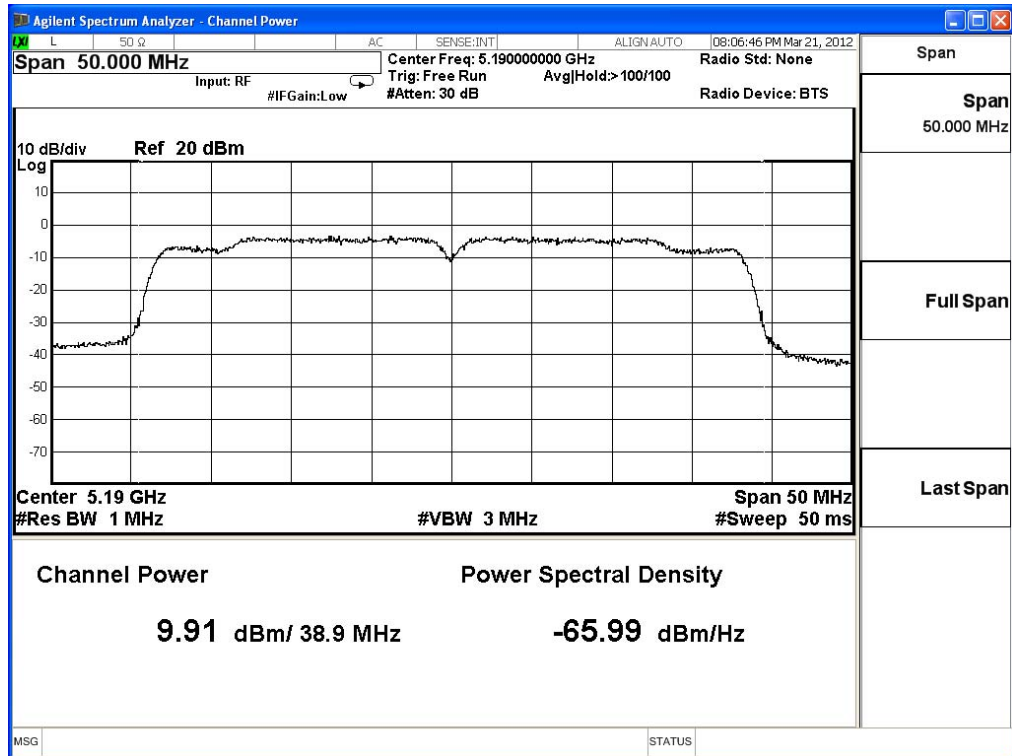
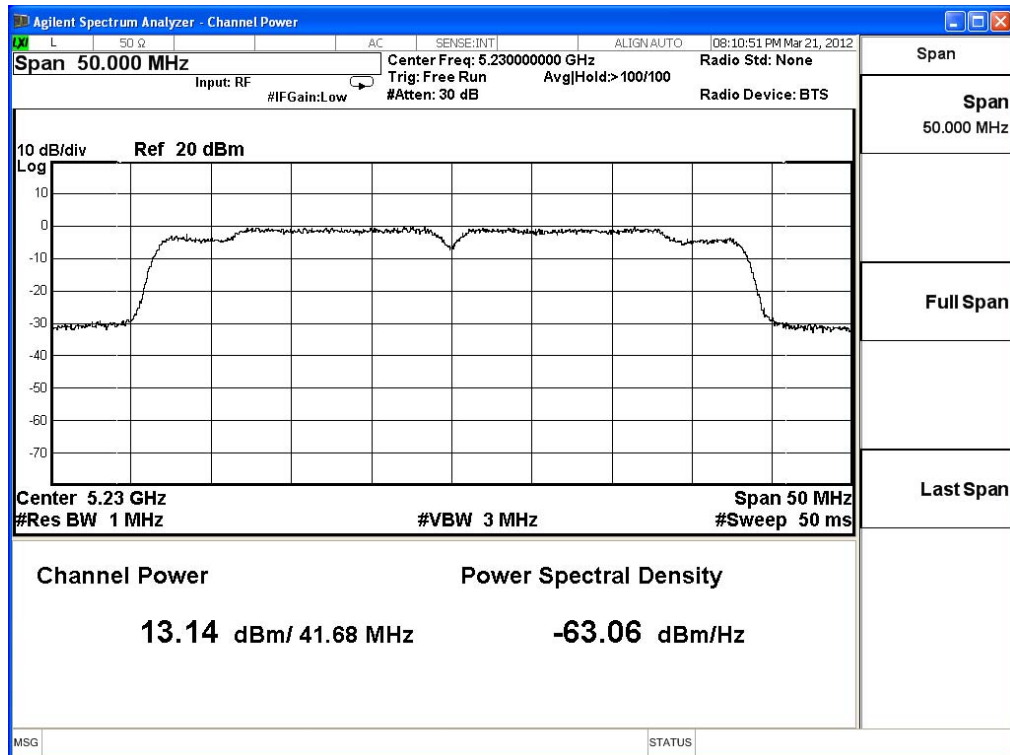


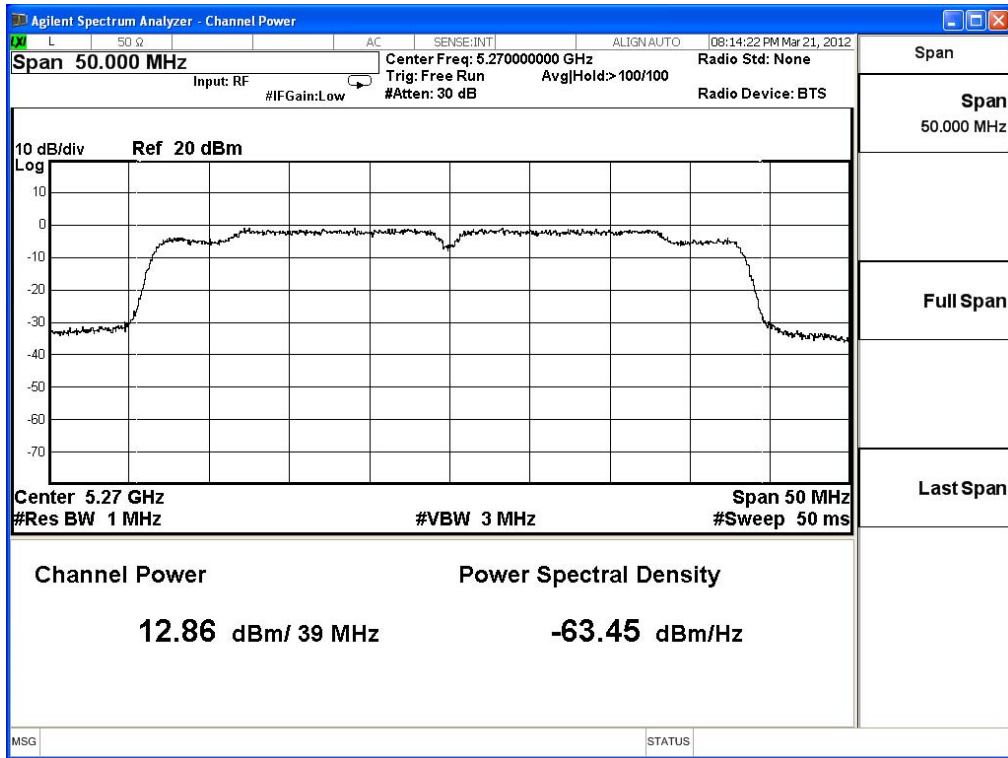
### Conduction Power Measurement Channel 38 – Chain A



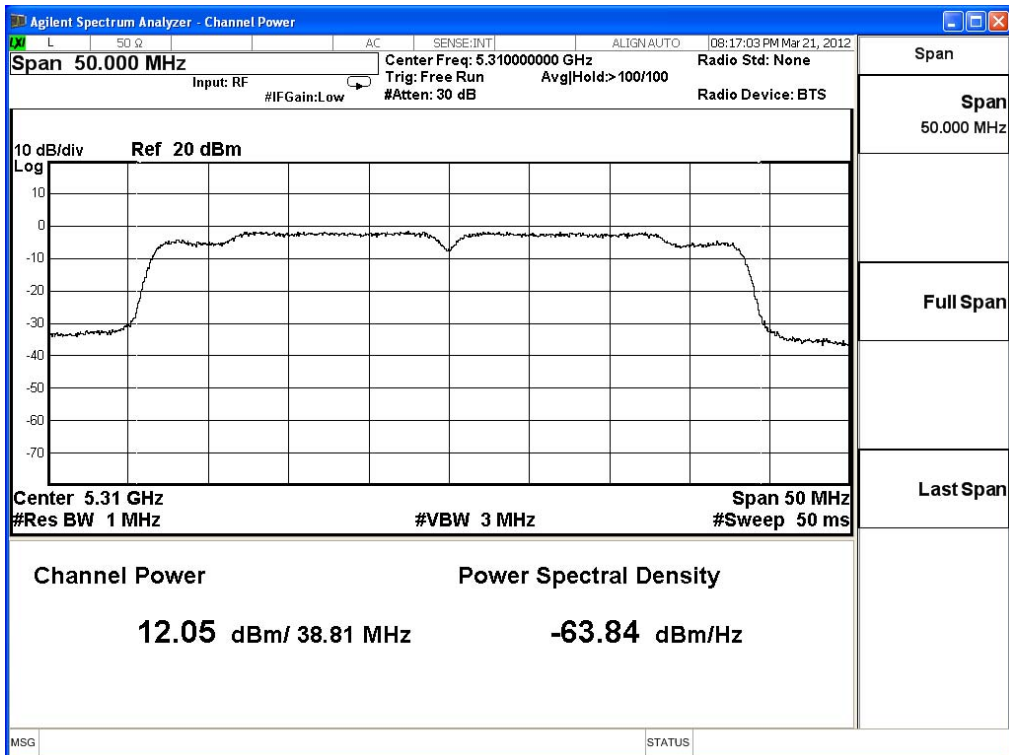
### Channel 46 – Chain A



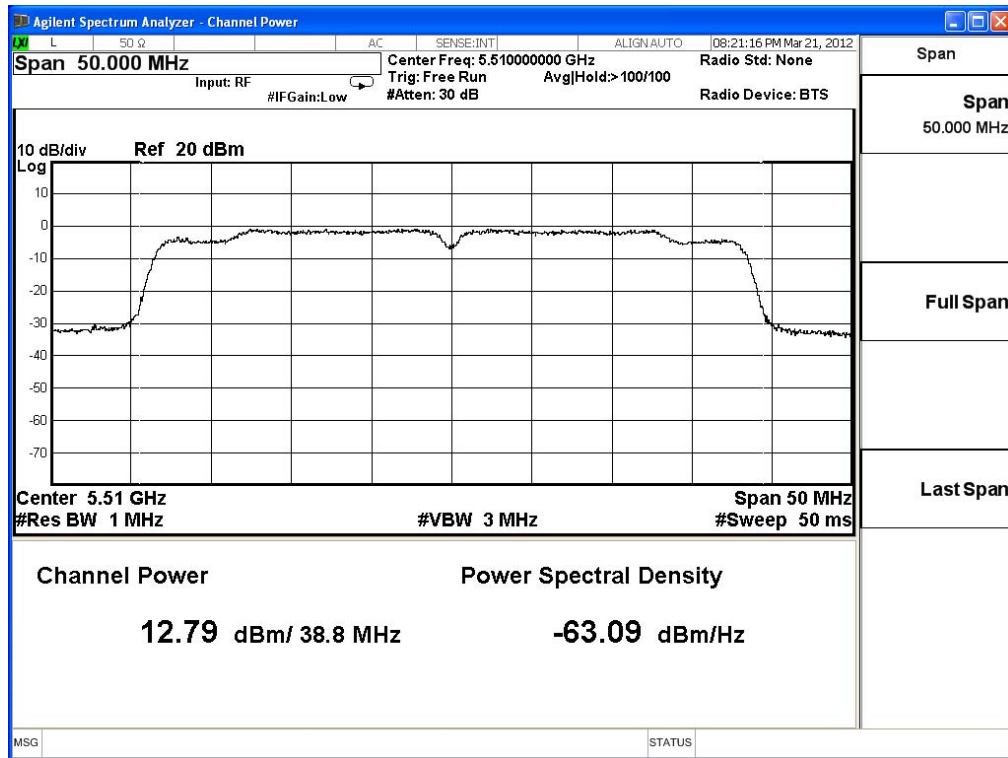
### Channel 54 – Chain A



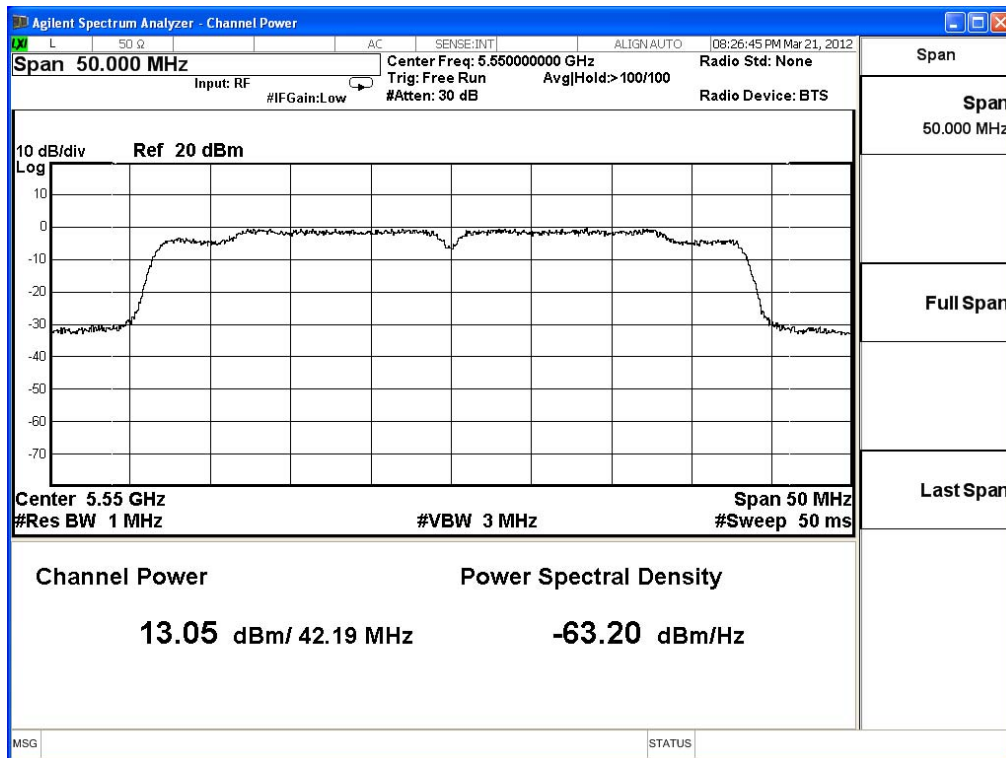
### Channel 62 – Chain A



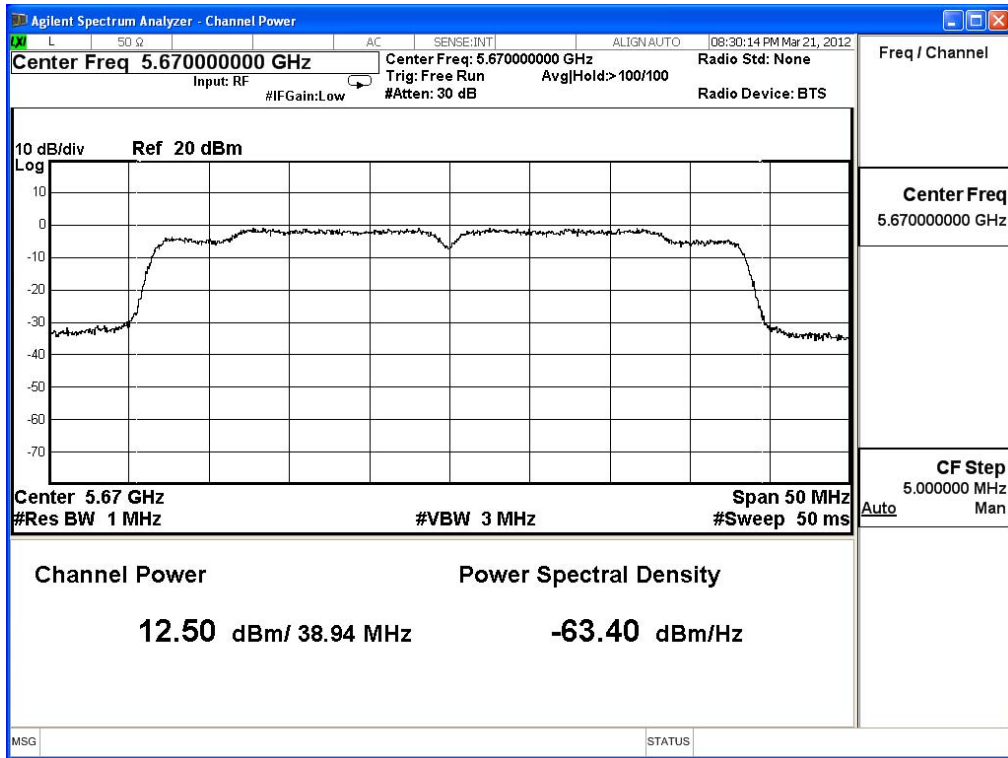
**Channel 102 – Chain A**



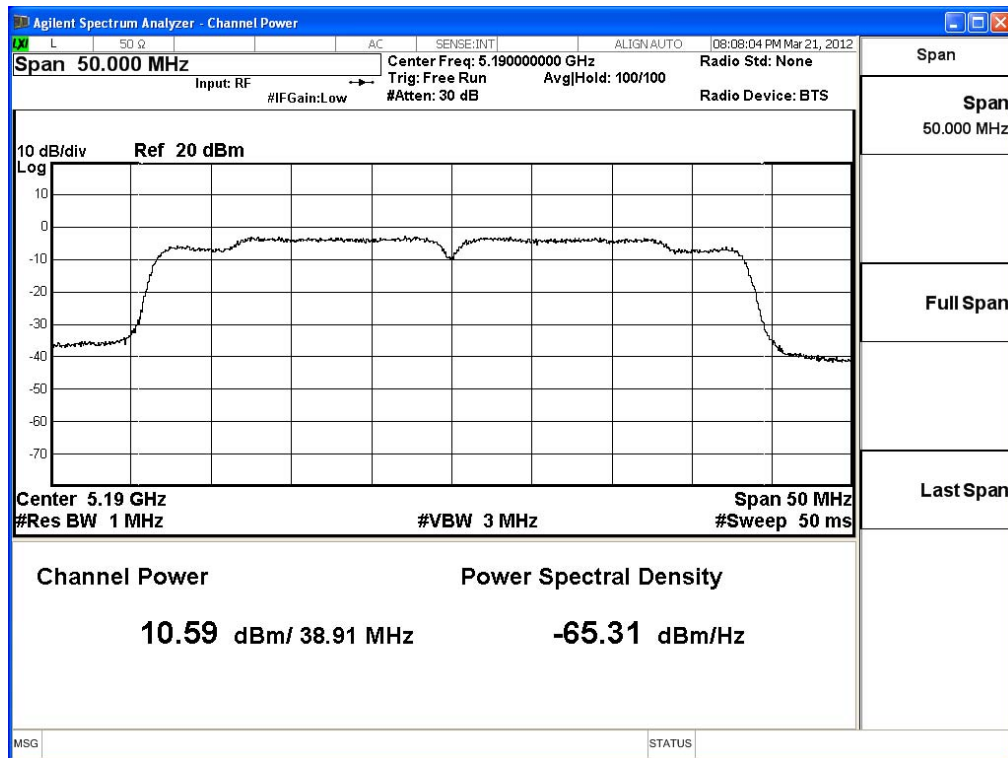
**Channel 110 – Chain A**



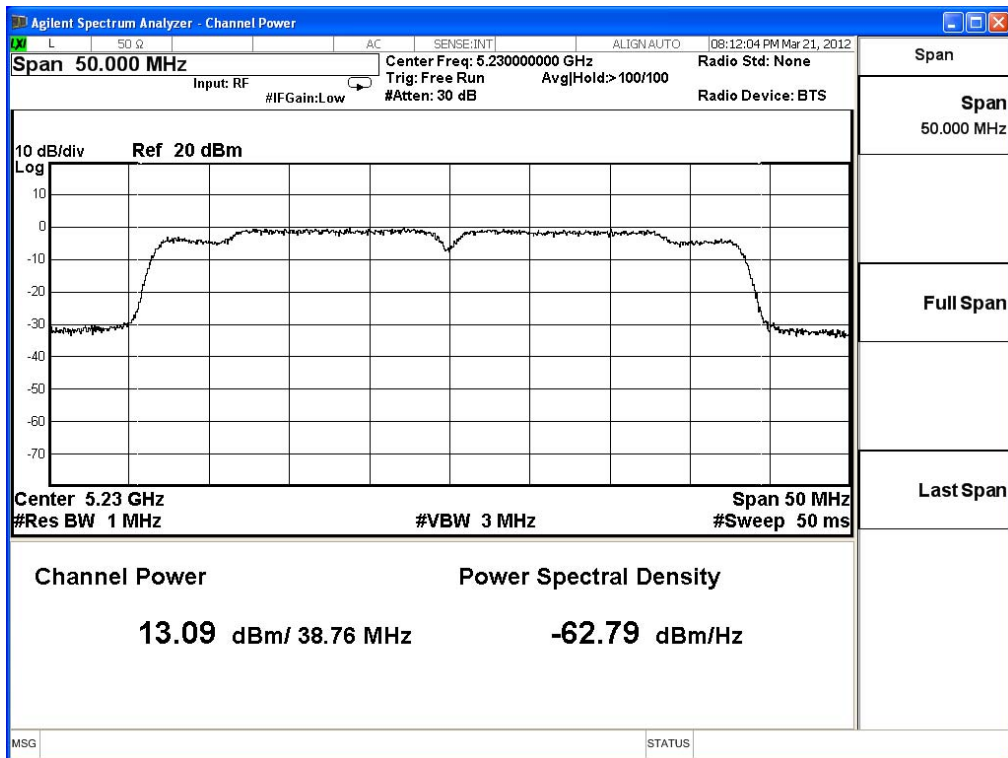
**Channel 134 – Chain A**



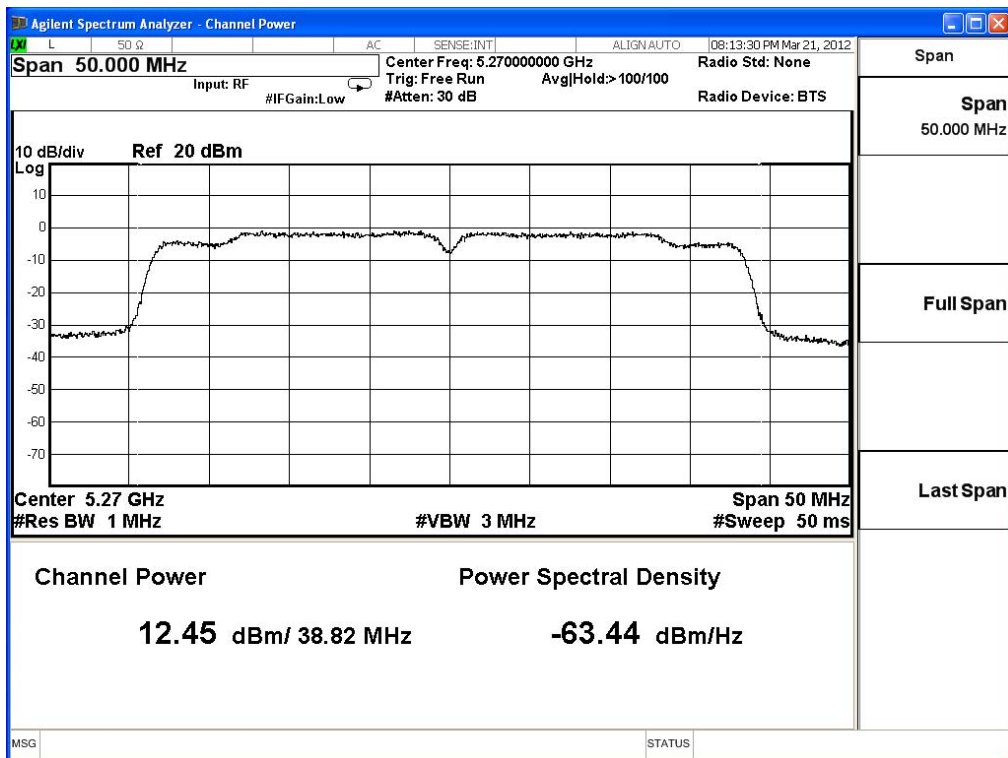
**Channel 38 – Chain B**



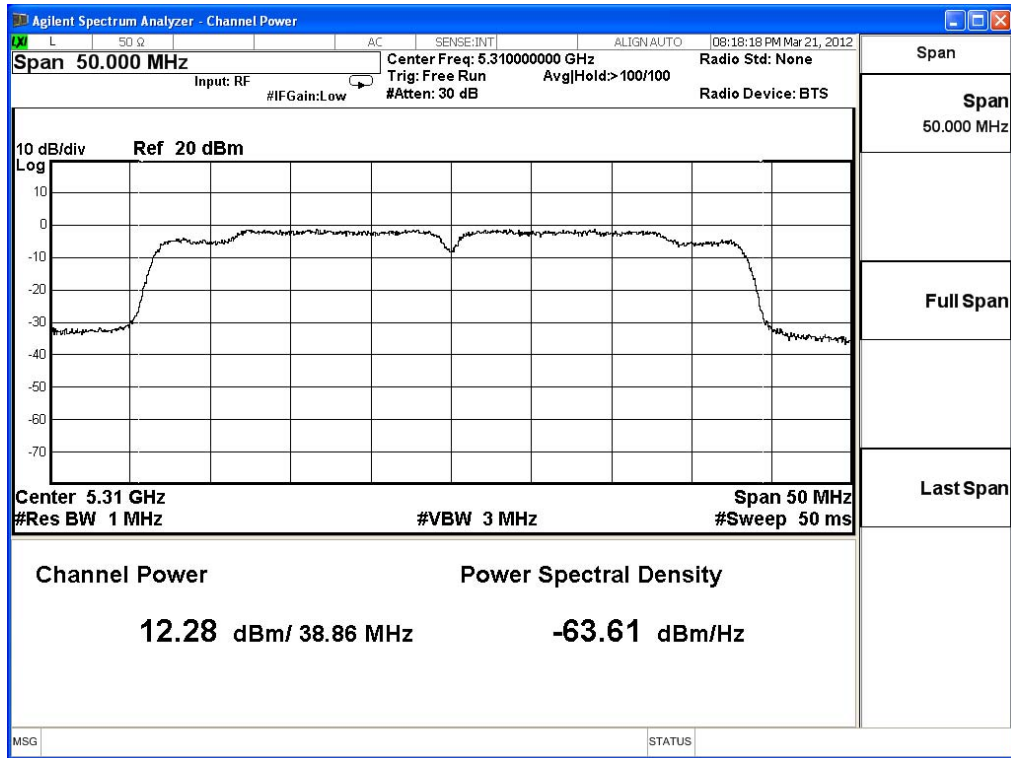
Channel 46 – Chain B



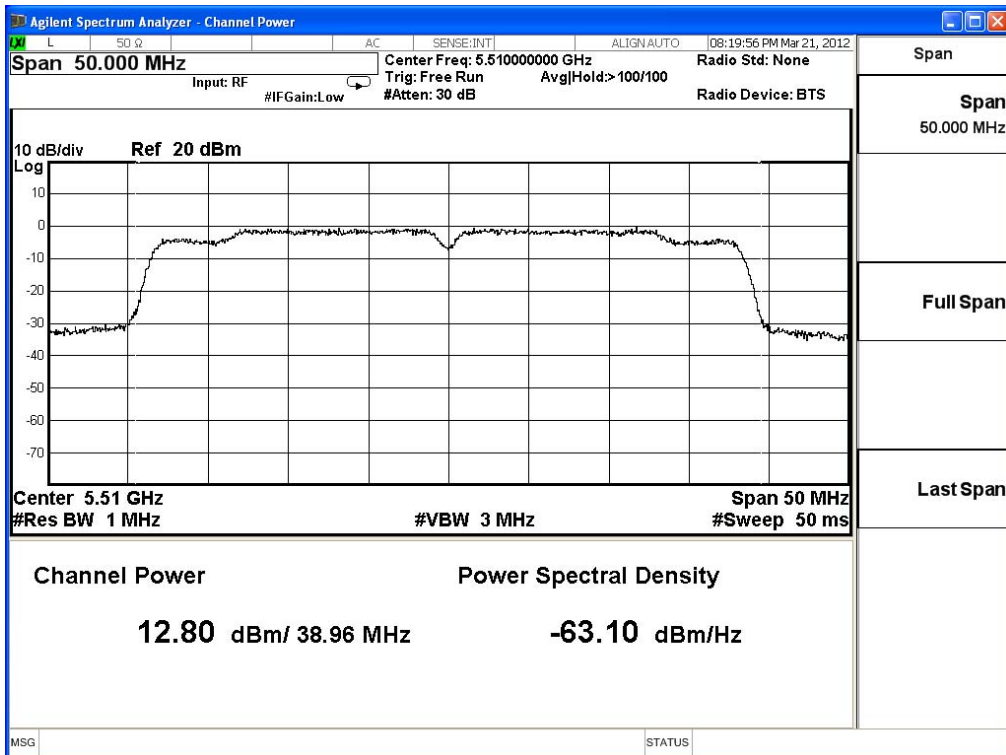
Channel 54 – Chain B



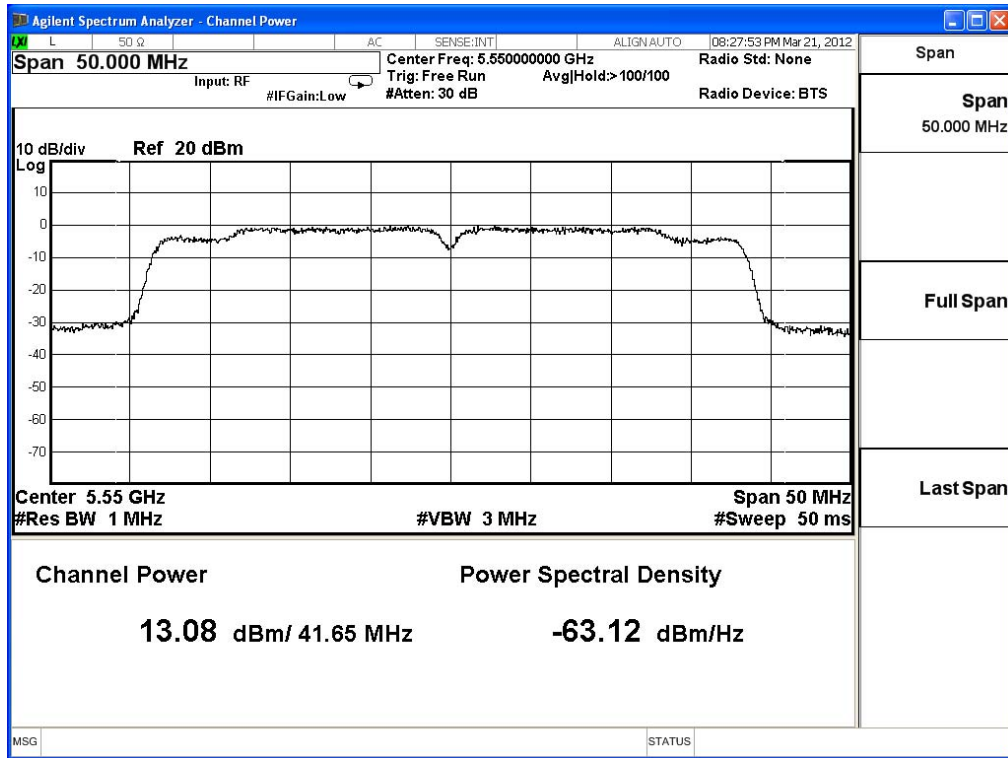
**Channel 62 – Chain B**



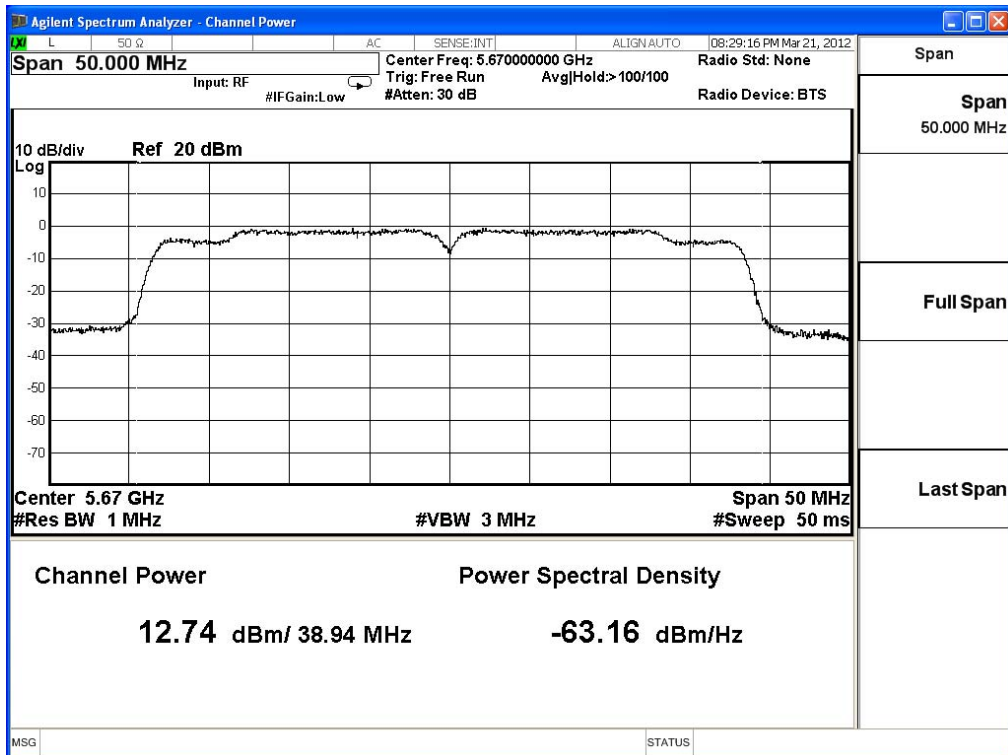
**Channel 102 – Chain B**



**Channel 110 – Chain B**



**Channel 134 – Chain B**



### 3. Radiated Emission

#### 3.1. Test Equipment

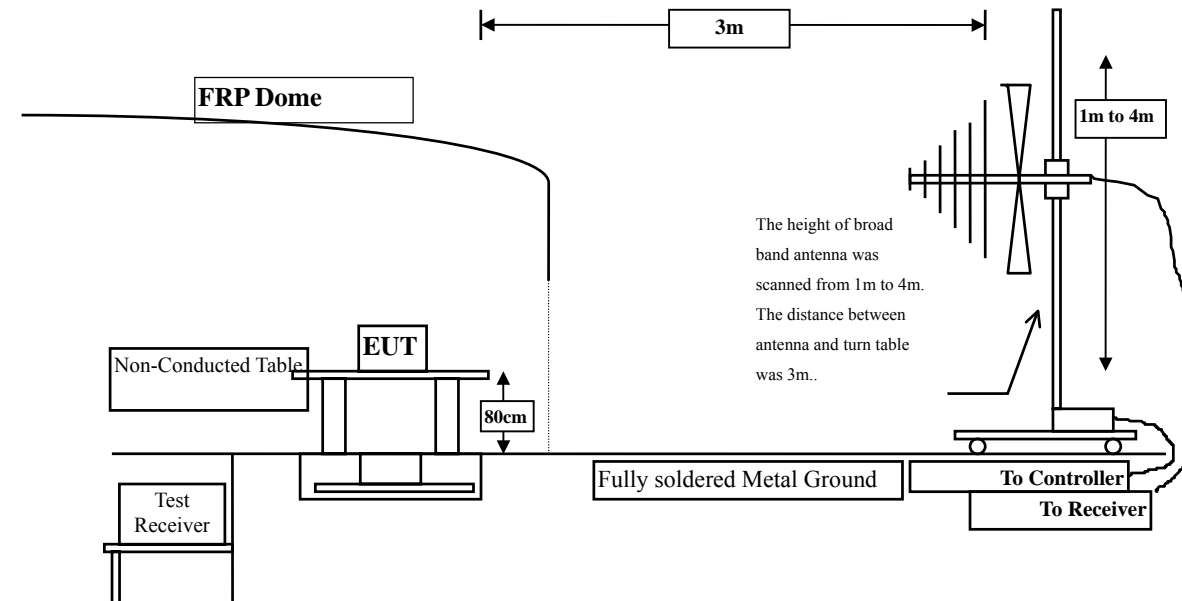
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	X Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2011
	X Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
	X Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	X Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	X Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	X Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X Coaxial Switch	Anritsu	MP59B/6200265729	N/A

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

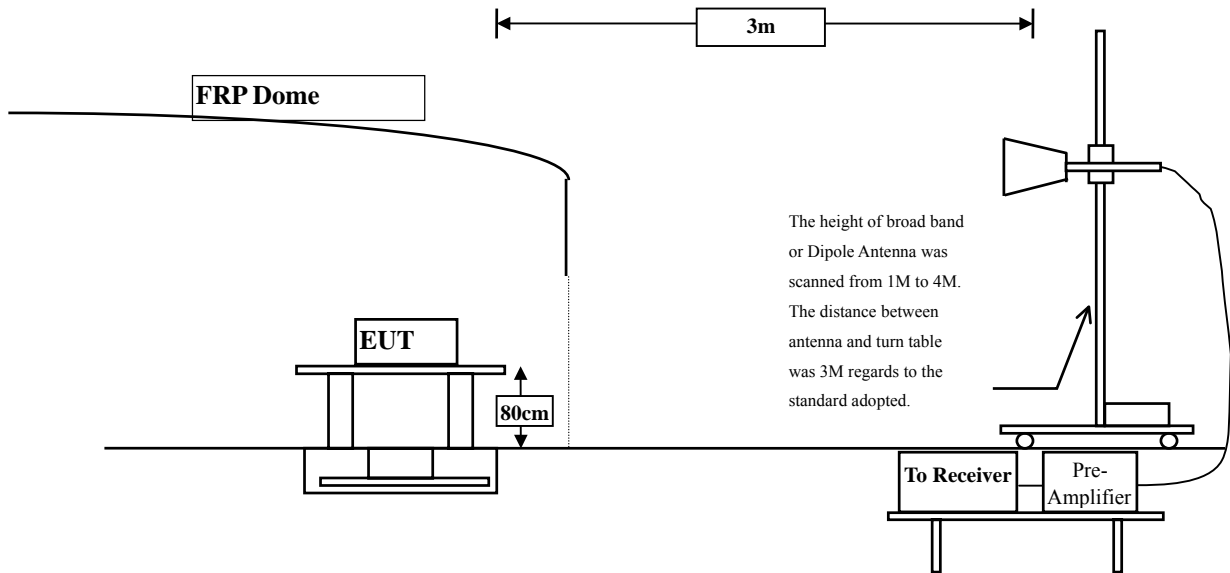
#### 3.2. Test Setup

Radiated Emission Below 1GHz





Radiated Emission Above 1GHz



3.3. Limits

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

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

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

### 3.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15.407 requirements.

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

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

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

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

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

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

### 3.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

### 3.6. Test Result of Radiated Emission

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10360.000	12.930	37.230	50.160	-23.840	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10360.000	13.724	37.050	50.774	-23.226	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5200MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10400.000	13.322	36.870	50.192	-23.808	74.000
15600.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10400.000	14.245	37.580	51.825	-22.175	74.000
15600.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10480.000	13.693	36.610	50.304	-23.696	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10480.000	14.620	36.540	51.161	-22.839	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10520.000	14.015	36.550	50.565	-23.435	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
<b>Average</b>					
<b>Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10520.000	14.818	36.300	51.118	-22.882	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
<b>Average</b>					
<b>Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10600.000	14.550	35.950	50.499	-23.501	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10600.000	14.881	36.260	51.141	-22.859	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10640.000	14.690	35.810	50.500	-23.500	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10640.000	15.083	36.510	51.593	-22.407	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11000.000	16.399	36.970	53.369	-20.631	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11000.000	17.132	36.214	53.346	-20.654	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11160.000	16.656	36.080	52.736	-21.264	74.000
16740.000	*	*	*	*	74.000
22320.000	*	*	*	*	74.000
27900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11160.000	17.726	36.214	53.940	-20.060	74.000
16740.000	*	*	*	*	74.000
22320.000	*	*	*	*	74.000
27900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11400.000	16.530	35.580	52.111	-21.889	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11400.000	17.138	36.090	53.228	-20.772	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10360.000	12.930	36.960	49.890	-24.110	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10360.000	13.724	37.220	50.944	-23.056	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5200MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10400.000	13.322	36.990	50.312	-23.688	74.000
15600.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10400.000	14.245	37.310	51.555	-22.445	74.000
15600.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10480.000	13.693	36.780	50.474	-23.526	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10480.000	14.620	37.630	52.251	-21.749	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5260MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10520.000	14.015	36.890	50.905	-23.095	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10520.000	14.818	36.890	51.708	-22.292	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10600.000	14.550	35.750	50.299	-23.701	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10600.000	14.881	36.810	51.691	-22.309	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5320MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10640.000	14.690	35.870	50.560	-23.440	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10640.000	15.083	36.290	51.373	-22.627	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11000.000	16.399	35.840	52.239	-21.761	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11000.000	17.132	36.050	53.182	-20.818	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11160.000	16.656	35.470	52.126	-21.874	74.000
16740.000	*	*	*	*	74.000
22320.000	*	*	*	*	74.000
27900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11160.000	17.726	35.790	53.516	-20.484	74.000
16740.000	*	*	*	*	74.000
22320.000	*	*	*	*	74.000
27900.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5700MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11400.000	16.530	35.630	52.161	-21.839	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11400.000	17.138	36.120	53.258	-20.742	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10380.000	12.939	36.520	49.459	-24.541	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10380.000	13.796	37.630	51.426	-22.574	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5230MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10460.000	13.508	36.900	50.408	-23.592	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10460.000	14.433	37.280	51.713	-22.287	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10540.000	14.151	35.630	49.780	-24.220	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10540.000	14.829	36.710	51.538	-22.462	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
<b>Average Detector:</b>					
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Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10620.000	14.623	35.290	49.913	-24.087	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
10620.000	14.970	36.210	51.180	-22.820	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5510MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11020.000	16.474	35.590	52.063	-21.937	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11020.000	17.224	35.620	52.844	-21.156	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5590MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11180.000	16.657	35.200	51.856	-22.144	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11180.000	17.681	35.340	53.020	-20.980	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5670MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11340.000	16.408	35.830	52.237	-21.763	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11340.000	17.167	36.310	53.477	-20.523	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
<b>Average Detector:</b>					
--					

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5200MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
255.040	-5.098	43.057	37.959	-8.041	46.000
336.520	-3.860	36.818	32.958	-13.042	46.000
398.600	-2.268	32.258	29.990	-16.010	46.000
499.480	0.048	36.066	36.114	-9.886	46.000
600.360	3.977	29.823	33.800	-12.200	46.000
926.280	6.491	26.563	33.054	-12.946	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
297.720	-7.143	40.084	32.942	-13.058	46.000
398.600	-4.678	32.588	27.910	-18.090	46.000
499.480	-0.852	32.143	31.291	-14.709	46.000
666.320	-1.809	27.372	25.564	-20.436	46.000
897.180	2.332	25.993	28.325	-17.675	46.000
961.200	7.260	28.526	35.786	-18.214	54.000

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
255.040	-5.098	43.624	38.526	-7.474	46.000
398.600	-2.268	31.027	28.759	-17.241	46.000
499.480	0.048	35.791	35.839	-10.161	46.000
600.360	3.977	30.283	34.260	-11.740	46.000
796.300	5.161	25.761	30.922	-15.078	46.000
930.160	7.187	29.618	36.805	-9.195	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
297.720	-7.143	39.061	31.919	-14.081	46.000
398.600	-4.678	34.987	30.309	-15.691	46.000
499.480	-0.852	33.064	32.212	-13.788	46.000
679.900	1.000	25.966	26.966	-19.034	46.000
844.800	3.181	23.890	27.071	-18.929	46.000
961.200	7.260	28.753	36.013	-17.987	54.000

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
268.620	-4.942	43.112	38.170	-7.830	46.000
398.600	-2.268	33.500	31.232	-14.768	46.000
499.480	0.048	35.305	35.353	-10.647	46.000
625.580	1.770	31.300	33.070	-12.930	46.000
800.180	5.141	26.685	31.826	-14.174	46.000
932.100	6.922	26.298	33.220	-12.780	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
299.660	-6.855	39.567	32.712	-13.288	46.000
336.520	-4.630	36.082	31.452	-14.548	46.000
398.600	-4.678	32.303	27.625	-18.375	46.000
499.480	-0.852	31.950	31.098	-14.902	46.000
720.640	-0.099	26.617	26.518	-19.482	46.000
961.200	7.260	28.445	35.705	-18.295	54.000

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
268.620	-4.942	43.159	38.217	-7.783	46.000
299.660	-3.585	41.124	37.539	-8.461	46.000
398.600	-2.268	33.843	31.575	-14.425	46.000
499.480	0.048	35.467	35.515	-10.485	46.000
600.360	3.977	29.659	33.636	-12.364	46.000
800.180	5.141	27.052	32.193	-13.807	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
299.660	-6.855	39.850	32.995	-13.005	46.000
336.520	-4.630	35.552	30.922	-15.078	46.000
499.480	-0.852	31.387	30.535	-15.465	46.000
600.360	-2.833	28.424	25.591	-20.409	46.000
697.360	1.311	25.181	26.492	-19.508	46.000
961.200	7.260	27.553	34.813	-19.187	54.000

Note:

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

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
268.620	-4.942	43.305	38.363	-7.637	46.000
398.600	-2.268	34.504	32.236	-13.764	46.000
499.480	0.048	35.032	35.080	-10.920	46.000
600.360	3.977	29.919	33.896	-12.104	46.000
745.860	3.308	25.340	28.648	-17.352	46.000
928.220	6.893	29.747	36.640	-9.360	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
299.660	-6.855	37.543	30.688	-15.312	46.000
398.600	-4.678	32.739	28.061	-17.939	46.000
499.480	-0.852	32.948	32.096	-13.904	46.000
699.300	0.695	26.742	27.437	-18.563	46.000
897.180	2.332	26.605	28.937	-17.063	46.000
961.200	7.260	27.870	35.130	-18.870	54.000

Note:

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



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5590MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
297.720	-3.633	39.575	35.943	-10.057	46.000
398.600	-2.268	32.543	30.275	-15.725	46.000
499.480	0.048	35.583	35.631	-10.369	46.000
600.360	3.977	30.047	34.024	-11.976	46.000
625.580	1.770	29.740	31.510	-14.490	46.000
912.700	6.132	28.644	34.776	-11.224	46.000
<b>Vertical</b>					
<b>Peak Detector</b>					
297.720	-7.143	39.317	32.175	-13.825	46.000
398.600	-4.678	34.369	29.691	-16.309	46.000
499.480	-0.852	31.650	30.798	-15.202	46.000
679.900	1.000	25.989	26.989	-19.011	46.000
901.060	3.331	26.425	29.756	-16.244	46.000
961.200	7.260	28.536	35.796	-18.204	54.000

Note:

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

## 4. Band Edge

### 4.1. Test Equipment

#### RF Conducted Measurement

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

Note:

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

#### RF Radiated Measurement:

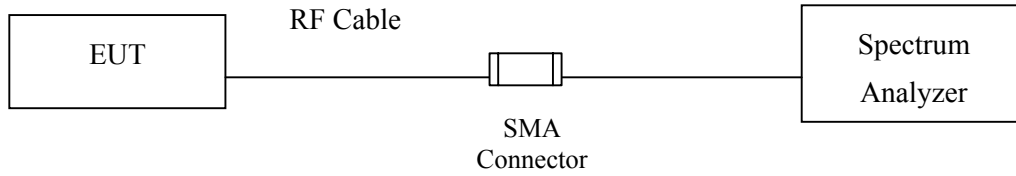
The following test equipments are used during the band edge tests:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.	
☒ Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2011
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2012
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

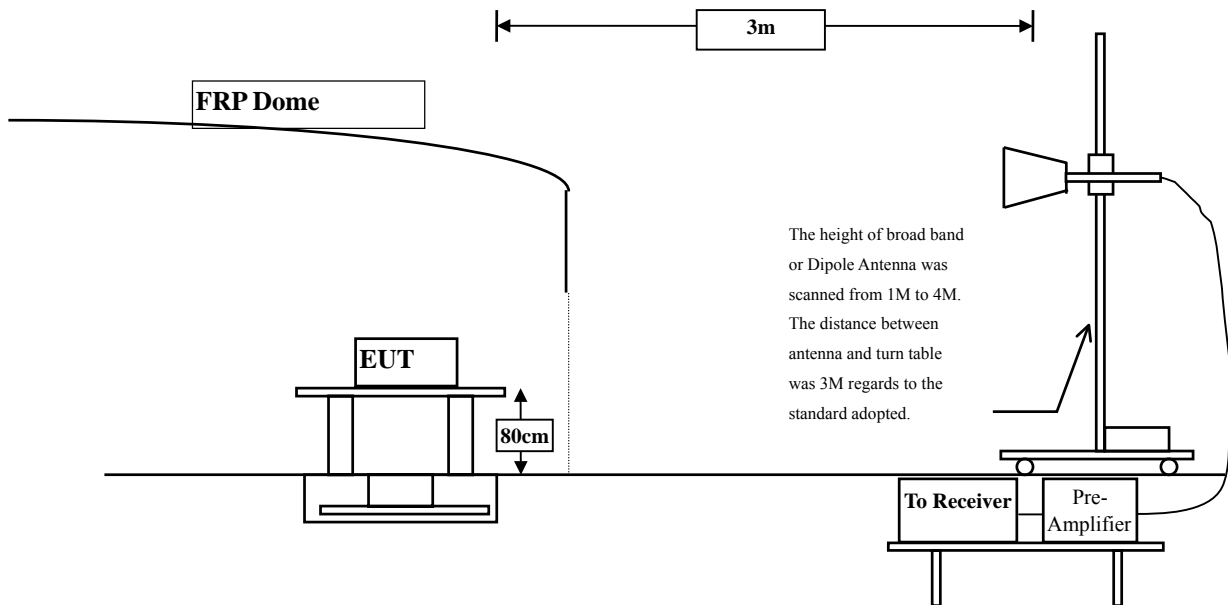
- Note:
1. All instruments are calibrated every one year.
  2. The test instruments marked by "X" are used to measure the final test results.

## 4.2. Test Setup

### RF Conducted Measurement



### RF Radiated Measurement:



### 4.3. Limits

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

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

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

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

### 4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

### 4.5. Uncertainty

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

#### 4.6. Test Result of Band Edge

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

Frequency (MHz)	Power Setting Measured (dBm)
	(Average)
5180	16.12

#### Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5180	34.966	56.75	91.716	Peak
Horizontal	5180	34.966	46.03	80.996	Average
Vertical	5180	37.073	72.14	109.214	Peak
Vertical	5180	37.073	61.12	98.194	Average

Note: 1: Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

#### Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	91.716	41.38	50.336	74.000	Peak
Horizontal	5150	80.996	46.29	34.706	54.000	Average
Vertical	5150	109.214	41.38	67.834	74.000	Peak
Vertical	5150	98.194	46.29	51.904	54.000	Average

Note:

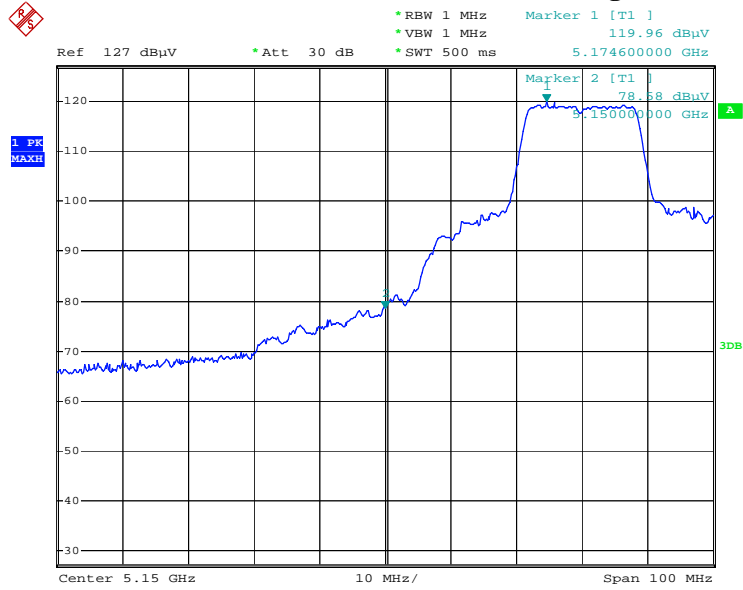
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F -  $\Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

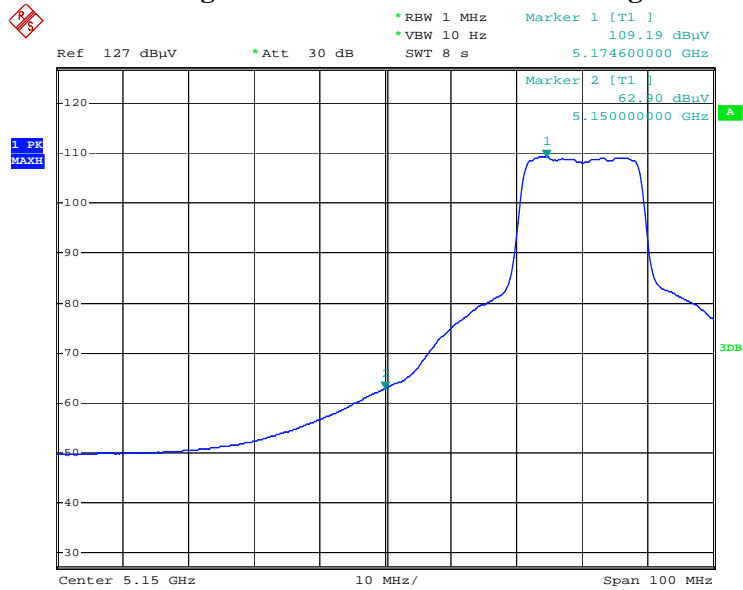
### Peak Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:07:00

### Average Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:07:36

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 40

Frequency (MHz)	Power Setting Measured (dBm)
	(Average)
5200	16.32

#### Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5200	34.858	56.65	91.508	Peak
Horizontal	5200	34.858	46.21	81.068	Average
Vertical	5200	37.082	71.44	108.522	Peak
Vertical	5200	37.082	60.29	97.372	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

#### Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5146.8	91.508	48.16	43.348	74.000	Peak
Horizontal	5150	81.068	57.3	23.768	54.000	Average
Vertical	5146.8	108.522	48.16	60.362	74.000	Peak
Vertical	5150	97.372	57.3	40.072	54.000	Average

Note:

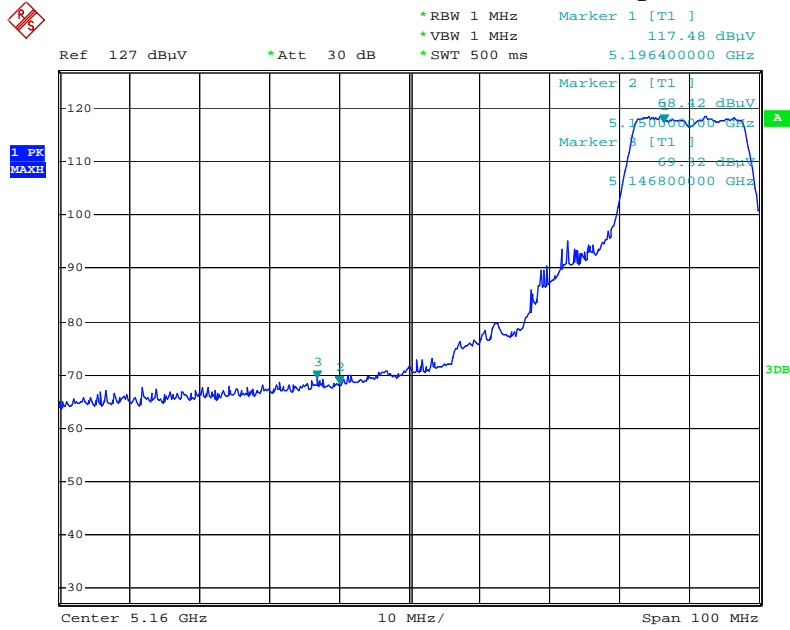
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F -  $\Delta$

F = Fundamental field Strength (Peak or Average)

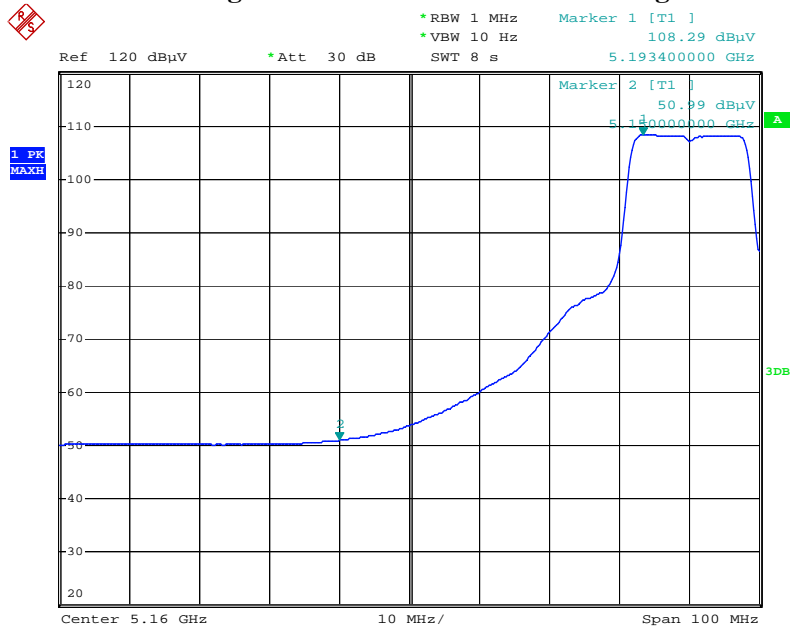
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

### Peak Detector of conducted Band Edge Delta



Date: 19.MAR.2012 17:23:19

### Average Detector of conducted Band Edge Delta



Date: 19.MAR.2012 17:24:39



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

Frequency (MHz)	Power Setting Measured (dBm)
	(Average)
5320	16.46

#### Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5320	35.635	58.78	94.414	Peak
Horizontal	5320	35.635	48.24	83.874	Average
Vertical	5320	37.552	71.61	109.161	Peak
Vertical	5320	37.552	60.32	97.871	Average

Note: 1: Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

#### Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5350.6	94.414	42.53	51.884	74.000	Peak
Horizontal	5350	83.874	49.93	33.944	54.000	Average
Vertical	5350.6	109.161	42.53	66.631	74.000	Peak
Vertical	5350	97.871	49.93	47.941	54.000	Average

Note:

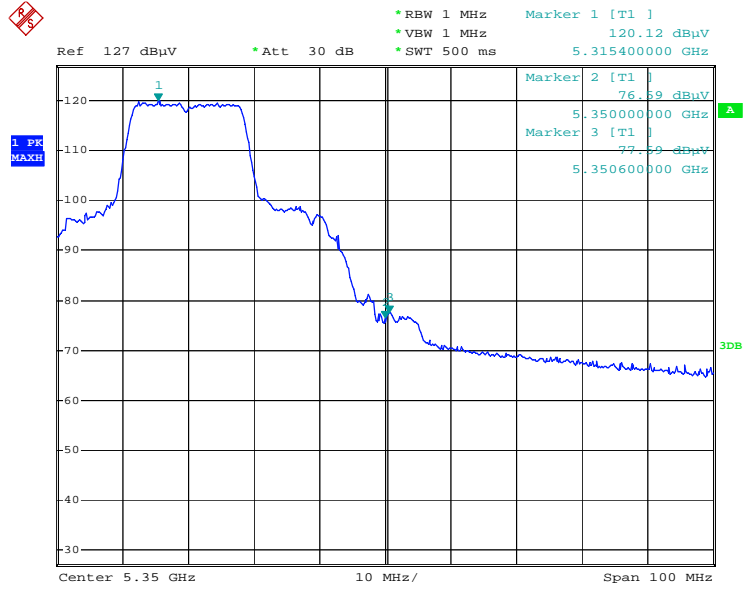
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F -  $\Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

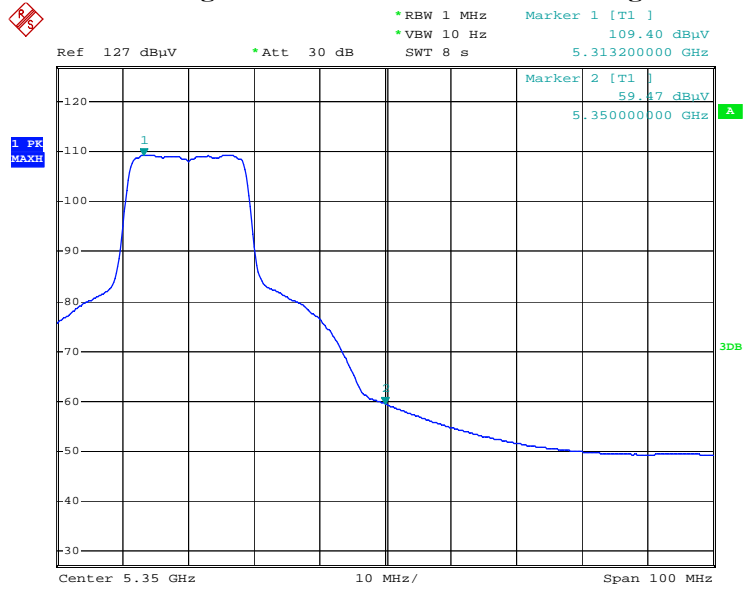
### Peak Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:12:35

### Average Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:12:56

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

Frequency (MHz)	Power Setting Measured (dBm)
	(Average)
5500	16.13

#### Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5500	36.684	58.48	95.164	Peak
Horizontal	5500	36.684	47.41	84.094	Average
Vertical	5500	38.145	69.76	107.905	Peak
Vertical	5500	38.145	58.82	96.965	Average

Note: 1: Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

#### Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5457	95.164	45.48	49.684	74.000	Peak
Horizontal	5460	84.094	53.55	30.544	54.000	Average
Vertical	5457	107.905	45.48	62.425	74.000	Peak
Vertical	5460	96.965	53.55	43.415	54.000	Average

Note:

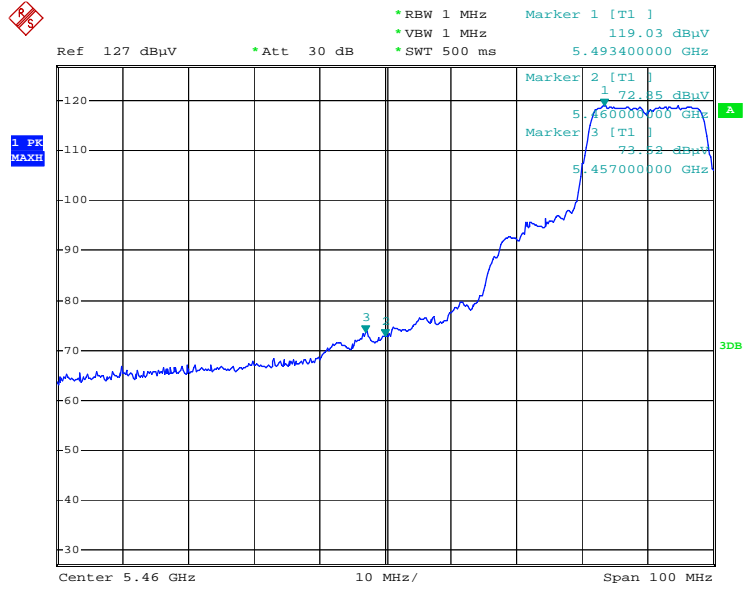
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F -  $\Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

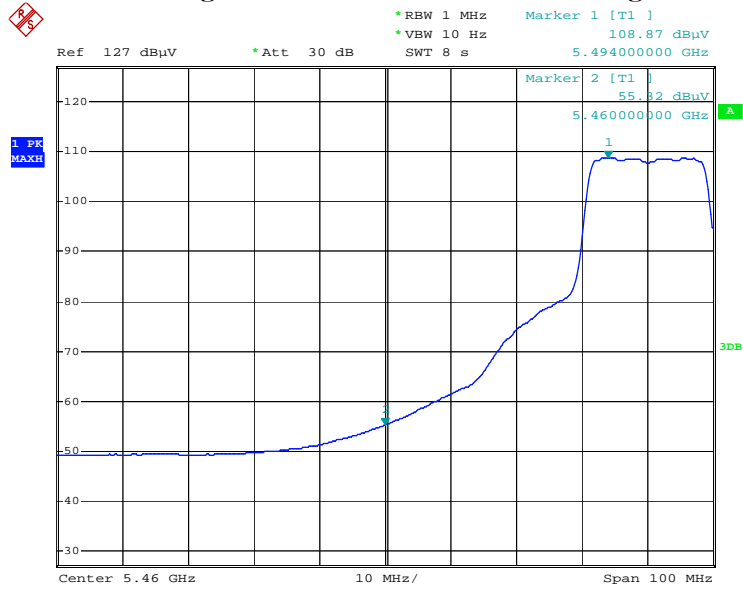
### Peak Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:14:12

### Average Detector of conducted Band Edge Delta



5190B-2

Date: 8.MAR.2012 11:14:34

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5470.000	18.334	-73.000	-54.666	-27.666	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5470.000	19.335	-68.680	-49.345	-22.345	-27.000	Pass

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 140

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5725.000	18.649	-67.960	-49.311	-22.311	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5700.000	19.229	-67.870	-48.641	-21.641	-27.000	Pass

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5180	13.07	13.03

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5180	34.966	57.31	92.276	Peak
Horizontal	5180	34.966	44.52	79.486	Average
Vertical	5180	37.073	73.12	110.194	Peak
Vertical	5180	37.073	59.07	96.144	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	92.276	42.67	49.606	74.000	Peak
Horizontal	5150	79.486	45.73	33.756	54.000	Average
Vertical	5150	110.194	42.67	67.524	74.000	Peak
Vertical	5150	96.144	45.73	50.414	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5149.4	92.276	44.25	48.026	74.000	Peak
Horizontal	5150	79.486	46.24	33.246	54.000	Average
Vertical	5149.4	110.194	44.25	65.944	74.000	Peak
Vertical	5150	96.144	46.24	49.904	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

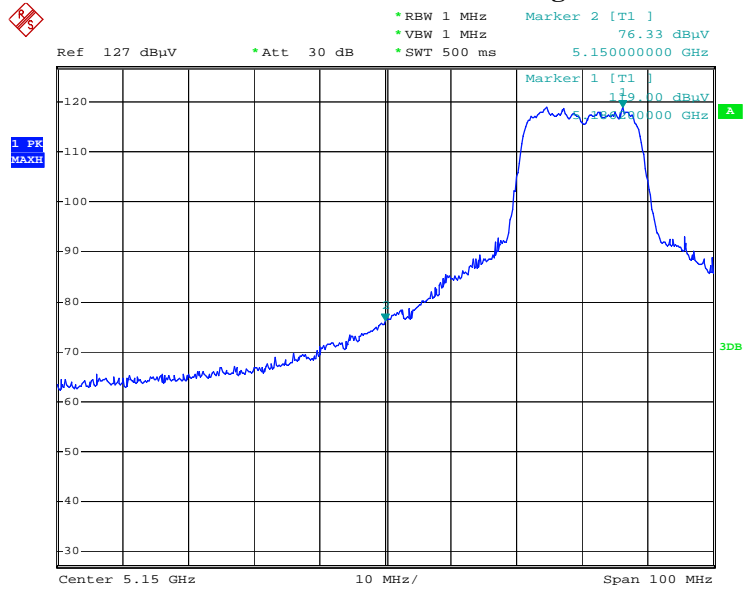
Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

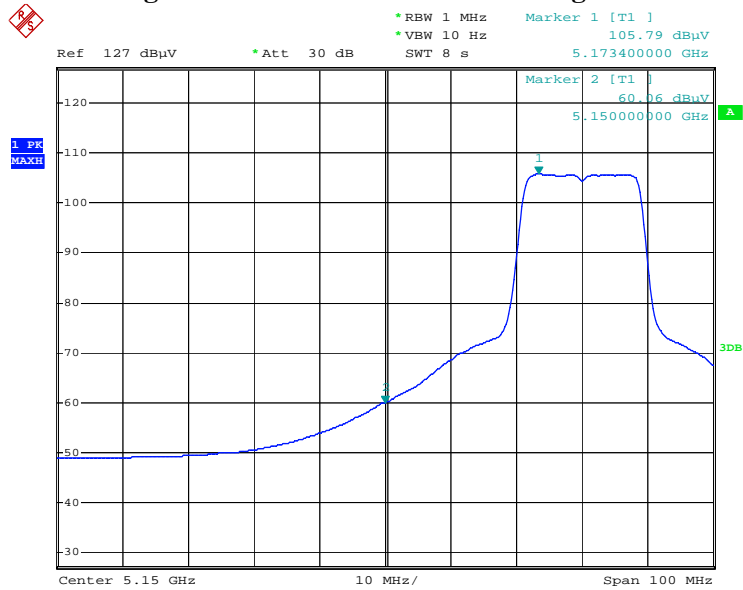


### Peak Detector of conducted Band Edge Delta-Chain A



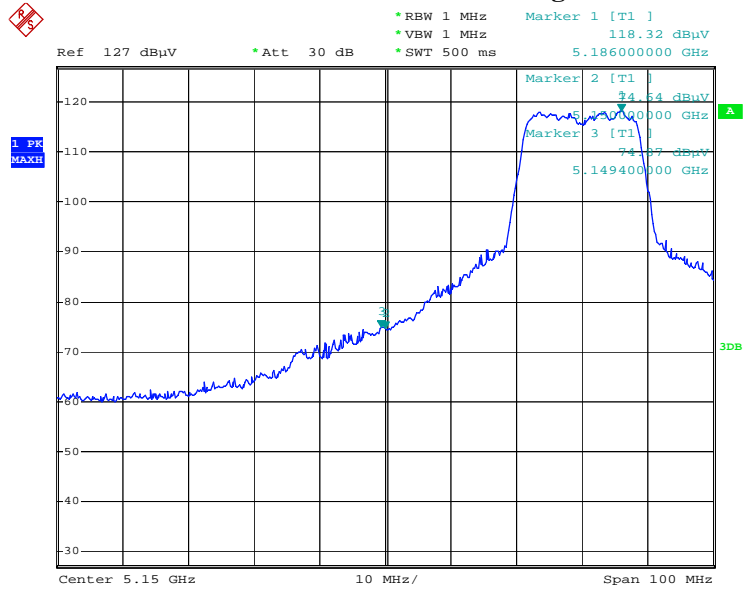
5190B-2  
Date: 8.MAR.2012 11:15:45

### Average Detector of conducted Band Edge Delta-Chain A



5190B-2  
Date: 8.MAR.2012 11:16:14

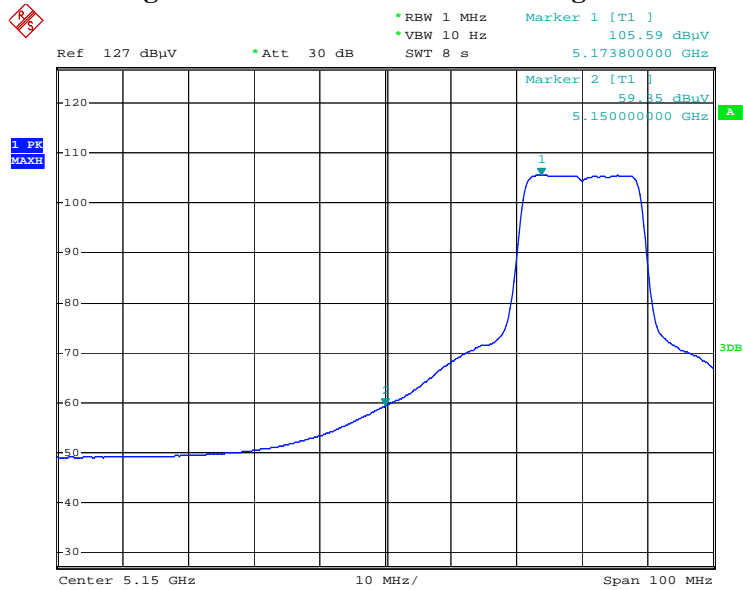
**Peak Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:18:07

**Average Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:18:31

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5320	13.18	13.02

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5320	35.635	58.85	94.484	Peak
Horizontal	5320	35.635	46.01	81.644	Average
Vertical	5320	37.552	72.94	110.491	Peak
Vertical	5320	37.552	59.94	97.491	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5350	94.484	48.81	45.674	74.000	Peak
Horizontal	5350	81.644	50.08	31.564	54.000	Average
Vertical	5350	110.491	48.81	61.681	74.000	Peak
Vertical	5350	97.491	50.08	47.411	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5351.8	94.484	49.82	44.664	74.000	Peak
Horizontal	5350	81.644	50.2	31.444	54.000	Average
Vertical	5351.8	110.491	49.82	60.671	74.000	Peak
Vertical	5350	97.491	50.2	47.291	54.000	Average

Note:

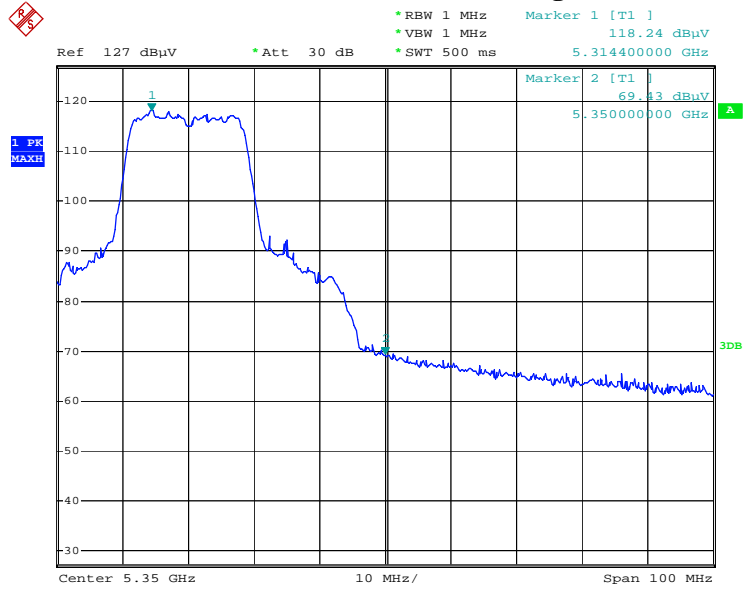
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

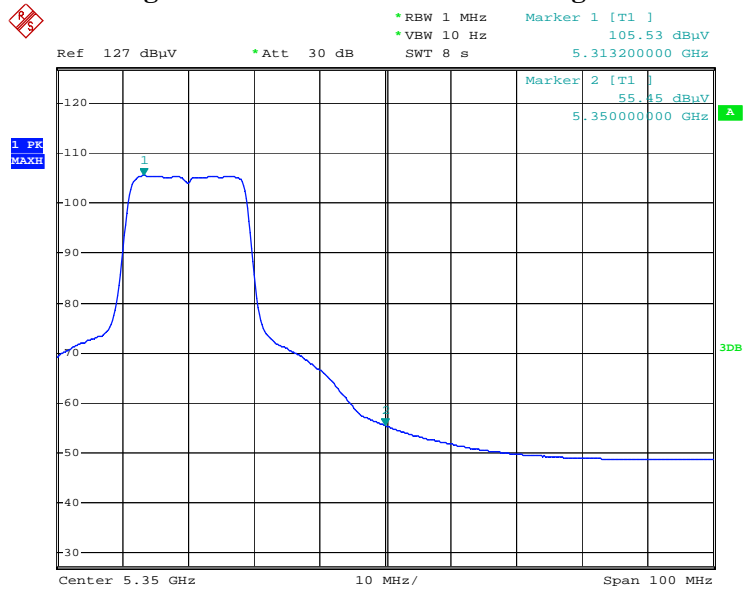
### Peak Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:21:47

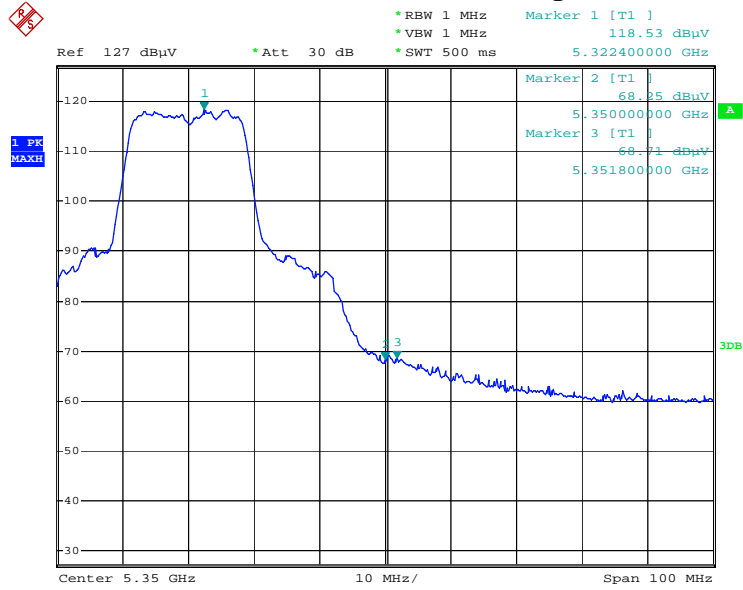
### Average Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:21:27

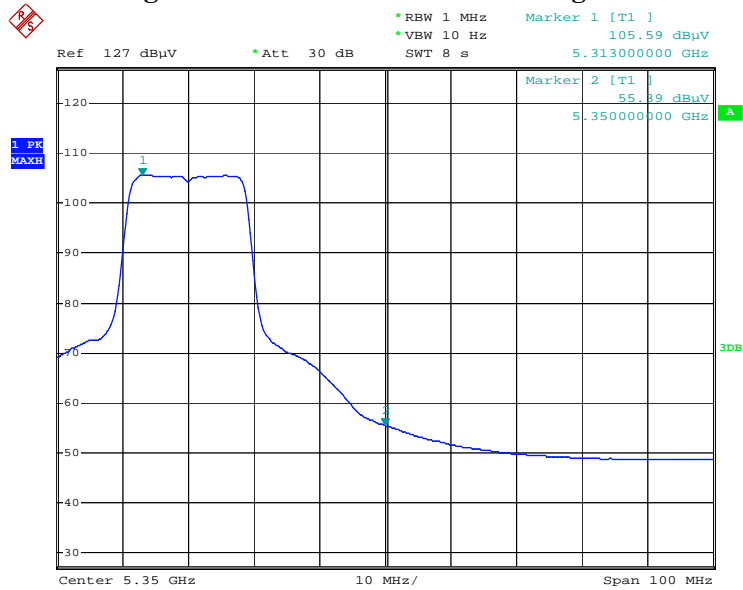
### Peak Detector of conducted Band Edge Delta-Chain B



5190B-2

Date: 8.MAR.2012 11:20:10

### Average Detector of conducted Band Edge Delta-Chain B



5190B-2

Date: 8.MAR.2012 11:20:47

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5500	13.16	13.09

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5500	36.684	57.87	94.554	Peak
Horizontal	5500	36.684	45.28	81.964	Average
Vertical	5500	38.145	71.08	109.225	Peak
Vertical	5500	38.145	57.95	96.095	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/sm)	Requiment Limit (dBuV/m)	Detector
Horizontal	5460	94.554	49.58	44.974	74.000	Peak
Horizontal	5460	81.964	52.42	29.544	54.000	Average
Vertical	5460	109.225	49.58	59.645	74.000	Peak
Vertical	5460	96.095	52.42	43.675	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5457	94.554	47.98	46.574	74.000	Peak
Horizontal	5460	81.964	52.31	29.654	54.000	Average
Vertical	5457	109.225	47.98	61.245	74.000	Peak
Vertical	5460	96.095	52.31	43.785	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

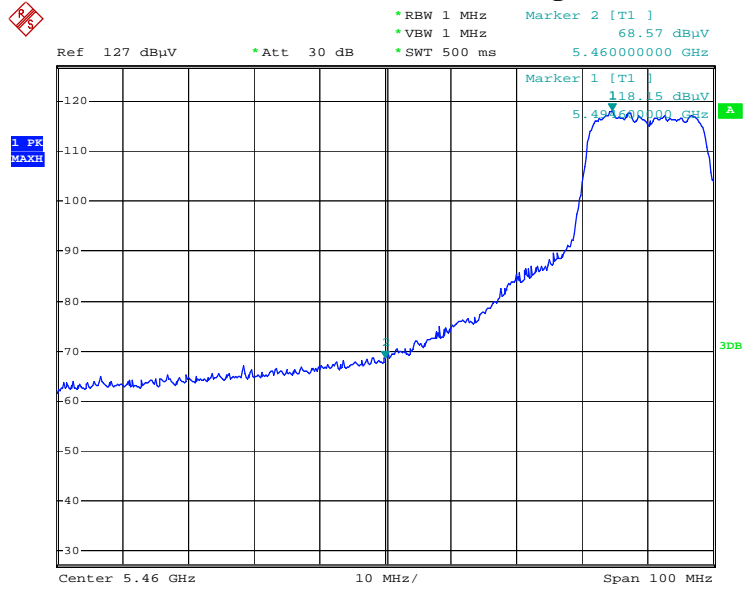
Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)



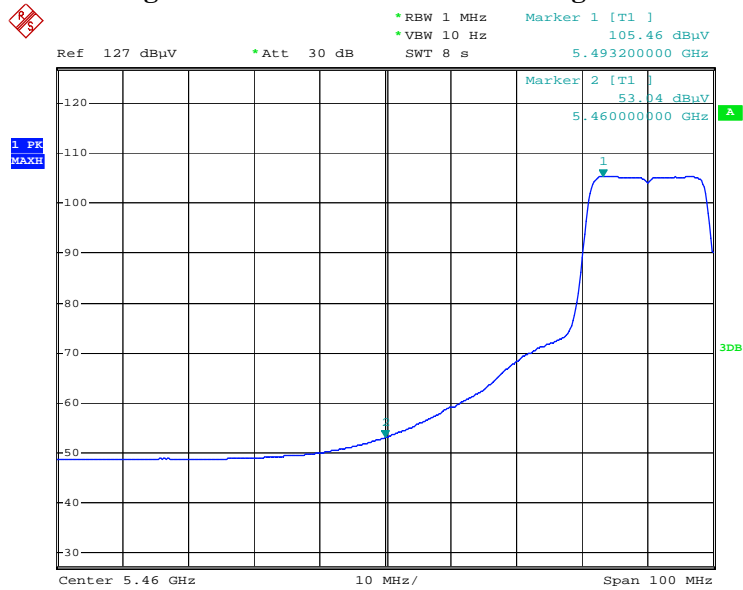
### Peak Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:22:38

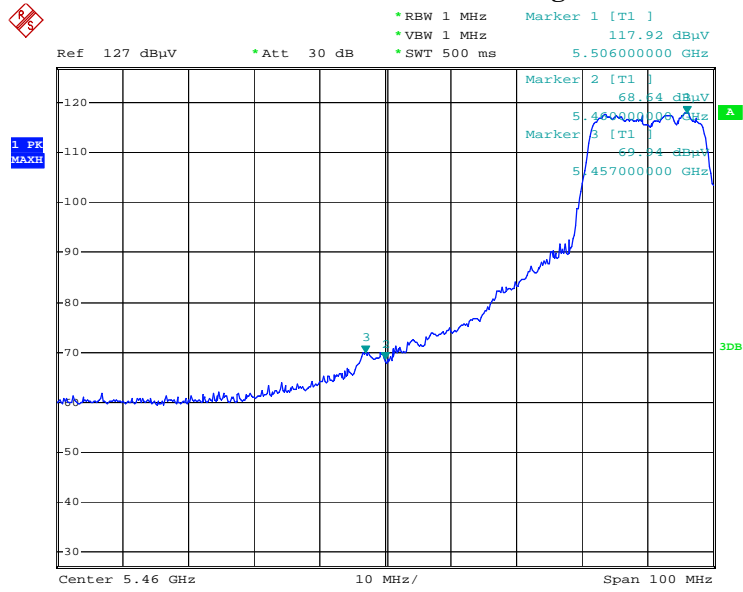
### Average Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:23:11

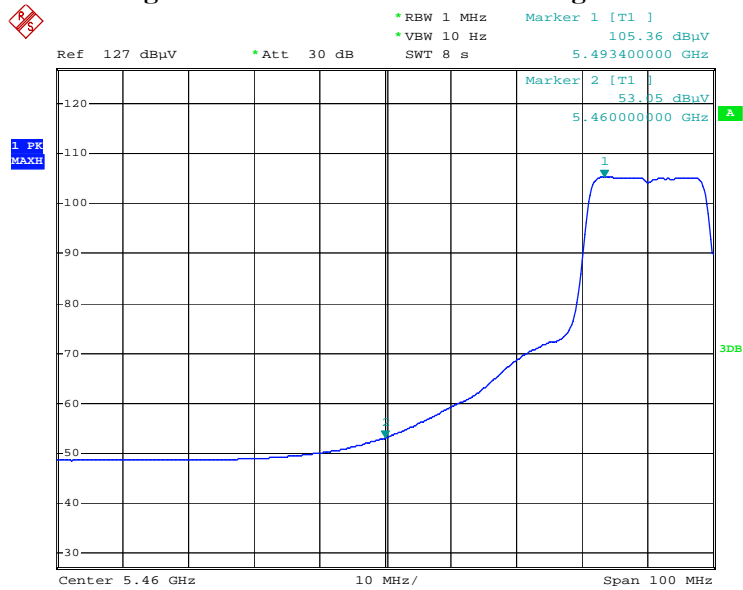
**Peak Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:24:15

**Average Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:23:46

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5470.000	19.335	-72.350	-53.015	-26.015	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5470.000	19.335	-68.350	-49.015	-22.015	-27.000	Pass

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 140

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5725.000	18.649	-70.600	-51.951	-24.951	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5725.000	19.372	-70.420	-51.048	-24.048	-27.000	Pass

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

Frequency (MHz)	Power Setting Measured (dBm)	
	(Average)	
	Chain A	Chain B
5190	10.06	10.46

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5190	34.907	52.2	87.108	Peak
Horizontal	5190	34.907	39.38	74.288	Average
Vertical	5190	34.907	67.94	102.848	Peak
Vertical	5190	34.907	54.25	89.158	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5149.6	87.108	35.35	51.758	74.000	Peak
Horizontal	5150	74.288	37.57	36.718	54.000	Average
Vertical	5149.6	102.848	35.35	67.498	74.000	Peak
Vertical	5150	89.158	37.57	51.588	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5148.2	87.108	35.16	51.948	74.000	Peak
Horizontal	5150	74.288	37.7	36.588	54.000	Average
Vertical	5148.2	102.848	35.16	67.688	74.000	Peak
Vertical	5150	89.158	37.7	51.458	54.000	Average

Note:

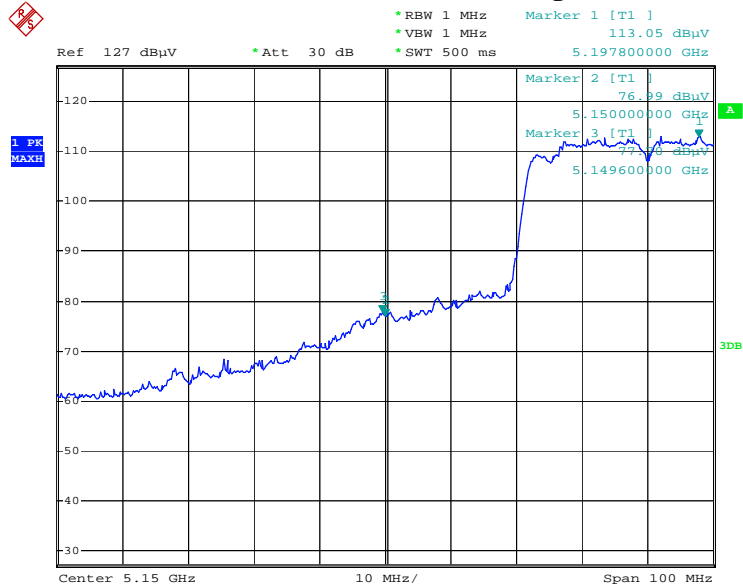
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

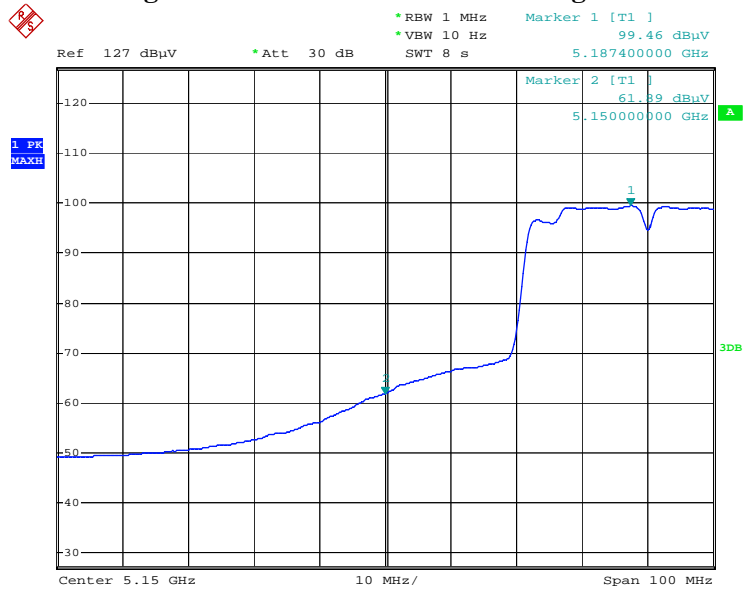
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

### Peak Detector of conducted Band Edge Delta-Chain A



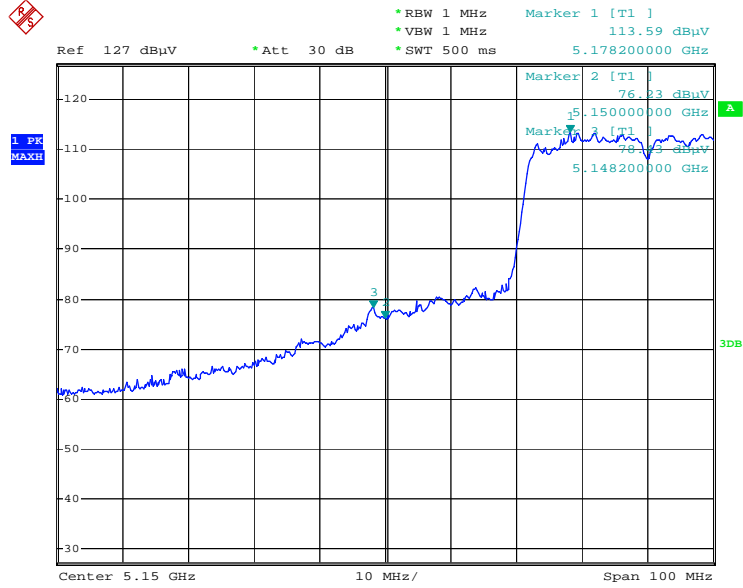
5190B-2  
 Date: 8.MAR.2012 11:27:17

### Average Detector of conducted Band Edge Delta-Chain A



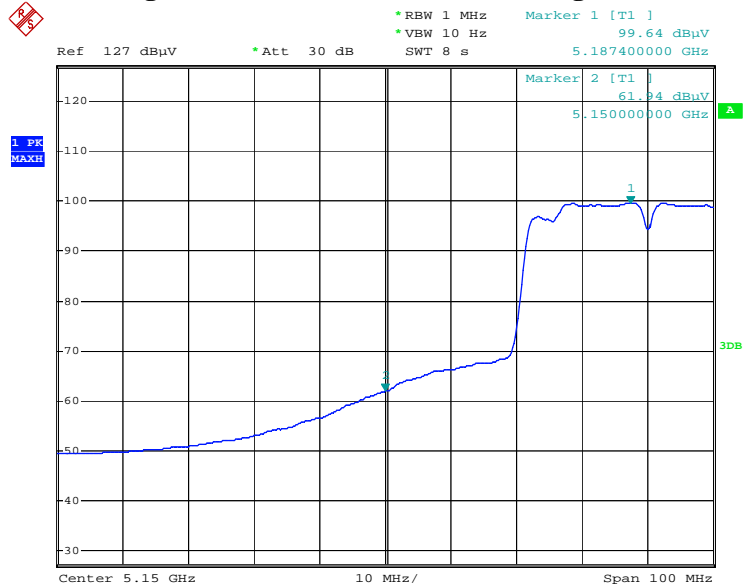
5190B-2  
 Date: 8.MAR.2012 11:26:48

**Peak Detector of conducted Band Edge Delta-Chain B**



5190B-2  
 Date: 8.MAR.2012 11:25:27

**Average Detector of conducted Band Edge Delta-Chain B**



5190B-2  
 Date: 8.MAR.2012 11:26:06



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 46

Frequency (MHz)	Power Setting Measured (dBm)	
	(Average)	
	Chain A	Chain B
5230	13.40	13.21

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5230	35.102	59.9	95.002	Peak
Horizontal	5230	35.102	46.88	81.982	Average
Vertical	5230	35.102	71	106.102	Peak
Vertical	5230	35.102	57.29	92.392	Average

Note: 1: Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5150	95.002	48.03	46.972	74.000	Peak
Horizontal	5150	81.982	49.34	32.642	54.000	Average
Vertical	5150	106.102	48.03	58.072	74.000	Peak
Vertical	5150	92.392	49.34	43.052	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5147.8	95.002	48.71	46.292	74.000	Peak
Horizontal	5150	81.982	49.42	32.562	54.000	Average
Vertical	5147.8	106.102	48.71	57.392	74.000	Peak
Vertical	5150	92.392	49.42	42.972	54.000	Average

Note:

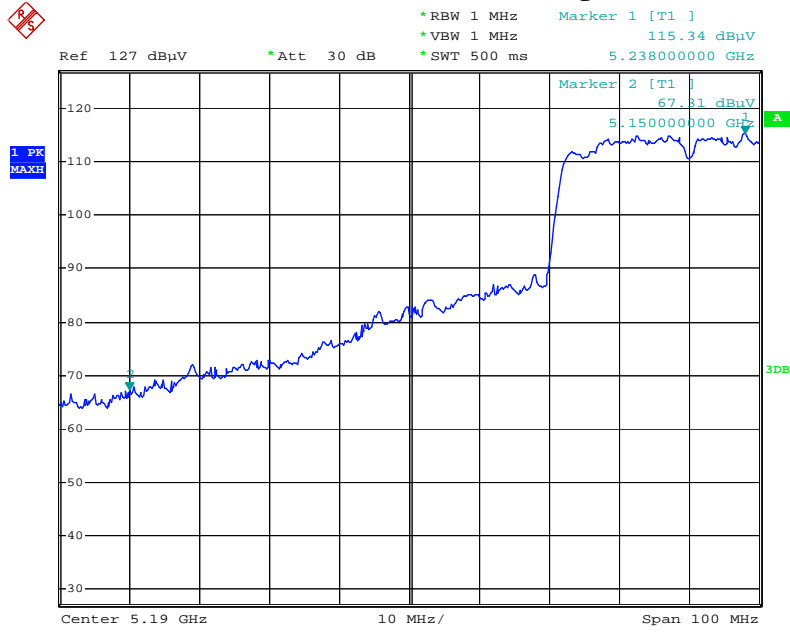
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

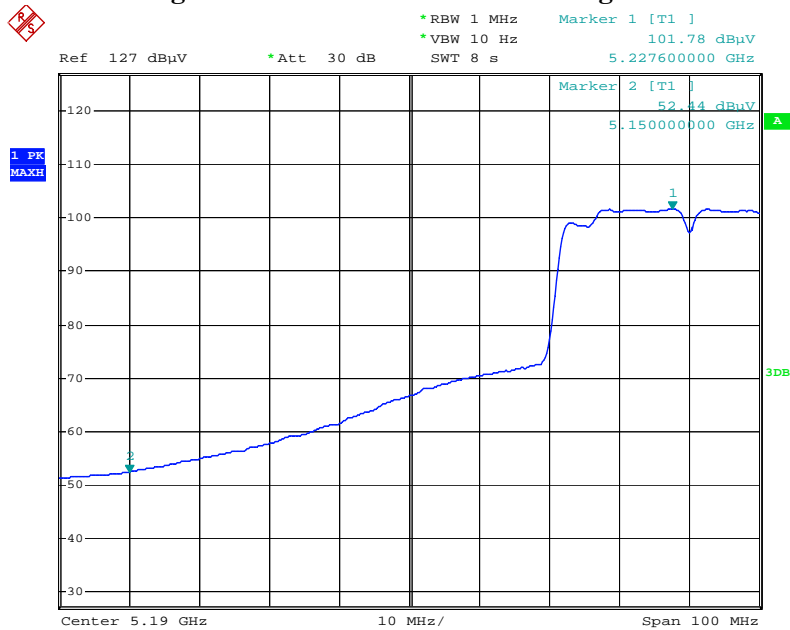
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

**Peak Detector of conducted Band Edge Delta-Chain A**



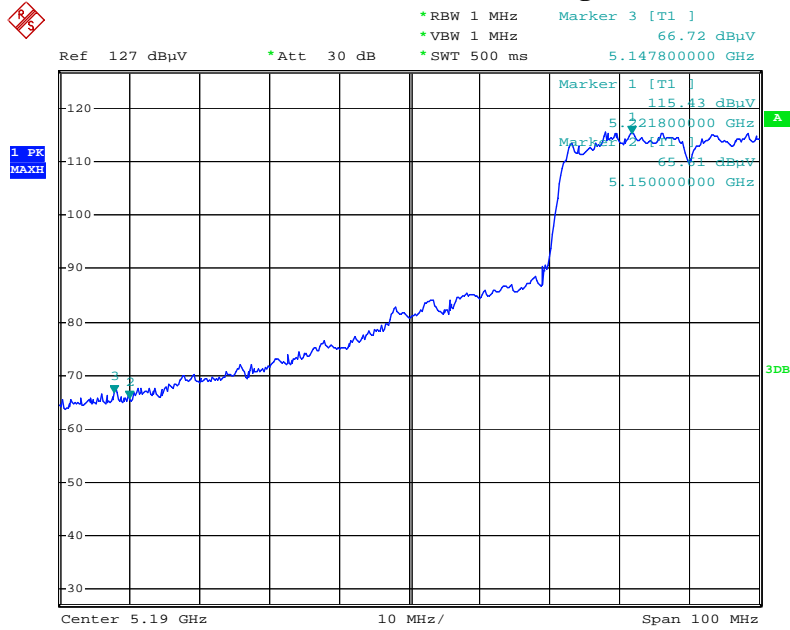
Date: 19.MAR.2012 17:26:59

**Average Detector of conducted Band Edge Delta-Chain A**



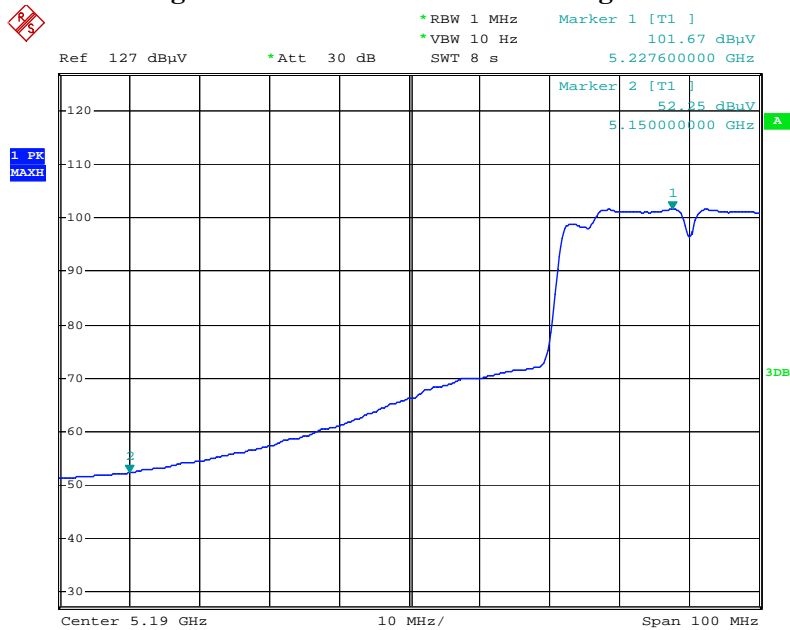
Date: 19.MAR.2012 17:27:41

### Peak Detector of conducted Band Edge Delta-Chain B



Date: 19.MAR.2012 17:28:41

### Average Detector of conducted Band Edge Delta-Chain B



Date: 19.MAR.2012 17:29:16

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 54

Frequency (MHz)	Power Setting Measured (dBm)	
	(Average)	
	Chain A	Chain B
5270	13.06	13.26

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dBuV/m]	Detector
Horizontal	5270	35.43	60.29	95.719	Peak
Horizontal	5270	35.43	47.27	82.699	Average
Vertical	5270	35.43	71.2	106.629	Peak
Vertical	5270	35.43	57.16	92.589	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5351.6	95.719	52.04	43.679	74.000	Peak
Horizontal	5350	82.699	51.21	31.489	54.000	Average
Vertical	5351.6	106.629	52.04	54.589	74.000	Peak
Vertical	5350	92.589	51.21	41.379	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiment Limit (dBuV/m)	Detector
Horizontal	5351	95.719	52.22	43.499	74.000	Peak
Horizontal	5350	82.699	51.21	31.489	54.000	Average
Vertical	5351	106.629	52.22	54.409	74.000	Peak
Vertical	5350	92.589	51.21	41.379	54.000	Average

Note:

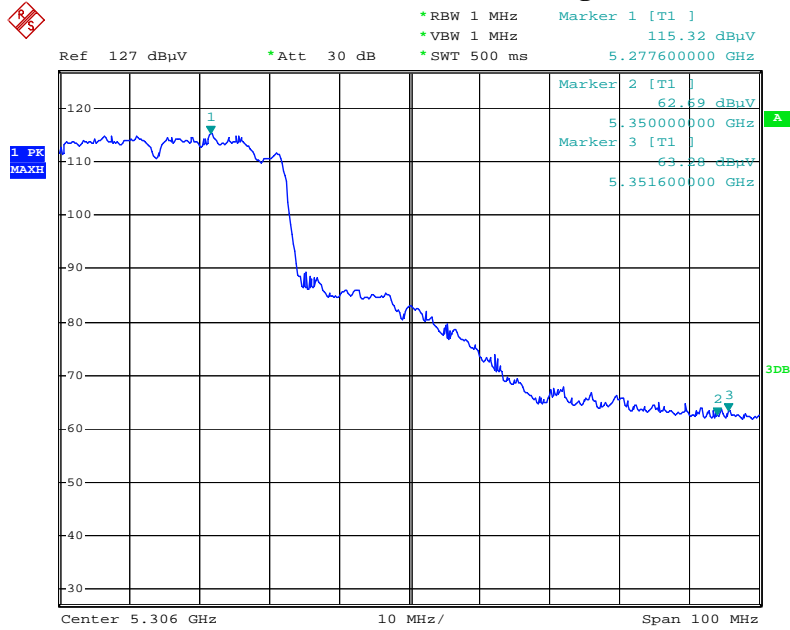
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

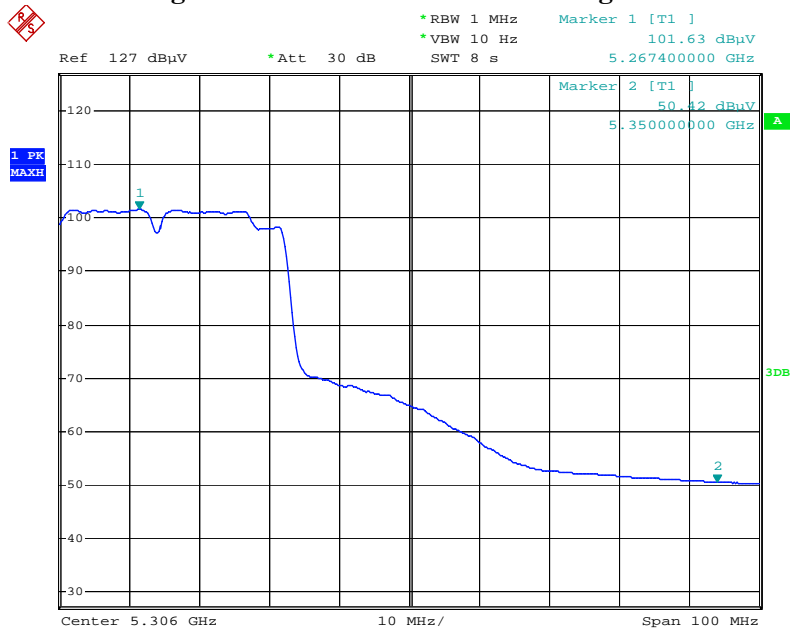
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

### Peak Detector of conducted Band Edge Delta-Chain A



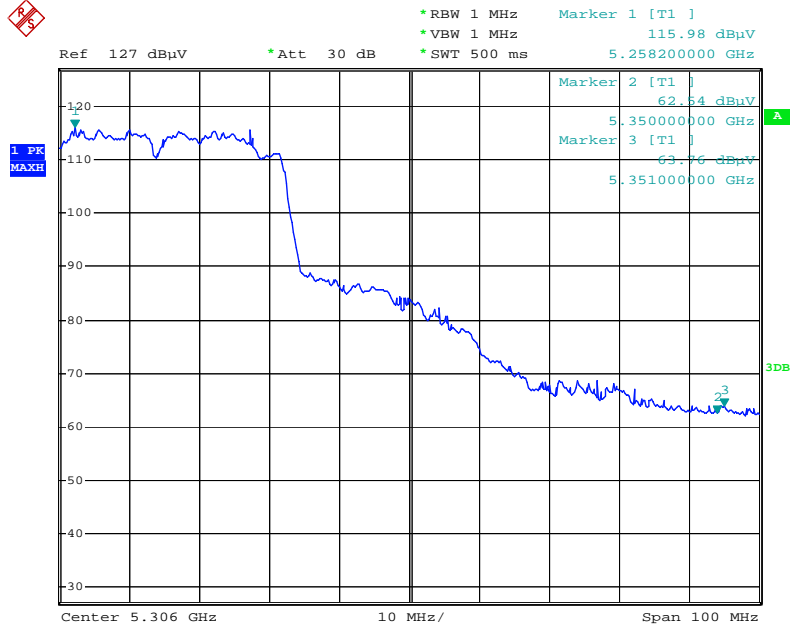
Date: 19.MAR.2012 17:32:40

### Average Detector of conducted Band Edge Delta-Chain A



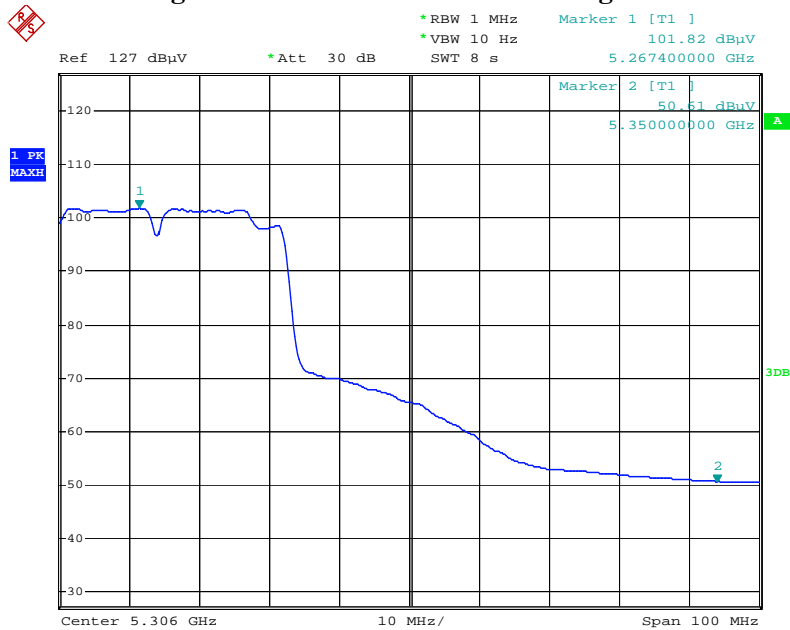
Date: 19.MAR.2012 17:33:09

**Peak Detector of conducted Band Edge Delta-Chain B**



Date: 19.MAR.2012 17:31:19

**Average Detector of conducted Band Edge Delta-Chain B**



Date: 19.MAR.2012 17:31:51



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5310	12.46	12.68

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5310	37.553	56	93.553	Peak
Horizontal	5310	37.553	42.64	80.193	Average
Vertical	5310	35.655	70.33	105.986	Peak
Vertical	5310	35.655	56.27	91.926	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5352.6	93.553	37.59	55.963	74.000	Peak
Horizontal	5350	80.193	40.49	39.703	54.000	Average
Vertical	5352.6	105.986	37.59	68.396	74.000	Peak
Vertical	5350	91.926	40.49	51.436	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5350	93.553	36.6	56.953	74.000	Peak
Horizontal	5350	80.193	40.27	39.923	54.000	Average
Vertical	5350	105.986	36.6	69.386	74.000	Peak
Vertical	5350	91.926	40.27	51.656	54.000	Average

Note:

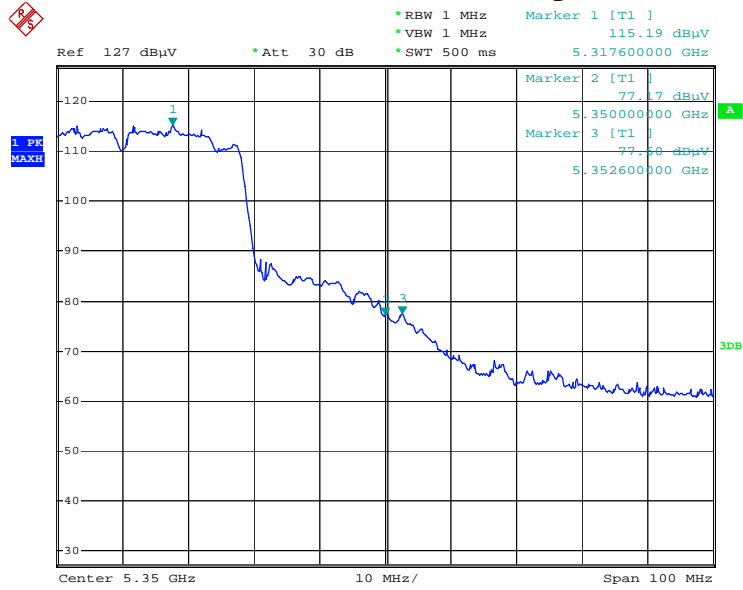
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

$\Delta$  = Conducted Band Edge Delta (Peak or Average)

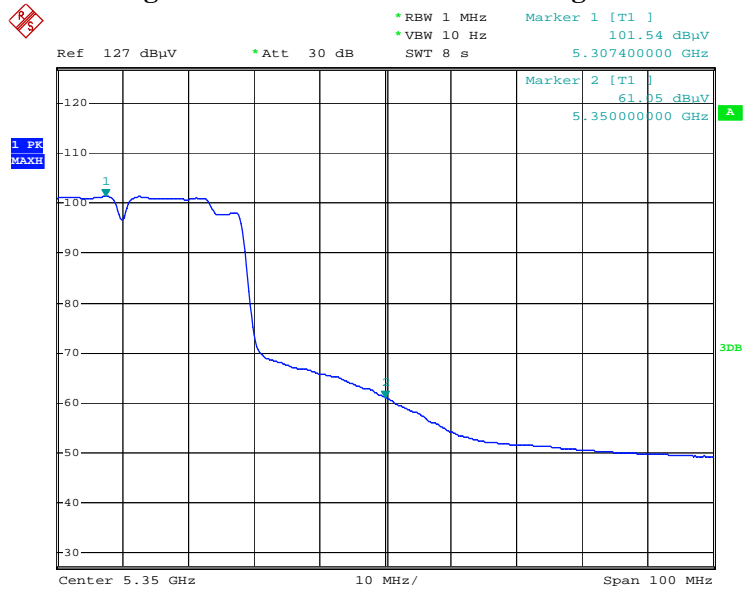
### Peak Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:28:10

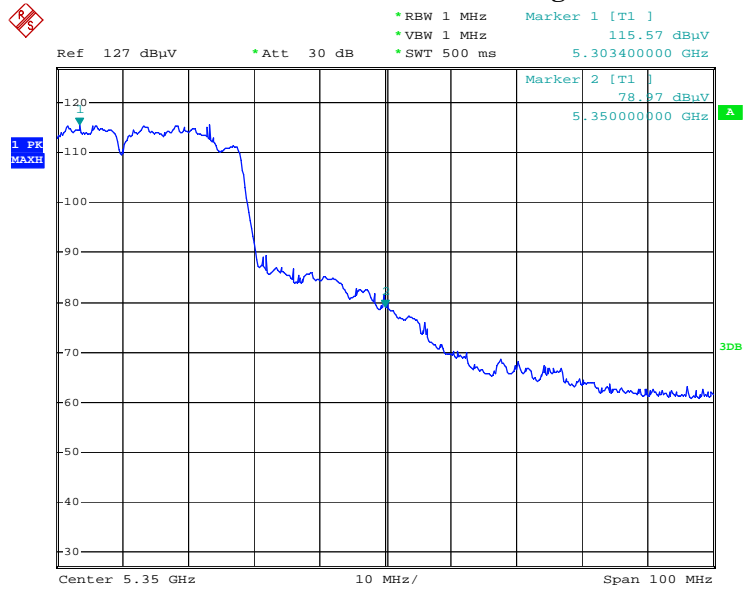
### Average Detector of conducted Band Edge Delta-Chain A



5190B-2

Date: 8.MAR.2012 11:28:44

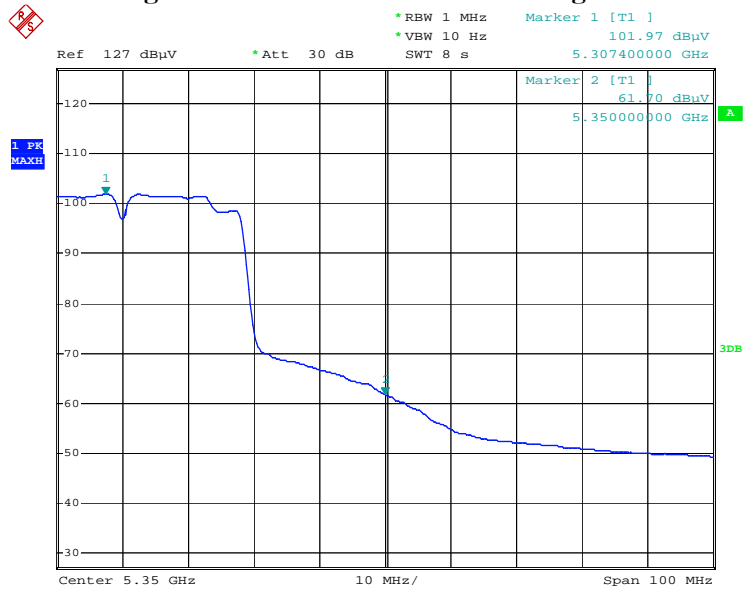
**Peak Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:29:45

**Average Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:29:19

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5510	13.07	13.31

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5510	38.124	55.17	93.294	Peak
Horizontal	5510	38.124	42.33	80.454	Average
Vertical	5510	38.124	68.76	106.884	Peak
Vertical	5510	38.124	55.28	93.404	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5460	93.294	39.66	53.634	74.000	Peak
Horizontal	5460	80.454	40.91	39.544	54.000	Average
Vertical	5460	106.884	39.66	67.224	74.000	Peak
Vertical	5460	93.404	40.91	52.494	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5458.6	93.294	38.82	54.474	74.000	Peak
Horizontal	5460	80.454	40.42	40.034	54.000	Average
Vertical	5458.6	106.884	38.82	68.064	74.000	Peak
Vertical	5460	93.404	40.42	52.984	54.000	Average

Note:

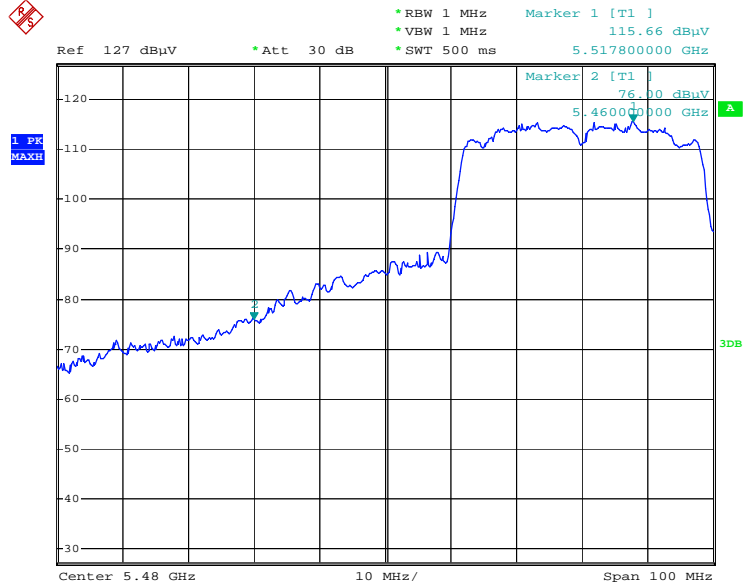
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

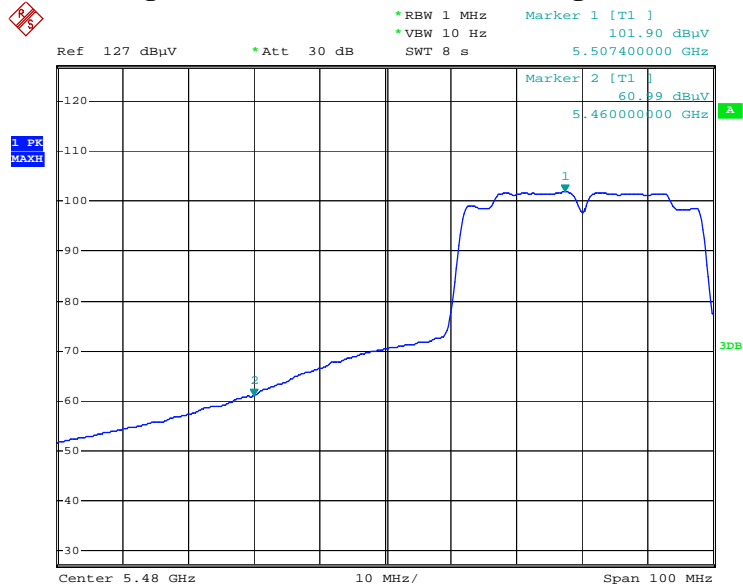
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

**Peak Detector of conducted Band Edge Delta-Chain A**



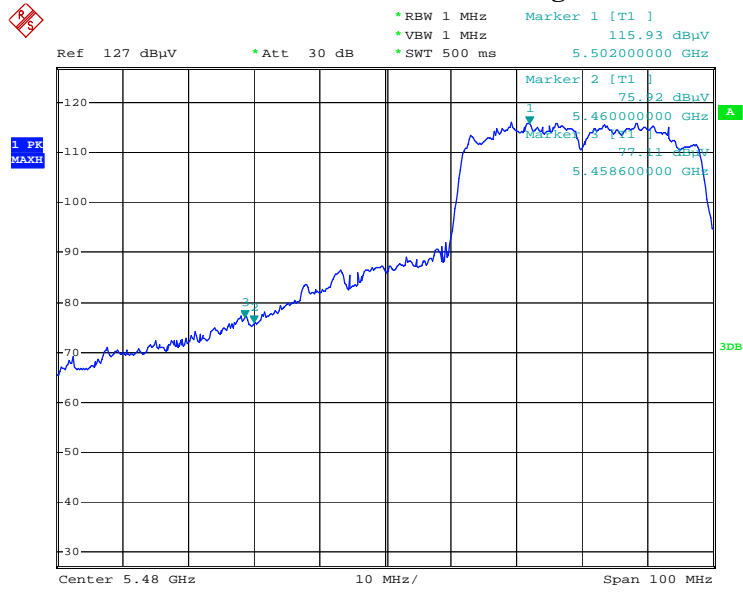
5190B-2  
 Date: 8.MAR.2012 11:32:56

**Average Detector of conducted Band Edge Delta-Chain A**



5190B-2  
 Date: 8.MAR.2012 11:32:25

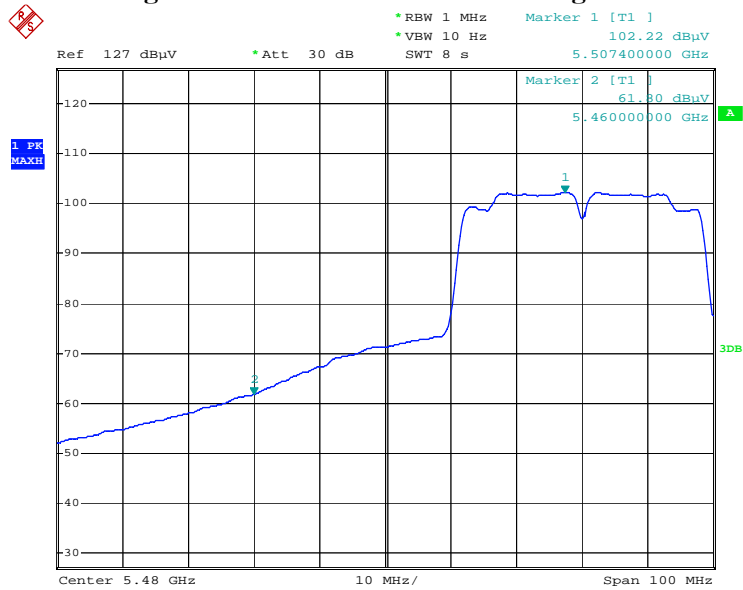
**Peak Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:31:05

**Average Detector of conducted Band Edge Delta-Chain B**



5190B-2

Date: 8.MAR.2012 11:31:50



Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 110

Frequency (MHz)	Power Setting Measured (dBm) (Average)	
	Chain A	Chain B
5550	13.36	13.18

**Fundamental Filed Strength**

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dB(uV)]	Emission Level [dB(uV/m)]	Detector
Horizontal	5550	36.339	59.74	96.078	Peak
Horizontal	5550	36.339	46.16	82.498	Average
Vertical	5550	37.856	68.21	106.066	Peak
Vertical	5550	37.856	54.93	92.786	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=30Hz

**Band Edge Test Data (Chain A)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5458.2	96.078	49.74	46.338	74.000	Peak
Horizontal	5460	82.498	51.03	31.468	54.000	Average
Vertical	5458.2	106.066	49.74	56.326	74.000	Peak
Vertical	5460	92.786	51.03	41.756	54.000	Average

**Band Edge Test Data (Chain B)**

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	$\Delta$ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5458.2	96.078	50.25	45.828	74.000	Peak
Horizontal	5460	82.498	50.68	31.818	54.000	Average
Vertical	5458.2	106.066	50.25	55.816	74.000	Peak
Vertical	5460	92.786	50.68	42.106	54.000	Average

Note:

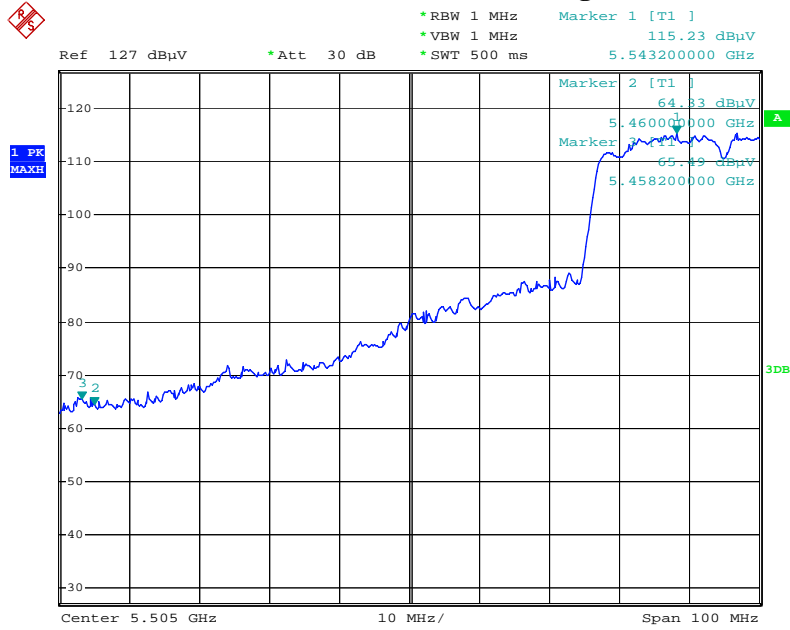
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength =  $F - \Delta$

F = Fundamental field Strength (Peak or Average)

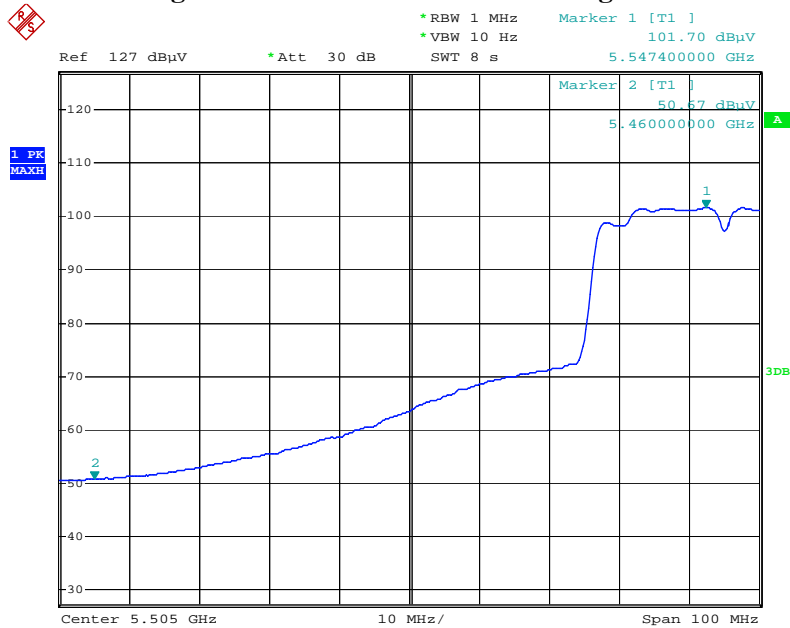
$\Delta$  = Conducted Band Edge Delta (Peak or Average)

### Peak Detector of conducted Band Edge Delta-Chain A



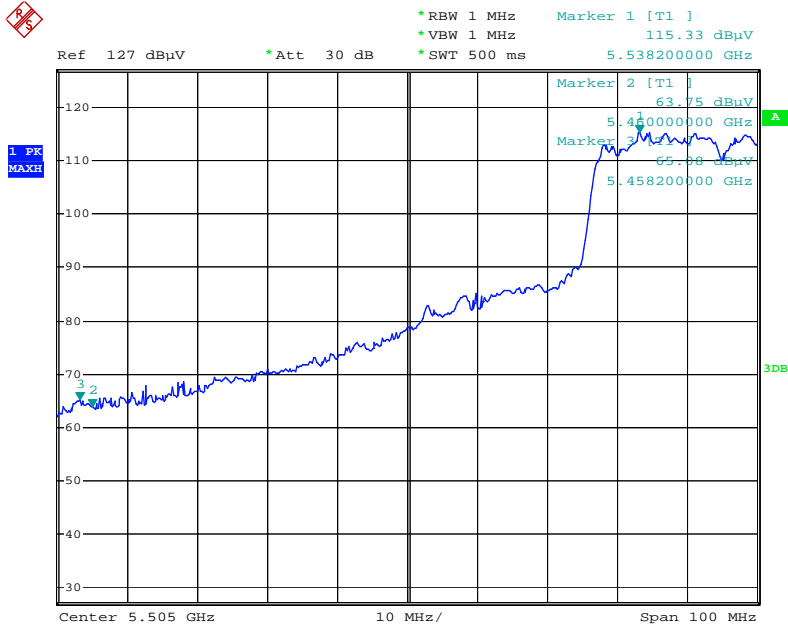
Date: 19.MAR.2012 17:35:15

### Average Detector of conducted Band Edge Delta-Chain A



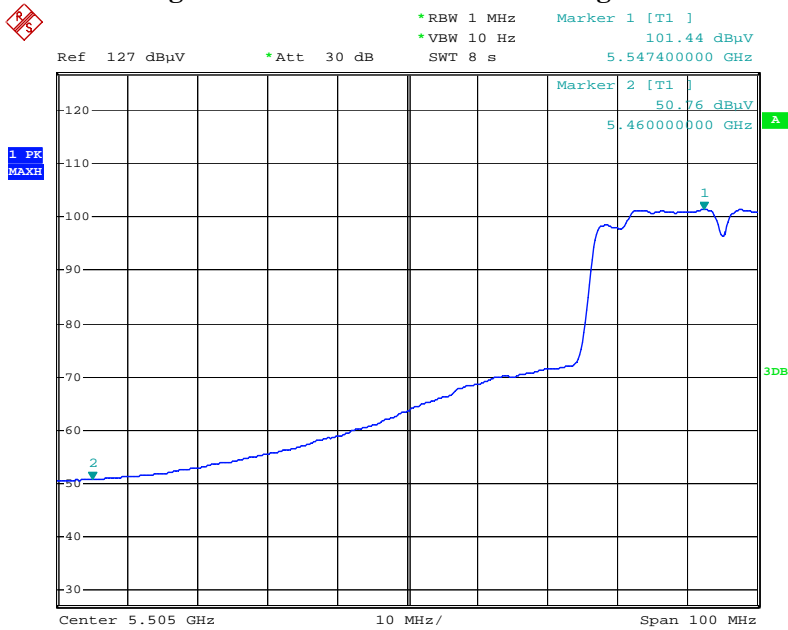
Date: 19.MAR.2012 17:35:44

### Peak Detector of conducted Band Edge Delta-Chain B



Date: 19.MAR.2012 17:36:36

### Average Detector of conducted Band Edge Delta-Chain B



Date: 19.MAR.2012 17:37:00

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5470.000	18.334	-64.900	-46.566	-19.566	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5470.000	19.335	-61.120	-41.785	-14.785	-27.000	Pass

Product : Intel® Centrino® Advanced-N 6230  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 134

**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5725.000	18.649	-75.820	-57.171	-30.171	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5725.000	19.372	-75.570	-56.198	-29.198	-27.000	Pass

## 5. EMI Reduction Method During Compliance Testing

No modification was made during testing.

## Attachment 1: EUT Test Photographs



## Attachment 2: EUT Detailed Photographs