

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)

Maximum conducted output power Measurement:

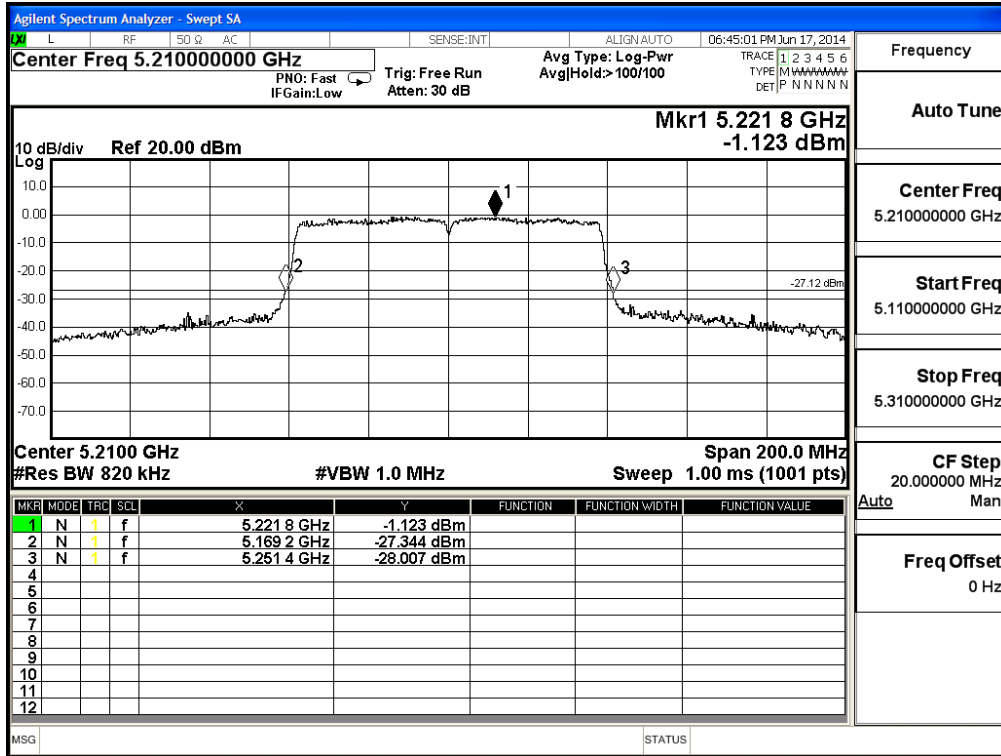
(CHAIN A+B+C)

Channel Number	Frequency (MHz)	Data Rate (Mbps)	26dB Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Output Power (dBm)	Output Power Limit	
								(dBm)	dBm+10log(BW)
42	5210	97.5	81.800	8.79	9.47	8.60	13.74	24	30.13
58	5290	97.5	81.400	8.62	9.54	8.71	13.75	24	30.11
106	5530	97.5	81.400	9.36	10.20	9.15	14.37	24	30.11
122	5610	97.5	81.600	9.29	10.36	9.49	14.51	24	30.12
138 (Band3)	5690	97.5	75.000	9.54	10.38	9.52	14.60	24	29.75
138 (Band4)	5690	97.5	5.800	-5.69	-6.94	-7.06	-1.75	30	24.63

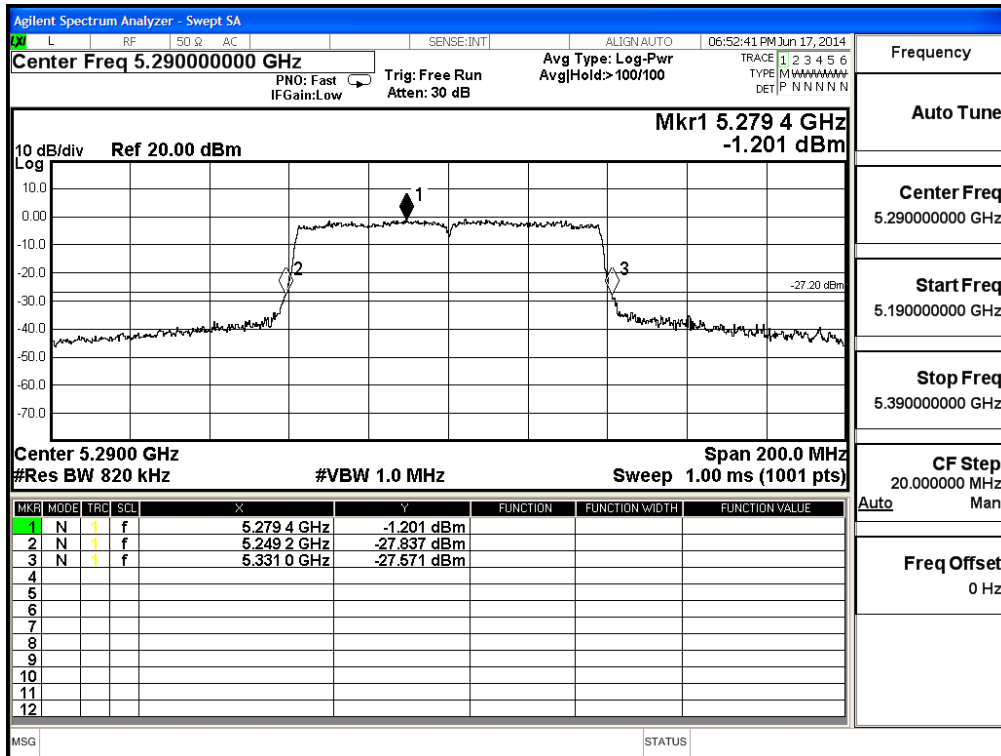
Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. Output Power (dBm) = 10*LOG (Chain A Power (mW)+ Chain B Power (mW) + Chain C Power (mW))
3. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
4. According to KDB 644545 D01 Guidance for IEEE 802.11ac v01, the operation channel work across the 5470-5725 MHz and 5725-5825 MHz band, the operation channel 5725 MHz is a dividing point, must each meet the band limits.

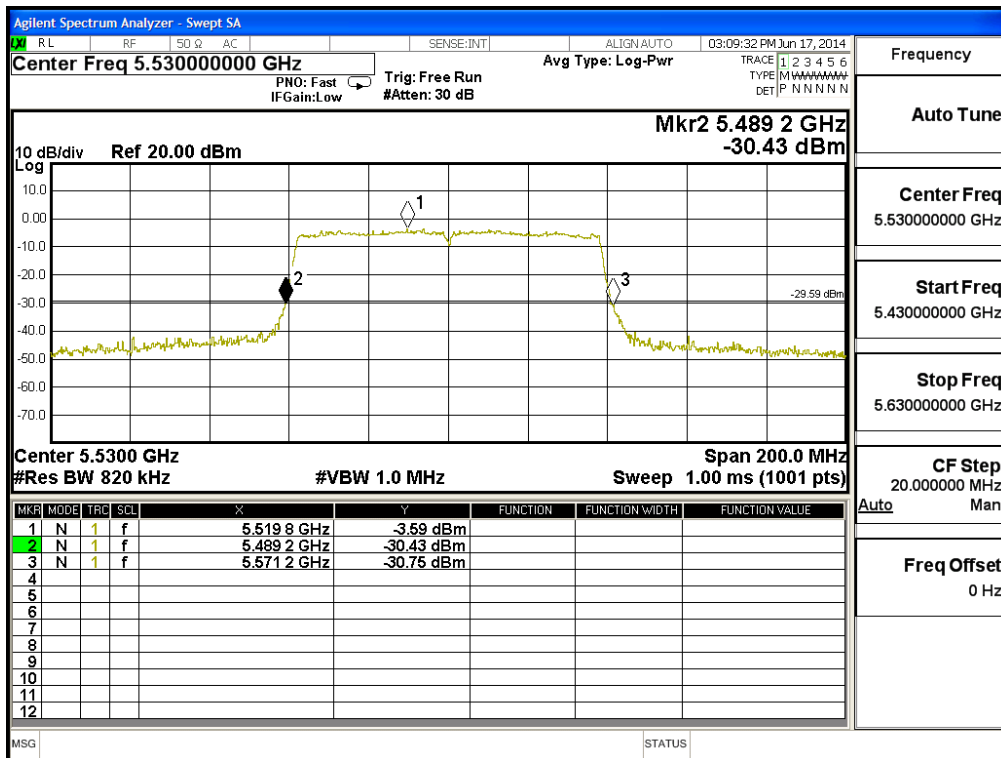
26dB Occupied Bandwidth:
Channel 42- Chain A



Channel 58- Chain A

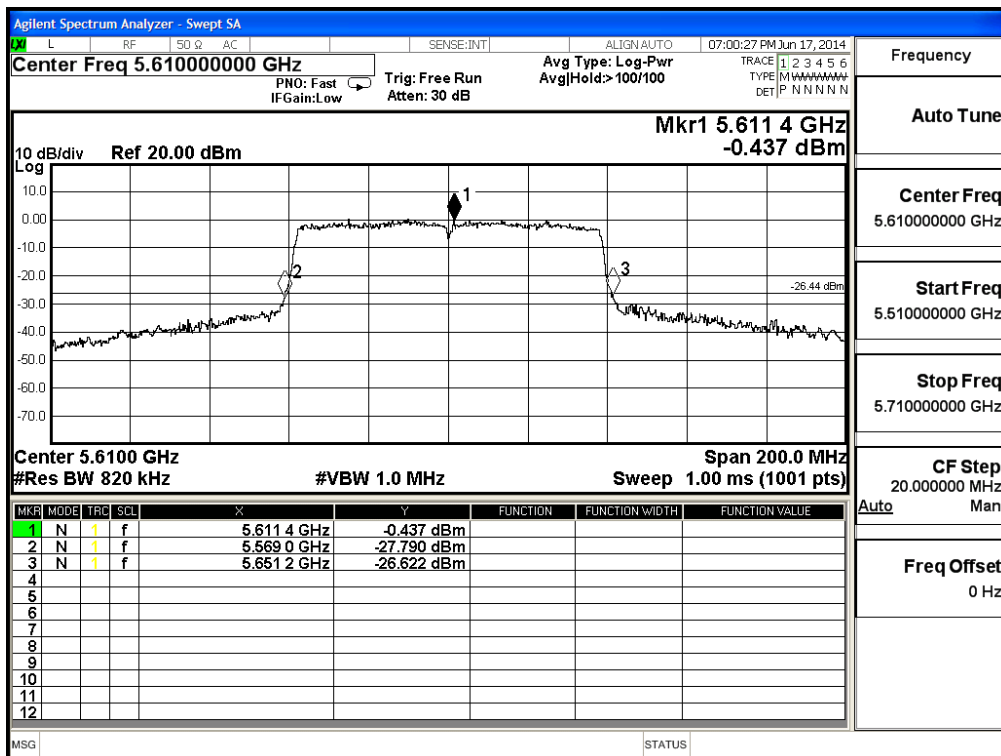


Channel 106– Chain A



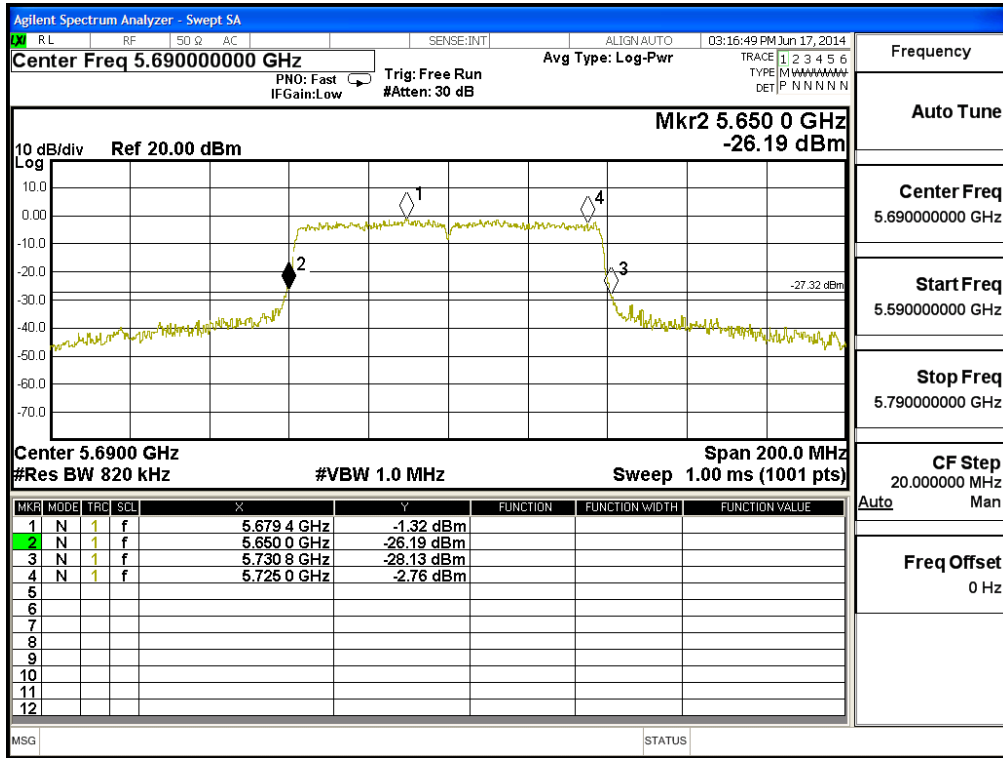
Frequency	
Auto Tune	
Center Freq	5.53000000 GHz
Start Freq	5.43000000 GHz
Stop Freq	5.63000000 GHz
CF Step	20.000000 MHz
Auto	Man
Freq Offset	0 Hz

Channel 122– Chain A

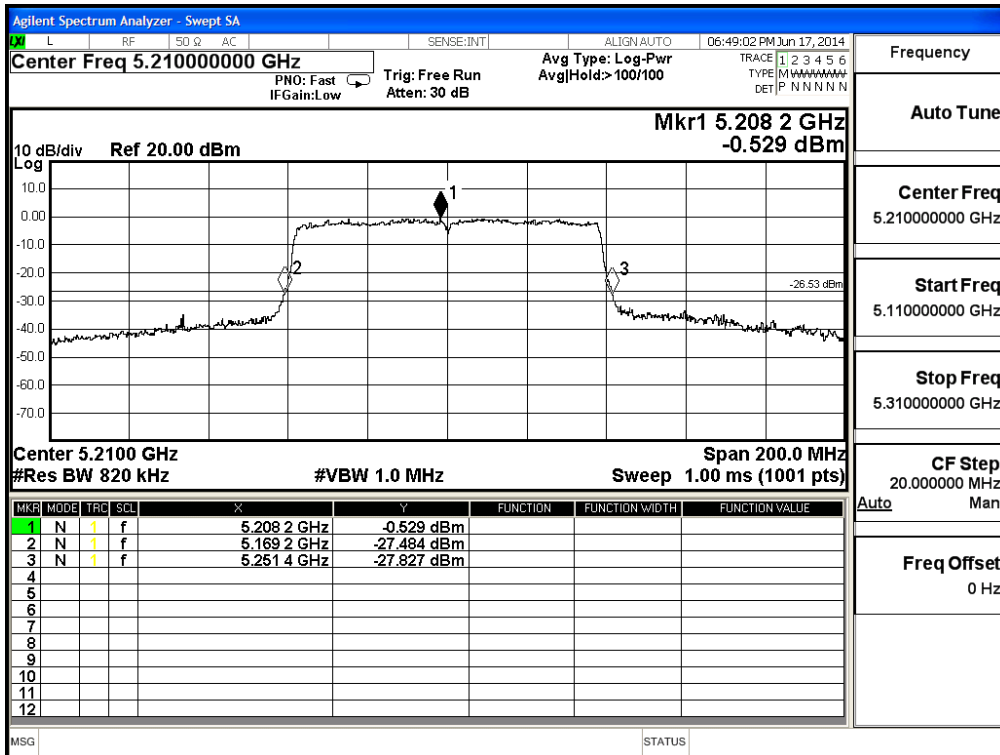


Frequency	
Auto Tune	
Center Freq	5.61000000 GHz
Start Freq	5.51000000 GHz
Stop Freq	5.71000000 GHz
CF Step	20.000000 MHz
Auto	Man
Freq Offset	0 Hz

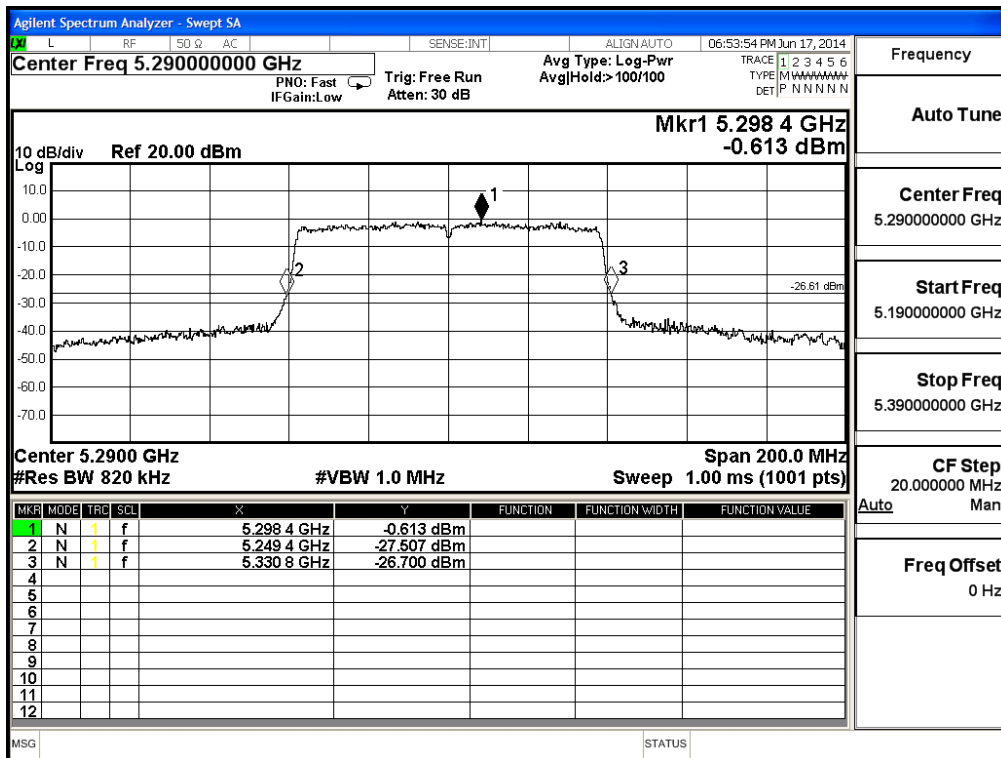
Channel 138- Chain A



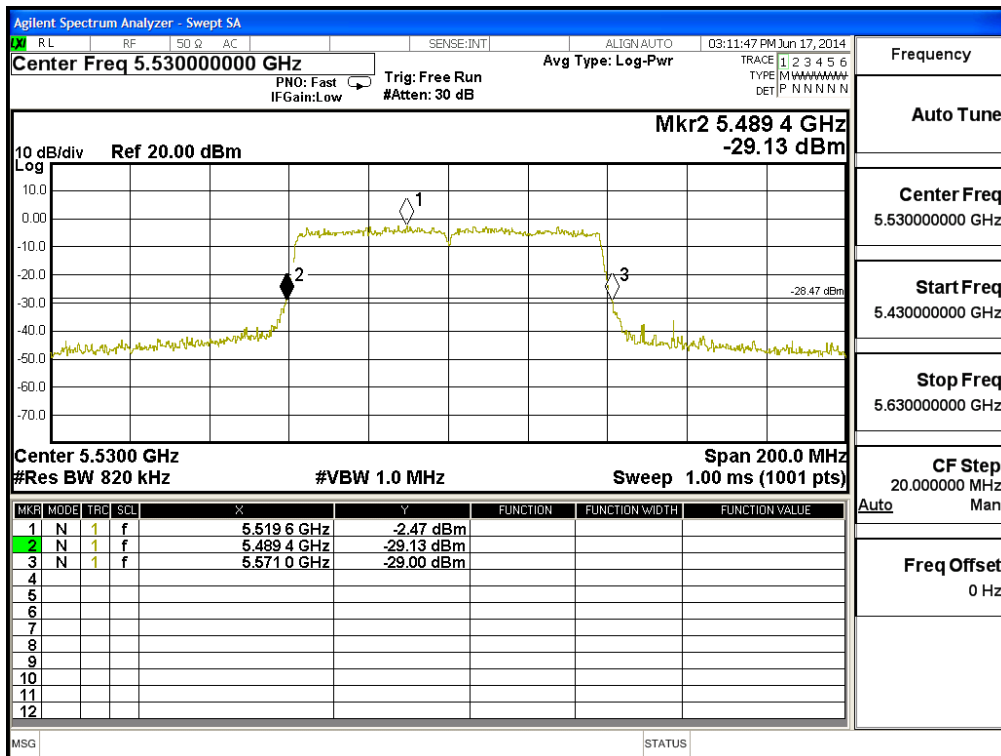
Channel 42 - Chain B



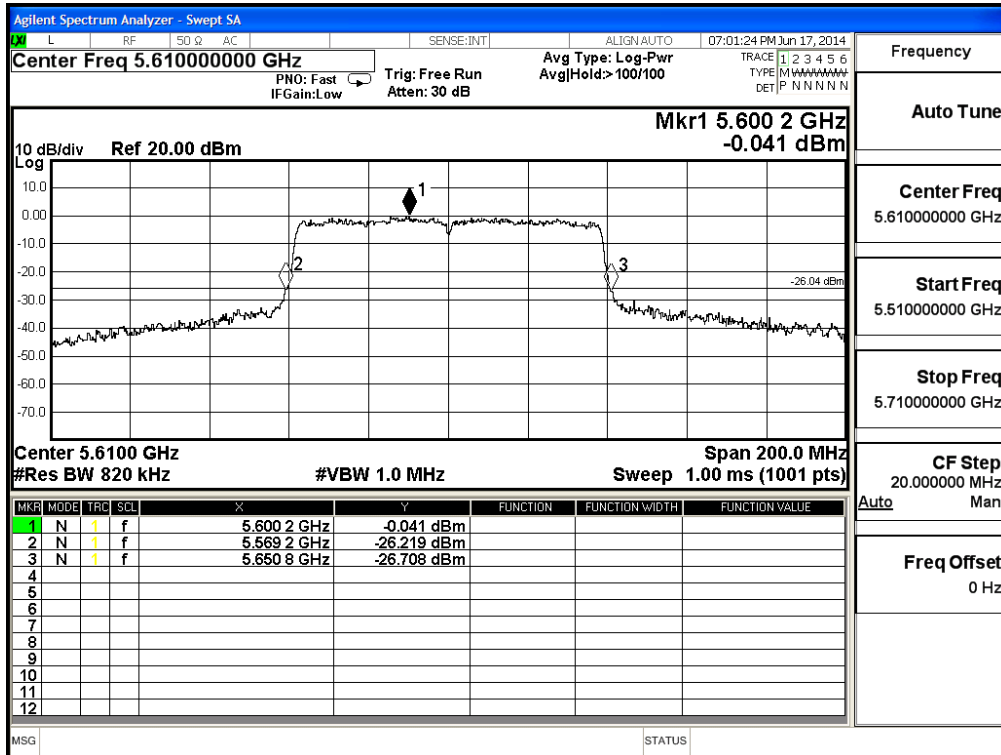
Channel 58 – Chain B



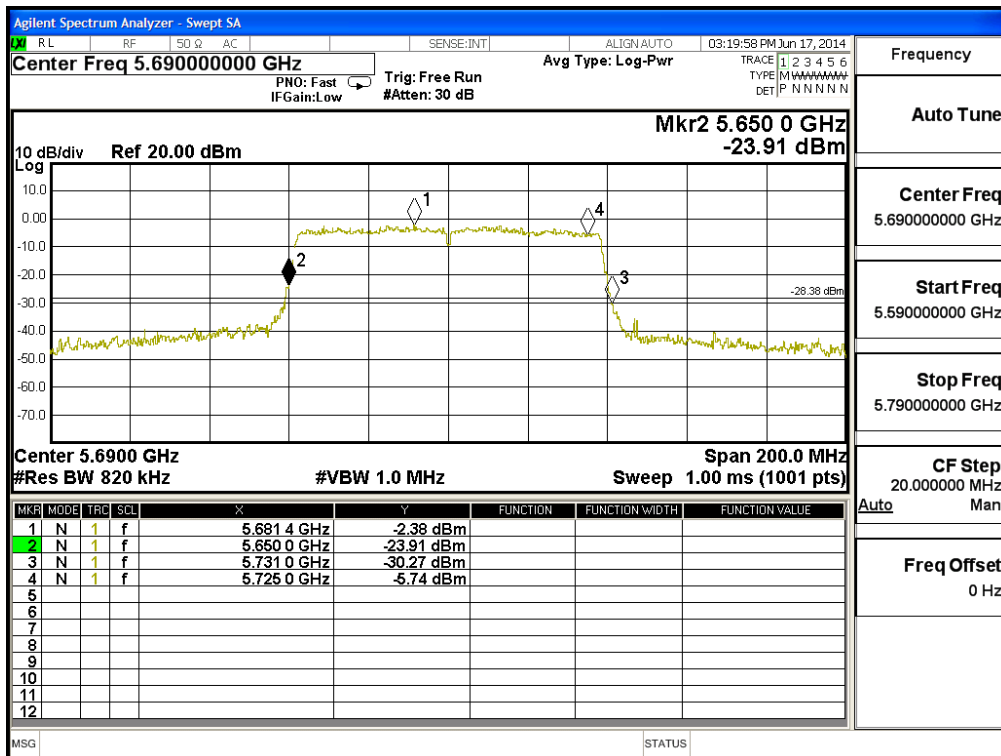
Channel 106 – Chain B



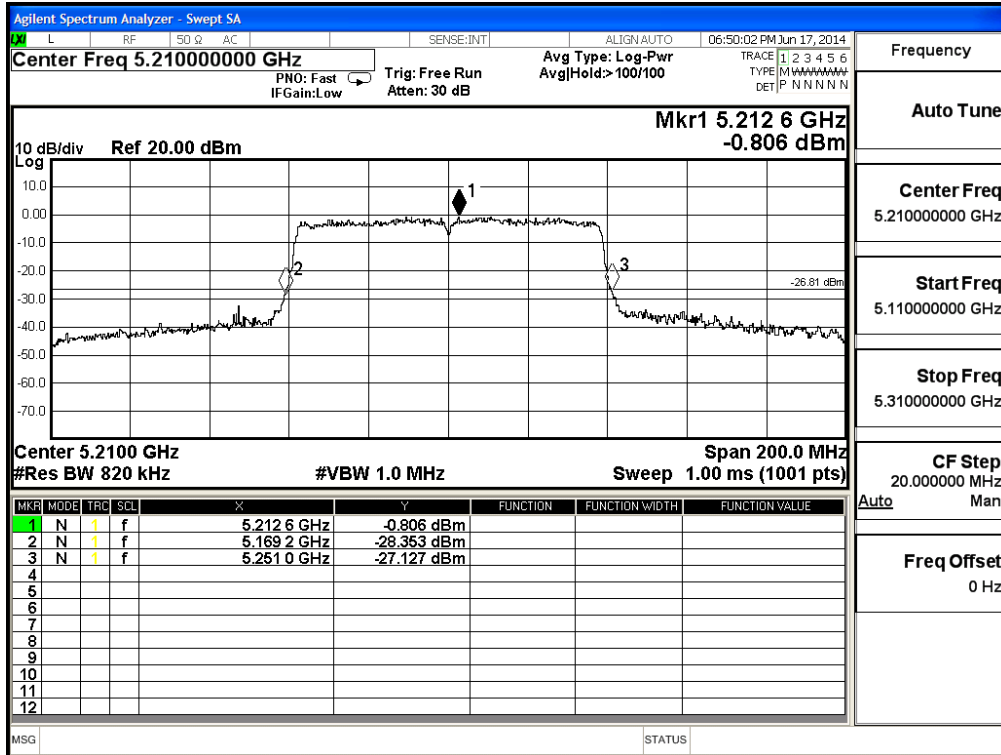
Channel 122 – Chain B



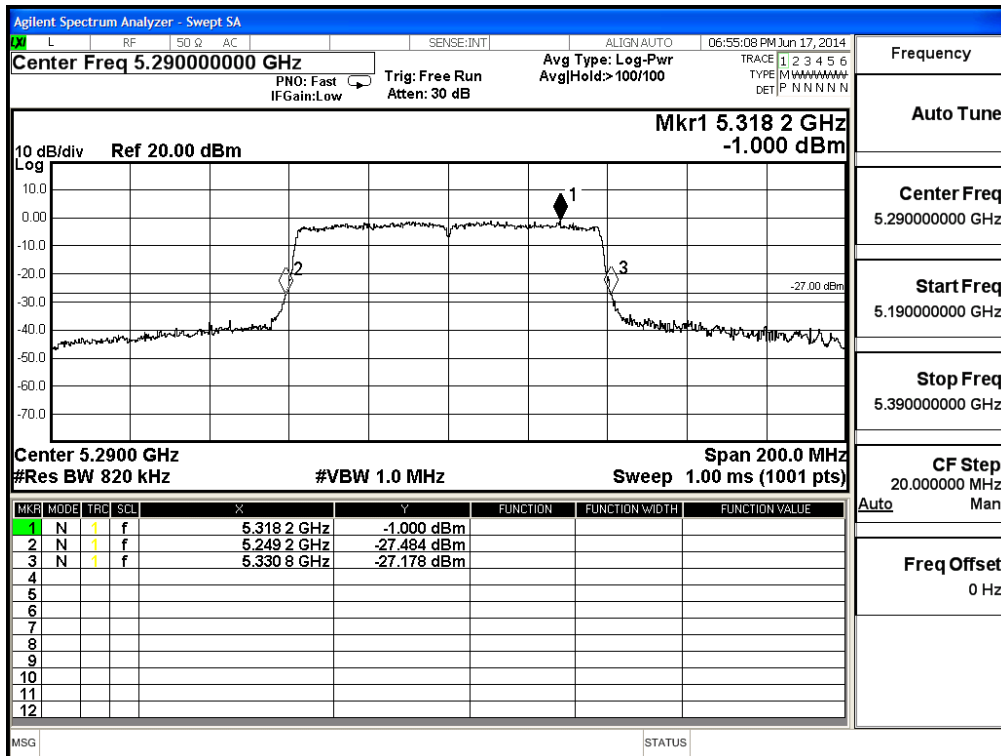
Channel 138 – Chain B



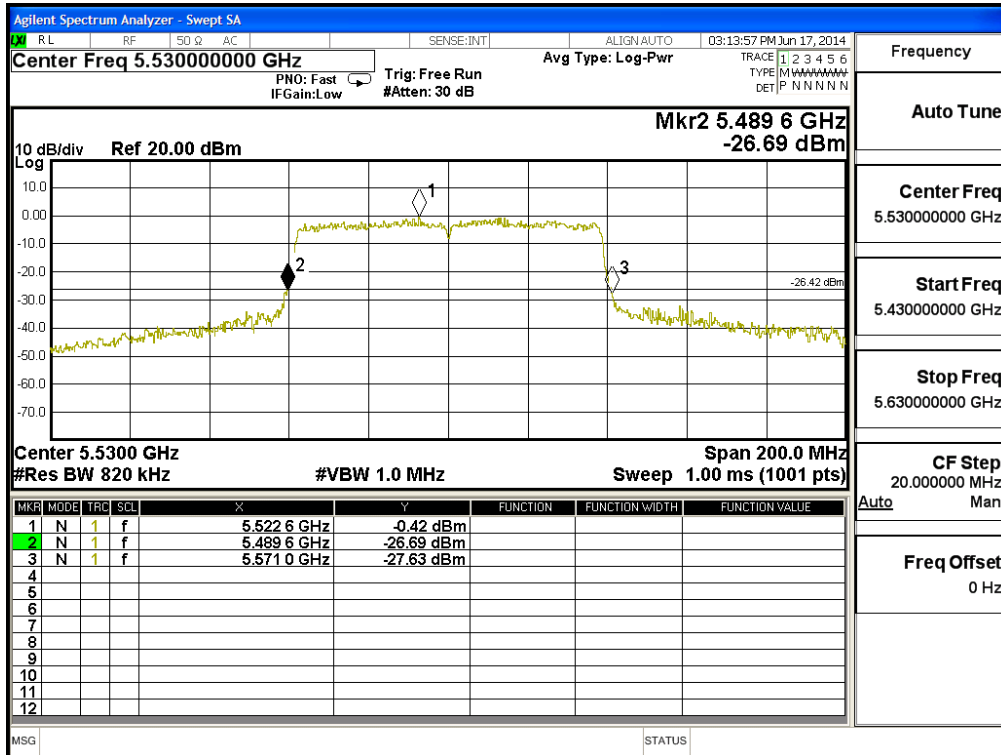
Channel 42- Chain C



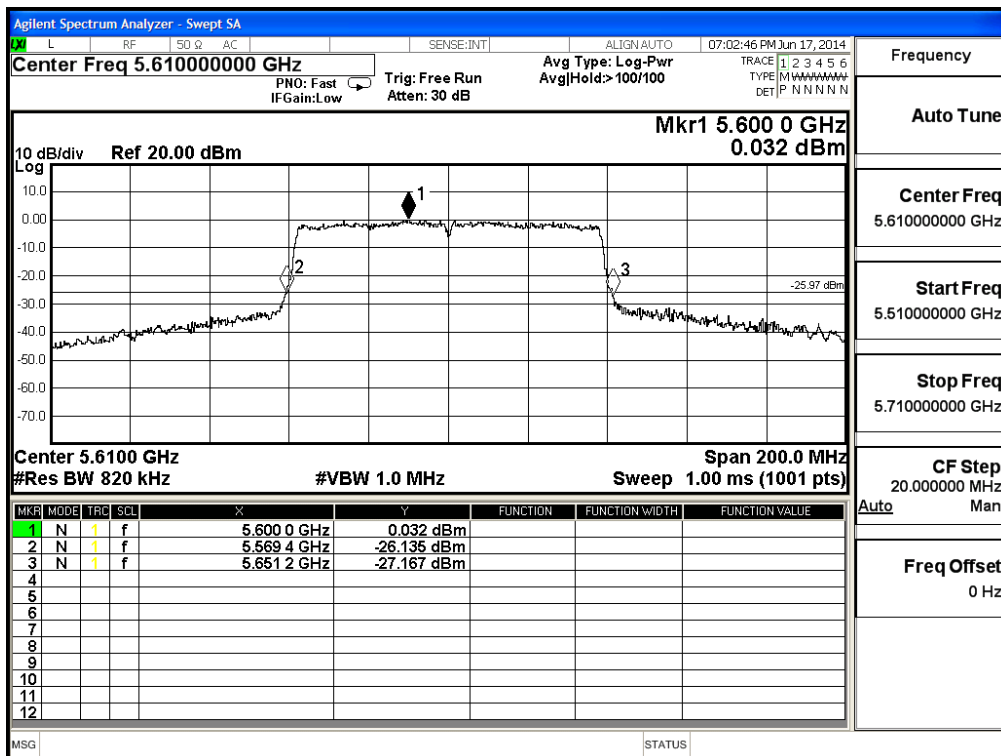
Channel 58- Chain C



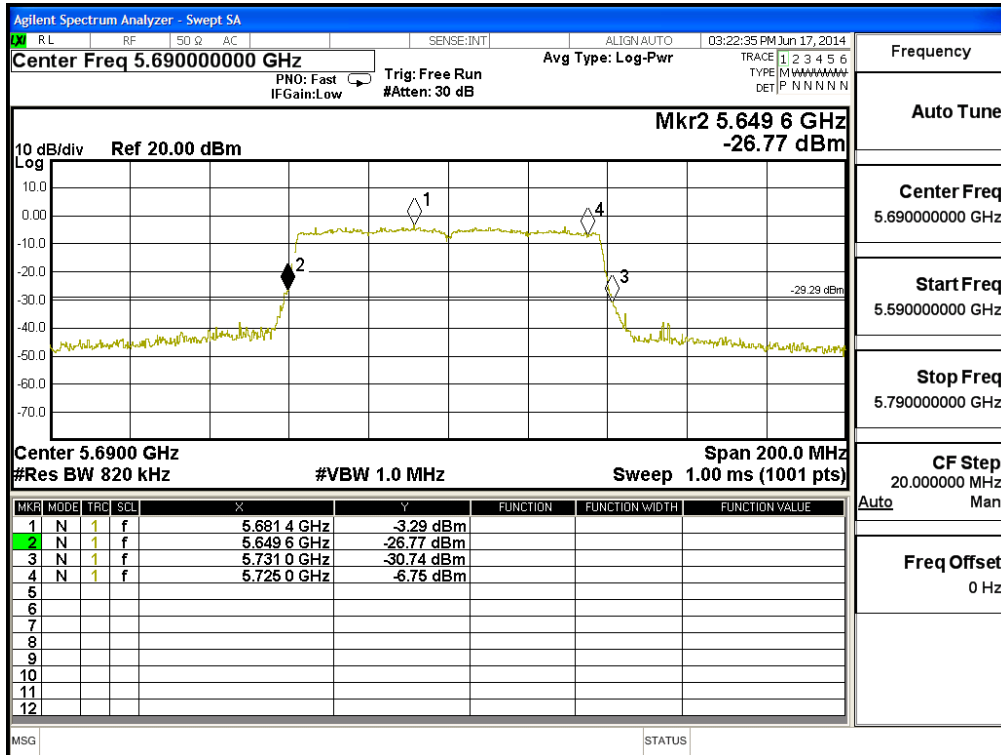
Channel 106- Chain C



Channel 122- Chain C

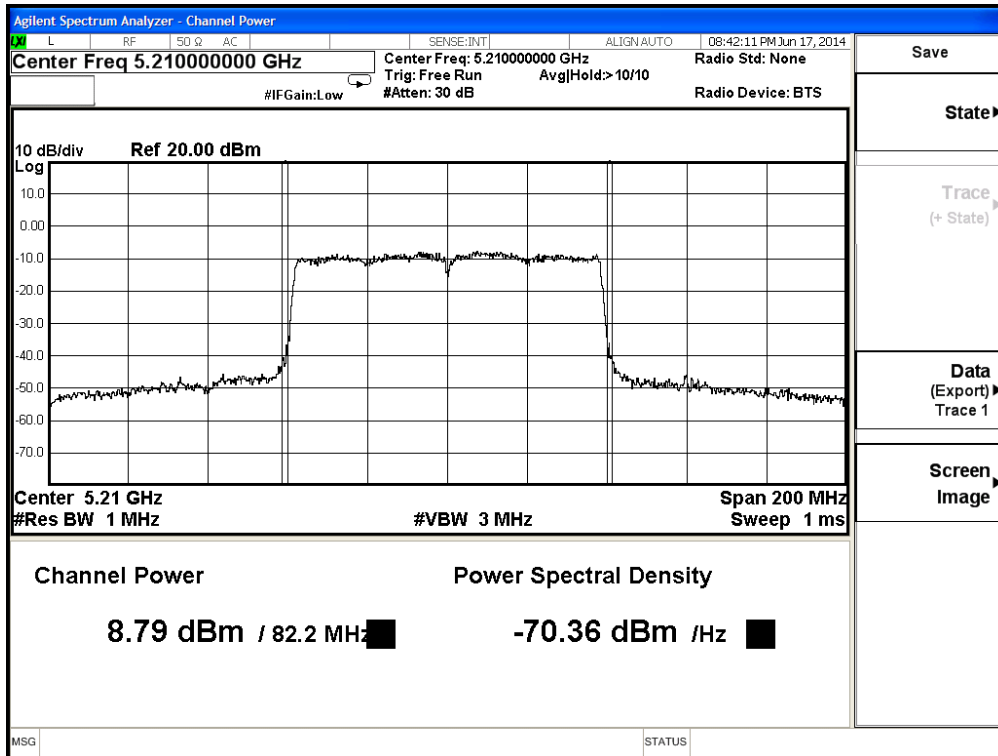


Channel 138- Chain C

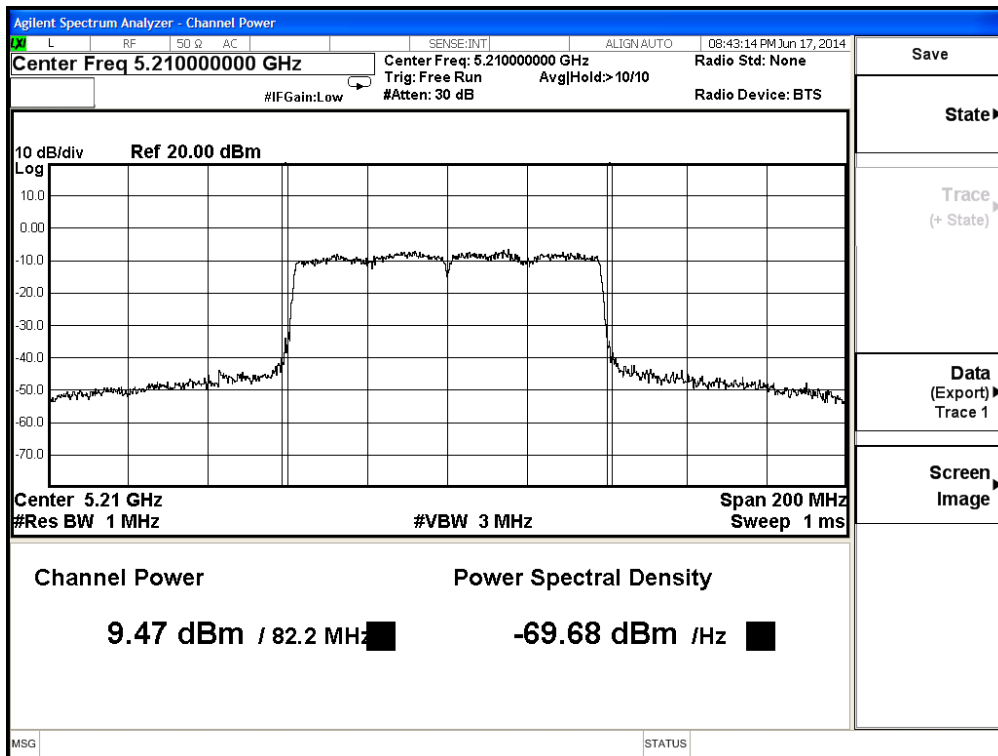


Maximum conducted output power:

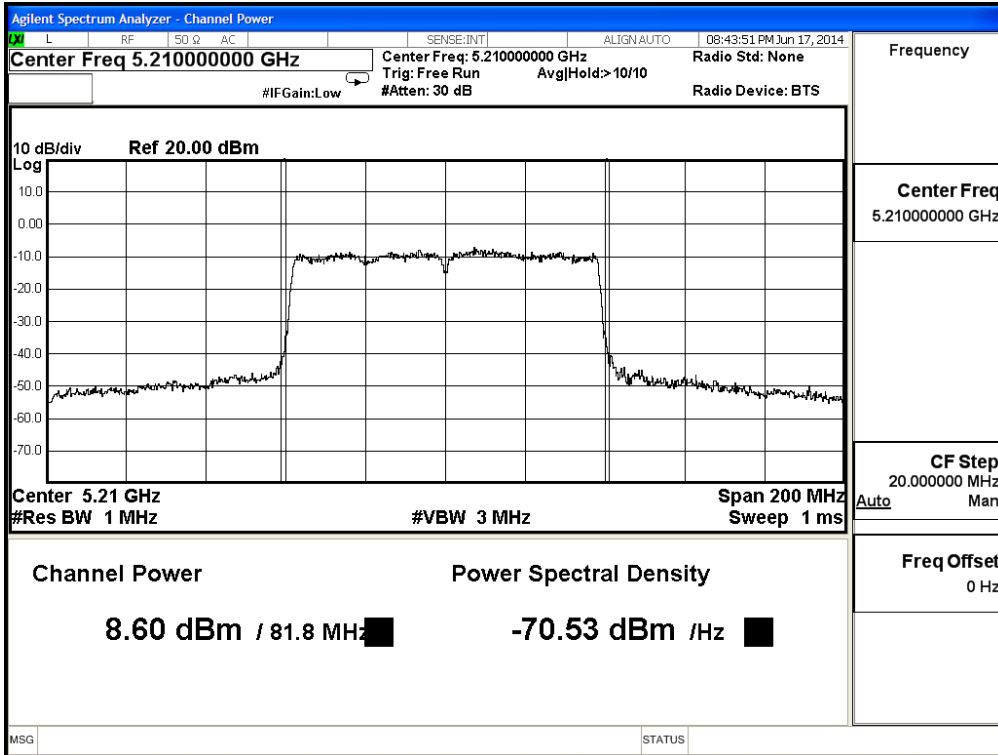
Channel 42- Chain A



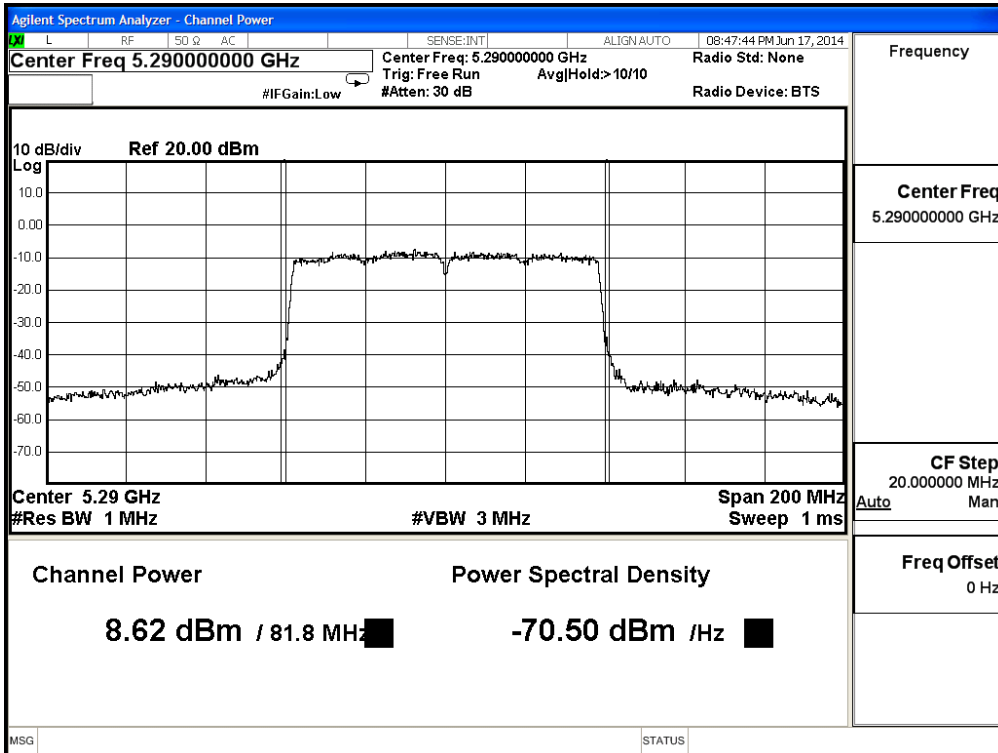
Channel 42- Chain B



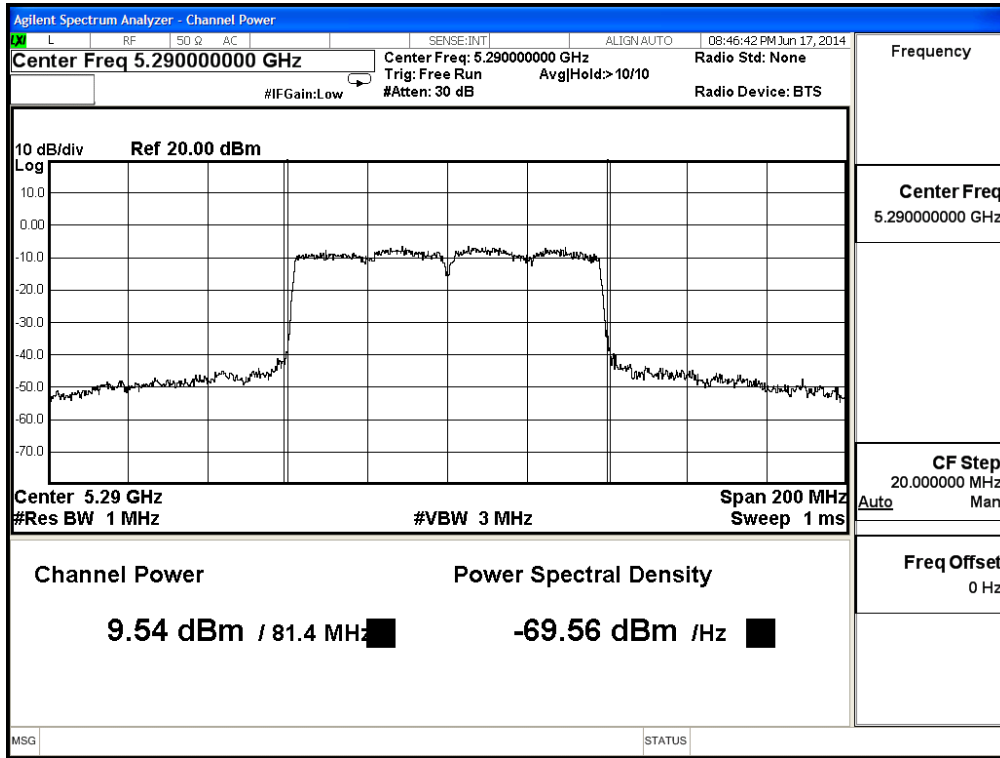
Channel 42- Chain C



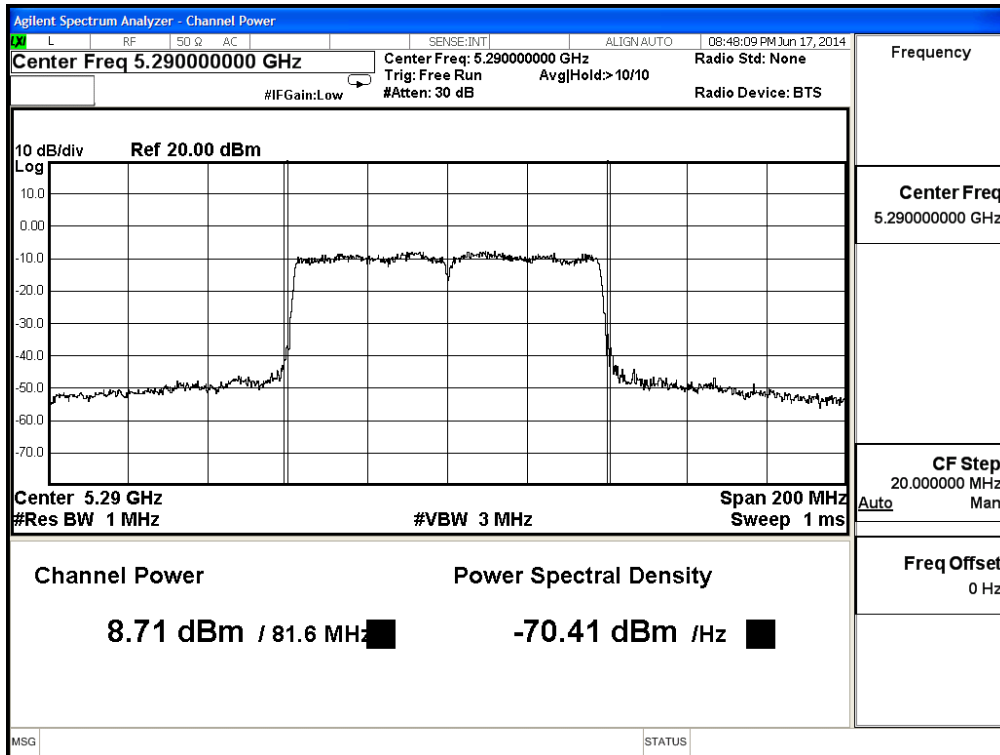
Channel 58- Chain A



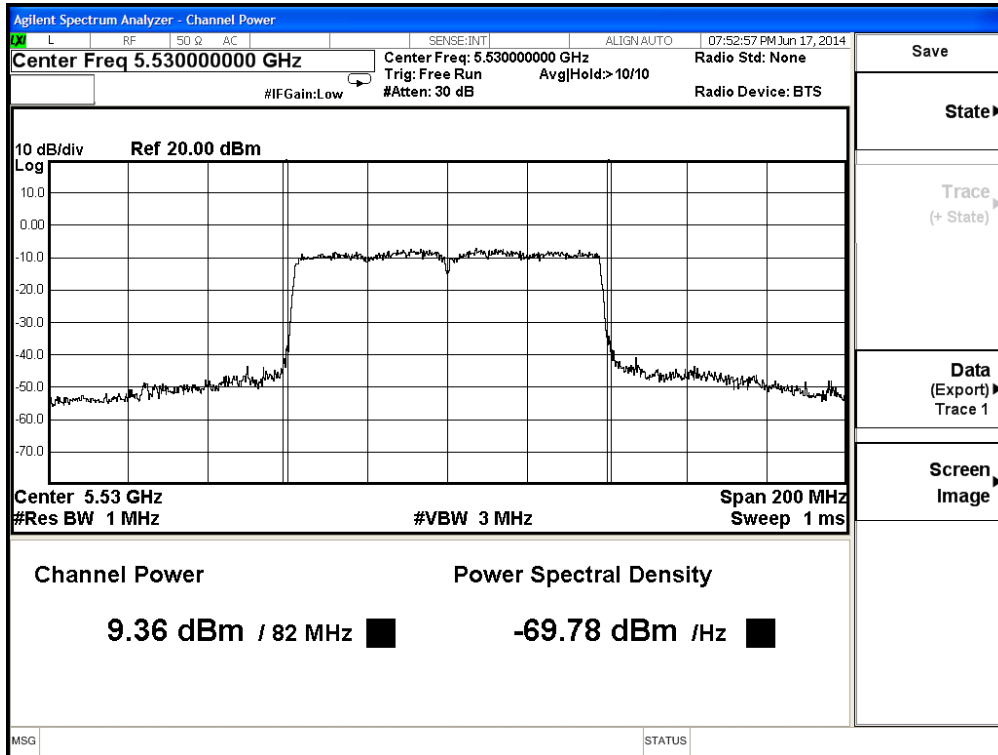
Channel 58- Chain B



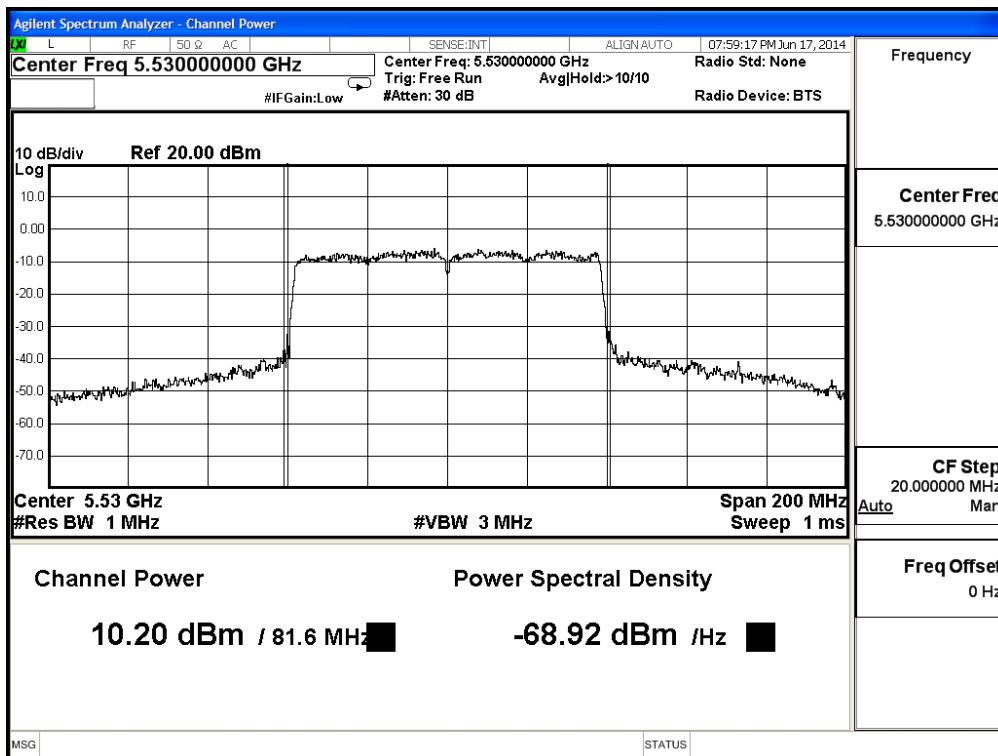
Channel 58- Chain C



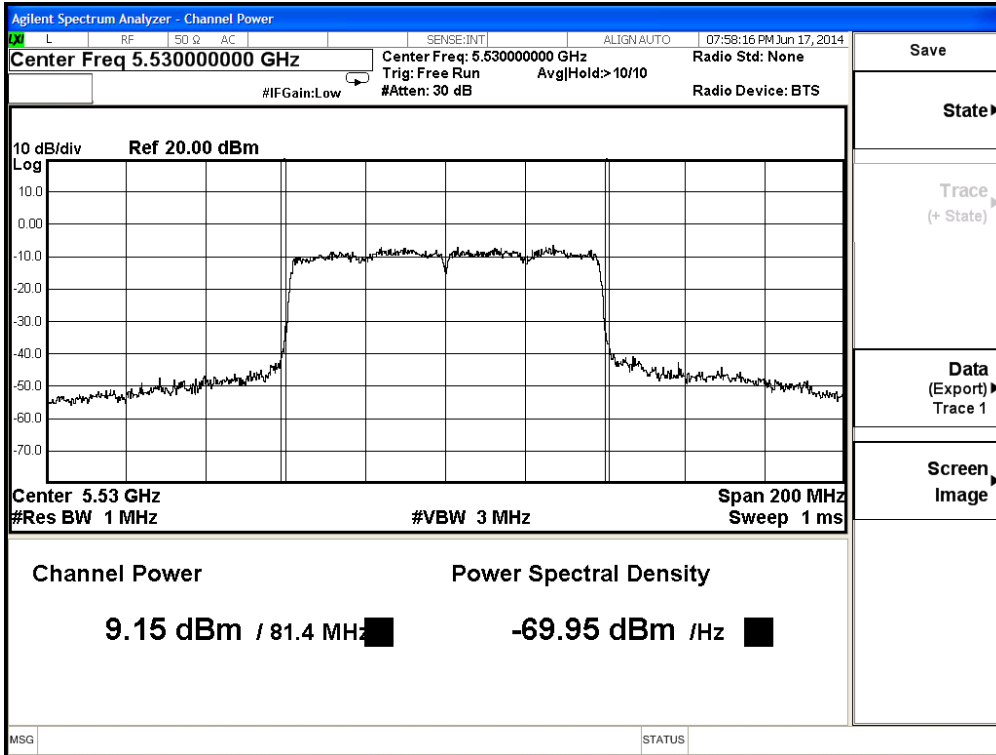
Channel 106– Chain A



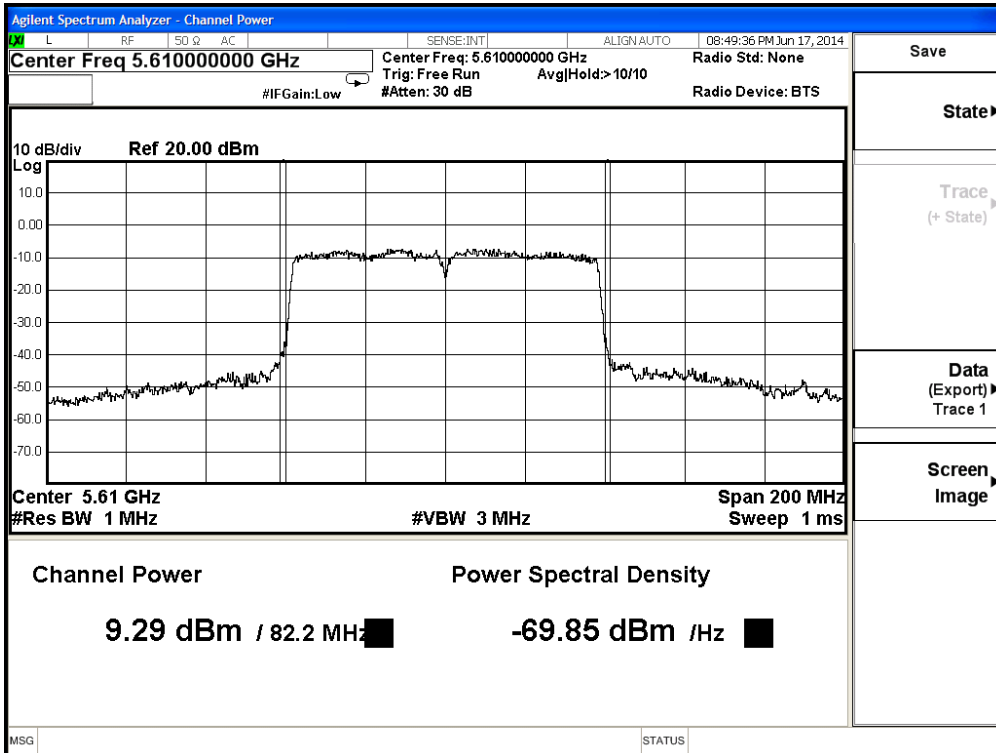
Channel 106– Chain B



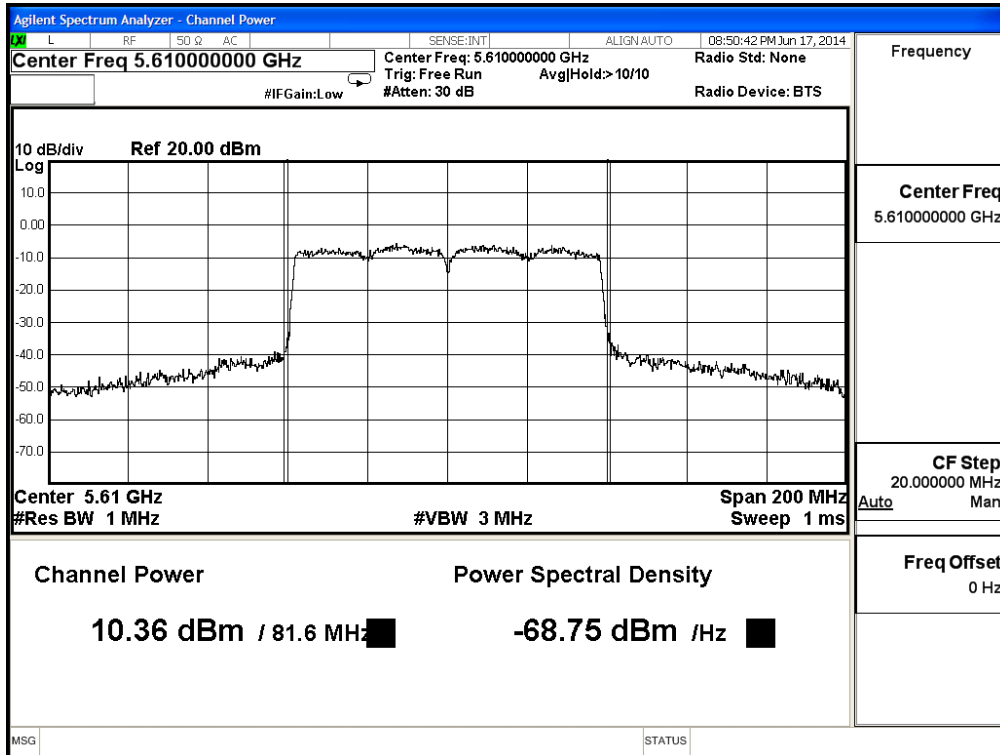
Channel 106– Chain C



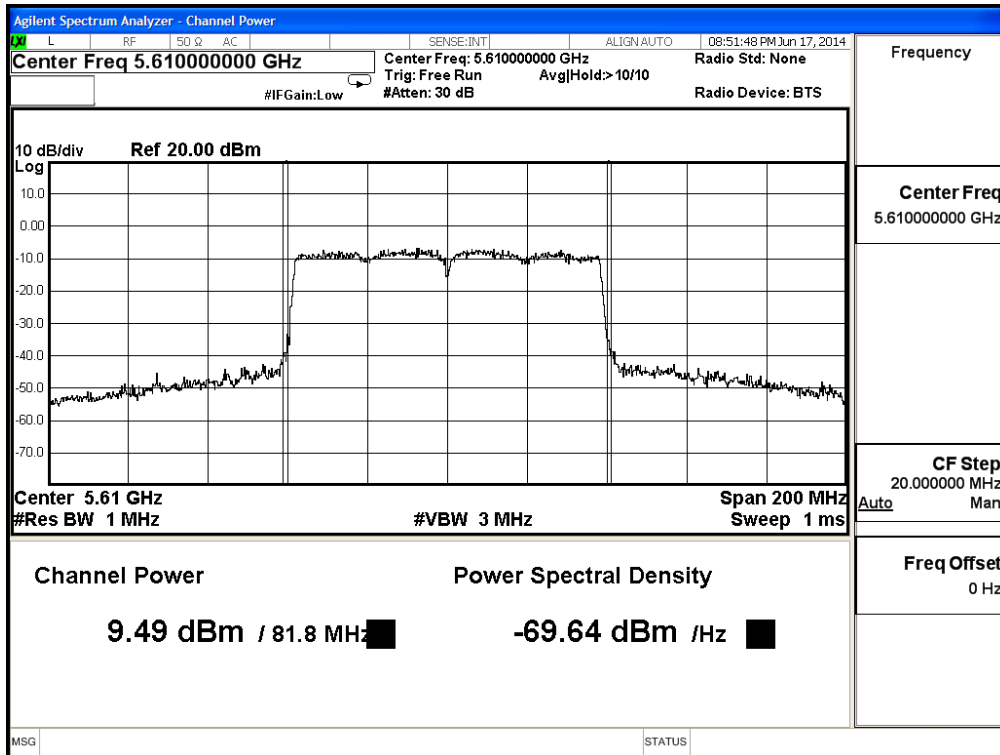
Channel 122– Chain A



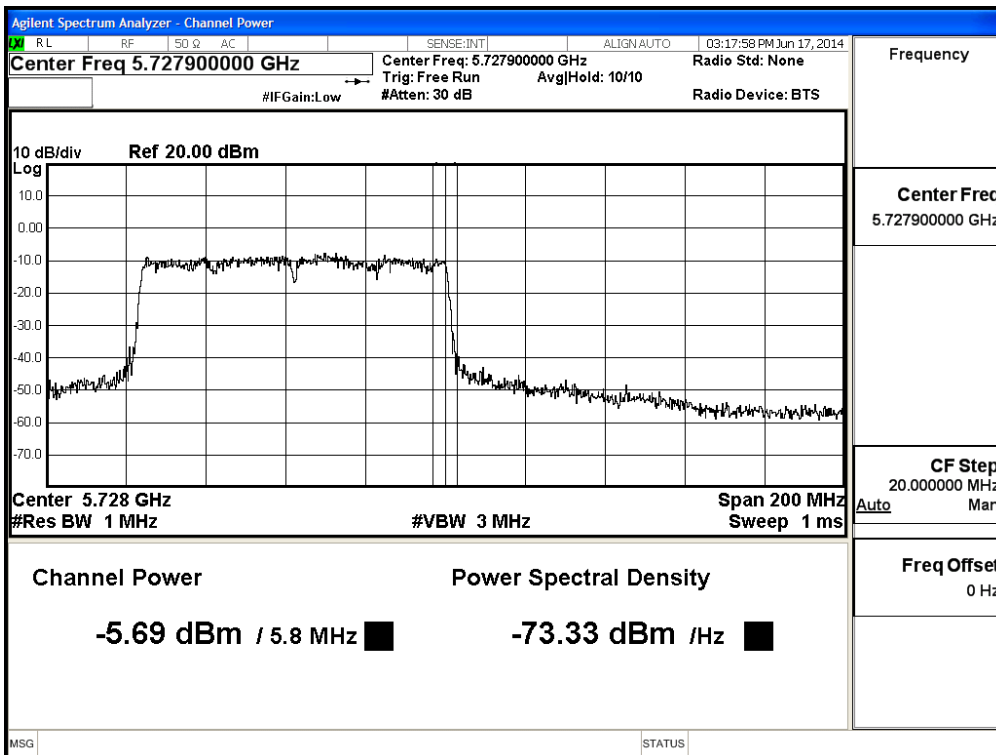
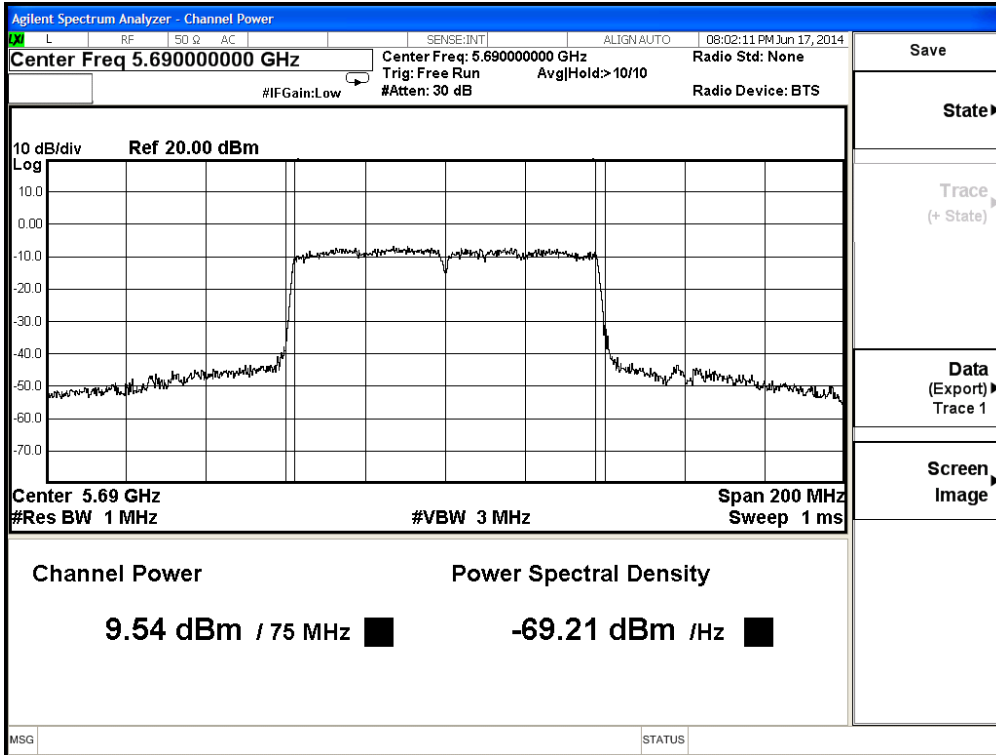
Channel 122- Chain B



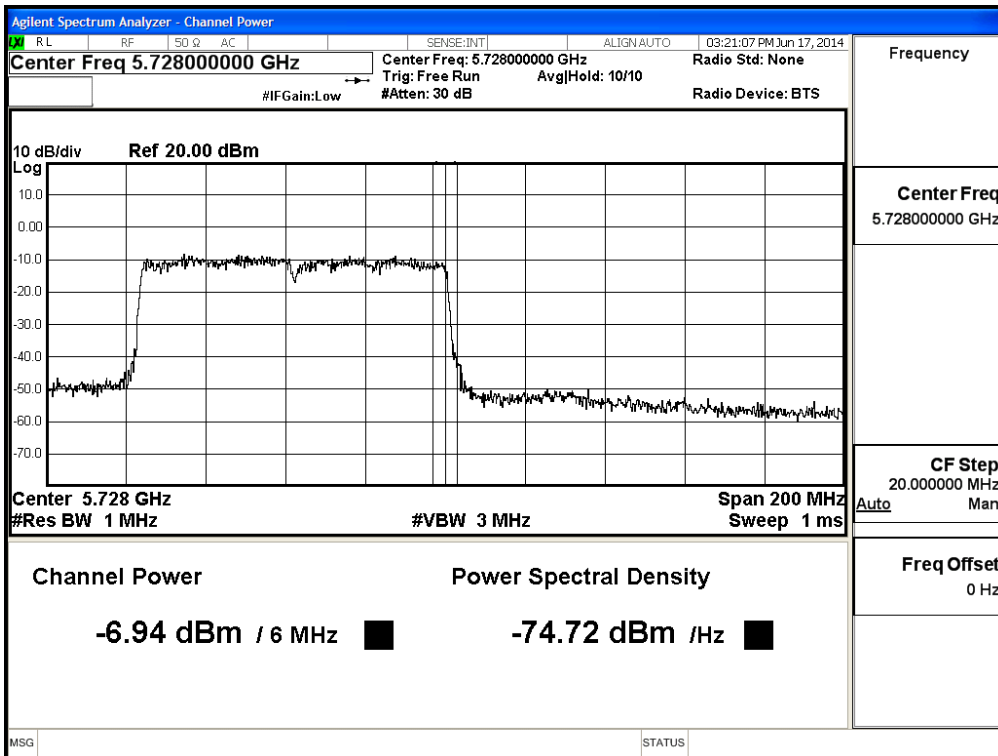
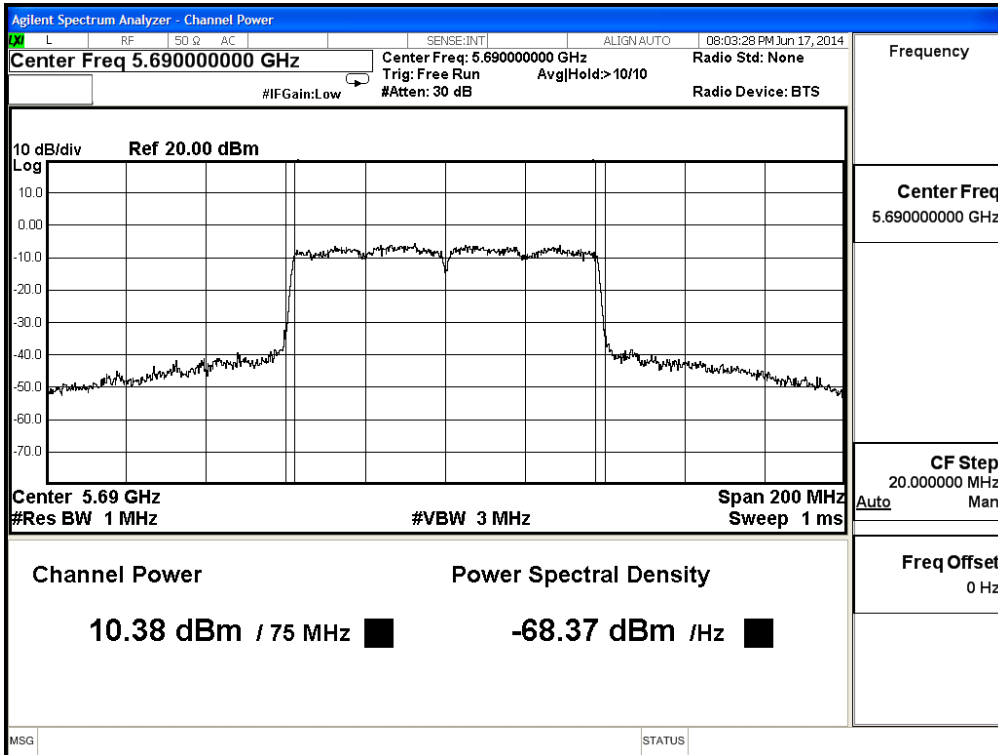
Channel 122- Chain C



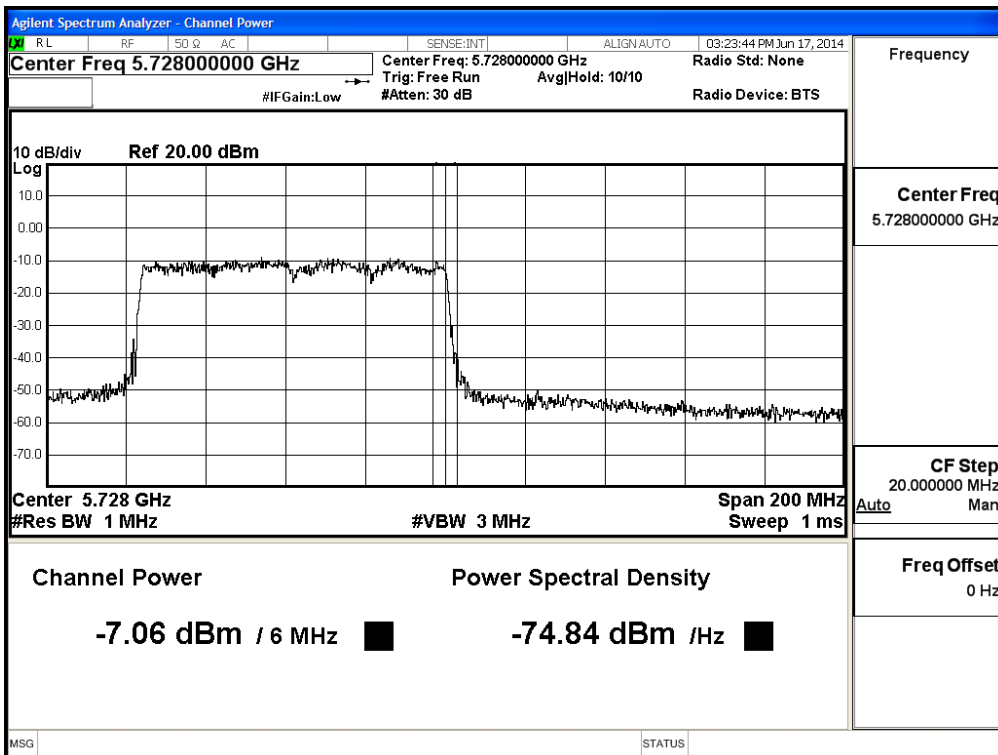
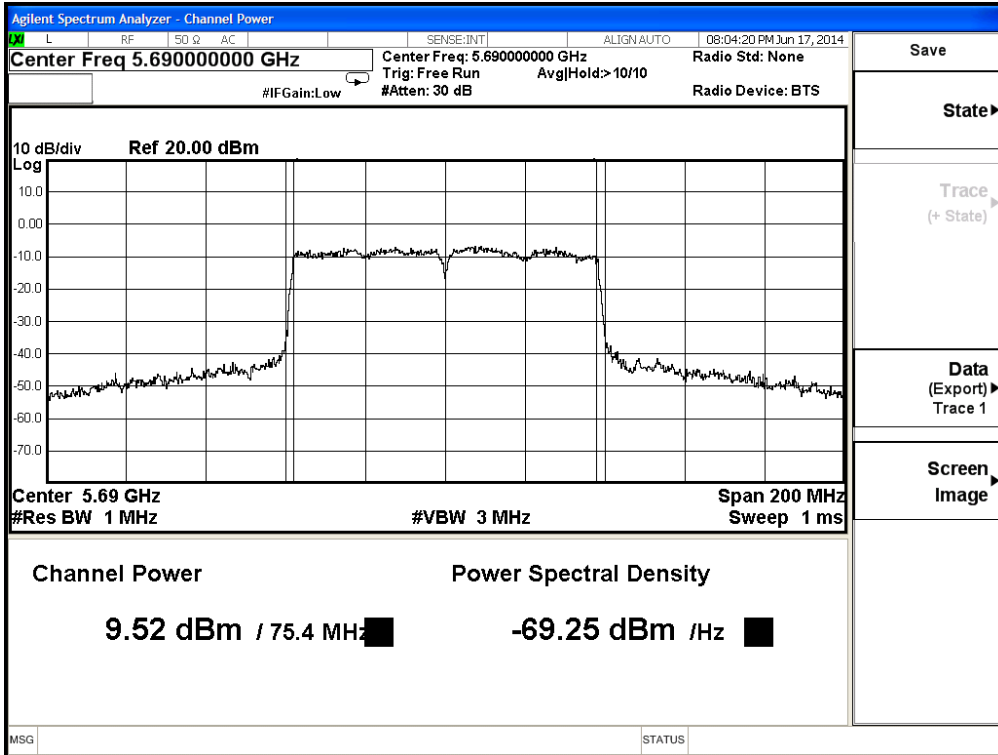
Channel 138- Chain A



Channel 138- Chain B



Channel 138– Chain C



3. Radiated Emission

3.1. Test Equipment

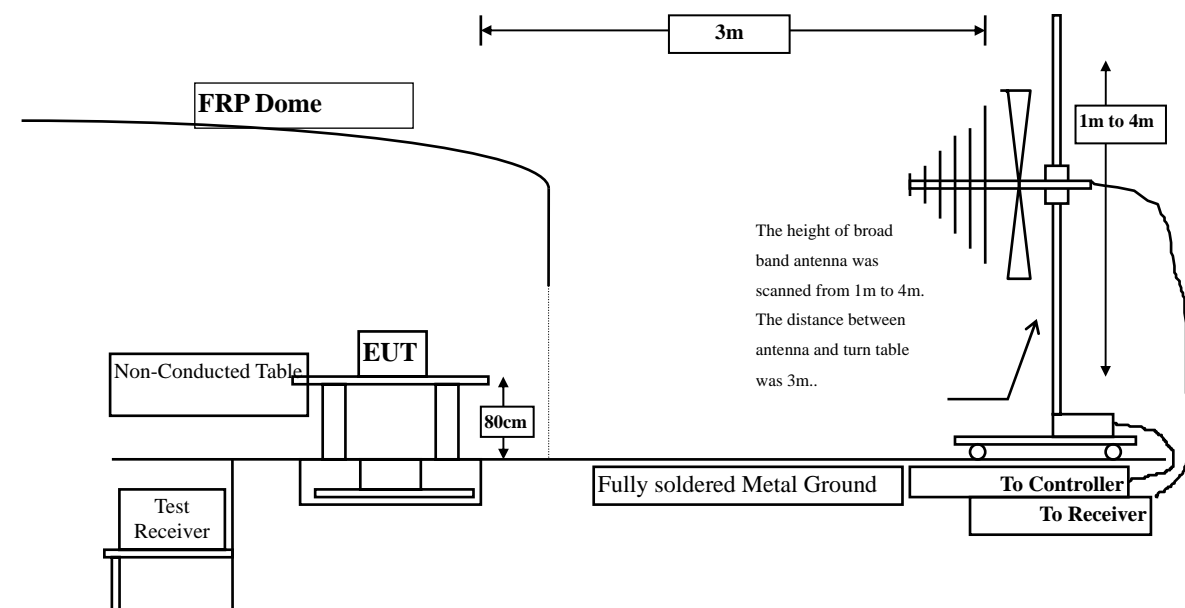
The following test equipments are used during the radiated emission test:

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

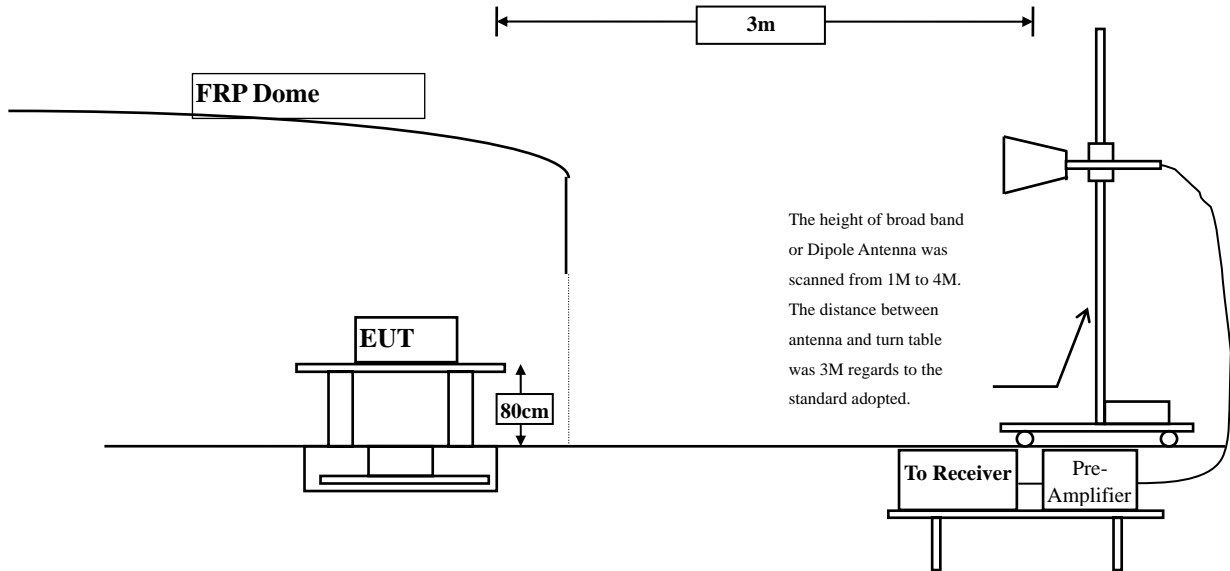
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

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	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

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

3.4. Test Procedure

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

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

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

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

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

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

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

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

The measurement frequency range form 9KHz - 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 : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	36.480	49.410	-24.590	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10360.000	13.724	36.320	50.044	-23.956	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 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
Horizontal					
Peak Detector:					
10400.000	13.322	36.770	50.092	-23.908	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10400.000	14.245	36.890	51.135	-22.865	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10480.000	13.693	37.560	51.254	-22.746	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10480.000	14.620	37.860	52.481	-21.519	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10520.000	14.015	35.960	49.975	-24.025	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
10520.000	14.818	36.890	51.708	-22.292	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average					
Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10600.000	14.550	35.510	50.059	-23.941	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10600.000	14.881	36.120	51.001	-22.999	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10640.000	14.690	36.120	50.810	-23.190	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10640.000	15.083	36.670	51.753	-22.247	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11000.000	16.399	36.130	52.529	-21.471	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11000.000	17.132	36.450	53.582	-20.418	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 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
Horizontal					
Peak Detector:					
11160.000	16.664	35.800	52.465	-21.535	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11160.000	17.643	35.960	53.603	-20.397	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11400.000	16.530	34.460	50.991	-23.009	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11400.000	17.138	35.790	52.928	-21.072	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	35.760	48.690	-25.310	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10360.000	13.724	36.220	49.944	-24.056	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5200MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10400.000	13.322	36.330	49.652	-24.348	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10400.000	14.245	36.760	51.005	-22.995	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5240MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10480.000	13.693	36.190	49.884	-24.116	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10480.000	14.620	36.560	51.181	-22.819	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5260MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10520.000	14.015	35.890	49.905	-24.095	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10520.000	14.818	36.180	50.998	-23.002	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10600.000	14.550	35.490	50.039	-23.961	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10600.000	14.881	35.960	50.841	-23.159	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5320MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10640.000	14.690	36.530	51.220	-22.780	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10640.000	15.083	36.780	51.863	-22.137	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5500MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11000.000	16.399	35.870	52.269	-21.731	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11000.000	17.132	35.990	53.122	-20.878	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11160.000	16.664	34.690	51.355	-22.645	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11160.000	16.664	34.690	51.355	-22.645	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5700MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11400.000	16.530	34.850	51.381	-22.619	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11400.000	17.138	36.850	53.988	-20.012	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10380.000	12.939	35.870	48.809	-25.191	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10380.000	13.796	36.730	50.526	-23.474	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5230MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10640.000	14.690	36.290	50.980	-23.020	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10460.000	14.433	36.760	51.193	-22.807	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10540.000	14.151	35.890	50.040	-23.960	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10540.000	14.829	36.770	51.598	-22.402	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5310MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10620.000	14.623	36.060	50.683	-23.317	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10620.000	14.970	36.170	51.140	-22.860	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5510MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11020.000	16.474	35.660	52.133	-21.867	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11020.000	17.224	36.020	53.244	-20.756	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5550MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11100.000	16.681	35.180	51.861	-22.139	74.000
16650.000	*	*	*	*	74.000
22200.000	*	*	*	*	74.000
27750.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11100.000	17.523	36.120	53.643	-20.357	74.000
16650.000	*	*	*	*	74.000
22200.000	*	*	*	*	74.000
27750.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5670MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11340.000	16.408	35.890	52.297	-21.703	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11340.000	17.167	36.320	53.487	-20.513	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11ac-20BW) (5720MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11440.000	16.779	34.610	51.389	-22.611	74.000
17160.000	*	*	*	*	74.000
22880.000	*	*	*	*	74.000
28600.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11440.000	17.519	34.990	52.509	-21.491	74.000
17160.000	*	*	*	*	74.000
22880.000	*	*	*	*	74.000
28600.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit (802.11ac-40BW) (5710MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11420.000	16.648	35.510	52.157	-21.843	74.000
17130.000	*	*	*	*	74.000
22840.000	*	*	*	*	74.000
28550.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11420.000	17.311	35.070	52.380	-21.620	74.000
17130.000	*	*	*	*	74.000
22840.000	*	*	*	*	74.000
28550.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5210MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10420.000	13.135	37.280	50.415	-23.585	74.000
15630.000	*	*	*	*	74.000
20840.000	*	*	*	*	74.000
26050.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10420.000	14.057	38.220	52.277	-21.723	74.000
15630.000	*	*	*	*	74.000
20840.000	*	*	*	*	74.000
26050.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5290MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
10580.000	14.423	37.020	51.443	-22.557	74.000
15870.000	*	*	*	*	74.000
21160.000	*	*	*	*	74.000
26450.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
10580.000	14.849	37.540	52.389	-21.611	74.000
15870.000	*	*	*	*	74.000
21160.000	*	*	*	*	74.000
26450.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5530MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11060.000	16.580	36.170	52.750	-21.250	74.000
16590.000	*	*	*	*	74.000
22120.000	*	*	*	*	74.000
27650.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11060.000	17.375	34.940	52.315	-21.685	74.000
16590.000	*	*	*	*	74.000
22120.000	*	*	*	*	74.000
27650.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5610MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11220.000	16.589	35.600	52.190	-21.810	74.000
16830.000	*	*	*	*	74.000
22440.000	*	*	*	*	74.000
28050.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11220.000	17.620	34.890	52.510	-21.490	74.000
16830.000	*	*	*	*	74.000
22440.000	*	*	*	*	74.000
28050.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5690MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
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Horizontal
Peak Detector:

11380.000	16.480	35.790	52.271	-21.729	74.000
17070.000	*	*	*	*	74.000
22760.000	*	*	*	*	74.000
28450.000	*	*	*	*	74.000

**Average
Detector:**

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Vertical
Peak Detector:

11380.000	17.125	35.380	52.506	-21.494	74.000
17070.000	*	*	*	*	74.000
22760.000	*	*	*	*	74.000
28450.000	*	*	*	*	74.000

**Average
Detector:**

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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 : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 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
Horizontal					
Peak Detector					
161.920	-11.626	47.213	35.588	-7.912	43.500
392.780	-2.096	36.327	34.231	-11.769	46.000
483.960	-0.688	36.919	36.232	-9.768	46.000
600.360	3.977	33.950	37.927	-8.073	46.000
712.880	3.569	27.806	31.375	-14.625	46.000
961.200	6.450	43.499	49.949	-4.051	54.000
Vertical					
Peak Detector					
111.480	-0.954	35.740	34.786	-8.714	43.500
181.320	-9.512	44.271	34.759	-8.741	43.500
222.060	-8.789	43.212	34.423	-11.577	46.000
286.080	-8.097	45.106	37.009	-8.991	46.000
365.620	-2.179	34.574	32.395	-13.605	46.000
747.800	2.166	30.672	32.838	-13.162	46.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

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

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 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
Horizontal					
Peak Detector					
152.220	-10.135	41.859	31.724	-11.776	43.500
402.480	-2.263	33.788	31.525	-14.475	46.000
513.060	1.550	30.172	31.722	-14.278	46.000
625.580	1.770	28.788	30.558	-15.442	46.000
697.360	3.171	27.379	30.550	-15.450	46.000
961.200	6.450	43.013	49.463	-4.537	54.000
Vertical					
Peak Detector					
134.760	-4.648	37.232	32.584	-10.916	43.500
355.920	-3.488	38.783	35.295	-10.705	46.000
480.080	-4.359	36.246	31.887	-14.113	46.000
600.360	-2.833	29.121	26.288	-19.712	46.000
747.800	2.166	29.746	31.912	-14.088	46.000
961.200	7.260	36.865	44.125	-9.875	54.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5200MHz)

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5300MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
148.340	-10.254	41.038	30.784	-12.716	43.500
408.300	-2.866	38.357	35.491	-10.509	46.000
474.260	0.024	36.979	37.002	-8.998	46.000
600.360	3.977	34.330	38.307	-7.693	46.000
720.640	3.511	32.508	36.019	-9.981	46.000
961.200	6.450	43.038	49.488	-4.512	54.000
Vertical					
Peak Detector					
111.480	-0.954	37.405	36.451	-7.049	43.500
235.640	-9.330	48.536	39.206	-6.794	46.000
390.840	-3.099	35.414	32.315	-13.685	46.000
480.080	-4.359	40.738	36.379	-9.621	46.000
666.320	-1.809	32.539	30.731	-15.269	46.000
961.200	7.260	36.131	43.391	-10.609	54.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) (5580MHz)

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5190MHz)

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5270MHz)

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

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) (5550MHz)

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

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

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11ac-20BW) (5720MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
141.200	-10.456	45.980	35.523	-7.977	43.500
391.420	-1.920	35.480	33.560	-12.440	46.000
434.890	-1.926	35.690	33.764	-12.236	46.000
677.580	2.894	34.820	37.714	-8.286	46.000
717.620	3.541	35.510	39.051	-6.949	46.000
961.200	6.450	40.100	46.550	-7.450	54.000
Vertical					
Peak Detector					
121.250	-3.818	36.820	33.002	-10.498	43.500
188.640	-11.090	45.680	34.589	-8.911	43.500
310.300	-6.843	44.380	37.537	-8.463	46.000
392.410	-3.445	34.820	31.375	-14.625	46.000
689.240	2.522	32.610	35.132	-10.868	46.000
922.160	5.532	28.610	34.142	-11.858	46.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit (802.11ac-40BW) (5710MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
241.360	-6.539	33.490	26.950	-19.050	46.000
401.800	-2.264	34.611	32.347	-13.653	46.000
520.810	1.762	30.280	32.042	-13.958	46.000
621.210	2.231	31.610	33.840	-12.160	46.000
717.600	3.541	25.320	28.861	-17.139	46.000
961.200	6.450	40.260	46.710	-7.290	54.000
Vertical					
Peak Detector					
140.680	-6.245	38.140	31.895	-11.605	43.500
360.160	-3.693	39.245	35.552	-10.448	46.000
491.560	-2.862	29.680	26.818	-19.182	46.000
601.200	-2.651	31.560	28.909	-17.091	46.000
741.900	0.132	30.690	30.822	-15.178	46.000
961.200	7.260	32.680	39.940	-14.060	54.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5210MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
145.500	-10.349	41.500	31.151	-12.349	43.500
388.690	-1.665	34.960	33.295	-12.705	46.000
553.130	2.576	30.766	33.342	-12.658	46.000
668.740	2.011	30.189	32.200	-13.800	46.000
705.680	2.653	31.880	34.534	-11.466	46.000
961.200	6.450	40.850	47.300	-6.700	54.000
Vertical					
Peak Detector					
121.560	-3.836	36.891	33.055	-10.445	43.500
369.450	-2.861	38.940	36.079	-9.921	46.000
544.250	-0.725	36.217	35.493	-10.507	46.000
717.500	-0.519	30.740	30.220	-15.780	46.000
825.500	3.418	30.350	33.767	-12.233	46.000
961.200	7.260	36.140	43.400	-10.600	54.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5530MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
169.520	-10.531	43.120	32.589	-10.911	43.500
398.520	-2.269	36.710	34.441	-11.559	46.000
531.640	1.914	36.160	38.073	-7.927	46.000
699.130	2.901	30.585	33.486	-12.514	46.000
816.940	5.443	26.420	31.863	-14.137	46.000
961.200	6.450	36.920	43.370	-10.630	54.000
Vertical					
Peak Detector					
100.580	0.028	31.841	31.869	-11.631	43.500
249.650	-7.570	41.830	34.260	-11.740	46.000
400.510	-5.147	39.360	34.213	-11.787	46.000
511.640	-0.368	33.290	32.922	-13.078	46.000
700.100	0.449	31.550	31.999	-14.001	46.000
961.200	7.260	31.520	38.780	-15.220	54.000

Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : General Radiated Emission
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW) (5690MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
124.560	-9.935	39.550	29.616	-13.884	43.500
267.510	-4.960	38.950	33.990	-12.010	46.000
311.300	-4.026	40.150	36.124	-9.876	46.000
502.260	0.117	31.590	31.707	-14.293	46.000
677.490	2.896	31.490	34.386	-11.614	46.000
798.560	5.149	31.920	37.069	-8.931	46.000
Vertical					
Peak Detector					
113.400	-1.840	33.540	31.700	-11.800	43.500
266.140	-8.042	36.466	28.423	-17.577	46.000
315.250	-6.887	41.660	34.774	-11.226	46.000
489.600	-3.084	34.580	31.496	-14.504	46.000
607.250	-1.584	31.140	29.556	-16.444	46.000
753.580	3.180	30.390	33.570	-12.430	46.000

Note:

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

4. Band Edge

4.1. Test Equipment

RF Radiated Measurement:

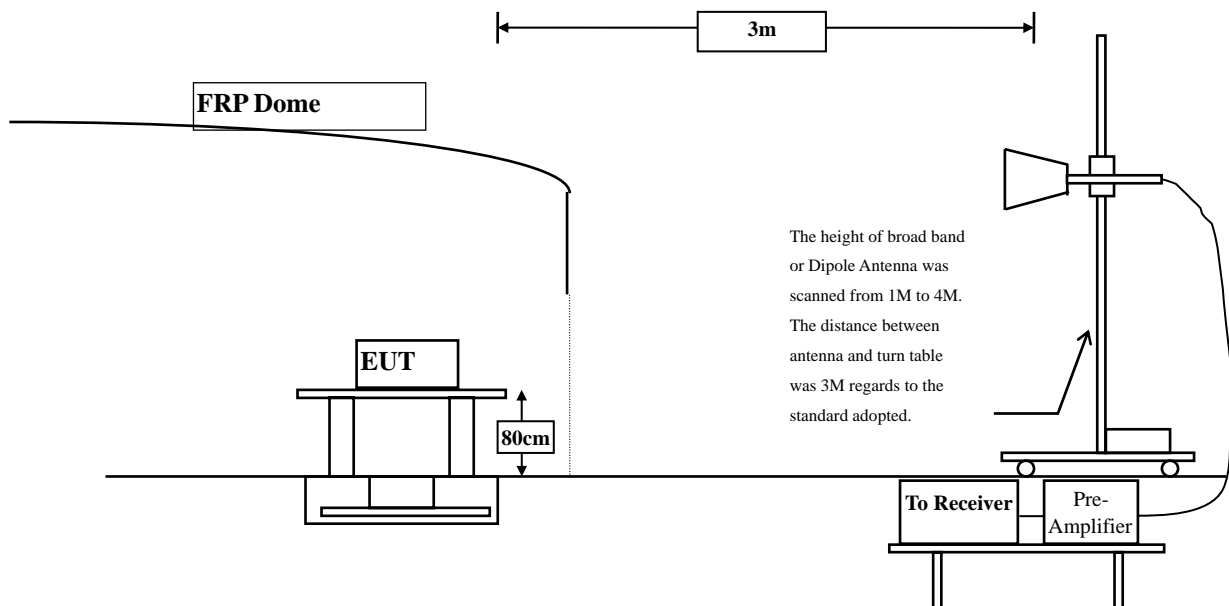
The following test equipments are used during the band edge tests:

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

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

4.2. Test Setup

RF Radiated Measurement:



4.3. Limits

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

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

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

- 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 C63.10:2009 on radiated measurement.

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

4.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

4.6. Test Result of Band Edge

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
36 (Peak)	5148.800	16.769	38.654	55.424	74.00	54.00	Pass
36 (Peak)	5150.000	16.762	37.688	54.451	74.00	54.00	Pass
36 (Peak)	5179.200	16.809	80.049	96.857	--	--	Pass
36 (Average)	5150.000	16.762	25.752	42.515	74.00	54.00	Pass
36 (Average)	5181.600	16.817	67.921	84.738	--	--	Pass

Figure Channel 36: Horizontal (Peak)

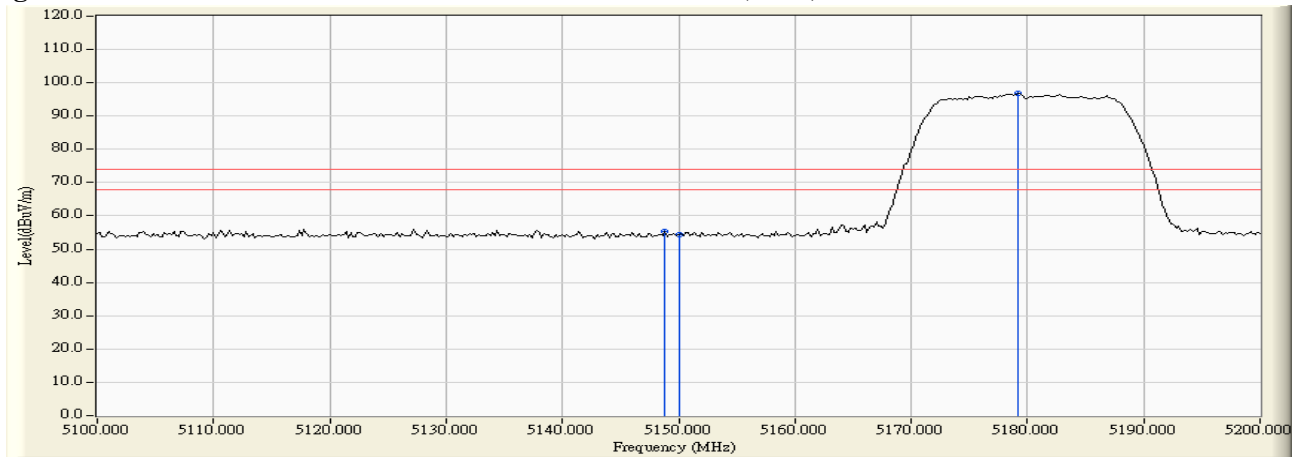
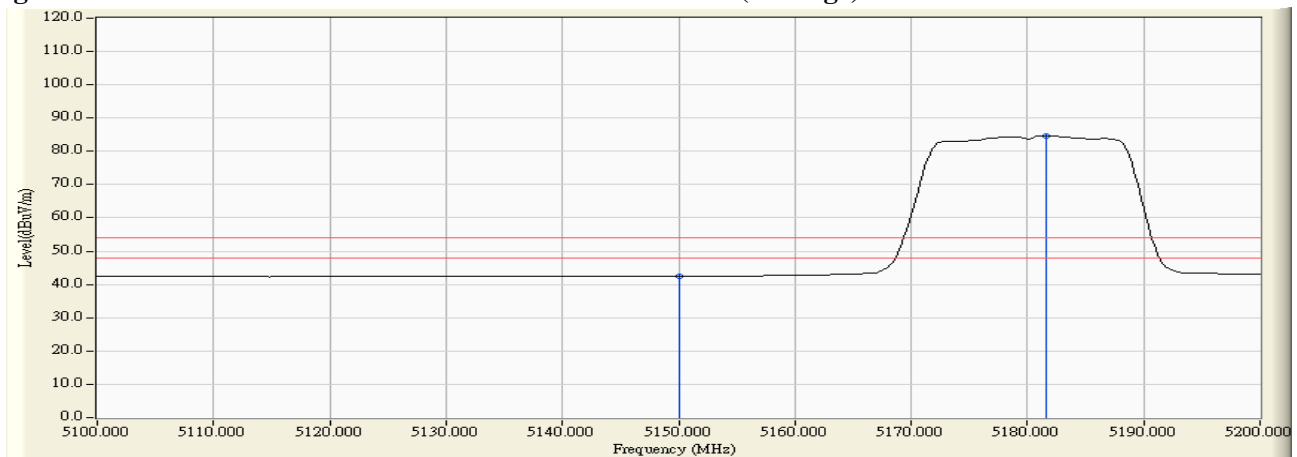


Figure Channel 36: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
36 (Peak)	5122.800	16.790	39.996	56.786	74.00	54.00	Pass
36 (Peak)	5150.000	42.901	38.005	54.768	74.00	54.00	Pass
36 (Peak)	5178.400	42.936	89.442	106.248	--	--	Pass
36 (Average)	5106.200	16.730	28.045	44.775	74.00	54.00	Pass
36 (Average)	5150.000	16.762	26.149	42.912	74.00	54.00	Pass
36 (Average)	5181.400	16.816	76.599	93.415	--	--	Pass

Figure Channel 36: Vertical (Peak)

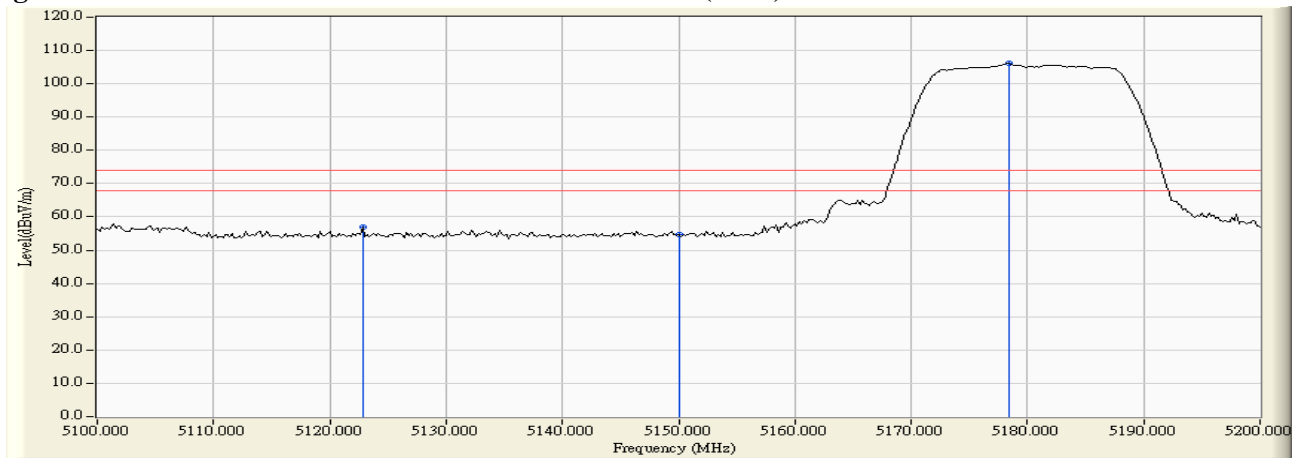
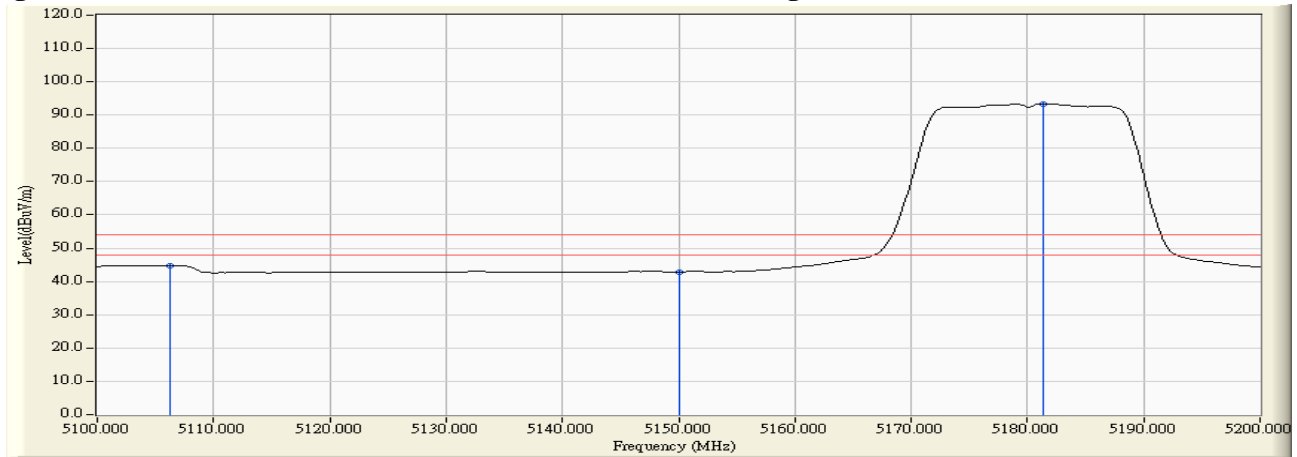


Figure Channel 36: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
64 (Peak)	5322.800	17.095	84.116	101.211	--	--	Pass
64 (Peak)	5350.000	17.133	36.324	53.457	74.00	54.00	Pass
64 (Peak)	5354.200	17.164	38.777	55.941	74.00	54.00	Pass
64 (Average)	5321.400	17.095	71.987	89.082	--	--	Pass
64 (Average)	5350.000	17.133	25.379	42.512	74.00	54.00	Pass

Figure Channel 64: Horizontal (Peak)

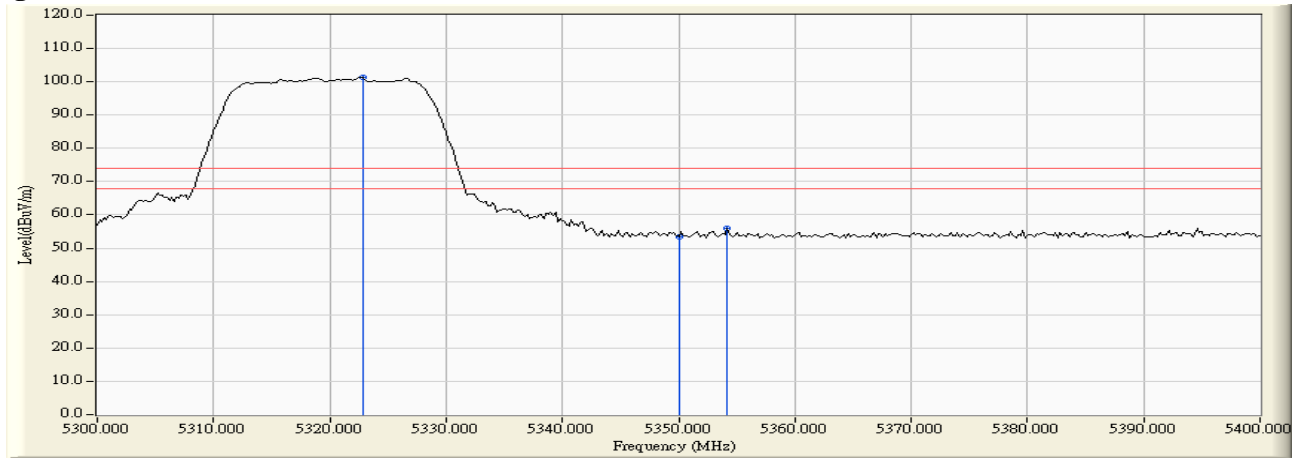
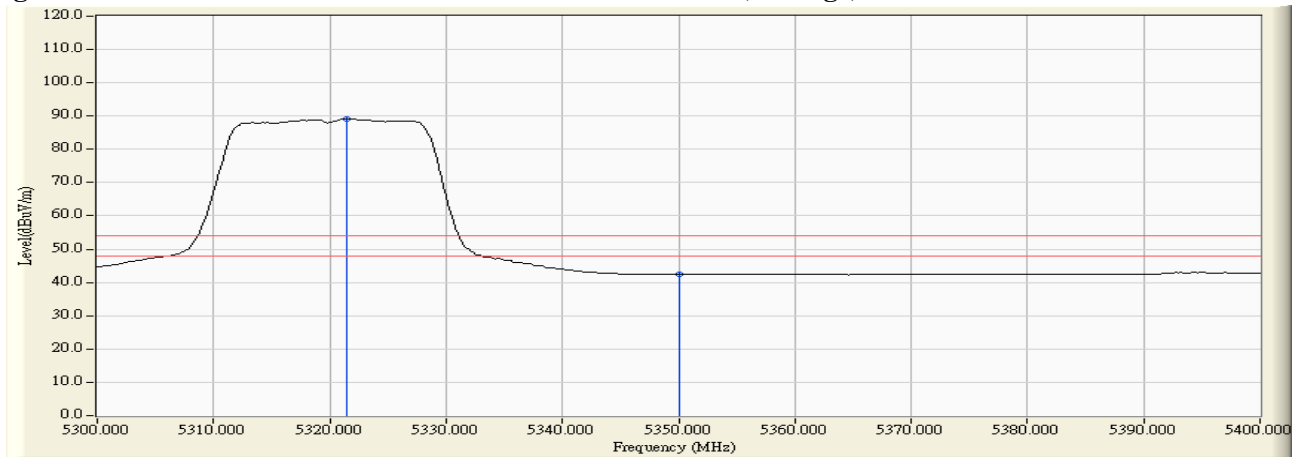


Figure Channel 64: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
64 (Peak)	5322.600	17.095	94.212	111.307	--	--	Pass
64 (Peak)	5350.000	17.133	39.406	56.539	74.00	54.00	Pass
64 (Peak)	5392.600	17.286	43.315	60.601	74.00	54.00	Pass
64 (Average)	5321.400	17.095	81.664	98.759	--	--	Pass
64 (Average)	5350.000	17.133	27.028	44.161	74.00	54.00	Pass
64 (Average)	5392.400	17.287	31.039	48.326	74.00	54.00	Pass

Figure Channel 64: Vertical (Peak)

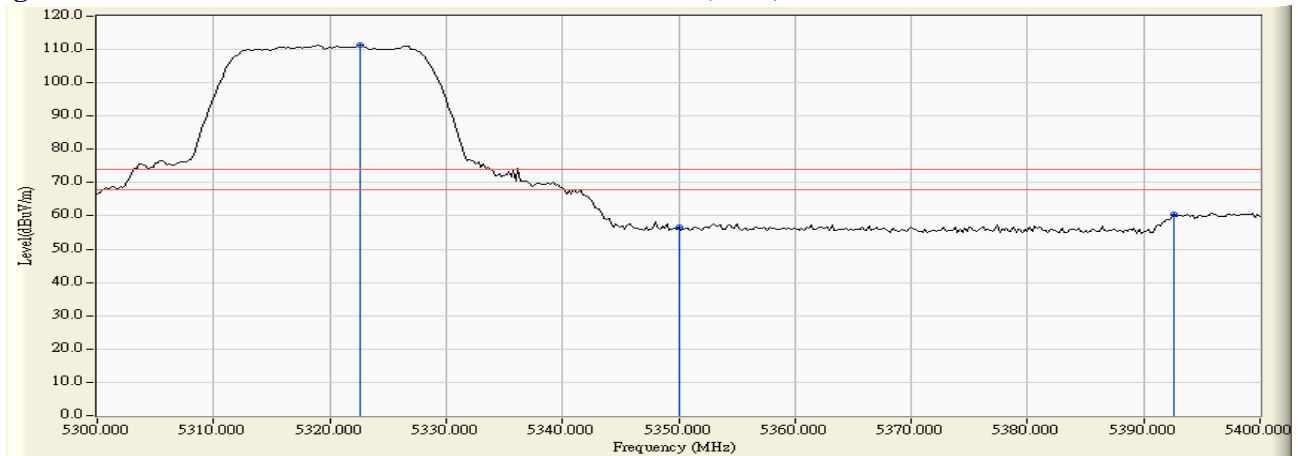
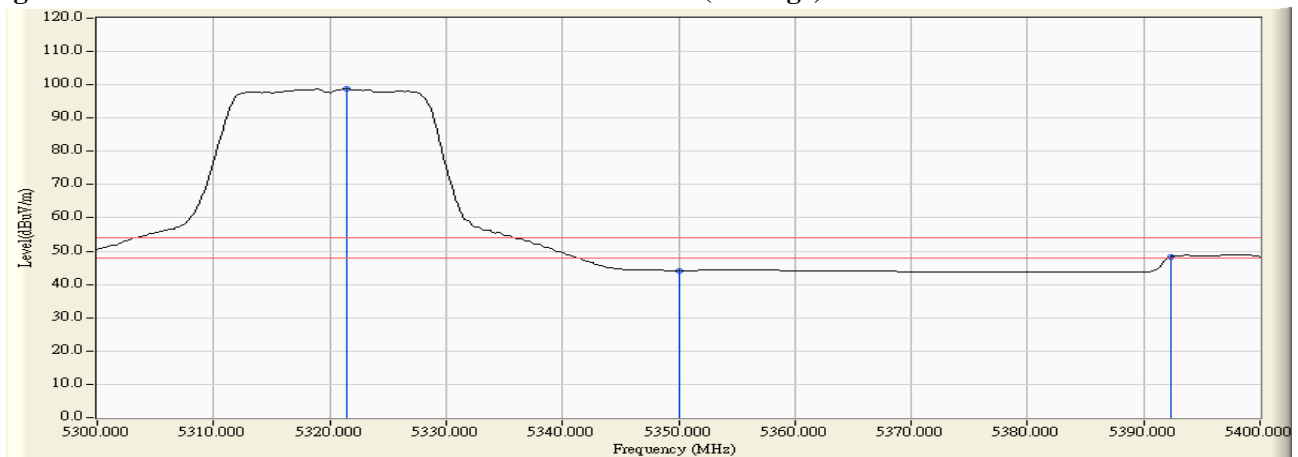


Figure Channel 64: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
100 (Peak)	5460.000	17.241	37.684	54.925	74.00	54.00	Pass
100 (Peak)	5498.400	17.366	85.607	102.973	--	--	Pass
100 (Average)	5460.000	17.241	25.359	42.600	74.00	54.00	Pass
100 (Average)	5501.400	17.388	73.541	90.929	--	--	Pass

Figure Channel 100: Horizontal (Peak)

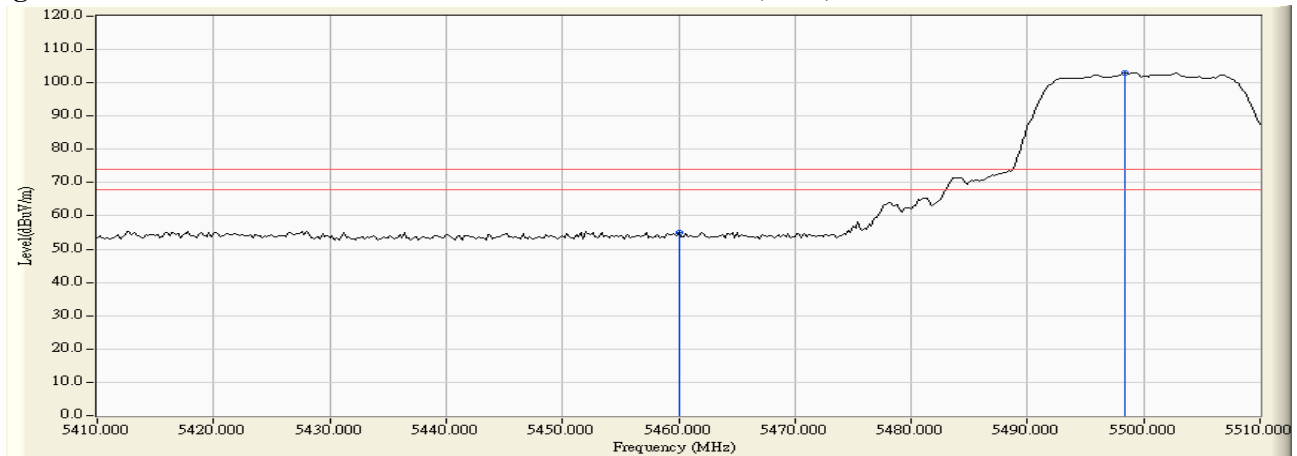
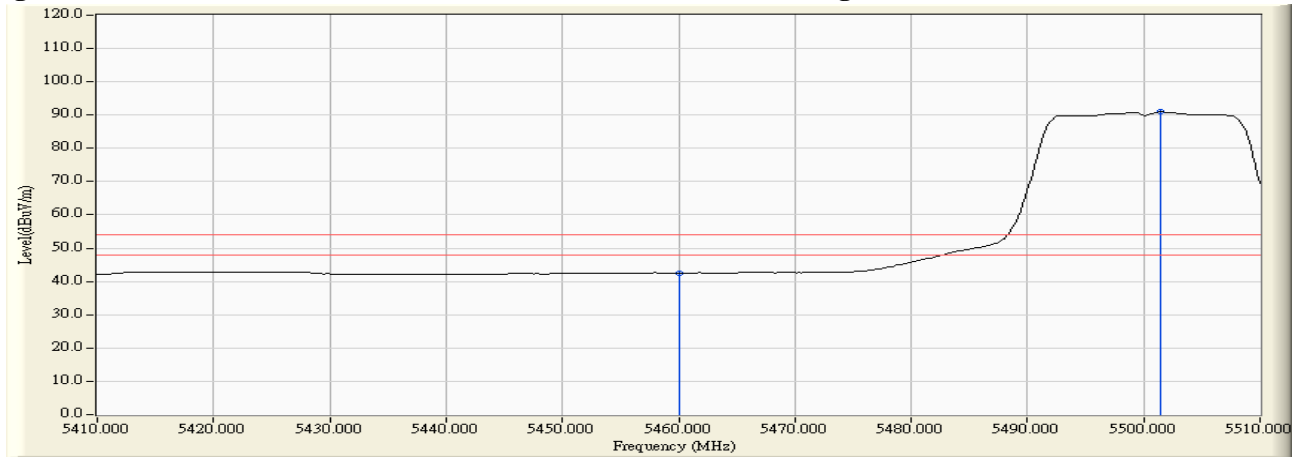


Figure Channel 100: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
100 (Peak)	5428.000	17.246	43.679	60.924	74.00	54.00	Pass
100 (Peak)	5460.000	17.241	38.297	55.538	74.00	54.00	Pass
100 (Peak)	5498.400	17.366	93.742	111.108	--	--	Pass
100 (Average)	5422.000	17.258	32.820	50.078	74.00	54.00	Pass
100 (Average)	5460.000	17.241	27.196	44.437	74.00	54.00	Pass
100 (Average)	5501.400	17.388	80.822	98.210	--	--	Pass

Figure Channel 100: Vertical (Peak)

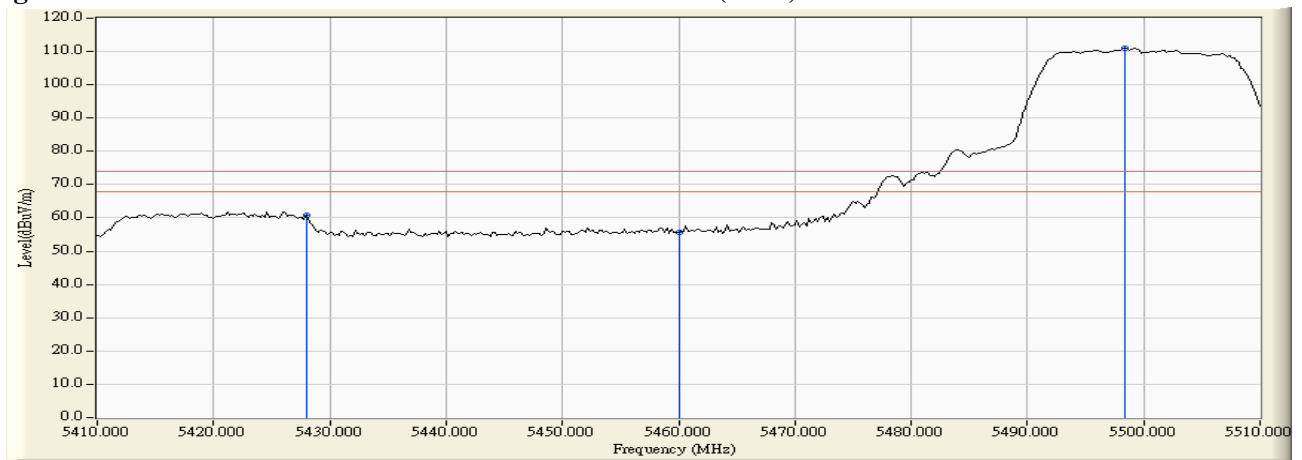
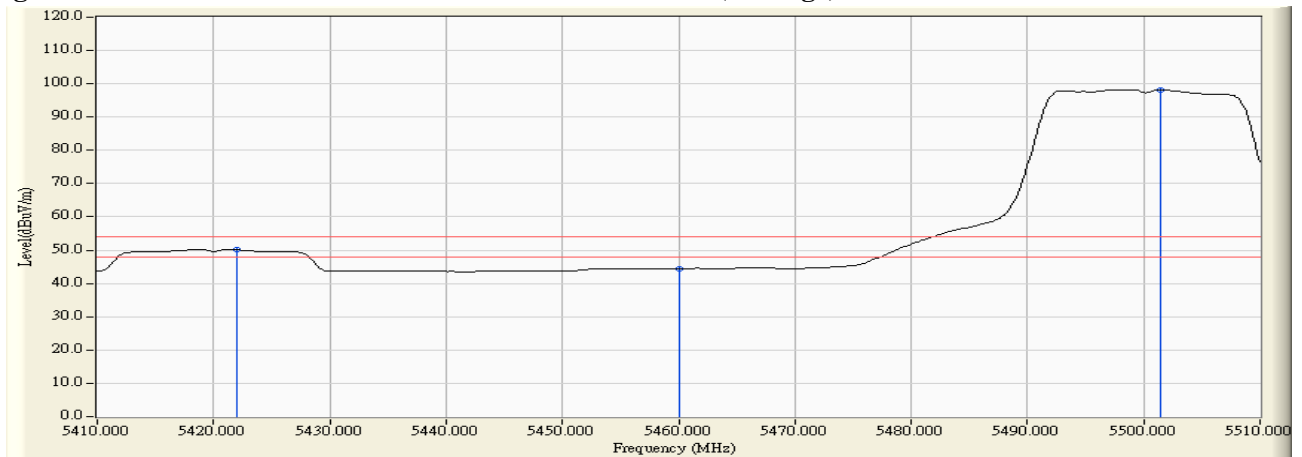


Figure Channel 100: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 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	-77.500	-59.166	-32.166	-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	-71.460	-52.125	-25.125	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 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	-78.250	-59.601	-32.601	-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	-71.260	-51.888	-24.888	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 36

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
36 (Peak)	5148.400	16.772	40.729	57.502	74.00	54.00	Pass
36 (Peak)	5150.000	16.762	39.678	56.441	74.00	54.00	Pass
36 (Peak)	5178.800	16.807	88.737	105.544	--	--	Pass
36 (Average)	5107.800	16.732	26.518	43.250	74.00	54.00	Pass
36 (Average)	5150.000	16.762	26.024	42.787	74.00	54.00	Pass
36 (Average)	5177.800	16.804	75.414	92.218	--	--	Pass

Figure Channel 36: Horizontal (Peak)

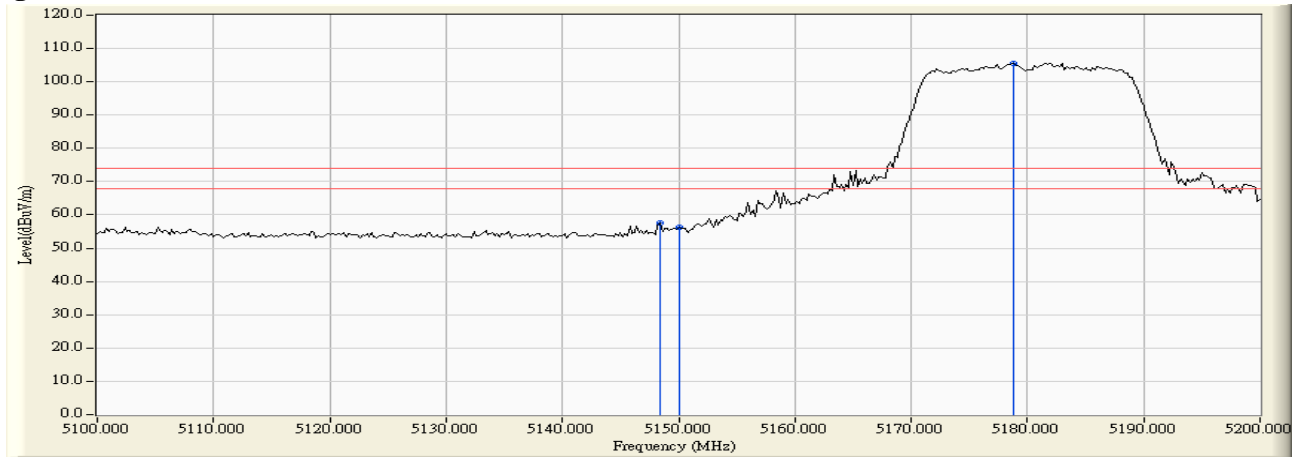
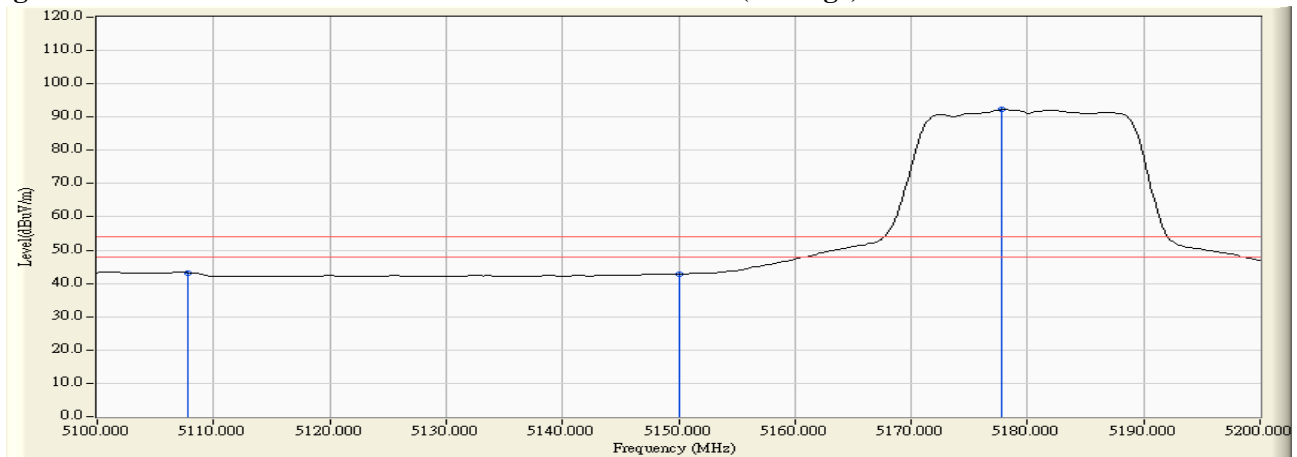


Figure Channel 36: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 36

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
36 (Peak)	5148.200	16.774	48.174	64.948	74.00	54.00	Pass
36 (Peak)	5150.000	16.762	46.795	63.558	74.00	54.00	Pass
36 (Peak)	5184.600	16.826	97.498	114.323	--	--	Pass
36 (Average)	5107.800	16.732	30.534	47.266	74.00	54.00	Pass
36 (Average)	5150.000	16.762	29.094	45.857	74.00	54.00	Pass
36 (Average)	5182.200	16.818	83.847	100.666	--	--	Pass

Figure Channel 36: Vertical (Peak)

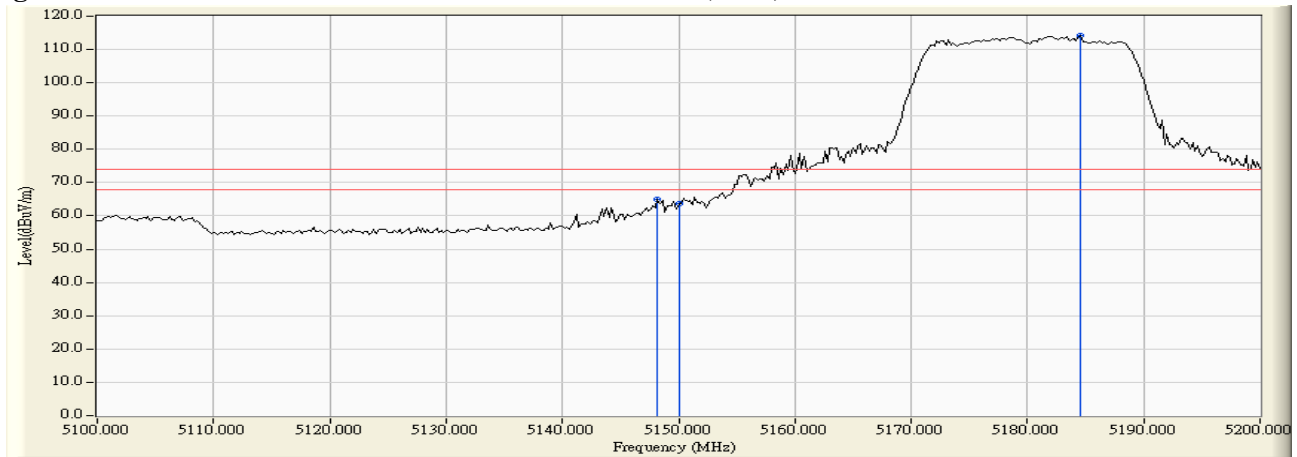
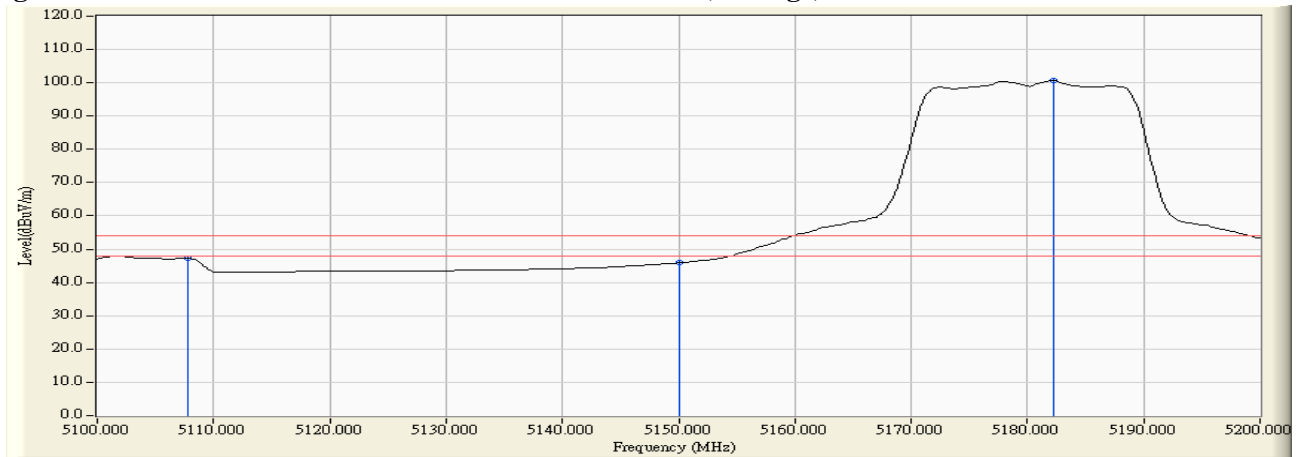


Figure Channel 36: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 64

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
64 (Peak)	5321.200	17.095	89.547	106.642	--	--	Pass
64 (Peak)	5350.000	17.133	38.652	55.785	74.00	54.00	Pass
64 (Peak)	5355.400	17.172	40.324	57.496	74.00	54.00	Pass
64 (Average)	5317.800	17.095	76.132	93.227	--	--	Pass
64 (Average)	5350.000	17.133	26.351	43.484	74.00	54.00	Pass

Figure Channel 64: Horizontal (Peak)

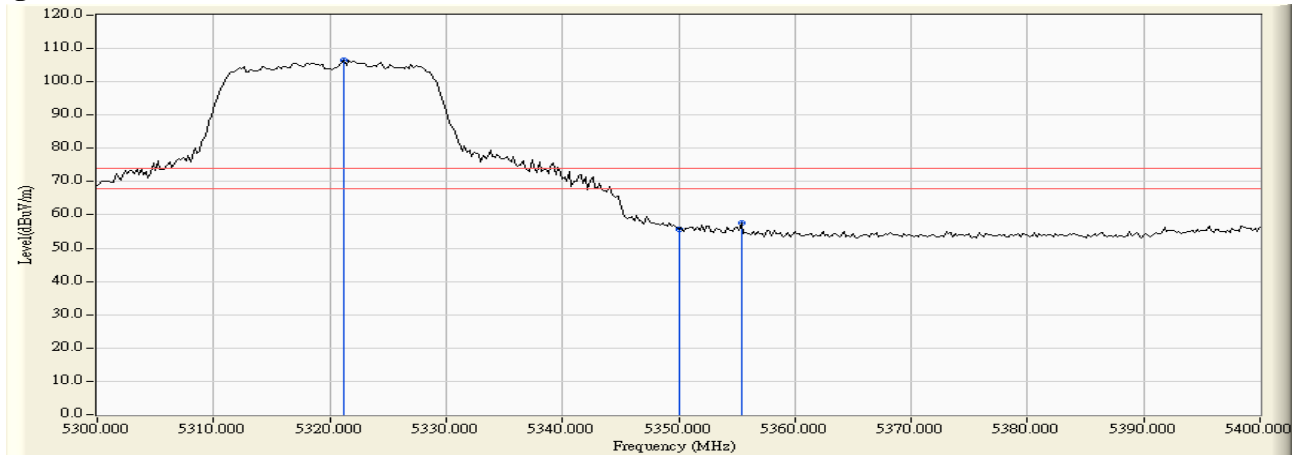
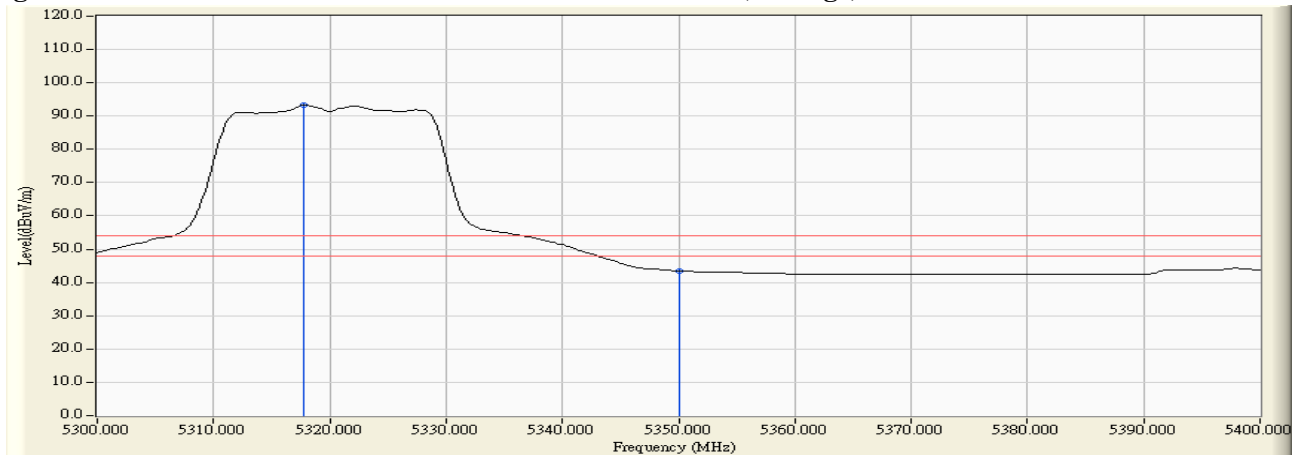


Figure Channel 64: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 64

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
64 (Peak)	5321.200	17.095	99.619	116.714	--	--	Pass
64 (Peak)	5350.000	17.133	46.331	63.464	74.00	54.00	Pass
64 (Peak)	5354.800	17.168	48.100	65.268	74.00	54.00	Pass
64 (Average)	5322.000	17.095	85.485	102.580	--	--	Pass
64 (Average)	5350.000	17.133	30.167	47.300	74.00	54.00	Pass
64 (Average)	5392.000	17.289	32.006	49.295	74.00	54.00	Pass

Figure Channel 64: Vertical (Peak)

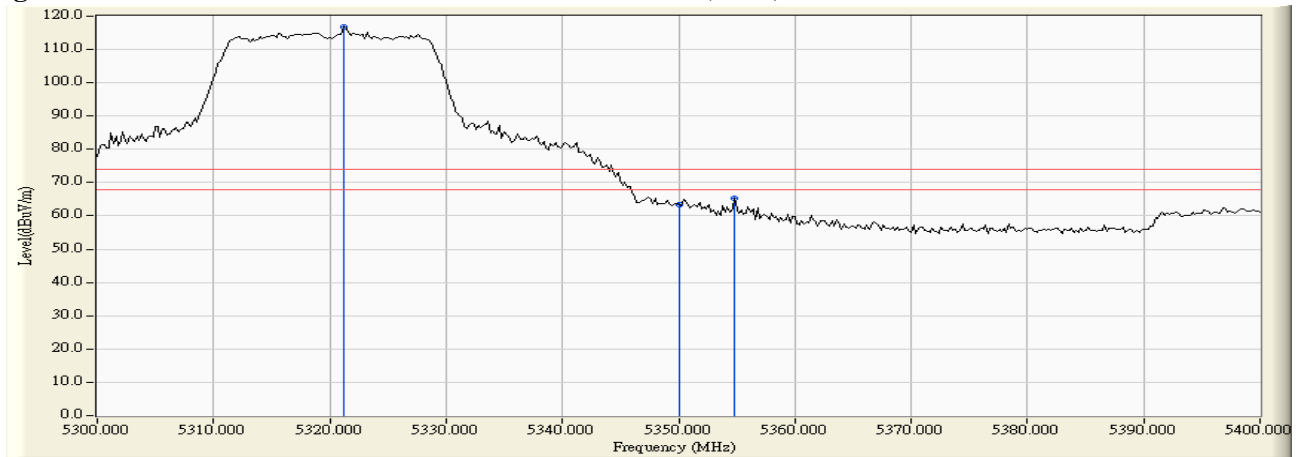
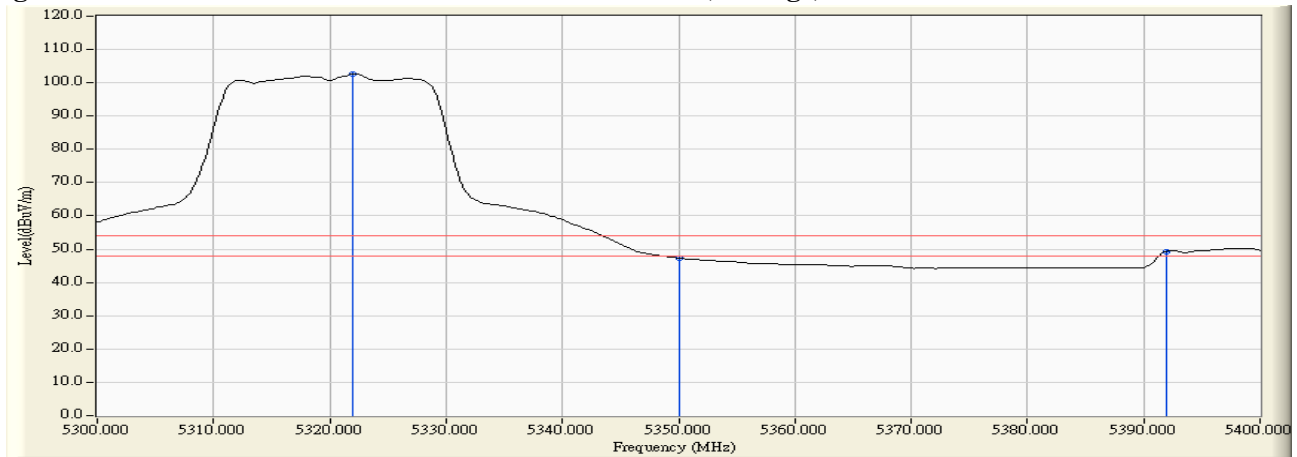


Figure Channel 64: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 100

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
100 (Peak)	5458.800	17.230	37.545	54.775	74.00	54.00	Pass
100 (Peak)	5460.000	17.241	36.690	53.931	74.00	54.00	Pass
100 (Peak)	5501.000	17.385	89.682	107.067	--	--	Pass
100 (Average)	5428.400	17.244	26.022	43.266	74.00	54.00	Pass
100 (Average)	5460.000	17.241	25.266	42.507	74.00	54.00	Pass
100 (Average)	5498.000	17.363	76.396	93.759	--	--	Pass

Figure Channel 100: Horizontal (Peak)

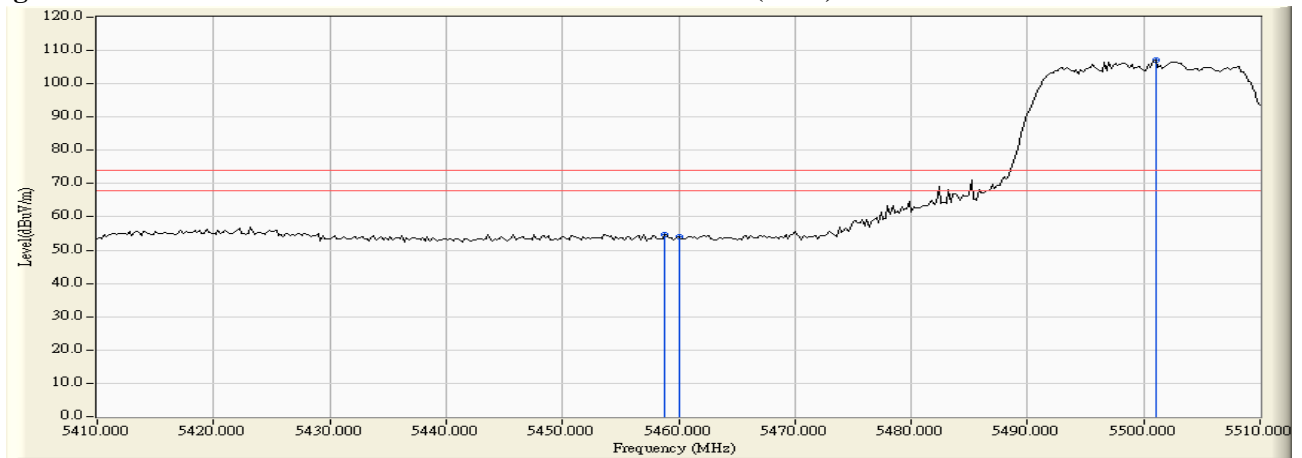
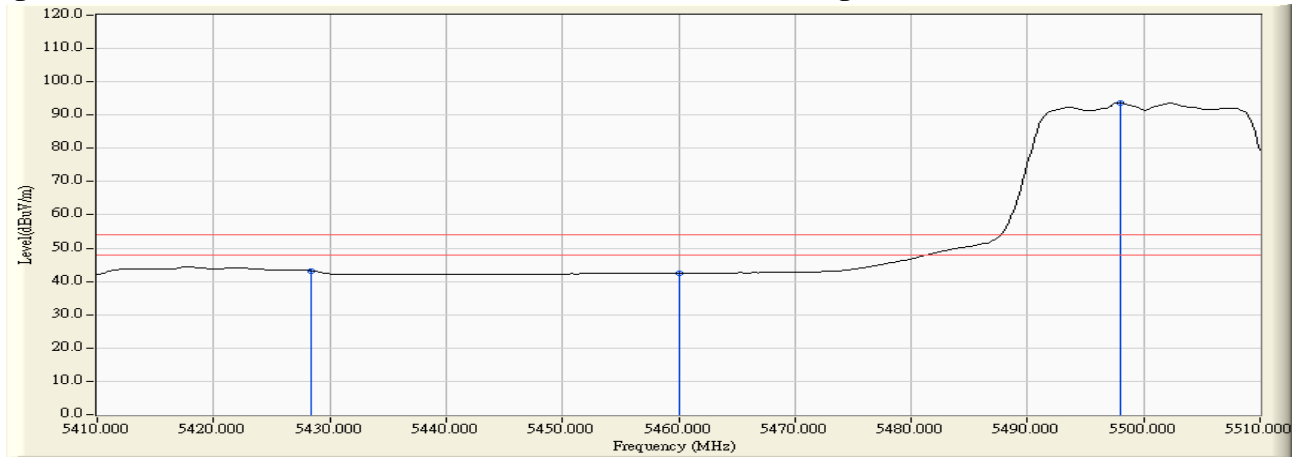


Figure Channel 100: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -Channel 100

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
100 (Peak)	5427.800	17.246	43.731	60.977	74.00	54.00	Pass
100 (Peak)	5459.200	17.234	41.889	59.123	74.00	54.00	Pass
100 (Peak)	5460.000	17.241	39.913	57.154	74.00	54.00	Pass
100 (Peak)	5502.000	17.392	97.624	115.016	--	--	Pass
100 (Average)	5422.400	17.257	33.032	50.290	74.00	54.00	Pass
100 (Average)	5460.000	17.241	27.747	44.988	74.00	54.00	Pass
100 (Average)	5502.000	17.394	84.181	101.575	--	--	Pass

Figure Channel 100: Vertical (Peak)

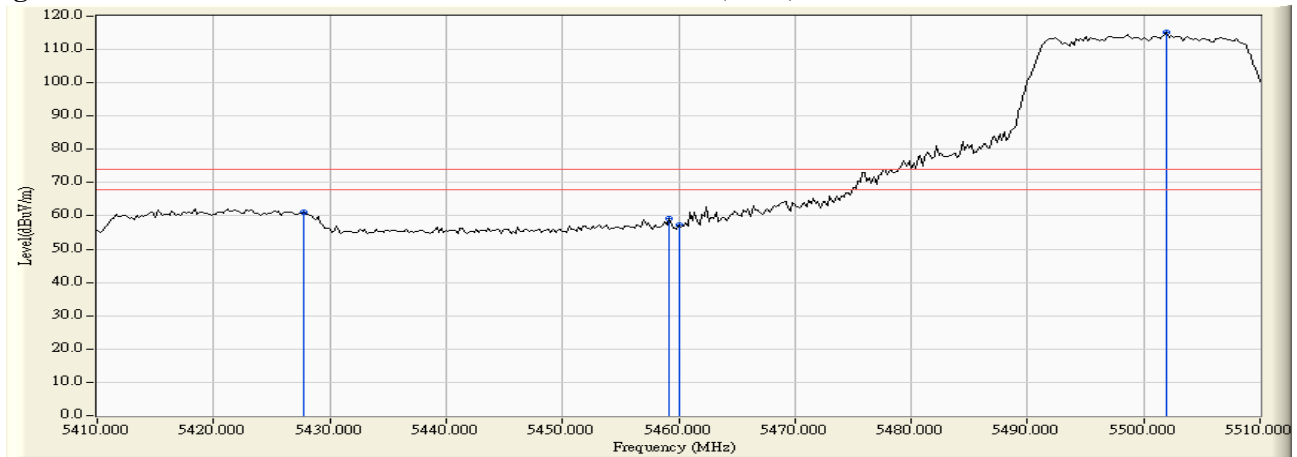
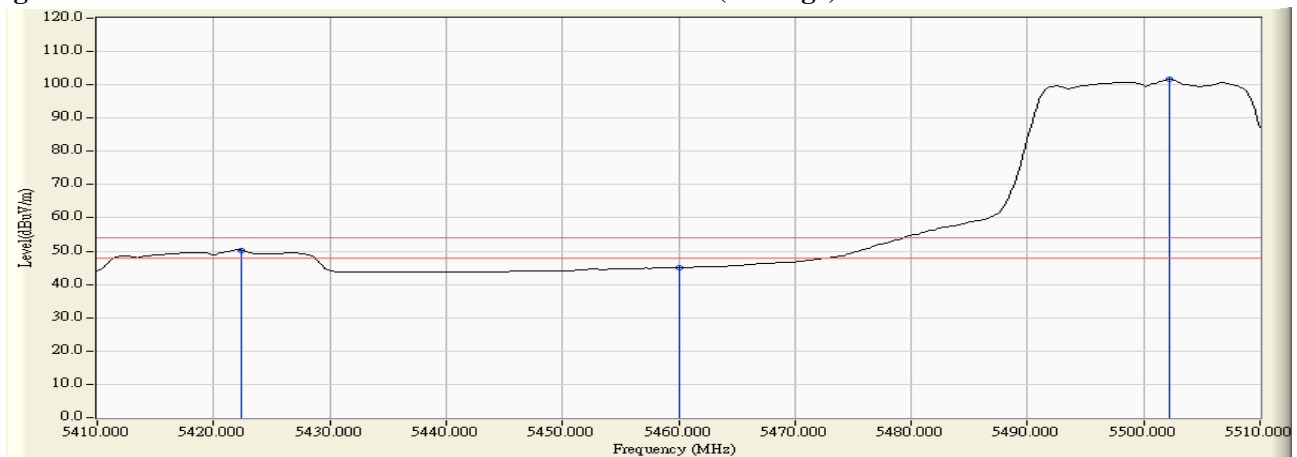


Figure Channel 100: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -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	-75.850	-57.516	-30.516	-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	-68.330	-48.995	-21.995	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 21.7Mbps) -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	-76.650	-58.001	-31.001	-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	-73.820	-54.448	-27.448	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 38

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
38 (Peak)	5144.800	16.794	52.965	69.759	74.00	54.00	Pass
38 (Peak)	5150.000	16.762	49.616	66.379	74.00	54.00	Pass
38 (Peak)	5195.000	16.965	88.828	105.793	--	--	Pass
38 (Average)	5150.000	16.762	33.637	50.400	74.00	54.00	Pass
38 (Average)	5198.000	17.016	73.421	90.438	--	--	Pass

Figure Channel 38: Horizontal (Peak)

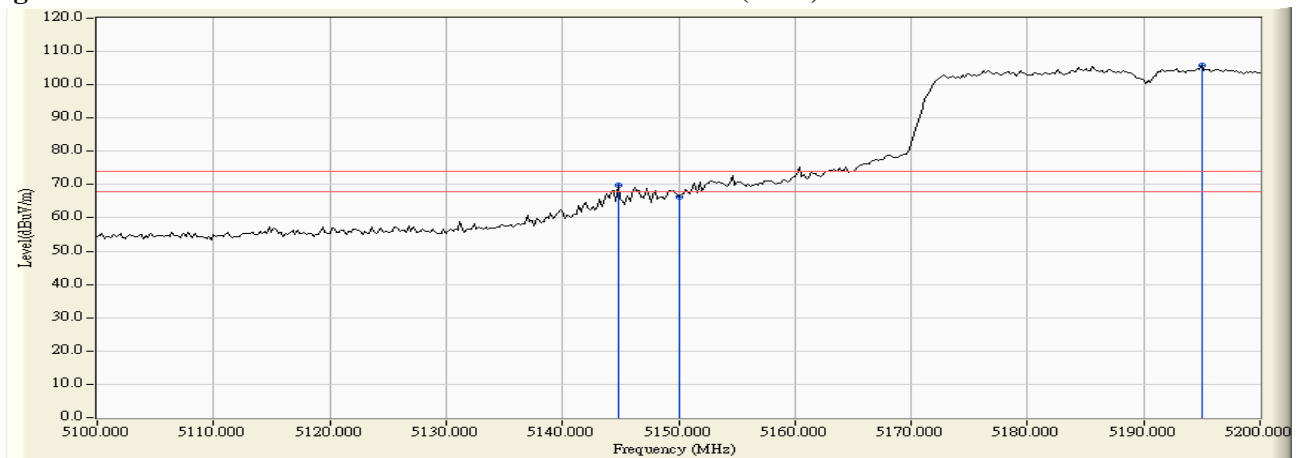
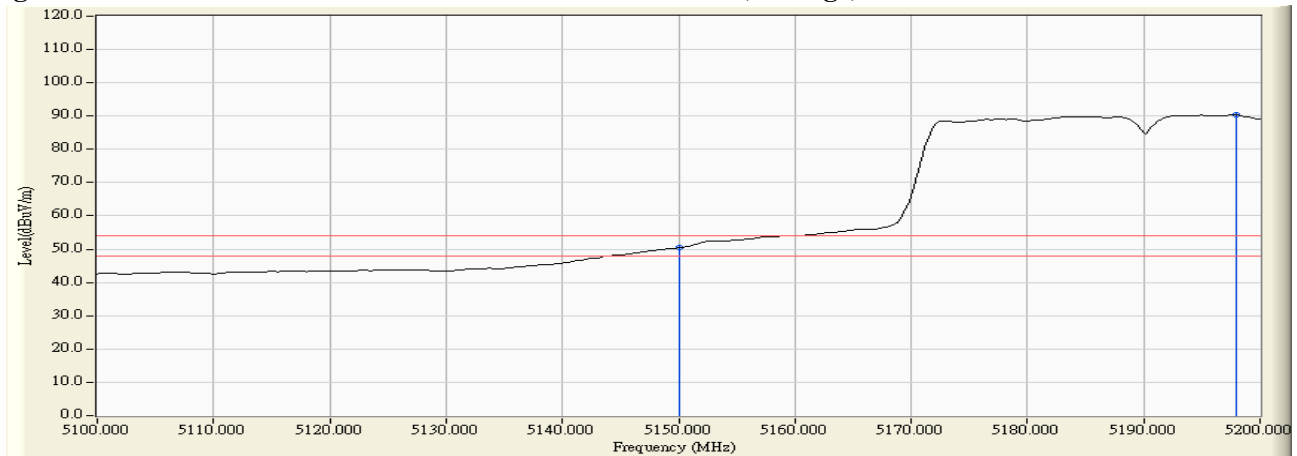


Figure Channel 38: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 38

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
38 (Peak)	5144.600	16.796	54.672	71.468	74.00	54.00	Pass
38 (Peak)	5150.000	16.762	52.800	69.563	74.00	54.00	Pass
38 (Peak)	5195.200	16.968	95.124	112.092	--	--	Pass
38 (Average)	5150.000	16.762	35.951	52.714	74.00	54.00	Pass
38 (Average)	5197.800	17.013	79.055	96.068	--	--	Pass

Figure Channel 38: Vertical (Peak)

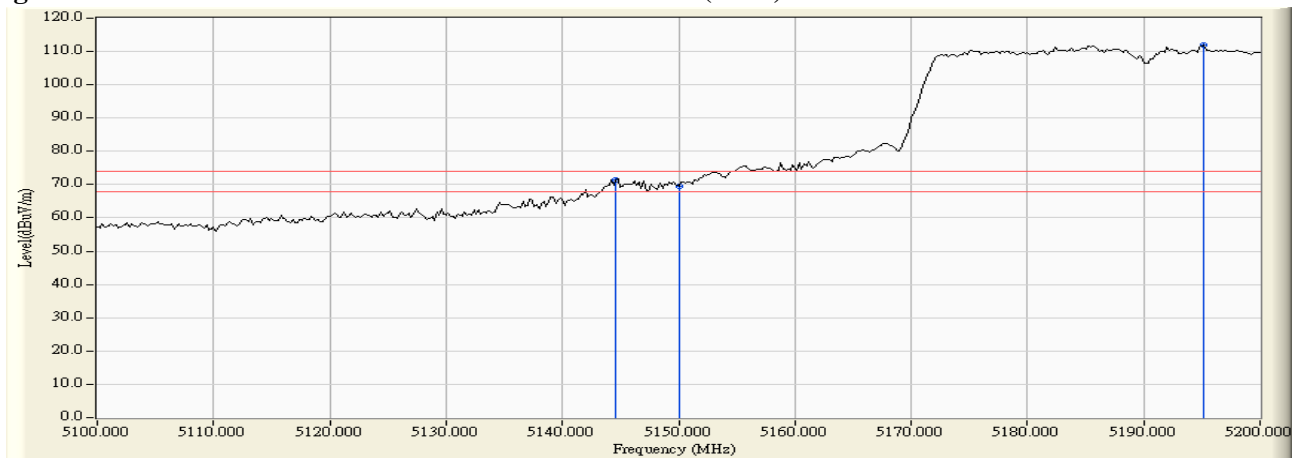
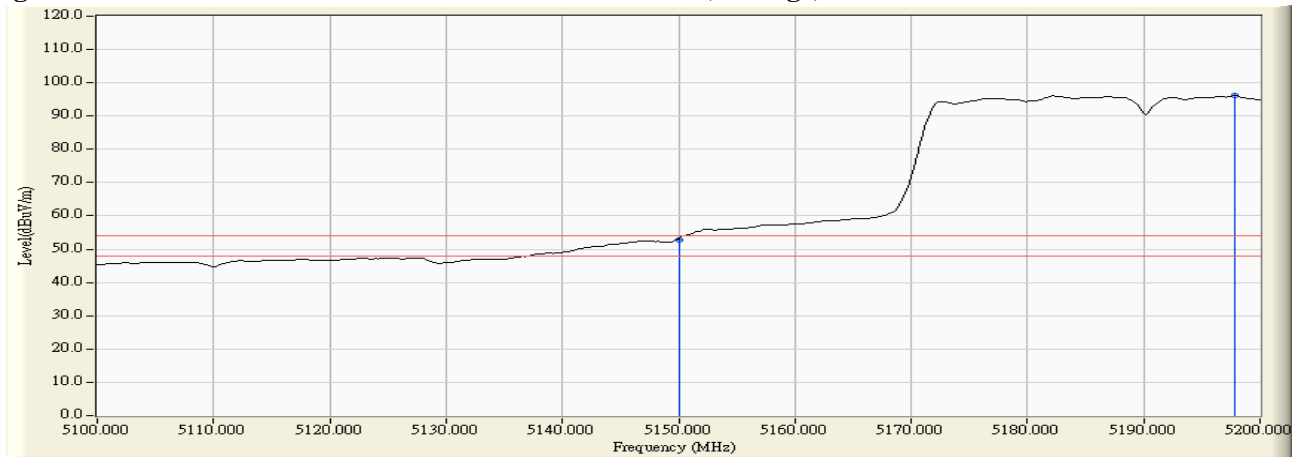


Figure Channel 38: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 62

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
62 (Peak)	5304.800	17.073	69.184	86.258	--	--	Pass
62 (Peak)	5350.000	17.133	27.526	44.659	74.00	54.00	Pass
62 (Average)	5304.600	17.073	84.597	101.670	--	--	Pass
62 (Average)	5350.000	17.133	43.507	60.640	74.00	54.00	Pass
62 (Average)	5354.800	17.168	44.123	61.291	74.00	54.00	Pass

Figure Channel 62: Horizontal (Peak)

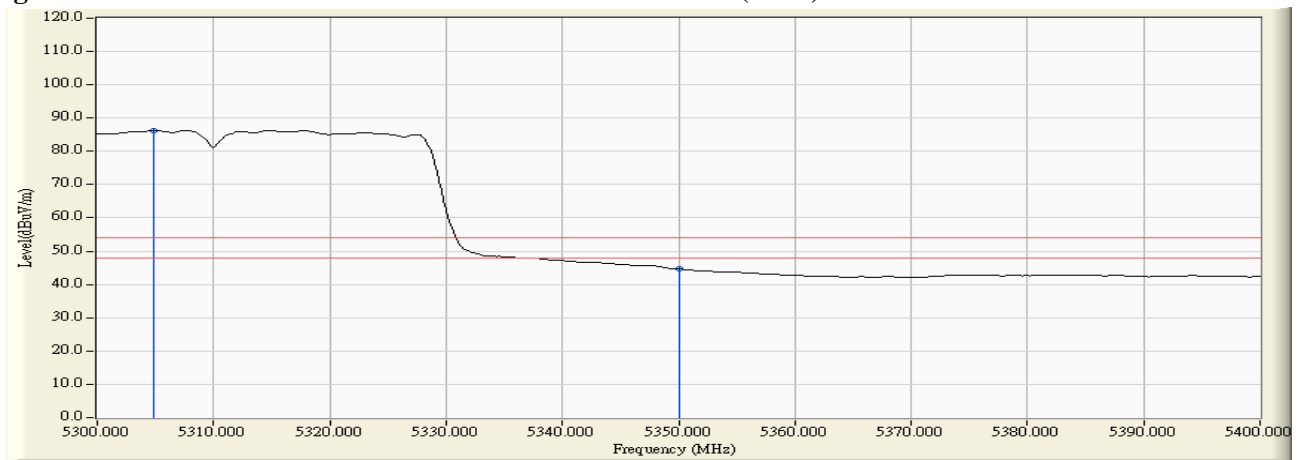
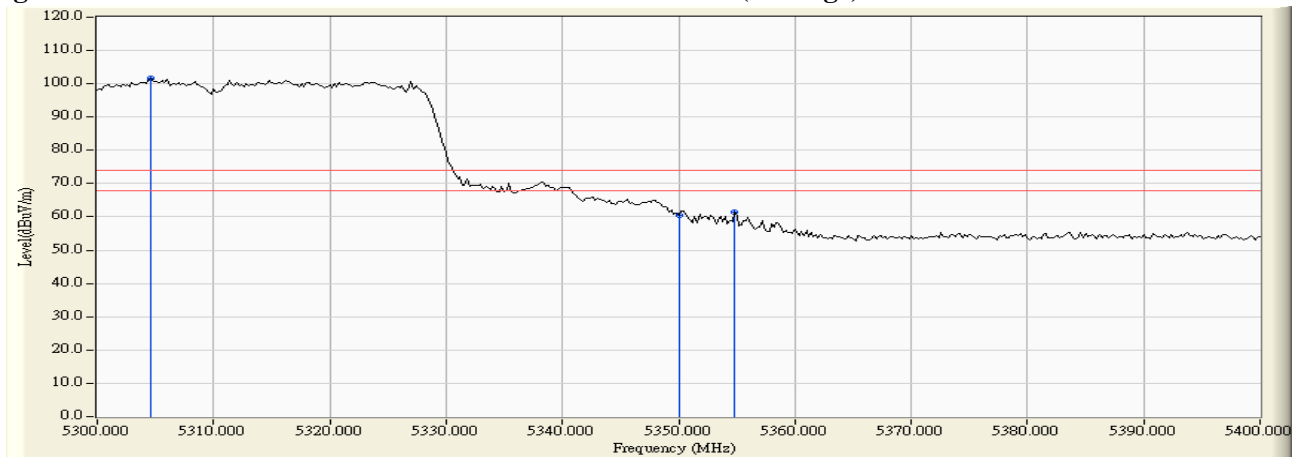


Figure Channel 62: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 62

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
62 (Peak)	5306.800	17.079	94.738	111.817	--	--	Pass
62 (Peak)	5350.000	17.133	54.929	72.062	74.00	54.00	Pass
62 (Average)	5306.600	17.078	79.394	96.473	--	--	Pass
62 (Average)	5350.000	17.133	34.489	51.622	74.00	54.00	Pass

Figure Channel 62: Vertical (Peak)

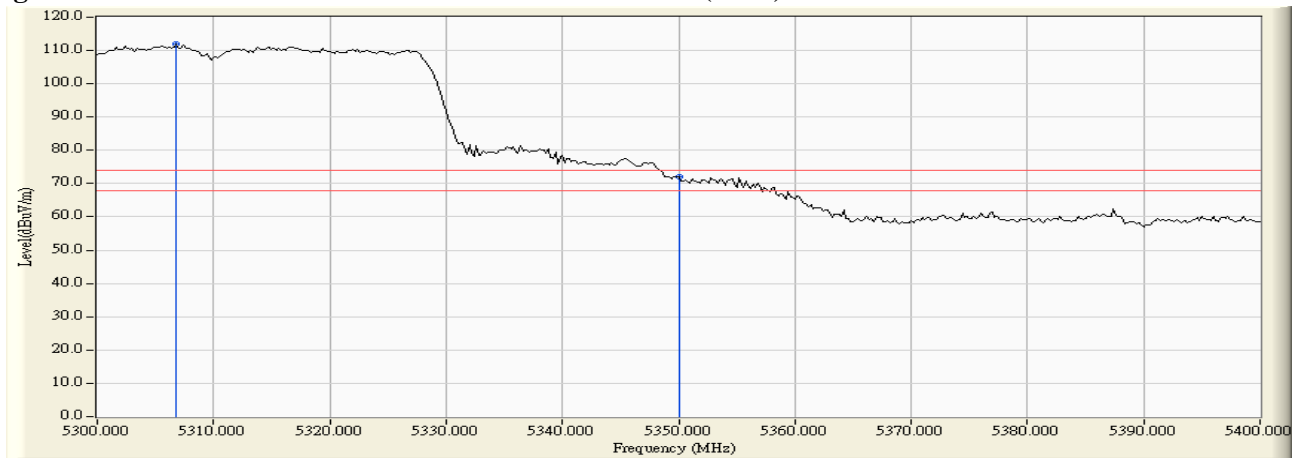
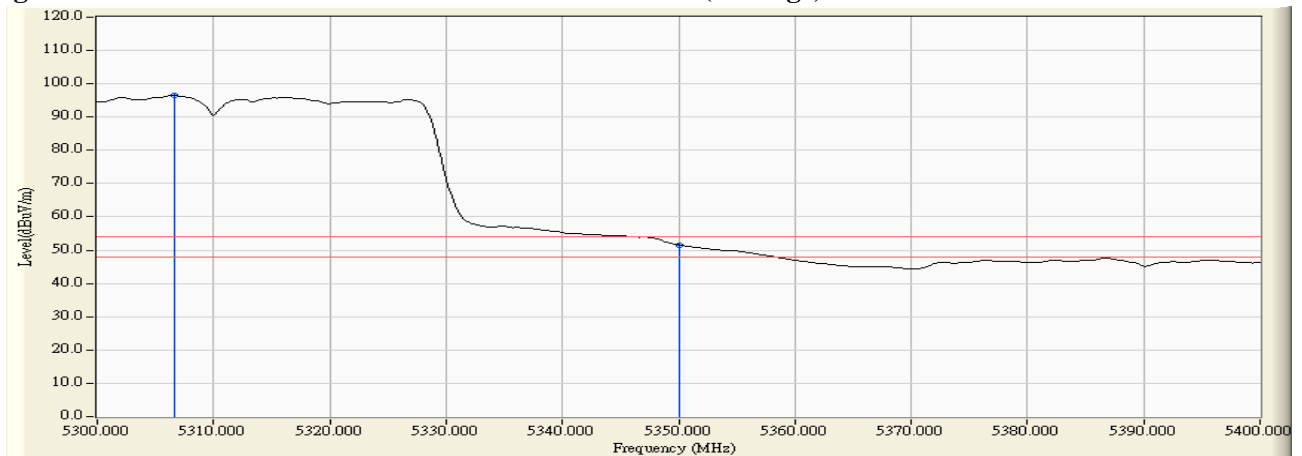


Figure Channel 62: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 102

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
102 (Peak)	5460.000	17.241	37.707	54.948	74.00	54.00	Pass
102 (Peak)	5505.000	17.414	82.769	100.183	--	--	Pass
102 (Average)	5460.000	17.241	25.291	42.532	74.00	54.00	Pass
102 (Average)	5503.200	17.401	67.454	84.855	--	--	Pass

Figure Channel 102: Horizontal (Peak)

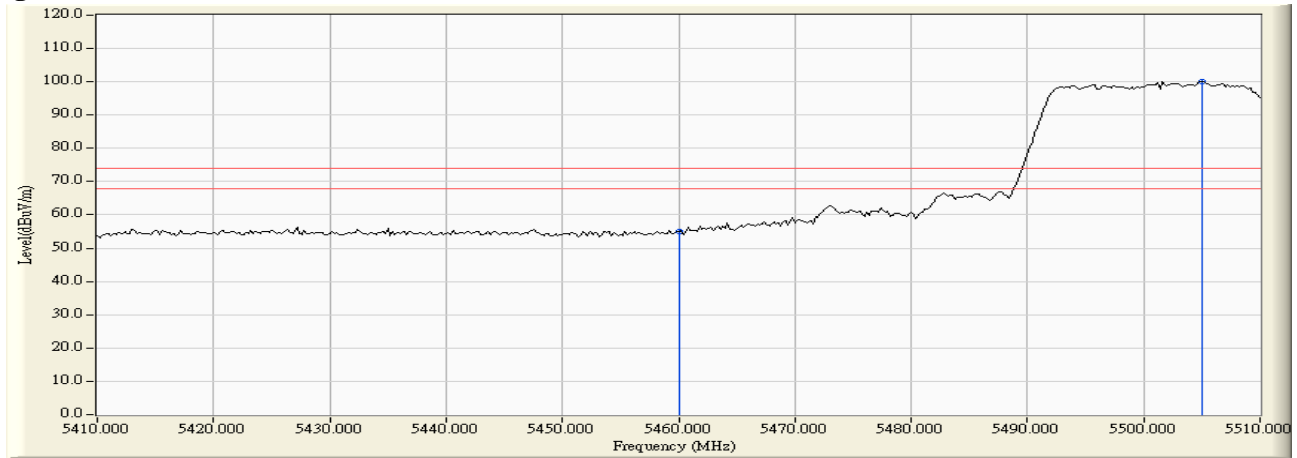
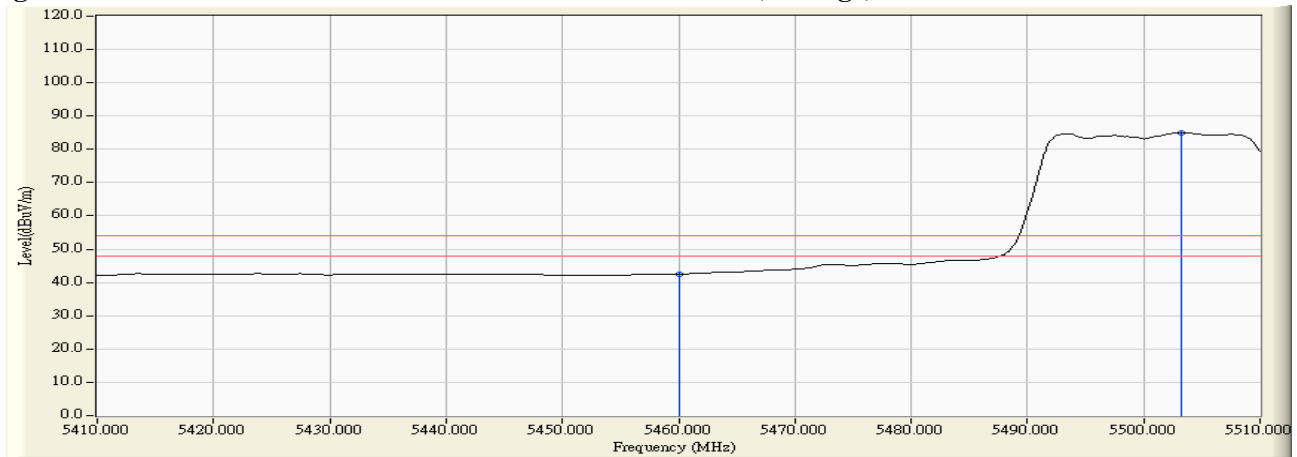


Figure Channel 102: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 102

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
102 (Peak)	5460.000	17.241	50.243	67.484	74.00	54.00	Pass
102 (Peak)	5506.800	17.427	94.533	111.960	--	--	Pass
102 (Average)	5460.000	17.241	32.264	49.505	74.00	54.00	Pass
102 (Average)	5506.600	17.426	79.362	96.788	--	--	Pass

Figure Channel 102: Vertical (Peak)

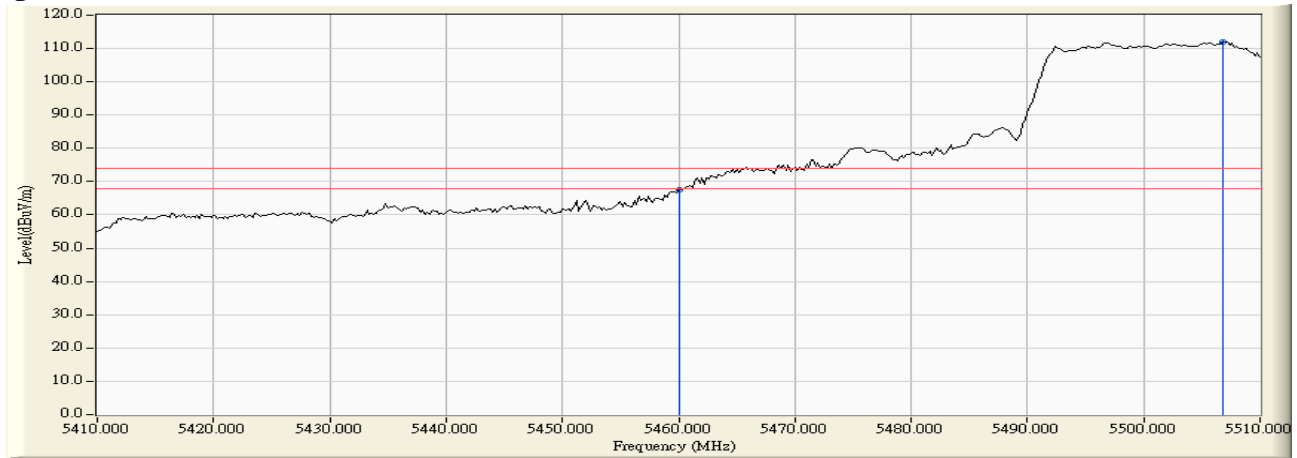
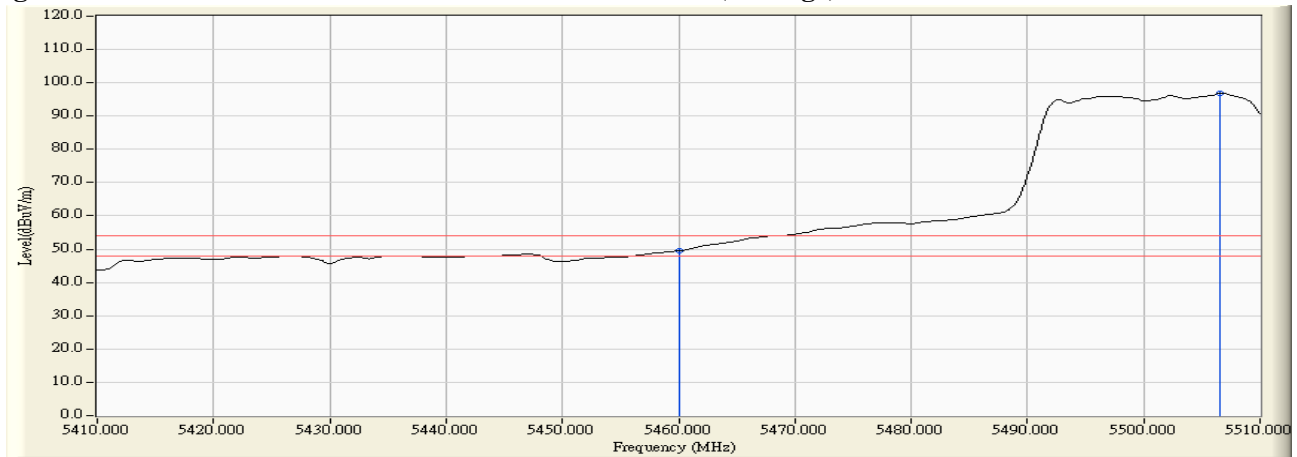


Figure Channel 102: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -Channel 102

RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5460.000	18.275	-65.430	-47.155	-20.155	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5460.000	19.288	-63.280	-43.992	-16.992	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n-40BW 45Mbps) -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	-77.360	-58.711	-31.711	-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	-73.290	-53.918	-26.918	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 4: Transmit (802.11ac-20BW) -Channel 144

RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5825.000	18.983	-67.490	-48.507	-31.507	-17.000	Pass
Horizontal	5835.000	19.106	-67.630	-48.524	-21.524	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5825.000	20.205	-68.660	-48.455	-31.455	-17.000	Pass
Vertical	5835.000	20.326	-68.930	-48.604	-21.604	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 5: Transmit (802.11ac-40BW) -Channel 142

RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5825.000	18.983	-66.320	-47.337	-30.337	-17.000	Pass
Horizontal	5835.000	19.106	-65.240	-46.134	-19.134	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5825.000	20.205	-64.320	-44.115	-27.115	-17.000	Pass
Vertical	5835.000	20.326	-63.330	-43.004	-16.004	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 42

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
42 (Peak)	5143.000	16.805	41.638	58.443	74.00	54.00	Pass
42 (Peak)	5150.000	16.762	40.126	56.889	74.00	54.00	Pass
42 (Peak)	5198.800	17.030	79.320	96.350	--	--	Pass
42 (Average)	5150.000	16.762	27.702	44.465	74.00	54.00	Pass
42 (Average)	5199.000	17.034	63.068	80.102	--	--	Pass

Figure Channel 42: Horizontal (Peak)

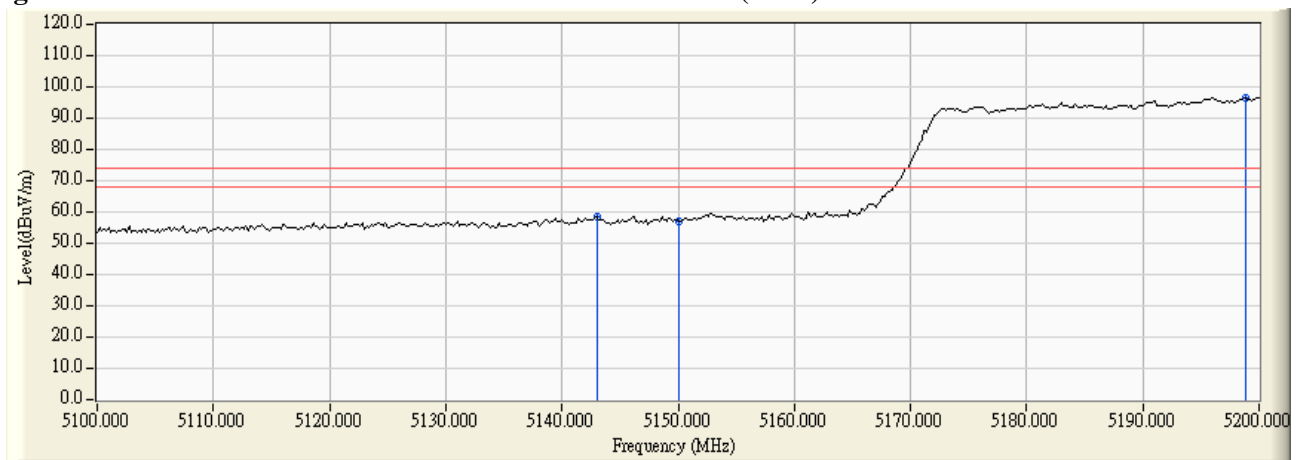
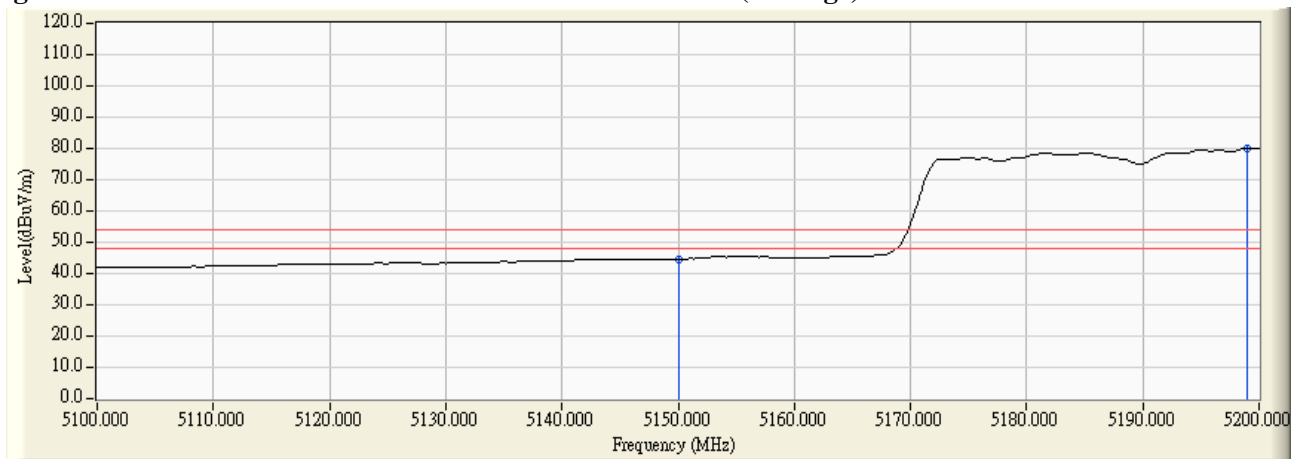


Figure Channel 42: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 42

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
42 (Peak)	5143.000	16.805	49.605	66.410	74.00	54.00	Pass
42 (Peak)	5150.000	16.762	47.240	64.003	74.00	54.00	Pass
42 (Peak)	5199.400	17.041	89.556	106.597	--	--	Pass
42 (Average)	5142.400	16.808	33.514	50.323	74.00	54.00	Pass
42 (Average)	5150.000	16.762	32.742	49.505	74.00	54.00	Pass
42 (Average)	5197.800	17.013	72.325	89.338	--	--	Pass

Figure Channel 42: Vertical (Peak)

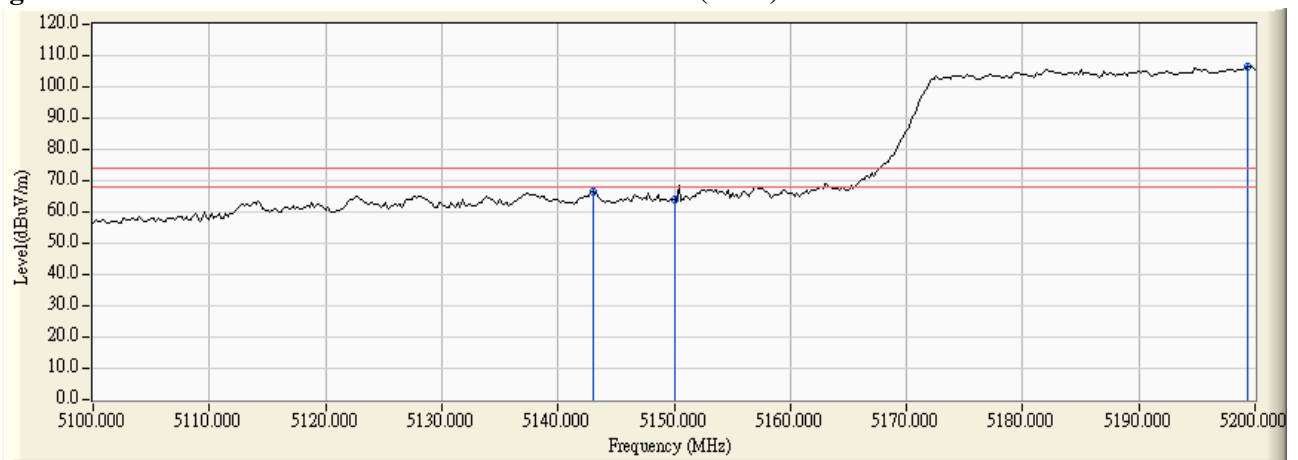
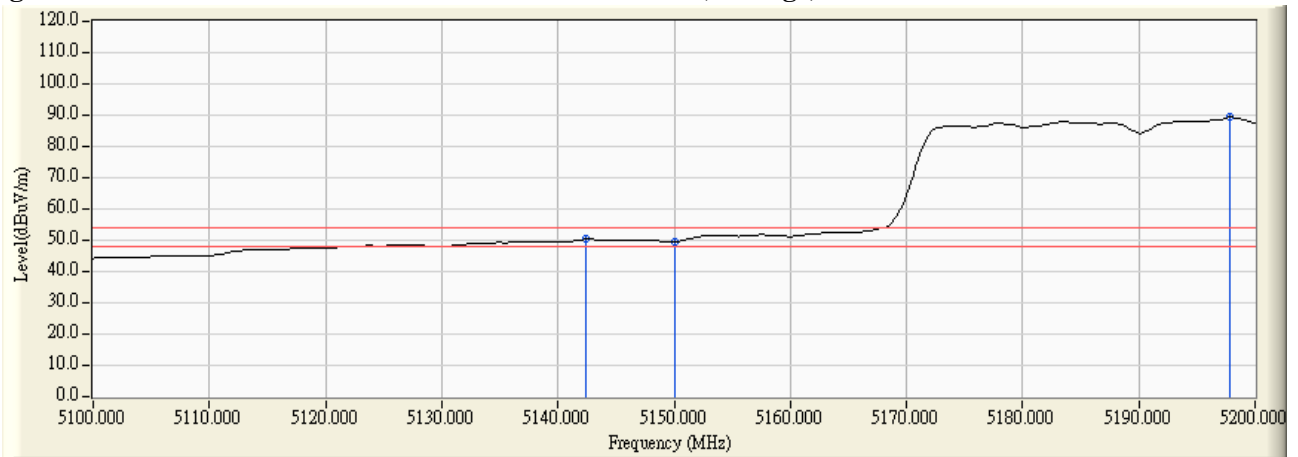


Figure Channel 42: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 58

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
58 (Peak)	5301.000	17.063	81.415	98.478	--	--	Pass
58 (Peak)	5350.000	17.133	39.612	56.745	74.00	54.00	Pass
58 (Peak)	5352.600	17.152	42.602	59.754	74.00	54.00	Pass
58 (Average)	5300.800	17.062	64.328	81.390	--	--	Pass
58 (Average)	5350.000	17.133	26.949	44.082	74.00	54.00	Pass

Figure Channel 155: Horizontal (Peak)

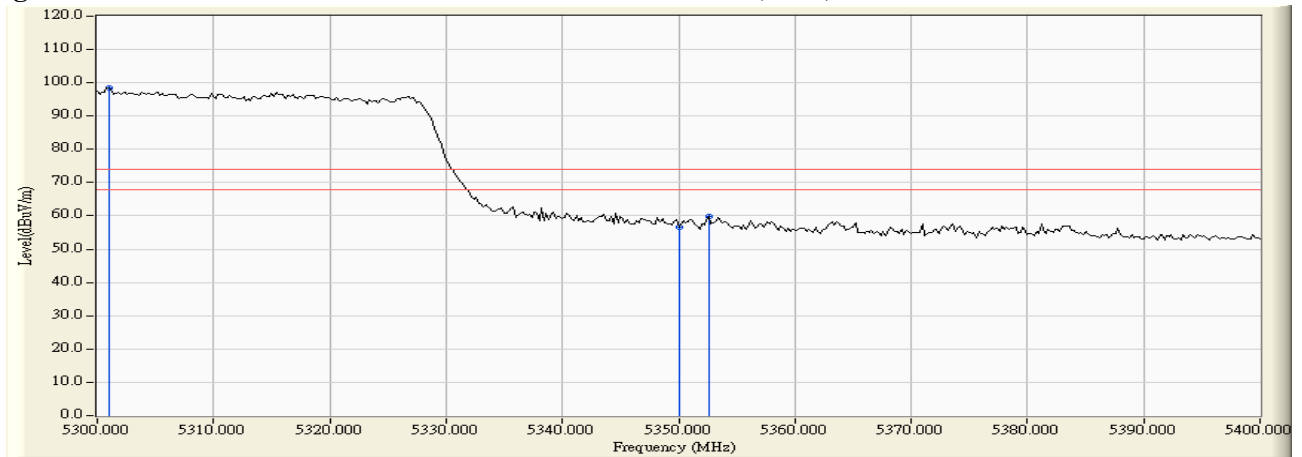
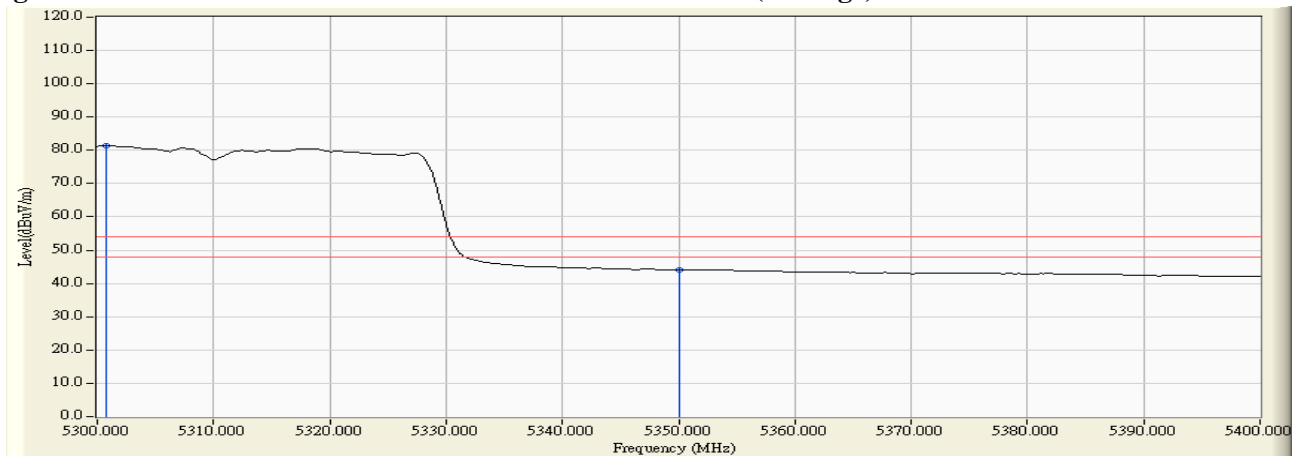


Figure Channel 155: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 58

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
58 (Peak)	5301.800	17.065	90.849	107.914	--	--	Pass
58 (Peak)	5350.000	17.133	54.097	71.230	74.00	54.00	Pass
58 (Peak)	5350.200	17.135	55.798	72.932	74.00	54.00	Pass
58 (Average)	5302.000	17.066	73.166	90.232	--	--	Pass
58 (Average)	5350.000	17.133	34.191	51.324	74.00	54.00	Pass

Figure Channel 155: Vertical (Peak)

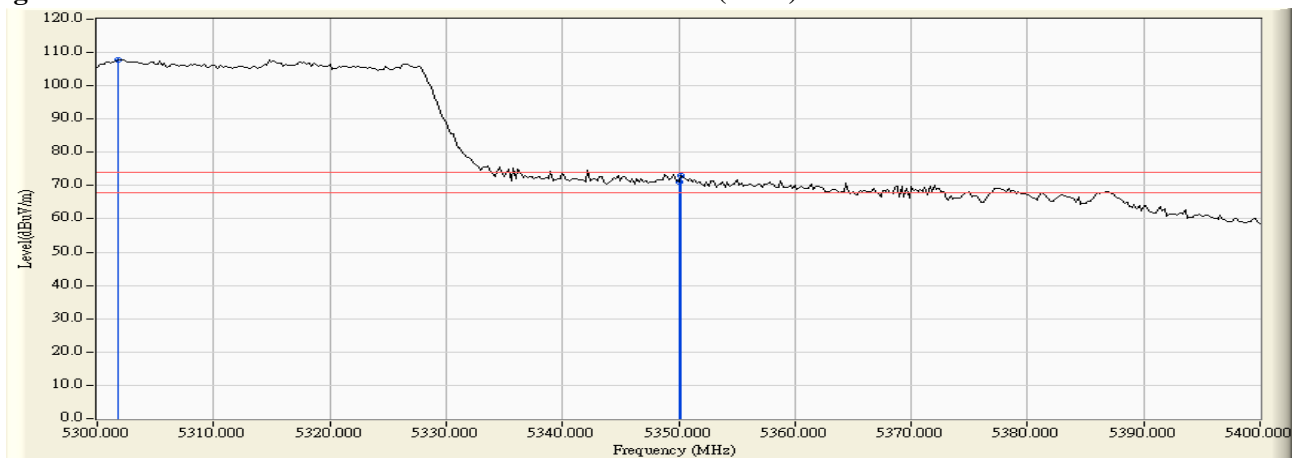
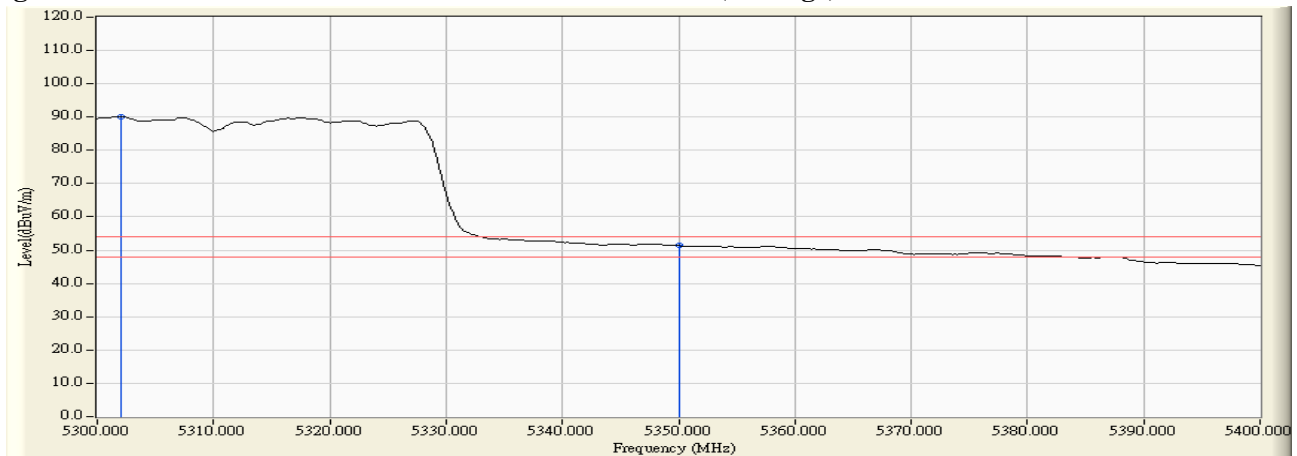


Figure Channel 155: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 106

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
106 (Peak)	5457.600	17.219	45.065	62.284	74.00	54.00	Pass
106 (Peak)	5460.000	17.241	41.007	58.248	74.00	54.00	Pass
106 (Peak)	5502.800	17.398	82.462	99.860	--	--	Pass
106 (Average)	5460.000	17.241	27.335	44.576	74.00	54.00	Pass
106 (Average)	5503.600	17.404	64.895	82.299	--	--	Pass

Figure Channel 106: Horizontal (Peak)

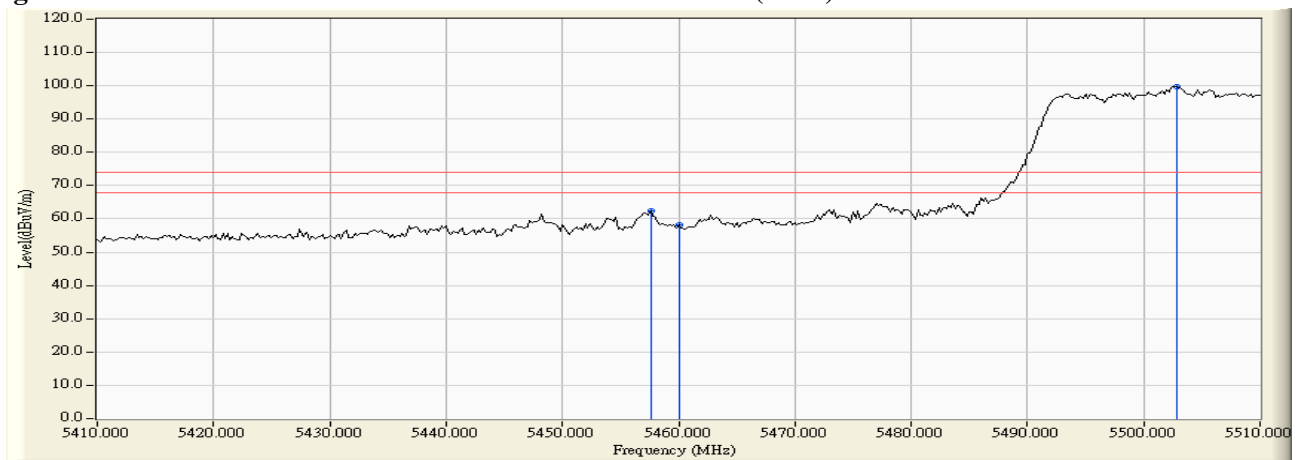
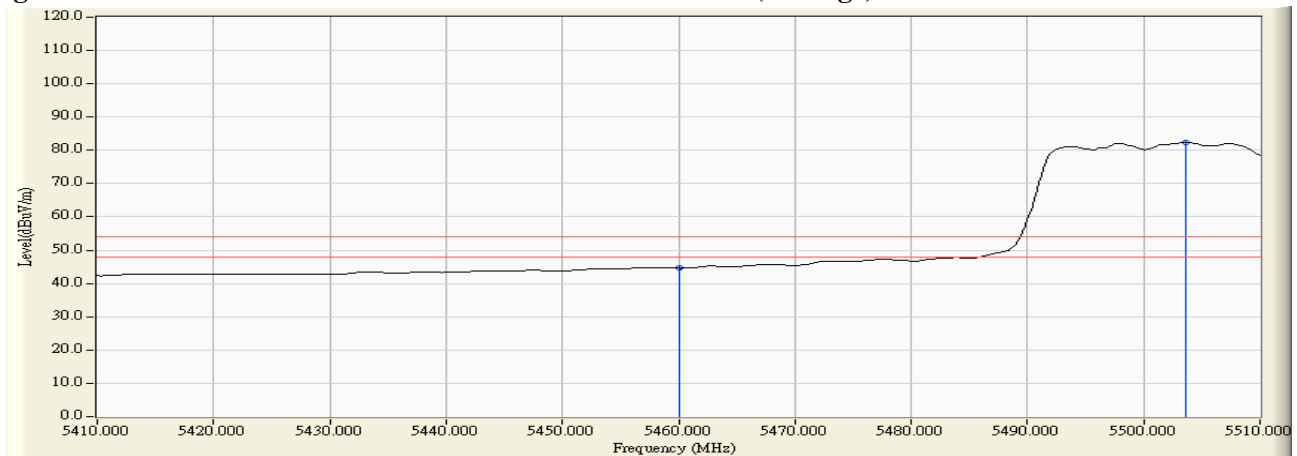


Figure Channel 106: Horizontal (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 106

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
106 (Peak)	5457.400	17.218	55.251	72.469	74.00	54.00	Pass
106 (Peak)	5460.000	17.241	49.691	66.932	74.00	54.00	Pass
106 (Peak)	5506.600	17.426	89.615	107.041	--	--	Pass
106 (Average)	5460.000	17.241	33.988	51.229	74.00	54.00	Pass
106 (Average)	5506.800	17.427	72.634	90.061	--	--	Pass

Figure Channel 106: Vertical (Peak)

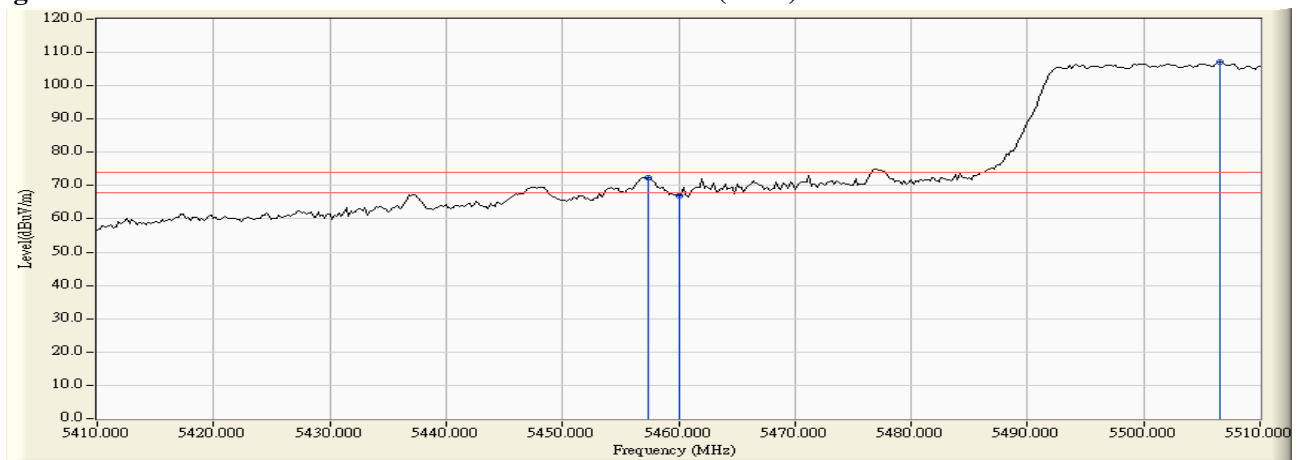
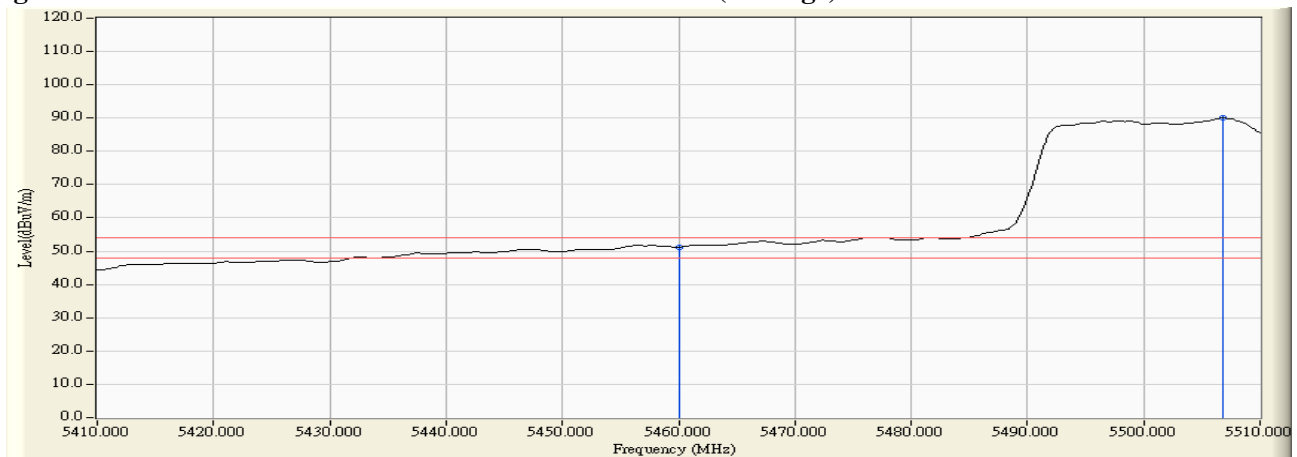


Figure Channel 106: Vertical (Average)



Note:

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

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 106

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	-80.940	-62.606	-35.606	-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	-78.240	-58.905	-31.905	-27.000	Pass

Product : 802.11abgn/11ac WLAN + Bluetooth PCI-E Mini Card
 Test Item : Band Edge Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW)-Channel 138

RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5825.000	18.983	-78.820	-59.837	-42.837	-17.000	Pass
Horizontal	5835.000	19.106	-80.640	-61.534	-34.534	-27.000	Pass

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5825.000	20.205	-83.490	-63.285	-46.285	-17.000	Pass
Vertical	5835.000	20.326	-84.430	-64.104	-37.104	-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