6. Radiated Emission

6.1. Test Equipment

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

| Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

6.2. Test Setup

Radiated Emission Below 1GHz
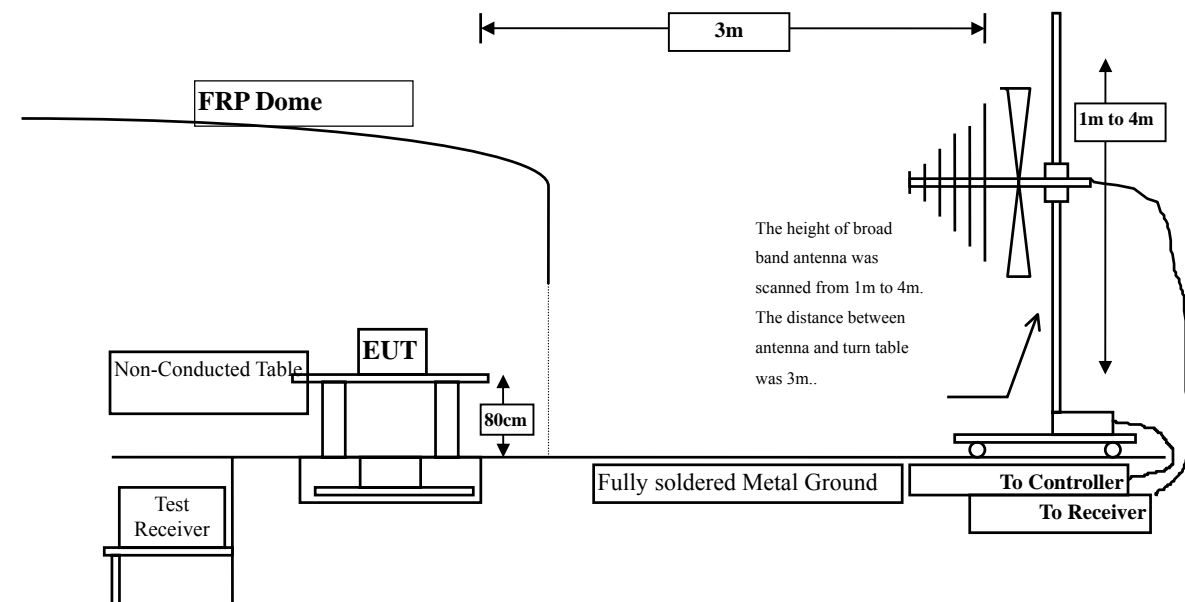
Radiated Emission Above 1GHz
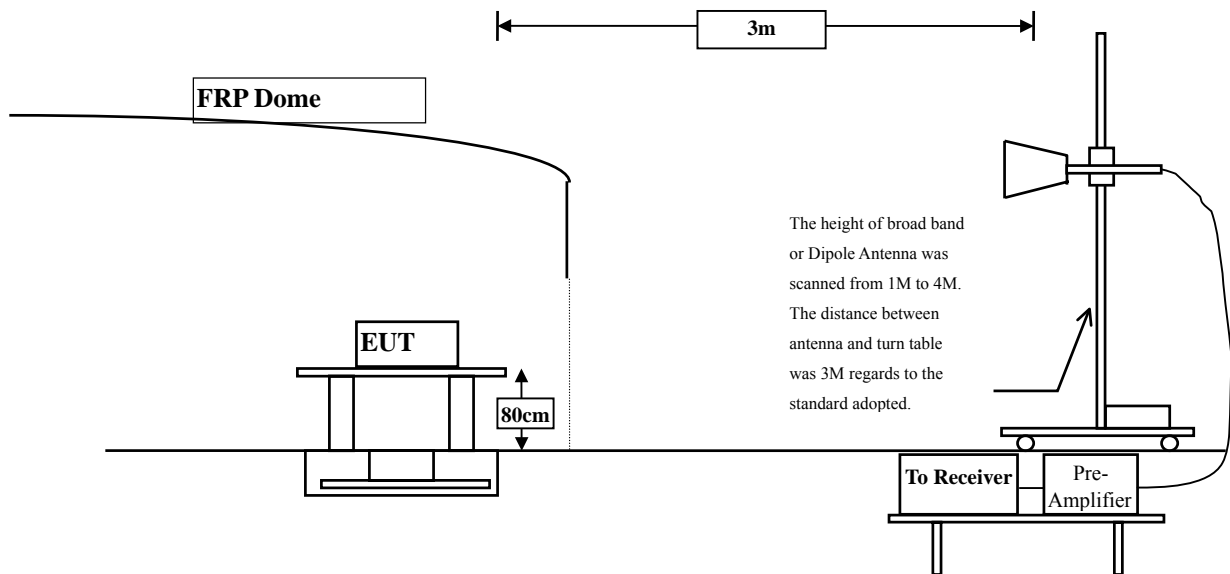
6.3.　Limits

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

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

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

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to FCC Public Notice DA 02-2138 test procedure for compliance to FCC 47CFR 15. 407 requirements.

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

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

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

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

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

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

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

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

6.5. Uncertainty

$\pm$ 3.8 dB below 1GHz

$\pm$ 3.9 dB above 1GHz

6.6. Test Result of Radiated Emission

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	36.500	49.430	-24.570	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10360.000	13.724	38.620	52.344	-21.656	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5220MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10440.000	13.322	40.190	53.512	-20.488	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
Detector:					
10440.000	*	*	*	*	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10440.000	14.245	42.720	56.965	-17.035	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
Detector:					
10440.000	14.245	26.730	40.975	-13.025	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10480.000	13.693	44.620	58.314	-15.686	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
10480.000	13.693	28.530	42.224	-11.776	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440000	*	*	*	*	54.000
36680.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10480.000	14.620	47.770	62.391	-11.609	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
Detector:					
10480.000	14.620	31.050	45.671	-8.329	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440000	*	*	*	*	54.000
36680.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10520.000	14.015	43.520	57.535	-16.465	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
Detector:					
10520.000	14.015	28.160	42.175	-11.825	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module	
Test Item	:	Harmonic Radiated Emission Data	
Test Site	:	No.3 OATS	
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5260MHz)	

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10520.000	14.818	46.180	60.998	-13.002	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
Detector:					
10520.000	14.818	30.420	45.238	-8.762	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5300MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10600.000	14.550	42.780	57.329	-16.671	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
Detector:					
10600.000	14.550	28.060	42.609	-11.391	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500.000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5300MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10600.000	14.881	44.420	59.301	-14.699	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
Detector:					
10600.000	14.881	29.960	44.841	-9.159	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500.000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5320MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10640.000	14.690	38.820	53.510	-20.490	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
Detector:					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Harmonic Radiated Emission Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10640.000	15.083	42.150	57.233	-16.767	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average Detector:					
10640.000	15.083	28.200	43.283	-10.717	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5500MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11000.000	16.399	44.220	60.619	-13.381	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average					
Detector:					
11000.000	16.399	28.270	44.669	-9.331	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Harmonic Radiated Emission Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11000.000	17.132	45.960	63.092	-10.908	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average Detector:					
11000.000	17.132	28.450	45.582	-8.418	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5600MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11200.000	16.656	43.050	59.706	-14.294	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
Detector:					
11200.000	16.656	27.060	43.716	-10.284	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5600MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11200.000	17.726	43.210	60.936	-13.064	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average Detector:					
11200.000	17.726	28.380	46.106	-7.894	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product　　　:　Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item　　:　Harmonic Radiated Emission Data
Test Site　　:　No.3 OATS
Test Mode　　:　Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11400.000	16.530	38.610	55.141	-18.859	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
Detector:					
11400.000	16.530	23.910	40.441	-13.559	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module	
Test Item	:	Harmonic Radiated Emission Data	
Test Site	:	No.3 OATS	
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5700MHz)	

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11400.000	17.138	40.450	57.588	-16.412	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
Detector:					
11400.000	17.138	25.220	42.358	-11.642	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5180MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10360.000	12.930	36.400	49.330	-24.670	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5180MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10360.000	13.724	35.890	49.614	-24.386	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average					
Detector:					
10360.000	*	*	*	*	54.000
15540.000	*	*	*	*	54.000
20720.000	*	*	*	*	54.000
25900.000	*	*	*	*	54.000
31080.000	*	*	*	*	54.000
36260.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10440.000	13.322	36.500	49.822	-24.178	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average					
Detector:					
10440.000	*	*	*	*	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10440.000	14.245	37.130	51.375	-22.625	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
10440.000	*	*	*	*	54.000
15660.000	*	*	*	*	54.000
20880.000	*	*	*	*	54.000
26100.000	*	*	*	*	54.000
31320.000	*	*	*	*	54.000
36540.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5240MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10480.000	13.693	35.980	49.674	-24.326	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average					
Detector:					
10480.000	*	*	*	*	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440.000	*	*	*	*	54.000
36680.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5240MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10480.000	14.620	35.990	50.611	-23.389	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
10480.000	*	*	*	*	54.000
15720.000	*	*	*	*	54.000
20960.000	*	*	*	*	54.000
26200.000	*	*	*	*	54.000
31440.000	*	*	*	*	54.000
36680.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10520.000	14.015	35.390	49.405	-24.595	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average Detector:					
10520.000	*	*	*	*	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10520.000	14.818	36.100	50.918	-23.082	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
31560.000	*	*	*	*	74.000
36820.000	*	*	*	*	74.000
Average					
Detector:					
10520.000	*	*	*	*	54.000
15780.000	*	*	*	*	54.000
21040.000	*	*	*	*	54.000
26300.000	*	*	*	*	54.000
31560.000	*	*	*	*	54.000
36820.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10600.000	14.550	35.910	50.459	-23.541	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
Detector:					
10600.000	*	*	*	*	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10600.000	14.881	35.850	50.731	-23.269	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500000	*	*	*	*	74.000
31800.000	*	*	*	*	74.000
37100.000	*	*	*	*	74.000
Average					
Detector:					
10600.000	*	*	*	*	54.000
15900.000	*	*	*	*	54.000
21200.000	*	*	*	*	54.000
26500000	*	*	*	*	54.000
31800.000	*	*	*	*	54.000
37100.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5320MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10640.000	14.690	35.630	50.320	-23.680	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
Detector:					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5320MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10640.000	15.083	35.660	50.743	-23.257	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
31920.000	*	*	*	*	74.000
37240.000	*	*	*	*	74.000
Average					
Detector:					
10640.000	*	*	*	*	54.000
15960.000	*	*	*	*	54.000
21280.000	*	*	*	*	54.000
26600.000	*	*	*	*	54.000
31920.000	*	*	*	*	54.000
37240.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11000.000	16.399	36.840	53.239	-20.761	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average Detector:					
11000.000	*	*	*	*	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11000.000	17.132	35.730	52.862	-21.138	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
33000.000	*	*	*	*	74.000
38500.000	*	*	*	*	74.000
Average Detector:					
11000.000	*	*	*	*	54.000
16500.000	*	*	*	*	54.000
22000.000	*	*	*	*	54.000
27500.000	*	*	*	*	54.000
33000.000	*	*	*	*	54.000
38500.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5600MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11200.000	16.656	34.930	51.586	-22.414	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average					
Detector:					
11200.000	*	*	*	*	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Harmonic Radiated Emission Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5600MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11200.000	17.726	35.720	53.446	-20.554	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
33600.000	*	*	*	*	74.000
39200.000	*	*	*	*	74.000
Average Detector:					
11200.000	*	*	*	*	54.000
16800.000	*	*	*	*	54.000
22400.000	*	*	*	*	54.000
28000.000	*	*	*	*	54.000
33600.000	*	*	*	*	54.000
39200.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5700MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11400.000	16.530	35.460	51.991	-22.009	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average					
Detector:					
11400.000	*	*	*	*	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5700MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11400.000	17.138	34.880	52.018	-21.982	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
34200.000	*	*	*	*	74.000
39900.000	*	*	*	*	74.000
Average Detector:					
11400.000	*	*	*	*	54.000
17100.000	*	*	*	*	54.000
22800.000	*	*	*	*	54.000
28500.000	*	*	*	*	54.000
34200.000	*	*	*	*	54.000
39900.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10380.000	12.939	36.860	49.799	-24.201	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
10380.000	*	*	*	*	54.000
15570.000	*	*	*	*	54.000
20760.000	*	*	*	*	54.000
25950.000	*	*	*	*	54.000
31140.000	*	*	*	*	54.000
36330.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Harmonic Radiated Emission Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10380.000	13.796	35.410	49.206	-24.794	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average					
Detector:					
10380.000	*	*	*	*	54.000
15570.000	*	*	*	*	54.000
20760.000	*	*	*	*	54.000
25950.000	*	*	*	*	54.000
31140.000	*	*	*	*	54.000
36330.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5230MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10460.000	13.508	36.210	49.718	-24.282	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average					
Detector:					
10460.000	*	*	*	*	54.000
15690.000	*	*	*	*	54.000
20920.000	*	*	*	*	54.000
26150.000	*	*	*	*	54.000
31380.000	*	*	*	*	54.000
36610.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module	
Test Item	:	Harmonic Radiated Emission Data	
Test Site	:	No.3 OATS	
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5230MHz)	

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10460.000	14.433	36.610	51.043	-22.957	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average					
Detector:					
10460.000	*	*	*	*	54.000
15690.000	*	*	*	*	54.000
20920.000	*	*	*	*	54.000
26150.000	*	*	*	*	54.000
31380.000	*	*	*	*	54.000
36610.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10540.000	14.151	35.610	49.760	-24.240	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
31620.000	*	*	*	*	74.000
36890.000	*	*	*	*	74.000
Average					
Detector:					
10540.000	*	*	*	*	54.000
15810.000	*	*	*	*	54.000
21080.000	*	*	*	*	54.000
26350.000	*	*	*	*	54.000
31620.000	*	*	*	*	54.000
36890.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10540.000	14.829	35.940	50.768	-23.232	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
31620.000	*	*	*	*	74.000
36890.000	*	*	*	*	74.000
Average Detector:					
10540.000	*	*	*	*	54.000
15810.000	*	*	*	*	54.000
21080.000	*	*	*	*	54.000
26350.000	*	*	*	*	54.000
31620.000	*	*	*	*	54.000
36890.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
10620.000	14.623	35.390	50.013	-23.987	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
31860.000	*	*	*	*	74.000
37170.000	*	*	*	*	74.000
Average					
Detector:					
10620.000	*	*	*	*	54.000
15930.000	*	*	*	*	54.000
21240.000	*	*	*	*	54.000
26550.000	*	*	*	*	54.000
31860.000	*	*	*	*	54.000
37170.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
10620.000	14.970	35.880	50.850	-23.150	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
31860.000	*	*	*	*	74.000
37170.000	*	*	*	*	74.000
Average					
Detector:					
10620.000	*	*	*	*	54.000
15930.000	*	*	*	*	54.000
21240.000	*	*	*	*	54.000
26550.000	*	*	*	*	54.000
31860.000	*	*	*	*	54.000
37170.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5510MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11020.000	16.474	35.260	51.733	-22.267	74.000
16530.000	*	*	*	*	74.000
22040.000	*	*	*	*	74.000
27550.000	*	*	*	*	74.000
33060.000	*	*	*	*	74.000
38570.000	*	*	*	*	74.000
Average Detector:					
11020.000	*	*	*	*	54.000
16530.000	*	*	*	*	54.000
22040.000	*	*	*	*	54.000
27550.000	*	*	*	*	54.000
33060.000	*	*	*	*	54.000
38570.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5510MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11020.000	17.224	36.010	53.234	-20.766	74.000
16530.000	*	*	*	*	74.000
22040.000	*	*	*	*	74.000
27550.000	*	*	*	*	74.000
33060.000	*	*	*	*	74.000
38570.000	*	*	*	*	74.000
Average					
Detector:					
11020.000	*	*	*	*	54.000
16530.000	*	*	*	*	54.000
22040.000	*	*	*	*	54.000
27550.000	*	*	*	*	54.000
33060.000	*	*	*	*	54.000
38570.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5590MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11180.000	16.657	34.200	50.856	-23.144	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
33540.000	*	*	*	*	74.000
39130.000	*	*	*	*	74.000
Average					
Detector:					
11180.000	*	*	*	*	54.000
16770.000	*	*	*	*	54.000
22360.000	*	*	*	*	54.000
27950.000	*	*	*	*	54.000
33540.000	*	*	*	*	54.000
39130.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5590MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11180.000	17.681	34.610	52.290	-21.710	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
33540.000	*	*	*	*	74.000
39130.000	*	*	*	*	74.000
Average Detector:					
11180.000	*	*	*	*	54.000
16770.000	*	*	*	*	54.000
22360.000	*	*	*	*	54.000
27950.000	*	*	*	*	54.000
33540.000	*	*	*	*	54.000
39130.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Harmonic Radiated Emission Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5670MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11340.000	16.408	34.410	50.817	-23.183	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
34020.000	*	*	*	*	74.000
39690.000	*	*	*	*	74.000
Average					
Detector:					
11340.000	*	*	*	*	54.000
17010.000	*	*	*	*	54.000
22680.000	*	*	*	*	54.000
28350.000	*	*	*	*	54.000
34020.000	*	*	*	*	54.000
39690.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	Harmonic Radiated Emission Data			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5670MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
11340.000	17.167	34.020	51.187	-22.813	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
34020.000	*	*	*	*	74.000
39690.000	*	*	*	*	74.000
Average					
Detector:					
11340.000	*	*	*	*	54.000
17010.000	*	*	*	*	54.000
22680.000	*	*	*	*	54.000
28350.000	*	*	*	*	54.000
34020.000	*	*	*	*	54.000
39690.000	*	*	*	*	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. " * ", means this data is the too weak instrument of signal is unable to test.
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.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
161.920	-11.626	47.619	35.994	-7.506	43.500
249.220	-6.014	44.757	38.743	-7.257	46.000
365.620	-1.329	40.420	39.091	-6.909	46.000
431.580	-2.099	39.171	37.072	-8.928	46.000
449.040	-2.238	40.430	38.192	-7.808	46.000
499.480	0.048	38.734	38.782	-7.218	46.000
Vertical					
Peak Detector					
150.280	-6.224	40.428	34.204	-9.296	43.500
179.380	-8.591	41.843	33.252	-10.248	43.500
270.560	-9.247	45.735	36.488	-9.512	46.000
311.300	-6.856	40.999	34.143	-11.857	46.000
332.640	-4.914	40.584	35.670	-10.330	46.000
530.520	-0.517	34.673	34.156	-11.844	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.

2. "   " means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	General Radiated Emission			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5300MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
31.940	-0.387	35.991	35.605	-4.395	40.000
249.220	-6.014	45.008	38.994	-7.006	46.000
365.620	-1.329	41.088	39.759	-6.241	46.000
400.540	-2.276	42.017	39.741	-6.259	46.000
433.520	-1.972	38.314	36.342	-9.658	46.000
499.480	0.048	38.889	38.937	-7.063	46.000
Vertical					
Peak Detector					
55.220	-4.699	32.604	27.905	-12.095	40.000
173.560	-8.444	43.603	35.160	-8.340	43.500
282.200	-8.461	45.342	36.881	-9.119	46.000
330.700	-4.912	40.481	35.569	-10.431	46.000
381.140	-1.558	36.639	35.081	-10.919	46.000
532.460	-0.563	34.204	33.641	-12.359	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
109.540	-7.488	42.912	35.424	-8.076	43.500
179.380	-11.771	49.773	38.002	-5.498	43.500
249.220	-6.014	43.890	37.876	-8.124	46.000
352.040	-2.403	40.048	37.645	-8.355	46.000
385.020	-1.350	37.126	35.776	-10.224	46.000
433.520	-1.972	39.940	37.968	-8.032	46.000
Vertical					
Peak Detector					
132.820	-4.440	39.787	35.347	-8.153	43.500
200.720	-7.835	43.947	36.112	-7.388	43.500
268.620	-8.842	45.206	36.364	-9.636	46.000
332.640	-4.914	40.657	35.743	-10.257	46.000
379.200	-1.505	36.085	34.579	-11.421	46.000
532.460	-0.563	35.965	35.402	-10.598	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested.
   Only the worst case is shown on the report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   General Radiated Emission
Test Site   :   No.3 OATS
Test Mode :   Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
132.820	-10.230	46.554	36.324	-7.176	43.500
253.100	-5.387	43.473	38.086	-7.914	46.000
363.680	-1.433	41.911	40.478	-5.522	46.000
431.580	-2.099	39.353	37.254	-8.746	46.000
449.040	-2.238	41.857	39.619	-6.381	46.000
499.480	0.048	37.896	37.944	-8.056	46.000
Vertical					
Peak Detector					
154.160	-6.221	40.894	34.673	-8.827	43.500
284.140	-8.194	46.666	38.472	-7.528	46.000
295.780	-7.455	45.584	38.129	-7.871	46.000
332.640	-4.914	41.446	36.532	-9.468	46.000
449.040	-7.498	40.749	33.251	-12.749	46.000
532.460	-0.563	35.796	35.233	-10.767	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested.
   Only the worst case is shown on the report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
68.800	-12.425	43.061	30.636	-9.364	40.000
241.460	-6.531	46.224	39.693	-6.307	46.000
365.620	-1.329	40.203	38.874	-7.126	46.000
433.520	-1.972	38.548	36.576	-9.424	46.000
499.480	0.048	37.166	37.214	-8.786	46.000
606.180	4.666	34.133	38.799	-7.201	46.000
Vertical					
Peak Detector					
132.820	-4.440	40.111	35.671	-7.829	43.500
158.040	-6.191	43.345	37.154	-6.346	43.500
251.160	-7.505	46.152	38.647	-7.353	46.000
332.640	-4.914	41.148	36.234	-9.766	46.000
507.240	-0.471	34.644	34.173	-11.827	46.000
530.520	-0.517	34.935	34.418	-11.582	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.

2. "　　" means the worst emission level.

3. Measurement Level = Reading Level + Correct Factor

4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module			
Test Item	:	General Radiated Emission			
Test Site	:	No.3 OATS			
Test Mode	:	Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)			

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
68.800	-12.425	41.635	29.210	-10.790	40.000
251.160	-5.745	44.582	38.837	-7.163	46.000
365.620	-1.329	41.083	39.754	-6.246	46.000
398.600	-2.268	42.419	40.151	-5.849	46.000
431.580	-2.099	39.080	36.981	-9.019	46.000
497.540	-0.273	40.778	40.505	-5.495	46.000
Vertical					
Peak Detector					
132.820	-4.440	39.187	34.747	-8.753	43.500
291.900	-8.004	45.828	37.823	-8.177	46.000
330.700	-4.912	41.345	36.433	-9.567	46.000
373.380	-2.373	37.864	35.491	-10.509	46.000
449.040	-7.498	37.504	30.006	-15.994	46.000
530.520	-0.517	35.954	35.437	-10.563	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   General Radiated Emission
Test Site   :   No.3 OATS
Test Mode   :   Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
70.740	-12.921	43.768	30.847	-9.153	40.000
249.220	-6.014	44.556	38.542	-7.458	46.000
365.620	-1.329	41.197	39.868	-6.132	46.000
398.600	-2.268	42.796	40.528	-5.472	46.000
431.580	-2.099	39.868	37.769	-8.231	46.000
499.480	0.048	38.926	38.974	-7.026	46.000
Vertical					
Peak Detector					
132.820	-4.440	38.897	34.457	-9.043	43.500
181.320	-9.512	45.353	35.841	-7.659	43.500
305.480	-6.809	43.689	36.880	-9.120	46.000
332.640	-4.914	41.051	36.137	-9.863	46.000
367.560	-2.545	37.372	34.827	-11.173	46.000
530.520	-0.517	34.076	33.559	-12.441	46.000

Note:
1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	General Radiated Emission
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
68.800	-12.425	42.501	30.076	-9.924	40.000
251.160	-5.745	44.242	38.497	-7.503	46.000
365.620	-1.329	39.682	38.353	-7.647	46.000
398.600	-2.268	42.214	39.946	-6.054	46.000
431.580	-2.099	39.440	37.341	-8.659	46.000
497.540	-0.273	39.228	38.955	-7.045	46.000
Vertical					
Peak Detector					
173.560	-8.444	44.271	35.828	-7.672	43.500
260.860	-7.462	44.344	36.882	-9.118	46.000
282.200	-8.461	47.087	38.626	-7.374	46.000
332.640	-4.914	41.144	36.230	-9.770	46.000
371.440	-2.737	37.245	34.508	-11.492	46.000
530.520	-0.517	36.851	36.334	-9.666	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested. Only the worst case is shown on the report.

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5590MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector					
70.740	-12.921	42.760	29.839	-10.161	40.000
241.460	-6.531	45.496	38.965	-7.035	46.000
365.620	-1.329	40.510	39.181	-6.819	46.000
398.600	-2.268	42.518	40.250	-5.750	46.000
449.040	-2.238	40.448	38.210	-7.790	46.000
497.540	-0.273	39.406	39.133	-6.867	46.000
Vertical					
Peak Detector					
132.820	-4.440	38.648	34.208	-9.292	43.500
198.780	-8.221	43.784	35.563	-7.937	43.500
243.400	-8.451	48.214	39.763	-6.237	46.000
299.660	-6.855	46.097	39.242	-6.758	46.000
332.640	-4.914	40.952	36.038	-9.962	46.000
532.460	-0.563	35.194	34.631	-11.369	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are average value.
2. "   " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor
4. The radiated emissions below 1GHz of the lowest, middle, highest frequency are pretested.
   Only the worst case is shown on the report.

7.   Band Edge

7.1.   Test Equipment

RF Conducted Measurement

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2010
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2010
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
X	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

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.
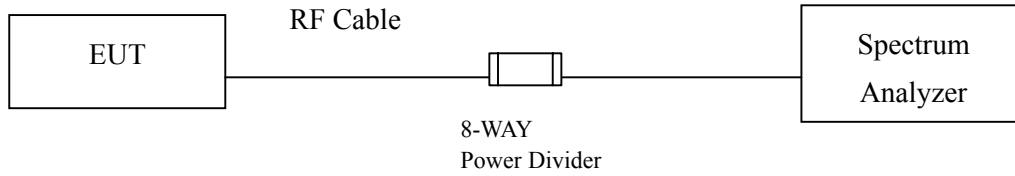3. The power combiner is used for measure 11n mode.

RF Radiated Measurement:

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

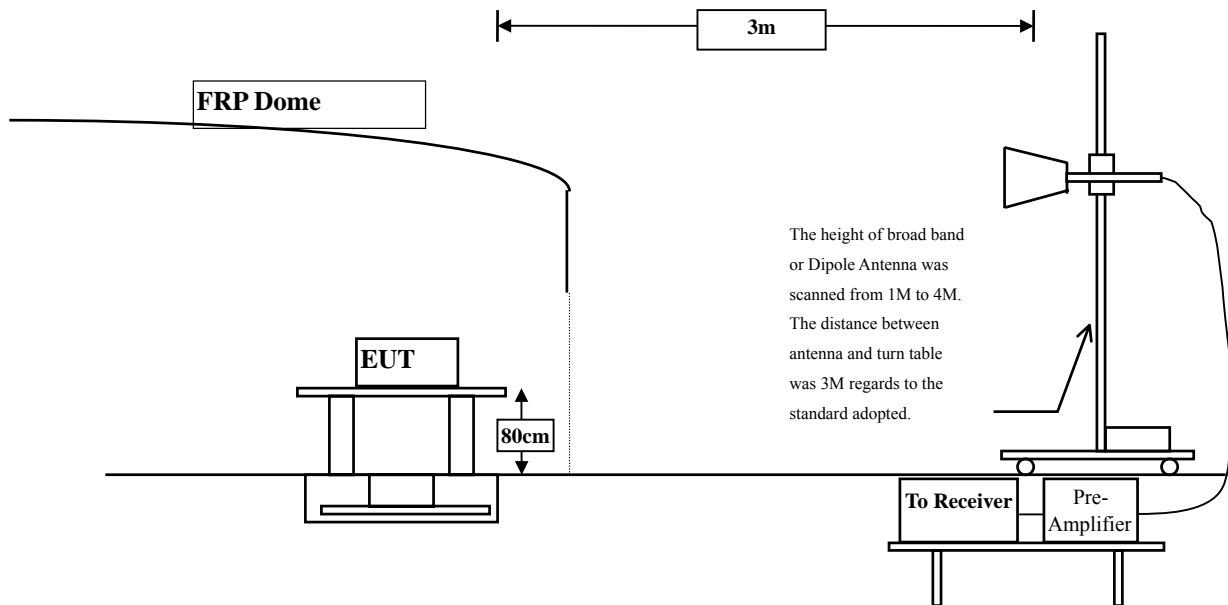| Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2010
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

7.2.   **Test Setup**

RF Conducted Measurement

```
┌──────────┐                              ┌──────────┐
│          │   RF Cable                   │ Spectrum │
│   EUT    │────────────[  ]──────────────│ Analyzer │
│          │                              │          │
└──────────┘                              └──────────┘
             8-WAY
             Power Divider
```

RF Radiated Measurement:

```
          |◄────────────── 3m ──────────────►|

  ┌─────────────┐
  │  FRP Dome   │
  └─────────────┘

                                    The height of broad band
                                    or Dipole Antenna was
                                    scanned from 1M to 4M.
                                    The distance between
        ┌─────┐                     antenna and turn table
        │ EUT │                     was 3M regards to the
      ──┴──┬──┴──                   standard adopted.
           │     80cm
```

To Receiver   Pre-Amplifier

7.3. Limits

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

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

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

Remarks :   1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

7.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

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

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

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

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

7.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

7.6. Test Result of Band Edge

Product	:	Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11a-6Mbps)-Channel 36

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Reading Level [dBuV]	Correction Factor [dB/m]	Emission Level [dBuV/m]	Detector
Horizontal	5180	34.966	65.39	100.356	Peak
Horizontal	5180	34.966	54.17	89.136	Average
Vertical	5180	37.073	71.02	108.094	Peak
Vertical	5180	37.073	61.02	98.094	Average

Note: 1:Spectrum Analyzer setting:

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

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

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	100.356	47.43	52.926	74.000	Peak
Horizontal	5150	89.136	45.225	43.911	54.000	Average
Vertical	5150	108.094	47.43	60.664	74.000	Peak
Vertical	5150	98.094	45.225	52.869	54.000	Average

Note:

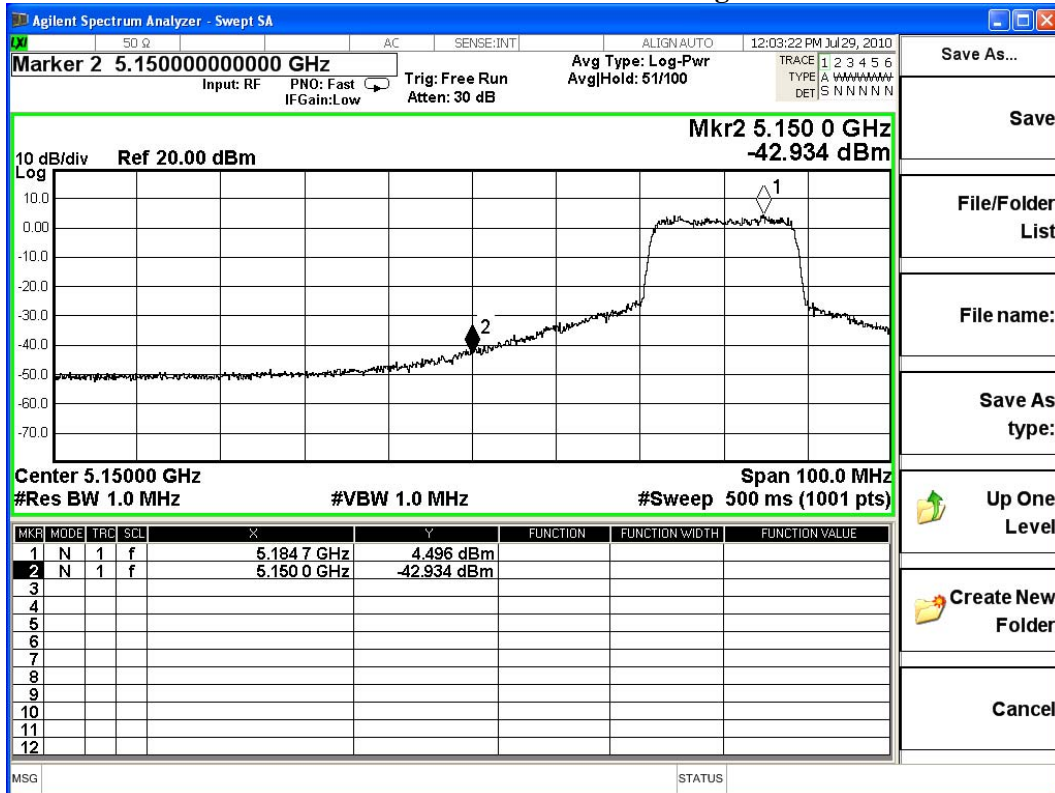The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Band Edge Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11a-6Mbps)-Channel 48

Test Frequency (MHz)	Measurement Level (20dB BW) (MHz)	Limit (MHz)	Result
5240	5248.7	<5250	PASS

NOTE: Accordance with 15.215 requirement.

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 52

Test Frequency (MHz)	Measurement Level (20dB BW) (MHz)	Limit (MHz)	Result
5260	5251.4	>5250	PASS

NOTE: Accordance with 15.215 requirement.

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Band Edge Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11a-6Mbps) -Channel 64

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]	Detector
Horizontal	5320	35.635	66.69	102.324	Peak
Horizontal	5320	35.635	56.66	92.294	Average
Vertical	5320	37.552	71.41	108.961	Peak
Vertical	5320	37.552	60.68	98.231	Average

Note: 1:Spectrum Analyzer setting:

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

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

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5350	102.324	45.807	56.517	74.000	Peak
Horizontal	5350	92.294	44.947	47.347	54.000	Average
Vertical	5350	108.961	45.807	63.154	74.000	Peak
Vertical	5350	98.231	44.947	53.284	54.000	Average

Note:

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

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

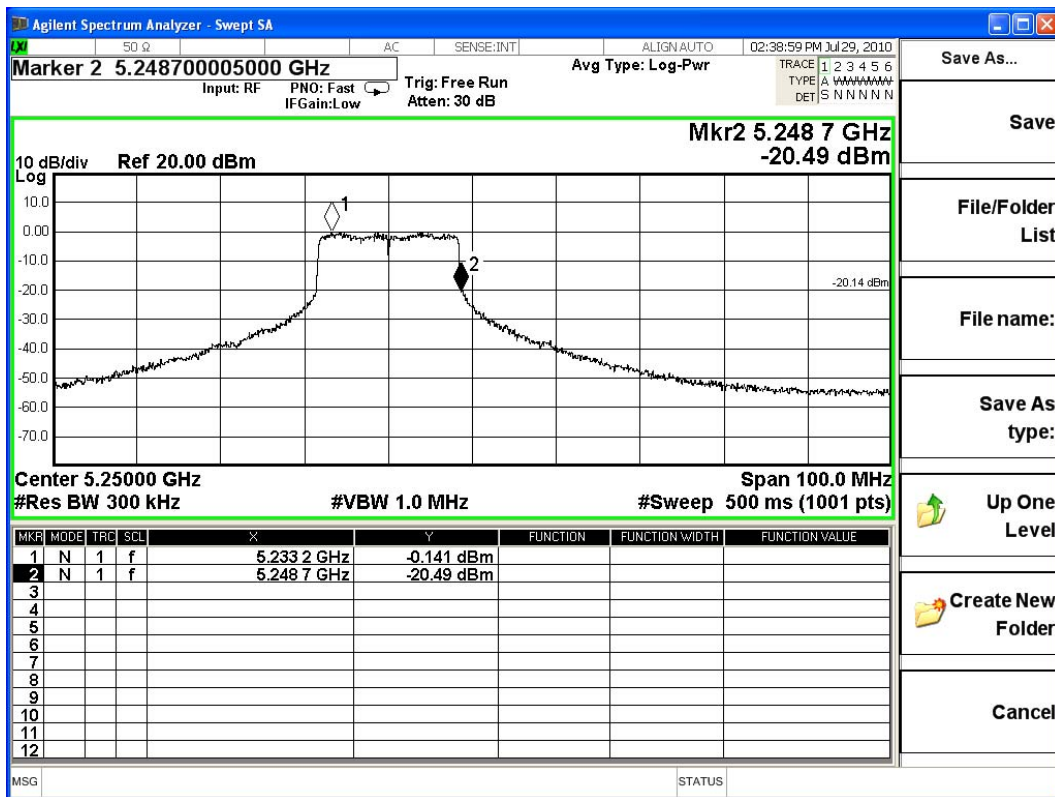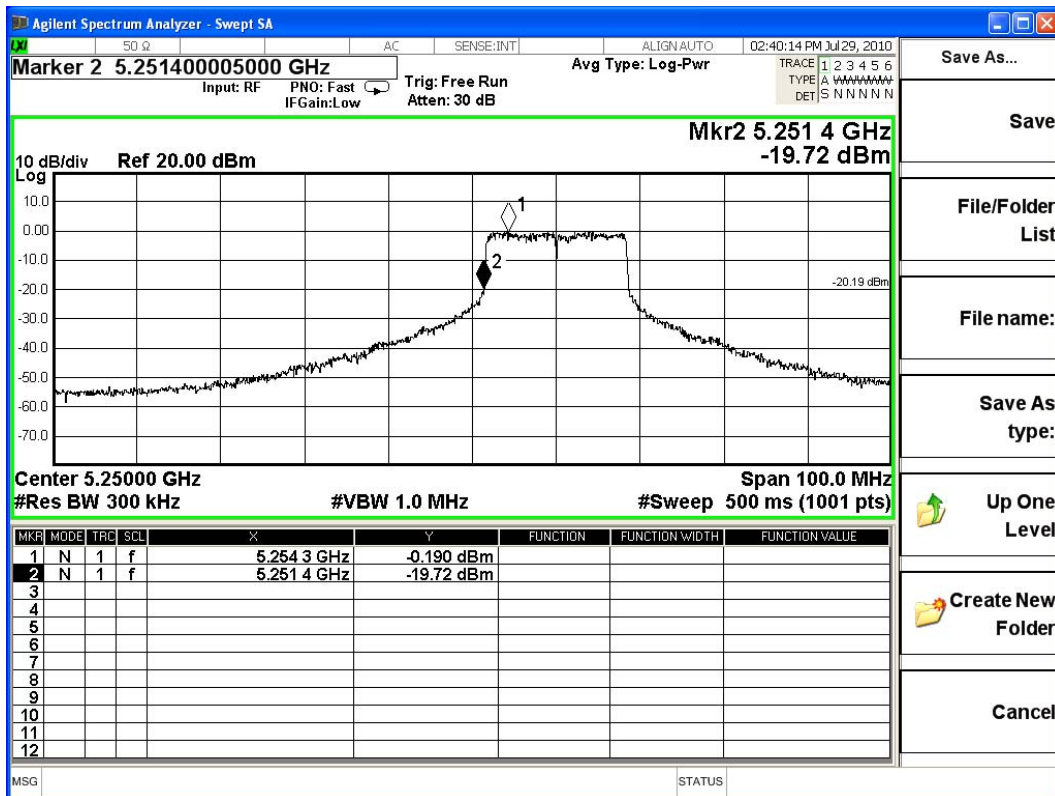
Average Detector of conducted Band Edge Delta

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Band Edge Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11a-6Mbps) -Channel 100

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]	Detector
Horizontal	5500	36.684	60.99	97.674	Peak
Horizontal	5500	36.684	50.13	86.814	Average
Vertical	5500	38.145	69.16	107.305	Peak
Vertical	5500	38.145	56.55	94.695	Average

Note: 1:Spectrum Analyzer setting:

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

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

Band Edge Test Data

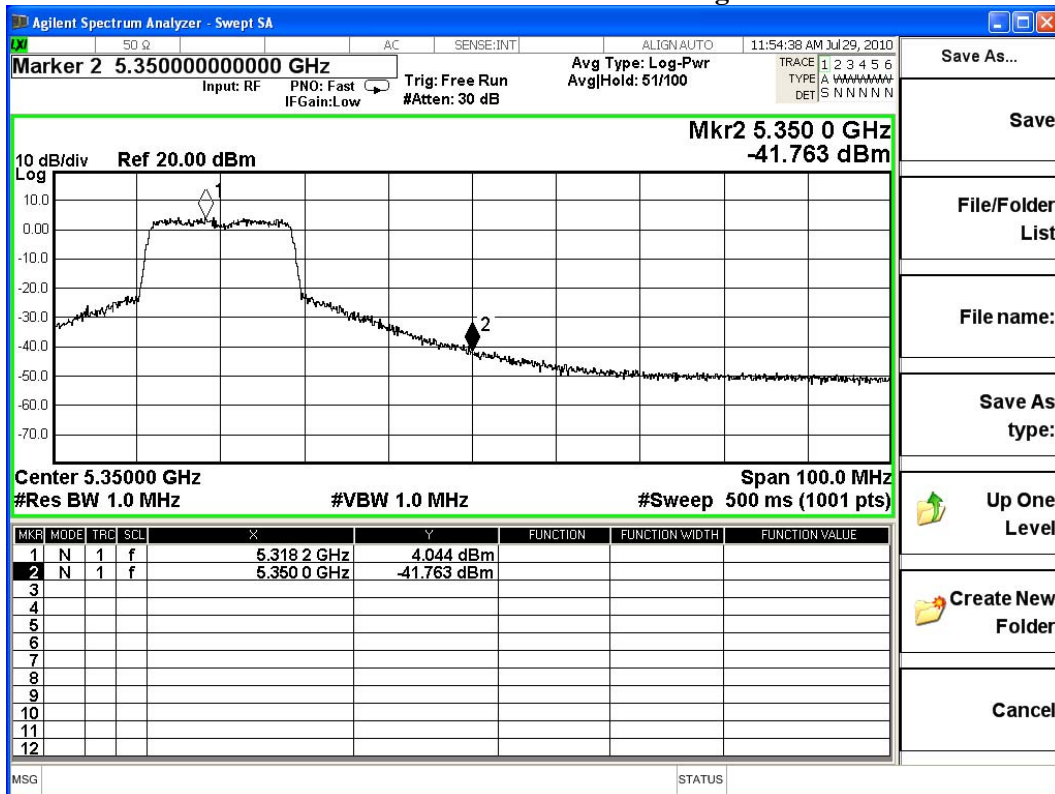| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5460	97.674	47.299	50.375	74.000	Peak
Horizontal	5460	86.814	47.86	38.954	54.000	Average
Vertical	5460	107.305	47.299	60.006	74.000	Peak
Vertical	5460	94.695	47.86	46.835	54.000	Average
Horizontal	5470	97.674	42.161	55.513	68.220	Peak
Vertical	5470	107.305	42.161	65.144	68.220	Peak

Note:

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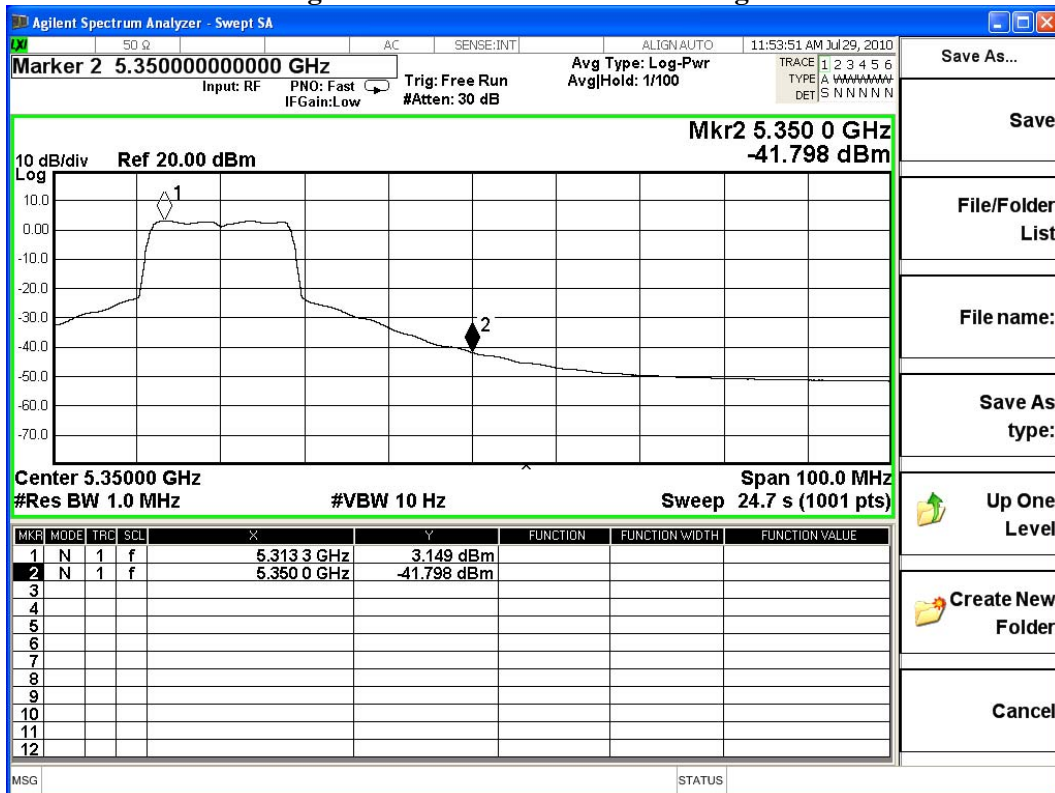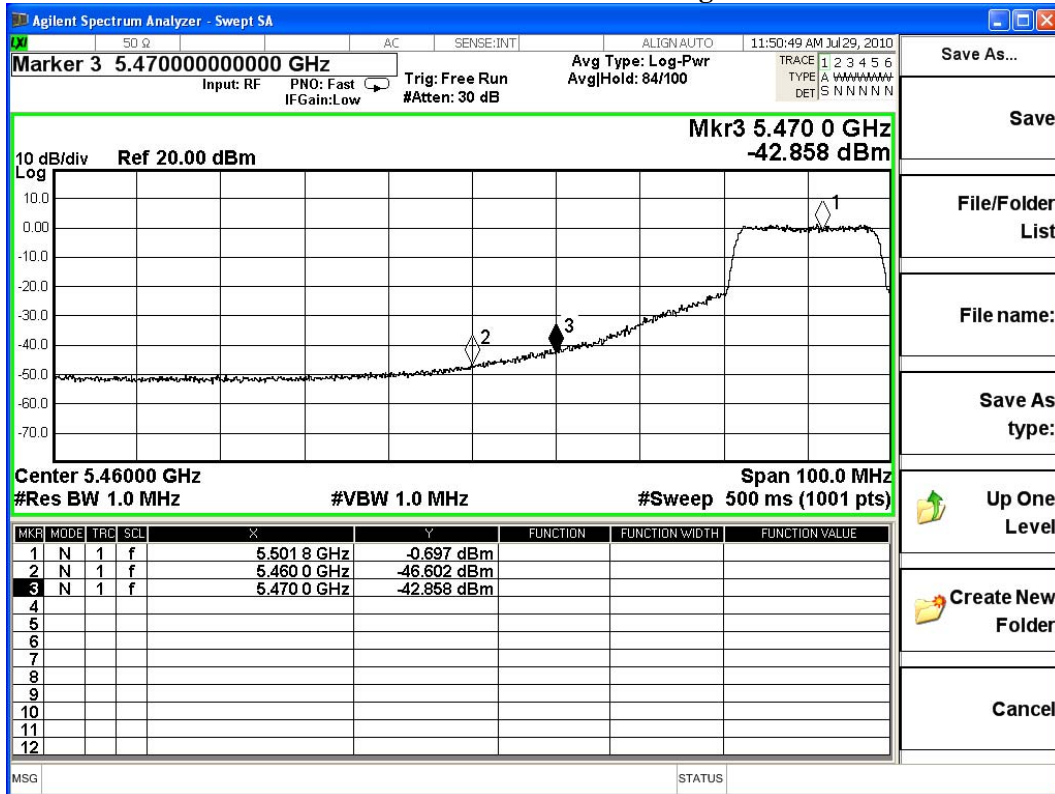
Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

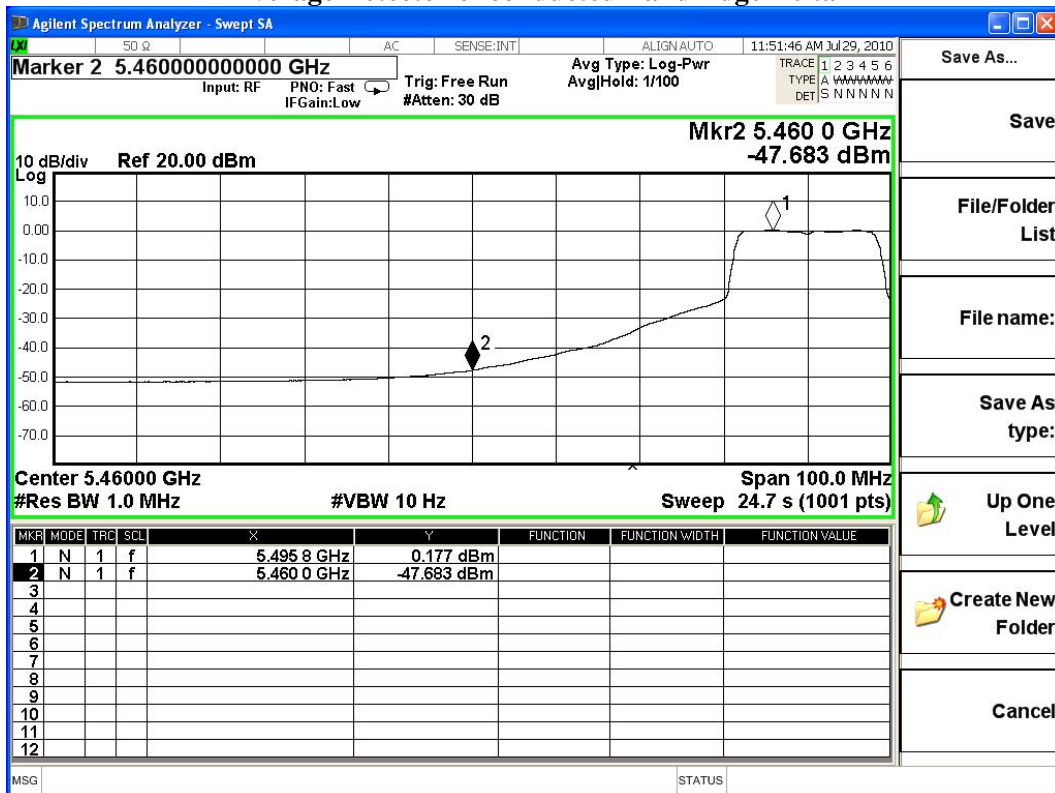Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta -1

Agilent Spectrum Analyzer - Swept SA

| 50 Ω | | AC | SENSE:INT | ALIGN AUTO | 11:50:49 AM Jul 29, 2010 | Save As... |

Marker 3 5.4700000000000 GHz
Input: RF   PNO: Fast   Trig: Free Run   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
IFGain:Low   #Atten: 30 dB   Avg|Hold: 84/100   TYPE A W W W W W W
#Atten: 30 dB   DET S N N N N N

Save

Mkr3 5.470 0 GHz
-42.858 dBm

10 dB/div   Ref 20.00 dBm
Log

10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

File/Folder List

File name:

Save As type:

Center 5.46000 GHz   Span 100.0 MHz
#Res BW 1.0 MHz   #VBW 1.0 MHz   #Sweep 500 ms (1001 pts)

Up One Level

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.501 8 GHz	-0.697 dBm			
2	N	1	f	5.460 0 GHz	-46.602 dBm			
3	N	1	f	5.470 0 GHz	-42.858 dBm			
4								
5								
6								
7								
8								
9								
10								
11								
12								

Create New Folder

Cancel

MSG   STATUS

Average Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Swept SA

| 50 Ω | | AC | SENSE:INT | ALIGN AUTO | 11:51:46 AM Jul 29, 2010 | Save As... |

Marker 2 5.4600000000000 GHz
Input: RF   PNO: Fast   Trig: Free Run   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
IFGain:Low   #Atten: 30 dB   Avg|Hold: 1/100   TYPE A W W W W W W
#Atten: 30 dB   DET S N N N N N

Save

Mkr2 5.460 0 GHz
-47.683 dBm

10 dB/div   Ref 20.00 dBm
Log

10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

File/Folder List

File name:

Save As type:

Center 5.46000 GHz   Span 100.0 MHz
#Res BW 1.0 MHz   #VBW 10 Hz   Sweep 24.7 s (1001 pts)

Up One Level

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.495 8 GHz	0.177 dBm			
2	N	1	f	5.460 0 GHz	-47.683 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

Create New Folder

Cancel

MSG   STATUS

Product   :   Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item   :   Band Edge Data
Test Site   :   No.3 OATS
Test Mode :   Mode 1: Transmit (802.11a-6Mbps) -Channel 140

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Reading Level [dB(uV)]	Correction Factor [dB/m]	Emission Level [dB(uV/m)]	Detector
Horizontal	5700	36.382	63.33	99.712	Peak
Vertical	5700	37.738	72.13	109.868	Peak

Note: 1:Spectrum Analyzer setting:

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

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

Band Edge Test Data

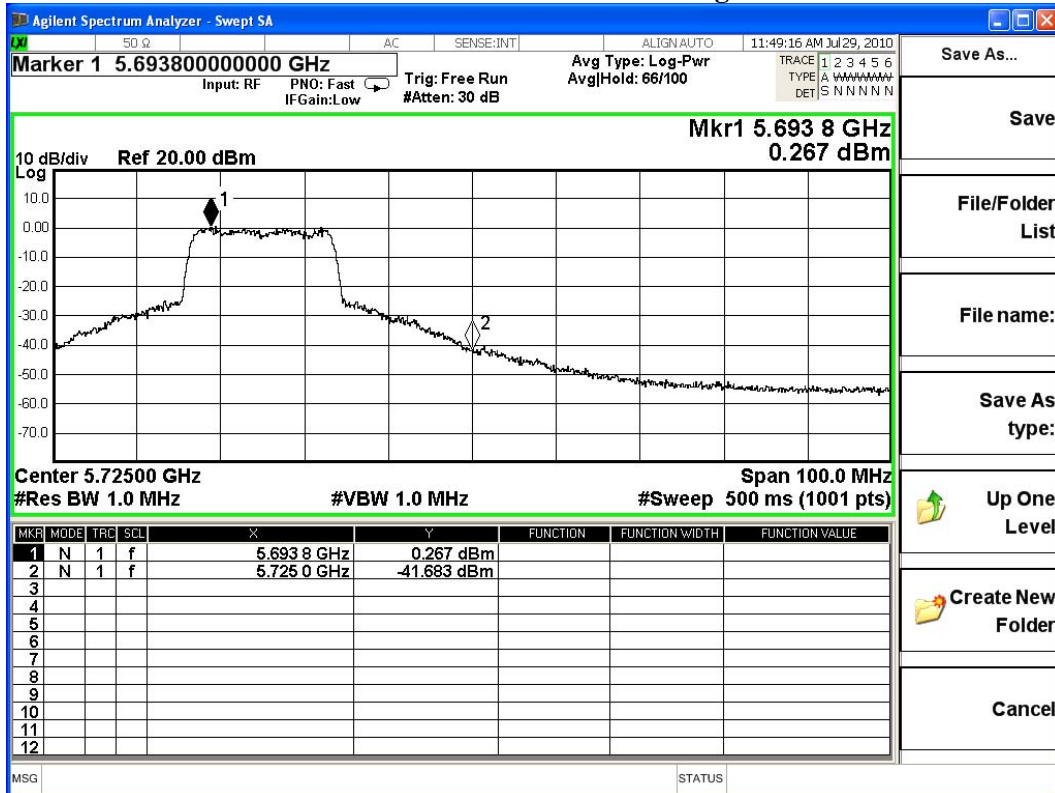| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5725	99.712	41.95	57.762	68.220	Peak
Vertical	5725	109.868	41.95	67.918	68.220	Peak

Note:

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

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Swept SA

| | 50 Ω | | AC | SENSE:INT | | ALIGN AUTO | 11:49:16 AM Jul 29, 2010 |

LXI

Marker 1 5.693800000000 GHz

Input: RF   PNO: Fast   Trig: Free Run   Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
IFGain:Low   #Atten: 30 dB   Avg|Hold: 66/100   TYPE A WWWWW
DET S N N N N N

Mkr1 5.693 8 GHz
0.267 dBm

10 dB/div   Ref 20.00 dBm
Log

10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

Center 5.72500 GHz   Span 100.0 MHz
#Res BW 1.0 MHz   #VBW 1.0 MHz   #Sweep 500 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.693 8 GHz	0.267 dBm			
2	N	1	f	5.725 0 GHz	-41.683 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MSG   STATUS

Save As...

Save

File/Folder List

File name:

Save As type:

Up One Level

Create New Folder

Cancel

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Reading Level [dBuV]	Correction Factor [dB/m]	Emission Level [dBuV/m]	Detector
Horizontal	5180	34.966	61.02	95.986	Peak
Horizontal	--	--	--	--	Average
Vertical	5180	37.073	68.89	105.964	Peak
Vertical	5180	37.073	56.22	93.294	Average

Note: 1:Spectrum Analyzer setting:

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

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

Band Edge Test Data

| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Requiqment Limit (dBuV/m)	Detector
Horizontal	5150	95.986	46.951	49.035	74.000	Peak
Horizontal	--	--	--	--	54.000	Average
Vertical	5150	105.964	46.951	59.013	74.000	Peak
Vertical	5150	93.294	48.066	45.228	54.000	Average

Note:

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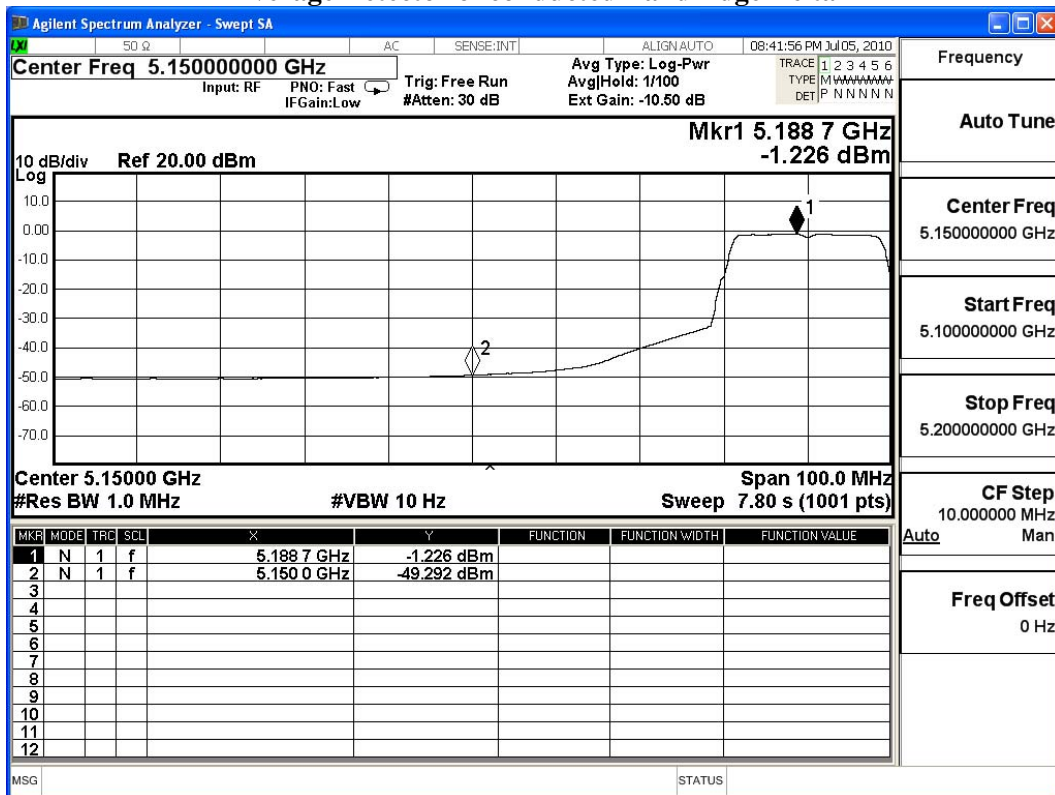
Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

QTK QuieTek Corporation

Peak Detector of conducted Band Edge Delta
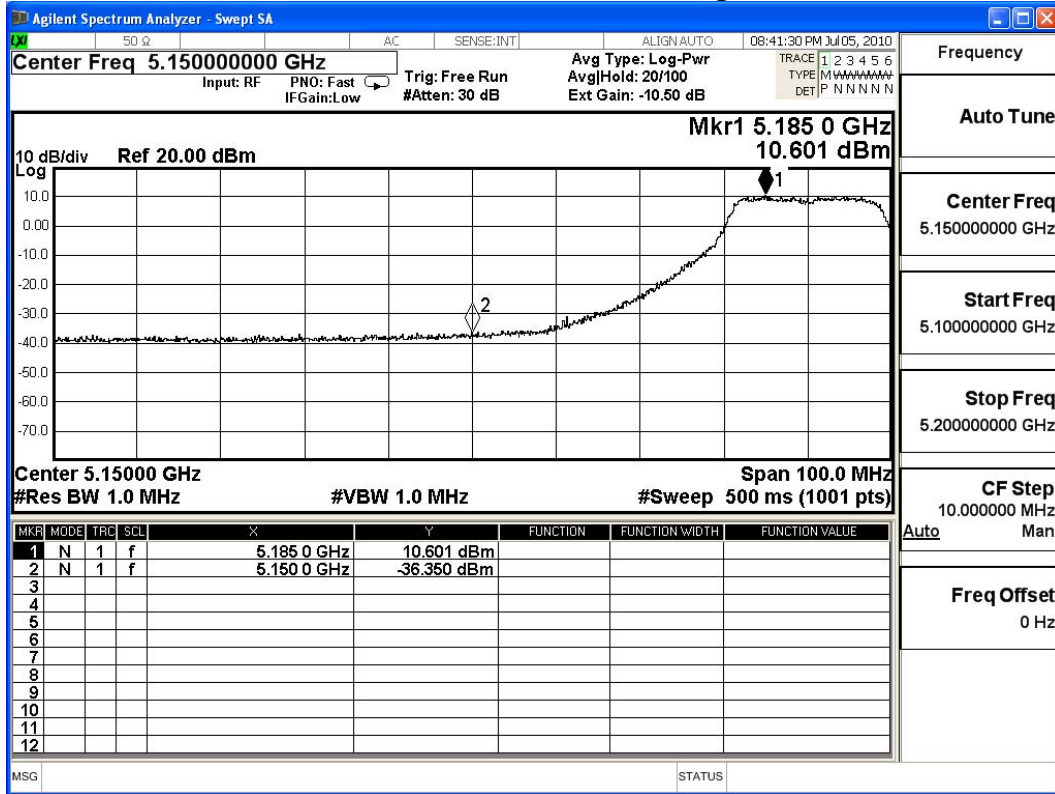
Average Detector of conducted Band Edge Delta

Product : Moxa IEEE 802.11a/b/g/n MiniPCI Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)-Channel 48

Test Frequency (MHz)	Measurement Level (20dB BW) (MHz)	Limit (MHz)	Result
5240	5249.85	<5250	PASS

NOTE: Accordance with 15.215 requirement.