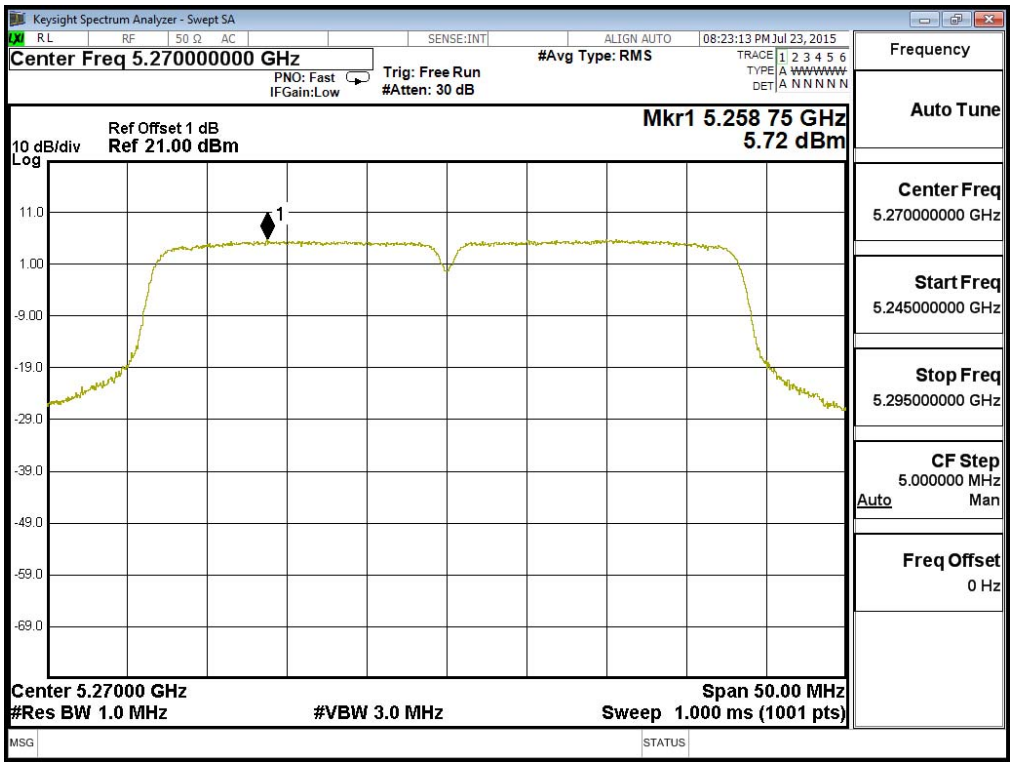
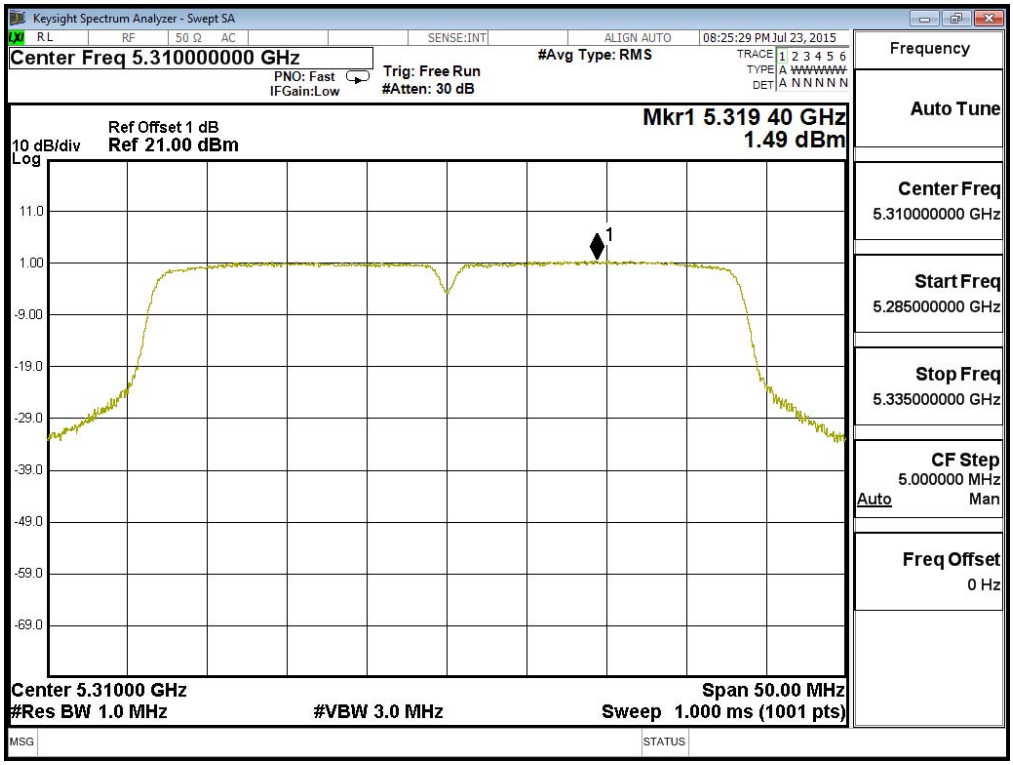
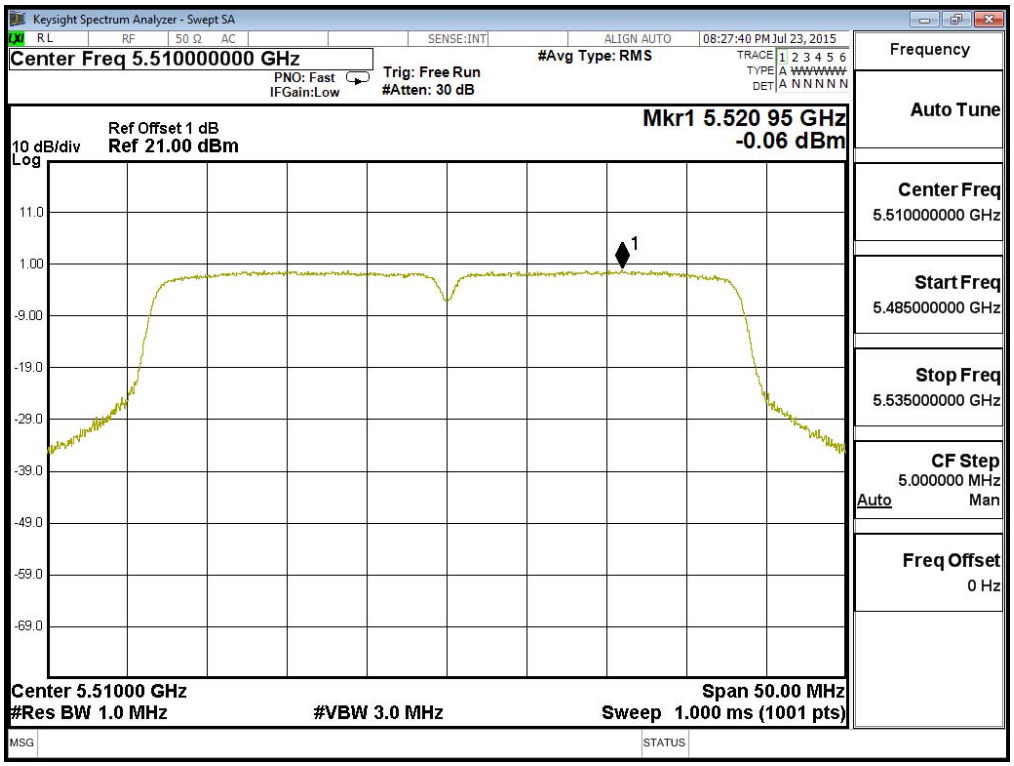
Channel 54 – Chain A



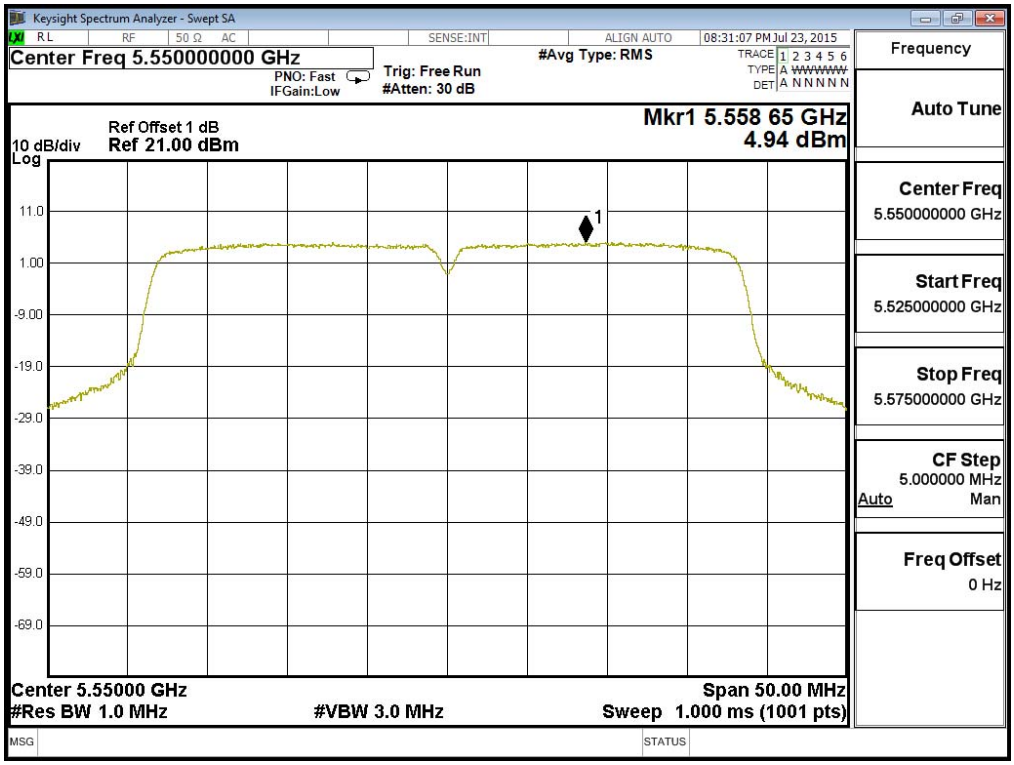
Channel 62 – Chain A



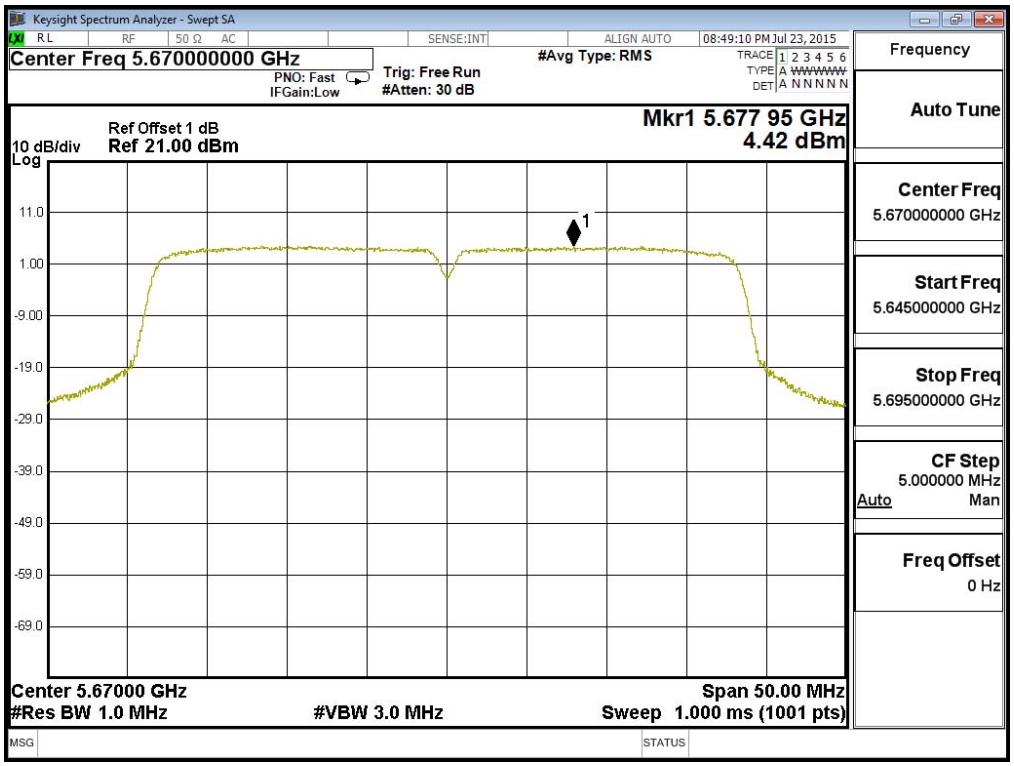
Channel 102 – Chain A



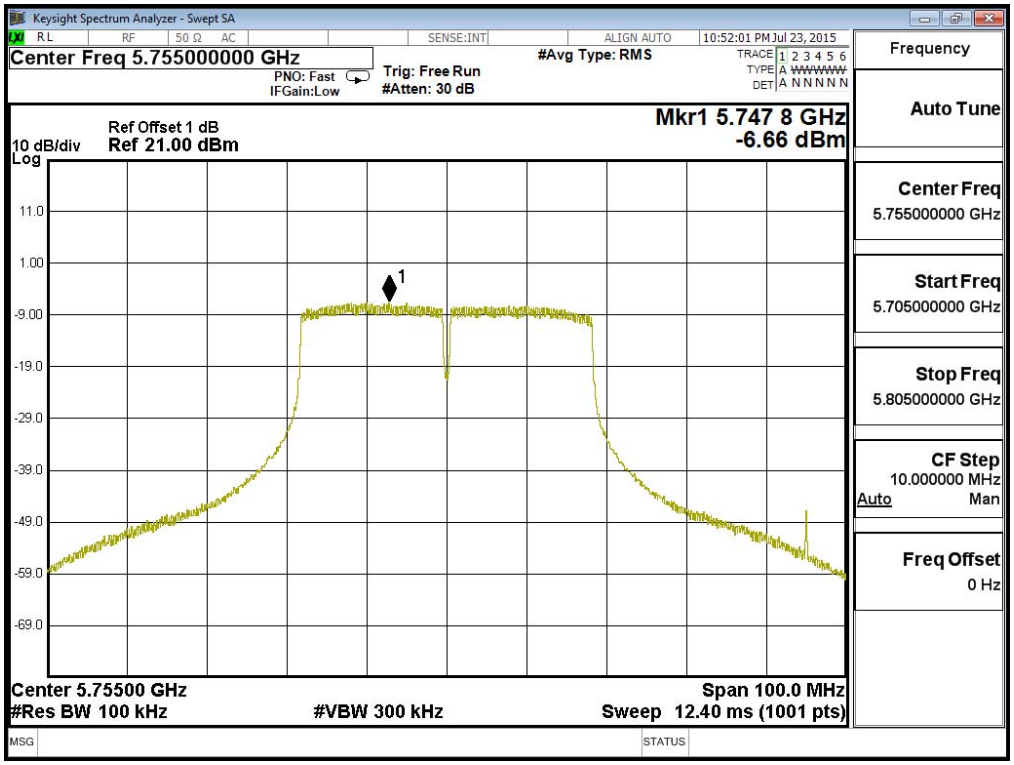
Channel 110 – Chain A



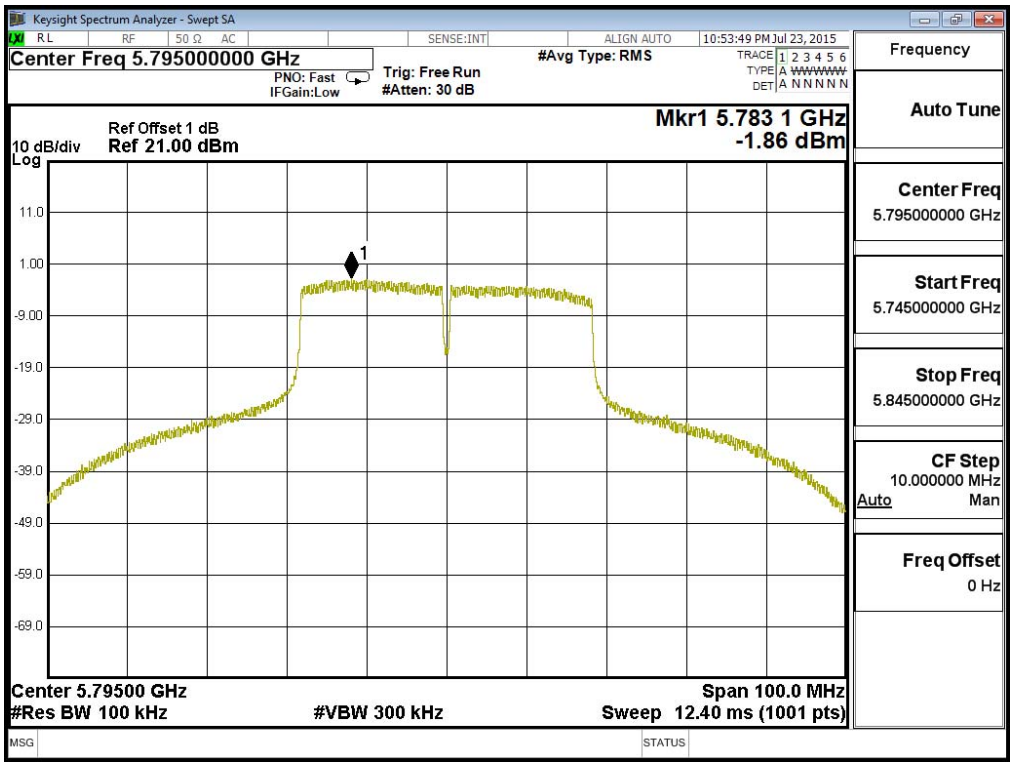
Channel 134 – Chain A



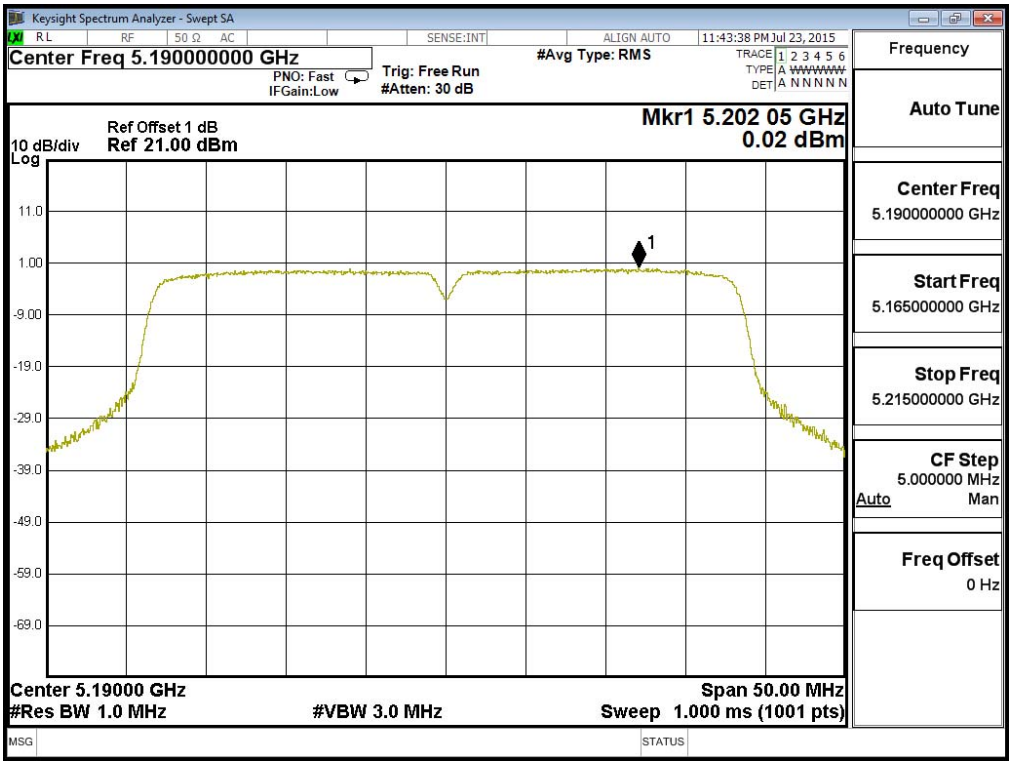
Channel 151 – Chain A



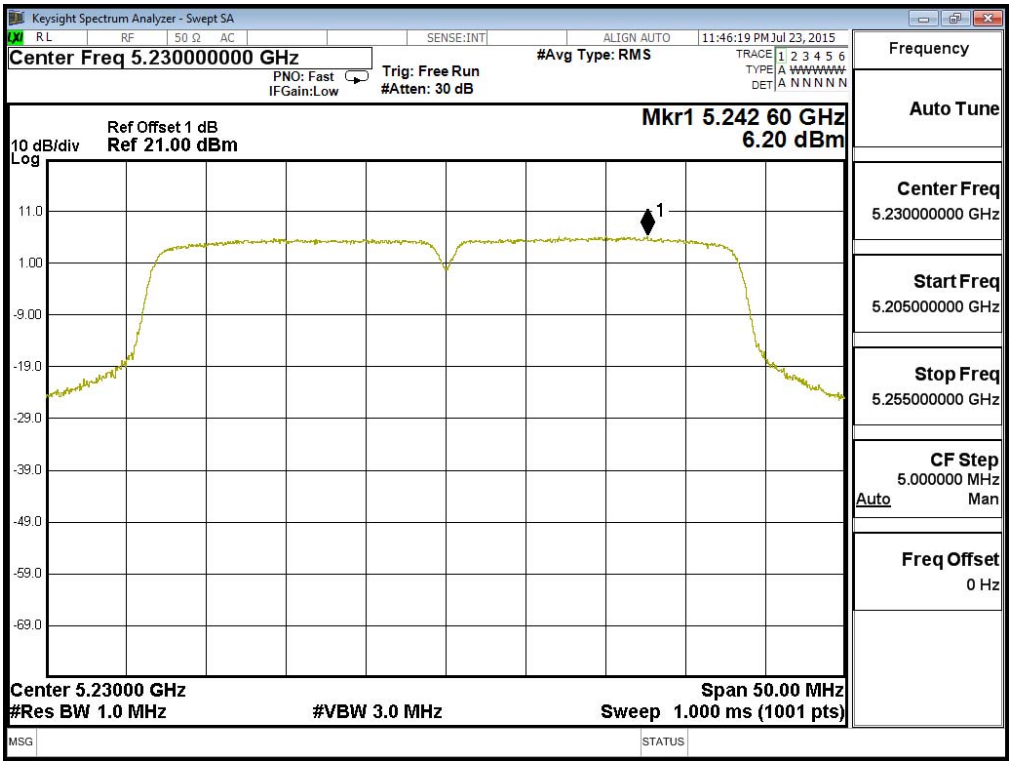
Channel 159 – Chain A



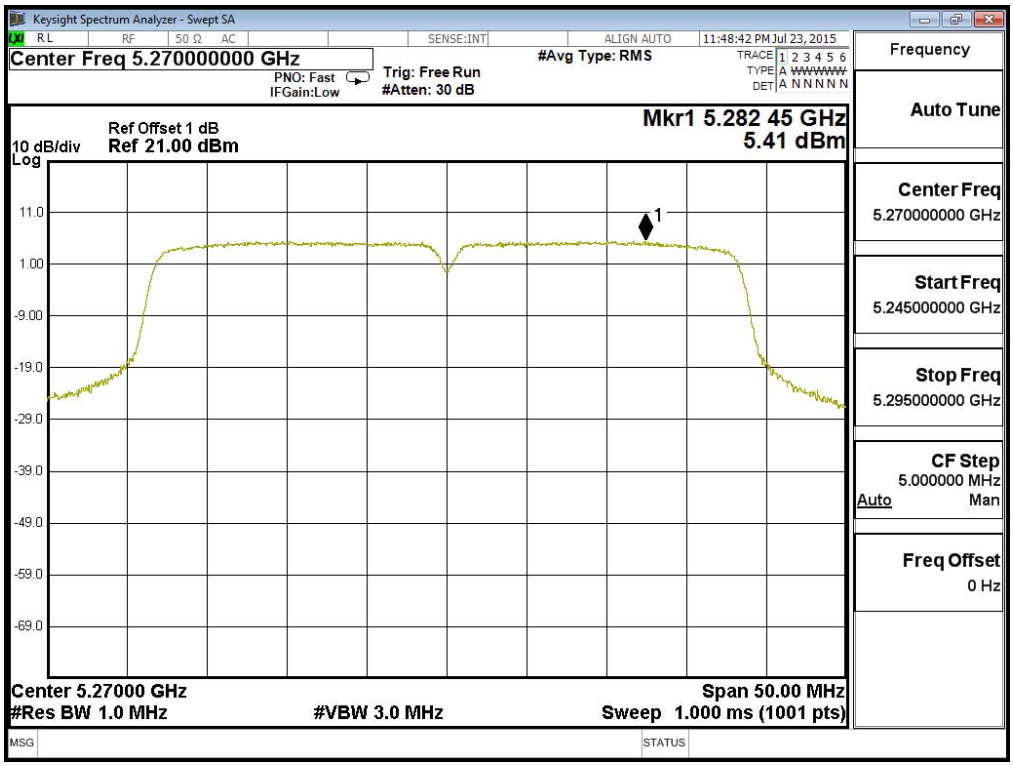
Channel 38 – Chain B



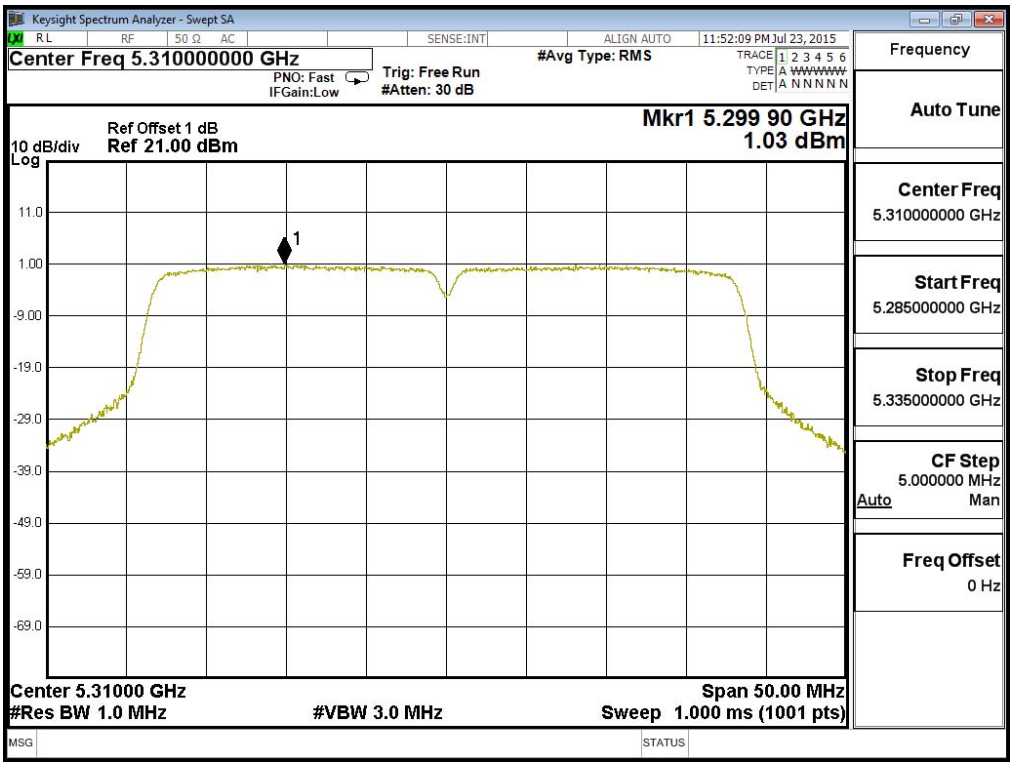
Channel 46 – Chain B



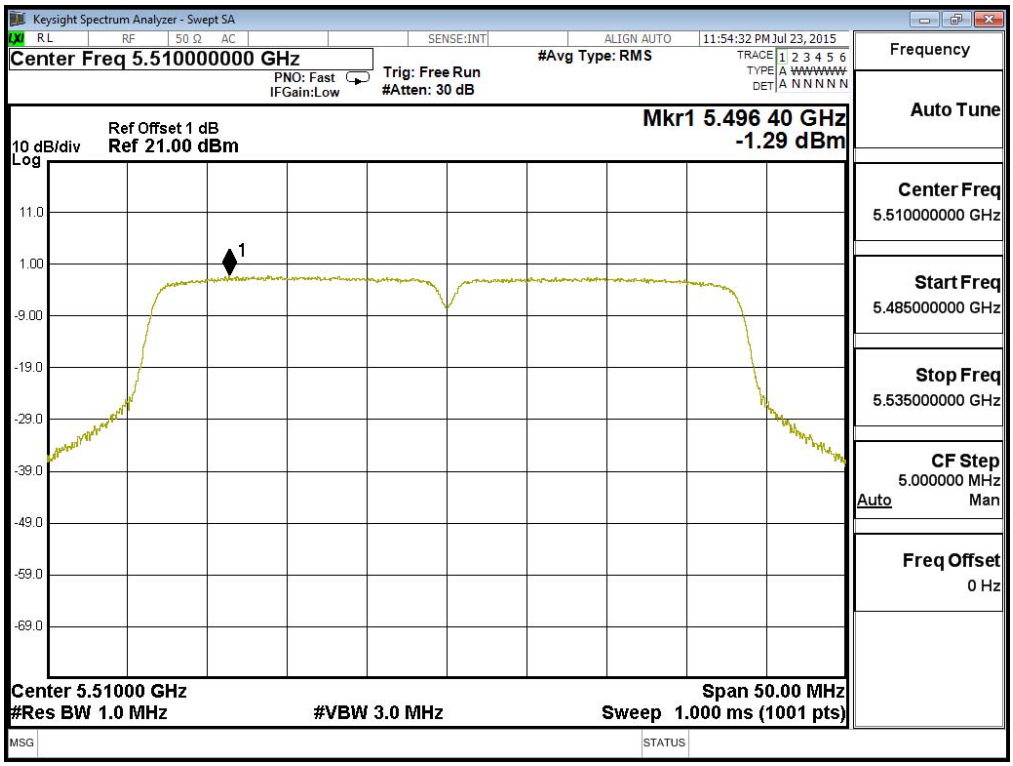
Channel 54 – Chain B



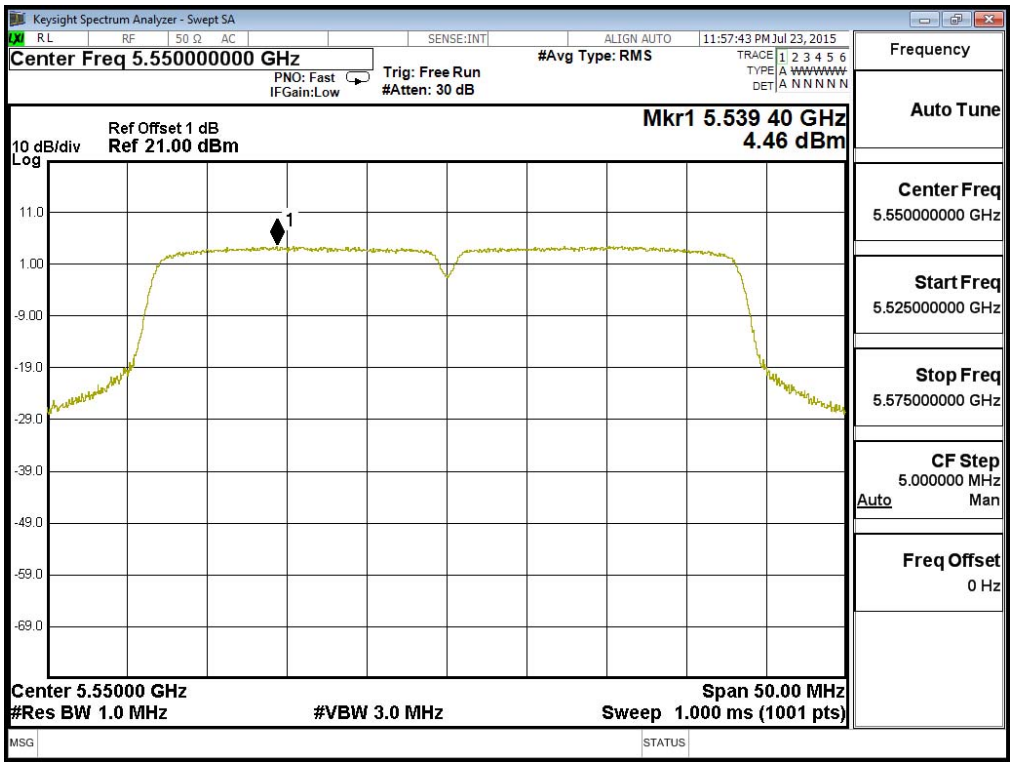
Channel 62 – Chain B



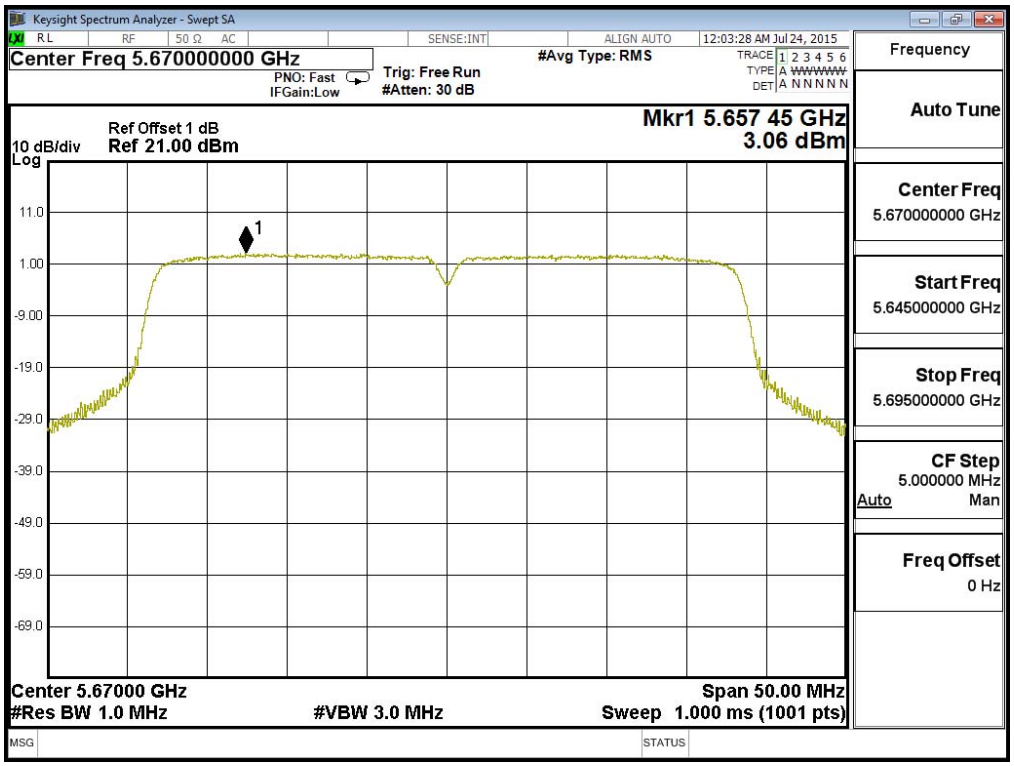
Channel 102 – Chain B



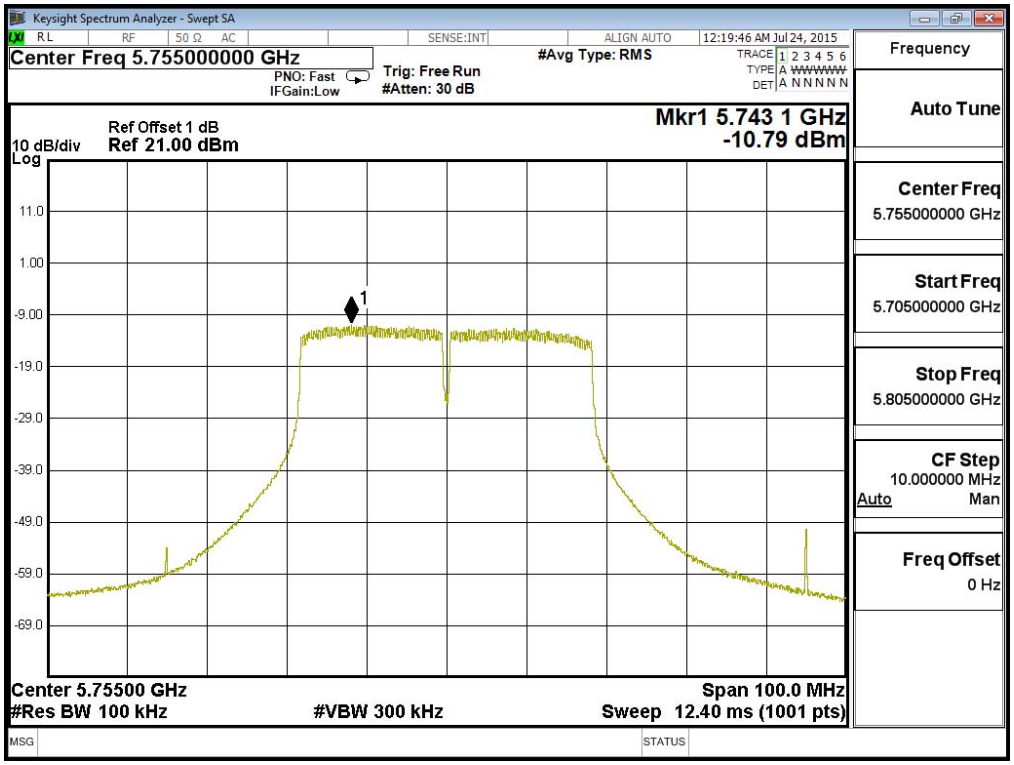
Channel 110 – Chain B



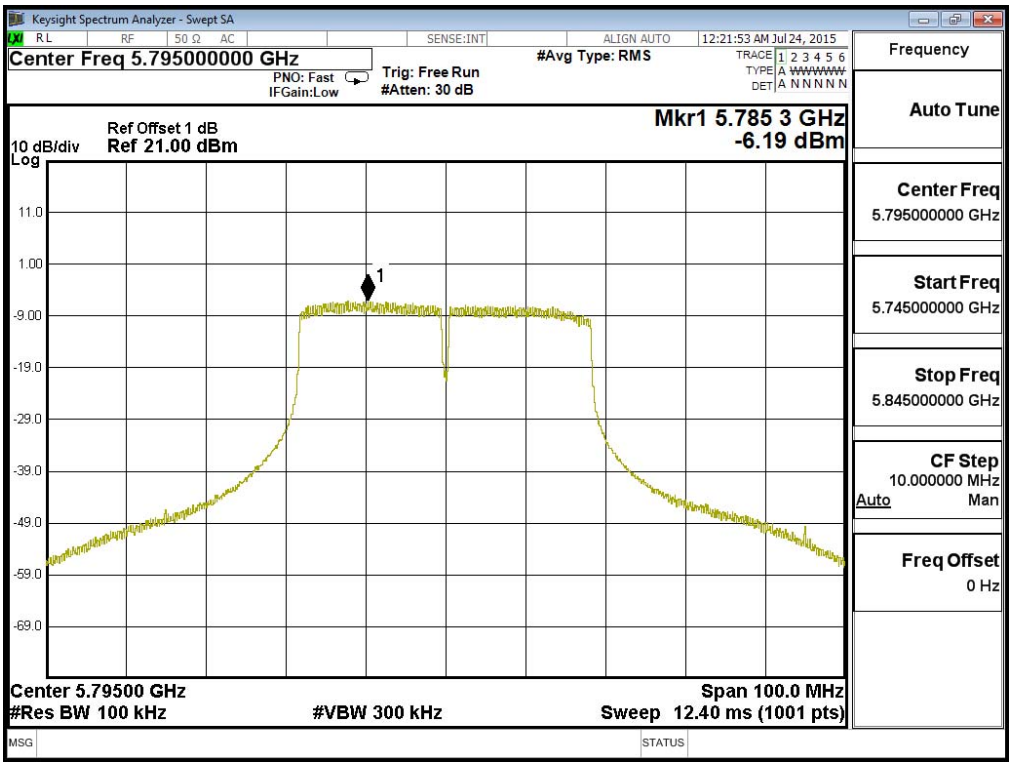
Channel 134 – Chain B



Channel 151 – Chain B



Channel 159 – Chain B



5. Radiated Emission

5.1. Test Equipment

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

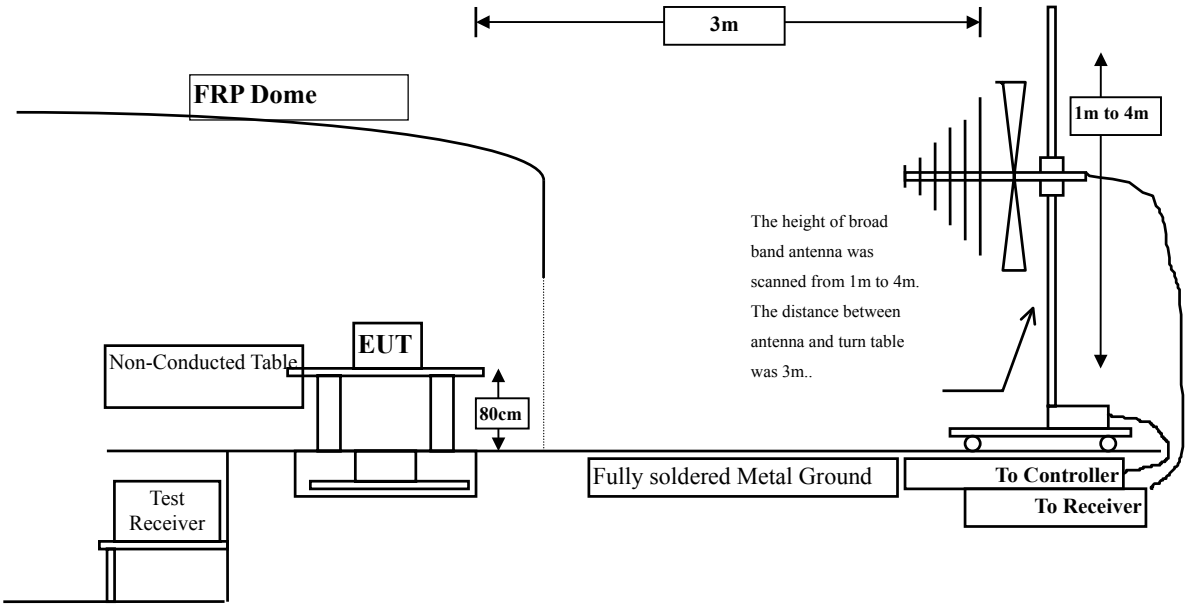
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2014
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2015
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2015

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

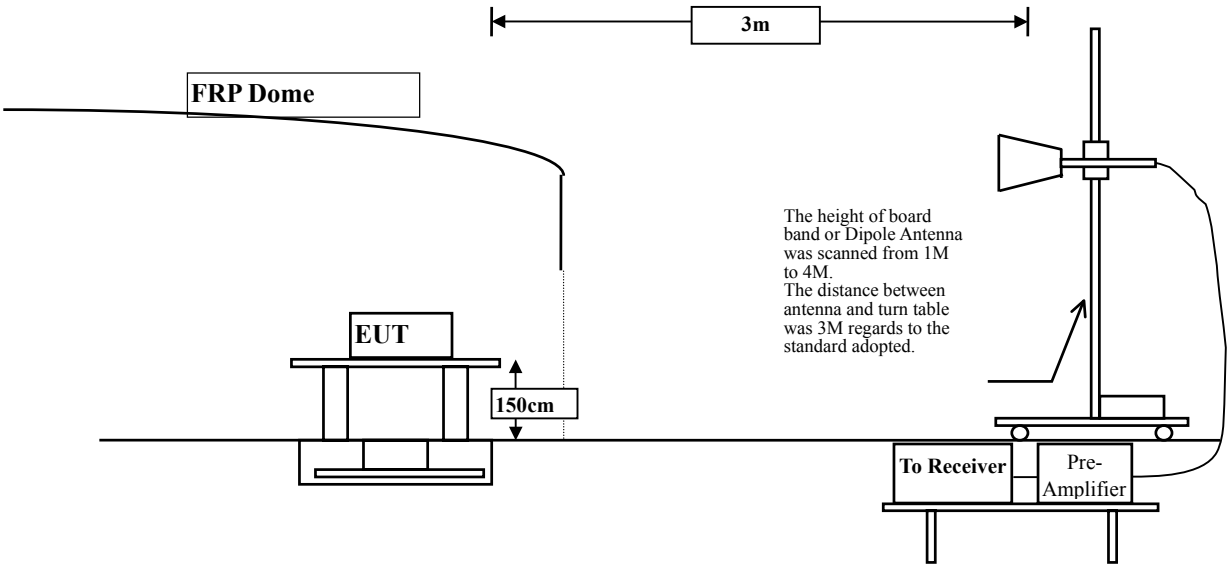
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

5.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



5.3. Limits

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

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

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

5.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 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 between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

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

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

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

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

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

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

5.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

5.6. Test Result of Radiated Emission

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10360.000	10.932	40.100	51.032	-22.968	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10360.000	12.436	40.350	52.785	-21.215	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10440.000	9.725	39.570	49.295	-24.705	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10440.000	11.505	44.670	56.175	-17.825	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
10440.000	11.505	30.030	41.535	-12.465	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10480.000	10.464	40.390	50.853	-23.147	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10480.000	12.399	42.920	55.319	-18.681	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
10480.000	12.399	31.140	43.539	-10.461	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10520.000	11.531	40.050	51.581	-22.419	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10520.000	13.441	48.070	61.511	-12.489	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
10520.000	13.441	33.690	47.131	-6.869	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10600.000	13.182	42.370	55.552	-18.448	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
10600.000	13.182	27.800	40.982	-13.018	54.000
Vertical					
Peak Detector:					
10600.000	14.717	46.220	60.937	-13.063	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
10600.000	14.717	32.600	47.317	-6.683	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10640.000	12.912	40.110	53.022	-20.978	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10640.000	14.585	43.740	58.325	-15.675	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
10640.000	14.585	29.480	44.065	-9.935	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11000.000	12.513	39.910	52.423	-21.577	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11000.000	14.635	43.400	58.035	-15.965	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
11000.000	14.635	29.220	43.855	-10.145	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11160.000	12.953	40.010	52.964	-21.036	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11160.000	15.197	52.640	67.837	-6.163	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
11160.000	15.197	38.150	53.347	-0.653	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11400.000	14.753	39.090	53.843	-20.157	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11400.000	16.303	47.950	64.253	-9.747	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
11400.000	16.303	33.650	49.953	-4.047	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5745MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal Peak Detector:					
11490.000	15.004	46.270	61.274	-12.726	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.004	31.790	46.794	-7.206	54.000
Vertical Peak Detector:					
11490.000	16.520	50.010	66.530	-7.470	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	16.520	35.640	52.160	-1.840	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5785MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11570.000	15.207	49.000	64.207	-9.793	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	15.207	33.770	48.977	-5.023	54.000
Vertical					
Peak Detector:					
11570.000	16.573	51.490	68.062	-5.938	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.573	36.310	52.882	-1.118	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5825MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal Peak Detector:					
11650.000	13.504	51.360	64.864	-9.136	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	13.504	35.900	49.404	-4.596	54.000
Vertical Peak Detector:					
11650.000	14.959	53.520	68.479	-5.521	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	14.959	37.610	52.569	-1.431	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10360.000	10.932	40.310	51.242	-22.758	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10360.000	12.436	41.570	54.005	-19.995	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
Average Detector:					
10360.000	12.436	28.620	41.055	-12.945	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10440.000	9.725	40.420	50.145	-23.855	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10440.000	11.505	42.380	53.885	-20.115	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10480.000	10.464	41.370	51.833	-22.167	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10480.000	12.399	43.070	55.469	-18.531	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
Average Detector:					
10480.000	12.399	29.440	41.839	-12.161	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10520.000	11.531	39.840	51.371	-22.629	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10520.000	13.441	44.930	58.371	-15.629	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000
Average Detector:					
10520.000	13.441	31.040	44.481	-9.519	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10600.000	13.182	39.940	53.122	-20.878	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10600.000	14.717	45.870	60.587	-13.413	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000
Average Detector:					
10600.000	14.717	31.440	46.157	-7.843	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10640.000	12.912	40.010	52.922	-21.078	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10640.000	14.585	46.180	60.765	-13.235	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000
Average Detector:					
10640.000	14.585	31.620	46.205	-7.795	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11000.000	12.513	40.500	53.013	-20.987	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11000.000	14.635	44.540	59.175	-14.825	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000
Average Detector:					
11000.000	14.635	29.640	44.275	-9.725	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11160.000	12.953	44.990	57.944	-16.056	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
11160.000	12.953	31.520	44.474	-9.526	54.000
Vertical					
Peak Detector:					
11160.000	15.197	50.340	65.537	-8.463	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000
Average Detector:					
11160.000	15.197	36.520	51.717	-2.283	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11400.000	14.753	43.050	57.803	-16.197	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
11400.000	14.753	29.160	43.913	-10.087	54.000
Vertical					
Peak Detector:					
11400.000	16.303	47.860	64.163	-9.837	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000
Average Detector:					
11400.000	16.303	34.600	50.903	-3.097	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5745MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11490.000	15.004	44.950	59.954	-14.046	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.004	30.370	45.374	-8.626	54.000
Vertical					
Peak Detector:					
11490.000	16.520	48.340	64.860	-9.140	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	16.520	35.230	51.750	-2.250	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11570.000	15.207	48.070	63.277	-10.723	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	15.207	33.340	48.547	-5.453	54.000
Vertical					
Peak Detector:					
11570.000	16.573	50.550	67.122	-6.878	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.573	36.330	52.902	-1.098	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5825MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11650.000	13.504	48.880	62.384	-11.616	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	13.504	33.970	47.474	-6.526	54.000
Vertical					
Peak Detector:					
11650.000	14.959	51.770	66.729	-7.271	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	14.959	36.750	51.709	-2.291	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10380.000	10.400	38.510	48.910	-25.090	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10380.000	11.965	39.190	51.156	-22.844	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10460.000	9.932	40.870	50.802	-23.198	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10460.000	11.790	43.600	55.390	-18.610	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
Average Detector:					
10460.000	11.790	29.960	41.750	-12.250	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10540.000	12.058	39.300	51.359	-22.641	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10540.000	13.868	43.380	57.248	-16.752	74.000
15810.000	*	*	*	*	74.000
21080.000	*	*	*	*	74.000
26350.000	*	*	*	*	74.000
Average Detector:					
10540.000	13.868	30.170	44.038	-9.962	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
10620.000	13.096	39.000	52.095	-21.905	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
10620.000	14.683	39.850	54.533	-19.467	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
10620.000	14.683	27.510	42.193	-11.807	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11020.000	12.820	39.580	52.400	-21.600	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
*	*	*	*	*	*
Vertical					
Peak Detector:					
11020.000	14.966	39.580	54.547	-19.453	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000
Average Detector:					
11020.000	14.966	27.500	42.467	-11.533	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11100.000	12.752	41.580	54.332	-19.668	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
Average Detector:					
11100.000	12.752	26.680	39.432	-14.568	54.000
Vertical					
Peak Detector:					
11100.000	15.006	41.060	56.066	-17.934	74.000
16770.000	*	*	*	*	74.000
22360.000	*	*	*	*	74.000
27950.000	*	*	*	*	74.000
Average Detector:					
11100.000	15.006	27.120	42.126	-11.874	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector:					
11340.000	14.149	41.320	55.469	-18.531	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
Average Detector:					
11340.000	14.149	27.890	42.039	-11.961	54.000
Vertical					
Peak Detector:					
11340.000	15.891	45.050	60.941	-13.059	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000
Average Detector:					
11340.000	15.891	30.270	46.161	-7.839	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11510.000	15.044	40.630	55.673	-18.327	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	15.044	27.120	42.163	-11.837	54.000
Vertical					
Peak Detector:					
11510.000	16.536	42.200	58.736	-15.264	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	16.536	28.150	44.686	-9.314	54.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5795MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
11590.000	15.364	47.570	62.934	-11.066	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	15.364	32.760	48.124	-5.876	54.000
Vertical					
Peak Detector:					
11590.000	16.687	49.540	66.227	-7.773	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	16.687	34.630	51.317	-2.683	54.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	44.839	38.623	-7.377	46.000
449.040	0.386	38.073	38.459	-7.541	46.000
625.580	1.419	37.310	38.730	-7.270	46.000
676.020	2.841	34.117	36.959	-9.041	46.000
875.840	5.816	38.165	43.981	-2.019	46.000
901.060	5.878	37.545	43.423	-2.577	46.000
Vertical					
Peak Detector					
179.380	-0.824	37.093	36.269	-7.231	43.500
249.220	-5.096	38.207	33.111	-12.889	46.000
375.320	0.388	37.458	37.846	-8.154	46.000
625.580	0.299	36.546	36.846	-9.154	46.000
676.020	0.451	41.915	42.367	-3.633	46.000
901.060	1.858	39.400	41.258	-4.742	46.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
210.420	-10.427	42.458	32.031	-11.469	43.500
375.320	0.918	36.943	37.861	-8.139	46.000
449.040	0.386	38.447	38.833	-7.167	46.000
625.580	1.419	33.622	35.042	-10.958	46.000
676.020	2.841	33.906	36.748	-9.252	46.000
875.840	5.816	38.577	44.393	-1.607	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.899	36.075	-7.425	43.500
249.220	-5.096	41.835	36.739	-9.261	46.000
375.320	0.388	35.138	35.526	-10.474	46.000
625.580	0.299	32.631	32.931	-13.069	46.000
676.020	0.451	42.769	43.221	-2.779	46.000
901.060	1.858	38.616	40.474	-5.526	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	42.081	35.865	-10.135	46.000
375.320	0.918	35.297	36.215	-9.785	46.000
449.040	0.386	39.436	39.822	-6.178	46.000
625.580	1.419	39.548	40.968	-5.032	46.000
850.620	6.773	32.061	38.834	-7.166	46.000
875.840	5.816	39.039	44.855	-1.145	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.011	35.187	-8.313	43.500
249.220	-5.096	41.036	35.940	-10.060	46.000
375.320	0.388	37.327	37.715	-8.285	46.000
625.580	0.299	34.500	34.800	-11.200	46.000
676.020	0.451	43.009	43.461	-2.539	46.000
901.060	1.858	37.186	39.044	-6.956	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	42.857	36.641	-9.359	46.000
375.320	0.918	36.157	37.075	-8.925	46.000
449.040	0.386	38.392	38.778	-7.222	46.000
625.580	1.419	37.668	39.088	-6.912	46.000
676.020	2.841	34.752	37.594	-8.406	46.000
875.840	5.816	35.346	41.162	-4.838	46.000
Vertical					
Peak Detector					
179.380	-0.824	37.025	36.201	-7.299	43.500
375.320	0.388	36.542	36.930	-9.070	46.000
676.020	0.451	42.904	43.356	-2.644	46.000
806.000	3.686	27.806	31.492	-14.508	46.000
875.840	0.516	33.084	33.600	-12.400	46.000
901.060	1.858	38.141	39.999	-6.001	46.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	45.491	39.275	-6.725	46.000
375.320	0.918	34.546	35.464	-10.536	46.000
449.040	0.386	37.977	38.363	-7.637	46.000
625.580	1.419	39.201	40.621	-5.379	46.000
676.020	2.841	34.774	37.616	-8.384	46.000
875.840	5.816	37.248	43.064	-2.936	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.767	35.943	-7.557	43.500
249.220	-5.096	43.577	38.481	-7.519	46.000
375.320	0.388	33.982	34.370	-11.630	46.000
625.580	0.299	36.380	36.680	-9.320	46.000
676.020	0.451	42.854	43.306	-2.694	46.000
901.060	1.858	38.953	40.811	-5.189	46.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	45.397	39.181	-6.819	46.000
449.040	0.386	38.795	39.181	-6.819	46.000
625.580	1.419	37.287	38.707	-7.293	46.000
749.740	3.963	27.890	31.853	-14.147	46.000
875.840	5.816	36.896	42.712	-3.288	46.000
901.060	5.878	36.944	42.822	-3.178	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.812	35.988	-7.512	43.500
249.220	-5.096	39.188	34.092	-11.908	46.000
375.320	0.388	35.398	35.786	-10.214	46.000
676.020	0.451	42.639	43.091	-2.909	46.000
806.000	3.686	28.238	31.924	-14.076	46.000
901.060	1.858	38.958	40.816	-5.184	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
375.320	0.918	34.657	35.575	-10.425	46.000
449.040	0.386	38.272	38.658	-7.342	46.000
625.580	1.419	33.732	35.152	-10.848	46.000
676.020	2.841	34.765	37.607	-8.393	46.000
875.840	5.816	36.847	42.663	-3.337	46.000
901.060	5.878	36.987	42.865	-3.135	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.816	35.992	-7.508	43.500
249.220	-5.096	39.572	34.476	-11.524	46.000
375.320	0.388	37.339	37.727	-8.273	46.000
676.020	0.451	42.673	43.125	-2.875	46.000
875.840	0.516	34.243	34.759	-11.241	46.000
901.060	1.858	38.991	40.849	-5.151	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
375.320	0.918	34.372	35.290	-10.710	46.000
449.040	0.386	38.739	39.125	-6.875	46.000
625.580	1.419	34.824	36.244	-9.756	46.000
676.020	2.841	35.087	37.929	-8.071	46.000
875.840	5.816	36.956	42.772	-3.228	46.000
901.060	5.878	37.811	43.689	-2.311	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.469	35.645	-7.855	43.500
249.220	-5.096	37.269	32.173	-13.827	46.000
375.320	0.388	37.428	37.816	-8.184	46.000
625.580	0.299	35.588	35.888	-10.112	46.000
676.020	0.451	43.026	43.478	-2.522	46.000
901.060	1.858	39.396	41.254	-4.746	46.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
134.760	-7.473	39.361	31.888	-11.612	43.500
449.040	0.386	38.185	38.571	-7.429	46.000
625.580	1.419	34.400	35.820	-10.180	46.000
676.020	2.841	33.755	36.597	-9.403	46.000
875.840	5.816	38.073	43.889	-2.111	46.000
901.060	5.878	38.116	43.994	-2.006	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.287	35.463	-8.037	43.500
249.220	-5.096	40.625	35.529	-10.471	46.000
375.320	0.388	34.142	34.530	-11.470	46.000
625.580	0.299	36.285	36.585	-9.415	46.000
676.020	0.451	41.175	41.627	-4.373	46.000
901.060	1.858	39.454	41.312	-4.688	46.000

Note:

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

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

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
375.320	0.918	35.907	36.825	-9.175	46.000
449.040	0.386	38.632	39.018	-6.982	46.000
625.580	1.419	40.098	41.518	-4.482	46.000
676.020	2.841	34.677	37.519	-8.481	46.000
875.840	5.816	38.412	44.228	-1.772	46.000
901.060	5.878	37.614	43.492	-2.508	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.624	35.800	-7.700	43.500
375.320	0.388	37.603	37.991	-8.009	46.000
625.580	0.299	34.319	34.619	-11.381	46.000
676.020	0.451	32.110	32.562	-13.438	46.000
806.000	3.686	28.404	32.090	-13.910	46.000
901.060	1.858	39.667	41.525	-4.475	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	41.278	35.062	-10.938	46.000
375.320	0.918	36.950	37.868	-8.132	46.000
449.040	0.386	38.561	38.947	-7.053	46.000
625.580	1.419	34.544	35.964	-10.036	46.000
875.840	5.816	38.024	43.840	-2.160	46.000
901.060	5.878	37.940	43.818	-2.182	46.000
Vertical					
Peak Detector					
179.380	-0.824	36.557	35.733	-7.767	43.500
249.220	-5.096	41.315	36.219	-9.781	46.000
375.320	0.388	36.379	36.767	-9.233	46.000
676.020	0.451	42.399	42.851	-3.149	46.000
806.000	3.686	29.234	32.920	-13.080	46.000
901.060	1.858	38.669	40.527	-5.473	46.000

Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

Frequency MHz	Correct Factor dB	Reading Level dBμV	Measurement Level dBμV/m	Margin dB	Limit dBμV/m
Horizontal					
Peak Detector					
249.220	-6.216	40.843	34.627	-11.373	46.000
375.320	0.918	37.774	38.692	-7.308	46.000
449.040	0.386	38.876	39.262	-6.738	46.000
676.020	2.841	34.803	37.645	-8.355	46.000
875.840	5.816	36.136	41.952	-4.048	46.000
901.060	5.878	36.884	42.762	-3.238	46.000
Vertical					
Peak Detector					
179.380	-0.824	37.368	36.544	-6.956	43.500
249.220	-5.096	42.274	37.178	-8.822	46.000
375.320	0.388	34.596	34.984	-11.016	46.000
676.020	0.451	41.775	42.227	-3.773	46.000
821.520	3.036	28.823	31.859	-14.141	46.000
901.060	1.858	38.990	40.848	-5.152	46.000

Note:

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

6. Band Edge

6.1. 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, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

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

RF Radiated Measurement:

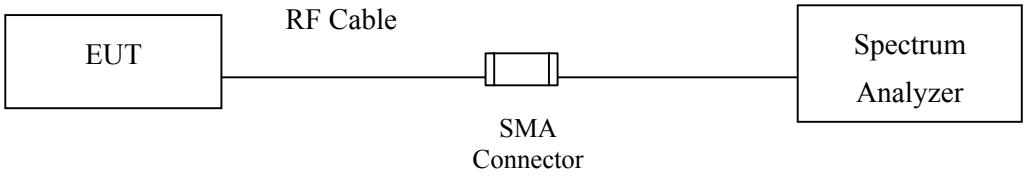
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

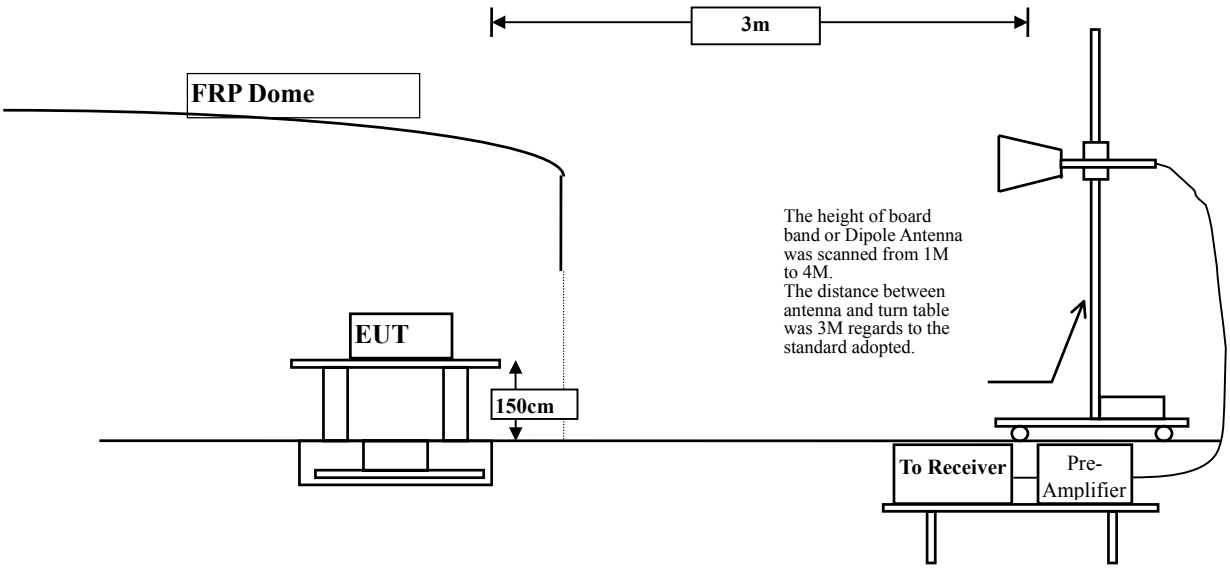
Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



6.3. 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	dBµV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBµV) = 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.

6.4. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

6.5. Uncertainty

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

6.6. Test Result of Band Edge

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5149.200	2.799	57.059	59.858	74.00	54.00	Pass
36 (Peak)	5150.000	2.796	56.411	59.207	74.00	54.00	Pass
36 (Peak)	5177.200	2.705	99.397	102.102	--	--	--
36 (Average)	5150.000	2.796	41.092	43.888	74.00	54.00	Pass
36 (Average)	5176.000	2.710	88.739	91.448	--	--	--

Figure Channel 36: Horizontal (Peak)

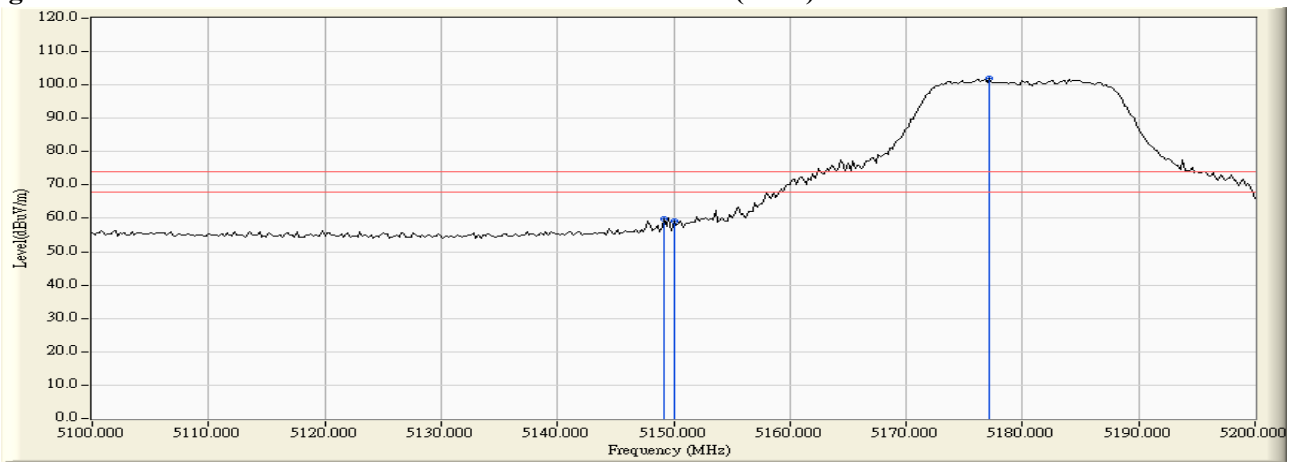
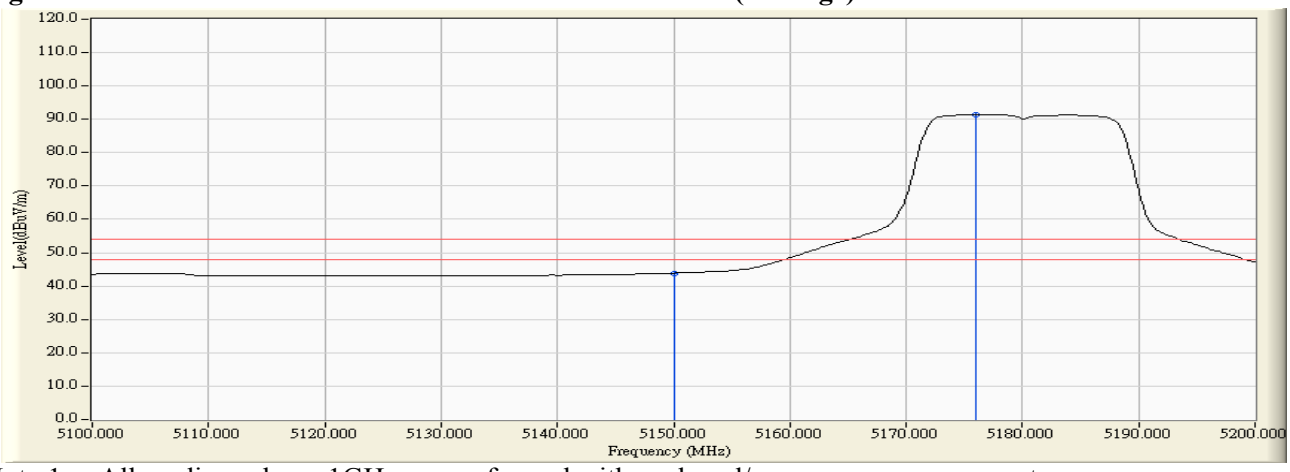


Figure Channel 36: Horizontal (Average)



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

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5149.800	3.331	69.587	72.918	74.00	54.00	Pass
36 (Peak)	5150.000	3.331	67.237	70.569	74.00	54.00	Pass
36 (Peak)	5176.200	3.455	110.582	114.037	--	--	--
36 (Average)	5150.000	3.331	46.823	50.155	74.00	54.00	Pass
36 (Average)	5184.600	3.494	99.507	103.001	--	--	--

Figure Channel 36: Vertical (Peak)

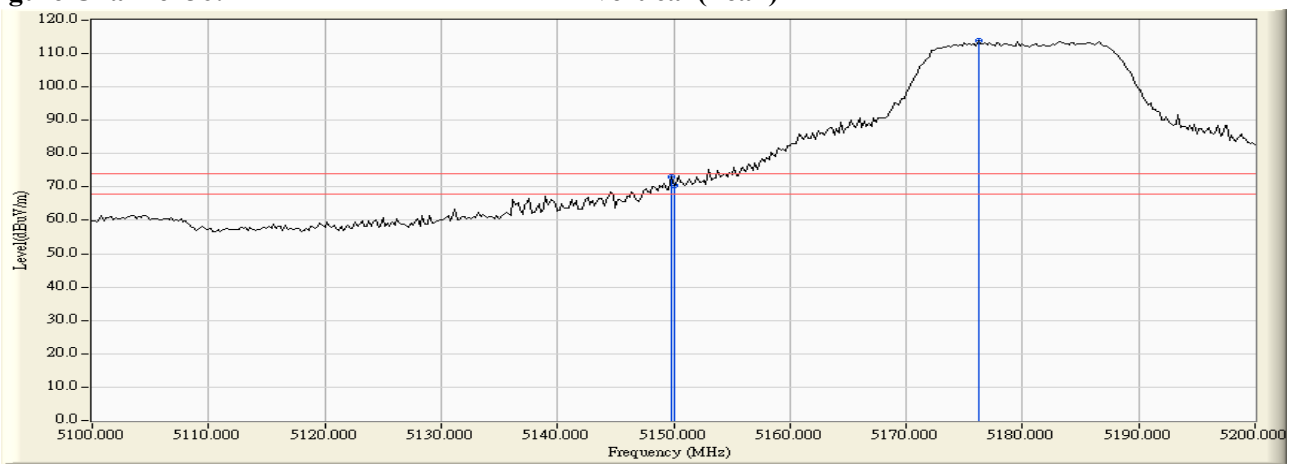
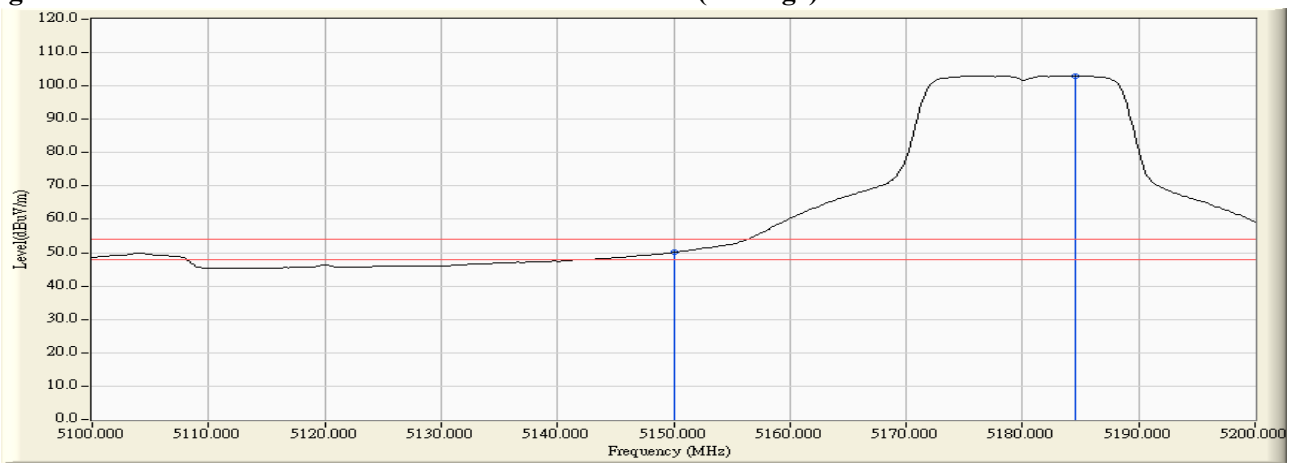


Figure Channel 36: Vertical (Average)



Note:

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

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
64 (Peak)	5323.200	3.637	99.966	103.603	--	--	--
64 (Peak)	5350.000	3.575	55.876	59.451	74.00	54.00	Pass
64 (Peak)	5351.000	3.573	57.517	61.089	74.00	54.00	Pass
64 (Average)	5325.200	3.633	89.277	92.910	--	--	--
64 (Average)	5350.000	3.575	40.796	44.371	74.00	54.00	Pass

Figure Channel 64: Horizontal (Peak)

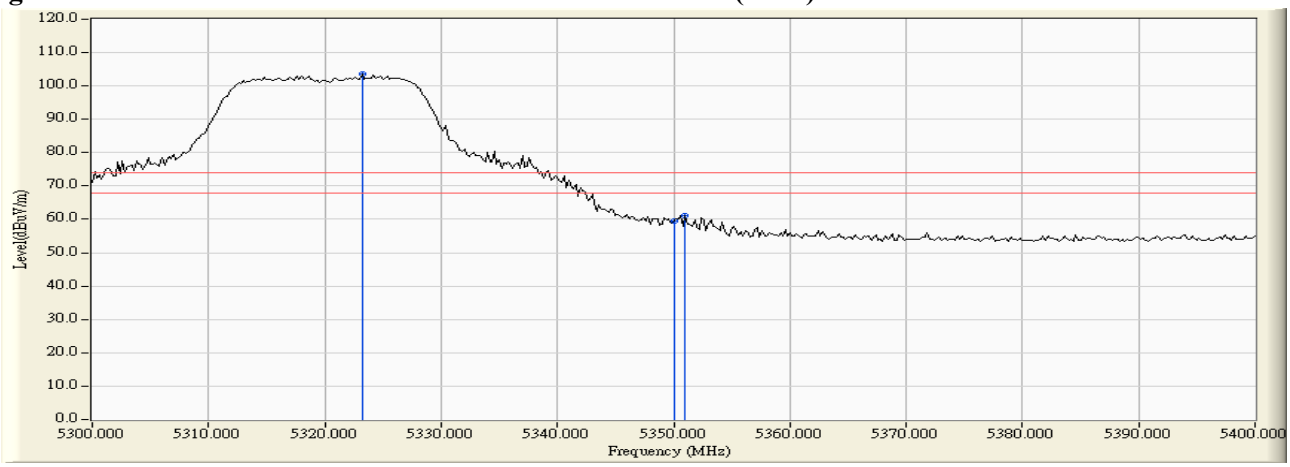
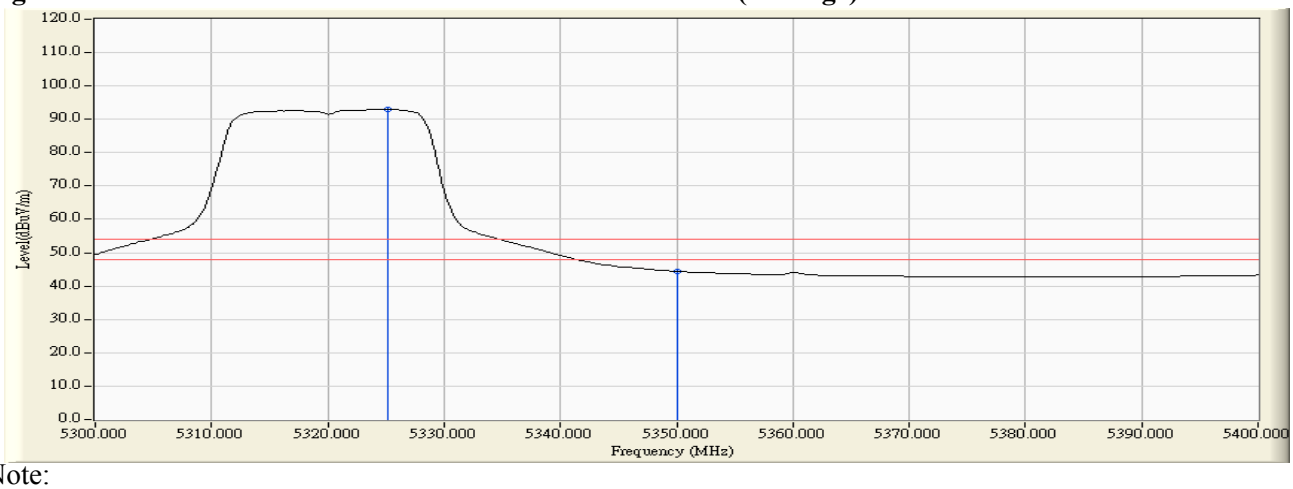


Figure Channel 64: Horizontal (Average)



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

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
64 (Peak)	5324.200	3.890	112.245	116.135	--	--	--
64 (Peak)	5350.000	3.900	67.502	71.402	74.00	54.00	Pass
64 (Peak)	5351.000	3.901	69.157	73.057	74.00	54.00	Pass
64 (Average)	5325.200	3.891	101.301	105.192	--	--	--
64 (Average)	5350.000	3.900	47.376	51.276	74.00	54.00	Pass

Figure Channel 64: Vertical (Peak)

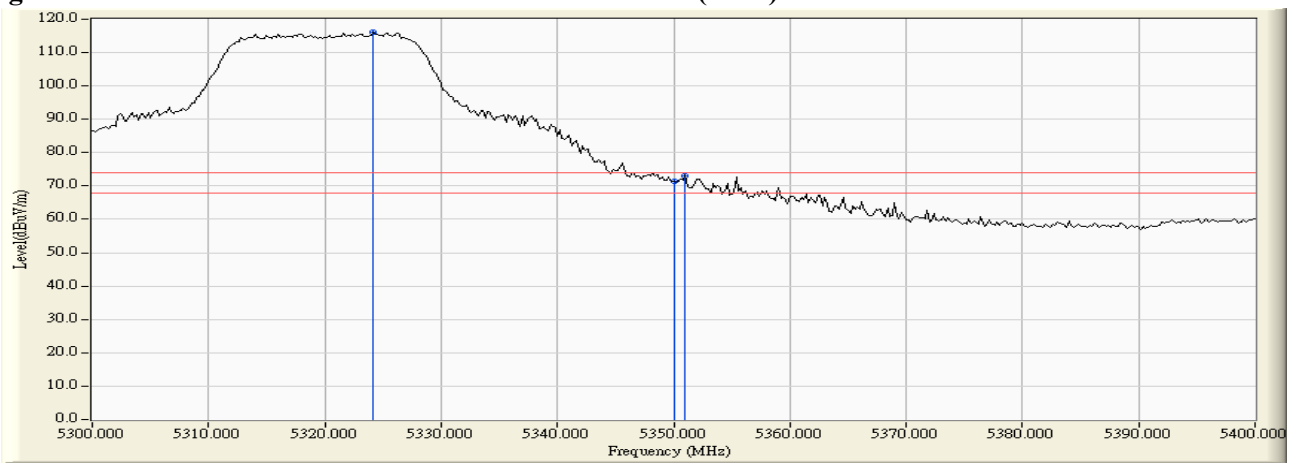
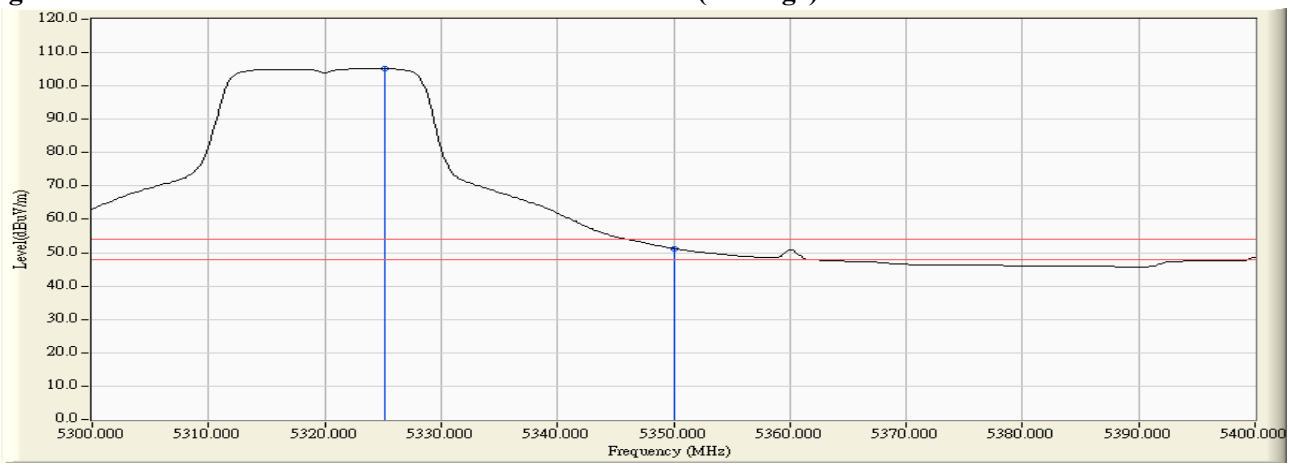


Figure Channel 64: Vertical (Average)



Note:

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

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
100 (Peak)	5426.800	3.400	52.898	56.298	74.00	54.00	Pass
100 (Peak)	5460.000	3.775	51.512	55.287	74.00	54.00	Pass
100 (Peak)	5504.600	4.542	98.439	102.980	--	--	--
100 (Average)	5426.000	3.394	40.866	44.260	74.00	54.00	Pass
100 (Average)	5460.000	3.775	39.723	43.498	74.00	54.00	Pass
100 (Average)	5504.200	4.535	88.098	92.633	--	--	--

Figure Channel 100: Horizontal (Peak)

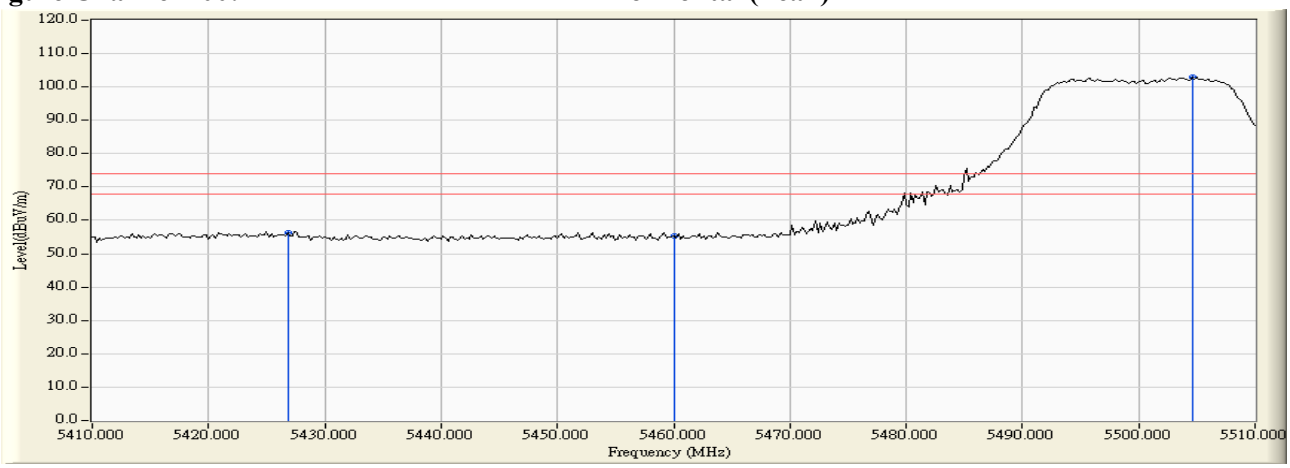
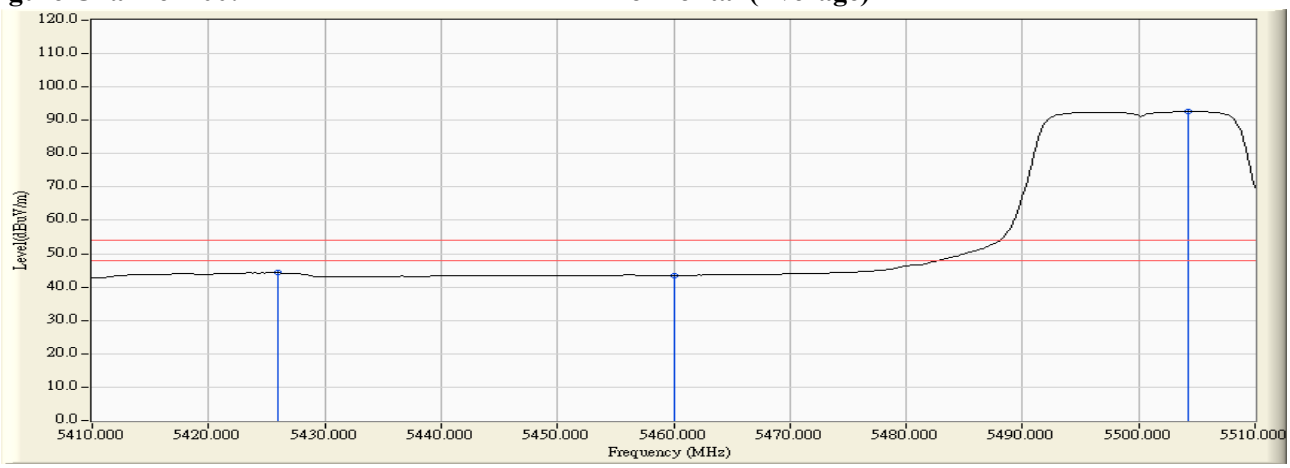


Figure Channel 100: Horizontal (Average)



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

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
100 (Peak)	5458.400	3.912	58.196	62.108	74.00	54.00	Pass
100 (Peak)	5460.000	3.934	54.849	58.784	74.00	54.00	Pass
100 (Peak)	5505.000	4.511	107.703	112.214	--	--	--
100 (Average)	5424.400	3.720	46.080	49.800	74.00	54.00	Pass
100 (Average)	5460.000	3.934	41.913	45.848	74.00	54.00	Pass
100 (Average)	5504.600	4.508	96.956	101.463	--	--	--

Figure Channel 100: Vertical (Peak)

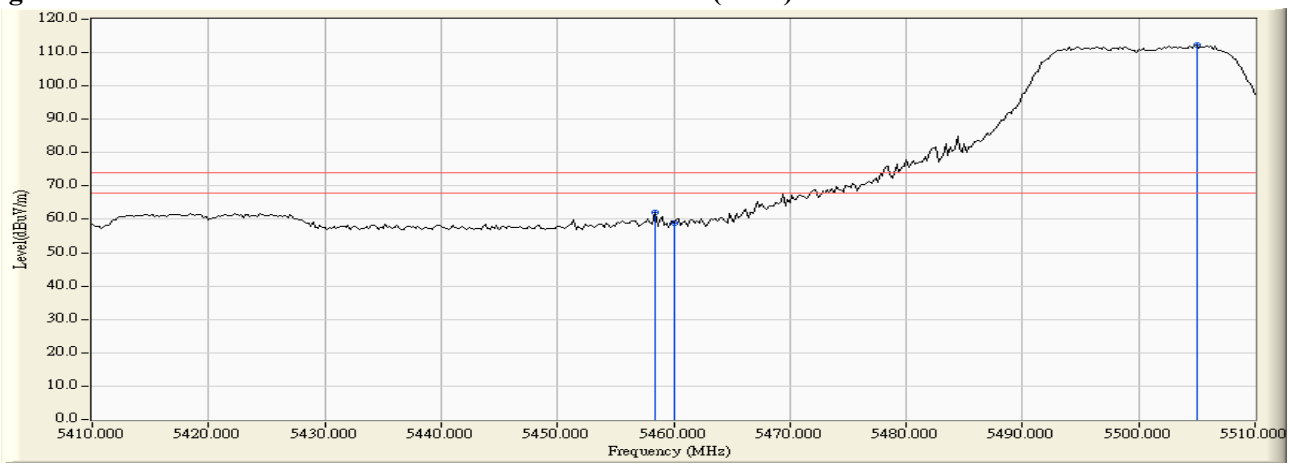
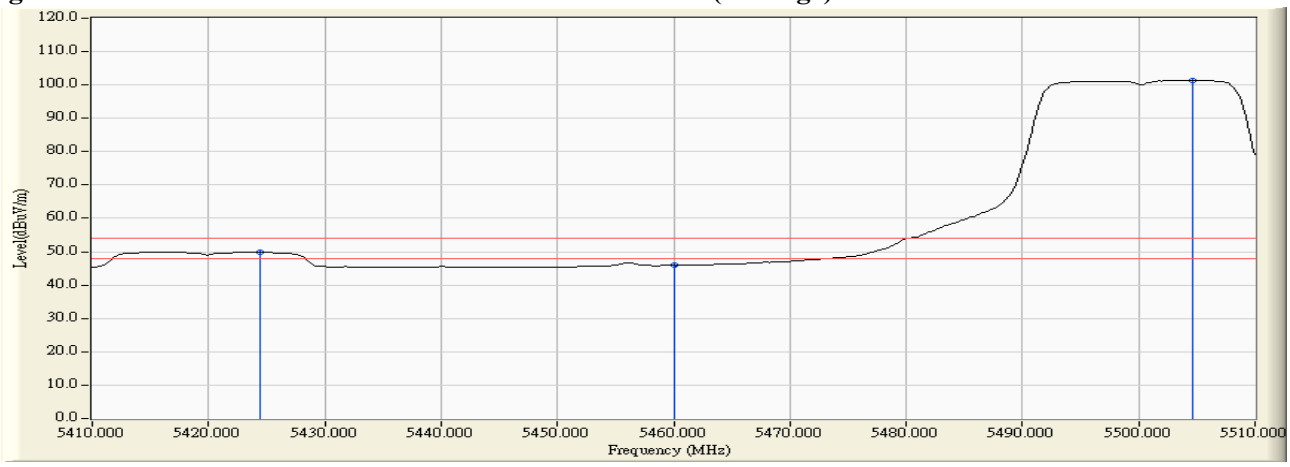


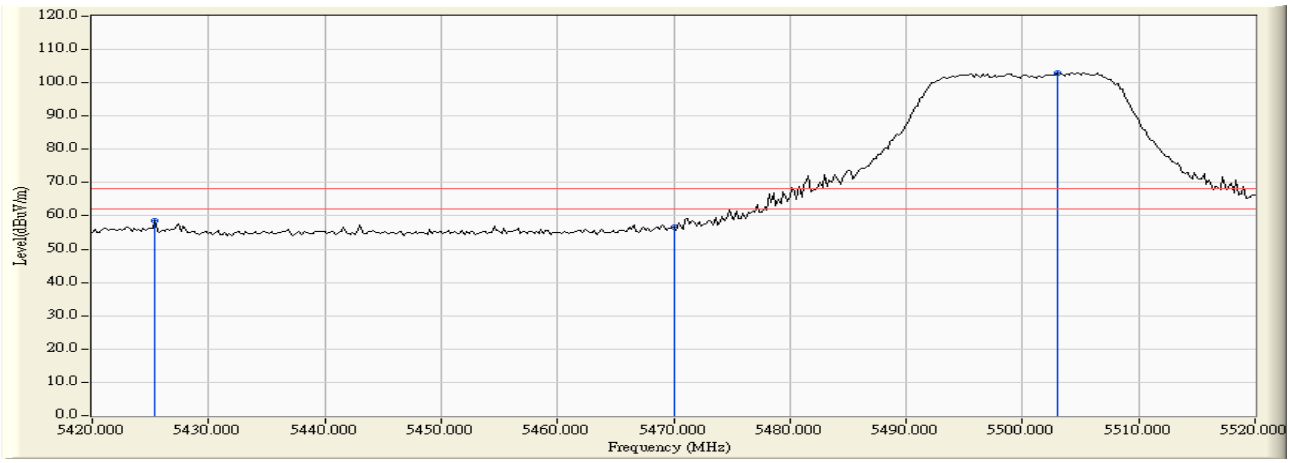
Figure Channel 100: Vertical (Average)



Note:

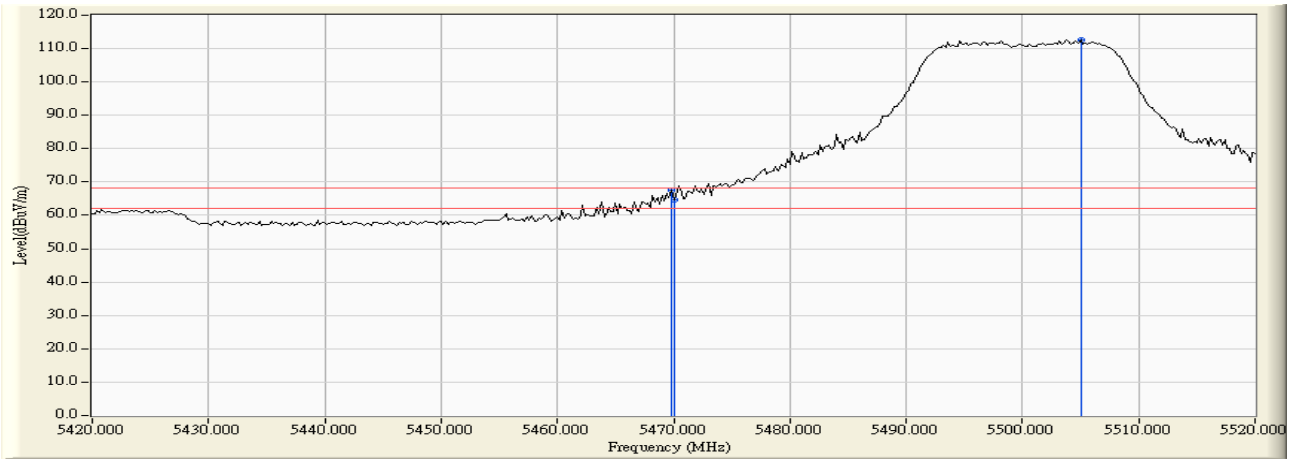
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading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

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



RF Radiated Measurement:

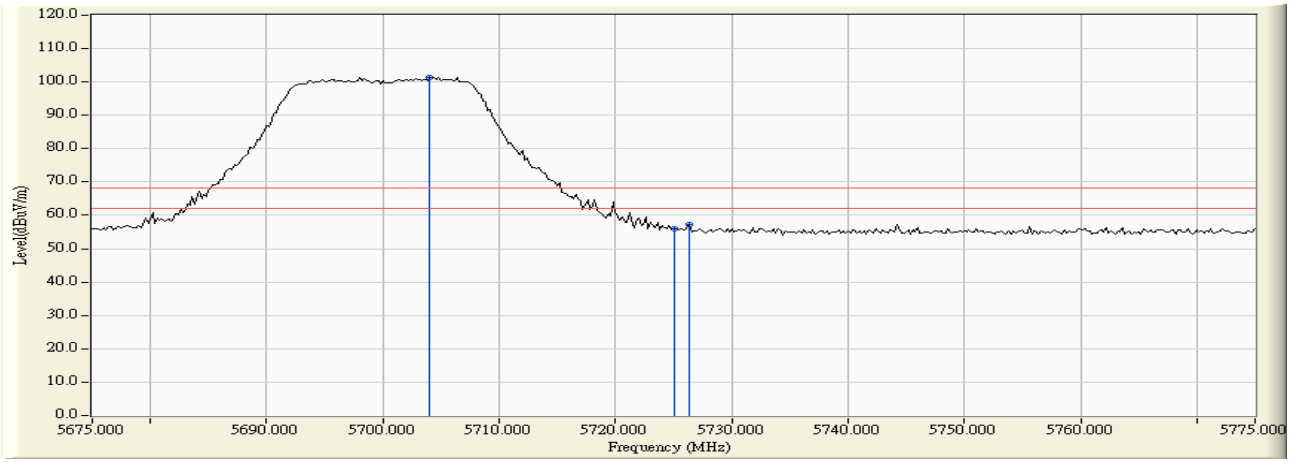
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5425.400	3.389	55.086	58.475	-9.745	68.220	Pass
Horizontal	5470.000	3.970	52.547	56.517	-11.703	68.220	Pass
Horizontal	5503.000	4.520	98.550	103.069	--	--	--



RF Radiated Measurement:

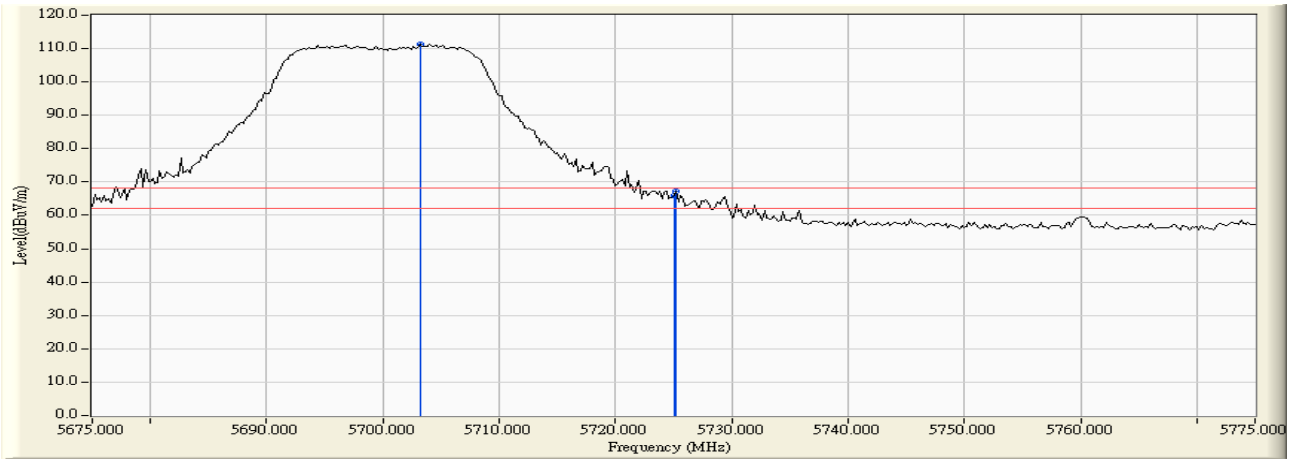
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5469.800	4.077	63.397	67.473	-0.747	68.220	Pass
Vertical	5470.000	4.079	60.709	64.788	-3.432	68.220	Pass
Vertical	5505.000	4.511	108.059	112.570	--	--	--

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



RF Radiated Measurement:

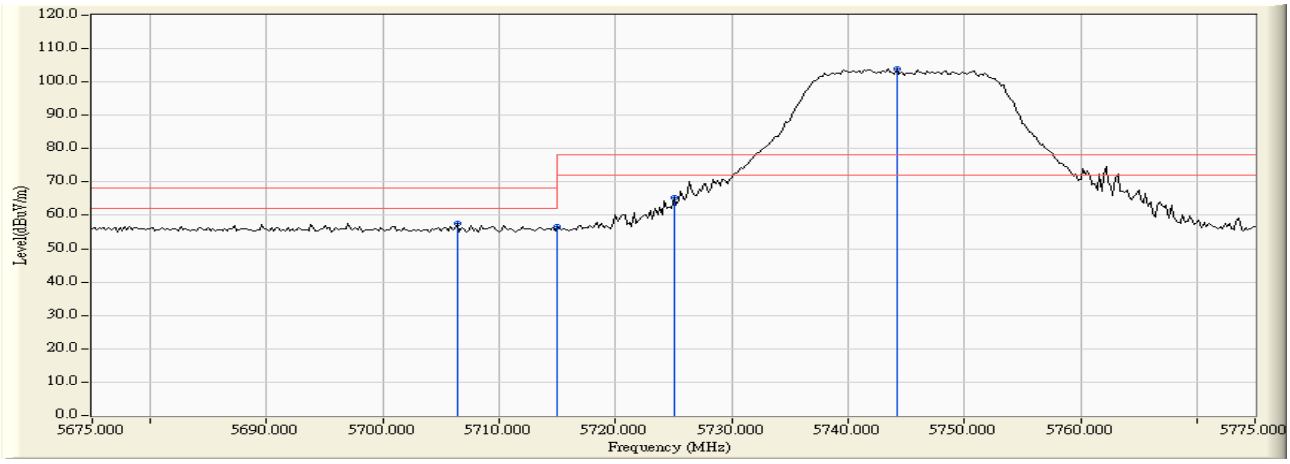
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5704.000	5.017	96.436	101.454	--	--	--
Horizontal	5725.000	5.104	50.775	55.878	-12.342	68.220	Pass
Horizontal	5726.400	5.109	51.998	57.107	-11.113	68.220	Pass



RF Radiated Measurement:

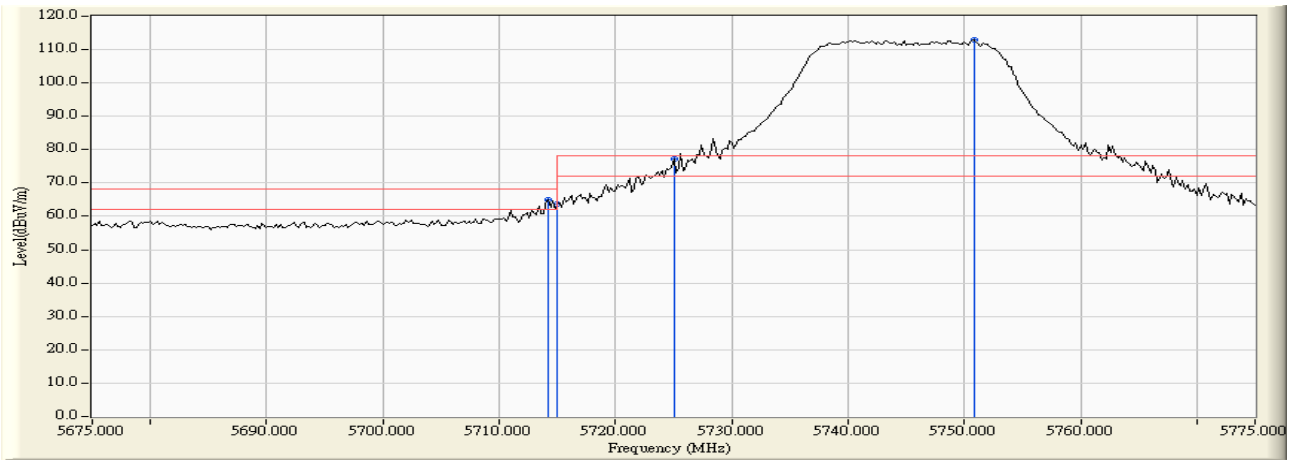
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5703.200	4.174	107.153	111.326	--	--	--
Vertical	5725.000	4.215	61.797	66.012	-2.208	68.220	Pass
Vertical	5725.200	4.215	63.170	67.385	-0.835	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 149



RF Radiated Measurement:

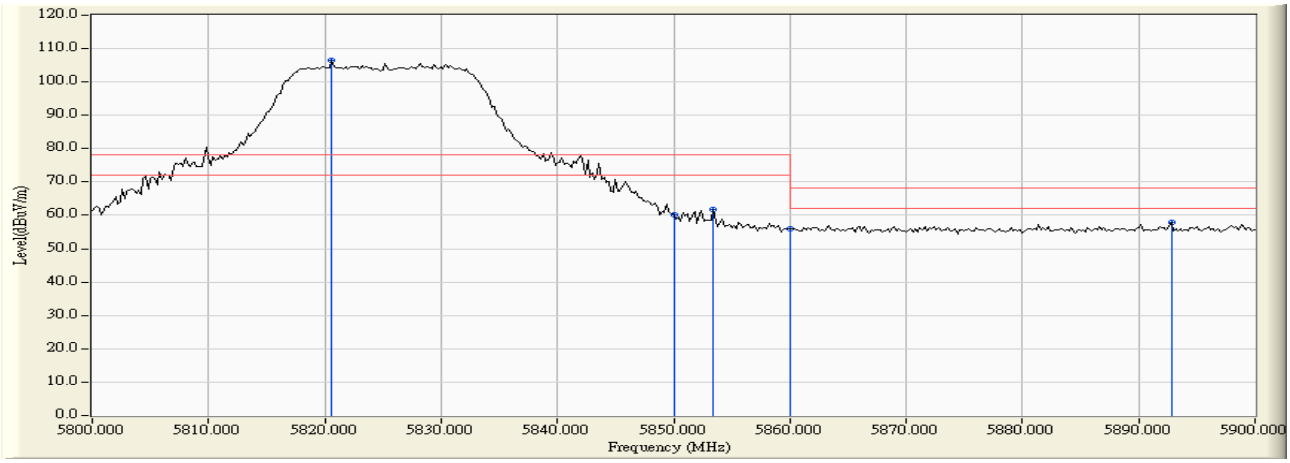
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5706.400	5.028	52.537	57.565	-10.655	68.220	Pass
Horizontal	5715.000	5.063	51.537	56.600	-11.620	68.220	Pass
Horizontal	5725.000	5.104	60.157	65.260	-12.960	78.220	Pass
Horizontal	5744.200	5.183	98.798	103.981	--	--	--



RF Radiated Measurement:

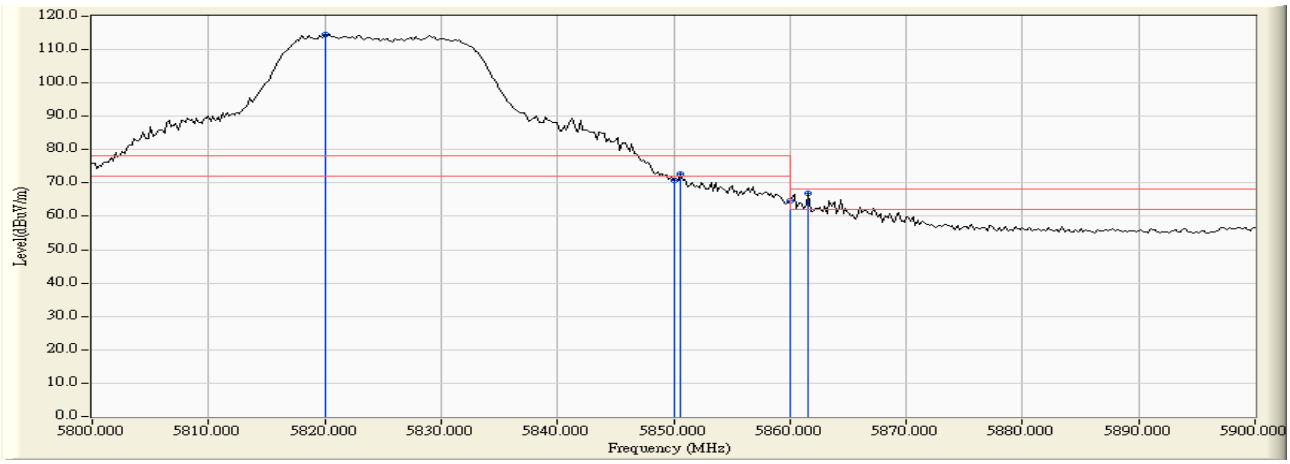
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5714.200	4.183	60.826	65.009	-3.211	68.220	Pass
Vertical	5715.000	4.186	59.652	63.838	-4.382	68.220	Pass
Vertical	5725.000	4.215	72.926	77.141	-1.079	78.220	Pass
Vertical	5750.800	4.288	108.476	112.764	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 165



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5820.600	5.512	100.891	106.403	--	--	--
Horizontal	5850.000	5.715	54.532	60.247	-17.973	78.220	Pass
Horizontal	5853.400	5.742	56.123	61.866	-16.354	78.220	Pass
Horizontal	5860.000	5.798	50.171	55.969	-12.251	68.220	Pass
Horizontal	5892.800	6.094	51.756	57.849	-10.371	68.220	Pass



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5820.000	4.314	110.192	114.506	--	--	--
Vertical	5850.000	4.194	66.602	70.796	-7.424	78.220	Pass
Vertical	5850.600	4.193	68.651	72.844	-5.376	78.220	Pass
Vertical	5860.000	4.168	60.503	64.671	-3.549	68.220	Pass
Vertical	5861.600	4.164	62.665	66.829	-1.391	68.220	Pass

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

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5149.400	2.799	56.125	58.923	74.00	54.00	Pass
36 (Peak)	5150.000	2.796	54.973	57.769	74.00	54.00	Pass
36 (Peak)	5175.200	2.712	103.757	106.469	--	--	--
36 (Average)	5105.200	2.909	42.634	45.544	74.00	54.00	Pass
36 (Average)	5150.000	2.796	42.304	45.100	74.00	54.00	Pass
36 (Average)	5175.800	2.710	92.491	95.201	--	--	--

Figure Channel 36: Horizontal (Peak)

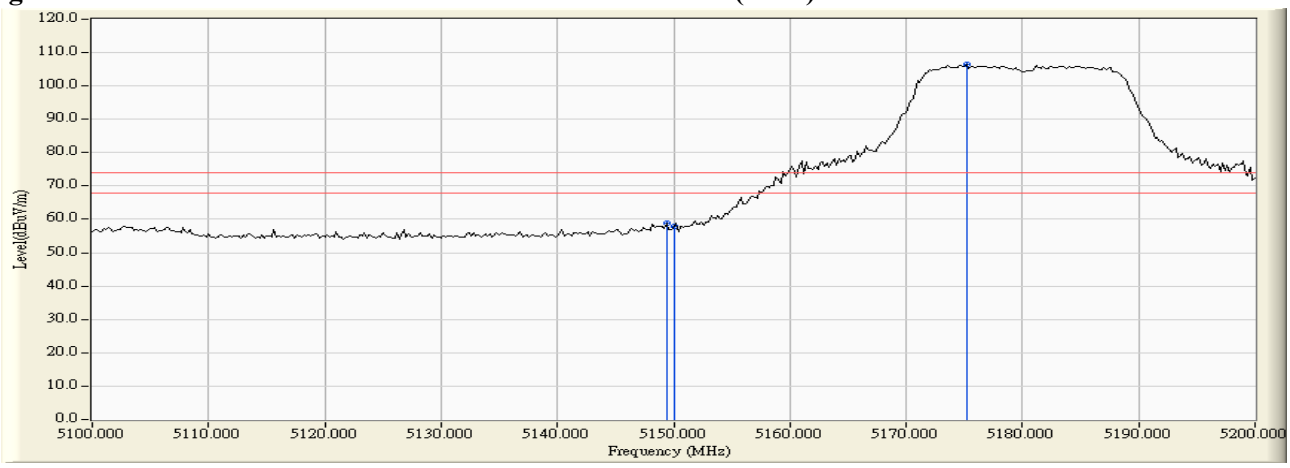
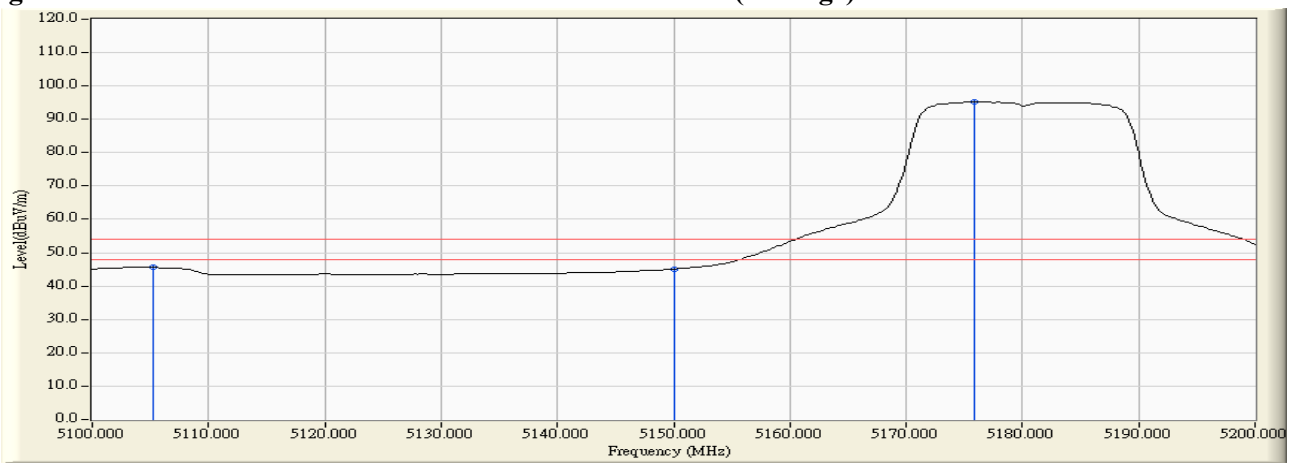


Figure Channel 36: Horizontal (Average)



Note:

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

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

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
36 (Peak)	5103.800	3.103	49.529	52.633	74.00	54.00	Pass
36 (Peak)	5150.000	3.331	49.274	52.606	74.00	54.00	Pass
36 (Peak)	5184.600	3.494	101.362	104.856	--	--	--
36 (Average)	5103.800	3.103	49.529	52.633	74.00	54.00	Pass
36 (Average)	5150.000	3.331	49.274	52.606	74.00	54.00	Pass
36 (Average)	5184.600	3.494	101.362	104.856	--	--	--

Figure Channel 36: Vertical (Peak)

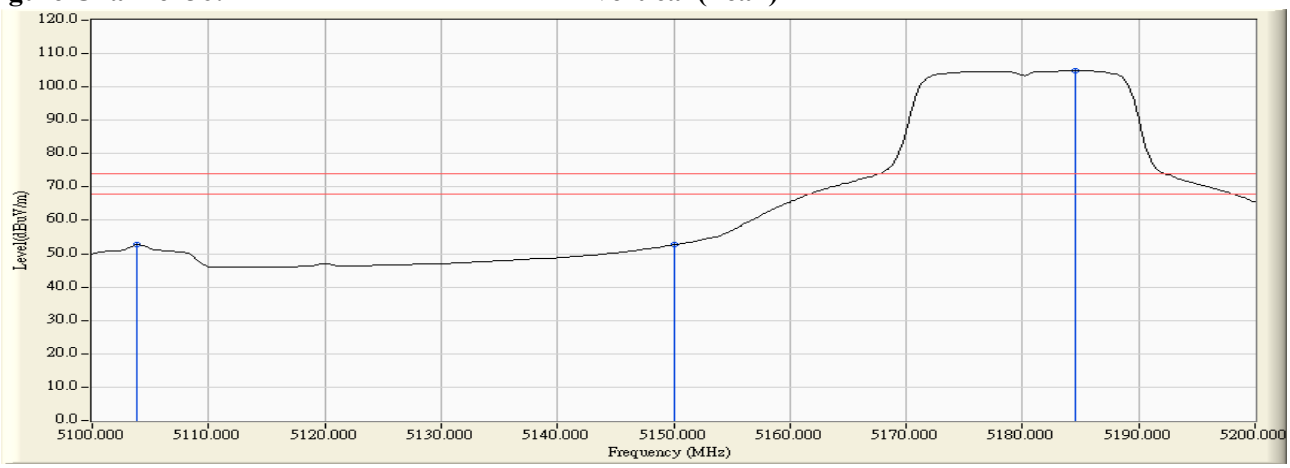
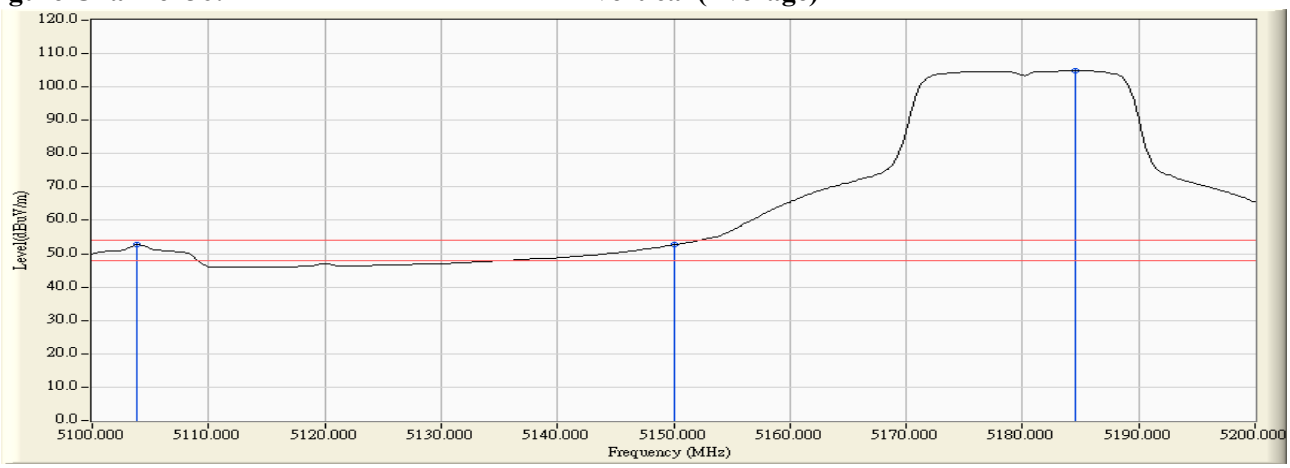


Figure Channel 36: Vertical (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
64 (Peak)	5315.400	3.652	103.493	107.144	--	--	--
64 (Peak)	5350.000	3.575	54.369	57.944	74.00	54.00	Pass
64 (Peak)	5350.800	3.572	56.838	60.411	74.00	54.00	Pass
64 (Average)	5324.800	3.633	91.232	94.866	--	--	--
64 (Average)	5350.000	3.575	41.089	44.664	74.00	54.00	Pass

Figure Channel 64: Horizontal (Peak)

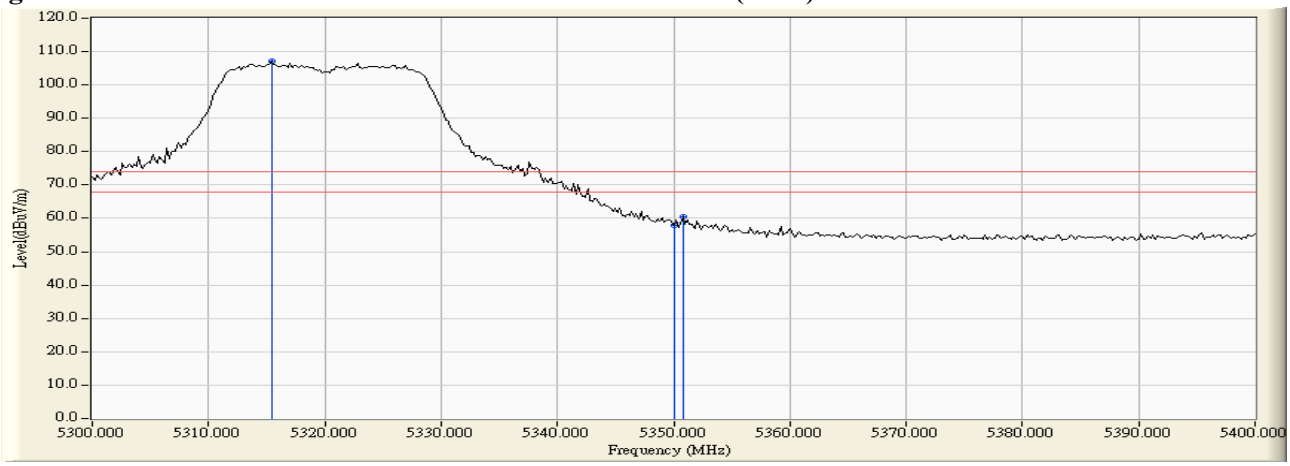
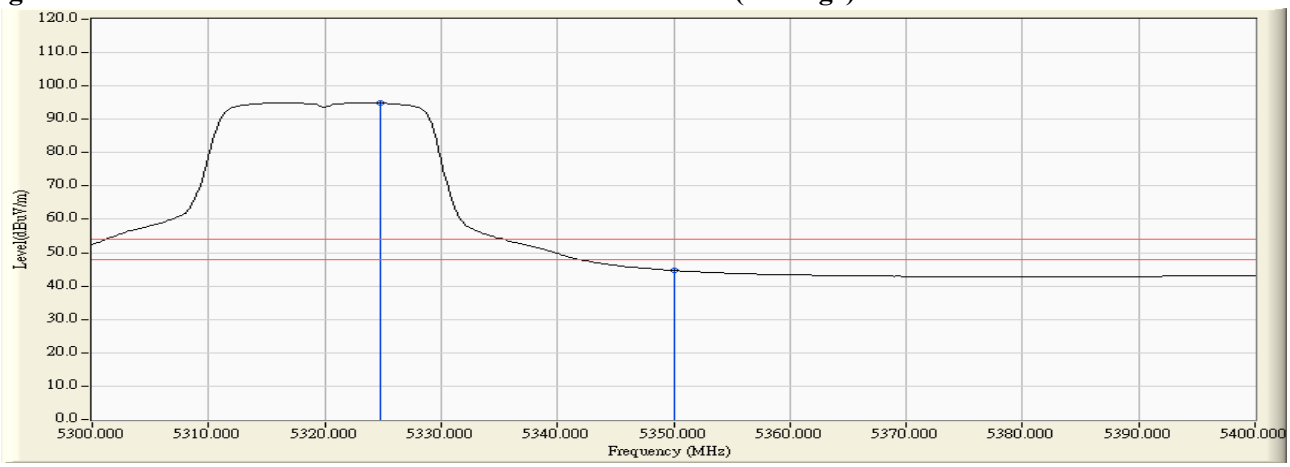


Figure Channel 64: Horizontal (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
64 (Peak)	5317.800	3.885	113.288	117.173	--	--	--
64 (Peak)	5350.000	3.900	64.964	68.864	74.00	54.00	Pass
64 (Peak)	5354.200	3.889	65.241	69.130	74.00	54.00	Pass
64 (Average)	5324.800	3.890	101.486	105.377	--	--	--
64 (Average)	5350.000	3.900	48.430	52.330	74.00	54.00	Pass

Figure Channel 64: Vertical (Peak)

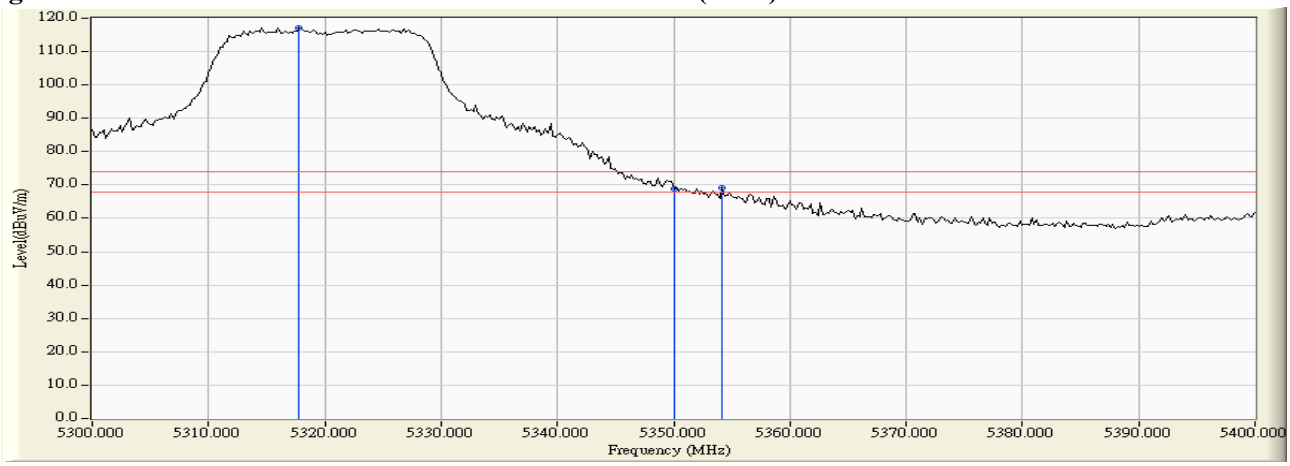
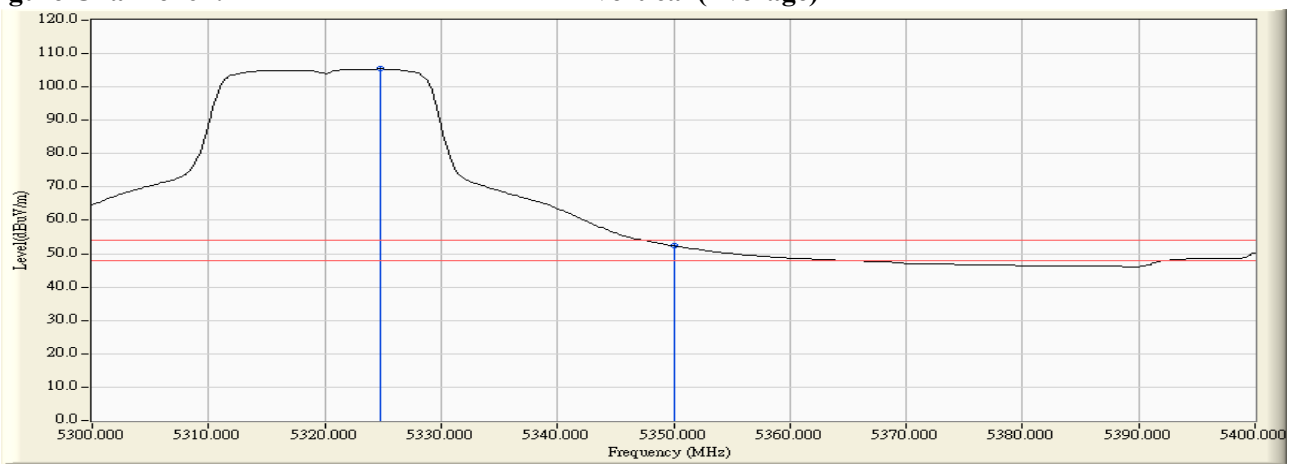


Figure Channel 64: Vertical (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
100 (Peak)	5425.400	3.389	54.864	58.253	74.00	54.00	Pass
100 (Peak)	5460.000	3.775	52.436	56.211	74.00	54.00	Pass
100 (Peak)	5503.400	4.525	104.376	108.901	--	--	--
100 (Average)	5427.200	3.402	42.441	45.844	74.00	54.00	Pass
100 (Average)	5460.000	3.775	40.281	44.056	74.00	54.00	Pass
100 (Average)	5505.000	4.546	92.589	97.135	--	--	--

Figure Channel 100: Horizontal (Peak)

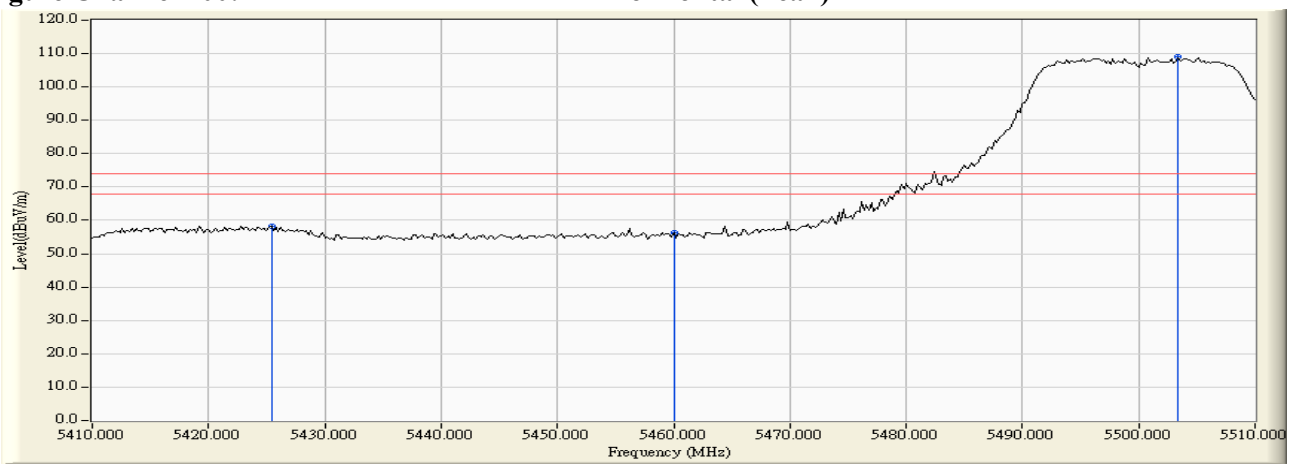
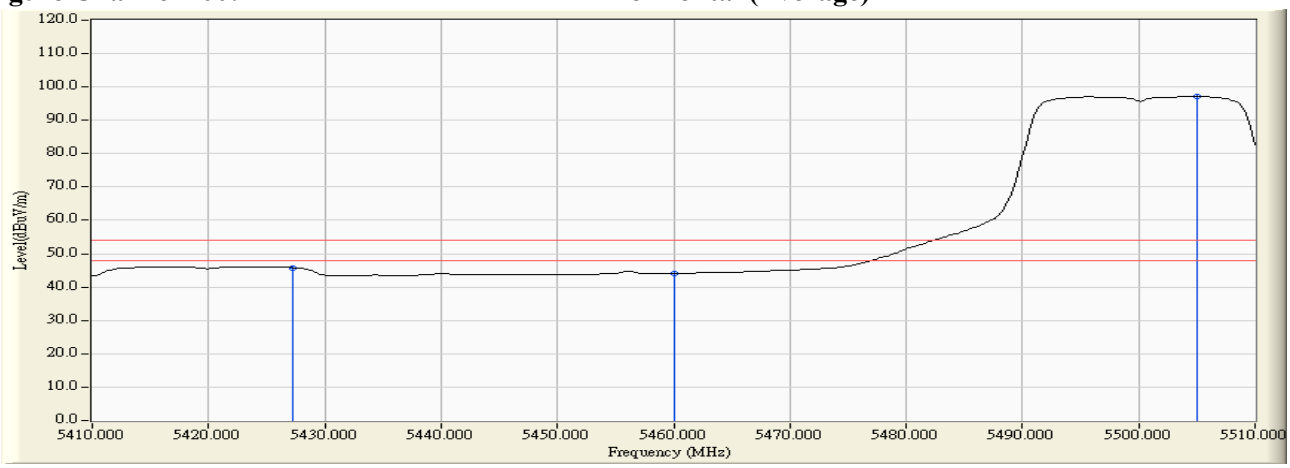


Figure Channel 100: Horizontal (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
100 (Peak)	5423.400	3.717	58.178	61.895	74.00	54.00	Pass
100 (Peak)	5460.000	3.934	55.306	59.241	74.00	54.00	Pass
100 (Peak)	5494.400	4.403	110.025	114.427	--	--	--
100 (Average)	5424.400	3.720	45.552	49.272	74.00	54.00	Pass
100 (Average)	5460.000	3.934	42.458	46.393	74.00	54.00	Pass
100 (Average)	5495.600	4.415	97.638	102.053	--	--	--

Figure Channel 100: Vertical (Peak)

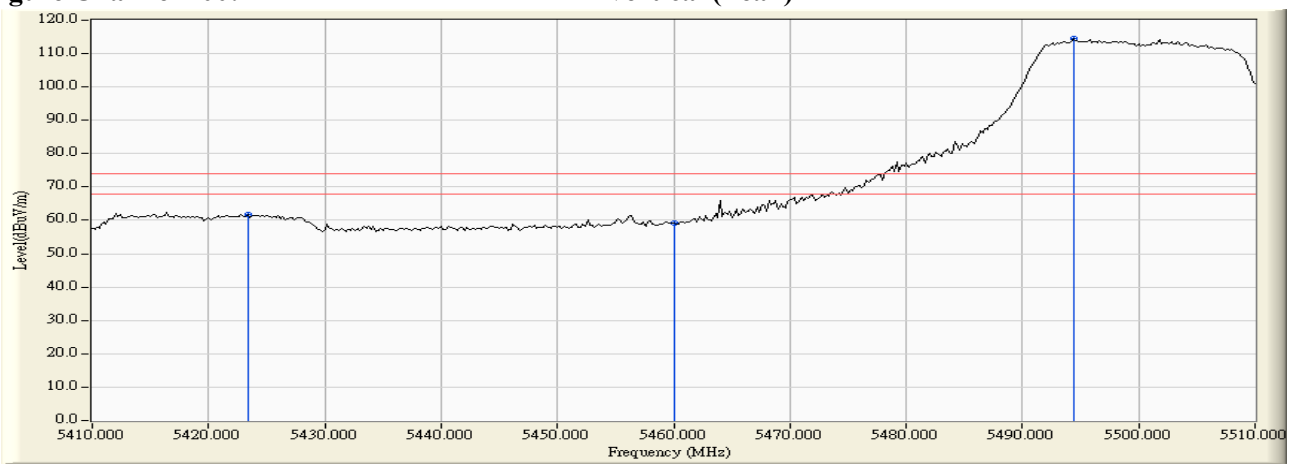
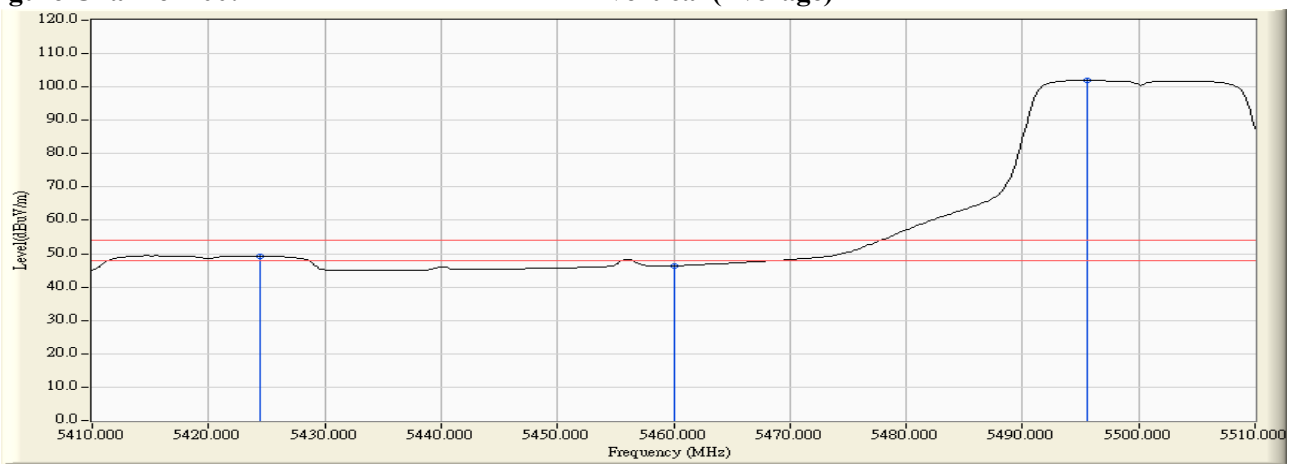


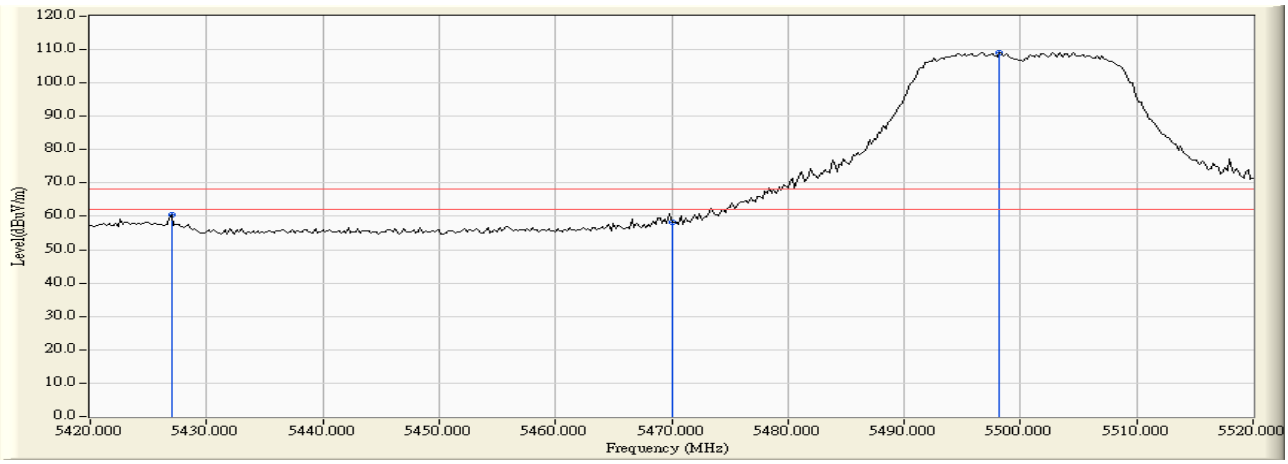
Figure Channel 100: Vertical (Average)



Note:

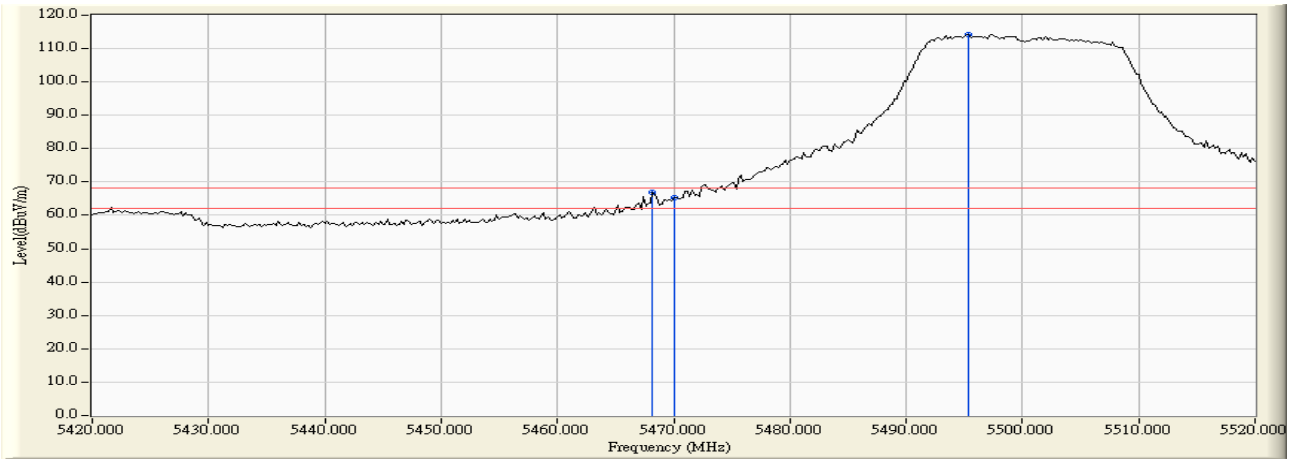
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100



RF Radiated Measurement:

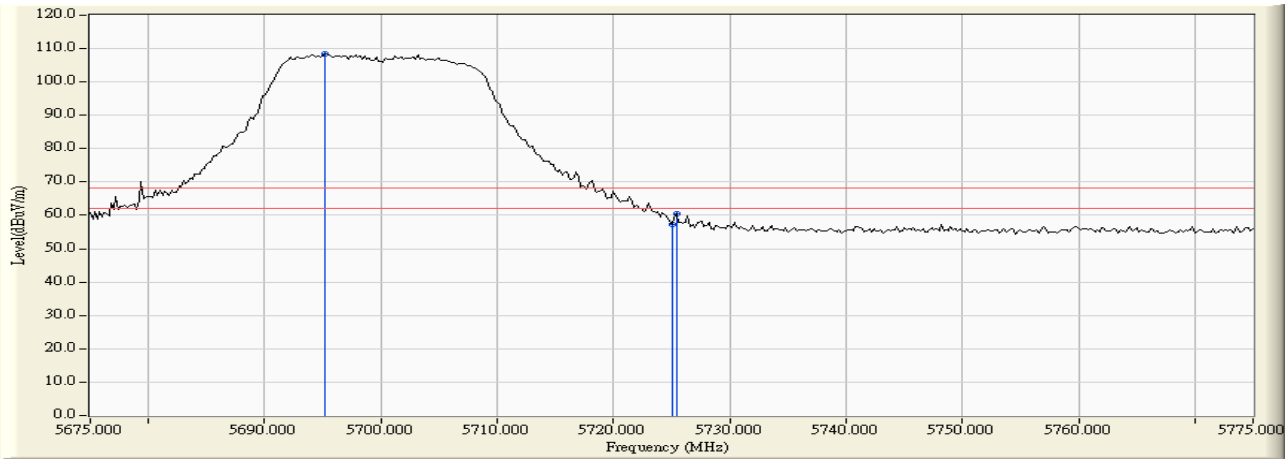
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBµV/m)	Result
Horizontal	5427.000	3.402	56.969	60.371	-7.849	68.220	Pass
Horizontal	5470.000	3.970	54.268	58.238	-9.982	68.220	Pass
Horizontal	5498.200	4.454	104.691	109.145	--	--	--



RF Radiated Measurement:

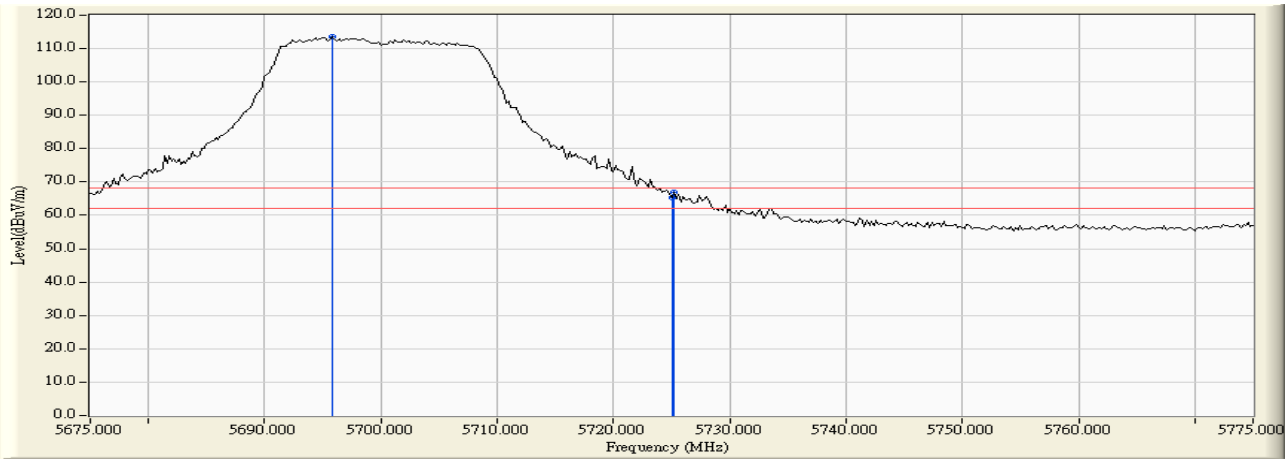
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBµV/m)	Result
Vertical	5468.200	4.054	62.888	66.941	-1.279	68.220	Pass
Vertical	5470.000	4.079	61.090	65.169	-3.051	68.220	Pass
Vertical	5495.400	4.413	109.929	114.341	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 140



RF Radiated Measurement:

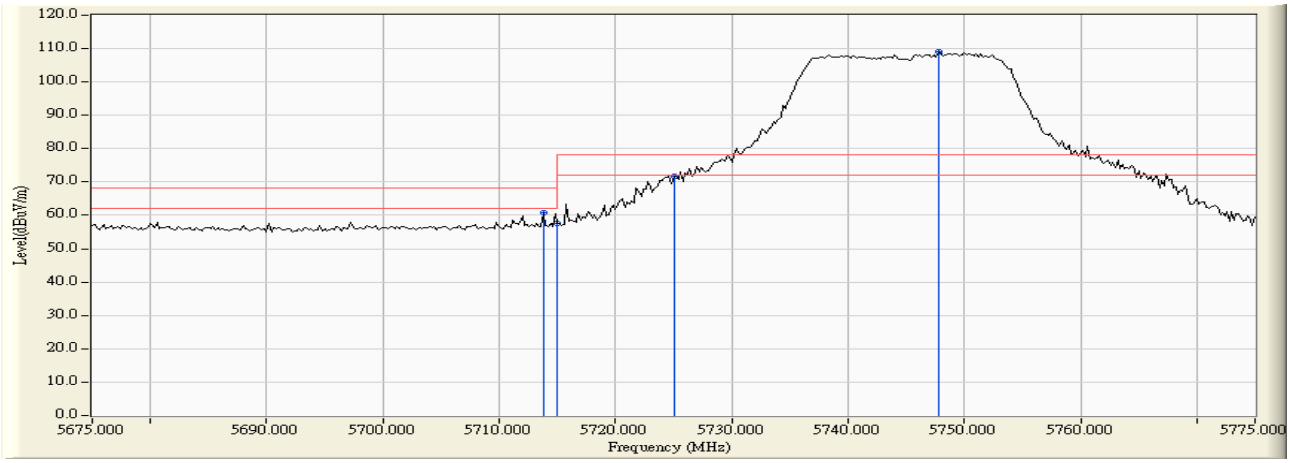
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5695.200	4.983	103.481	108.463	--	--	--
Horizontal	5725.000	5.104	52.127	57.230	-10.990	68.220	Pass
Horizontal	5725.400	5.106	55.361	60.466	-7.754	68.220	Pass



RF Radiated Measurement:

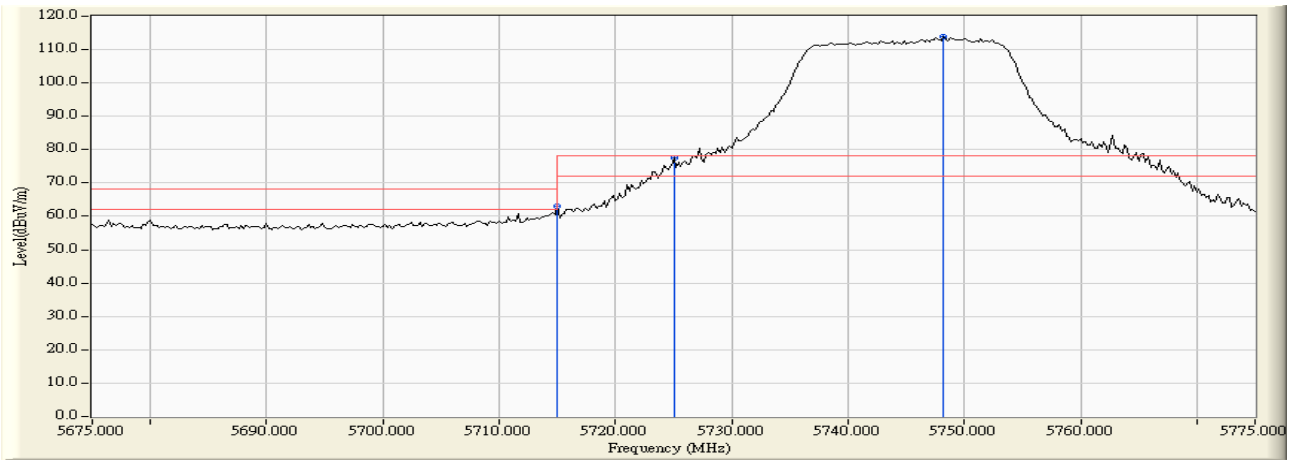
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5695.800	4.180	109.346	113.525	--	--	--
Vertical	5725.000	4.215	61.207	65.422	-2.798	68.220	Pass
Vertical	5725.200	4.215	62.809	67.024	-1.196	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 149



RF Radiated Measurement:

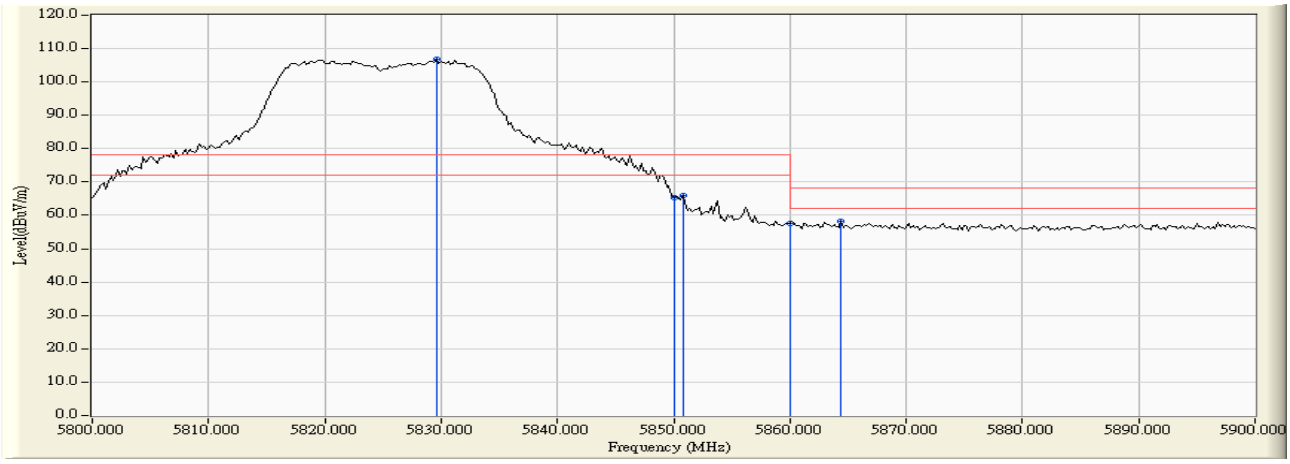
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5713.800	5.058	55.767	60.825	-7.395	68.220	Pass
Horizontal	5715.000	5.063	52.528	57.591	-10.629	68.220	Pass
Horizontal	5725.000	5.104	66.665	71.768	-6.452	78.220	Pass
Horizontal	5747.800	5.196	103.834	109.030	--	--	--



RF Radiated Measurement:

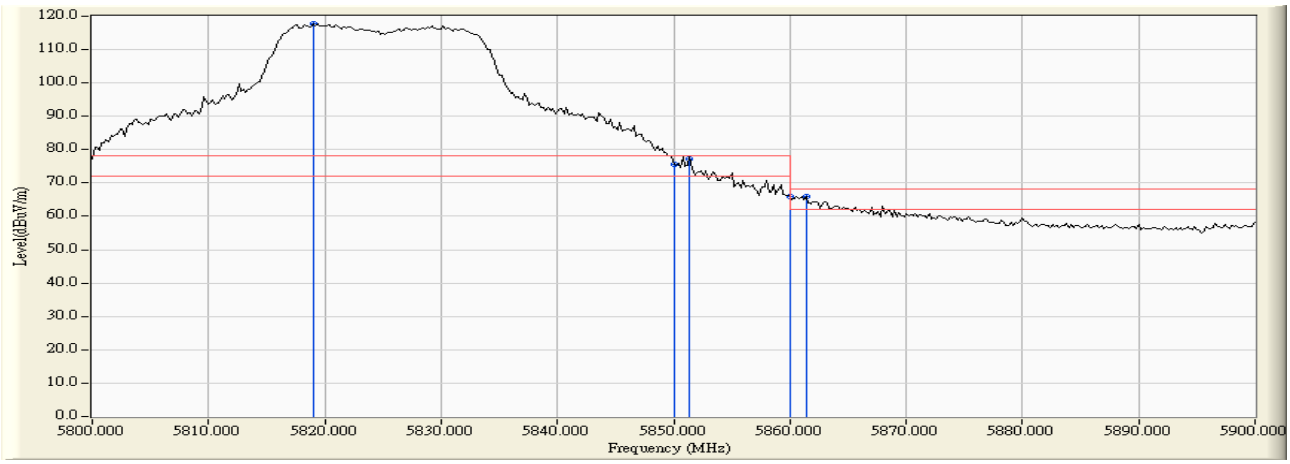
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5715.000	4.186	58.968	63.154	-5.066	68.220	Pass
Vertical	5725.000	4.215	73.213	77.428	-0.792	78.220	Pass
Vertical	5748.200	4.282	109.751	114.033	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 165



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5829.600	5.572	101.116	106.687	--	--	--
Horizontal	5850.000	5.715	59.601	65.316	-12.904	78.220	Pass
Horizontal	5850.800	5.722	60.214	65.936	-12.284	78.220	Pass
Horizontal	5860.000	5.798	51.755	57.553	-10.667	68.220	Pass
Horizontal	5864.400	5.836	52.254	58.090	-10.130	68.220	Pass



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5819.000	4.318	113.433	117.751	--	--	--
Vertical	5850.000	4.194	71.561	75.755	-2.465	78.220	Pass
Vertical	5851.400	4.190	73.006	77.197	-1.023	78.220	Pass
Vertical	5860.000	4.168	61.635	65.803	-2.417	68.220	Pass
Vertical	5861.400	4.163	61.717	65.881	-2.339	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
38 (Peak)	5149.000	2.800	55.516	58.316	74.00	54.00	Pass
38 (Peak)	5150.000	2.796	54.228	57.024	74.00	54.00	Pass
38 (Peak)	5198.400	2.635	96.802	99.438	--	--	--
38 (Average)	5150.000	2.796	42.615	45.411	74.00	54.00	Pass
38 (Average)	5178.800	2.699	85.203	87.903	--	--	--

Figure Channel 38: Horizontal (Peak)

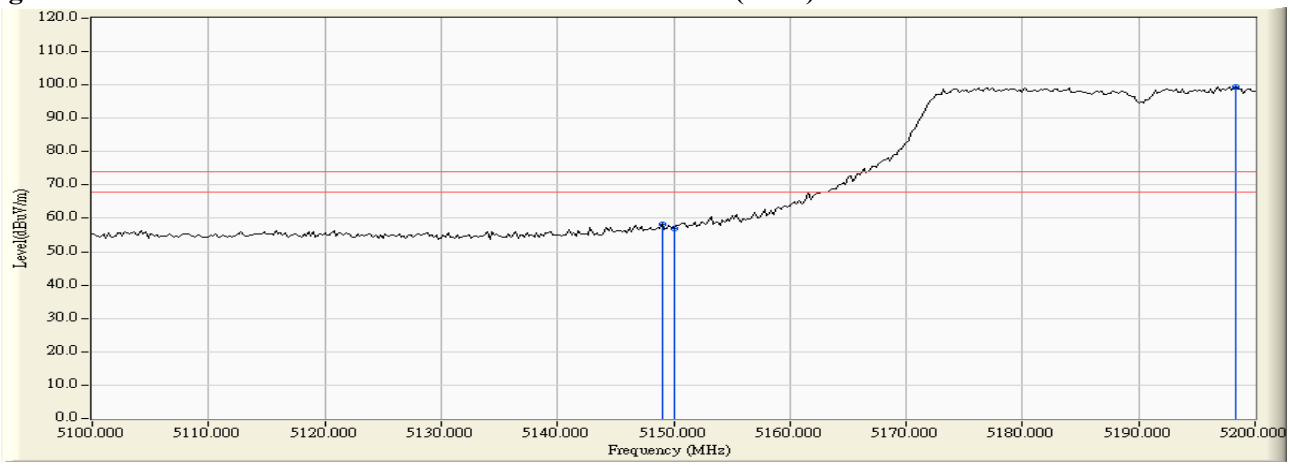
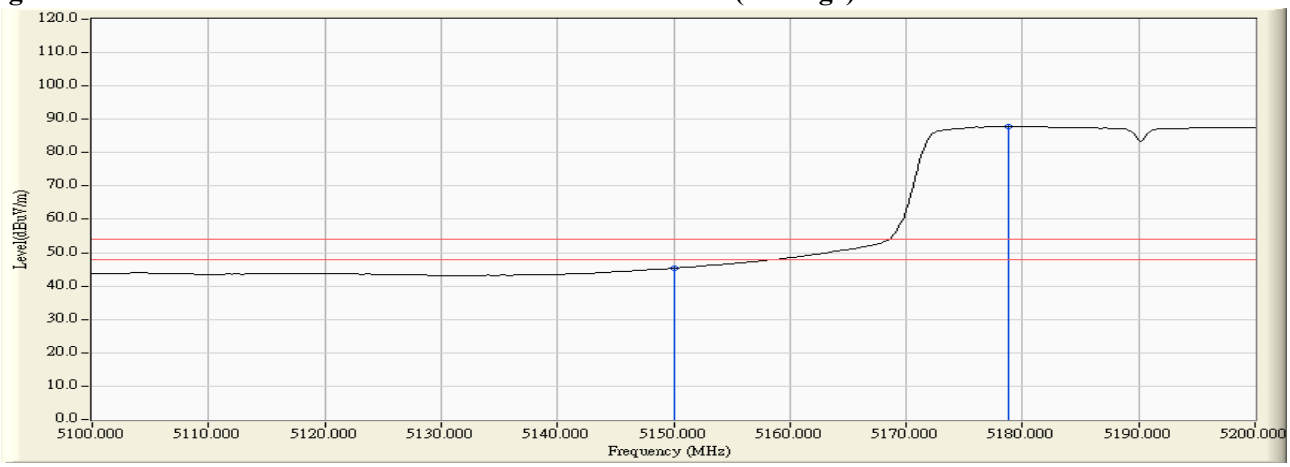


Figure Channel 38: Horizontal (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
38 (Peak)	5148.400	3.324	64.167	67.491	74.00	54.00	Pass
38 (Peak)	5150.000	3.331	63.958	67.290	74.00	54.00	Pass
38 (Peak)	5193.400	3.538	105.562	109.099	--	--	--
38 (Average)	5150.000	3.331	49.522	52.854	74.00	54.00	Pass
38 (Average)	5178.800	3.466	93.537	97.004	--	--	--

Figure Channel 38: Vertical (Peak)

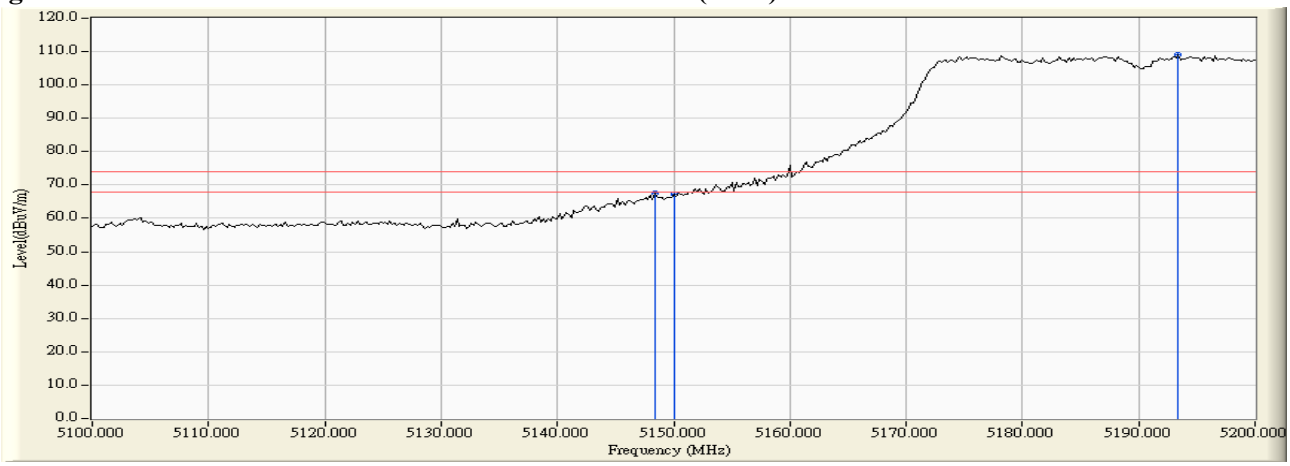
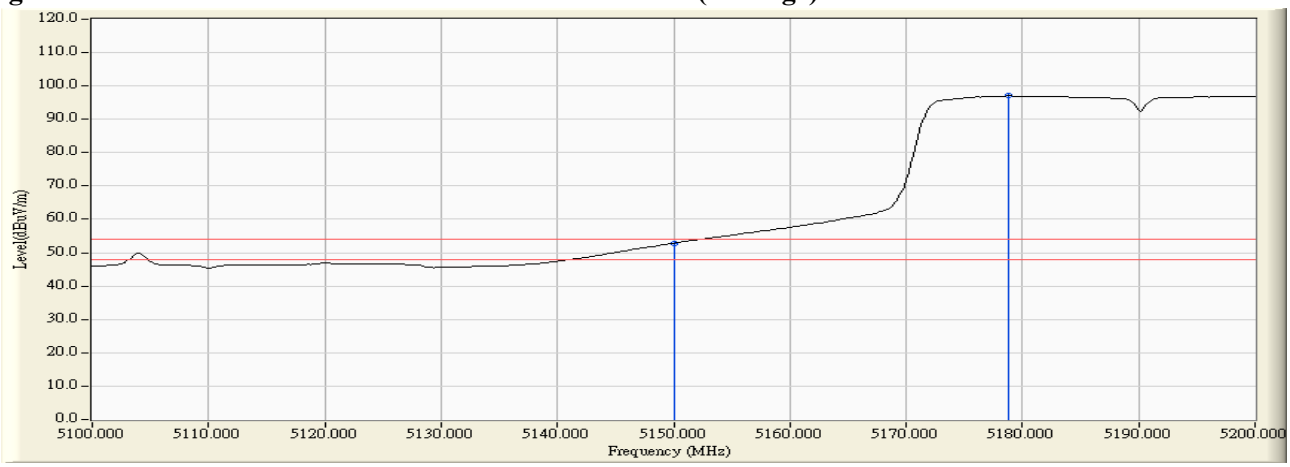


Figure Channel 38: Vertical (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
62 (Peak)	5314.400	3.653	98.041	101.694	--	--	--
62 (Peak)	5350.000	3.575	52.285	55.860	74.00	54.00	Pass
62 (Peak)	5350.200	3.575	56.621	60.195	74.00	54.00	Pass
62 (Average)	5301.000	3.679	86.424	90.103	--	--	--
62 (Average)	5350.000	3.575	41.004	44.579	74.00	54.00	Pass

Figure Channel 62: Horizontal (Peak)

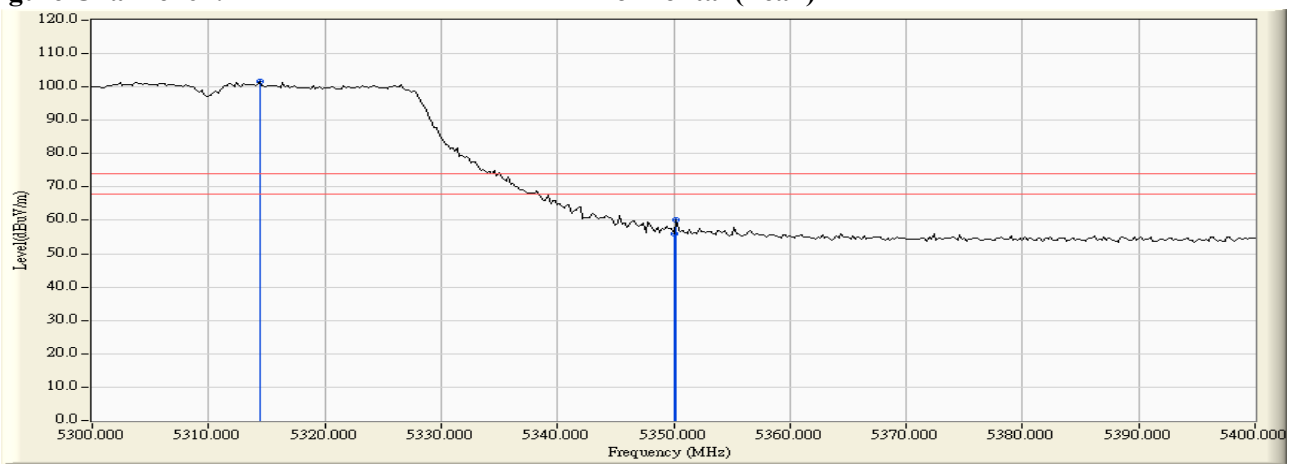
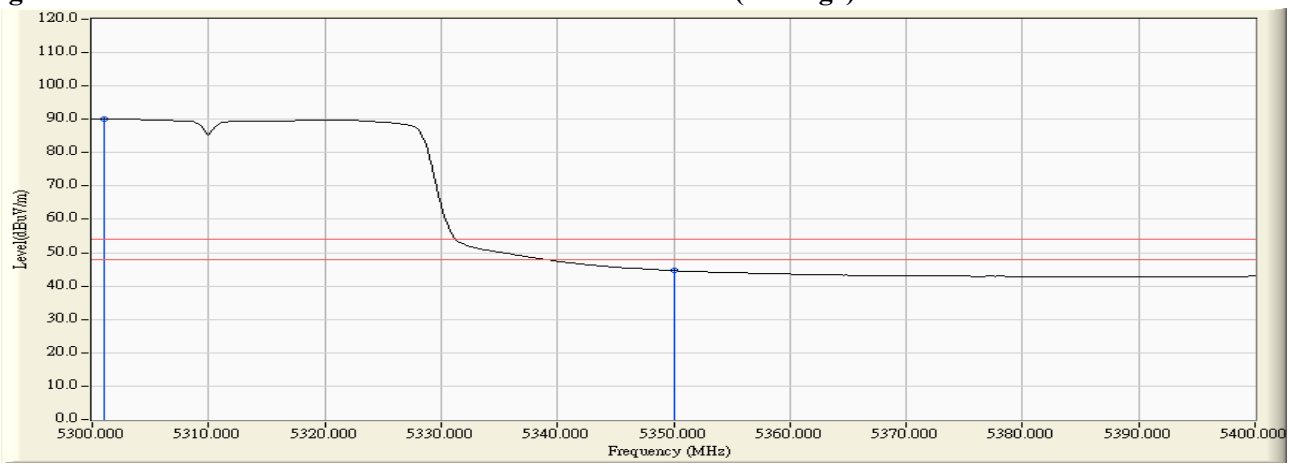


Figure Channel 62: Horizontal (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
62 (Peak)	5320.600	3.887	107.737	111.624	--	--	--
62 (Peak)	5350.000	3.900	65.375	69.275	74.00	54.00	Pass
62 (Peak)	5350.800	3.900	68.702	72.602	74.00	54.00	Pass
62 (Average)	5321.000	3.887	95.239	99.127	--	--	--
62 (Average)	5350.000	3.900	48.229	52.129	74.00	54.00	Pass

Figure Channel 62: Vertical (Peak)

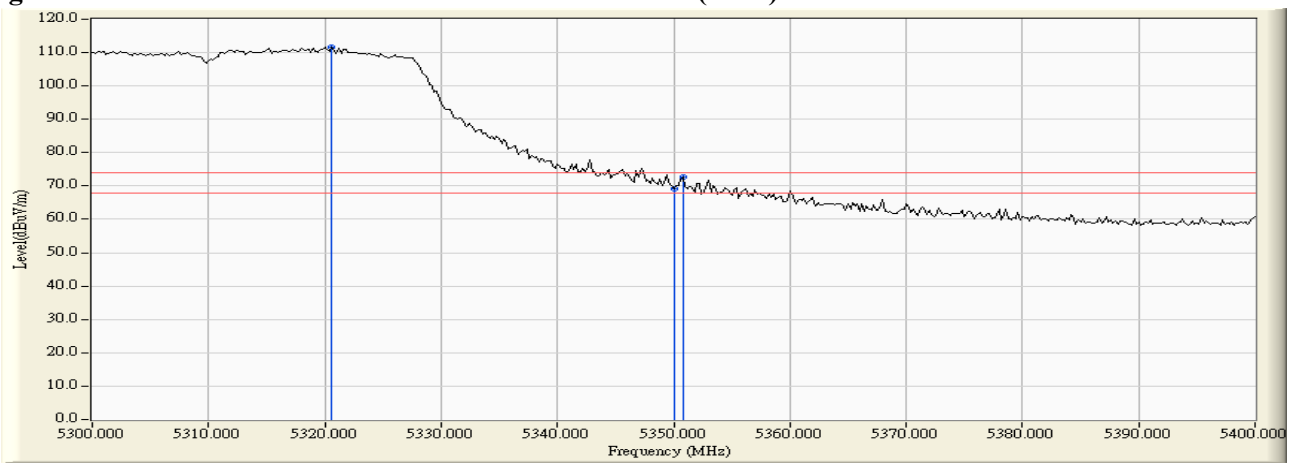
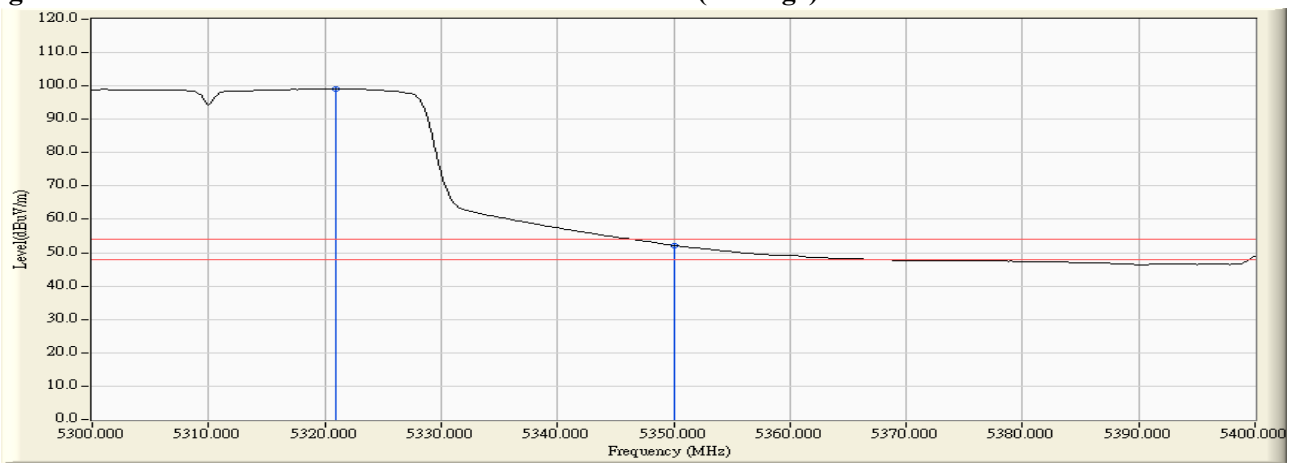


Figure Channel 62: Vertical (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
102 (Peak)	5458.000	3.737	52.520	56.256	74.00	54.00	Pass
102 (Peak)	5460.000	3.775	51.610	55.385	74.00	54.00	Pass
102 (Peak)	5498.000	4.451	98.800	103.252	--	--	--
102 (Average)	5460.000	3.775	40.640	44.415	74.00	54.00	Pass
102 (Average)	5500.800	4.490	86.983	91.472	--	--	--

Figure Channel 102: Horizontal (Peak)

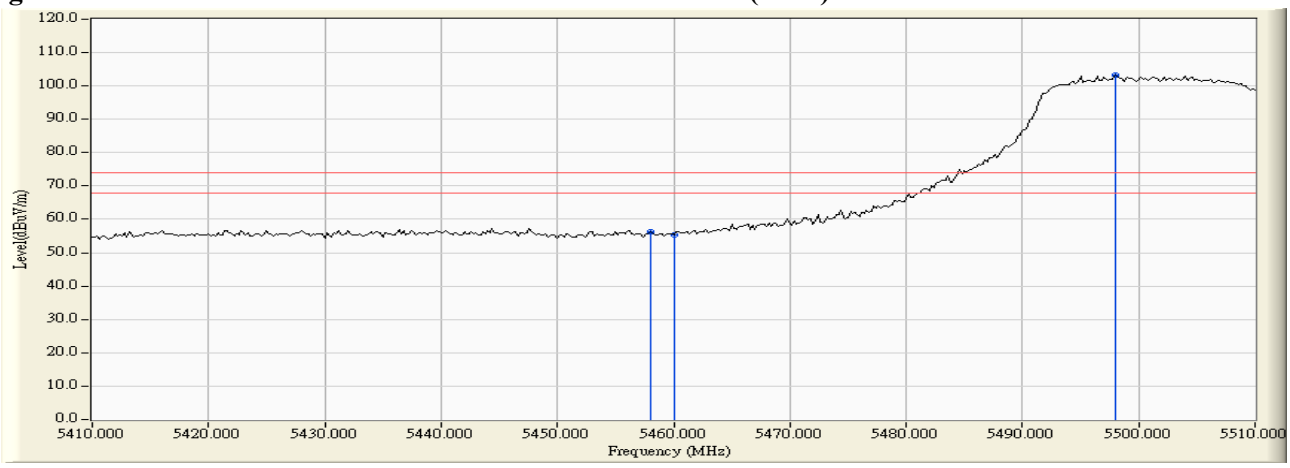
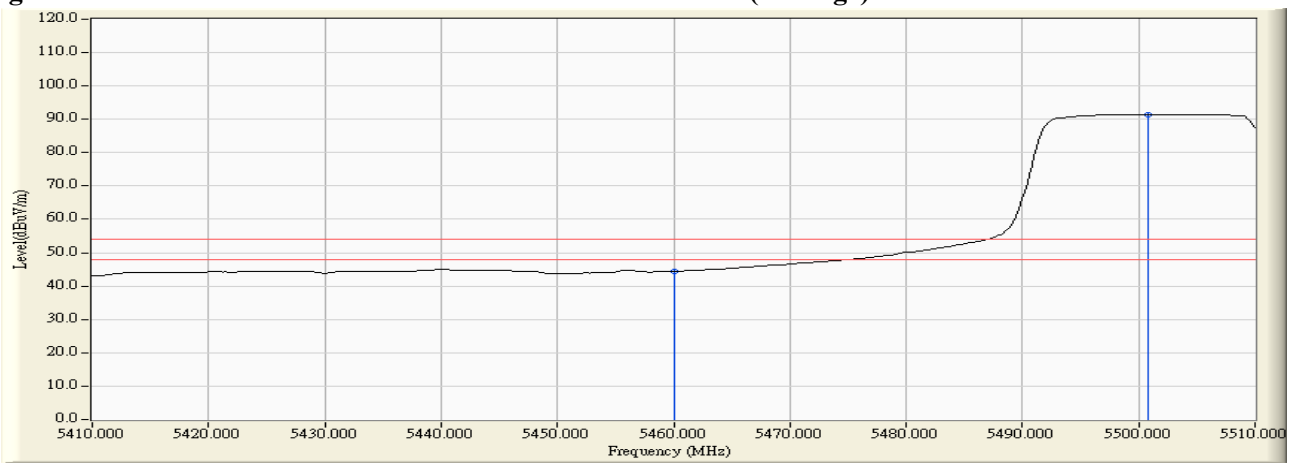


Figure Channel 102: Horizontal (Average)



Note:

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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
102 (Peak)	5457.800	3.903	56.656	60.559	74.00	54.00	Pass
102 (Peak)	5460.000	3.934	56.179	60.114	74.00	54.00	Pass
102 (Peak)	5498.200	4.441	104.581	109.022	--	--	--
102 (Average)	5455.800	3.875	44.147	48.022	74.00	54.00	Pass
102 (Average)	5460.000	3.934	42.937	46.872	74.00	54.00	Pass
102 (Average)	5498.600	4.445	92.254	96.699	--	--	--

Figure Channel 102: Vertical (Peak)

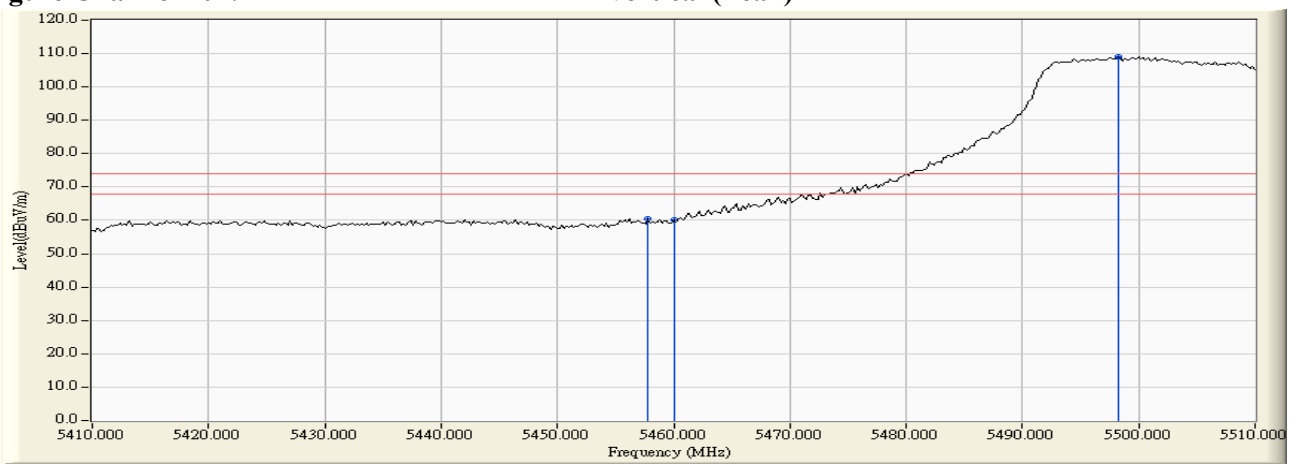
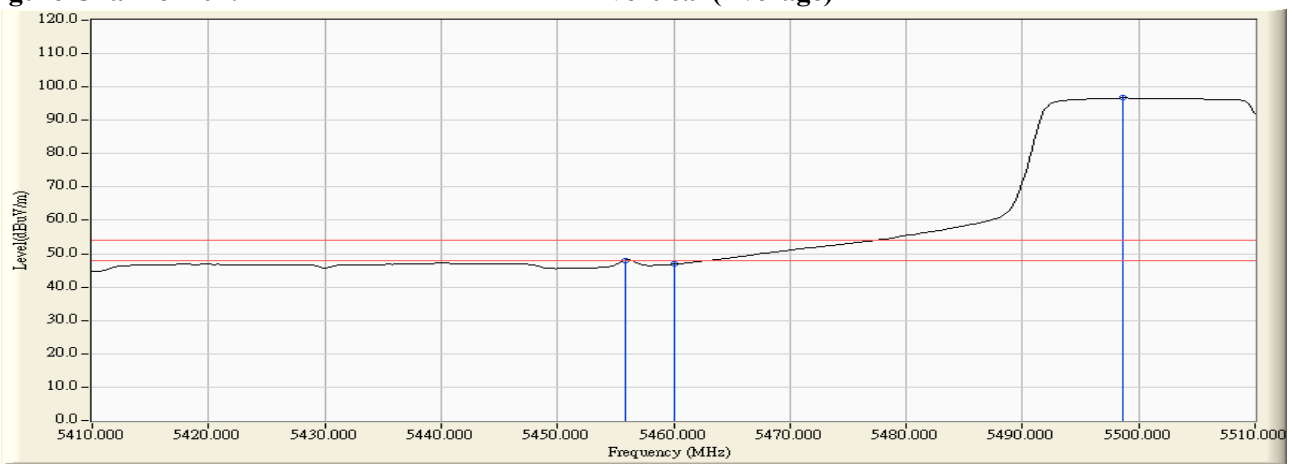


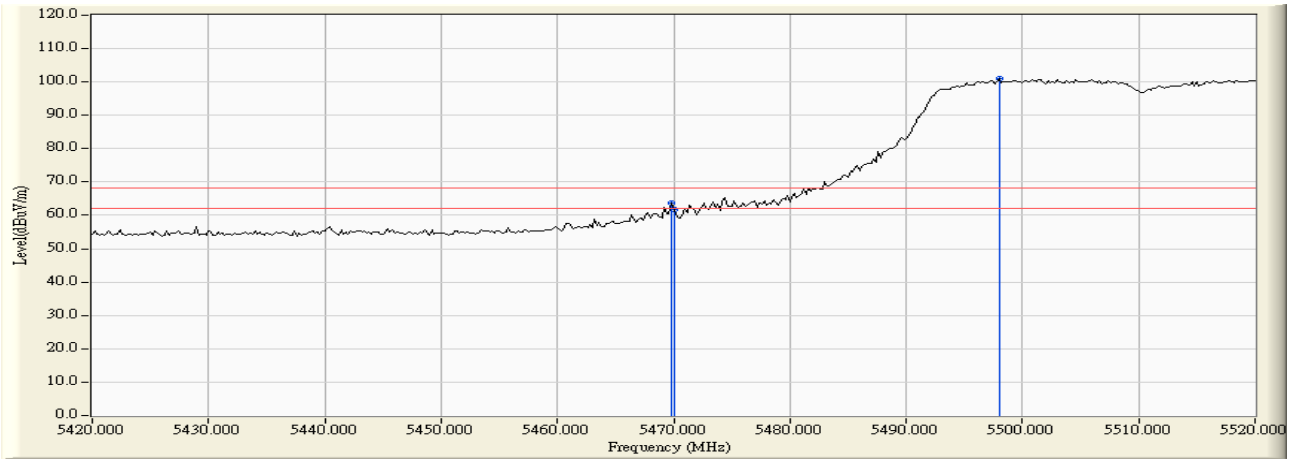
Figure Channel 102: Vertical (Average)



Note:

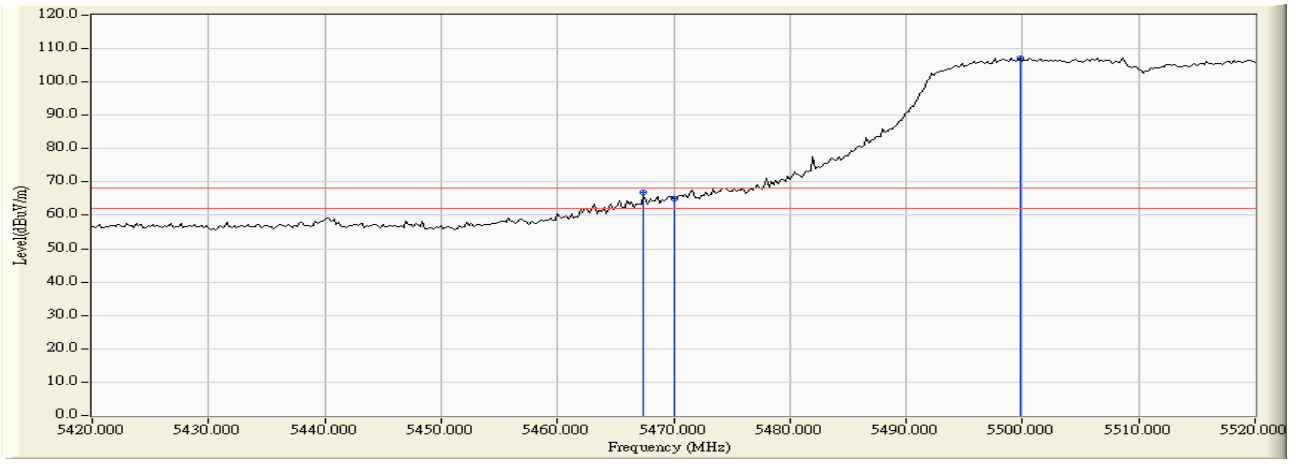
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading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

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102



RF Radiated Measurement:

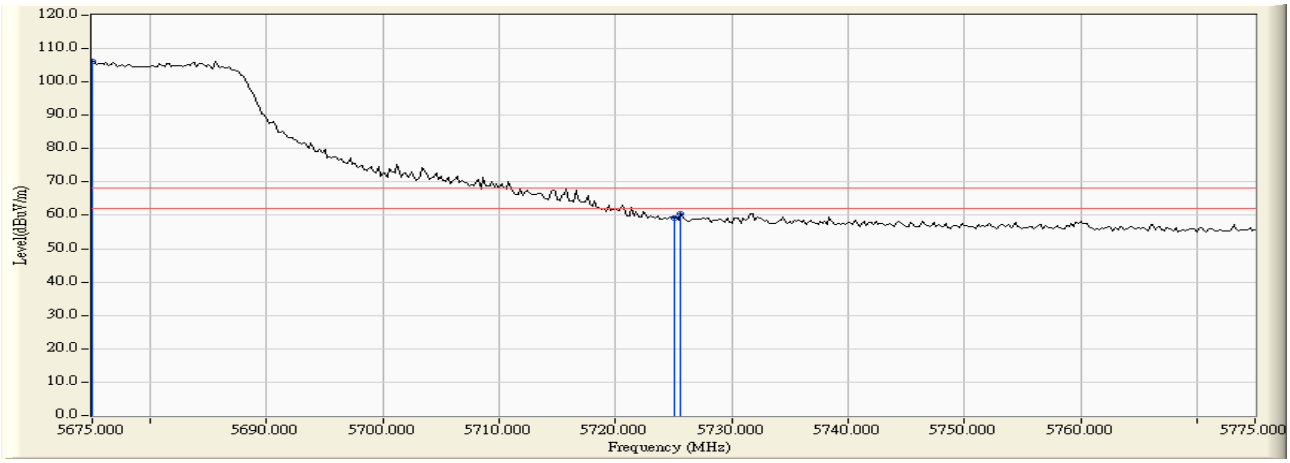
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBµV/m)	Result
Horizontal	5469.800	3.967	59.682	63.648	-4.572	68.220	Pass
Horizontal	5470.000	3.970	57.749	61.719	-6.501	68.220	Pass
Horizontal	5498.000	4.451	96.408	100.860	--	--	--



RF Radiated Measurement:

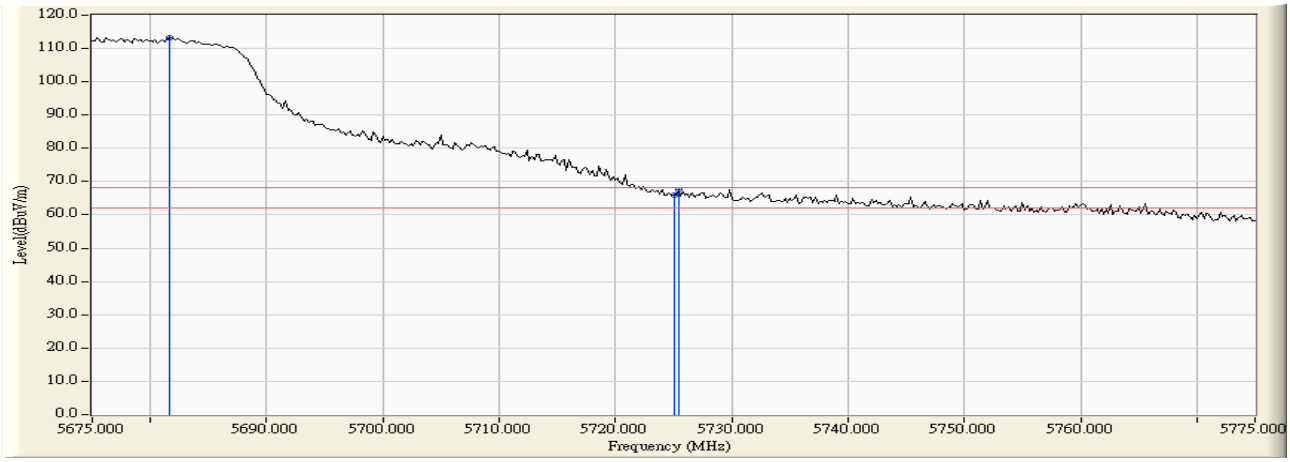
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Arerage Limit (dBµV/m)	Result
Vertical	5467.400	4.042	62.788	66.830	-1.390	68.220	Pass
Vertical	5470.000	4.079	61.038	65.117	-3.103	68.220	Pass
Vertical	5499.800	4.458	102.694	107.152	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 134



RF Radiated Measurement:

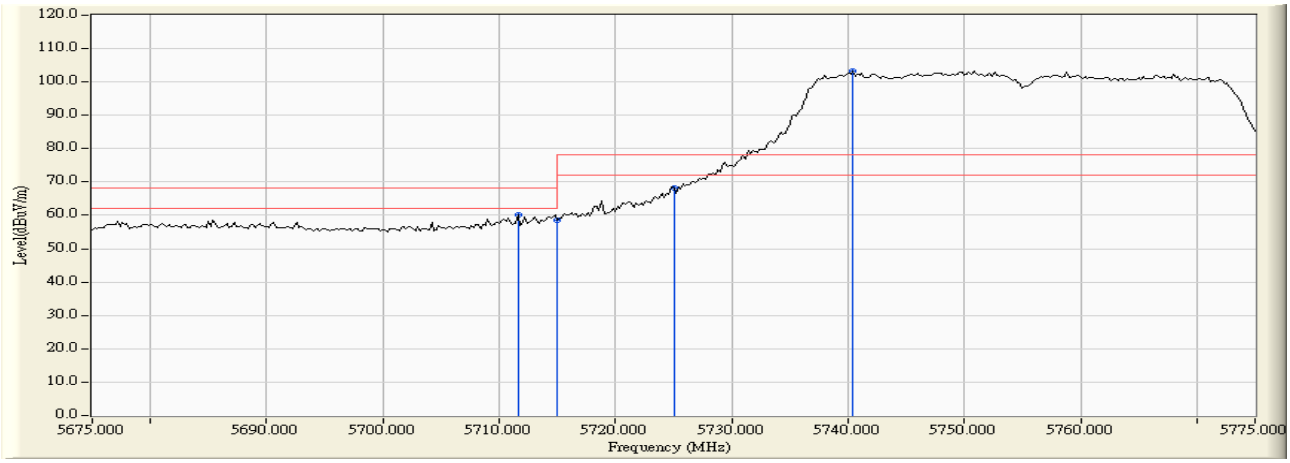
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5675.000	4.907	101.273	106.180	--	--	--
Horizontal	5725.000	5.104	54.163	59.266	-8.954	68.220	Pass
Horizontal	5725.600	5.106	55.380	60.486	-7.734	68.220	Pass



RF Radiated Measurement:

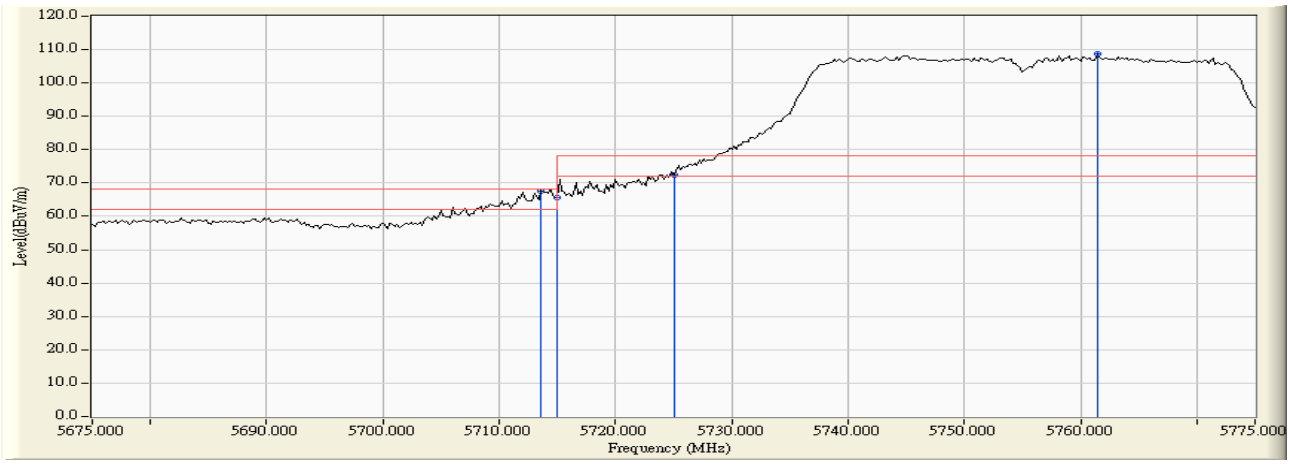
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5681.600	4.239	109.128	113.367	--	--	--
Vertical	5725.000	4.215	61.882	66.097	-2.123	68.220	Pass
Vertical	5725.400	4.216	63.197	67.413	-0.807	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 151



RF Radiated Measurement :

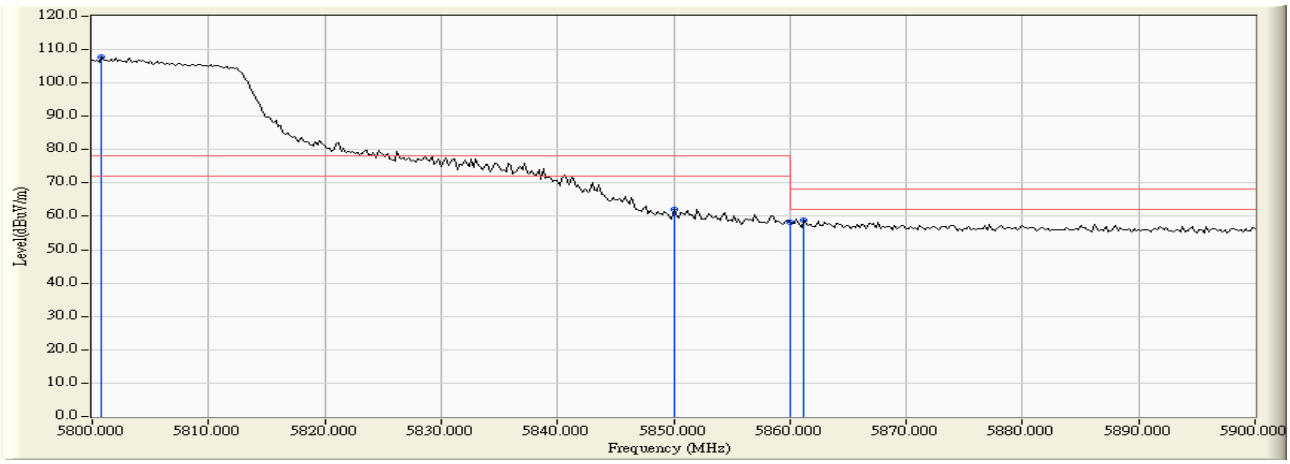
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5711.600	5.049	55.143	60.192	-8.028	68.220	Pass
Horizontal	5715.000	5.063	53.617	58.680	-9.540	68.220	Pass
Horizontal	5725.000	5.104	63.210	68.313	-9.907	78.220	Pass
Horizontal	5740.400	5.168	98.184	103.352	--	--	--



RF Radiated Measurement:

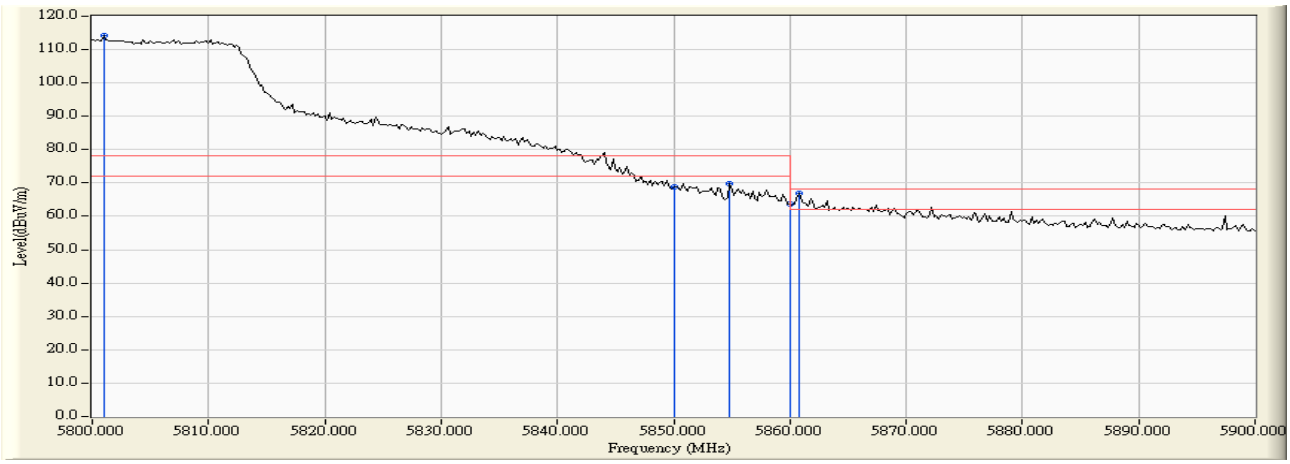
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5713.600	4.182	63.538	67.720	-0.500	68.220	Pass
Vertical	5715.000	4.186	61.554	65.740	-2.480	68.220	Pass
Vertical	5725.000	4.215	68.210	72.425	-5.795	78.220	Pass
Vertical	5761.400	4.314	104.278	108.593	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 159



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Horizontal	5800.800	5.391	102.242	107.632	--	--	--
Horizontal	5850.000	5.715	56.478	62.193	-16.027	78.220	Pass
Horizontal	5860.000	5.798	52.544	58.342	-9.878	68.220	Pass
Horizontal	5861.200	5.808	53.027	58.835	-9.385	68.220	Pass



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Arerage Limit (dBμV/m)	Result
Vertical	5801.000	4.369	109.833	114.202	--	--	--
Vertical	5850.000	4.194	64.733	68.927	-9.293	78.220	Pass
Vertical	5854.800	4.182	65.751	69.933	-8.287	78.220	Pass
Vertical	5860.000	4.168	59.629	63.797	-4.423	68.220	Pass
Vertical	5860.800	4.166	62.907	67.073	-1.147	68.220	Pass

7. Occupied Bandwidth

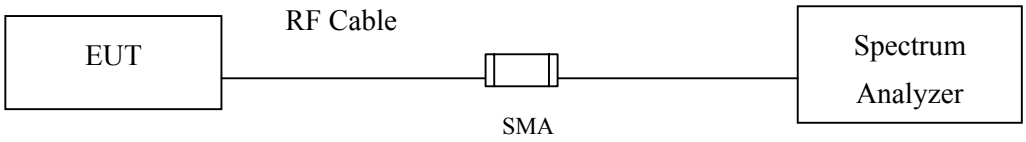
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

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.

7.2. Test Setup



7.3. Limits

For the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

7.4. .Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

7.5. Uncertainty

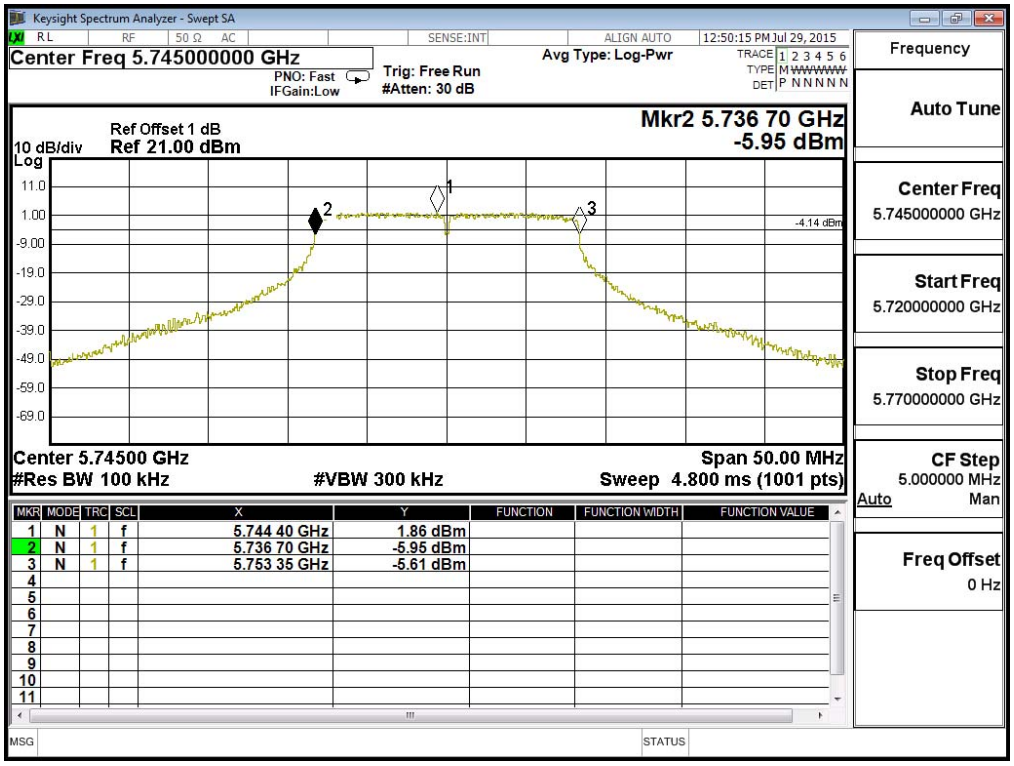
± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16650	>500	Pass

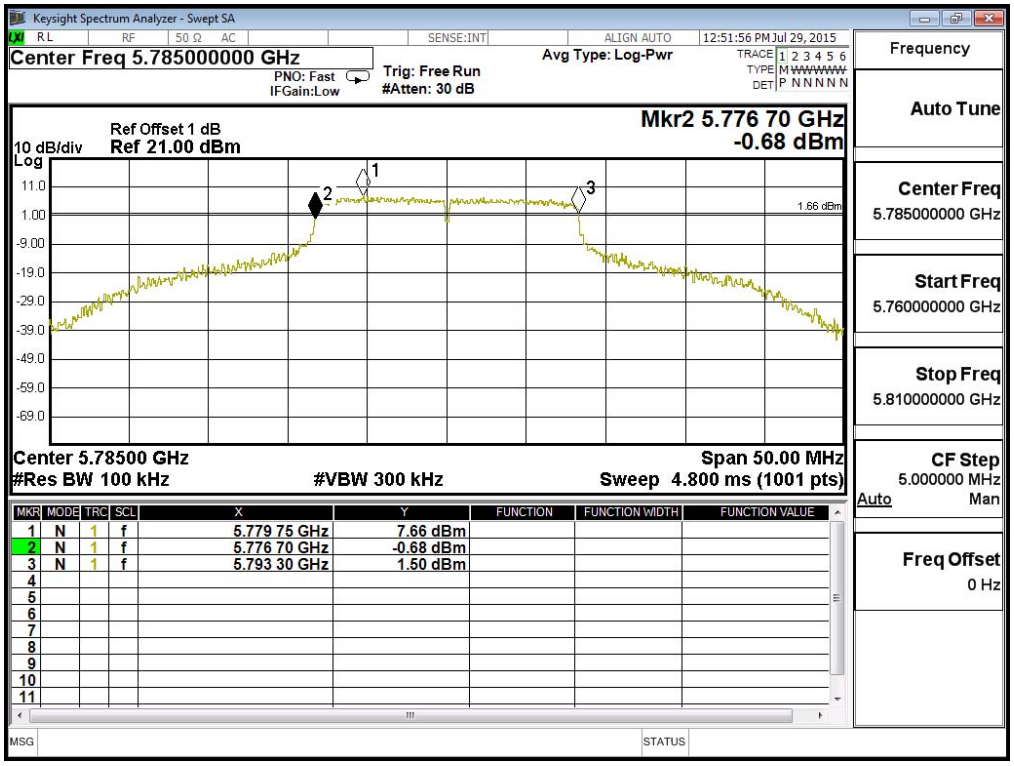
Figure Channel 149:



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16600	>500	Pass

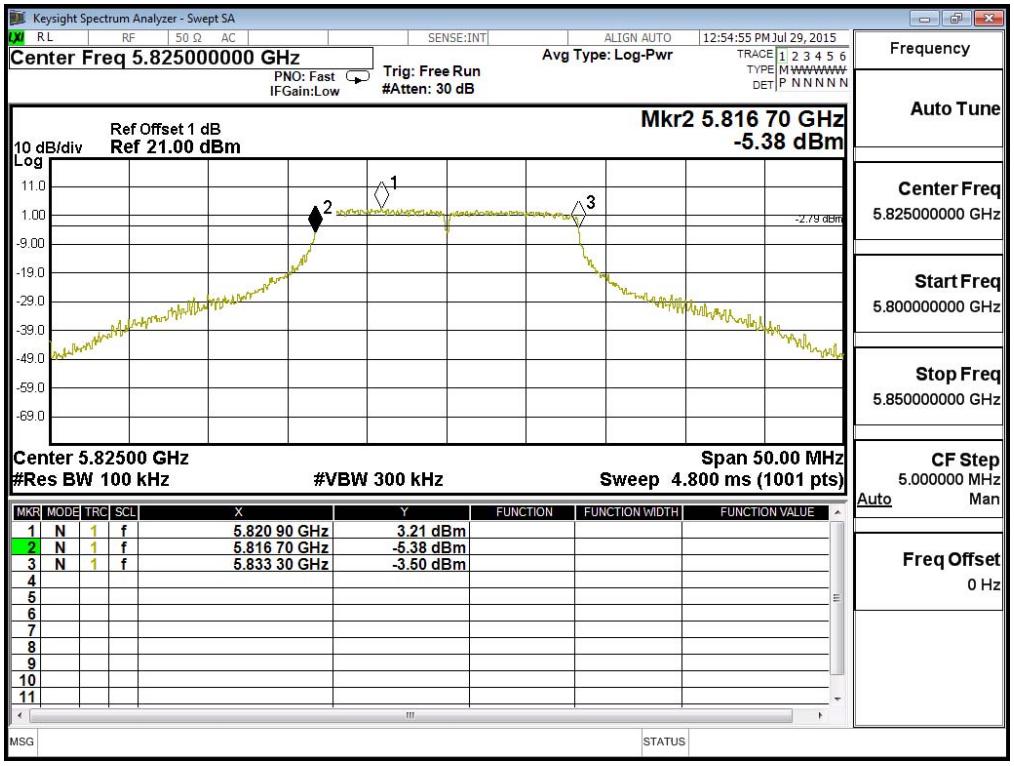
Figure Channel 157:



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16600	>500	Pass

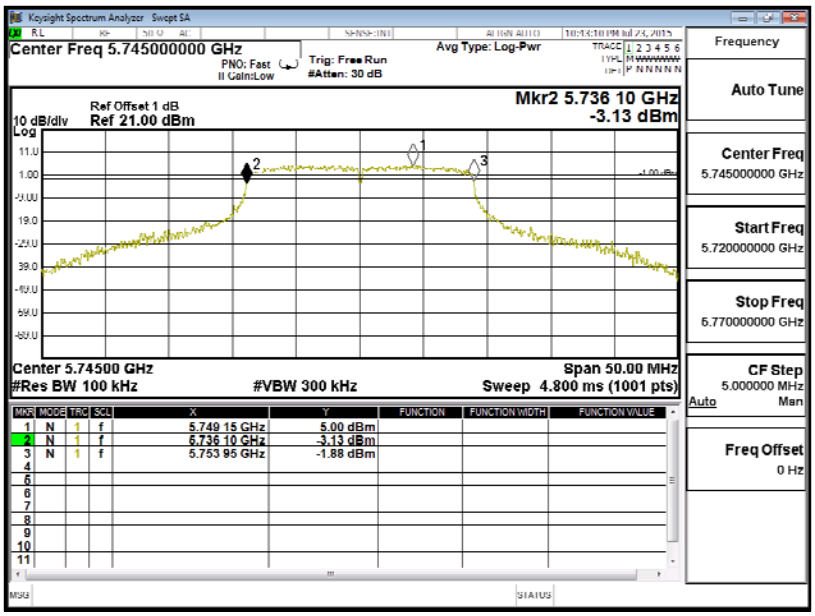
Figure Channel 165:



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5745MHz)

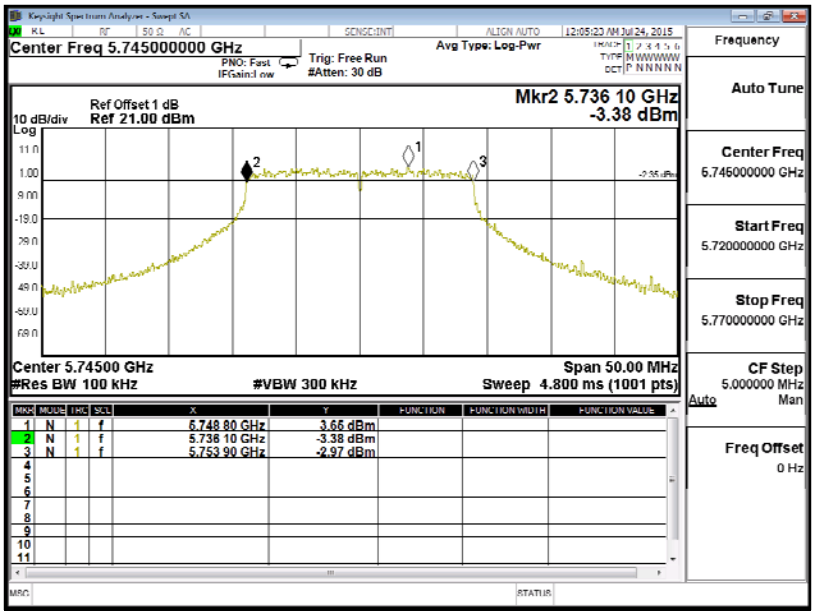
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17850	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17800	>500	Pass

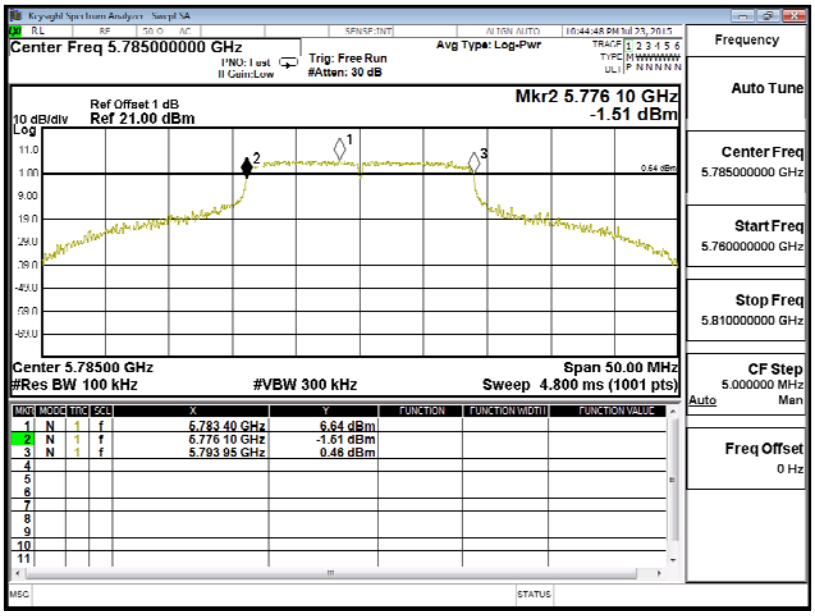
Figure Channel 149: (Chain B)



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

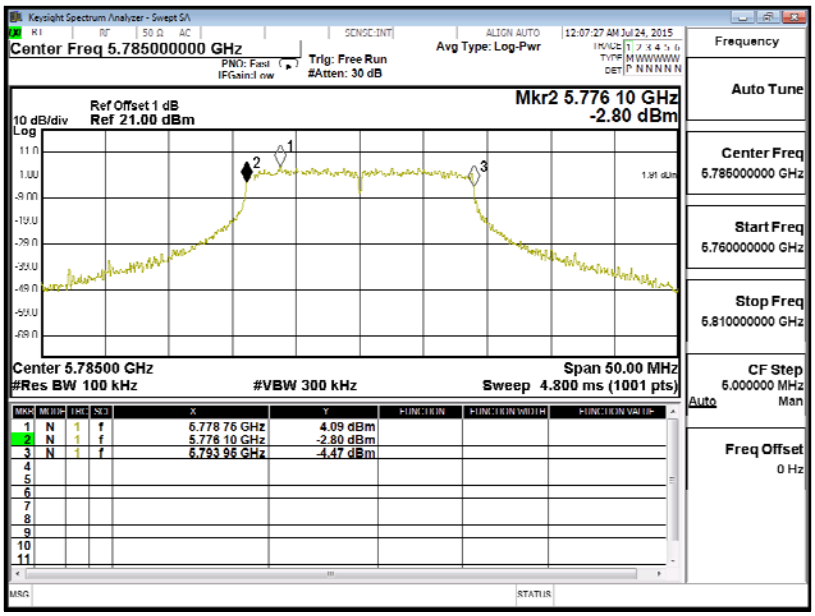
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17850	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17850	>500	Pass

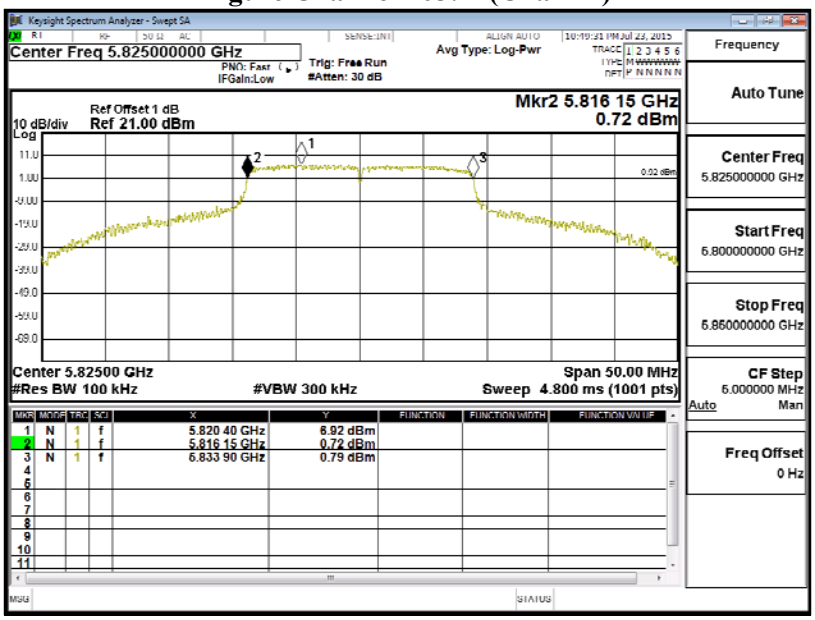
Figure Channel 157: (Chain B)



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5825MHz)

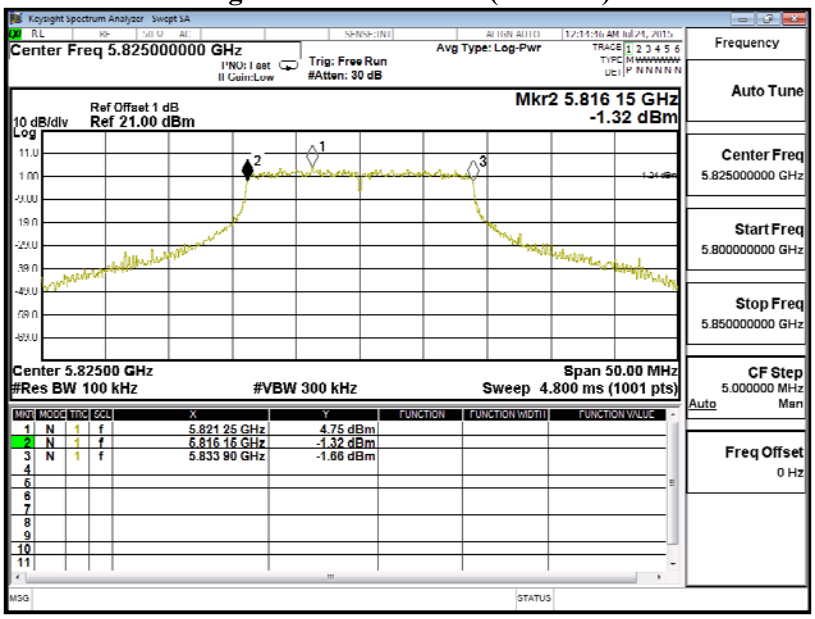
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17750	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17750	>500	Pass

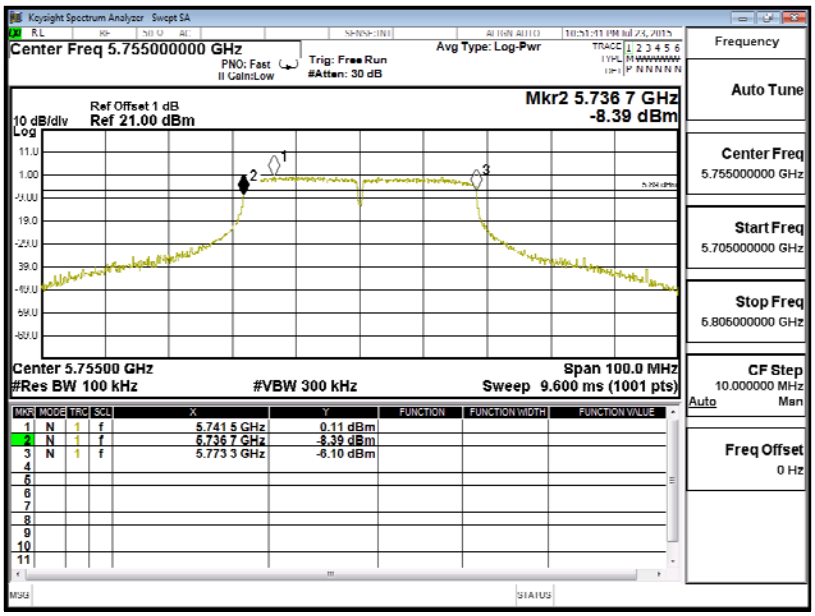
Figure Channel 165: (Chain B)



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

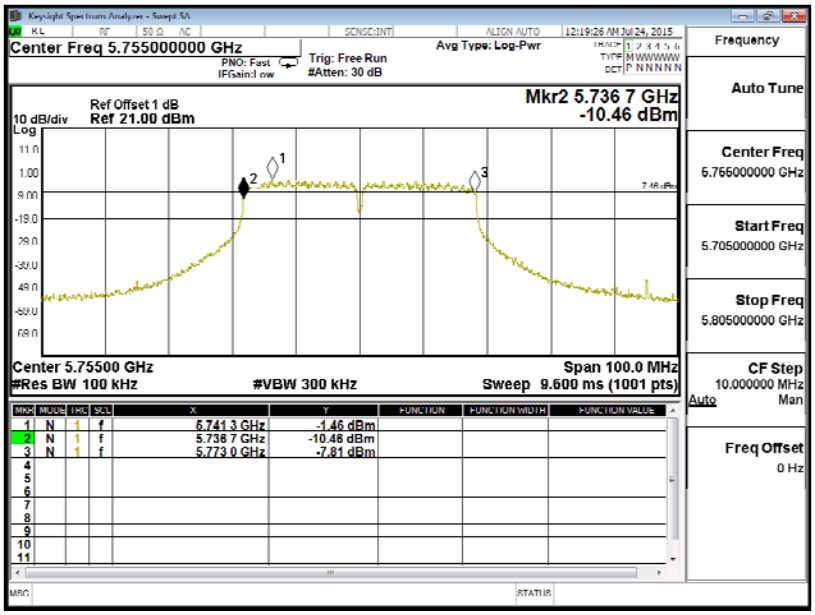
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36600	>500	Pass

Figure Channel 151: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36300	>500	Pass

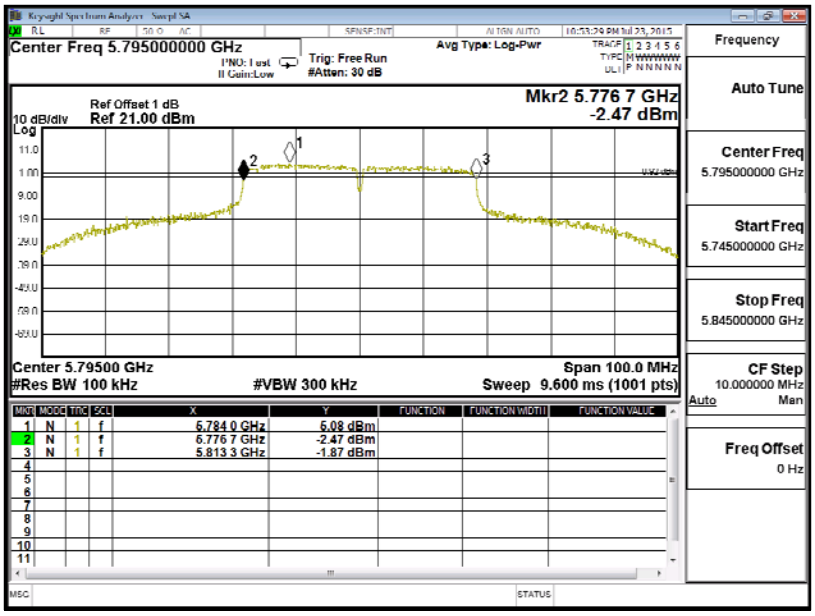
Figure Channel 151: (Chain B)



Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5795MHz)

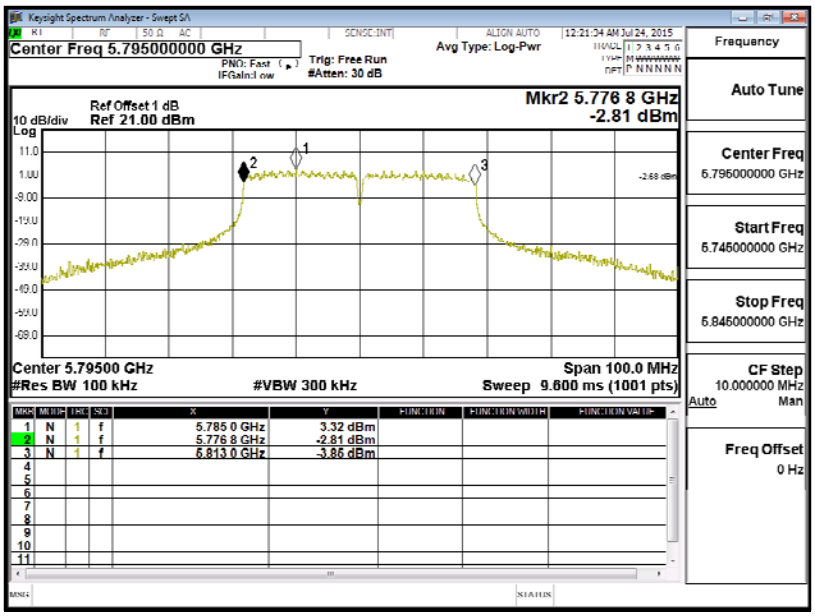
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36600	>500	Pass

Figure Channel 159: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36200	>500	Pass

Figure Channel 159: (Chain B)



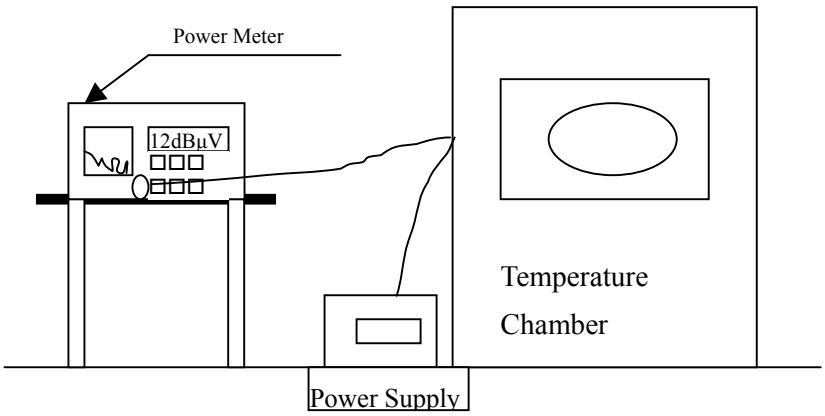
8. Frequency Stability

8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

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.

8.2. Test Setup



8.3. Limits

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified

8.4. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

8.5. Uncertainty

± 150 Hz

8.6. Test Result of Frequency Stability

Product : MOXA IEEE 802.11 a/b/g/n
Test Item : Frequency Stability
Test Site : Temperature Chamber
Test Mode : Carrier Wave

Chain A

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tnom (20) oC	Vnom (120)V	36	5180.0000	5180.0016	-0.0016
		38	5190.0000	5190.0012	-0.0012
		44	5220.0000	5220.0016	-0.0016
		46	5230.0000	5230.0018	-0.0018
		48	5240.0000	5240.0011	-0.0011
		52	5260.0000	5260.0020	-0.0020
		54	5270.0000	5270.0012	-0.0012
		60	5300.0000	5300.0018	-0.0018
		62	5310.0000	5310.0011	-0.0011
		64	5320.0000	5320.0010	-0.0010
		100	5500.0000	5500.0015	-0.0015
		102	5510.0000	5510.0015	-0.0015
		110	5550.0000	5550.0014	-0.0014
		116	5580.0000	5580.0010	-0.0010
		134	5670.0000	5670.0014	-0.0014
		140	5700.0000	5700.0016	-0.0016
		149	5745.0000	5745.0012	-0.0012
		151	5755.0000	5755.0012	-0.0012
		157	5785.0000	5785.0014	-0.0014
		159	5795.0000	5795.0019	-0.0019
		165	5825.0000	5825.0011	-0.0011

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (50) oC	Vmax (138)V	36	5180.0000	5180.0013	-0.0013
		38	5190.0000	5190.0020	-0.0020
		44	5220.0000	5220.0012	-0.0012
		46	5230.0000	5230.0015	-0.0015
		48	5240.0000	5240.0017	-0.0017
		52	5260.0000	5260.0011	-0.0011
		54	5270.0000	5270.0018	-0.0018
		60	5300.0000	5300.0020	-0.0020
		62	5310.0000	5310.0011	-0.0011
		64	5320.0000	5320.0014	-0.0014
		100	5500.0000	5500.0017	-0.0017
		102	5510.0000	5510.0015	-0.0015
		110	5550.0000	5550.0017	-0.0017
		116	5580.0000	5580.0010	-0.0010
		134	5670.0000	5670.0013	-0.0013
		140	5700.0000	5700.0018	-0.0018
		149	5745.0000	5745.0011	-0.0011
		151	5755.0000	5755.0020	-0.0020
		157	5785.0000	5785.0018	-0.0018
		159	5795.0000	5795.0013	-0.0013
		165	5825.0000	5825.0020	-0.0020

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (50) °C	Vmin (102)V	36	5180.0000	5180.0014	-0.0014
		38	5190.0000	5190.0011	-0.0011
		44	5220.0000	5220.0019	-0.0019
		46	5230.0000	5230.0012	-0.0012
		48	5240.0000	5240.0014	-0.0014
		52	5260.0000	5260.0015	-0.0015
		54	5270.0000	5270.0016	-0.0016
		60	5300.0000	5300.0010	-0.0010
		62	5310.0000	5310.0019	-0.0019
		64	5320.0000	5320.0016	-0.0016
		100	5500.0000	5500.0014	-0.0014
		102	5510.0000	5510.0015	-0.0015
		110	5550.0000	5550.0017	-0.0017
		116	5580.0000	5580.0016	-0.0016
		134	5670.0000	5670.0013	-0.0013
		140	5700.0000	5700.0018	-0.0018
		149	5745.0000	5745.0019	-0.0019
		151	5755.0000	5755.0012	-0.0012
		157	5785.0000	5785.0013	-0.0013
		159	5795.0000	5795.0020	-0.0020
		165	5825.0000	5825.0013	-0.0013

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tnom (-10) oC	Vnom (138)V	36	5180.0000	5180.0018	-0.0018
		38	5190.0000	5190.0013	-0.0013
		44	5220.0000	5220.0020	-0.0020
		46	5230.0000	5230.0012	-0.0012
		48	5240.0000	5240.0012	-0.0012
		52	5260.0000	5260.0012	-0.0012
		54	5270.0000	5270.0014	-0.0014
		60	5300.0000	5300.0012	-0.0012
		62	5310.0000	5310.0018	-0.0018
		64	5320.0000	5320.0013	-0.0013
		100	5500.0000	5500.0015	-0.0015
		102	5510.0000	5510.0011	-0.0011
		110	5550.0000	5550.0011	-0.0011
		116	5580.0000	5580.0013	-0.0013
		134	5670.0000	5670.0015	-0.0015
		140	5700.0000	5700.0020	-0.0020
		149	5745.0000	5745.0015	-0.0015
		151	5755.0000	5755.0017	-0.0017
		157	5785.0000	5785.0015	-0.0015
		159	5795.0000	5795.0015	-0.0015
		165	5825.0000	5825.0010	-0.0010

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (-10) oC	Vmax (102)V	36	5180.0000	5180.0018	-0.0018
		38	5190.0000	5190.0013	-0.0013
		44	5220.0000	5220.0020	-0.0020
		46	5230.0000	5230.0012	-0.0012
		48	5240.0000	5240.0012	-0.0012
		52	5260.0000	5260.0012	-0.0012
		54	5270.0000	5270.0014	-0.0014
		60	5300.0000	5300.0012	-0.0012
		62	5310.0000	5310.0018	-0.0018
		64	5320.0000	5320.0013	-0.0013
		100	5500.0000	5500.0015	-0.0015
		102	5510.0000	5510.0011	-0.0011
		110	5550.0000	5550.0011	-0.0011
		116	5580.0000	5580.0013	-0.0013
		134	5670.0000	5670.0015	-0.0015
		140	5700.0000	5700.0020	-0.0020
		149	5745.0000	5745.0015	-0.0015
		151	5755.0000	5755.0017	-0.0017
		157	5785.0000	5785.0015	-0.0015
		159	5795.0000	5795.0015	-0.0015
		165	5825.0000	5825.0010	-0.0010

Chain B

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tnom (20) oC	Vnom (120)V	36	5180.0000	5180.0019	-0.0019
		38	5190.0000	5190.0017	-0.0017
		44	5220.0000	5220.0020	-0.0020
		46	5230.0000	5230.0017	-0.0017
		48	5240.0000	5240.0012	-0.0012
		52	5260.0000	5260.0011	-0.0011
		54	5270.0000	5270.0011	-0.0011
		60	5300.0000	5300.0018	-0.0018
		62	5310.0000	5310.0019	-0.0019
		64	5320.0000	5320.0019	-0.0019
		100	5500.0000	5500.0010	-0.0010
		102	5510.0000	5510.0018	-0.0018
		110	5550.0000	5550.0020	-0.0020
		116	5580.0000	5580.0010	-0.0010
		134	5670.0000	5670.0018	-0.0018
		140	5700.0000	5700.0015	-0.0015
		149	5745.0000	5745.0019	-0.0019
		151	5755.0000	5755.0014	-0.0014
		157	5785.0000	5785.0015	-0.0015
		159	5795.0000	5795.0012	-0.0012
		165	5825.0000	5825.0014	-0.0014

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (50) oC	Vmax (138)V	36	5180.0000	5180.0018	-0.0018
		38	5190.0000	5190.0014	-0.0014
		44	5220.0000	5220.0020	-0.0020
		46	5230.0000	5230.0014	-0.0014
		48	5240.0000	5240.0014	-0.0014
		52	5260.0000	5260.0016	-0.0016
		54	5270.0000	5270.0015	-0.0015
		60	5300.0000	5300.0011	-0.0011
		62	5310.0000	5310.0013	-0.0013
		64	5320.0000	5320.0015	-0.0015
		100	5500.0000	5500.0017	-0.0017
		102	5510.0000	5510.0019	-0.0019
		110	5550.0000	5550.0016	-0.0016
		116	5580.0000	5580.0015	-0.0015
		134	5670.0000	5670.0017	-0.0017
		140	5700.0000	5700.0019	-0.0019
		149	5745.0000	5745.0018	-0.0018
		151	5755.0000	5755.0011	-0.0011
		157	5785.0000	5785.0016	-0.0016
		159	5795.0000	5795.0014	-0.0014
		165	5825.0000	5825.0011	-0.0011

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (50) °C	Vmin (102)V	36	5180.0000	5180.0012	-0.0012
		38	5190.0000	5190.0018	-0.0018
		44	5220.0000	5220.0014	-0.0014
		46	5230.0000	5230.0015	-0.0015
		48	5240.0000	5240.0019	-0.0019
		52	5260.0000	5260.0020	-0.0020
		54	5270.0000	5270.0013	-0.0013
		60	5300.0000	5300.0018	-0.0018
		62	5310.0000	5310.0018	-0.0018
		64	5320.0000	5320.0015	-0.0015
		100	5500.0000	5500.0012	-0.0012
		102	5510.0000	5510.0011	-0.0011
		110	5550.0000	5550.0018	-0.0018
		116	5580.0000	5580.0018	-0.0018
		134	5670.0000	5670.0015	-0.0015
		140	5700.0000	5700.0015	-0.0015
		149	5745.0000	5745.0018	-0.0018
		151	5755.0000	5755.0012	-0.0012
		157	5785.0000	5785.0018	-0.0018
		159	5795.0000	5795.0020	-0.0020
		165	5825.0000	5825.0010	-0.0010

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tnom (-10) oC	Vnom (138)V	36	5180.0000	5180.0017	-0.0017
		38	5190.0000	5190.0016	-0.0016
		44	5220.0000	5220.0018	-0.0018
		46	5230.0000	5230.0016	-0.0016
		48	5240.0000	5240.0016	-0.0016
		52	5260.0000	5260.0011	-0.0011
		54	5270.0000	5270.0018	-0.0018
		60	5300.0000	5300.0012	-0.0012
		62	5310.0000	5310.0013	-0.0013
		64	5320.0000	5320.0011	-0.0011
		100	5500.0000	5500.0016	-0.0016
		102	5510.0000	5510.0010	-0.0010
		110	5550.0000	5550.0019	-0.0019
		116	5580.0000	5580.0018	-0.0018
		134	5670.0000	5670.0014	-0.0014
		140	5700.0000	5700.0014	-0.0014
		149	5745.0000	5745.0013	-0.0013
		151	5755.0000	5755.0018	-0.0018
		157	5785.0000	5785.0017	-0.0017
		159	5795.0000	5795.0019	-0.0019
		165	5825.0000	5825.0011	-0.0011

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	△F (MHz)
Tmax (-10) oC	Vmax (102)V	36	5180.0000	5180.0015	-0.0015
		38	5190.0000	5190.0017	-0.0017
		44	5220.0000	5220.0020	-0.0020
		46	5230.0000	5230.0016	-0.0016
		48	5240.0000	5240.0016	-0.0016
		52	5260.0000	5260.0012	-0.0012
		54	5270.0000	5270.0011	-0.0011
		60	5300.0000	5300.0012	-0.0012
		62	5310.0000	5310.0015	-0.0015
		64	5320.0000	5320.0012	-0.0012
		100	5500.0000	5500.0013	-0.0013
		102	5510.0000	5510.0010	-0.0010
		110	5550.0000	5550.0011	-0.0011
		116	5580.0000	5580.0016	-0.0016
		134	5670.0000	5670.0019	-0.0019
		140	5700.0000	5700.0018	-0.0018
		149	5745.0000	5745.0012	-0.0012
		151	5755.0000	5755.0010	-0.0010
		157	5785.0000	5785.0018	-0.0018
		159	5795.0000	5795.0017	-0.0017
		165	5825.0000	5825.0012	-0.0012

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.