

7. Radiated Emission

7.1. Test Equipment

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

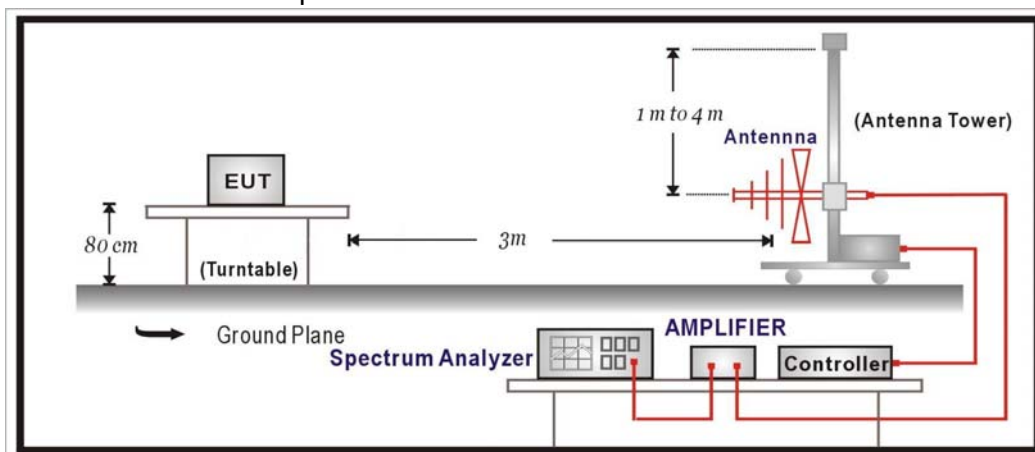
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2013/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120D	743	2013/02/02
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2012/12/05
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2013/03/01
Spectrum Analyzer	Agilent	E4440A	MY46187335	2013/02/07
Coaxial Cable	Huber+Suhner AG	Sucoflex 102	25623/2	2013/03/04

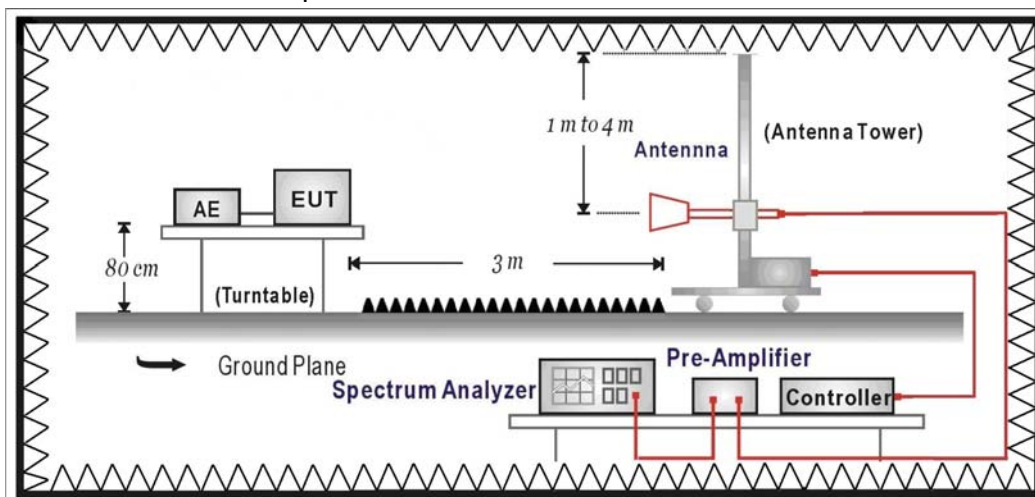
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



7.3. Limits

➤ General Radiated Emission Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

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

Remark:

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

➤ Unwanted Emission out of the restricted bands Limits

FCC Part 15 Subpart C Paragraph 15.407(b) Limits		
Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (dBuV/m@3m)
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27 (Note1)	68.3
	-17 (Note2)	78.3

Remark:

1. For frequencies more than 10 MHz above or below the band edges.
2. For frequency range from the band edges to 10 MHz above or below the band edges.
3.
$$uV/m = \frac{1000000\sqrt{30 \times EIRP}}{3}$$
, RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)

7.4. Test Procedure

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

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

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 KHz, above 1GHz are 1 MHz.

The frequency range from 30MHz to 10th harmonics is checked.

7.5. Uncertainty

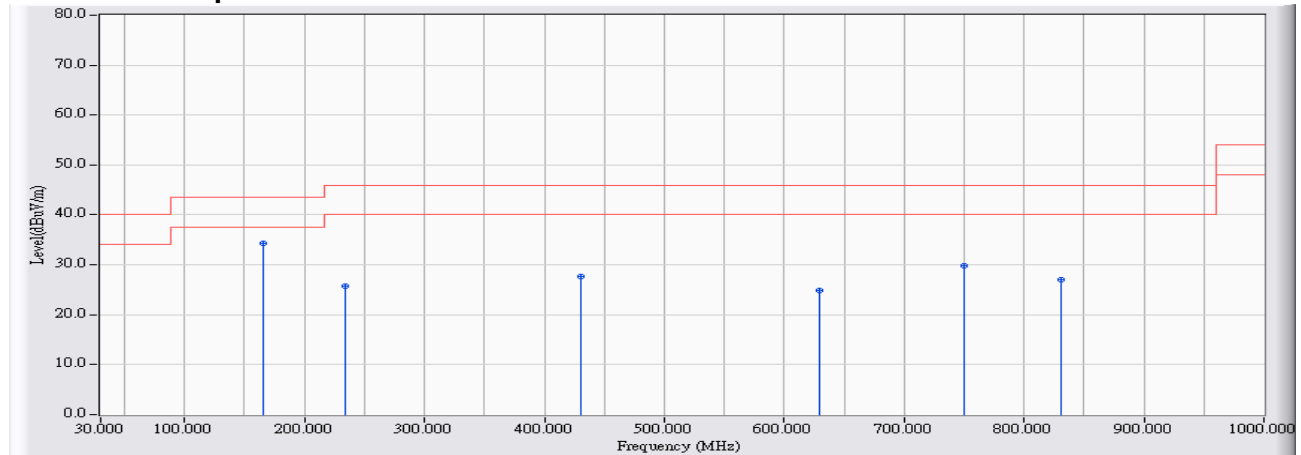
The measurement uncertainty

30MHz~1GHz as $\pm 3.43\text{dB}$

1GHz~26.5Ghz as $\pm 3.65\text{dB}$

7.6. Test Result

30MHz-1GHz Spurious

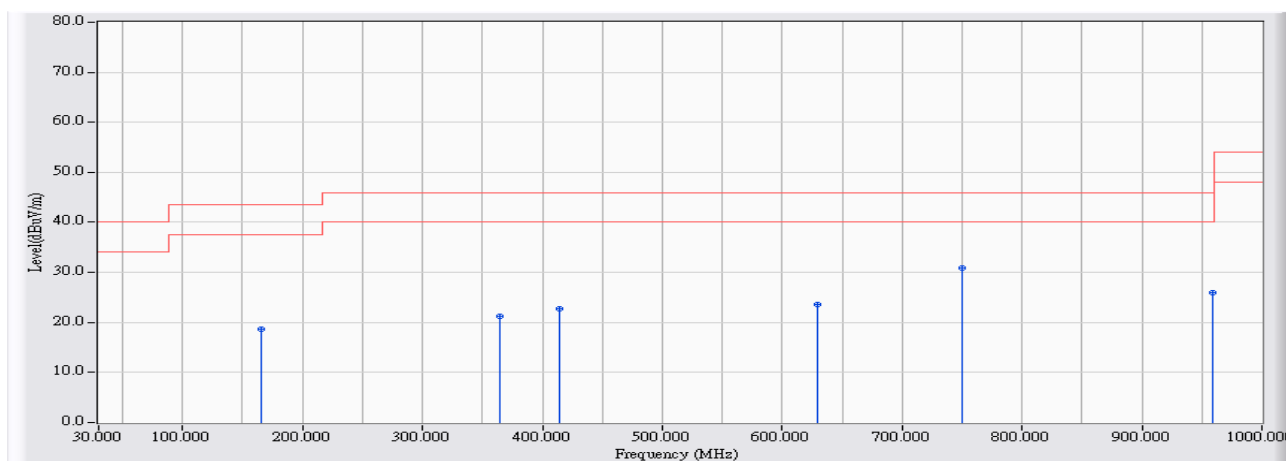


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	165.800	-14.160	48.409	34.249	-9.251	43.500	QUASIPeAK
2		233.700	-12.256	38.026	25.770	-20.230	46.000	QUASIPeAK
3		430.933	-6.728	34.457	27.728	-18.272	46.000	QUASIPeAK
4		629.783	-4.183	29.030	24.847	-21.153	46.000	QUASIPeAK
5		749.417	-3.297	33.125	29.829	-16.171	46.000	QUASIPeAK
6		830.250	-2.453	29.452	27.000	-19.000	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/10/13 - 15:08
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz,802.11a

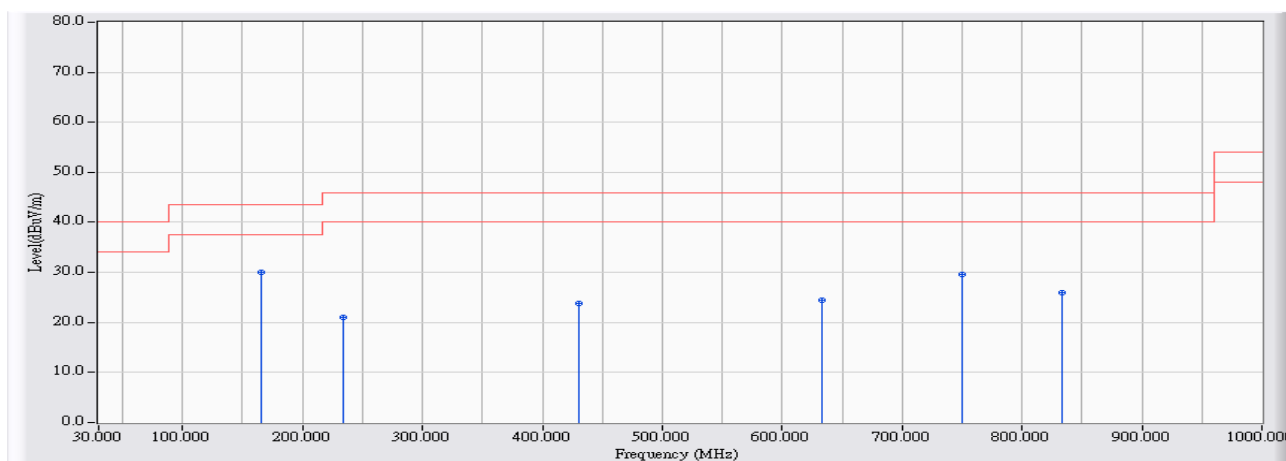


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		165.800	-14.160	32.829	18.669	-24.831	43.500	QUASIPeAK
2		364.650	-8.391	29.529	21.138	-24.862	46.000	QUASIPeAK
3		414.767	-7.064	29.816	22.752	-23.248	46.000	QUASIPeAK
4		629.783	-4.183	27.715	23.532	-22.468	46.000	QUASIPeAK
5	*	749.417	-3.297	34.104	30.808	-15.192	46.000	QUASIPeAK
6		959.583	-1.348	27.335	25.987	-20.013	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/10/13 - 15:08
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz,802.11n(20M)

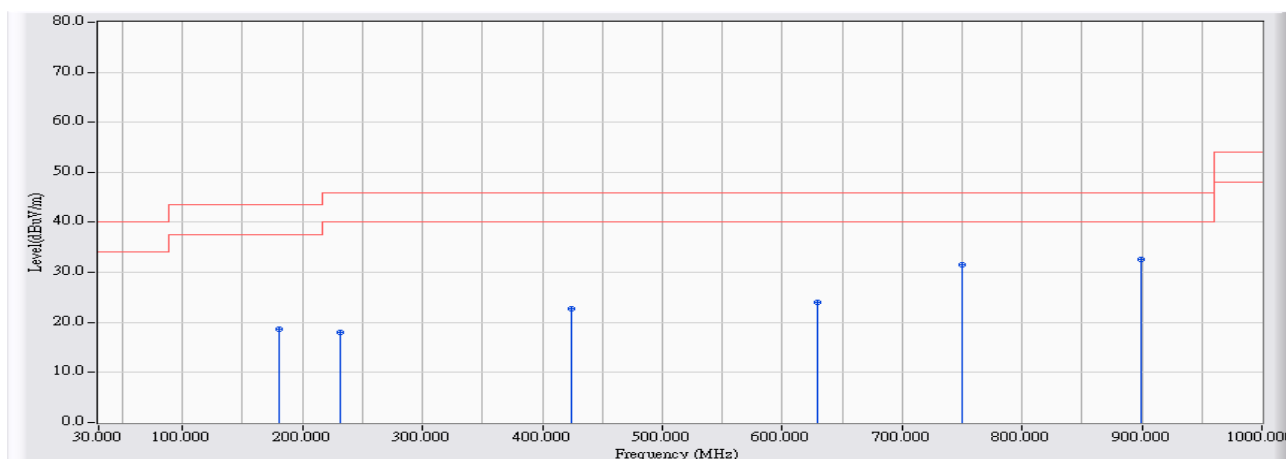


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	165.800	-14.160	44.282	30.122	-13.378	43.500	QUASIPeAK
2		233.700	-12.256	33.325	21.069	-24.931	46.000	QUASIPeAK
3		430.933	-6.728	30.448	23.719	-22.281	46.000	QUASIPeAK
4		633.017	-4.167	28.624	24.457	-21.543	46.000	QUASIPeAK
5		749.417	-3.297	32.827	29.531	-16.469	46.000	QUASIPeAK
6		833.483	-2.431	28.372	25.941	-20.059	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/10/13 - 15:09
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz,802.11n(20M)

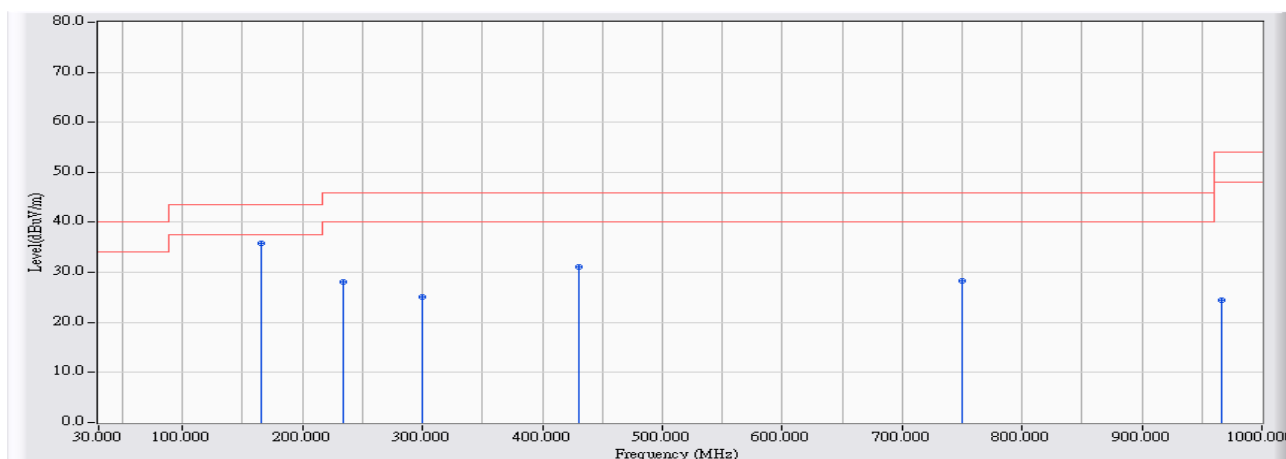


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		180.350	-14.715	33.445	18.730	-24.770	43.500	QUASIPeAK
2		232.083	-12.374	30.391	18.017	-27.983	46.000	QUASIPeAK
3		424.467	-6.863	29.521	22.658	-23.342	46.000	QUASIPeAK
4		629.783	-4.183	28.218	24.035	-21.965	46.000	QUASIPeAK
5		749.417	-3.297	34.801	31.505	-14.495	46.000	QUASIPeAK
6	*	899.767	-2.011	34.626	32.615	-13.385	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/10/13 - 15:09
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz,802.11n(40M)

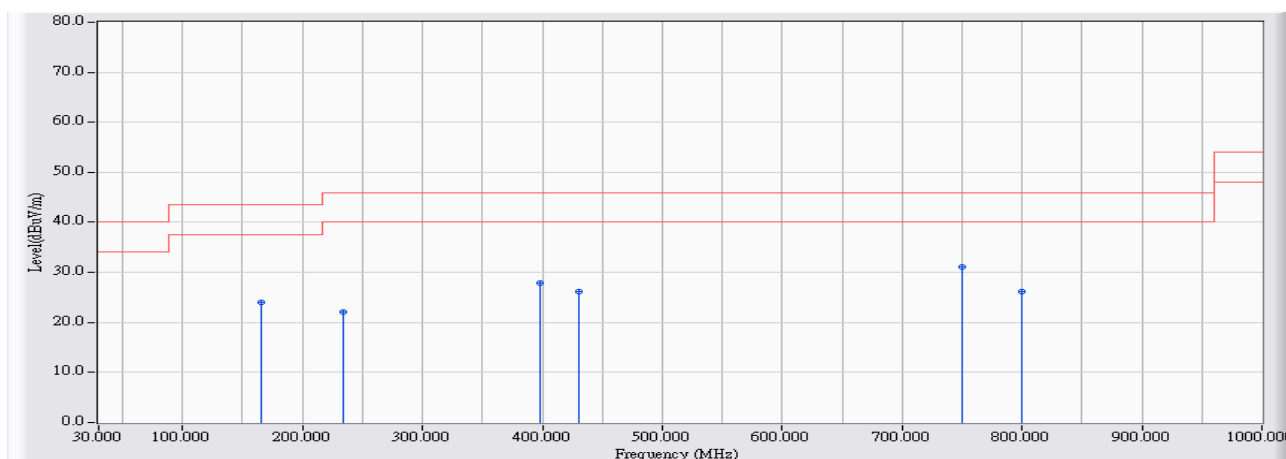


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	165.800	-14.160	50.027	35.867	-7.633	43.500	QUASIPeAK
2		233.700	-12.256	40.426	28.170	-17.830	46.000	QUASIPeAK
3		299.983	-10.270	35.288	25.018	-20.982	46.000	QUASIPeAK
4		430.933	-6.728	37.919	31.190	-14.810	46.000	QUASIPeAK
5		749.417	-3.297	31.569	28.273	-17.727	46.000	QUASIPeAK
6		966.050	-1.281	25.798	24.517	-29.483	54.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/10/13 - 15:09
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz,802.11n(40M)

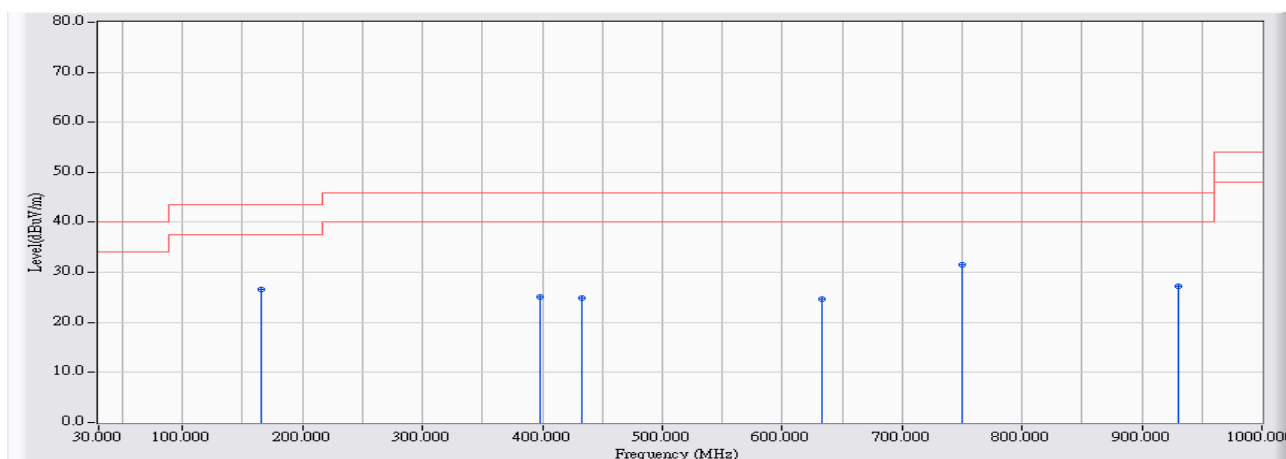


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		165.800	-14.160	38.286	24.126	-19.374	43.500	QUASIPeAK
2		233.700	-12.256	34.395	22.139	-23.861	46.000	QUASIPeAK
3		398.600	-7.411	35.248	27.838	-18.162	46.000	QUASIPeAK
4		430.933	-6.728	32.982	26.253	-19.747	46.000	QUASIPeAK
5	*	749.417	-3.297	34.290	30.994	-15.006	46.000	QUASIPeAK
6		799.533	-2.655	28.899	26.244	-19.756	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/11/07 - 19:09
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz,802.11ac(80M)

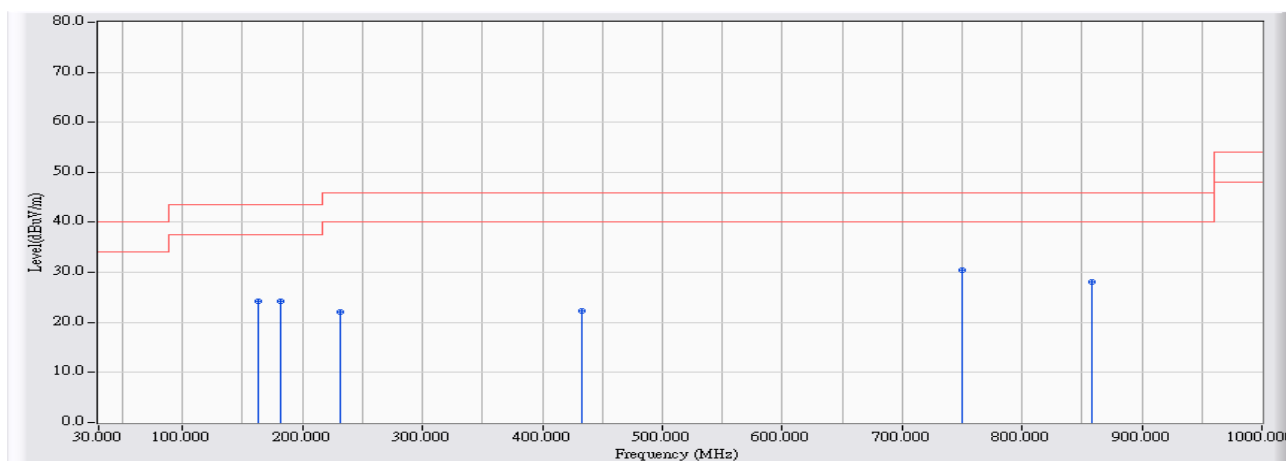


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		165.800	-14.160	40.832	26.672	-16.828	43.500	QUASIPeAK
2		398.600	-7.411	32.596	25.186	-20.814	46.000	QUASIPeAK
3		432.550	-6.695	31.652	24.957	-21.043	46.000	QUASIPeAK
4		633.017	-4.167	28.831	24.664	-21.336	46.000	QUASIPeAK
5	*	749.417	-3.297	34.863	31.567	-14.433	46.000	QUASIPeAK
6		930.483	-1.667	28.918	27.251	-18.749	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2012/11/07 - 19:09
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz,802.11ac(80M)



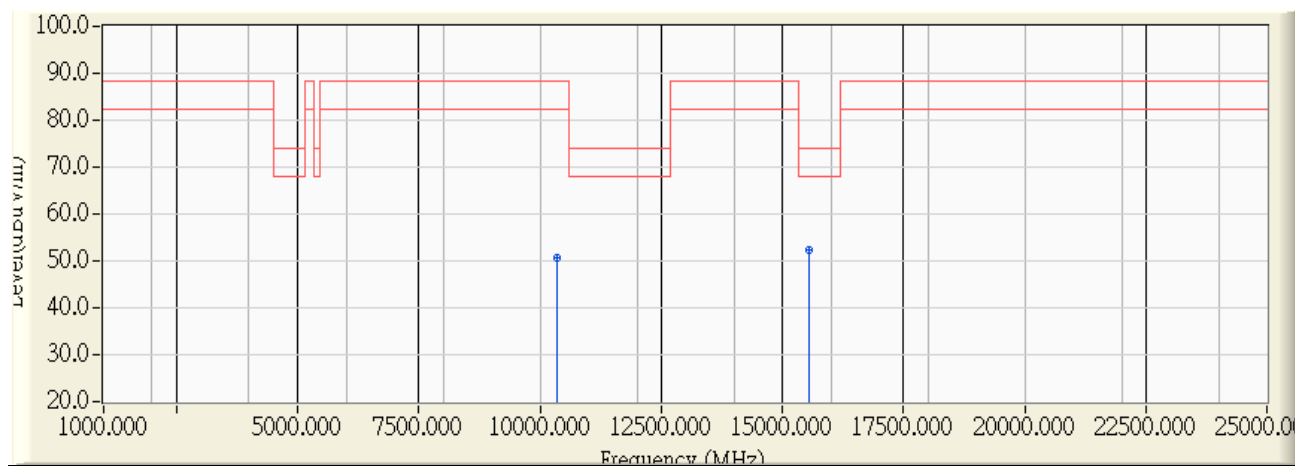
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		162.567	-14.034	38.376	24.342	-19.158	43.500	QUASIPeAK
2		181.967	-14.715	38.897	24.182	-19.318	43.500	QUASIPeAK
3		232.083	-12.374	34.457	22.083	-23.917	46.000	QUASIPeAK
4		432.550	-6.695	28.966	22.271	-23.729	46.000	QUASIPeAK
5	*	749.417	-3.297	33.747	30.451	-15.549	46.000	QUASIPeAK
6		857.733	-2.276	30.370	28.095	-17.905	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Harmonic & Spurious:

Site : CB1	Time : 2012/10/17 - 18:48
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

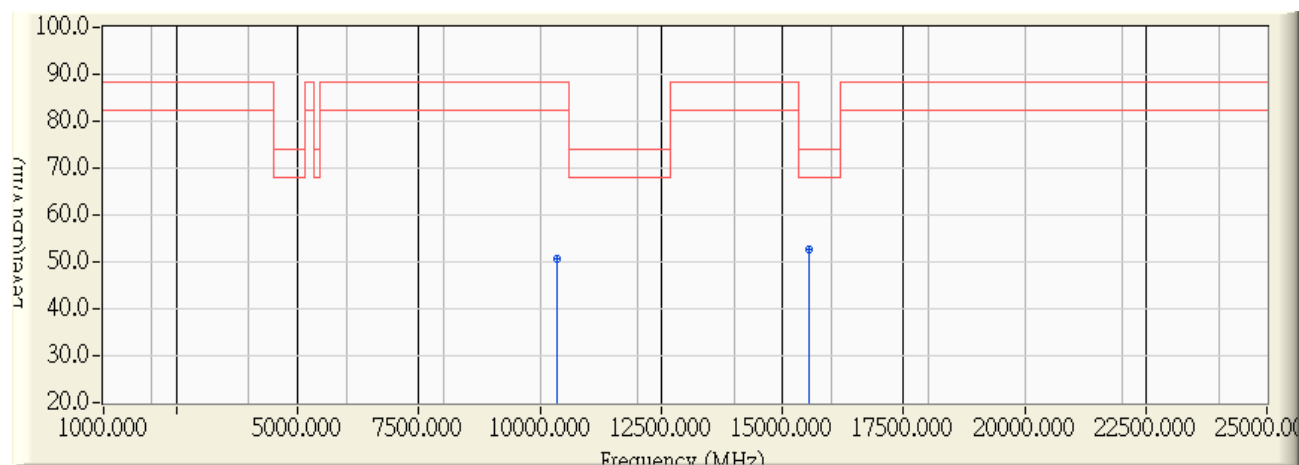


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10360.480	10.792	39.930	50.723	-37.577	88.300	PEAK
2	*	15540.840	11.403	40.860	52.263	-21.737	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 18:49
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

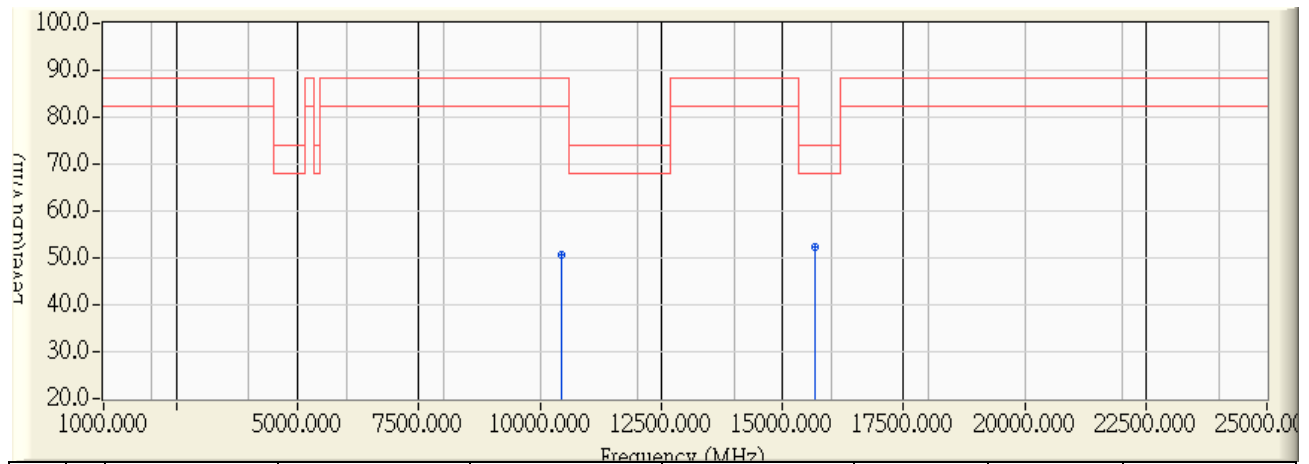


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10355.760	10.805	39.750	50.556	-37.744	88.300	PEAK
2	*	15545.080	11.400	41.230	52.630	-21.370	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 18:53
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz_802.11a

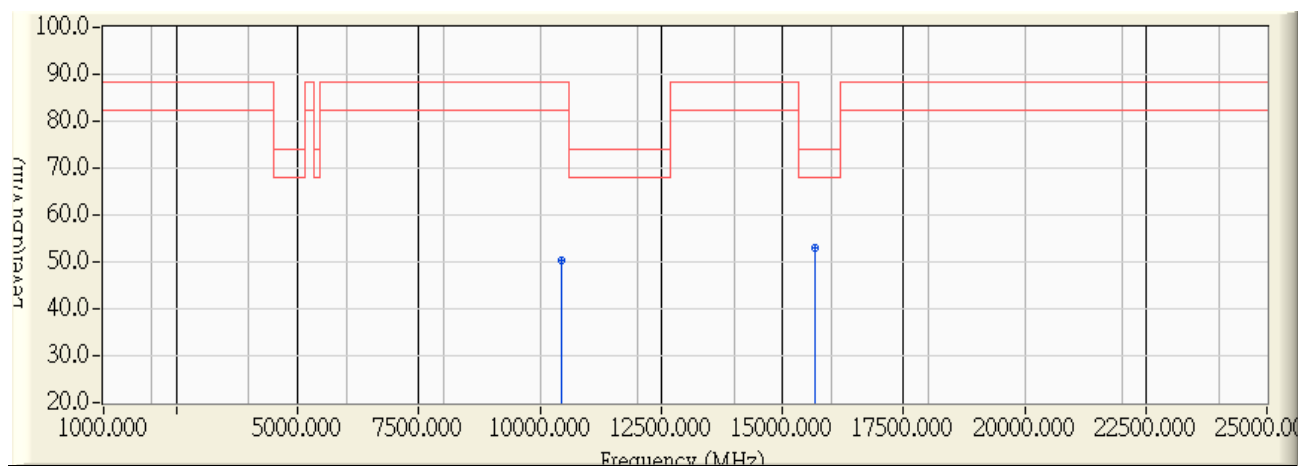


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10447.240	10.553	40.010	50.563	-37.737	88.300	PEAK
2	*	15662.120	11.321	41.060	52.380	-21.620	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 18:54
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz_802.11a

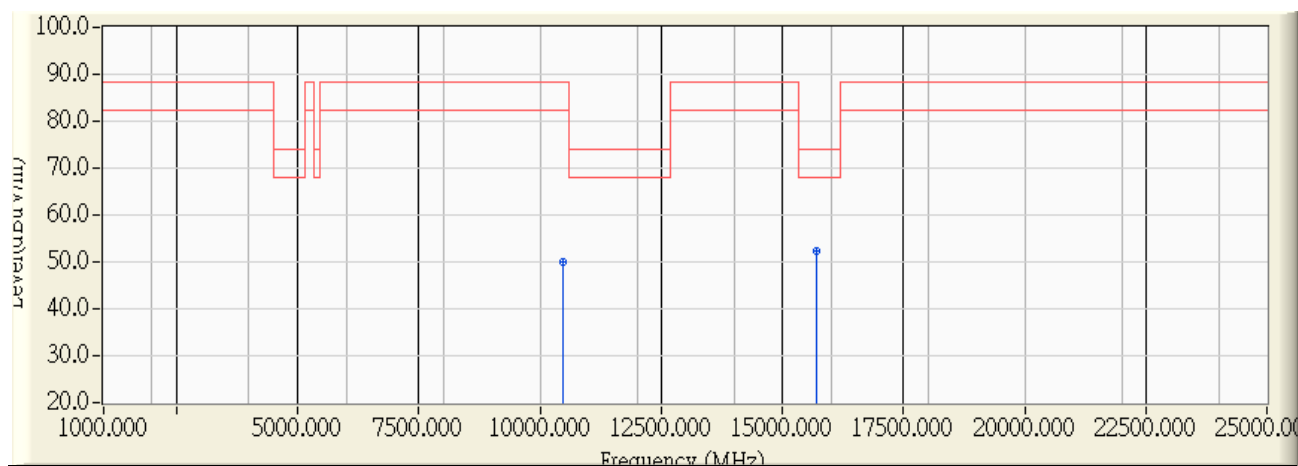


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10436.920	10.581	39.610	50.192	-38.108	88.300	PEAK
2	*	15664.360	11.319	41.660	52.979	-21.021	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 18:58
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5240MHz_802.11a

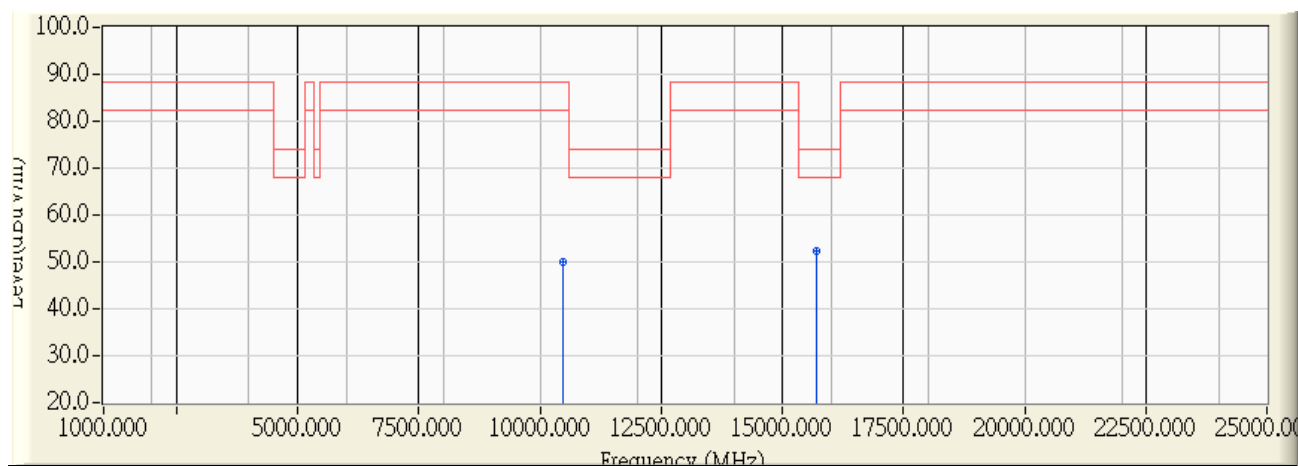


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10487.840	10.445	39.450	49.895	-38.405	88.300	PEAK
2	*	15717.920	11.282	41.030	52.312	-21.688	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:00
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5240MHz_802.11a

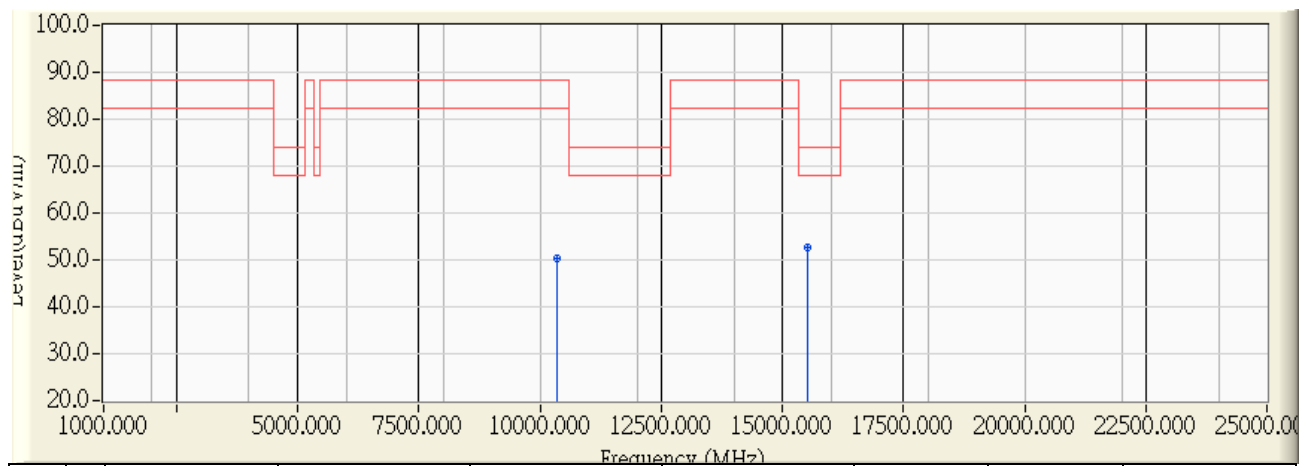


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10480.040	10.463	39.670	50.132	-38.168	88.300	PEAK
2	*	15718.280	11.282	40.940	52.222	-21.778	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:05
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

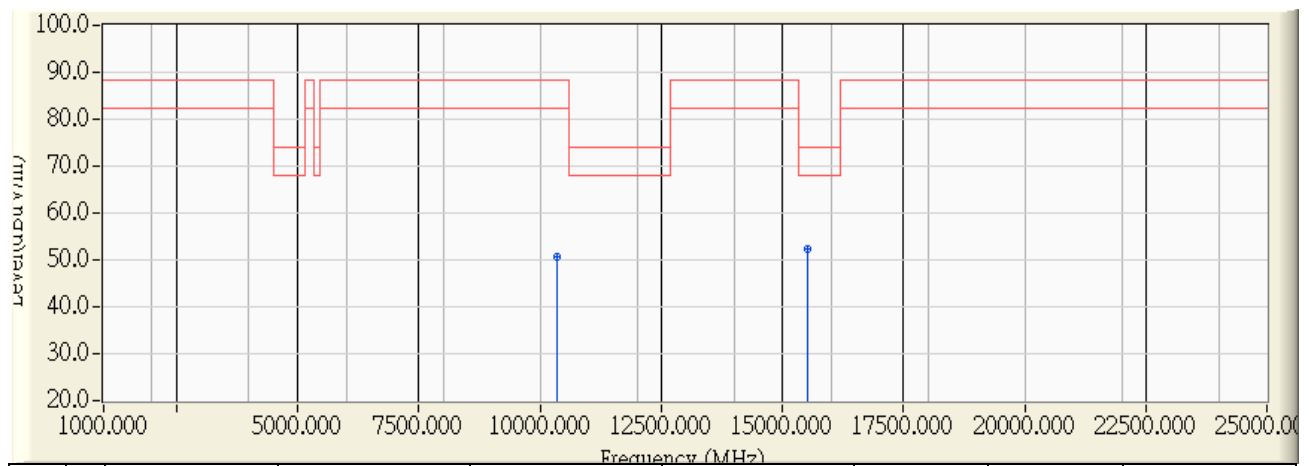


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10360.040	10.794	39.380	50.174	-38.126	88.300	PEAK
2	*	15532.560	11.409	41.410	52.819	-21.181	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:06
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

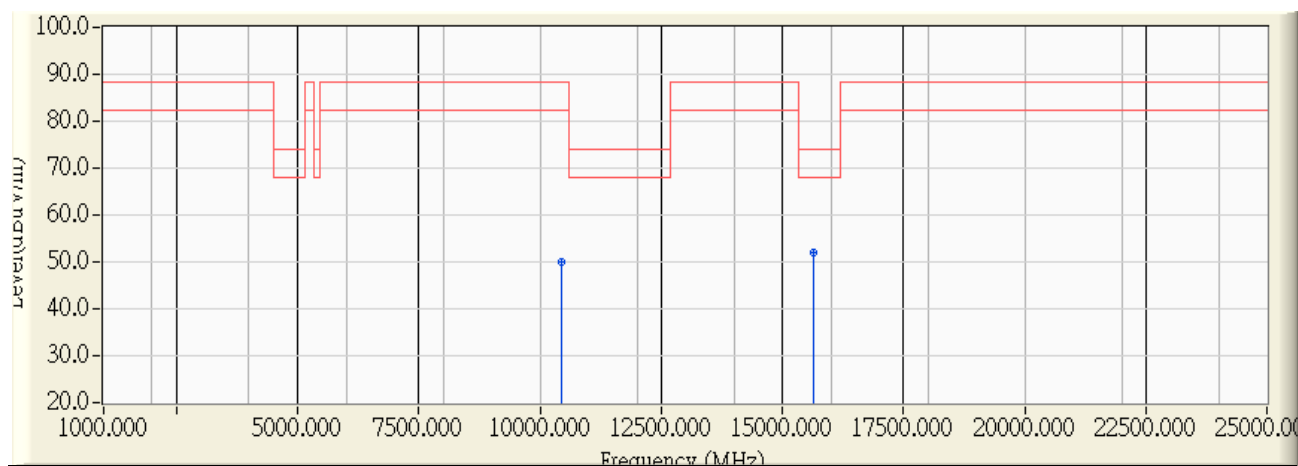


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10356.320	10.804	39.760	50.564	-37.736	88.300	PEAK
2	*	15536.640	11.406	40.940	52.346	-21.654	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:09
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz_802.11n(20M)

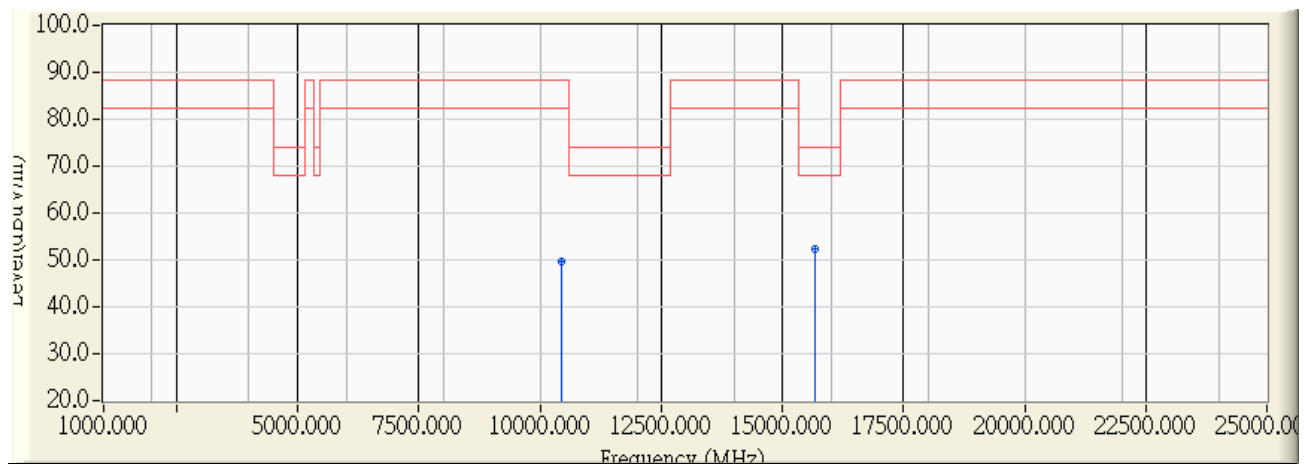


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10439.920	10.573	39.360	49.933	-38.367	88.300	PEAK
2	*	15660.920	11.321	40.760	52.081	-21.919	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:10
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5220MHz_802.11n(20M)

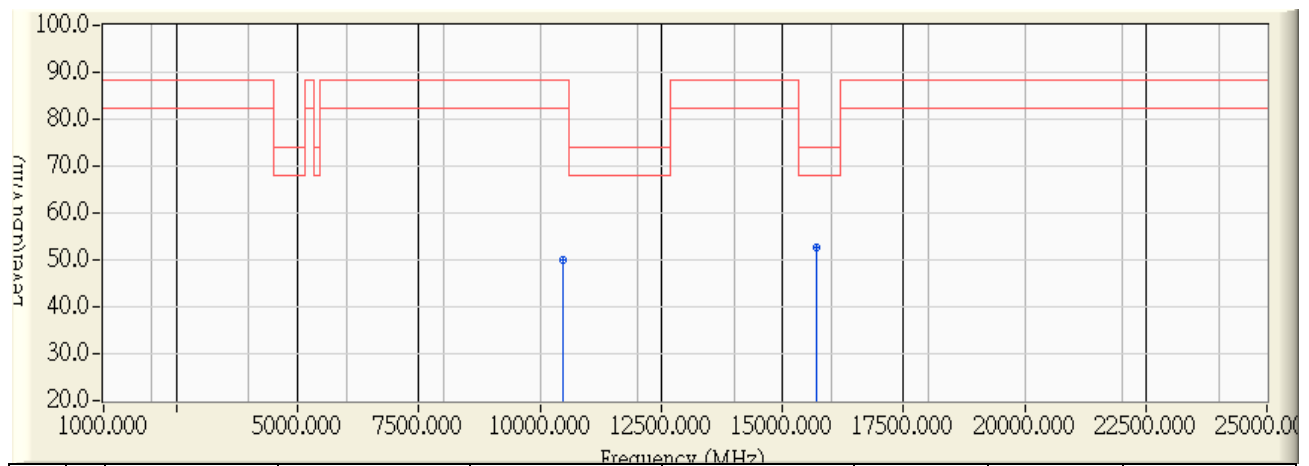


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10443.400	10.564	39.210	49.774	-38.526	88.300	PEAK
2	*	15667.400	11.316	41.080	52.397	-21.603	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:11
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5240MHz_802.11n(20M)

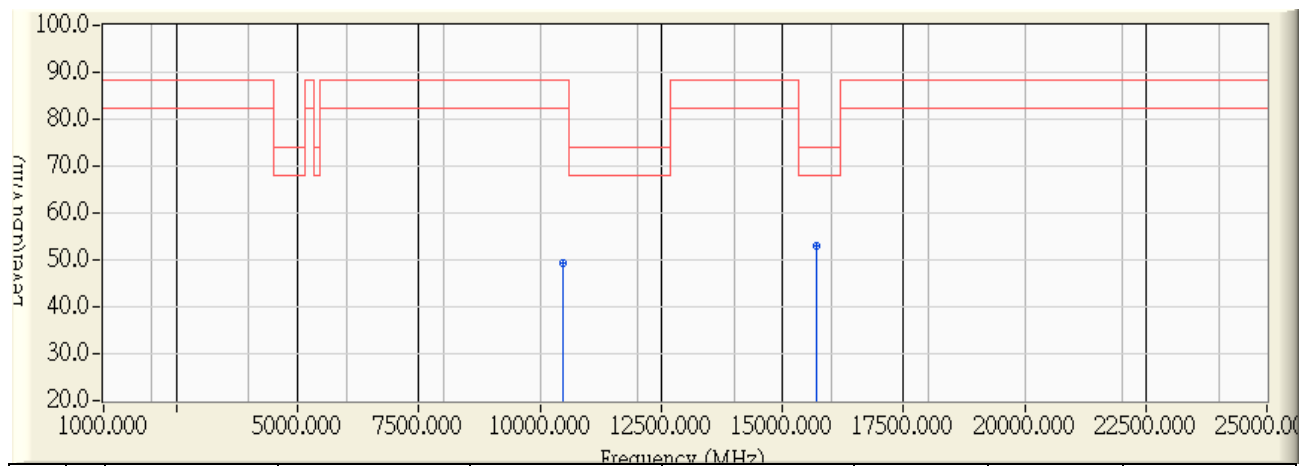


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10471.080	10.487	39.570	50.057	-38.243	88.300	PEAK
2	*	15718.480	11.282	41.270	52.552	-21.448	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:11
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5240MHz_802.11n(20M)

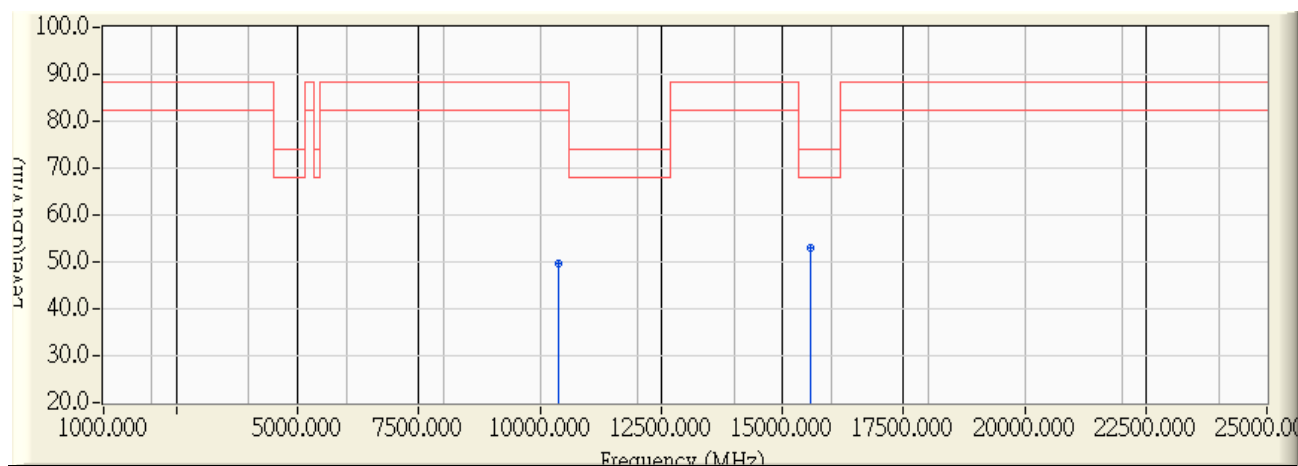


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10481.160	10.460	38.800	49.259	-39.041	88.300	PEAK
2	*	15716.600	11.283	41.680	52.963	-21.037	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:14
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

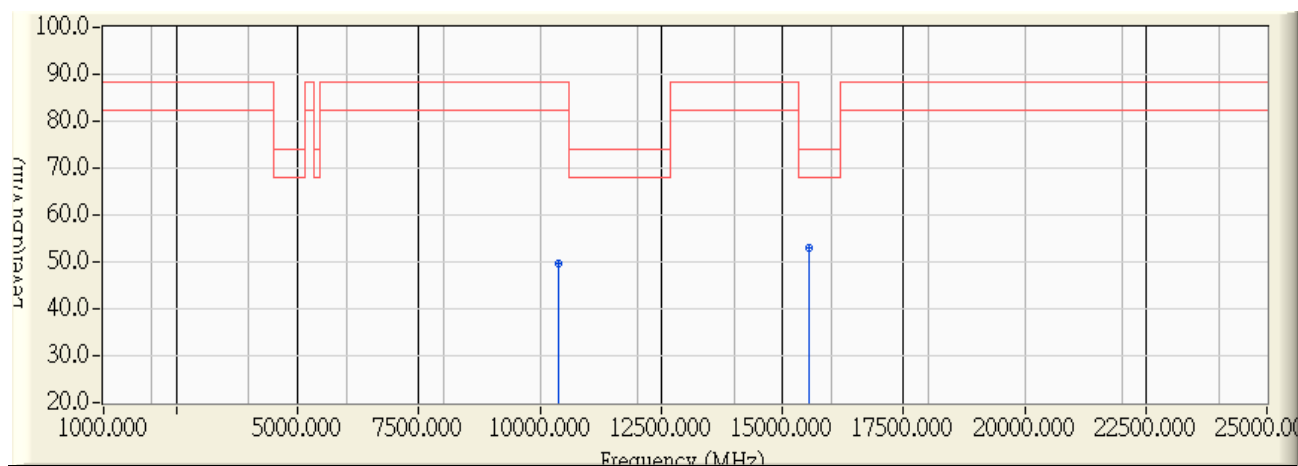


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10377.500	10.746	38.790	49.536	-38.764	88.300	PEAK
2	*	15579.600	11.377	41.570	52.947	-21.053	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:14
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

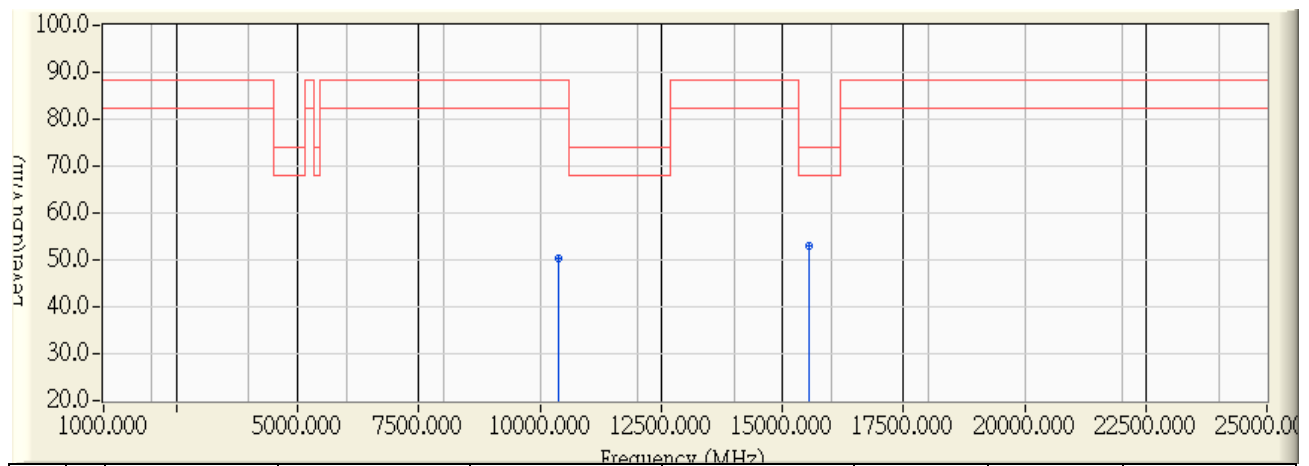


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10391.200	10.708	38.860	49.568	-38.732	88.300	PEAK
2	*	15552.800	11.394	41.540	52.935	-21.065	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:17
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5230MHz_802.11n(40M)

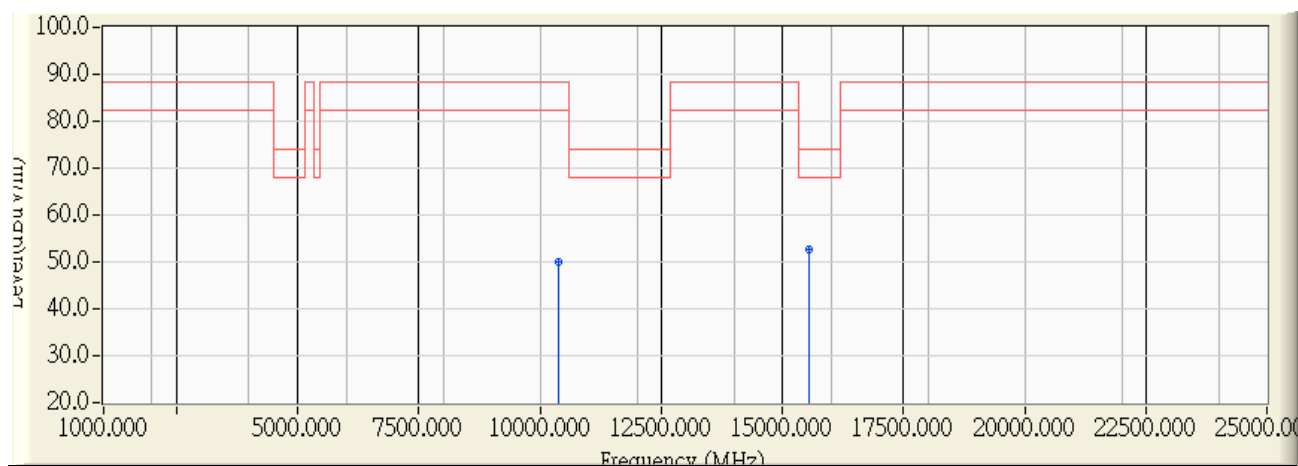


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10397.700	10.690	39.760	50.450	-37.850	88.300	PEAK
2	*	15554.500	11.393	41.600	52.994	-21.006	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:19
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5230MHz_802.11n(40M)

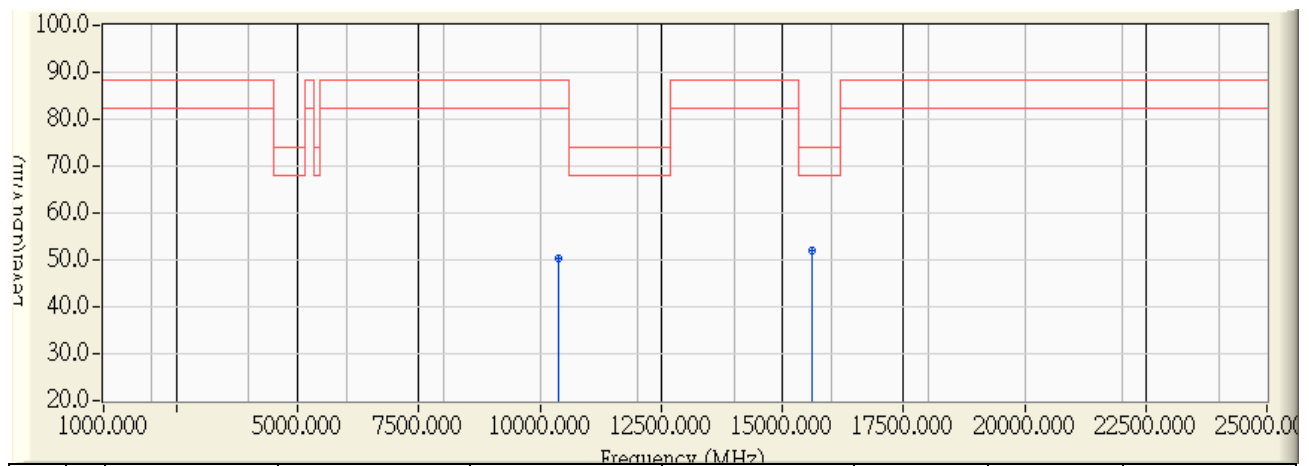


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10387.300	10.718	39.290	50.008	-38.292	88.300	PEAK
2	*	15564.500	11.386	41.150	52.537	-21.463	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:22
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)

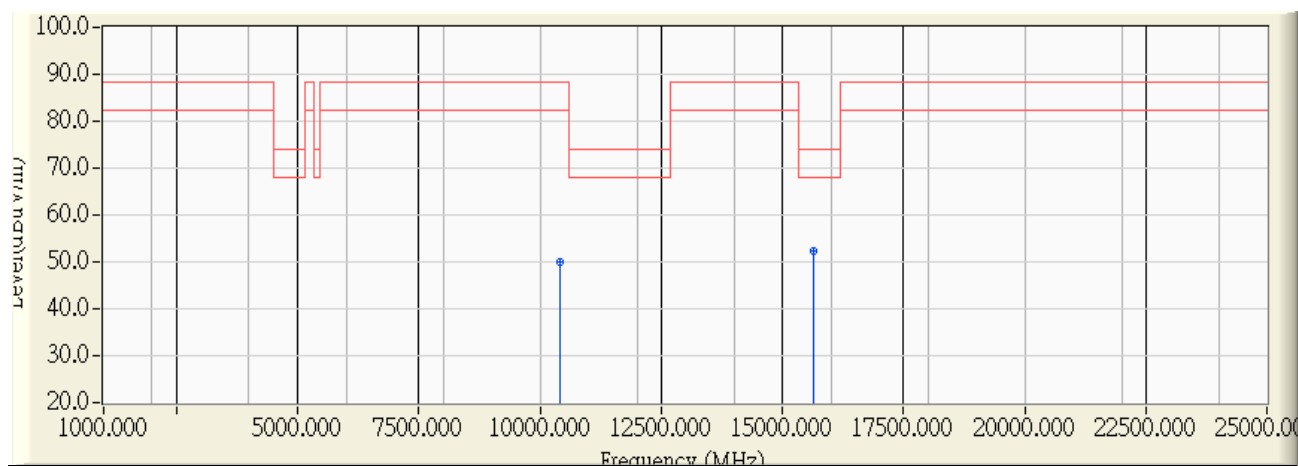


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10385.400	10.724	39.480	50.204	-38.096	88.300	PEAK
2	*	15605.400	11.359	40.720	52.079	-21.921	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	Time : 2012/10/17 - 19:23
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		10419.800	10.629	39.300	49.929	-38.371	88.300	PEAK
2	*	15650.800	11.328	40.910	52.238	-21.762	74.000	PEAK

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 = 1MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. " # ", means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

8. Band Edge

8.1. Test Equipment

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

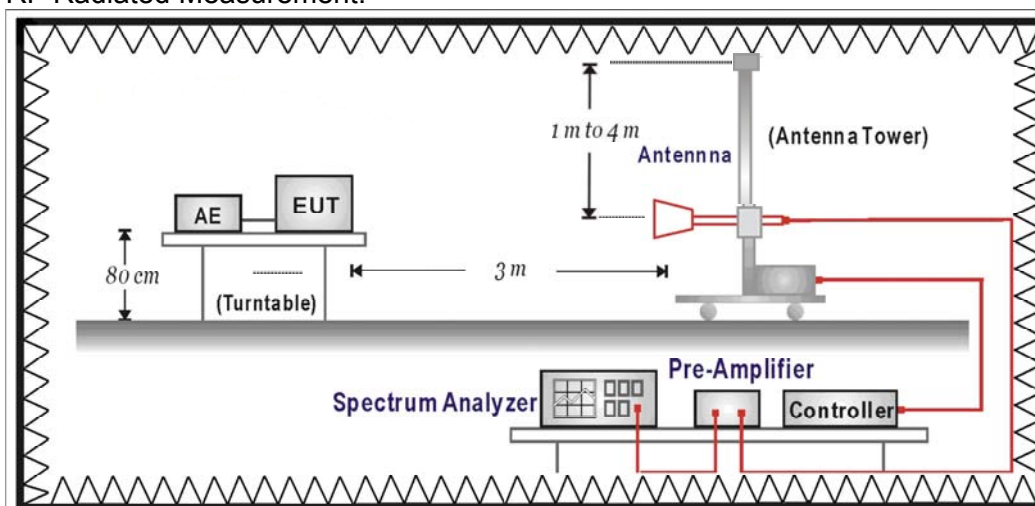
Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120D	743	2013/02/02
Spectrum Analyzer	Agilent	E4440A	MY46187335	2013/02/07
Coaxial Cable	Huber+Suhner AG	Sucoflex 102	25623/2	2013/03/04

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup

RF Radiated Measurement:



8.3. Limits

➤ General Radiated Emission Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

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

Remark:

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

➤ Unwanted Emission out of the restricted bands Limits

FCC Part 15 Subpart C Paragraph 15.407(b) Limits		
Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (dBuV/m@3m)
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27 (Note1)	68.3
	-17 (Note2)	78.3

Remark:

- For frequencies more than 10 MHz above or below the band edges.
- For frequency range from the band edges to 10 MHz above or below the band edges.
- $$uV/m = \frac{1000000\sqrt{30 \times EIRP}}{3}, \text{ RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)}$$

8.4. Test Procedure

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

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

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30) is 120 KHz, above 1GHz are 1 MHz.

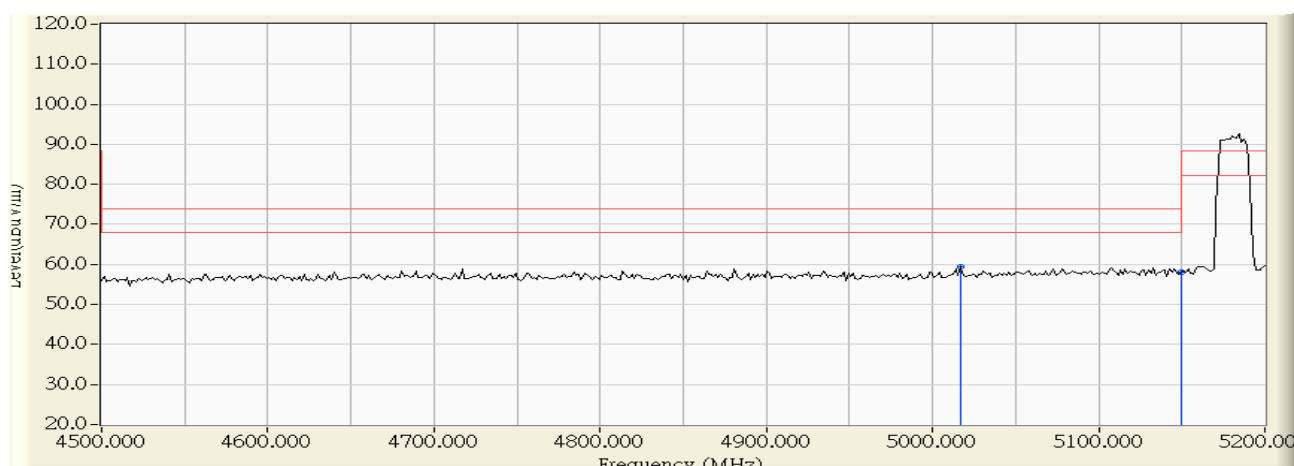
8.5. Uncertainty

The measurement uncertainty is defined as $\pm 3.65\text{dB}$

8.6. Test Result

Radiated is defined as

Site : CB1	Time : 2012/10/17 - 20:51
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

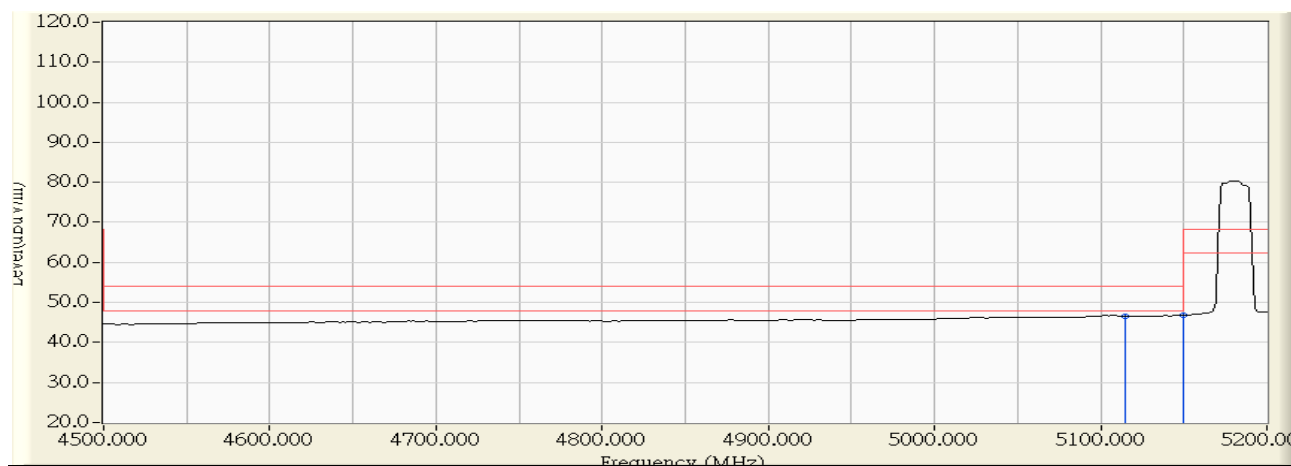


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5016.600	-0.211	59.740	59.528	-14.472	74.000	PEAK
2		5150.000	0.831	57.219	58.050	-15.950	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 20:53
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

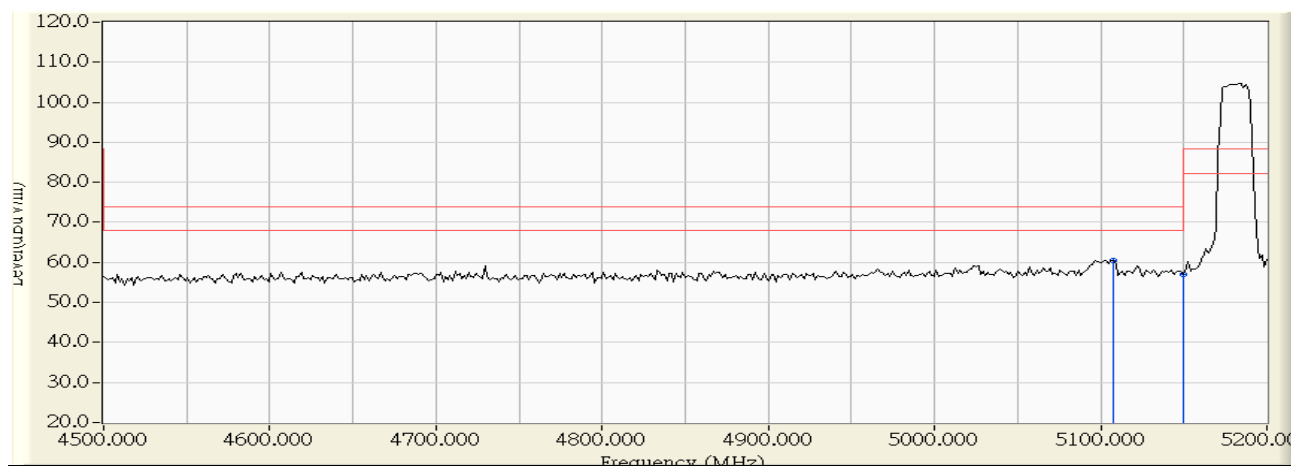


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5114.600	0.554	46.041	46.595	-7.405	54.000	AVERAGE
2	*	5150.000	0.831	46.005	46.836	-7.164	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 20:56
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

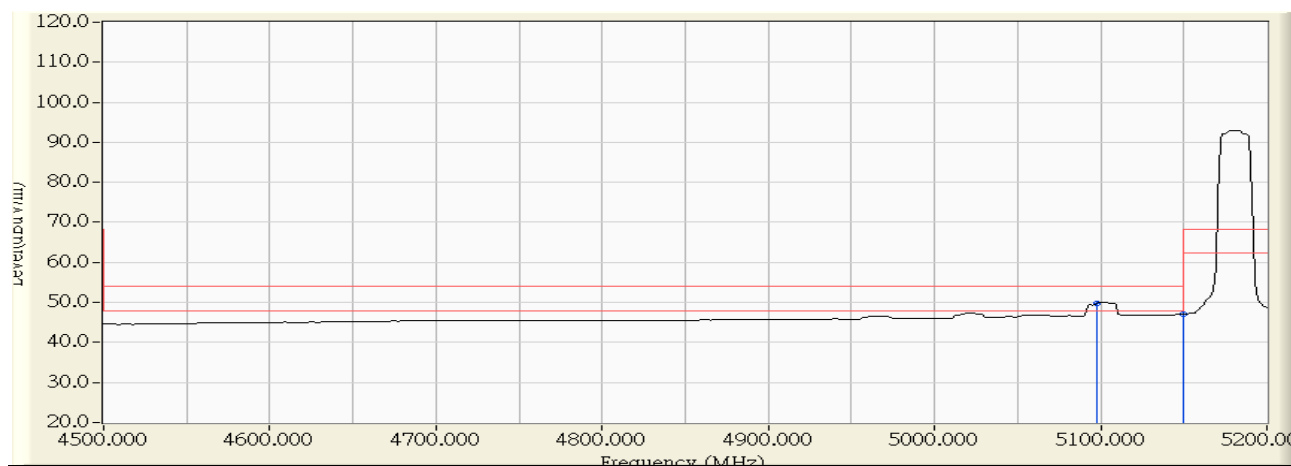


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5107.600	0.499	59.974	60.473	-13.527	74.000	PEAK
2		5150.000	0.831	56.292	57.123	-16.877	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 20:57
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11a

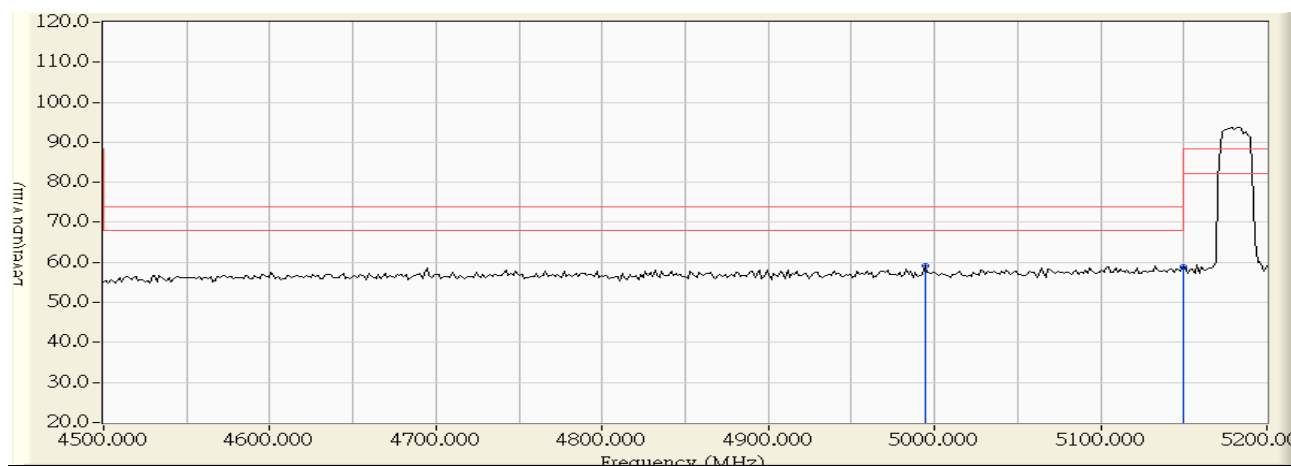


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5097.800	0.423	49.423	49.846	-4.154	54.000	AVERAGE
2		5150.000	0.831	46.185	47.016	-6.984	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:01
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

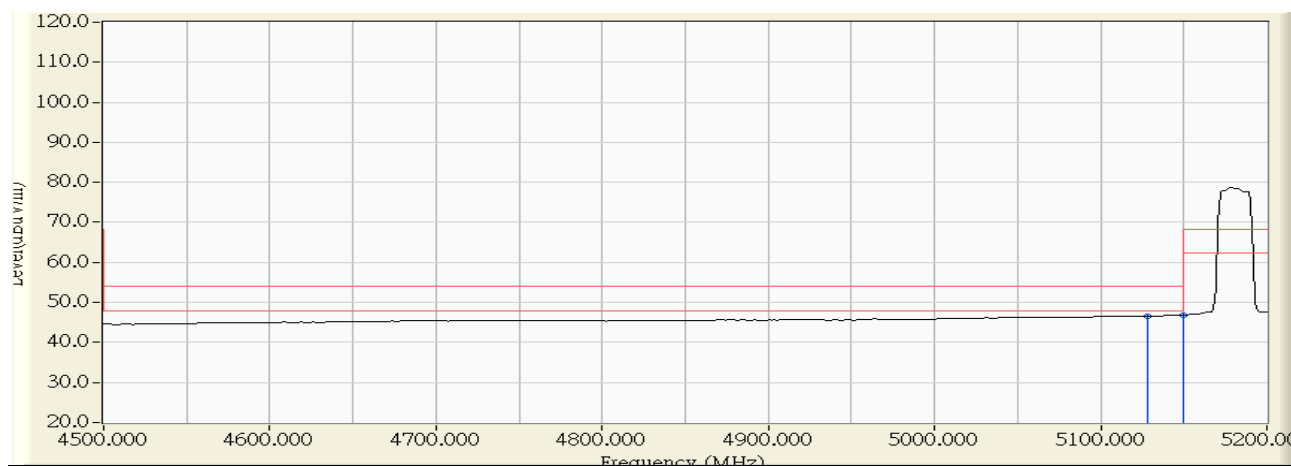


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4994.200	-0.356	59.614	59.257	-14.743	74.000	PEAK
2		5150.000	0.831	57.986	58.817	-15.183	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:03
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

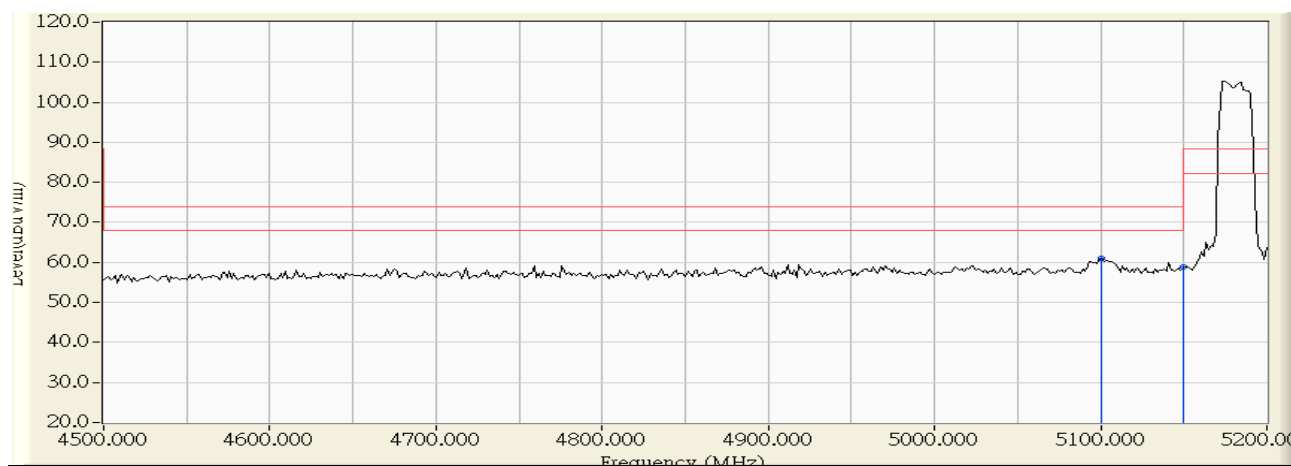


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5128.600	0.664	45.991	46.654	-7.346	54.000	AVERAGE
2	*	5150.000	0.831	46.037	46.868	-7.132	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:06
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

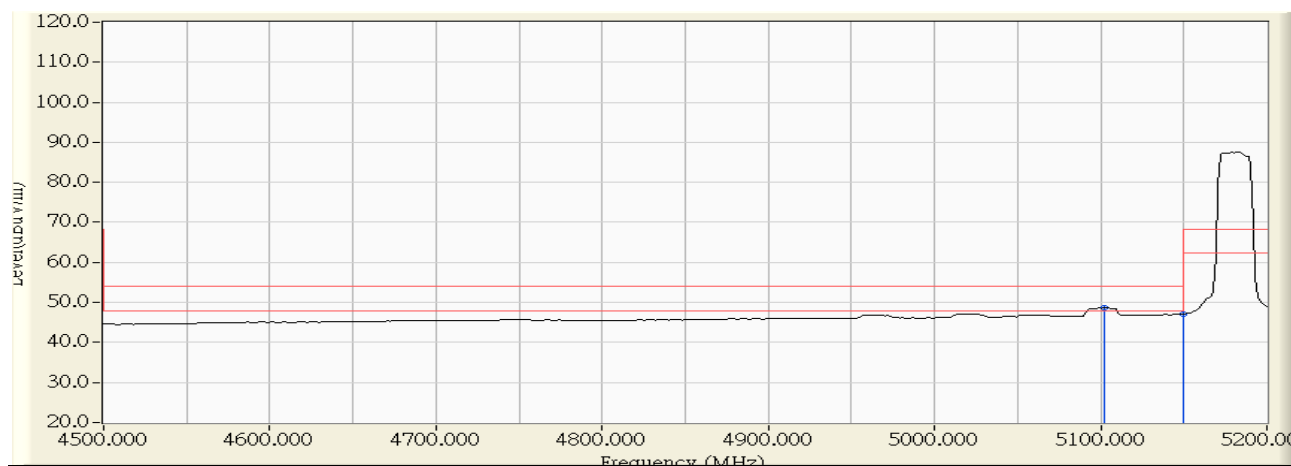


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5100.600	0.444	60.497	60.942	-13.058	74.000	PEAK
2		5150.000	0.831	57.912	58.743	-15.257	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:08
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5180MHz_802.11n(20M)

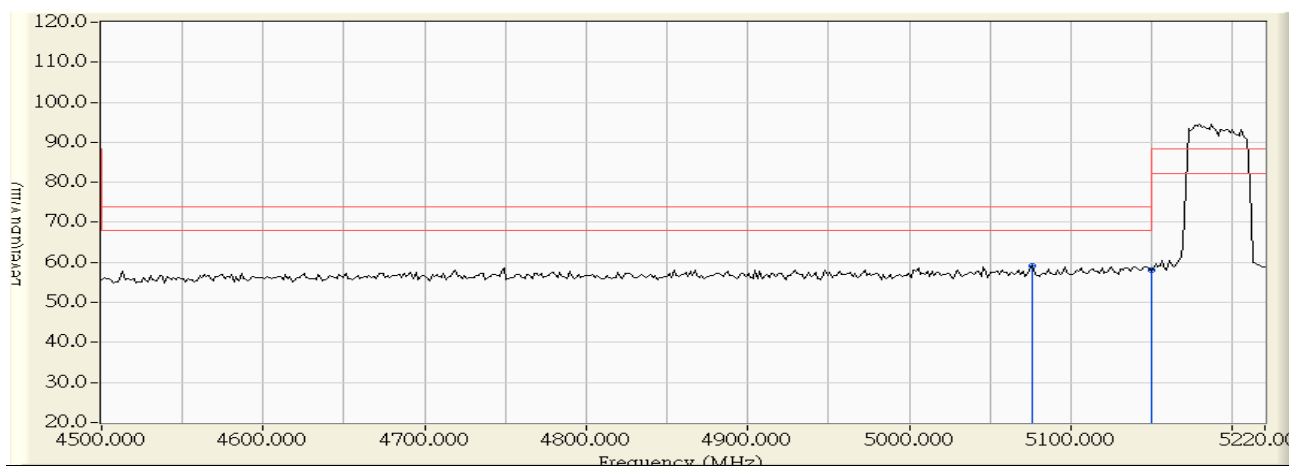


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5102.000	0.456	48.254	48.710	-5.290	54.000	AVERAGE
2		5150.000	0.831	46.308	47.139	-6.861	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:11
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

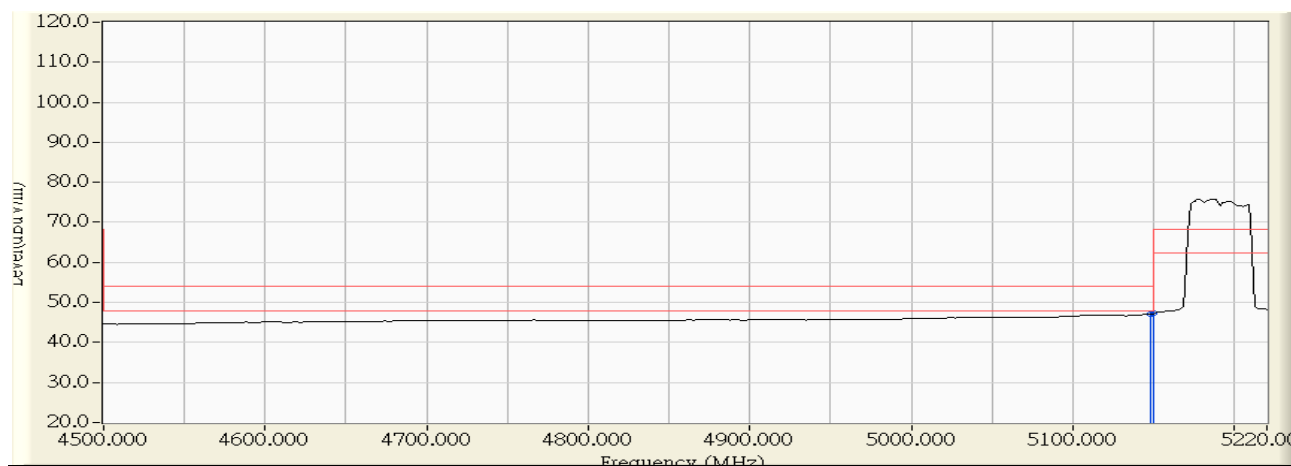


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5076.000	0.252	58.939	59.191	-14.809	74.000	PEAK
2		5150.000	0.831	57.135	57.966	-16.034	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:13
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

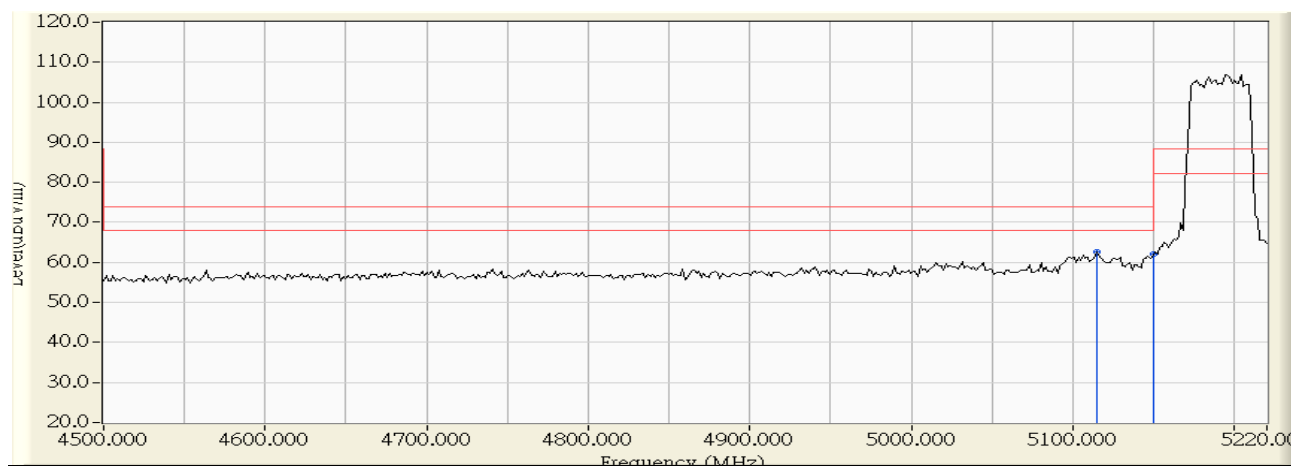


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5148.000	0.815	46.395	47.210	-6.790	54.000	AVERAGE
2	*	5150.000	0.831	46.394	47.225	-6.775	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:16
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

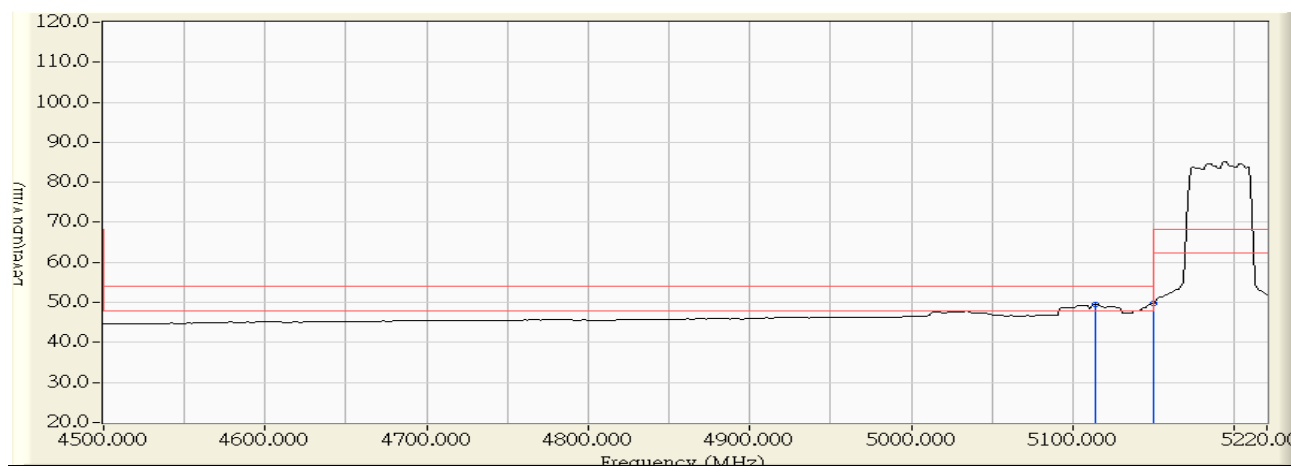


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5114.880	0.556	62.138	62.694	-11.306	74.000	PEAK
2		5150.000	0.831	61.247	62.078	-11.922	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:17
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5190MHz_802.11n(40M)

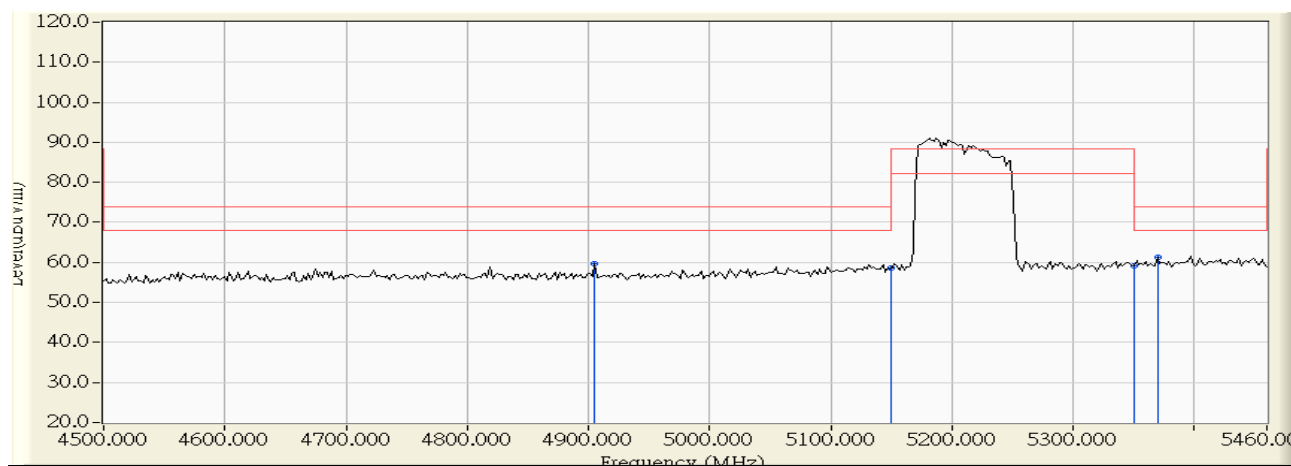


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5113.440	0.544	48.959	49.504	-4.496	54.000	AVERAGE
2	*	5150.000	0.831	48.985	49.816	-4.184	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:23
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)

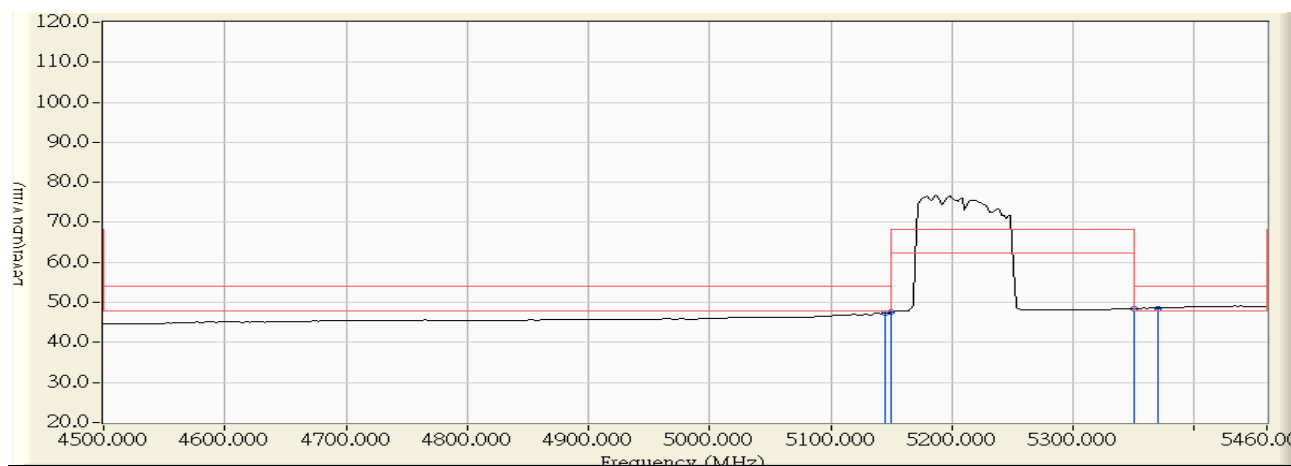


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4905.120	-0.590	60.276	59.686	-14.314	74.000	PEAK
2		5150.000	0.831	57.662	58.493	-15.507	74.000	PEAK
3		5350.000	2.394	56.772	59.166	-14.834	74.000	PEAK
4	*	5369.760	2.548	58.608	61.156	-12.844	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:26
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)

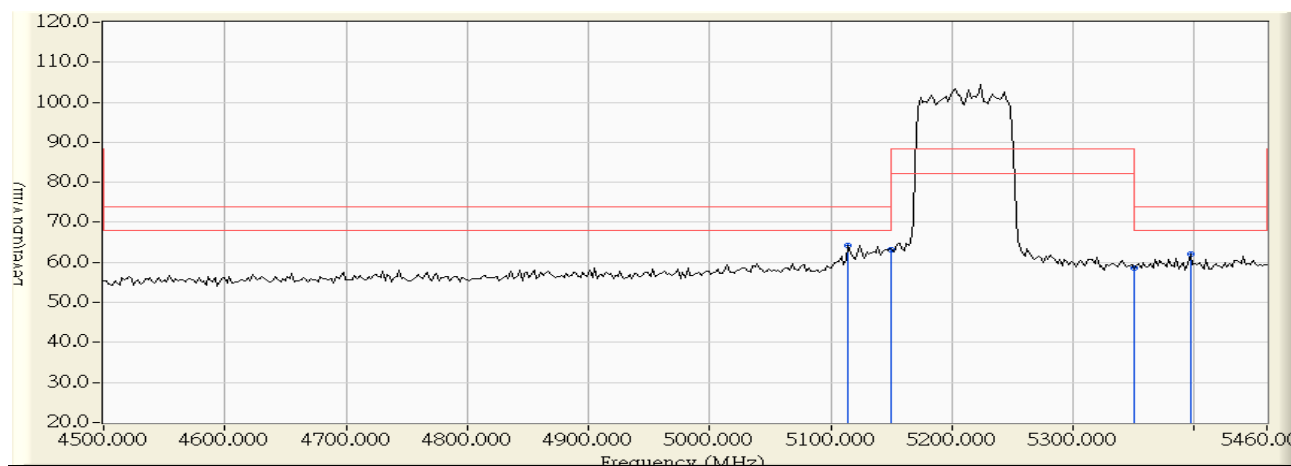


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5145.120	0.793	46.599	47.392	-6.608	54.000	AVERAGE
2		5150.000	0.831	46.697	47.528	-6.472	54.000	AVERAGE
3		5350.000	2.394	46.123	48.517	-5.483	54.000	AVERAGE
4	*	5369.760	2.548	46.002	48.550	-5.450	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:28
Limit : FCC_SpartE_15.407_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)

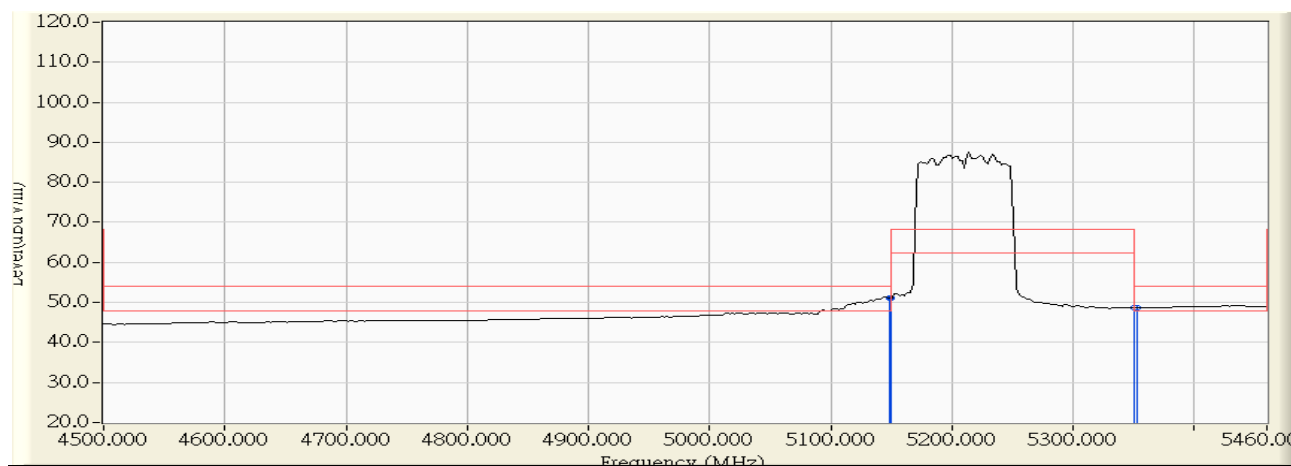


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	5114.400	0.553	63.736	64.289	-9.711	74.000	PEAK
2		5150.000	0.831	62.395	63.226	-10.774	74.000	PEAK
3		5350.000	2.394	56.320	58.714	-15.286	74.000	PEAK
4		5396.640	2.758	59.271	62.029	-11.971	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

Site : CB1	Time : 2012/10/17 - 21:31
Limit : FCC_SpartE_15.407_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : DC 3.3V (Power by PC)
EUT : Dual Band 3x3 802.11ac PCI-E Adapter	Note : 5210MHz_802.11ac(80M)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		5148.960	0.822	50.237	51.060	-2.940	54.000	AVERAGE
2	*	5150.000	0.831	50.322	51.153	-2.847	54.000	AVERAGE
3		5350.000	2.394	46.241	48.635	-5.365	54.000	AVERAGE
4		5352.480	2.413	46.260	48.673	-5.327	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.

9. Frequency Stability

9.1. Test Equipment

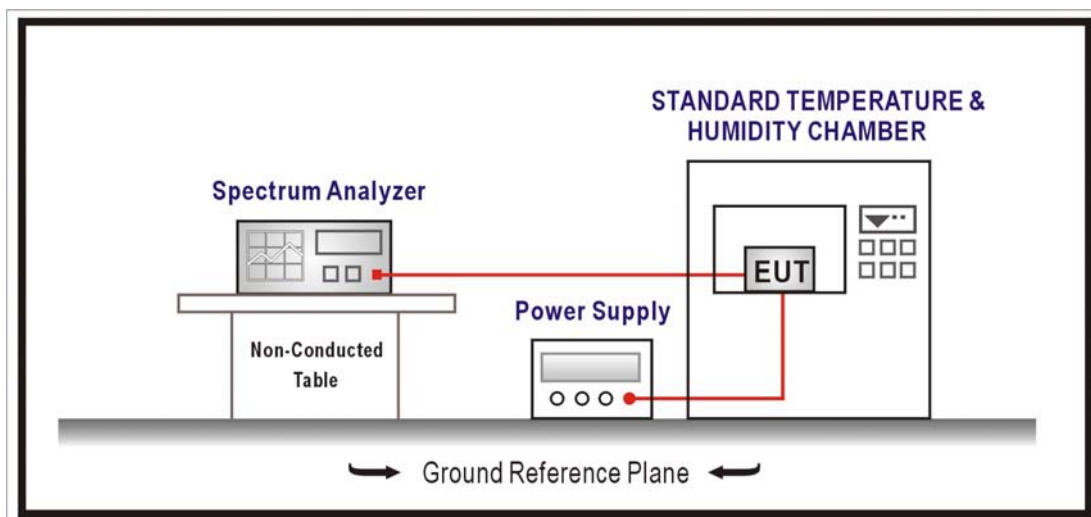
The following test equipments are used during the radiated emission tests:

Frequency Stability / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	R&S	FSP	100561	2013/02/19
Standard Temperature & Humidity Chamber	WIT	TH-1S-B	1082101	2013/01/29

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

9.2. Test Setup



9.3. Limits

Manufactures of all 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

9.4. Test Procedure

The EUT was setup to ANSI C63.4, 2009; tested to DTS test procedure of Aug 2002 DA 02-2138 for compliance to FCC 47CFR Subpart E requirements.

9.5. Uncertainty

The measurement uncertainty is defined as ± 150 Hz

9.6. Test Result

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11a - 5180MHz		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5180.7319	141.2905	PASS
-10		5180.5170	99.8107	PASS
0		5180.5593	107.9670	PASS
10		5180.7720	149.0434	PASS
20		5180.6215	119.9895	PASS
30		5180.4797	92.5968	PASS
40		5180.3317	64.0350	PASS
50		5180.8125	156.8481	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5180.5119	98.8290	PASS
	120	5180.7999	154.4229	PASS
	138	5180.2941	56.7764	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11a - 5240MHz		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5240.8007	152.8039	PASS
-10		5240.8389	160.0972	PASS
0		5240.2644	50.4513	PASS
10		5240.4848	92.5183	PASS
20		5240.2089	39.8650	PASS
30		5240.5849	111.6285	PASS
40		5240.0910	17.3582	PASS
50		5240.4877	93.0780	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5240.1777	33.9178	PASS
	120	5240.7384	140.9200	PASS
	138	5240.0225	4.2959	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5180MHz(ANT 0)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5180.7355	141.9888	PASS
-10		5180.0319	6.1649	PASS
0		5180.5352	103.3108	PASS
10		5180.1397	26.9617	PASS
20		5180.8801	169.9098	PASS
30		5180.3511	67.7875	PASS
40		5180.5586	107.8355	PASS
50		5180.3864	74.5944	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5180.3472	67.0179	PASS
	120	5180.1773	34.2192	PASS
	138	5180.5280	101.9247	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5240MHz(ANT 0)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5240.1527	29.1389	PASS
-10		5240.6138	117.1384	PASS
0		5240.7997	152.6148	PASS
10		5240.2053	39.1872	PASS
20		5240.3727	71.1253	PASS
30		5240.8313	158.6358	PASS
40		5240.5809	110.8561	PASS
50		5240.6146	117.2828	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5240.3753	71.6161	PASS
	120	5240.4161	79.4062	PASS
	138	5240.4805	91.7027	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5180MHz(ANT 1)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5180.4865	93.9239	PASS
-10		5180.8672	167.4121	PASS
0		5180.2724	52.5908	PASS
10		5180.8712	168.1867	PASS
20		5180.7347	141.8367	PASS
30		5180.3485	67.2736	PASS
40		5180.6457	124.6506	PASS
50		5180.7715	148.9286	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5180.0442	8.5284	PASS
	120	5180.1685	32.5353	PASS
	138	5180.8531	164.6831	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5240MHz(ANT 1)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5240.2600	49.6130	PASS
-10		5240.2082	39.7247	PASS
0		5240.8322	158.8138	PASS
10		5240.0165	3.1397	PASS
20		5240.5191	99.0652	PASS
30		5240.7849	149.7977	PASS
40		5240.1121	21.4008	PASS
50		5240.4013	76.5853	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5240.2521	48.1044	PASS
	120	5240.2511	47.9284	PASS
	138	5240.8786	167.6648	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5180MHz (ANT 2)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5180.0523	10.0996	PASS
-10		5180.4273	82.4962	PASS
0		5180.2189	42.2570	PASS
10		5180.8457	163.2649	PASS
20		5180.7794	150.4664	PASS
30		5180.8680	167.5685	PASS
40		5180.3064	59.1424	PASS
50		5180.4687	90.4914	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5180.8761	169.1264	PASS
	120	5180.8250	159.2736	PASS
	138	5180.7665	147.9815	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_20M - 5240MHz (ANT 2)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5240.0847	16.1623	PASS
-10		5240.2991	57.0884	PASS
0		5240.7229	137.9598	PASS
10		5240.7279	138.9099	PASS
20		5240.3337	63.6793	PASS
30		5240.0658	12.5591	PASS
40		5240.2269	43.3025	PASS
50		5240.2379	45.4028	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5240.1228	23.4446	PASS
	120	5240.1809	34.5205	PASS
	138	5240.8195	156.3980	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M - 5190MHz(ANT 0)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5190.0469	9.0378	PASS
-10		5190.7594	146.3233	PASS
0		5190.4748	91.4819	PASS
10		5190.4297	82.7962	PASS
20		5190.1883	36.2853	PASS
30		5190.6123	117.9820	PASS
40		5190.0515	9.9259	PASS
50		5190.5223	100.6453	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5190.3772	72.6749	PASS
	120	5190.2460	47.3983	PASS
	138	5190.4763	91.7721	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M - 5230MHz(ANT 0)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5230.0557	10.6528	PASS
-10		5230.1342	25.6614	PASS
0		5230.2120	40.5274	PASS
10		5230.2937	56.1489	PASS
20		5230.1874	35.8404	PASS
30		5230.0520	9.9415	PASS
40		5230.3224	61.6531	PASS
50		5230.1814	34.6909	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5230.1030	19.6865	PASS
	120	5230.5273	100.8208	PASS
	138	5230.6064	115.9445	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M - 5190MHz(ANT 1)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5190.2332	44.9320	PASS
-10		5190.7830	150.8612	PASS
0		5190.1455	28.0348	PASS
10		5190.0757	14.5794	PASS
20		5190.2053	39.5651	PASS
30		5190.7829	150.8539	PASS
40		5190.0691	13.3069	PASS
50		5190.6309	121.5650	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5190.5511	106.1907	PASS
	120	5190.1378	26.5482	PASS
	138	5190.3408	65.6657	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M - 5230MHz(ANT 1)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5230.1928	36.8714	PASS
-10		5230.4015	76.7648	PASS
0		5230.2252	43.0538	PASS
10		5230.2968	56.7402	PASS
20		5230.3844	73.4995	PASS
30		5230.8048	153.8745	PASS
40		5230.8722	166.7598	PASS
50		5230.3126	59.7678	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5230.8277	158.2633	PASS
	120	5230.8160	156.0160	PASS
	138	5230.1676	32.0427	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M - 5190MHz(ANT 2)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5190.4752	91.5701	PASS
-10		5190.0790	15.2190	PASS
0		5190.0181	3.4791	PASS
10		5190.2800	53.9514	PASS
20		5190.0288	5.5522	PASS
30		5190.2928	56.4229	PASS
40		5190.1184	22.8172	PASS
50		5190.6409	123.4922	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5190.0993	19.1283	PASS
	120	5190.2385	45.9567	PASS
	138	5190.6112	117.7616	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11n_40M -5230MHz(ANT 2)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5230.6684	127.8006	PASS
-10		5230.7047	134.7353	PASS
0		5230.6125	117.1196	PASS
10		5230.3040	58.1176	PASS
20		5230.0352	6.7344	PASS
30		5230.4925	94.1595	PASS
40		5230.8827	168.7678	PASS
50		5230.8530	163.1046	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5230.2443	46.7063	PASS
	120	5230.2097	40.0981	PASS
	138	5230.5838	111.6166	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11ac_80M -5210MHz(ANT0)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5210.7921	152.0325	PASS
-10		5210.5642	108.2945	PASS
0		5210.0392	7.5316	PASS
10		5210.3628	69.6435	PASS
20		5210.5692	109.2578	PASS
30		5210.7285	139.8366	PASS
40		5210.2658	51.0227	PASS
50		5210.8893	170.6985	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5210.3093	59.3713	PASS
	120	5210.5244	100.6521	PASS
	138	5210.4951	95.0374	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11ac 80M -5210MHz(ANT1)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5210.4757	91.3041	PASS
-10		5210.0227	4.3556	PASS
0		5210.7544	144.7979	PASS
10		5210.3215	61.7058	PASS
20		5210.3146	60.3917	PASS
30		5210.5747	110.3159	PASS
40		5210.8675	166.5148	PASS
50		5210.0200	3.8401	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5210.6847	131.4241	PASS
	120	5210.1056	20.2695	PASS
	138	5210.5289	101.5176	PASS

Product	Dual Band 3x3 802.11ac PCI-E Adapter		
Test Item	Frequency Stability		
Test Mode	Mode 1: Transmit - 802.11ac 80M -5210MHz(ANT2)		
Date of Test	2012/10/17	Test Site	SR7

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
-20	120	5210.7499	143.9366	PASS
-10		5210.3914	75.1274	PASS
0		5210.3653	70.1208	PASS
10		5210.6908	132.5921	PASS
20		5210.3862	74.1355	PASS
30		5210.0097	1.8621	PASS
40		5210.0669	12.8316	PASS
50		5210.6493	124.6313	PASS

Temperature Interval (°C)	AC Voltage (V)	Frequency (MHz)	Deviation (ppm)	Result
25	102	5210.6238	119.7344	PASS
	120	5210.4377	84.0074	PASS
	138	5210.2335	44.8085	PASS