4.5. Radiated Emissions Measurement

4.5.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100KHz / 100KHz for peak

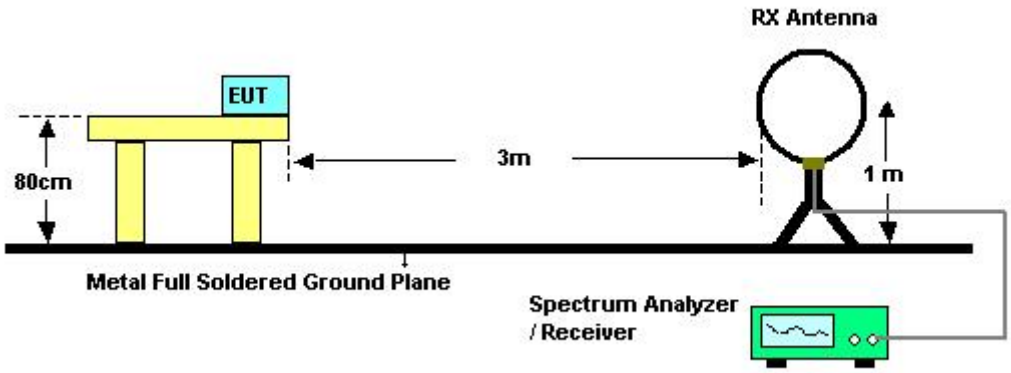
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

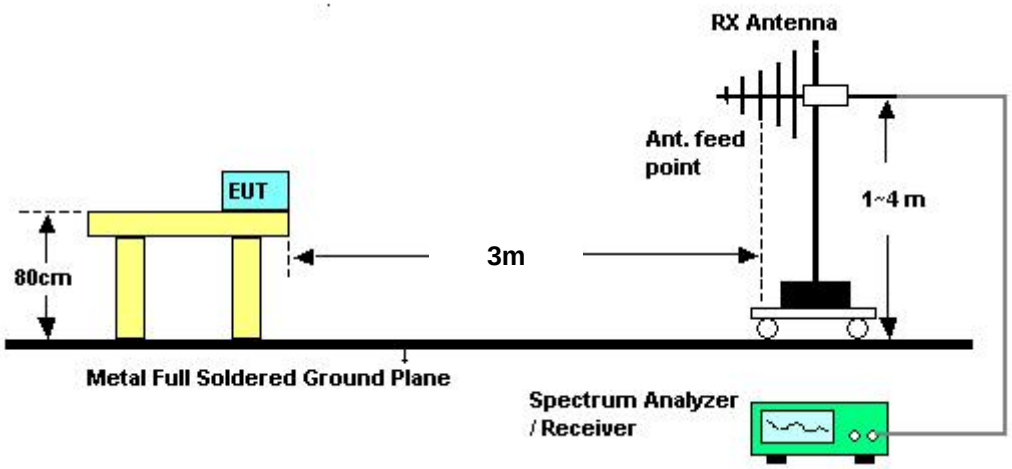
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.5.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

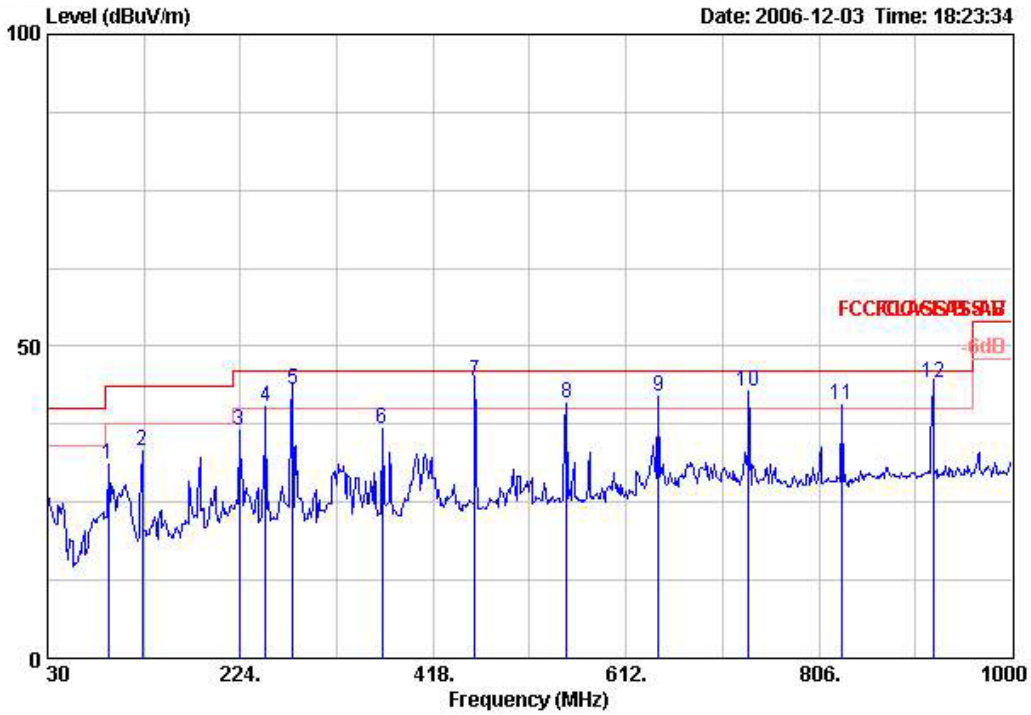
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

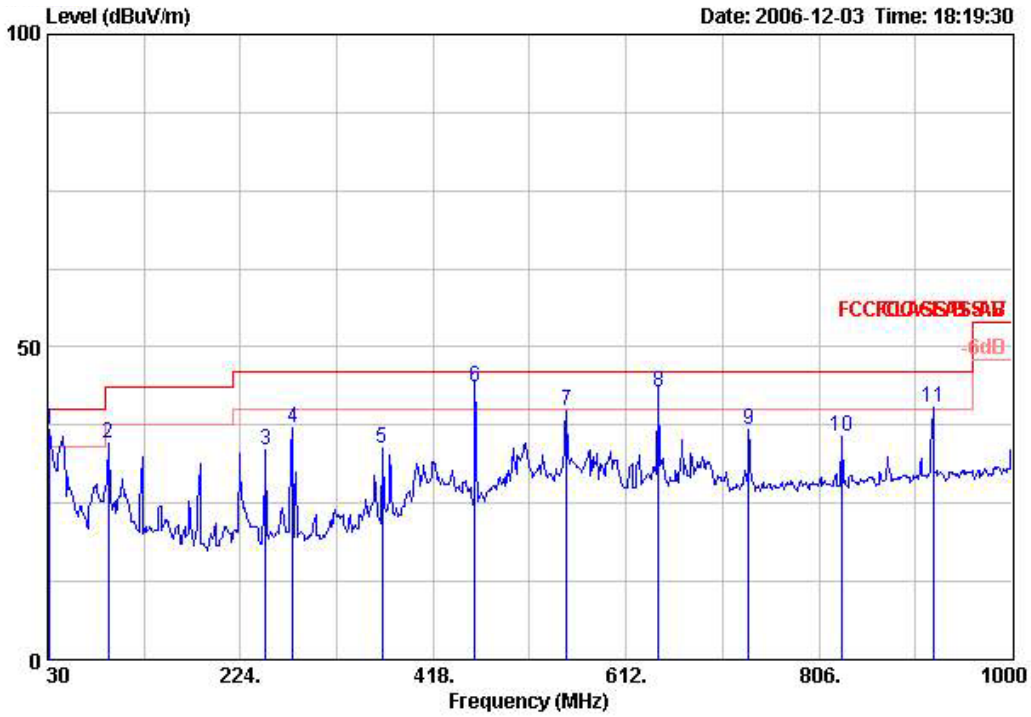
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g CH 6 / Mode 5

Horizontal



		Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1		91.110	31.01	-12.49	43.50	51.59	1.43	31.59	Peak	---	---	9.58
2		125.060	33.35	-10.15	43.50	50.67	1.70	31.71	Peak	---	---	12.70
3		223.030	36.59	-9.41	46.00	55.17	2.14	31.40	Peak	---	---	10.68
4	!	249.220	40.39	-5.61	46.00	56.53	2.38	31.35	Peak	---	---	12.83
5	!	276.380	43.04	-2.96	46.00	58.41	2.50	31.33	QP	100	241	13.46
6		366.590	36.86	-9.14	46.00	49.73	2.50	31.17	Peak	---	---	15.80
7	*	459.710	44.39	-1.61	46.00	55.00	2.98	30.92	QP	100	62	17.33
8	!	551.860	40.80	-5.20	46.00	49.45	3.20	30.75	Peak	---	---	18.91
9	!	644.980	41.96	-4.04	46.00	49.29	3.45	30.34	Peak	---	---	19.55
10	!	735.190	42.66	-3.34	46.00	49.04	3.82	30.34	Peak	---	---	20.15
11	!	828.310	40.51	-5.49	46.00	45.70	3.91	30.15	Peak	---	---	21.04
12	!	920.460	44.12	-1.88	46.00	48.00	4.02	29.62	QP	100	50	21.72

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1 !	31.940	36.86	-3.14	40.00	48.94	0.93	31.67	Peak	---	---	18.66
2	91.110	34.52	-8.98	43.50	55.10	1.43	31.59	Peak	---	---	9.58
3	249.220	33.52	-12.48	46.00	49.67	2.38	31.35	Peak	---	---	12.83
4	276.380	37.19	-8.81	46.00	52.56	2.50	31.33	Peak	---	---	13.46
5	366.590	33.67	-12.33	46.00	46.54	2.50	31.17	Peak	---	---	15.80
6 !	459.710	43.51	-2.49	46.00	54.12	2.98	30.92	QP	200	256	17.33
7	551.860	39.66	-6.34	46.00	48.31	3.20	30.75	Peak	---	---	18.91
8 !	644.980	42.88	-3.12	46.00	50.22	3.45	30.34	QP	150	260	19.55
9	735.190	36.66	-9.34	46.00	43.04	3.82	30.34	Peak	---	---	20.15
10	828.310	35.71	-10.29	46.00	40.91	3.91	30.15	Peak	---	---	21.04
11 !	920.460	40.34	-5.66	46.00	44.21	4.02	29.62	Peak	---	---	21.72

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

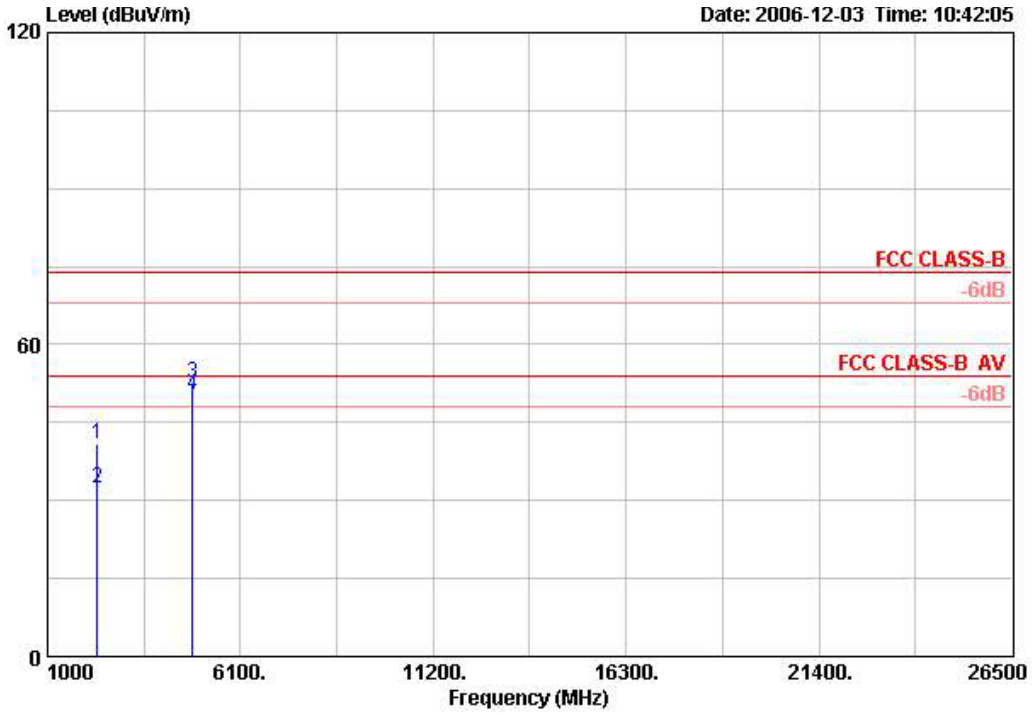
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~10th Harmonic)

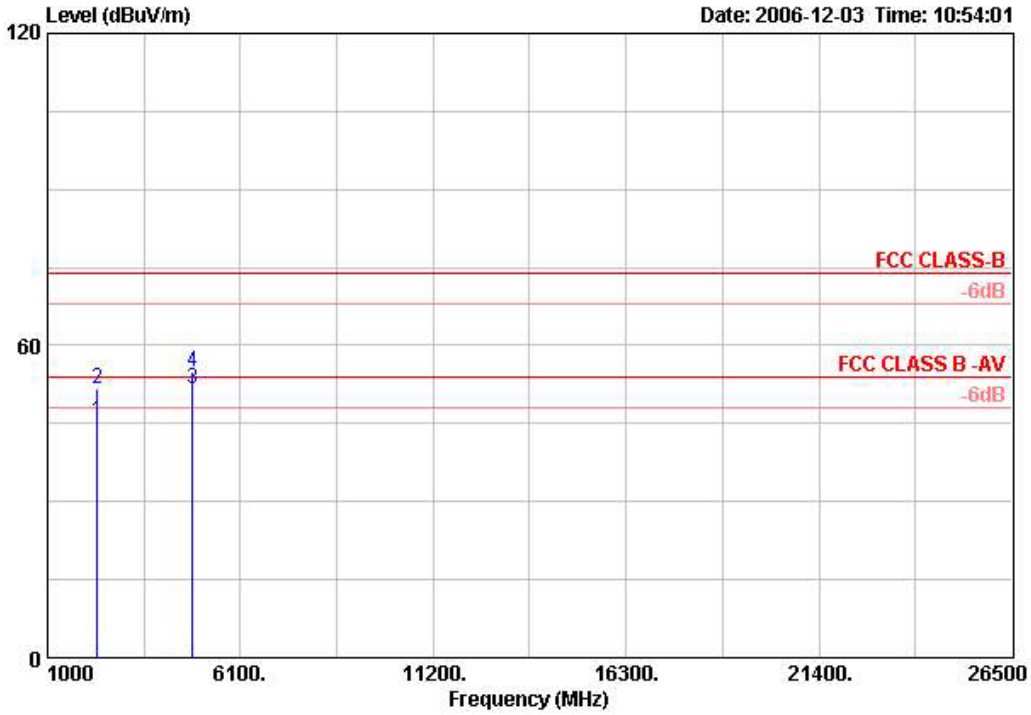
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11b CH 1

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB/m		cm	deg
1	2320.020	40.95	-33.05	74.00	45.28	2.71	35.07	28.02	PEAK	139	48
2	2320.020	32.25	-21.75	54.00	36.59	2.71	35.07	28.02	AVERAGE	139	48
3	4824.000	52.49	-21.51	74.00	50.30	4.30	35.16	33.06	PEAK	113	231
4 *	4824.000	50.47	-3.53	54.00	48.27	4.30	35.16	33.06	AVERAGE	113	231

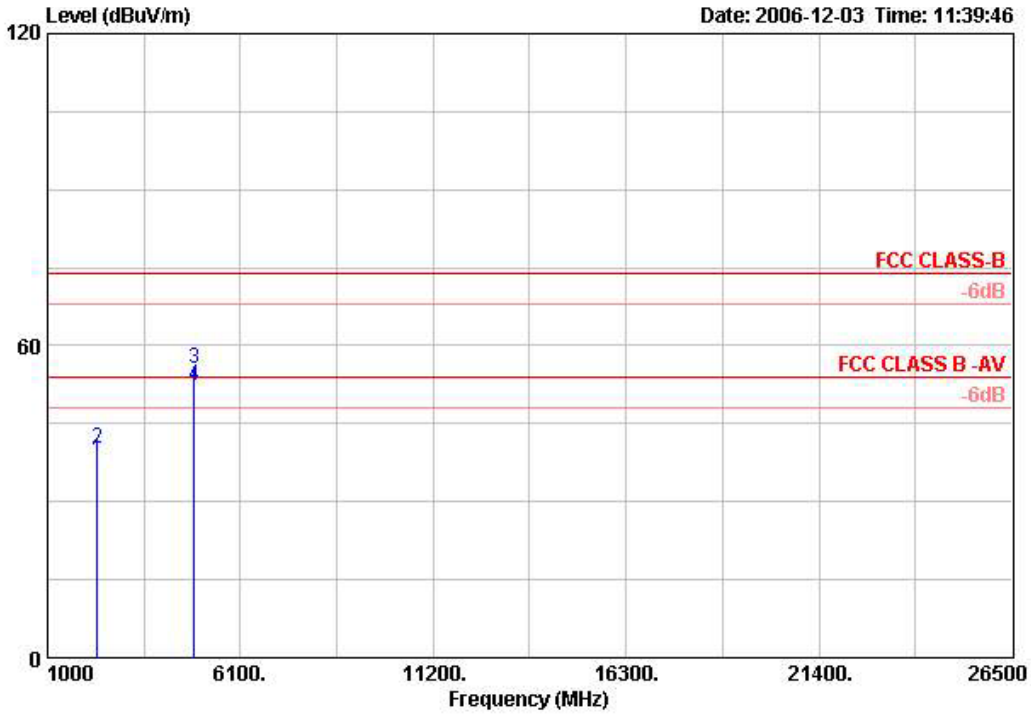
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.020	45.55	-8.45	54.00	49.89	2.71	35.07	AVERAGE	139	248	28.02
2	2320.020	51.70	-22.30	74.00	56.04	2.71	35.07	PEAK	139	248	28.02
3 !	4824.020	51.75	-2.25	54.00	49.56	4.30	35.16	AVERAGE	141	332	33.06
4	4824.020	54.79	-19.21	74.00	52.60	4.30	35.16	PEAK	141	332	33.06

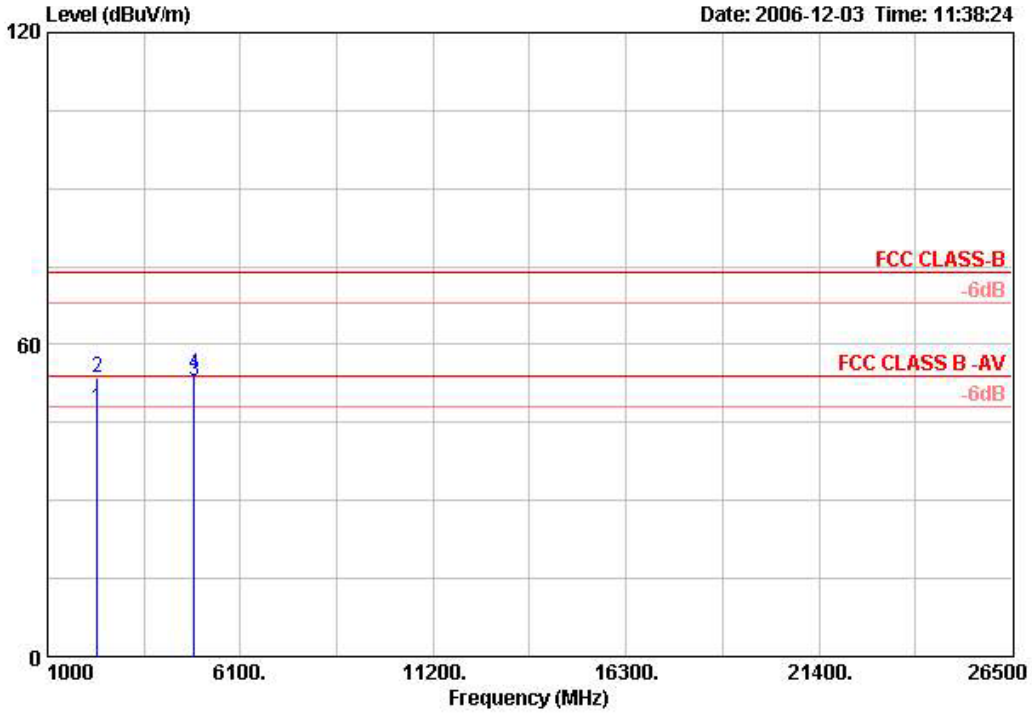
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11b CH 6

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.000	37.97	-16.03	54.00	42.31	2.71	35.07	AVERAGE	126	50	28.02
2	2320.000	40.09	-33.91	74.00	44.43	2.71	35.07	PEAK	126	50	28.02
3	4873.950	55.53	-18.47	74.00	53.22	4.30	35.15	PEAK	125	241	33.16
4 !	4874.060	52.28	-1.72	54.00	49.98	4.30	35.15	AVERAGE	125	241	33.16

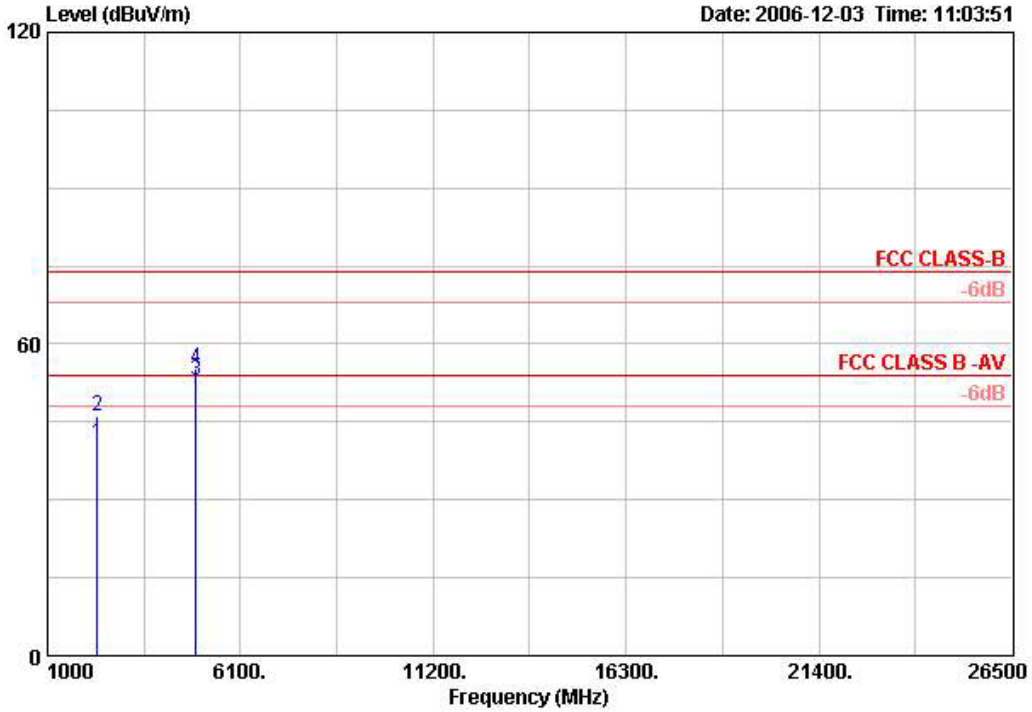
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.000	47.59	-6.41	54.00	51.93	2.71	35.07	AVERAGE	126	228	28.02
2	2320.000	53.63	-20.37	74.00	57.96	2.71	35.07	PEAK	126	228	28.02
3 *	4873.950	53.11	-0.89	54.00	50.80	4.30	35.15	AVERAGE	130	314	33.16
4	4873.950	54.41	-19.59	74.00	52.10	4.30	35.15	PEAK	130	314	33.16

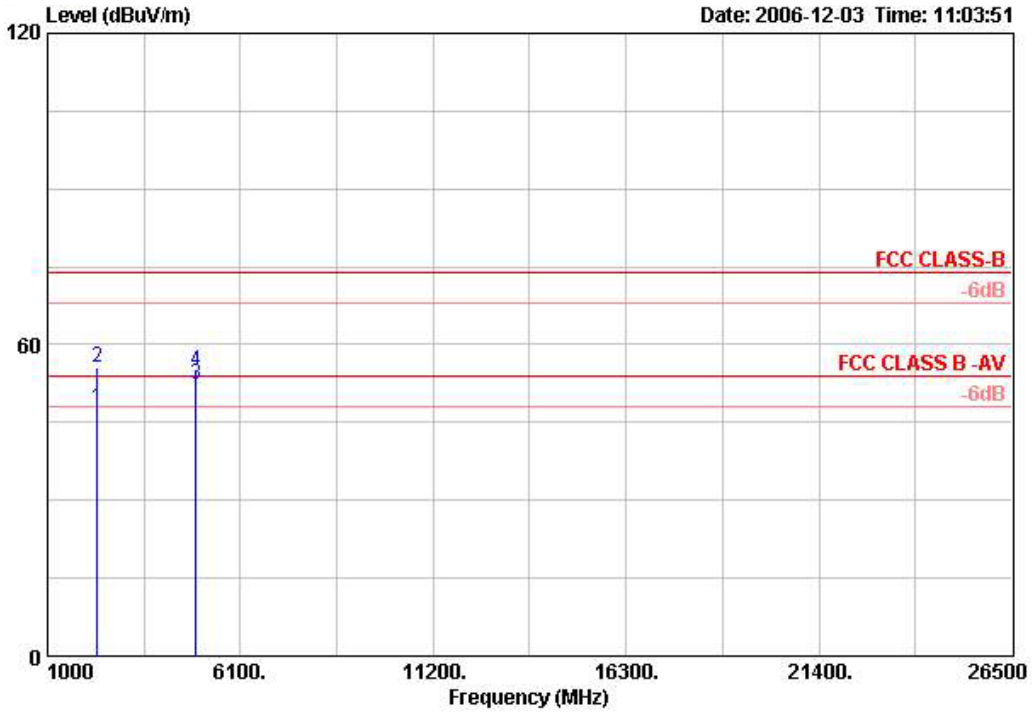
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11b CH 11

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2319.980	40.71	-13.29	54.00	45.04	2.71	35.07	AVERAGE	132	75	28.02
2	2319.980	46.09	-27.91	74.00	50.43	2.71	35.07	PEAK	132	75	28.02
3 *	4923.990	52.82	-1.18	54.00	50.40	4.30	35.14	AVERAGE	134	41	33.26
4	4923.990	55.42	-18.58	74.00	53.00	4.30	35.14	PEAK	134	41	33.26

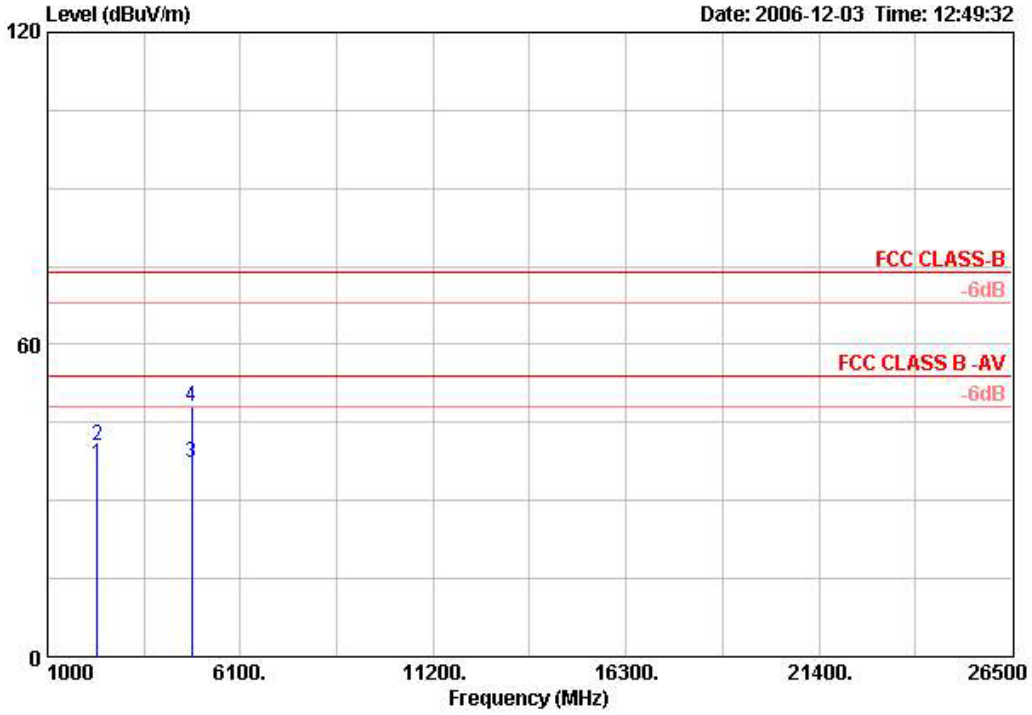
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.000	47.82	-6.18	54.00	52.16	2.71	35.07	AVERAGE	132	215	28.02
2	2320.000	55.45	-18.55	74.00	59.78	2.71	35.07	PEAK	132	215	28.02
3 !	4923.990	52.32	-1.68	54.00	49.90	4.30	35.14	AVERAGE	151	41	33.26
4	4923.990	54.82	-19.18	74.00	52.40	4.30	35.14	PEAK	151	41	33.26

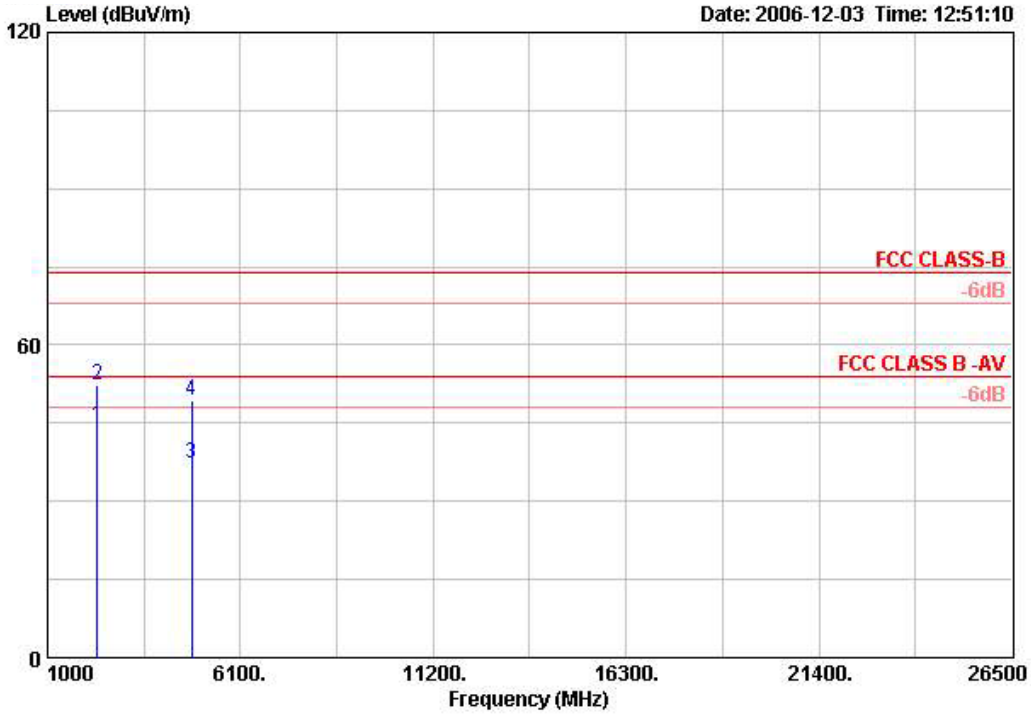
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g CH 1

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.040	36.95	-17.05	54.00	41.29	2.71	35.07	AVERAGE	125	42	28.02
2	2320.040	40.69	-33.31	74.00	45.02	2.71	35.07	PEAK	125	42	28.02
3	4822.200	37.43	-16.57	54.00	35.24	4.30	35.16	AVERAGE	100	236	33.06
4	4822.200	48.00	-26.00	74.00	45.81	4.30	35.16	PEAK	100	236	33.06

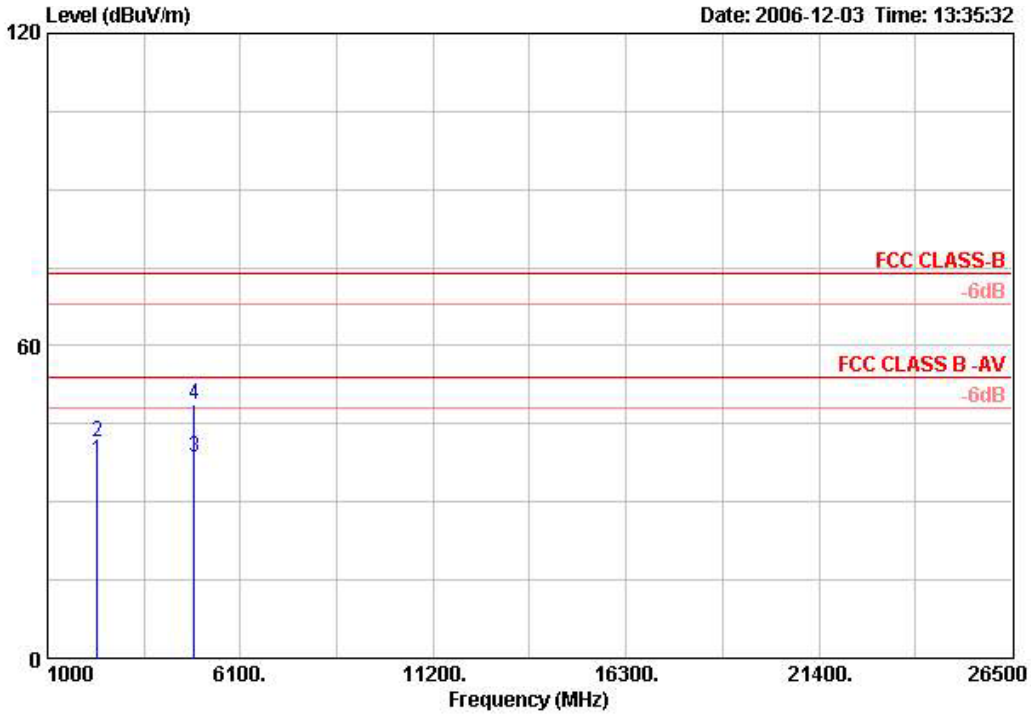
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.040	44.58	-9.42	54.00	48.91	2.71	35.07	AVERAGE	125	324	28.02
2	2320.040	52.42	-21.58	74.00	56.76	2.71	35.07	PEAK	125	324	28.02
3	4822.200	37.16	-16.84	54.00	34.97	4.30	35.16	AVERAGE	102	5	33.06
4	4822.200	49.44	-24.56	74.00	47.25	4.30	35.16	PEAK	102	5	33.06

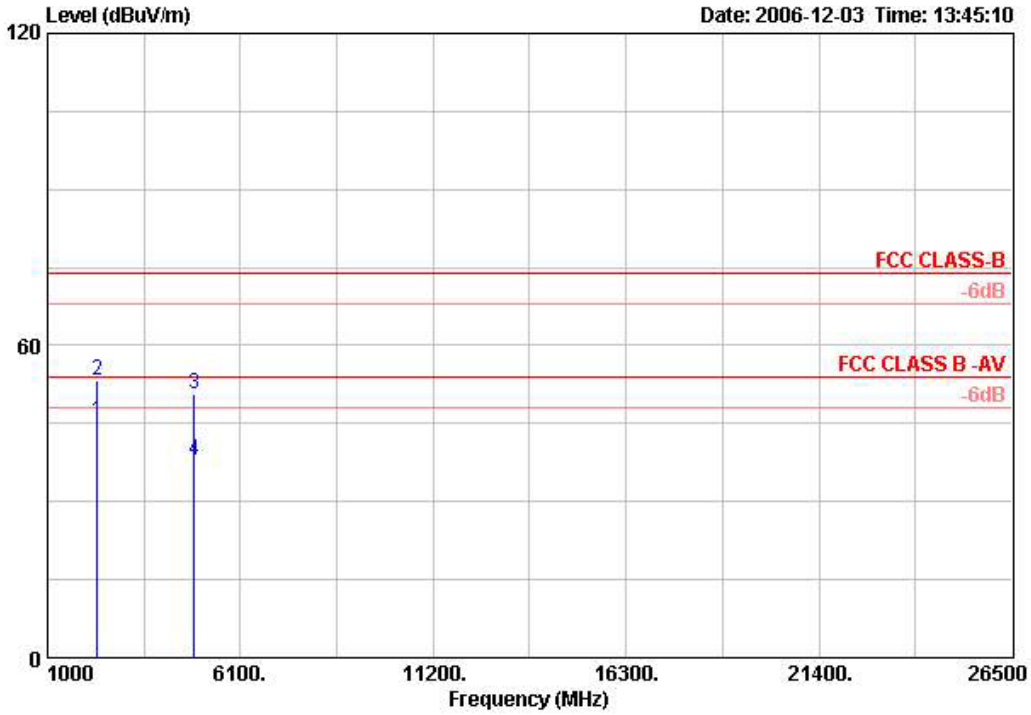
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g CH 6

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2319.970	37.88	-16.12	54.00	42.22	2.71	35.07	AVERAGE	134	33	28.02
2	2319.970	41.66	-32.34	74.00	46.00	2.71	35.07	PEAK	134	33	28.02
3	4872.990	38.44	-15.56	54.00	36.25	4.30	35.16	AVERAGE	100	256	33.06
4	4872.990	48.71	-25.29	74.00	46.52	4.30	35.16	PEAK	100	256	33.06

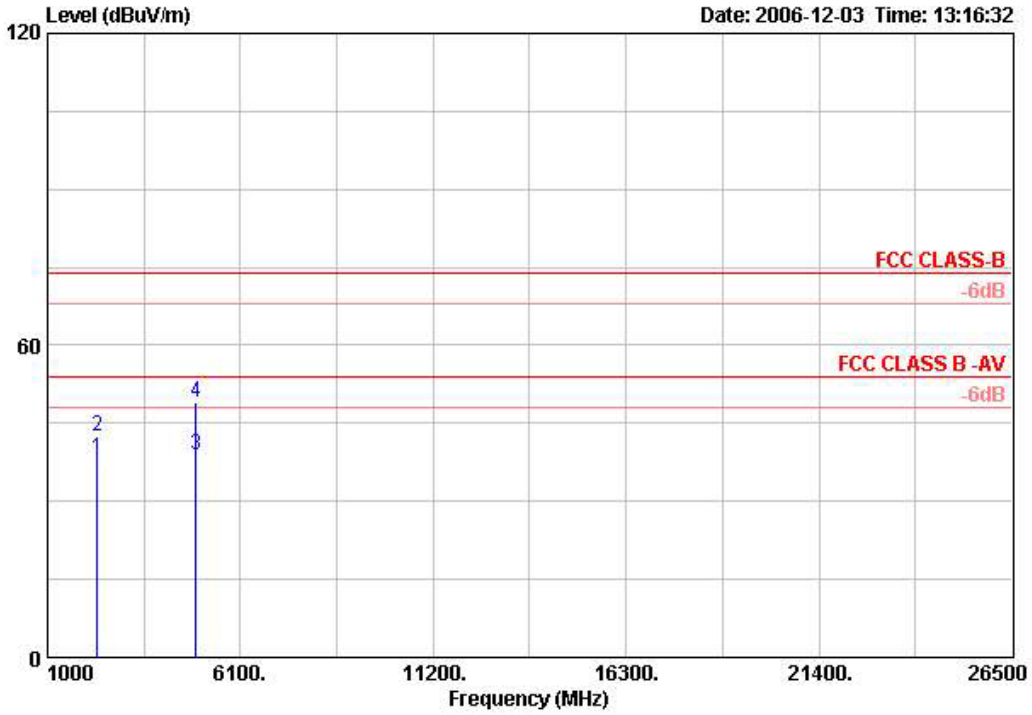
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2319.910	45.53	-8.47	54.00	49.87	2.71	35.07	AVERAGE	138	344	28.02
2	2319.910	53.35	-20.65	74.00	57.69	2.71	35.07	PEAK	138	344	28.02
3	4873.120	50.75	-23.25	74.00	48.56	4.30	35.16	PEAK	100	0	33.06
4	4873.120	37.85	-16.15	54.00	35.66	4.30	35.16	AVERAGE	100	0	33.06

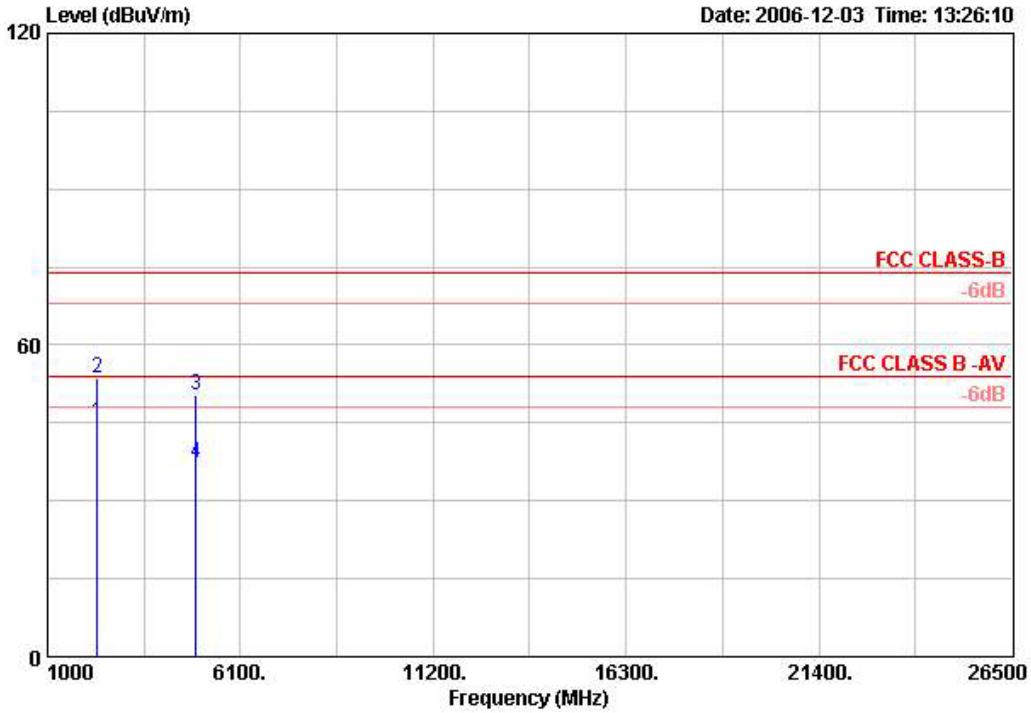
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g CH 11

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.000	38.12	-15.88	54.00	42.46	2.71	35.07	AVERAGE	125	42	28.02
2	2320.000	42.53	-31.47	74.00	46.87	2.71	35.07	PEAK	125	42	28.02
3	4922.690	38.77	-15.23	54.00	36.58	4.30	35.16	AVERAGE	100	236	33.06
4	4922.690	49.14	-24.86	74.00	46.95	4.30	35.16	PEAK	100	236	33.06

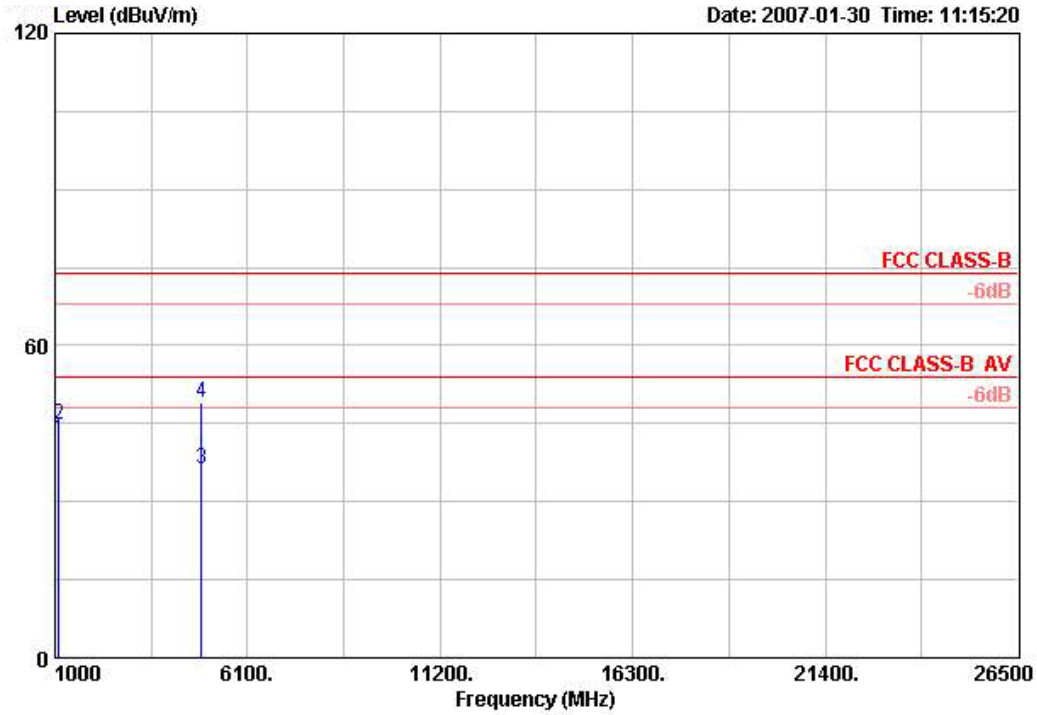
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1	2320.000	45.15	-8.85	54.00	49.49	2.71	35.07	AVERAGE	125	324	28.02
2	2320.000	53.51	-20.49	74.00	57.85	2.71	35.07	PEAK	125	324	28.02
3	4924.000	50.19	-23.81	74.00	48.00	4.30	35.16	PEAK	103	0	33.06
4	4924.500	37.19	-16.81	54.00	35.00	4.30	35.16	AVERAGE	103	0	33.06

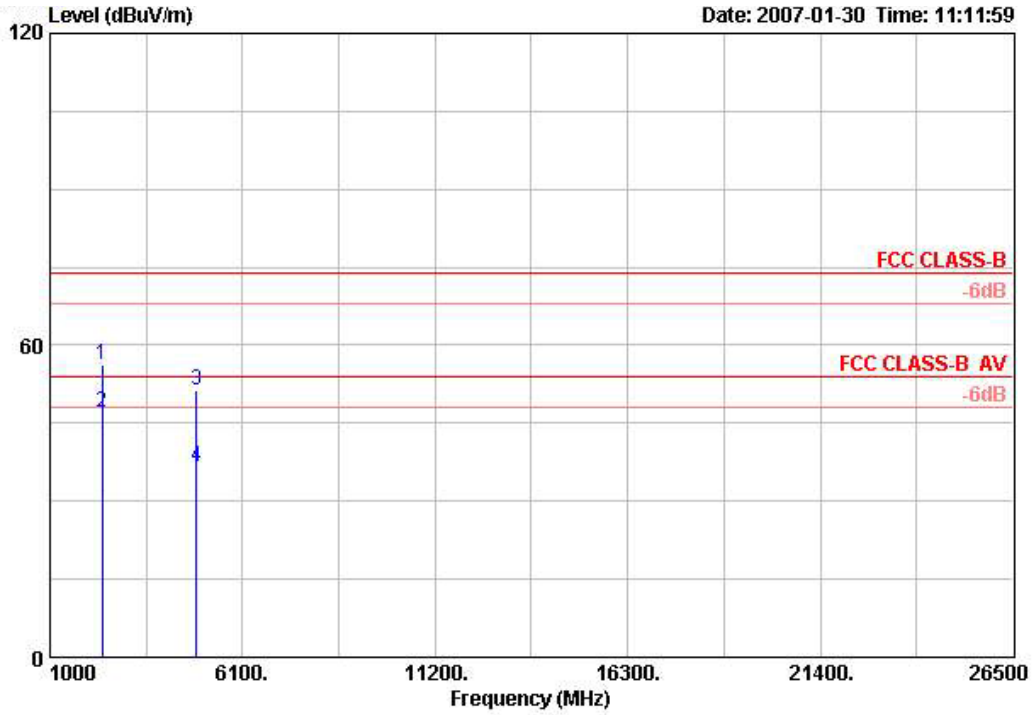
Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g Turbo CH 6

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	1103.980	41.70	-12.30	54.00	47.62	25.38	3.29	34.60	AVERAGE	100	275
2	1104.020	44.83	-29.17	74.00	50.76	25.38	3.29	34.60	PEAK	100	275
3	4874.460	36.28	-17.72	54.00	28.81	33.46	7.24	33.23	AVERAGE	100	0
4	4876.680	49.14	-24.86	74.00	41.67	33.46	7.24	33.23	PEAK	100	0

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2376.000	56.11	-17.89	74.00	55.82	28.82	4.97	33.50	PEAK	100	280
2	2376.320	47.10	-6.90	54.00	46.81	28.82	4.97	33.50	AVERAGE	100	280
3	4872.660	51.43	-22.57	74.00	43.96	33.46	7.24	33.23	PEAK	100	0
4	4875.900	36.72	-17.28	54.00	29.25	33.46	7.24	33.23	AVERAGE	100	0

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6. Band Edge Emissions Measurement

4.6.1. Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz /100 KHz for Peak

4.6.3. Test Procedures

1. The test procedure is the same as section 4.5.3, only the frequency range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

4.6.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

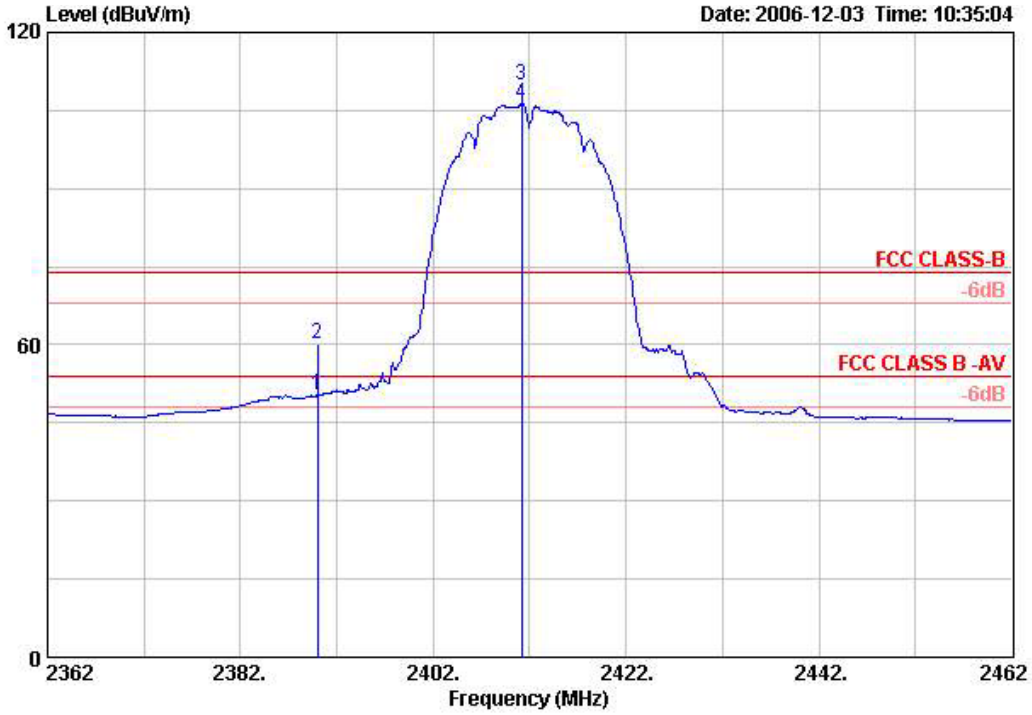
4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

Temperature	25℃	Humidity	63%
Test Engineer	Leo Hung	Configurations	802.11b CH 1, 11

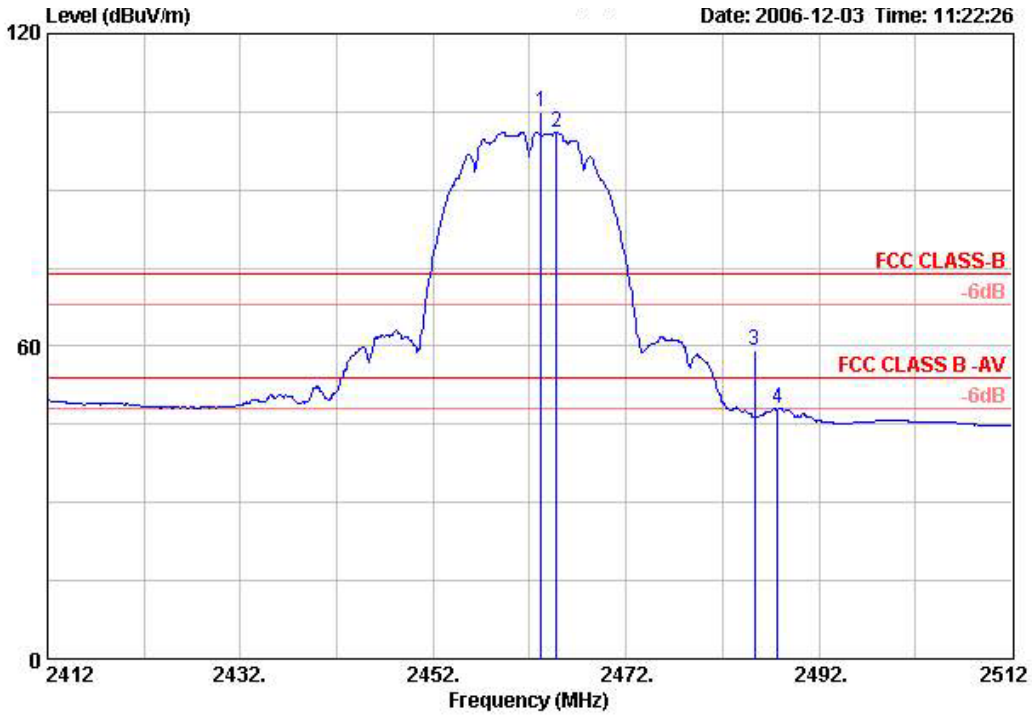
Channel 1



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1 !	2390.000	50.34	-3.66	54.00	19.40	2.76	0.00	AVERAGE	130	8	28.17
2	2390.000	60.17	-13.83	74.00	29.23	2.76	0.00	PEAK	130	8	28.17
3 *	2411.200	109.95			78.95	2.79	0.00	PEAK	130	8	28.21
4 *	2411.200	106.21			75.21	2.79	0.00	AVERAGE	130	8	28.21

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 11

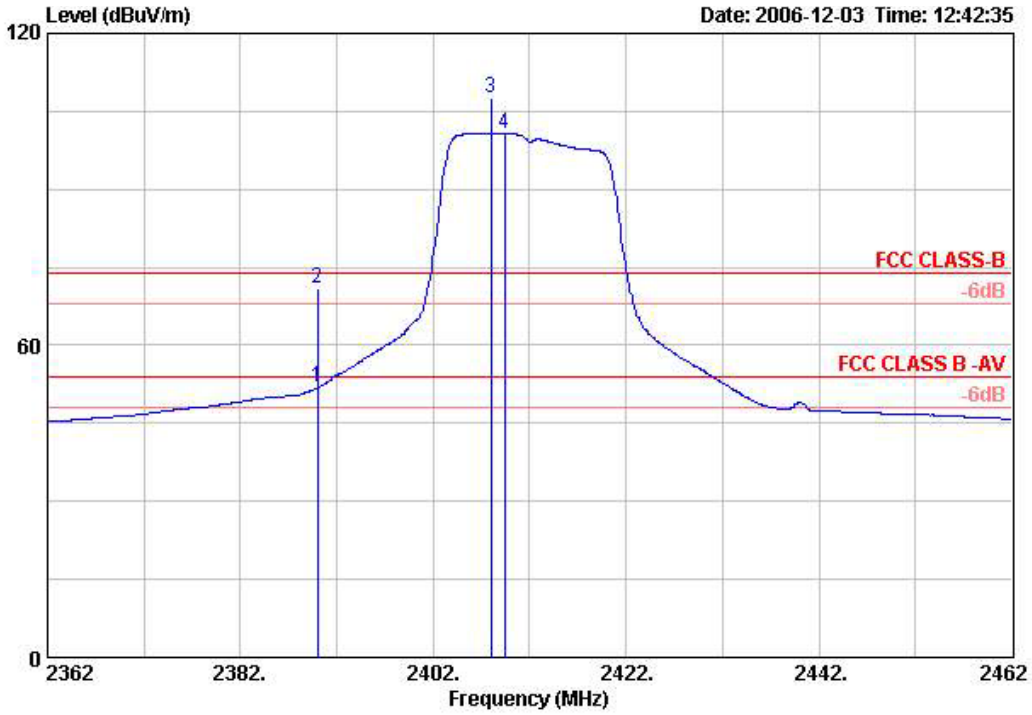


	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1 *	2463.200	104.84			73.70	2.81	0.00	PEAK	132	234	28.32
2 *	2464.800	101.10			69.96	2.81	0.00	AVERAGE	132	234	28.32
3	2485.300	59.19	-14.81	74.00	27.99	2.84	0.00	PEAK	132	234	28.36
4	2487.700	47.91	-6.09	54.00	16.67	2.84	0.00	AVERAGE	132	234	28.40

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25℃	Humidity	63%
Test Engineer	Leo Hung	Configurations	802.11g CH 1, 11

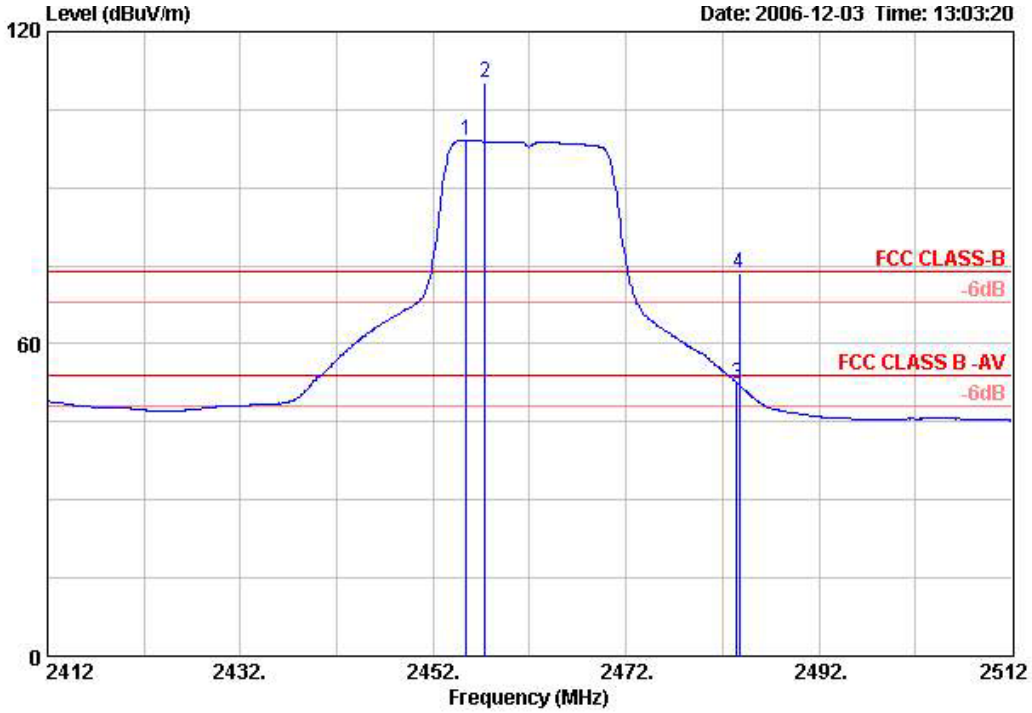
Channel 1



	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1 !	2390.000	51.94	-2.06	54.00	21.00	2.76	0.00	AVERAGE	129	15	28.17
2 !	2390.000	70.97	-3.03	74.00	40.04	2.76	0.00	PEAK	129	15	28.17
3 *	2408.000	107.55			76.55	2.79	0.00	PEAK	129	15	28.21
4 *	2409.400	100.65			69.65	2.79	0.00	AVERAGE	129	15	28.21

Item 3, 4 are the fundamental frequency at 2412 MHz.

Channel 11

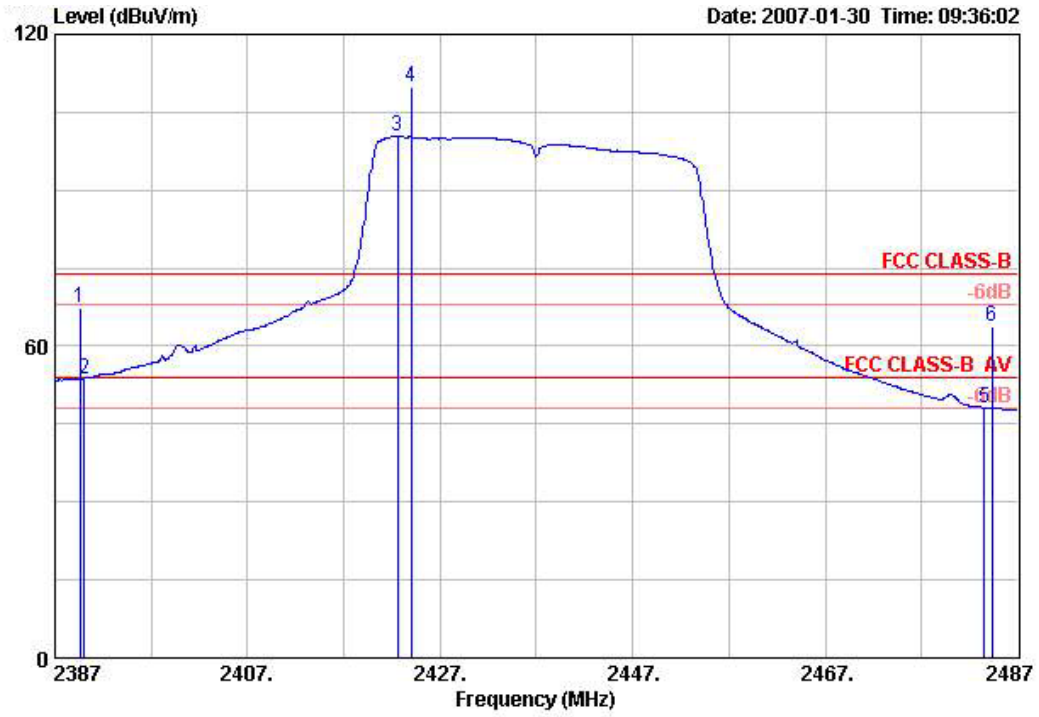


	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Antenna Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	dB/m
1 *	2455.400	99.15			68.01	2.81	0.00	AVERAGE	124	0	28.32
2 *	2457.400	110.17			79.03	2.81	0.00	PEAK	124	0	28.32
3 !	2483.500	52.32	-1.68	54.00	21.12	2.84	0.00	AVERAGE	124	0	28.36
4 *	2483.700	73.73	-0.27	74.00	42.53	2.84	0.00	PEAK	124	0	28.36

Item 1, 2 are the fundamental frequency at 2462 MHz.

Temperature	25℃	Humidity	63%
Test Engineer	Jordan Hsiao	Configurations	802.11g Turbo CH 6

Turbo Channel 6



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2389.600	67.22	-6.78	74.00	33.43	28.82	4.97	0.00	PEAK	100	264
2 @	2390.000	53.75	-0.25	54.00	19.95	28.82	4.98	0.00	AVERAGE	100	264
3 @	2422.600	100.28			66.44	28.81	5.02	0.00	AVERAGE	100	264
4 @	2424.000	109.99			76.15	28.81	5.02	0.00	PEAK	100	264
5 !	2483.500	48.17	-5.83	54.00	14.25	28.80	5.11	0.00	AVERAGE	100	264
6	2484.300	63.64	-10.36	74.00	29.73	28.80	5.11	0.00	PEAK	100	264

Item 3, 4 are the fundamental frequency at 2437 MHz.

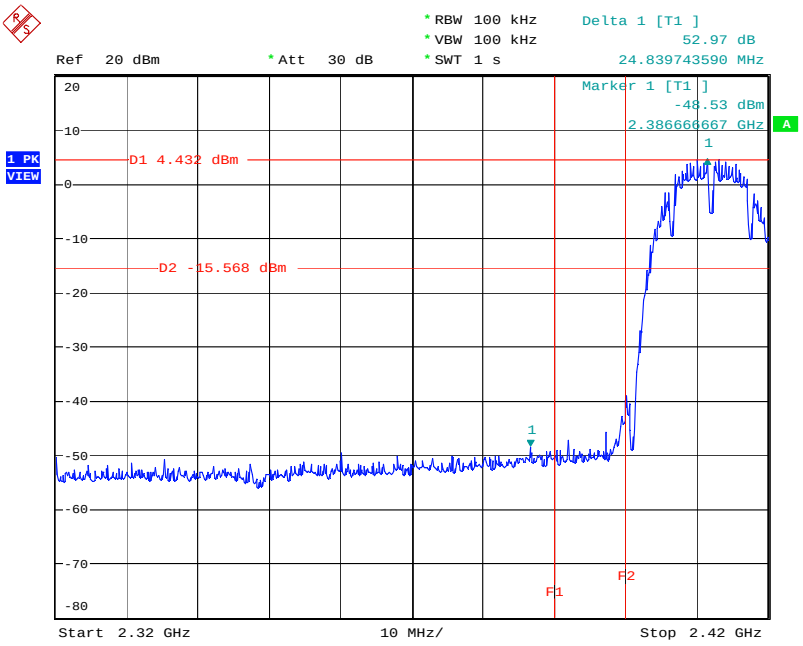
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

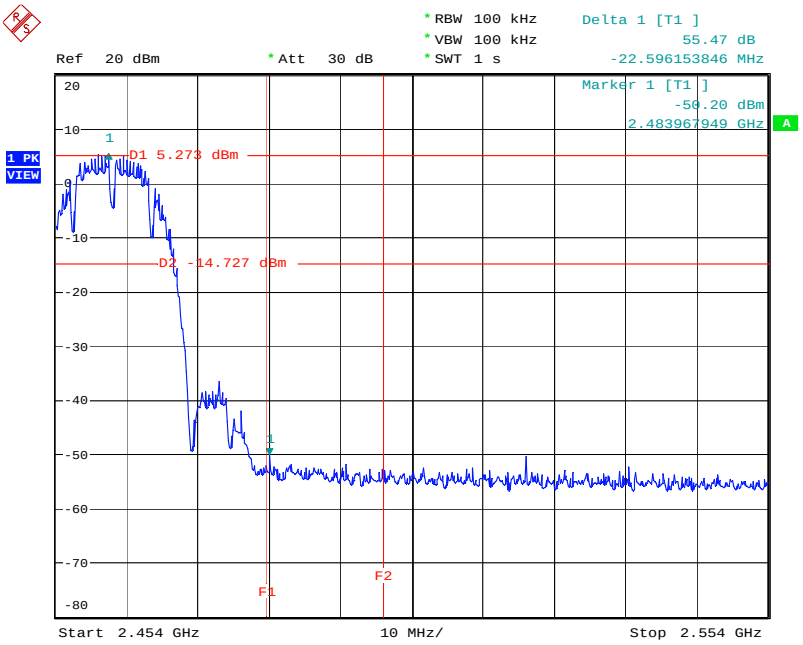
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b / 2412 MHz



Date: 5.DEC.2006 16:11:30

High Band Edge Plot on Configuration IEEE 802.11b / 2462 MHz



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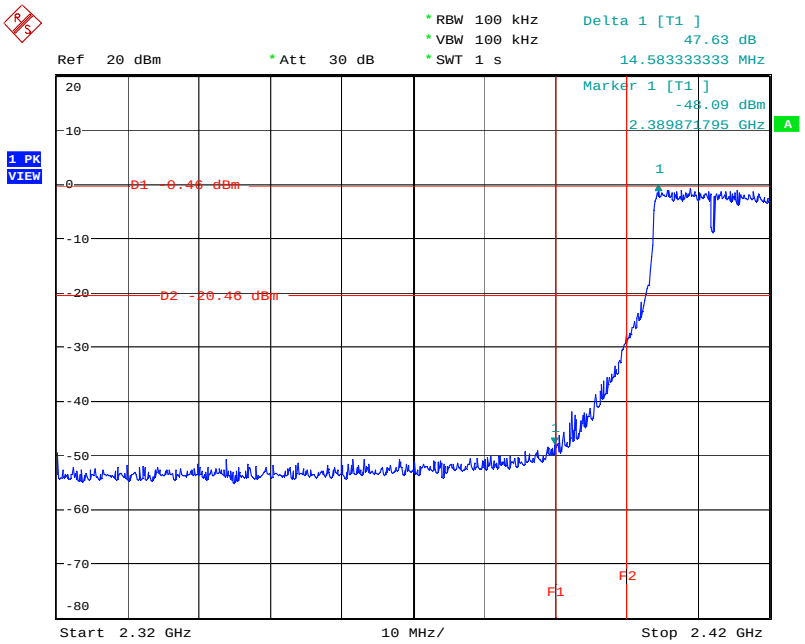
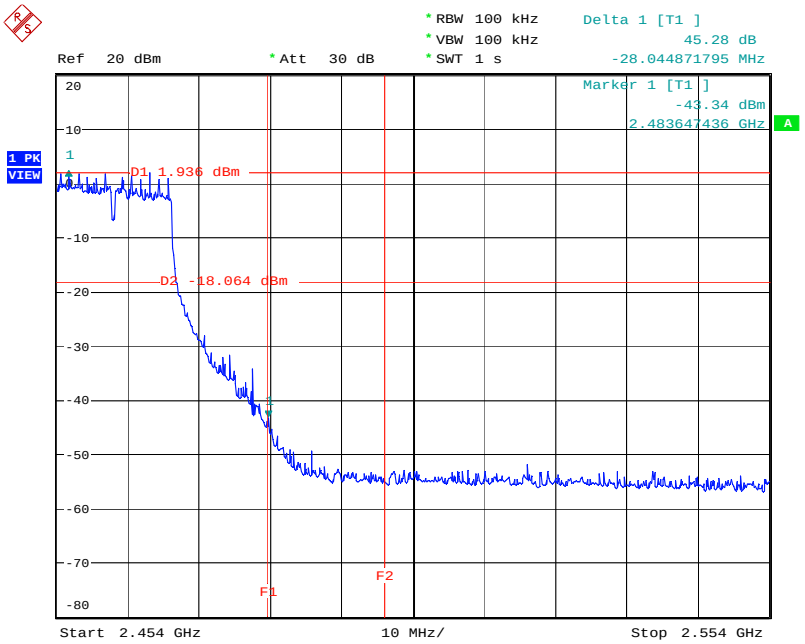
Low Band Edge Plot on Configuration IEEE 802.11g / 2412 MHz



Date: 5.DEC.2006 16:09:15

High Band Edge Plot on Configuration IEEE 802.11g / 2462 MHz



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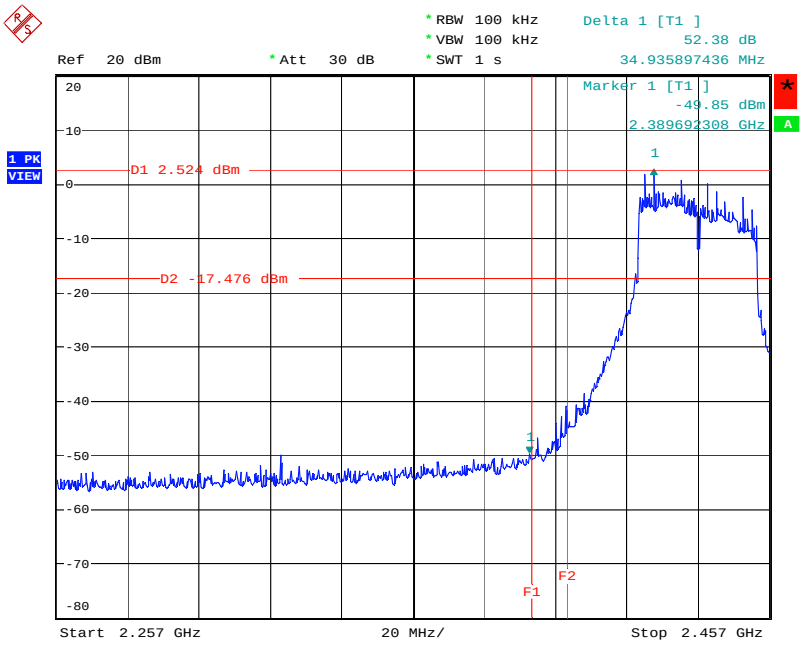
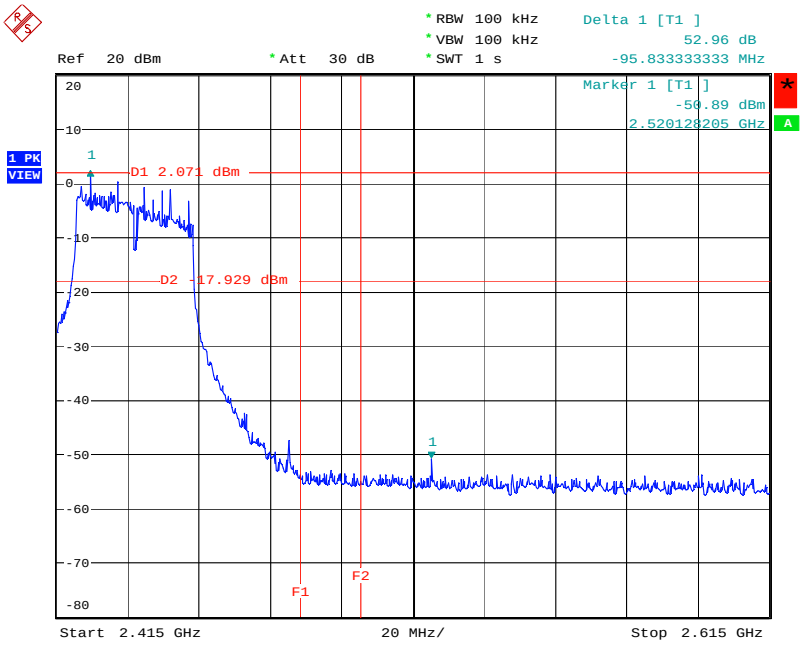
Low Band Edge Plot on Configuration IEEE 802.11g Turbo / 2437 MHz



Date: 30.JAN.2007 11:48:50

High Band Edge Plot on Configuration IEEE 802.11g Turbo/ 2437 MHz



Date: 30.JAN.2007 11:48:59

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Feb. 21, 2006	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 28, 2006	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 17, 2006	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2006	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Mar. 27, 2006	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 15, 2006	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	CPA9231A	3565	9 kHz - 2 GHz	Mar. 14, 2006	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	May 29, 2006	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	923364	26.5 GHz - 40 GHz	Jan. 24, 2006*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100004/040	9 kHz - 40 GHz	Sep. 21, 2006	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2006*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 24, 2006	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	Apr. 27, 2006	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	NCR	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Dec. 02, 2006	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec. 02, 2006	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 – 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023	9kHz ~ 30GHz	Nov. 26, 2006	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100764	DC ~ 40GHz	Jul. 20, 2006	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100666	DC ~ 40GHz	Jul. 20, 2006	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jun. 10, 2006	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	Apr. 21, 2005*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Dec. 28, 2006	Conducted (TH01-HY)
Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Oct. 02, 2006	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 1, 2006	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 1, 2006	Conducted (TH01-HY)
Oscilloscope	Tektronix	TDS1012	CO38515	100MHz / 1GS/s	Jun. 20, 2006	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Dec. 30, 2006	Conducted (TH01-HY)
Data Generator	Tektronix	DG2030	063-2920-50	0.1Hz~400MHz	Jun. 16, 2006	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

Note: *Calibration Interval of instruments listed above is two year.

6. TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	:	886-2-2794-8886
	FAX	:	886-2-2794-9777
JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
	TEL	:	886-3-656-9065
	FAX	:	886-3-656-9085