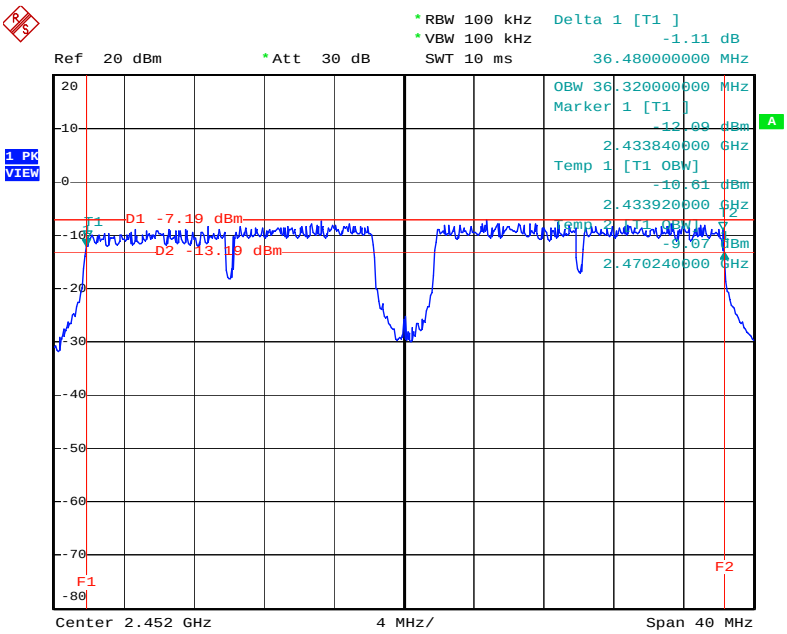
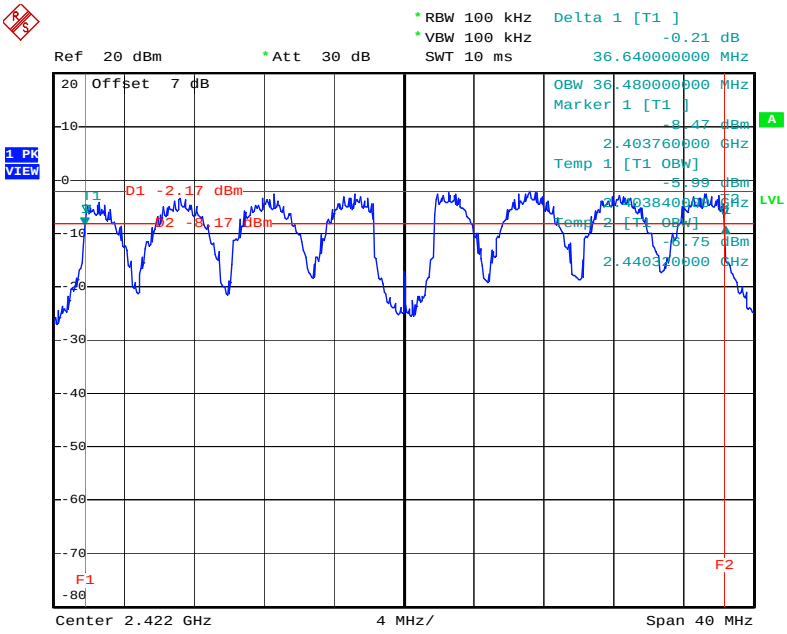
6 dB Bandwidth Plot on Configuration IEEE 802.11g 40MHz Ant. A / 2452 MHz



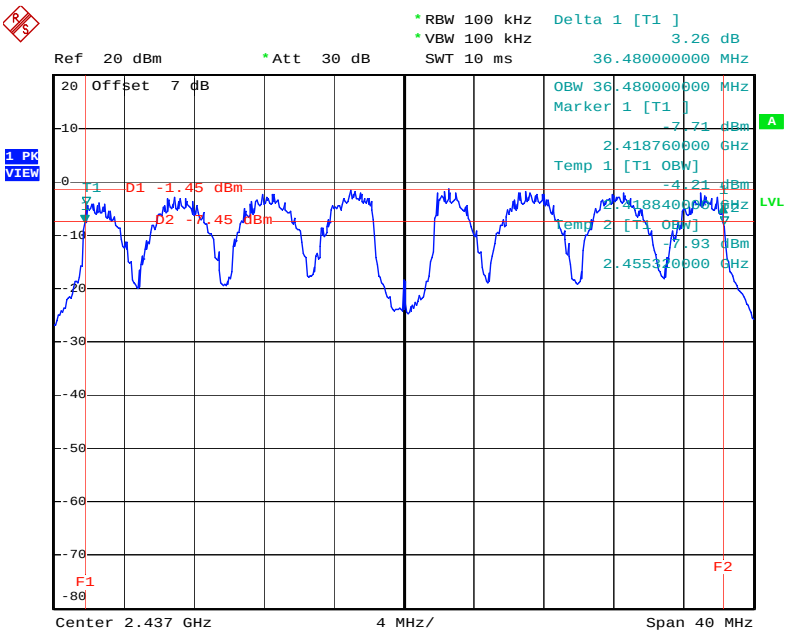
Date: 17.AUG.2006 09:09:54

6 dB Bandwidth Plot on Configuration IEEE 802.11g 40MHz Ant. A + Ant. B / 2422 MHz



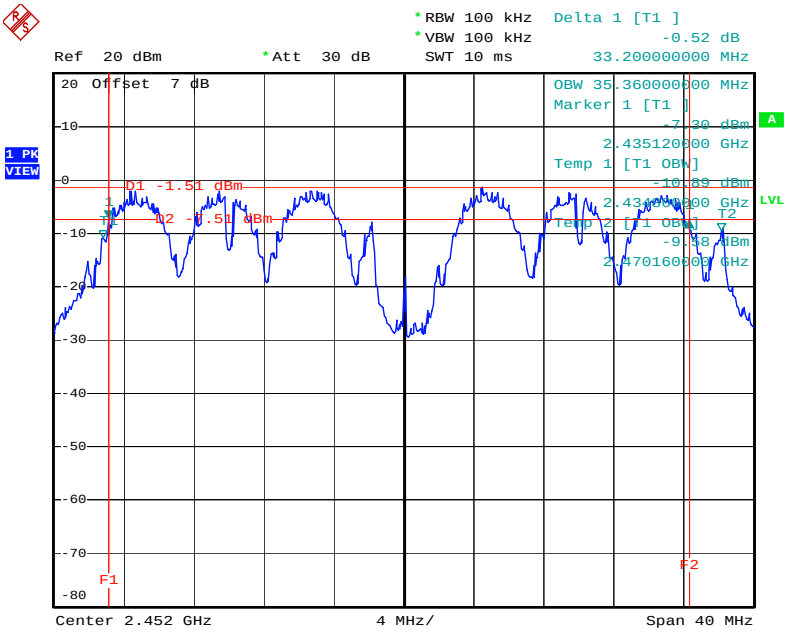
Date: 17.AUG.2006 05:24:16

6 dB Bandwidth Plot on Configuration IEEE 802.11g 40MHz Ant. A + Ant. B / 2437 MHz



Date: 17.AUG.2006 05:37:15

6 dB Bandwidth Plot on Configuration IEEE 802.11g 40MHz Ant. A + Ant. B / 2452 MHz



Date: 17.AUG.2006 05:28:50

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

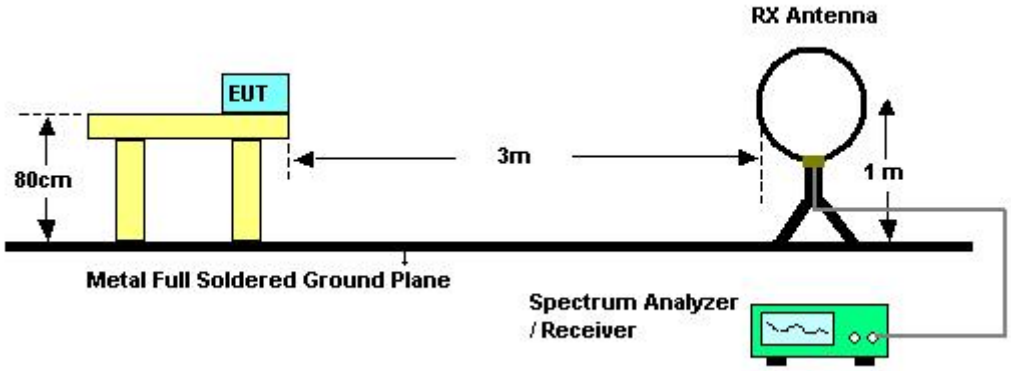
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.5.3. Test Procedures

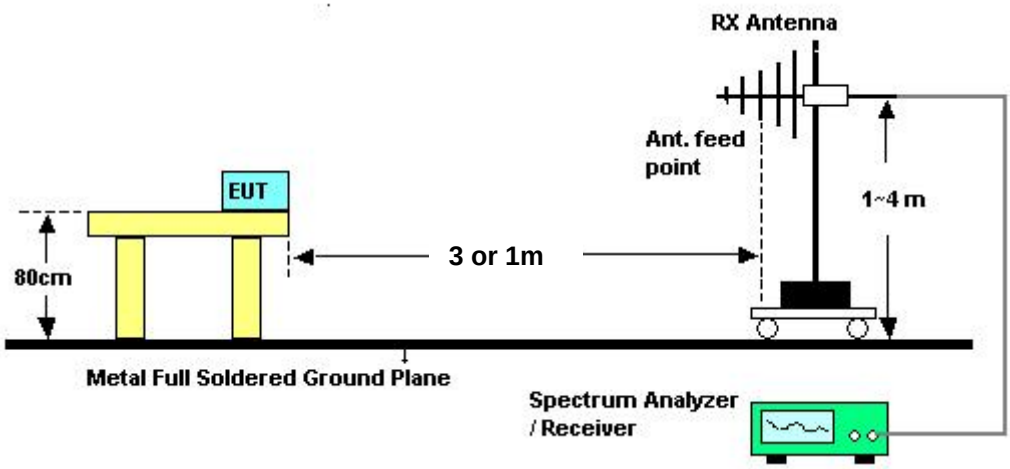
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 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	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 40MHz Channel 6

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

Note:

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

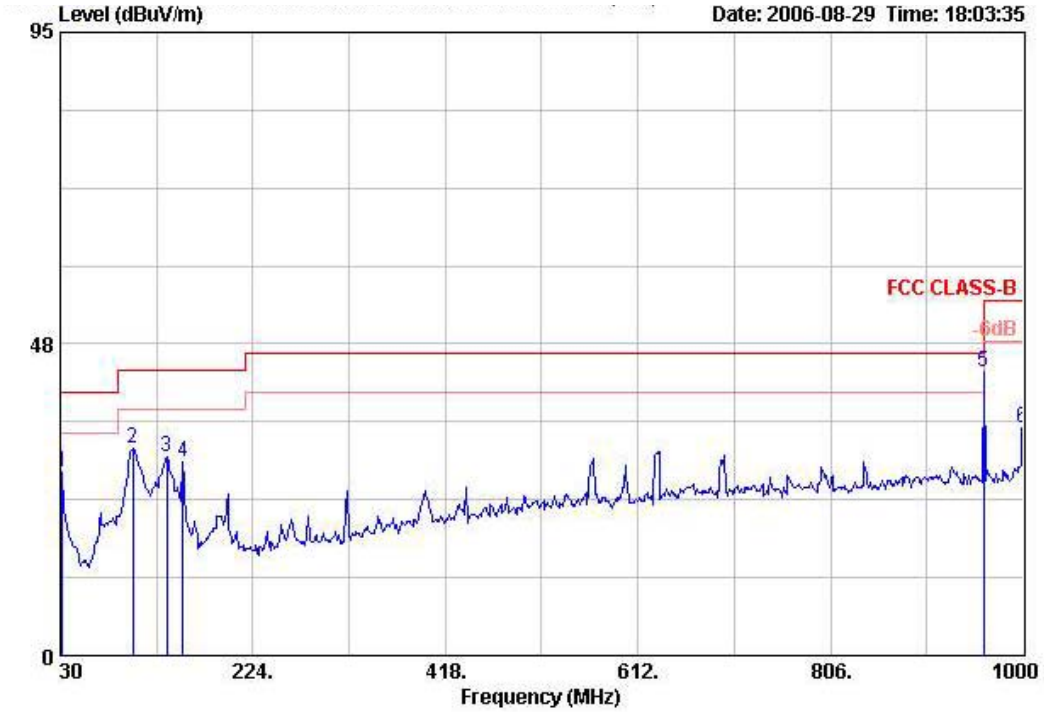
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

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

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

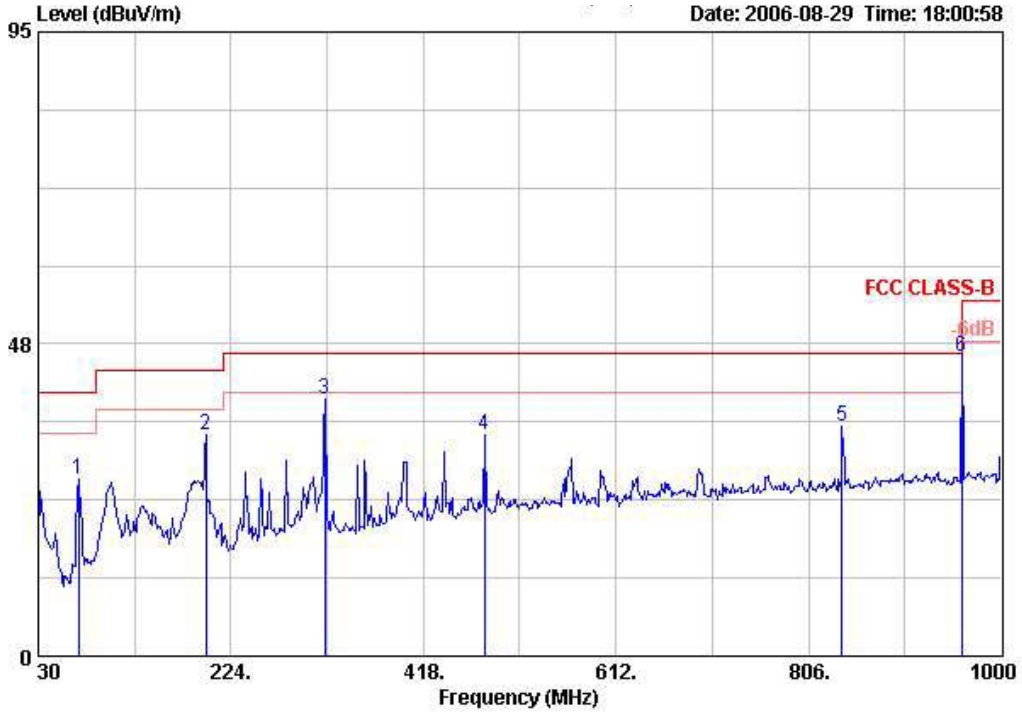
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 40MHz Channel 6 Ant. A

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	28.06	-11.94	40.00	40.15	0.93	31.67	Peak	---	---	18.66
2	102.750	31.54	-11.96	43.50	50.08	1.50	31.72	Peak	---	---	11.68
3	137.670	30.22	-13.28	43.50	48.17	1.70	31.59	Peak	---	---	11.94
4	153.190	29.48	-14.02	43.50	48.09	1.90	31.53	Peak	---	---	11.02
5 !	959.966	43.27	-2.73	46.00	46.90	3.92	29.49	QP	---	---	21.94
6	1000.000	34.63	-19.37	54.00	37.90	4.00	29.37	Peak	---	---	22.10

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	70.740	26.95	-13.05	40.00	50.57	1.43	31.74	Peak	---	---	6.69
2	198.780	33.77	-9.73	43.50	53.08	2.00	31.45	Peak	---	---	10.14
3	319.060	39.10	-6.90	46.00	53.57	2.28	31.29	Peak	---	---	14.54
4	479.110	33.58	-12.42	46.00	43.78	3.13	30.93	Peak	---	---	17.60
5	839.950	34.82	-11.18	46.00	39.81	3.96	30.13	Peak	---	---	21.18
6 @	959.966	45.65	-0.35	46.00	49.28	3.92	29.49	QP	---	---	21.94

Note:

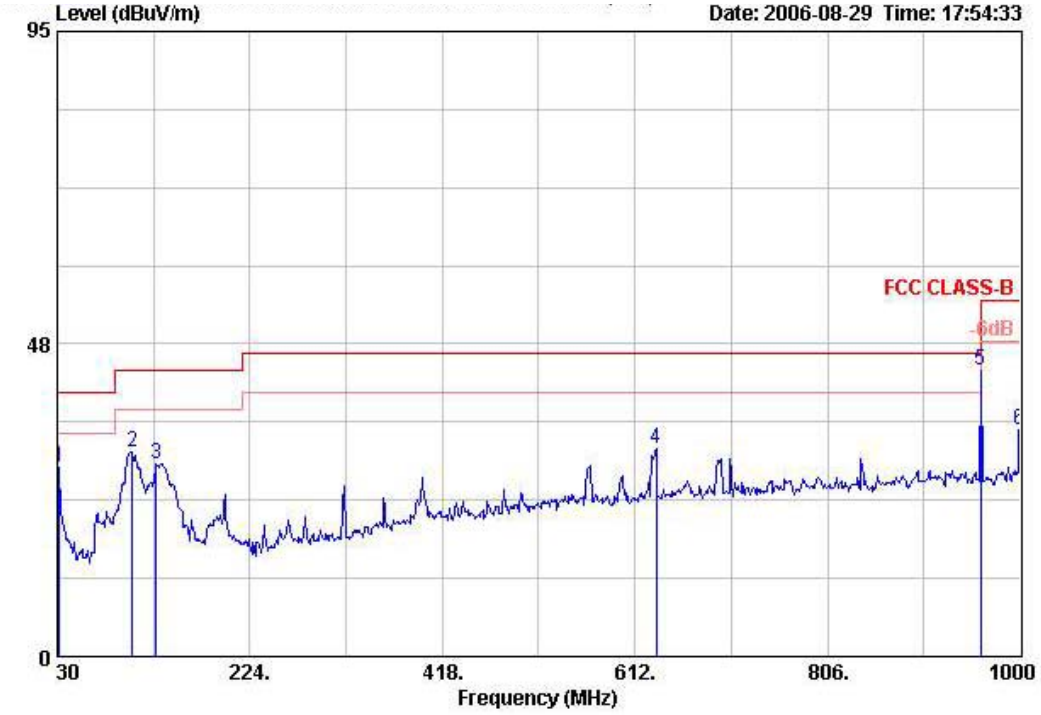
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

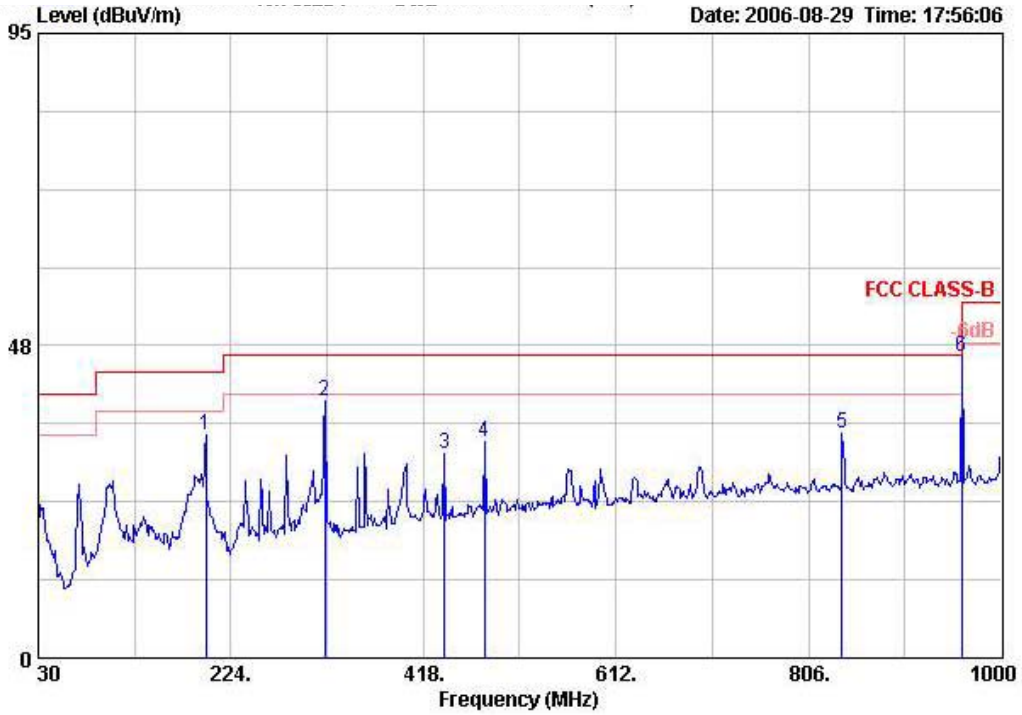
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g Channel 6 Ant. A + Ant. B

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	28.65	-11.35	40.00	40.74	0.93	31.67	Peak	---	---	18.66
2	105.660	31.17	-12.33	43.50	49.23	1.50	31.72	Peak	---	---	12.16
3	129.910	29.31	-14.19	43.50	46.78	1.70	31.67	Peak	---	---	12.50
4	633.340	31.64	-14.36	46.00	39.30	3.36	30.45	Peak	---	---	19.43
5 !	959.966	43.57	-2.43	46.00	47.20	3.92	29.49	QP	---	---	21.94
6	1000.000	34.34	-19.66	54.00	37.61	4.00	29.37	Peak	---	---	22.10

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	198.780	33.97	-9.53	43.50	53.28	2.00	31.45	Peak	---	---	10.14
2	319.060	39.18	-6.82	46.00	53.65	2.28	31.29	Peak	---	---	14.54
3	439.340	31.19	-14.81	46.00	42.20	2.86	30.94	Peak	---	---	17.07
4	479.110	32.93	-13.07	46.00	43.12	3.13	30.93	Peak	---	---	17.60
5	839.950	34.28	-11.72	46.00	39.27	3.96	30.13	Peak	---	---	21.18
6	960.230	45.72	-8.28	54.00	49.35	3.92	29.49	Peak	---	---	21.94

Note:

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

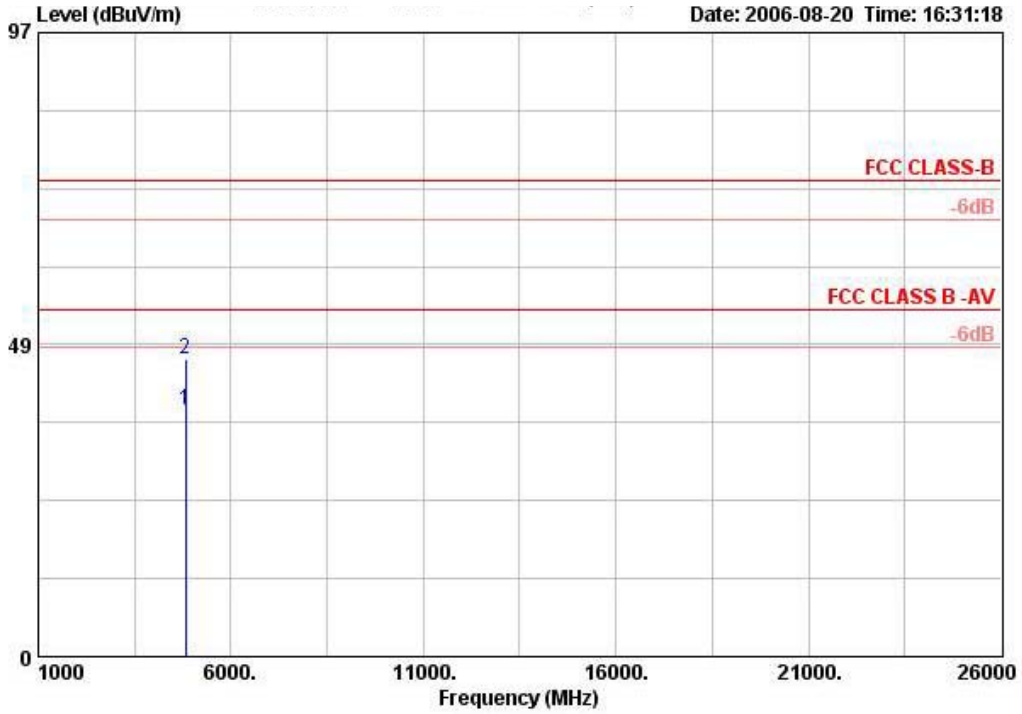
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

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

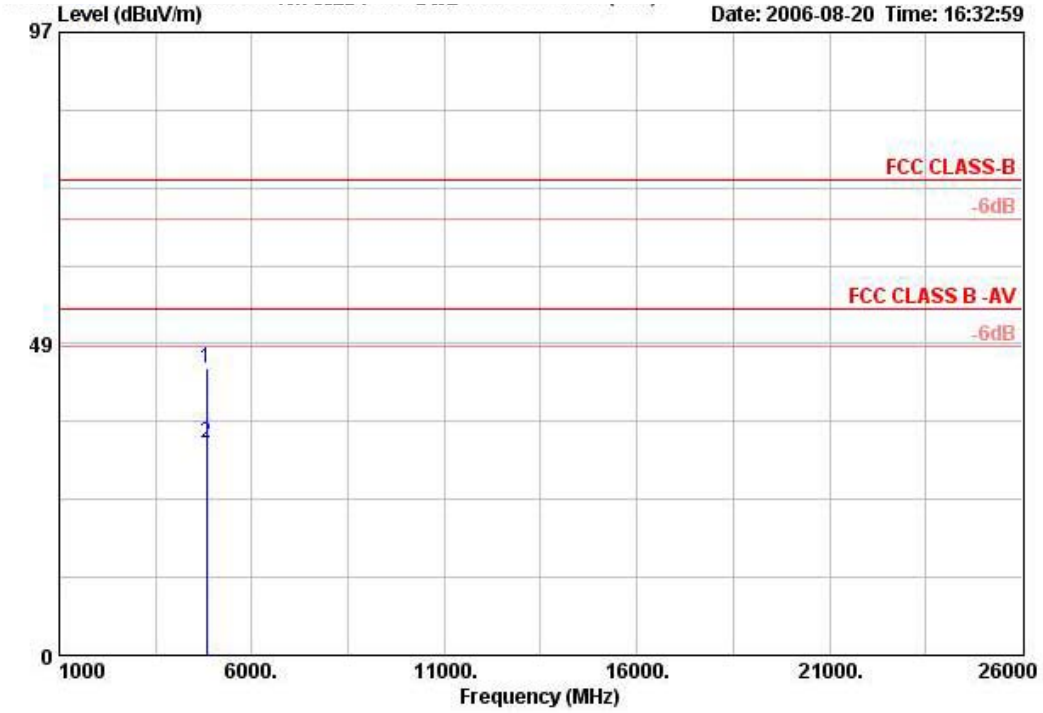
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 1 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4824.090	38.29	-15.71	54.00	35.94	33.22	4.30	35.16	AVERAGE	VERTICAL	3
2	4824.090	46.13	-27.87	74.00	43.78	33.22	4.30	35.16	PEAK	VERTICAL	3

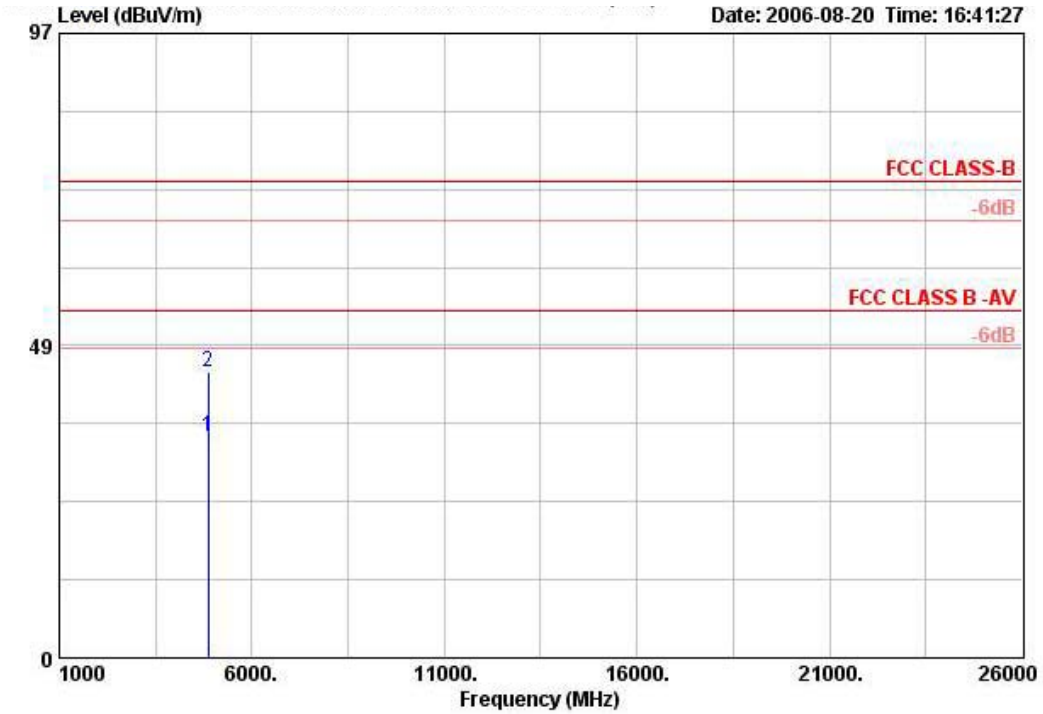
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4822.610	44.60	-29.40	74.00	42.25	33.22	4.30	35.16	PEAK	HORIZONTAL	3
2	4824.220	33.11	-20.89	54.00	30.76	33.22	4.30	35.16	AVERAGE	HORIZONTAL	3

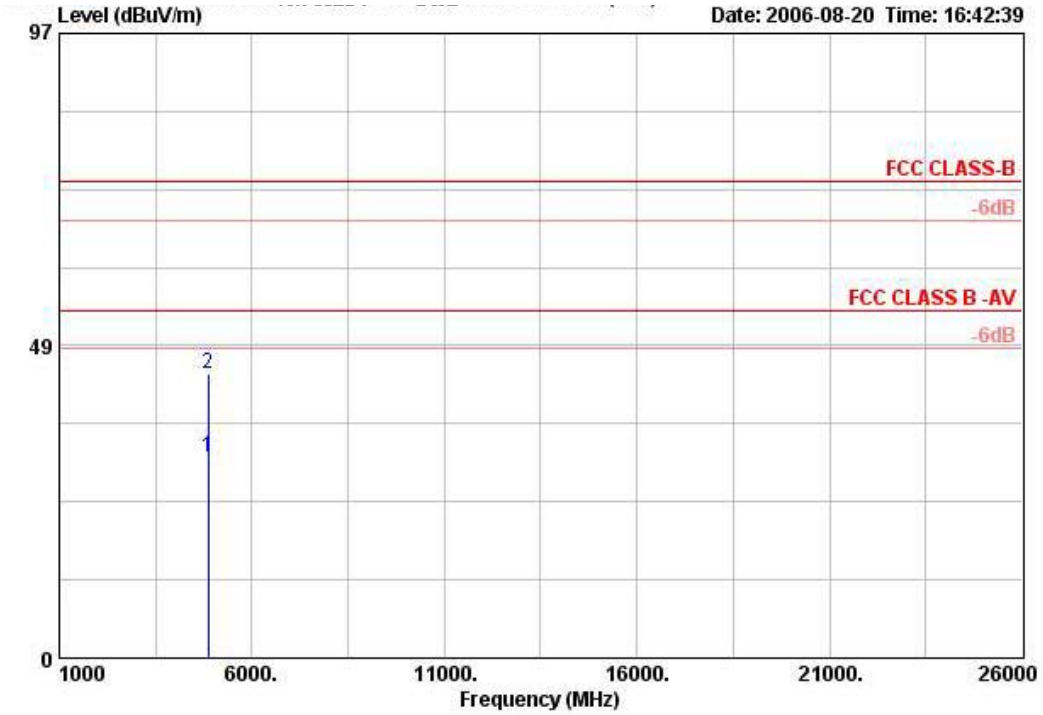
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 6 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4874.140	34.37	-19.63	54.00	31.86	33.36	4.30	35.15	AVERAGE	VERTICAL	3
2	4874.140	44.29	-29.71	74.00	41.78	33.36	4.30	35.15	PEAK	VERTICAL	3

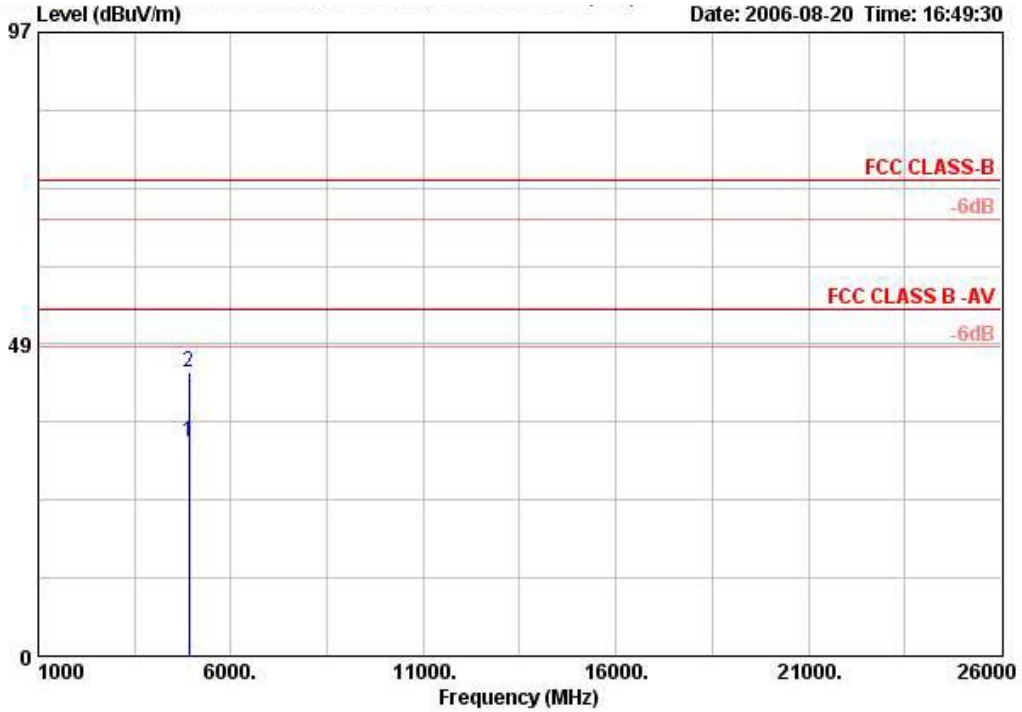
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4874.900	31.28	-22.72	54.00	28.77	33.36	4.30	35.15	AVERAGE	HORIZONTAL	3
2	4876.460	44.13	-29.87	74.00	41.62	33.36	4.30	35.15	PEAK	HORIZONTAL	3

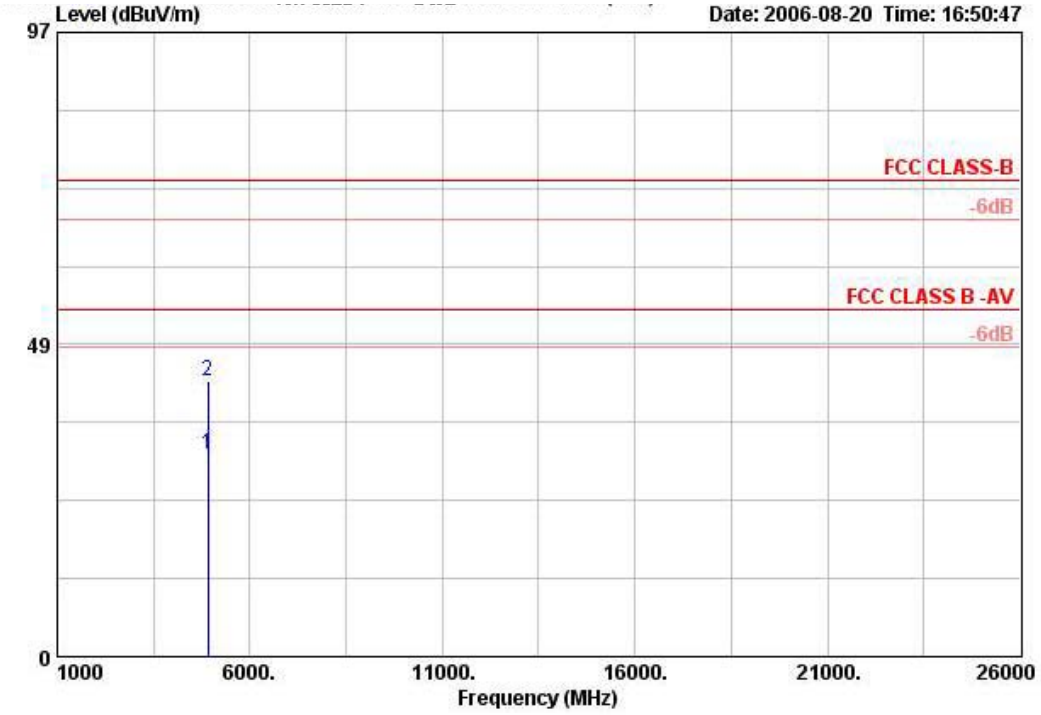
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 11 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4923.920	33.21	-20.79	54.00	30.55	33.51	4.30	35.14	AVERAGE	VERTICAL	3
2	4923.920	44.21	-29.79	74.00	41.54	33.51	4.30	35.14	PEAK	VERTICAL	3

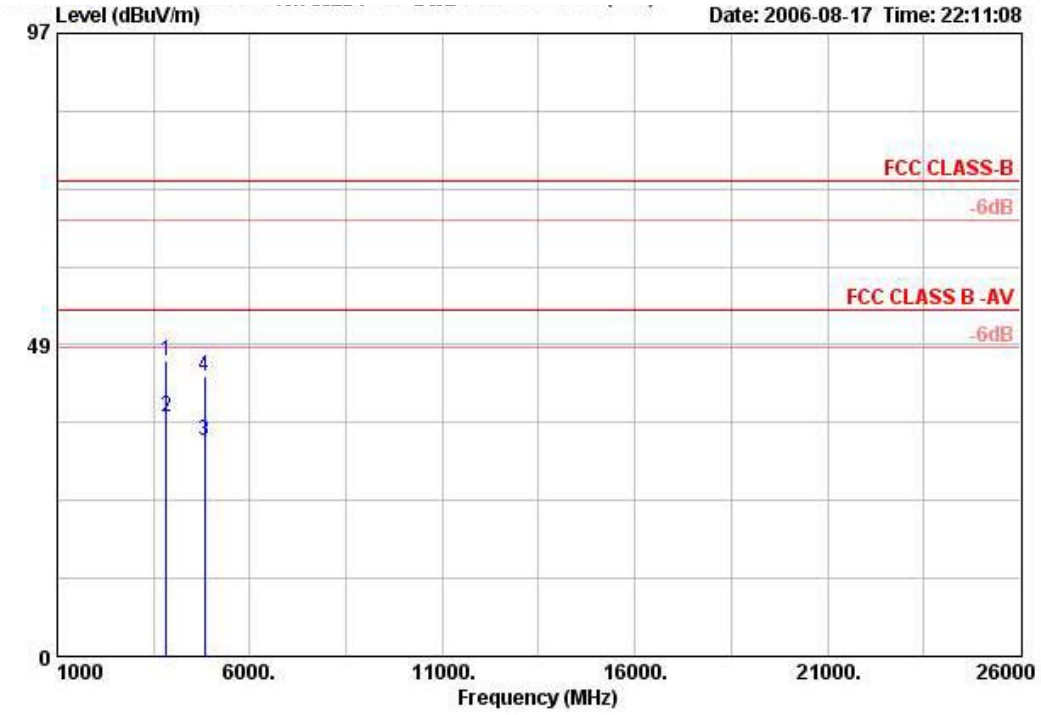
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4923.920	31.58	-22.42	54.00	28.92	33.51	4.30	35.14	AVERAGE	HORIZONTAL	3
2	4923.920	42.82	-31.18	74.00	40.16	33.51	4.30	35.14	PEAK	HORIZONTAL	3

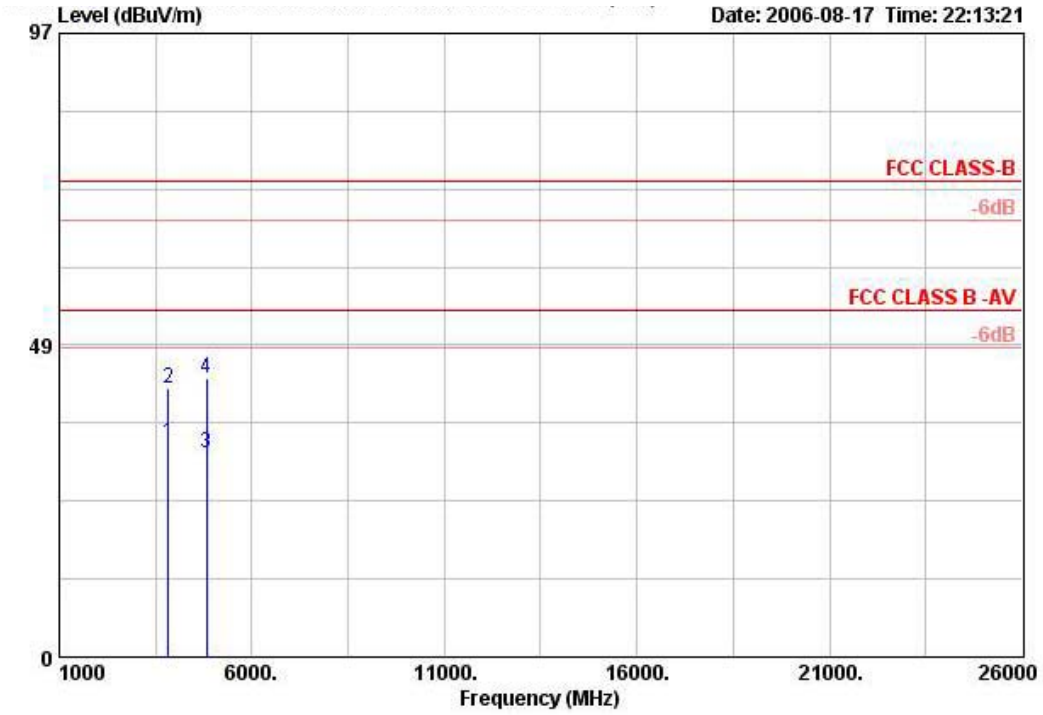
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 1 Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3839.980	45.87	-28.13	74.00	46.67	30.71	3.52	35.03	PEAK	VERTICAL	3
2	3840.100	37.23	-16.77	54.00	38.03	30.71	3.52	35.03	AVERAGE	VERTICAL	3
3	4824.000	33.45	-20.55	54.00	31.10	33.22	4.30	35.16	AVERAGE	VERTICAL	3
4	4824.000	43.48	-30.52	74.00	41.13	33.22	4.30	35.16	PEAK	VERTICAL	3

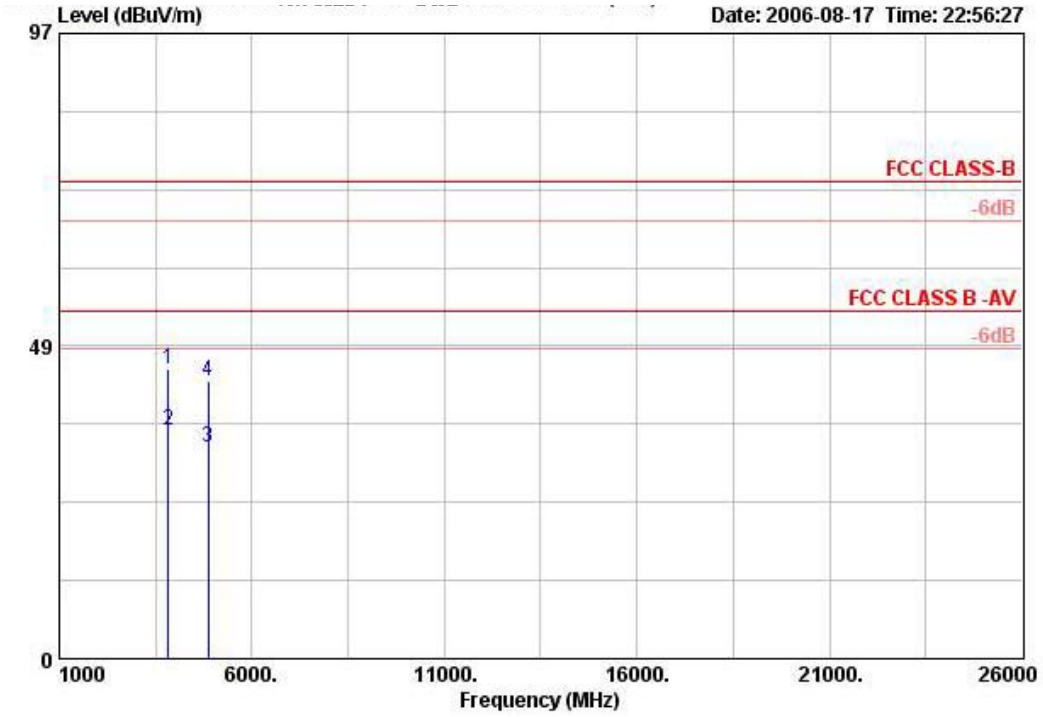
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.000	33.19	-20.81	54.00	33.98	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
2	3840.000	41.69	-32.31	74.00	42.48	30.71	3.52	35.03	PEAK	HORIZONTAL	3
3	4824.000	31.79	-22.21	54.00	29.44	33.22	4.30	35.16	AVERAGE	HORIZONTAL	3
4	4824.000	43.33	-30.67	74.00	40.98	33.22	4.30	35.16	PEAK	HORIZONTAL	3

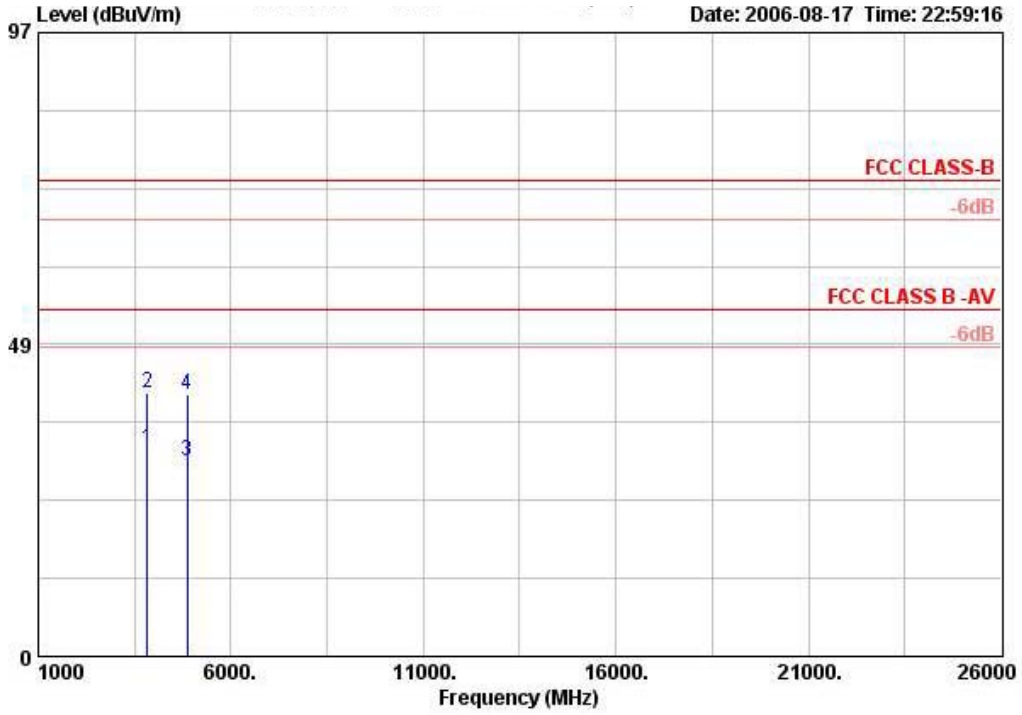
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 6 Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.030	44.96	-29.04	74.00	45.76	30.71	3.52	35.03	PEAK	VERTICAL	3
2	3840.130	35.38	-18.62	54.00	36.17	30.71	3.52	35.03	AVERAGE	VERTICAL	3
3	4874.040	32.86	-21.14	54.00	30.35	33.36	4.30	35.15	AVERAGE	VERTICAL	3
4	4874.040	43.00	-31.00	74.00	40.50	33.36	4.30	35.15	PEAK	VERTICAL	3

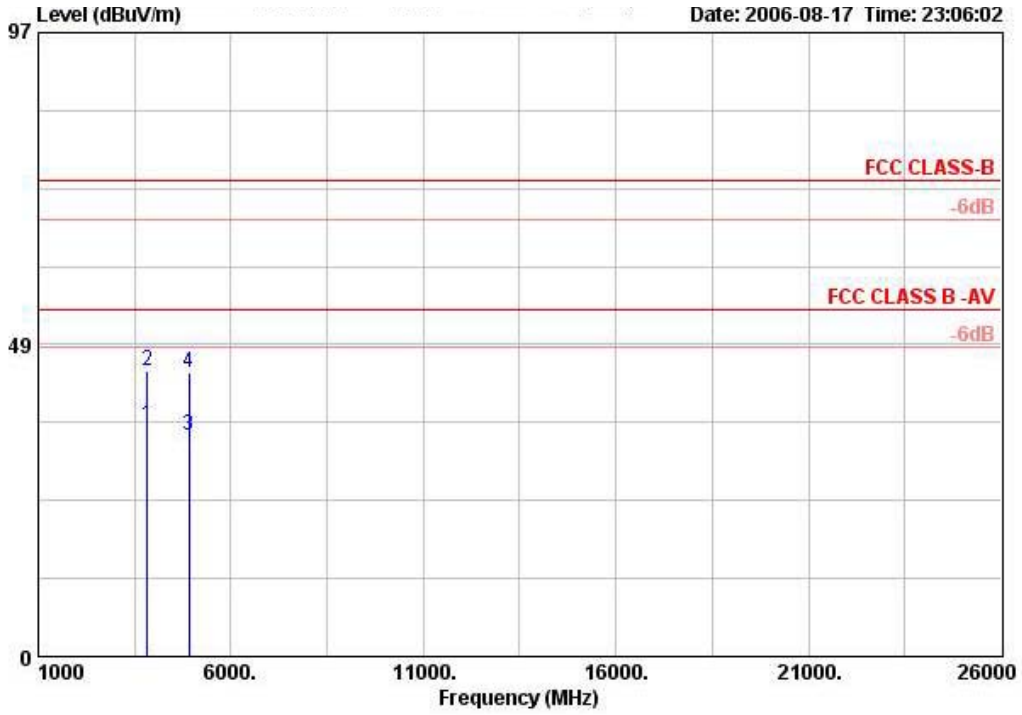
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.120	32.22	-21.78	54.00	33.02	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
2	3840.120	41.01	-32.99	74.00	41.81	30.71	3.52	35.03	PEAK	HORIZONTAL	3
3	4874.040	30.41	-23.59	54.00	27.90	33.36	4.30	35.15	AVERAGE	HORIZONTAL	3
4	4874.040	40.63	-33.37	74.00	38.12	33.36	4.30	35.15	PEAK	HORIZONTAL	3

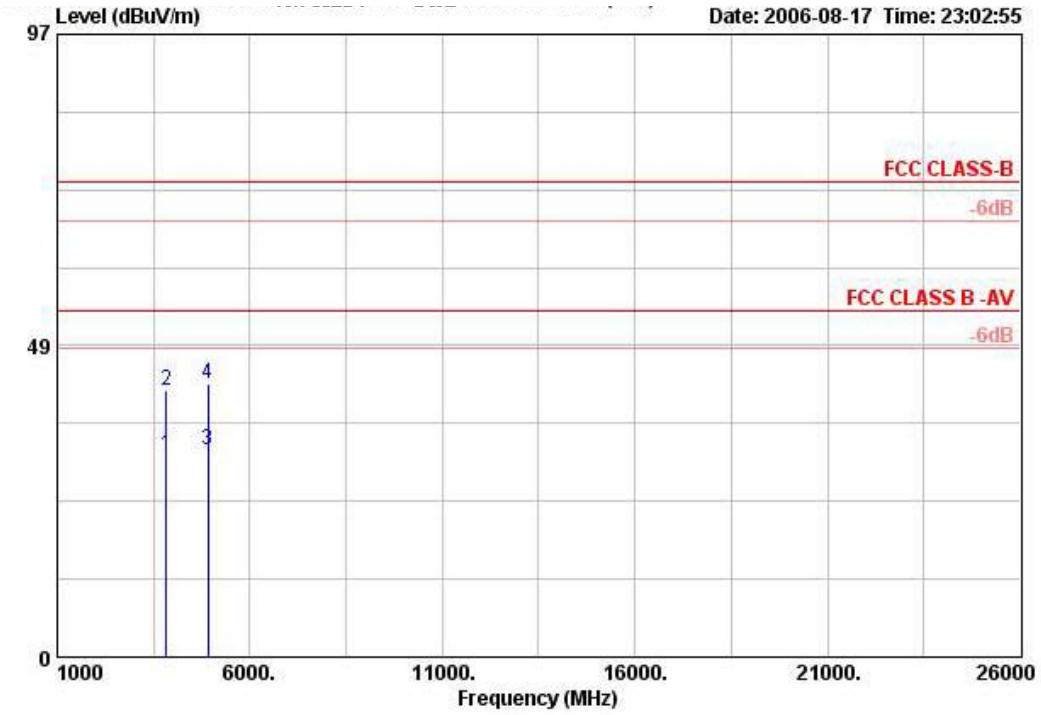
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 20MHz Channel 11 Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.040	35.82	-18.18	54.00	36.62	30.71	3.52	35.03	AVERAGE	VERTICAL	3
2	3840.040	44.28	-29.72	74.00	45.08	30.71	3.52	35.03	PEAK	VERTICAL	3
3	4924.020	34.23	-19.77	54.00	31.57	33.51	4.30	35.14	AVERAGE	VERTICAL	3
4	4924.020	44.24	-29.76	74.00	41.57	33.51	4.30	35.14	PEAK	VERTICAL	3

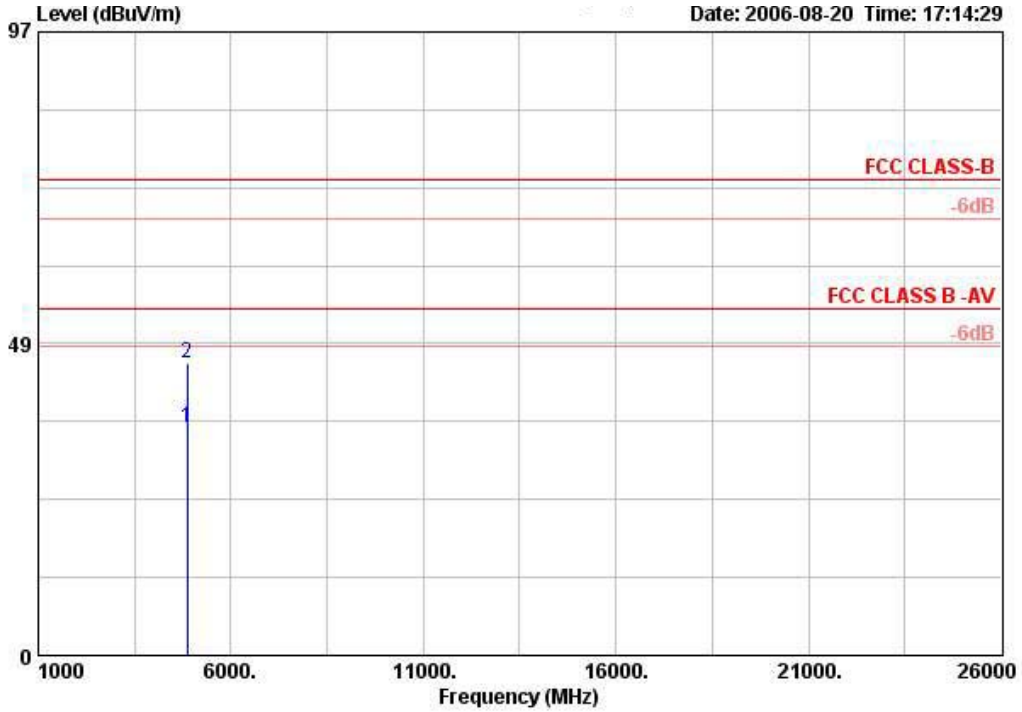
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3839.960	31.43	-22.57	54.00	32.22	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
2	3839.960	41.37	-32.63	74.00	42.17	30.71	3.52	35.03	PEAK	HORIZONTAL	3
3	4924.160	32.28	-21.72	54.00	29.62	33.51	4.30	35.14	AVERAGE	HORIZONTAL	3
4	4924.160	42.53	-31.47	74.00	39.87	33.51	4.30	35.14	PEAK	HORIZONTAL	3

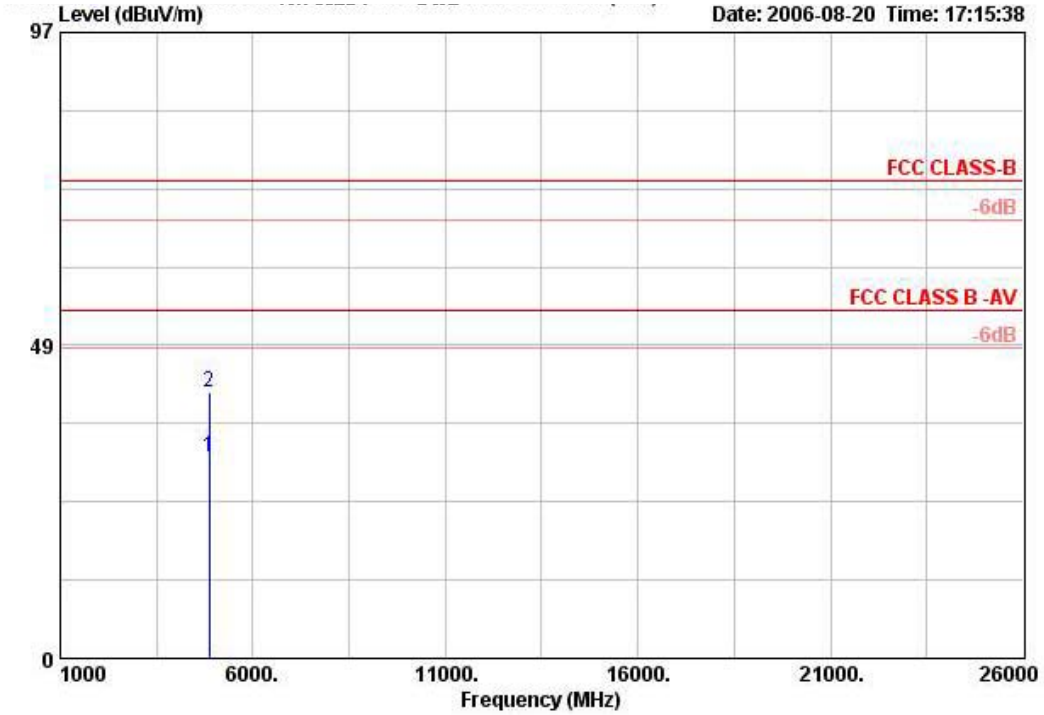
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 3(Lower) Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4864.240	35.32	-18.68	54.00	32.86	33.31	4.30	35.15	AVERAGE	VERTICAL	3
2	4864.240	45.58	-28.42	74.00	43.12	33.31	4.30	35.15	PEAK	VERTICAL	3

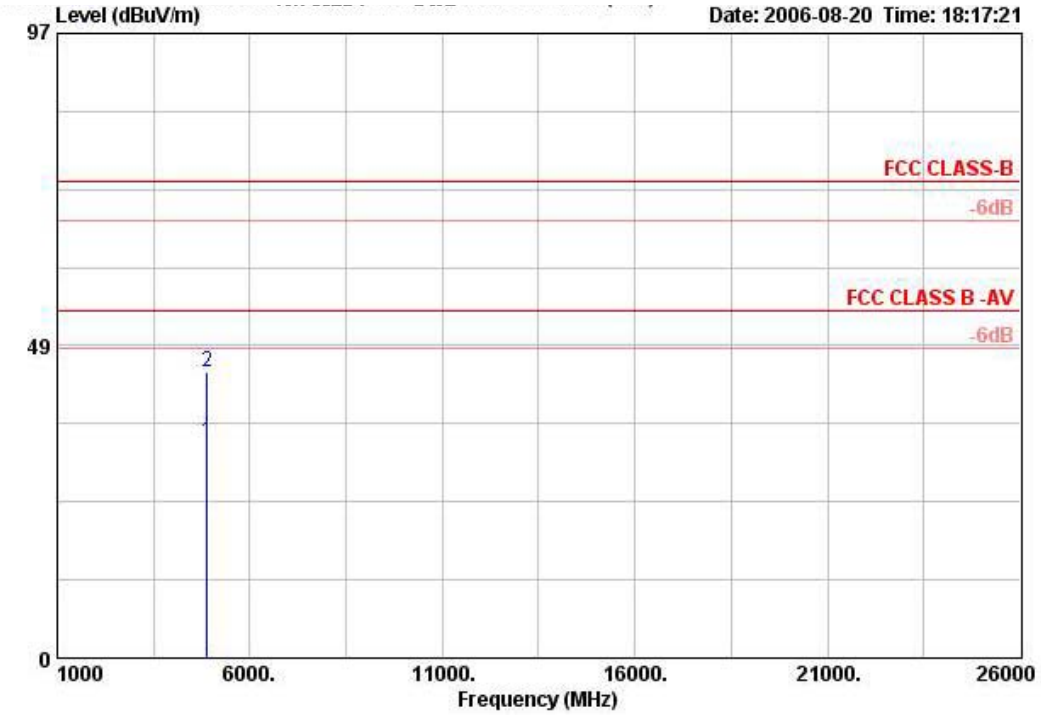
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4864.240	31.12	-22.88	54.00	28.66	33.31	4.30	35.15	AVERAGE	HORIZONTAL	3
2	4864.240	41.36	-32.64	74.00	38.90	33.31	4.30	35.15	PEAK	HORIZONTAL	3

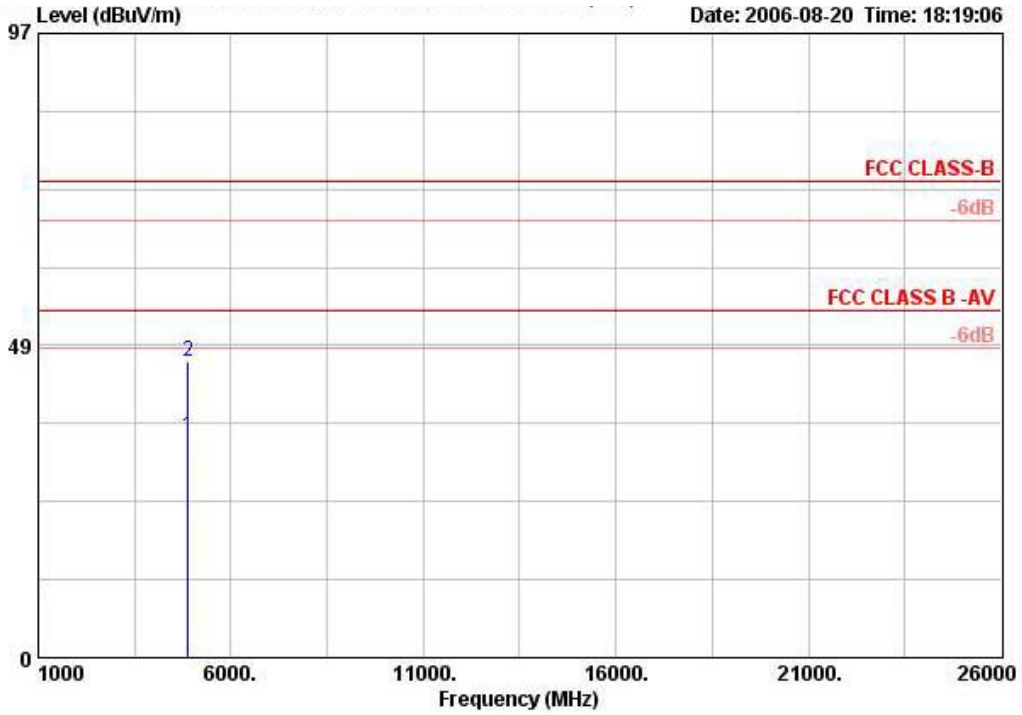
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 6(Lower) Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4894.080	33.55	-20.45	54.00	30.99	33.41	4.30	35.15	AVERAGE	VERTICAL	3
2	4894.080	44.28	-29.72	74.00	41.71	33.41	4.30	35.15	PEAK	VERTICAL	3

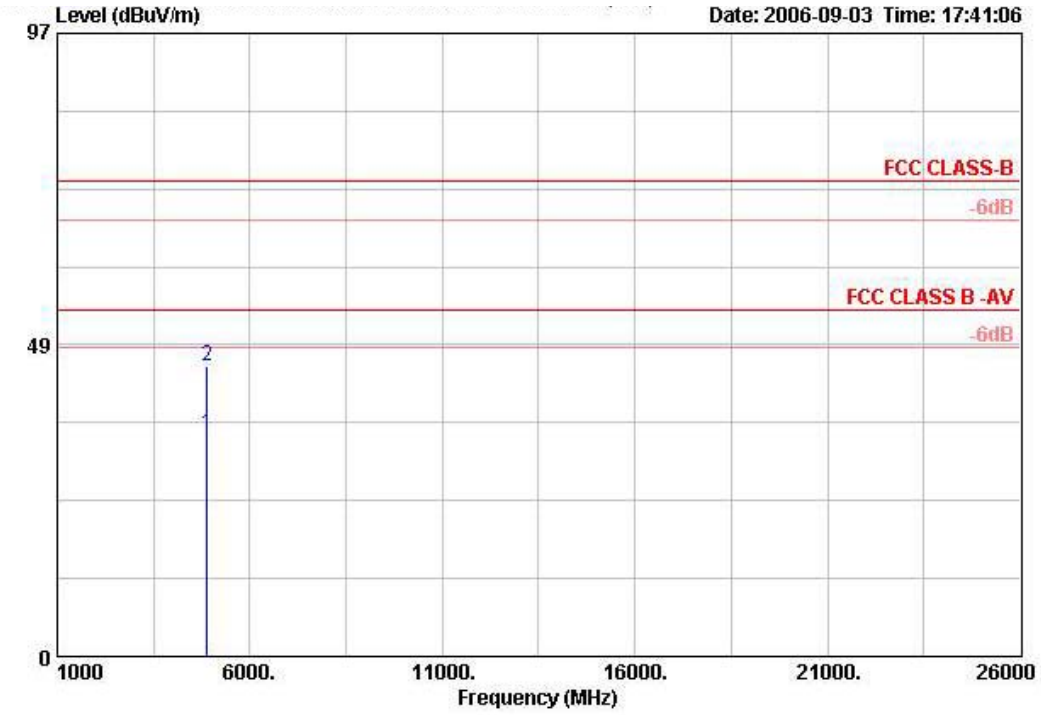
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4894.140	34.25	-19.75	54.00	31.69	33.41	4.30	35.15	AVERAGE	HORIZONTAL	3
2	4894.256	45.97	-28.03	74.00	43.41	33.41	4.30	35.15	PEAK	HORIZONTAL	3

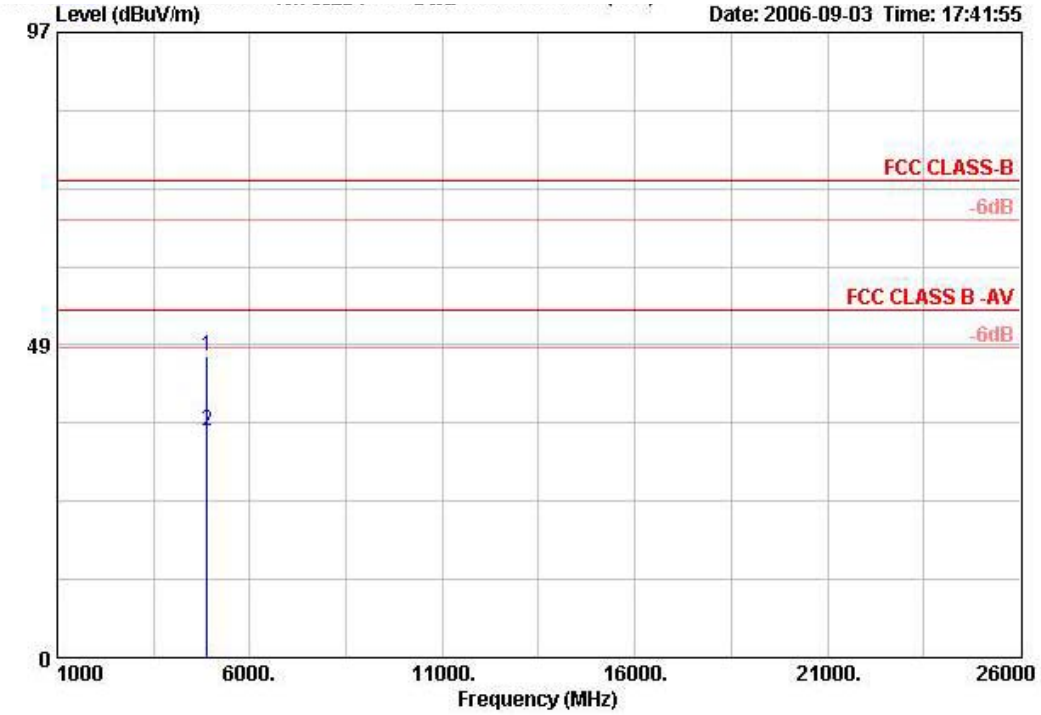
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 6(Upper) Ant. A

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	4894.100	34.50	-19.50	54.00	31.94	4.30	35.15	Average	102	247	33.41
2	4894.100	45.25	-28.75	74.00	42.69	4.30	35.15	Peak	102	247	33.41

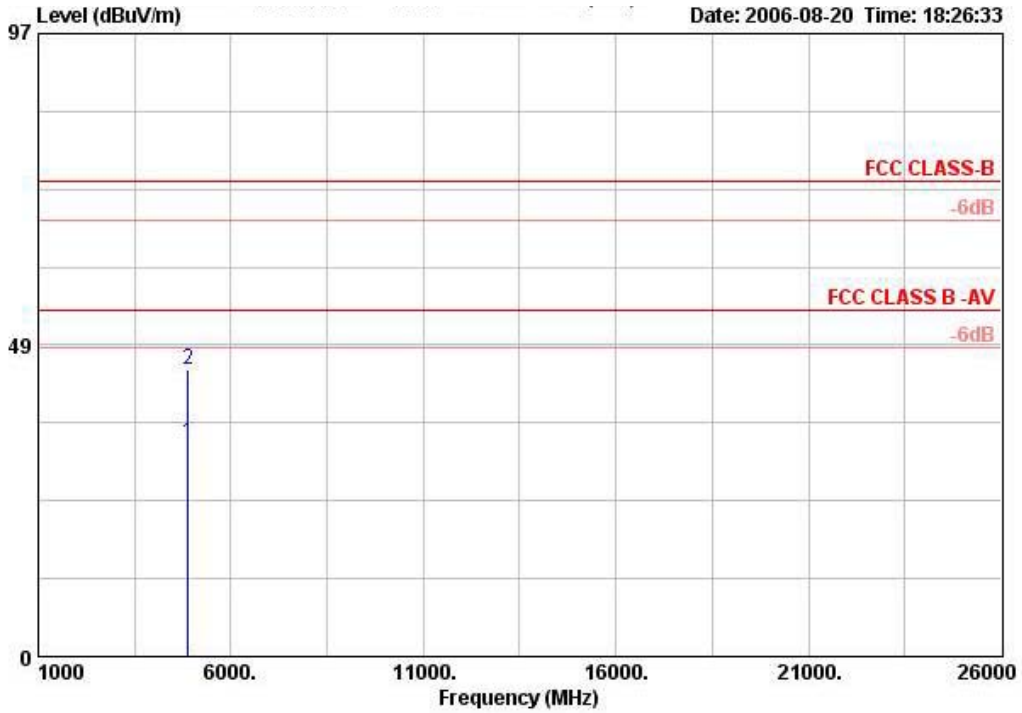
Horizontal



	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	4894.340	46.85	-27.15	74.00	44.29	4.30	35.15	Peak	100	173	33.41
2	4894.340	35.12	-38.88	74.00	32.56	4.30	35.15	Peak	100	173	33.41

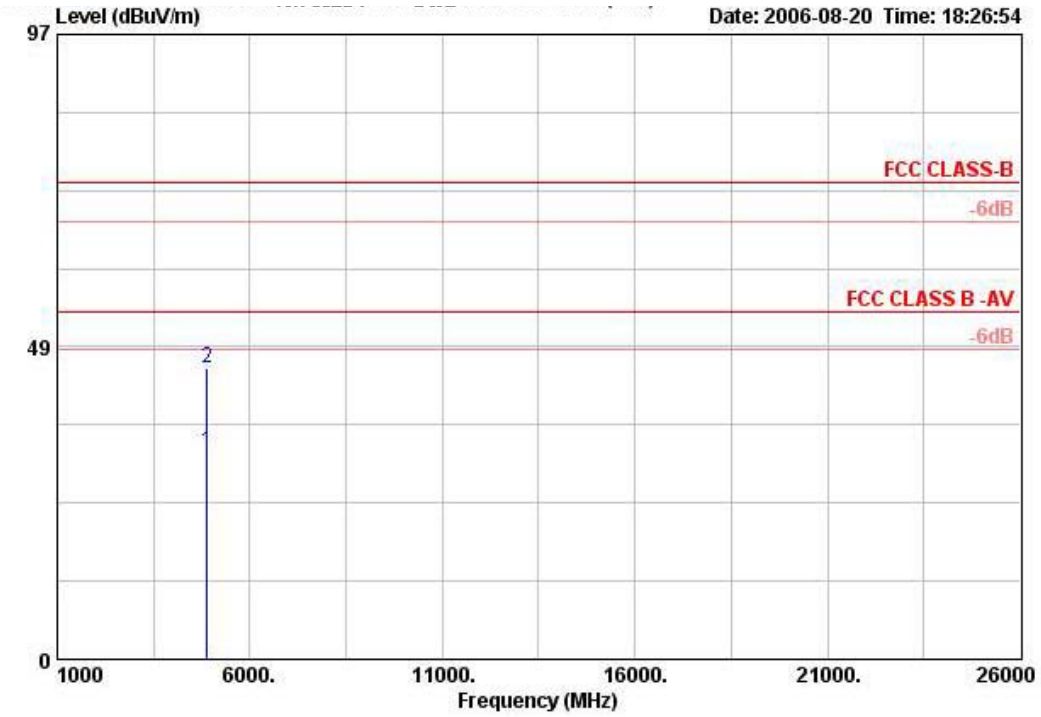
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 9(Upper) Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4884.400	33.36	-20.64	54.00	30.85	33.36	4.30	35.15	AVERAGE	VERTICAL	3
2	4884.400	44.60	-29.40	74.00	42.10	33.36	4.30	35.15	PEAK	VERTICAL	3

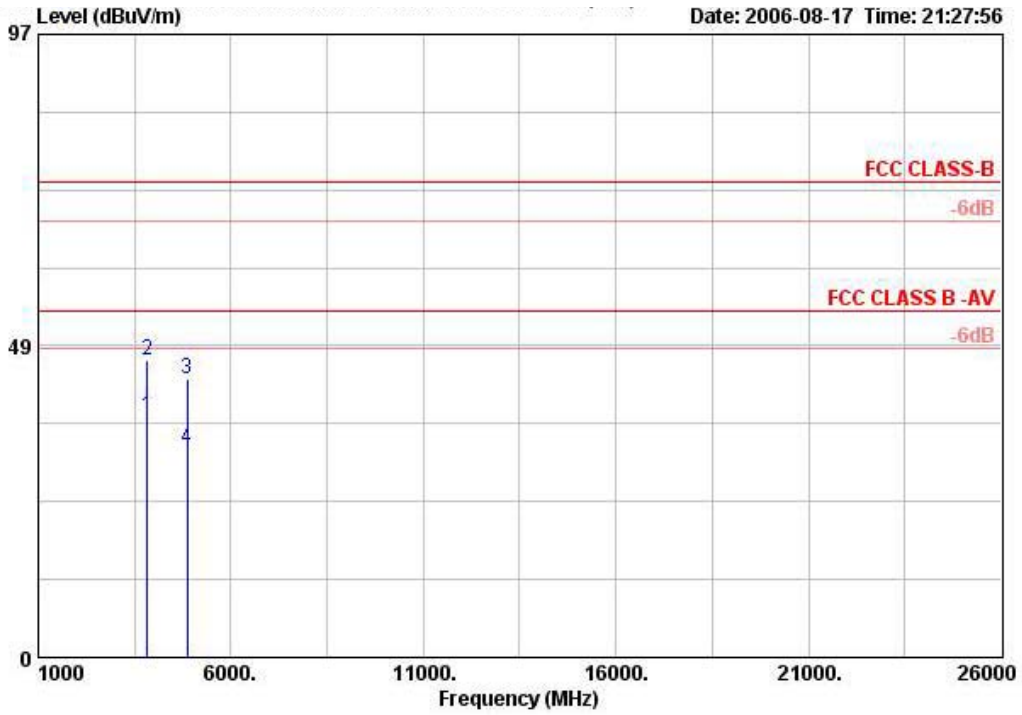
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4884.468	32.20	-21.80	54.00	29.69	33.36	4.30	35.15	AVERAGE	HORIZONTAL	3
2	4884.732	45.30	-28.70	74.00	42.74	33.41	4.30	35.15	PEAK	HORIZONTAL	3

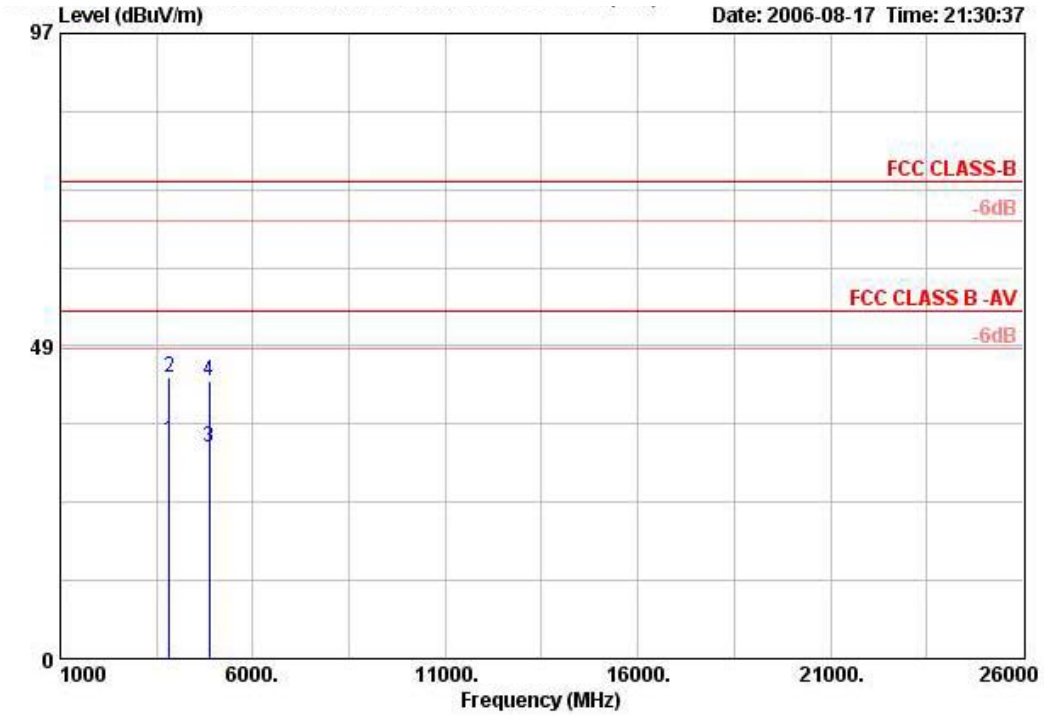
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 3(Lower) Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.000	37.48	-16.52	54.00	38.28	30.71	3.52	35.03	AVERAGE	VERTICAL	3
2	3840.000	46.21	-27.79	74.00	47.01	30.71	3.52	35.03	PEAK	VERTICAL	3
3	4871.960	43.26	-30.74	74.00	40.75	33.36	4.30	35.15	PEAK	VERTICAL	3
4	4871.960	32.63	-21.37	54.00	30.12	33.36	4.30	35.15	AVERAGE	VERTICAL	3

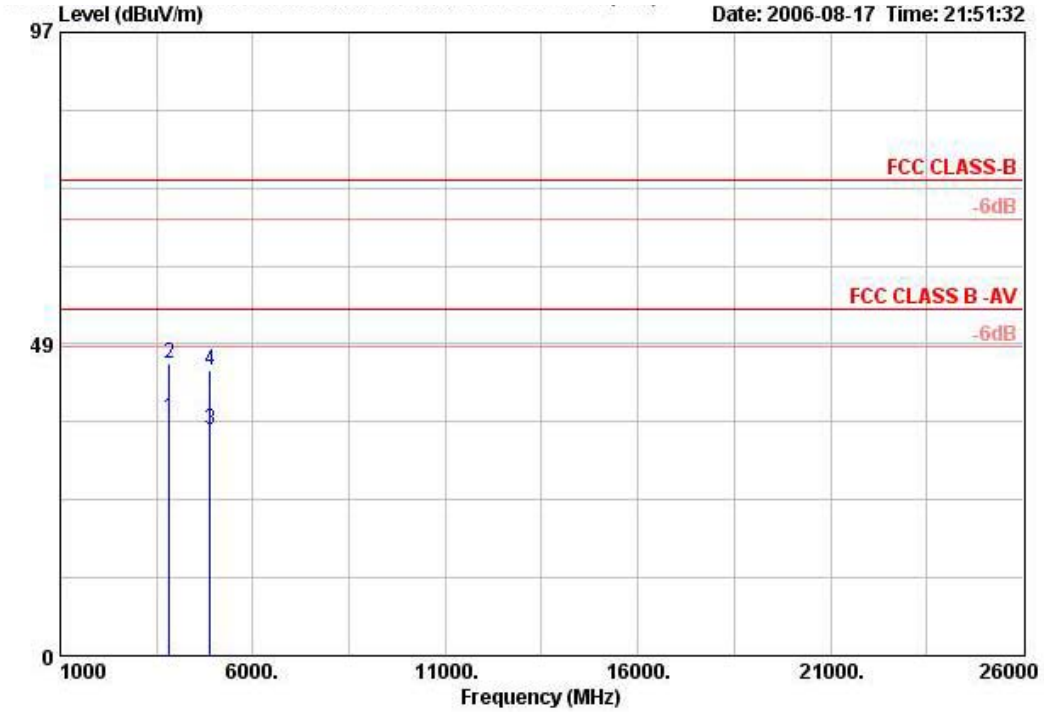
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.000	33.93	-20.07	54.00	34.73	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
2	3840.000	43.48	-30.52	74.00	44.28	30.71	3.52	35.03	PEAK	HORIZONTAL	3
3	4872.220	32.82	-21.18	54.00	30.32	33.36	4.30	35.15	AVERAGE	HORIZONTAL	3
4	4872.220	43.02	-30.98	74.00	40.51	33.36	4.30	35.15	PEAK	HORIZONTAL	3

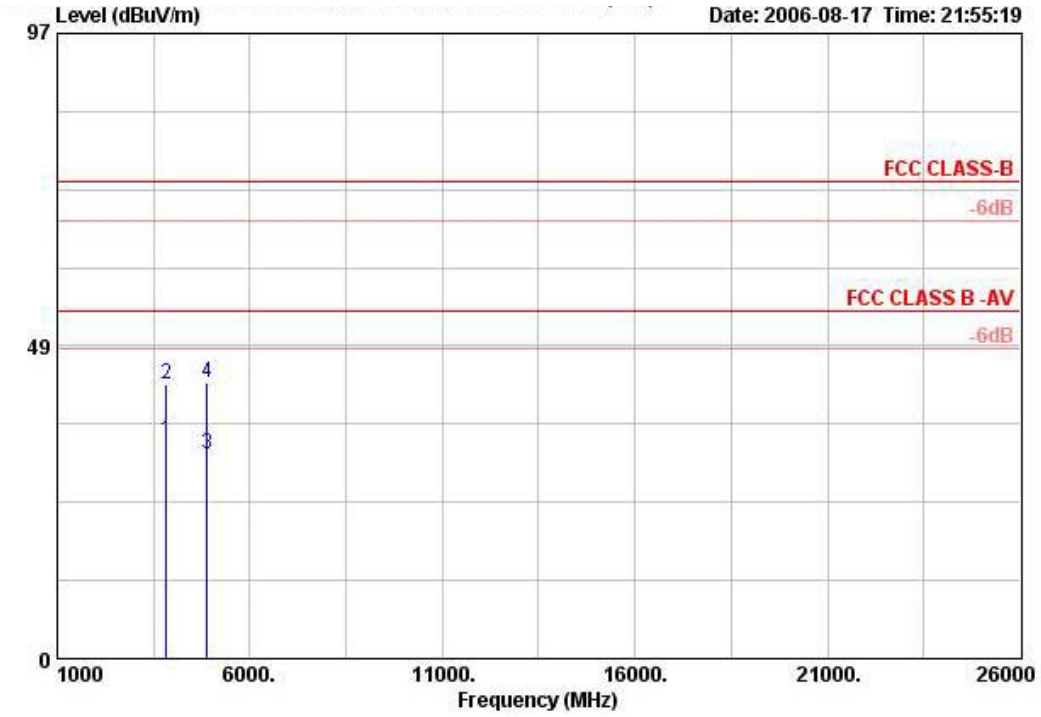
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 6(Lower) Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.060	37.05	-16.95	54.00	37.85	30.71	3.52	35.03	AVERAGE	VERTICAL	3
2	3840.060	45.35	-28.65	74.00	46.15	30.71	3.52	35.03	PEAK	VERTICAL	3
3	4894.080	35.05	-18.95	54.00	32.49	33.41	4.30	35.15	AVERAGE	VERTICAL	3
4	4894.080	44.34	-29.66	74.00	41.78	33.41	4.30	35.15	PEAK	VERTICAL	3

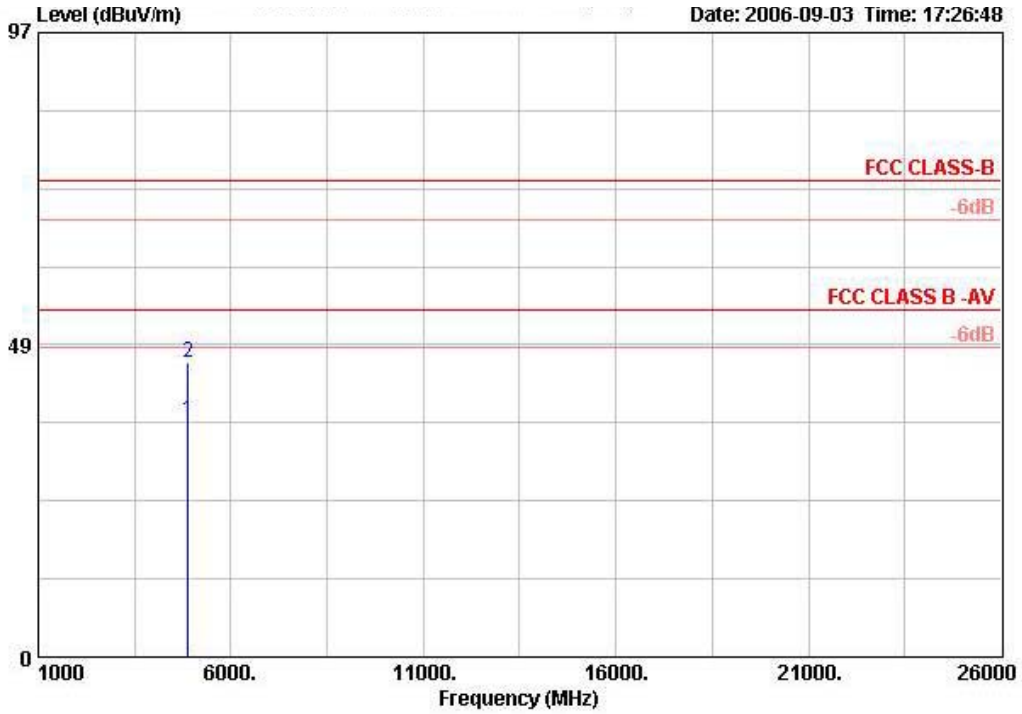
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	3840.020	33.70	-20.30	54.00	34.50	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
2	3840.020	42.57	-31.43	74.00	43.37	30.71	3.52	35.03	PEAK	HORIZONTAL	3
3	4894.080	31.80	-22.20	54.00	29.24	33.41	4.30	35.15	AVERAGE	HORIZONTAL	3
4	4894.080	42.76	-31.24	74.00	40.20	33.41	4.30	35.15	PEAK	HORIZONTAL	3

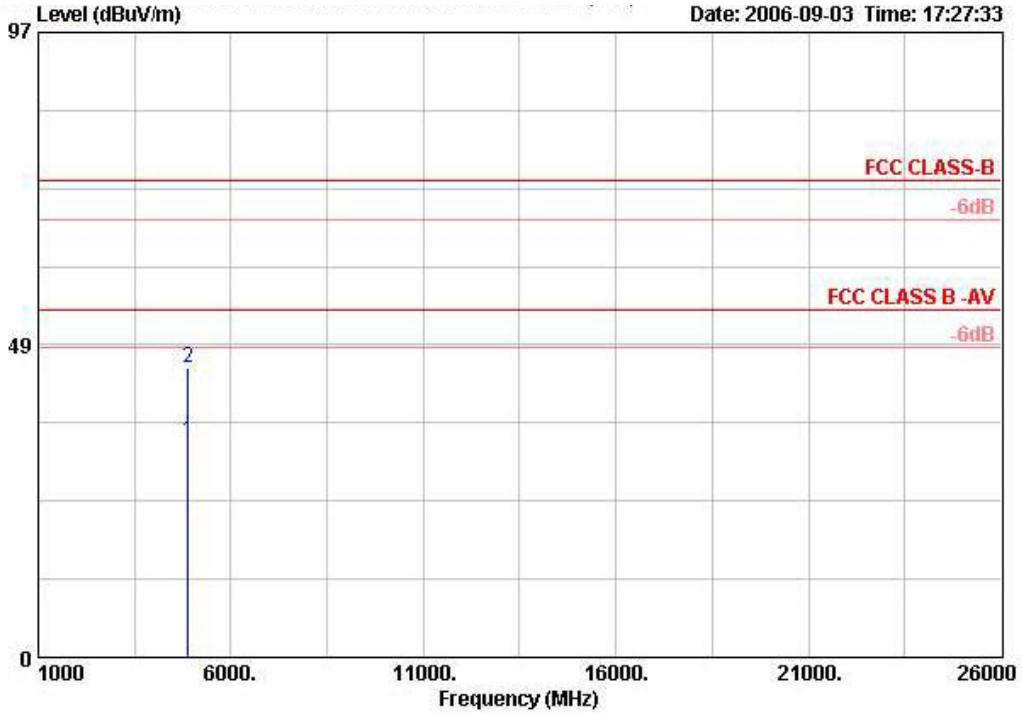
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 6(Upper) Ant. A + Ant. B

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	4894.300	36.80	-17.20	54.00	34.24	4.30	35.15	Average	102	33	33.41
2	4894.300	45.85	-28.15	74.00	43.29	4.30	35.15	Peak	102	33	33.41

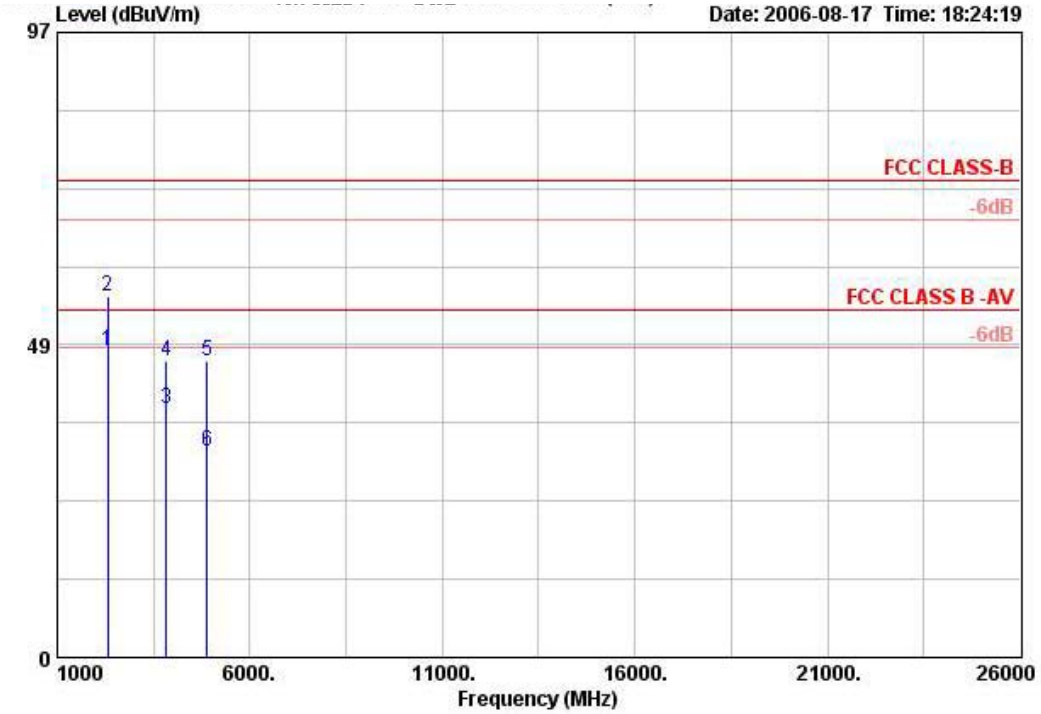
Horizontal



	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	4894.640	33.50	-20.50	54.00	30.94	4.30	35.15	Average	100	250	33.41
2	4894.640	44.80	-29.20	74.00	42.24	4.30	35.15	Peak	100	250	33.41

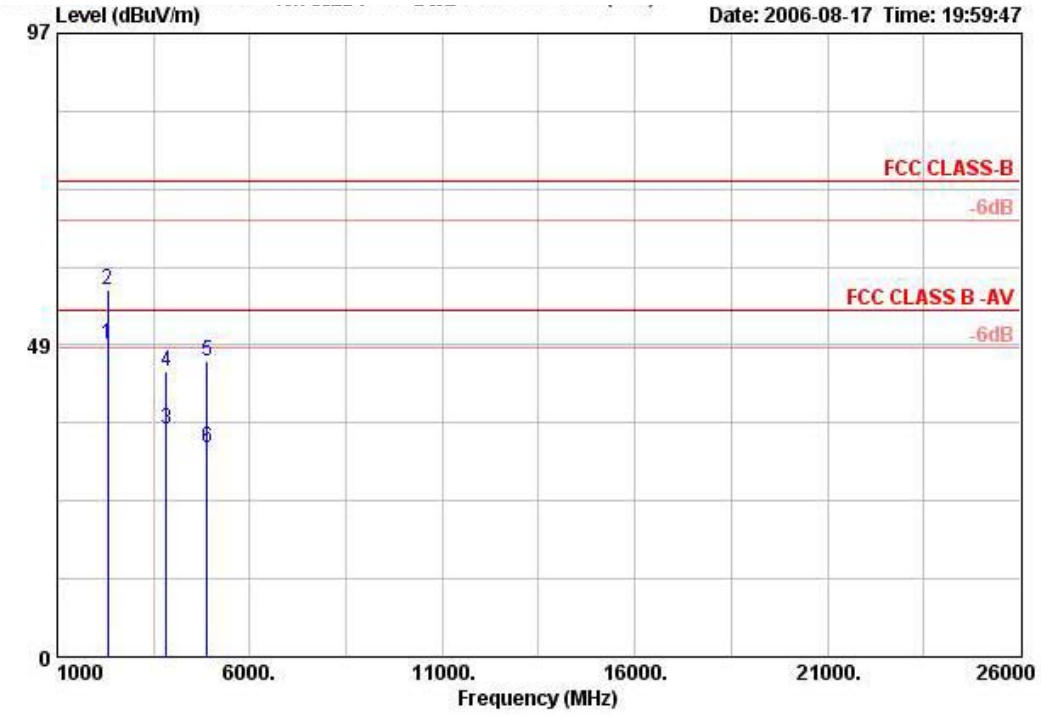
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11b 40MHz Channel 9(Upper) Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	2319.980	47.46	-6.54	54.00	49.35	30.47	2.71	35.07	AVERAGE	VERTICAL	3
2	2319.980	55.93	-18.07	74.00	57.81	30.47	2.71	35.07	PEAK	VERTICAL	3
3	3840.040	38.70	-15.30	54.00	39.50	30.71	3.52	35.03	AVERAGE	VERTICAL	3
4	3840.040	45.91	-28.09	74.00	46.71	30.71	3.52	35.03	PEAK	VERTICAL	3
5	4884.120	46.12	-27.88	74.00	43.61	33.36	4.30	35.15	PEAK	VERTICAL	3
6	4884.120	31.87	-22.13	54.00	29.37	33.36	4.30	35.15	AVERAGE	VERTICAL	3

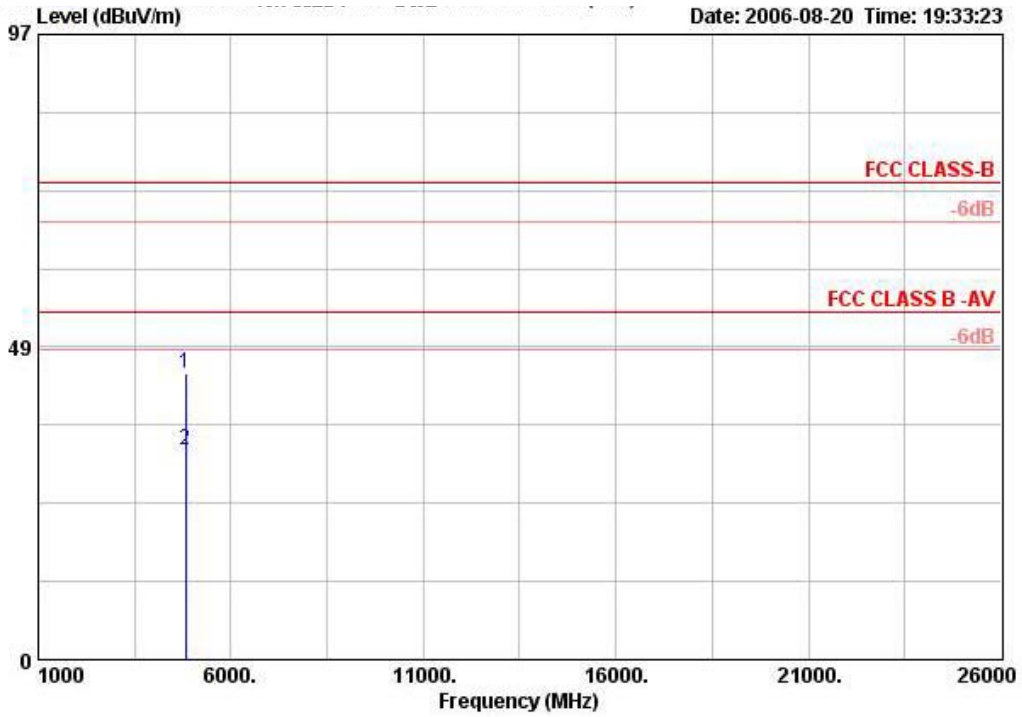
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1 !	2320.000	48.66	-5.34	54.00	50.55	30.47	2.71	35.07	AVERAGE	HORIZONTAL	3
2	2320.000	57.17	-16.83	74.00	59.06	30.47	2.71	35.07	PEAK	HORIZONTAL	3
3	3840.020	35.50	-18.50	54.00	36.30	30.71	3.52	35.03	AVERAGE	HORIZONTAL	3
4	3840.020	44.41	-29.59	74.00	45.21	30.71	3.52	35.03	PEAK	HORIZONTAL	3
5	4887.400	45.90	-28.10	74.00	43.34	33.41	4.30	35.15	PEAK	HORIZONTAL	3
6	4887.880	32.60	-21.40	54.00	30.04	33.41	4.30	35.15	AVERAGE	HORIZONTAL	3

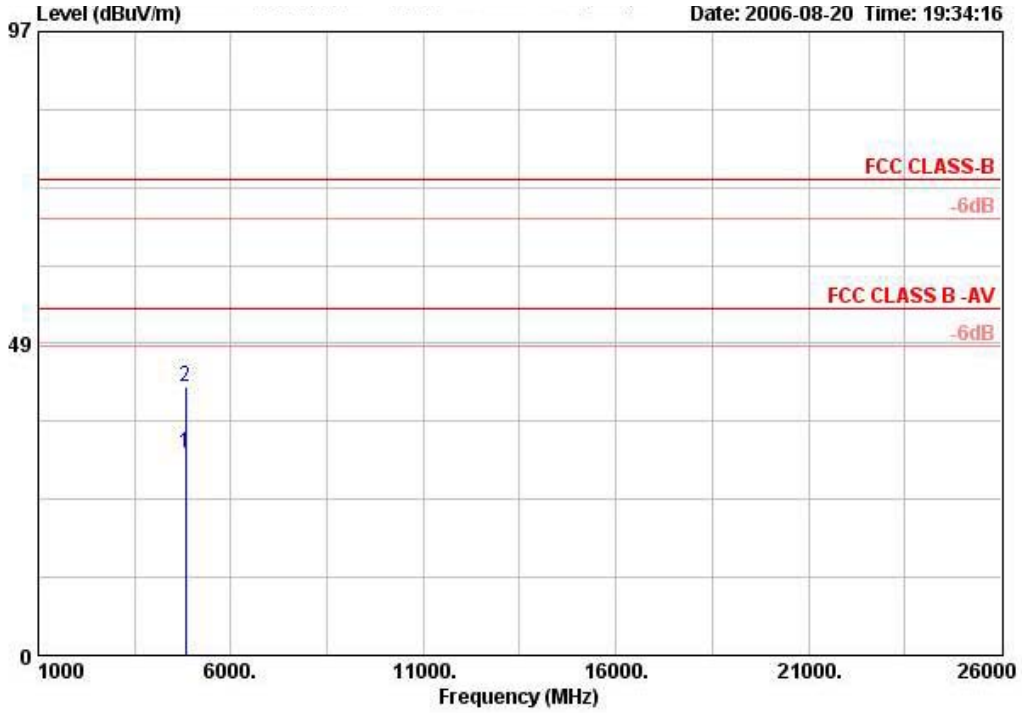
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 20MHz Channel 1 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4824.020	44.29	-29.71	74.00	41.94	33.22	4.30	35.16	PEAK	VERTICAL	3
2	4828.980	32.57	-21.43	54.00	30.22	33.22	4.30	35.16	AVERAGE	VERTICAL	3

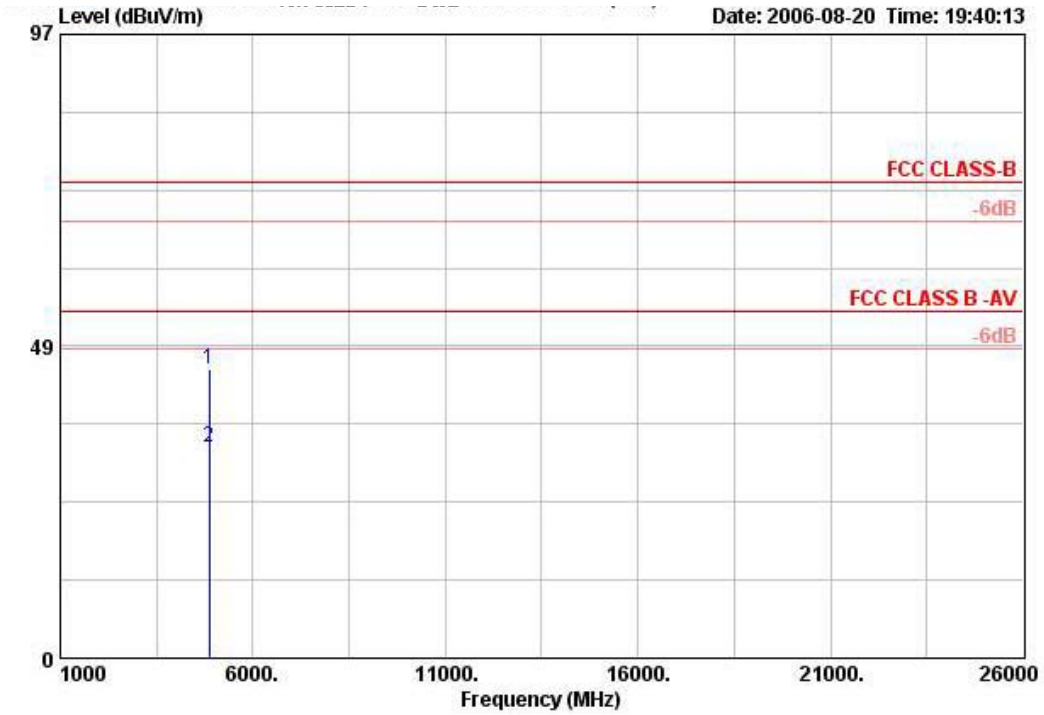
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4824.020	31.35	-22.65	54.00	28.99	33.22	4.30	35.16	AVERAGE	HORIZONTAL	3
2	4824.020	41.83	-32.17	74.00	39.47	33.22	4.30	35.16	PEAK	HORIZONTAL	3

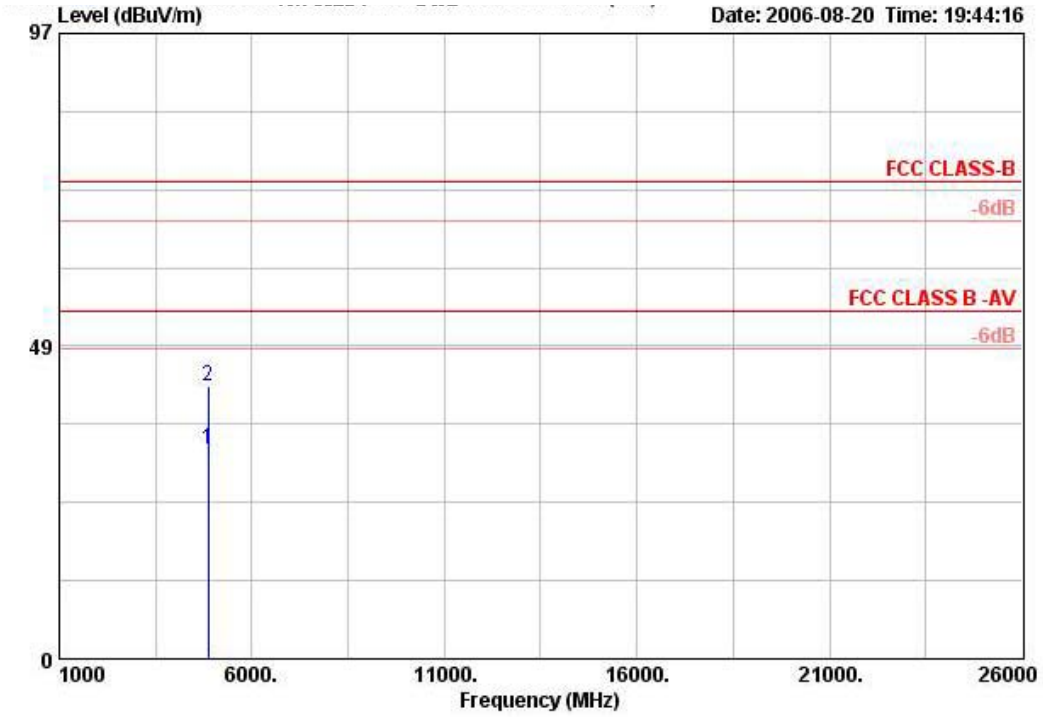
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 20MHz Channel 6 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4873.120	44.89	-29.11	74.00	42.54	33.22	4.30	35.16	PEAK	VERTICAL	3
2	4873.580	32.70	-21.30	54.00	30.35	33.22	4.30	35.16	AVERAGE	VERTICAL	3

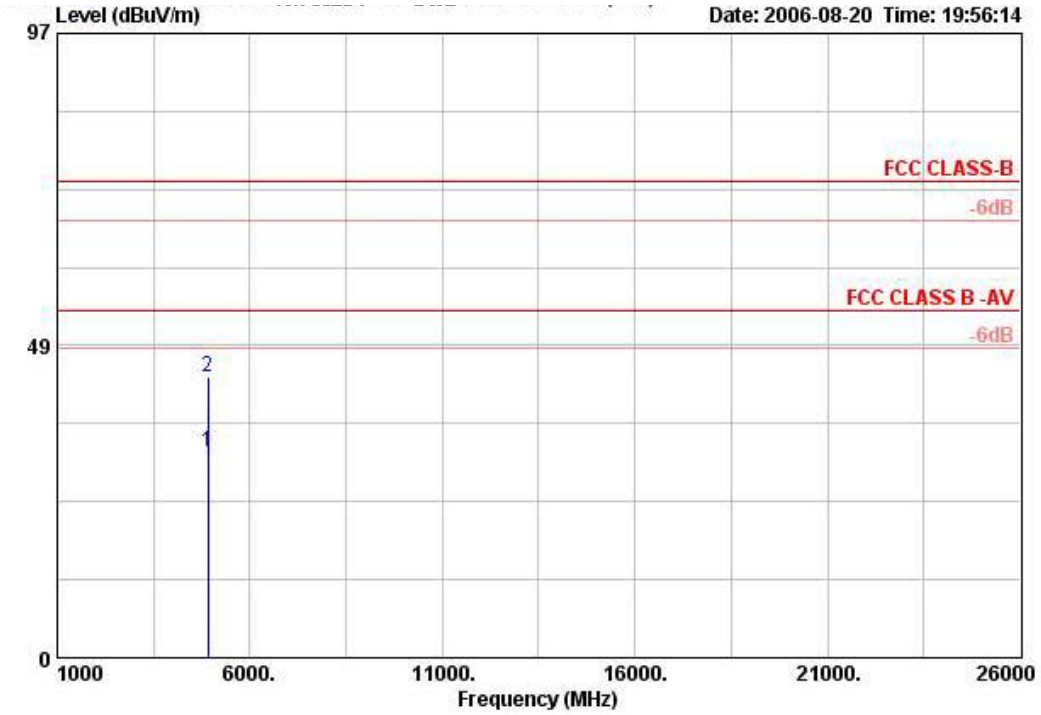
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4874.320	32.46	-21.54	54.00	30.11	33.22	4.30	35.16	AVERAGE	HORIZONTAL	3
2	4874.420	42.26	-31.74	74.00	39.91	33.22	4.30	35.16	PEAK	HORIZONTAL	3

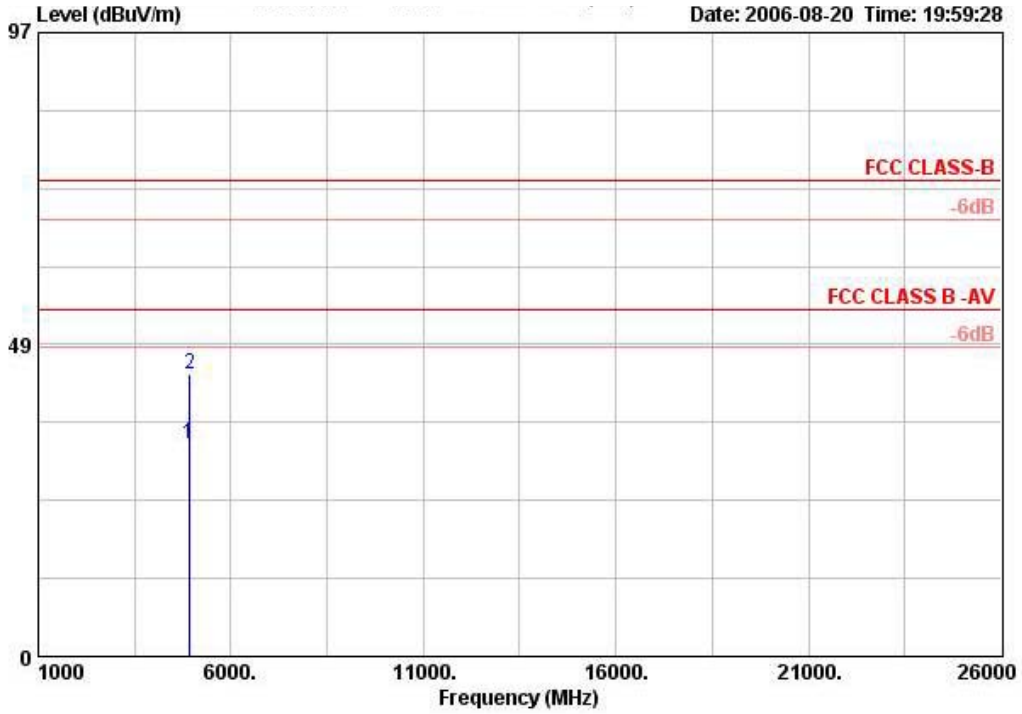
Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 20MHz Channel 11 Ant. A

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4923.180	32.03	-21.97	54.00	29.67	33.22	4.30	35.16	AVERAGE	VERTICAL	3
2	4923.620	43.49	-30.51	74.00	41.14	33.22	4.30	35.16	PEAK	VERTICAL	3

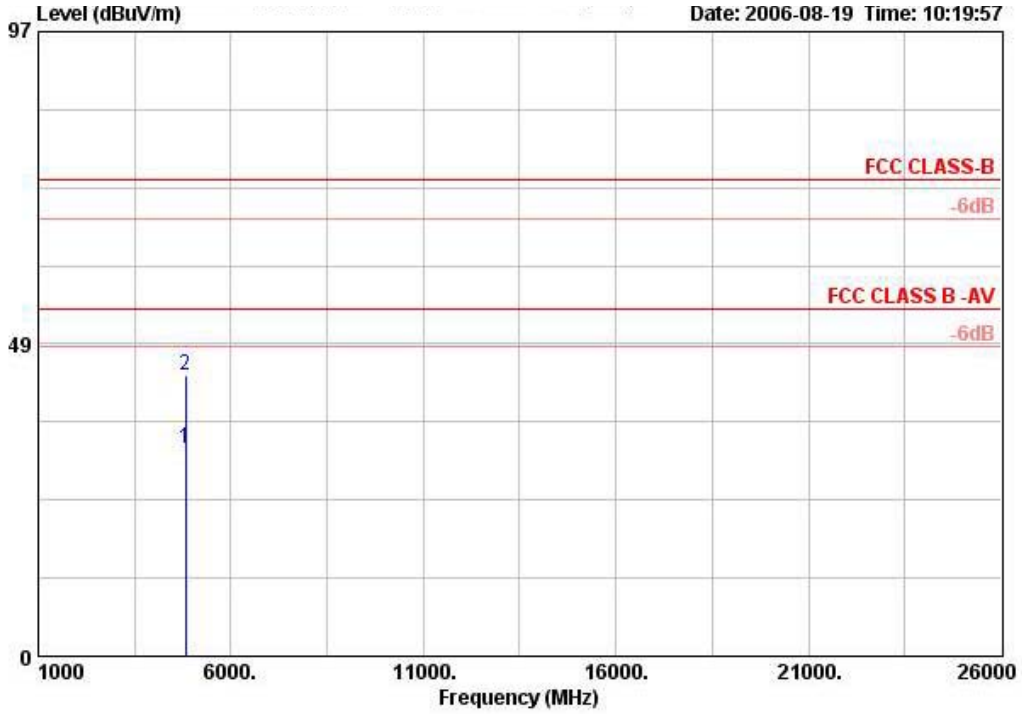
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4922.520	33.16	-20.84	54.00	30.81	33.22	4.30	35.16	AVERAGE	HORIZONTAL	3
2	4925.850	43.86	-30.14	74.00	41.51	33.22	4.30	35.16	PEAK	HORIZONTAL	3

Temperature	24℃	Humidity	64%
Test Engineer	Leo Hung	Configurations	802.11g 20MHz Channel 1 Ant. A + Ant. B

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Pol/Phase	Distance
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			m
1	4814.440	32.29	-21.71	54.00	29.99	33.17	4.30	35.16	AVERAGE	VERTICAL	3
2	4814.440	43.72	-30.28	74.00	41.42	33.17	4.30	35.16	PEAK	VERTICAL	3