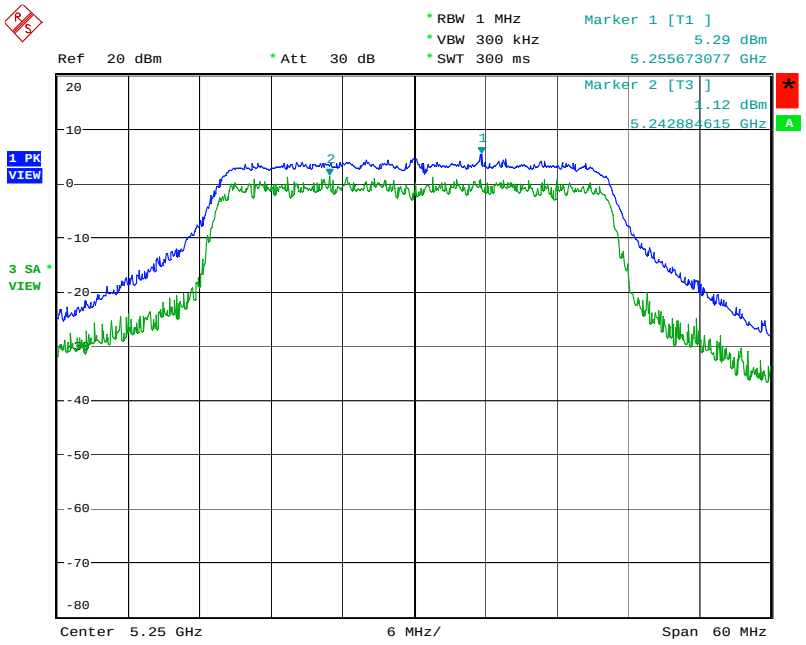
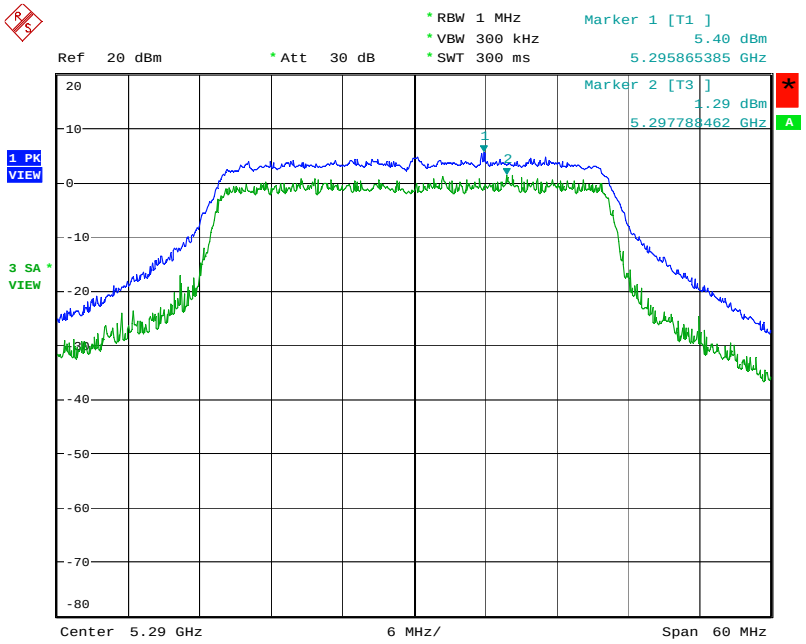
Peak Excursion Plot on Configuration IEEE 802.11a Turbo / 5250 MHz



Date: 2.JUN.2006 14:42:00

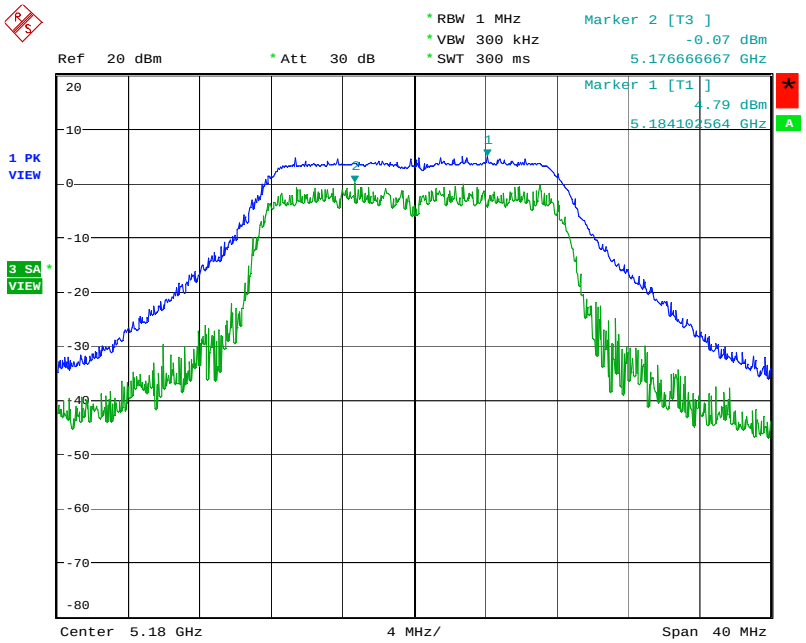
Peak Excursion Plot on Configuration IEEE 802.11a Turbo / 5290 MHz



Date: 2.JUN.2006 14:41:09

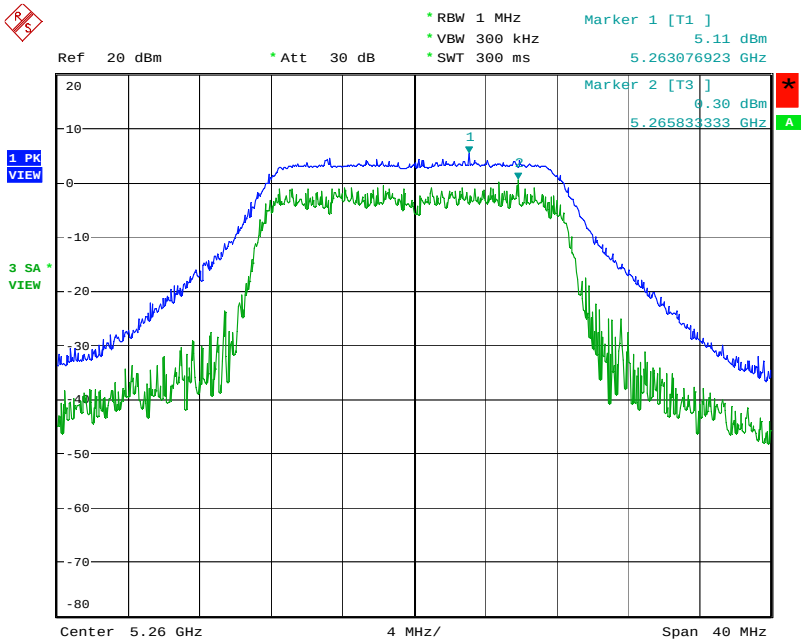
For Ant. 2

Peak Excursion Plot on Configuration IEEE 802.11a / 5180 MHz



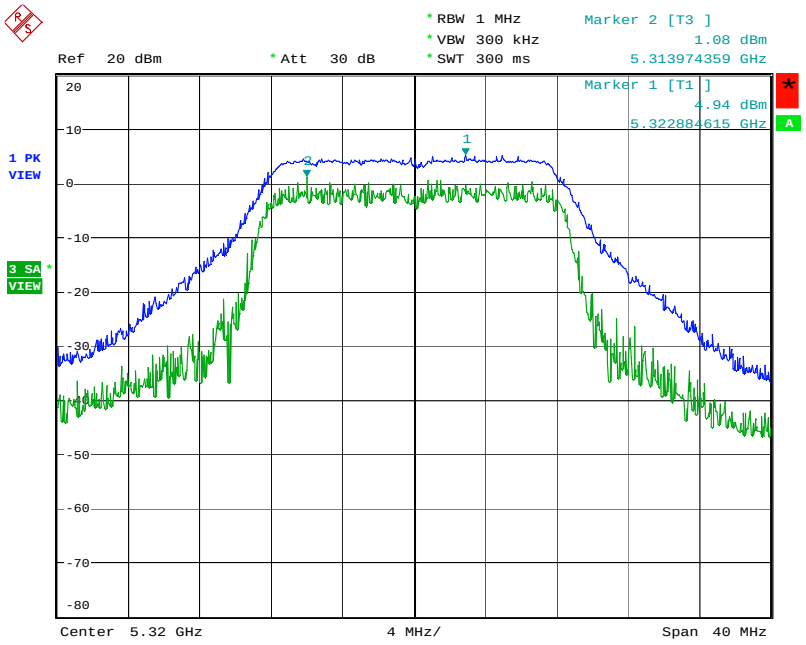
Date: 20.APR.2006 21:04:10

Peak Excursion Plot on Configuration IEEE 802.11a / 5260 MHz



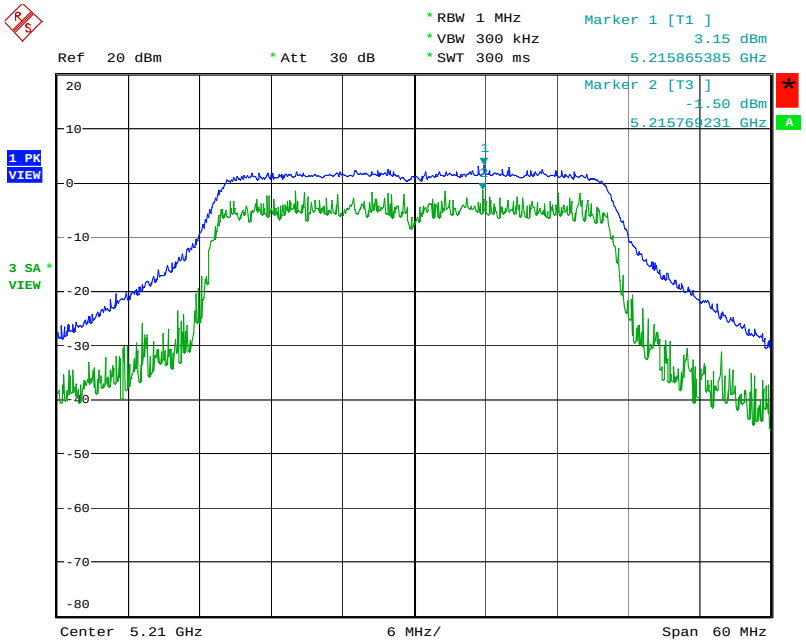
Date: 20.APR.2006 21:03:10

Peak Excursion Plot on Configuration IEEE 802.11a / 5320 MHz



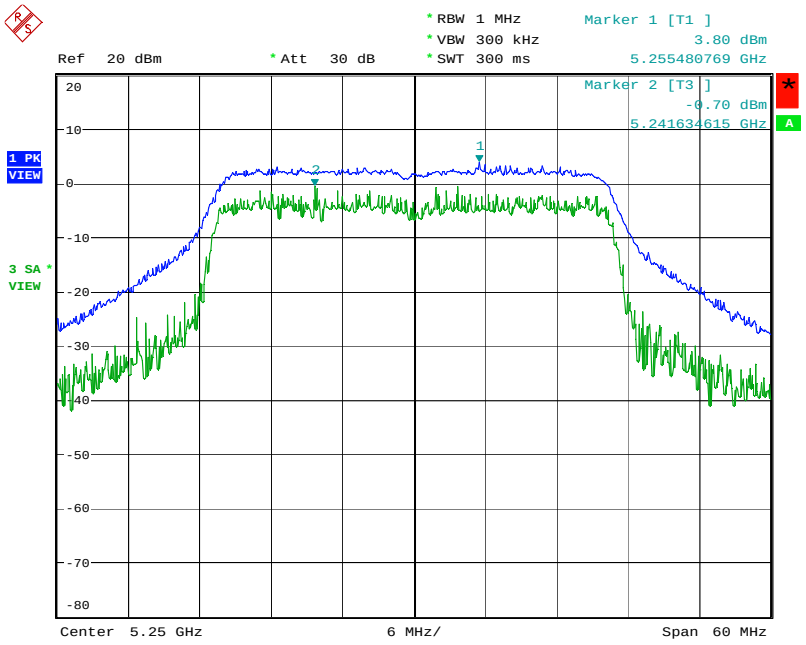
Date: 20.APR.2006 21:00:22

Peak Excursion Plot on Configuration IEEE 802.11a Turbo / 5210 MHz



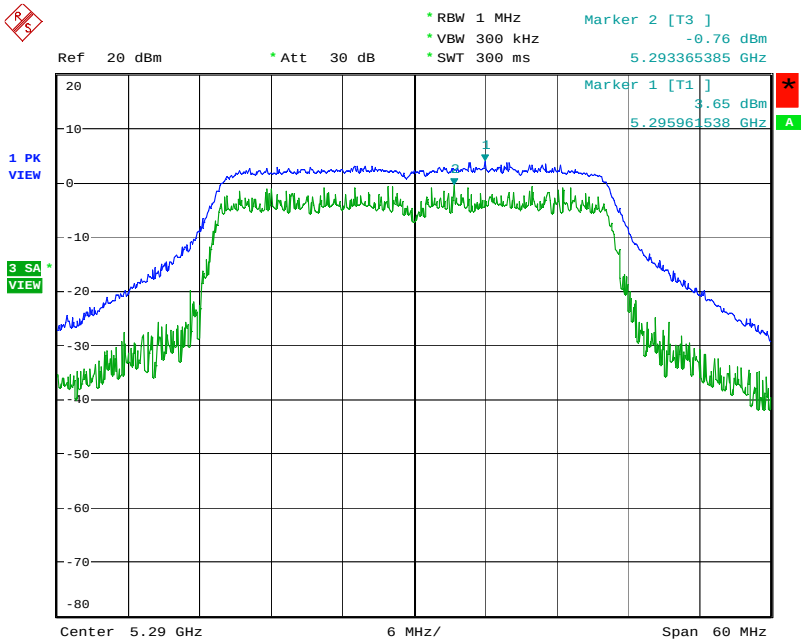
Date: 20.APR.2006 21:05:13

Peak Excursion Plot on Configuration IEEE 802.11a Turbo / 5250 MHz



Date: 20.APR.2006 21:06:16

Peak Excursion Plot on Configuration IEEE 802.11a Turbo / 5290 MHz



Date: 20.APR.2006 21:07:09

4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.47-5.725 GHz band: In addition, 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 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 (other emission)	100KHz / 100KHz for peak

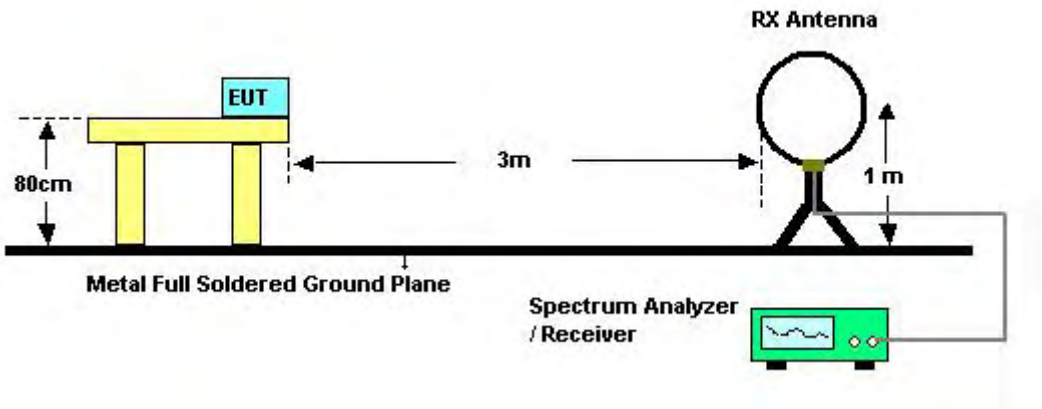
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

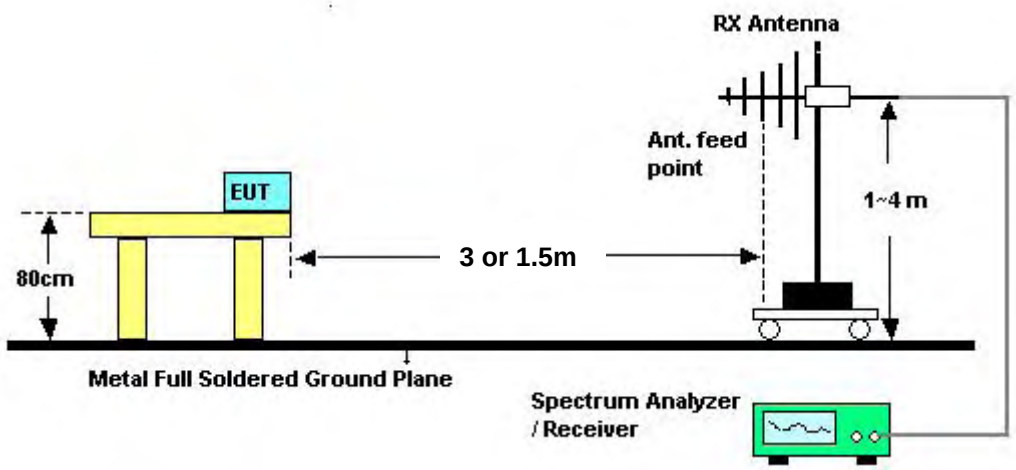
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting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

4.6.4. Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 5GHz 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 distanc [3m] / test distance [1.5m]) (dB);

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

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

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	802.11a Channel 64

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.

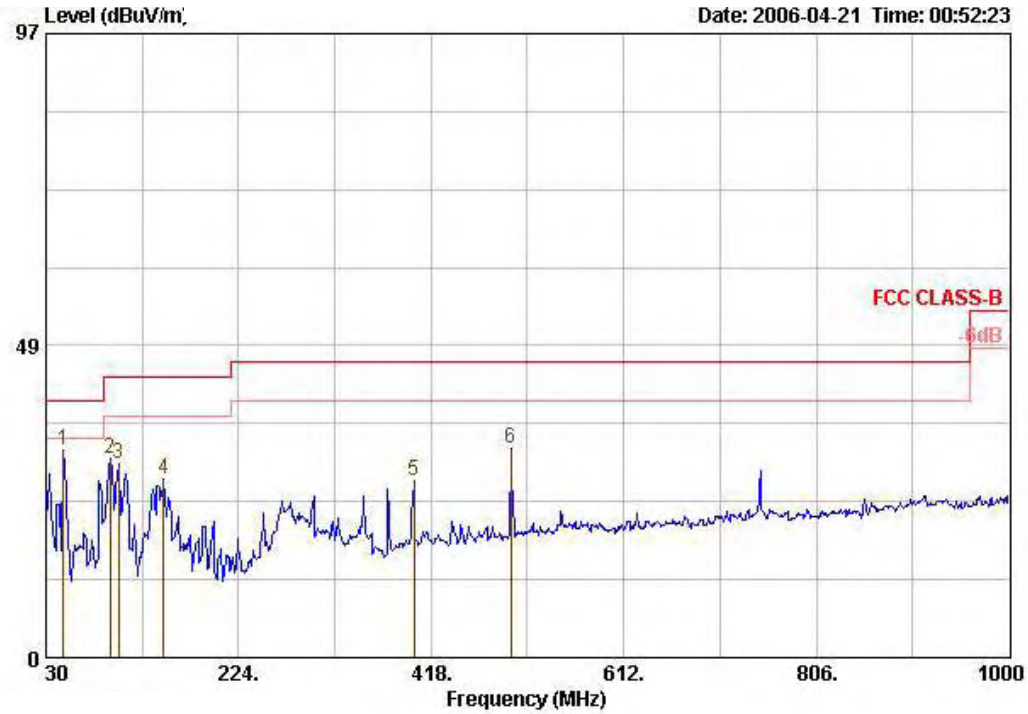
4.6.8. Results of Radiated Emissions (30MHz~1GHz)

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / POE/ 802.11a Channel 64

Vertical

	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	32.910	38.79	-1.21	40.00	16.45	0.49	29.78	51.64	QP	---	---
2 !	43.580	37.79	-2.21	40.00	10.30	0.56	29.83	56.76	QP	---	---
3 !	51.340	36.54	-3.46	40.00	7.35	0.61	29.83	58.41	Peak	---	---
4 !	59.100	35.32	-4.68	40.00	5.45	0.65	29.86	59.08	Peak	---	---
5	94.990	33.94	-9.56	43.50	9.75	0.79	30.12	53.51	Peak	---	---
6	109.540	34.00	-9.50	43.50	11.50	0.84	30.07	51.73	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	47.460	32.31	-7.69	40.00	8.77	0.58	29.83	52.79	Peak	---	---
2	94.990	30.81	-12.69	43.50	9.75	0.79	30.12	50.39	Peak	---	---
3	102.750	30.22	-13.28	43.50	10.89	0.81	30.08	48.60	Peak	---	---
4	148.340	27.85	-15.65	43.50	10.28	0.96	30.09	46.70	Peak	---	---
5	400.540	27.62	-18.38	46.00	15.94	1.59	30.35	40.43	Peak	---	---
6	498.510	32.56	-13.44	46.00	17.36	1.77	30.53	43.96	Peak	---	---

Note:

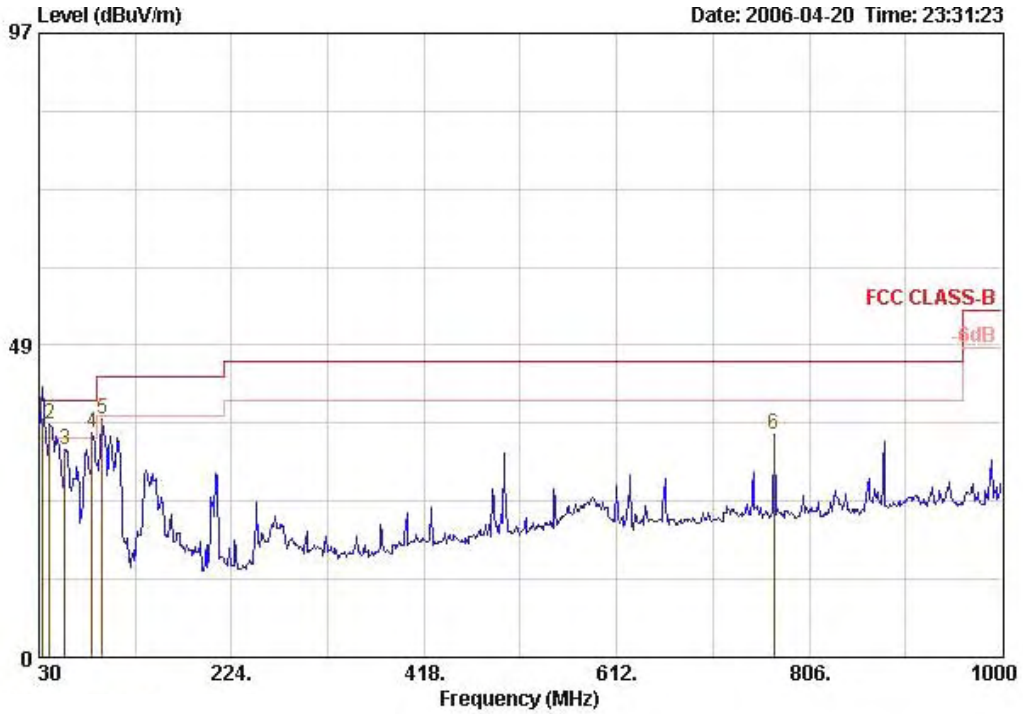
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

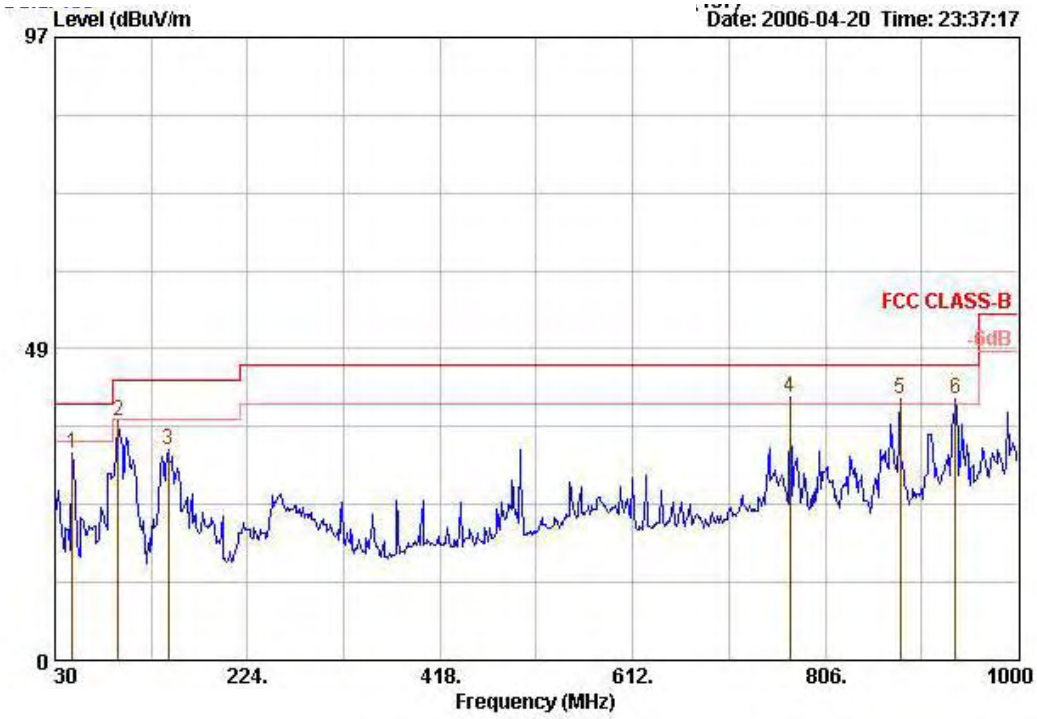
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / Adapter/ 802.11a Channel 64

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	32.910	37.15	-2.85	40.00	16.45	0.49	29.78	49.99	QP	---	---
2 @	40.670	36.15	-3.85	40.00	11.90	0.54	29.81	53.52	Peak	---	---
3	56.190	32.29	-7.71	40.00	6.00	0.63	29.82	55.48	Peak	---	---
4 @	83.350	34.82	-5.18	40.00	7.40	0.73	29.97	56.65	Peak	---	---
5	94.020	37.10	-6.40	43.50	9.60	0.79	30.11	56.82	Peak	---	---
6	770.110	34.69	-11.31	46.00	19.92	2.19	30.09	42.66	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	47.460	32.24	-7.76	40.00	8.77	0.58	29.83	52.72	Peak	---	---
2	94.020	37.31	-6.19	43.50	9.60	0.79	30.11	57.03	Peak	---	---
3	144.460	32.87	-10.63	43.50	10.63	0.95	30.06	51.36	Peak	---	---
4 @	770.110	41.04	-4.96	46.00	19.92	2.19	30.09	49.01	Peak	---	---
5 @	881.660	40.61	-5.39	46.00	20.32	2.39	29.18	47.08	Peak	---	---
6 @	936.950	40.76	-5.24	46.00	20.57	2.48	29.00	46.71	Peak	---	---

Note:

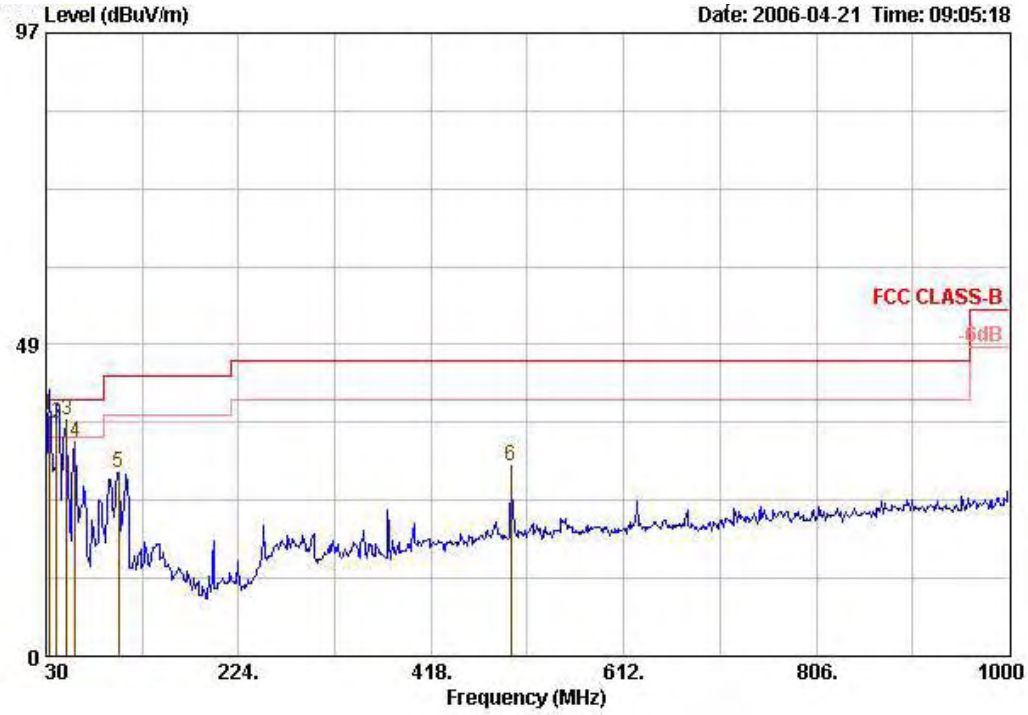
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

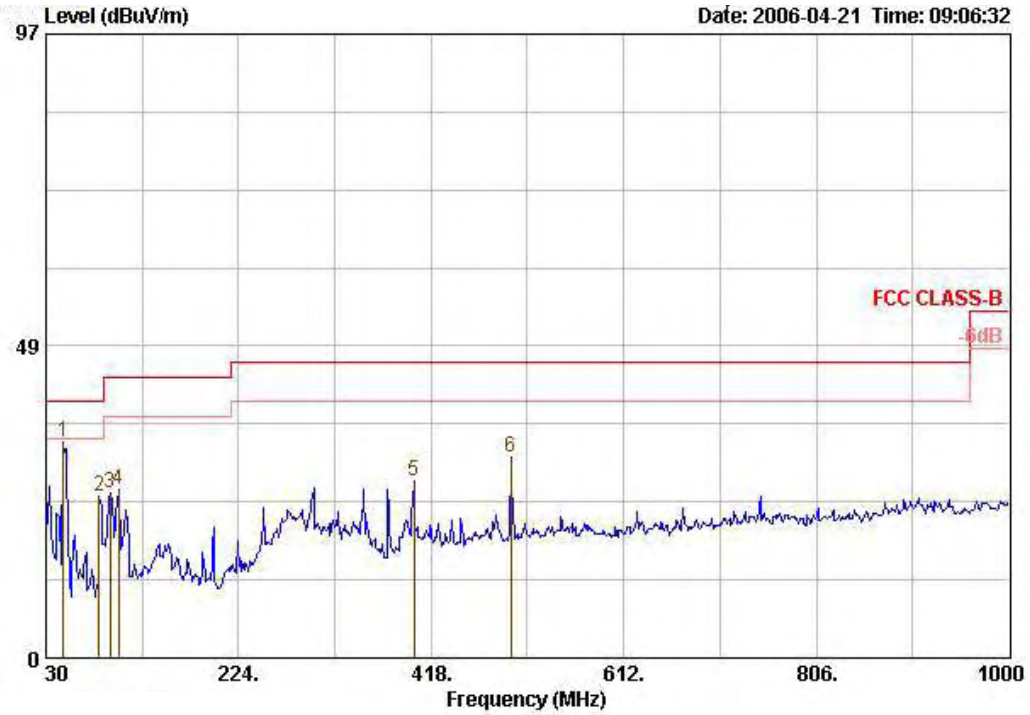
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / POE/ 802.11a Channel 64

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 !	32.910	37.59	-2.41	40.00	16.45	0.49	29.78	50.43	QP	---	---
2 !	40.670	36.21	-3.79	40.00	11.90	0.54	29.81	53.58	QP	---	---
3 !	51.340	36.76	-3.24	40.00	7.35	0.61	29.83	58.63	Peak	---	---
4	59.100	33.34	-6.66	40.00	5.45	0.65	29.86	57.10	Peak	---	---
5	102.750	28.62	-14.88	43.50	10.89	0.81	30.08	47.00	Peak	---	---
6	498.510	29.62	-16.38	46.00	17.36	1.77	30.53	41.02	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	47.460	33.69	-6.31	40.00	8.77	0.58	29.83	54.16	Peak	---	---
2	83.350	25.08	-14.92	40.00	7.40	0.73	29.97	46.92	Peak	---	---
3	94.990	25.71	-17.79	43.50	9.75	0.79	30.12	45.28	Peak	---	---
4	102.750	26.23	-17.27	43.50	10.89	0.81	30.08	44.61	Peak	---	---
5	400.540	27.50	-18.50	46.00	15.94	1.59	30.35	40.31	Peak	---	---
6	498.510	31.13	-14.87	46.00	17.36	1.77	30.53	42.53	Peak	---	---

Note:

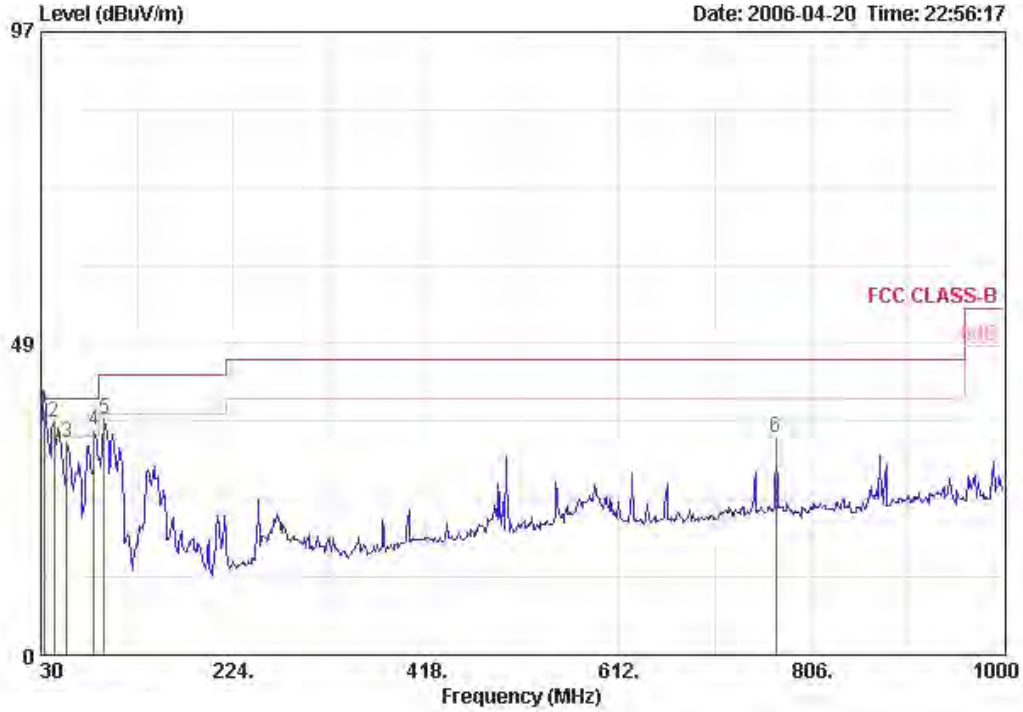
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

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

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

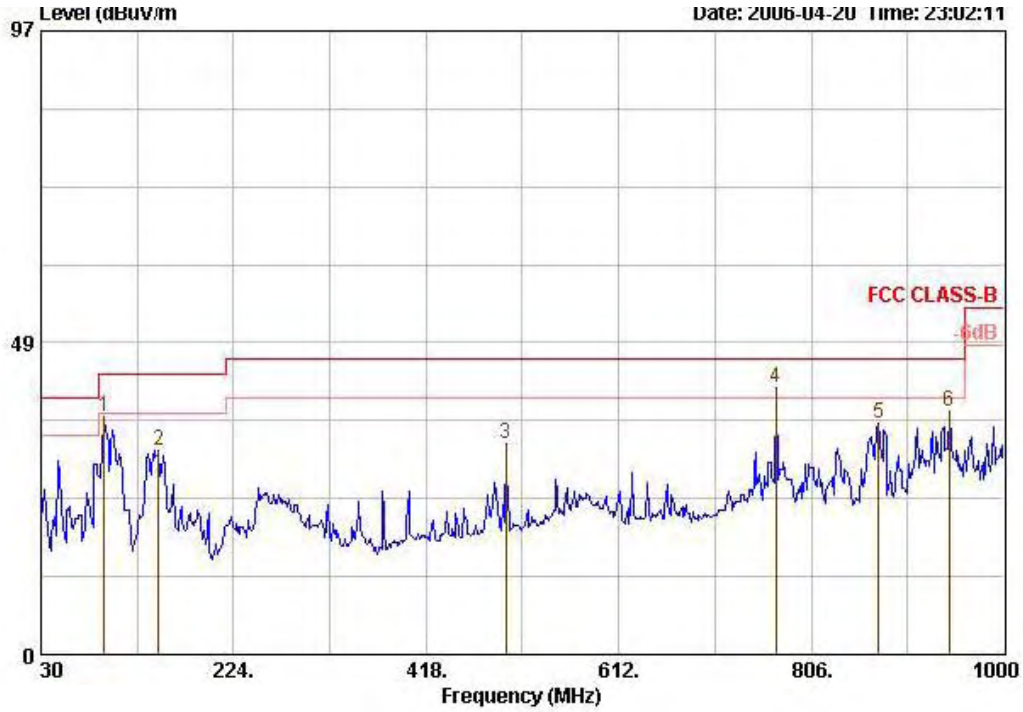
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / Adapter/ 802.11a Channel 64

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	32.910	37.93	-2.07	40.00	16.45	0.49	29.78	50.77	QP	---	---
2 !	43.580	36.33	-3.67	40.00	10.30	0.56	29.83	55.30	Peak	---	---
3	56.190	33.02	-6.98	40.00	6.00	0.63	29.82	56.21	Peak	---	---
4 !	83.350	34.87	-5.13	40.00	7.40	0.73	29.97	56.71	Peak	---	---
5	94.020	36.86	-6.64	43.50	9.60	0.79	30.11	56.58	Peak	---	---
6	770.110	33.86	-12.14	46.00	19.92	2.19	30.09	41.84	Peak	---	---

Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	94.020	36.90	-6.60	43.50	9.60	0.79	30.11	56.62	Peak	---	---
2	148.340	31.84	-11.66	43.50	10.28	0.96	30.09	50.69	Peak	---	---
3	498.510	32.78	-13.22	46.00	17.36	1.77	30.53	44.18	Peak	---	---
4 @	770.110	41.62	-4.38	46.00	19.92	2.19	30.09	49.60	Peak	---	---
5	873.900	35.85	-10.15	46.00	20.30	2.38	29.36	42.52	Peak	---	---
6	944.710	37.89	-8.11	46.00	20.58	2.49	29.05	43.87	Peak	---	---

Note:

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

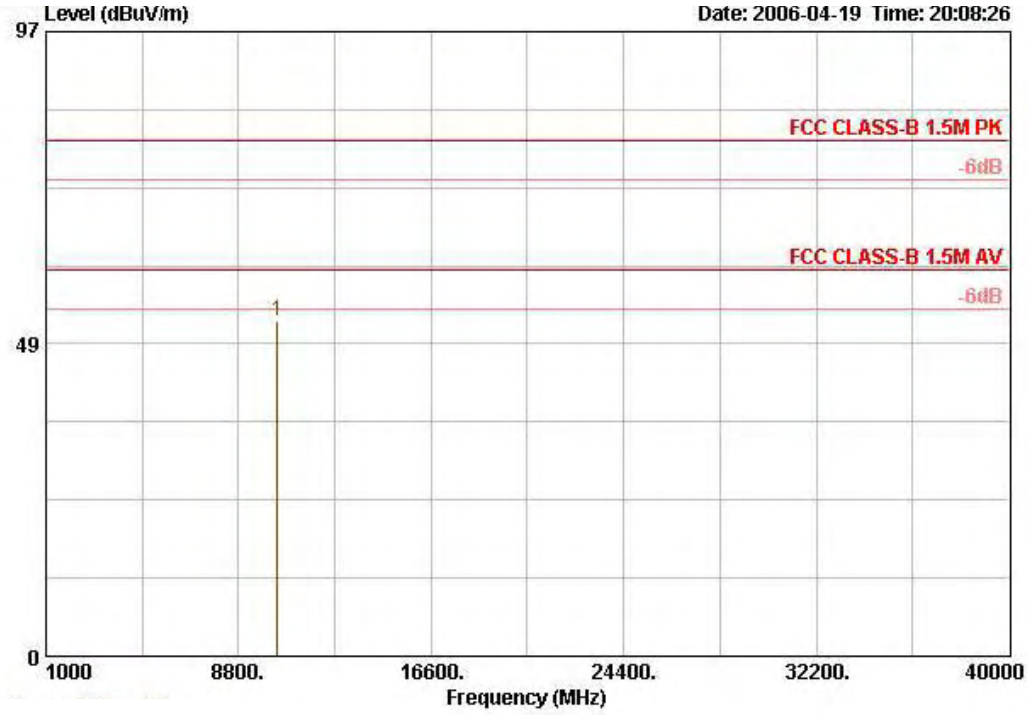
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

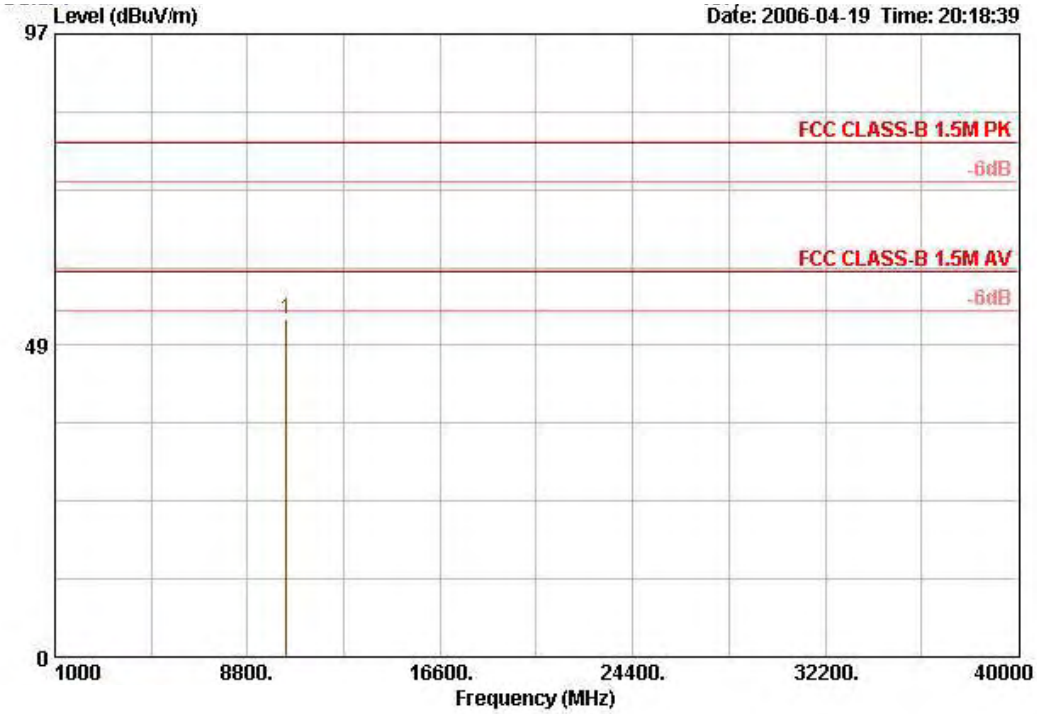
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Channel 36

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10359.720	52.08	-27.92	80.00	39.34	5.80	35.55	42.49	PEAK	130	184

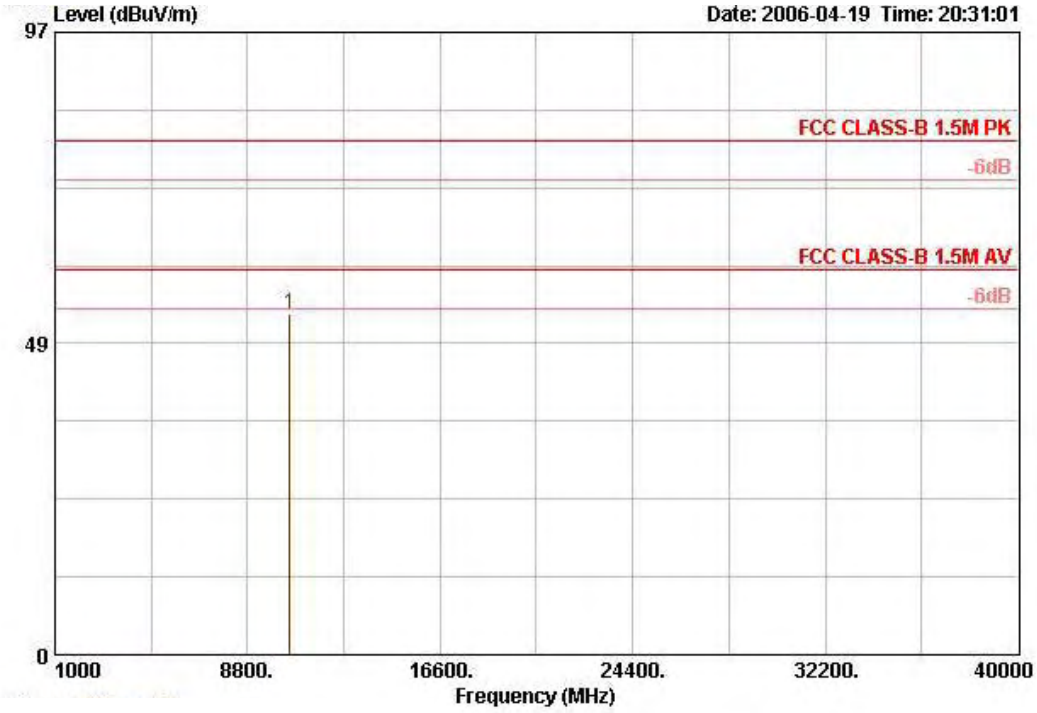
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10359.720	52.48	-27.52	80.00	39.34	5.80	35.55	42.89	PEAK	110	262

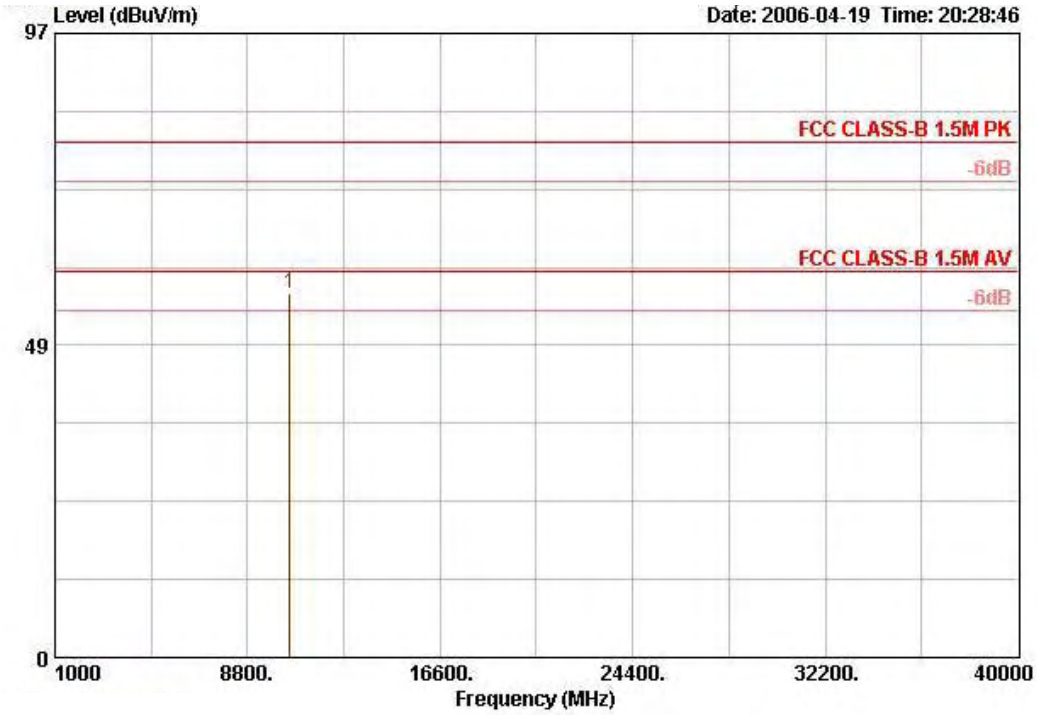
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Channel 52

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10519.160	53.09	-26.91	80.00	39.49	5.93	35.40	43.07	PEAK	118	327

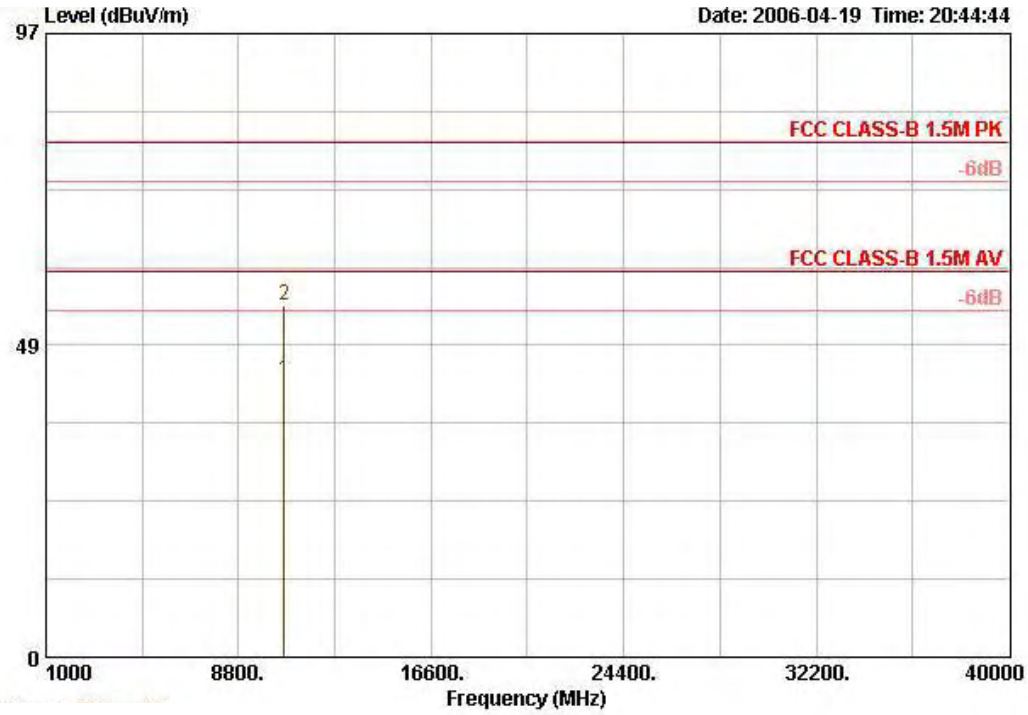
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10515.920	56.51	-23.49	80.00	39.49	5.93	35.40	46.49	PEAK	129	76

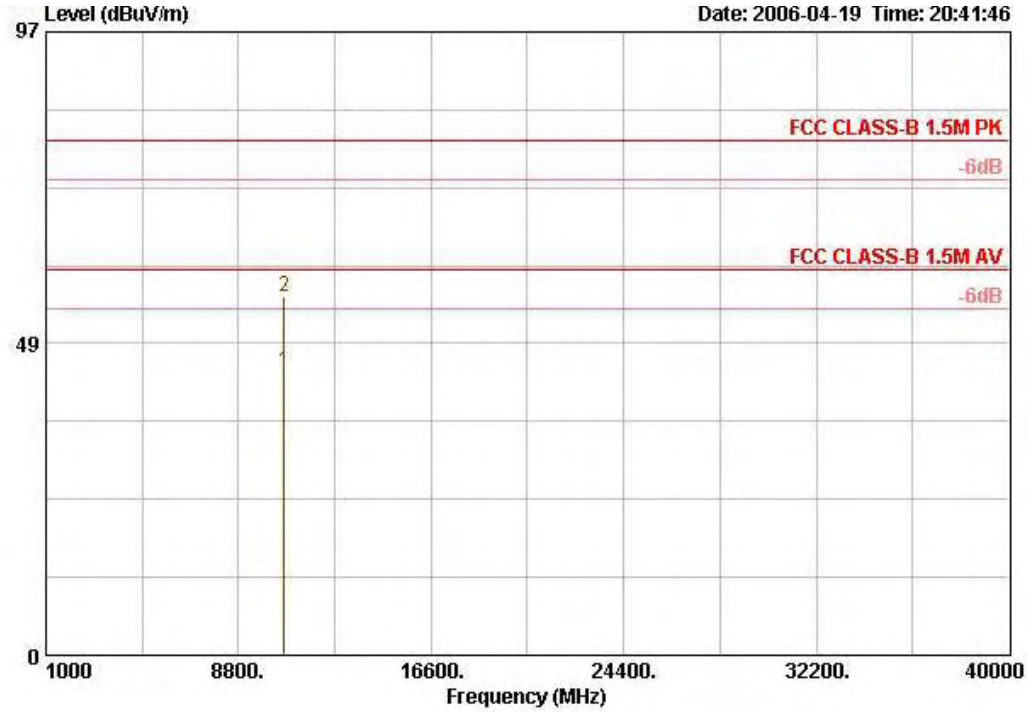
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Channel 64

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10640.280	43.03	-16.97	60.00	39.42	6.03	35.32	32.90	AVERAGE	111	136
2	10640.280	54.63	-25.37	80.00	39.42	6.03	35.32	44.50	PEAK	111	136

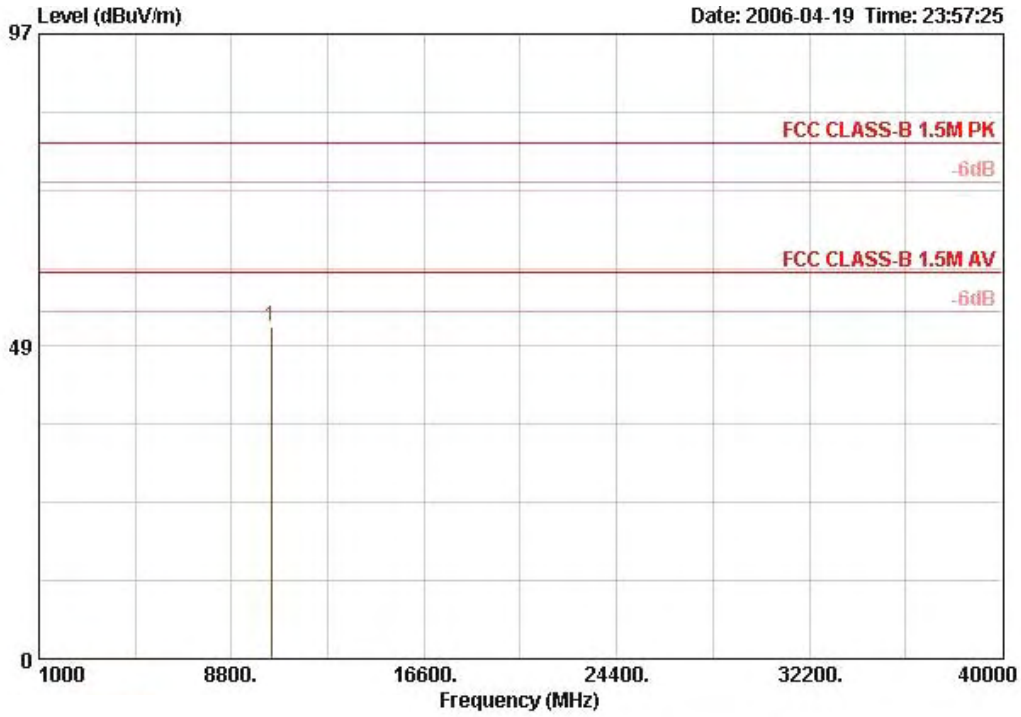
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10639.520	44.10	-15.90	60.00	39.42	6.03	35.32	33.97	AVERAGE	120	77
2	10639.520	55.70	-24.30	80.00	39.42	6.03	35.32	45.57	PEAK	120	77

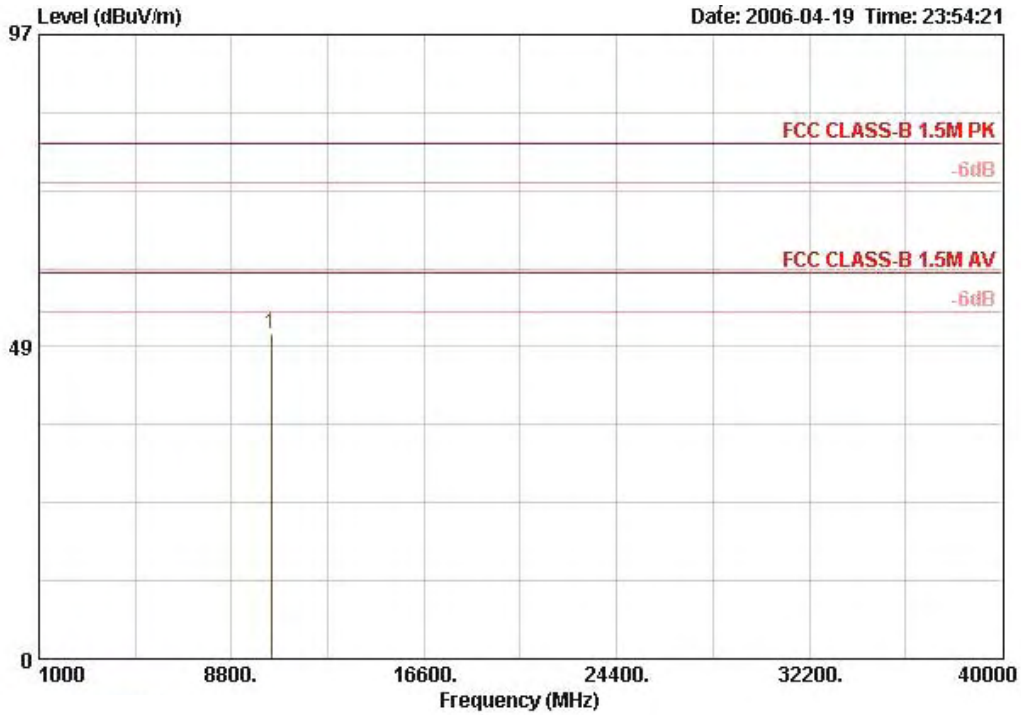
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Turbo Channel 42

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10421.200	51.67	-28.33	80.00	39.50	5.93	35.40	41.64	PEAK	105	138

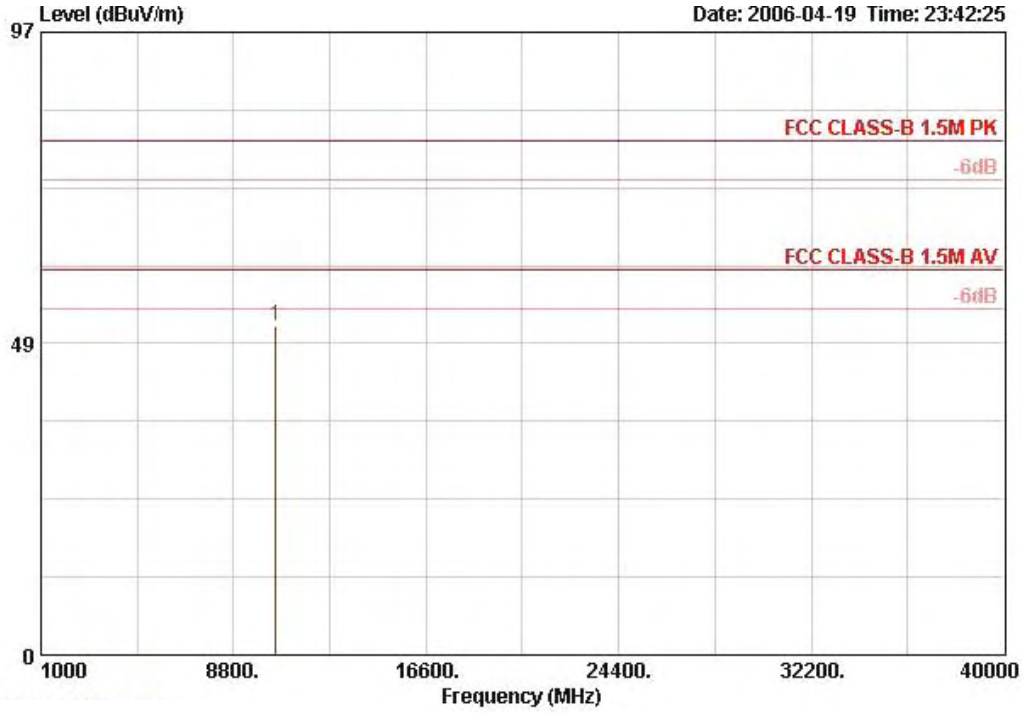
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10417.400	50.47	-29.53	80.00	39.50	5.93	35.43	40.46	PEAK	115	290

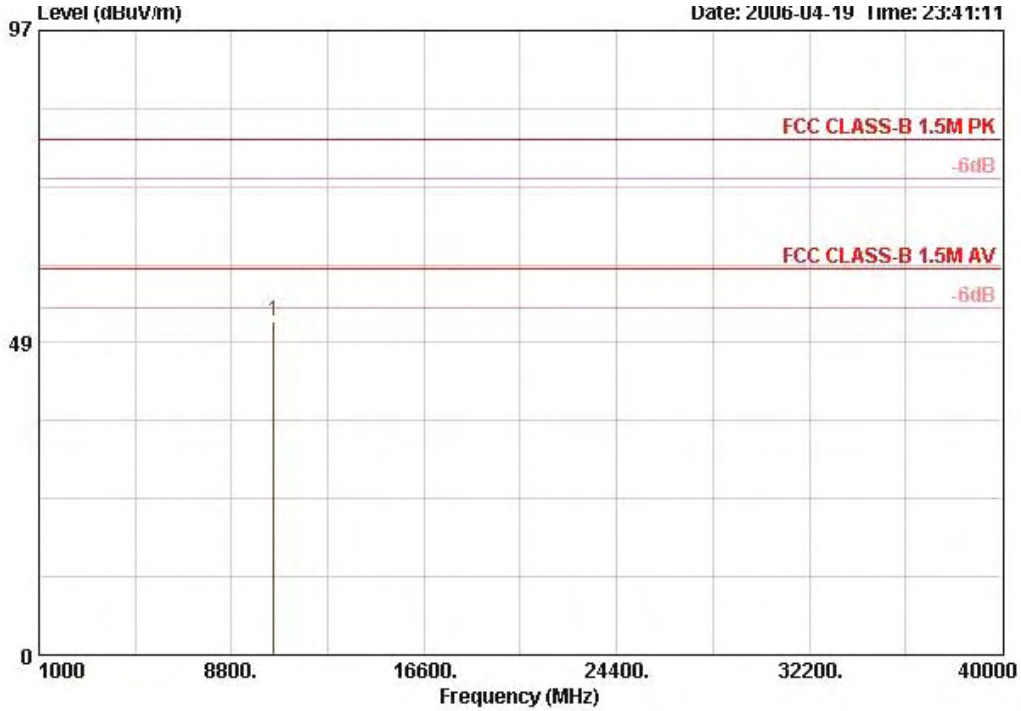
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Turbo Channel 50

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10500.600	51.26	-28.74	80.00	39.50	5.93	35.40	41.22	PEAK	106	140

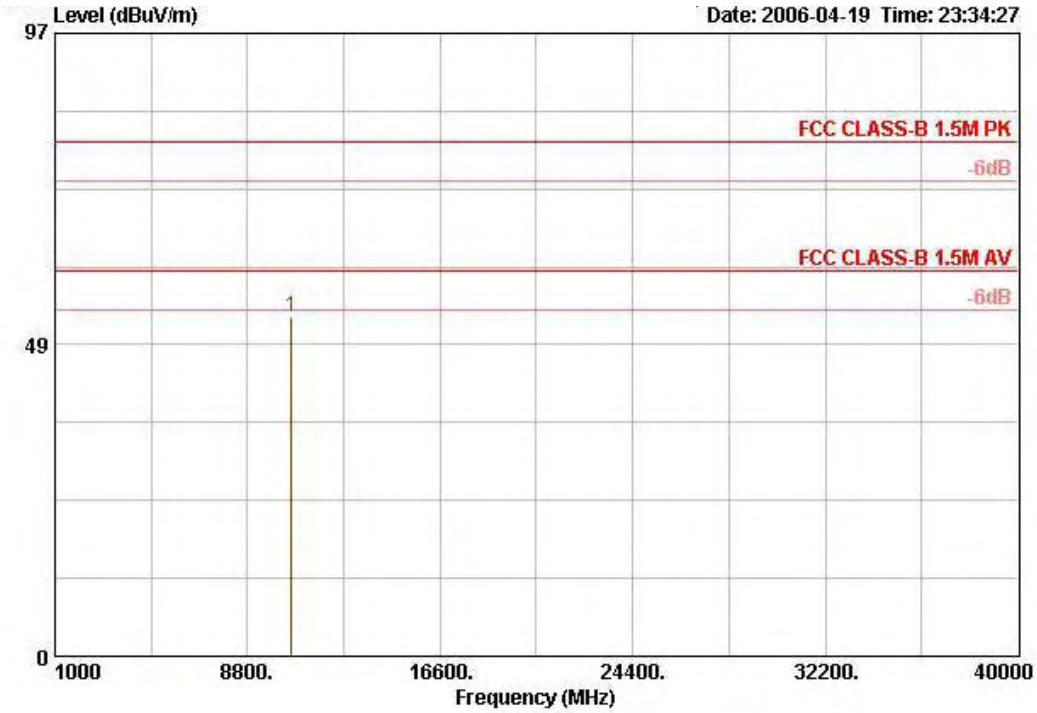
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10497.200	51.85	-28.15	80.00	39.50	5.93	35.43	41.84	PEAK	113	286

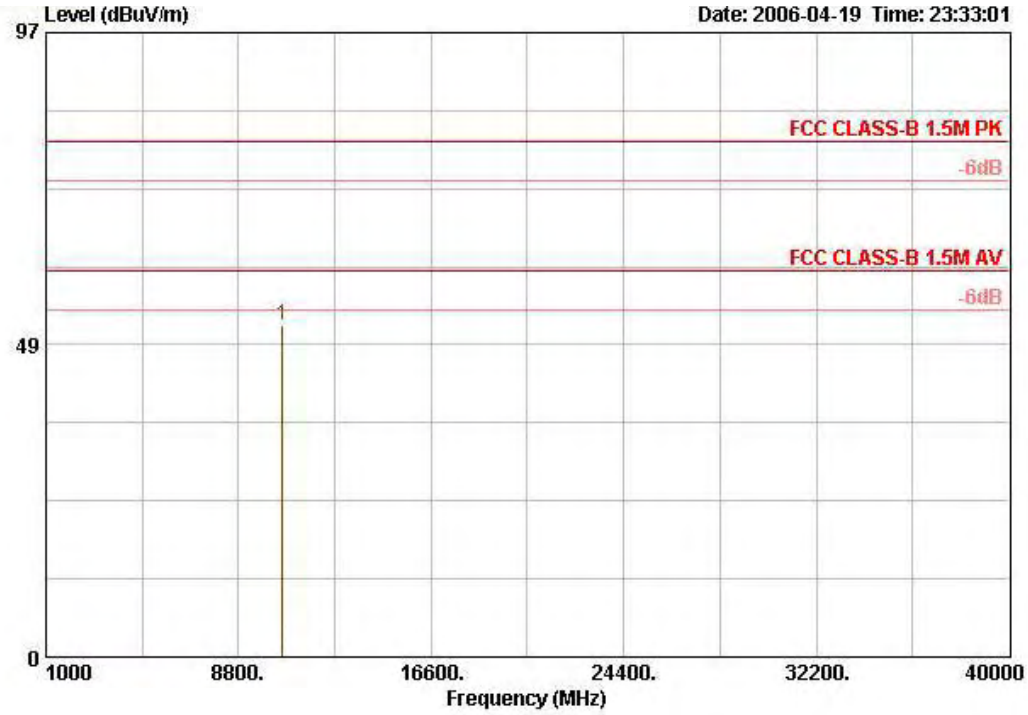
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Turbo Channel 58

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10577.600	52.78	-27.22	80.00	39.46	6.00	35.35	42.67	PEAK	106	136

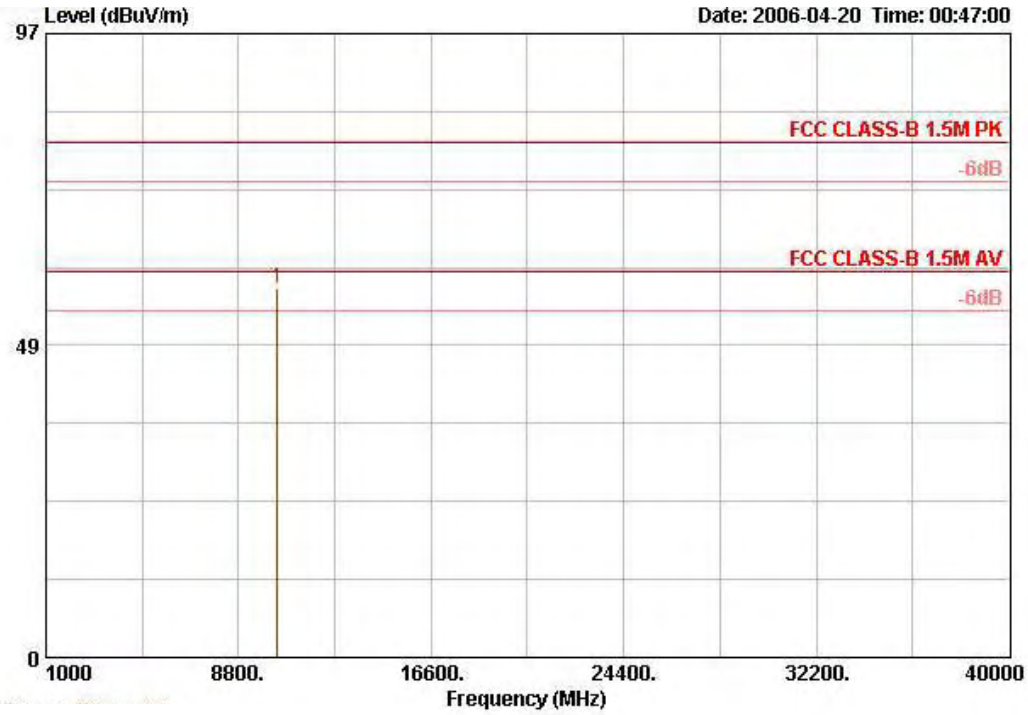
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10578.960	51.65	-28.35	80.00	39.46	6.00	35.35	41.54	PEAK	114	286

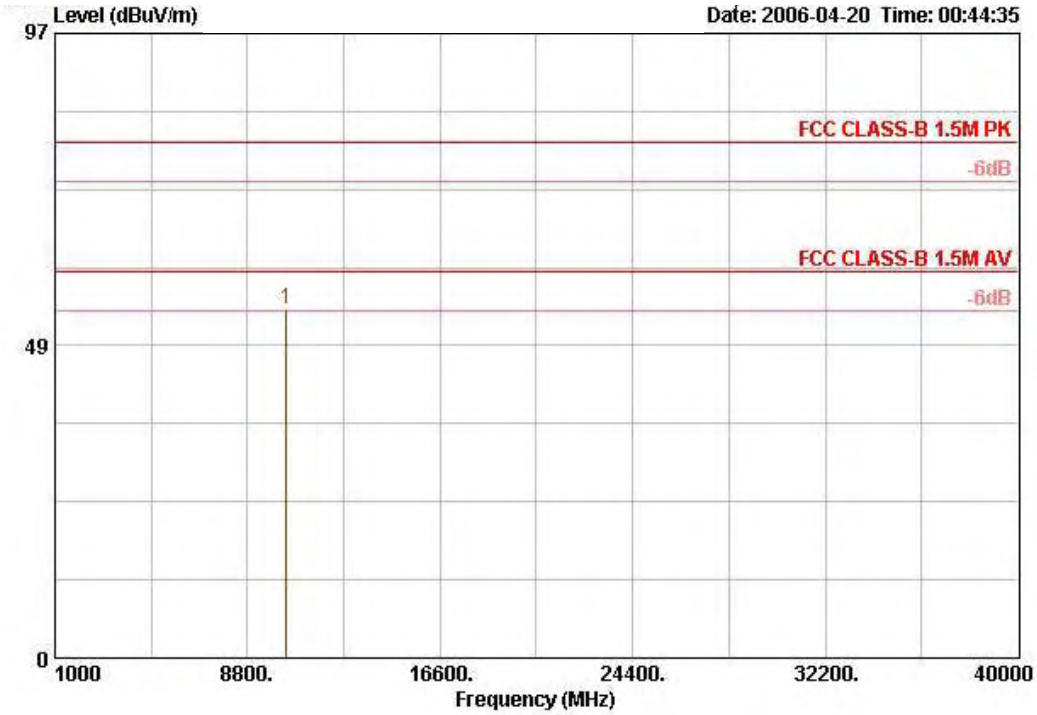
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Channel 36

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10360.360	57.44	-22.56	80.00	39.34	5.80	35.55	47.86	PEAK	121	347

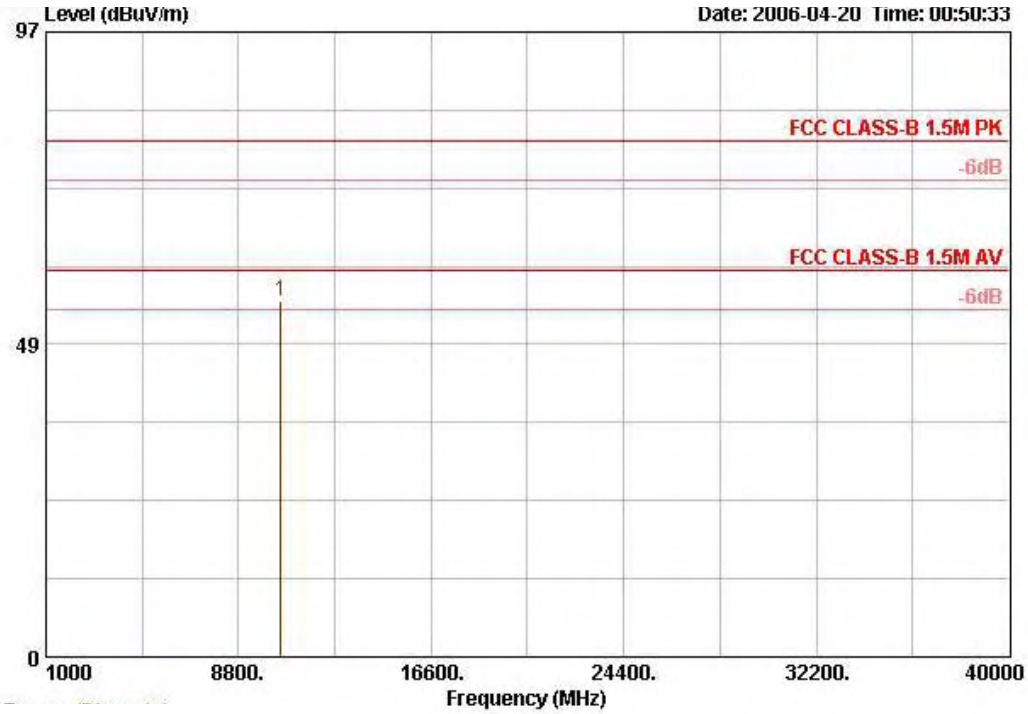
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10360.400	54.14	-25.86	80.00	39.34	5.80	35.55	44.55	PEAK	115	289

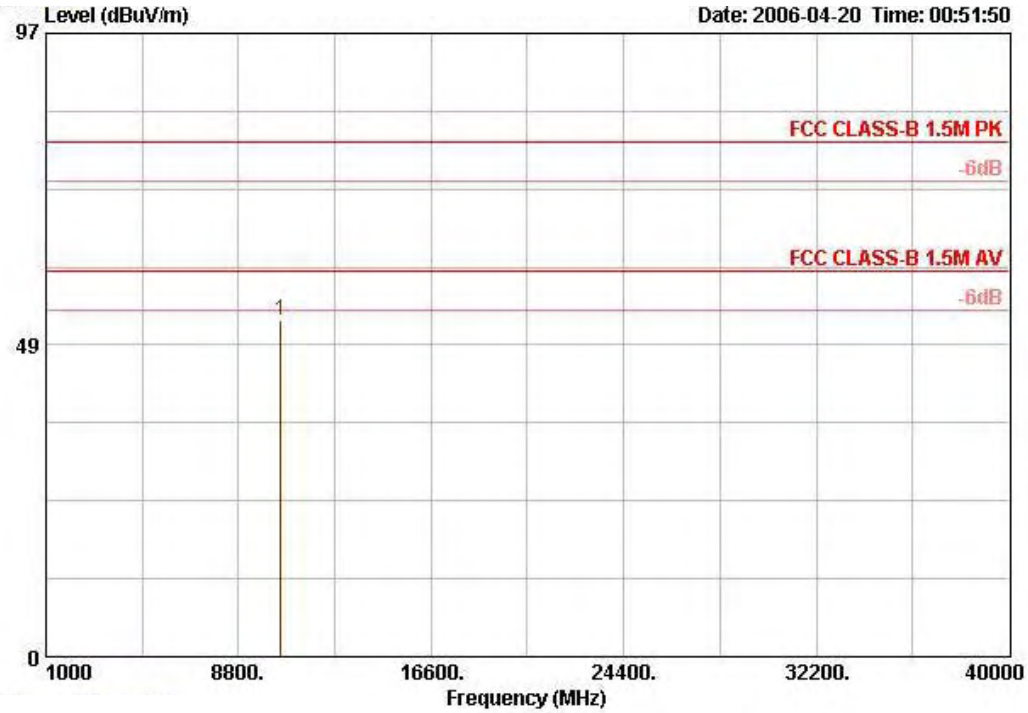
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Channel 52

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10519.440	55.34	-24.66	80.00	39.49	5.93	35.40	45.32	PEAK	123	342

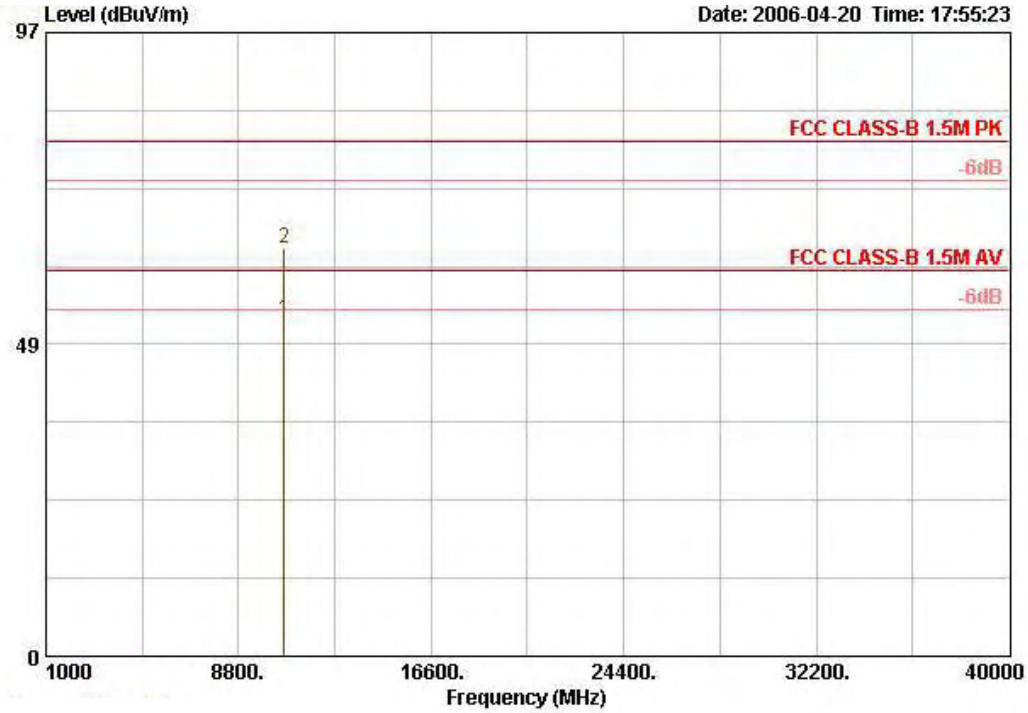
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10517.680	52.35	-27.65	80.00	39.49	5.93	35.40	42.33	PEAK	112	285

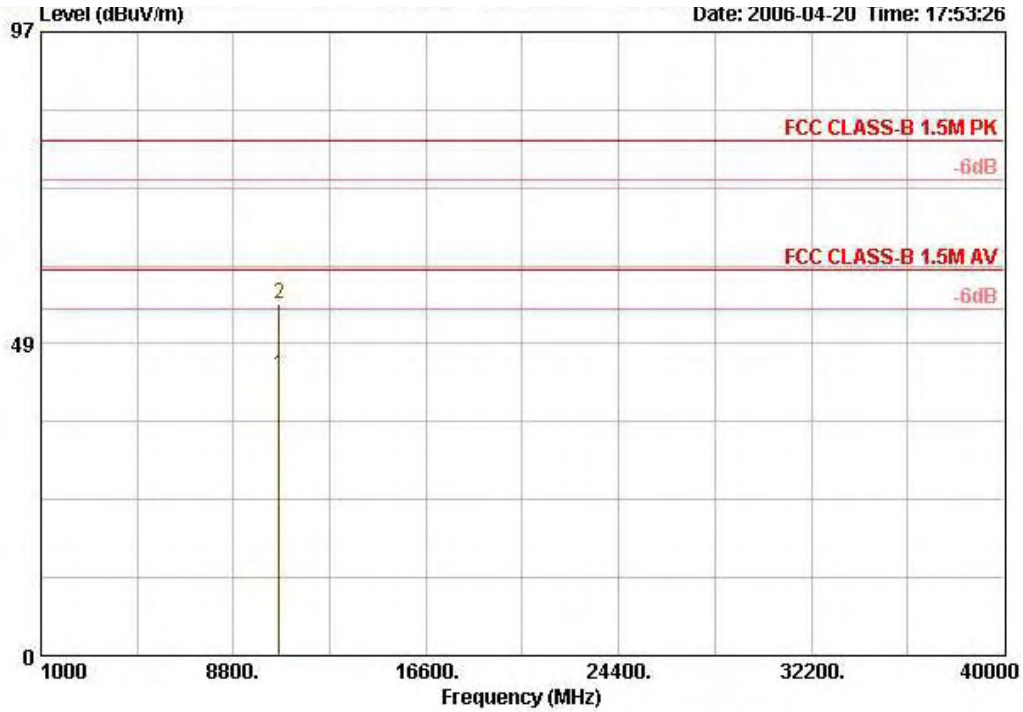
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Channel 64

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10640.120	52.38	-7.62	60.00	39.42	6.03	35.32	42.25	AVERAGE	100	6
2	10640.120	63.48	-16.52	80.00	39.42	6.03	35.32	53.35	PEAK	100	6

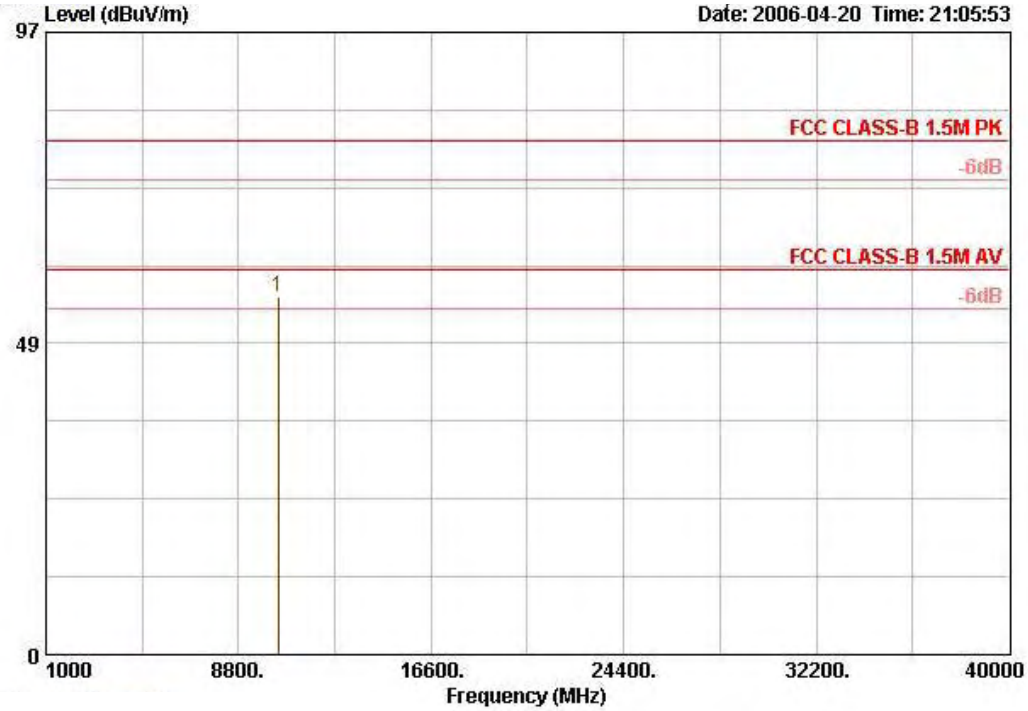
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10639.840	43.70	-16.30	60.00	39.42	6.03	35.32	33.57	AVERAGE	105	325
2	10639.840	54.71	-25.29	80.00	39.42	6.03	35.32	44.58	PEAK	105	325

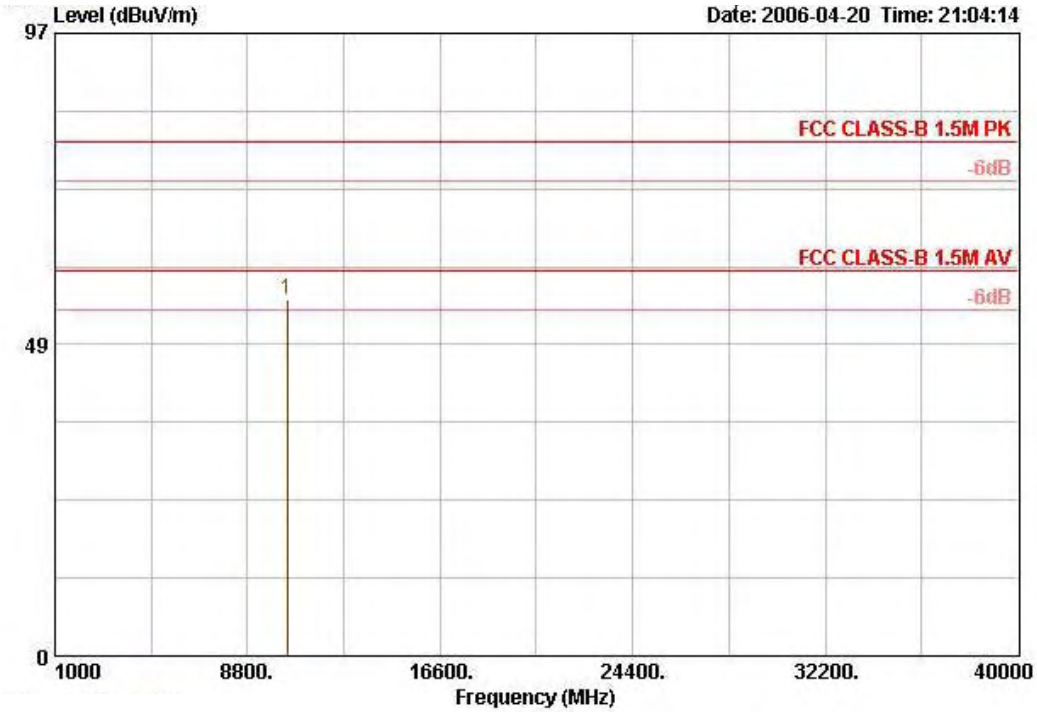
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Turbo Channel 42

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10414.600	55.78	-24.22	80.00	39.40	5.83	35.50	46.05	PEAK	118	21

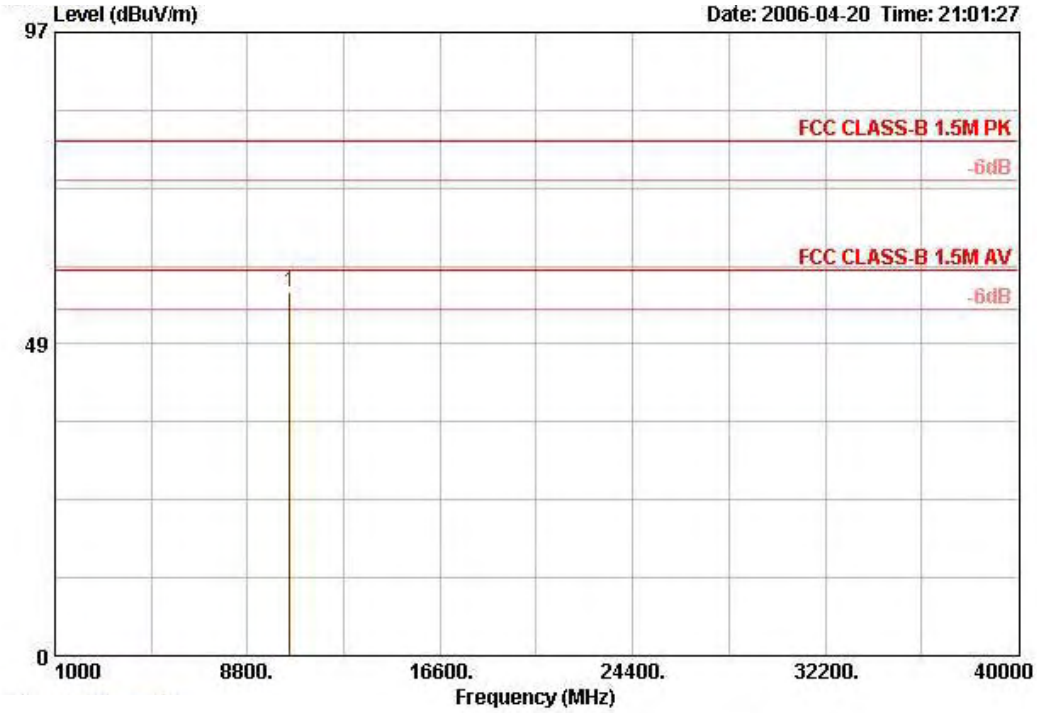
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10417.600	55.50	-24.50	80.00	39.40	5.83	35.50	45.77	PEAK	117	287

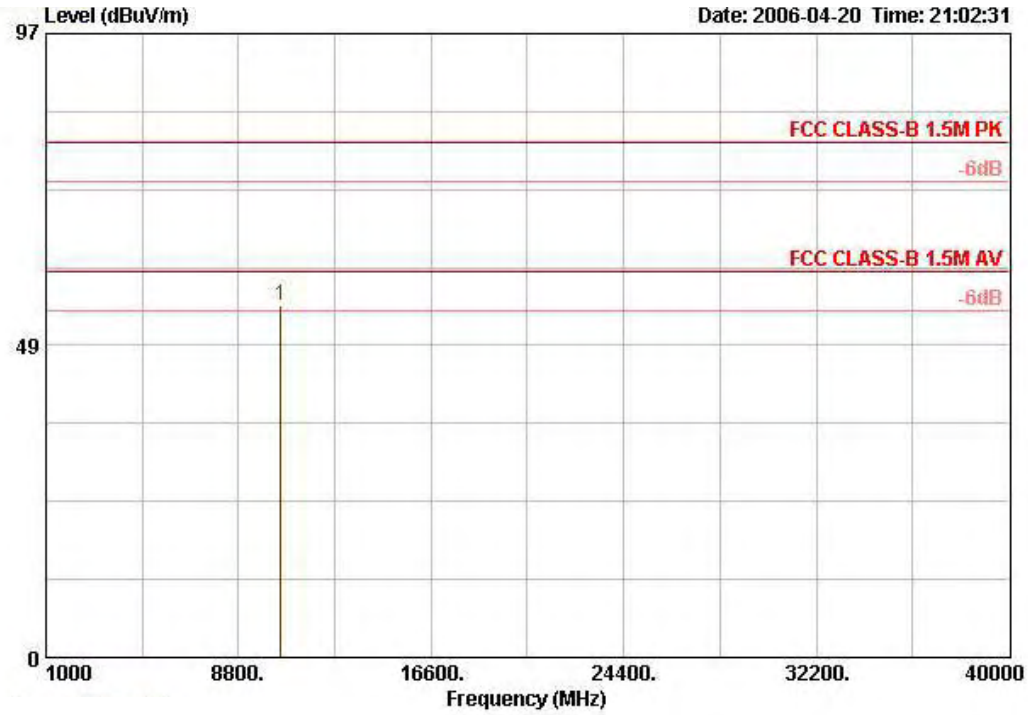
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Turbo Channel 50

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10502.500	56.58	-23.42	80.00	39.50	5.93	35.40	46.54	PEAK	124	16

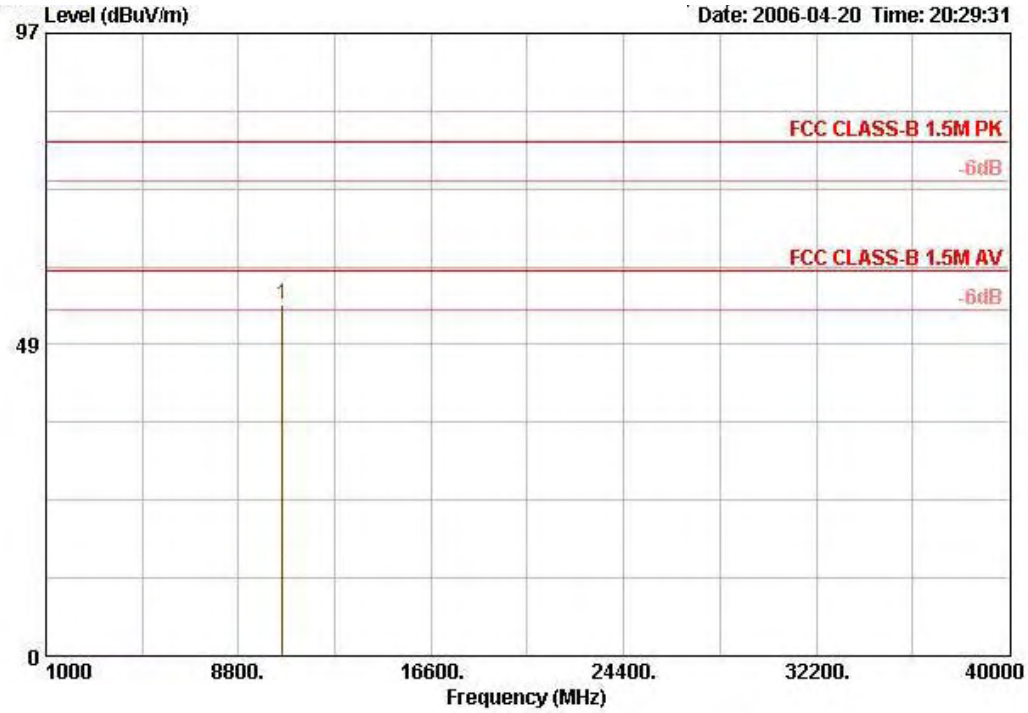
Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10497.700	54.64	-25.36	80.00	39.50	5.93	35.43	44.63	PEAK	109	291

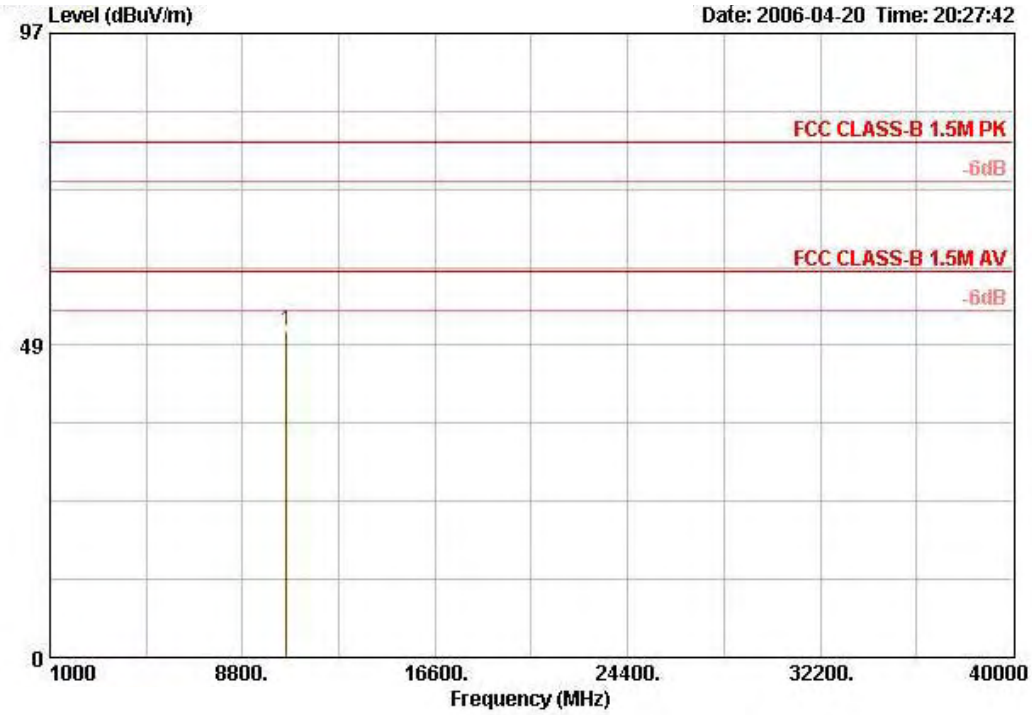
Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Turbo Channel 58

Vertical



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10574.240	54.76	-25.24	80.00	39.46	5.97	35.37	44.70	PEAK	121	3

Horizontal



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	10587.160	50.66	-29.34	80.00	39.45	6.00	35.35	40.57	PEAK	116	356

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.

The limits above 5GHz 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 distanc [3m] / test distance [1.5m]) (dB);

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

4.7. Band Edge Emissions Measurement

4.7.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, 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

4.7.2. Measuring Instruments and Setting

Please refer to section 5 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 (other emission)	1 MHz /1 MHz for Peak

4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3, only the freqeuncy 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.

4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.7.5. Test Deviation

There is no deviation with the original standard.

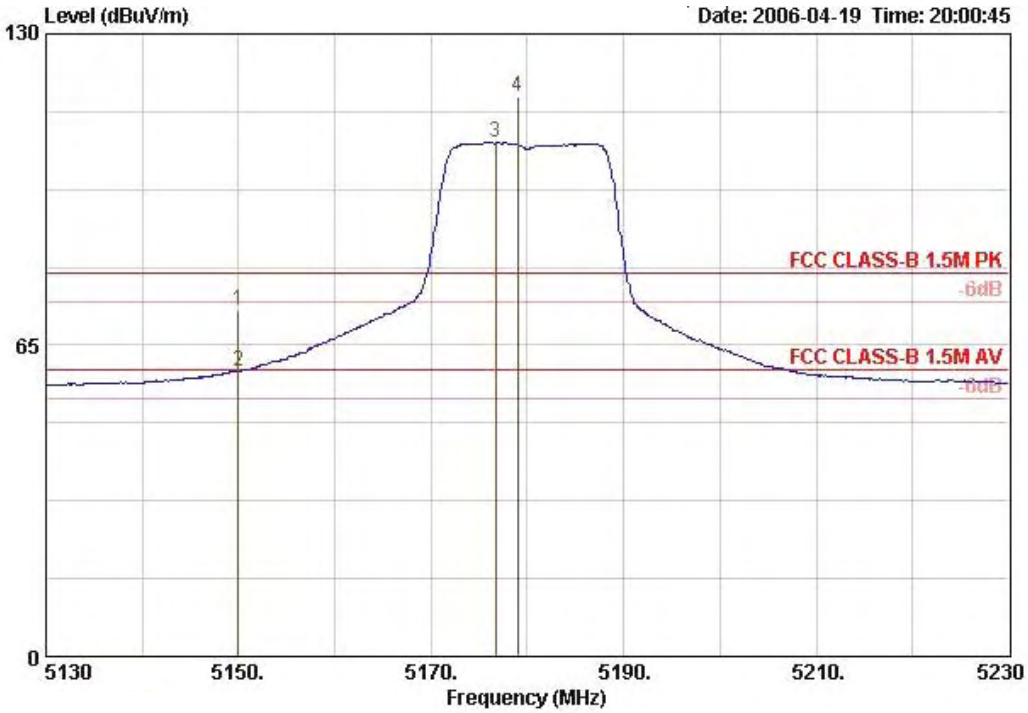
4.7.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Channel 36, 64

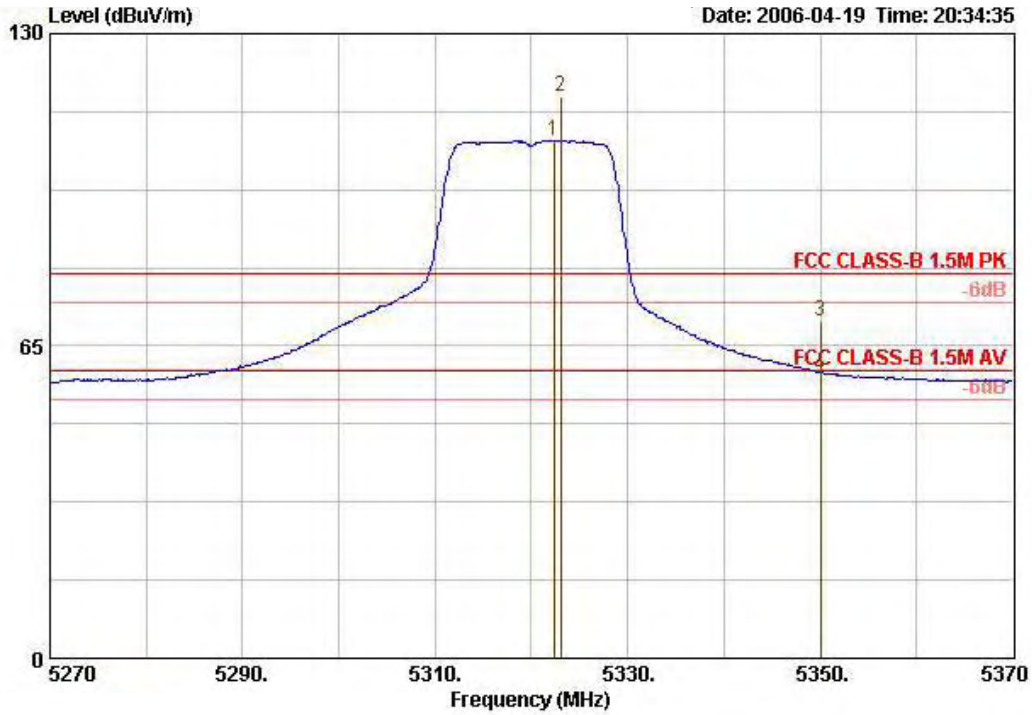
Channel 36



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	5150.000	72.24	-7.76	80.00	33.84	4.88	0.00	33.52	PEAK	100	20
2 @	5150.000	59.35	-0.65	60.00	33.84	4.88	0.00	20.63	AVERAGE	100	20
3 @	5176.700	107.31			33.89	4.92	0.00	68.50	Average	---	---
4 @	5179.000	116.75			33.89	4.92	0.00	77.94	PEAK	100	20

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 64

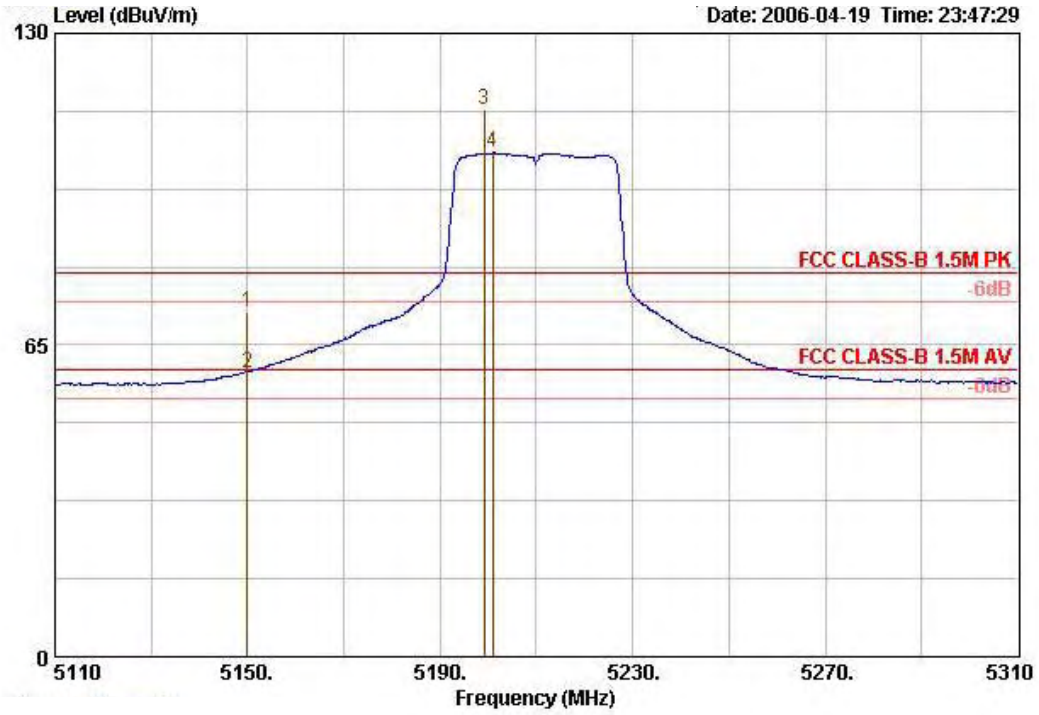


	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	5322.300	107.71			34.11	5.07	0.00	68.53	Average	---	---
2 @	5323.000	116.95			34.11	5.07	0.00	77.77	PEAK	100	4
3	5350.000	70.27	-9.73	80.00	34.16	5.11	0.00	31.00	PEAK	100	4
4 @	5350.000	58.93	-1.07	60.00	34.16	5.11	0.00	19.65	AVERAGE	100	4

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 1 / 802.11a Turbo Channel 42, 58

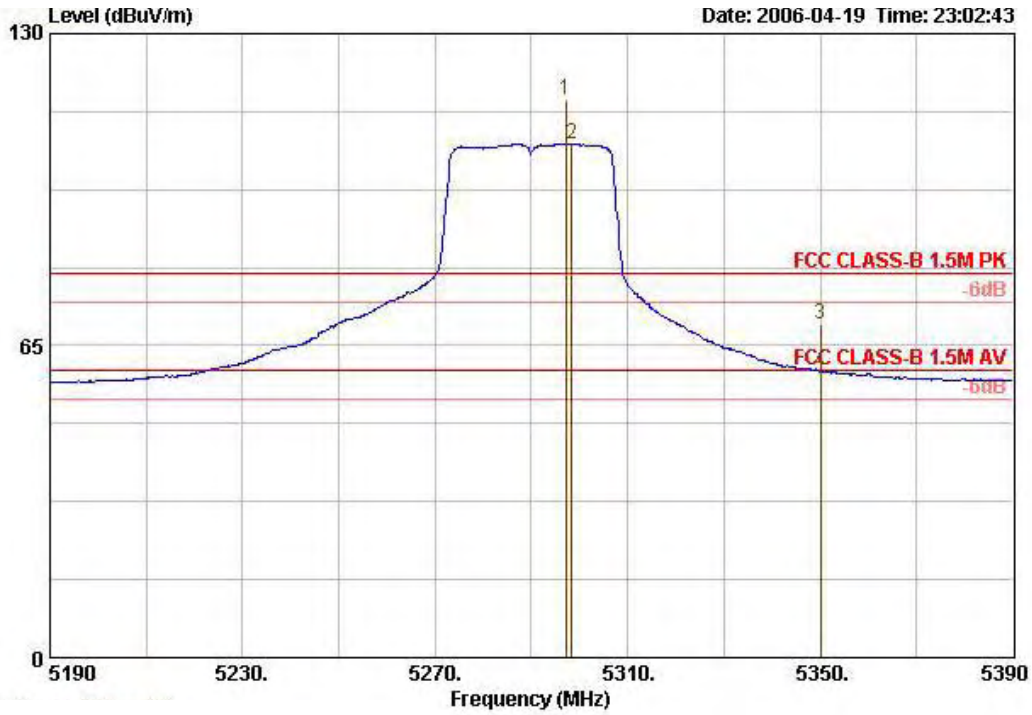
Turbo Channel 42



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	5150.000	72.07	-7.93	80.00	33.84	4.88	0.00	33.35	PEAK	100	34
2 @	5150.000	59.18	-0.82	60.00	33.84	4.88	0.00	20.46	AVERAGE	100	34
3 @	5199.200	114.10			33.92	4.96	0.00	75.23	PEAK	100	34
4 @	5201.000	105.13			33.92	4.96	0.00	66.25	Average	---	---

Item 3, 4 are the fundamental frequency at 5210 MHz.

Turbo Channel 58

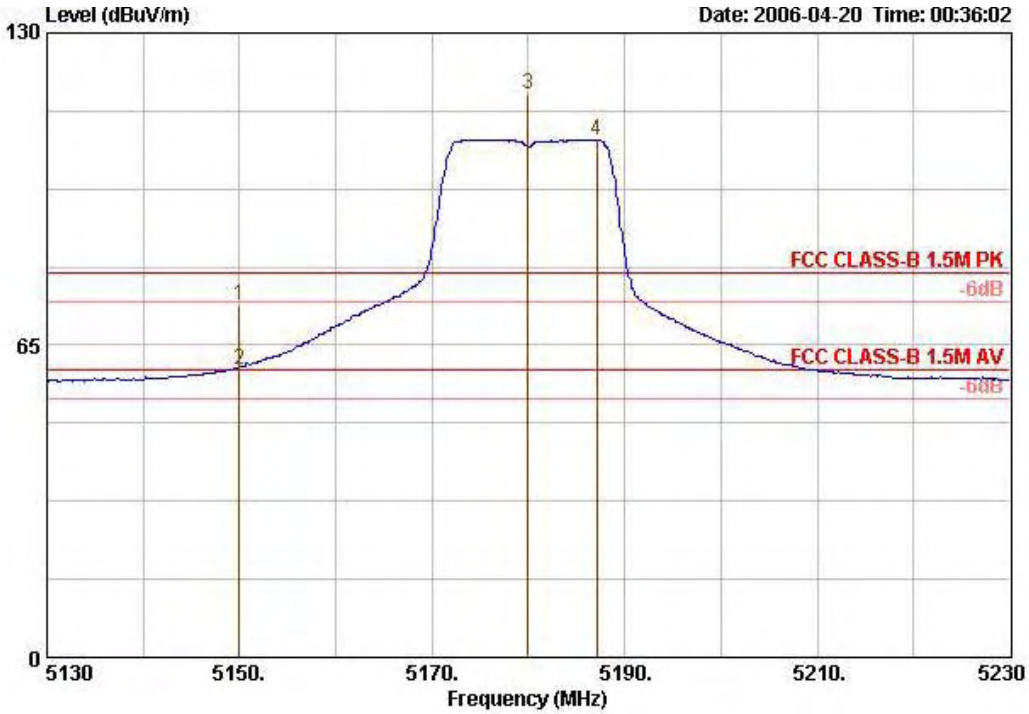


	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	5297.200	116.22			34.08	5.03	0.00	77.10	PEAK	104	67
2 @	5298.400	107.13			34.08	5.03	0.00	68.01	Average	---	---
3	5350.000	69.31	-10.69	80.00	34.16	5.11	0.00	30.03	PEAK	104	67
4 @	5350.000	59.48	-0.52	60.00	34.16	5.11	0.00	20.21	AVERAGE	104	67

Item 1, 2 are the fundamental frequency at 5290 MHz.

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Channel 36, 64

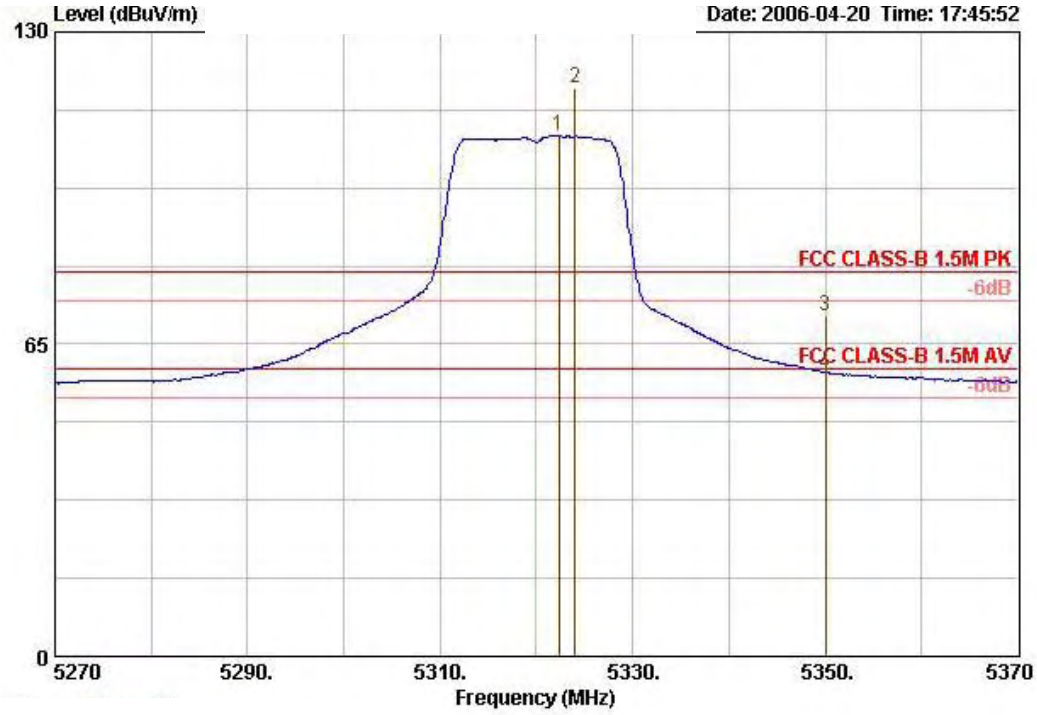
Channel 36



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	5150.000	73.27	-6.73	80.00	33.84	4.88	0.00	34.55	PEAK	105	15
2 @	5150.000	59.79	-0.21	60.00	33.84	4.88	0.00	21.07	AVERAGE	105	15
3 @	5180.000	117.23			33.89	4.92	0.00	78.42	PEAK	105	15
4 @	5187.100	107.83			33.89	4.92	0.00	69.02	Average	---	---

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 64

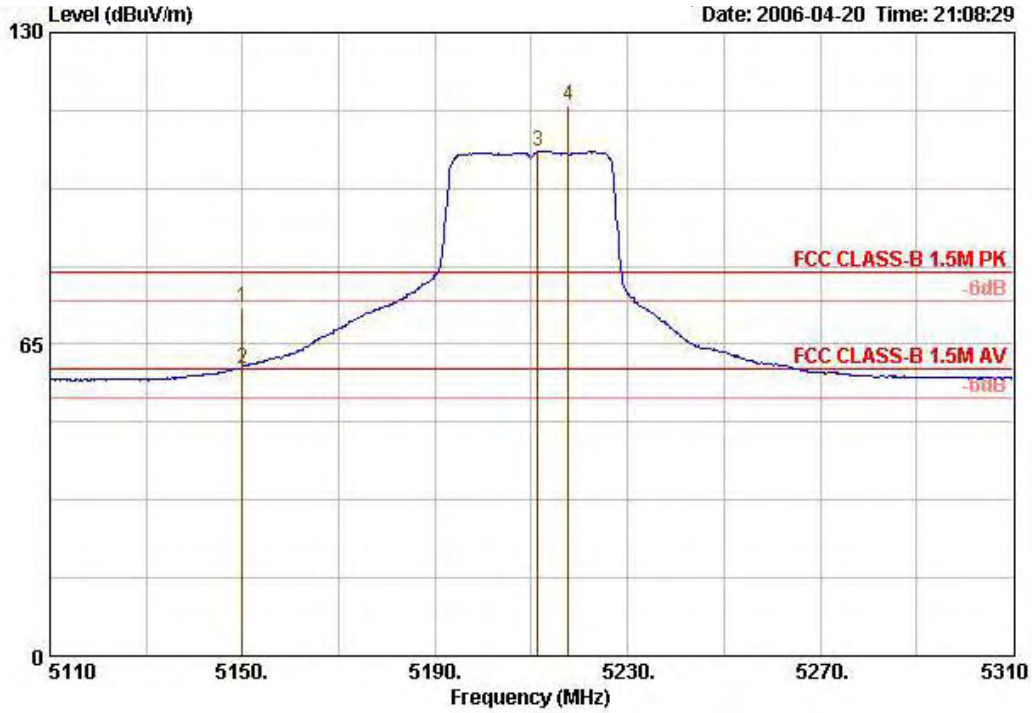


	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	5322.300	108.35			34.11	5.07	0.00	69.17	Average	---	---
2 @	5324.000	118.25			34.11	5.07	0.00	79.07	PEAK	100	8
3	5350.000	70.90	-9.10	80.00	34.16	5.11	0.00	31.63	PEAK	100	8
4 @	5350.000	58.95	-1.05	60.00	34.16	5.11	0.00	19.68	AVERAGE	100	8

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	24℃	Humidity	64%
Test Engineer	Rush Kao	Configurations	Ant. 2 / 802.11a Turbo Channel 42, 58

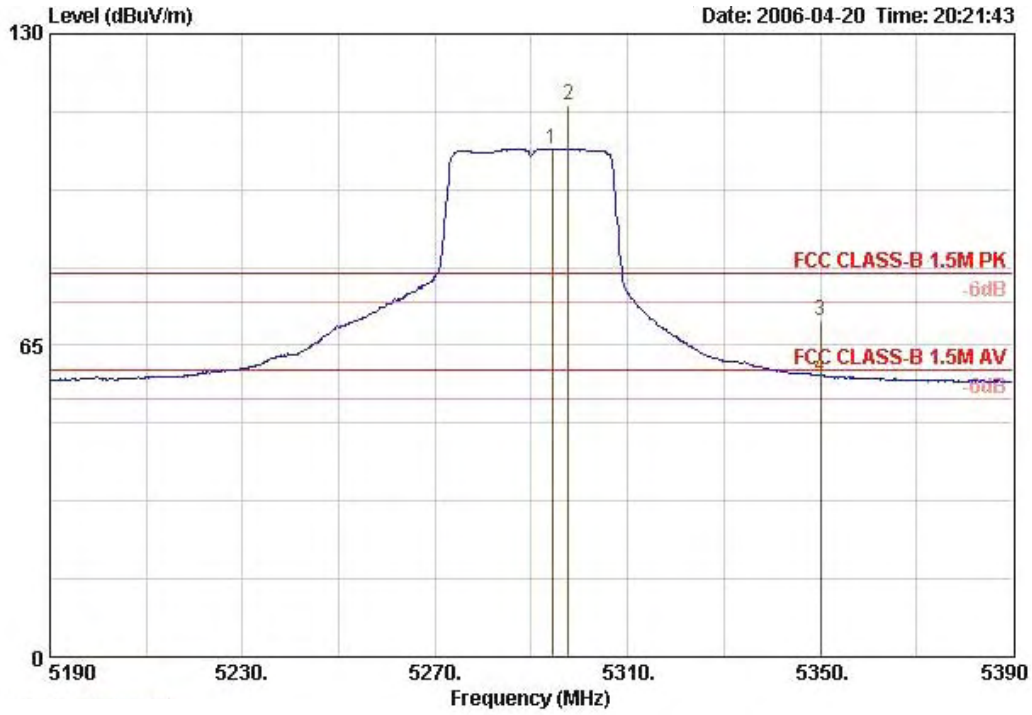
Turbo Channel 42



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1	5150.000	72.49	-7.51	80.00	33.84	4.88	0.00	33.77	PEAK	100	16
2 @	5150.000	59.92	-0.08	60.00	33.84	4.88	0.00	21.21	AVERAGE	100	16
3 @	5211.400	105.31			33.95	4.96	0.00	66.41	Average	---	---
4 @	5217.600	114.60			33.95	4.96	0.00	75.69	PEAK	100	16

Item 3, 4 are the fundamental frequency at 5210 MHz.

Turbo Channel 58



	Freq	Level	Over Limit	Limit Line	Antenna Factor	Cable Loss	Preamp Factor	Read Level	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	dBuV		cm	deg
1 @	5294.400	106.07			34.08	5.03	0.00	66.96	Average	---	---
2 @	5297.600	115.19			34.08	5.03	0.00	76.08	PEAK	100	16
3	5350.000	70.24	-9.76	80.00	34.16	5.11	0.00	30.97	PEAK	100	16
4 @	5350.000	58.49	-1.51	60.00	34.16	5.11	0.00	19.22	AVERAGE	100	16

Item 1, 2 are the fundamental frequency at 5290 MHz.

Note:

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

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

Receiving maximum band edge emissions are Vertical Polarization.

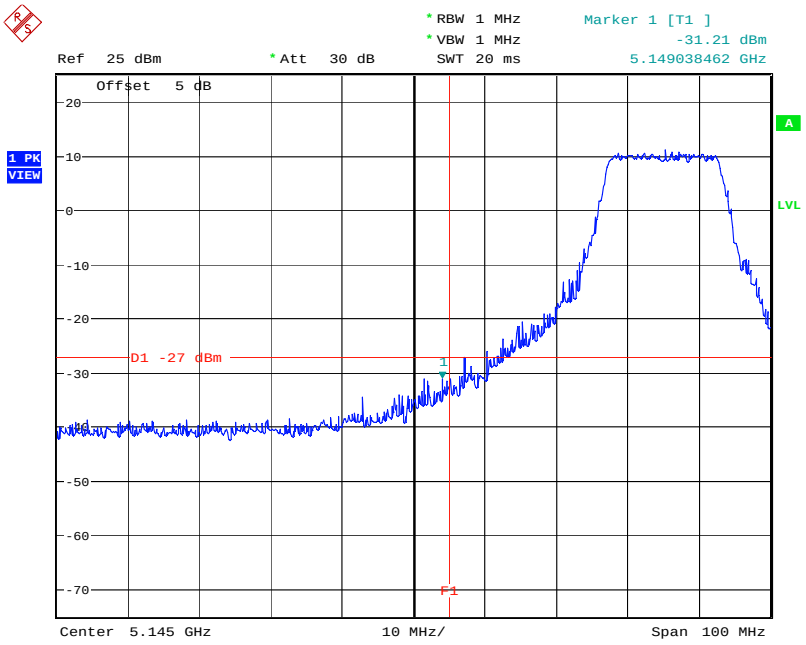
The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

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

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

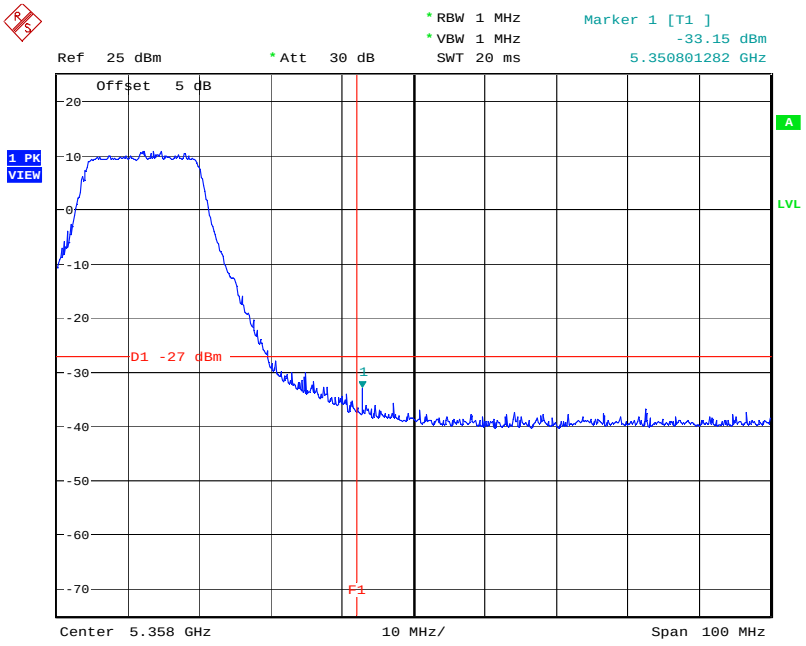
For Ant. 1

EIRP Emission in Band on Configuration IEEE 802.11a / 5180 MHz



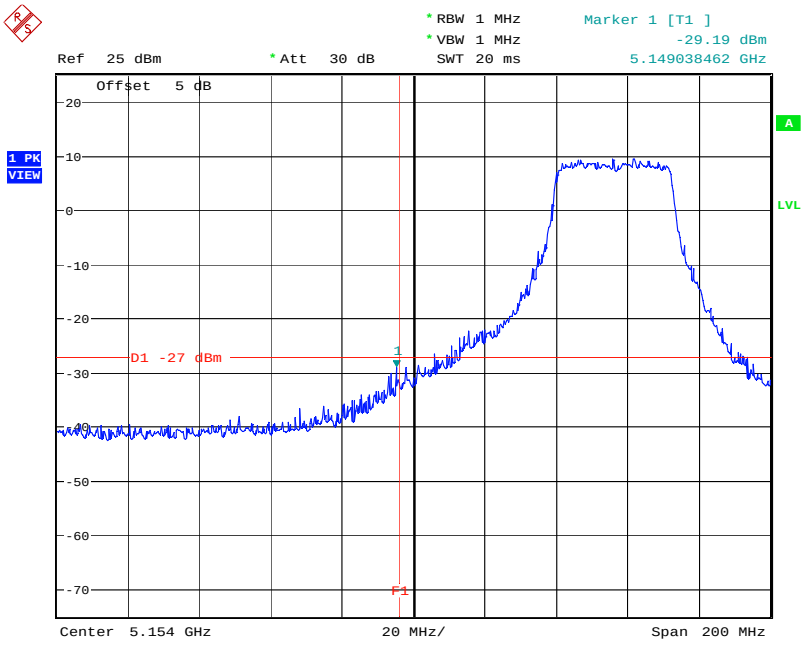
Date: 2.JUN.2006 14:30:23

EIRP Emission in Band on Configuration IEEE 802.11a / 5320 MHz



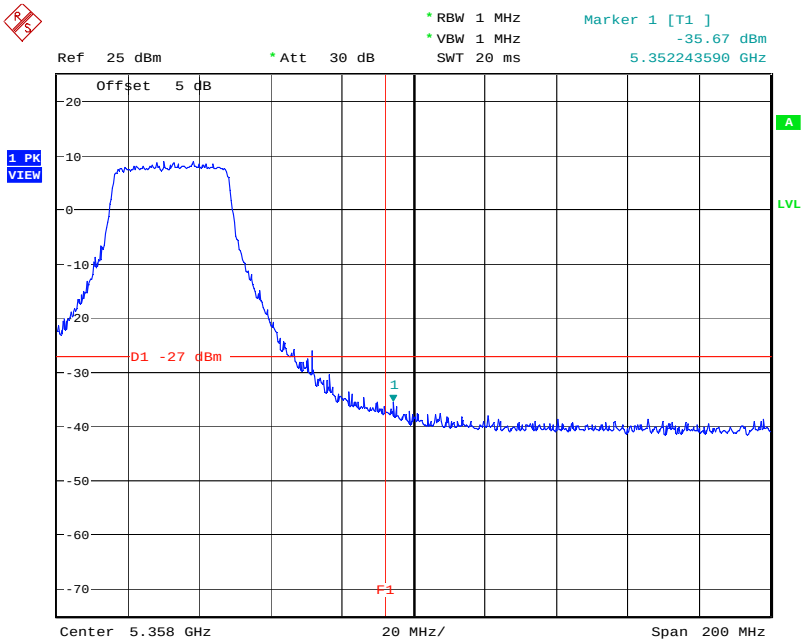
Date: 2.JUN.2006 14:29:31

EIRP Emission in Band on Configuration IEEE 802.11a Turbo / 5210 MHz



Date: 2.JUN.2006 14:43:57

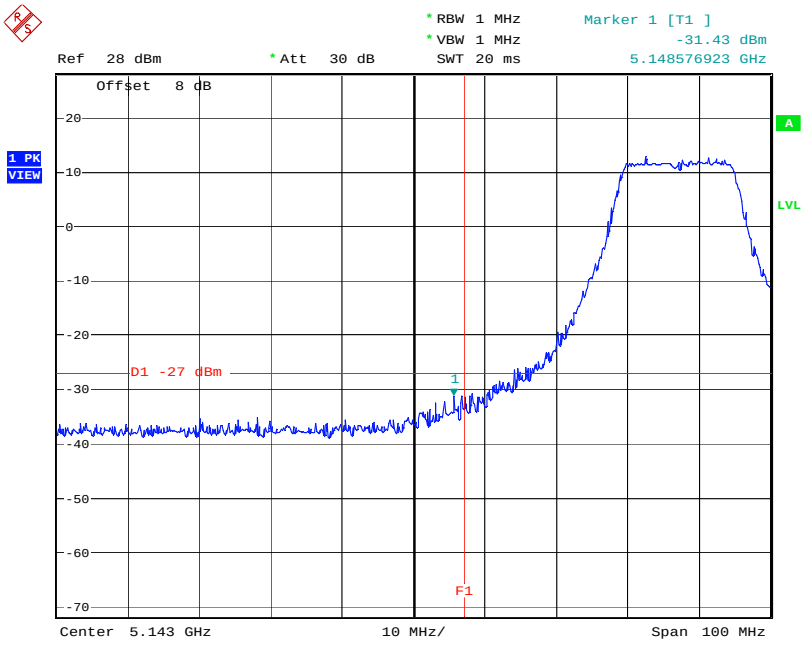
EIRP Emission in Band on Configuration IEEE 802.11a Turbo / 5290 MHz



Date: 2.JUN.2006 14:44:31

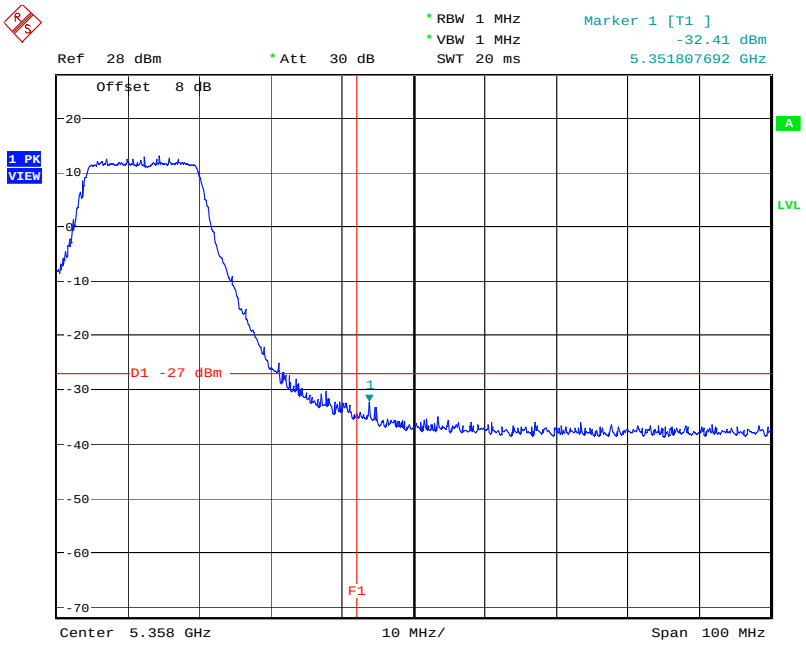
For Ant. 2

EIRP Emission in Band on Configuration IEEE 802.11a / 5180 MHz



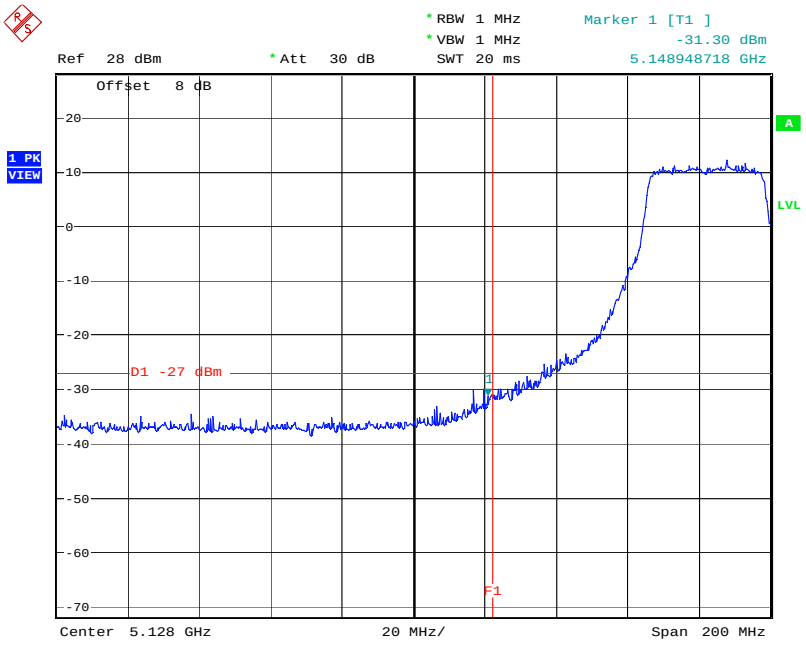
Date: 20.APR.2006 21:42:19

EIRP Emission in Band on Configuration IEEE 802.11a / 5320 MHz



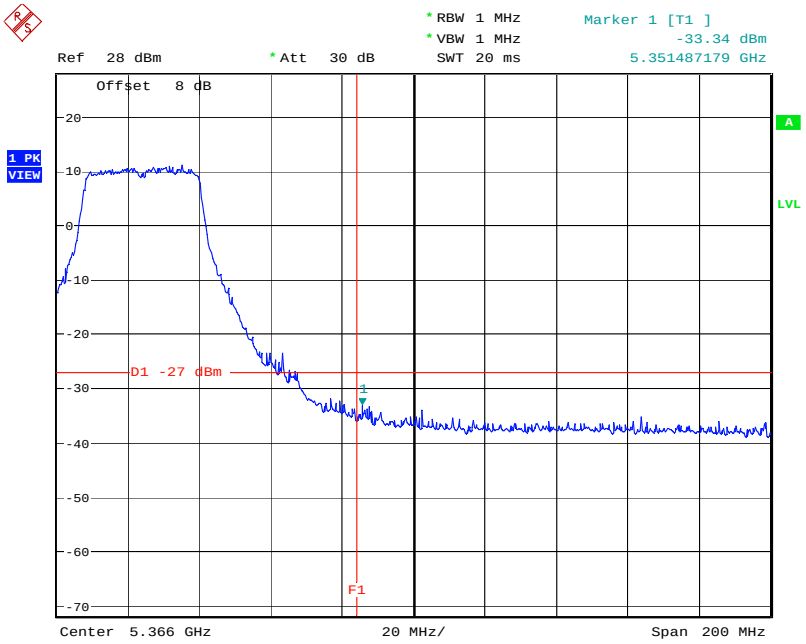
Date: 20.APR.2006 21:40:25

EIRP Emission in Band on Configuration IEEE 802.11a Turbo / 5210 MHz



Date: 20.APR.2006 21:37:04

EIRP Emission in Band on Configuration IEEE 802.11a Turbo / 5290 MHz



Date: 20.APR.2006 21:38:33

4.8. Frequency Stability Measurement

4.8.1. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ±20ppm (IEEE 802.11a specification).

4.8.2. Measuring Instruments and Setting

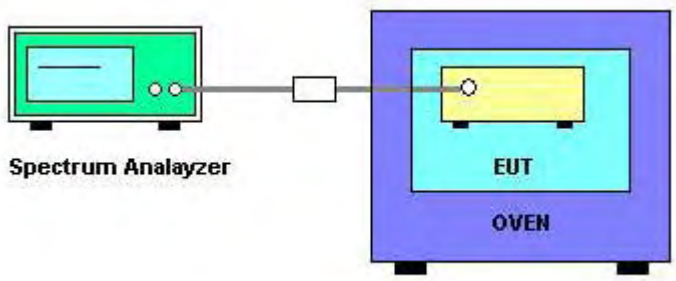
Please refer to section 5 in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RB	10 kHz
VB	10 kHz
Sweep Time	Auto

4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±20ppm (IEEE 802.11a specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature rule is -30°C~50°C.

4.8.4. Test Setup Layout



4.8.5. Test Deviation

There is no deviation with the original standard.

4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

4.8.7. Test Result of Frequency Stability

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	**5320**
126.50	5320.0112
110.00	5320.0142
93.50	5320.0136
Max. Deviation (MHz)	**0.0142**
Max. Deviation (ppm)	**2.6692**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	**5320**
-30	5320.0475
-20	5320.0483
-10	5320.0521
0	5320.0456
10	5320.0325
20	5320.0192
30	5320.0161
40	5320.0074
50	5320.0110
Max. Deviation (MHz)	**0.0521**
Max. Deviation (ppm)	**9.7857**

4.9. Antenna Requirements

4.9.1. 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.

4.9.2. Antenna Connector Construction

Please refer to section 3.3 in this test report, all antenna connectors comply 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. 22, 2006	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Dec. 19, 2005	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9708-1839	9kHz – 30MHz	Mar. 18, 2006	Conduction (CO04-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 22, 2005	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. 16, 2005	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	CPA9231A	3565	9 kHz - 2 GHz	Jan. 18, 2006	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	May 31, 2005	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. 30, 2005	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2006*	Radiation (03CH03-HY)
Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30 MHz - 200 MHz	Jul. 22, 2005	Radiation (03CH03-HY)
Log Antenna	SCHWARZBECK	VUSLP 9111	221	200 MHz - 1 GHz	Jul. 22, 2005	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6903	1GHz ~ 18GHz	Mar. 15, 2006	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Non-Calibration required	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Dec.02, 2005	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec.02, 2005	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, 2005	Conducted (TH01-HY)
Power meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 06, 2005	Conducted (TH01-HY)
Power sensor	R&S	NRV-Z55	100049	DC ~ 40GHz	Jul. 06, 2005	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Apr. 27, 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, 2005	Conducted (TH01-HY)
Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Oct. 01, 2005	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 30, 2005	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 30, 2005	Conducted (TH01-HY)
Oscilloscope	Tektronix	TDS1012	CO38515	100MHz / 1GS/s	Apr. 15, 2005*	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Dec. 30, 2005	Conducted (TH01-HY)
Data Generator	Tektronix	DG2030	063-2920-50	0.1Hz~400MHz	Jun. 01, 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. SPORTON COMPANY PROFILE

SPORTON Lab. was established in 1986 with one shielded room: the first private EMI test facility, offering local manufacturers an alternative EMI test familial apart from ERSO. In 1988, one 3M and 10M/3M open area test site were setup and also obtained official accreditation from FCC, VCCI and NEMKO. In 1993, a Safety laboratory was founded and obtained accreditation from UL of USA, CSA of Canada and TUV (Rhineland & PS) of Germany. In 1995, one EMC lab, including EMI and EMS test facilities was setup. In 1997, SPORTON Group has provided financial expense to relocate the headquarter to Orient Scientific Park in Taipei Hsien to offer more comprehensive, more qualified and better service to local suppliers and manufactures. In 1999, Safety Group and Component Group were setup. In 2001, SPORTON has established 3M/10M chamber in Hwa Ya Technology Park.

6.1. Test Location

SHIJR	ADD	: 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	: 02-2696-2468
	FAX	: 02-2696-2255
HWA YA	ADD	: No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	: 03-327-3456
	FAX	: 03-318-0055
LINKOU	ADD	: No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	: 02-2601-1640
	FAX	: 02-2601-1695
DUNGHU	ADD	: No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	: 02-2631-4739
	FAX	: 02-2631-9740
JUNGHE	ADD	: 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	: 02-8227-2020
	FAX	: 02-8227-2626
NEIHU	ADD	: 4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	: 02-2794-8886
	FAX	: 02-2794-9777
JHUBEI	ADD	: No.8, Lane 728, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
	TEL	: 03-656-9065
	FAX	: 03-656-9085

7. NVLAP CERTIFICATE OF ACCREDITATION

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:1999

NVLAP LAB CODE: 200079-0

Sporton International, Inc. Hwa Ya EMC Laboratory
Tao Yuan Hsien 333
TAIWAN

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Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

2006-01-01 through 2006-12-31
Effective dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2005-05-19)