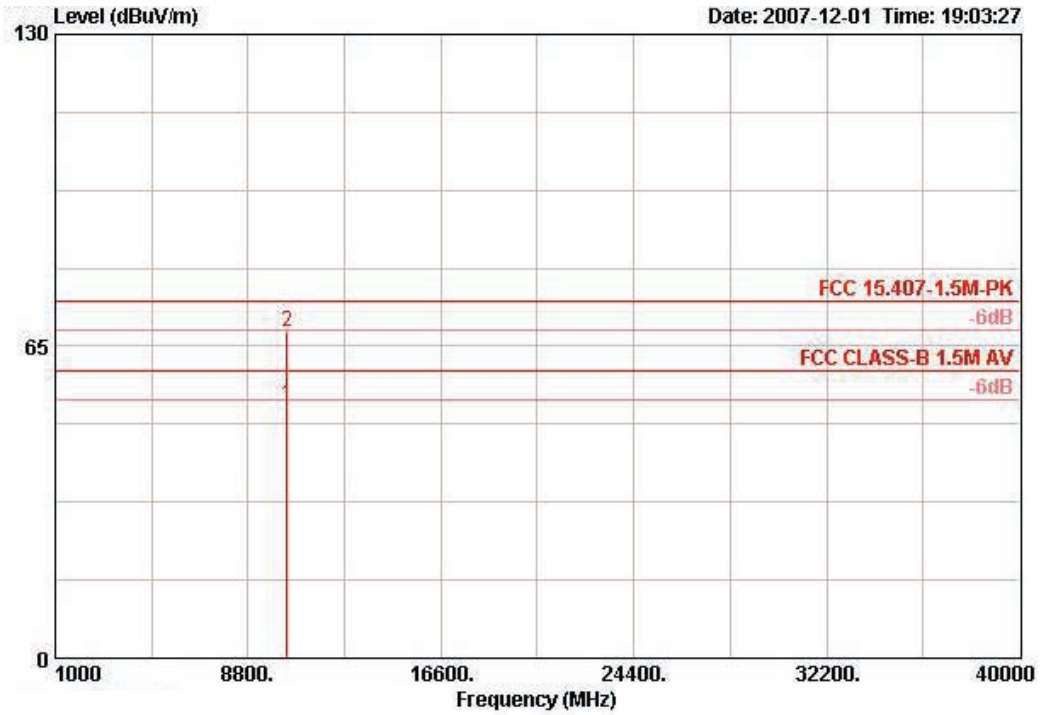
4.6.9. Results for Radiated Emissions (1GHz~40GHz)

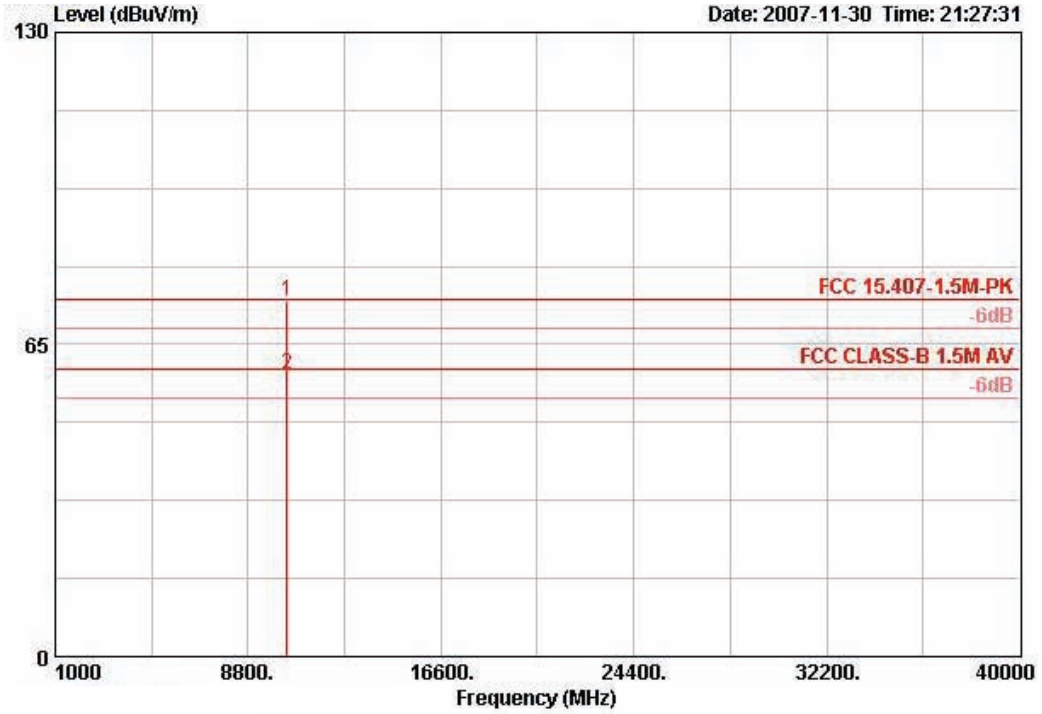
Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 36 Ant. 1 + Ant. 3

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
2	10358.840	68.18	-6.12	74.30	56.33	39.76	6.83	34.74	PEAK	111	33	HORIZONTAL

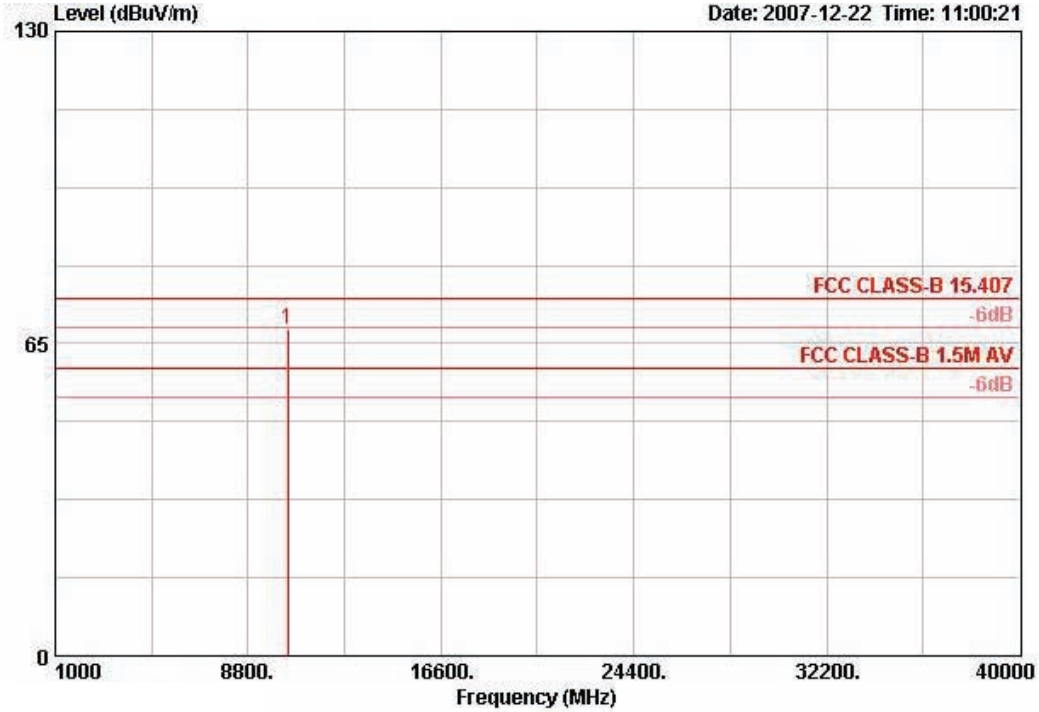
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10360.440	74.13	-0.17	74.30	62.29	39.76	6.83	34.74	PEAK	114	274	VERTICAL

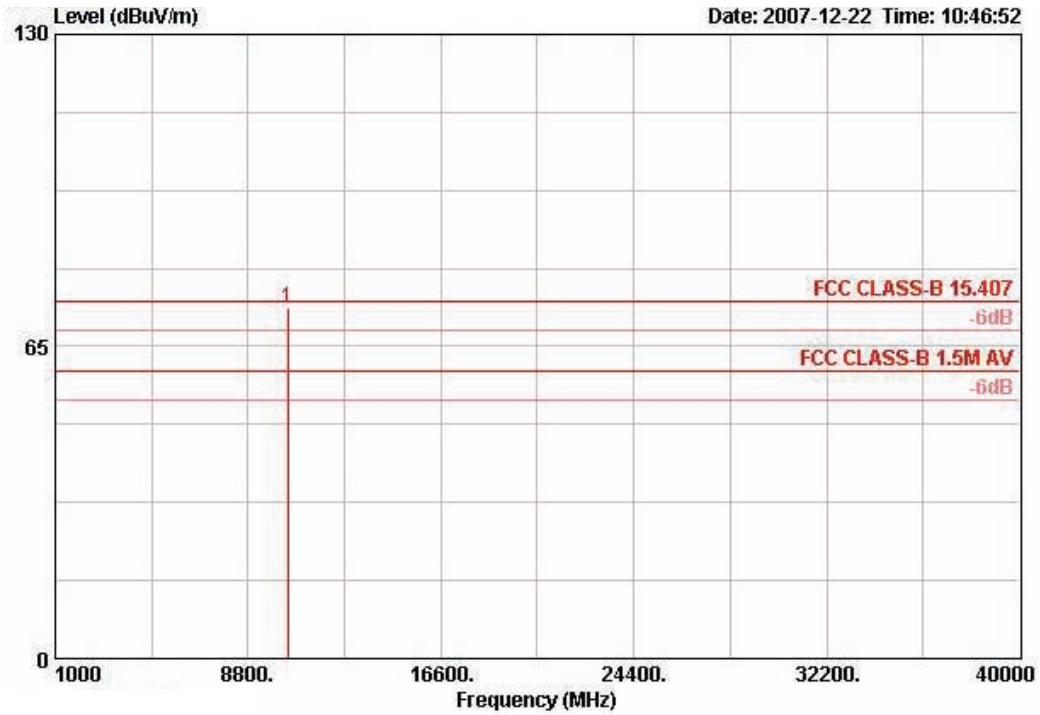
Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 40 Ant. 1 + Ant. 3

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10398.800	68.15	-6.15	74.30	56.18	39.82	6.83	34.69	PEAK	120	278	HORIZONTAL

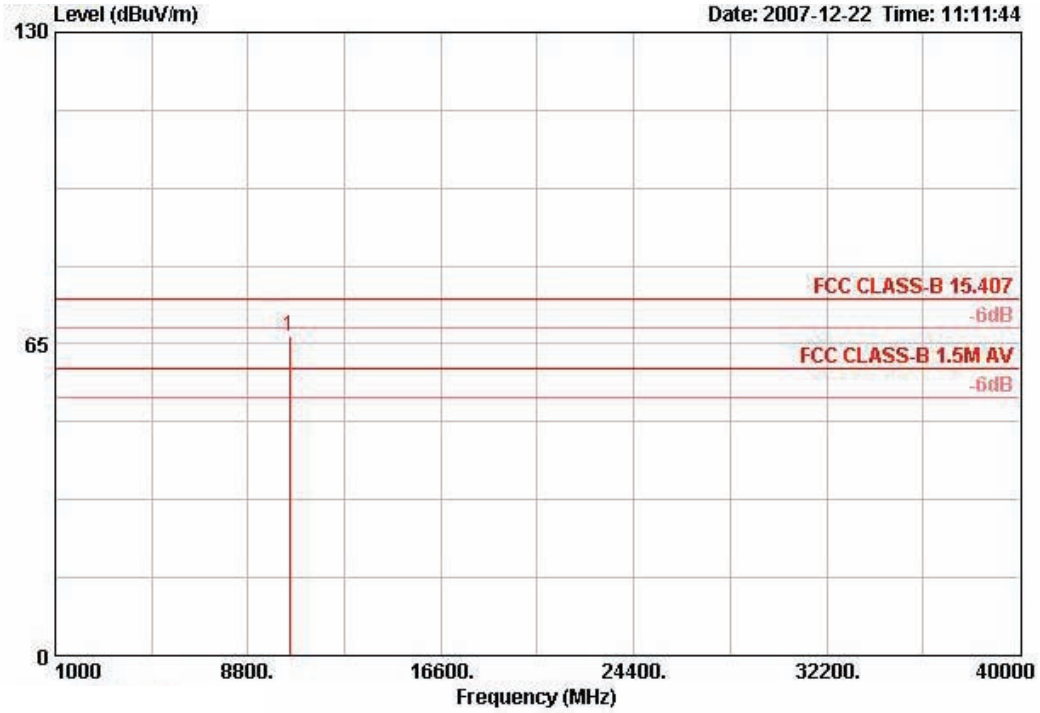
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10400.400	72.89	-1.41	74.30	60.93	39.82	6.83	34.69	PEAK	100	273	VERTICAL

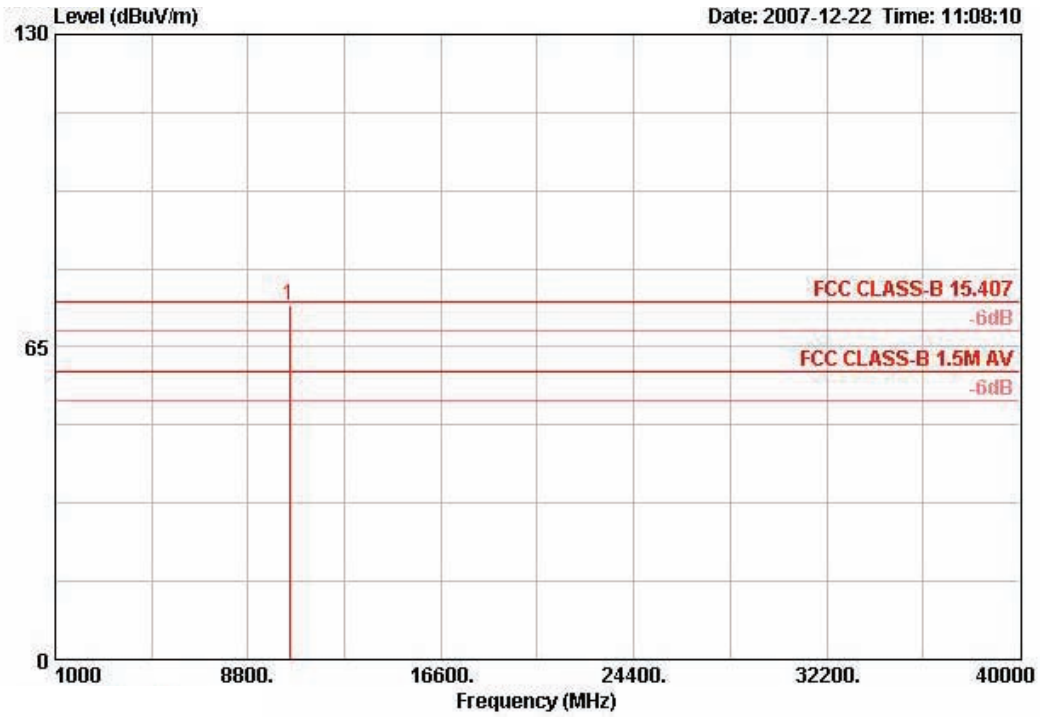
Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 48 Ant. 1 + Ant. 3

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10478.800	66.46	-7.84	74.30	54.26	39.97	6.85	34.62	PEAK	114	272	HORIZONTAL

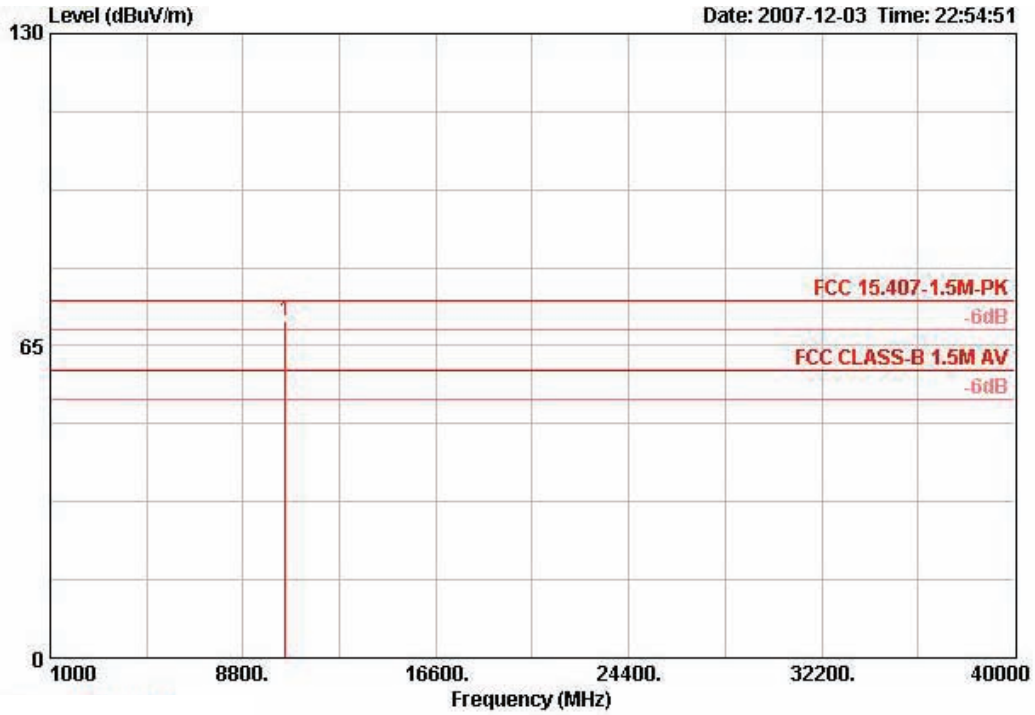
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10480.600	73.60	-0.70	74.30	61.40	39.97	6.85	34.62	PEAK	132	286	VERTICAL

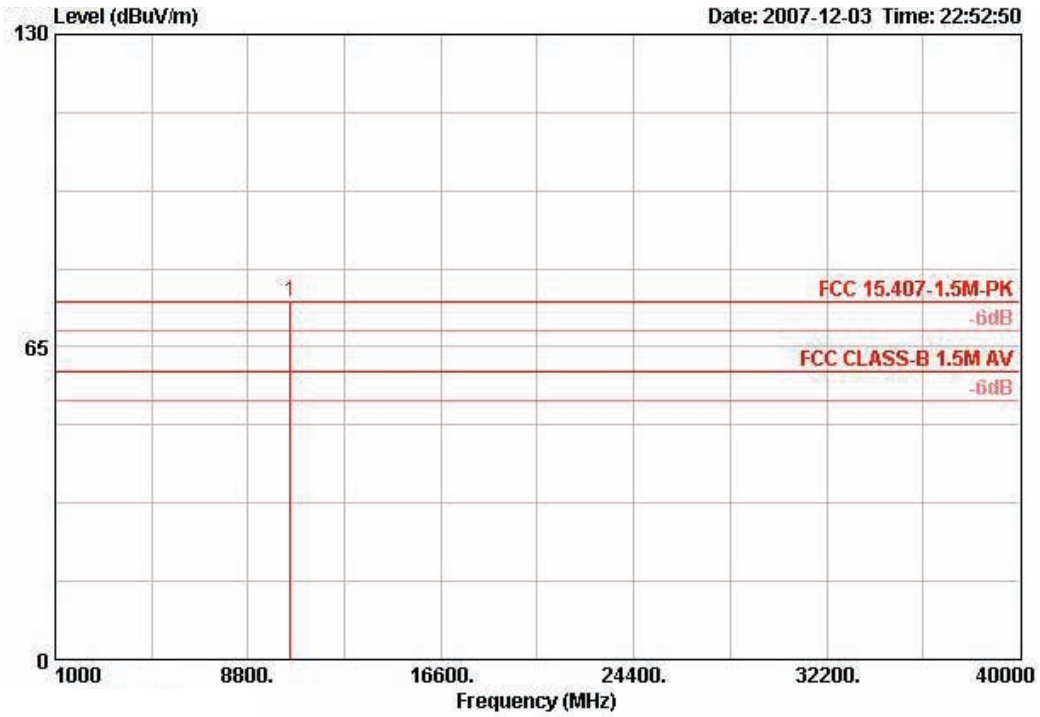
Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 52 Ant. 1 + Ant. 3

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 !	10518.640	70.00	-4.30	74.30	57.76	39.98	6.85	34.59	PEAK	122	285	HORIZONTAL

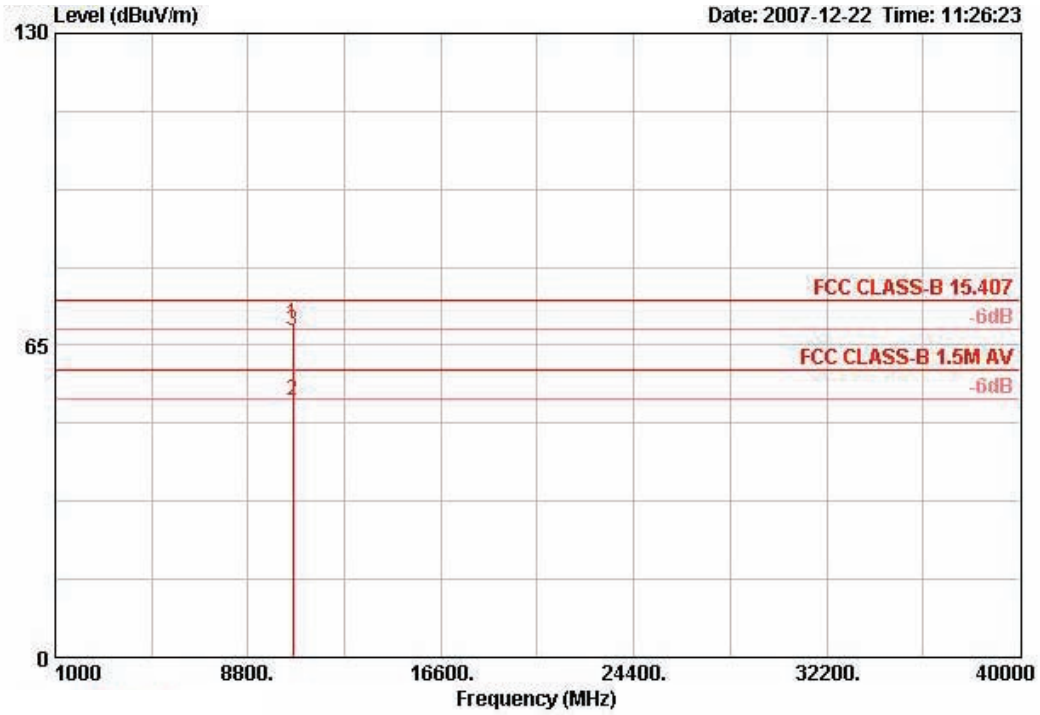
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10522.000	74.22	-0.08	74.30	61.98	39.98	6.85	34.59	PEAK	118	288	VERTICAL

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 60 Ant. 1 + Ant. 3

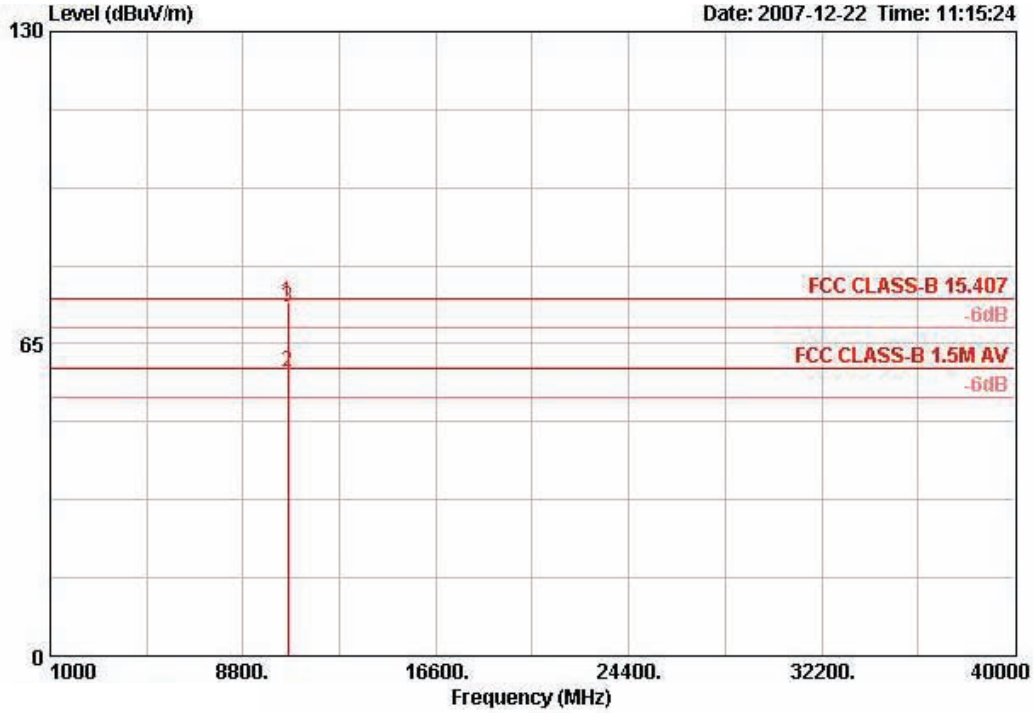
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10599.000	69.25	-5.05	74.30	57.10	39.90	6.88	34.62	PEAK	116	285	HORIZONTAL
2 @	10603.600	53.50	-6.50	60.00	41.35	39.90	6.89	34.63	AVERAGE	116	285	HORIZONTAL
3 @	10603.800	68.11			55.96	39.90	6.89	34.63	PEAK	116	285	HORIZONTAL

Note: Item 3 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Vertical

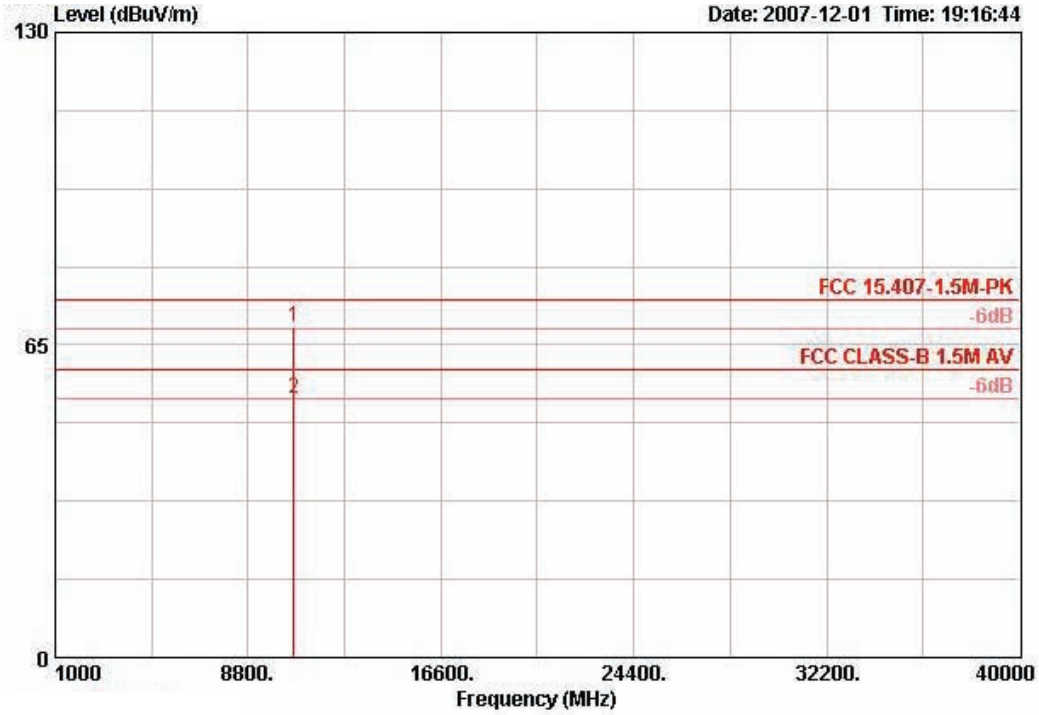


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10596.800	73.60	-0.70	74.30	61.44	39.90	6.88	34.62	Peak	127	285	VERTICAL
2 @	10601.400	59.14	-0.86	60.00	46.99	39.90	6.89	34.63	AVERAGE	127	285	VERTICAL
3 @	10601.600	72.66			60.51	39.90	6.89	34.63	PEAK	127	285	VERTICAL

Note: Item 3 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 64 Ant. 1 + Ant. 3

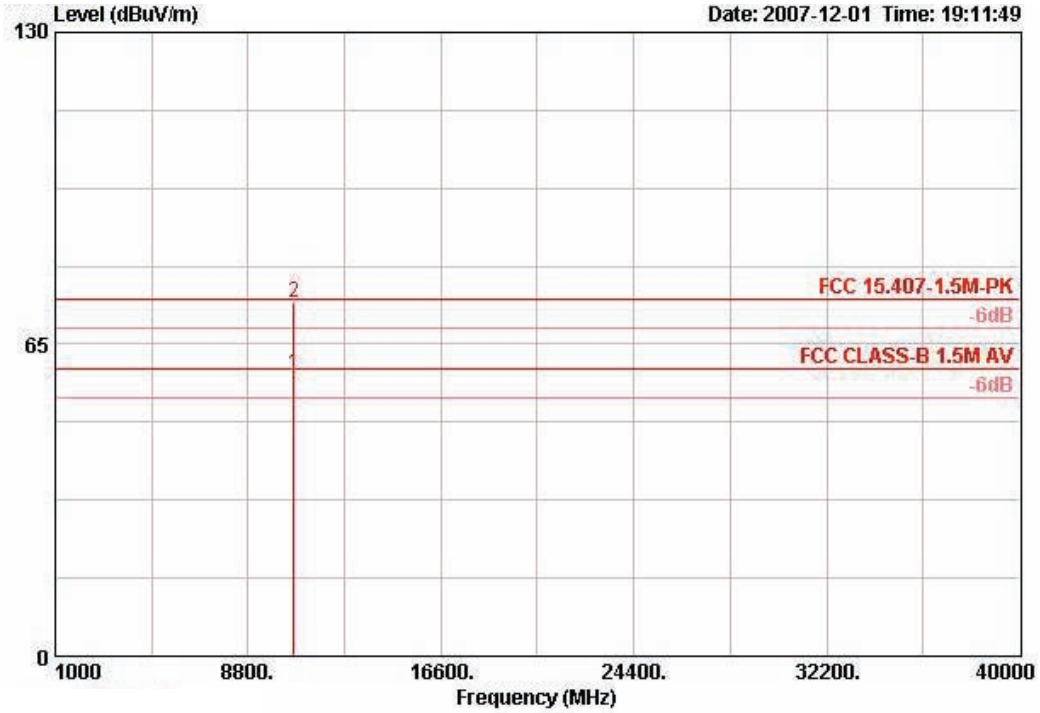
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 !	10639.080	68.73			56.61	39.86	6.89	34.64	PEAK	124	286	HORIZONTAL
2	10639.200	53.96	-6.04	60.00	41.84	39.86	6.89	34.64	AVERAGE	0	286	HORIZONTAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Vertical

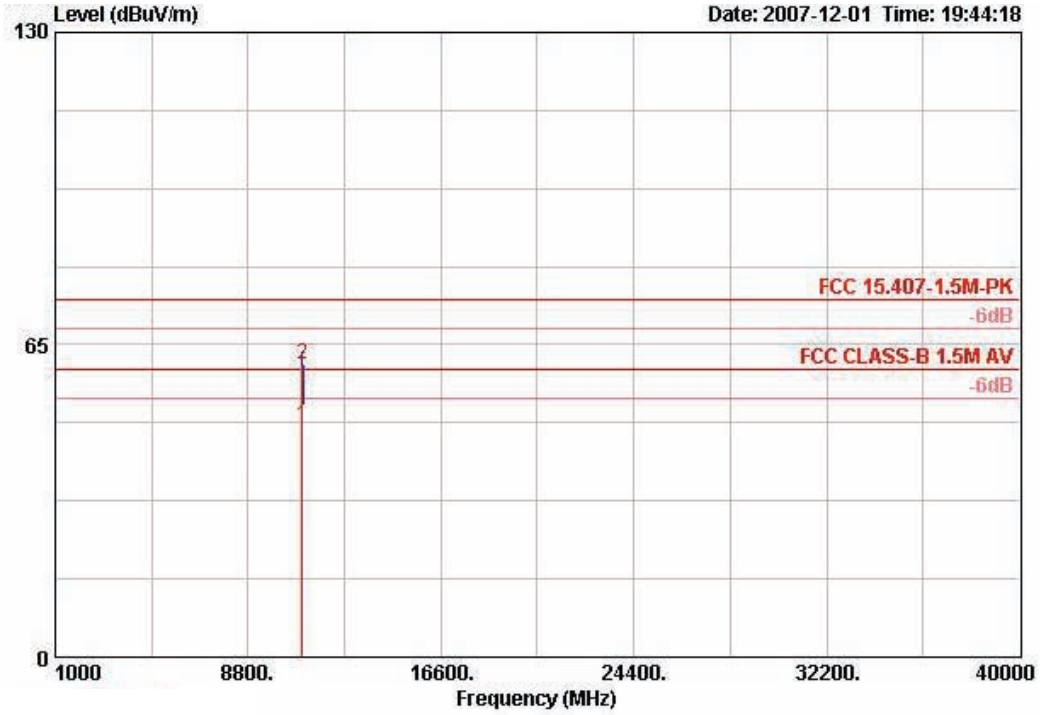


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10641.880	58.89	-1.11	60.00	46.77	39.86	6.89	34.64	AVERAGE	110	289	VERTICAL
2 @	10642.000	73.77			61.65	39.86	6.89	34.64	PEAK	110	289	VERTICAL

Note: Item 2 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 100 Ant. 1 + Ant. 3

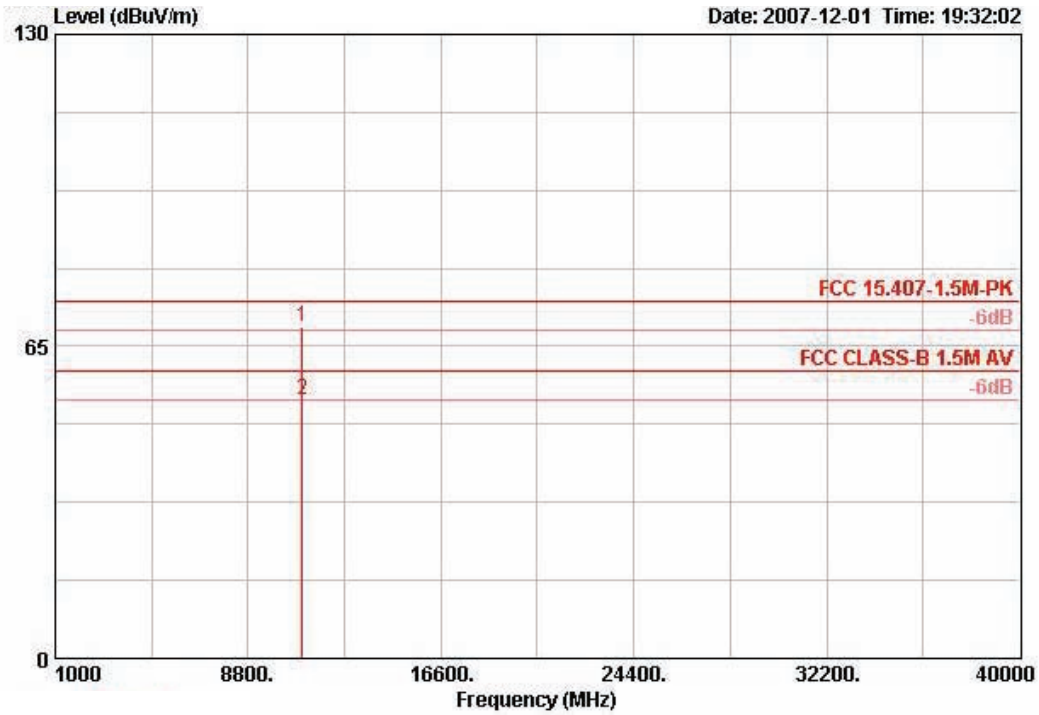
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	10997.760	48.03	-11.97	60.00	36.28	39.50	7.02	34.77	AVERAGE	109	268	HORIZONTAL
2	10997.760	60.96			49.21	39.50	7.02	34.77	PEAK	109	268	HORIZONTAL

Note: Item 2 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Vertical

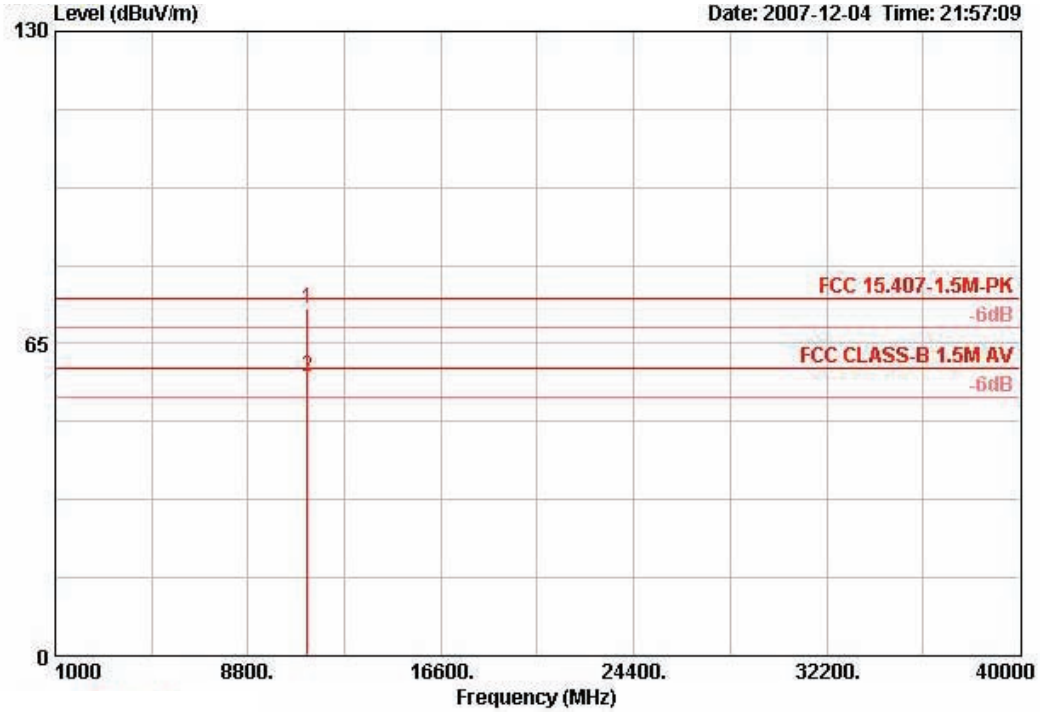


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 !	10998.040	69.07			57.32	39.50	7.02	34.77	PEAK	120	294	VERTICAL
2	10998.160	53.71	-6.29	60.00	41.96	39.50	7.02	34.77	AVERAGE	120	294	VERTICAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 120 Ant. 1 + Ant. 3

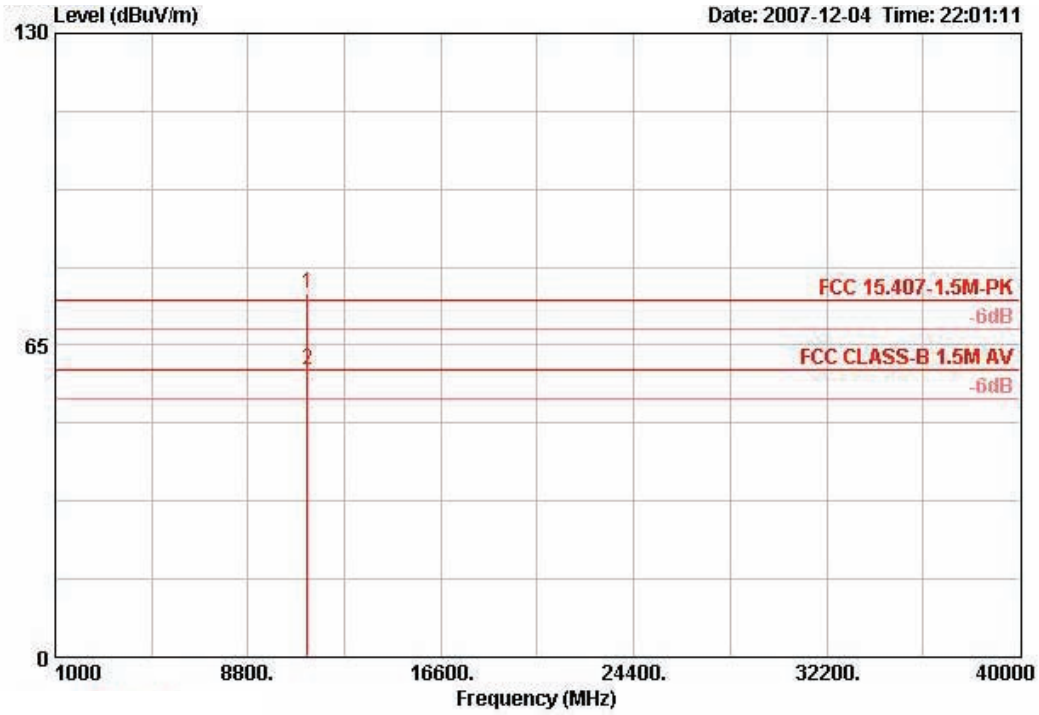
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	11194.680	72.41			60.66	39.50	7.10	34.85	PEAK	116	325	HORIZONTAL
2 @	11199.880	58.06	-1.94	60.00	46.31	39.50	7.10	34.85	AVERAGE	116	325	HORIZONTAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Vertical

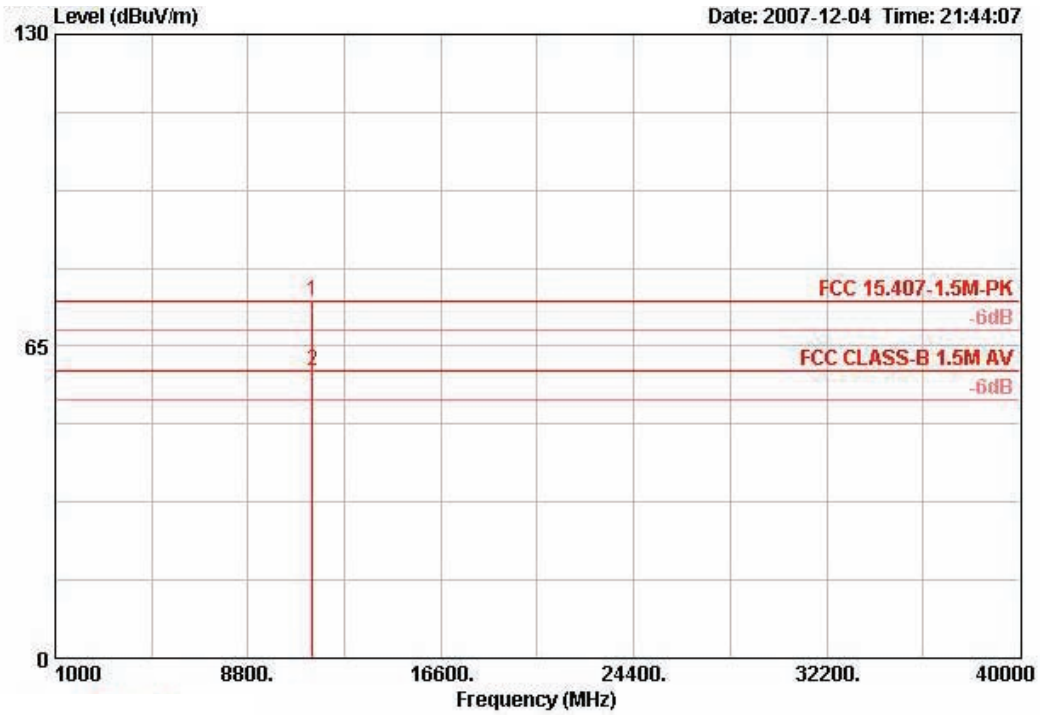


	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	11197.360	75.88			64.13	39.50	7.10	34.85	PEAK	101	287	VERTICAL
2 @	11197.440	59.69	-0.31	60.00	47.94	39.50	7.10	34.85	AVERAGE	101	287	VERTICAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 140 Ant. 1 + Ant. 3

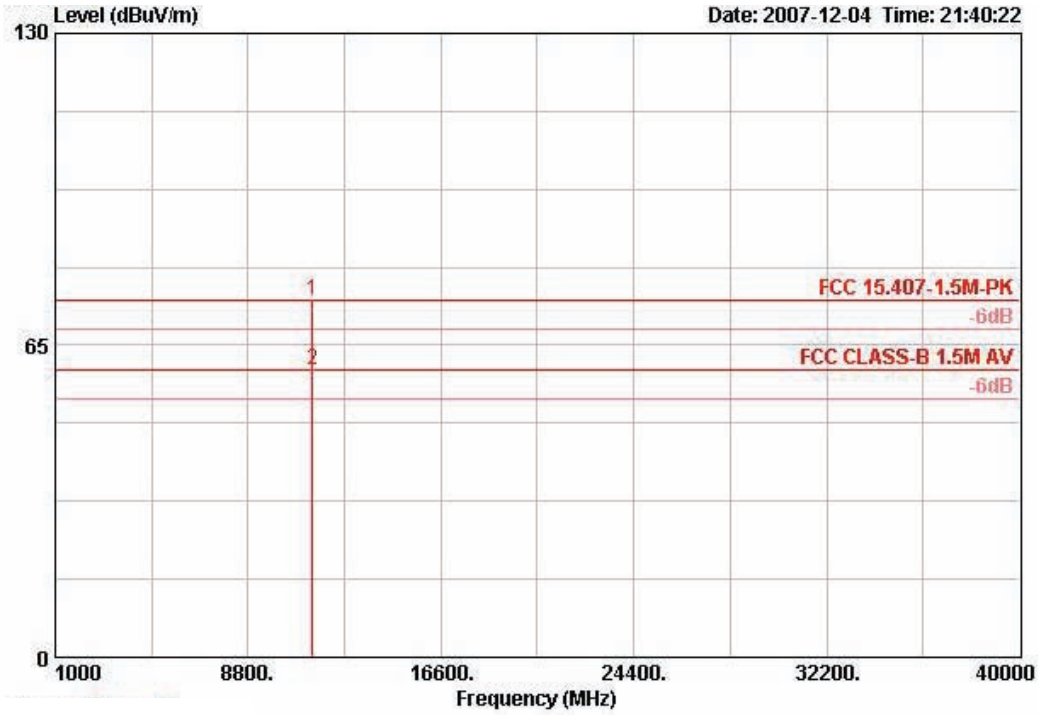
Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	11397.040	74.27			62.52	39.50	7.17	34.92	PEAK	108	288	HORIZONTAL
2 @	11398.000	59.74	-0.26	60.00	47.99	39.50	7.17	34.92	AVERAGE	108	288	HORIZONTAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	11397.640	74.48			62.73	39.50	7.17	34.92	PEAK	108	289	VERTICAL
2 @	11397.920	59.79	-0.21	60.00	48.04	39.50	7.17	34.92	AVERAGE	108	289	VERTICAL

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

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.

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 distance [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). For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/m at 3m); for frequencies 10 MHz or greater above or below the band edge, emissions 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 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)	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 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.

4.7.4. 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	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 36, 52, 64 Ant. 1 + Ant. 3

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 !	5150.000	55.59	-4.41	60.00	16.65	34.00	4.95	0.00	AVERAGE	100	49	VERTICAL
2	5150.000	67.14			28.20	34.00	4.95	0.00	PEAK	100	49	VERTICAL
3 @	5181.400	104.62			65.59	34.07	4.97	0.00	AVERAGE	100	49	VERTICAL
4 @	5182.400	113.64			74.60	34.07	4.97	0.00	PEAK	100	49	VERTICAL

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

Note: Item 2 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Channel 52

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5259.200	102.53			63.26	34.23	5.04	0.00	AVERAGE	100	232	VERTICAL
2 @	5261.000	113.00			73.73	34.23	5.04	0.00	PEAK	100	232	VERTICAL

Item 1, 2 are the fundamental frequency at 5260 MHz.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5316.800	105.27			65.86	34.33	5.08	0.00	AVERAGE	129	49	VERTICAL
2 @	5322.400	116.48			77.05	34.33	5.10	0.00	PEAK	129	49	VERTICAL
3	5350.000	67.23			27.70	34.40	5.13	0.00	PEAK	129	49	VERTICAL
4 @	5350.000	56.28	-3.72	60.00	16.75	34.40	5.13	0.00	AVERAGE	129	49	VERTICAL

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

Note: Item 3 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Temperature	26℃	Humidity	60%
Test Engineer	Aric Li	Configurations	802.11a Ch 100, 120, 140 Ant. 1 + Ant. 3

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1	5460.000	67.99			28.17	34.60	5.22	0.00	PEAK	128	36	VERTICAL
2 @	5460.000	56.67	-3.33	60.00	16.86	34.60	5.22	0.00	AVERAGE	128	36	VERTICAL
3	5470.000	67.05	-7.25	74.30	27.20	34.63	5.22	0.00	PEAK	128	36	VERTICAL
4 @	5495.400	113.88			73.97	34.67	5.24	0.00	PEAK	128	36	VERTICAL
5 @	5502.800	102.86			62.91	34.70	5.25	0.00	AVERAGE	128	36	VERTICAL

Item 4, 5 are the fundamental frequency at 5500 MHz.

Note: Item 1 fall in restricted band, thus 15.209 limit applies. However, the test site distance has been moved to 1.5m, the corresponding limit will be adjusted to 80dBuV/m.

Channel 120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5596.400	101.75			61.69	34.77	5.29	0.00	AVERAGE	110	104	VERTICAL
2 @	5598.200	113.28			73.23	34.77	5.29	0.00	PEAK	110	104	VERTICAL

Item 3, 4 are the fundamental frequency at 5600 MHz.

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5697.400	114.39			74.20	34.85	5.34	0.00	PEAK	110	81	VERTICAL
2 @	5701.800	103.27			63.07	34.87	5.34	0.00	AVERAGE	110	81	VERTICAL
3 @	5725.400	70.84	-3.46	74.30	30.60	34.88	5.35	0.00	PEAK	110	81	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Note:

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

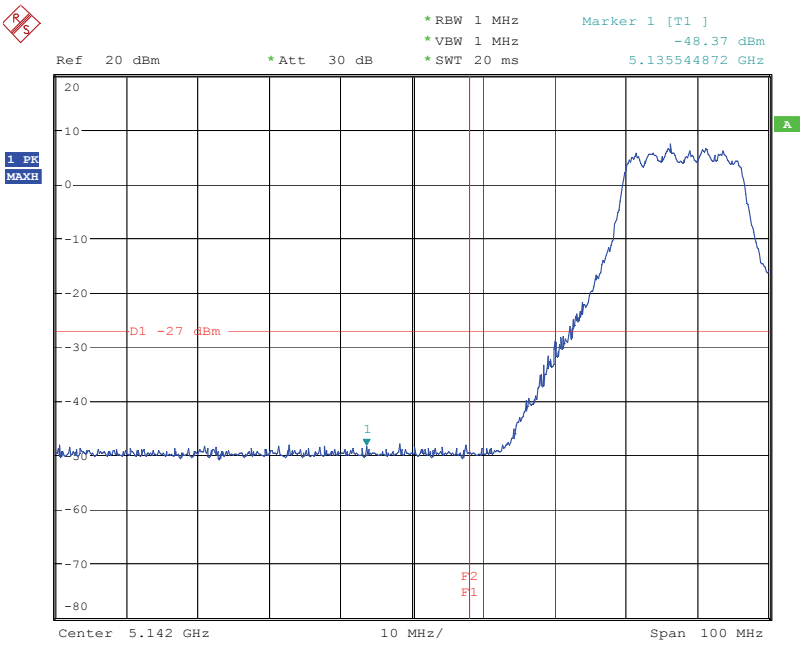
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

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 distance [3m] / test distance [1.5m]) (dB);

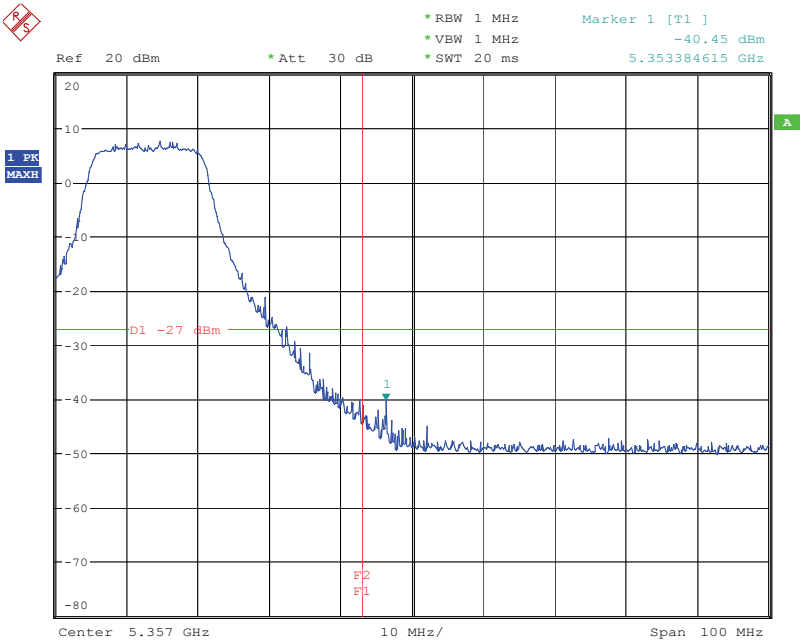
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

EIRP Emission in Band on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5180 MHz



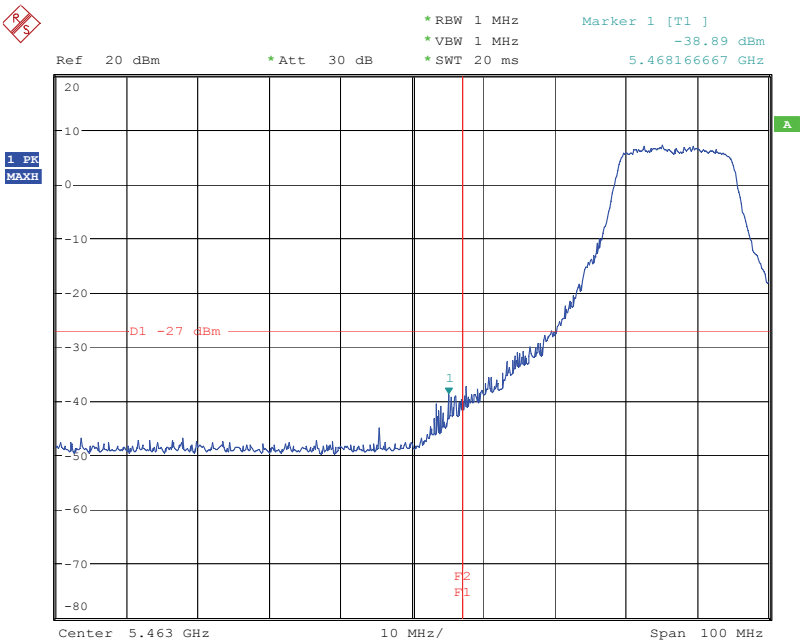
Date: 9.DEC.2007 11:53:43

EIRP Emission in Band on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5320 MHz



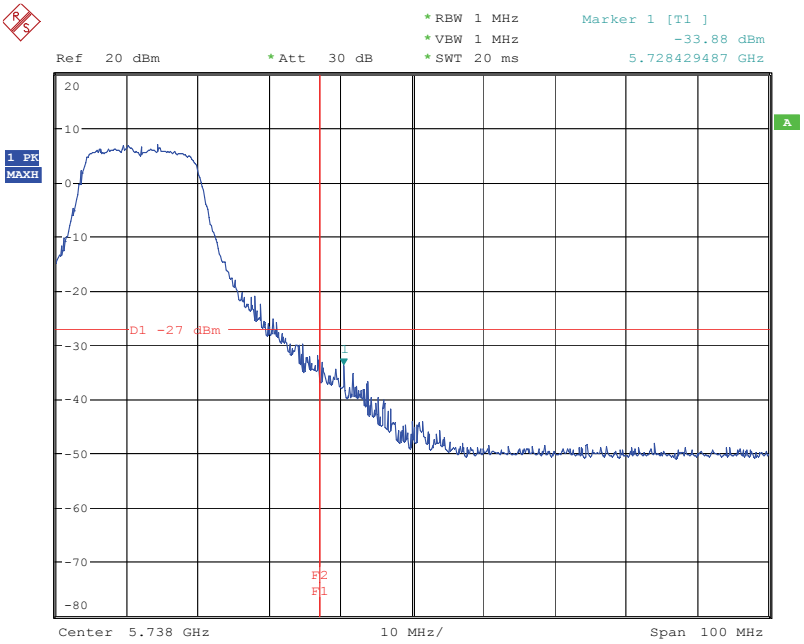
Date: 9.DEC.2007 12:11:42

EIRP Emission in Band on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5500 MHz



Date: 9.DEC.2007 12:10:25

EIRP Emission in Band on Configuration IEEE 802.11a Ant. 1 + Ant. 3 / 5700 MHz



Date: 9.DEC.2007 12:07:56

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

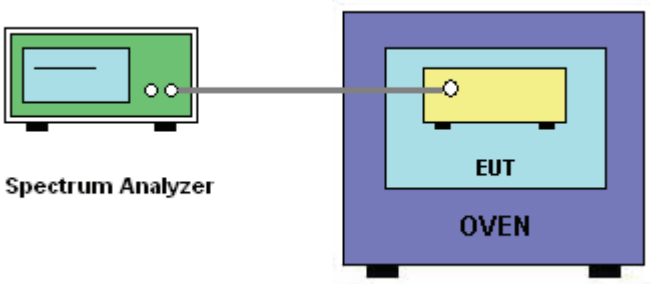
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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.
8. Measuring multiple antennas, the connector is required to link with spectrum analyser through a combiner.

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)	5260 MHz
126.50	5260.009300
110.00	5260.023500
93.50	5259.993200
Max. Deviation (MHz)	0.023500
Max. Deviation (ppm)	4.47

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	5260 MHz
-30	5260.046300
-20	5260.050570
-10	5260.045700
0	5260.014100
10	5260.012900
20	5259.983500
30	5259.965300
40	5259.961200
50	5259.955600
Max. Deviation (MHz)	0.050570
Max. Deviation (ppm)	9.61

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; 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	100359	9kHz – 2.75GHz	Mar. 01, 2007	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2007	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2007	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	May 09, 2007	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 14, 2007	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	CPA9231A	1886	9 kHz - 2 GHz	Jan. 22, 2007	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jun. 07, 2007	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	923364	26.5 GHz - 40 GHz	Jan. 22, 2007*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100305	9 kHz - 40 GHz	Sep. 27, 2007	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. 21, 2007	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 04, 2007	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. 03, 2007	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec. 03, 2007	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	Dec. 17, 2007	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jun. 27, 2007	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 04, 2007*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 03, 2007	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Oct. 01, 2007	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2007	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2007	Conducted (TH01-HY)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Nov. 14, 2007	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 07, 2007	Conducted (TH01-HY)

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

* Calibration Interval of instruments listed above is two year.

NCR means Non-Calibration required.

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

7. TAF CERTIFICATE OF ACCREDITATION

TAF

Certificate No. : L1190-070110

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	:	ISO/IEC 17025:2005
Accreditation Number	:	1190
Originally Accredited	:	December 15, 2003
Effective Period	:	January 10, 2007 to January 09, 2010
Accredited Scope	:	Testing Field, see described in the Appendix
Specific Accreditation Program	:	Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 10, 2007

P1, total 9 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when used without the Appendix.