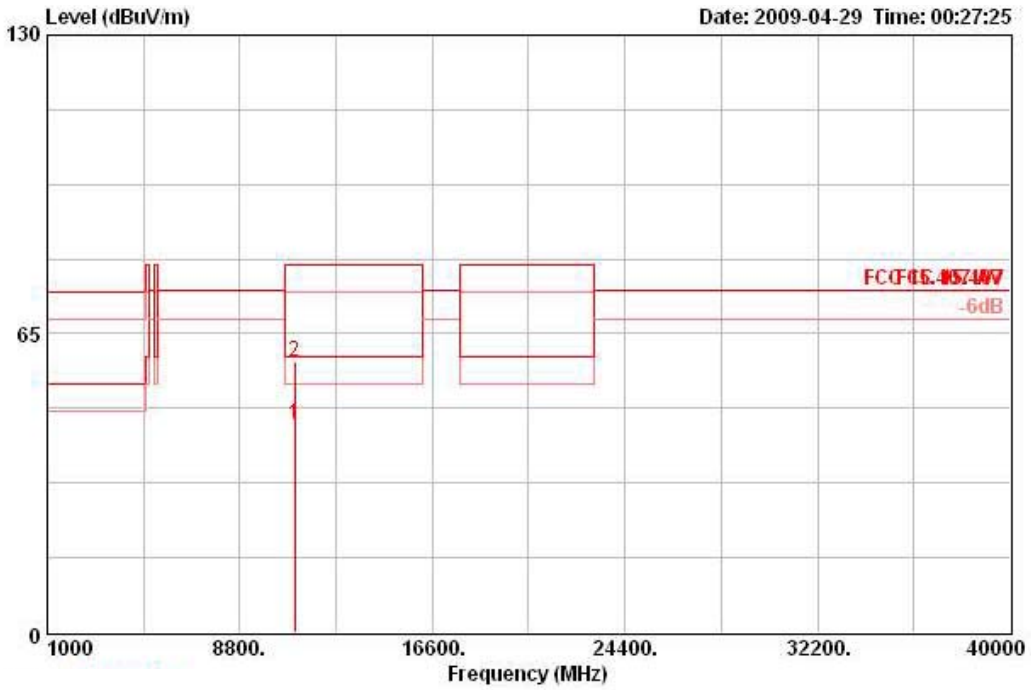
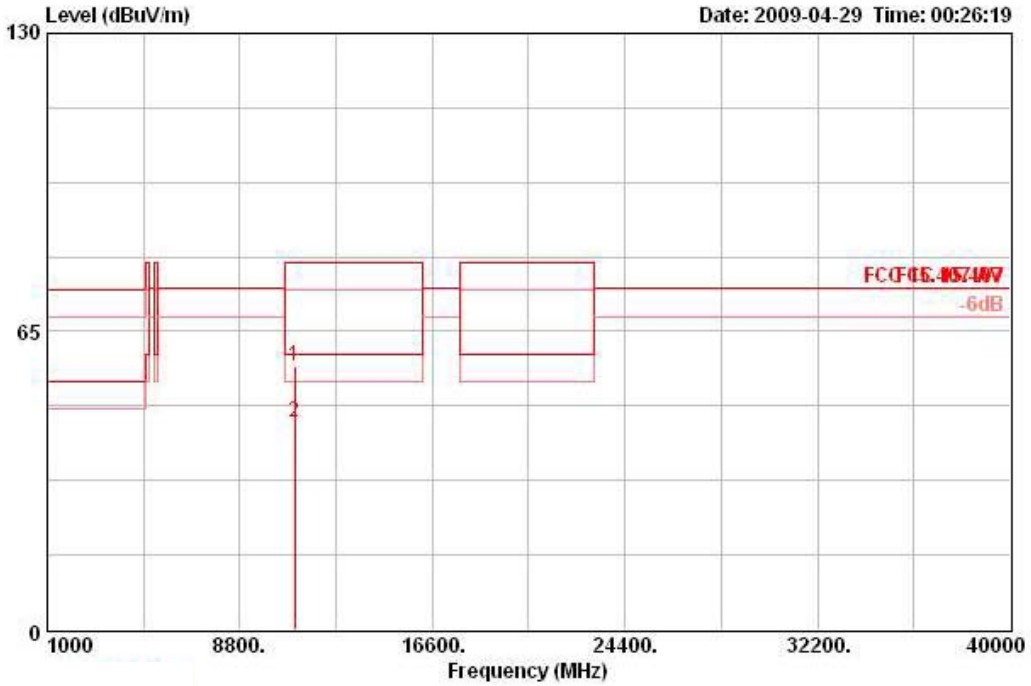
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 102 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11019.980	45.12	-14.88	60.00	30.12	39.50	34.81	10.31	AVERAGE	HORIZONTAL	0	100
2 @	11020.000	58.73	-21.27	80.00	43.73	39.50	34.81	10.31	PEAK	HORIZONTAL	0	100

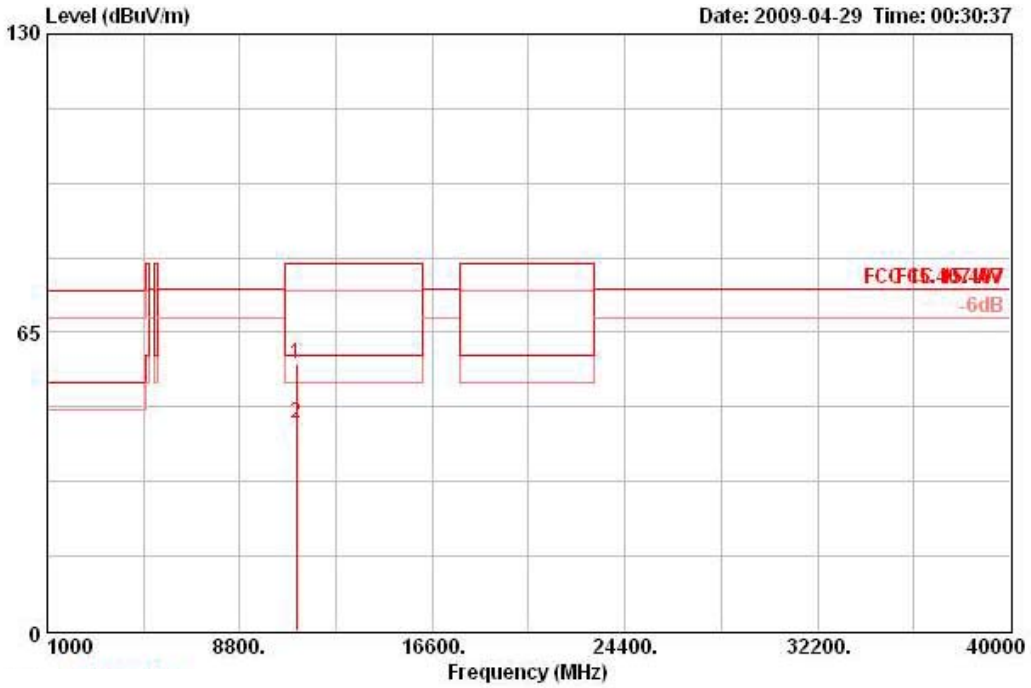
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11020.010	57.56	-22.44	80.00	42.56	39.50	34.81	10.31	PEAK	VERTICAL	360	100
2 @	11020.010	45.14	-14.86	60.00	30.14	39.50	34.81	10.31	AVERAGE	VERTICAL	360	100

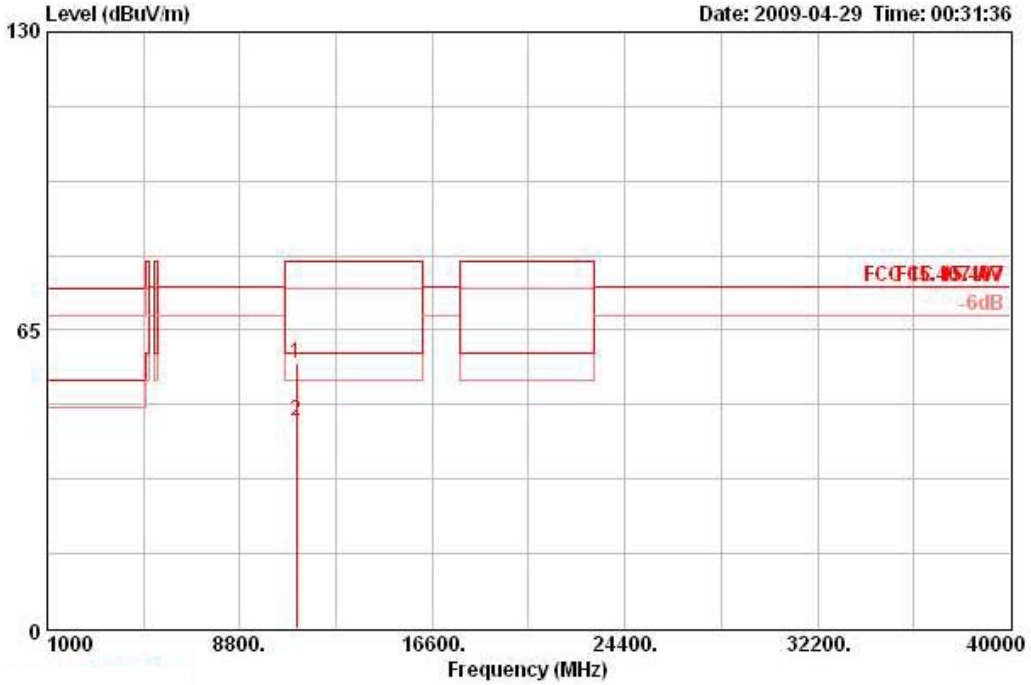
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 110 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11099.980	58.28	-21.72	80.00	43.23	39.50	34.86	10.41	PEAK	HORIZONTAL	0	100
2 @	11099.990	45.09	-14.91	60.00	30.04	39.50	34.86	10.41	AVERAGE	HORIZONTAL	0	100

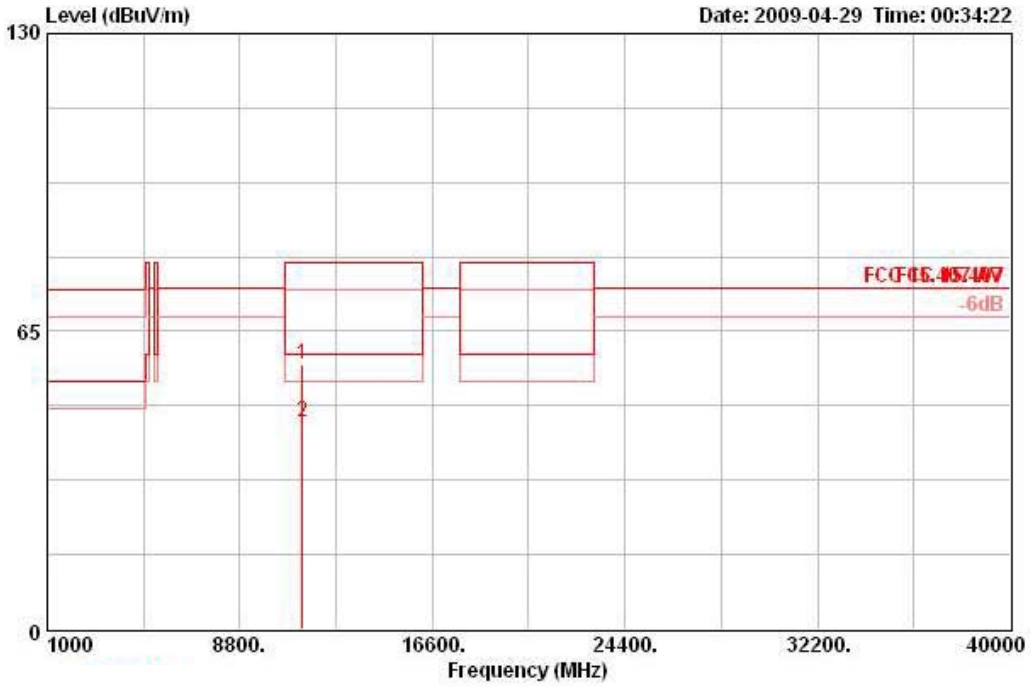
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11099.990	57.80	-22.20	80.00	42.75	39.50	34.86	10.41	PEAK	VERTICAL	360	100
2 @	11100.020	45.12	-14.88	60.00	30.07	39.50	34.86	10.41	AVERAGE	VERTICAL	360	100

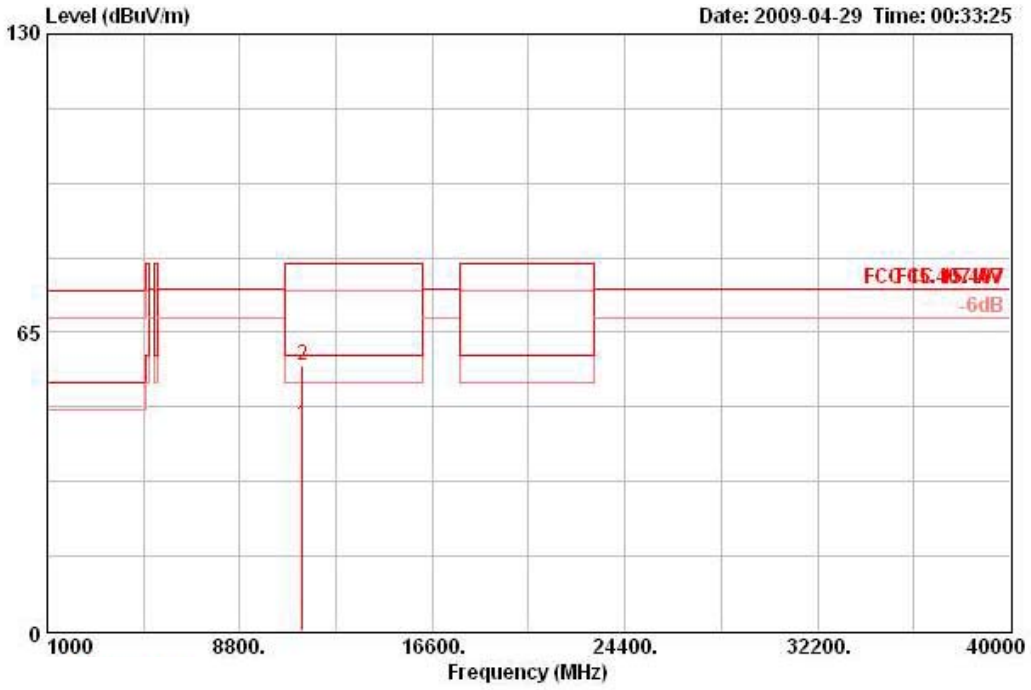
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 134 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11339.980	57.74	-22.26	80.00	42.54	39.50	35.00	10.70	PEAK	HORIZONTAL	360	100
2 @	11340.000	45.10	-14.90	60.00	29.89	39.50	35.00	10.70	AVERAGE	HORIZONTAL	360	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11339.990	44.97	-15.03	60.00	29.77	39.50	35.00	10.70	AVERAGE	VERTICAL	0	100
2 @	11339.990	57.67	-22.33	80.00	42.47	39.50	35.00	10.70	PEAK	VERTICAL	0	100

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.

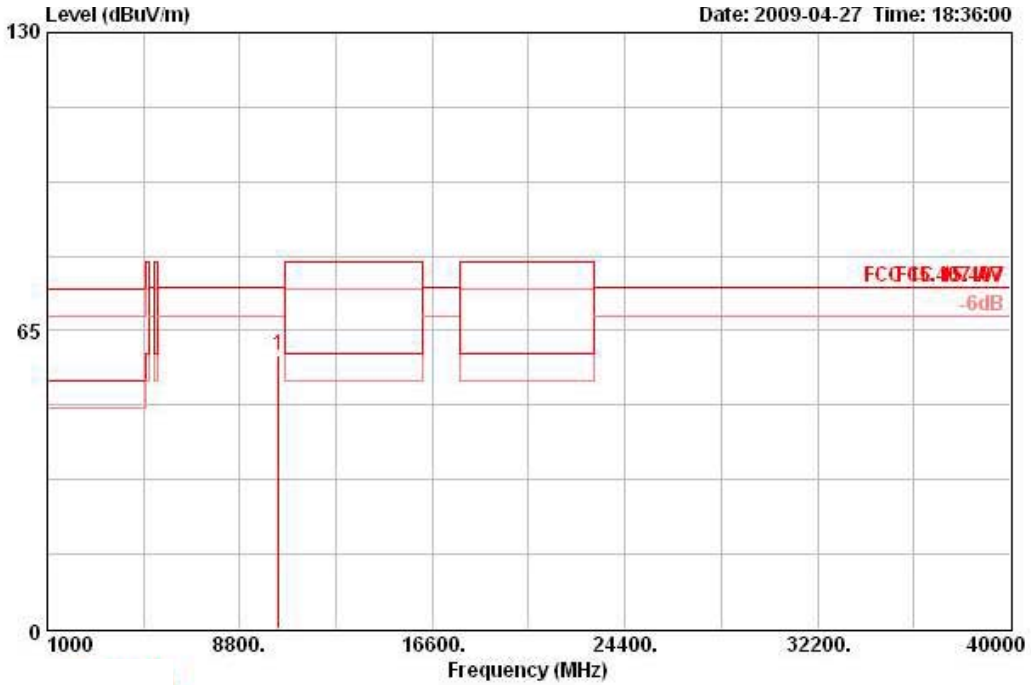
The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

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

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

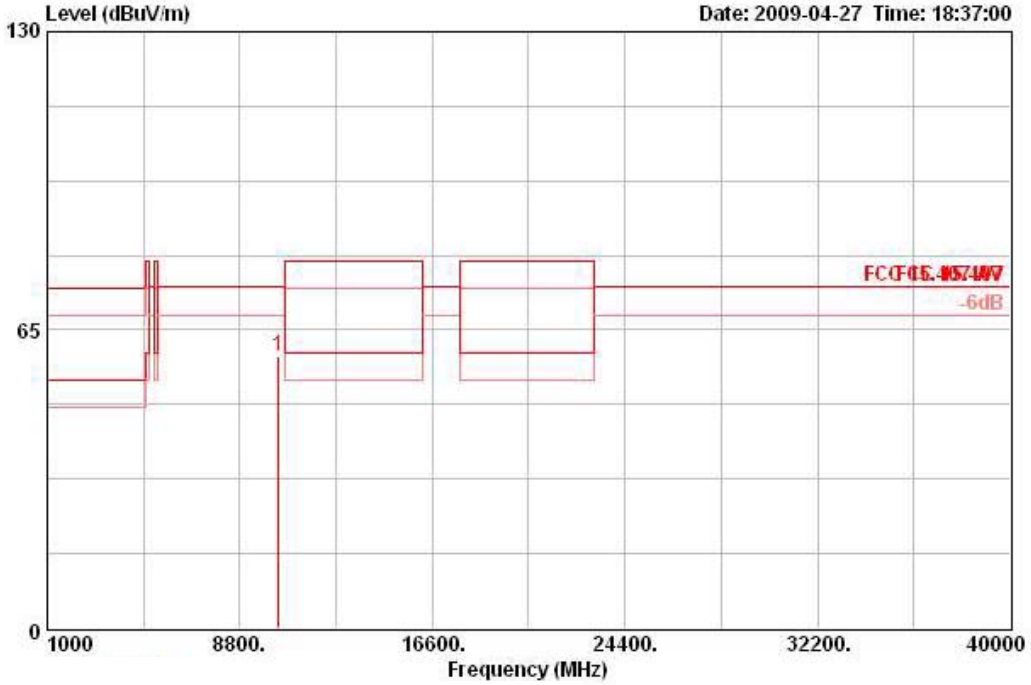
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 36 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10360.010	59.47	-14.83	74.30	44.80	39.76	35.31	10.22	PEAK	HORIZONTAL	360	100

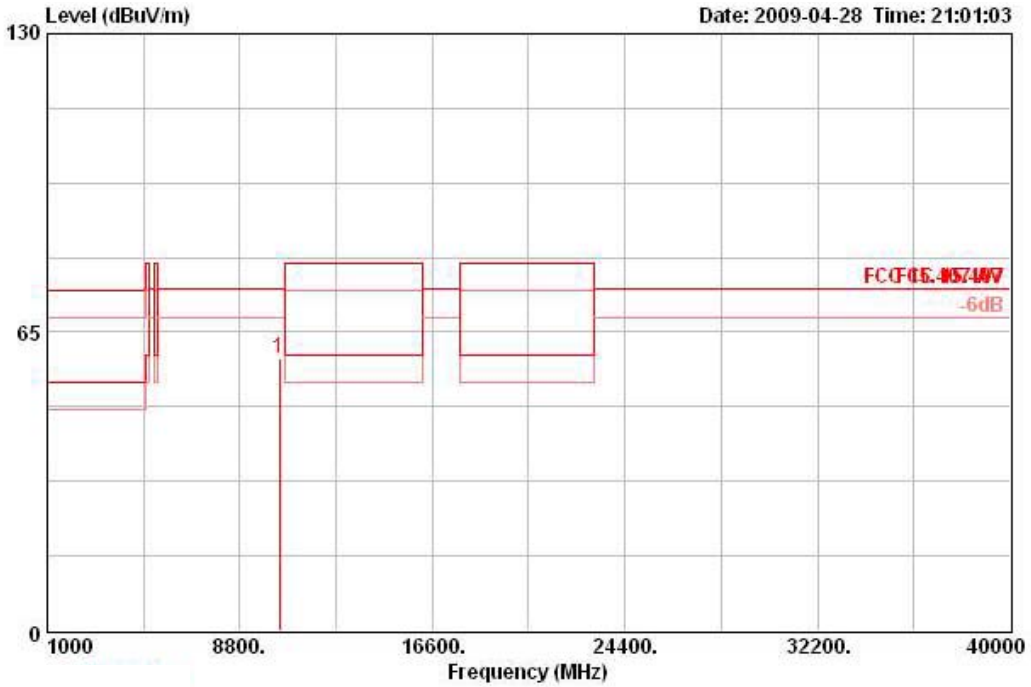
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10360.000	59.19	-15.11	74.30	44.52	39.76	35.31	10.22	PEAK	VERTICAL	0	100

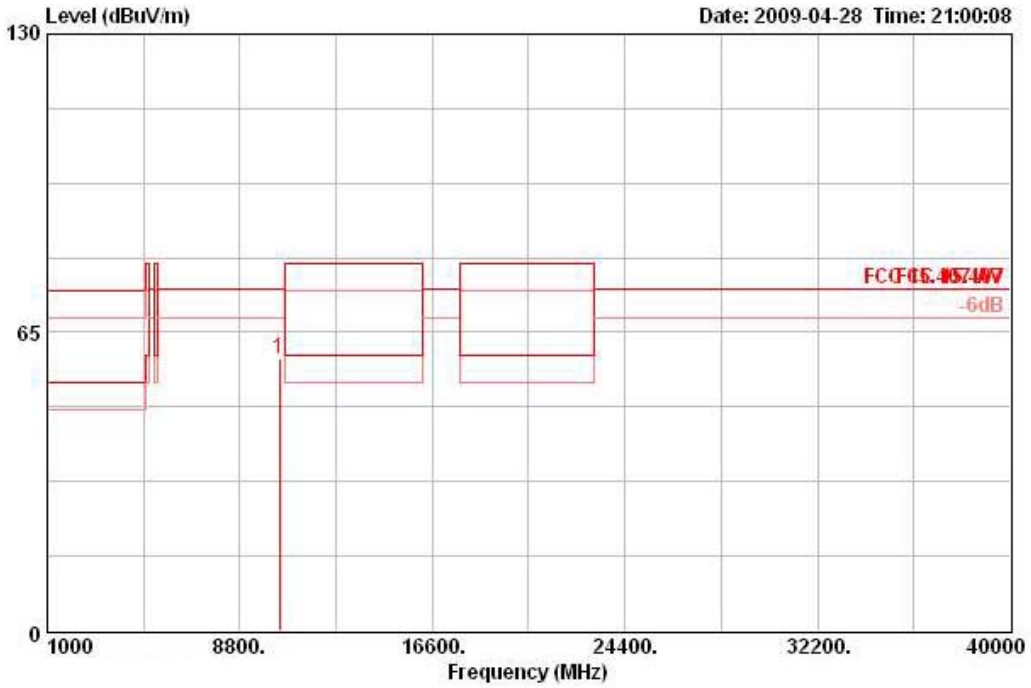
Temperature	25.6℃	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 40 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10400.020	59.17	-15.13	74.30	44.36	39.82	35.28	10.27	PEAK	HORIZONTAL	360	100

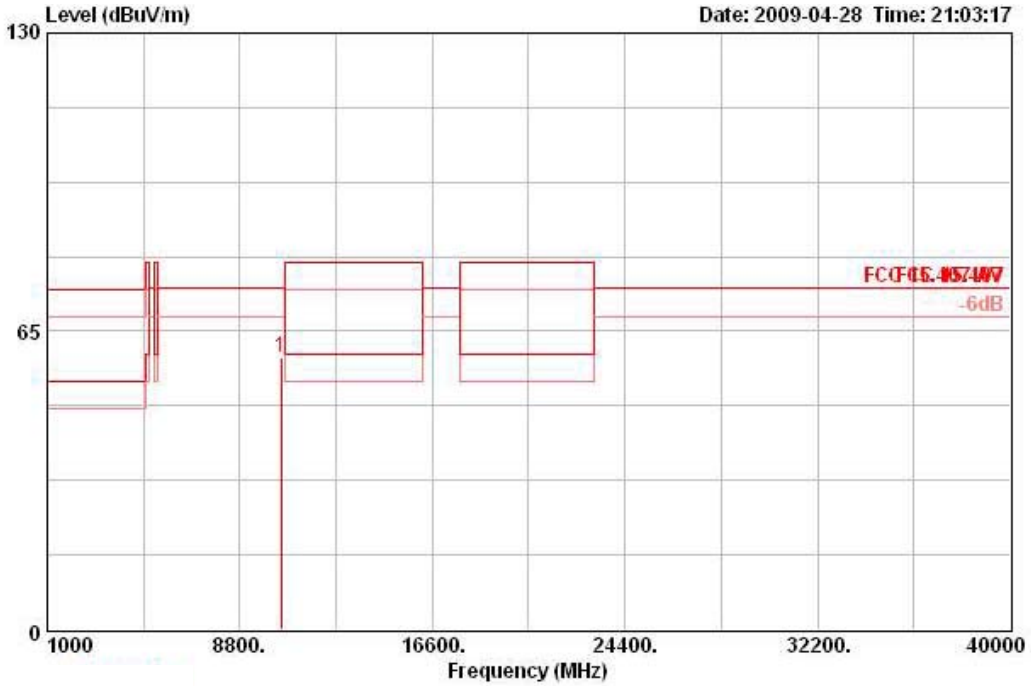
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10400.120	59.16	-15.14	74.30	44.35	39.82	35.28	10.27	PEAK	VERTICAL	0	100

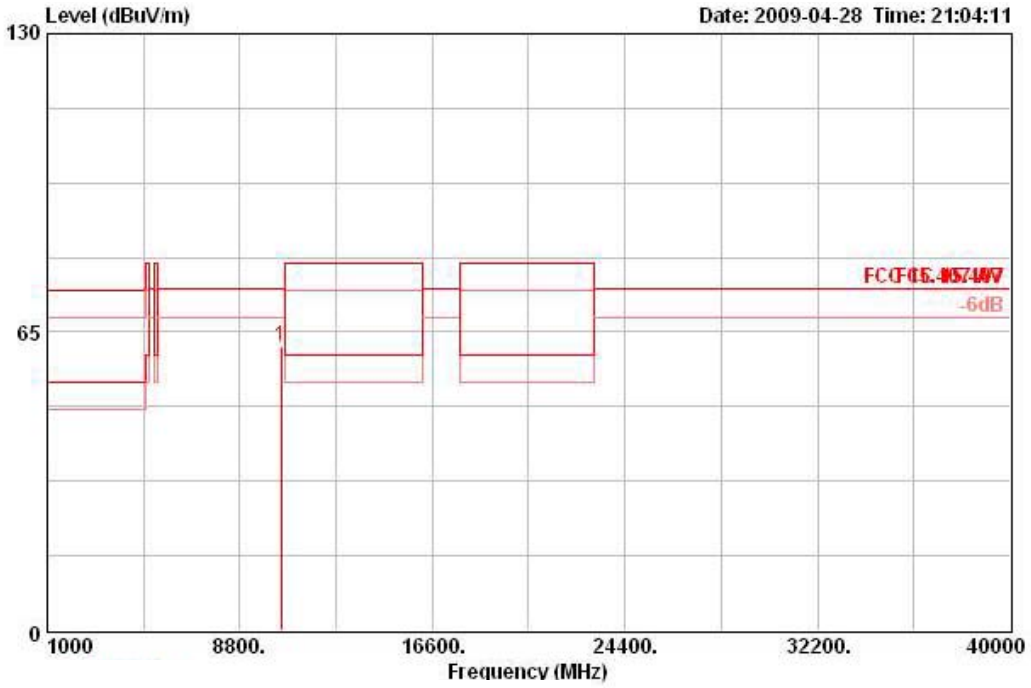
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 48 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10480.050	59.27	-15.03	74.30	44.17	39.97	35.21	10.35	PEAK	HORIZONTAL	0	100

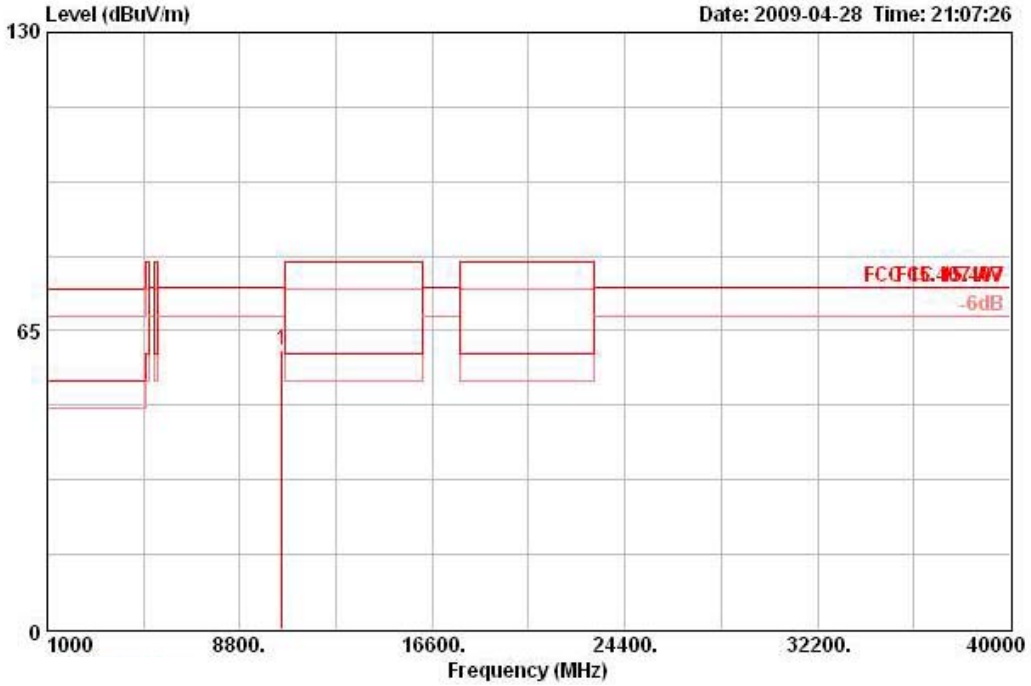
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10479.820	61.89	-12.41	74.30	46.79	39.97	35.21	10.35	PEAK	VERTICAL	360	100

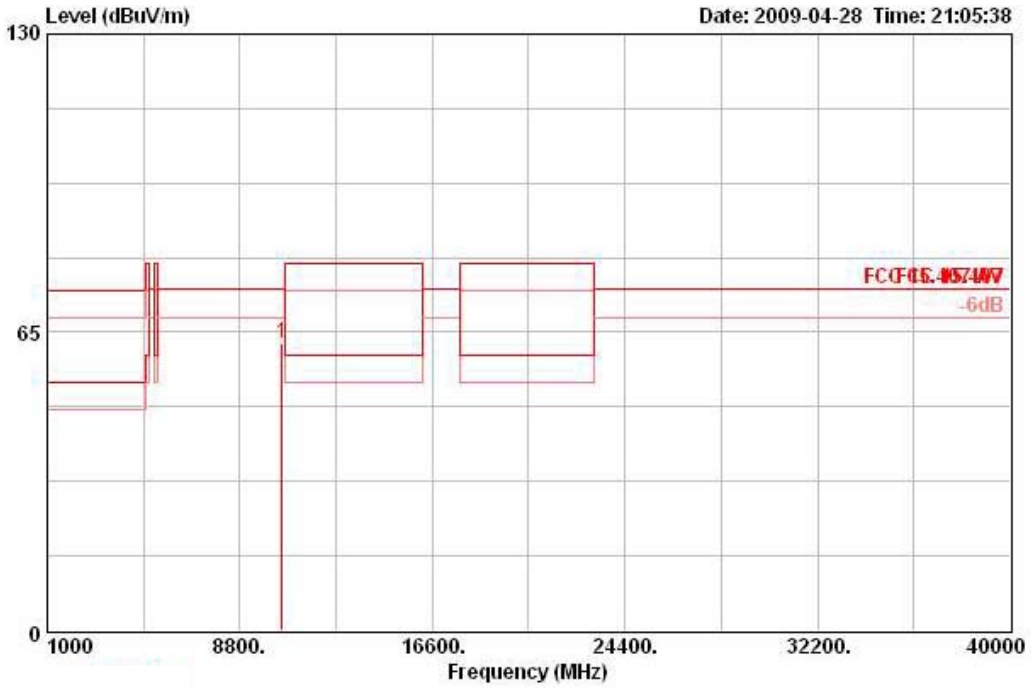
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 52 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10519.850	60.71	-13.59	74.30	45.54	39.98	35.19	10.37	PEAK	HORIZONTAL	360	100

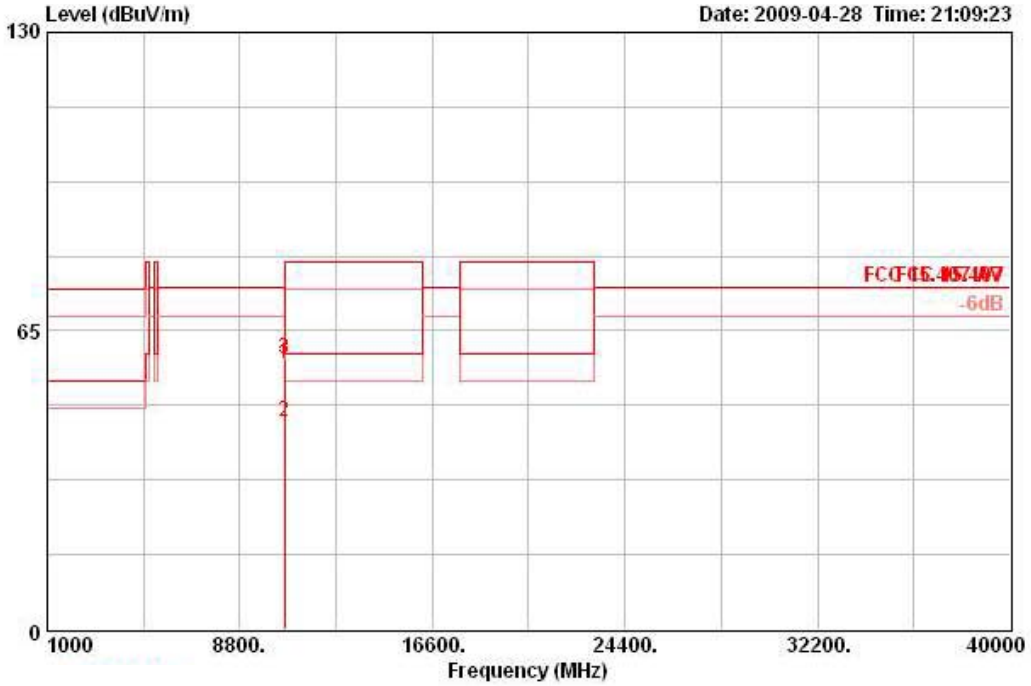
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10520.080	62.68	-11.62	74.30	47.51	39.98	35.19	10.37	PEAK	VERTICAL	0	100

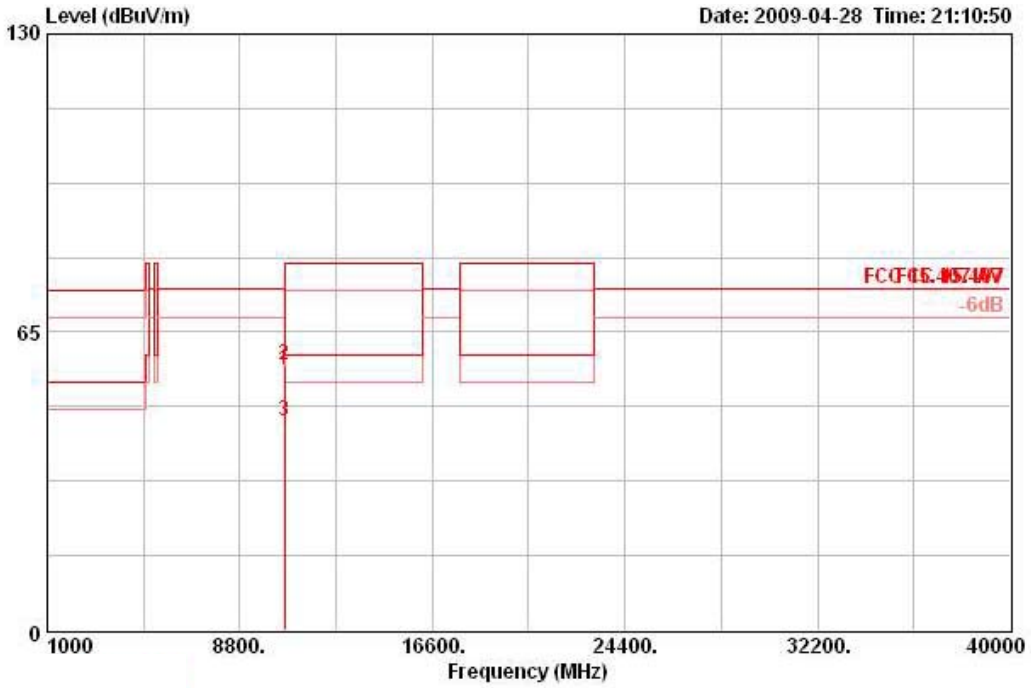
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 60 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10599.980	57.94	-16.36	74.30	42.81	39.90	35.12	10.36	PEAK	HORIZONTAL	0	100
2 @	10600.000	45.33	-14.67	60.00	30.19	39.90	35.12	10.36	AVERAGE	HORIZONTAL	0	100
3 @	10600.010	58.92	-21.08	80.00	43.79	39.90	35.12	10.36	PEAK	HORIZONTAL	0	100

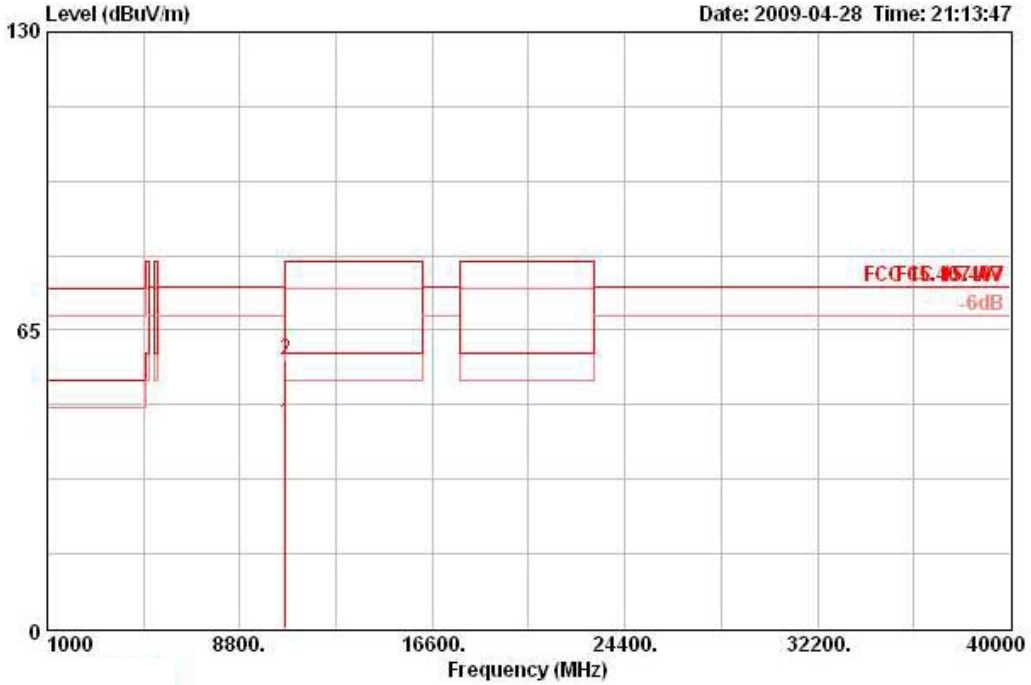
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10599.980	56.58	-17.72	74.30	41.44	39.90	35.12	10.36	PEAK	VERTICAL	360	100
2 @	10600.000	57.70	-22.30	80.00	42.57	39.90	35.12	10.36	PEAK	VERTICAL	360	100
3 @	10600.000	45.59	-14.41	60.00	30.46	39.90	35.12	10.36	AVERAGE	VERTICAL	360	100

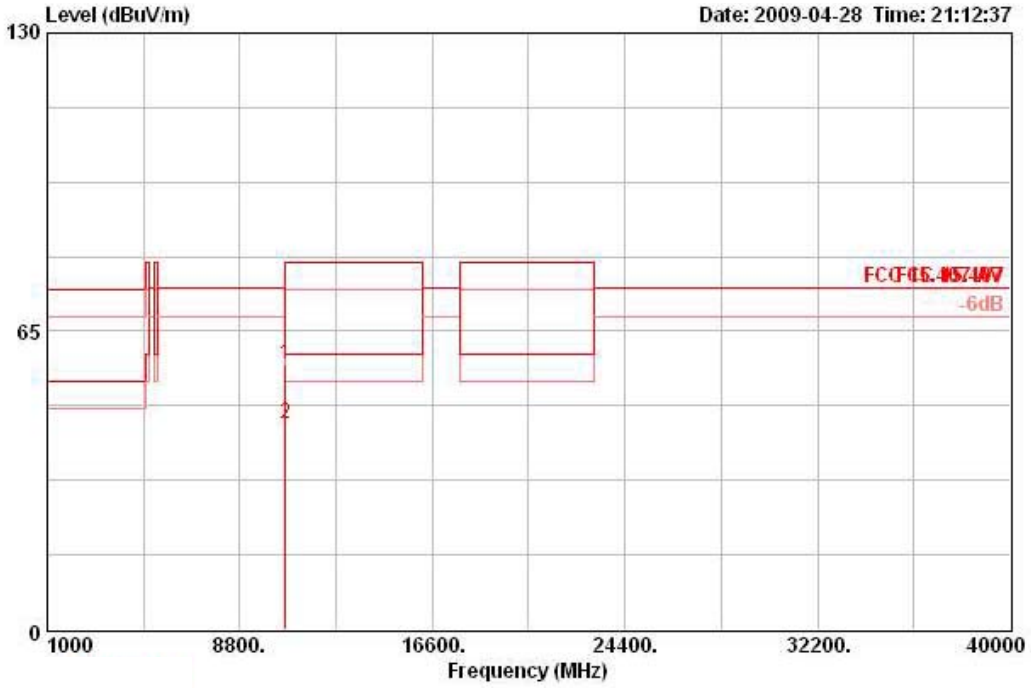
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 64 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10639.980	44.82	-15.18	60.00	29.70	39.86	35.09	10.35	AVERAGE	HORIZONTAL	360	100
2 @	10640.000	58.36	-21.64	80.00	43.24	39.86	35.09	10.35	PEAK	HORIZONTAL	360	100

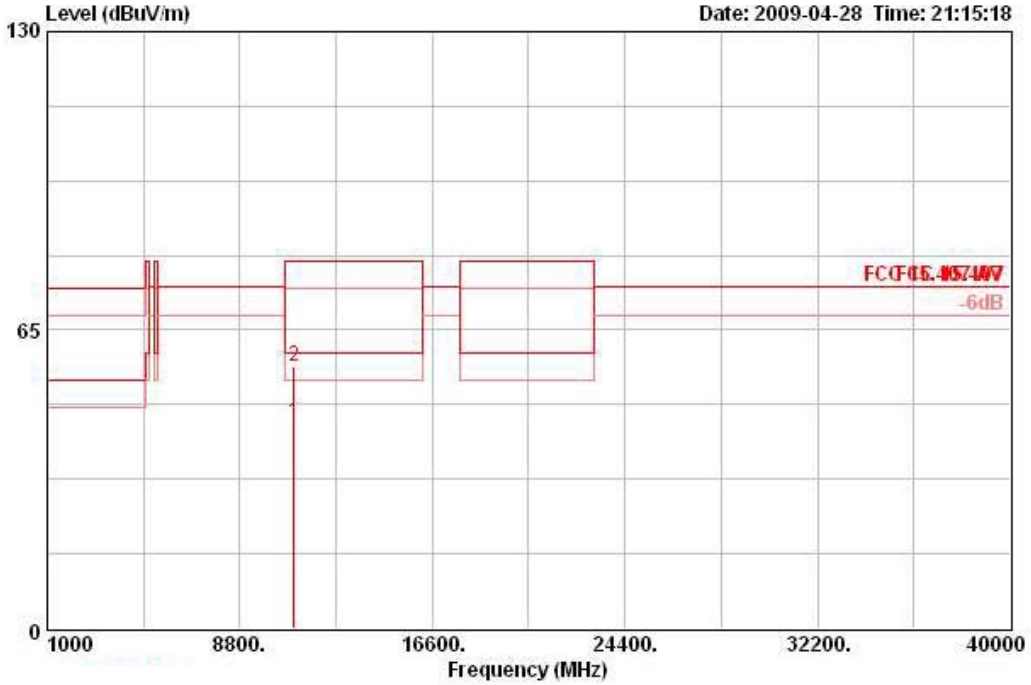
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10640.020	57.72	-22.28	80.00	42.60	39.86	35.09	10.35	PEAK	VERTICAL	0	100
2 @	10640.020	44.84	-15.16	60.00	29.72	39.86	35.09	10.35	AVERAGE	VERTICAL	0	100

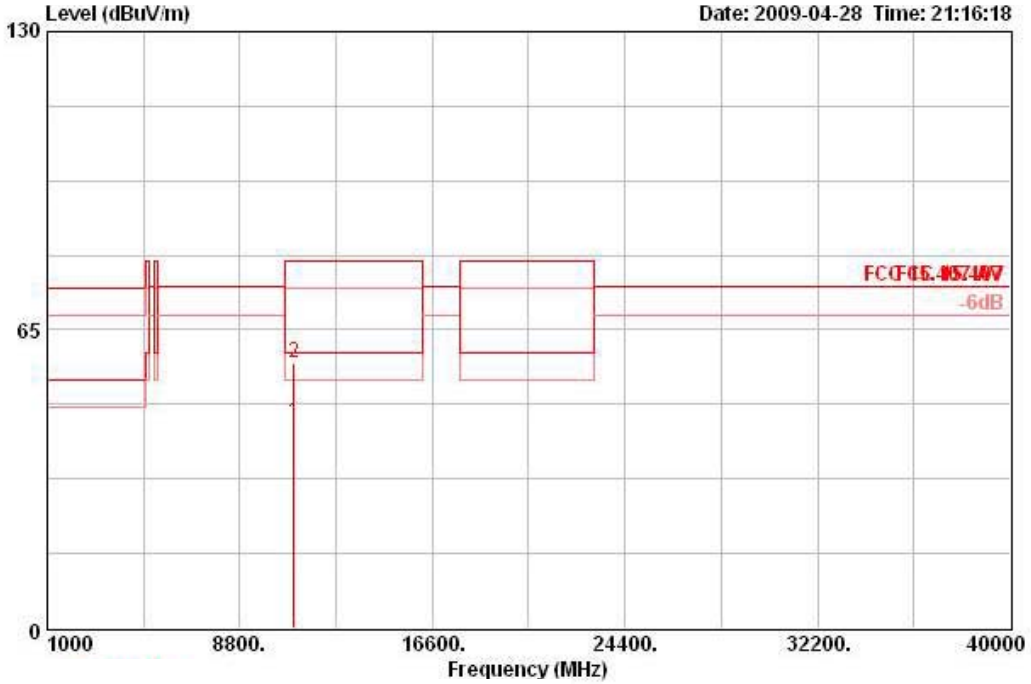
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 100 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10999.980	44.63	-15.37	60.00	29.65	39.50	34.80	10.28	AVERAGE	HORIZONTAL	0	100
2 @	11000.010	57.18	-22.82	80.00	42.20	39.50	34.80	10.28	PEAK	HORIZONTAL	0	100

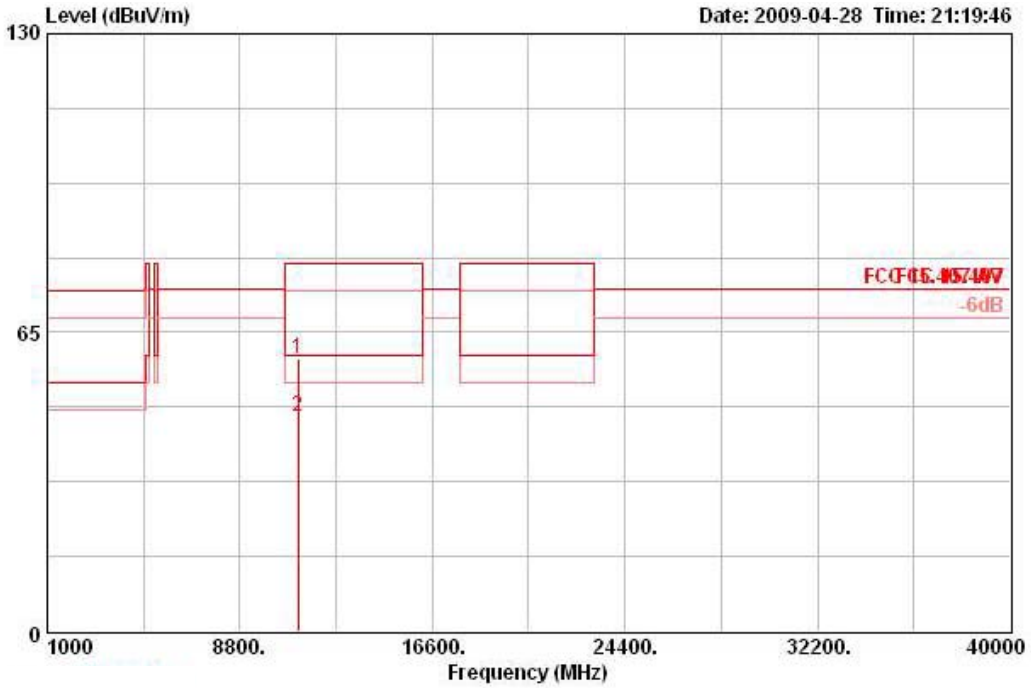
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	10999.990	44.65	-15.35	60.00	29.67	39.50	34.80	10.28	AVERAGE	VERTICAL	360	100
2 @	11000.000	57.74	-22.26	80.00	42.76	39.50	34.80	10.28	PEAK	VERTICAL	360	100

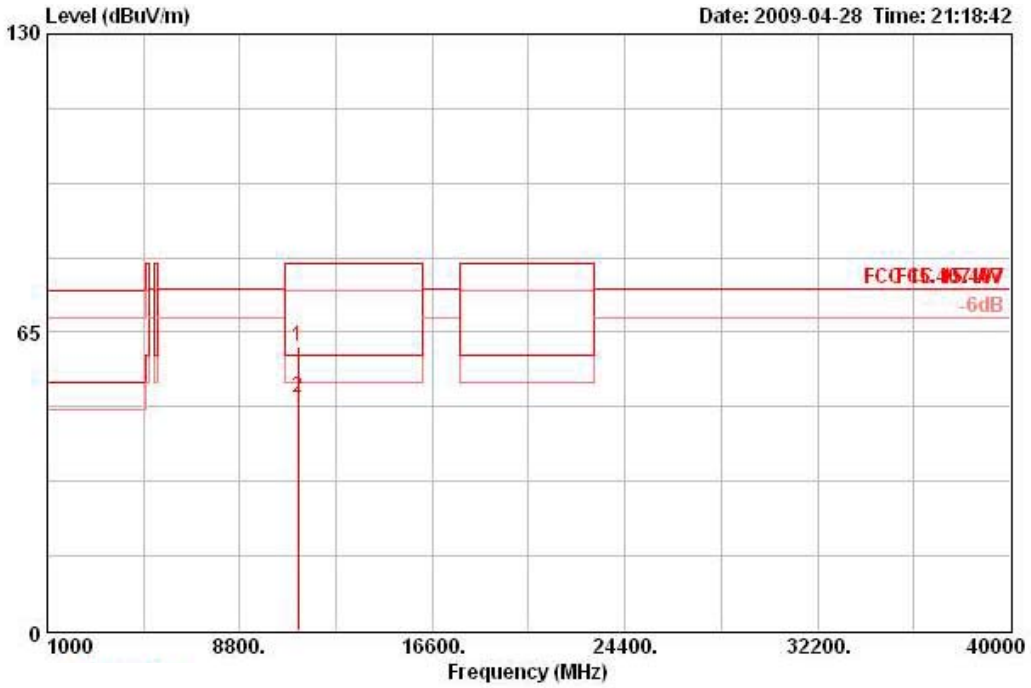
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 116 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11159.980	59.22	-20.78	80.00	44.14	39.50	34.90	10.48	PEAK	HORIZONTAL	216	100
2 @	11160.000	46.56	-13.44	60.00	31.48	39.50	34.90	10.48	AVERAGE	HORIZONTAL	216	100

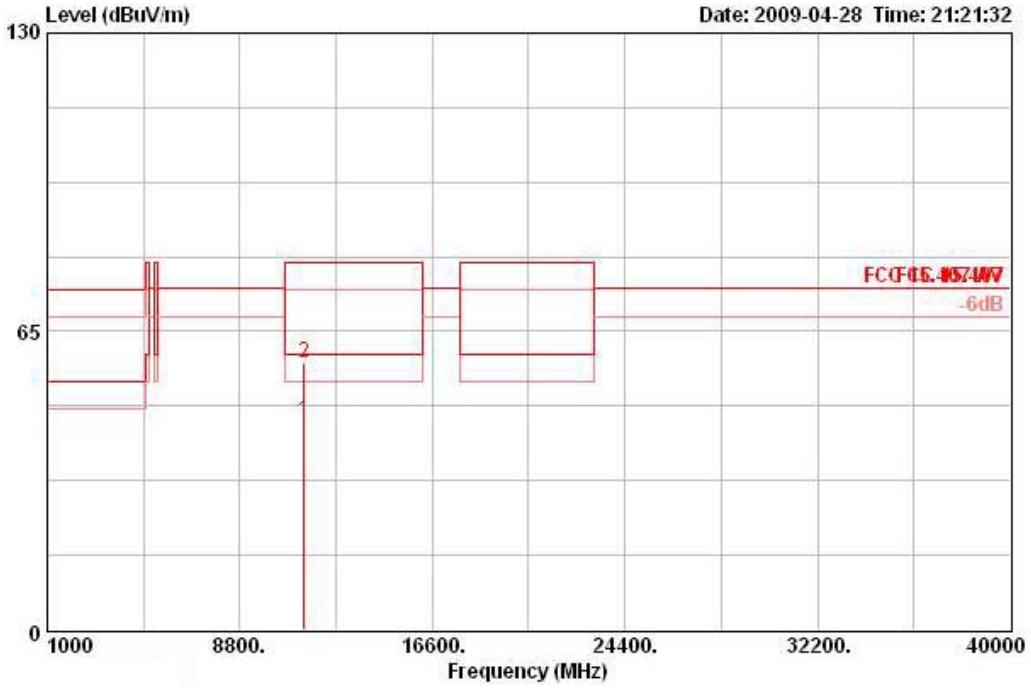
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11159.980	62.03	-17.97	80.00	46.96	39.50	34.90	10.48	PEAK	VERTICAL	30	100
2 @	11159.990	50.66	-9.34	60.00	35.58	39.50	34.90	10.48	AVERAGE	VERTICAL	30	100

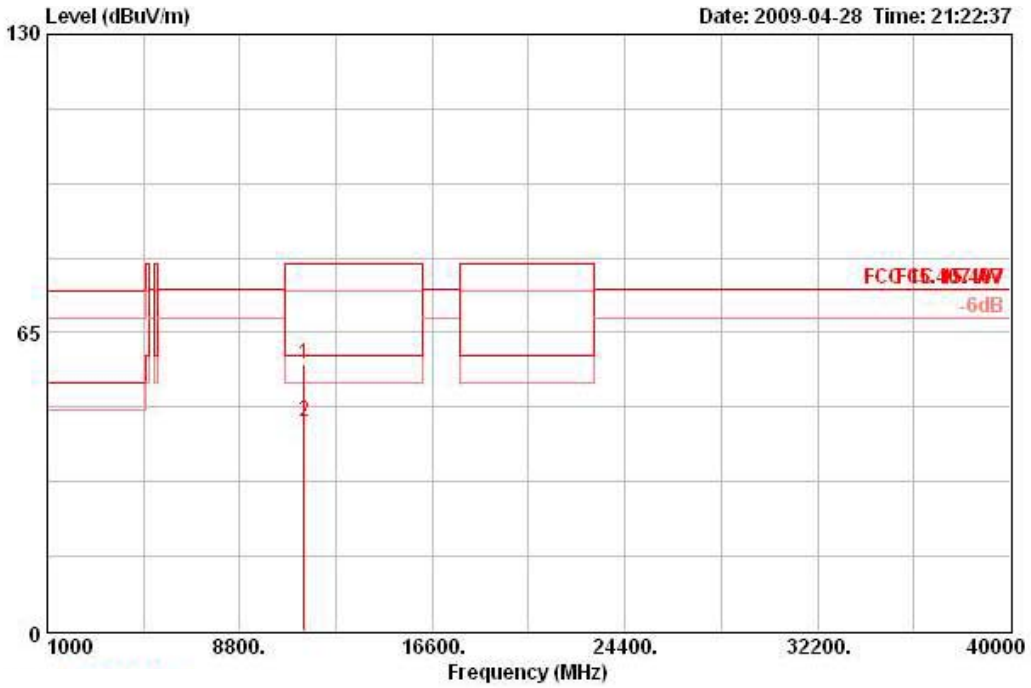
Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 140 / Ant. A + Ant. B

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11399.980	45.48	-14.52	60.00	30.22	39.50	35.04	10.80	AVERAGE	HORIZONTAL	0	100
2 @	11399.980	58.19	-21.81	80.00	42.93	39.50	35.04	10.80	PEAK	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	11399.980	58.32	-21.68	80.00	43.06	39.50	35.04	10.80	PEAK	VERTICAL	360	100
2 @	11400.000	45.58	-14.42	60.00	30.32	39.50	35.04	10.80	AVERAGE	VERTICAL	360	100

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	25.6℃	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 20MHz Ch 36, 40 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5145.600	79.53	-0.47	80.00	41.09	34.00	0.00	4.44	PEAK	VERTICAL	206	100
2 @	5150.000	58.40	-1.60	60.00	19.96	34.00	0.00	4.44	AVERAGE	VERTICAL	206	100
3 @	5175.000	116.74			78.24	34.07	0.00	4.43	PEAK	VERTICAL	206	100
4 @	5175.800	107.17			68.67	34.07	0.00	4.43	AVERAGE	VERTICAL	206	100

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

Channel 40

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5150.000	58.87	-1.13	60.00	20.43	34.00	0.00	4.44	AVERAGE	VERTICAL	217	100
2 @	5150.000	73.82	-6.18	80.00	35.37	34.00	0.00	4.44	PEAK	VERTICAL	217	100
3 @	5201.400	112.09			73.56	34.10	0.00	4.43	AVERAGE	VERTICAL	217	100
4 @	5201.600	121.94			83.41	34.10	0.00	4.43	PEAK	VERTICAL	217	100

Item 3, 4 are the fundamental frequency at 5200 MHz.

Temperature	25.6℃	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 20MHz Ch 60, 64 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 60

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5305.800	120.84			82.14	34.30	0.00	4.40	PEAK	VERTICAL	214	100
2 @	5307.000	110.41			71.72	34.30	0.00	4.40	AVERAGE	VERTICAL	214	100
3 @	5350.000	58.34	-1.66	60.00	19.57	34.40	0.00	4.38	AVERAGE	VERTICAL	214	100
4 @	5350.000	69.69	-10.31	80.00	30.91	34.40	0.00	4.38	PEAK	VERTICAL	214	100

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5312.200	107.08			68.35	34.33	0.00	4.40	AVERAGE	VERTICAL	152	100
2 @	5323.200	117.17			78.45	34.33	0.00	4.39	PEAK	VERTICAL	152	100
3 @	5350.000	57.64	-2.36	60.00	18.86	34.40	0.00	4.38	AVERAGE	VERTICAL	152	100
4 @	5350.200	78.15	-1.85	80.00	39.37	34.40	0.00	4.38	PEAK	VERTICAL	152	100

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

Temperature	25.6℃	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 20MHz Ch 100, 140 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5458.200	69.13	-10.87	80.00	30.18	34.60	0.00	4.35	PEAK	VERTICAL	184	100
2 @	5460.000	57.12	-2.88	60.00	18.17	34.60	0.00	4.35	AVERAGE	VERTICAL	184	100
3 @	5466.400	71.12	-3.18	74.30	32.14	34.63	0.00	4.35	PEAK	VERTICAL	184	100
4 @	5494.200	106.27			67.27	34.67	0.00	4.34	AVERAGE	VERTICAL	184	100
5 @	5494.200	115.68			76.67	34.67	0.00	4.34	PEAK	VERTICAL	184	100

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

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5695.800	105.03			65.79	34.85	0.00	4.39	AVERAGE	VERTICAL	86	100
2 @	5696.000	114.51			75.27	34.85	0.00	4.39	PEAK	VERTICAL	86	100
3 @	5726.200	73.34	-0.96	74.30	34.07	34.88	0.00	4.40	PEAK	VERTICAL	86	100

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

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 38, 46 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 38

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5149.200	75.23	-4.77	80.00	36.79	34.00	0.00	4.44	PEAK	VERTICAL	265	120
2 @	5150.000	59.74	-0.26	60.00	21.30	34.00	0.00	4.44	AVERAGE	VERTICAL	265	120
3 @	5198.800	101.41			62.89	34.10	0.00	4.43	AVERAGE	VERTICAL	265	120
4 @	5203.200	111.73			73.20	34.10	0.00	4.43	PEAK	VERTICAL	265	120

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5147.200	74.49	-5.51	80.00	36.05	34.00	0.00	4.44	PEAK	VERTICAL	193	100
2 @	5150.000	58.54	-1.46	60.00	20.10	34.00	0.00	4.44	AVERAGE	VERTICAL	193	100
3 @	5218.400	117.74			79.18	34.13	0.00	4.43	PEAK	VERTICAL	193	100
4 @	5218.800	107.22			68.66	34.13	0.00	4.43	AVERAGE	VERTICAL	193	100

Item 3, 4 are the fundamental frequency at 5230 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 54, 62 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 54

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5260.800	106.92			68.28	34.23	0.00	4.41	AVERAGE	VERTICAL	216	100
2 @	5273.200	117.59			78.95	34.23	0.00	4.40	PEAK	VERTICAL	216	100
3 @	5350.000	58.67	-1.33	60.00	19.89	34.40	0.00	4.38	AVERAGE	VERTICAL	216	100
4 @	5357.200	70.93	-9.07	80.00	32.15	34.40	0.00	4.38	PEAK	VERTICAL	216	100

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5320.800	112.34			73.61	34.33	0.00	4.40	PEAK	VERTICAL	199	100
2 @	5322.000	101.36			62.63	34.33	0.00	4.40	AVERAGE	VERTICAL	199	100
3 @	5350.000	57.84	-2.16	60.00	19.06	34.40	0.00	4.38	AVERAGE	VERTICAL	199	100
4 @	5350.400	74.47	-5.53	80.00	35.69	34.40	0.00	4.38	PEAK	VERTICAL	199	100

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	Draft n MCS0 40MHz Ch 102, 110, 134 / Ant. A + Ant. B
Test Date	Apr. 28, 2009		

Channel 102

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1	5459.600	71.03	-8.97	80.00	32.09	34.60	0.00	4.35	PEAK	VERTICAL	139	100
2 !	5460.000	57.14	-2.86	60.00	18.19	34.60	0.00	4.35	AVERAGE	VERTICAL	139	100
3 !	5461.200	73.32	-0.98	74.30	34.38	34.60	0.00	4.35	PEAK	VERTICAL	139	100
4	5498.400	99.34			60.30	34.70	0.00	4.34	AVERAGE	VERTICAL	139	100
5 @	5502.215	111.04			71.99	34.70	0.00	4.35	PEAK	VERTICAL	139	100

Item 4, 5 are the fundamental frequency at 5510MHz.

Channel 110

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5458.800	68.99	-11.01	80.00	30.04	34.60	0.00	4.35	PEAK	HORIZONTAL	110	123
2 @	5460.000	56.66	-3.34	60.00	17.71	34.60	0.00	4.35	AVERAGE	HORIZONTAL	110	123
3 @	5468.400	69.32	-4.98	74.30	30.34	34.63	0.00	4.35	PEAK	HORIZONTAL	110	123
4 @	5536.400	98.28			59.20	34.73	0.00	4.35	AVERAGE	HORIZONTAL	110	123
5 @	5537.200	108.63			69.55	34.73	0.00	4.35	PEAK	HORIZONTAL	110	123

Item 4, 5 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5654.000	111.51			72.30	34.82	0.00	4.39	PEAK	VERTICAL	209	100
2 @	5682.000	100.69			61.46	34.84	0.00	4.39	AVERAGE	VERTICAL	209	100
3 @	5726.200	73.63	-0.67	74.30	34.35	34.88	0.00	4.40	PEAK	VERTICAL	209	100

Item 1, 2 are the fundamental frequency at 5670 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].

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 36, 40 / Ant. A
Test Date	Apr. 28, 2009		

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5149.400	78.78	-1.22	80.00	40.34	34.00	0.00	4.44	PEAK	VERTICAL	318	100
2 @	5150.000	59.55	-0.45	60.00	21.11	34.00	0.00	4.44	AVERAGE	VERTICAL	318	100
3 @	5176.000	118.09			79.59	34.07	0.00	4.43	PEAK	VERTICAL	318	100
4 @	5186.400	107.17			68.67	34.07	0.00	4.43	AVERAGE	VERTICAL	318	100

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

Channel 40

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5150.000	59.16	-0.84	60.00	20.72	34.00	0.00	4.44	AVERAGE	VERTICAL	216	100
2 @	5150.000	72.84	-7.16	80.00	34.40	34.00	0.00	4.44	PEAK	VERTICAL	216	100
3 @	5195.000	112.40			73.88	34.10	0.00	4.43	AVERAGE	VERTICAL	216	100
4 @	5195.000	122.09			83.56	34.10	0.00	4.43	PEAK	VERTICAL	216	100

Item 3, 4 are the fundamental frequency at 5200 MHz.

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 60, 64 / Ant. A
Test Date	Apr. 28, 2009		

Channel 60

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5306.600	123.01			84.32	34.30	0.00	4.40	PEAK	VERTICAL	88	100
2 @	5306.600	112.51			73.81	34.30	0.00	4.40	AVERAGE	VERTICAL	88	100
3 @	5350.000	59.58	-0.42	60.00	20.80	34.40	0.00	4.38	AVERAGE	VERTICAL	88	100
4 @	5350.000	72.12	-7.88	80.00	33.34	34.40	0.00	4.38	PEAK	VERTICAL	88	100

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5326.400	119.56			80.84	34.33	0.00	4.39	PEAK	VERTICAL	87	106
2 @	5326.400	109.33			70.61	34.33	0.00	4.39	AVERAGE	VERTICAL	87	106
3 @	5350.000	58.78	-1.22	60.00	20.00	34.40	0.00	4.38	AVERAGE	VERTICAL	87	106
4 @	5351.400	78.45	-1.55	80.00	39.67	34.40	0.00	4.38	PEAK	VERTICAL	87	106

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

Temperature	25.6°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	802.11a Ch 100, 140 / Ant. A
Test Date	Apr. 28, 2009		

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5458.400	69.04	-10.96	80.00	30.09	34.60	0.00	4.35	PEAK	VERTICAL	203	100
2 @	5460.000	56.73	-3.27	60.00	17.79	34.60	0.00	4.35	AVERAGE	VERTICAL	203	100
3 @	5469.200	73.33	-0.97	74.30	34.35	34.63	0.00	4.35	PEAK	VERTICAL	203	100
4 @	5493.000	105.21			66.21	34.67	0.00	4.34	AVERAGE	VERTICAL	203	100
5 @	5495.200	115.57			76.56	34.67	0.00	4.34	PEAK	VERTICAL	203	100

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

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	5702.400	116.20			76.94	34.87	0.00	4.39	PEAK	VERTICAL	145	118
2 @	5702.600	105.83			66.58	34.87	0.00	4.39	AVERAGE	VERTICAL	145	118
3 @	5725.200	70.85	-3.45	74.30	31.57	34.88	0.00	4.40	PEAK	VERTICAL	145	118

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].

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 (Draft n specification).

4.8.2. Measuring Instruments and Setting

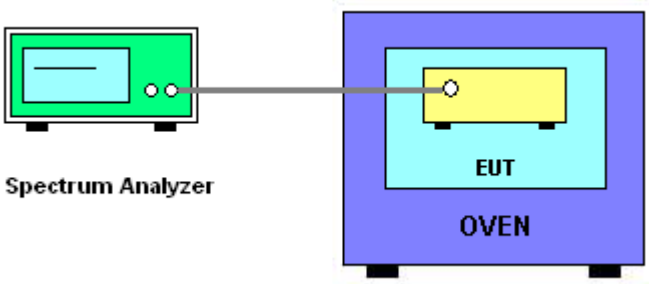
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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 (Draft n 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 Power Meter 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)	**5300**
126.50	5299.994600
110.00	5299.999400
93.50	5300.002400
Max. Deviation (MHz)	**0.005400**
Max. Deviation (ppm)	**1.02**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	**5300**
-30	5300.035400
-20	5300.033000
-10	5300.024600
0	5300.021600
10	5300.001200
20	5299.999800
30	5299.996800
40	5299.994600
50	5299.992300
Max. Deviation (MHz)	**0.035400**
Max. Deviation (ppm)	**6.68**

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	100174	9kHz – 2.75GHz	Apr. 15, 2009	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 23, 2009	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2009	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2008	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Jun 13, 2008	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. 14, 2008	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 23, 2009	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jul. 21, 2008	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	9121372	26.5 GHz - 40 GHz	Apr. 06, 2009*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023	9 kHz - 30 GHz	Feb 02, 2009	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul 28, 2008*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 12, 2008	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	Apr. 29, 2008	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan.16, 2009	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Jan. 05, 2009	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Jan. 05, 2009	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	Jan. 09, 2009	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jul. 11, 2008	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 30, 2008*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 13, 2009	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Jul. 18, 2008	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2008	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2008	Conducted (TH01-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Dec. 14, 2008	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 10, 2009	Conducted (TH01-HY)
Oscilloscope	Tektonix	TDS380	B016197	400MHz/ 2GS/s	Jun. 27, 2008	Conducted (TH01-HY)

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

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

6. TEST LOCATION

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

7. TAF CERTIFICATE OF ACCREDITATION

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

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