

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 5.470-5.725 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 falls 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 (microrvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

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

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1000KHz / 1000KHz for peak

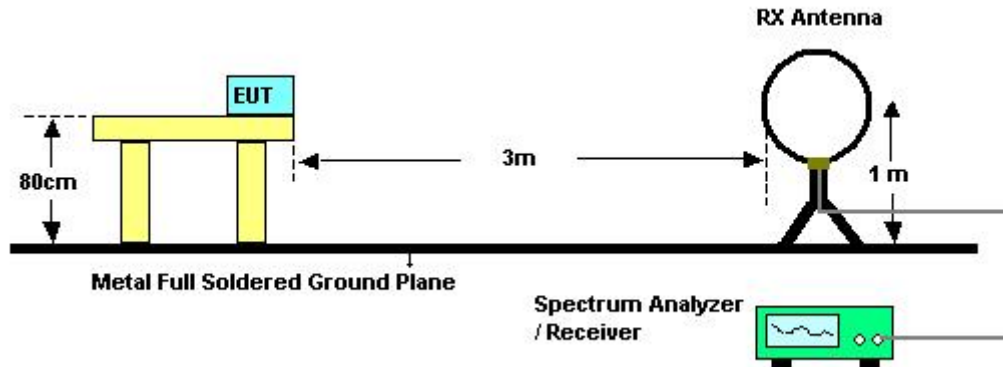
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

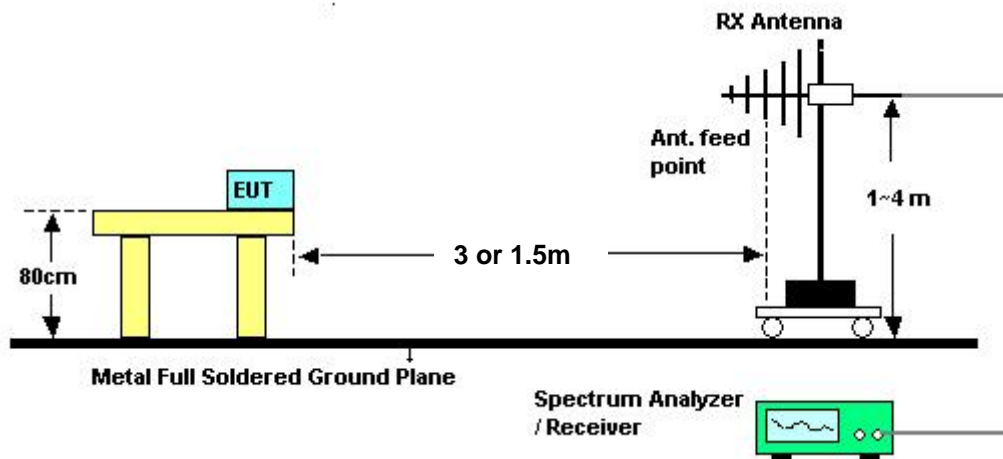
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 from 3m to 1.5m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1.5m]})$ (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	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	Normal Link
Test Date	Mar. 30, 2009		

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

Note:

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

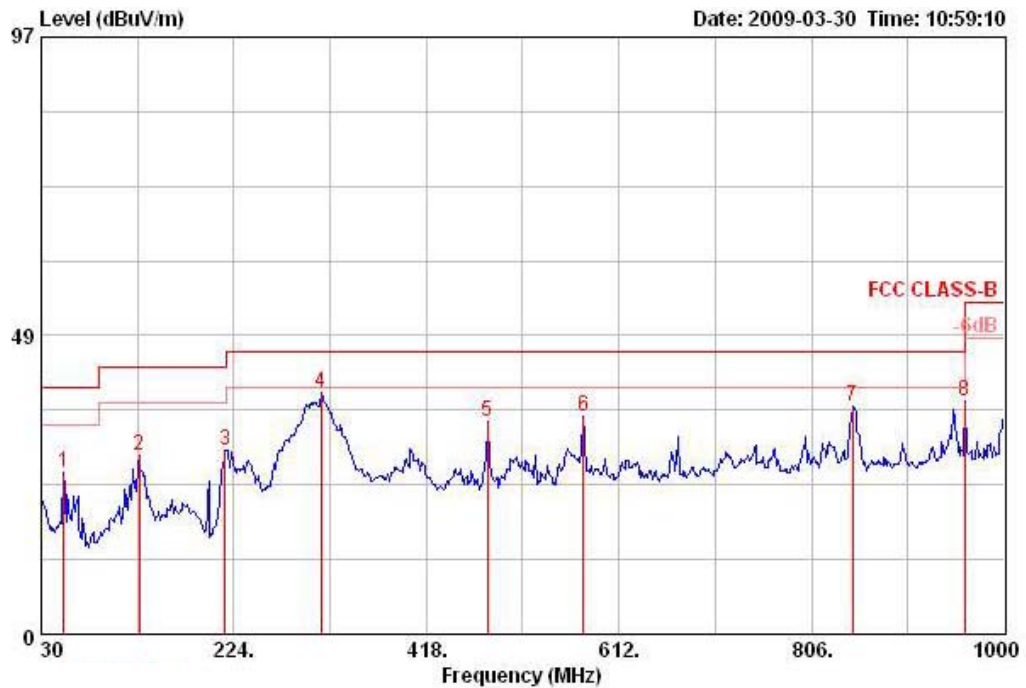
Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

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

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

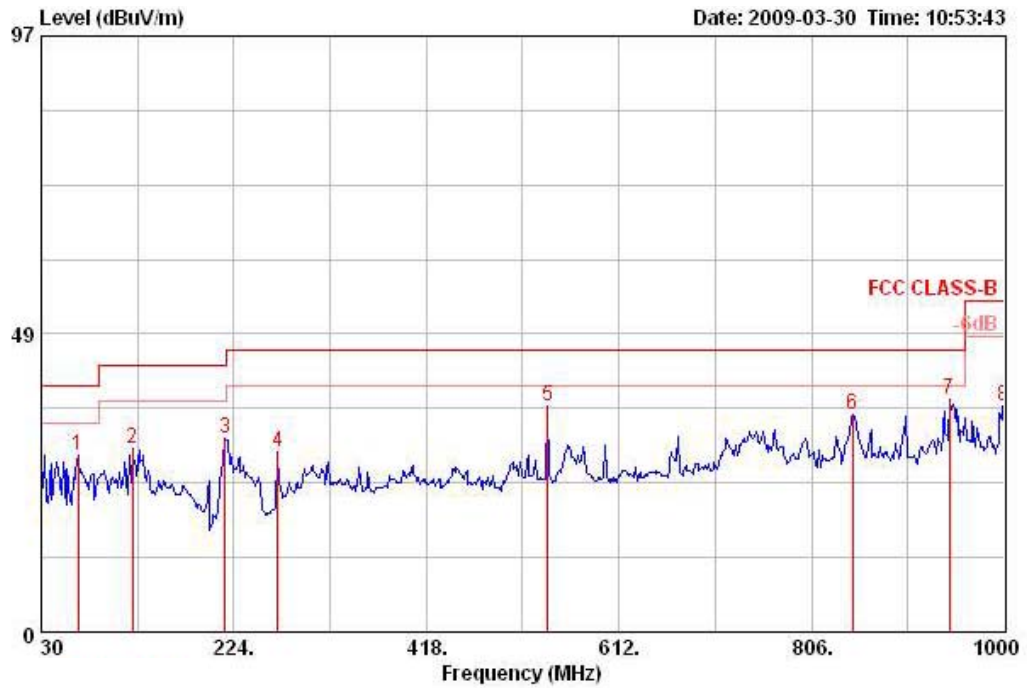
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	Normal Link / Mode 2

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	52.310	26.34	-13.66	40.00	45.22	8.18	27.79	0.74	Peak	HORIZONTAL	0	100
2	128.940	28.91	-14.59	43.50	42.82	12.25	27.45	1.29	Peak	HORIZONTAL	0	100
3	215.270	29.97	-13.53	43.50	45.09	10.19	27.07	1.76	Peak	HORIZONTAL	0	100
4	312.270	39.15	-6.85	46.00	50.30	13.70	26.98	2.13	Peak	HORIZONTAL	233	100
5	479.110	34.64	-11.36	46.00	42.68	17.30	27.99	2.66	Peak	HORIZONTAL	0	100
6	576.110	35.25	-10.75	46.00	42.00	18.49	28.10	2.85	Peak	HORIZONTAL	0	100
7	847.710	36.95	-9.05	46.00	40.93	20.13	27.51	3.40	Peak	HORIZONTAL	0	100
8	960.230	37.92	-16.08	54.00	40.47	20.99	27.16	3.62	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	66.860	28.87	-11.13	40.00	49.06	6.68	27.73	0.86	Peak	VERTICAL	0	400
2	122.150	29.83	-13.67	43.50	43.70	12.40	27.49	1.22	Peak	VERTICAL	0	400
3	215.270	31.44	-12.06	43.50	46.56	10.19	27.07	1.76	Peak	VERTICAL	0	400
4	268.620	29.20	-16.80	46.00	41.20	12.99	26.96	1.97	Peak	VERTICAL	0	400
5	540.220	36.66	-9.34	46.00	43.90	18.08	28.10	2.78	Peak	VERTICAL	0	400
6	847.710	35.30	-10.70	46.00	39.28	20.13	27.51	3.40	Peak	VERTICAL	0	400
7	944.710	37.84	-8.16	46.00	40.59	20.87	27.22	3.60	Peak	VERTICAL	121	100
8	1000.000	36.68	-17.32	54.00	38.69	21.29	27.00	3.70	Peak	VERTICAL	0	400

Note:

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

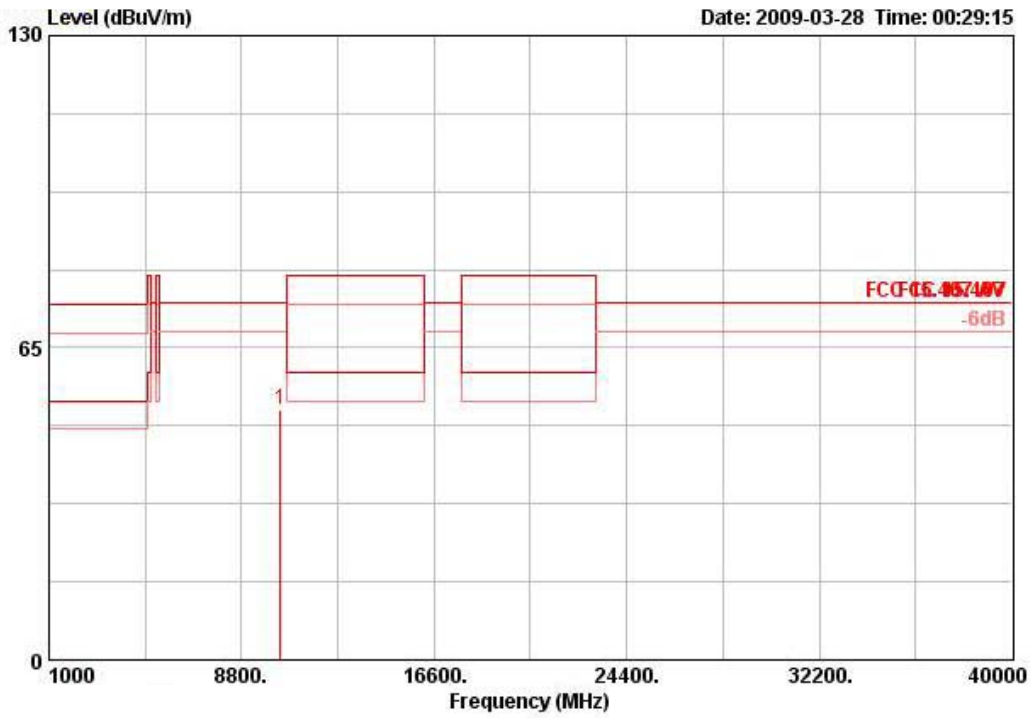
Emission level (dBUV/m) = 20 log Emission level (uV/m).

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

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

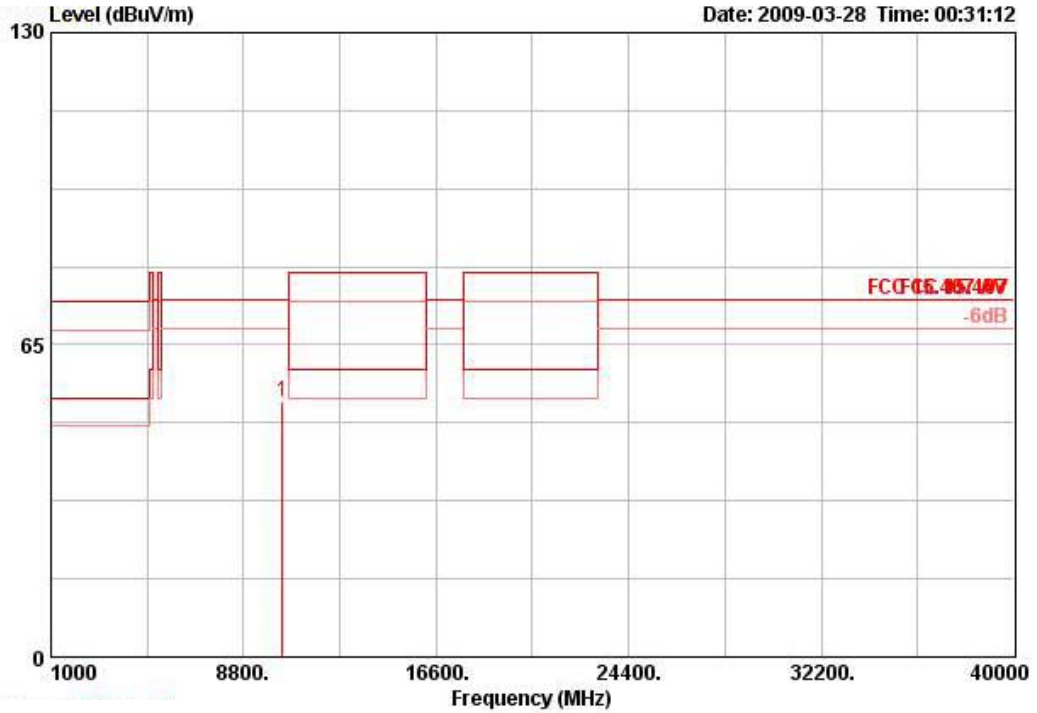
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 36 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Antenna 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 @	10356.580	52.02	-22.28	74.30	43.12	38.51	5.75	35.36	PEAK	100	360	HORIZONTAL

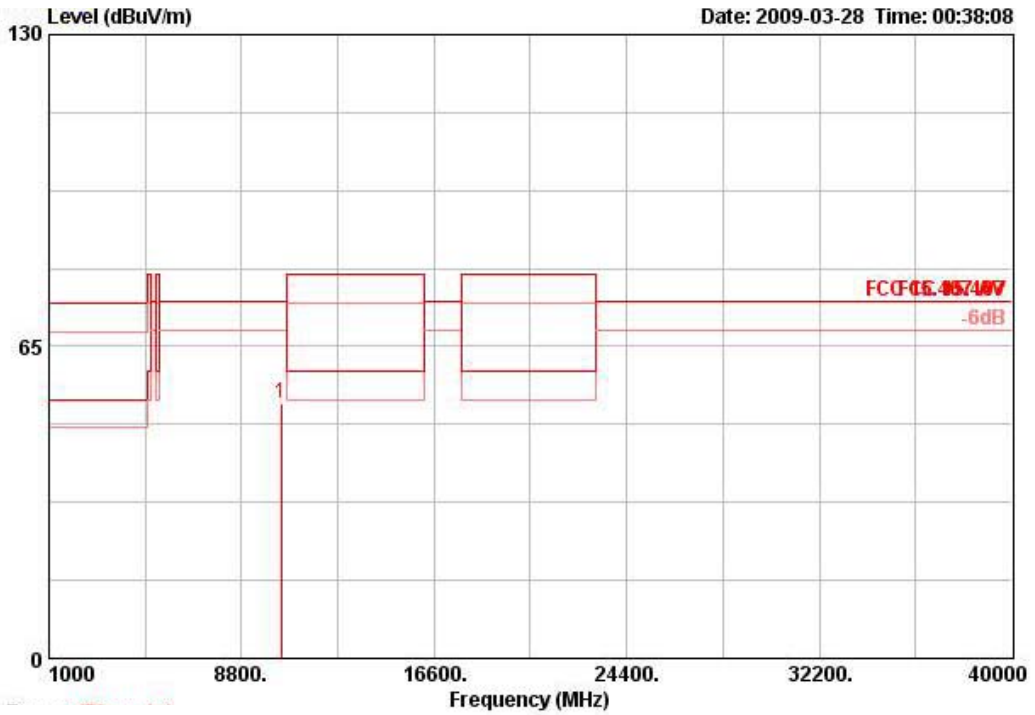
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10358.420	53.29	-21.01	74.30	44.40	38.51	5.75	35.36	PEAK	100	0	VERTICAL

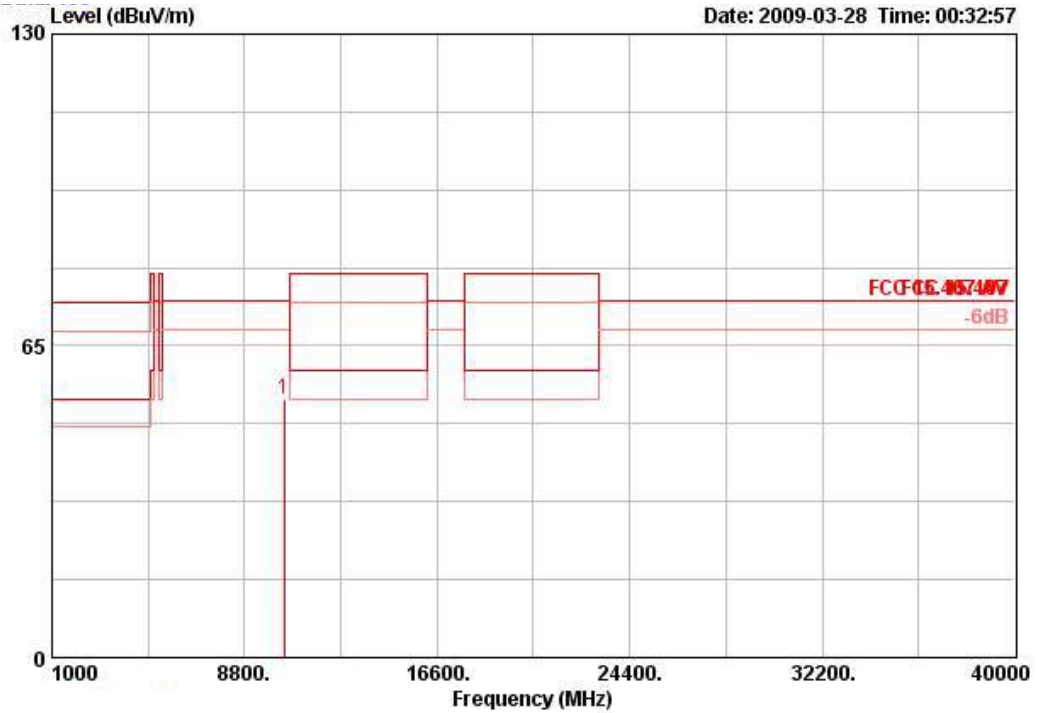
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 40 / Ant. 1 + Ant. 2

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 @	10396.960	53.01	-21.29	74.30	44.00	38.54	5.77	35.30	PEAK	100	0	HORIZONTAL

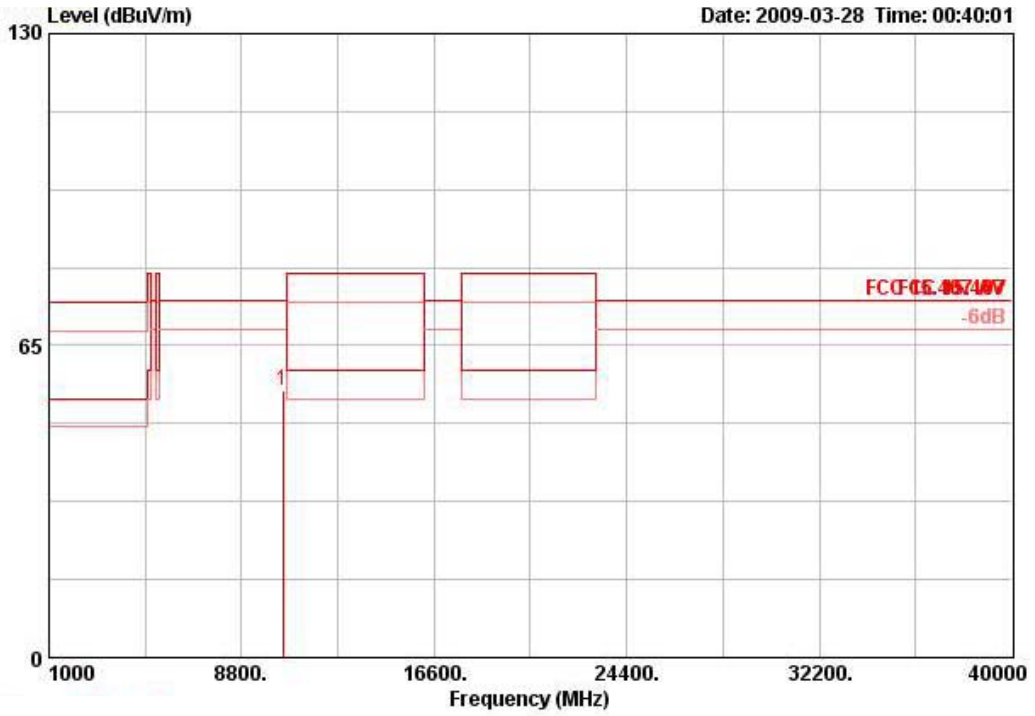
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10399.500	53.72	-20.58	74.30	44.71	38.54	5.77	35.30	PEAK	100	360	VERTICAL

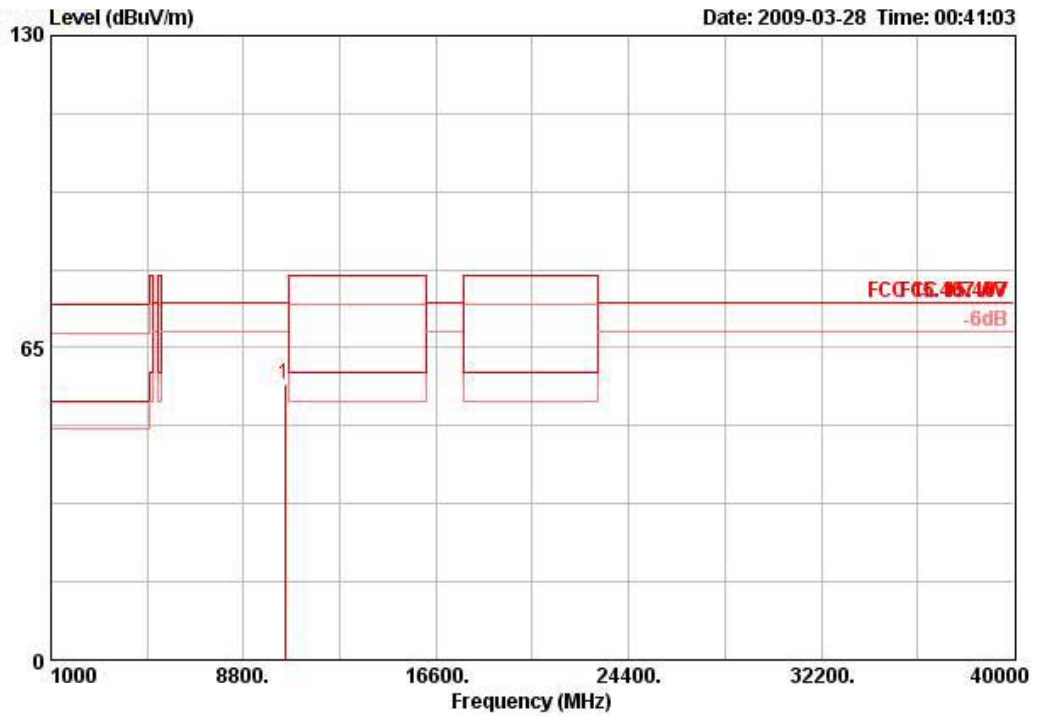
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 48 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Antenna 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 @	10481.200	55.58	-18.72	74.30	46.39	38.59	5.81	35.21	PEAK	100	359	HORIZONTAL

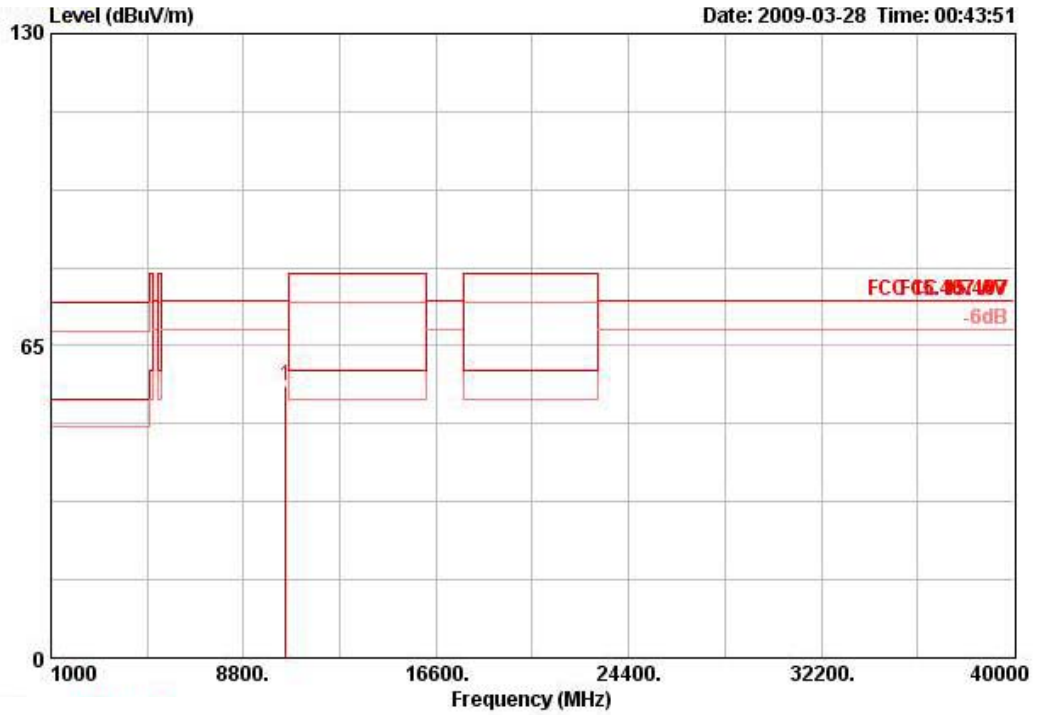
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10478.400	57.34	-16.96	74.30	48.16	38.59	5.81	35.21	PEAK	100	0	VERTICAL

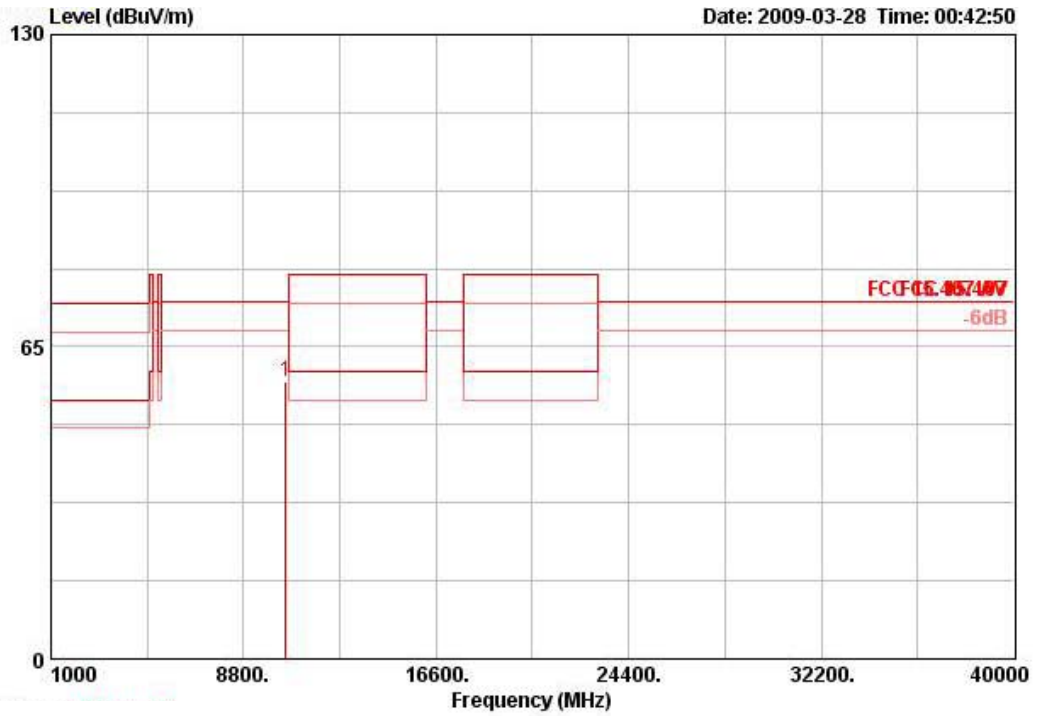
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 52 / Ant. 1 + Ant. 2

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	
10518.220	56.63	-17.67	74.30	47.40	38.59	5.82	35.18	PEAK	100	0	HORIZONTAL

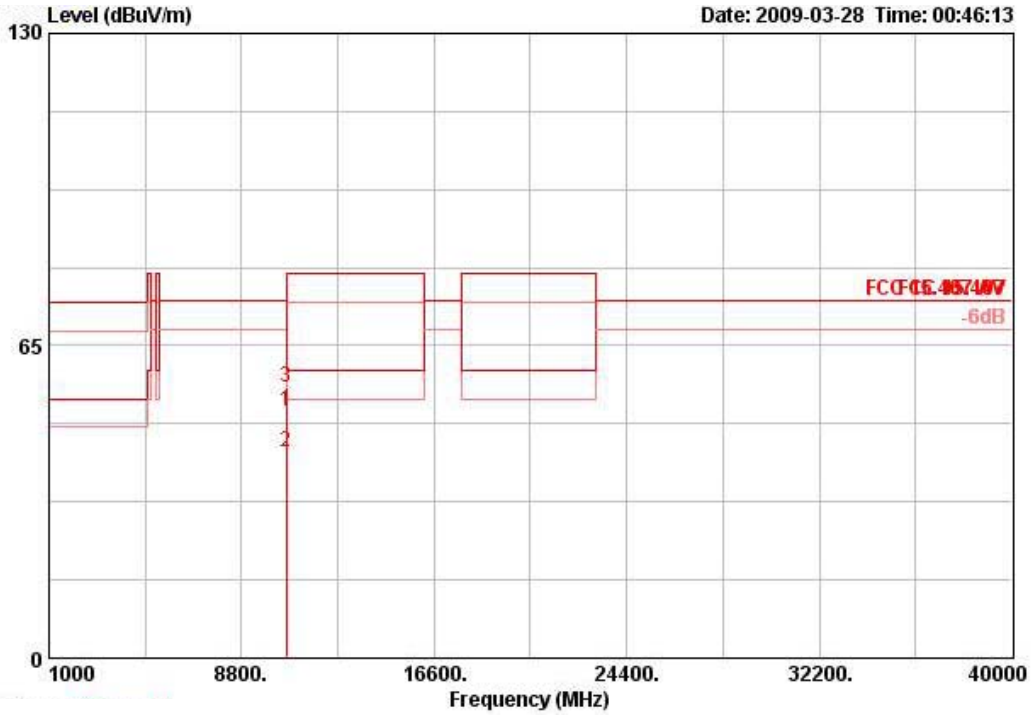
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10517.700	57.71	-16.59	74.30	48.47	38.59	5.82	35.18	PEAK	100	360	VERTICAL

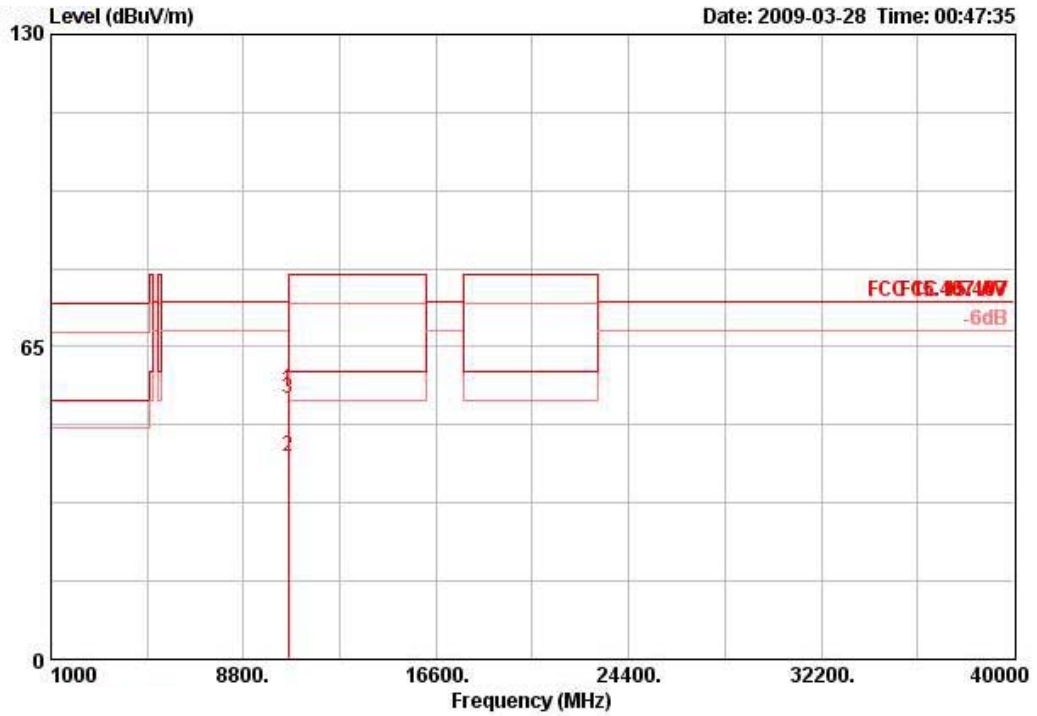
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 60 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10598.640	51.41	-22.89	74.30	42.14	38.56	5.81	35.10	PEAK	118	308	HORIZONTAL
2 @	10600.000	42.79	-17.21	60.00	33.52	38.56	5.81	35.10	AVERAGE	118	309	HORIZONTAL
3 @	10600.000	56.35	-23.65	80.00	47.08	38.56	5.81	35.10	PEAK	118	308	HORIZONTAL

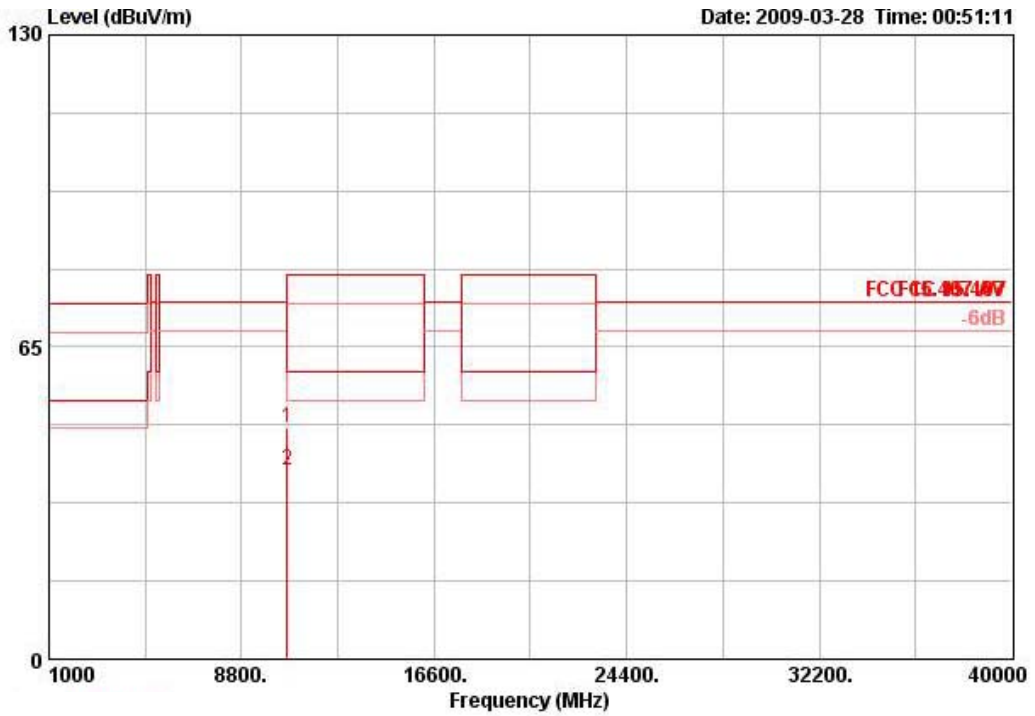
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10596.700	55.88	-18.42	74.30	46.61	38.56	5.81	35.10	PEAK	100	274	VERTICAL
2 @	10600.000	42.04	-17.96	60.00	32.78	38.56	5.81	35.10	AVERAGE	100	274	VERTICAL
3 @	10600.000	54.17	-25.83	80.00	44.91	38.56	5.81	35.10	PEAK	100	274	VERTICAL

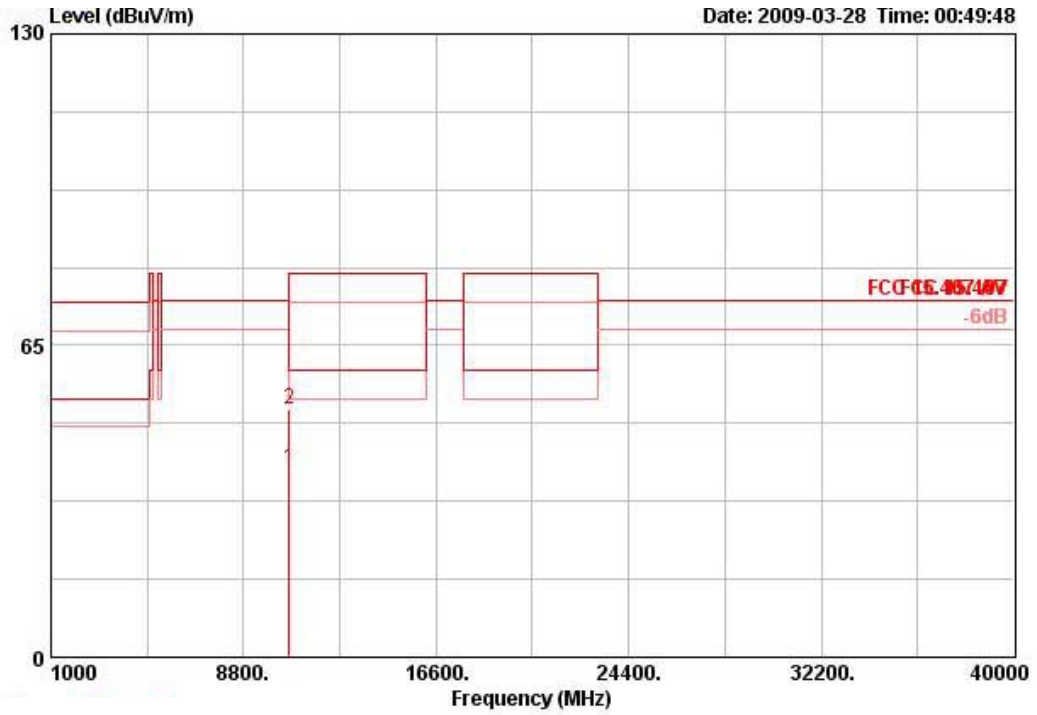
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 64 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10635.580	48.31	-31.69	80.00	39.02	38.54	5.80	35.05	PEAK	100	0	HORIZONTAL
2 @	10637.100	39.18	-20.82	60.00	29.89	38.54	5.80	35.05	AVERAGE	100	0	HORIZONTAL

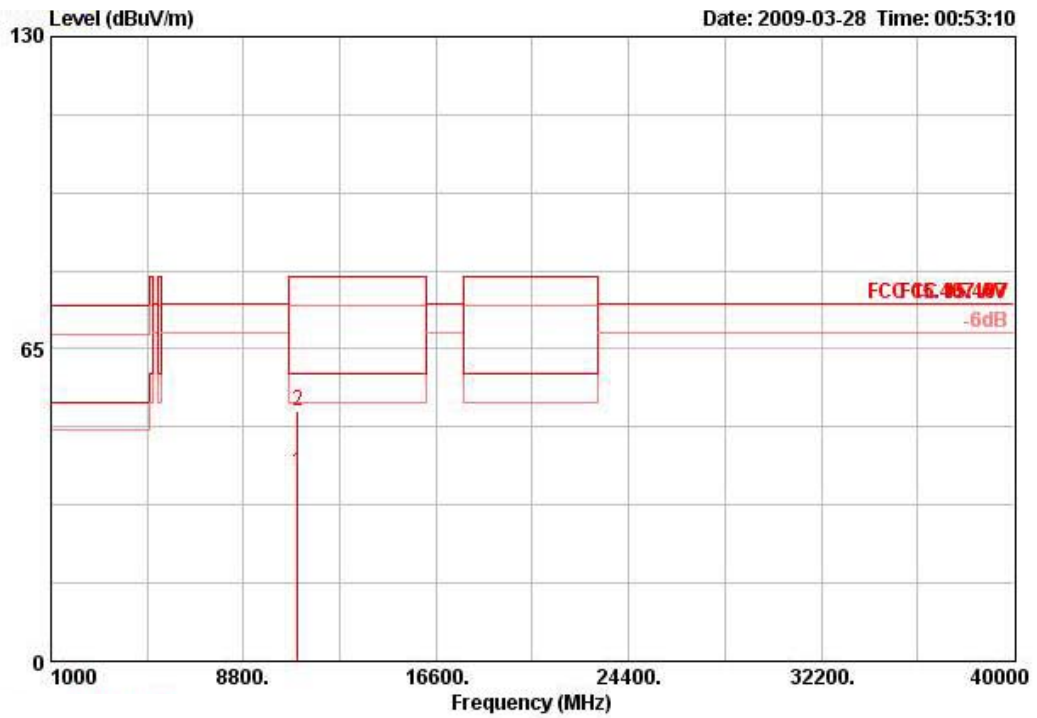
Vertical



	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 @	10637.040	39.37	-20.63	60.00	30.07	38.54	5.80	35.05	AVERAGE	100	360	VERTICAL
2 @	10637.800	51.74	-28.26	80.00	42.44	38.54	5.80	35.05	PEAK	100	360	VERTICAL

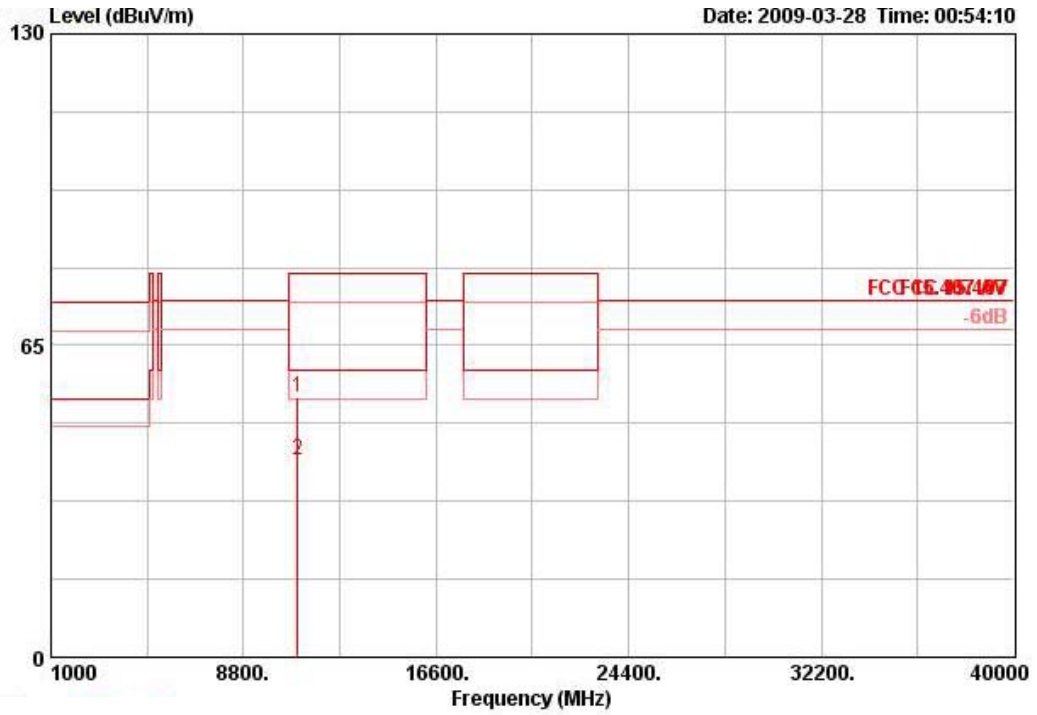
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 100 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	11000.660	39.37	-20.63	60.00	29.91	38.40	5.75	34.69	AVERAGE	100	360	HORIZONTAL
2 @	11004.780	52.14	-27.86	80.00	42.68	38.40	5.75	34.69	PEAK	100	360	HORIZONTAL

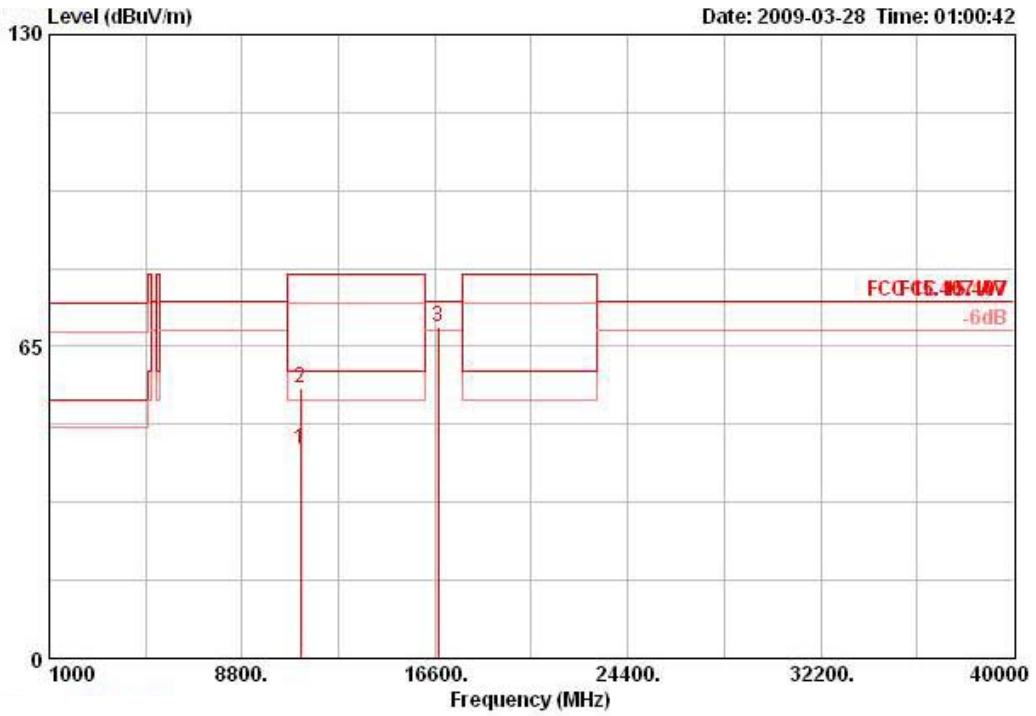
Vertical



	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 @	10999.100	54.33	-25.67	80.00	44.87	38.40	5.75	34.69	PEAK	100	272	VERTICAL
2 @	11000.280	41.25	-18.75	60.00	31.79	38.40	5.75	34.69	AVERAGE	100	272	VERTICAL

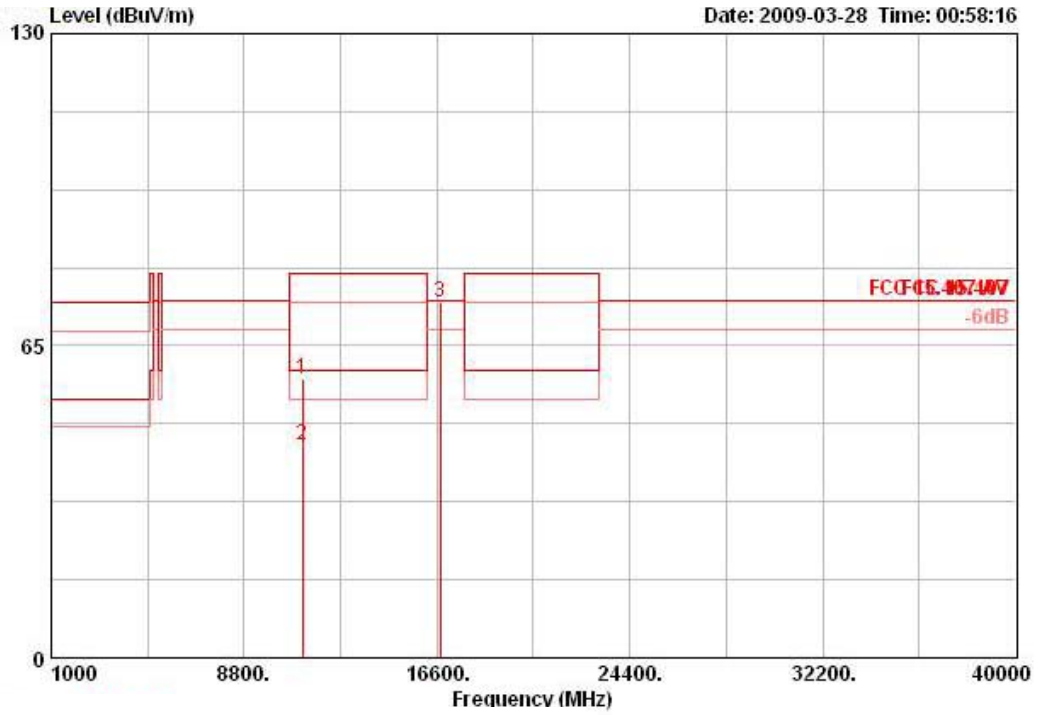
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 116 / Ant. 1 + Ant. 2

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	11155.040	43.46	-16.54	60.00	33.97	38.43	5.77	34.71	AVERAGE	121	256	HORIZONTAL
2	11155.240	56.34	-23.66	80.00	46.85	38.43	5.77	34.71	PEAK	121	256	HORIZONTAL
3 !	16741.680	69.11	-5.19	74.30	55.83	40.47	7.33	34.52	PEAK	100	283	HORIZONTAL

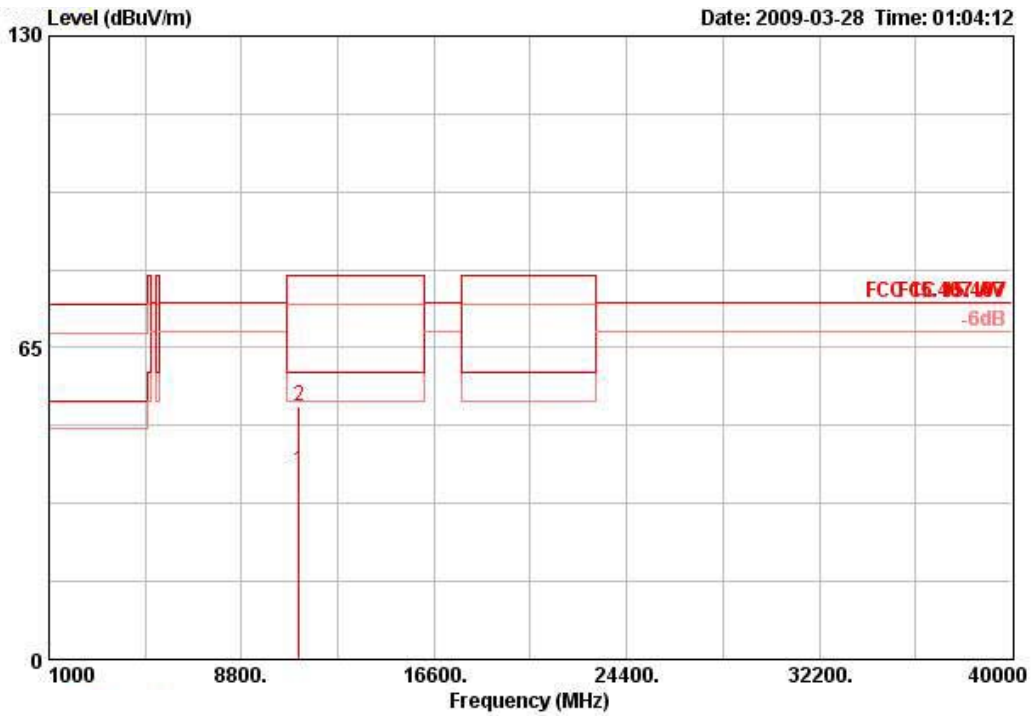
Vertical



	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	11159.760	58.02	-21.98	80.00	48.53	38.43	5.77	34.71	PEAK	100	280	VERTICAL
2	11160.400	44.33	-15.67	60.00	34.84	38.43	5.77	34.71	AVERAGE	100	280	VERTICAL
3 @	16738.060	74.15	-0.15	74.30	60.87	40.47	7.33	34.52	PEAK	100	276	VERTICAL

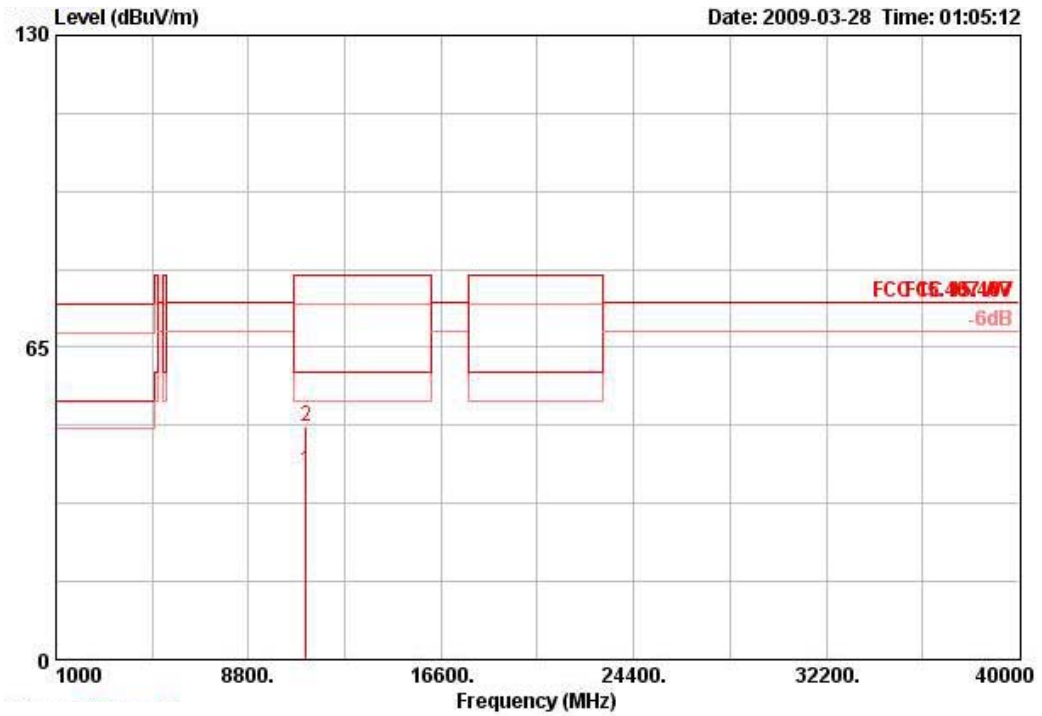
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 140 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	11137.620	39.25	-20.75	60.00	29.76	38.43	5.77	34.71	AVERAGE	100	0	HORIZONTAL
2 @	11141.280	52.74	-27.26	80.00	43.25	38.43	5.77	34.71	PEAK	100	0	HORIZONTAL

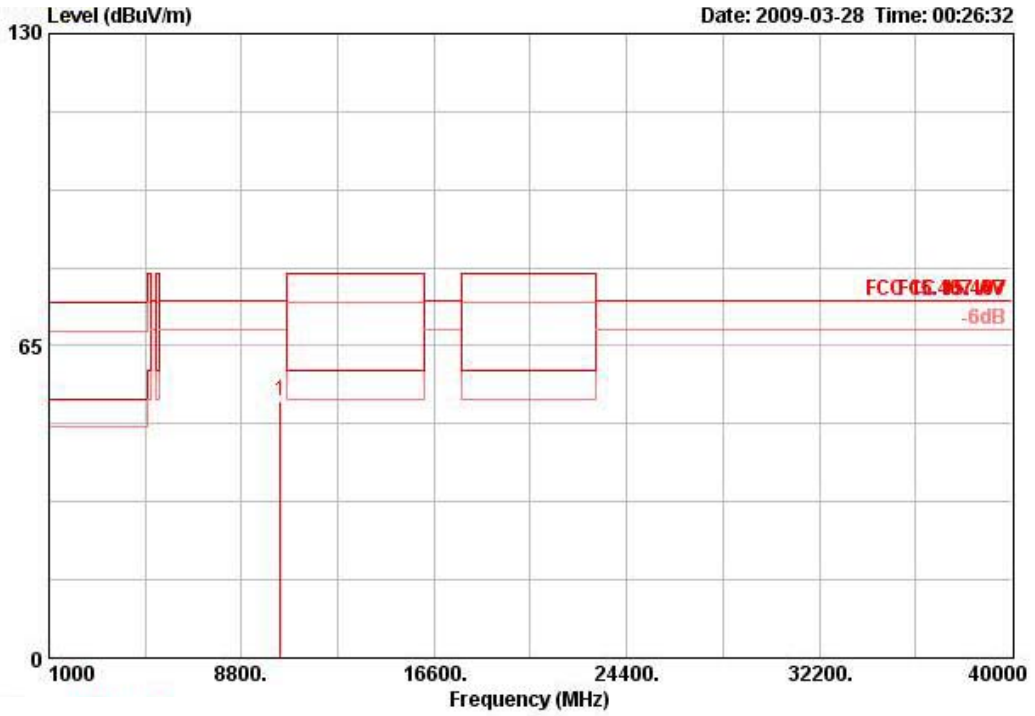
Vertical



	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 @	11135.740	39.28	-20.72	60.00	29.79	38.43	5.77	34.71	AVERAGE	100	360	VERTICAL
2 @	11138.680	48.56	-31.44	80.00	39.08	38.43	5.77	34.71	PEAK	100	360	VERTICAL

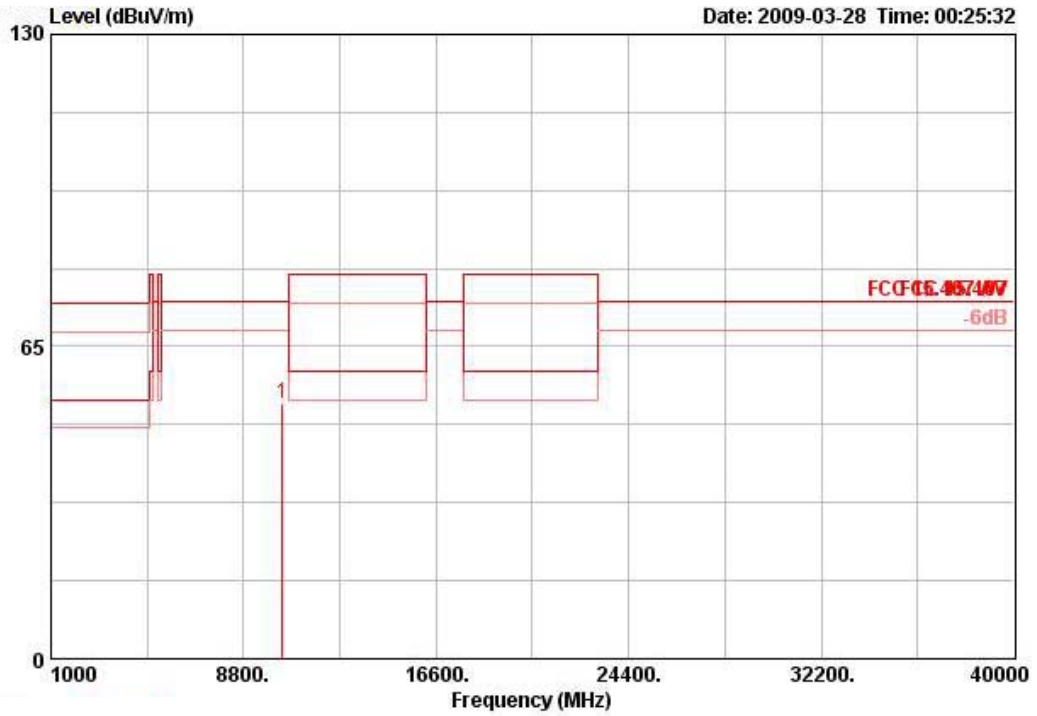
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 38 / Ant. 1 + Ant. 2

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 @	10380.900	53.33	-20.97	74.30	44.37	38.53	5.76	35.33	PEAK	100	0	HORIZONTAL

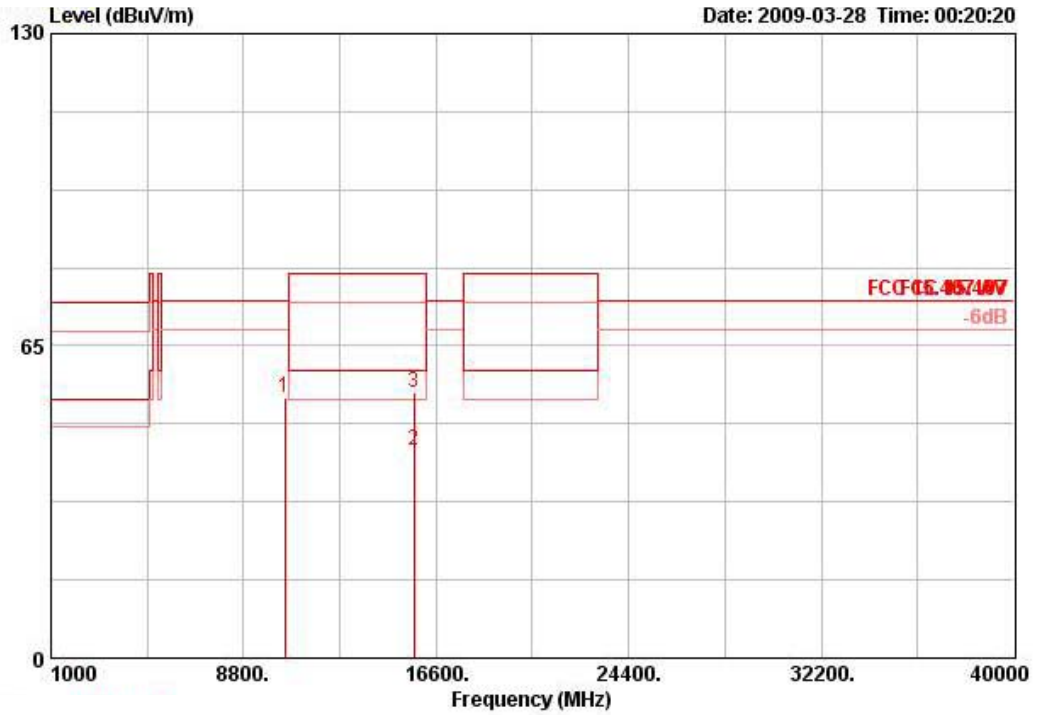
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10384.400	53.19	-21.11	74.30	44.23	38.53	5.76	35.33	PEAK	100	360	VERTICAL

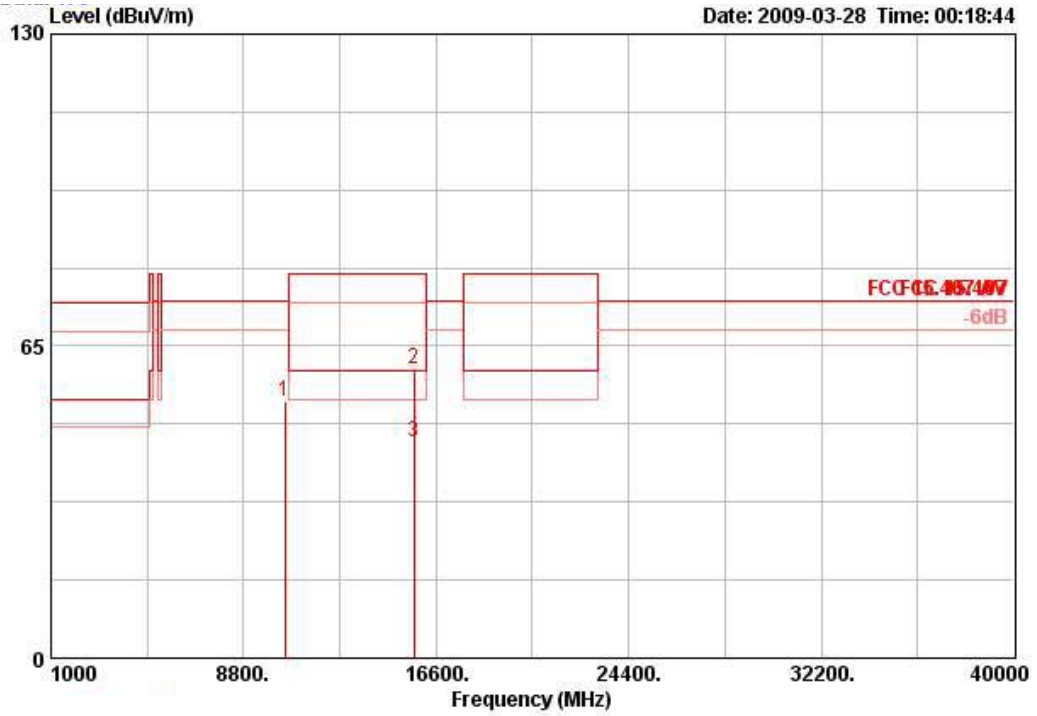
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 46 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10459.600	54.02	-20.28	74.30	44.90	38.57	5.80	35.24	PEAK	100	360	HORIZONTAL
2 @	15686.920	43.19	-16.81	60.00	32.75	38.39	6.90	34.84	AVERAGE	100	0	HORIZONTAL
3 @	15687.560	55.41	-24.59	80.00	44.96	38.39	6.90	34.84	PEAK	100	0	HORIZONTAL

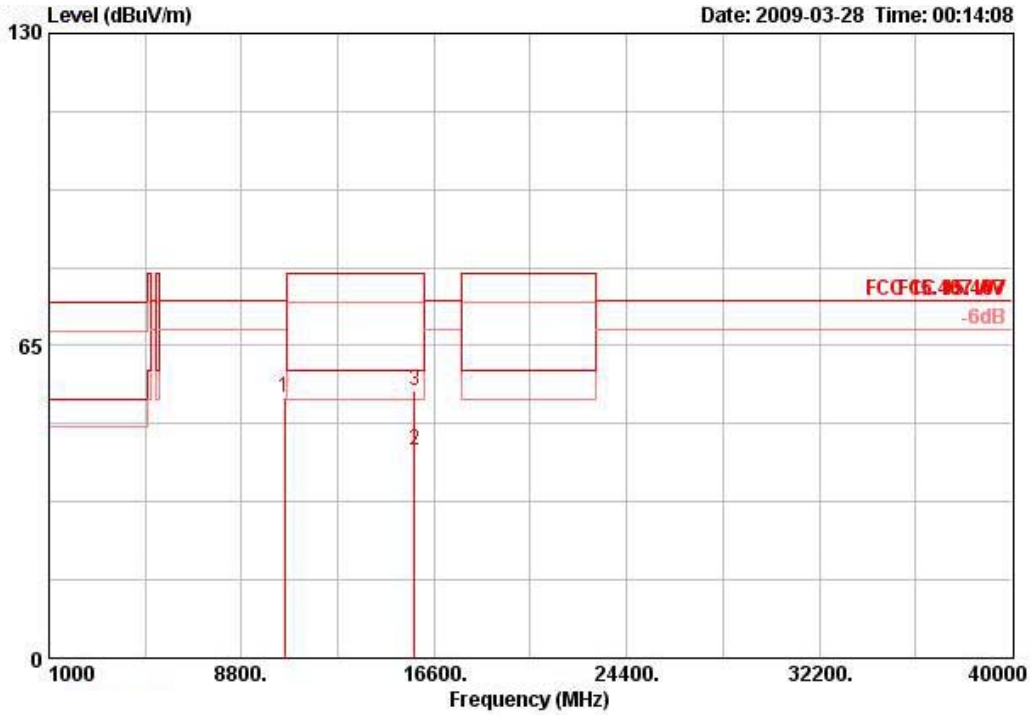
Vertical



	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 @	10464.140	53.39	-20.91	74.30	44.25	38.58	5.80	35.24	PEAK	100	0	VERTICAL
2 @	15688.240	60.17	-19.83	80.00	49.72	38.39	6.90	34.84	PEAK	113	270	VERTICAL
3 @	15692.980	44.86	-15.14	60.00	34.41	38.39	6.90	34.84	AVERAGE	113	270	VERTICAL

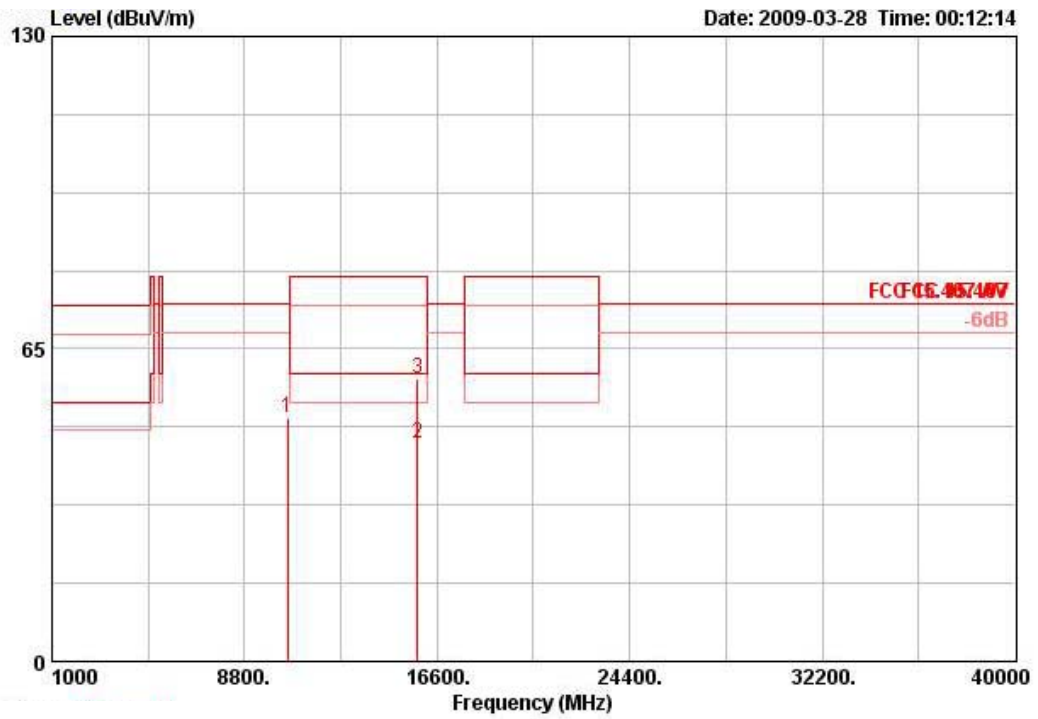
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 54 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10540.100	54.25	-20.05	74.30	45.01	38.59	5.82	35.15	PEAK	100	0	HORIZONTAL
2 @	15805.120	43.08	-16.92	60.00	32.61	38.51	6.92	34.96	AVERAGE	100	360	HORIZONTAL
3 @	15812.140	55.61	-24.39	80.00	45.13	38.51	6.92	34.96	PEAK	100	360	HORIZONTAL

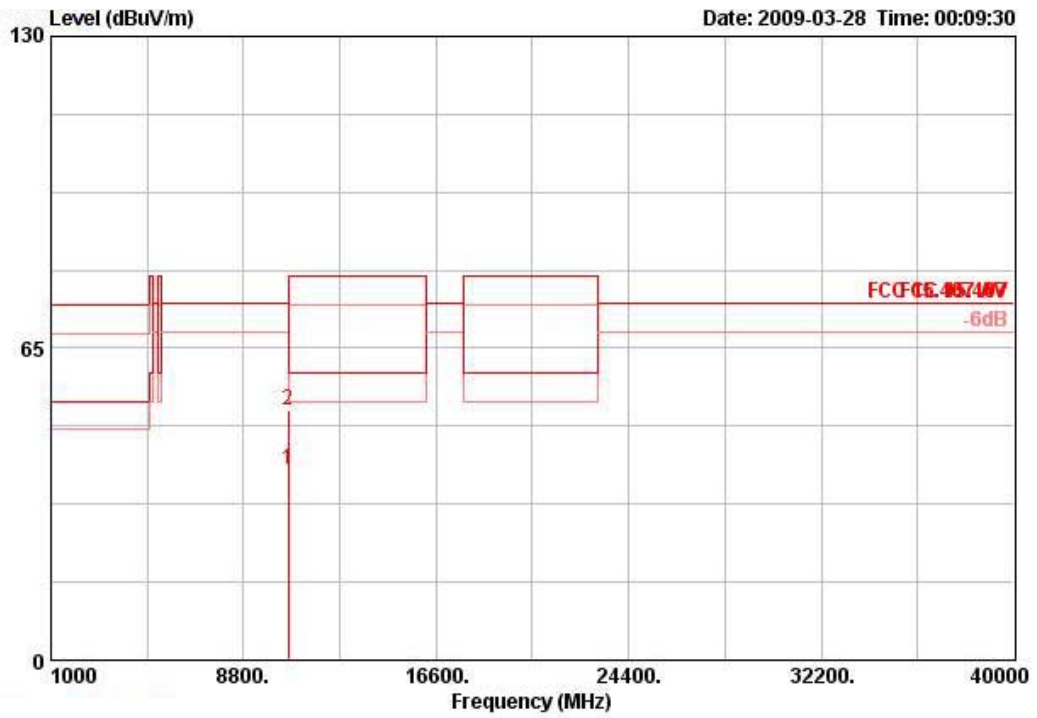
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10535.460	50.53	-23.77	74.30	41.28	38.59	5.82	35.15	PEAK	100	360	VERTICAL
2 @	15806.420	45.18	-14.82	60.00	34.71	38.51	6.92	34.96	AVERAGE	110	273	VERTICAL
3 @	15807.540	58.80	-21.20	80.00	48.33	38.51	6.92	34.96	PEAK	110	274	VERTICAL

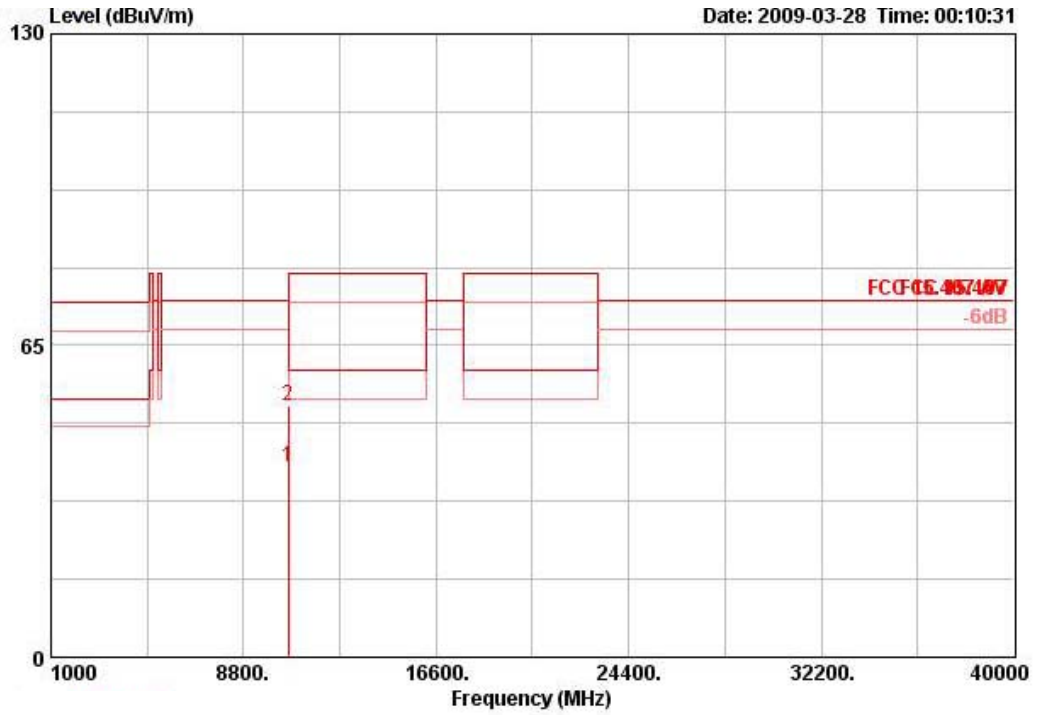
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 62 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10616.460	39.50	-20.50	60.00	30.22	38.55	5.81	35.08	AVERAGE	100	360	HORIZONTAL
2 @	10617.240	51.90	-28.10	80.00	42.62	38.55	5.81	35.08	PEAK	100	360	HORIZONTAL

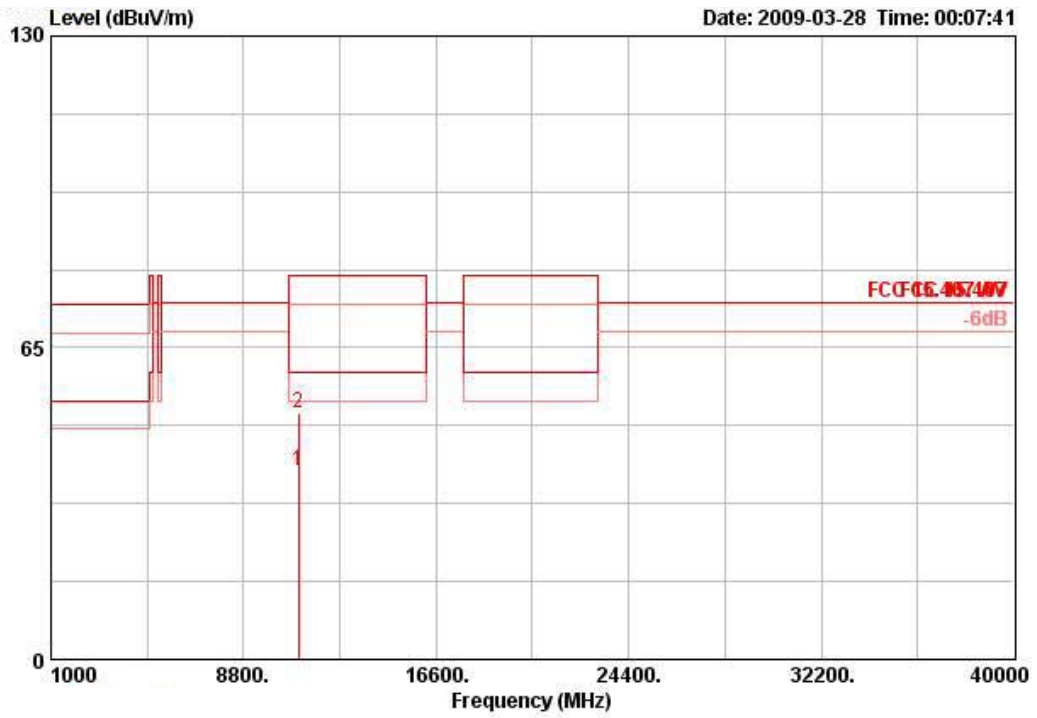
Vertical



	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 @	10616.260	39.55	-20.45	60.00	30.27	38.55	5.81	35.08	AVERAGE	100	0	VERTICAL
2 @	10617.100	52.54	-27.46	80.00	43.26	38.55	5.81	35.08	PEAK	100	0	VERTICAL

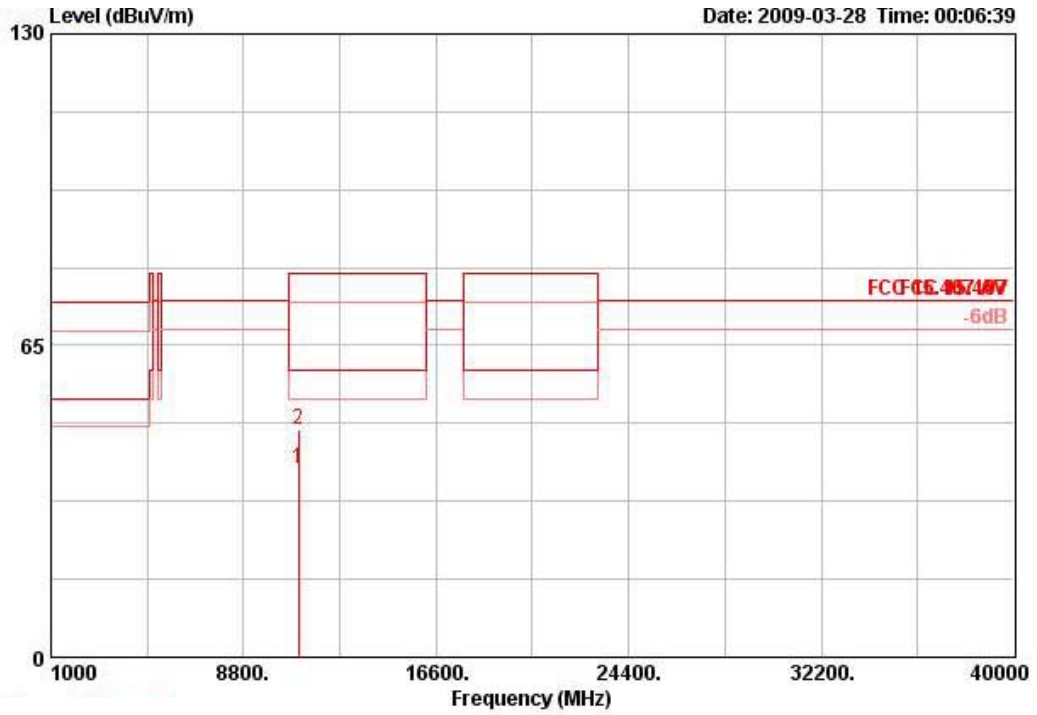
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 102 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	11015.160	39.41	-20.59	60.00	29.95	38.40	5.75	34.69	AVERAGE	100	0	HORIZONTAL
2 @	11021.160	51.51	-28.49	80.00	42.05	38.40	5.75	34.69	PEAK	100	0	HORIZONTAL

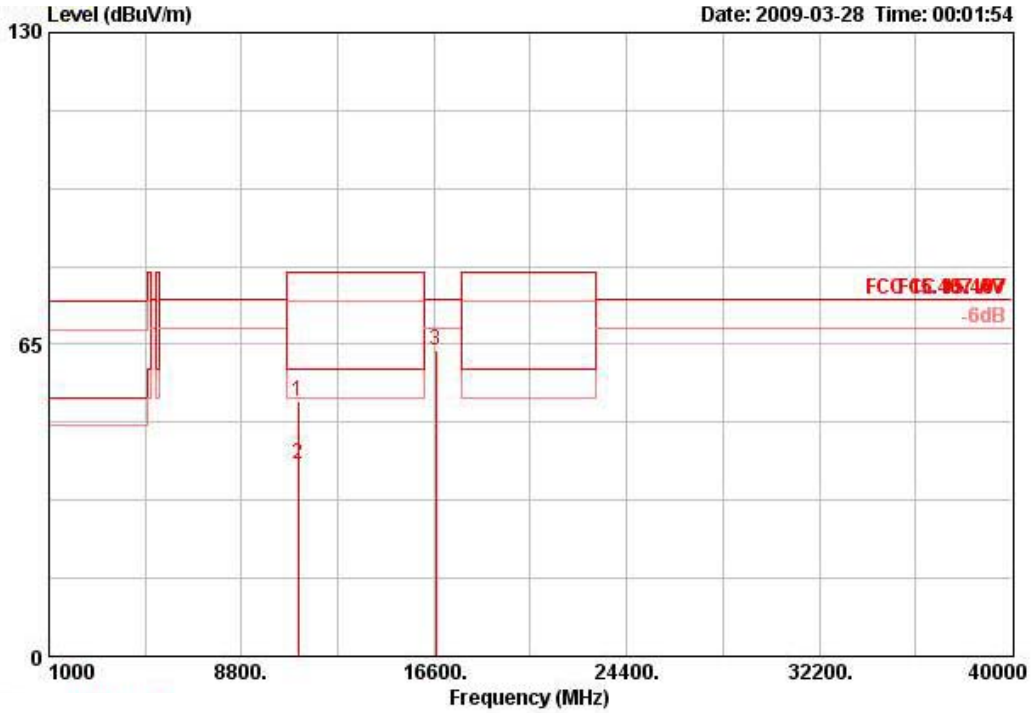
Vertical



	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 @	11015.180	39.47	-20.53	60.00	30.01	38.40	5.75	34.69	AVERAGE	100	360	VERTICAL
2 @	11016.020	47.36	-32.64	80.00	37.89	38.40	5.75	34.69	PEAK	100	360	VERTICAL

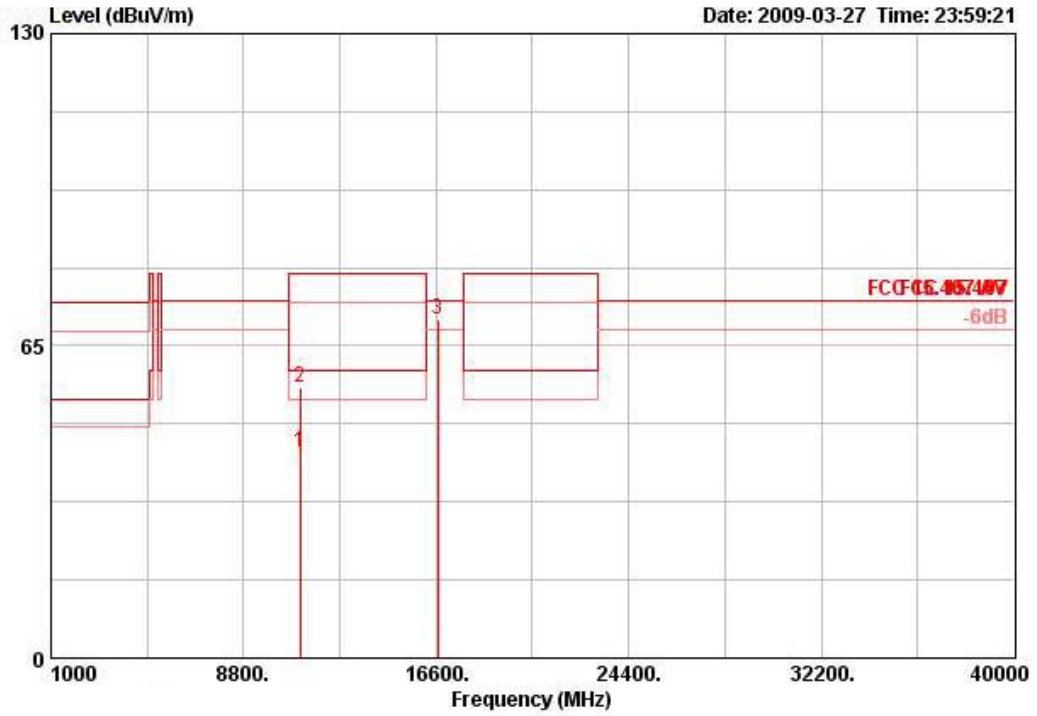
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 110 / Ant. 1 + Ant. 2

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 @	11100.860	53.02	-26.98	80.00	43.54	38.42	5.76	34.70	PEAK	100	0	HORIZONTAL
2 @	11105.000	39.89	-20.11	60.00	30.41	38.42	5.76	34.70	AVERAGE	100	0	HORIZONTAL
3 @	16649.000	63.67	-10.63	74.30	50.96	40.12	7.24	34.65	PEAK	108	287	HORIZONTAL

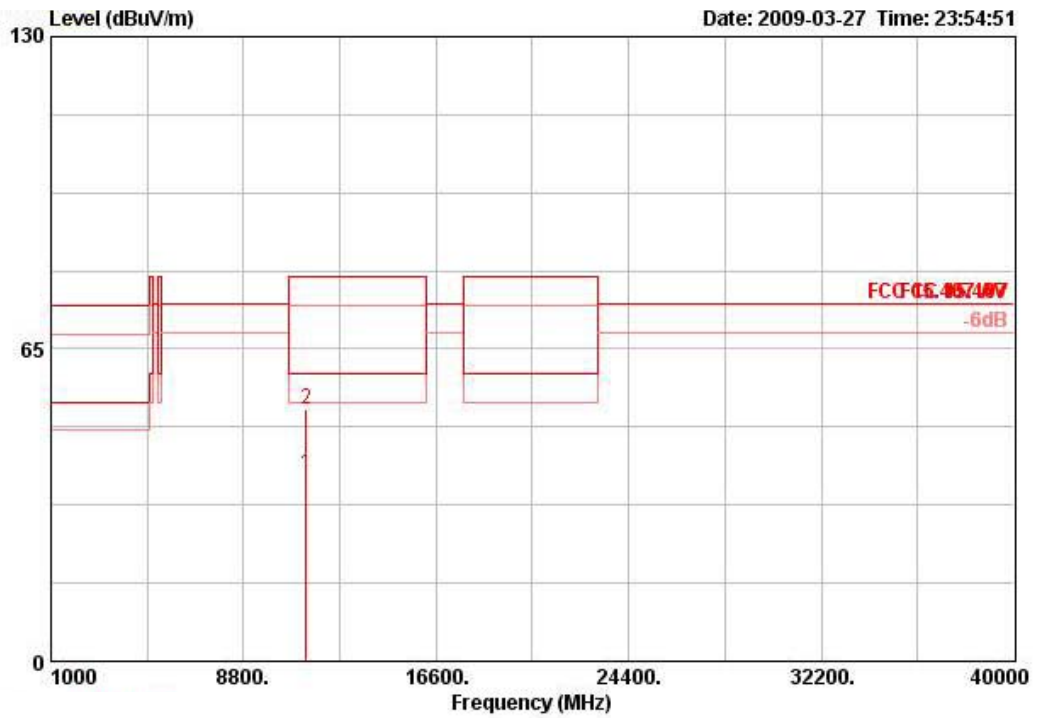
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	11100.340	42.75	-17.25	60.00	33.27	38.42	5.76	34.70	AVERAGE	100	276	VERTICAL
2 @	11101.340	56.20	-23.80	80.00	46.72	38.42	5.76	34.70	PEAK	100	276	VERTICAL
3 @	16648.400	70.38	-3.92	74.30	57.74	40.05	7.24	34.65	PEAK	100	276	VERTICAL

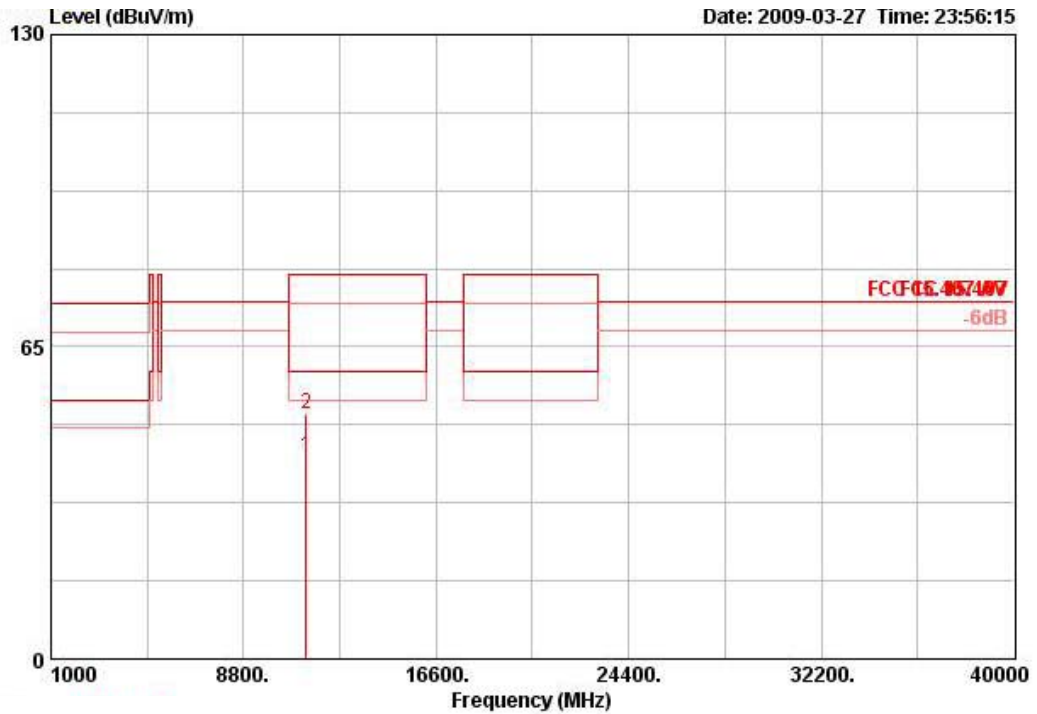
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 134 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB	dB		cm	deg	
1 @	11339.870	39.07	-20.93	60.00	29.54	38.47	5.79	34.73 AVERAGE	100	0	HORIZONTAL
2 @	11340.450	52.28	-27.72	80.00	42.75	38.47	5.79	34.73 PEAK	100	0	HORIZONTAL

Vertical



	Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table			
Freq	Level	Limit	Level	Factor	Loss	Factor	Remark	Pos	Pos			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg			
1 @	11335.800	42.29	-17.71	60.00	32.77	38.47	5.79	34.73	AVERAGE	100	286	VERTICAL
2 @	11336.180	50.93	-29.07	80.00	41.40	38.47	5.79	34.73	PEAK	100	286	VERTICAL

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.

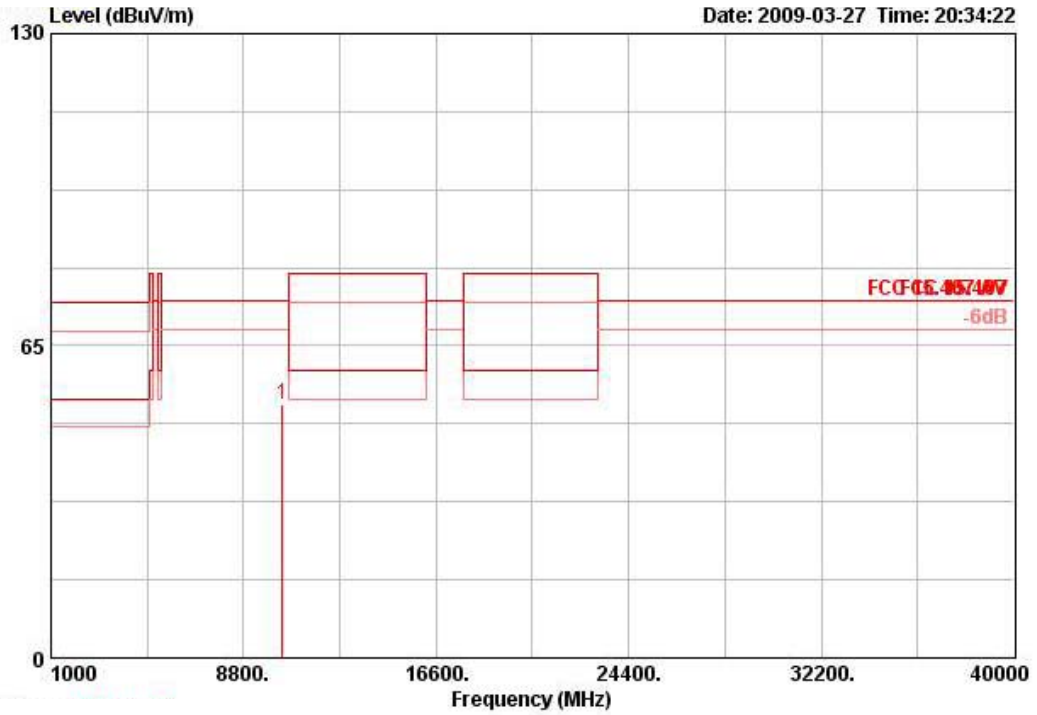
The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1.5m.

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

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

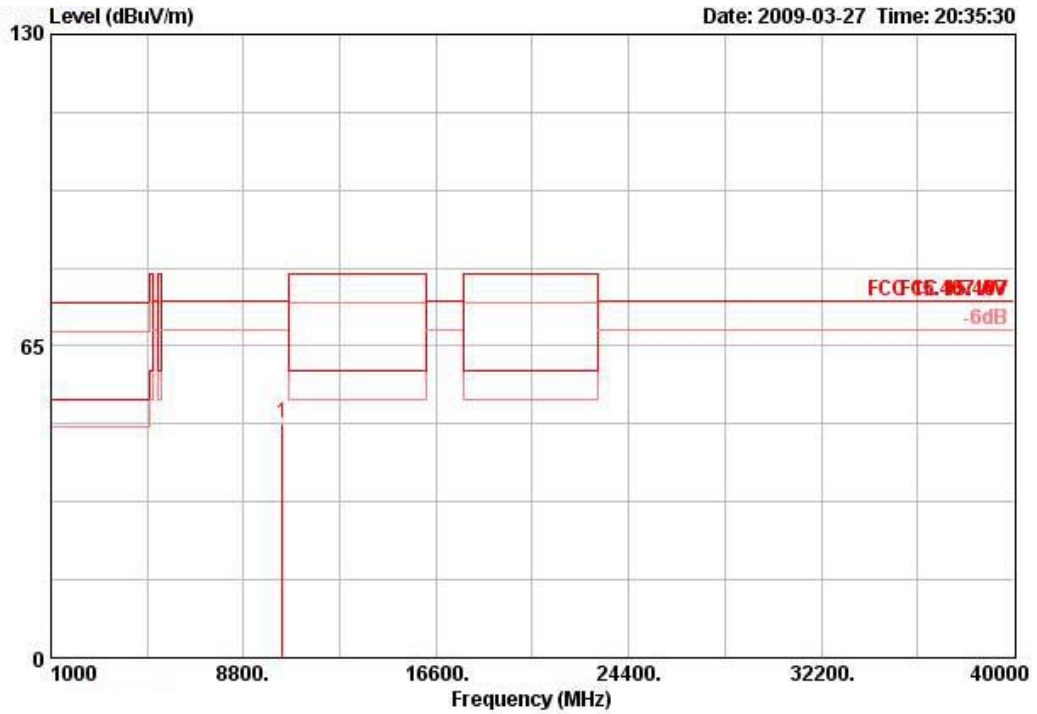
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 36 / Ant. 1 + Ant. 2

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	
10362.350	52.62	-21.68	74.30	43.71	38.52	5.75	35.36	PEAK	100	0	HORIZONTAL

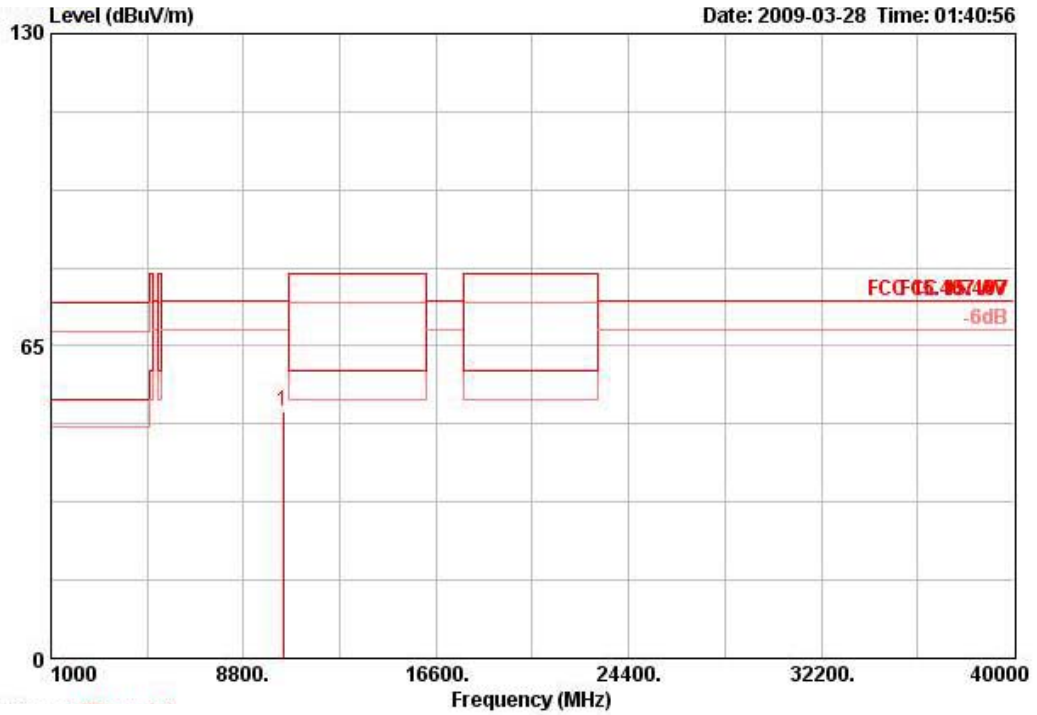
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10358.220	48.82	-25.48	74.30	39.92	38.51	5.75	35.36	PEAK	100	360	VERTICAL

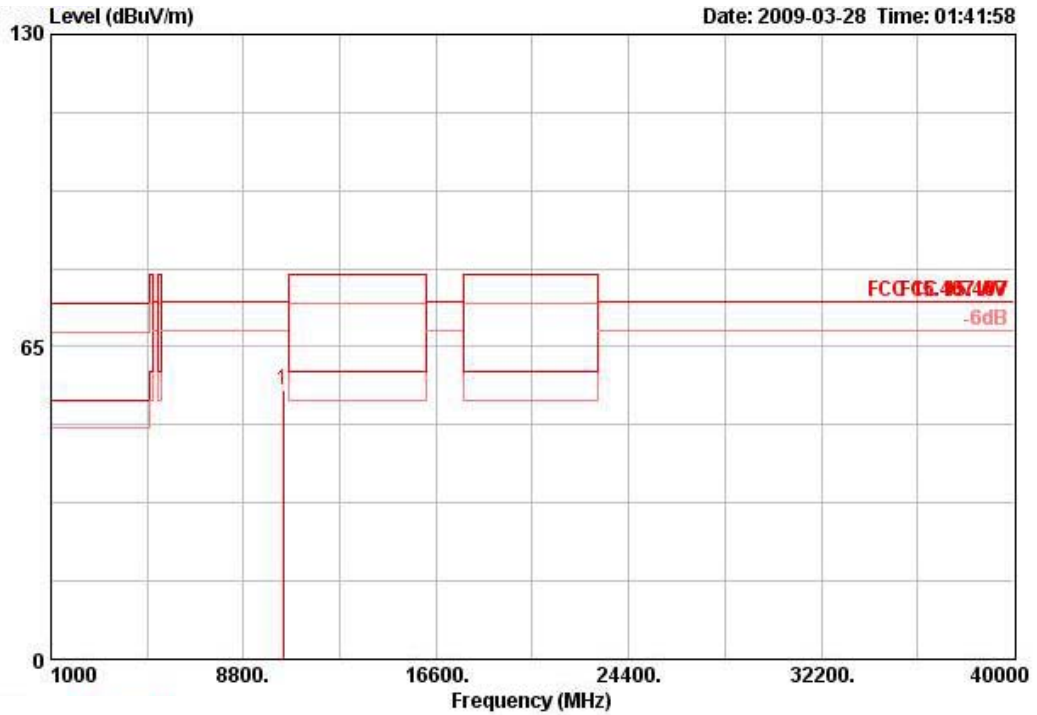
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 40 / Ant. 1 + Ant. 2

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 @	10397.120	51.37	-22.93	74.30	42.36	38.54	5.77	35.30	PEAK	100	360	HORIZONTAL

Vertical

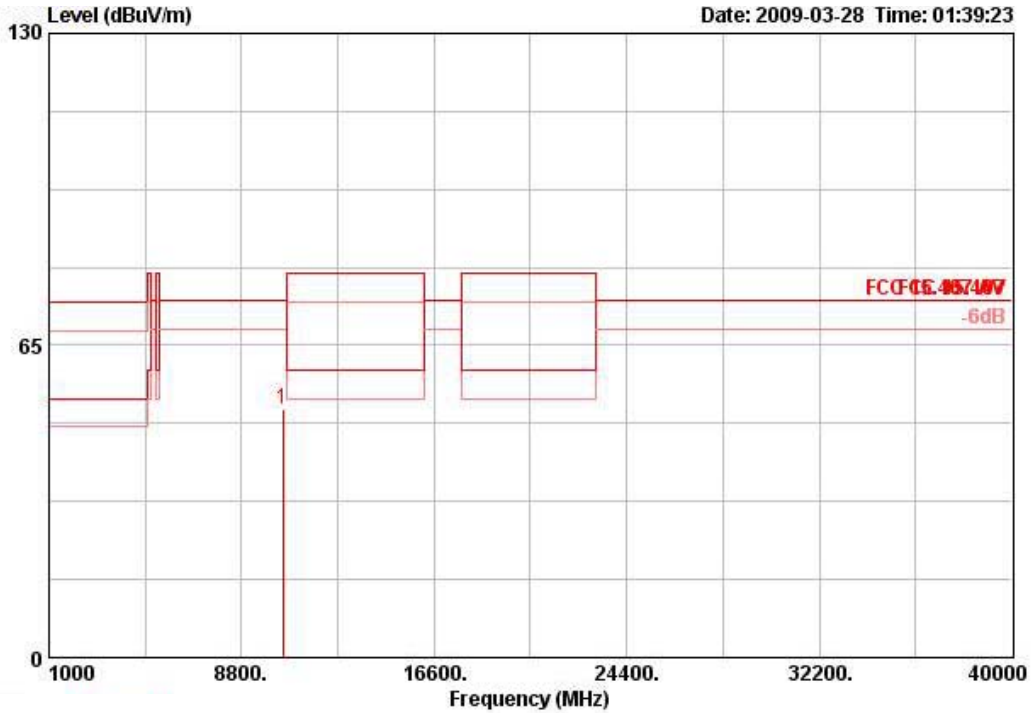


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10395.920	55.94	-18.36	74.30	46.97	38.54	5.76	35.33	PEAK	100	0	VERTICAL



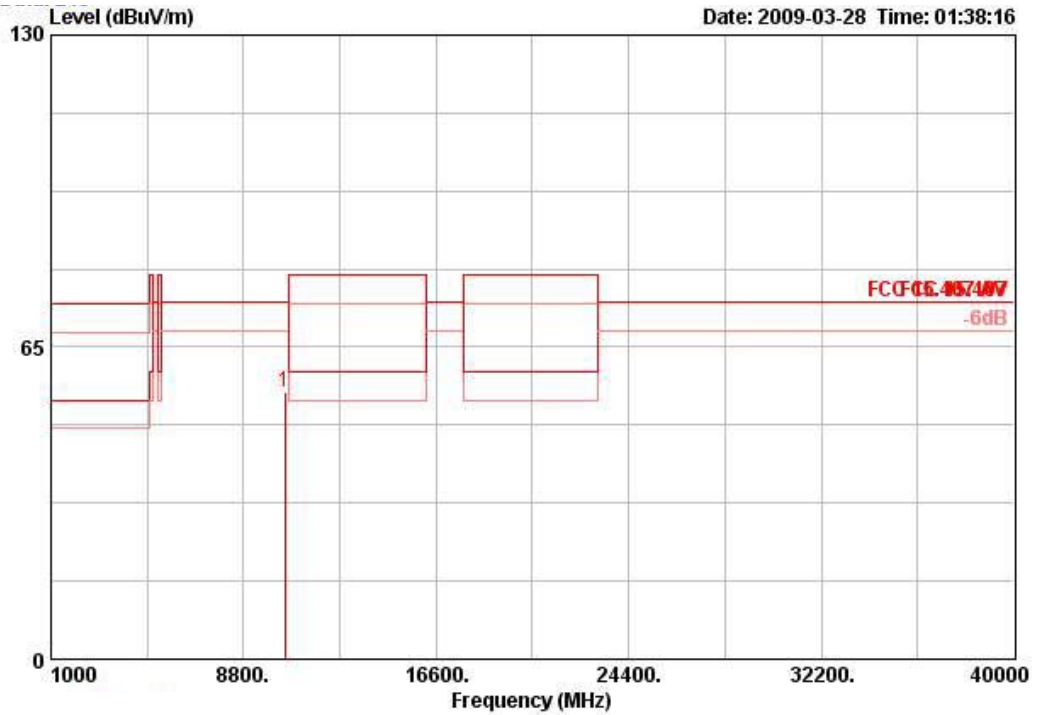
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 48 / Ant. 1 + Ant. 2

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 @	10480.040	51.82	-22.48	74.30	42.63	38.59	5.81	35.21	PEAK	100	0	HORIZONTAL

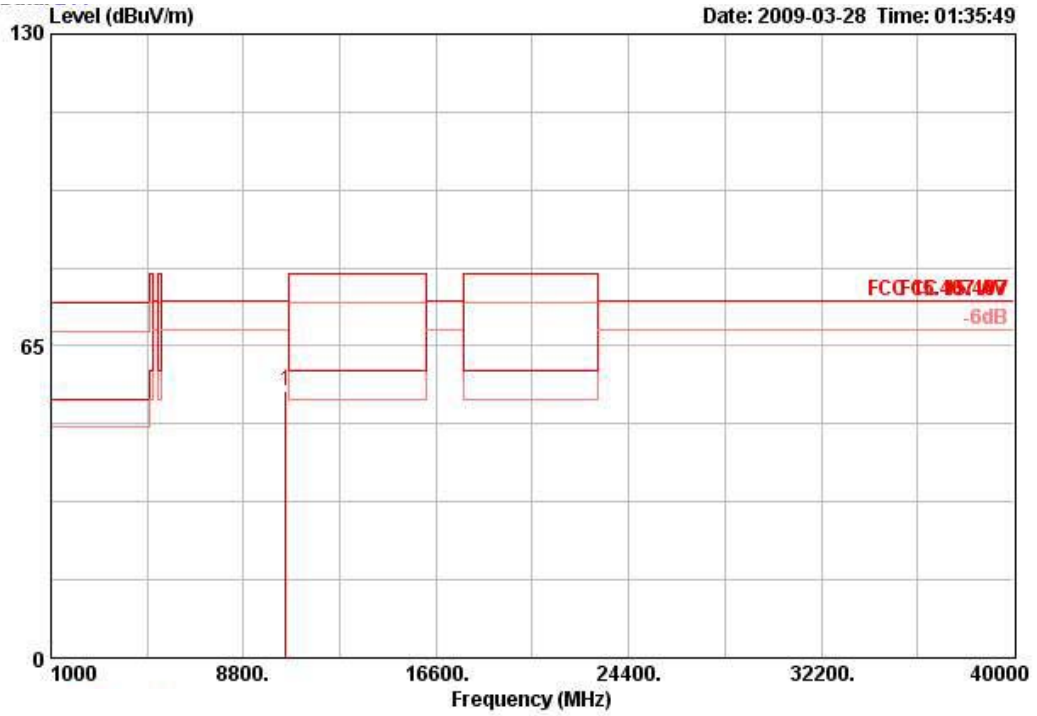
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10481.920	55.59	-18.71	74.30	46.40	38.59	5.81	35.21	PEAK	100	360	VERTICAL

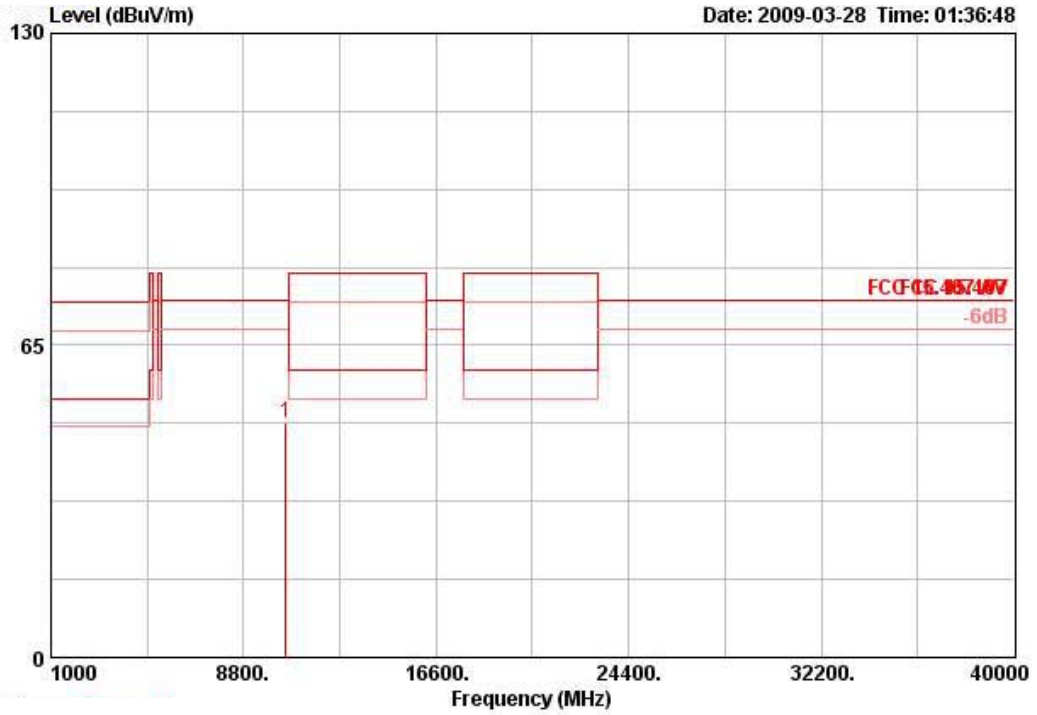
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 52 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Antenna 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 @	10518.540	55.70	-18.60	74.30	46.47	38.59	5.82	35.18	PEAK	100	360	HORIZONTAL

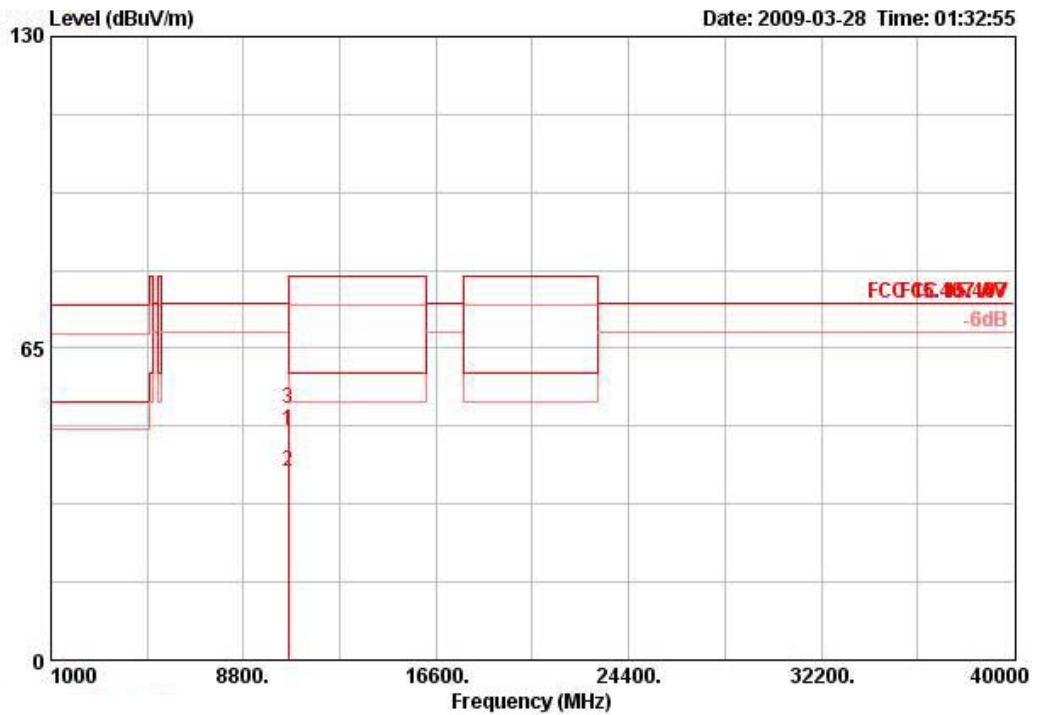
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10515.040	48.99	-25.31	74.30	39.76	38.59	5.82	35.18	PEAK	100	0	VERTICAL

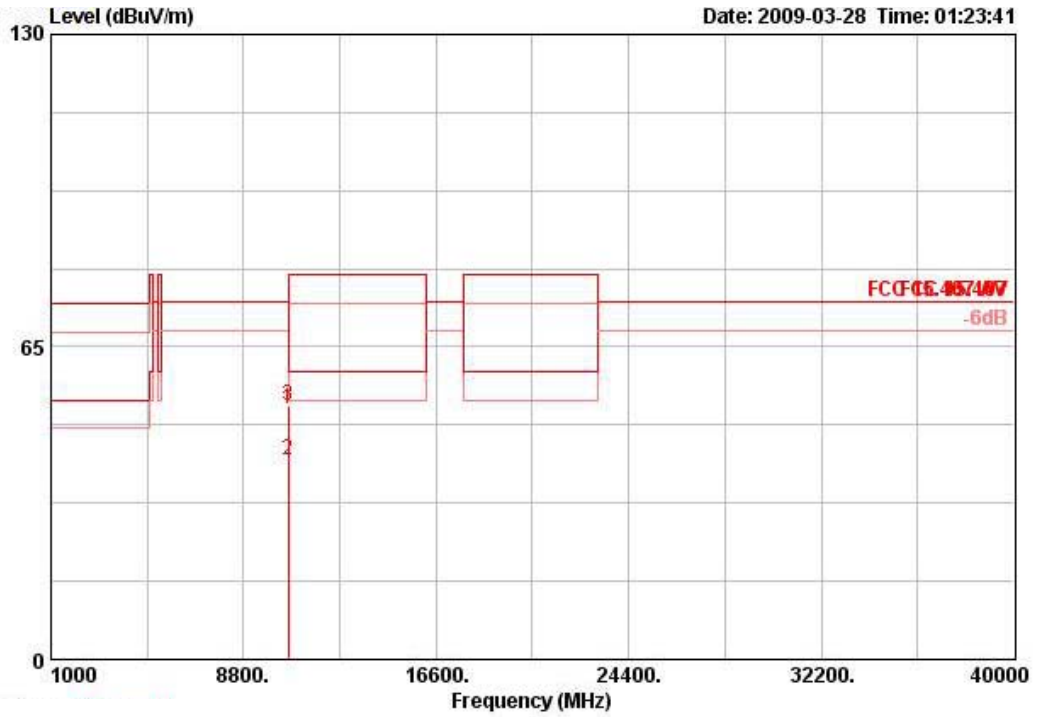
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 60 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10595.840	47.71	-26.59	74.30	38.44	38.57	5.81	35.10	PEAK	100	0	HORIZONTAL
2 @	10600.000	39.45	-20.55	60.00	30.19	38.56	5.81	35.10	AVERAGE	100	0	HORIZONTAL
3 @	10600.000	52.51	-27.49	80.00	43.24	38.56	5.81	35.10	PEAK	100	0	HORIZONTAL

Vertical

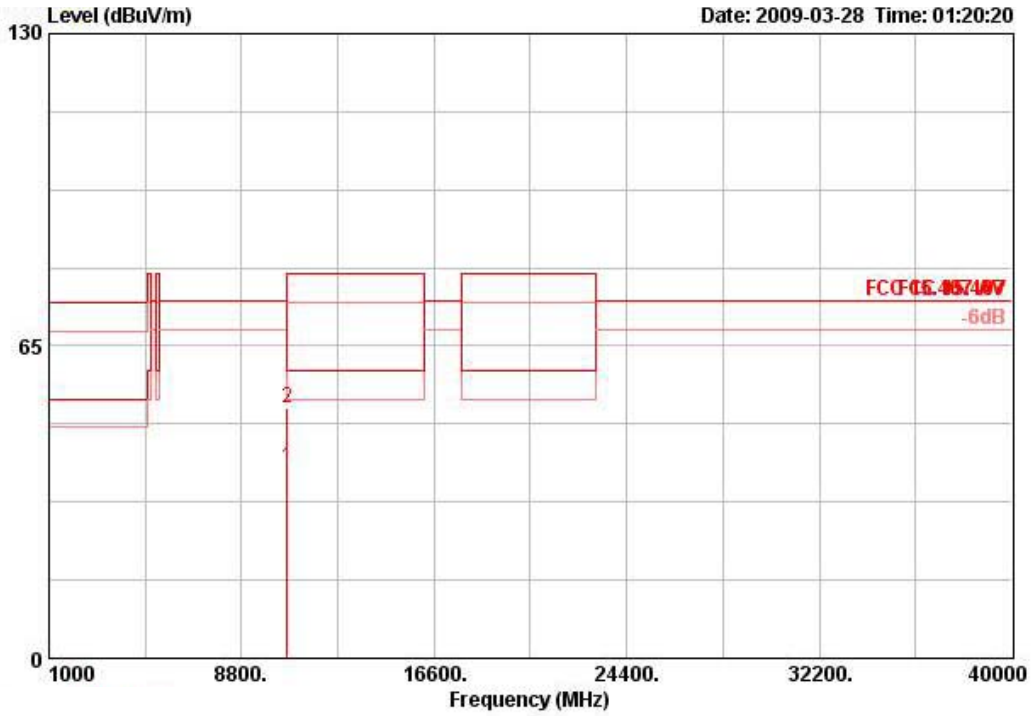


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	10599.980	51.93	-22.37	74.30	42.67	38.56	5.81	35.10	PEAK	100	360	VERTICAL
2 @	10603.040	41.43	-18.57	60.00	32.14	38.56	5.81	35.08	AVERAGE	100	360	VERTICAL
3 @	10603.320	52.83	-27.17	80.00	43.54	38.56	5.81	35.08	PEAK	100	360	VERTICAL



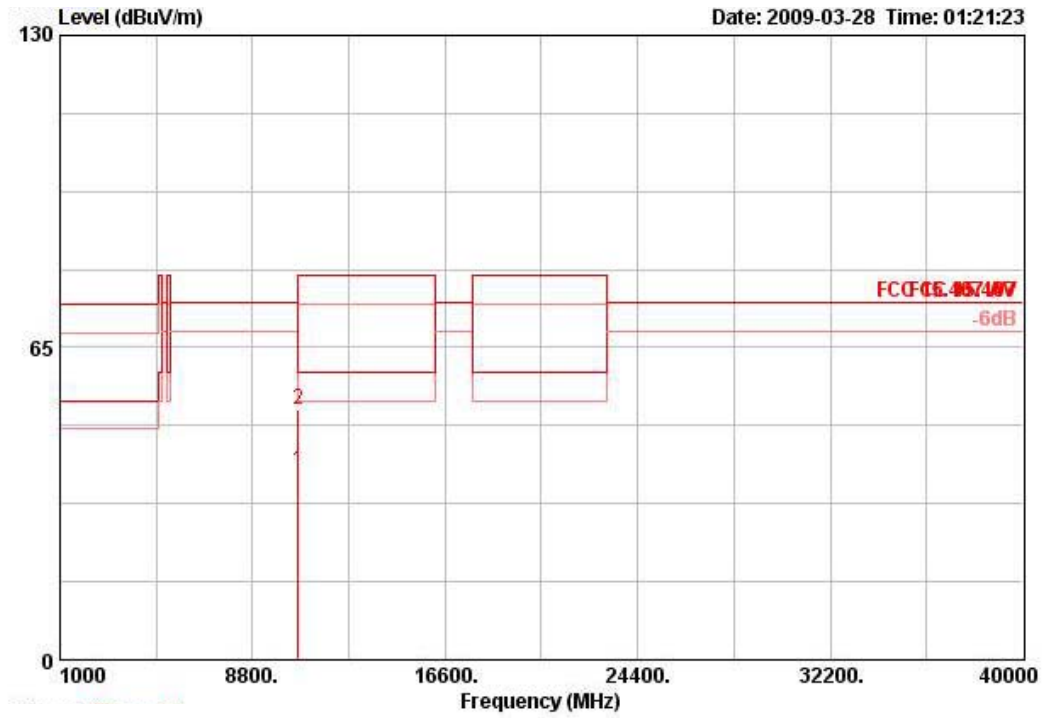
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 64 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10638.940	39.62	-20.38	60.00	30.32	38.54	5.80	35.05	AVERAGE	100	360	HORIZONTAL
2 @	10642.960	52.00	-28.00	80.00	42.70	38.54	5.80	35.05	PEAK	100	360	HORIZONTAL

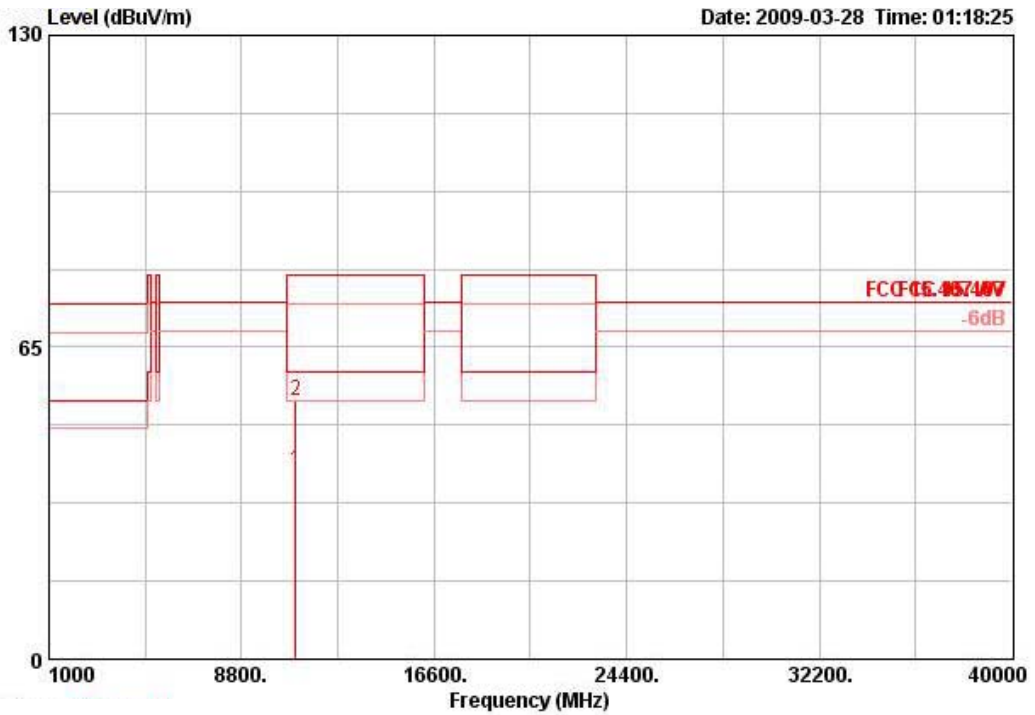
Vertical



	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 @	10635.180	39.34	-20.66	60.00	30.04	38.54	5.80	35.05	AVERAGE	100	0	VERTICAL
2 @	10640.520	51.98	-28.02	80.00	42.68	38.54	5.80	35.05	PEAK	100	0	VERTICAL

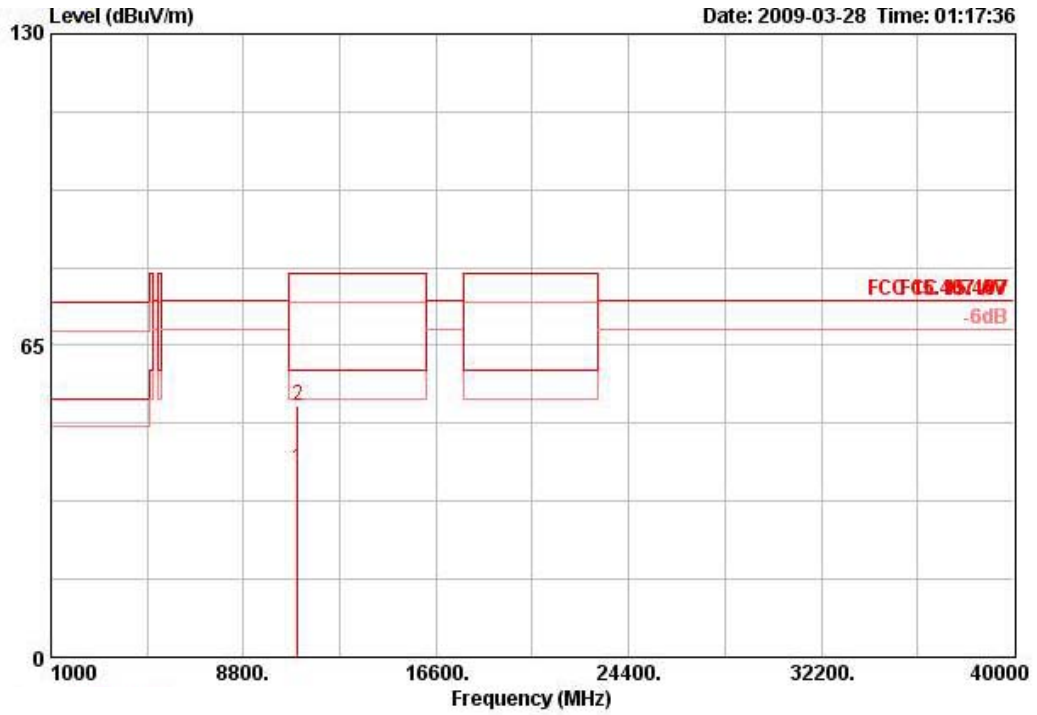
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 100 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	10997.700	39.31	-20.69	60.00	29.85	38.40	5.75	34.69	AVERAGE	100	0	HORIZONTAL
2 @	10998.680	53.96	-26.04	80.00	44.50	38.40	5.75	34.69	PEAK	100	0	HORIZONTAL

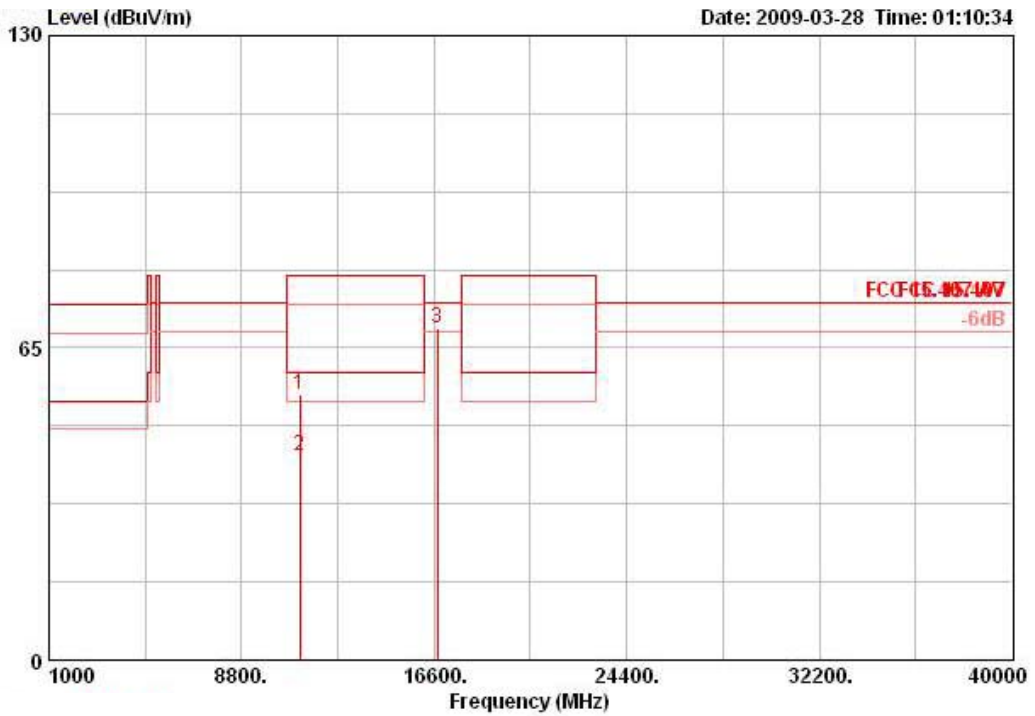
Vertical



	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 @	11003.440	39.29	-20.71	60.00	29.83	38.40	5.75	34.69	AVERAGE	100	0	VERTICAL
2 @	11004.080	52.27	-27.73	80.00	42.81	38.40	5.75	34.69	PEAK	100	0	VERTICAL

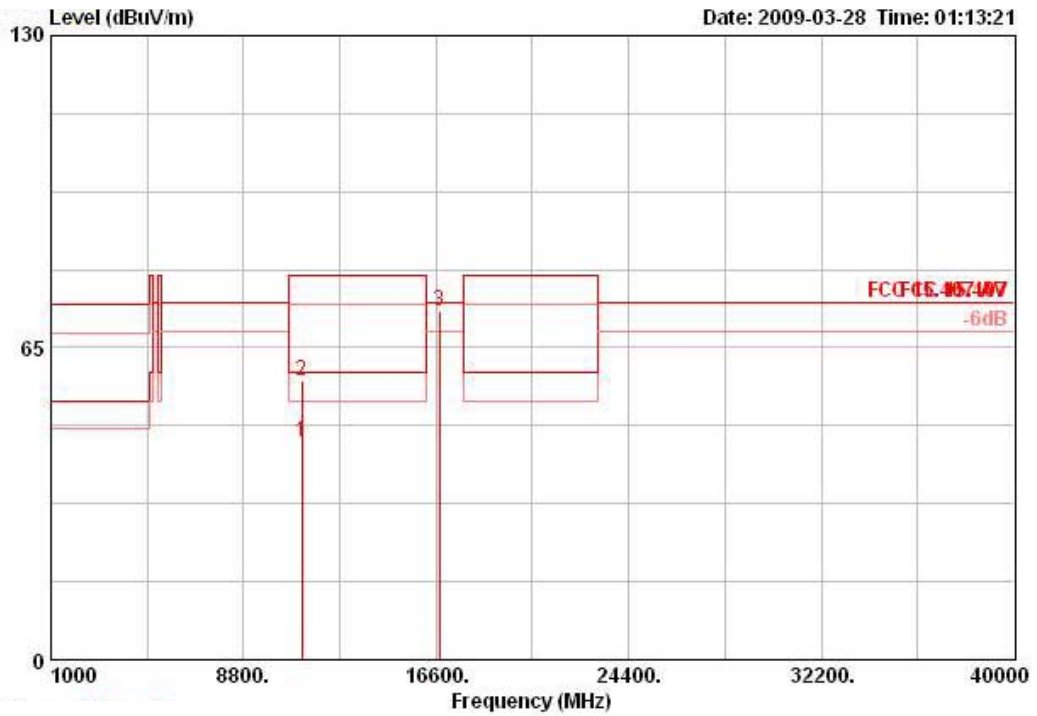
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 116 / Ant. 1 + Ant. 2

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg	
1	11157.740	55.21	-24.79	80.00	45.72	38.43	5.77	34.71 PEAK	100	272	HORIZONTAL
2	11162.540	42.45	-17.55	60.00	32.96	38.43	5.77	34.71 AVERAGE	100	272	HORIZONTAL
3 @	16735.600	69.19	-5.11	74.30	55.92	40.47	7.33	34.52 PEAK	105	283	HORIZONTAL

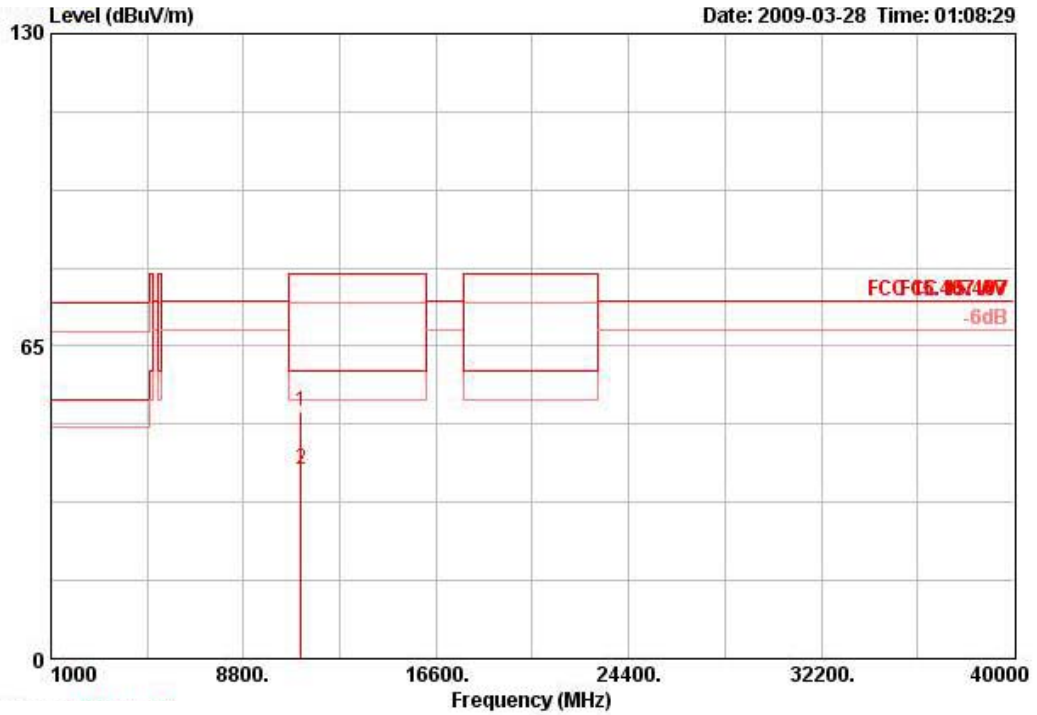
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	11160.480	45.29	-14.71	60.00	35.79	38.43	5.77	34.71	AVERAGE	100	272	VERTICAL
2	11160.840	58.18	-21.82	80.00	48.69	38.43	5.77	34.71	PEAK	100	272	VERTICAL
3 @	16741.920	72.60	-1.70	74.30	59.33	40.47	7.33	34.52	PEAK	100	272	VERTICAL

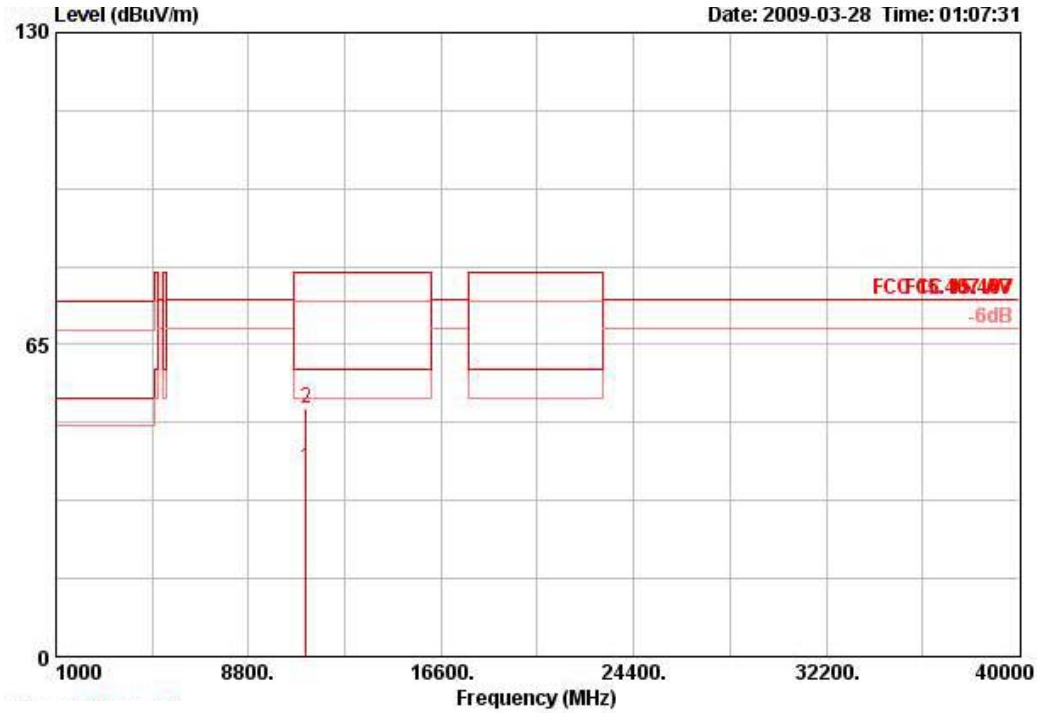
Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 140 / Ant. 1 + Ant. 2

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 @	11138.470	51.43	-28.57	80.00	41.95	38.43	5.77	34.71	PEAK	100	360	HORIZONTAL
2 @	11140.330	39.28	-20.72	60.00	29.79	38.43	5.77	34.71	AVERAGE	100	360	HORIZONTAL

Vertical



	Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
Freq	Level	Limit	Level	Factor	Loss	Factor	Remark	Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB		cm	deg
1 @	11137.360	39.29	-20.71	60.00	29.80	38.43	5.77 34.71 AVERAGE	100	0 VERTICAL
2 @	11139.280	51.85	-28.15	80.00	42.36	38.43	5.77 34.71 PEAK	100	0 VERTICAL

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 from 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 (micровolts/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)	1 MHz / 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	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 36, 40 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 36

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5146.400	77.18	-2.82	80.00	40.68	33.07	3.43	0.00	PEAK	115	85	VERTICAL
2 @	5150.000	59.05	-0.95	60.00	22.55	33.07	3.43	0.00	AVERAGE	115	85	VERTICAL
3 @	5177.000	119.19			82.62	33.13	3.44	0.00	PEAK	115	85	VERTICAL
4 @	5179.000	106.89			70.33	33.13	3.44	0.00	AVERAGE	115	85	VERTICAL

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

Channel 40

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5149.600	75.88	-4.12	80.00	39.38	33.07	3.43	0.00	PEAK	114	77	VERTICAL
2 @	5150.000	58.62	-1.38	60.00	22.12	33.07	3.43	0.00	AVERAGE	114	77	VERTICAL
3 @	5196.800	122.31			85.71	33.16	3.44	0.00	PEAK	114	77	VERTICAL
4 @	5197.600	110.49			73.89	33.16	3.44	0.00	AVERAGE	114	77	VERTICAL

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



Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 60, 64 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 60

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5297.600	110.51			73.71	33.34	3.45	0.00	AVERAGE	119	75	VERTICAL
2 @	5298.800	122.75			85.96	33.34	3.45	0.00	PEAK	119	75	VERTICAL
3 @	5350.000	59.08	-0.92	60.00	22.19	33.43	3.46	0.00	AVERAGE	119	75	VERTICAL
4 @	5354.400	76.76	-3.24	80.00	39.86	33.43	3.46	0.00	PEAK	119	75	VERTICAL

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

Channel 64

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	5317.800	118.15			81.33	33.37	3.45	0.00	PEAK	119	96	VERTICAL
2 @	5323.200	105.86			69.03	33.37	3.46	0.00	AVERAGE	119	96	VERTICAL
3 @	5350.000	59.19	-0.81	60.00	22.30	33.43	3.46	0.00	AVERAGE	119	96	VERTICAL
4 @	5354.000	77.74	-2.26	80.00	40.84	33.43	3.46	0.00	PEAK	119	96	VERTICAL

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



Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 20MHz Ch 100, 140 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 100

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	67.80	-12.20	80.00	30.72	33.61	3.48	0.00	PEAK	114	93	VERTICAL
2 @	5460.000	55.18	-4.82	60.00	18.09	33.61	3.48	0.00	AVERAGE	114	93	VERTICAL
3 @	5469.200	73.62	-0.68	74.30	36.50	33.64	3.48	0.00	PEAK	114	93	VERTICAL
4 @	5503.200	104.91			67.72	33.70	3.49	0.00	AVERAGE	114	93	VERTICAL
5 @	5505.600	116.57			79.37	33.70	3.49	0.00	PEAK	114	93	VERTICAL

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

Channel 140

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5697.800	116.92			79.06	34.27	3.59	0.00	PEAK	117	95	VERTICAL
2	5703.000	104.65			66.73	34.32	3.59	0.00	AVERAGE	117	95	VERTICAL
3 @	5725.200	73.52	-0.78	74.30	35.54	34.37	3.61	0.00	PEAK	117	95	VERTICAL

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

Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 38, 46 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 38

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5148.000	75.23	-4.77	80.00	38.73	33.07	3.43	0.00	PEAK	113	89	VERTICAL
2 @	5150.000	58.68	-1.32	60.00	22.18	33.07	3.43	0.00	AVERAGE	113	89	VERTICAL
3	5179.200	111.93			75.36	33.13	3.44	0.00	PEAK	113	89	VERTICAL
4 @	5190.400	100.00			63.44	33.13	3.44	0.00	AVERAGE	113	89	VERTICAL

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

Channel 46

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	59.14	-0.86	60.00	22.64	33.07	3.43	0.00	AVERAGE	114	87	VERTICAL
2 @	5150.000	72.74	-7.26	80.00	36.24	33.07	3.43	0.00	PEAK	114	87	VERTICAL
3 @	5218.000	118.45			81.82	33.19	3.44	0.00	PEAK	114	87	VERTICAL
4 @	5221.600	105.30			68.66	33.19	3.44	0.00	AVERAGE	114	87	VERTICAL

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



Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 54, 62 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 54

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5277.600	116.62			79.86	33.31	3.45	0.00	PEAK	118	73	VERTICAL
2 @	5279.200	104.18			67.42	33.31	3.45	0.00	AVERAGE	118	73	VERTICAL
3 @	5350.000	59.25	-0.75	60.00	22.36	33.43	3.46	0.00	AVERAGE	118	73	VERTICAL
4 @	5350.000	73.78	-6.22	80.00	36.89	33.43	3.46	0.00	PEAK	118	73	VERTICAL

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

Channel 62

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5319.600	111.65			74.83	33.37	3.45	0.00	PEAK	119	77	VERTICAL
2 @	5321.200	99.15			62.32	33.37	3.45	0.00	AVERAGE	119	77	VERTICAL
3 @	5350.000	58.69	-1.31	60.00	21.80	33.43	3.46	0.00	AVERAGE	119	77	VERTICAL
4 @	5356.400	72.52	-7.48	80.00	35.62	33.43	3.46	0.00	PEAK	119	77	VERTICAL

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

Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11n MCS0 40MHz Ch 102, 110, 134 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 102

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	56.10	-3.90	60.00	19.02	33.61	3.48	0.00	AVERAGE	151	266	HORIZONTAL
2 @	5460.000	68.33	-11.67	80.00	31.24	33.61	3.48	0.00	PEAK	151	266	HORIZONTAL
3 @	5470.000	73.24	-1.06	74.30	36.12	33.64	3.48	0.00	PEAK	151	266	HORIZONTAL
4 @	5498.800	111.07			73.89	33.70	3.48	0.00	PEAK	151	266	HORIZONTAL
5 @	5504.800	98.74			61.55	33.70	3.49	0.00	AVERAGE	151	266	HORIZONTAL

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

Channel 110

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5459.600	71.27	-8.73	80.00	34.18	33.61	3.48	0.00	PEAK	148	266	HORIZONTAL
2 @	5460.000	57.92	-2.08	60.00	20.84	33.61	3.48	0.00	AVERAGE	148	266	HORIZONTAL
3 @	5470.000	73.64	-0.66	74.30	36.52	33.64	3.48	0.00	PEAK	148	266	HORIZONTAL
4 @	5538.000	118.97			81.66	33.80	3.51	0.00	PEAK	148	266	HORIZONTAL
5 @	5544.400	105.35			68.04	33.80	3.51	0.00	AVERAGE	148	266	HORIZONTAL

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

Channel 134

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5664.000	100.86			63.11	34.17	3.58	0.00	AVERAGE	116	94	VERTICAL
2	5676.800	115.05			77.26	34.22	3.58	0.00	PEAK	116	94	VERTICAL
3 @	5725.000	74.09	-0.21	74.30	36.11	34.37	3.61	0.00	PEAK	116	94	VERTICAL

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	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 36, 40 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 36

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5147.800	76.38	-3.62	80.00	39.88	33.07	3.43	0.00	PEAK	114	76	VERTICAL
2 @	5150.000	59.24	-0.76	60.00	22.74	33.07	3.43	0.00	AVERAGE	114	76	VERTICAL
3 @	5177.000	118.88			82.32	33.13	3.44	0.00	PEAK	114	76	VERTICAL
4	5178.600	107.49			70.92	33.13	3.44	0.00	AVERAGE	114	76	VERTICAL

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

Channel 40

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5149.200	76.14	-3.86	80.00	39.64	33.07	3.43	0.00	PEAK	116	84	VERTICAL
2 @	5150.000	59.22	-0.78	60.00	22.71	33.07	3.43	0.00	AVERAGE	116	84	VERTICAL
3 @	5194.800	122.45			85.85	33.16	3.44	0.00	PEAK	116	84	VERTICAL
4 @	5199.200	109.62			73.02	33.16	3.44	0.00	AVERAGE	116	84	VERTICAL

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

Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 60, 64 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 60

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5302.000	110.04			73.24	33.34	3.45	0.00	AVERAGE	119	76	VERTICAL
2 @	5302.400	121.68			84.89	33.34	3.45	0.00	PEAK	119	76	VERTICAL
3 @	5350.000	59.24	-0.76	60.00	22.35	33.43	3.46	0.00	AVERAGE	119	76	VERTICAL
4 @	5350.800	73.97	-6.03	80.00	37.08	33.43	3.46	0.00	PEAK	119	76	VERTICAL

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

Channel 64

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5321.200	107.31			70.48	33.37	3.45	0.00	AVERAGE	118	73	VERTICAL
2	5322.400	119.05			82.22	33.37	3.46	0.00	PEAK	118	73	VERTICAL
3 @	5350.000	59.63	-0.37	60.00	22.74	33.43	3.46	0.00	AVERAGE	8995	73	VERTICAL
4 @	5350.000	75.51	-4.49	80.00	38.62	33.43	3.46	0.00	PEAK	118	73	VERTICAL

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



Temperature	24.3°C	Humidity	56%
Test Engineer	Roy Huang	Configurations	802.11a Ch 100, 140 / Ant. 1 + Ant. 2
Test Date	Mar. 27, 2009		

Channel 100

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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	55.24	-4.76	60.00	18.15	33.61	3.48	0.00	AVERAGE	123	92	VERTICAL
2 @	5460.000	66.64	-13.36	80.00	29.56	33.61	3.48	0.00	PEAK	123	92	VERTICAL
3 @	5469.600	73.33	-0.97	74.30	36.21	33.64	3.48	0.00	PEAK	123	92	VERTICAL
4 @	5501.200	106.28			69.09	33.70	3.49	0.00	AVERAGE	123	92	VERTICAL
5 @	5501.800	118.13			80.94	33.70	3.49	0.00	PEAK	123	92	VERTICAL

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

Channel 140

	Freq	Level	Over Limit	Limit Line	ReadAntenna 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 @	5699.400	116.25			78.39	34.27	3.59	0.00	PEAK	124	91	VERTICAL
2	5702.400	105.74			67.83	34.32	3.59	0.00	AVERAGE	124	91	VERTICAL
3 @	5726.600	73.35	-0.95	74.30	35.37	34.37	3.61	0.00	PEAK	124	91	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].

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 $\pm 20\text{ppm}$ (802.11n specification).

4.8.2. Measuring Instruments and Setting

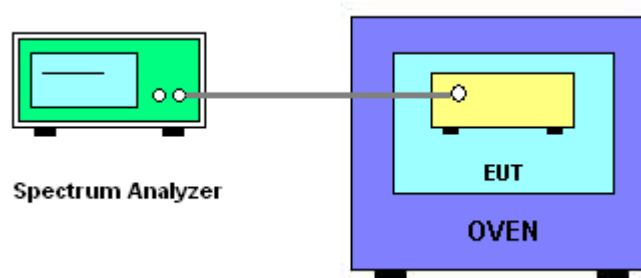
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f) / f_c \times 10^6$ ppm and the limit is less than $\pm 20\text{ppm}$ (802.11n 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 $-30^\circ\text{C} \sim 50^\circ\text{C}$.
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)	5300
126.50	5300.014150
110.00	5300.023720
93.50	5300.022000
Max. Deviation (MHz)	0.023720
Max. Deviation (ppm)	4.48

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	5300
-30	5300.054400
-20	5300.052100
-10	5300.043200
0	5300.012900
10	5300.003800
20	5299.998700
30	5299.987200
40	5299.971000
50	5299.961900
Max. Deviation (MHz)	0.054400
Max. Deviation (ppm)	10.2642

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, 2008	Conduction (CO04-HY)
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)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2009	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, 2008*	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	FSU26.5	100015	20Hz ~ 26.5GHz	Oct. 29, 2008	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)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
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)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Dec. 14, 2008	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 25, 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.

* 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 2 nd 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. : L1190-091230

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, 2010 to January 09, 2013
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 Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities

Jay-san Chen

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : December 30, 2009

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