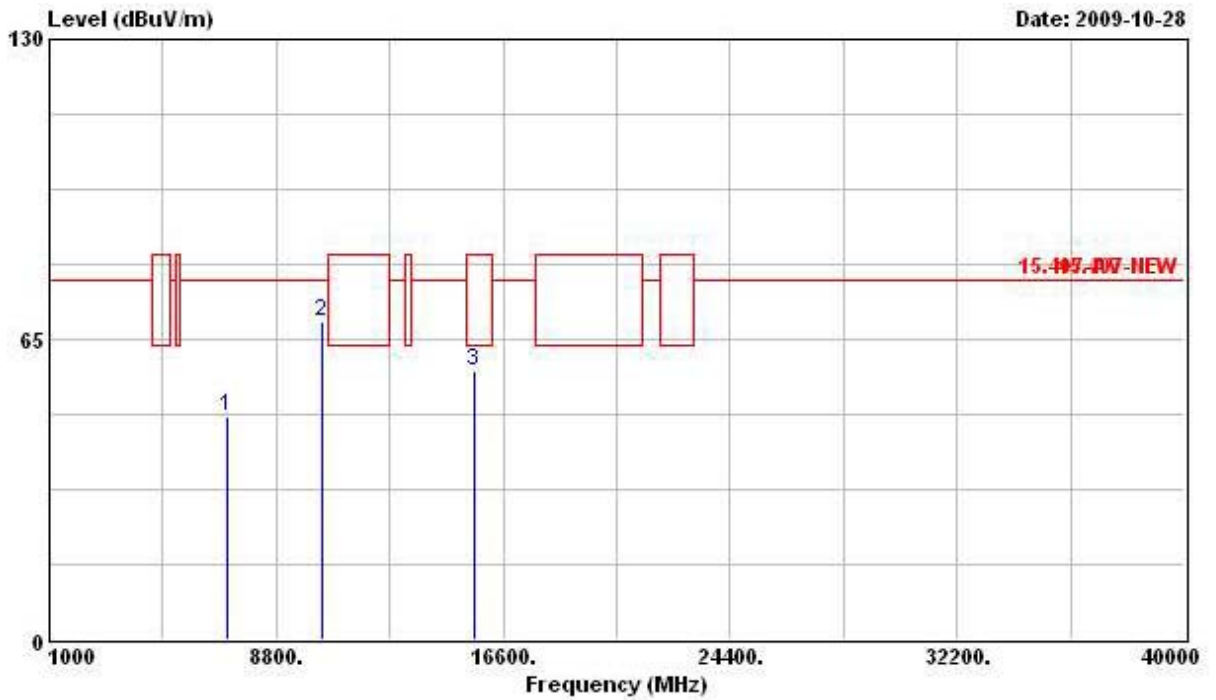


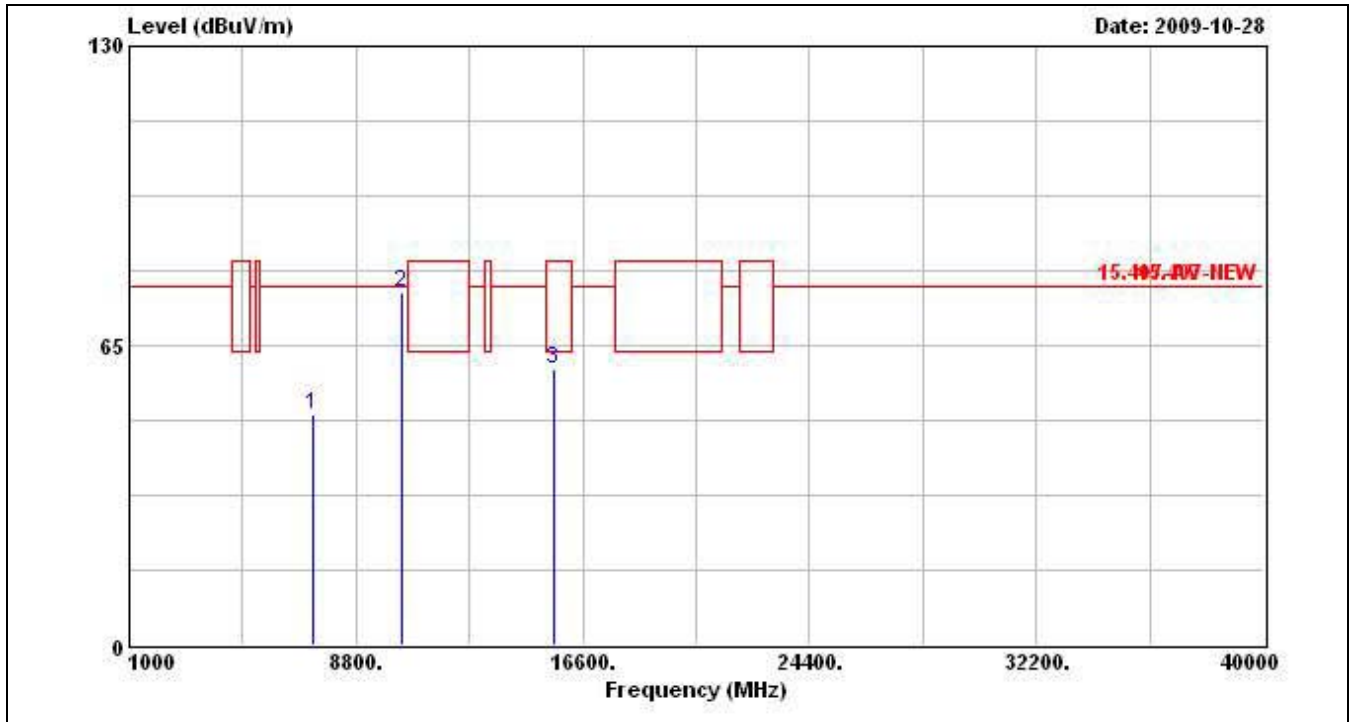
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 40 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7110.000	48.19	-29.65	77.84	38.72	36.35	6.04	32.91	Peak	---	---
2	10390.000	68.71	-9.13	77.84	53.49	39.32	7.68	31.78	Peak	---	---
3	15590.000	58.32	-5.22	63.54	42.08	37.53	9.94	31.23	PK	---	---

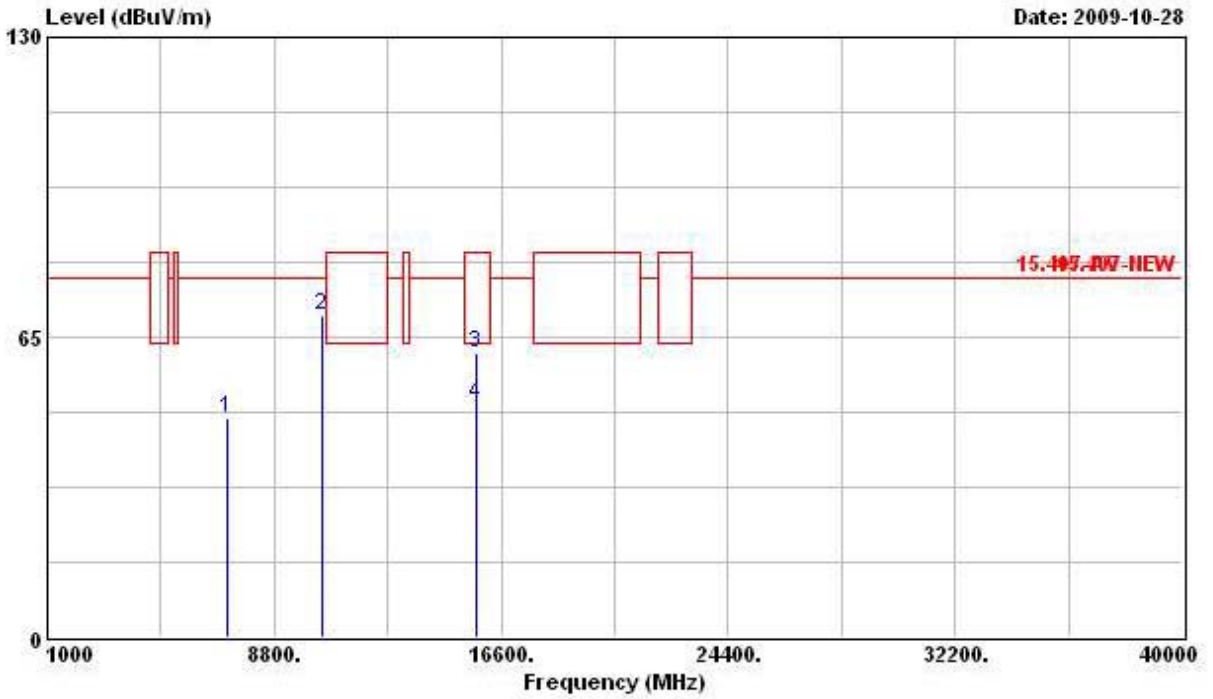
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7324.000	50.05	-27.79	77.84	39.37	36.89	6.22	32.42	Peak	---	---
2	10400.900	76.40	-1.44	77.84	61.16	39.32	7.65	31.73	Peak	---	---
3	15604.000	59.88	-3.66	63.54	43.64	37.54	9.94	31.24	PK	---	---

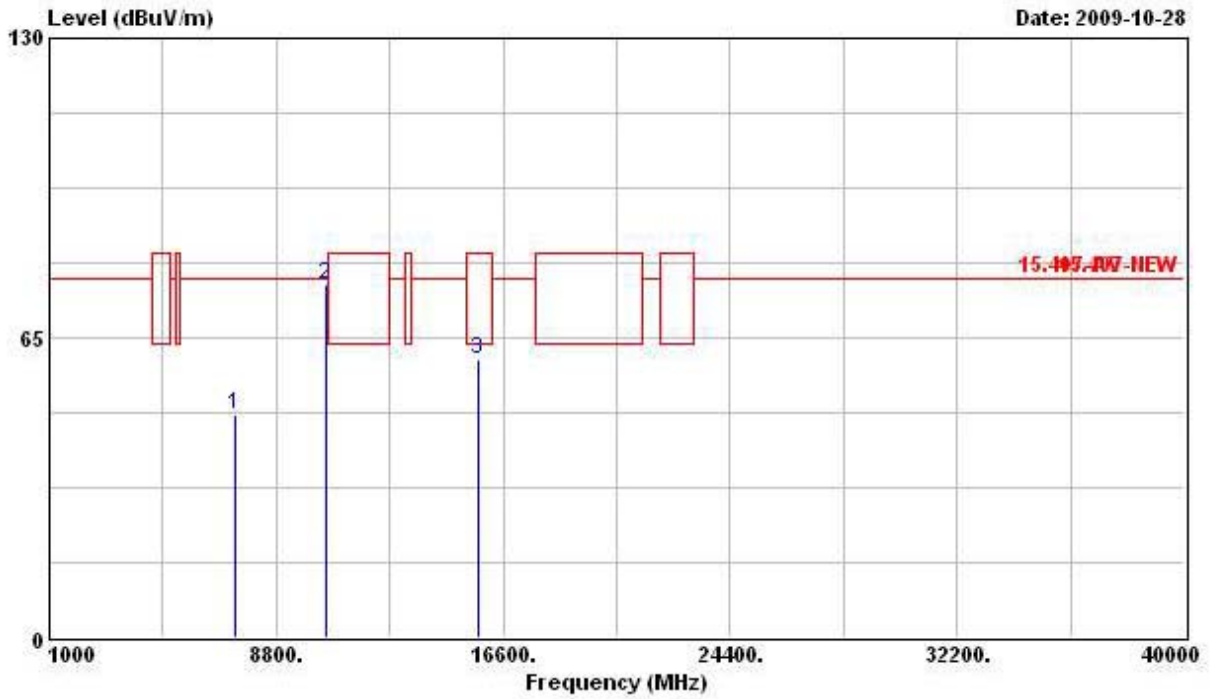
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 48 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7150.000	47.65	-30.19	77.84	37.96	36.47	6.07	32.85	Peak	---	---
2	10470.000	69.64	-8.20	77.84	54.34	39.31	7.63	31.64	Peak	---	---
3	15740.000	61.78	-21.76	83.54	45.40	37.60	10.08	31.30	Peak	---	---
4	15740.000	50.66	-12.88	63.54	34.28	37.60	10.08	31.30	Average	---	---

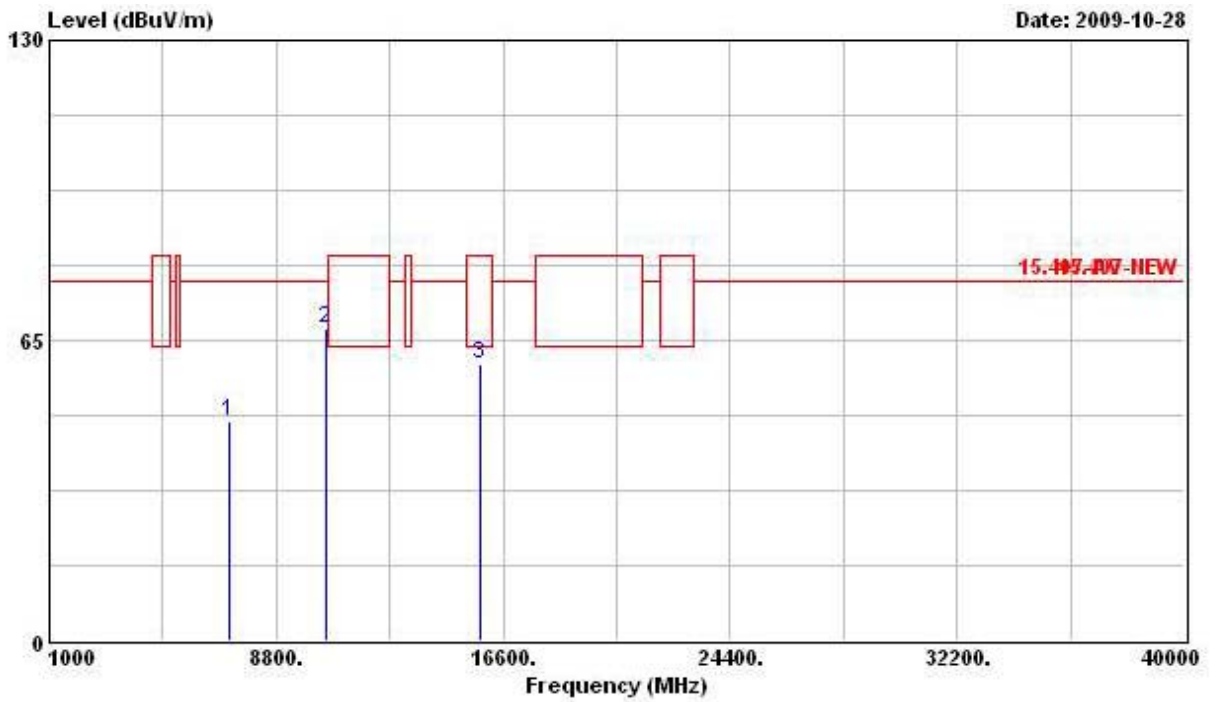
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7380.000	48.35	-29.49	77.84	37.39	37.01	6.25	32.30	Peak	---	---
2 @	10481.000	76.75	-1.09	77.84	61.43	39.30	7.61	31.60	Peak	---	---
3 @	15716.000	60.30	-3.24	63.54	43.95	37.59	10.04	31.29	PK	---	---

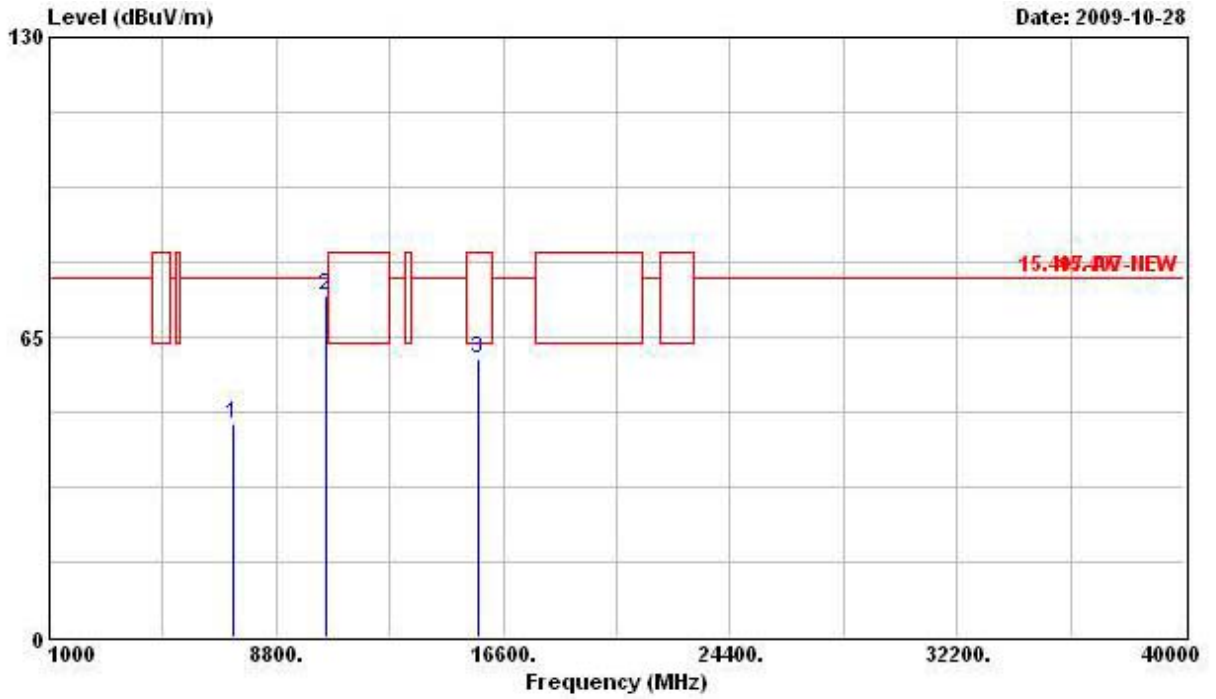
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 52 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7180.000	47.59	-30.25	77.84	37.73	36.56	6.10	32.79	Peak	---	---
2	10510.000	67.42	-10.42	77.84	52.06	39.30	7.61	31.55	Peak	---	---
3 @	15780.000	59.68	-3.86	63.54	43.27	37.61	10.12	31.32	PK	---	---

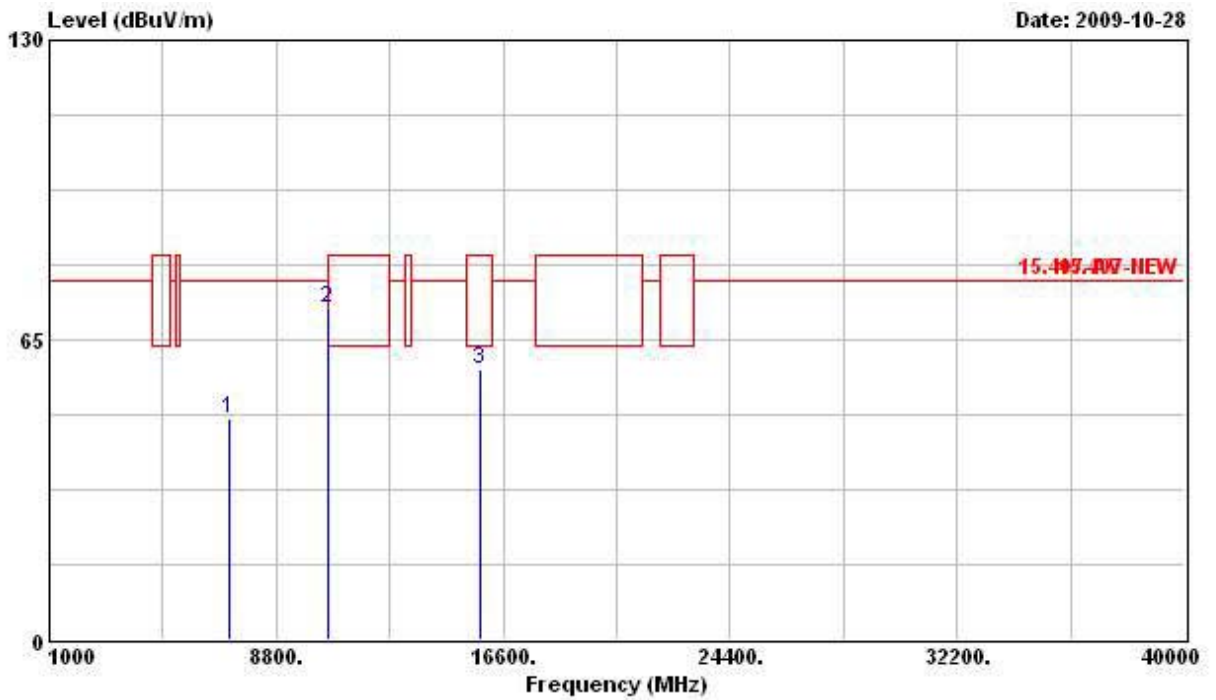
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7305.000	46.15	-31.69	77.84	37.14	36.84	4.65	32.48	Peak	---	---
2 @	10521.000	74.19	-3.65	77.84	60.64	39.29	5.81	31.55	Peak	---	---
3 @	15770.000	60.48	-3.06	63.54	46.74	37.61	7.44	31.31	PK	---	---

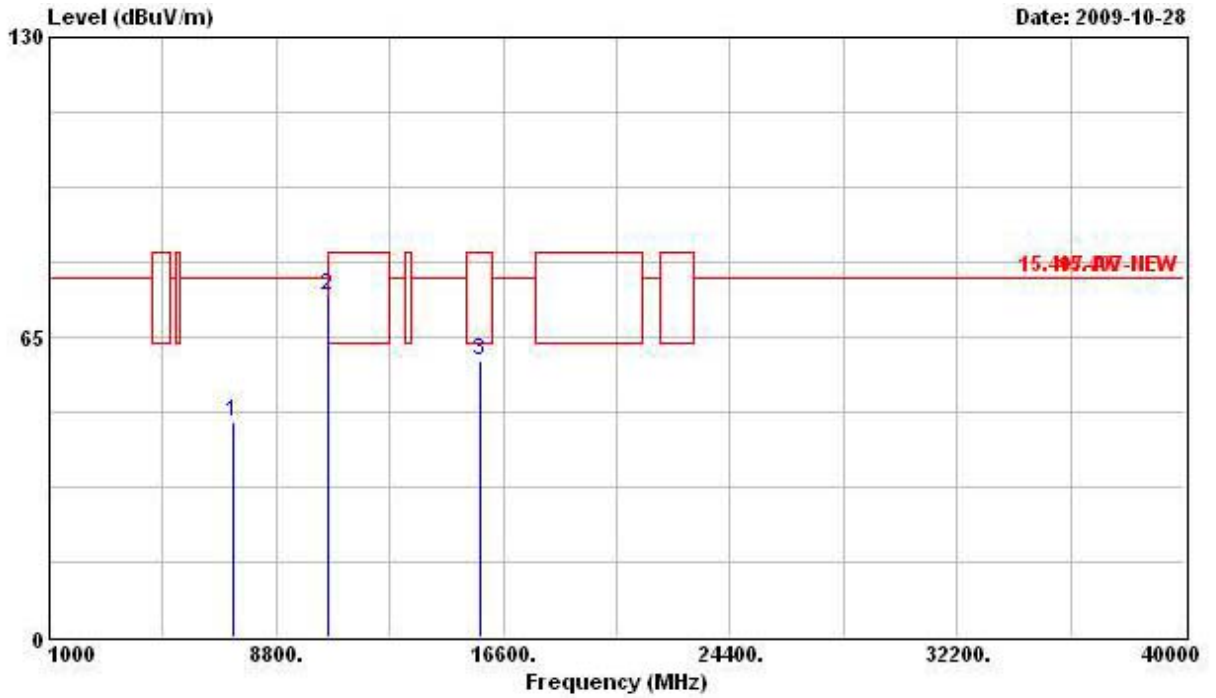
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 56 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7150.000	47.75	-30.09	77.84	38.06	36.47	6.07	32.85	Peak	---	---
2	10560.000	72.03	-5.81	77.84	56.64	39.27	7.72	31.60	Peak	---	---
3	15830.000	58.61	-4.93	63.54	42.17	37.63	10.15	31.35	PK	---	---

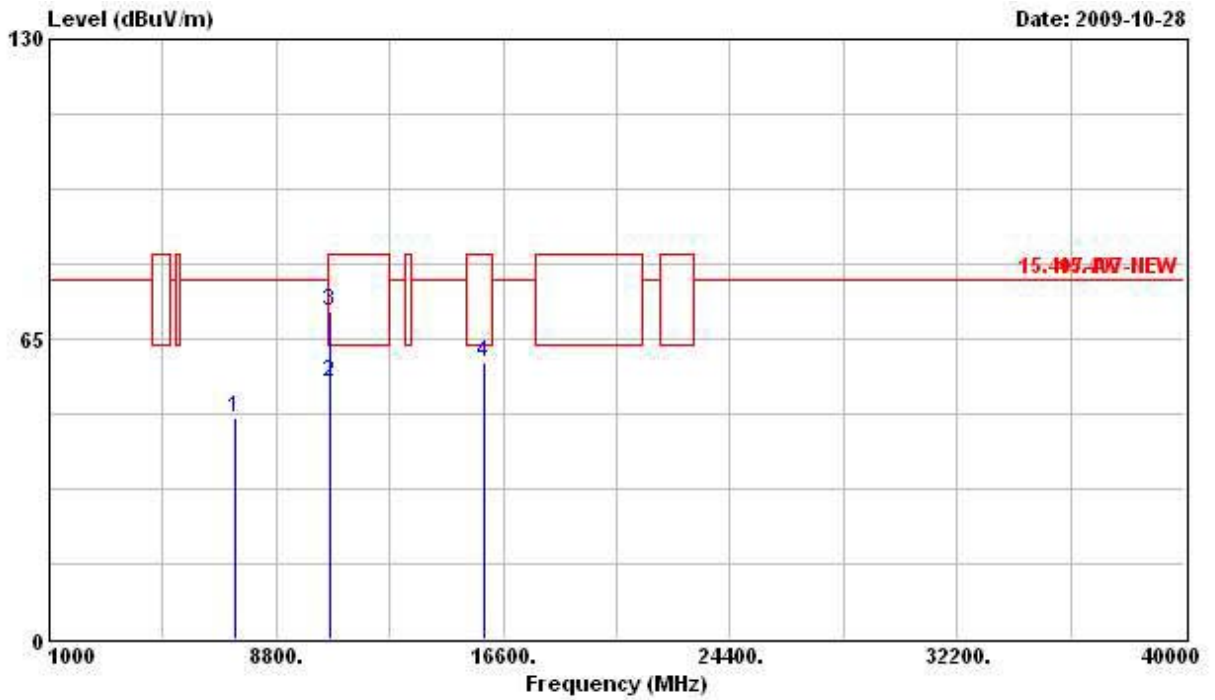
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7336.000	46.58	-31.26	77.84	37.38	36.93	4.70	32.42	Peak	---	---
2 @	10561.000	74.08	-3.76	77.84	60.56	39.27	5.84	31.60	Peak	---	---
3 @	15842.000	59.67	-3.87	63.54	45.88	37.64	7.50	31.35	Average	---	---

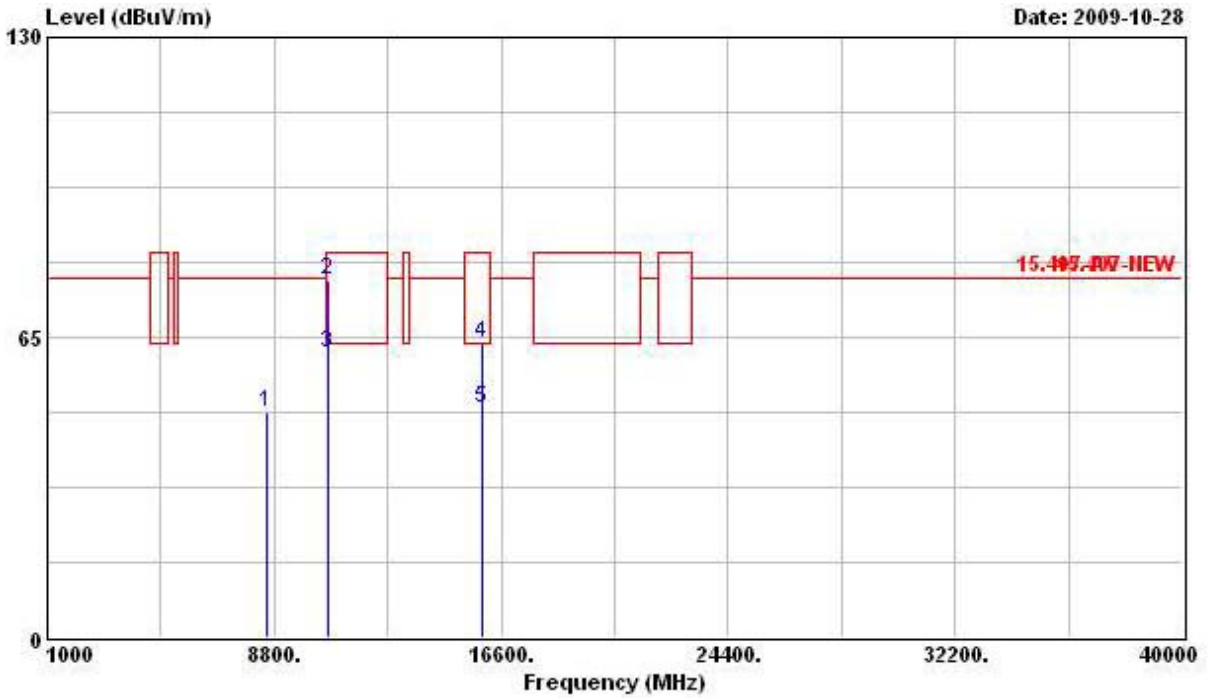
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 64 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7400.000	47.75	-30.09	77.84	36.66	37.05	6.28	32.24	Peak	---	---
2	10640.000	55.45	-8.09	63.54	40.09	39.22	7.83	31.68	Average	---	---
3	10640.000	71.05	-12.49	83.54	55.69	39.22	7.83	31.68	Peak	---	---
4	15950.000	59.70	-3.84	63.54	43.15	37.68	10.26	31.39	PK	---	---

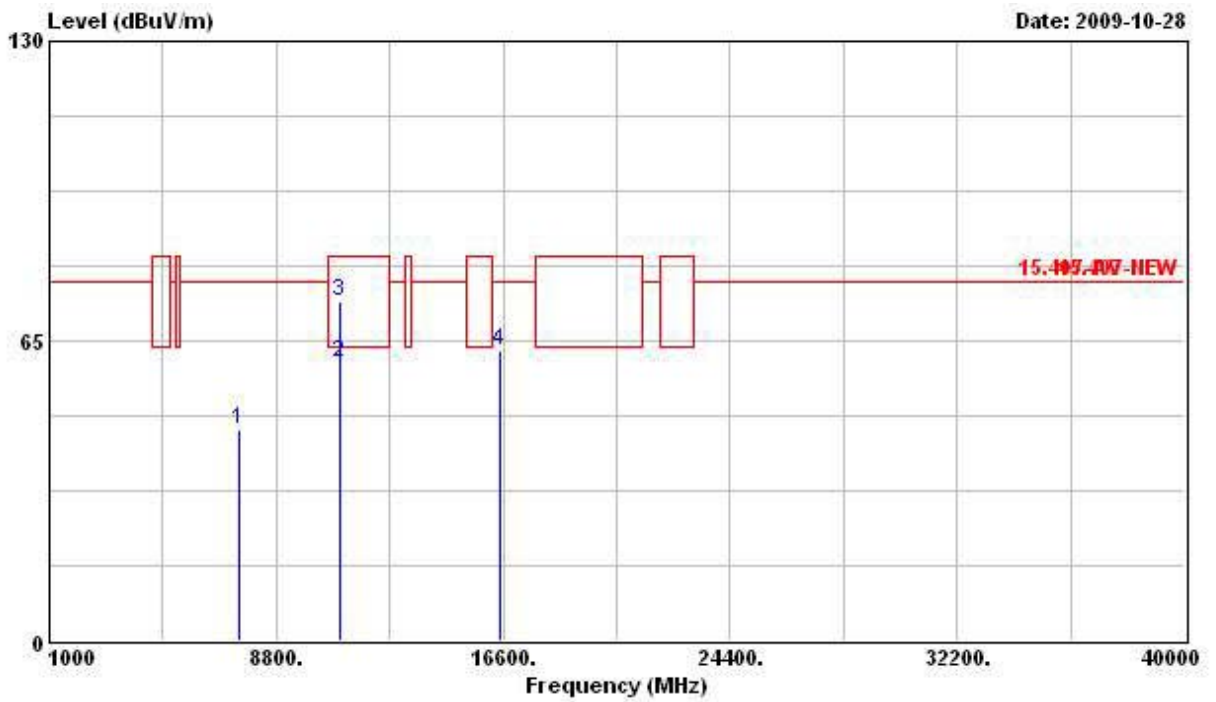
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8510.000	48.81	-29.03	77.84	35.09	38.31	7.46	32.04	Peak	---	---
2	10633.000	77.31	-6.23	83.54	61.95	39.22	7.83	31.68	Peak	---	---
3 @	10633.000	61.47	-2.07	63.54	46.11	39.22	7.83	31.68	Average	---	---
4	15965.000	63.62	-19.92	83.54	47.04	37.69	10.30	31.40	Peak	---	---
5	15965.000	49.70	-13.84	63.54	33.12	37.69	10.30	31.40	Average	---	---

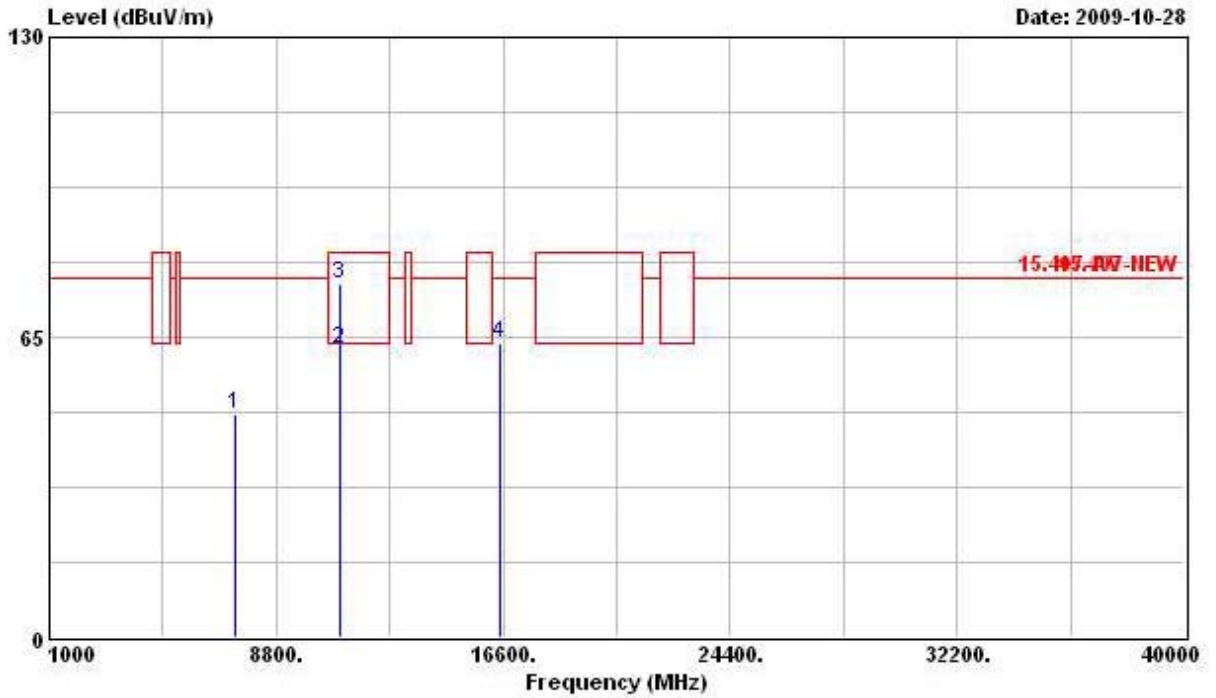
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 100 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7500.000	45.74	-32.10	77.84	34.10	37.30	6.34	31.99	Peak	---	---
2 @	11002.350	60.24	-3.30	63.54	44.97	39.00	8.32	32.05	Average	---	---
3	11002.350	73.68	-9.86	83.54	58.41	39.00	8.32	32.05	Peak	---	---
4	16510.000	62.81	-15.03	77.84	43.84	39.00	11.21	31.23	Peak	---	---

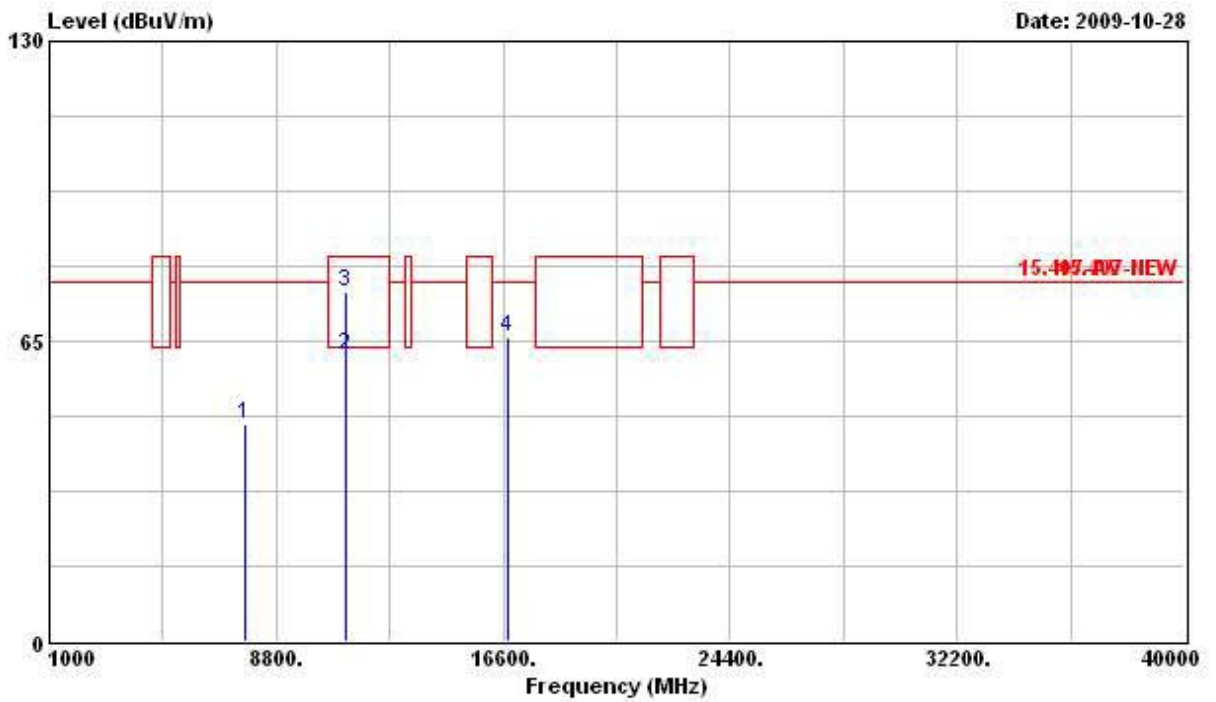
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7365.000	48.31	-29.53	77.84	37.39	36.97	6.25	32.30	Peak	---	---
2	11002.270	62.59	-0.95	63.54	47.32	39.00	8.32	32.05	Average	---	---
3	11002.270	76.70	-6.84	83.54	61.43	39.00	8.32	32.05	Peak	---	---
4	16505.000	63.80	-14.04	77.84	44.83	39.00	11.21	31.23	Peak	---	---

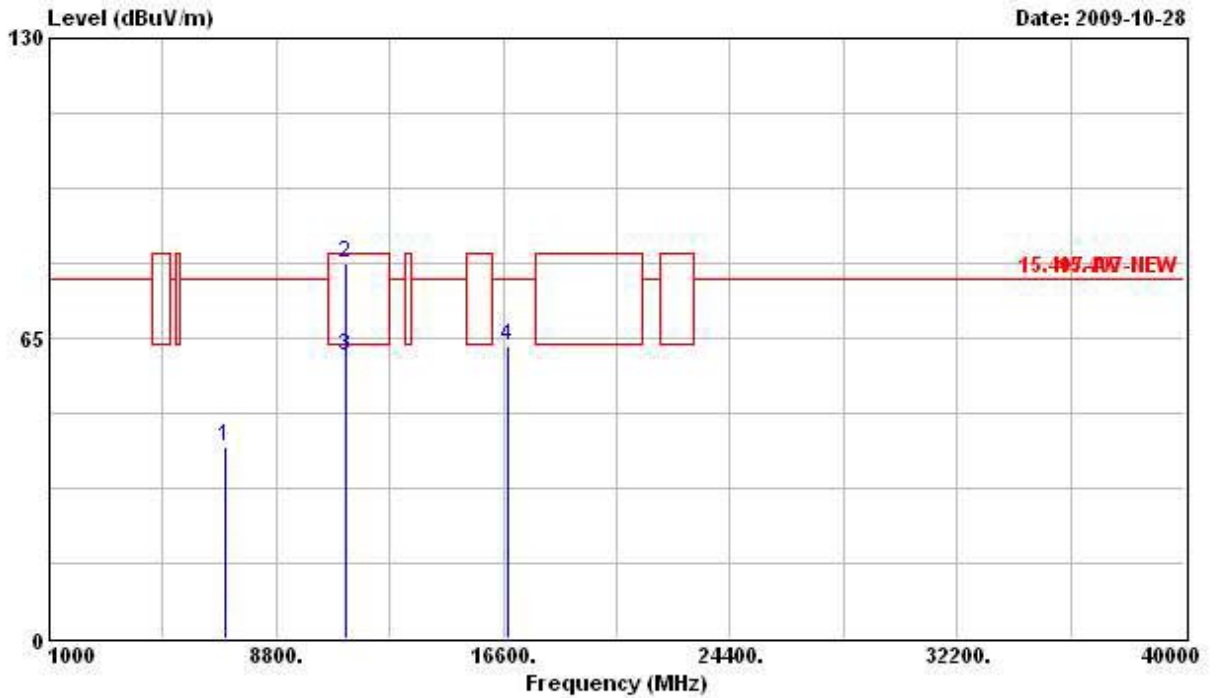
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 110 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	7700.000	46.84	-31.00	77.84	34.83	37.50	6.59	32.09	Peak	---	---
2 @	11160.000	61.95	-1.59	63.54	46.19	39.23	8.31	31.78	Average	---	---
3	11160.000	75.73	-7.81	83.54	59.97	39.23	8.31	31.78	Peak	---	---
4	16740.000	65.71	-12.13	77.84	45.32	40.11	11.36	31.07	Peak	---	---

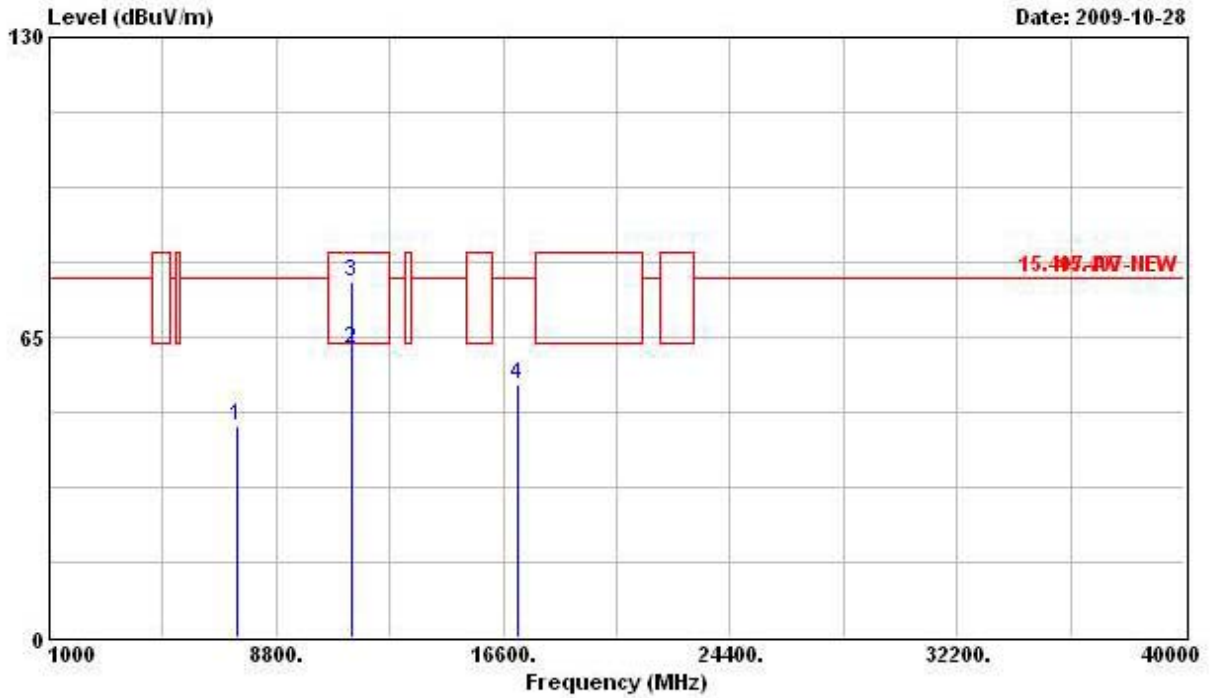
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7078.000	41.65	-36.19	77.84	32.37	36.31	6.01	33.04	Peak	---	---
2	11160.000	81.26	-2.28	83.54	65.50	39.23	8.31	31.78	Peak	---	---
3	11160.000	61.13	-2.41	63.54	45.37	39.23	8.31	31.78	Average	---	---
4	16740.000	63.41	-14.43	77.84	43.02	40.11	11.36	31.07	Peak	---	---

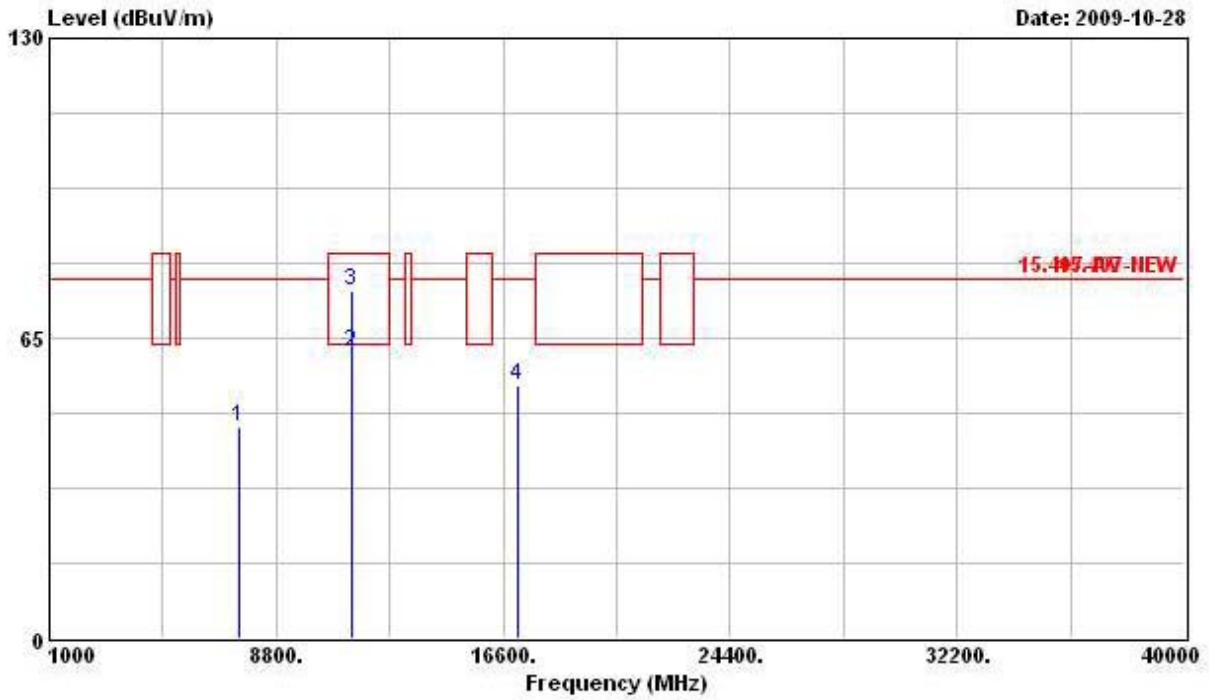
Final Test Date	Oct. 28, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 140 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7430.000	45.88	-31.96	77.84	34.65	37.13	6.28	32.18	Peak	---	---
2 @	11401.150	62.39	-1.15	63.54	45.87	39.56	8.30	31.34	Average	---	---
3	11401.150	76.96	-6.58	83.54	60.44	39.56	8.30	31.34	Peak	---	---
4	17100.000	54.60	-23.24	77.84	31.71	42.14	11.65	30.90	Peak	---	---

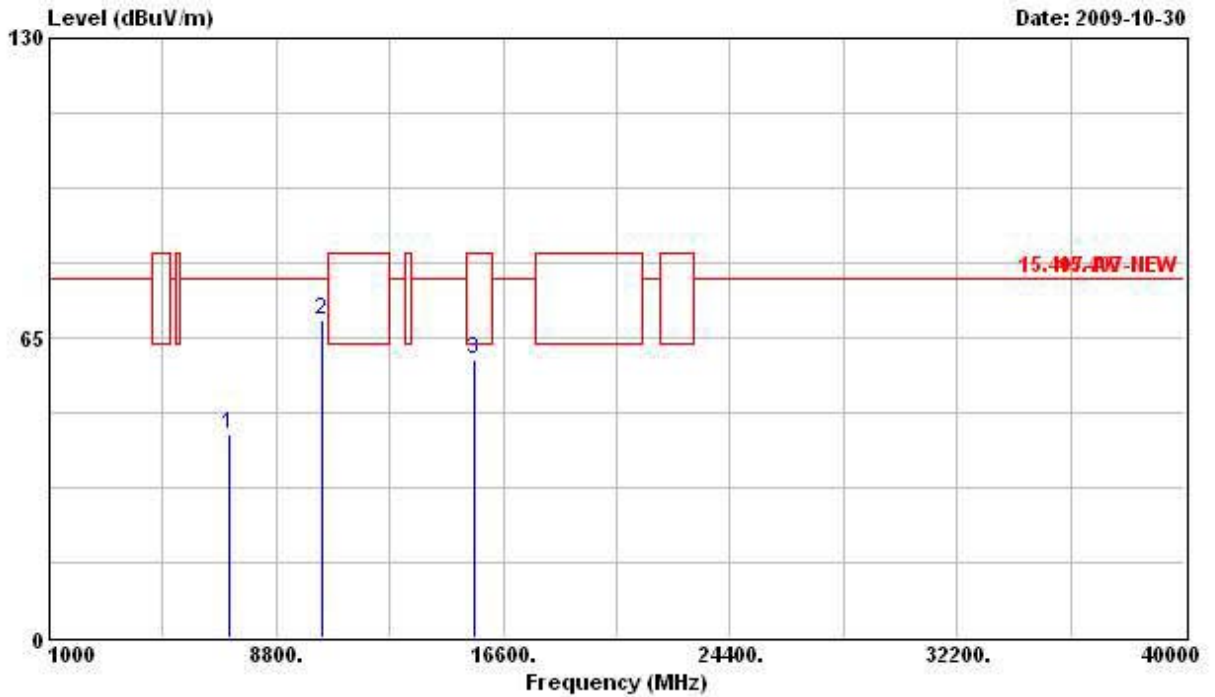
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg
1	7530.000	45.91	-31.93	77.84	34.19	37.33	6.39	32.01 Peak	---	---
2 @	11400.000	62.03	-1.51	63.54	45.51	39.56	8.30	31.34 Average	---	---
3	11400.000	75.23	-8.31	83.54	58.71	39.56	8.30	31.34 Peak	---	---
4	17100.000	54.82	-23.02	77.84	31.93	42.14	11.65	30.90 Peak	---	---

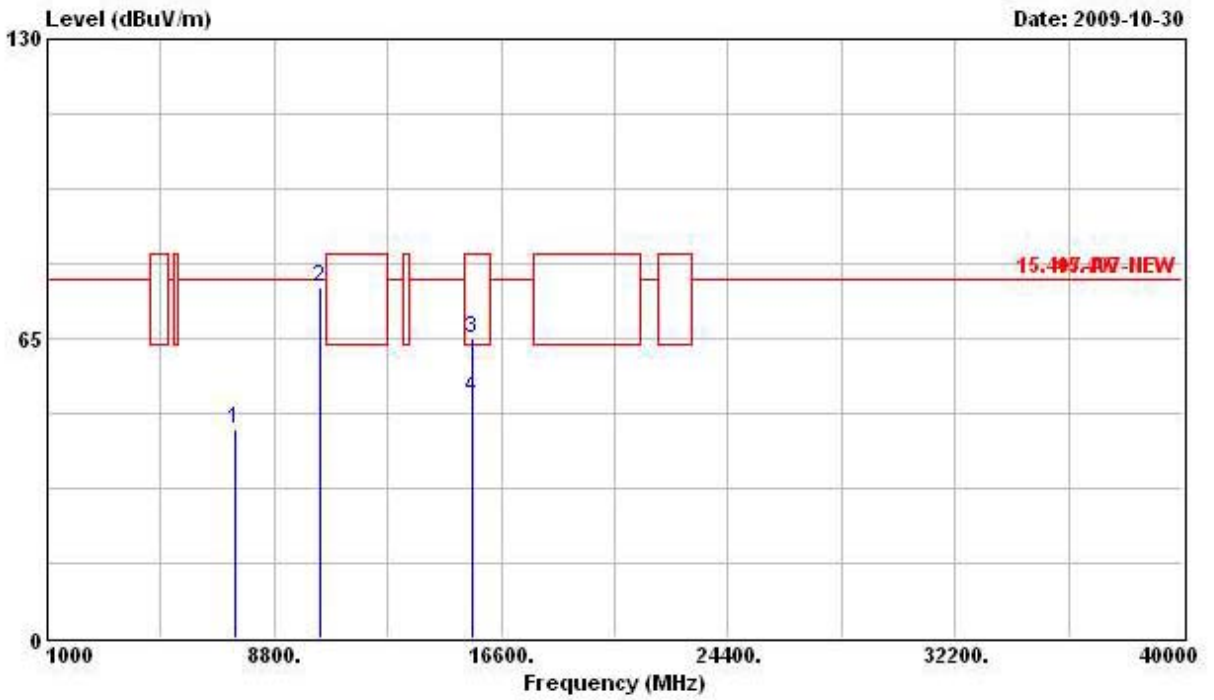
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 38 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7184.000	43.84	-34.00	77.84	33.92	36.56	6.10	32.73	Peak	---	---
2	10382.000	68.88	-8.96	77.84	53.66	39.32	7.68	31.78	Peak	---	---
3	15582.000	60.22	-3.32	63.54	43.98	37.53	9.94	31.23	PK	---	---

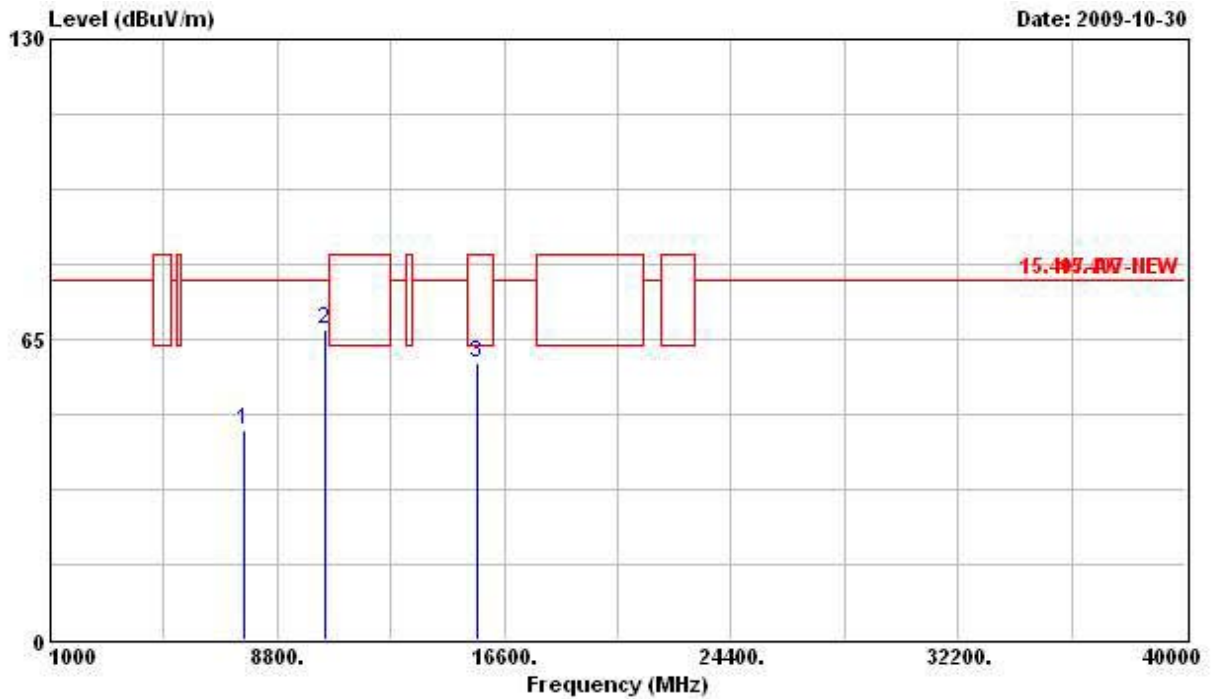
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB		cm	deg
1	7460.000	45.18	-32.66	77.84	33.77	37.22	6.31	32.12 Peak	---	---
2 @	10378.000	76.21	-1.63	77.84	60.99	39.32	7.68	31.78 Peak	---	---
3	15584.000	65.00	-18.54	83.54	48.76	37.53	9.94	31.23 Peak	---	---
4	15584.000	52.00	-11.54	63.54	35.76	37.53	9.94	31.23 Average	---	---

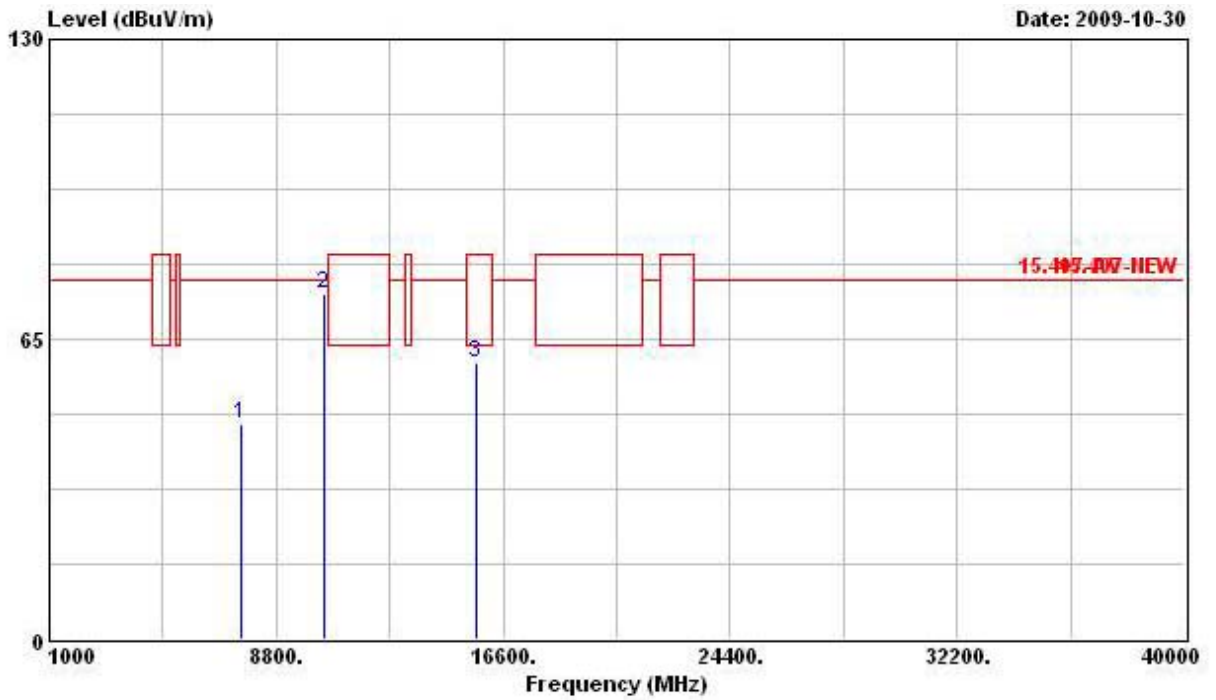
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 46 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7678.000	45.37	-32.47	77.84	33.37	37.48	6.59	32.07	Peak	---	---
2	10447.000	67.03	-10.81	77.84	51.77	39.31	7.63	31.69	Peak	---	---
3 @	15686.000	60.01	-3.53	63.54	43.66	37.58	10.04	31.28	PK	---	---

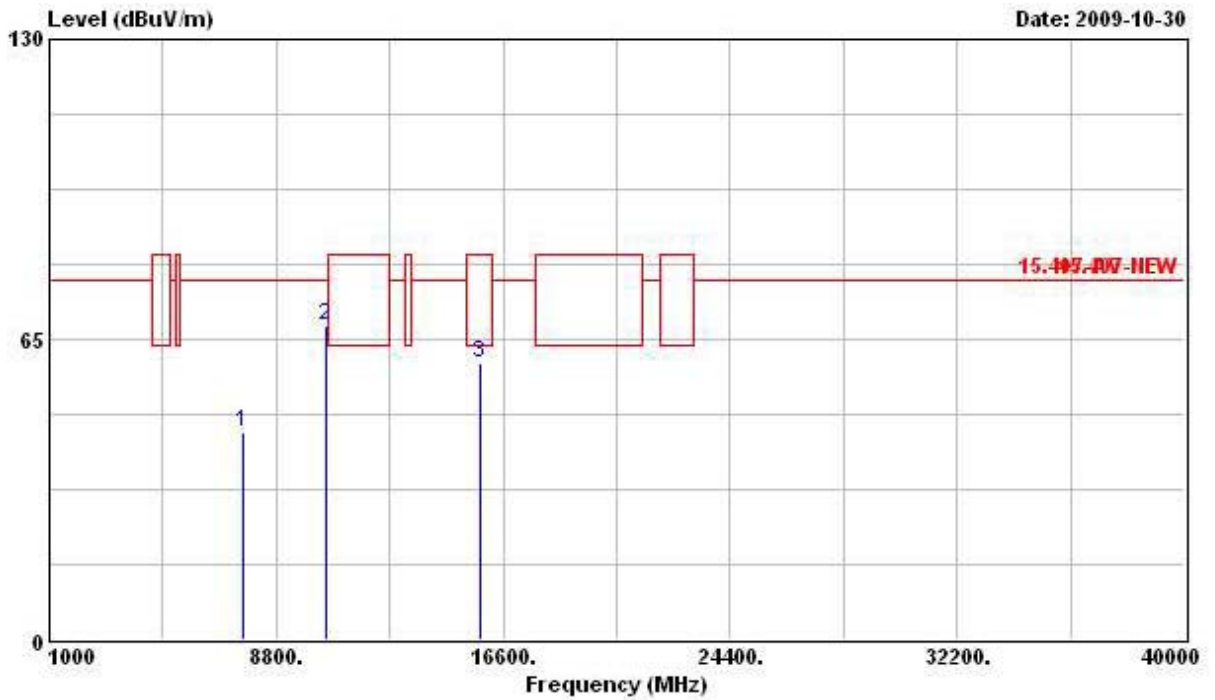
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7594.000	46.46	-31.38	77.84	34.61	37.40	6.49	32.04	Peak	---	---
2 @	10458.000	74.65	-3.19	77.84	59.35	39.31	7.63	31.64	Peak	---	---
3 @	15690.000	59.89	-3.65	63.54	43.54	37.58	10.04	31.28	PK	---	---

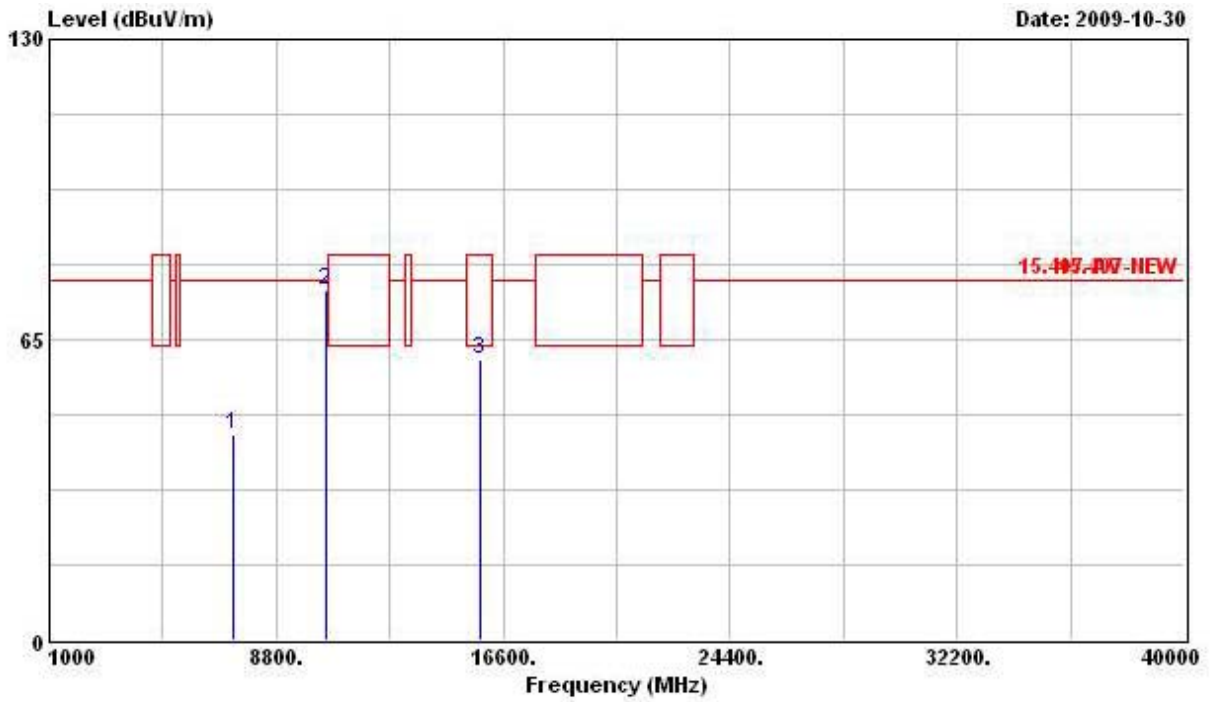
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 54 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7678.000	45.07	-32.77	77.84	33.07	37.48	6.59	32.07	Peak	---	---
2	10538.000	67.78	-10.06	77.84	52.41	39.28	7.66	31.58	Peak	---	---
3	15842.000	59.84	-3.70	63.54	43.36	37.64	10.19	31.35	PK	---	---

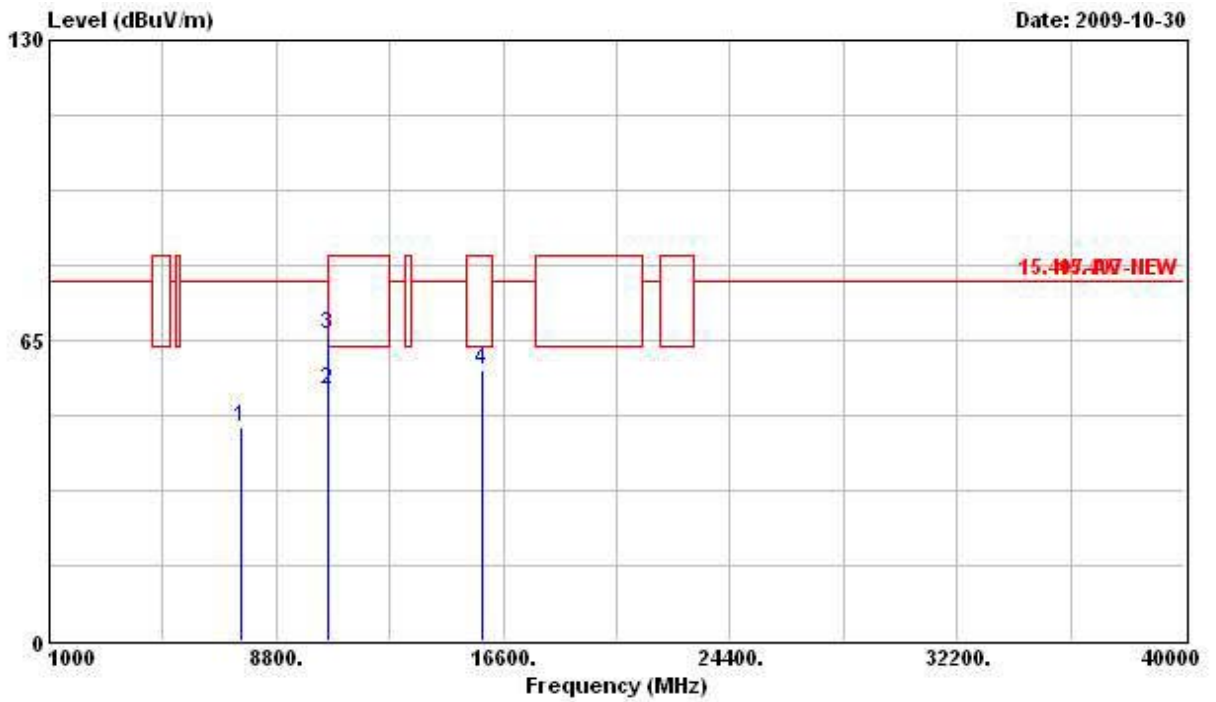
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7328.000	44.29	-33.55	77.84	33.61	36.89	6.22	32.42	Peak	---	---
2 @	10544.300	75.84	-2.00	77.84	60.47	39.28	7.66	31.58	Peak	---	---
3 @	15824.000	60.53	-3.01	63.54	44.08	37.63	10.15	31.33	PK	---	---

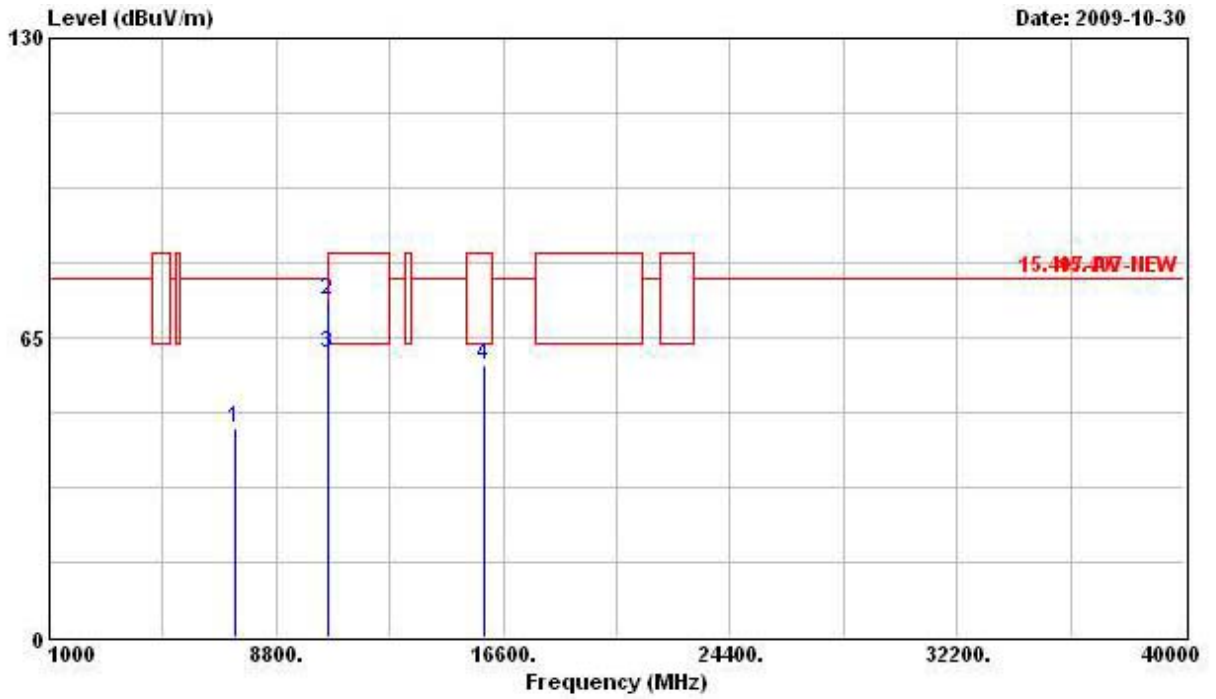
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 62 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7600.000	46.36	-31.48	77.84	34.51	37.40	6.49	32.04	Peak	---	---
2	10603.000	54.41	-9.13	63.54	39.05	39.24	7.77	31.65	Average	---	---
3	10603.000	66.41	-17.13	83.54	51.05	39.24	7.77	31.65	Peak	---	---
4	15907.000	58.73	-4.81	63.54	42.22	37.67	10.23	31.38	PK	---	---

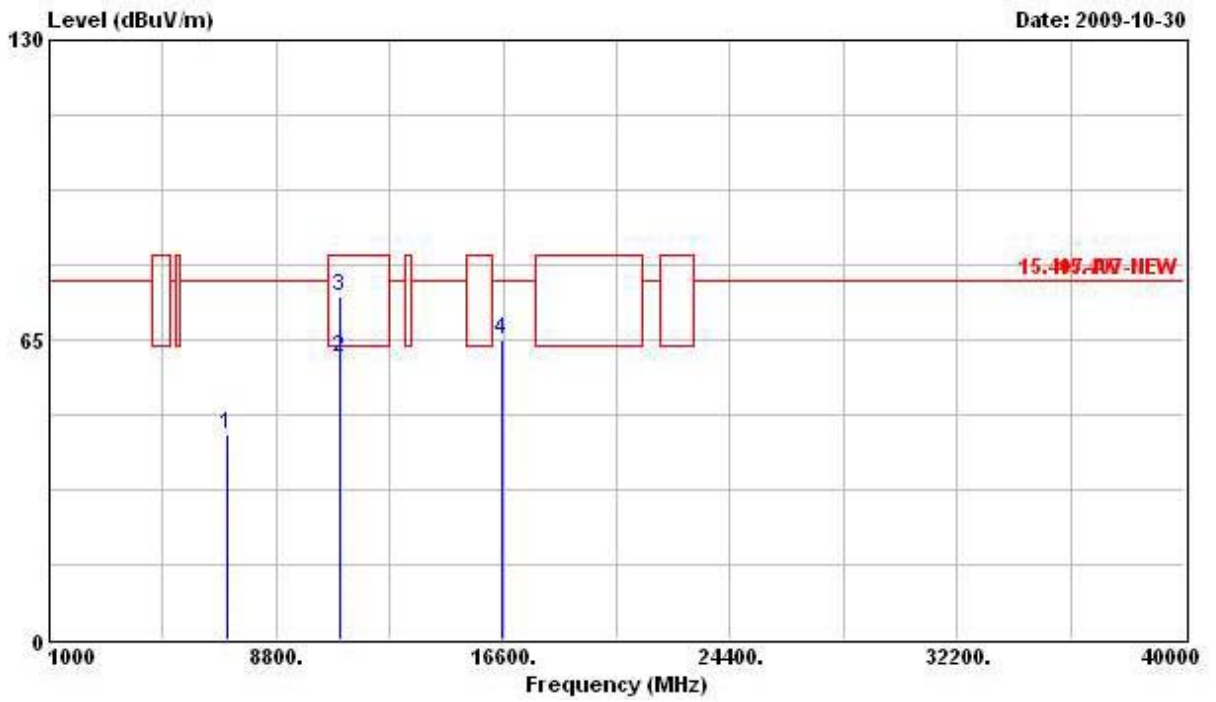
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7400.000	45.14	-32.70	77.84	34.05	37.05	6.28	32.24	Peak	---	---
2	10606.000	72.98	-10.56	83.54	57.62	39.24	7.77	31.65	Peak	---	---
3 @	10606.000	61.58	-1.96	63.54	46.22	39.24	7.77	31.65	Average	---	---
4	15920.000	59.02	-4.52	63.54	42.47	37.67	10.26	31.38	PK	---	---

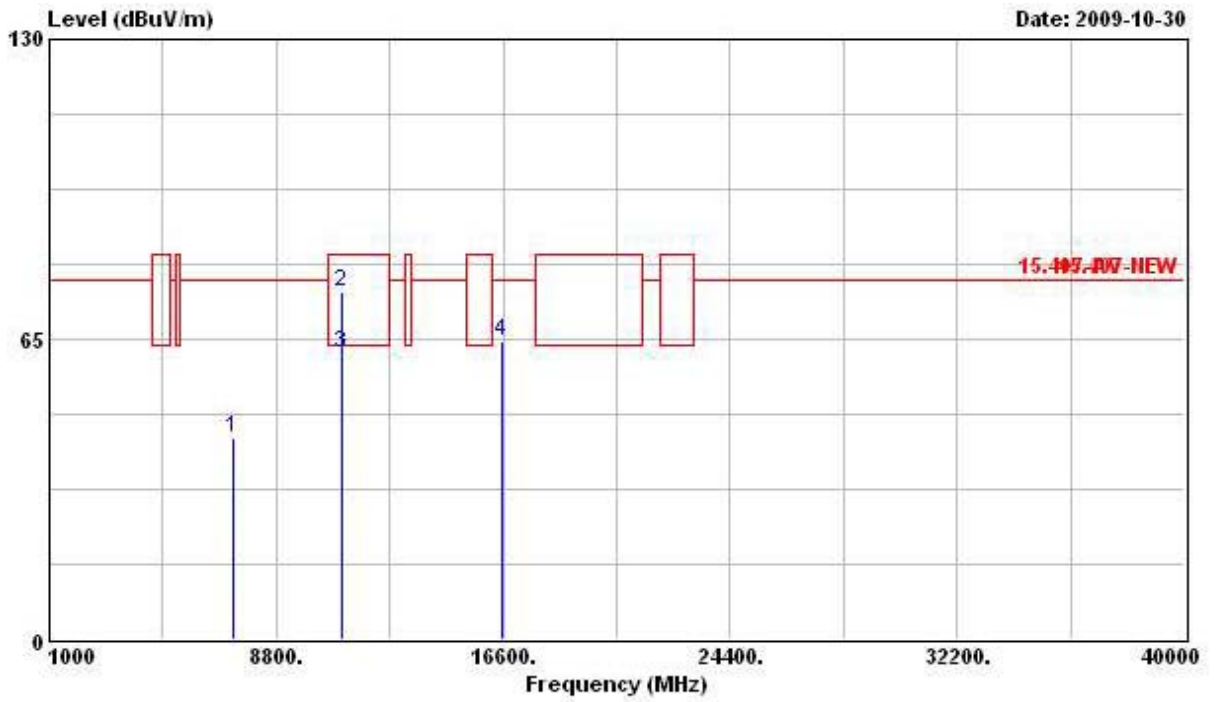
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 102 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	7119.000	44.29	-33.55	77.84	34.78	36.39	6.04	32.91	Peak	---	---
2 @	11006.000	61.29	-2.25	63.54	46.00	39.02	8.32	32.05	Average	---	---
3	11006.000	74.31	-9.23	83.54	59.02	39.02	8.32	32.05	Peak	---	---
4	16531.000	65.21	-12.63	77.84	46.06	39.16	11.21	31.22	Peak	---	---

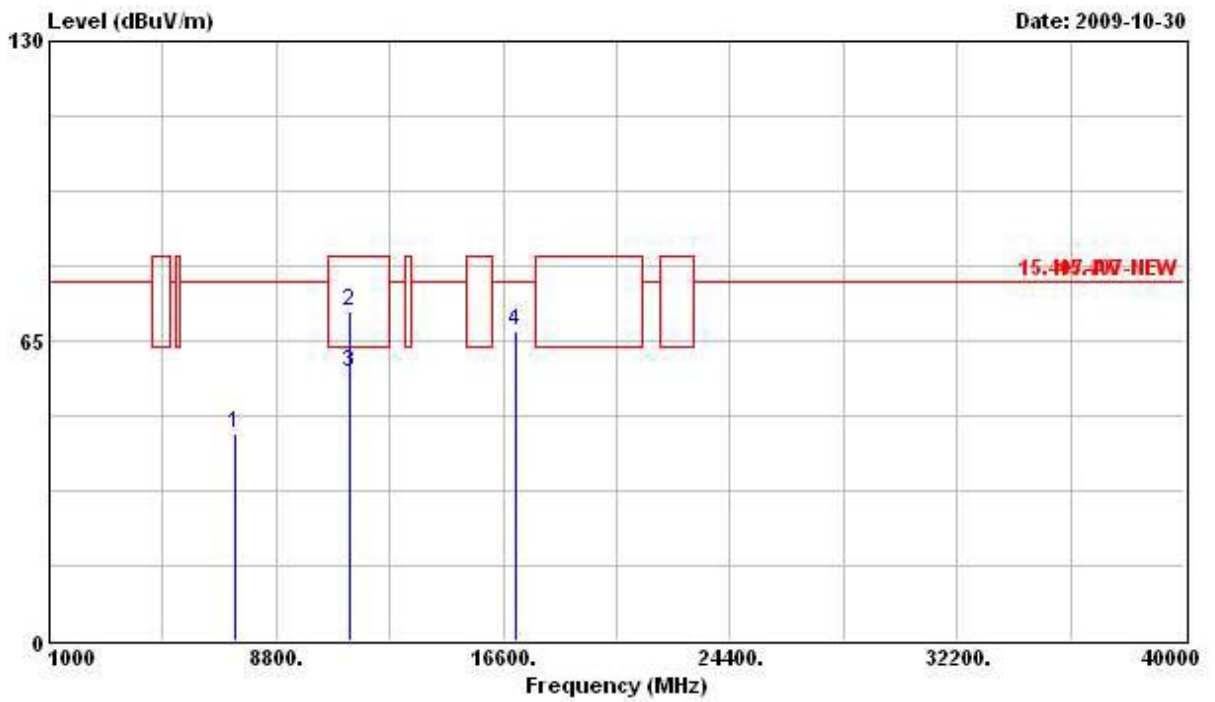
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7327.000	43.56	-34.28	77.84	32.88	36.89	6.22	32.42	Peak	---	---
2	11023.900	75.32	-8.22	83.54	59.96	39.05	8.31	32.00	Peak	---	---
3 @	11023.900	61.88	-1.66	63.54	46.52	39.05	8.31	32.00	Average	---	---
4	16531.000	64.40	-13.44	77.84	45.25	39.16	11.21	31.22	Peak	---	---

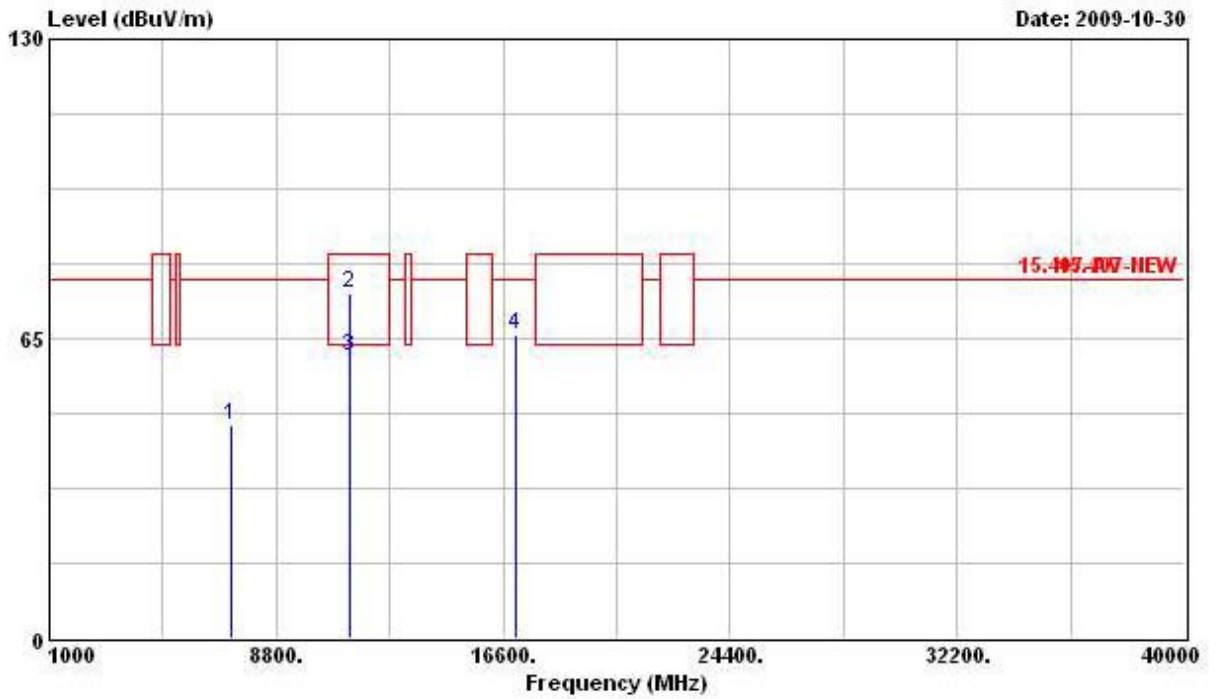
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 110 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	7392.000	45.03	-32.81	77.84	33.97	37.05	6.25	32.24	Peak	---	---
2	11318.000	71.39	-12.15	83.54	55.12	39.44	8.31	31.47	Peak	---	---
3	11318.000	58.24	-5.30	63.54	41.97	39.44	8.31	31.47	Average	---	---
4	17038.000	67.28	-10.56	77.84	45.04	41.58	11.55	30.90	Peak	---	---

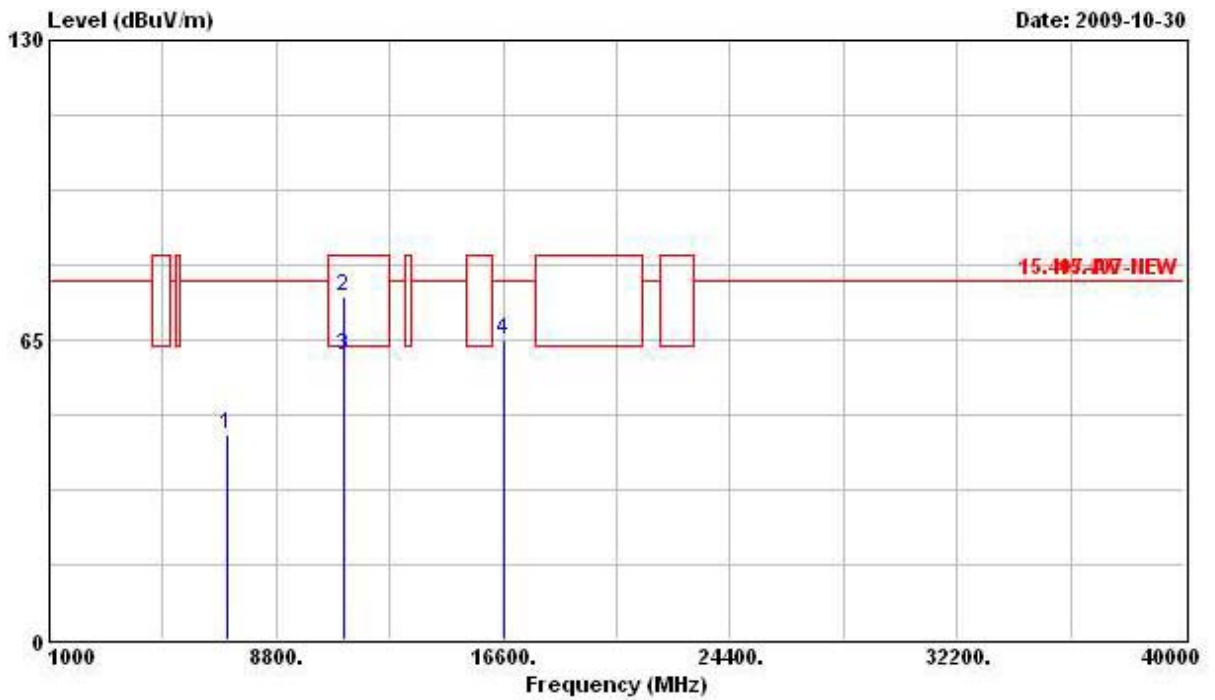
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7275.000	45.98	-31.86	77.84	35.61	36.76	6.16	32.55	Peak	---	---
2	11326.600	74.74	-8.80	83.54	58.47	39.44	8.31	31.47	Peak	---	---
3 @	11326.600	61.09	-2.45	63.54	44.82	39.44	8.31	31.47	Average	---	---
4	17038.000	66.00	-11.84	77.84	43.76	41.58	11.55	30.90	Peak	---	---

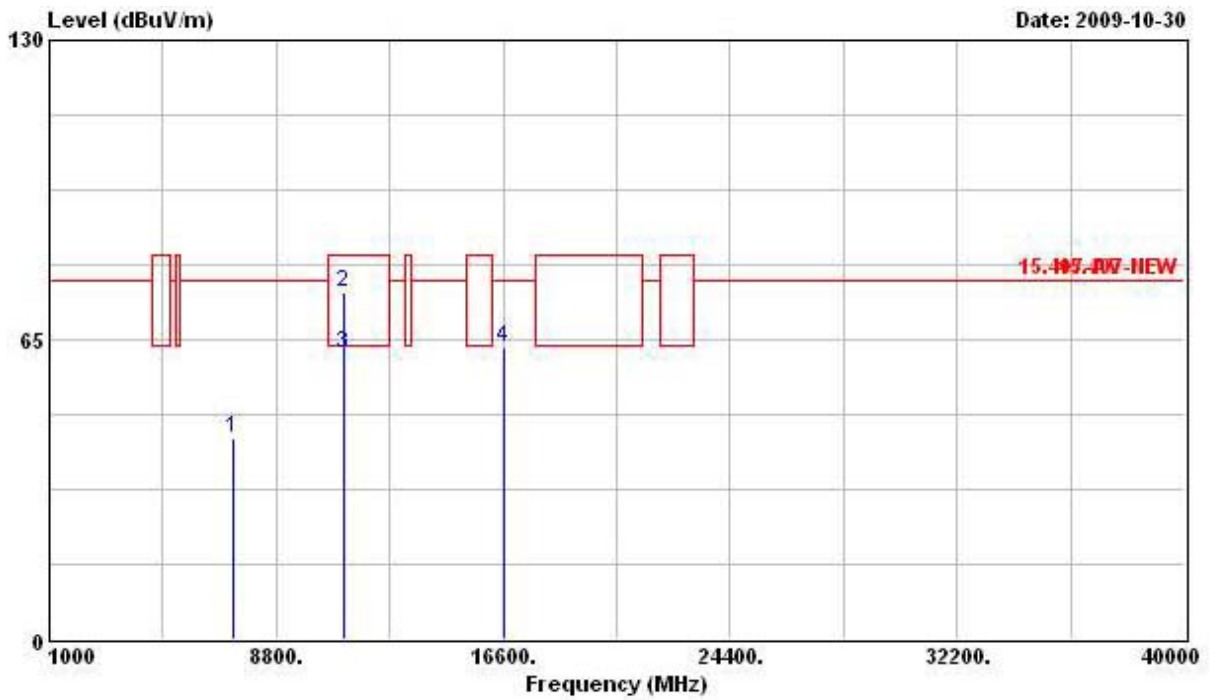
Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 134 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB		cm	deg
1	7119.000	44.29	-33.55	77.84	34.78	36.39	6.04	32.91	Peak	---	---
2	11100.000	74.31	-9.23	83.54	58.73	39.14	8.31	31.87	Peak	---	---
3	11100.000	61.49	-2.05	63.54	45.91	39.14	8.31	31.87	Average	---	---
4	16650.000	65.21	-12.63	77.84	45.34	39.71	11.28	31.13	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7327.000	43.56	-34.28	77.84	32.88	36.89	6.22	32.42	Peak	---	---
2	11100.000	75.32	-8.22	83.54	59.74	39.14	8.31	31.87	Peak	---	---
3 @	11100.000	61.88	-1.66	63.54	46.30	39.14	8.31	31.87	Average	---	---
4	16650.000	63.40	-14.44	77.84	43.53	39.71	11.28	31.13	Peak	---	---

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 1m.

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

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.7 Band Edge and Fundamental Emissions Measurement

3.7.1 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 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 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

3.7.2 Measuring Instruments and Setting

Please refer to section 4 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

3.7.3 Test Procedures

1. The test procedure is the same as section 3.6.3, only the frequency range investigated is limited to 100MHz around band edges.
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.

3.7.4 Test Setup Layout

This test setup layout is the same as that shown in section 3.6.4.

3.7.5 Test Deviation

There is no deviation with the original standard.

3.7.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.7.7 Test Result of Band Edge and Fundamental Emissions

For Single Chain:

Final Test Date	Oct. 27, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11a CH 36, 40, 48

Channel 36

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5145.900	78.44	-5.10	83.54	38.90	34.35	5.19	0.00	Peak
2 @	5183.000	120.43			80.84	34.38	5.21	0.00	Peak
1 @	5149.900	62.41	-1.13	63.54	22.33	34.89	5.19	0.00	Average
2 @	5183.000	110.03			69.91	34.91	5.21	0.00	Average

An item 2 is Fundamental Emissions.

Channel 40

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5107.600	67.75	-15.79	83.54	30.73	34.32	2.71	0.00	Peak
2 @	5195.920	117.32			80.05	34.40	2.87	0.00	Peak
3	5382.800	68.71	-14.83	83.54	30.86	34.58	3.27	0.00	Peak
1 @	5146.960	54.76	-8.78	63.54	17.62	34.35	2.79	0.00	Average
2 @	5195.600	106.72			69.45	34.40	2.87	0.00	Average
3 @	5403.280	54.21	-9.33	63.54	16.34	34.60	3.27	0.00	Average

An item 2 is Fundamental Emissions.

Channel 48

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5140.560	67.31	-16.23	83.54	27.25	34.89	5.17	0.00	Peak
2 @	5235.600	117.93			77.76	34.94	5.23	0.00	Peak
3	5401.680	68.49	-15.05	83.54	28.15	35.04	5.30	0.00	Peak
1	5148.240	53.72	-9.82	63.54	13.64	34.89	5.19	0.00	Average
2 @	5236.560	107.42			67.25	34.94	5.23	0.00	Average
3	5363.600	54.34	-9.20	63.54	14.04	35.02	5.28	0.00	Average

An item 2 is Fundamental Emissions.

Final Test Date	Oct. 27, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11a CH 52, 56, 64

Channel 52

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5135.440	53.55	-9.99	63.54	13.50	34.88	5.17	0.00	Average
2 @	5263.760	107.90			67.69	34.96	5.25	0.00	Average
3	5408.400	54.42	-9.12	63.54	14.08	35.04	5.30	0.00	Average
1	5115.280	67.31	-16.23	83.54	27.27	34.87	5.17	0.00	Peak
2 @	5257.040	118.40			78.22	34.95	5.23	0.00	Peak
3	5377.360	68.41	-15.13	83.54	28.09	35.02	5.30	0.00	Peak

An item 2 is Fundamental Emissions.

Channel 56

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5142.160	67.35	-16.19	83.54	27.29	34.89	5.17	0.00	Peak
2 @	5276.560	118.56			78.34	34.97	5.25	0.00	Peak
3	5359.440	68.84	-14.70	83.54	28.55	35.01	5.28	0.00	Peak
1	5141.840	53.64	-9.90	63.54	13.58	34.89	5.17	0.00	Average
2 @	5283.920	108.08			67.86	34.97	5.25	0.00	Average
3	5363.600	55.63	-7.91	63.54	15.33	35.02	5.28	0.00	Average

An item 2 is Fundamental Emissions.

Channel 64

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5316.370	118.94			78.69	34.99	5.26	0.00	Peak
2	5352.770	77.24	-6.30	83.54	36.95	35.01	5.28	0.00	Peak
1 @	5323.930	108.44			68.19	34.99	5.26	0.00	Average
2	5352.770	57.32	-6.22	63.54	17.03	35.01	5.28	0.00	Average

An item 1 is Fundamental Emissions.

Final Test Date	Nov. 06, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11a CH 100, 116, 140

Channel 100

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5459.500	75.20	-8.34	83.54	34.79	35.07	5.34	0.00	Peak
2 @	5496.200	121.39			80.95	35.09	5.35	0.00	Peak
1	5458.600	58.54	-5.00	63.54	18.13	35.07	5.34	0.00	Average
2 @	5496.600	110.74			70.29	35.10	5.35	0.00	Average

An item 2 is Fundamental Emissions.

Channel 116

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5453.320	67.97	-15.57	83.54	28.00	34.65	5.32	0.00	Peak
2 @	5576.820	121.26			81.17	34.71	5.38	0.00	Peak
3	5754.660	69.23	-18.61	87.84	29.06	34.75	5.42	0.00	Peak
1	5453.700	55.16	-8.38	63.54	15.19	34.65	5.32	0.00	Average
2 @	5585.940	110.72			70.63	34.72	5.38	0.00	Average
3	5724.260	55.47	-32.37	87.84	15.32	34.74	5.41	0.00	Average

An item 2 is Fundamental Emissions.

Channel 140

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5696.400	112.19			71.42	35.37	5.41	0.00	Average
2	5725.080	69.98	-17.86	87.84	29.16	35.41	5.41	0.00	Average
1 @	5695.920	122.76			81.99	35.37	5.41	0.00	Peak
2 @	5726.280	85.56	-2.28	87.84	44.74	35.41	5.41	0.00	Peak

An item 1 is Fundamental Emissions.

For Two Chain:

Final Test Date	Oct. 30, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 36, 40, 48 (20MHz)

Channel 36

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5147.900	79.64	-3.90	83.54	40.10	34.35	5.19	0.00	Peak
2 @	5187.500	122.57			82.98	34.38	5.21	0.00	Peak
1 @	5150.000	62.40	-1.14	63.54	22.86	34.35	5.19	0.00	Average
2 @	5183.900	110.97			71.38	34.38	5.21	0.00	Average

An item 2 is Fundamental Emissions.

Channel 40

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5147.280	71.28	-12.26	83.54	31.74	34.35	5.19	0.00	Peak
2 @	5196.880	120.65			81.04	34.40	5.21	0.00	Peak
3	5380.240	69.59	-13.95	83.54	29.71	34.58	5.30	0.00	Peak
1	5147.280	57.88	-5.66	63.54	18.34	34.35	5.19	0.00	Average
2 @	5203.600	108.93			69.32	34.40	5.21	0.00	Average
3	5399.120	55.07	-8.47	63.54	15.17	34.60	5.30	0.00	Average

An item 2 is Fundamental Emissions.

Channel 48

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5148.560	68.47	-15.07	83.54	28.93	34.35	5.19	0.00	Peak
2 @	5234.320	121.86			82.20	34.43	5.23	0.00	Peak
3	5358.480	69.56	-13.98	83.54	29.73	34.55	5.28	0.00	Peak
1	5147.280	54.16	-9.38	63.54	14.62	34.35	5.19	0.00	Average
2 @	5243.280	109.78			70.10	34.45	5.23	0.00	Average
3	5396.560	55.26	-8.28	63.54	15.36	34.60	5.30	0.00	Average

An item 2 is Fundamental Emissions.

Final Test Date	Oct. 31, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 52, 56, 64 (20MHz)

Channel 52

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5090.960	67.75	-15.79	83.54	28.29	34.30	5.16	0.00	Peak
2 @	5257.040	121.53			81.85	34.45	5.23	0.00	Peak
3	5407.120	70.18	-13.36	83.54	30.28	34.60	5.30	0.00	Peak
1	5144.400	53.94	-9.60	63.54	14.40	34.35	5.19	0.00	Average
2 @	5252.240	109.64			69.96	34.45	5.23	0.00	Average
3	5409.680	56.08	-7.46	63.54	16.18	34.60	5.30	0.00	Average

An item 2 is Fundamental Emissions.

Channel 56

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5126.480	67.12	-16.42	83.54	27.61	34.33	5.17	0.00	Peak
2 @	5282.640	121.69			81.96	34.48	5.25	0.00	Peak
3	5363.600	70.73	-12.81	83.54	30.88	34.57	5.28	0.00	Peak
1	5148.240	53.45	-10.09	63.54	13.91	34.35	5.19	0.00	Average
2 @	5283.920	109.84			70.11	34.48	5.25	0.00	Average
3	5355.600	56.86	-6.68	63.54	17.03	34.55	5.28	0.00	Average

An item 2 is Fundamental Emissions.

Channel 64

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5327.570	121.05			81.25	34.53	5.26	0.00	Peak
2	5350.810	74.43	-9.11	83.54	34.60	34.55	5.28	0.00	Peak
1 @	5326.940	109.10			69.30	34.53	5.26	0.00	Average
2	5352.140	58.85	-4.69	63.54	19.02	34.55	5.28	0.00	Average

An item 1 is Fundamental Emissions.

Final Test Date	Oct. 31, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 100, 116, 140 (20MHz)

Channel 100

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5447.100	74.01	-9.53	83.54	34.04	34.65	5.32	0.00	Peak
2 @	5492.700	121.94			81.92	34.68	5.34	0.00	Peak
1 @	5447.900	61.17	-2.37	63.54	21.20	34.65	5.32	0.00	Average
2 @	5493.000	110.37			70.33	34.68	5.35	0.00	Average

An item 2 is Fundamental Emissions.

Channel 116

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5453.320	69.72	-13.82	83.54	29.75	34.65	5.32	0.00	Peak
2 @	5581.380	122.23			82.14	34.71	5.38	0.00	Peak
3	5716.660	71.05	-16.79	87.84	30.90	34.74	5.41	0.00	Peak
1	5438.120	55.89	-7.65	63.54	15.94	34.63	5.32	0.00	Average
2 @	5584.040	109.95			69.86	34.72	5.38	0.00	Average
3	5724.260	57.96	-29.88	87.84	17.81	34.74	5.41	0.00	Average

An item 2 is Fundamental Emissions.

Channel 140

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5704.200	123.80			83.65	34.74	5.41	0.00	Peak
2 @	5725.080	86.76	-1.08	87.84	46.61	34.74	5.41	0.00	Peak
1 @	5696.040	113.69			73.54	34.74	5.41	0.00	Average
2	5725.080	71.45	-16.39	87.84	31.30	34.74	5.41	0.00	Average

An item 1 is Fundamental Emissions.

Final Test Date	Oct. 31, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 38, 46, 54 (40MHz)

Channel 38

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5148.730	81.64	-1.90	83.54	42.10	34.35	5.19	0.00	Peak
2 @	5197.900	117.90			78.29	34.40	5.21	0.00	Peak
1 @	5149.830	61.78	-1.76	63.54	22.24	34.35	5.19	0.00	Average
2 @	5205.930	99.73			60.12	34.40	5.21	0.00	Average

An item 2 is Fundamental Emissions.

Channel 46

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5144.720	67.70	-15.84	83.54	28.16	34.35	5.19	0.00	Peak
2 @	5237.840	119.20			79.54	34.43	5.23	0.00	Peak
3	5389.200	68.60	-14.94	83.54	28.72	34.58	5.30	0.00	Peak
1	5148.560	54.65	-8.89	63.54	15.11	34.35	5.19	0.00	Average
2 @	5234.320	107.41			67.75	34.43	5.23	0.00	Average
3	5356.880	54.72	-8.82	63.54	14.89	34.55	5.28	0.00	Average

An item 2 is Fundamental Emissions.

Channel 54

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5134.480	67.37	-16.17	83.54	27.86	34.33	5.17	0.00	Peak
2 @	5277.840	119.85			80.12	34.48	5.25	0.00	Peak
3	5353.360	70.55	-12.99	83.54	30.72	34.55	5.28	0.00	Peak
1	5148.240	53.81	-9.73	63.54	14.27	34.35	5.19	0.00	Average
2 @	5260.880	108.30			68.59	34.47	5.25	0.00	Average
3	5353.040	56.84	-6.70	63.54	17.01	34.55	5.28	0.00	Average

An item 2 is Fundamental Emissions.

Final Test Date	Oct. 31, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 62, 102, 110 (40MHz)

Channel 62

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5305.680	117.61			77.85	34.50	5.26	0.00	Peak
2 @	5352.400	81.94	-1.60	83.54	42.11	34.55	5.28	0.00	Peak
1 @	5298.000	103.40			63.65	34.50	5.25	0.00	Average
2 @	5350.640	61.58	-1.96	63.54	21.75	34.55	5.28	0.00	Average

An item 1 is Fundamental Emissions.

Channel 102

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5459.800	81.86	-1.68	83.54	41.87	34.65	5.34	0.00	Peak
2 @	5521.900	118.39			78.33	34.70	5.35	0.00	Peak
1 @	5459.440	61.68	-1.86	63.54	21.69	34.65	5.34	0.00	Average
2 @	5520.460	102.62			62.56	34.70	5.35	0.00	Average

An item 2 is Fundamental Emissions.

Channel 110

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5677.560	120.02			79.89	34.73	5.40	0.00	Peak
2 @	5715.600	86.38	-1.46	87.84	46.23	34.74	5.41	0.00	Peak
1 @	5659.800	109.75			69.62	34.73	5.40	0.00	Average
2	5716.200	70.61	-17.23	87.84	30.46	34.74	5.41	0.00	Average

An item 1 is Fundamental Emissions.

Final Test Date	Nov. 06, 2009	Test Site No.	03CH02-HY
Temperature	20°C	Humidity	50%
Test Engineer	Steven	Configuration	802.11n CH 134 (40MHz)

Channel 134

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5456.360	78.45	-5.09	83.54	38.46	34.65	5.34	0.00	Peak
2 @	5543.380	122.51			82.44	34.71	5.37	0.00	Peak
3	5720.840	70.49	-17.35	87.84	30.34	34.74	5.41	0.00	Peak
1	5459.780	61.49	-2.05	63.54	21.50	34.65	5.34	0.00	Average
2 @	5538.440	110.42			70.35	34.71	5.37	0.00	Average
3	5725.400	56.69	-31.15	87.84	16.54	34.74	5.41	0.00	Average

An item 2 is Fundamental Emissions.

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 1m.

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

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.8 Frequency Stability Measurement

3.8.1 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 $\pm 20\text{ppm}$ (IEEE 802.11a specification).

3.8.2 Measuring Instruments and Setting

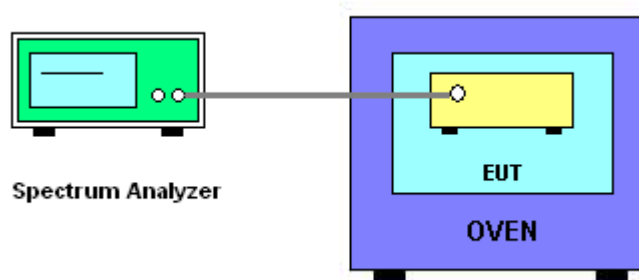
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

3.8.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
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 $\pm 20\text{ppm}$ (IEEE 802.11a specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature rule is $-30^\circ\text{C} \sim 50^\circ\text{C}$.
8. When measuring maximum conducted output power within multiple antenna systems, add every result of the values by mathematic formula.

3.8.4 Test Setup Layout



3.8.5 Test Deviation

There is no deviation with the original standard.

3.8.6 EUT Operation during Test

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

3.8.7 Test Result of Frequency Stability

Voltage vs. Frequency Stability

For Single Chain

Voltage (V)	Measurement Frequency (MHz)	
	IEEE 802.11a 5500 MHz	IEEE 802.11n 5500 MHz (20MHz)
126.5	5499.997400	5499.994900
110	5499.998700	5499.996600
93.5	5499.996800	5499.995900
Max. Deviation (MHz)	0.003200	0.005100
Max. Deviation (ppm)	0.58	0.93

Temperature vs. Frequency Stability

Temperature (°C)	Measurement Frequency (MHz)	
	IEEE 802.11a 5500 MHz	IEEE 802.11n 5500 MHz (20MHz)
-30	5499.987200	5499.990200
-20	5499.990700	5499.993500
-10	5499.998700	5499.998200
0	5499.996400	5499.997800
10	5499.996800	5499.995100
20	5499.998700	5499.991900
30	5499.986400	5499.986700
40	5499.981200	5499.981000
50	5499.976900	5499.977600
Max. Deviation (MHz)	0.023100	0.022400
Max. Deviation (ppm)	4.20	4.07

For Two Chain

Voltage	Measurement Frequency (MHz)
(V)	IEEE 802.11n 5510 MHz (40MHz)
126.5	5509.998200
110	5509.998900
93.5	5509.997500
Max. Deviation (MHz)	0.002500
Max. Deviation (ppm)	0.45

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	IEEE 802.11n 5510 (40MHz)
-30	5509.989800
-20	5509.992000
-10	5509.994200
0	5509.995500
10	5509.994700
20	5509.998500
30	5509.996100
40	5509.988500
50	5509.982300
Max. Deviation (MHz)	0.017700
Max. Deviation (ppm)	3.2123

3.9 Antenna Requirements

3.9.1 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.

3.9.2 Antenna Connector Construction

Please refer to section 2.2 in this test report; antenna connector complied with the requirements.

4 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, 2009	Conduction (CO04-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSU26.5	100015	20Hz ~ 26.5GHz	Oct. 01, 2009	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 31, 2009	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100666	DC ~ 30GHz	Aug. 05, 2009	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jul. 31, 2009	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	Aug. 06, 2009	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)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	Jul. 12, 2009*	Conducted (TH01-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	Apr. 28, 2009	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30 MHz - 2 GHz	Nov. 30, 2008	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB020	30 MHz - 1 GHz	Dec. 17, 2008	Radiation (03CH02-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX106	03CH02-HY	1GHz~40GHz	Dec. 17, 2008	Radiation (03CH02-HY)
Spectrum Analyzer	R&S	FSP40	100305/040	9 kHz - 40GHz	Feb. 04, 2009	Radiation (03CH02-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30 MHz - 1 GHz 3m	May 11, 2009	Radiation (03CH02-HY)
Amplifier	Agilent	8447D	2944A11146	100 kHz – 1.3 GHz	Jul. 07, 2009	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1GHz – 26.5 GHz	Jul. 16, 2009	Radiation (03CH02-HY)
Turn Table	HD	DS 420	420/649/00	0 - 360 degree	N/A	Radiation (03CH02-HY)
Antenna Mast	HD	MA 240	240/559/00	1 m - 4 m	N/A	Radiation (03CH02-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul 28, 2008*	Radiation (03CH02-HY)

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

5 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 728, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

6 TAF CERTIFICATE OF ACCREDITATION



Certificate No. : L1190-090318

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
Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : March 18, 2009

P1, total 19 pages

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