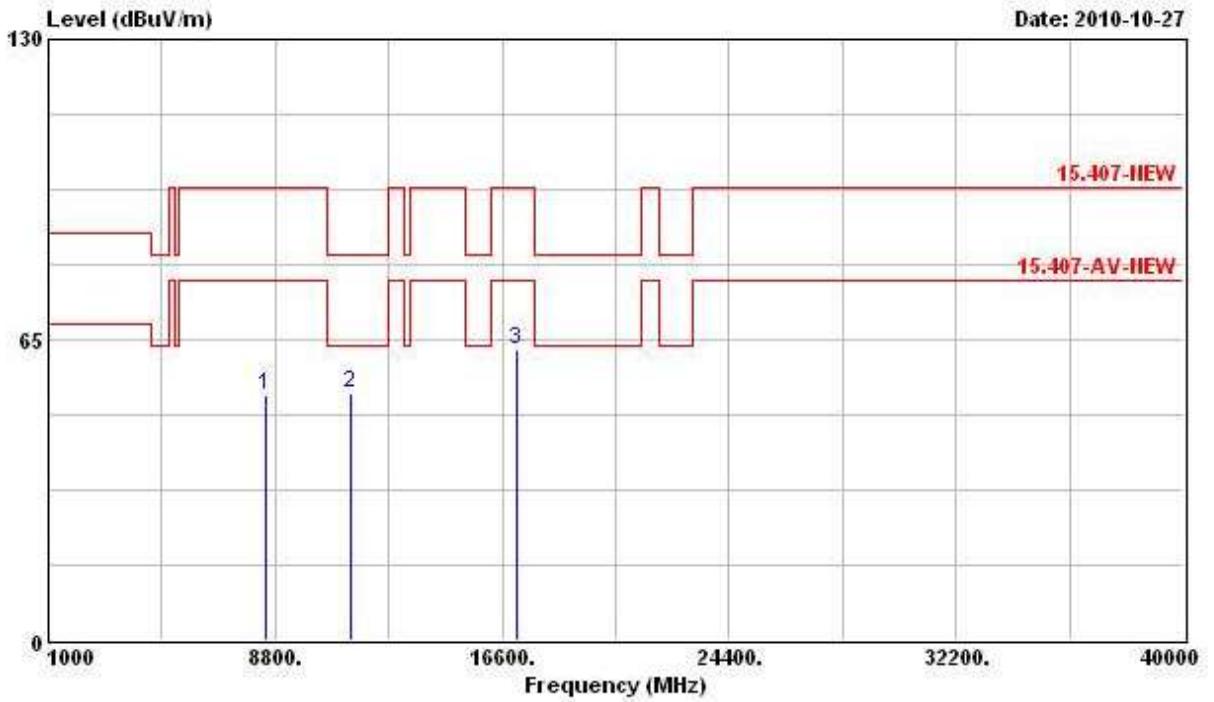


Vertical

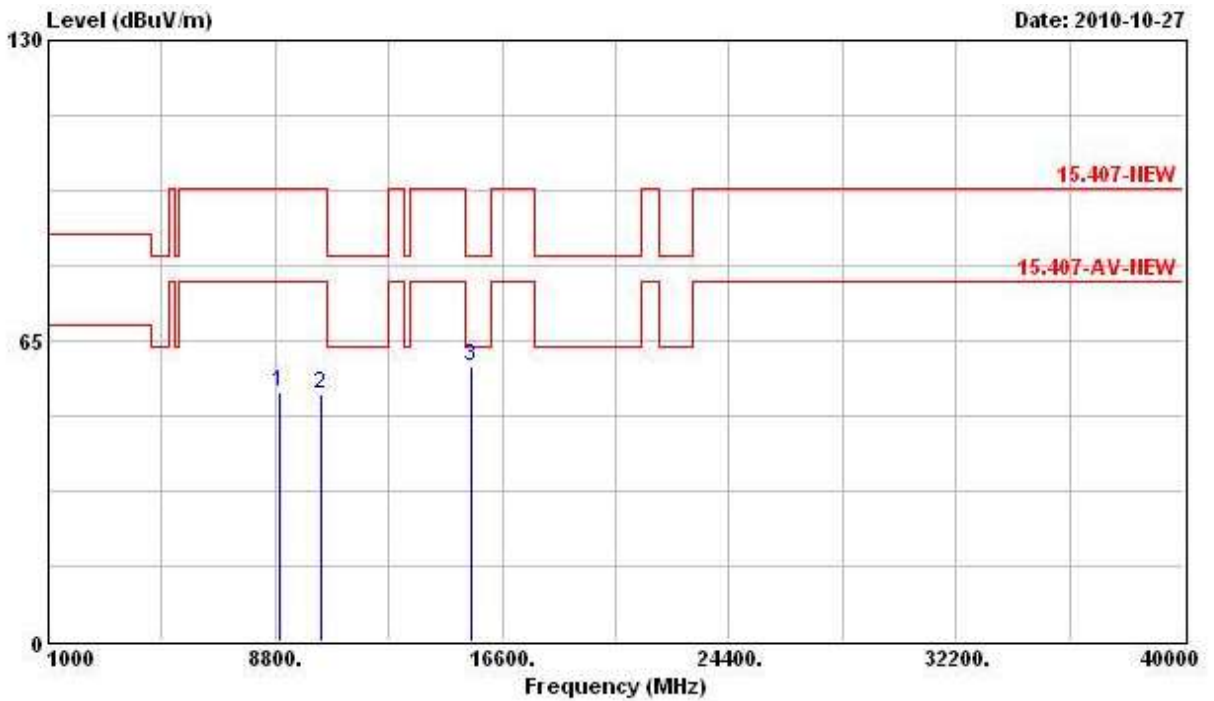


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8498.000	52.97	-24.87	77.84	42.45	38.20	5.36	33.05	PK
2	11400.000	53.50	-10.04	63.54	40.30	39.76	6.03	32.59	PK
3	17100.000	62.96	-34.88	97.84	44.98	42.24	7.40	31.66	PERK

For Two Chain:

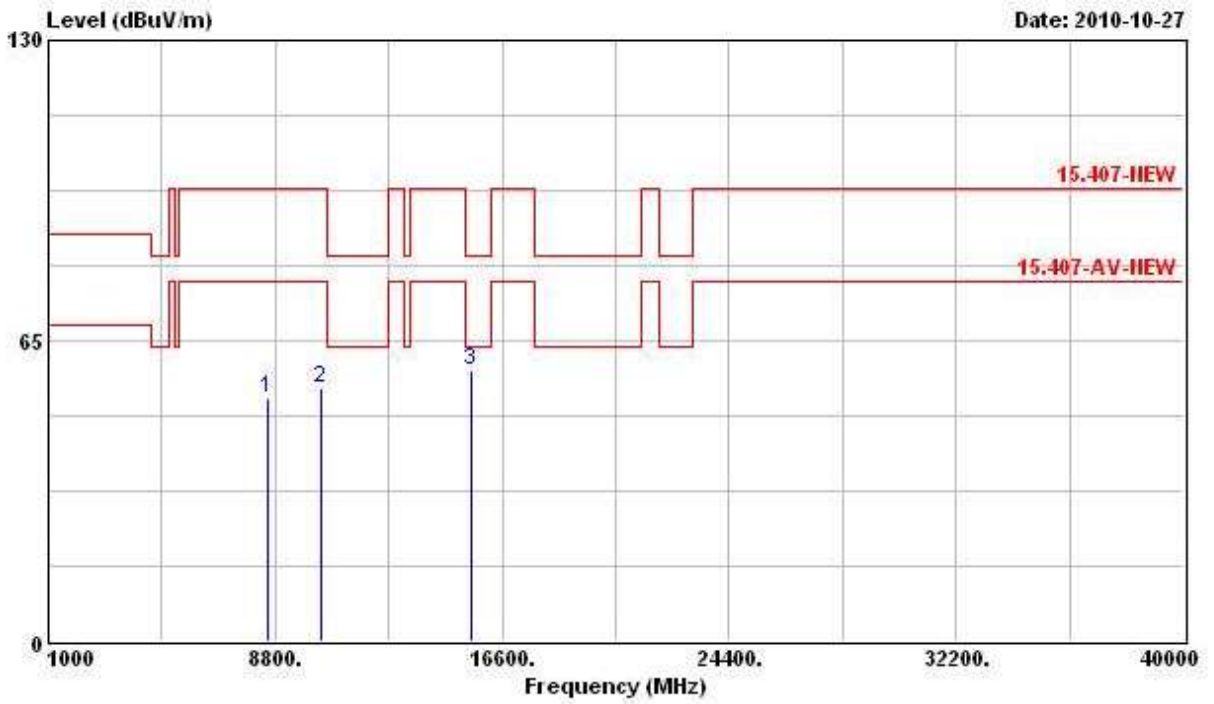
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 36 (20MHz) / (Ant. A+Ant. B)

Horizontal



	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	8920.000	53.97	-43.87	97.84	43.48	38.53	5.15	33.19	PEAK
2	10360.000	53.56	-44.28	97.84	41.28	39.55	5.75	33.02	PEAK
3	15540.000	59.50	-4.04	63.54	46.25	38.44	7.28	32.47	PK

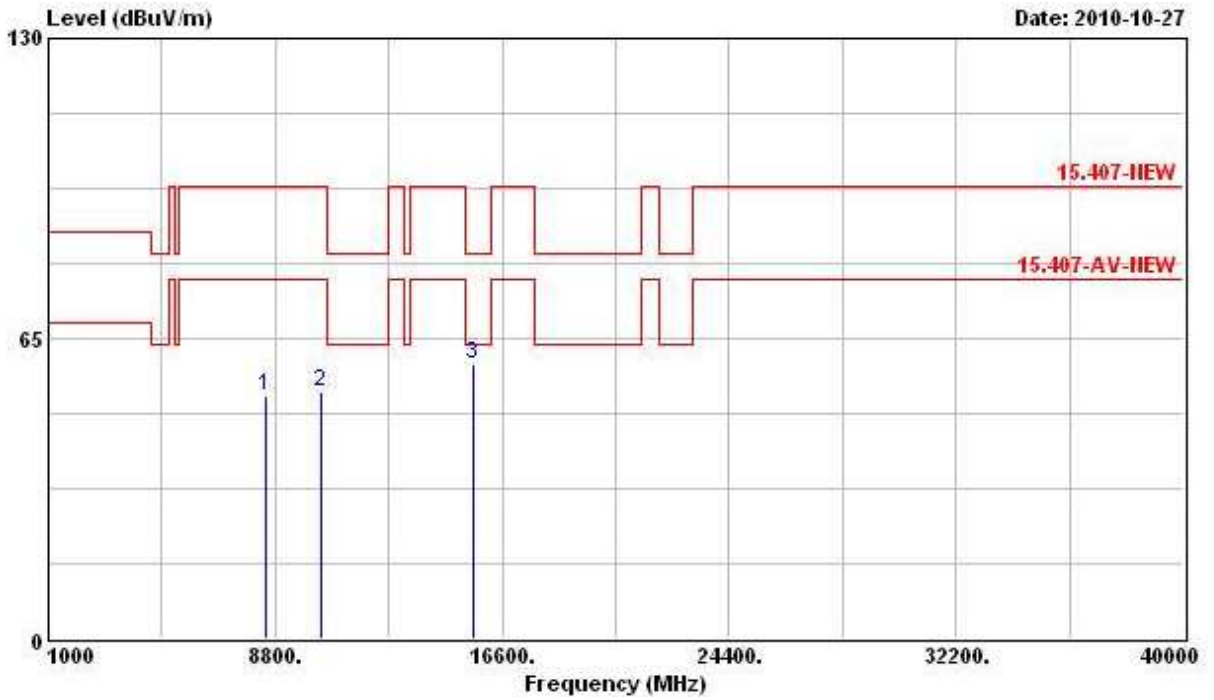
Vertical



	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	8530.000	52.69	-45.15	97.84	42.15	38.23	5.37	33.06	PEAK
2	10360.000	54.80	-43.04	97.84	42.52	39.55	5.75	33.02	PEAK
3	15544.000	58.47	-5.07	63.54	45.25	38.42	7.28	32.47	PK

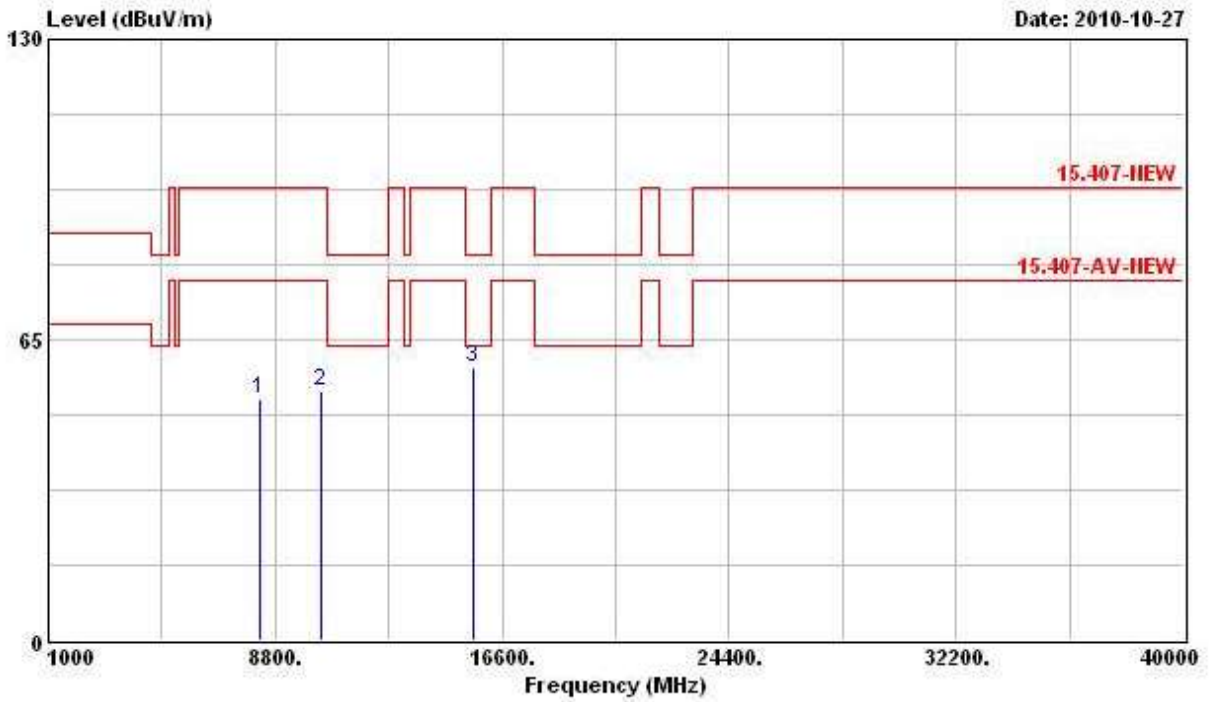
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 40 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	8494.000	52.67	-25.17	77.84	42.16	38.20	5.36	33.05	PK
2	10400.000	53.47	-44.37	97.84	41.14	39.54	5.77	32.98	PEAK
3	15600.000	59.23	-4.31	63.54	46.06	38.33	7.33	32.50	PK

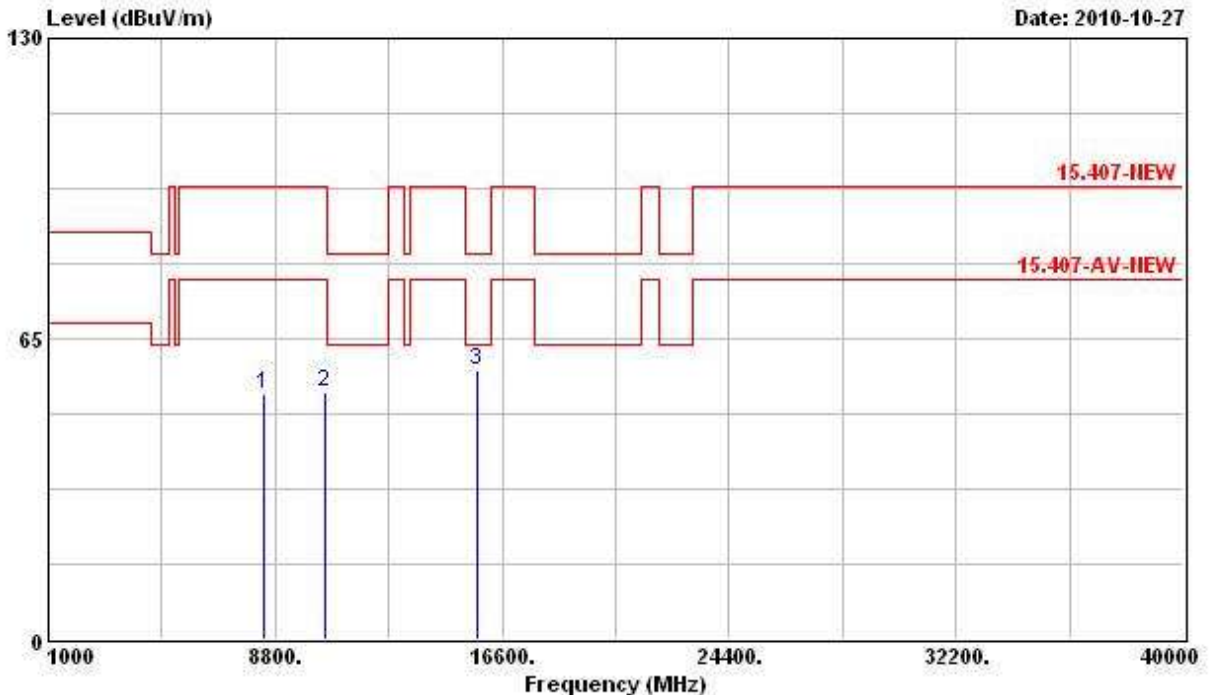
Vertical



	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	8294.000	52.15	-25.69	77.84	41.91	37.95	5.34	33.05	PK
2	10400.000	54.06	-43.78	97.84	41.73	39.54	5.77	32.98	PEAK
3	15600.000	59.04	-4.50	63.54	45.87	38.33	7.33	32.50	PK

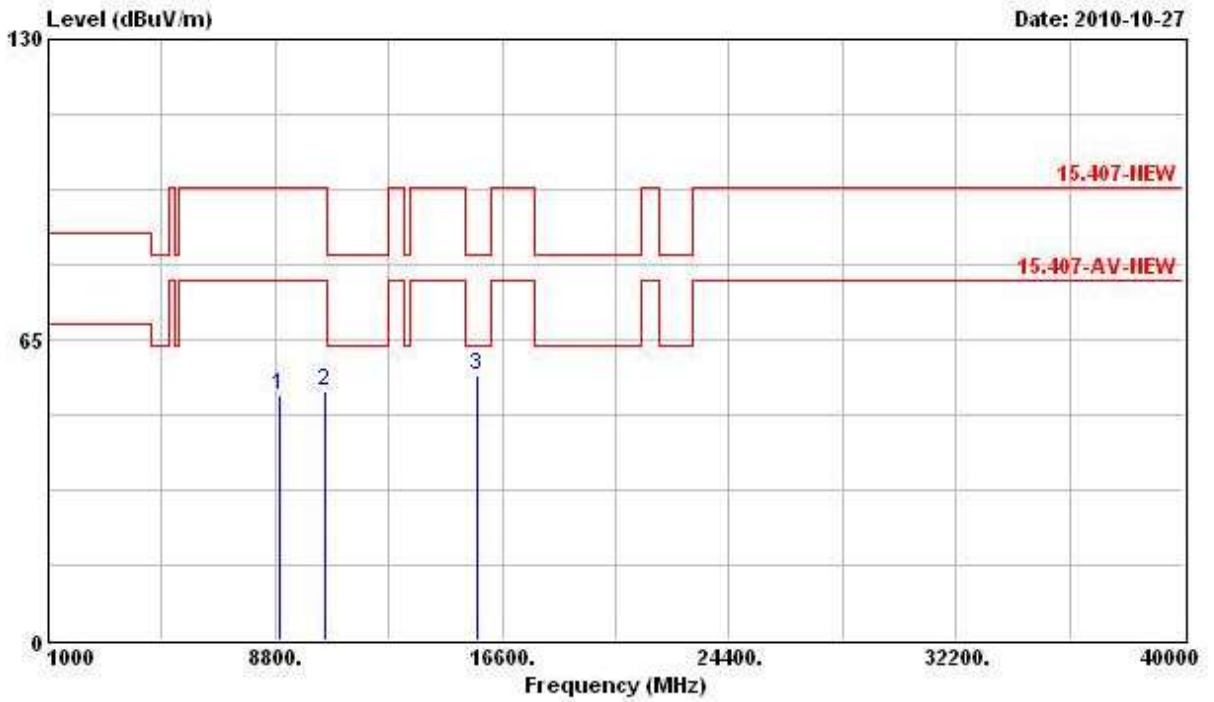
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 48 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	8392.000	53.13	-24.71	77.84	42.75	38.08	5.35	33.05	PK
2	10480.000	53.56	-44.28	97.84	41.17	39.51	5.80	32.91	PEAK
3	15720.000	58.24	-5.30	63.54	45.22	38.14	7.42	32.54	PK

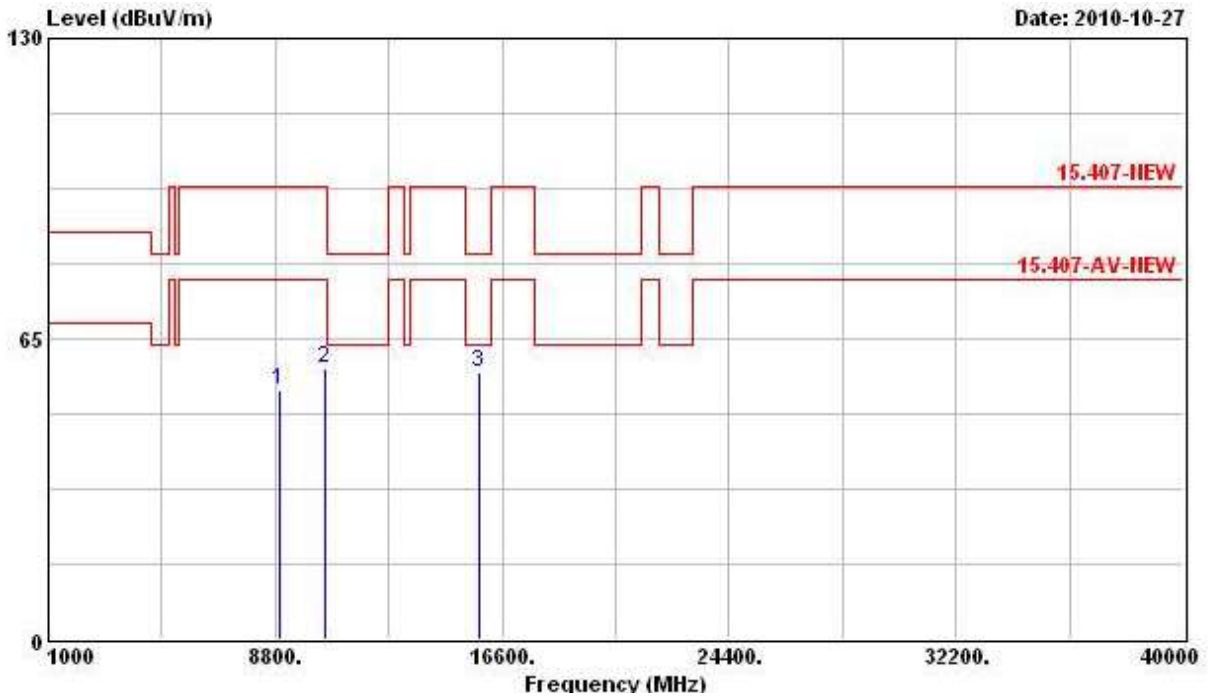
Vertical



	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	8962.000	53.05	-44.79	97.84	42.56	38.56	5.13	33.20	PEAK
2	10480.000	53.86	-43.98	97.84	41.47	39.51	5.80	32.91	PEAK
3	15720.000	57.38	-6.16	63.54	44.37	38.14	7.42	32.54	PK

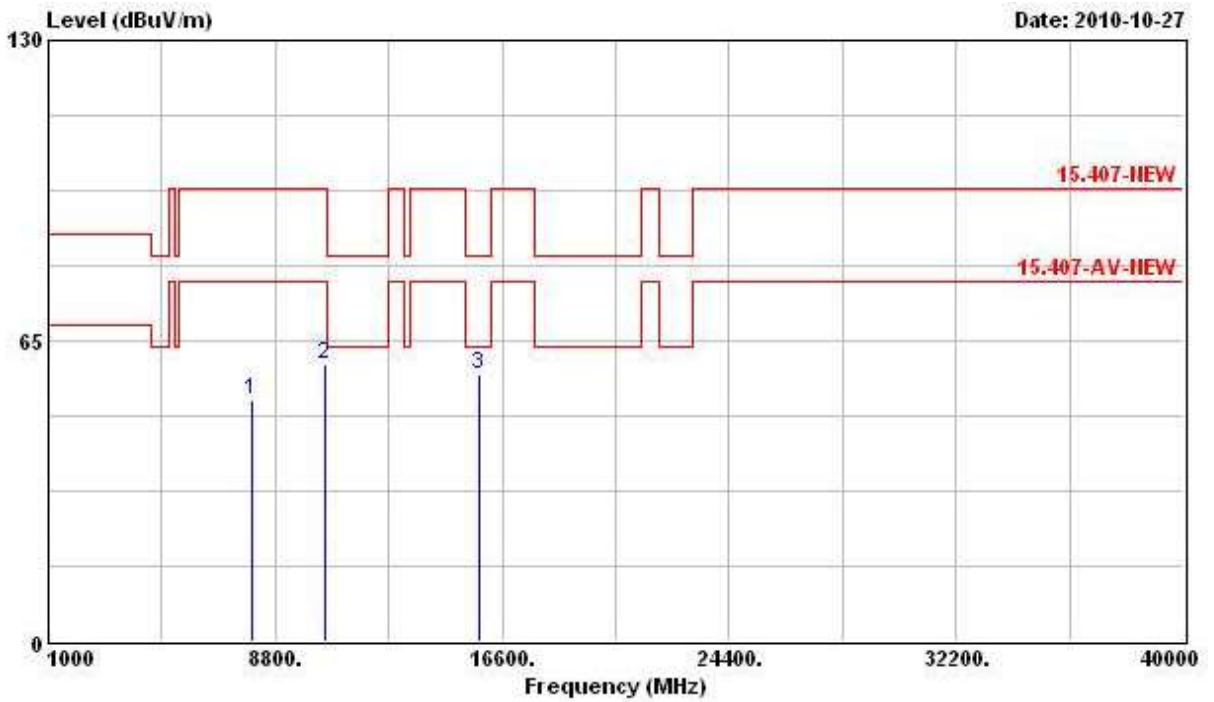
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 52 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable Preamp	Loss Factor	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8962.000	53.69	-44.15	97.84	43.21	38.56	5.13	33.20	PEAK
2	10520.000	58.40	-39.44	97.84	45.99	39.49	5.81	32.89	PEAK
3	15780.000	57.69	-5.85	63.54	44.76	38.06	7.44	32.57	PK

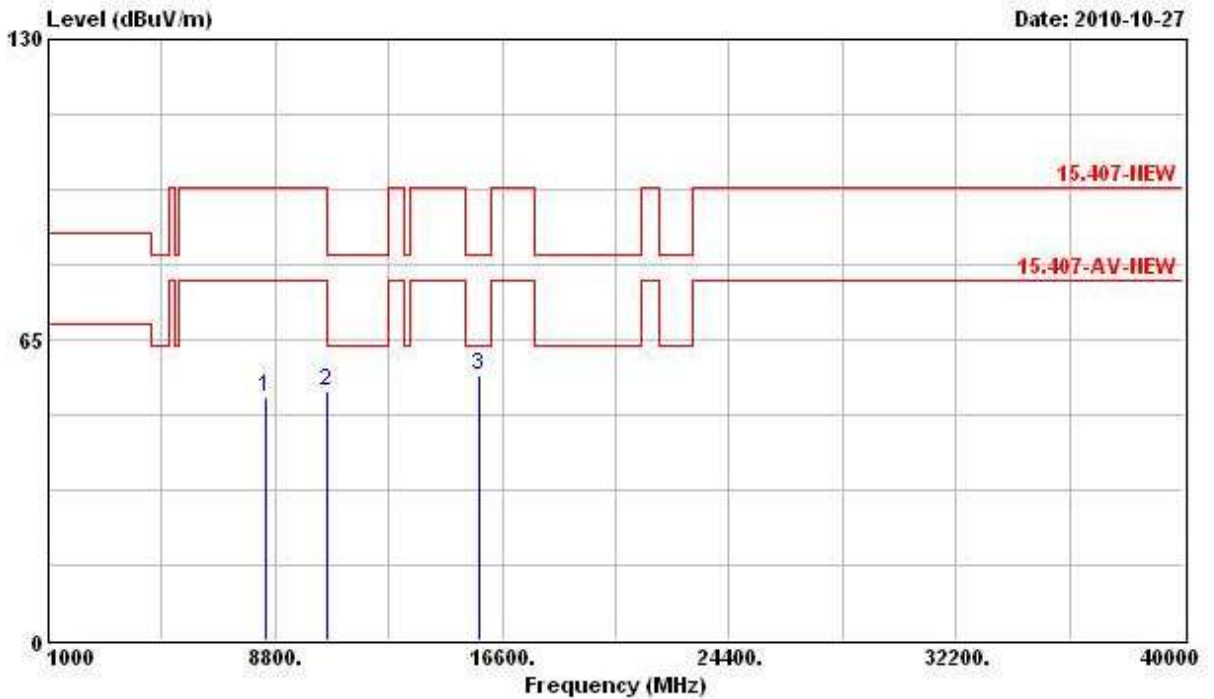
Vertical



	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	8000.000	52.22	-45.62	97.84	42.37	37.60	5.30	33.05	PEAK
2	10520.000	59.90	-37.94	97.84	47.49	39.49	5.81	32.89	PEAK
3	15780.000	57.80	-5.74	63.54	44.87	38.06	7.44	32.57	PK

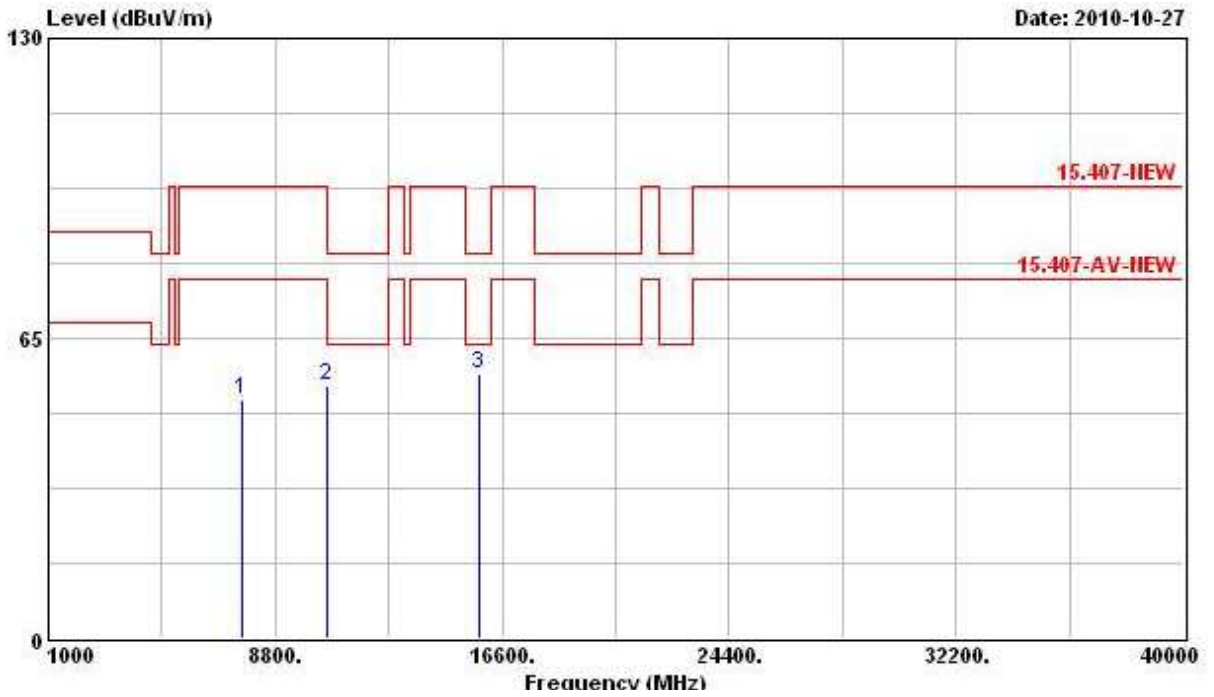
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 56 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable Preamp	Loss Factor	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8470.000	52.77	-25.07	77.84	42.30	38.16	5.36	33.05	PK
2	10560.000	53.91	-43.93	97.84	41.46	39.47	5.84	32.86	PEAK
3	15840.000	57.30	-6.24	63.54	44.45	37.95	7.50	32.59	PK

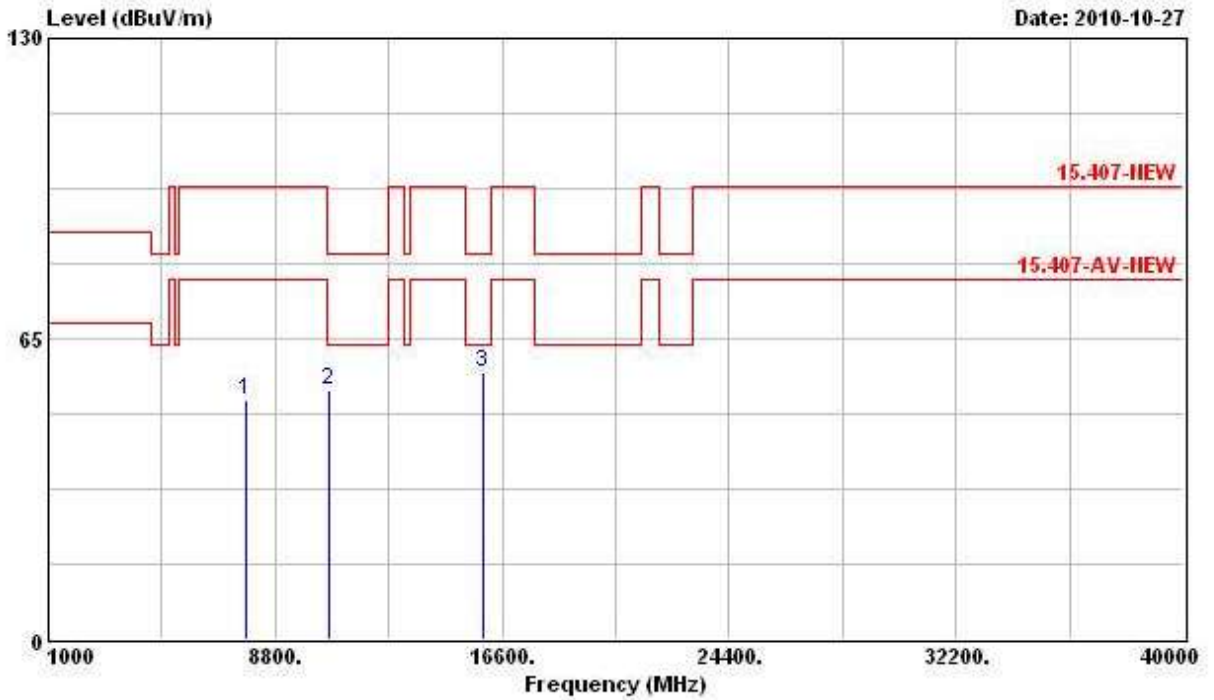
Vertical



	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	7682.000	51.93	-25.91	77.84	42.65	37.22	5.05	32.99	PK
2	10560.000	54.71	-43.13	97.84	42.26	39.47	5.84	32.86	PEAK
3	15840.000	57.42	-6.12	63.54	44.56	37.95	7.50	32.59	PK

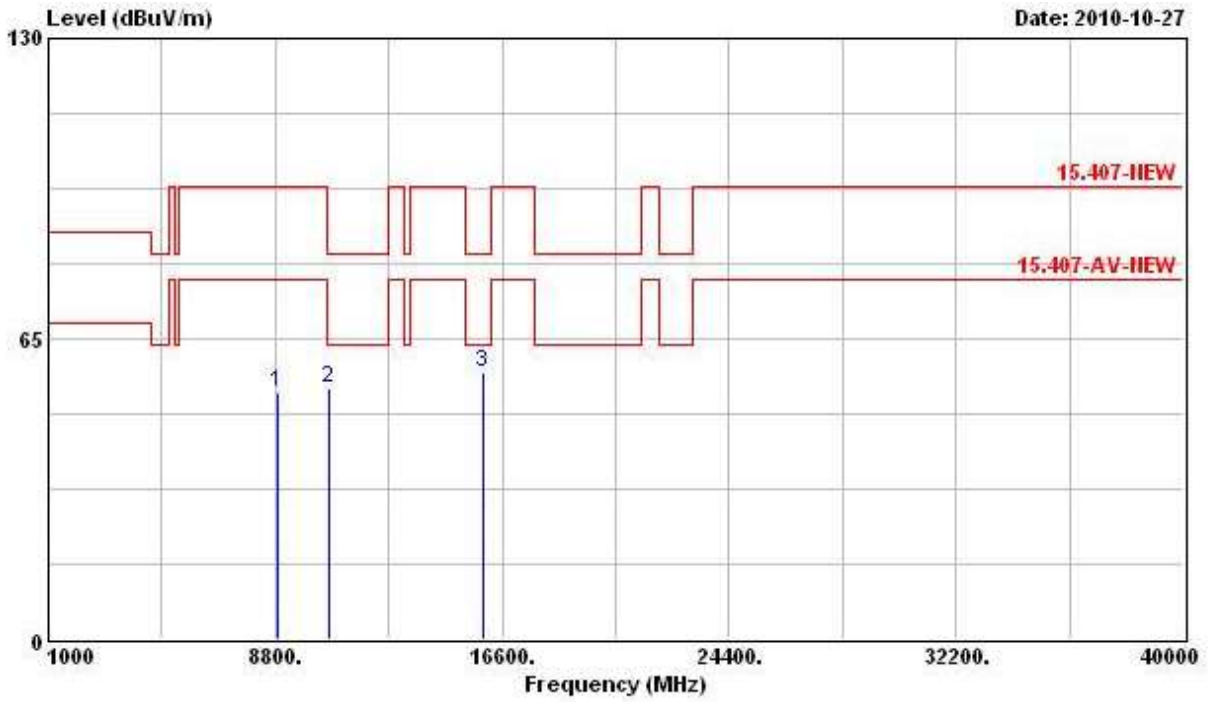
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 64 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	7810.000	51.82	-46.02	97.84	42.31	37.38	5.14	33.01	PEAK
2	10640.000	53.87	-29.67	83.54	41.37	39.42	5.91	32.82	PEAK
3	15960.000	57.93	-25.61	83.54	45.23	37.76	7.58	32.64	PK

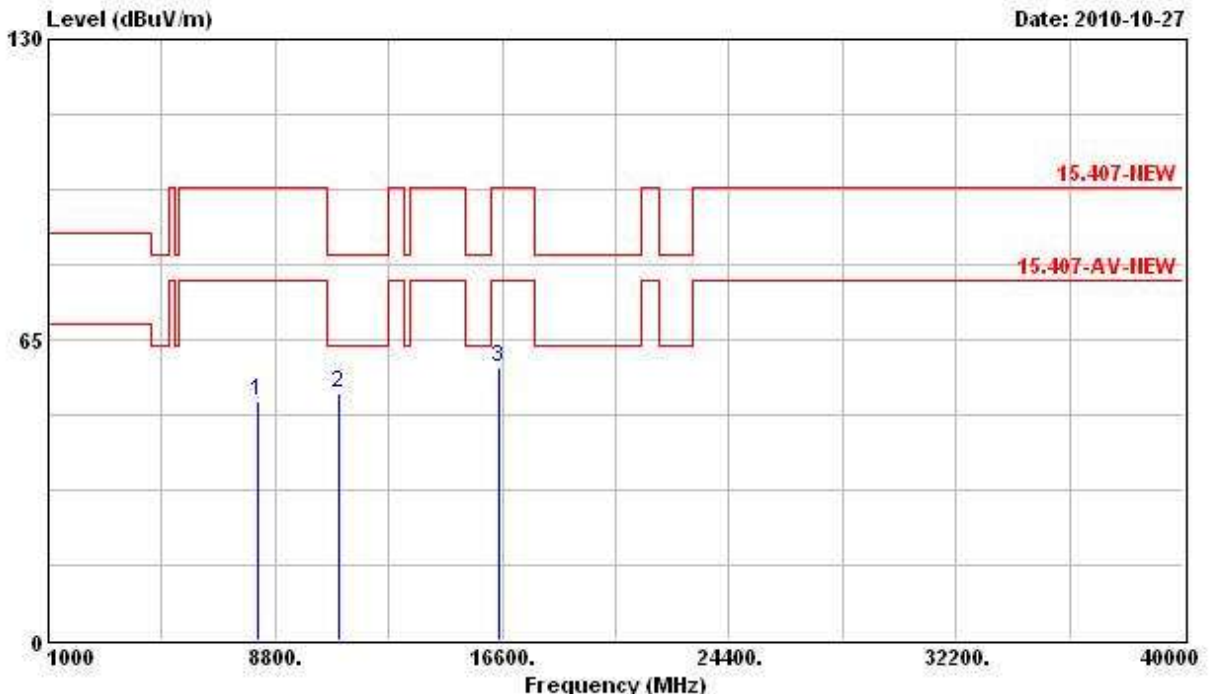
Vertical



	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	8858.000	53.40	-44.44	97.84	42.92	38.48	5.17	33.17	PEAK
2	10640.000	54.27	-9.27	63.54	41.76	39.42	5.91	32.82	PK
3	15960.000	57.86	-5.68	63.54	45.17	37.76	7.58	32.64	PK

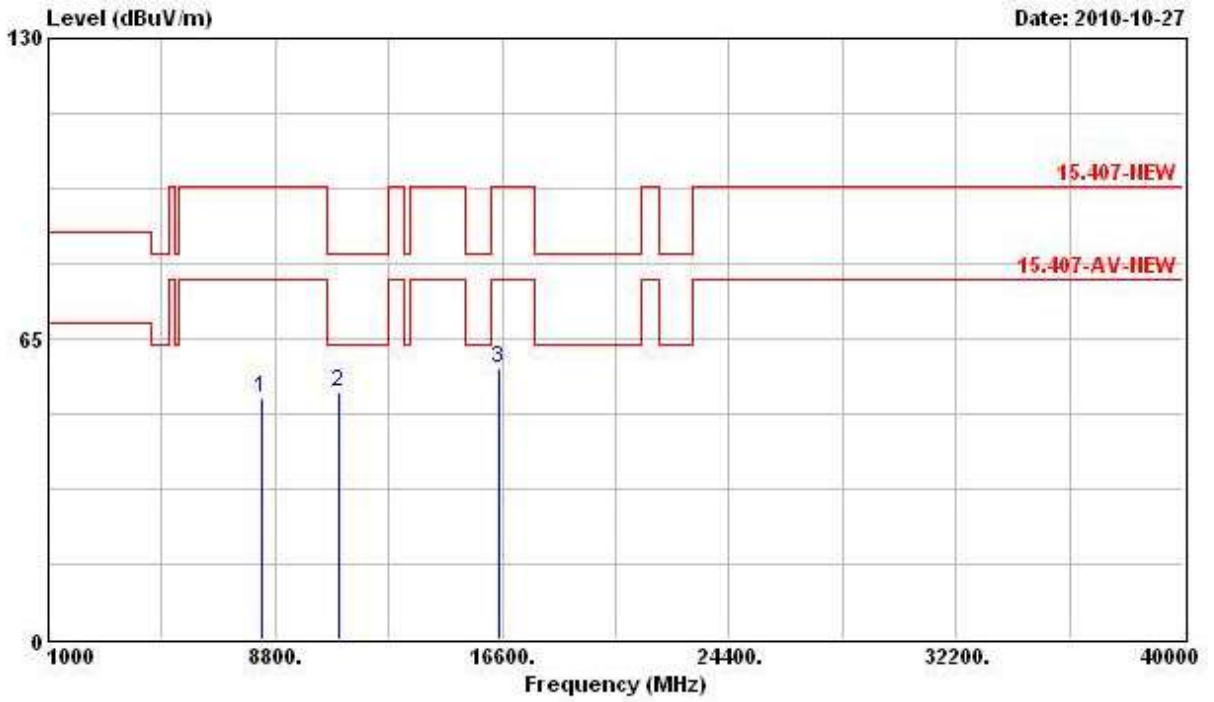
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 100 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	8220.000	51.91	-25.93	77.84	41.76	37.87	5.33	33.05	PK
2	11000.000	53.48	-10.06	63.54	40.67	39.20	6.23	32.62	PK
3	16500.000	58.96	-38.88	97.84	45.11	38.50	7.60	32.26	PEAK

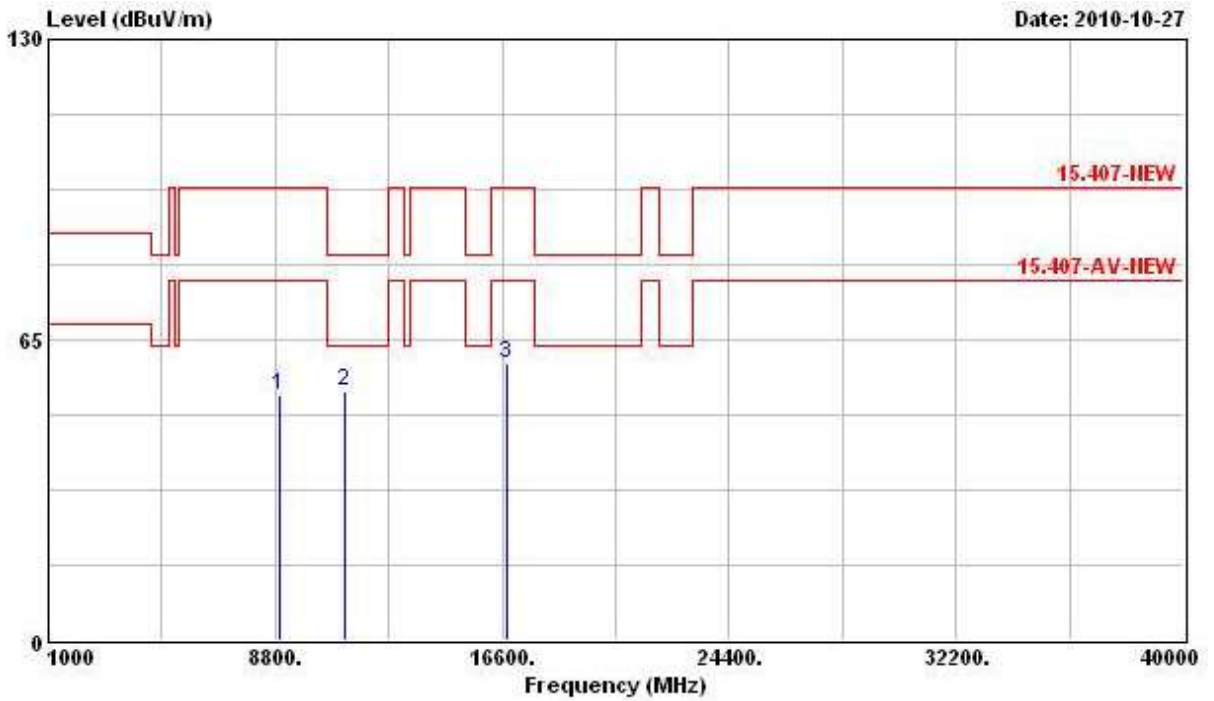
Vertical



	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	8320.000	52.17	-25.67	77.84	41.89	37.99	5.34	33.05	PK
2	11000.000	53.65	-9.89	63.54	40.84	39.20	6.23	32.62	PK
3	16500.000	58.77	-39.07	97.84	44.93	38.50	7.60	32.26	PEAK

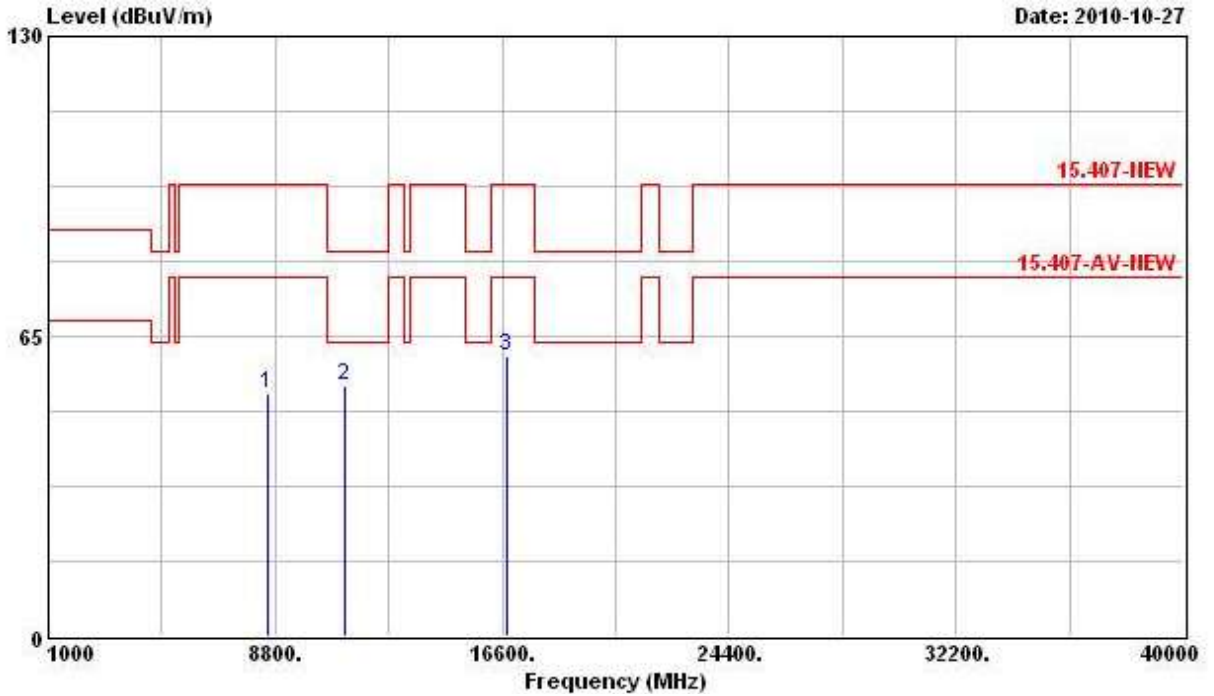
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 116 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	8960.000	52.89	-44.95	97.84	42.40	38.56	5.13	33.20	PEAK
2	11160.000	54.07	-9.47	63.54	41.09	39.43	6.15	32.61	PK
3	16740.000	59.88	-37.96	97.84	44.49	39.85	7.51	31.96	PEAK

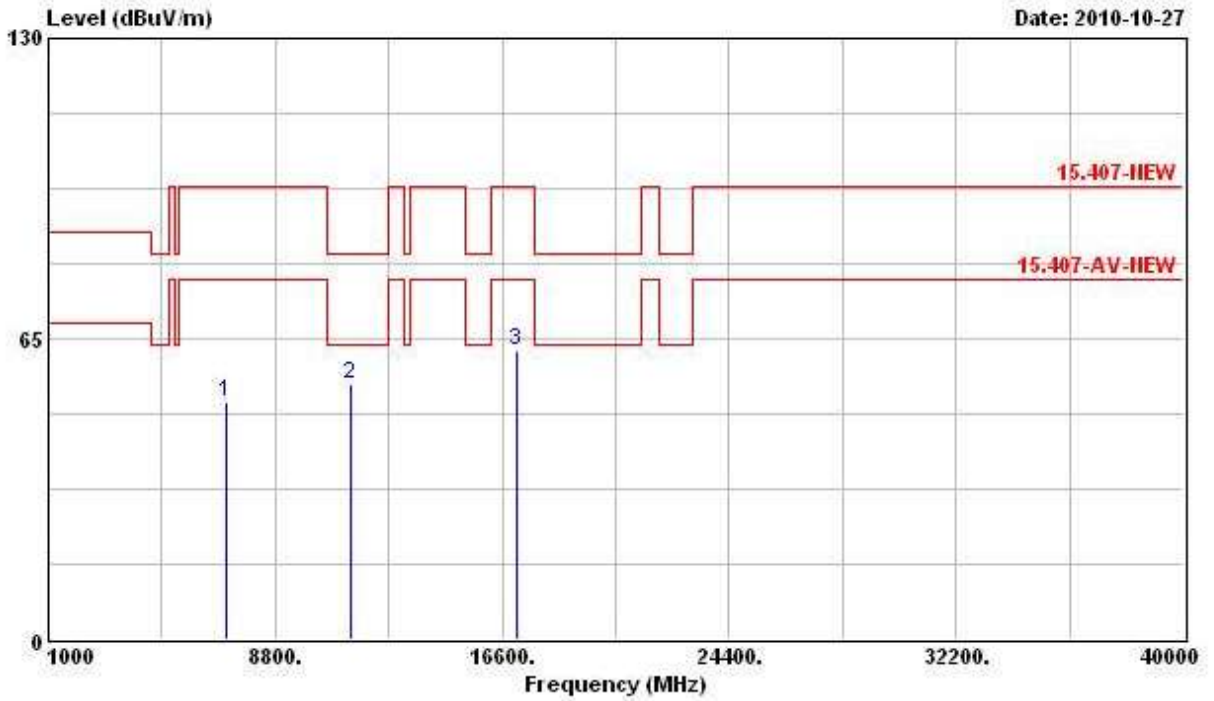
Vertical



	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	8540.000	52.60	-45.24	97.84	42.08	38.24	5.35	33.07	PEAK
2	11160.000	54.40	-9.14	63.54	41.43	39.43	6.15	32.61	PK
3	16740.000	60.80	-37.04	97.84	45.41	39.85	7.51	31.96	PEAK

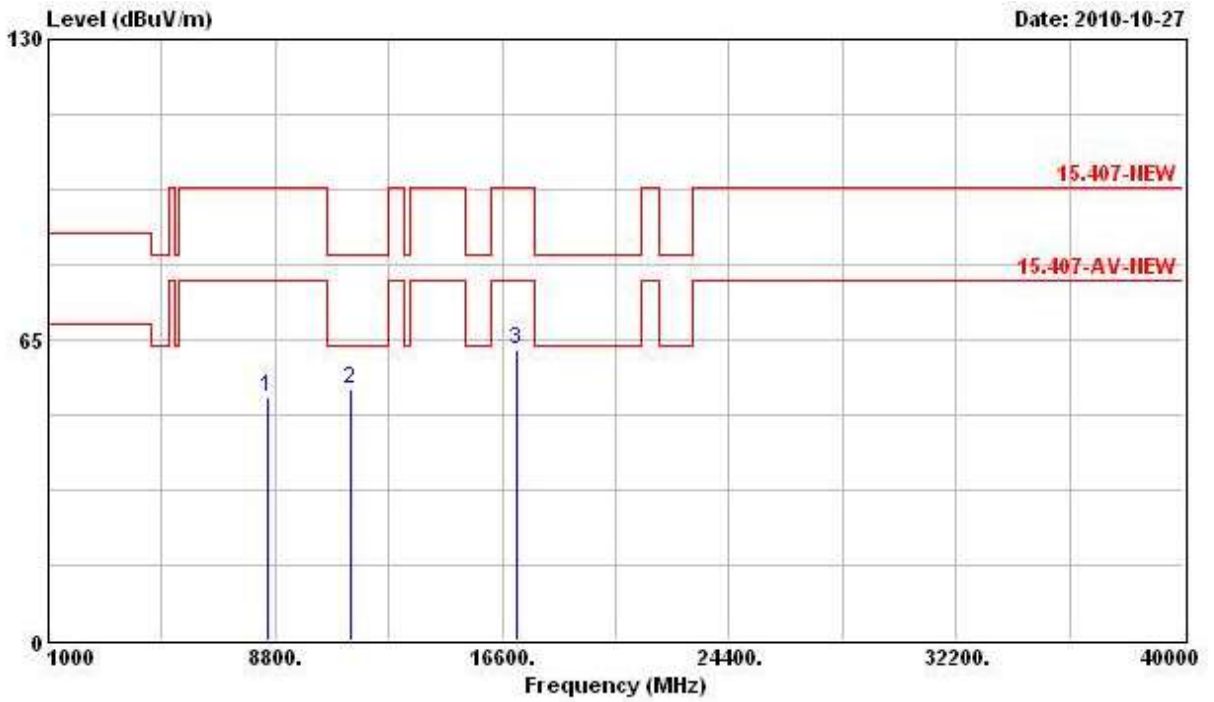
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 140 (20 MHz) / (Ant. A+Ant. B)

Horizontal



	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	7090.000	51.25	-46.59	97.84	43.47	36.26	4.36	32.84	PEAK
2	11400.000	55.06	-8.48	63.54	41.86	39.76	6.03	32.59	PK
3	17100.000	62.53	-35.31	97.84	44.55	42.24	7.40	31.66	PEAK

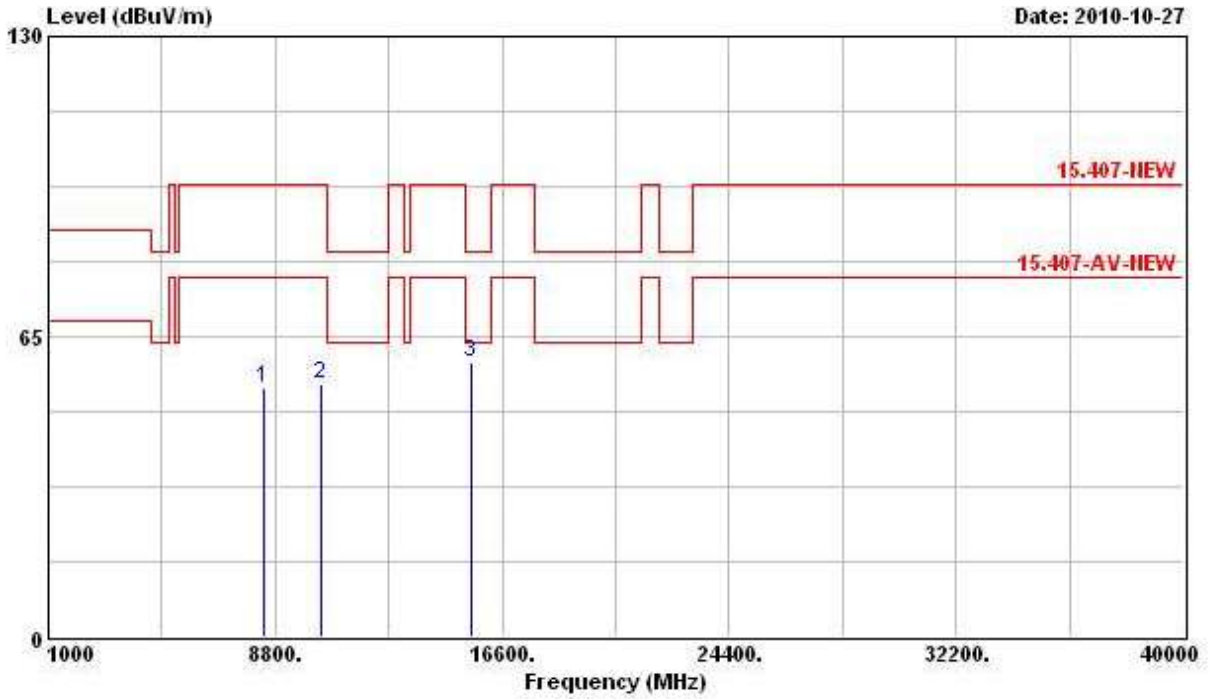
Vertical



	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	8562.000	52.81	-45.03	97.84	42.29	38.25	5.35	33.08	PEAK
2	11400.000	54.24	-9.30	63.54	41.04	39.76	6.03	32.59	PK
3	17100.000	62.74	-35.10	97.84	44.76	42.24	7.40	31.66	PEAK

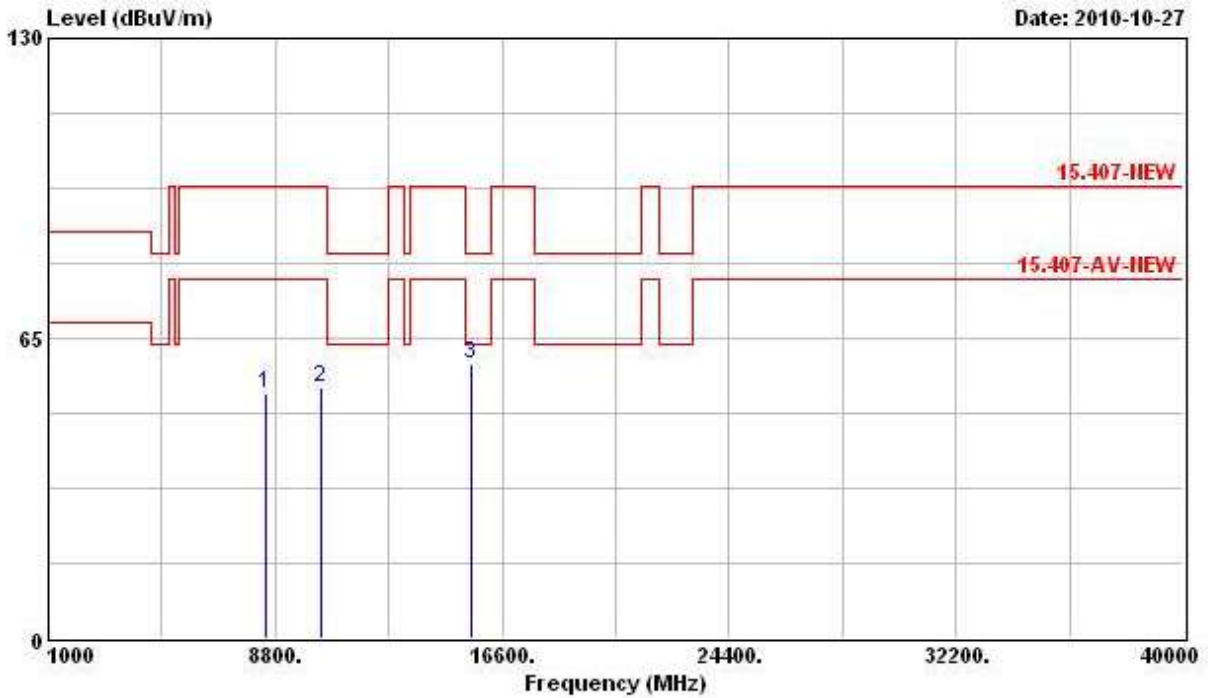
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 38 (40MHz) / (Ant. A + Ant. B)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	8378.000	53.77	-24.07	77.84	43.42	38.06	5.35	33.05 PK
2	10380.000	54.56	-43.28	97.84	42.24	39.55	5.77	33.00 PERK
3	15570.000	59.35	-4.19	63.54	46.13	38.39	7.30	32.48 PK

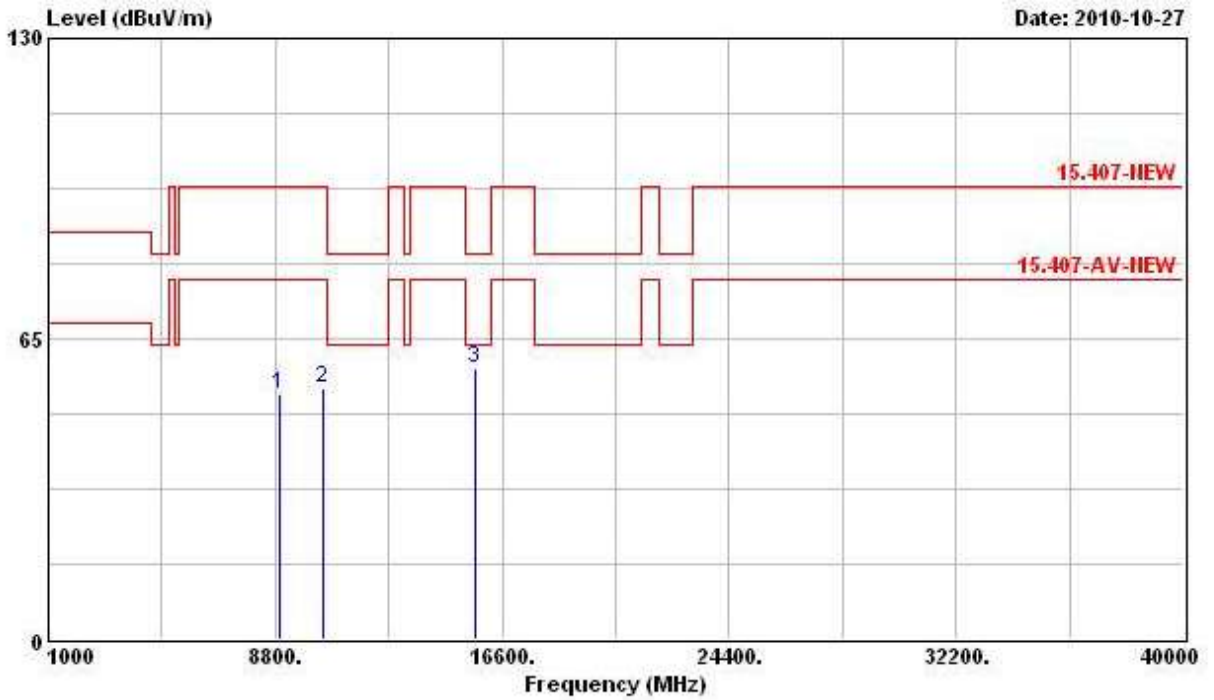
Vertical



	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	8474.000	53.09	-24.75	77.84	42.60	38.18	5.36	33.05	PK
2	10380.000	54.49	-43.35	97.84	42.17	39.55	5.77	33.00	PERK
3	15570.000	59.52	-4.02	63.54	46.30	38.39	7.30	32.48	PK

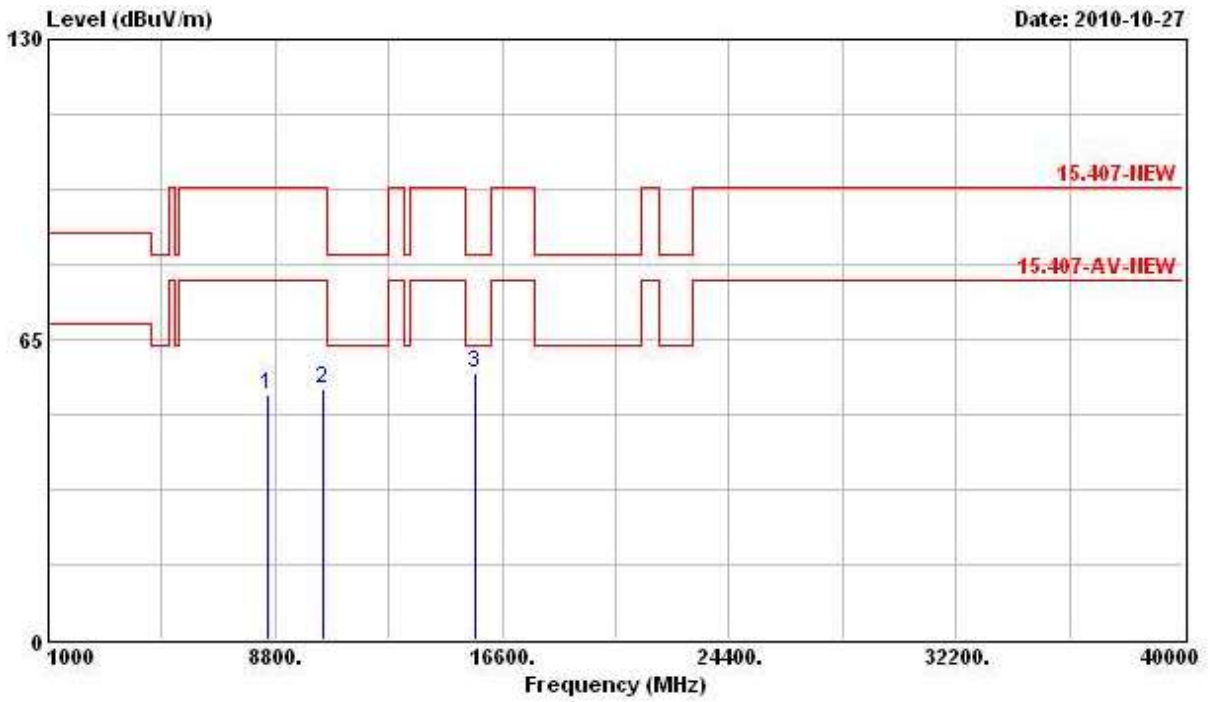
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 46 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8936.000	53.21	-44.63	97.84	42.73	38.55	5.13	33.19	PEAK
2	10460.000	54.10	-43.74	97.84	41.72	39.52	5.80	32.93	PEAK
3	15690.000	58.57	-4.97	63.54	45.51	38.20	7.39	32.53	PK

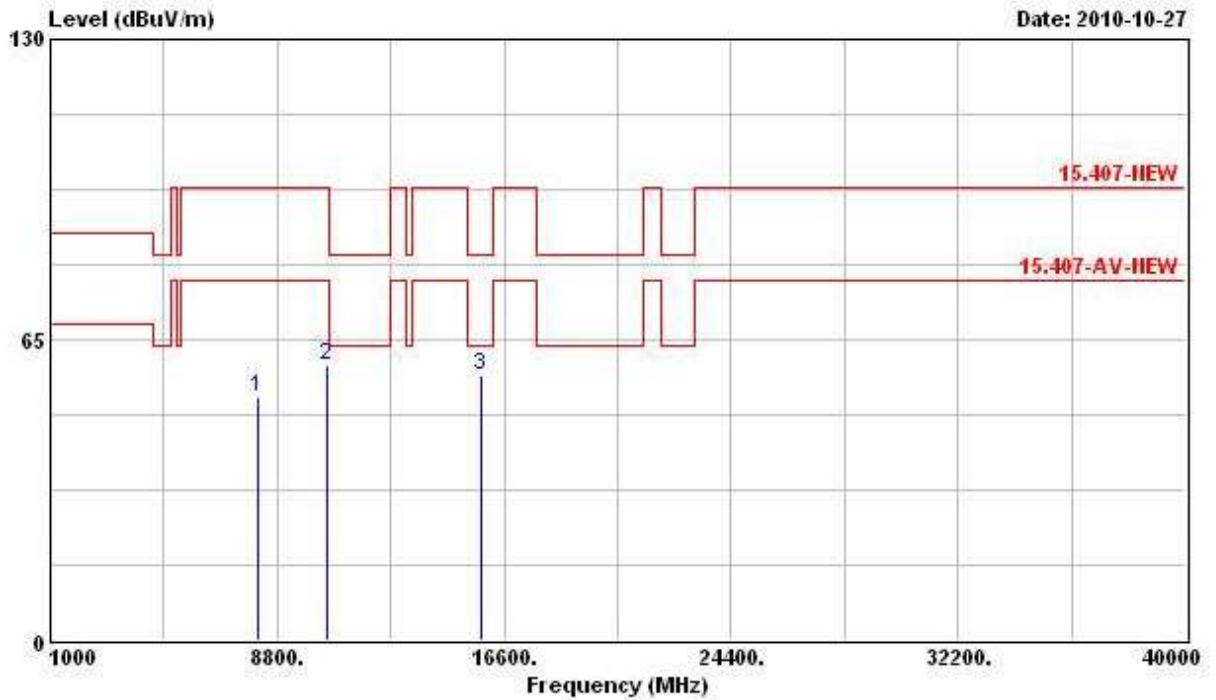
Vertical



	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	8546.000	52.90	-44.94	97.84	42.38	38.24	5.35	33.07	PEAK
2	10460.000	54.45	-43.39	97.84	42.07	39.52	5.80	32.93	PEAK
3	15690.000	57.92	-5.62	63.54	44.86	38.20	7.39	32.53	PK

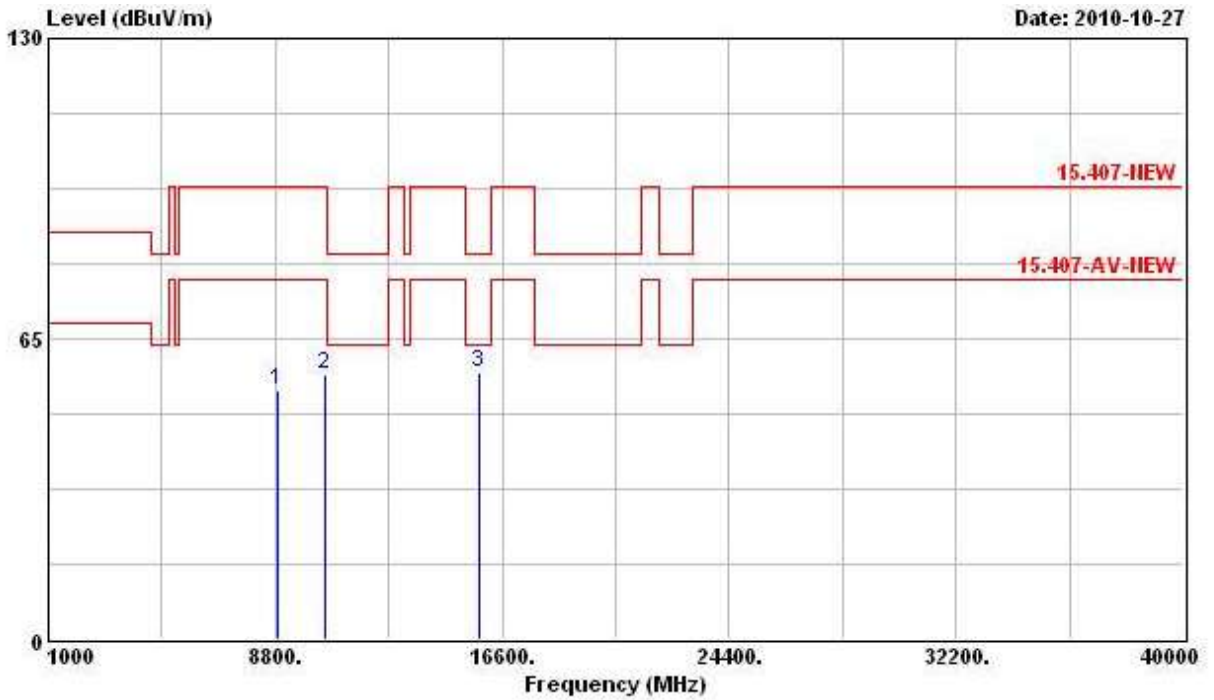
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 54 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8164.000	52.59	-25.25	77.84	42.53	37.79	5.32	33.05	PK
2	10540.000	59.55	-38.29	97.84	47.10	39.48	5.84	32.88	PEAK
3	15810.000	57.35	-6.19	63.54	44.45	38.00	7.47	32.58	PK

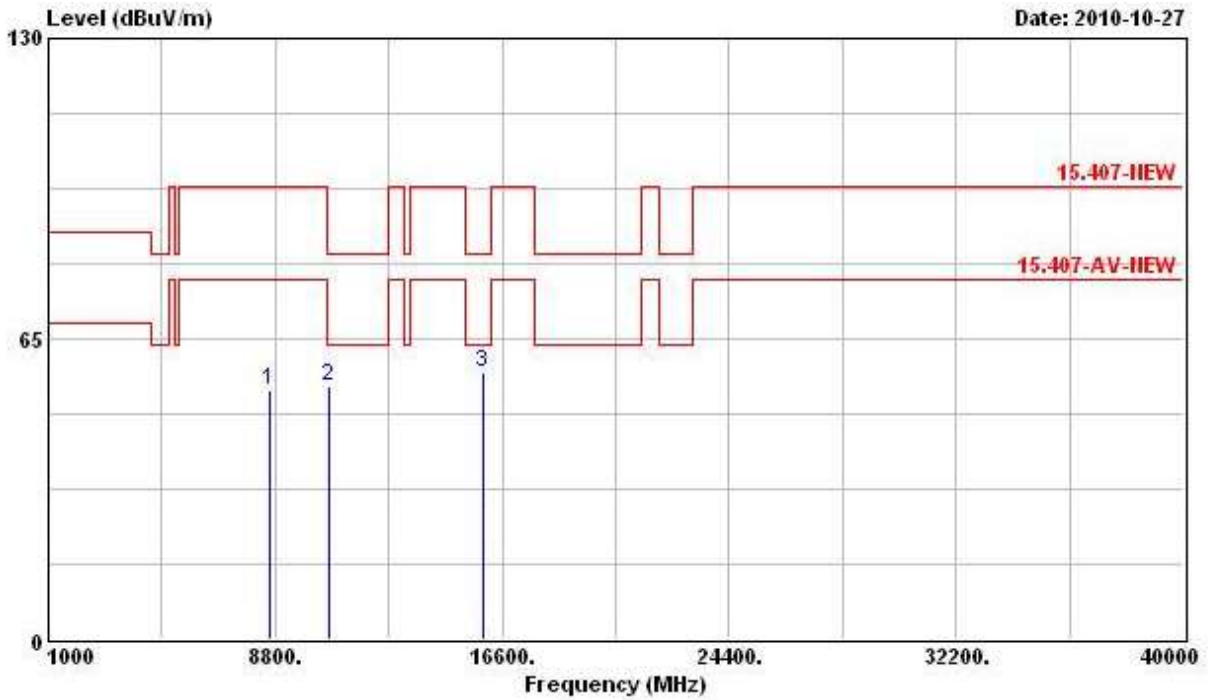
Vertical



	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	8914.000	54.04	-43.80	97.84	43.54	38.53	5.15	33.19	PEAK
2	10540.000	57.50	-40.34	97.84	45.06	39.48	5.84	32.88	PEAK
3	15810.000	57.54	-6.00	63.54	44.65	38.00	7.47	32.58	PK

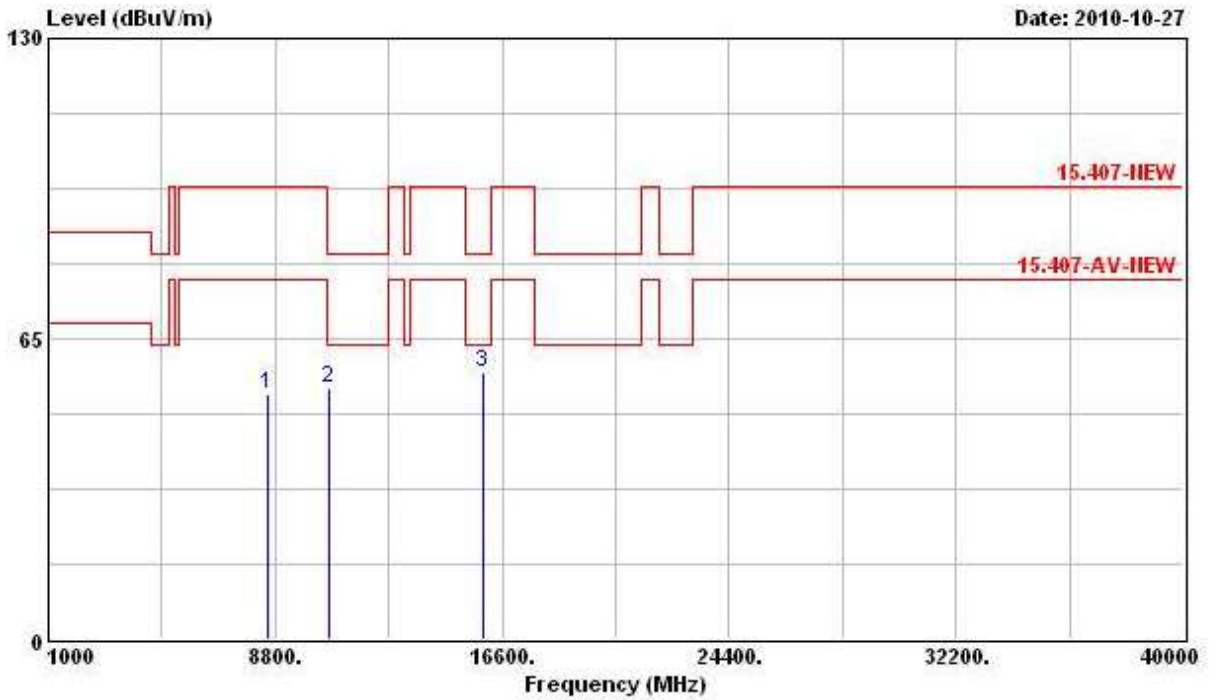
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 62 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8582.000	53.85	-43.99	97.84	43.33	38.27	5.33	33.08	PEAK
2	10620.000	54.86	-8.68	63.54	42.36	39.43	5.91	32.83	PK
3	15930.000	57.79	-5.75	63.54	45.04	37.81	7.56	32.62	PK

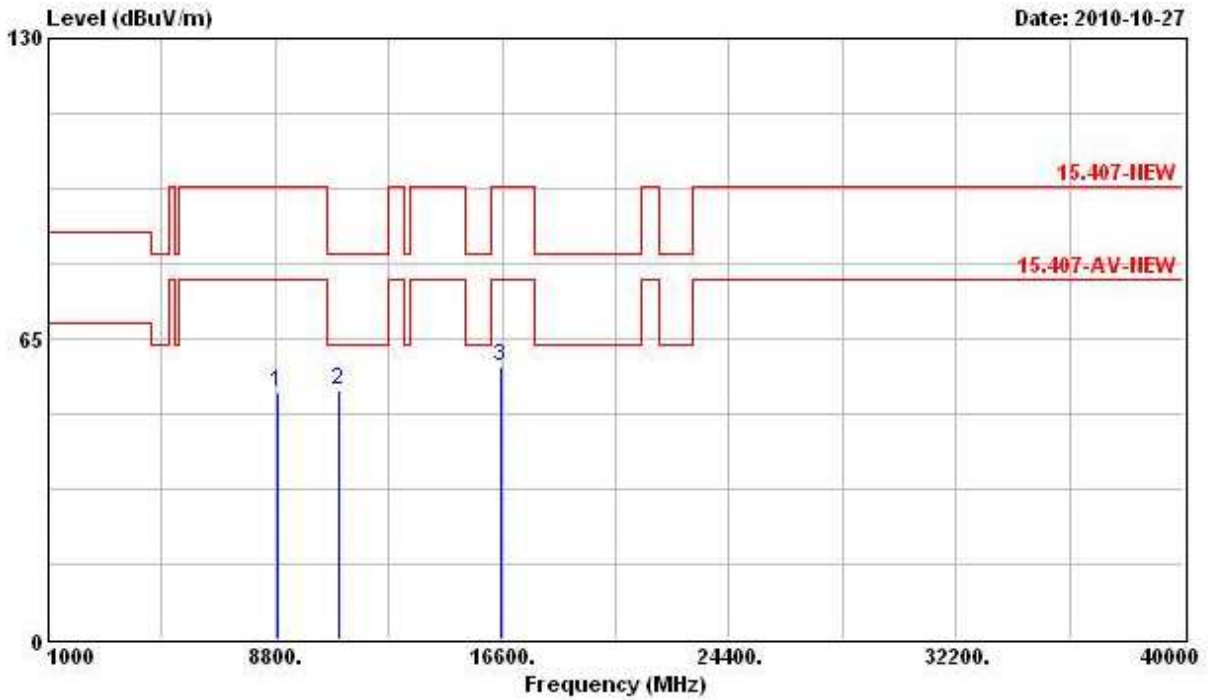
Vertical



	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	8574.000	53.09	-44.75	97.84	42.55	38.27	5.35	33.08	PEAK
2	10620.000	54.38	-9.16	63.54	41.88	39.43	5.91	32.83	PK
3	15930.000	57.81	-5.73	63.54	45.07	37.81	7.56	32.62	PK

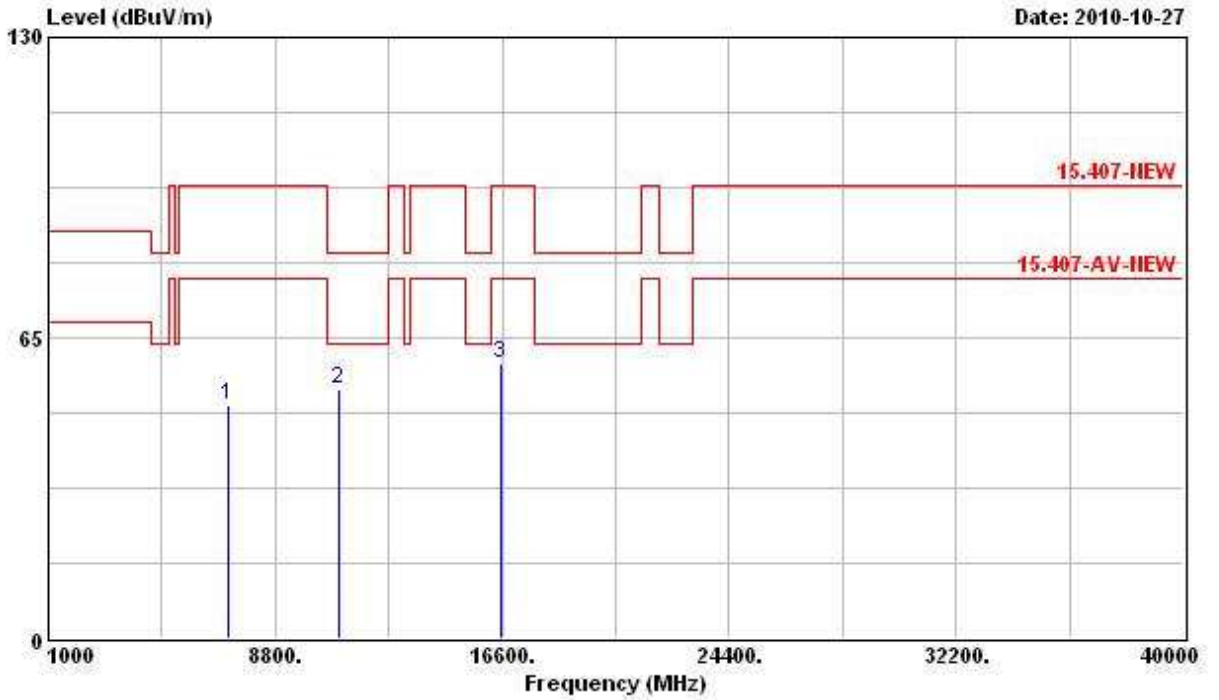
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 102 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8908.000	53.44	-44.40	97.84	42.96	38.52	5.15	33.19	PEAK
2	11020.000	53.67	-9.87	63.54	40.84	39.22	6.23	32.62	PK
3	16530.000	59.10	-38.74	97.84	45.03	38.69	7.60	32.23	PEAK

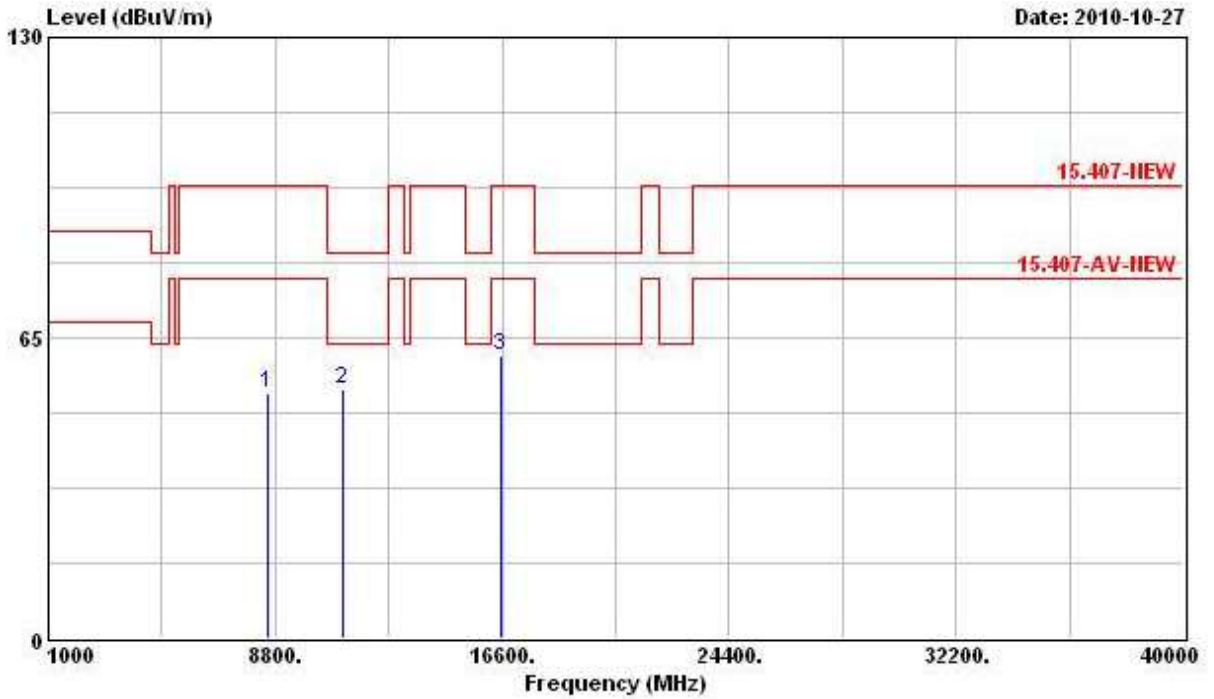
Vertical



	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	7158.000	50.64	-47.20	97.84	42.66	36.38	4.45	32.86	PEAK
2	11020.000	54.02	-9.52	63.54	41.18	39.22	6.23	32.62	PK
3	16530.000	59.49	-38.35	97.84	45.42	38.69	7.60	32.23	PEAK

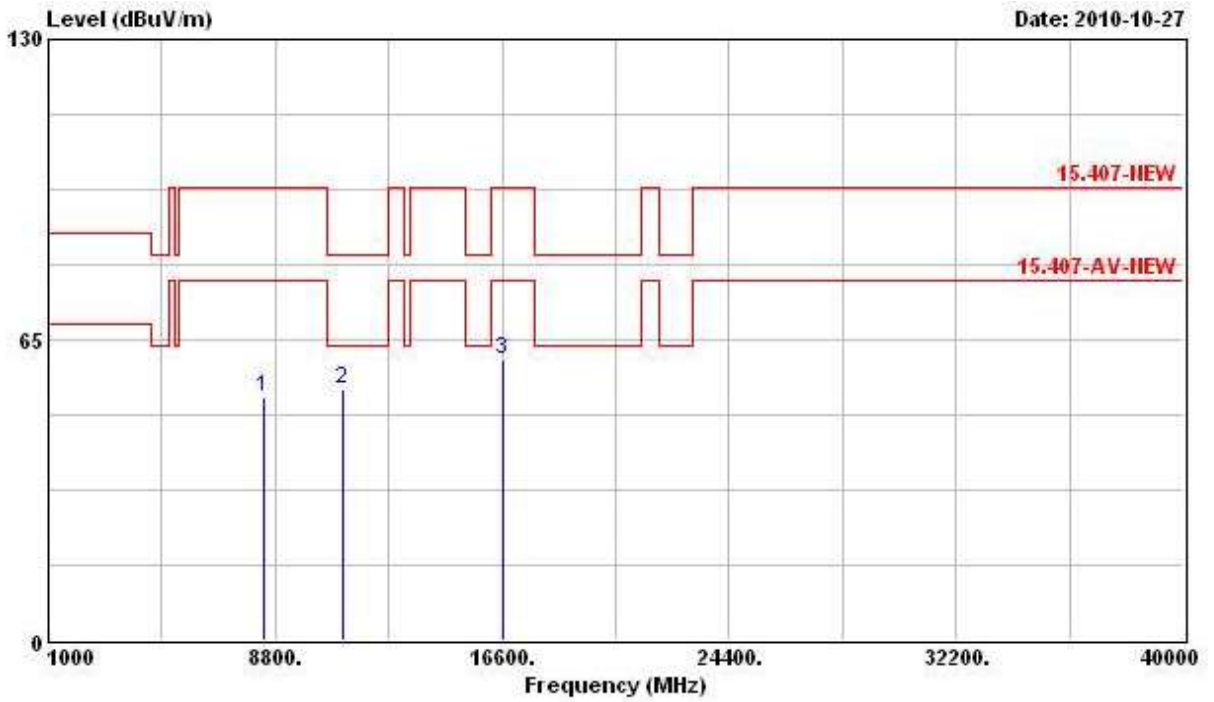
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 110 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8554.000	53.17	-44.67	97.84	42.65	38.24	5.35	33.07	PEAK
2	11100.000	53.76	-9.78	63.54	40.84	39.34	6.19	32.61	PK
3	16550.000	61.07	-36.77	97.84	46.89	38.79	7.59	32.19	PEAK

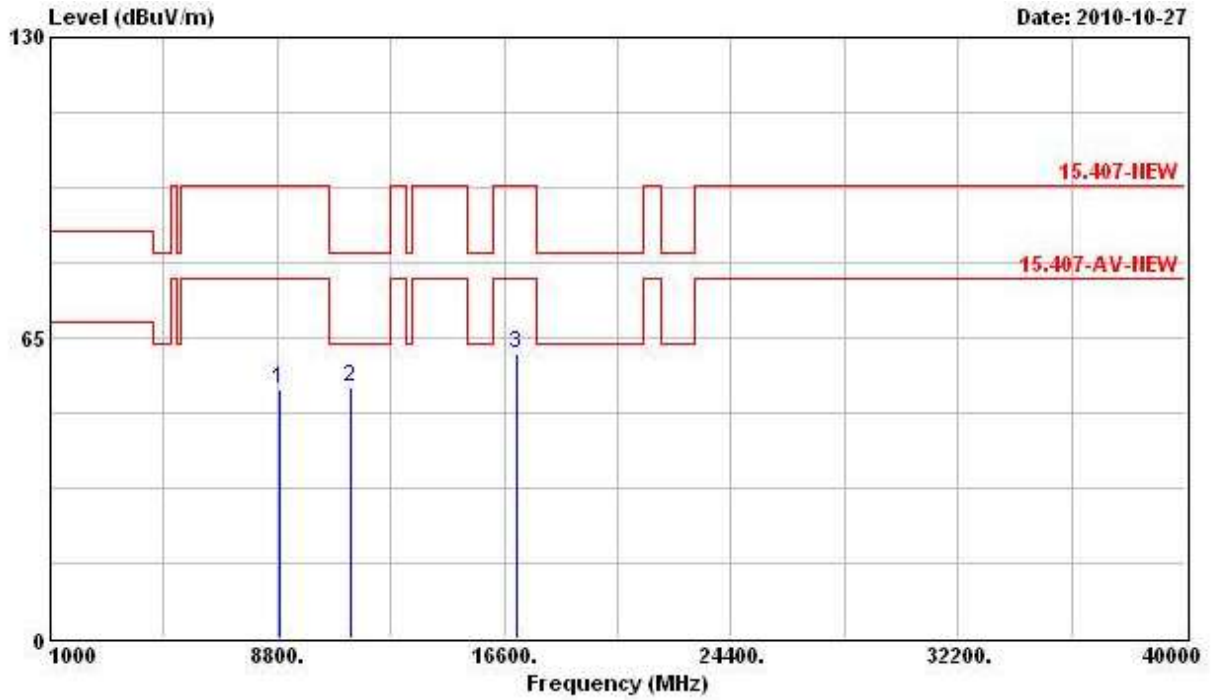
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	
1	8394.000	52.78	-25.06	77.84	42.40	38.08	5.35	33.05 PK
2	11100.000	54.23	-9.31	63.54	41.32	39.34	6.19	32.61 PK
3	16650.000	60.57	-37.27	97.84	45.70	39.37	7.55	32.06 PEAK

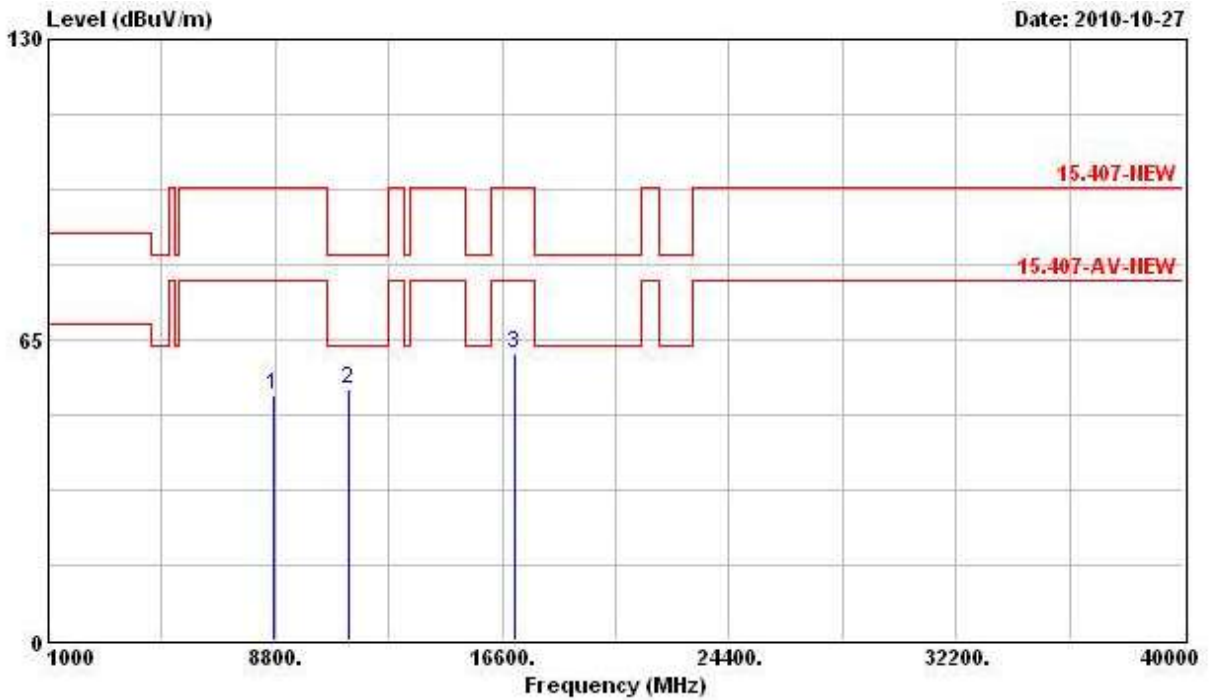
Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 110 (40MHz) / (Ant. A + Ant. B)

Horizontal



	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	8876.000	53.85	-43.99	97.84	43.37	38.49	5.17	33.18	PEAK
2	11340.000	54.25	-9.29	63.54	41.11	39.67	6.07	32.59	PK
3	17010.000	61.77	-36.07	97.84	44.55	41.46	7.41	31.64	PEAK

Vertical



	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	8738.000	53.05	-44.79	97.84	42.56	38.39	5.24	33.13	PEAK
2	11340.000	54.38	-9.16	63.54	41.24	39.67	6.07	32.59	PK
3	17010.000	61.80	-36.04	97.84	44.57	41.46	7.41	31.64	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 from 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). 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, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11a Ch. 36, 40, 48 (Ant. A)

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	5149.500	72.79	-10.75	83.54	35.55	34.45	2.79	0.00	Peak
2 @	5183.000	115.11			77.84	34.48	2.79	0.00	Peak
1	5127.500	57.93	-5.61	63.54	20.79	34.43	2.71	0.00	Average
2 @	5181.900	102.96			65.69	34.48	2.79	0.00	Average

The 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	5146.500	69.75	-13.79	83.54	32.51	34.45	2.79	0.00	Peak
2 @	5202.900	115.36			77.99	34.50	2.87	0.00	Peak
3	5380.200	68.51	-15.03	83.54	30.56	34.68	3.27	0.00	Peak
1	5147.400	57.70	-5.84	63.54	20.46	34.45	2.79	0.00	Average
2 @	5201.700	103.44			66.07	34.50	2.87	0.00	Average
3	5394.600	55.51	-8.03	63.54	17.54	34.70	3.27	0.00	Average

The 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	5130.900	68.72	-14.82	83.54	31.58	34.43	2.71	0.00	Peak
2 @	5242.500	116.18			78.68	34.55	2.95	0.00	Peak
3	5388.600	68.99	-14.55	83.54	31.04	34.68	3.27	0.00	Peak
1	5135.700	55.09	-8.45	63.54	17.95	34.43	2.71	0.00	Average
2 @	5242.200	104.30			66.80	34.55	2.95	0.00	Average
3	5398.200	55.40	-8.14	63.54	17.43	34.70	3.27	0.00	Average

The item 2 is fundamental emissions.

Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11a Ch. 52, 56, 64 (Ant. A)

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	5111.400	69.37	-14.17	83.54	32.25	34.42	2.71	0.00	Peak
2 @	5262.900	117.23			79.63	34.57	3.03	0.00	Peak
3	5364.600	68.99	-14.55	83.54	31.13	34.67	3.19	0.00	Peak
1	5110.500	55.40	-8.14	63.54	18.28	34.42	2.71	0.00	Average
2 @	5262.600	105.15			67.55	34.57	3.03	0.00	Average
3	5398.500	55.48	-8.06	63.54	17.51	34.70	3.27	0.00	Average

The 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	5126.100	68.27	-15.27	83.54	31.13	34.43	2.71	0.00	Peak
2 @	5283.000	115.95			78.34	34.58	3.03	0.00	Peak
3	5357.400	68.28	-15.26	83.54	30.44	34.65	3.19	0.00	Peak
1	5113.800	55.44	-8.10	63.54	18.32	34.42	2.71	0.00	Average
2 @	5274.900	104.56			66.96	34.57	3.03	0.00	Average
3	5392.500	55.50	-8.04	63.54	17.55	34.68	3.27	0.00	Average

The items 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 @	5323.000	114.34			76.61	34.62	3.11	0.00	Peak
2	5350.700	70.08	-13.46	83.54	32.24	34.65	3.19	0.00	Peak
1 @	5315.400	102.25			64.52	34.62	3.11	0.00	Average
2	5372.700	56.11	-7.43	63.54	18.25	34.67	3.19	0.00	Average

The item 1 is fundamental emissions.

Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11a Ch. 100, 116, 140 (Ant. A)

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	5447.000	70.57	-12.97	83.54	32.47	34.75	3.35	0.00	Peak
2 @	5497.400	111.40			73.09	34.80	3.51	0.00	Peak
1	5447.500	57.28	-6.26	63.54	19.18	34.75	3.35	0.00	Average
2 @	5496.700	100.56			62.25	34.80	3.51	0.00	Average

The 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	5409.200	68.06	-15.48	83.54	30.09	34.70	3.27	0.00	Peak
2 @	5576.800	110.07			71.68	34.80	3.59	0.00	Peak
3	5745.200	69.25	-28.59	97.84	30.71	34.80	3.74	0.00	Peak
1	5447.200	55.76	-7.78	63.54	17.66	34.75	3.35	0.00	Average
2 @	5578.400	99.77			61.38	34.80	3.59	0.00	Average
3	5759.600	56.29	-21.55	77.84	17.75	34.80	3.74	0.00	Average

The 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 @	5696.600	108.03			69.53	34.80	3.70	0.00	Peak
2	5749.800	70.48	-27.36	97.84	31.94	34.80	3.74	0.00	Peak
1 @	5698.200	97.48			58.98	34.80	3.70	0.00	Average
2	5752.700	56.41	-21.43	77.84	17.87	34.80	3.74	0.00	Average

The item 1 is fundamental emissions.

For Two Chain:

Final Test Date	Oct. 23, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 36, 40, 48 (20MHz) / (Ant. A + Ant. B)

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	5147.800	72.26	-11.28	83.54	35.02	34.45	2.79	0.00	Peak
2 @	5174.200	114.93			77.66	34.48	2.79	0.00	Peak
1	5127.500	58.44	-5.10	63.54	21.30	34.43	2.71	0.00	Average
2 @	5182.200	103.62			66.35	34.48	2.79	0.00	Average

The 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	5147.400	69.98	-13.56	83.54	32.74	34.45	2.79	0.00	Peak
2 @	5195.400	114.77			77.40	34.50	2.87	0.00	Peak
3	5380.500	69.08	-14.46	83.54	31.13	34.68	3.27	0.00	Peak
1	5147.700	58.05	-5.49	63.54	20.81	34.45	2.79	0.00	Average
2 @	5196.900	103.05			65.68	34.50	2.87	0.00	Average
3	5391.300	55.54	-8.00	63.54	17.59	34.68	3.27	0.00	Average

The 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	5112.600	67.94	-15.60	83.54	30.82	34.42	2.71	0.00	Peak
2 @	5242.500	114.32			76.82	34.55	2.95	0.00	Peak
3	5378.100	67.91	-15.63	83.54	30.04	34.68	3.19	0.00	Peak
1	5127.300	54.97	-8.57	63.54	17.83	34.43	2.71	0.00	Average
2 @	5241.300	103.27			65.79	34.53	2.95	0.00	Average
3	5397.300	55.42	-8.12	63.54	17.45	34.70	3.27	0.00	Average

The item 2 is fundamental emissions.

Final Test Date	Oct. 23, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 52, 56, 64 (20MHz) / (Ant. A + Ant. B)

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	5106.600	68.22	-15.32	83.54	31.10	34.42	2.71	0.00	Peak
2 @	5264.100	115.24			77.64	34.57	3.03	0.00	Peak
3	5361.300	68.31	-15.23	83.54	30.45	34.67	3.19	0.00	Peak
1	5109.300	55.32	-8.22	63.54	18.20	34.42	2.71	0.00	Average
2 @	5263.800	103.92			66.32	34.57	3.03	0.00	Average
3	5397.000	55.52	-8.02	63.54	17.55	34.70	3.27	0.00	Average

The 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	5136.900	68.35	-15.19	83.54	31.21	34.43	2.71	0.00	Peak
2 @	5275.800	114.68			77.07	34.58	3.03	0.00	Peak
3	5356.500	68.77	-14.77	83.54	30.93	34.65	3.19	0.00	Peak
1	5114.100	55.41	-8.13	63.54	18.29	34.42	2.71	0.00	Average
2 @	5276.100	103.42			65.81	34.58	3.03	0.00	Average
3	5398.500	55.51	-8.03	63.54	17.54	34.70	3.27	0.00	Average

The 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 @	5322.600	113.05			75.32	34.62	3.11	0.00	Peak
2	5371.800	70.11	-13.43	83.54	32.25	34.67	3.19	0.00	Peak
1 @	5317.500	100.98			63.25	34.62	3.11	0.00	Average
2	5372.300	56.40	-7.14	63.54	18.54	34.67	3.19	0.00	Average

The item 1 is fundamental emissions.

Final Test Date	Oct. 23, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 100, 116, 140 (20MHz) / (Ant. A + Ant. B)

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	5443.400	69.98	-13.56	83.54	31.89	34.73	3.35	0.00	Peak
2 @	5498.600	110.83			72.52	34.80	3.51	0.00	Peak
1	5447.800	56.84	-6.70	63.54	18.74	34.75	3.35	0.00	Average
2 @	5497.100	99.38			61.07	34.80	3.51	0.00	Average

The 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	5415.000	68.47	-15.07	83.54	30.48	34.72	3.27	0.00	Peak
2 @	5581.500	112.01			73.62	34.80	3.59	0.00	Peak
3	5771.500	69.99	-27.85	97.84	31.41	34.80	3.78	0.00	Peak
1	5443.500	55.81	-7.73	63.54	17.72	34.73	3.35	0.00	Average
2 @	5579.000	100.72			62.33	34.80	3.59	0.00	Average
3	5781.000	56.36	-21.48	77.84	17.78	34.80	3.78	0.00	Average

The 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 @	5703.400	110.33			71.83	34.80	3.70	0.00	Peak
2	5765.900	71.30	-26.54	97.84	32.76	34.80	3.74	0.00	Peak
1 @	5701.100	98.75			60.25	34.80	3.70	0.00	Average
2	5751.900	56.87	-20.97	77.84	18.33	34.80	3.74	0.00	Average

The item 1 is fundamental emissions.

Final Test Date	Oct. 27, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 38, 46, 54 (40MHz) / (Ant. A + Ant. B)

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	5147.900	78.63	-4.91	83.54	41.39	34.45	2.79	0.00	Peak
2 @	5191.500	110.49			73.12	34.50	2.87	0.00	Peak
1	5149.990	59.85	-3.69	63.54	22.61	34.45	2.79	0.00	Average
2 @	5194.600	98.98			61.61	34.50	2.87	0.00	Average

The 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	5124.900	68.64	-14.90	83.54	31.50	34.43	2.71	0.00	Peak
2 @	5226.600	110.25			72.77	34.53	2.95	0.00	Peak
3	5358.600	68.67	-14.87	83.54	30.83	34.65	3.19	0.00	Peak
1	5125.800	56.27	-7.27	63.54	19.13	34.43	2.71	0.00	Average
2 @	5226.600	99.48			62.00	34.53	2.95	0.00	Average
3	5389.800	55.48	-8.06	63.54	17.53	34.68	3.27	0.00	Average

The 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	5148.600	68.03	-15.51	83.54	30.79	34.45	2.79	0.00	Peak
2 @	5266.200	112.12			74.52	34.57	3.03	0.00	Peak
3	5382.900	68.38	-15.16	83.54	30.43	34.68	3.27	0.00	Peak
1	5134.200	55.45	-8.09	63.54	18.31	34.43	2.71	0.00	Average
2 @	5266.200	100.98			63.38	34.57	3.03	0.00	Average
3	5373.300	55.63	-7.91	63.54	17.77	34.67	3.19	0.00	Average

The item 2 is fundamental emissions.

Final Test Date	Oct. 25, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 62, 102 (40MHz) / (Ant. A + Ant. B)

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 @	5299.020	110.10			72.47	34.60	3.03	0.00	Peak
2	5352.810	72.42	-11.12	83.54	34.58	34.65	3.19	0.00	Peak
1 @	5294.290	98.93			61.30	34.60	3.03	0.00	Average
2	5350.500	56.79	-6.75	63.54	18.95	34.65	3.19	0.00	Average

The 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	5446.670	70.14	-13.40	83.54	32.04	34.75	3.35	0.00	Peak
2 @	5505.820	108.94			70.63	34.80	3.51	0.00	Peak
1	5458.500	56.21	-7.33	63.54	18.03	34.75	3.43	0.00	Average
2 @	5505.950	97.69			59.38	34.80	3.51	0.00	Average

The item 2 is fundamental emissions.

Final Test Date	Oct. 25, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11n Ch. 110, 134 (40MHz) / (Ant. A + Ant. B)

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	5421.600	69.16	-14.38	83.54	31.09	34.72	3.35	0.00	Peak
2 @	5540.000	107.45			69.10	34.80	3.55	0.00	Peak
3	5766.000	69.63	-28.21	97.84	31.09	34.80	3.74	0.00	Peak
1	5447.200	56.38	-7.16	63.54	18.28	34.75	3.35	0.00	Average
2 @	5538.800	96.27			57.92	34.80	3.55	0.00	Average
3	5767.600	56.40	-21.44	77.84	17.86	34.80	3.74	0.00	Average

The item 2 is fundamental emissions.

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 @	5666.660	107.13			68.67	34.80	3.66	0.00	Peak
2	5760.600	70.51	-27.33	97.84	31.97	34.80	3.74	0.00	Peak
1 @	5672.120	95.48			57.02	34.80	3.66	0.00	Average
2	5771.940	56.48	-21.36	77.84	17.90	34.80	3.78	0.00	Average

The item 1 is fundamental emissions.

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 ±20ppm (IEEE 802.11a specification).

3.8.2 Measuring Instruments and Setting

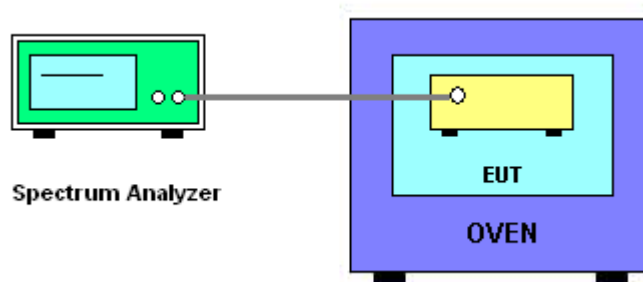
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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. fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/fc \times 10^6$ ppm and the limit is less than ±20ppm (IEEE 802.11a specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature rule is -30°C~50°C.
8. Measuring multiple antennas, the connectors are required to link with Spectrum Analyzer through a combiner.

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	Measurement Frequency (MHz)
(V)	IEEE 802.11 a 5320 MHz
126.5	5319.989730
110.00	5319.988010
93.5	5319.988410
Max. Deviation (MHz)	0.011990
Max. Deviation (ppm)	2.25

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	IEEE 802.11 a 5320 MHz
-25	5320.009600
-20	5320.010200
-10	5320.011400
0	5320.009800
10	5319.987600
20	5319.989800
30	5319.986200
40	5319.973000
50	5319.974200
Max. Deviation (MHz)	0.027000
Max. Deviation (ppm)	5.08

For Two Chain

Voltage	Measurement Frequency (MHz)
(V)	IEEE 802.11 n (40MHz) 5190 MHz
126.5	5189.999819
110.00	5189.999996
93.5	5189.999832
Max. Deviation (MHz)	0.000181
Max. Deviation (ppm)	0.03

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(°C)	IEEE 802.11 n (40MHz) 5190 MHz
-25	5189.999269
-20	5189.999413
-10	5189.999157
0	5189.999543
10	5189.999313
20	5189.999996
30	5189.999370
40	5189.998744
50	5189.998159
Max. Deviation (MHz)	0.001841
Max. Deviation (ppm)	0.35

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 FCC 15.407 section 15.203. The antenna specification is not subject to the requirement of FCC 15.407 section 2.2.

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. 06, 2010	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99041	9kHz – 30MHz	Mar. 23, 2010	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Apr. 29, 2010	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2010	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	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	Nov. 19, 2009	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Apr. 16, 2010	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Aug. 05, 2010	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 02, 2009	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 02, 2009	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 30, 2010	Conducted (TH01-HY)
Power Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	Dec. 03, 2009	Conducted (TH01-HY)
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	Dec. 03, 2009	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. 26, 2010*	Conducted (TH01-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 18, 2010	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 24, 2010	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Aug. 02, 2010	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100305/040	9 kHz - 40GHz	Feb. 02, 2010	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Oct. 16, 2010	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 20, 2010	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan.11, 2010	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Jan. 05, 2010	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Jan. 05, 2010	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)

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. 29, 2010*	Radiation (03CH03-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. : L1190-100529

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
President, Taiwan Accreditation Foundation
Date : May 29, 2010

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