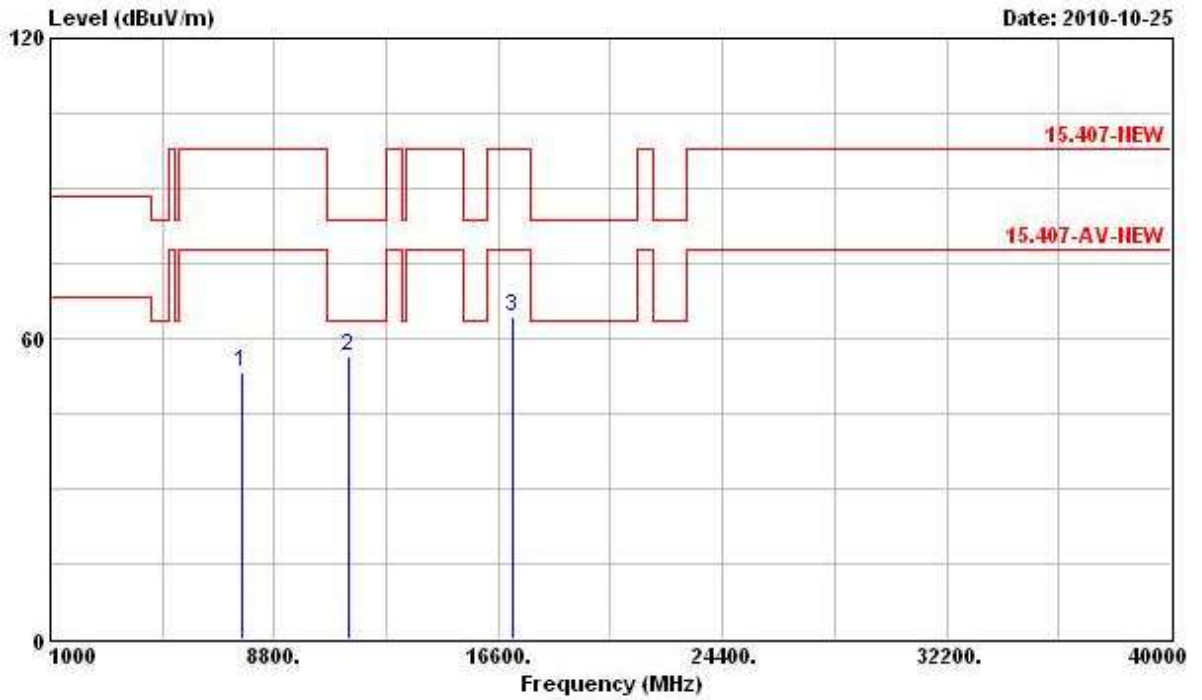


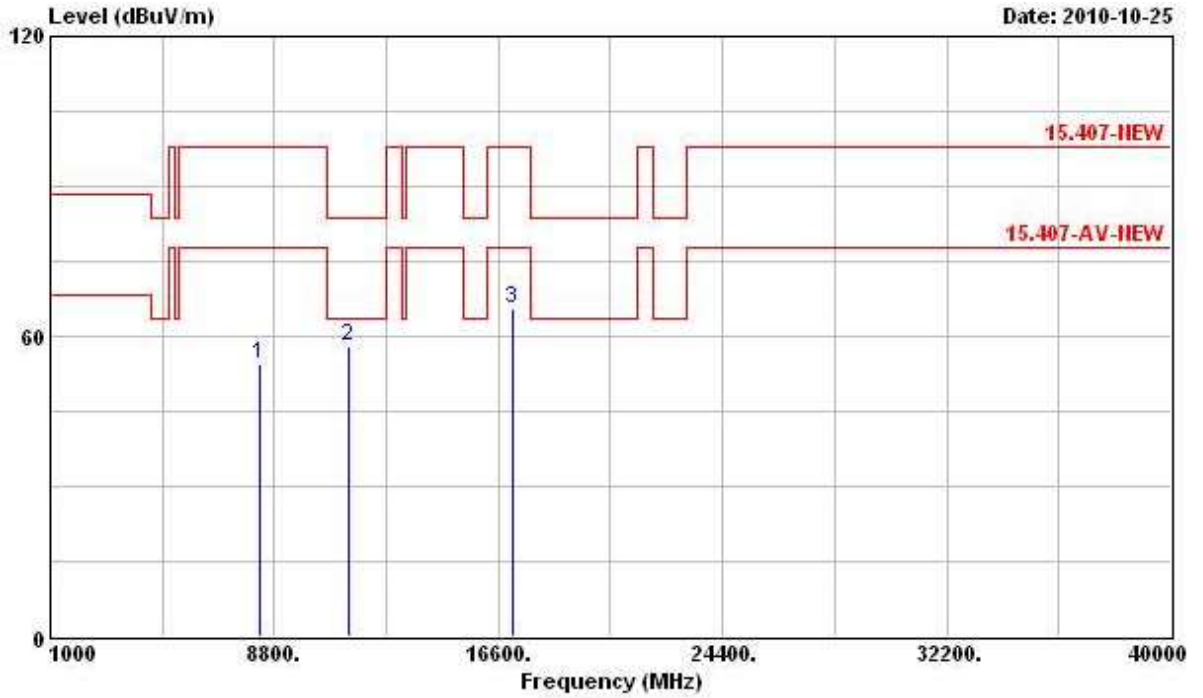
Final Test Date	Oct. 25, 2010	Test Site No.	03CH03-HY
Temperature	24.9°C	Humidity	54%
Test Engineer	Eddie	Configuration	802.11a Ch. 140 (Ant. A)

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	7638.000	53.45	-24.39	77.84	44.09	37.98	5.69	34.31	PK
2	11400.000	56.54	-7.00	63.54	42.87	40.56	6.71	33.60	PK
3	17100.000	64.53	-33.31	97.84	44.56	43.64	8.61	32.28	Peak

Vertical

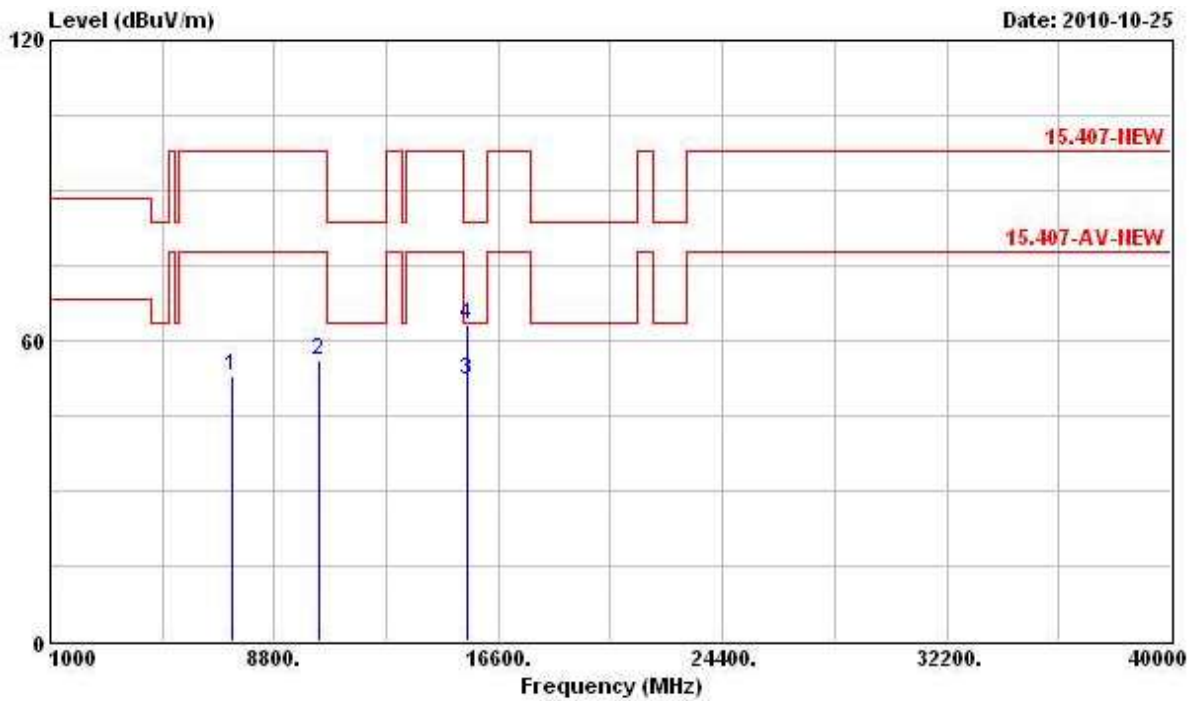


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8260.000	54.42	-23.42	77.84	44.46	38.36	5.88	34.28	PK
2	11400.000	58.11	-5.43	63.54	44.44	40.56	6.71	33.60	PK
3	17100.000	65.62	-32.22	97.84	45.65	43.64	8.61	32.28	Peak

For Two Chain:

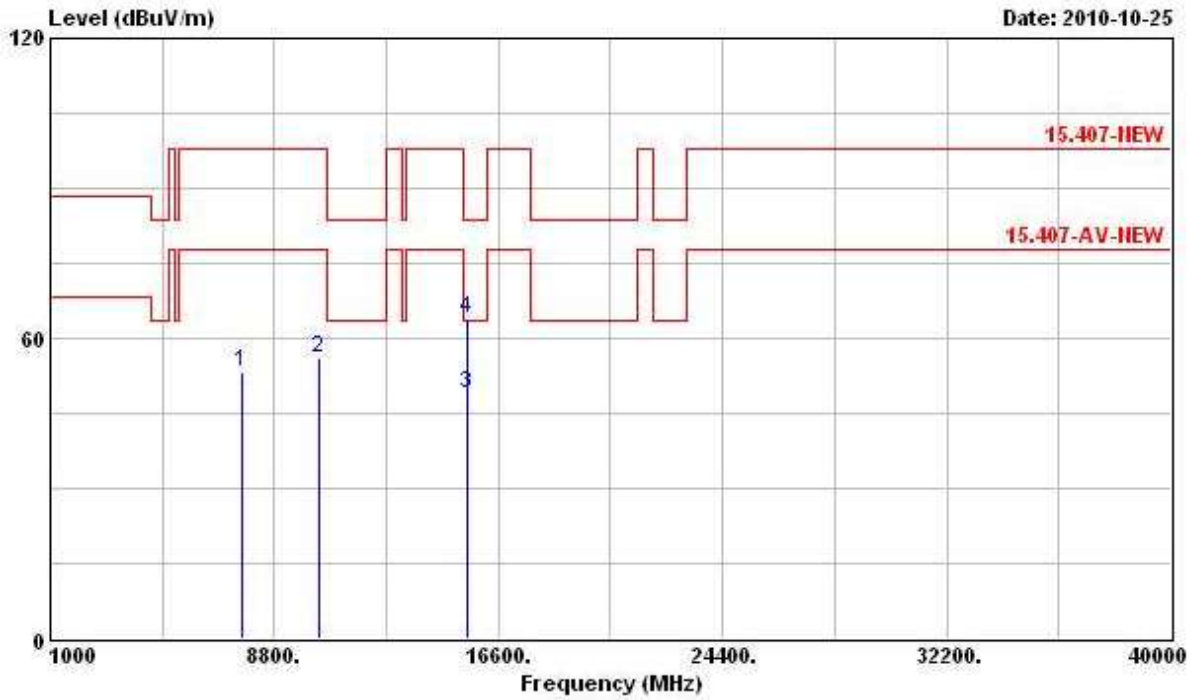
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 36 (20MHz) / (Ant. A+Ant. B)

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	7352.000	52.89	-24.95	77.84	43.67	37.87	5.64	34.29	PK
2	10360.000	56.10	-41.74	97.84	43.51	40.02	6.71	34.14	Peak
3	15540.000	52.07	-11.47	63.54	33.65	42.81	8.45	32.84	Average
4	15540.000	63.25	-20.29	83.54	44.83	42.81	8.45	32.84	Peak

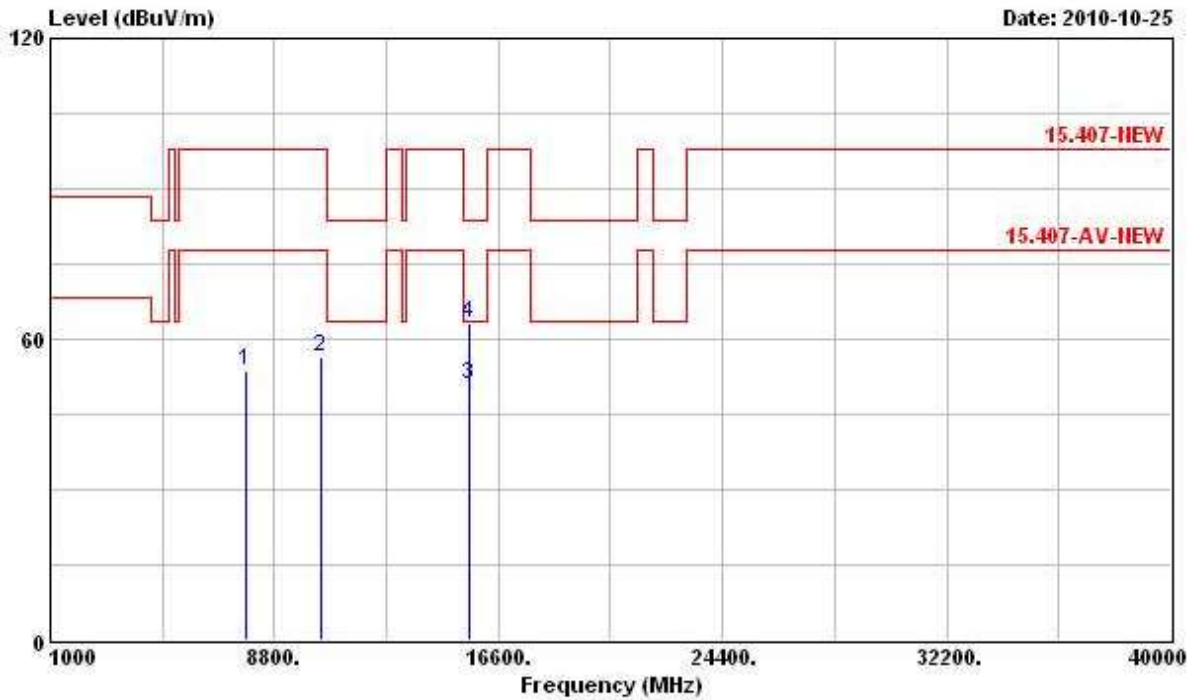
Vertical



	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	7648.000	53.39	-24.45	77.84	44.03	37.99	5.69	34.32	PK
2	10360.000	55.99	-41.85	97.84	43.40	40.02	6.71	34.14	Peak
3	15540.000	48.98	-14.56	63.54	30.56	42.81	8.45	32.84	Average
4	15540.000	64.08	-19.46	83.54	45.66	42.81	8.45	32.84	Peak

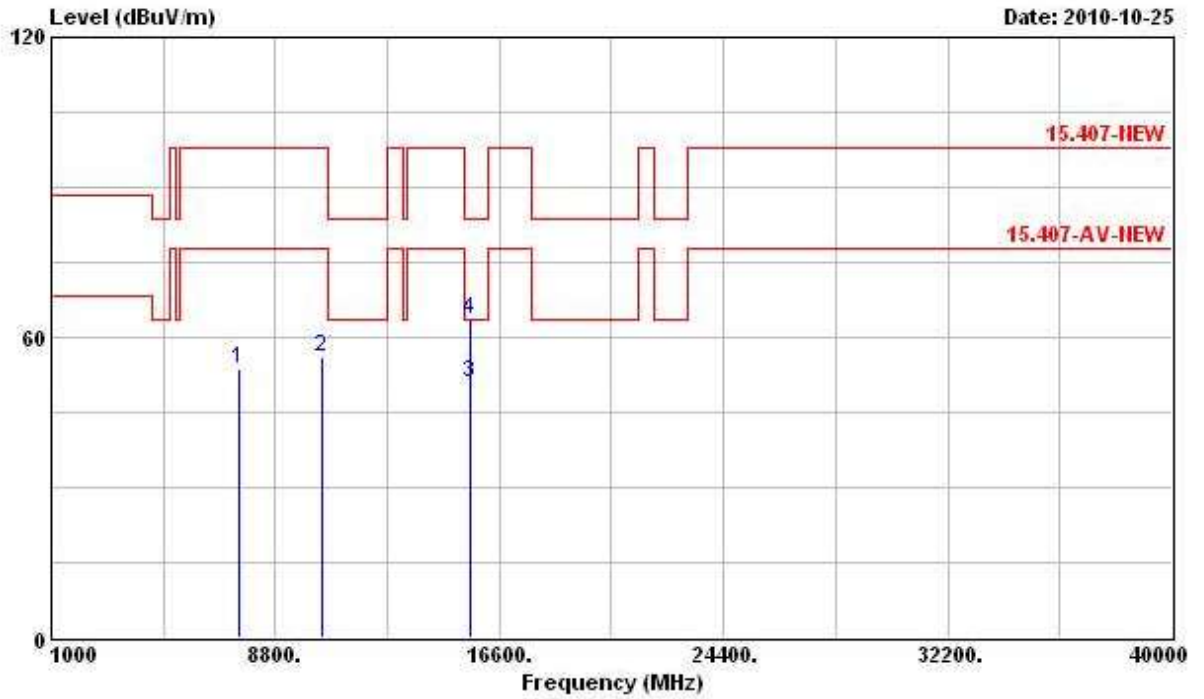
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 40 (20MHz) / (Ant. A+Ant. B)

**Horizontal**



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	7808.000	53.62	-44.22	97.84	44.13	38.08	5.75	34.34 Peak
2	10400.000	56.64	-41.20	97.84	43.95	40.04	6.75	34.10 Peak
3	15600.000	50.79	-12.75	63.54	32.44	42.82	8.45	32.92 Average
4	15600.000	63.33	-20.21	83.54	44.98	42.82	8.45	32.92 Peak

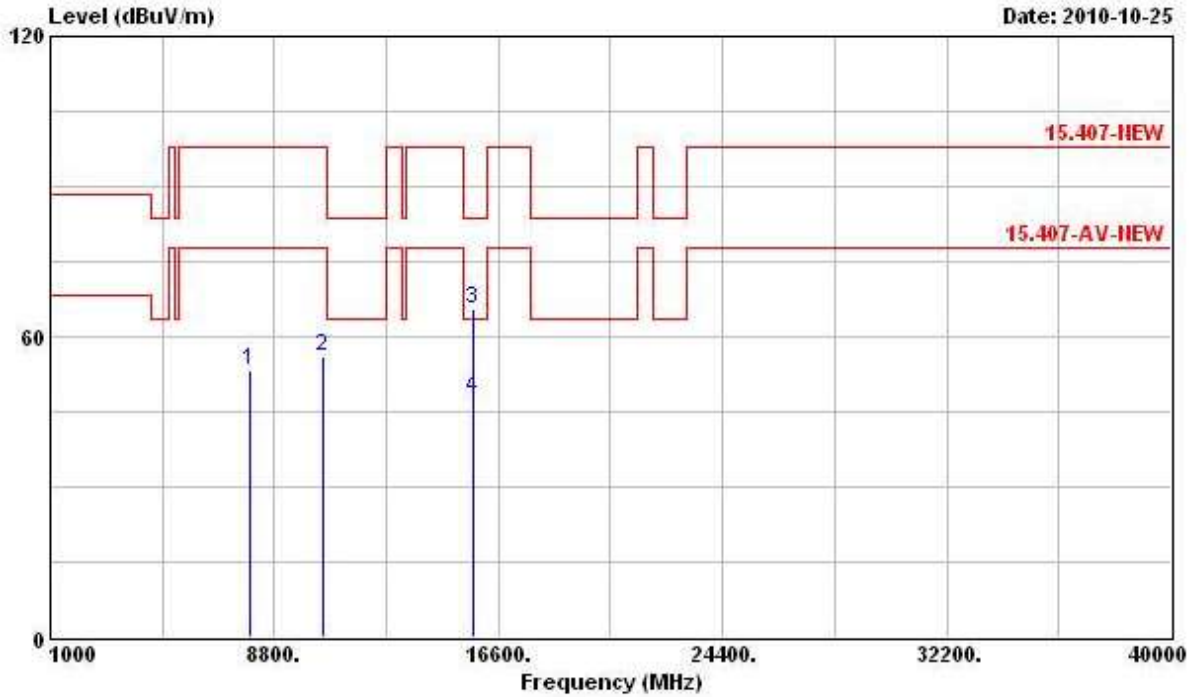
Vertical



	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	7566.000	53.68	-24.16	77.84	44.37	37.94	5.67	34.30	PK
2	10400.000	56.16	-41.68	97.84	43.47	40.04	6.75	34.10	Peak
3	15600.000	51.03	-12.51	63.54	32.68	42.82	8.45	32.92	Average
4	15600.000	63.52	-20.02	83.54	45.17	42.82	8.45	32.92	Peak

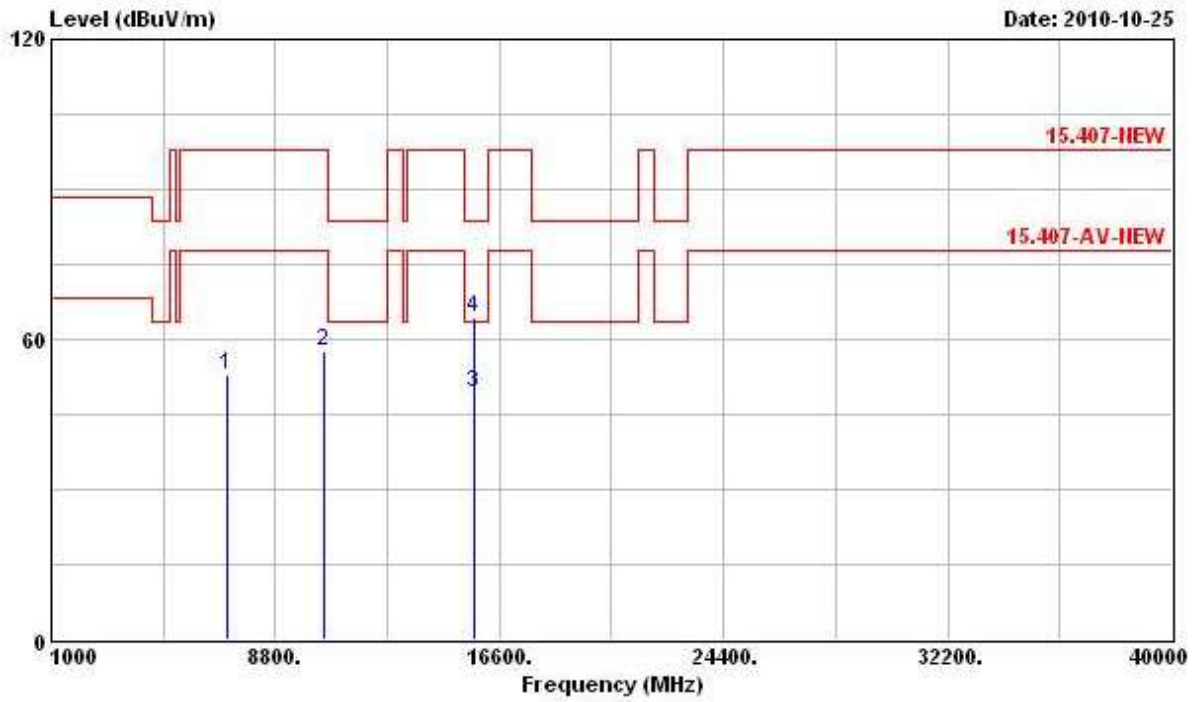
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 48 (20MHz) / (Ant. A+Ant. B)

**Horizontal**



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	
1	7916.000	53.48	-44.36	97.84	43.90	5.78	34.35	Peak
2	10480.000	55.87	-41.97	97.84	42.99	6.82	34.03	Peak
3	15720.000	65.35	-18.19	83.54	47.08	8.46	33.03	Peak
4	15720.000	47.93	-15.61	63.54	29.66	8.46	33.03	Average

Vertical



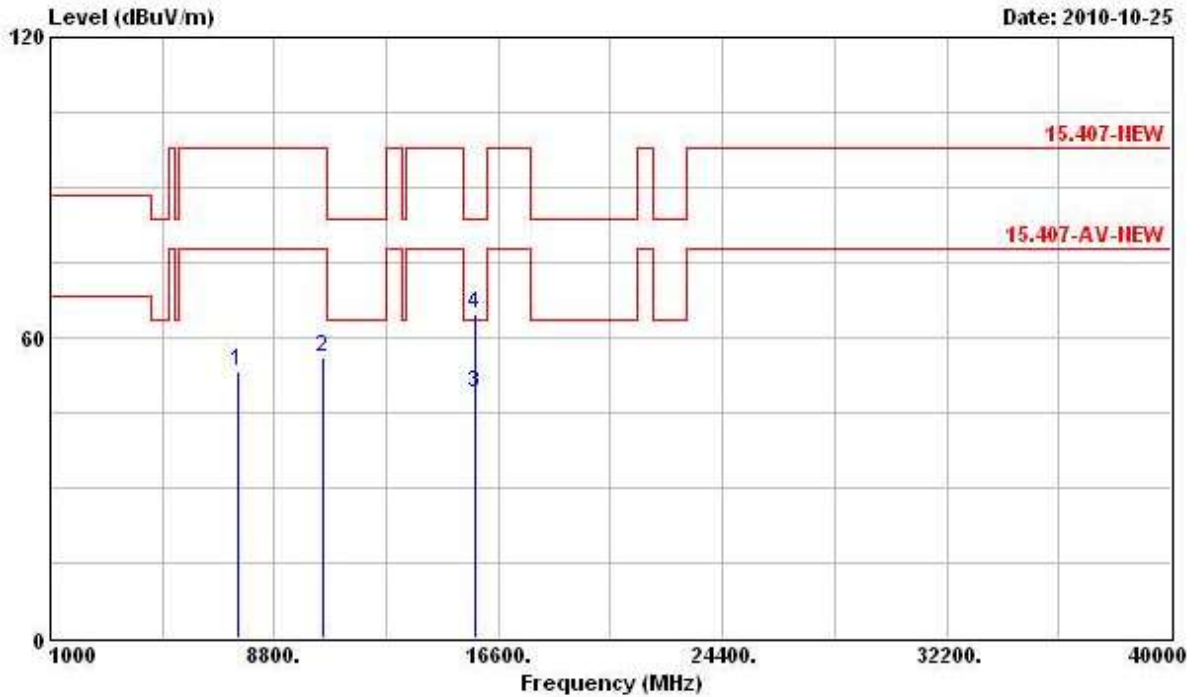
9527 2010/10/25 15:40:00

	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	7132.000	52.97	-44.87	97.84	43.81	37.83	5.61	34.28	Peak
2	10480.000	57.45	-40.39	97.84	44.57	40.09	6.82	34.03	Peak
3	15720.000	49.17	-14.37	63.54	30.90	42.84	8.46	33.03	Average
4	15720.000	64.19	-19.35	83.54	45.92	42.84	8.46	33.03	Peak



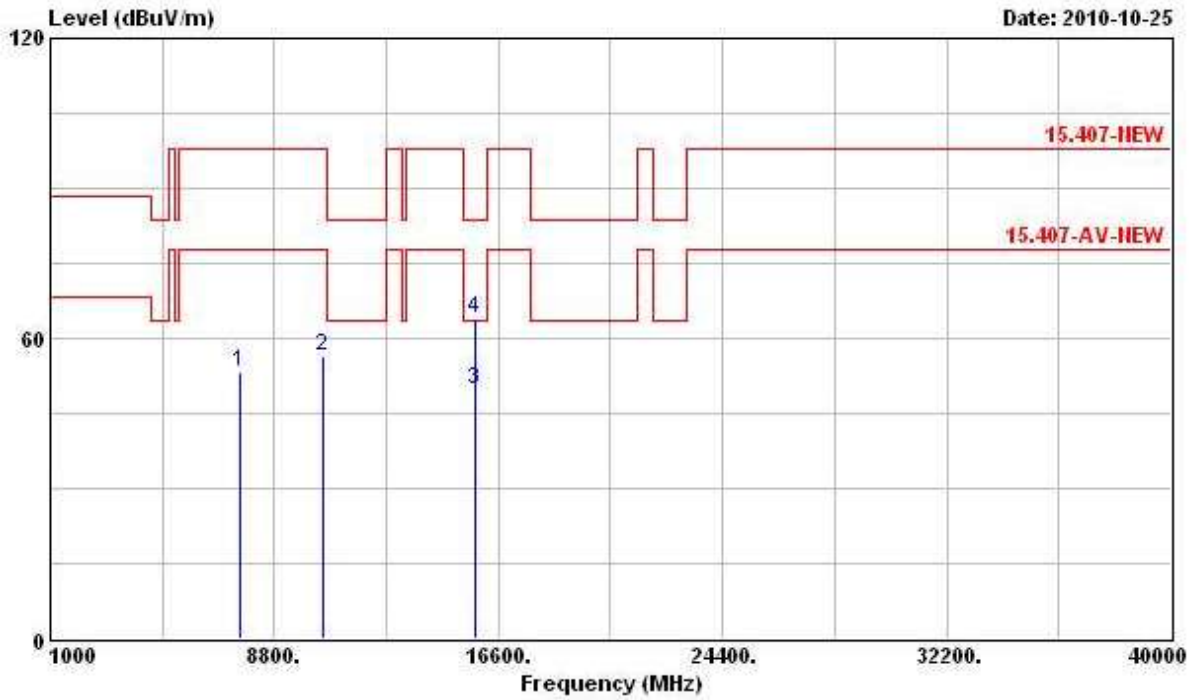
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 52 (20MHz) / (Ant. A+Ant. B)

**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	7500.000	53.30	-24.54	77.84	44.04	37.90	5.66	34.30	PK
2	10520.000	56.10	-41.74	97.84	43.14	40.11	6.85	34.00	Peak
3	15780.000	48.90	-14.64	63.54	30.69	42.86	8.46	33.11	Average
4	15780.000	64.63	-18.91	83.54	46.42	42.86	8.46	33.11	Peak

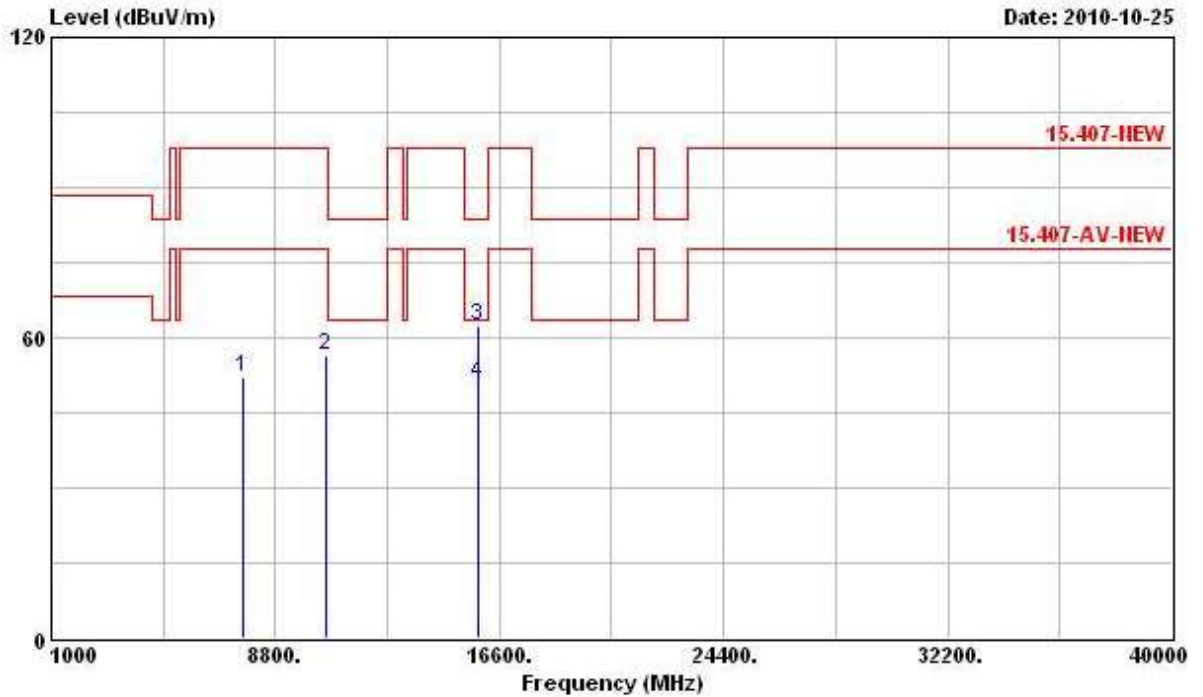
Vertical



	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	7632.000	53.11	-24.73	77.84	43.75	37.98	5.69	34.31	PK
2	10520.000	56.38	-41.46	97.84	43.42	40.11	6.85	34.00	Peak
3	15780.000	49.86	-13.68	63.54	31.65	42.86	8.46	33.11	Average
4	15780.000	63.93	-19.61	83.54	45.72	42.86	8.46	33.11	Peak

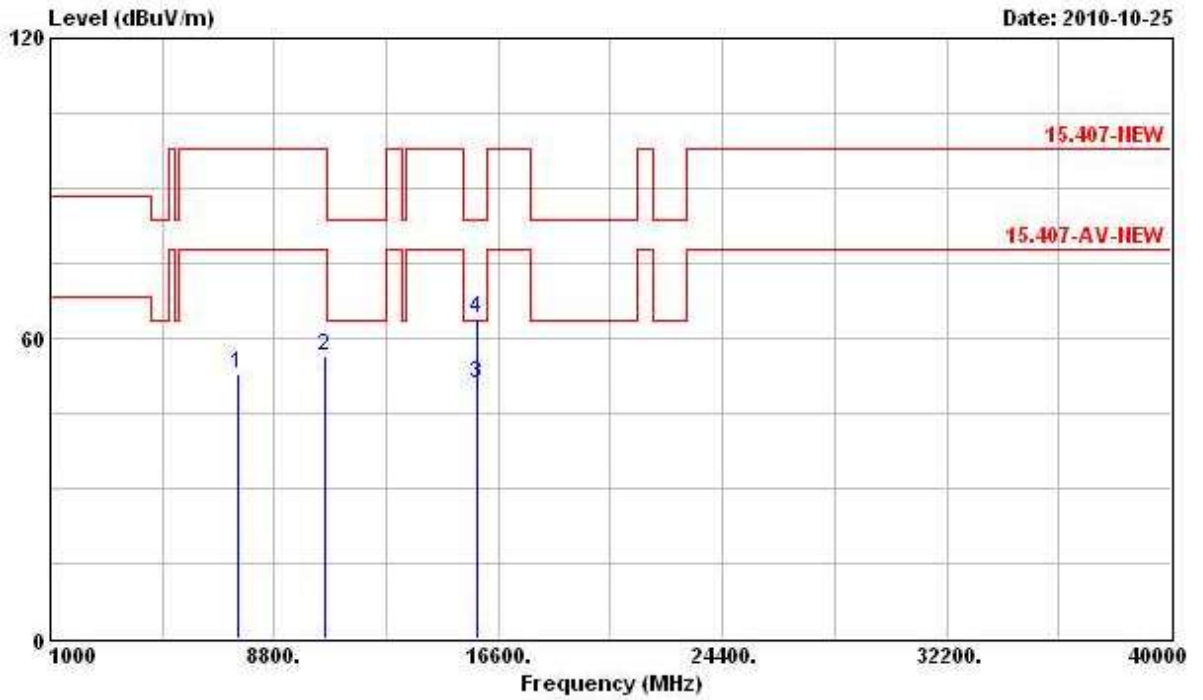
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 56 (20MHz) / (Ant. A+Ant. B)

**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	7682.000	52.13	-25.71	77.84	42.73	38.01	5.71	34.32	PK
2	10560.000	56.28	-41.56	97.84	43.21	40.13	6.88	33.94	Peak
3	15840.000	62.33	-21.21	83.54	44.16	42.87	8.46	33.16	Peak
4	15840.000	50.82	-12.72	63.54	32.65	42.87	8.46	33.16	Average

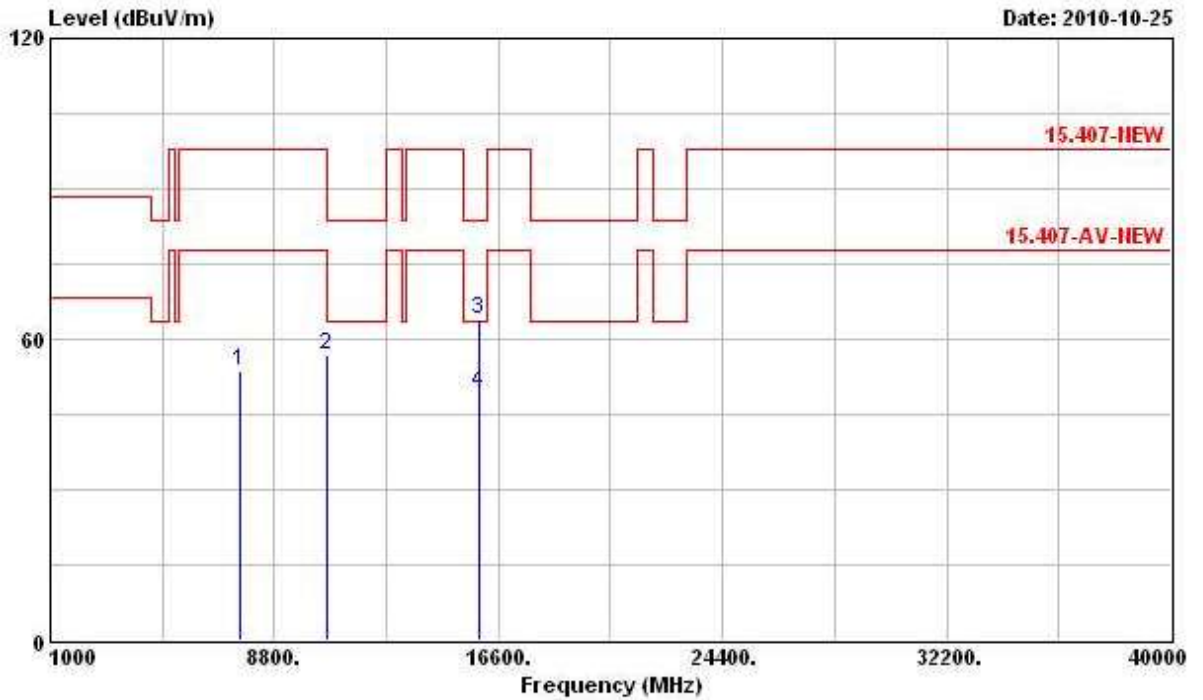
Vertical



	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	7540.000	52.87	-24.97	77.84	43.57	37.93	5.67	34.30	PK
2	10560.000	56.43	-41.41	97.84	43.36	40.13	6.88	33.94	Peak
3	15840.000	50.79	-12.75	63.54	32.62	42.87	8.46	33.16	Average
4	15840.000	64.09	-19.45	83.54	45.92	42.87	8.46	33.16	Peak

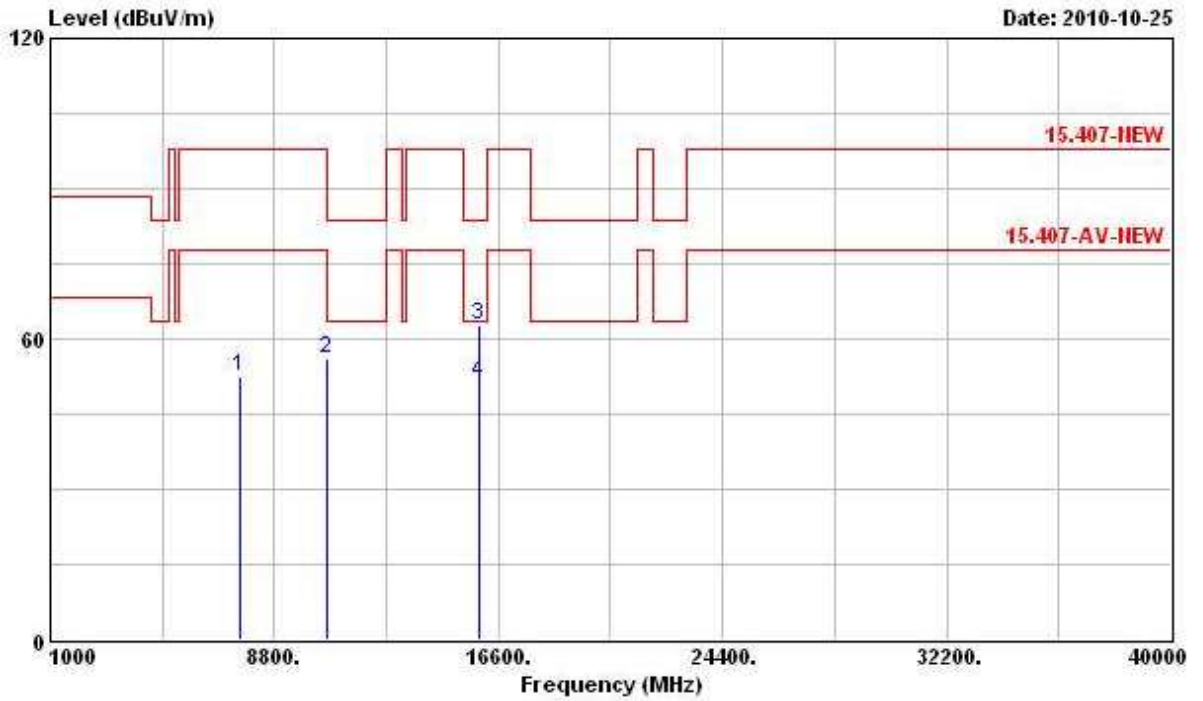
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 64 (20MHz) / (Ant. A+Ant. B)

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	7632.000	53.51	-24.33	77.84	44.15	37.98	5.69	34.31	PK
2	10640.000	56.66	-6.88	63.54	43.39	40.18	6.93	33.84	PK
3	15960.000	63.75	-19.79	83.54	45.68	42.89	8.47	33.29	Peak
4	15960.000	49.45	-14.09	63.54	31.38	42.89	8.47	33.29	Average

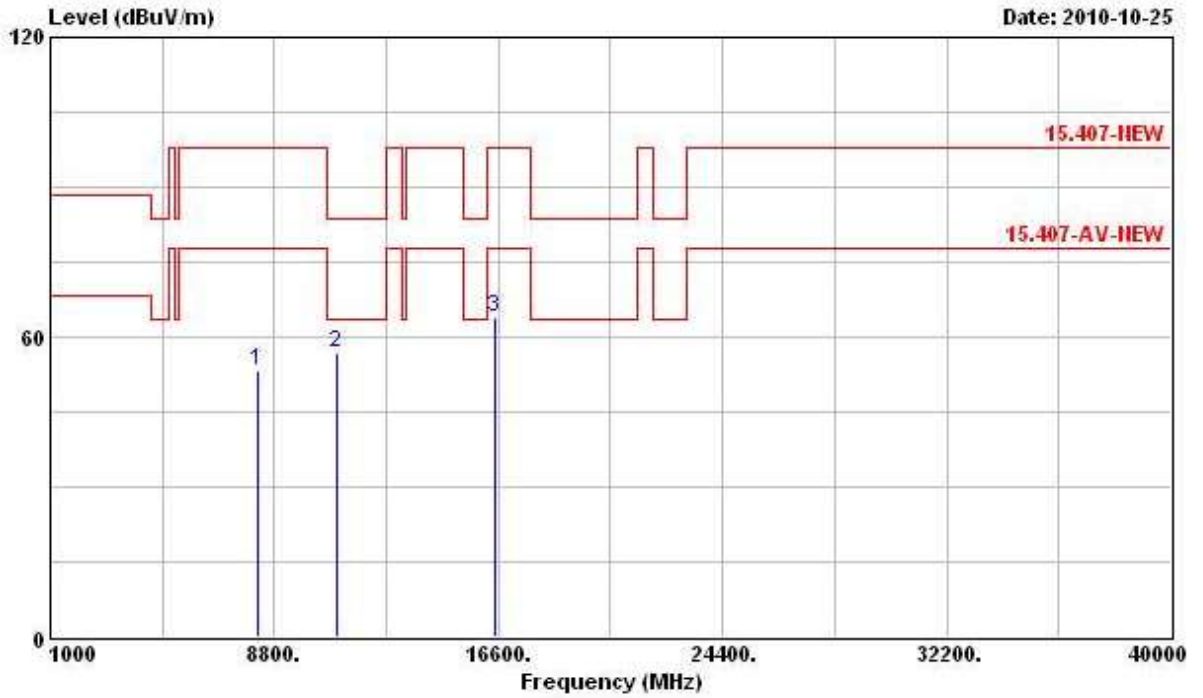
Vertical



	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	7630.000	52.40	-25.44	77.84	43.04	37.98	5.69	34.31	PK
2	10640.000	55.94	-7.60	63.54	42.67	40.18	6.93	33.84	PK
3	15960.000	62.78	-20.76	83.54	44.71	42.89	8.47	33.29	Peak
4	15960.000	51.22	-12.32	63.54	33.15	42.89	8.47	33.29	Average

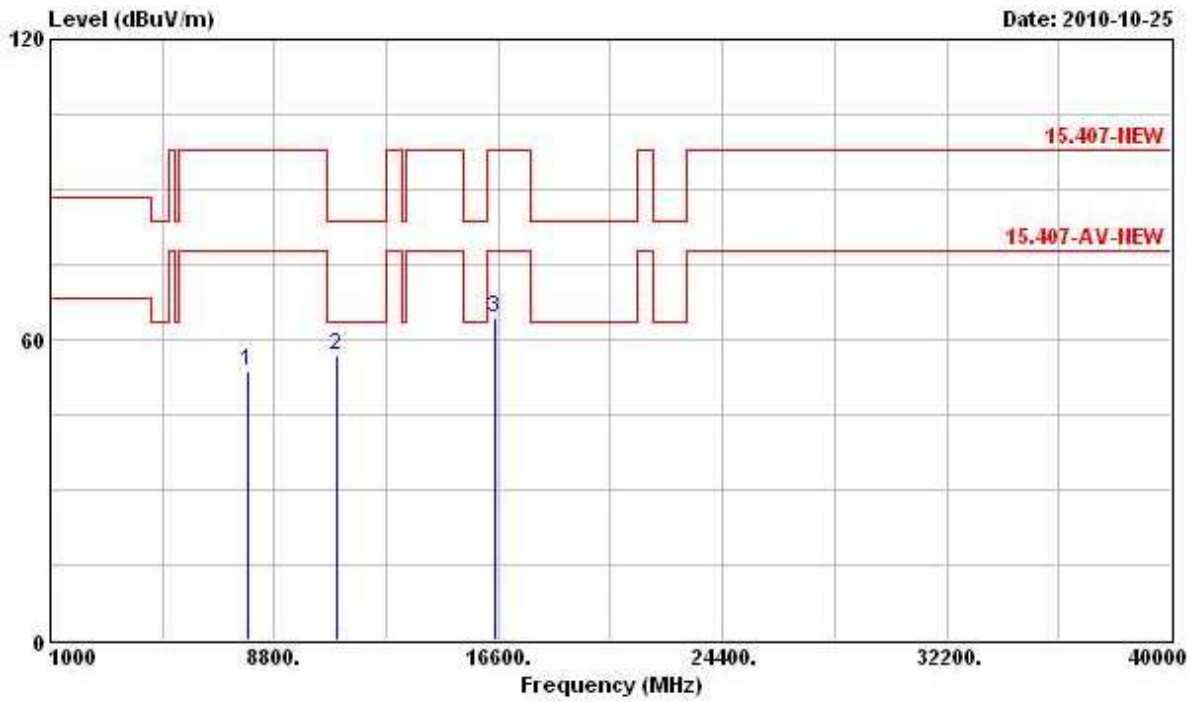
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 100 (20MHz) / (Ant. A+Ant. B)

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	8226.000	53.40	-24.44	77.84	43.51	38.33	5.86	34.30	PK
2	11000.000	56.90	-6.64	63.54	42.72	40.40	7.17	33.39	PK
3	16500.000	63.92	-33.92	97.84	44.96	43.50	8.24	32.78	Peak

Vertical

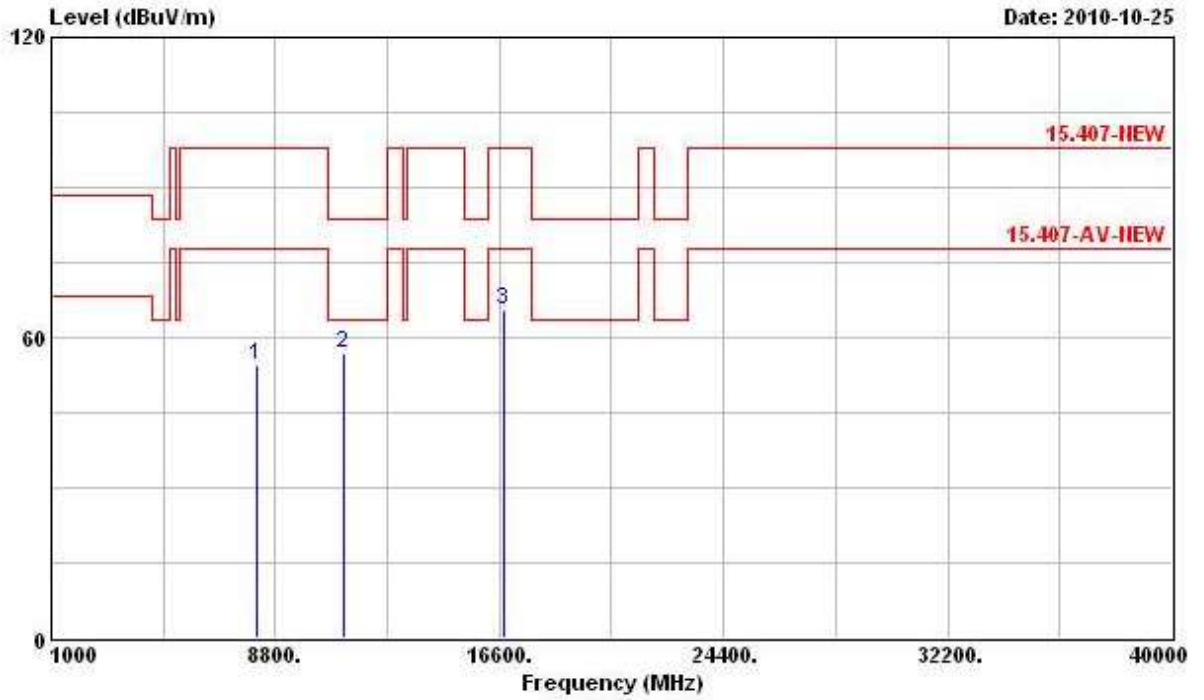


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7896.000	53.70	-44.14	97.84	44.13	38.14	5.78	34.35	Peak
2	11000.000	57.02	-6.52	63.54	42.84	40.40	7.17	33.39	PK
3	16500.000	64.50	-33.34	97.84	45.54	43.50	8.24	32.78	Peak



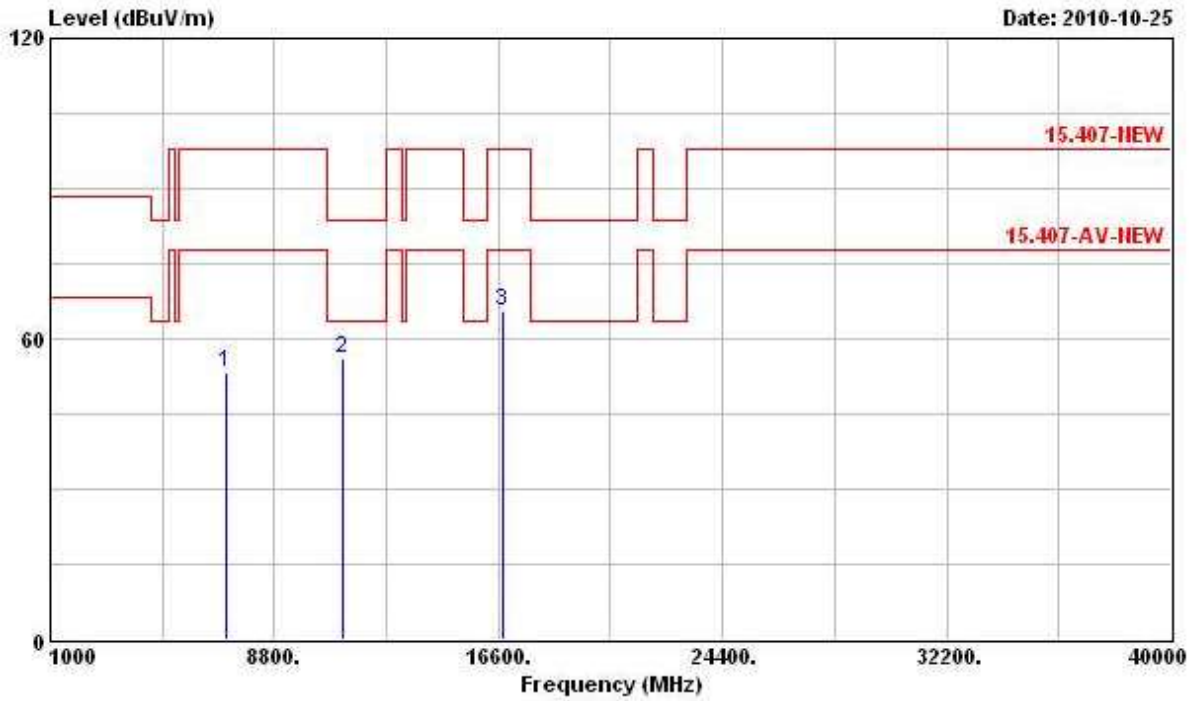
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 116 (20MHz) / (Ant. A+Ant. B)

**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	8124.000	54.28	-23.56	77.84	44.50	38.27	5.84	34.33	PK
2	11160.000	56.81	-6.73	63.54	42.85	40.47	6.96	33.47	PK
3	16740.000	65.71	-32.13	97.84	46.20	43.60	8.47	32.56	Peak

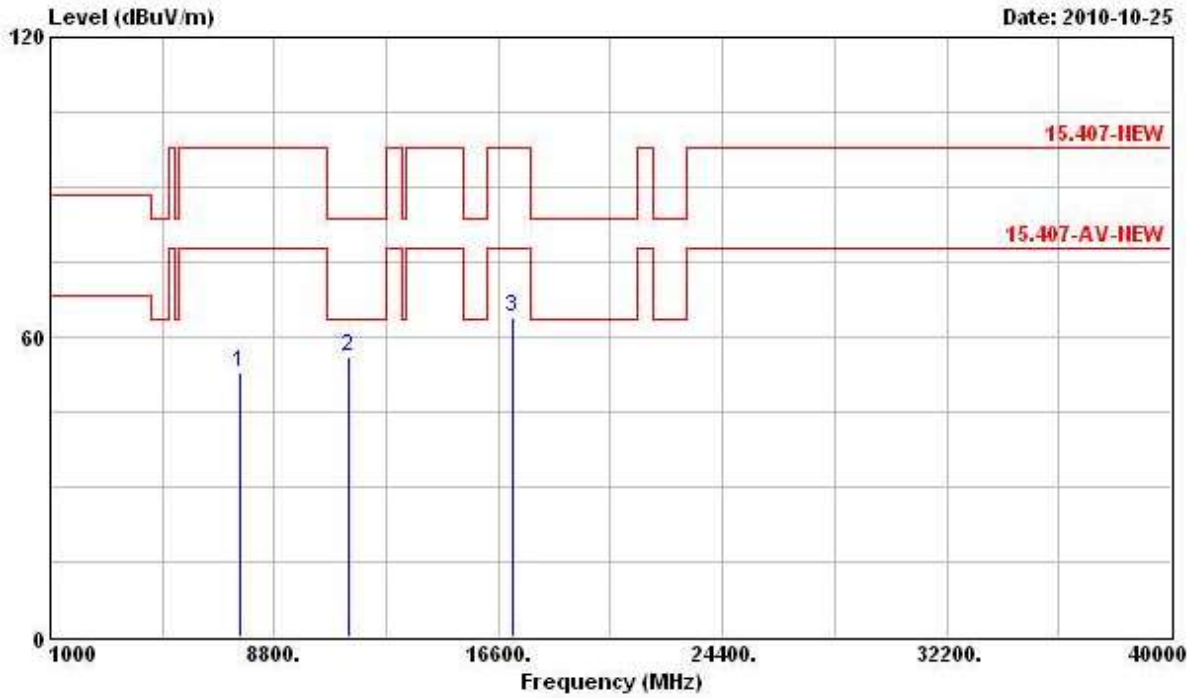
Vertical



	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	7156.000	53.10	-44.74	97.84	43.93	37.83	5.62	34.28	Peak
2	11160.000	56.01	-7.53	63.54	42.05	40.47	6.96	33.47	PK
3	16740.000	65.42	-32.42	97.84	45.91	43.60	8.47	32.56	Peak

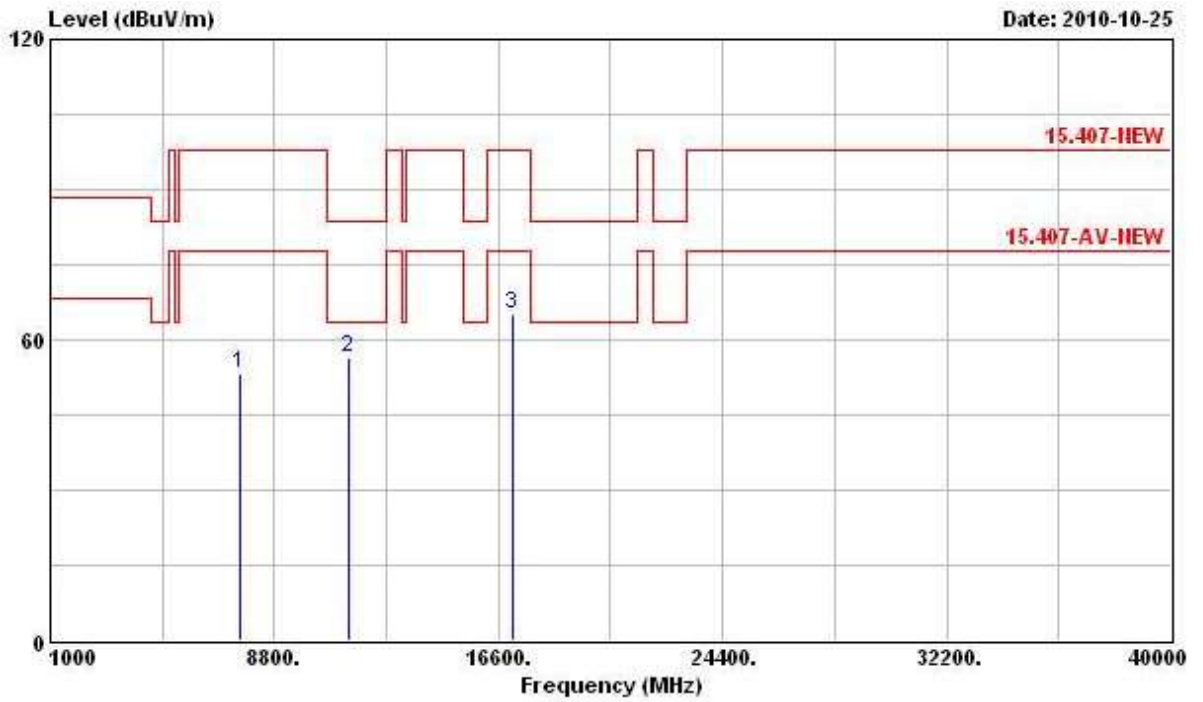
<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 140 (20MHz) / (Ant. A+Ant. B)

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	7610.000	52.90	-24.94	77.84	43.56	37.97	5.68	34.31	PK
2	11400.000	56.19	-7.35	63.54	42.52	40.56	6.71	33.60	PK
3	17100.000	63.97	-33.87	97.84	44.00	43.64	8.61	32.28	Peak

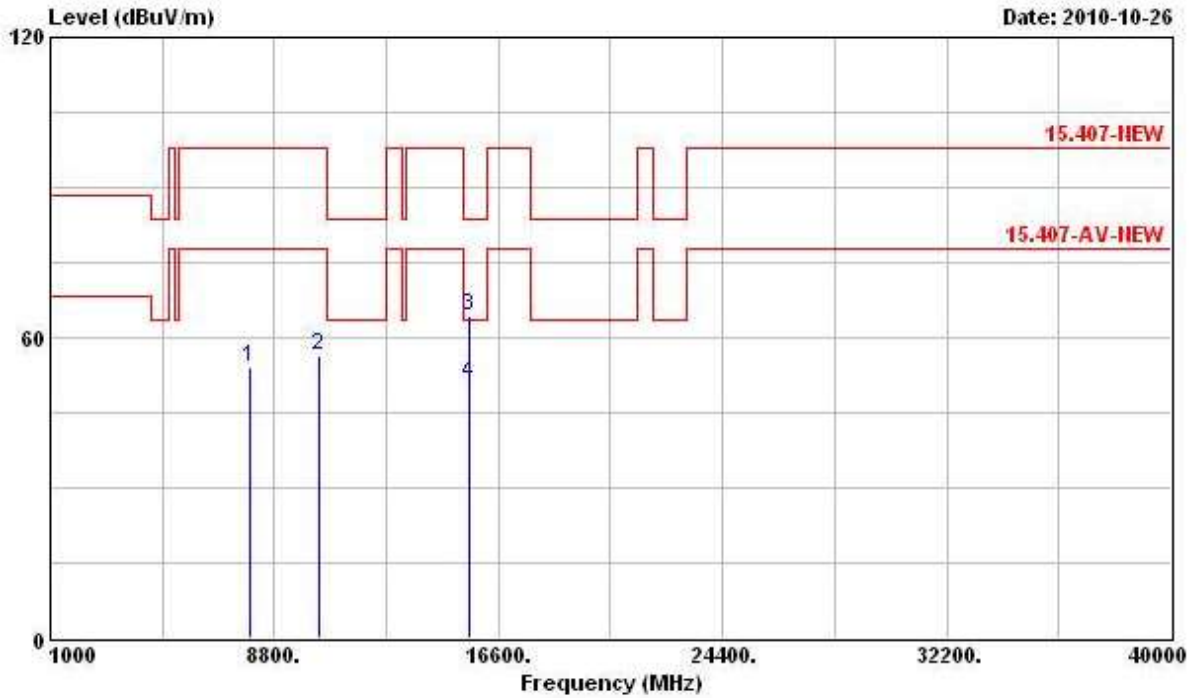
Vertical



	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	7588.000	53.39	-24.45	77.84	44.06	37.96	5.68	34.31	PK
2	11400.000	56.27	-7.27	63.54	42.60	40.56	6.71	33.60	PK
3	17100.000	65.12	-32.72	97.84	45.15	43.64	8.61	32.28	Peak

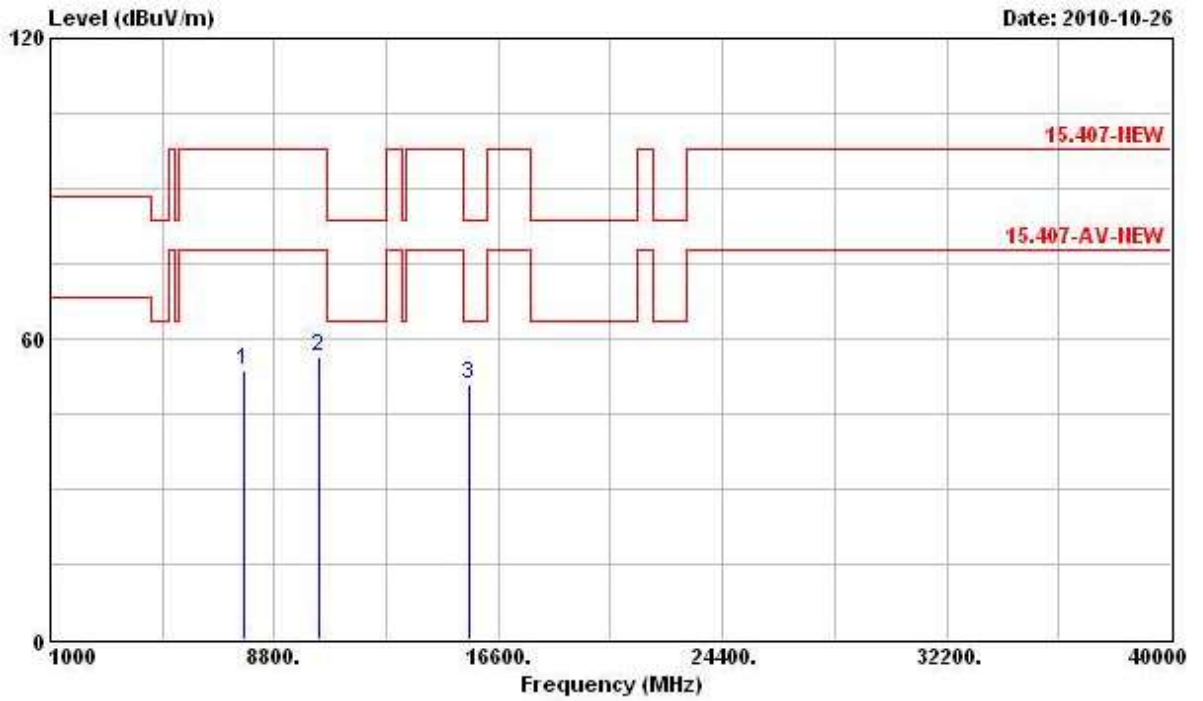
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 38 (40MHz) / (Ant. A + Ant. B)

**Horizontal**



	<b>Freq</b>	<b>Level</b>	<b>Over</b>	<b>Limit</b>	<b>ReadAntenna</b>	<b>Cable</b>	<b>Preamp</b>	
	<b>MHz</b>	<b>dBuV/m</b>	<b>Limit</b>	<b>Line</b>	<b>Level</b>	<b>Loss</b>	<b>Factor</b>	<b>Remark</b>
			<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB</b>	<b>dB</b>	
<b>1</b>	<b>7952.000</b>	<b>54.09</b>	<b>-43.75</b>	<b>97.84</b>	<b>44.49</b>	<b>38.17</b>	<b>5.79</b>	<b>34.36 Peak</b>
<b>2</b>	<b>10380.000</b>	<b>56.62</b>	<b>-41.22</b>	<b>97.84</b>	<b>43.96</b>	<b>40.03</b>	<b>6.75</b>	<b>34.12 Peak</b>
<b>3</b>	<b>15570.000</b>	<b>64.22</b>	<b>-19.32</b>	<b>83.54</b>	<b>45.83</b>	<b>42.81</b>	<b>8.45</b>	<b>32.87 Peak</b>
<b>4</b>	<b>15570.000</b>	<b>50.93</b>	<b>-12.61</b>	<b>63.54</b>	<b>32.54</b>	<b>42.81</b>	<b>8.45</b>	<b>32.87 Average</b>

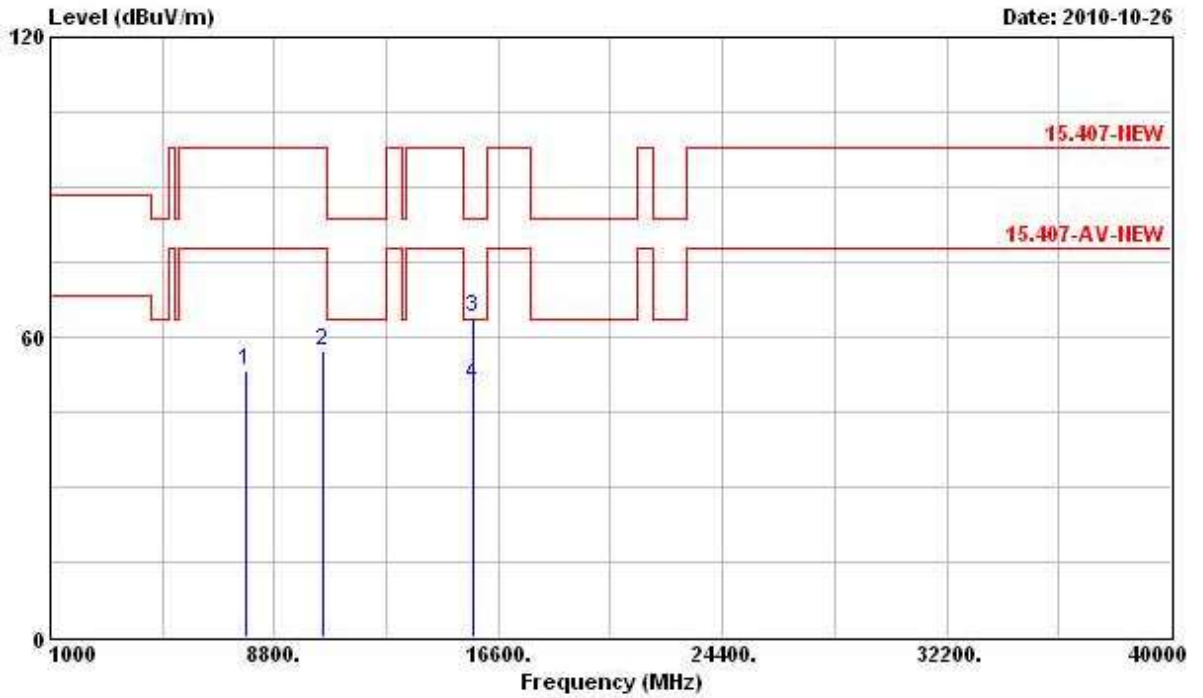
Vertical



	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	7760.000	53.55	-44.29	97.84	44.09	38.06	5.73	34.33	Peak
2	10380.000	56.43	-41.41	97.84	43.77	40.03	6.75	34.12	Peak
3	15570.000	50.91	-12.63	63.54	32.52	42.81	8.45	32.87	Average

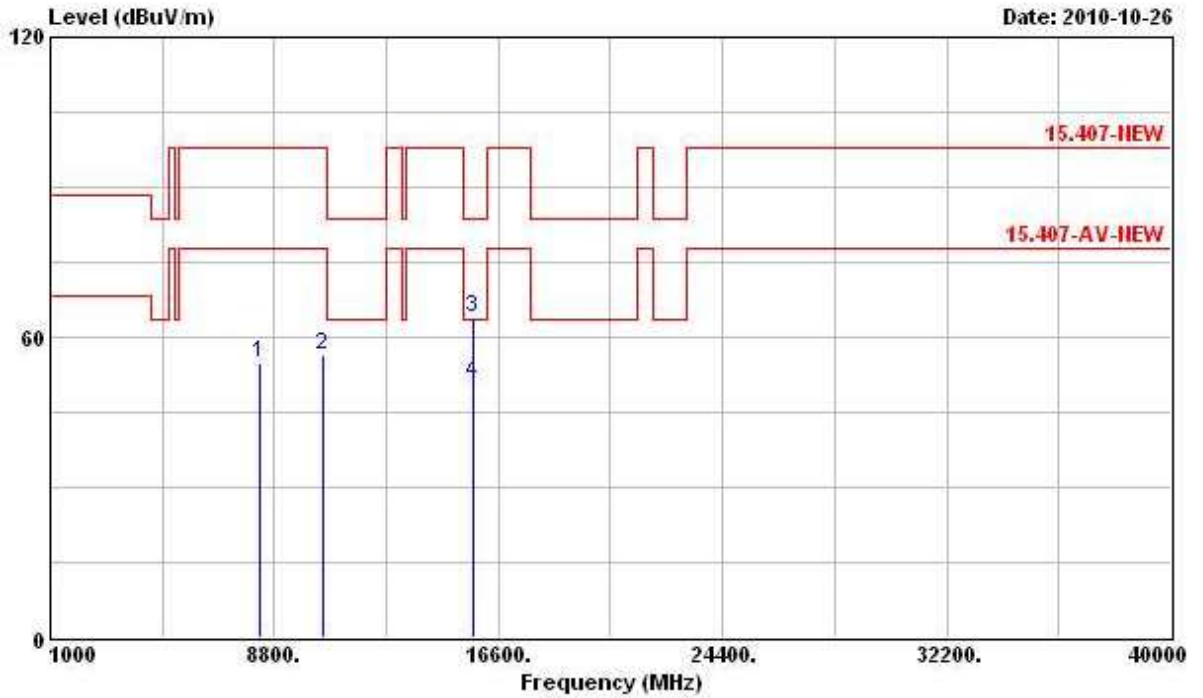
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 46 (40MHz) / (Ant. A + Ant. B)

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	7788.000	53.38	-44.46	97.84	43.91	38.07	5.74	34.34	Peak
2	10460.000	57.14	-40.70	97.84	44.30	40.07	6.82	34.05	Peak
3	15690.000	64.11	-19.43	83.54	45.81	42.84	8.46	33.00	Peak
4	15690.000	50.42	-13.12	63.54	32.12	42.84	8.46	33.00	Average

Vertical

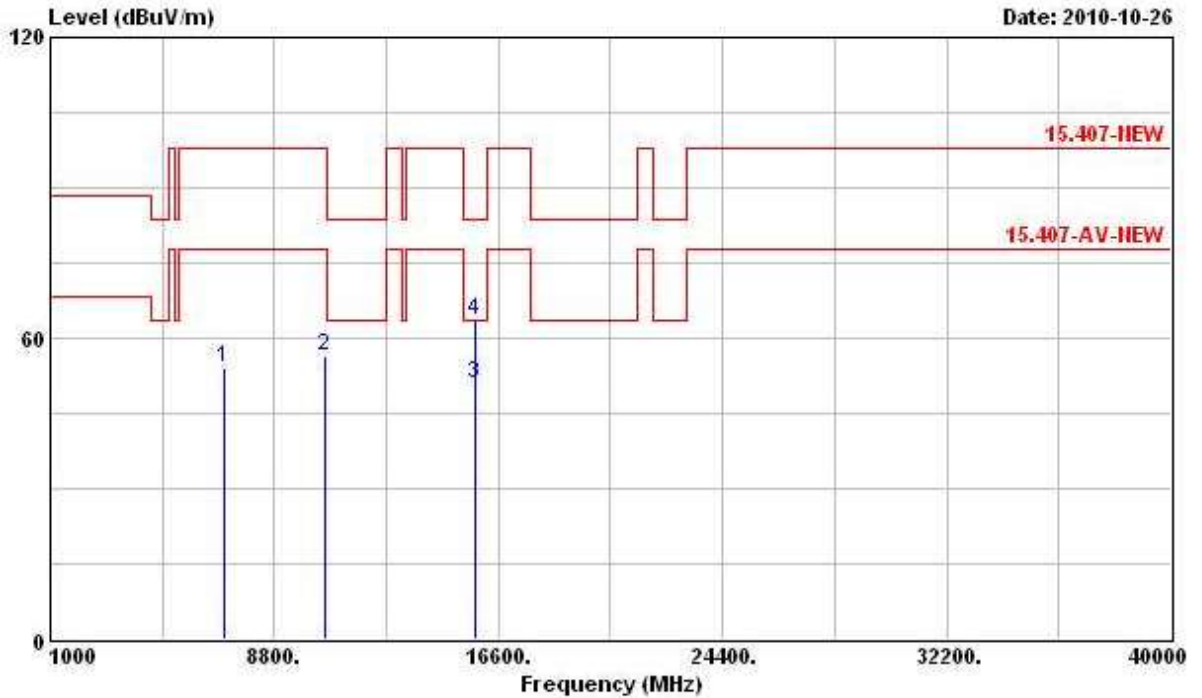


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8282.000	54.91	-22.93	77.84	44.92	38.37	5.89	34.27	PK
2	10460.000	56.36	-41.48	97.84	43.52	40.07	6.82	34.05	Peak
3	15690.000	64.14	-19.40	83.54	45.84	42.84	8.46	33.00	Peak
4	15690.000	51.04	-12.50	63.54	32.74	42.84	8.46	33.00	Average



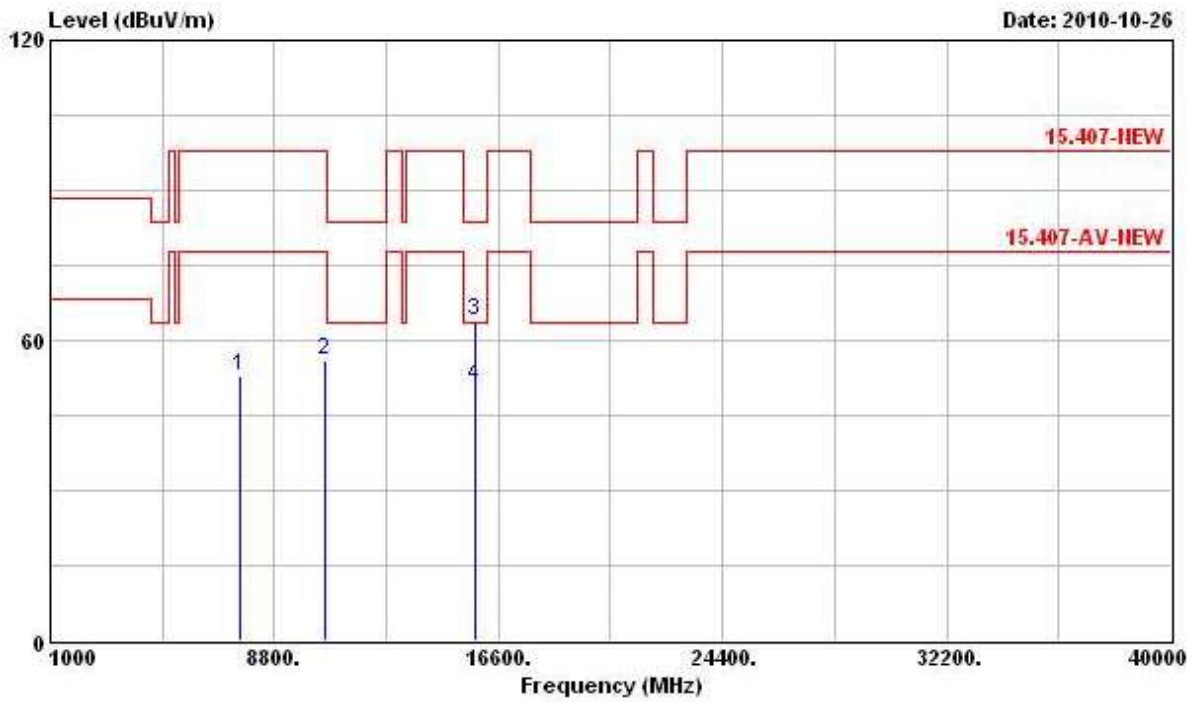
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 54 (40MHz) / (Ant. A + Ant. B)

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	7022.000	54.18	-43.66	97.84	45.06	37.80	5.60	34.28	Peak
2	10540.000	56.52	-41.32	97.84	43.49	40.12	6.88	33.97	Peak
3	15810.000	51.08	-12.46	63.54	32.89	42.86	8.46	33.13	Average
4	15810.000	63.52	-20.02	83.54	45.33	42.86	8.46	33.13	Peak

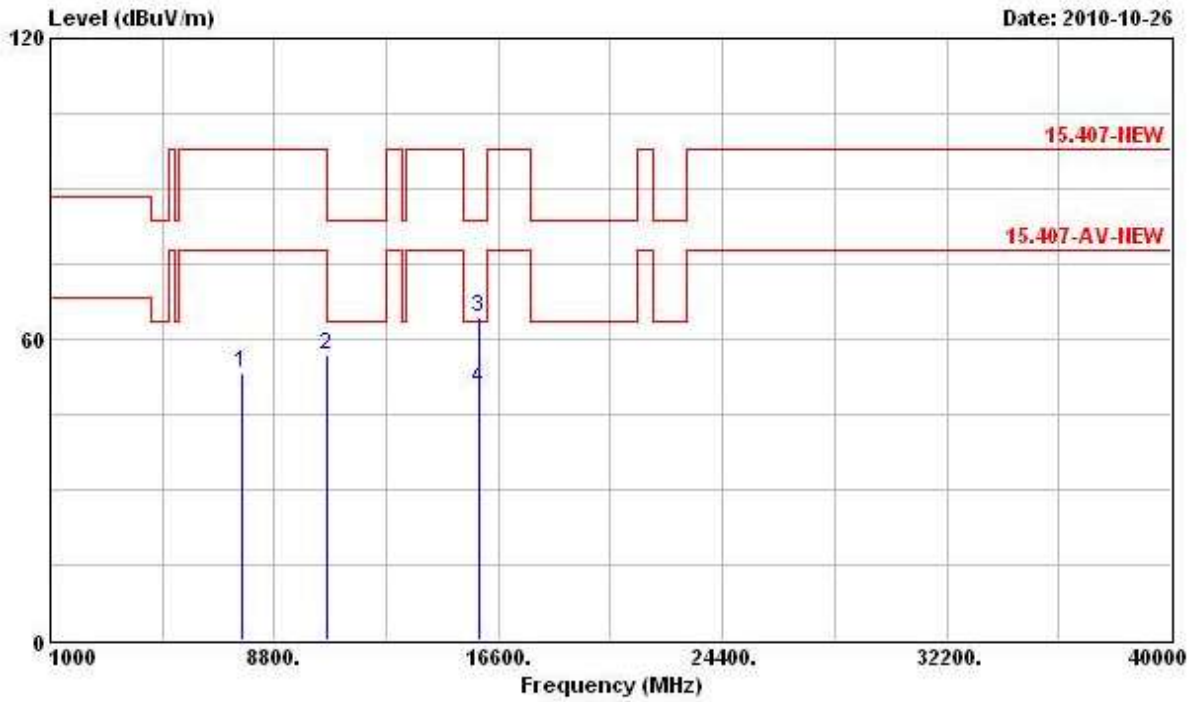
Vertical



	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	7626.000	52.85	-24.99	77.84	43.49	37.98	5.69	34.31	PK
2	10540.000	56.21	-41.63	97.84	43.18	40.12	6.88	33.97	Peak
3	15810.000	64.02	-19.52	83.54	45.83	42.86	8.46	33.13	Peak
4	15810.000	50.97	-12.57	63.54	32.78	42.86	8.46	33.13	Average

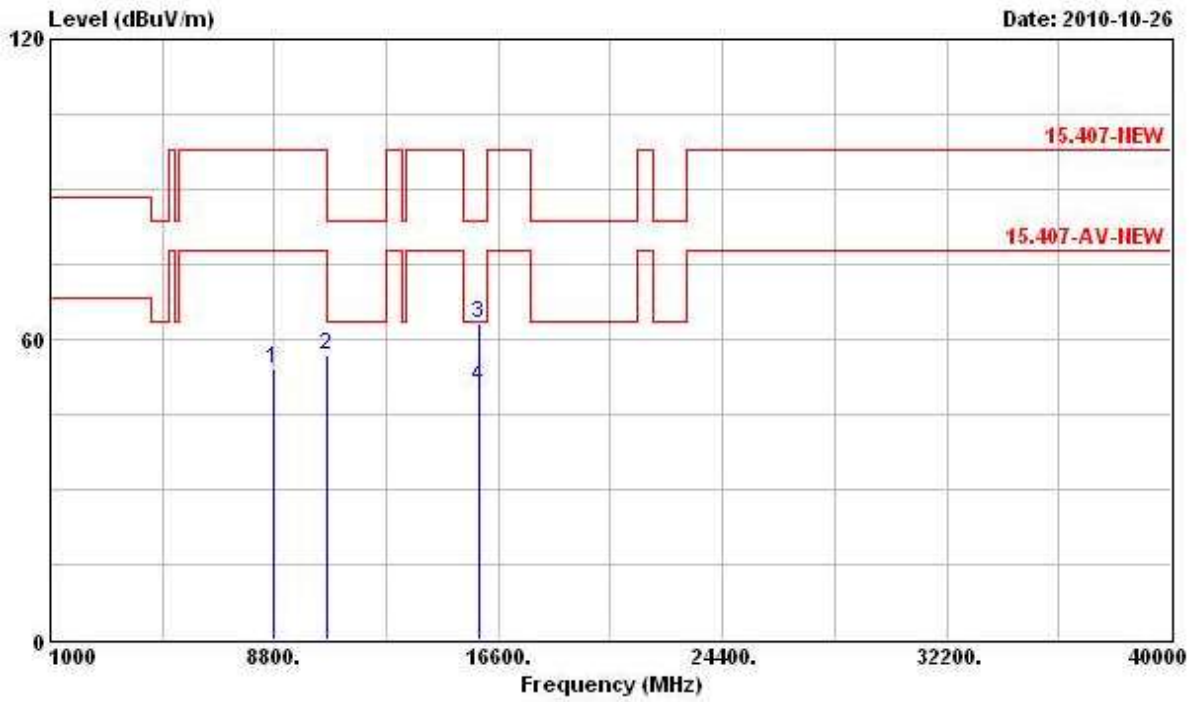
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 62 (40MHz) / (Ant. A + Ant. B)

Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Remark
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB	dB	
1	7680.000	53.30	-24.54	77.84	43.90	5.71	34.32	PK
2	10620.000	56.88	-6.66	63.54	43.65	6.93	33.87	PK
3	15930.000	64.34	-19.20	83.54	46.22	8.47	33.24	Peak
4	15930.000	50.27	-13.27	63.54	32.15	8.47	33.24	Average

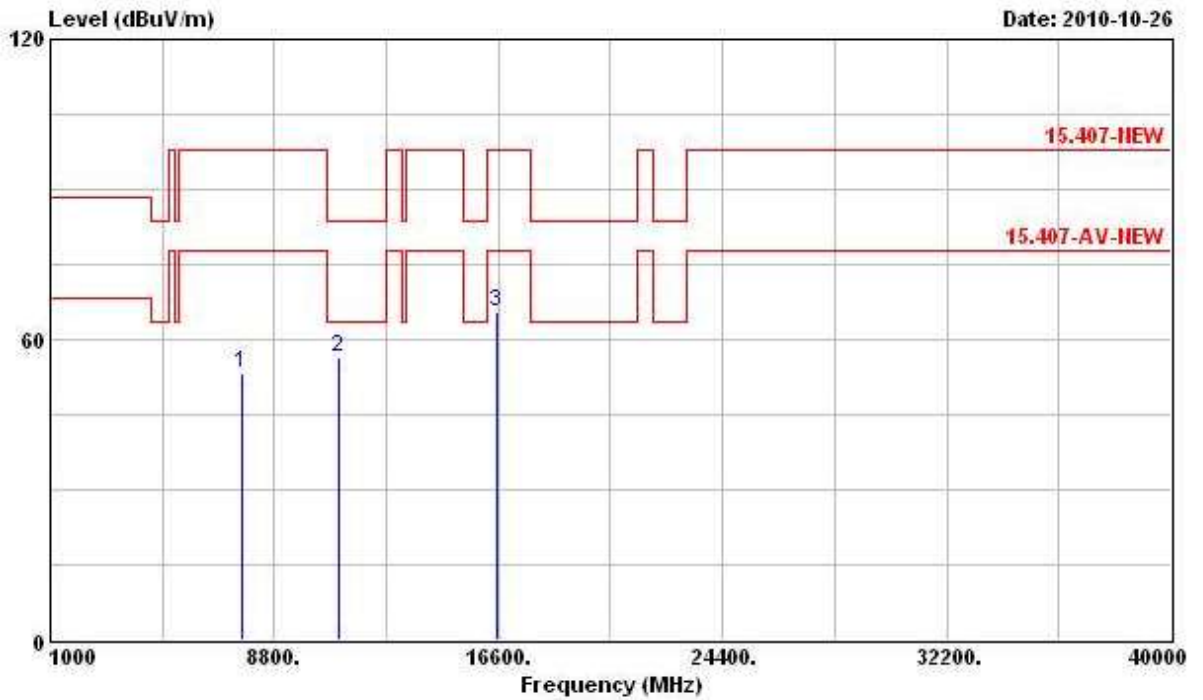
Vertical



	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	8766.000	53.90	-43.94	97.84	44.05	38.29	6.06	34.50	Peak
2	10620.000	56.95	-6.59	63.54	43.72	40.17	6.93	33.87	PK
3	15930.000	63.08	-20.46	83.54	44.96	42.89	8.47	33.24	Peak
4	15930.000	50.67	-12.87	63.54	32.55	42.89	8.47	33.24	Average

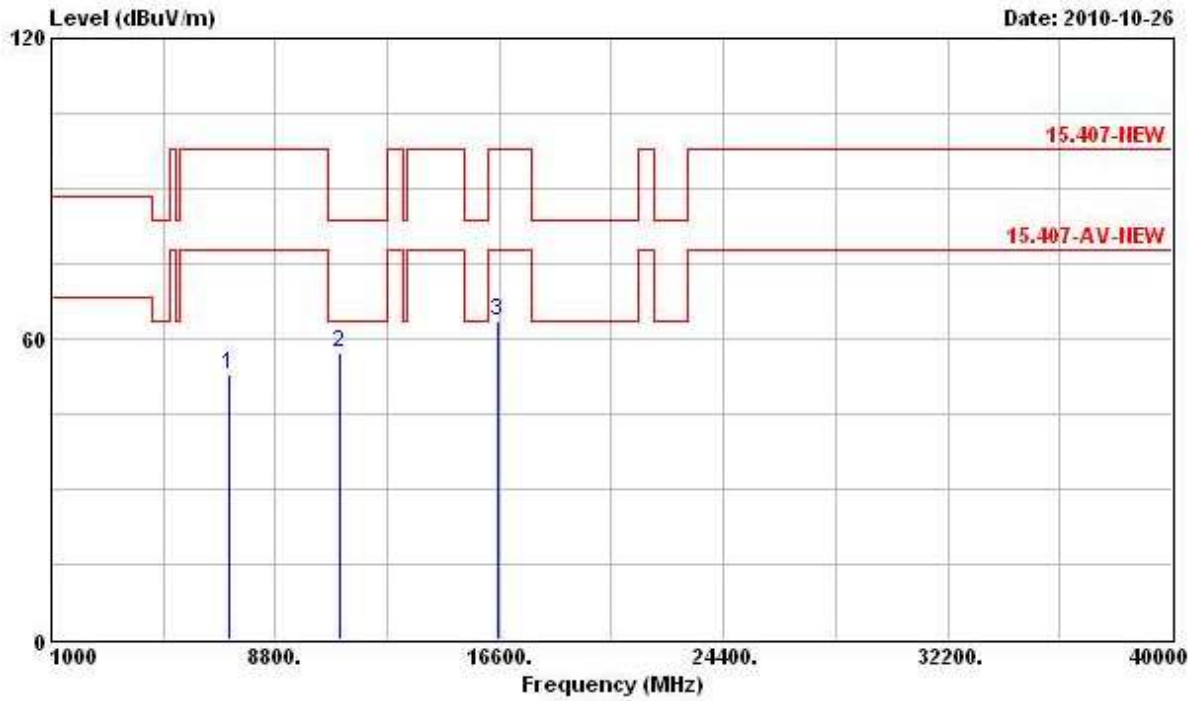
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 102 (40MHz) / (Ant. A + Ant. B)

**Horizontal**



	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7672.000	53.37	-24.47	77.84	43.98	38.00	5.71	34.32	PK
2	11020.000	56.56	-6.98	63.54	42.42	40.41	7.13	33.40	PK
3	16530.000	65.62	-32.22	97.84	46.60	43.51	8.27	32.76	Peak

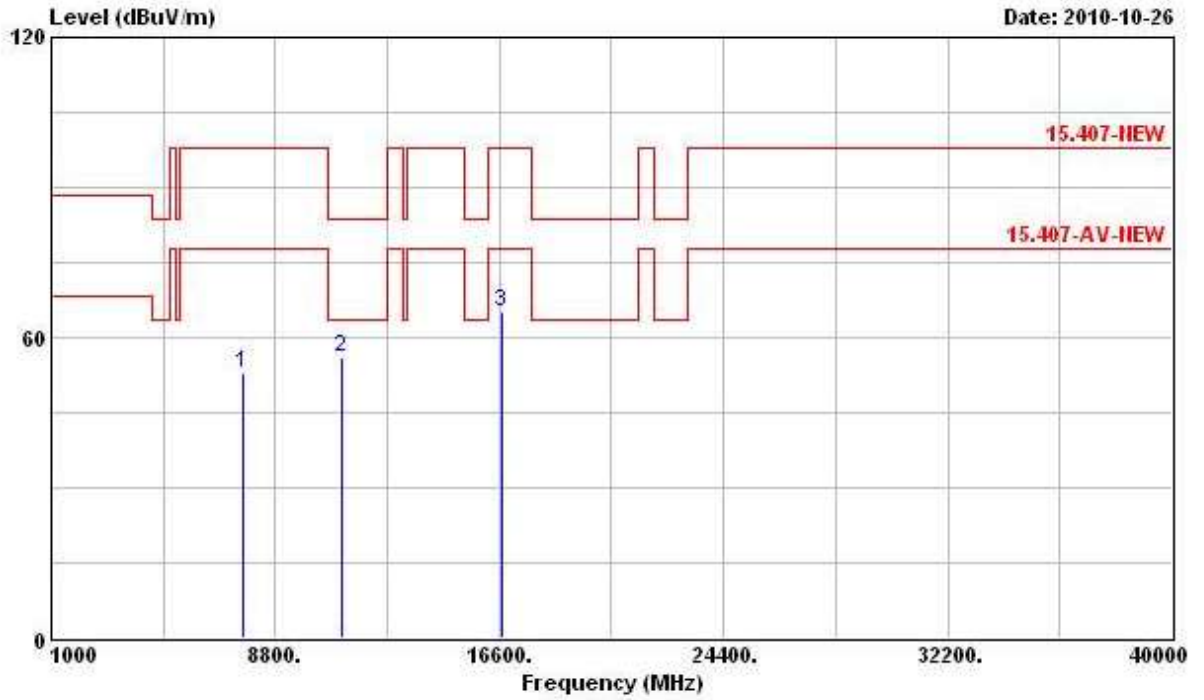
Vertical



	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	7200.000	52.96	-44.88	97.84	43.79	37.84	5.62	34.29	Peak
2	11020.000	57.09	-6.45	63.54	42.95	40.41	7.13	33.40	PK
3	16530.000	63.72	-34.12	97.84	44.70	43.51	8.27	32.76	Peak

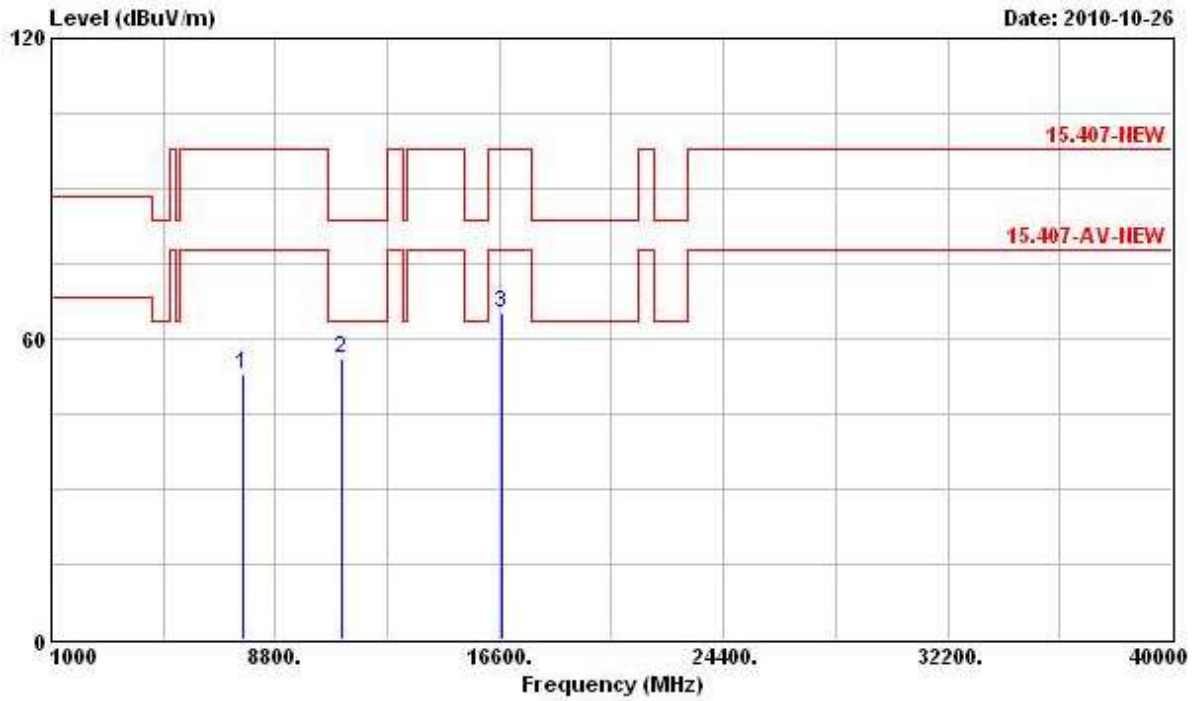
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 110 (40MHz) / (Ant. A + Ant. B)

**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	7640.000	52.89	-24.95	77.84	43.52	37.99	5.69	34.31	PK
2	11100.000	56.06	-7.48	63.54	42.01	40.44	7.05	33.44	PK
3	16650.000	65.18	-32.66	97.84	45.89	43.56	8.37	32.64	Peak

Vertical

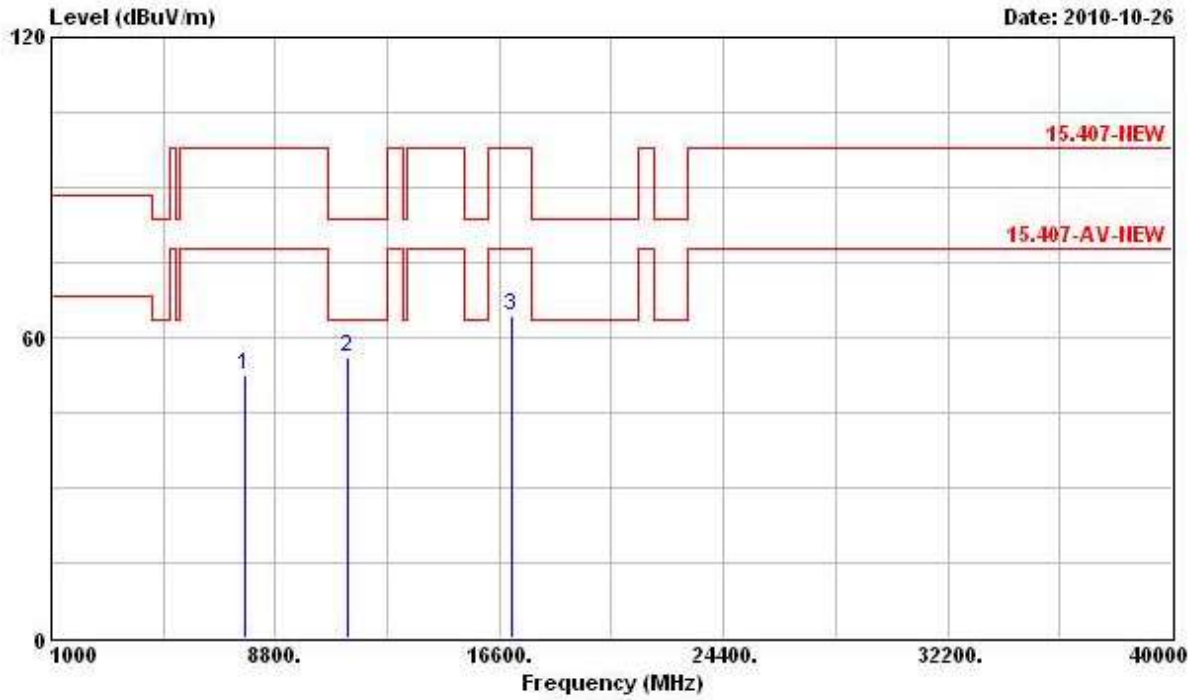


	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7680.000	52.83	-25.01	77.84	43.43	38.01	5.71	34.32	PK
2	11100.000	56.22	-7.32	63.54	42.17	40.44	7.05	33.44	PK
3	16650.000	65.02	-32.82	97.84	45.73	43.56	8.37	32.64	Peak



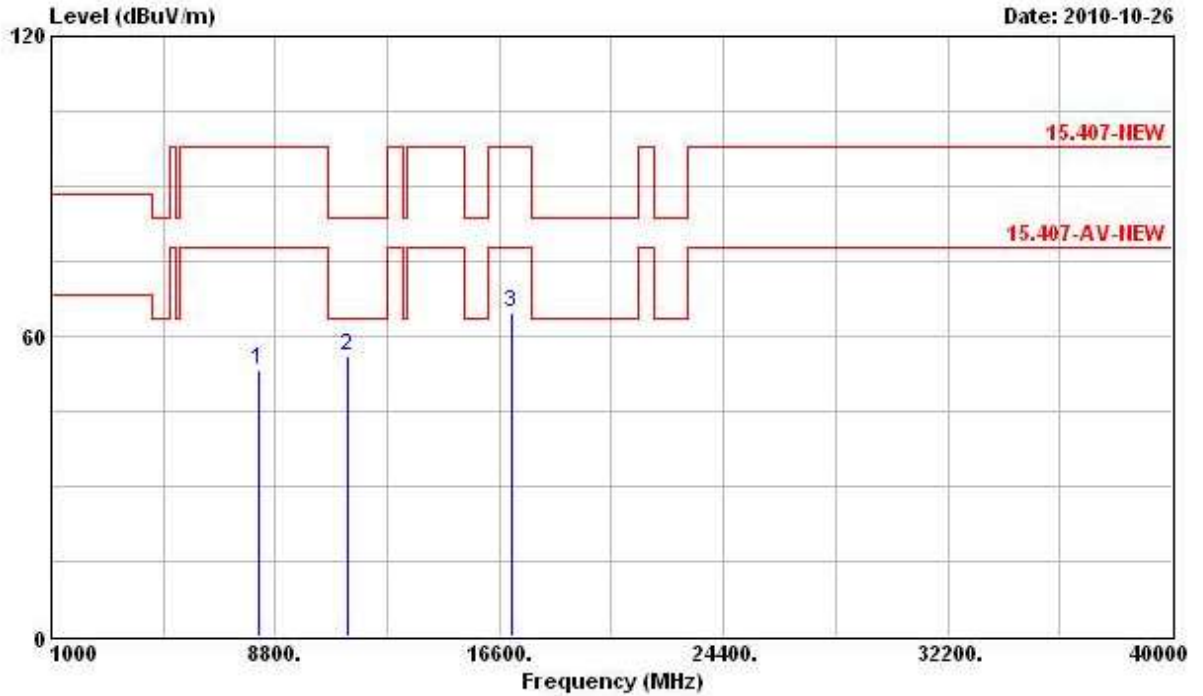
<b>Final Test Date</b>	Oct. 26, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 110 (40MHz) / (Ant. A + Ant. B)

**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	7720.000	52.35	-25.49	77.84	42.93	38.03	5.72	34.33	PK
2	11340.000	55.88	-7.66	63.54	42.11	40.53	6.80	33.56	PK
3	17010.000	64.48	-33.36	97.84	44.45	43.69	8.65	32.31	Peak

Vertical



	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	8210.000	53.43	-24.41	77.84	43.55	38.32	5.86	34.30	PK
2	11340.000	56.17	-7.37	63.54	42.40	40.53	6.80	33.56	PK
3	17010.000	64.82	-33.02	97.84	44.79	43.69	8.65	32.31	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). 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.

<b>Frequencies (MHz)</b>	<b>Field Strength (micorvolts/meter)</b>	<b>Measurement Distance (meters)</b>
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.

<b>Spectrum Parameter</b>	<b>Setting</b>
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:**

<b>Final Test Date</b>	Oct. 23, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11a Ch. 36, 40, 48 (Ant. A)

**Channel 36**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5127.100	61.81	-1.73	63.54	20.84	36.19	4.78	0.00	Average
2 @	5180.600	106.16			65.10	36.26	4.80	0.00	Average
1	5134.200	74.63	-8.91	83.54	33.66	36.19	4.78	0.00	Peak
2 @	5178.700	116.33			75.27	36.26	4.80	0.00	Peak

The item 2 is fundamental emissions.

**Channel 40**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5147.400	62.13	-1.41	63.54	21.14	36.21	4.78	0.00	Average
2 @	5198.100	108.61			67.52	36.28	4.81	0.00	Average
3 @	5394.600	60.01	-3.53	63.54	18.57	36.56	4.88	0.00	Average
1	5147.700	74.19	-9.35	83.54	33.20	36.21	4.78	0.00	Peak
2 @	5198.100	118.42			77.33	36.28	4.81	0.00	Peak
3	5381.700	72.94	-10.60	83.54	31.53	36.54	4.87	0.00	Peak

The item 2 is fundamental emissions.

**Channel 48**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5114.100	60.94	-2.60	63.54	20.01	36.16	4.77	0.00	Average
2 @	5238.600	113.55			72.40	36.33	4.82	0.00	Average
3 @	5357.700	60.51	-3.03	63.54	19.15	36.49	4.87	0.00	Average
1	5117.400	74.12	-9.42	83.54	33.18	36.16	4.78	0.00	Peak
2 @	5237.400	123.52			82.37	36.33	4.82	0.00	Peak
3	5365.800	73.77	-9.77	83.54	32.39	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

<b>Final Test Date</b>	Oct. 23, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11a Ch. 52, 56, 64 (Ant. A)

**Channel 52**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5100.000	60.85	-2.69	63.54	19.94	36.14	4.77	0.00	Average
2 @	5262.900	113.74			72.55	36.37	4.82	0.00	Average
3 @	5351.400	60.80	-2.74	63.54	19.44	36.49	4.87	0.00	Average
1	5134.200	74.55	-8.99	83.54	33.58	36.19	4.78	0.00	Peak
2 @	5261.400	123.87			82.68	36.37	4.82	0.00	Peak
3	5353.800	74.30	-9.24	83.54	32.94	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

**Channel 56**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5130.900	60.85	-2.69	63.54	19.88	36.19	4.78	0.00	Average
2 @	5278.500	113.87			72.63	36.40	4.84	0.00	Average
3 @	5355.300	60.94	-2.60	63.54	19.58	36.49	4.87	0.00	Average
1	5100.000	73.95	-9.59	83.54	33.04	36.14	4.77	0.00	Peak
2 @	5277.000	123.96			82.72	36.40	4.84	0.00	Peak
3	5350.500	73.45	-10.09	83.54	32.09	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

**Channel 64**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5318.820	108.61			67.32	36.44	4.85	0.00	Average
2 @	5372.300	62.03	-1.51	63.54	20.65	36.51	4.87	0.00	Average
1 @	5318.610	119.17			77.88	36.44	4.85	0.00	Peak
2	5373.770	74.87	-8.67	83.54	33.49	36.51	4.87	0.00	Peak

The item 1 is fundamental emissions.

<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11a Ch. 100, 116, 140 (Ant. A)

**Channel 100**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5447.120	61.81	-1.73	63.54	20.28	36.63	4.90	0.00	Average
2 @	5500.880	106.72			65.11	36.70	4.91	0.00	Average
1	5447.200	74.91	-8.63	83.54	33.38	36.63	4.90	0.00	Peak
2 @	5501.840	117.25			75.64	36.70	4.91	0.00	Peak

The item 2 is fundamental emissions.

**Channel 116**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5440.880	60.55	-2.99	63.54	19.04	36.61	4.90	0.00	Average
2 @	5579.120	110.29			68.56	36.78	4.95	0.00	Average
3	5737.840	61.26	-16.58	77.84	19.23	36.99	5.04	0.00	Average
1	5438.640	73.62	-9.92	83.54	32.11	36.61	4.90	0.00	Peak
2 @	5581.680	120.31			78.56	36.80	4.95	0.00	Peak
3	5742.960	74.16	-23.68	97.84	32.10	36.99	5.07	0.00	Peak

The item 2 is fundamental emissions.

**Channel 140**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5700.680	108.56			66.57	36.95	5.04	0.00	Average
2	5725.400	61.98	-15.86	77.84	19.97	36.97	5.04	0.00	Average
1 @	5701.640	119.19			77.20	36.95	5.04	0.00	Peak
2	5726.360	77.98	-19.86	97.84	35.97	36.97	5.04	0.00	Peak

The item 1 is fundamental emissions.

**For Two Chain:**

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

**Channel 36**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5127.800	61.90	-1.64	63.54	20.93	36.19	4.78	0.00	Average
2 @	5181.400	106.48			65.42	36.26	4.80	0.00	Average
1	5122.300	74.44	-9.10	83.54	33.50	36.16	4.78	0.00	Peak
2 @	5181.900	118.23			77.17	36.26	4.80	0.00	Peak

The item 2 is fundamental emissions.

**Channel 40**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5147.700	62.16	-1.38	63.54	21.17	36.21	4.78	0.00	Average
2 @	5197.800	107.37			66.28	36.28	4.81	0.00	Average
3 @	5365.800	60.46	-3.08	63.54	19.08	36.51	4.87	0.00	Average
1	5146.500	73.95	-9.59	83.54	32.96	36.21	4.78	0.00	Peak
2 @	5196.600	118.85			77.76	36.28	4.81	0.00	Peak
3	5388.900	73.12	-10.42	83.54	31.70	36.54	4.88	0.00	Peak

The item 2 is fundamental emissions.

**Channel 48**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5125.800	61.22	-2.32	63.54	20.25	36.19	4.78	0.00	Average
2 @	5237.700	112.44			71.29	36.33	4.82	0.00	Average
3 @	5352.900	61.05	-2.49	63.54	19.69	36.49	4.87	0.00	Average
1	5133.300	73.93	-9.61	83.54	32.96	36.19	4.78	0.00	Peak
2 @	5238.600	123.95			82.80	36.33	4.82	0.00	Peak
3	5374.500	73.75	-9.79	83.54	32.37	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

<b>Final Test Date</b>	Oct. 23, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	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 @	5128.200	61.58	-1.96	63.54	20.61	36.19	4.78	0.00	Average
2 @	5261.400	113.94			72.75	36.37	4.82	0.00	Average
3 @	5351.700	61.54	-2.00	63.54	20.18	36.49	4.87	0.00	Average
1	5121.300	74.63	-8.91	83.54	33.69	36.16	4.78	0.00	Peak
2 @	5259.000	125.36			84.17	36.37	4.82	0.00	Peak
3	5360.100	74.76	-8.78	83.54	33.40	36.49	4.87	0.00	Peak

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 @	5124.900	61.63	-1.91	63.54	20.66	36.19	4.78	0.00	Average
2 @	5280.900	114.38			73.14	36.40	4.84	0.00	Average
3 @	5350.000	61.70	-1.84	63.54	20.34	36.49	4.87	0.00	Average
1	5111.400	74.88	-8.66	83.54	33.95	36.16	4.77	0.00	Peak
2 @	5278.500	125.88			84.64	36.40	4.84	0.00	Peak
3	5351.700	74.53	-9.01	83.54	33.17	36.49	4.87	0.00	Peak

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 @	5317.770	108.69			67.40	36.44	4.85	0.00	Average
2 @	5372.020	62.29	-1.25	63.54	20.91	36.51	4.87	0.00	Average
1 @	5316.650	120.75			79.46	36.44	4.85	0.00	Peak
2	5372.020	74.74	-8.80	83.54	33.36	36.51	4.87	0.00	Peak

The item 1 is fundamental emissions.



<b>Final Test Date</b>	Oct. 23, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	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 @ 5447.520	61.94	-1.60	63.54	20.41	36.63	4.90	0.00	Average
2 @ 5501.840	106.25			64.64	36.70	4.91	0.00	Average
1 5447.840	74.90	-8.64	83.54	33.37	36.63	4.90	0.00	Peak
2 @ 5502.160	118.34			76.73	36.70	4.91	0.00	Peak

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 @ 5457.840	60.95	-2.59	63.54	19.42	36.63	4.90	0.00	Average
2 @ 5577.840	112.04			70.31	36.78	4.95	0.00	Average
3 5743.280	61.26	-16.58	77.84	19.20	36.99	5.07	0.00	Average
1 5430.960	74.86	-8.68	83.54	33.35	36.61	4.90	0.00	Peak
2 @ 5576.560	123.28			81.55	36.78	4.95	0.00	Peak
3 5746.800	74.93	-22.91	97.84	32.87	36.99	5.07	0.00	Peak

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 @ 5697.800	110.38			68.43	36.93	5.02	0.00	Average
2 5724.980	61.81	-16.03	77.84	19.80	36.97	5.04	0.00	Average
1 @ 5698.280	122.24			80.29	36.93	5.02	0.00	Peak
2 5725.400	76.93	-20.91	97.84	34.92	36.97	5.04	0.00	Peak

The item 1 is fundamental emissions.

<b>Final Test Date</b>	Oct. 25, 2010	<b>Test Site No.</b>	03CH03-HY
<b>Temperature</b>	24.9°C	<b>Humidity</b>	54%
<b>Test Engineer</b>	Eddie	<b>Configuration</b>	802.11n Ch. 38, 46, 54 (40MHz) / (Ant. A + Ant. B)

**Channel 38**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5149.940	62.17	-1.37	63.54	21.18	36.21	4.78	0.00	Average
2 @	5194.490	96.01			54.92	36.28	4.81	0.00	Average
1	5148.290	75.05	-8.49	83.54	34.06	36.21	4.78	0.00	Peak
2 @	5193.610	106.53			65.44	36.28	4.81	0.00	Peak

The item 2 is fundamental emissions.

**Channel 46**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1	5148.750	59.42	-4.12	63.54	18.43	36.21	4.78	0.00	Average
2 @	5222.750	96.64			55.53	36.30	4.81	0.00	Average
3	5350.500	59.36	-4.18	63.54	18.00	36.49	4.87	0.00	Average
1	5131.750	72.97	-10.57	83.54	32.00	36.19	4.78	0.00	Peak
2 @	5233.500	107.06			65.91	36.33	4.82	0.00	Peak
3	5366.500	73.18	-10.36	83.54	31.80	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

**Channel 54**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5135.500	59.63	-3.91	63.54	18.66	36.19	4.78	0.00	Average
2 @	5265.500	101.23			60.04	36.37	4.82	0.00	Average
3 @	5362.750	59.57	-3.97	63.54	18.19	36.51	4.87	0.00	Average
1	5136.750	73.03	-10.51	83.54	32.06	36.19	4.78	0.00	Peak
2 @	5265.500	111.43			70.24	36.37	4.82	0.00	Peak
3	5361.750	72.34	-11.20	83.54	30.96	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

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

**Channel 62**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5305.100	95.64			54.38	36.42	4.84	0.00	Average
2 @	5350.200	60.65	-2.89	63.54	19.29	36.49	4.87	0.00	Average
1 @	5307.100	106.20			64.94	36.42	4.84	0.00	Peak
2	5350.000	74.28	-9.26	83.54	32.92	36.49	4.87	0.00	Peak

The item 1 is fundamental emissions.

**Channel 102**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1	5431.800	58.61	-4.93	63.54	17.10	36.61	4.90	0.00	Average
2 @	5505.400	91.87			50.24	36.70	4.93	0.00	Average
1	5451.500	71.96	-11.58	83.54	30.43	36.63	4.90	0.00	Peak
2 @	5507.400	102.47			60.84	36.70	4.93	0.00	Peak

The item 2 is fundamental emissions.

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

**Channel 110**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1	5445.700	58.42	-5.12	63.54	16.89	36.63	4.90	0.00	Average
2 @	5546.200	91.89			50.20	36.74	4.95	0.00	Average
3	5732.500	59.98	-17.86	77.84	17.97	36.97	5.04	0.00	Average
1	5446.600	72.26	-11.28	83.54	30.73	36.63	4.90	0.00	Peak
2 @	5547.400	103.79			62.10	36.74	4.95	0.00	Peak
3	5725.300	73.36	-24.48	97.84	31.35	36.97	5.04	0.00	Peak

The item 2 is fundamental emissions.

**Channel 134**

	<b>Freq</b>	<b>Level</b>	<b>Over Limit</b>	<b>Limit Line</b>	<b>ReadAntenna Level</b>	<b>Antenna Factor</b>	<b>Cable Loss</b>	<b>Preamp Factor</b>	<b>Remark</b>
	<b>MHz</b>	<b>dBuV/m</b>	<b>dB</b>	<b>dBuV/m</b>	<b>dBuV</b>	<b>dB/m</b>	<b>dB</b>	<b>dB</b>	
1 @	5662.700	91.78			49.87	36.89	5.02	0.00	Average
2	5725.100	59.88	-17.96	77.84	17.87	36.97	5.04	0.00	Average
1 @	5665.500	102.37			60.46	36.89	5.02	0.00	Peak
2	5736.800	73.03	-24.81	97.84	31.00	36.99	5.04	0.00	Peak

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**

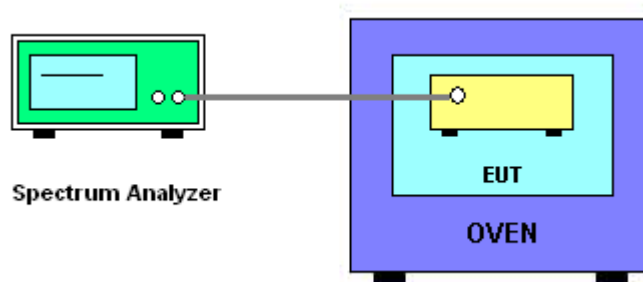
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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**

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

**Temperature vs. Frequency Stability**

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

**For Two Chain**

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

**Temperature vs. Frequency Stability**

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

### **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 <sup>nd</sup> 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**

<b>Accreditation Criteria</b>	: ISO/IEC 17025:2005
<b>Accreditation Number</b>	: 1190
<b>Originally Accredited</b>	: December 15, 2003
<b>Effective Period</b>	: January 10, 2010 to January 09, 2013
<b>Accredited Scope</b>	: Testing Field, see described in the Appendix.
<b>Specific Accreditation Program</b>	: 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.