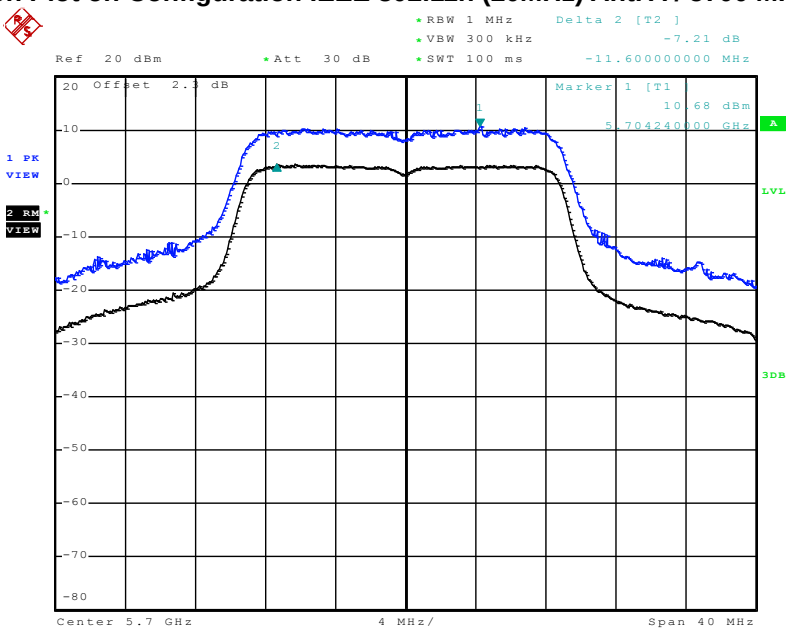
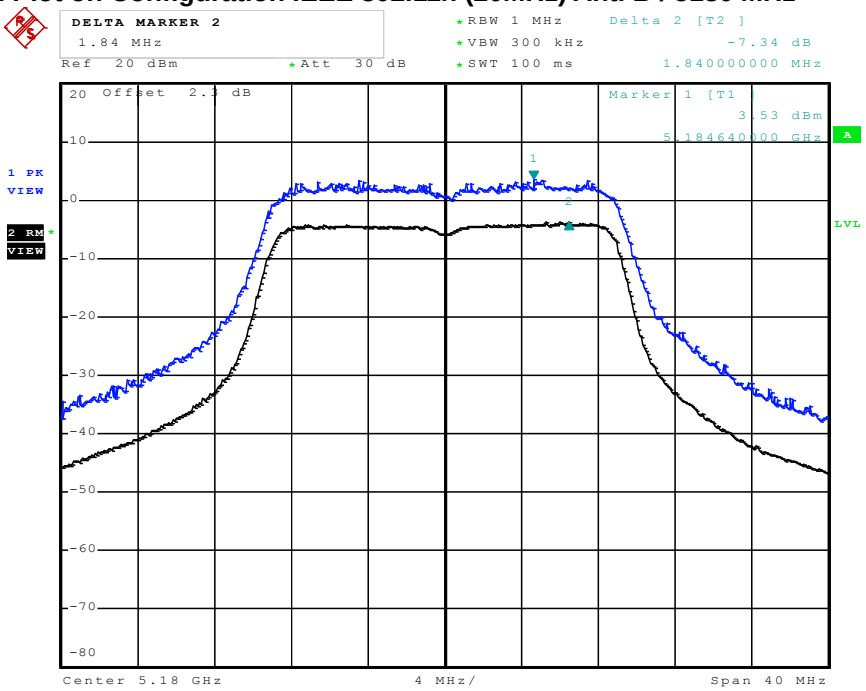
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. A / 5700 MHz

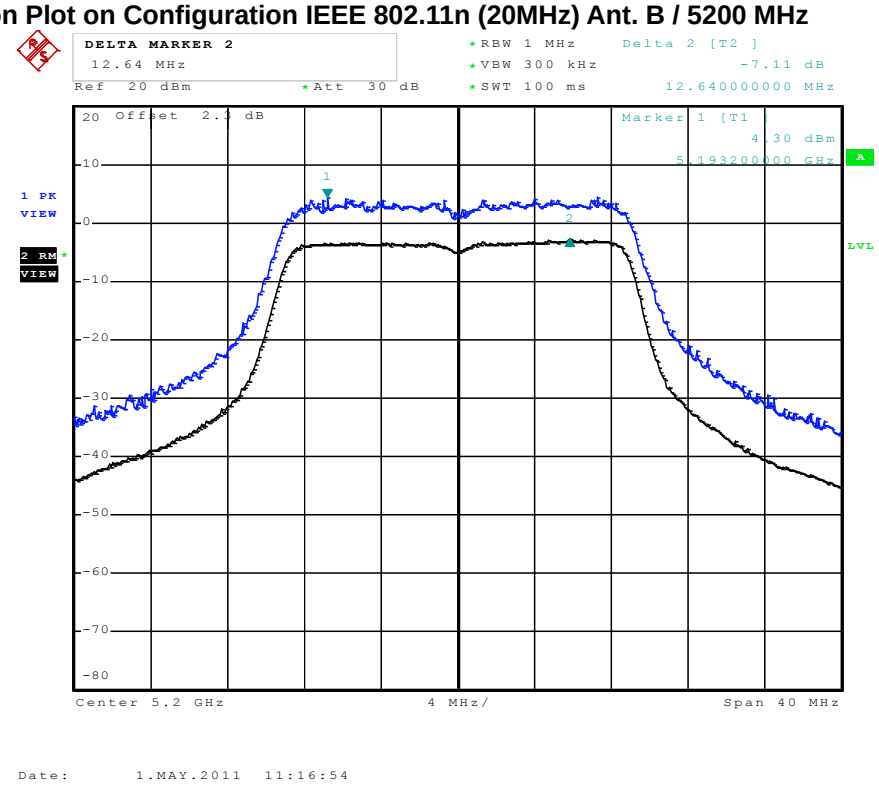


Date: 1.JUN.2011 10:04:51

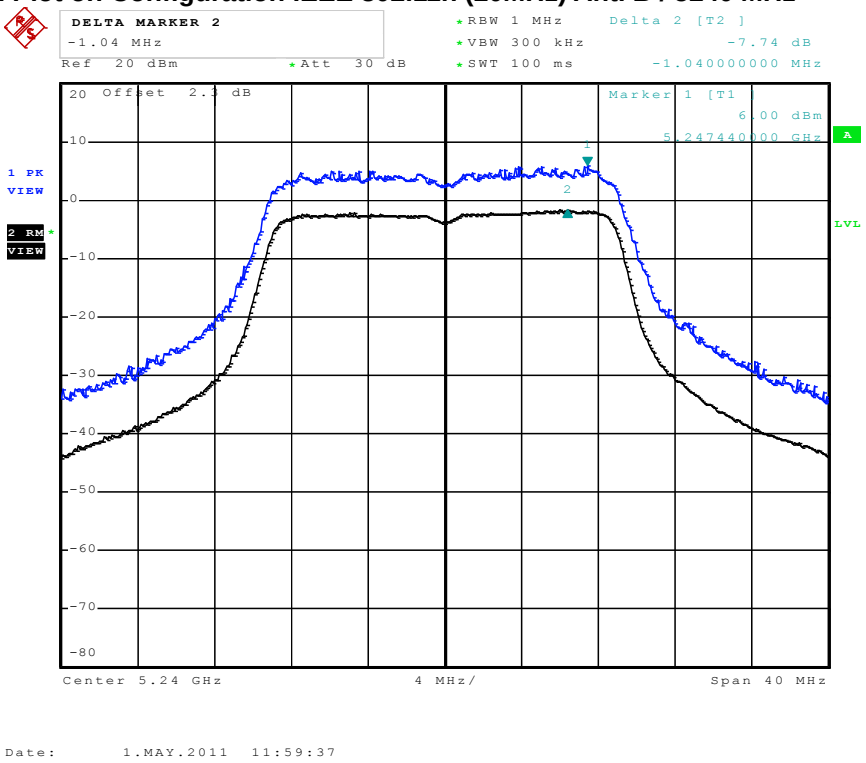
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5180 MHz



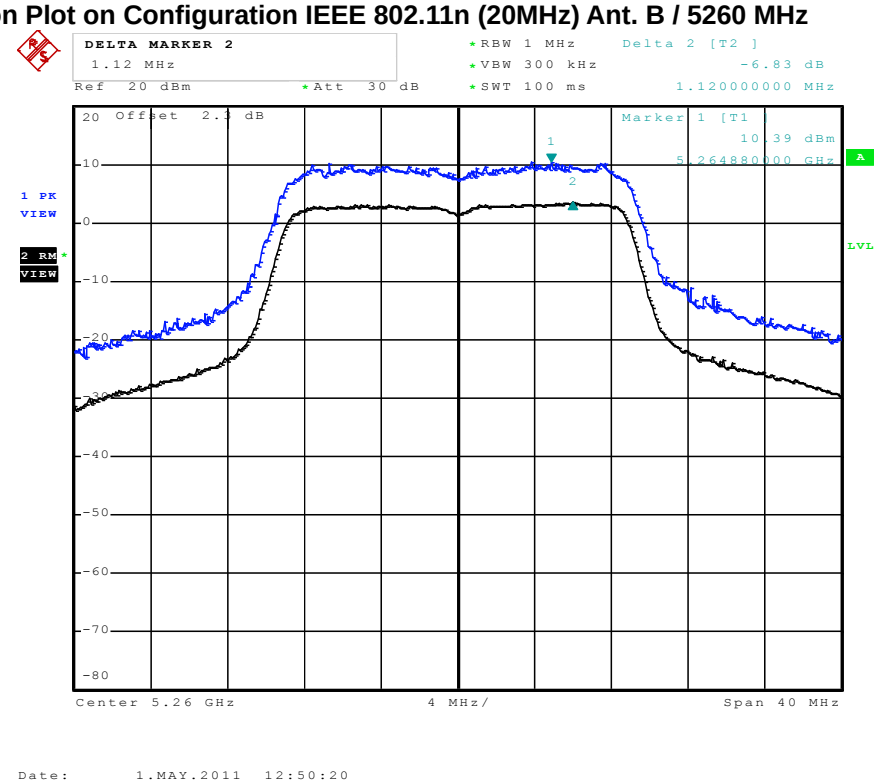
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5200 MHz



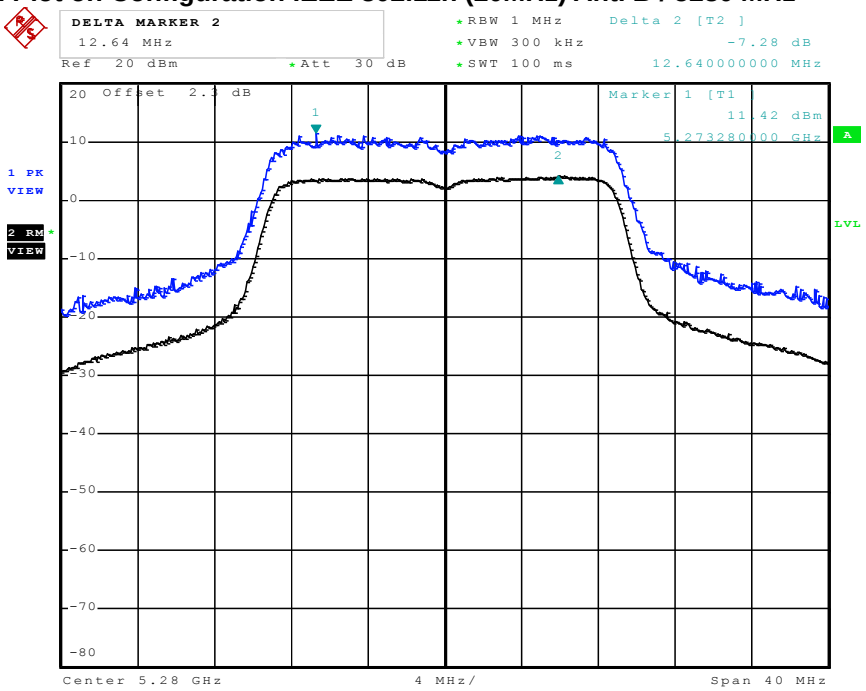
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5240 MHz



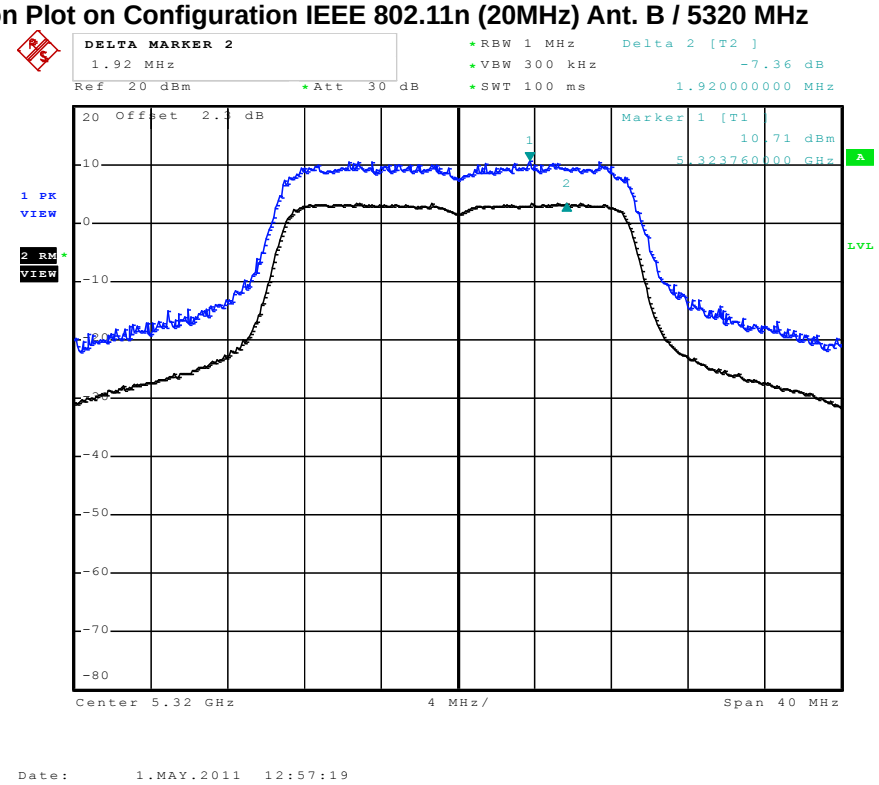
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5260 MHz



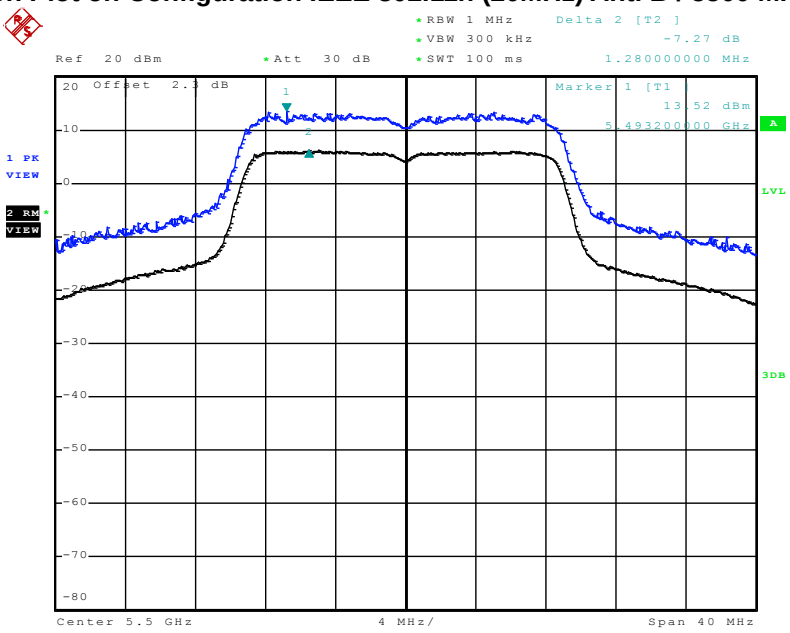
Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5280 MHz



Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5320 MHz

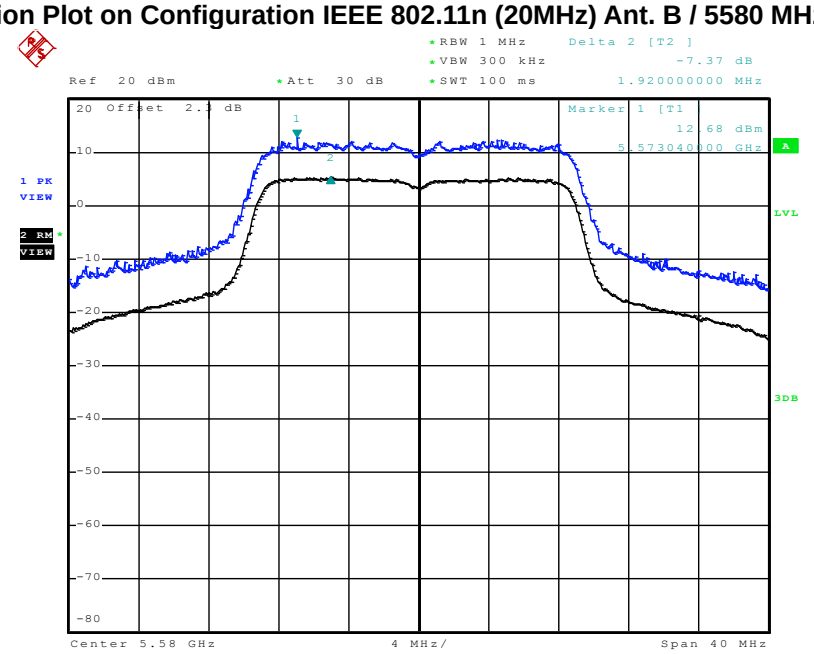


Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5500 MHz



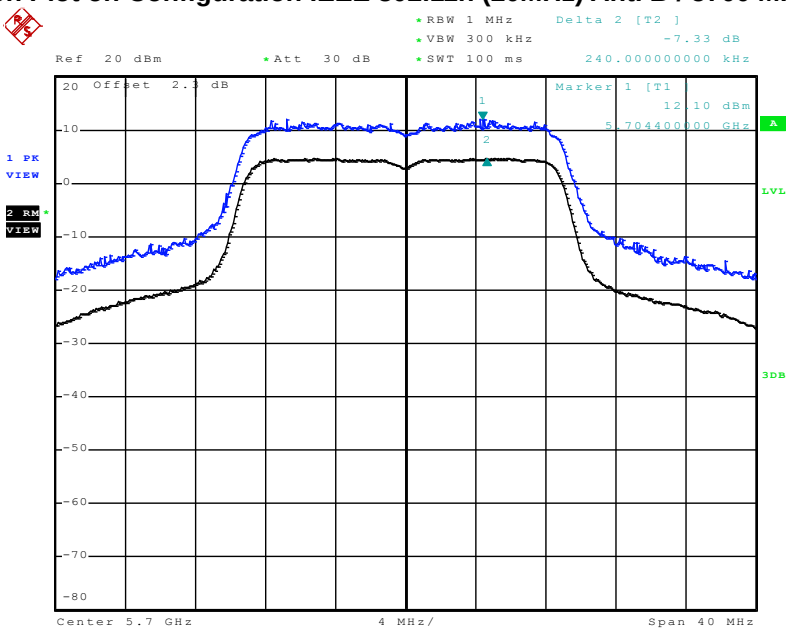
Date: 31.MAY.2011 21:22:36

Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5580 MHz



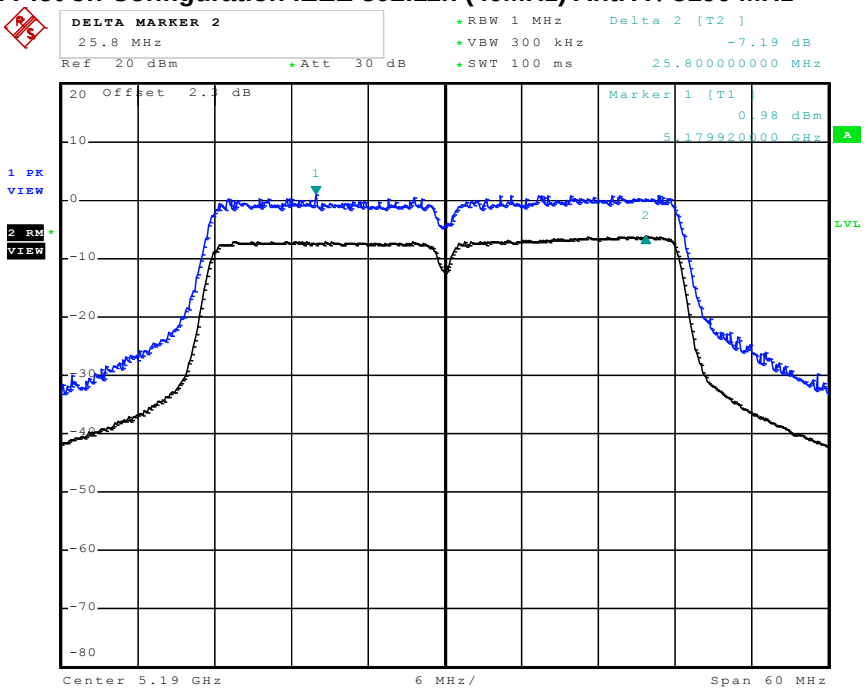
Date: 1.JUN.2011 10:00:04

Peak Excursion Plot on Configuration IEEE 802.11n (20MHz) Ant. B / 5700 MHz



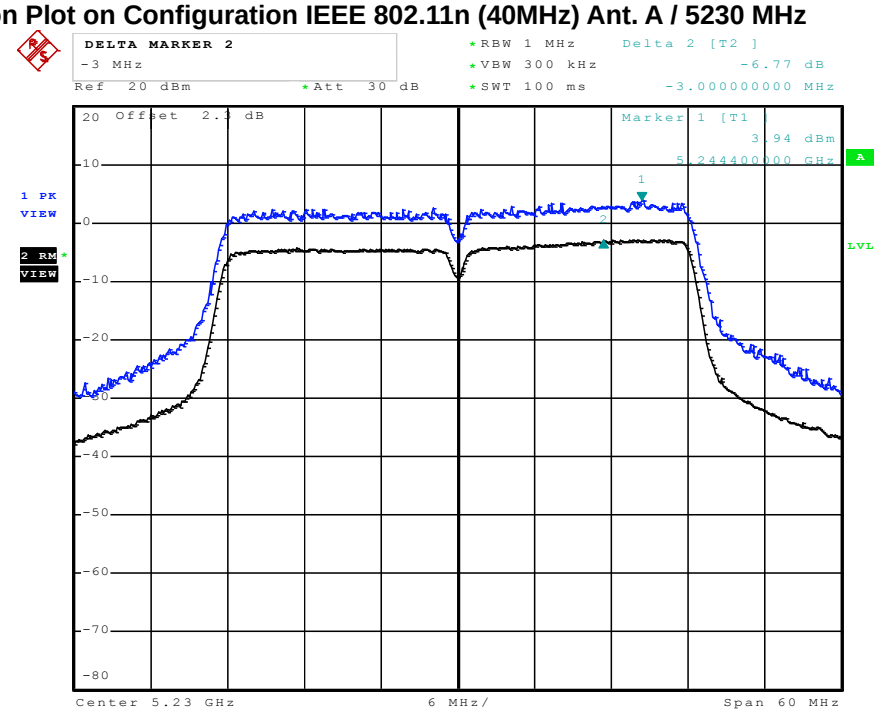
Date: 1.JUN.2011 10:08:48

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5190 MHz



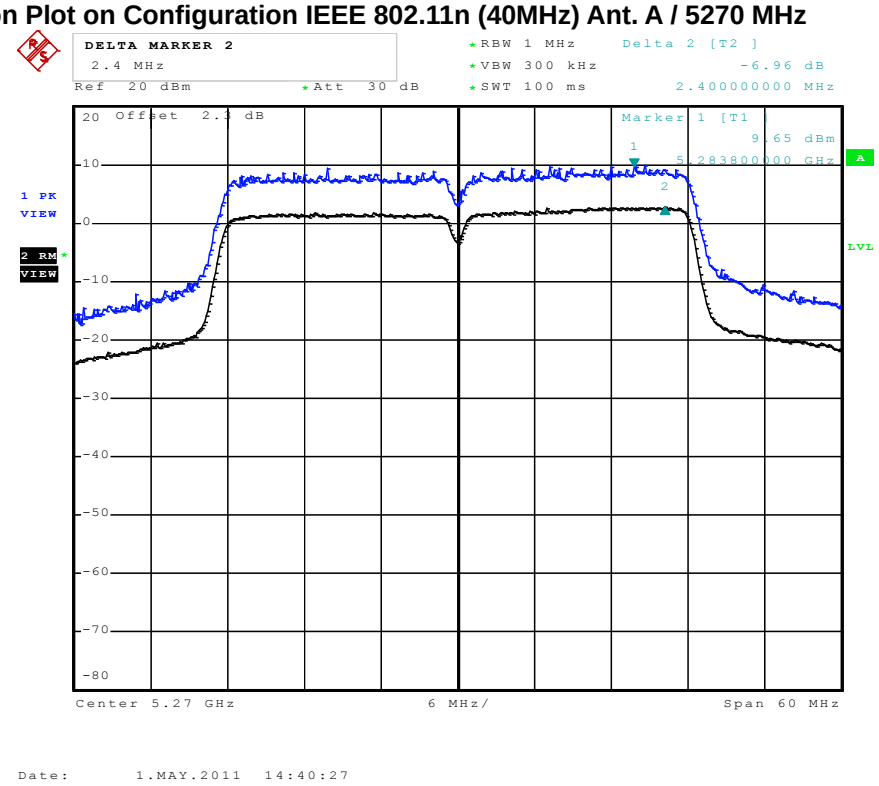
Date: 1.MAY.2011 14:19:02

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5230 MHz

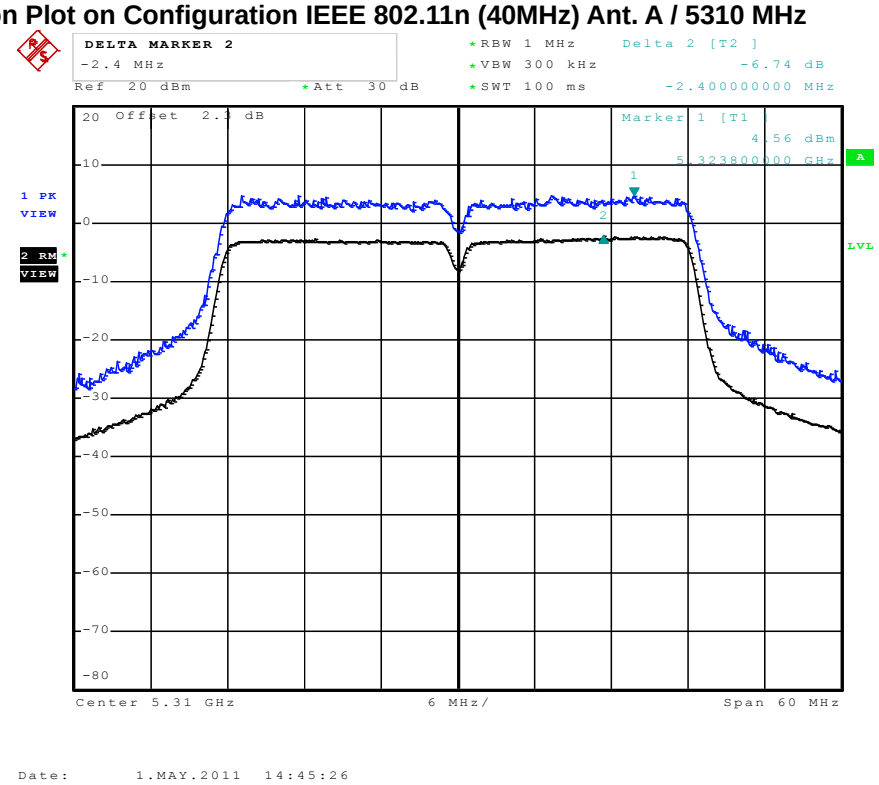


Date: 1.MAY.2011 14:23:37

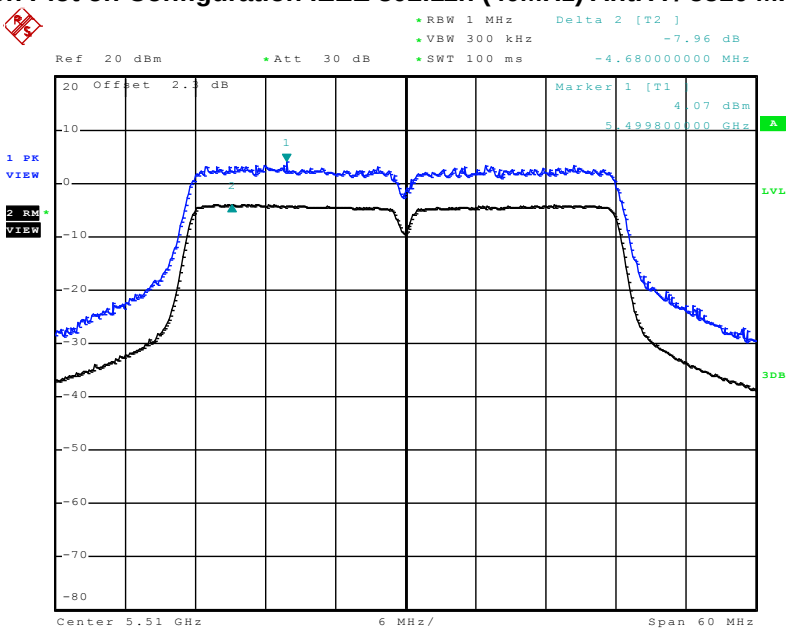
Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5270 MHz



Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5310 MHz

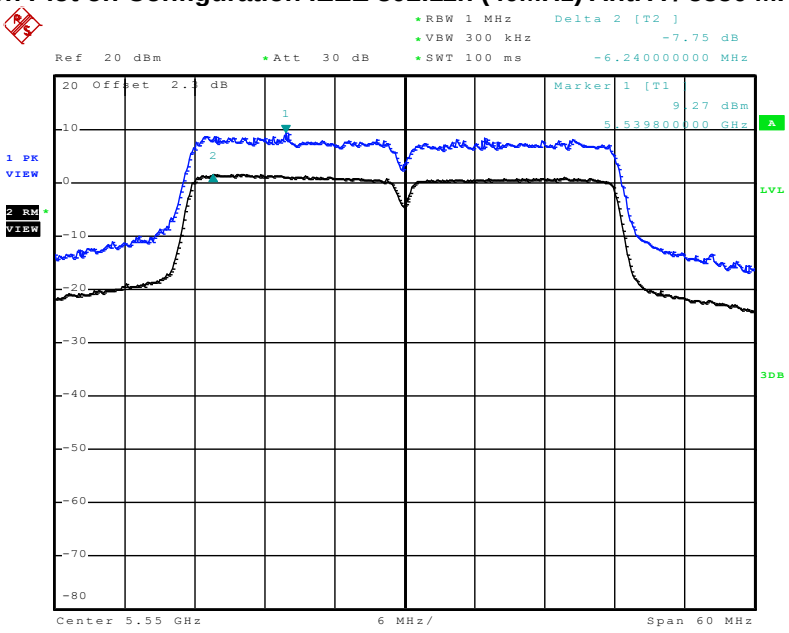


Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5510 MHz



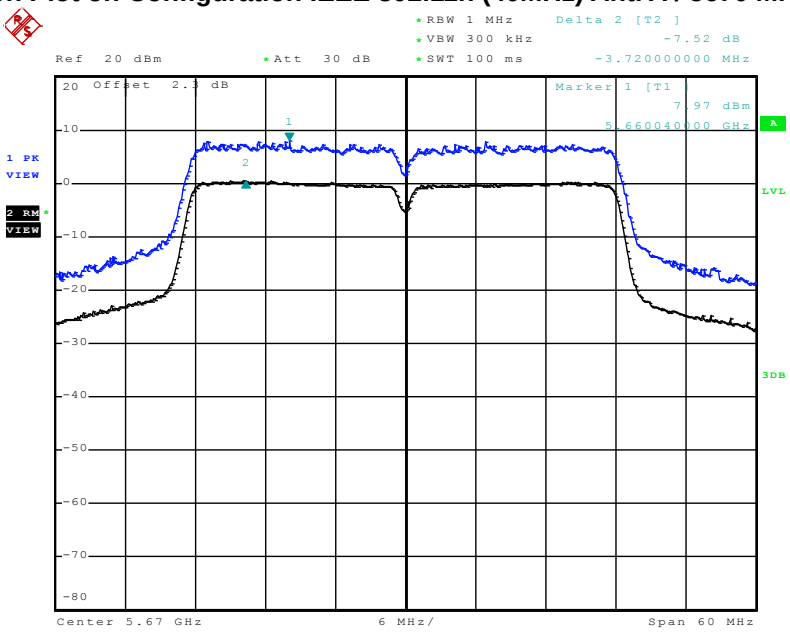
Date: 9.JUN.2011 14:34:50

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5550 MHz



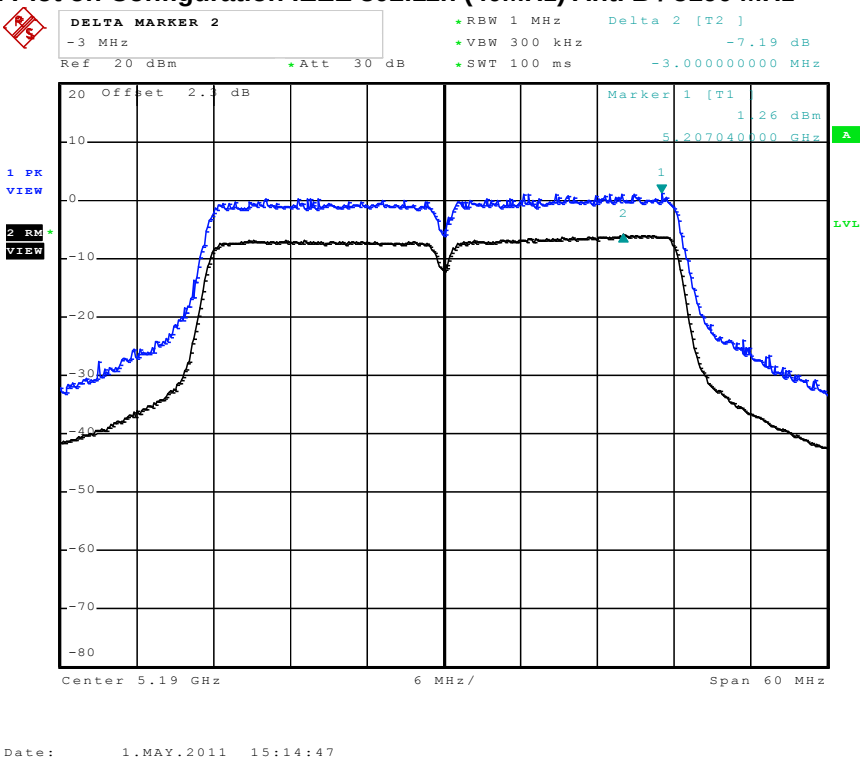
Date: 1.JUN.2011 10:34:05

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. A / 5670 MHz

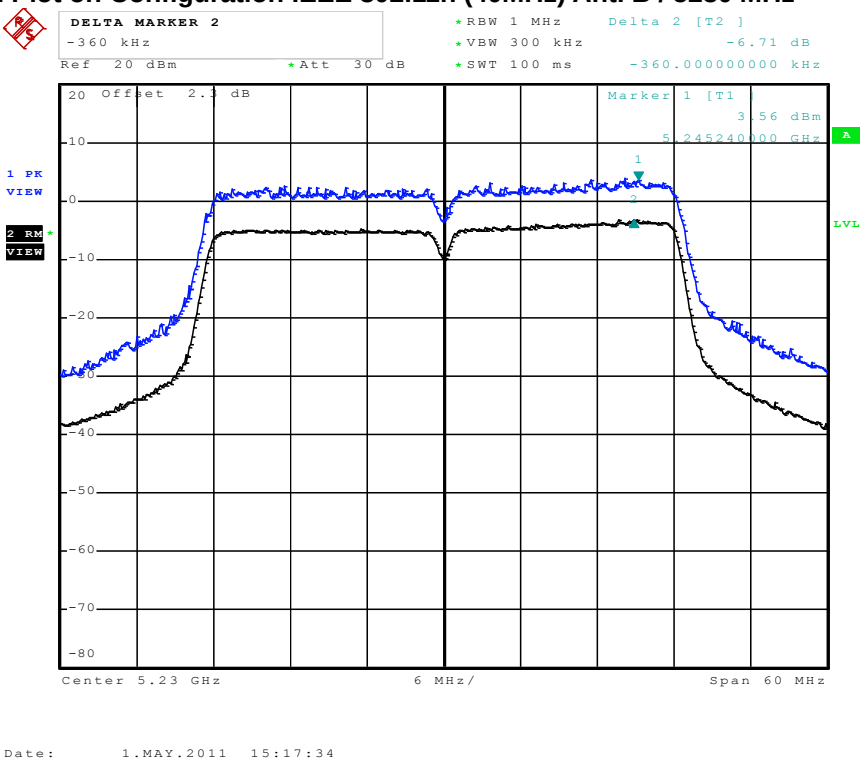


Date: 1.JUN.2011 10:41:15

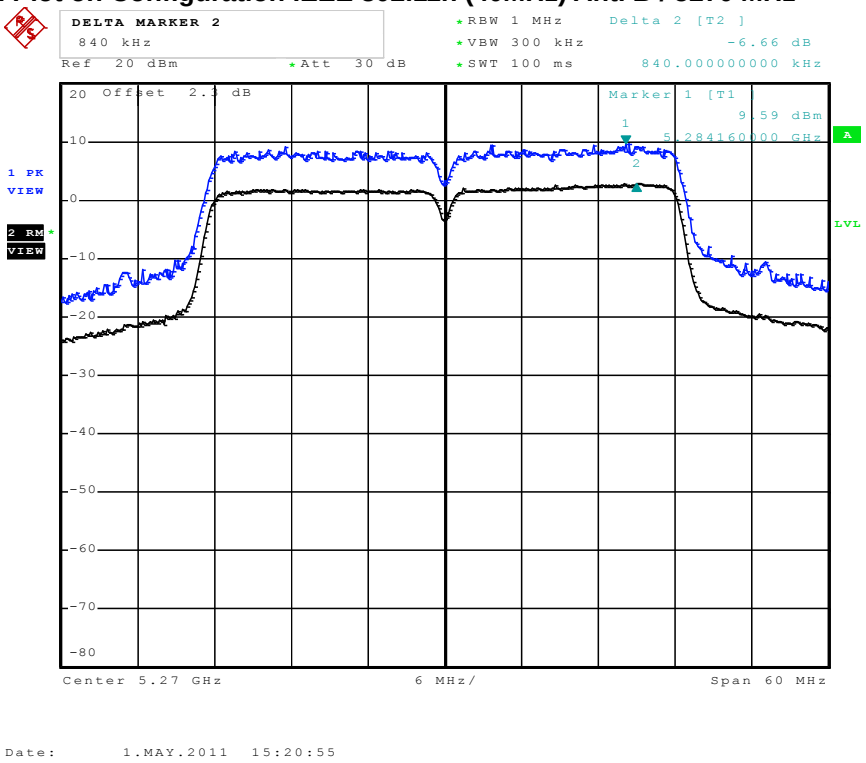
Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5190 MHz



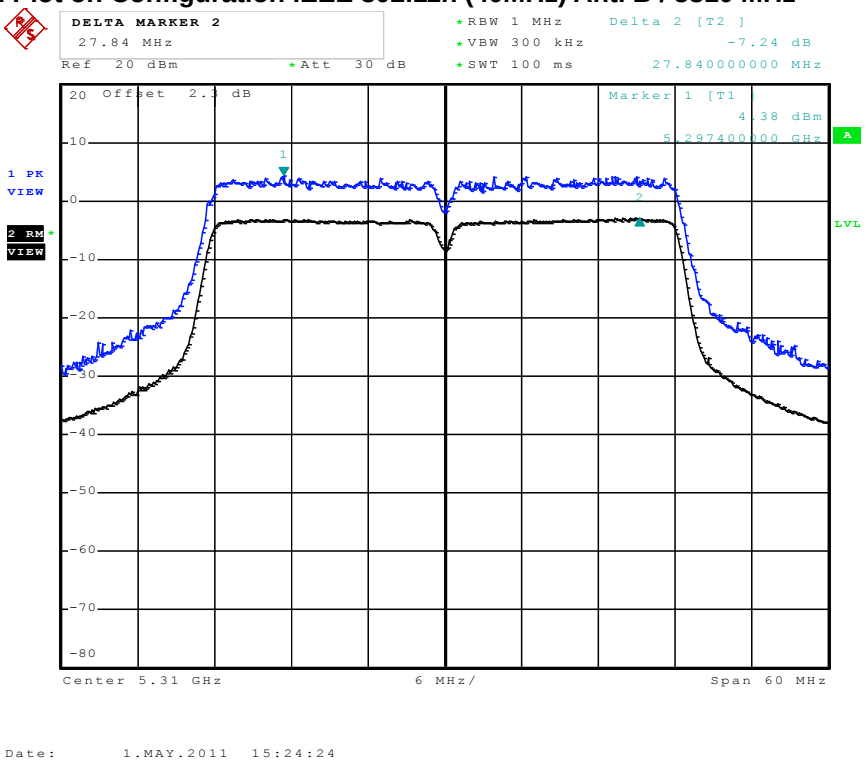
Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5230 MHz



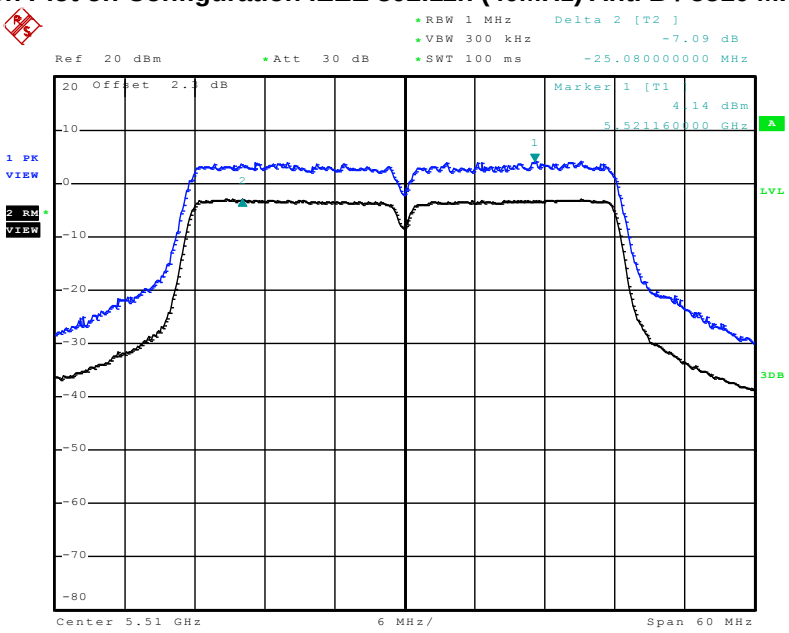
Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5270 MHz



Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5310 MHz

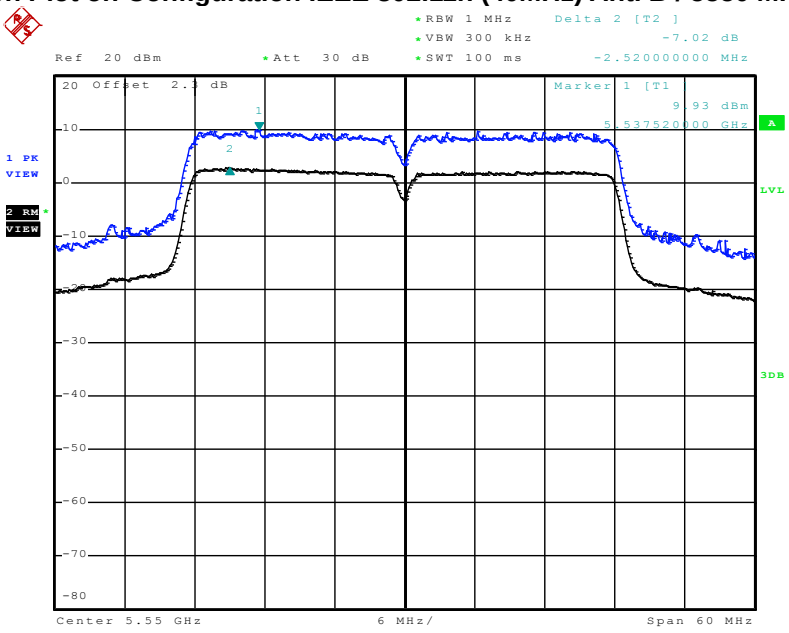


Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5510 MHz



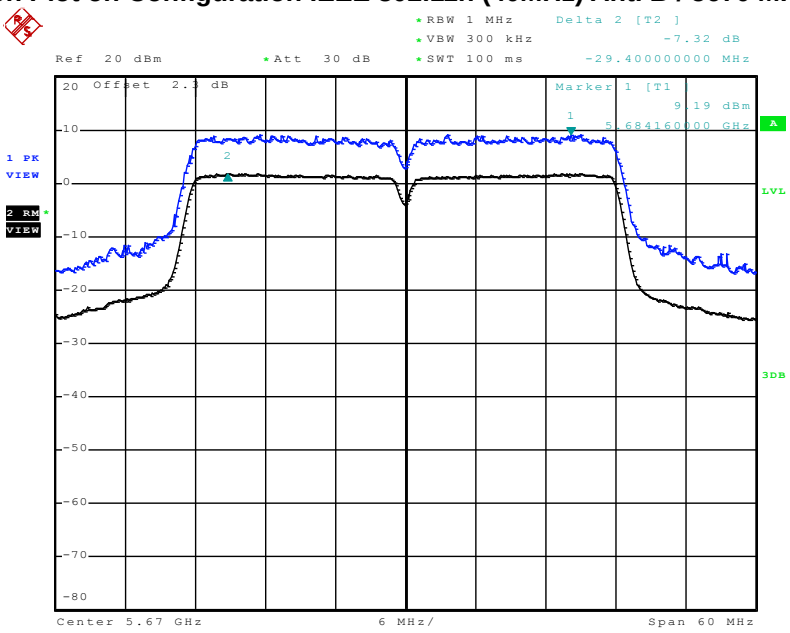
Date: 9.JUN.2011 14:43:59

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5550 MHz



Date: 1.JUN.2011 10:37:21

Peak Excursion Plot on Configuration IEEE 802.11n (40MHz) Ant. B / 5670 MHz



Date: 1.JUN.2011 10:44:43

3.6 Radiated Emissions Measurement

3.6.1 Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.47-5.725 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

3.6.2 Measuring Instruments and Setting

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

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

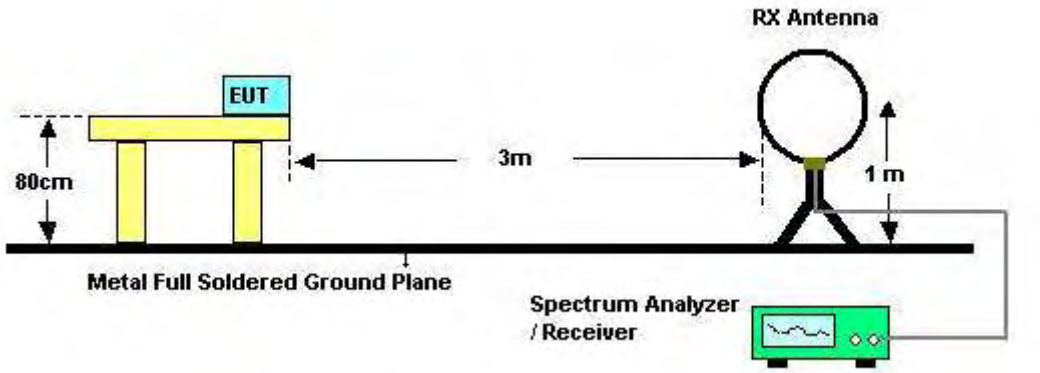
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.6.3 Test Procedures

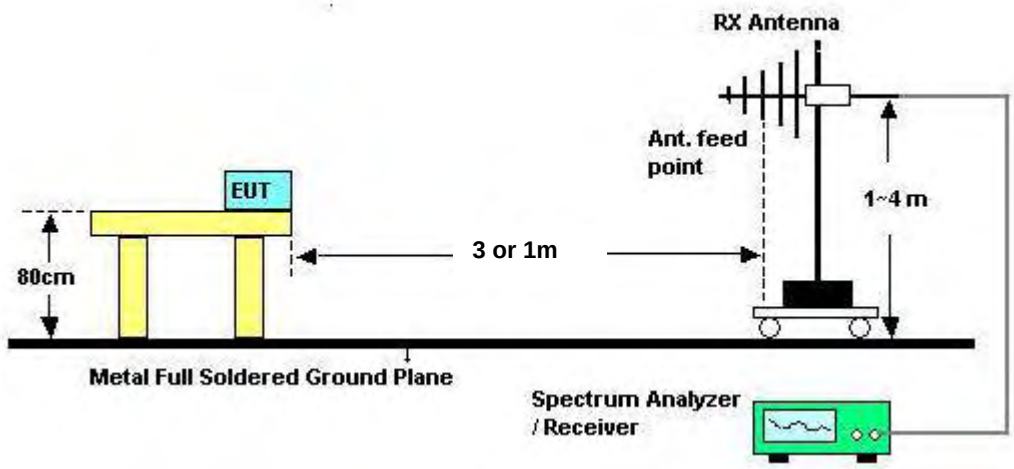
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

3.6.4 Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade 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].

3.6.5 Test Deviation

There is no deviation with the original standard.

3.6.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.6.7 Results of Radiated Emissions (9kHz~30MHz)

Final Test Date	Mar. 26, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel		

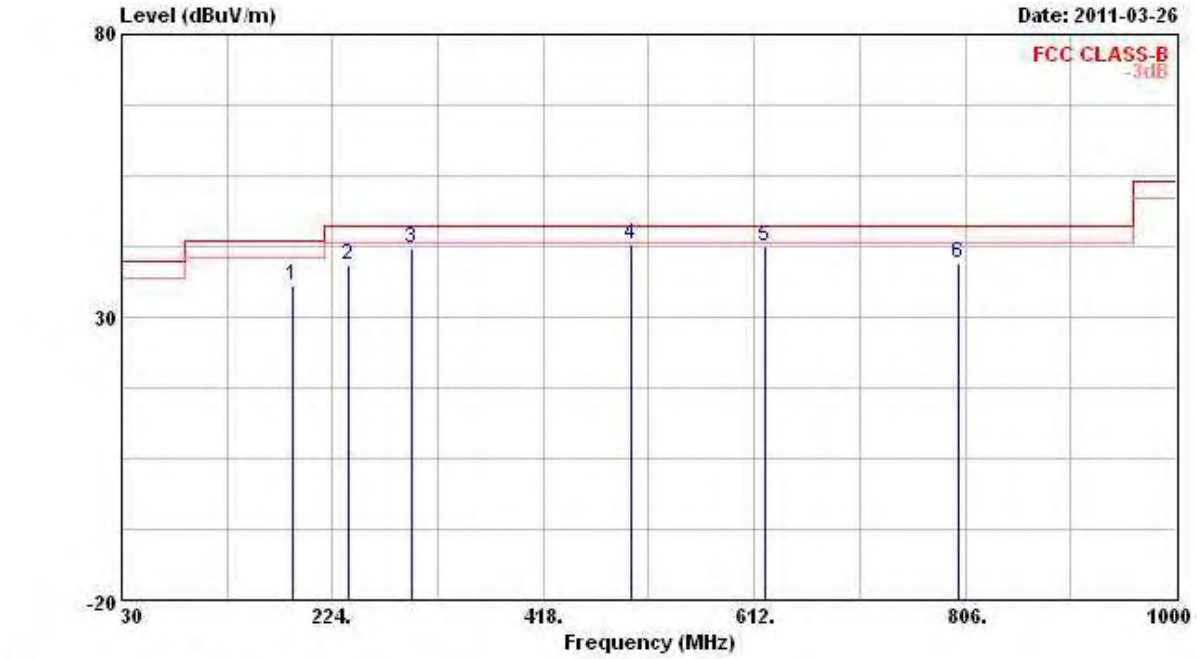
Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:
The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor.

3.6.8 Results of Radiated Emissions (30MHz~1GHz)

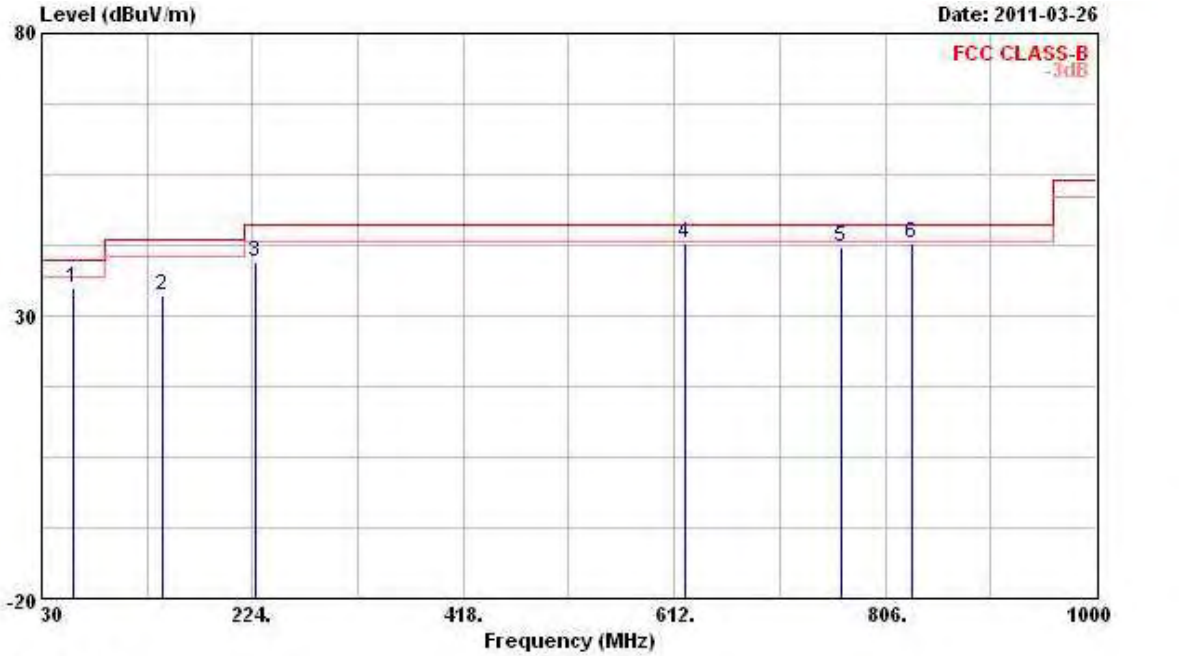
Final Test Date	Mar. 26, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configurations**	Normal Mode

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	187.140	35.70	-7.80	43.50	50.24	10.41	2.24	27.19	Peak
2	238.550	39.24	-6.76	46.00	50.89	12.62	2.60	26.87	Peak
3	296.750	42.08	-3.92	46.00	52.31	13.66	2.90	26.79	Peak
4	498.510	42.68	-3.32	46.00	49.82	17.26	3.78	28.18	QP
5	621.700	42.48	-3.52	46.00	46.61	19.89	4.12	28.14	Peak
6	800.180	39.51	-6.49	46.00	42.19	20.27	4.77	27.72	Peak

Vertical



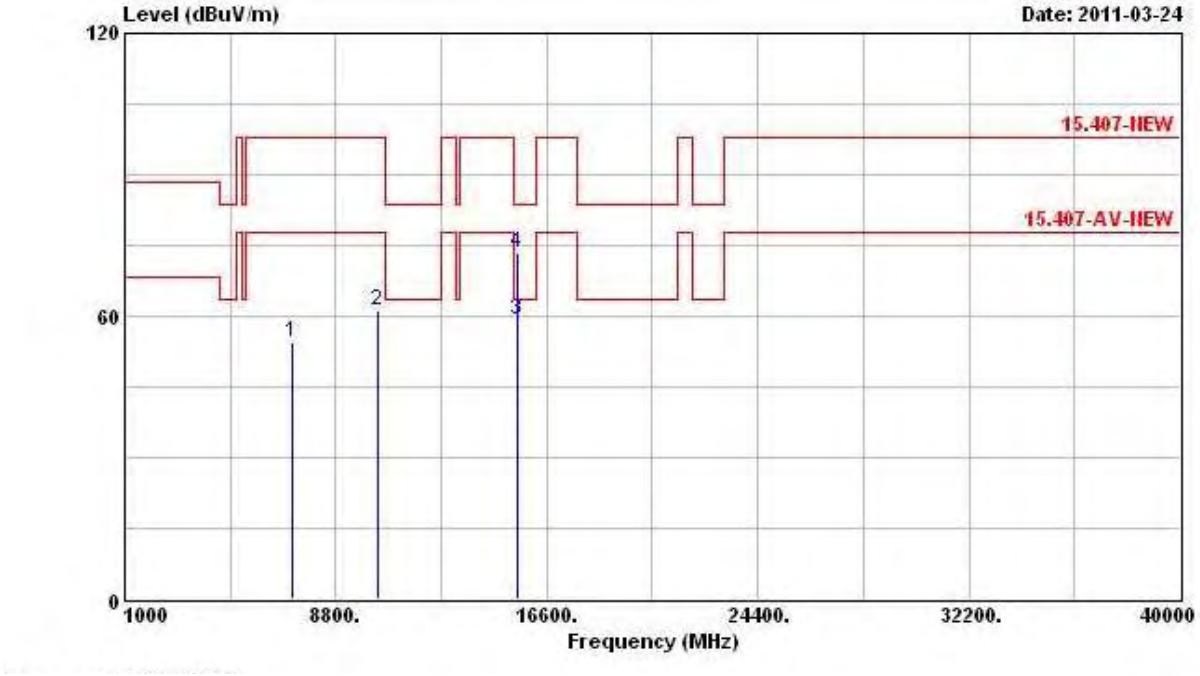
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	59.100	34.81	-5.19	40.00	53.95	7.38	1.24	27.76	Peak
2	141.550	33.49	-10.01	43.50	47.22	11.78	1.96	27.47	Peak
3	225.940	39.41	-6.59	46.00	51.62	12.21	2.51	26.93	Peak
4	621.700	42.94	-3.06	46.00	47.07	19.89	4.12	28.14	Peak
5	766.230	42.23	-3.77	46.00	45.63	19.79	4.64	27.83	QP
6	831.220	42.85	-3.15	46.00	45.43	20.19	4.83	27.60	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.

3.6.9 Results for Radiated Emissions (1GHz~40GHz)

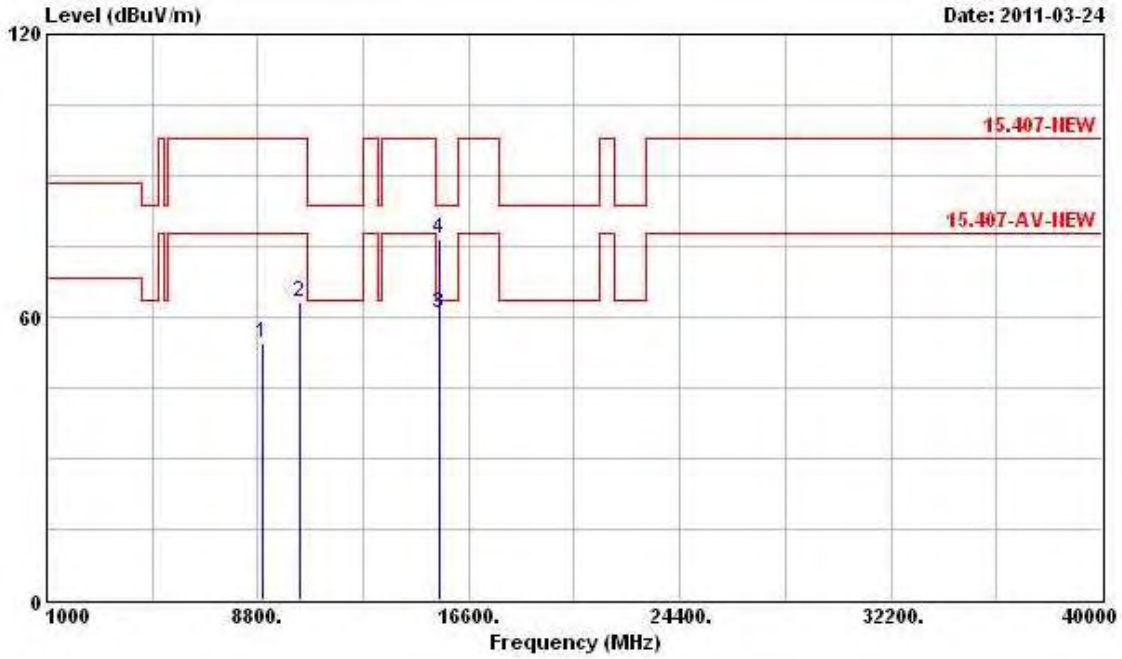
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 36

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7208.000	54.62	-43.22	97.84	45.45	37.84	5.62	34.29	Peak
2	10360.000	61.09	-36.75	97.84	48.50	40.02	6.71	34.14	Peak
3	15540.000	59.26	-4.28	63.54	40.84	42.81	8.45	32.84	Average
4	15540.000	73.25	-10.29	83.54	54.83	42.81	8.45	32.84	Peak

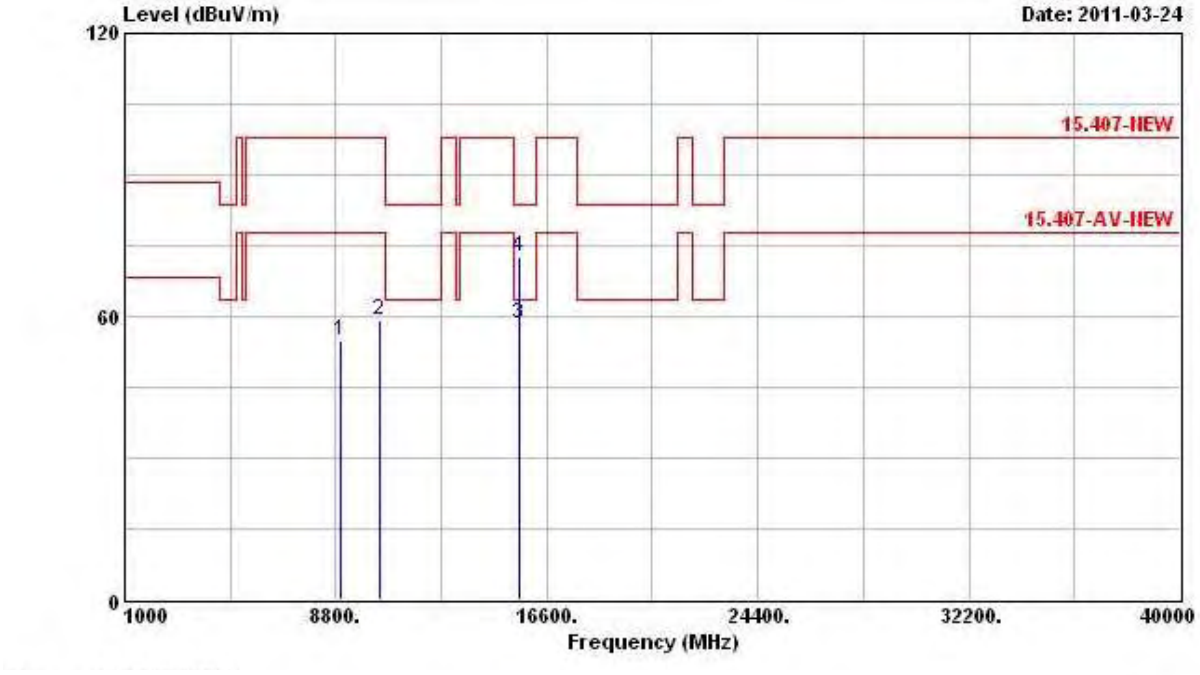
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8980.000	54.45	-43.39	97.84	44.87	38.13	6.16	34.71	Peak
2	10360.000	63.33	-34.51	97.84	50.74	40.02	6.71	34.14	Peak
3	@15540.000	60.65	-2.89	63.54	42.23	42.81	8.45	32.84	Average
4	15540.000	76.62	-6.92	83.54	58.20	42.81	8.45	32.84	Peak

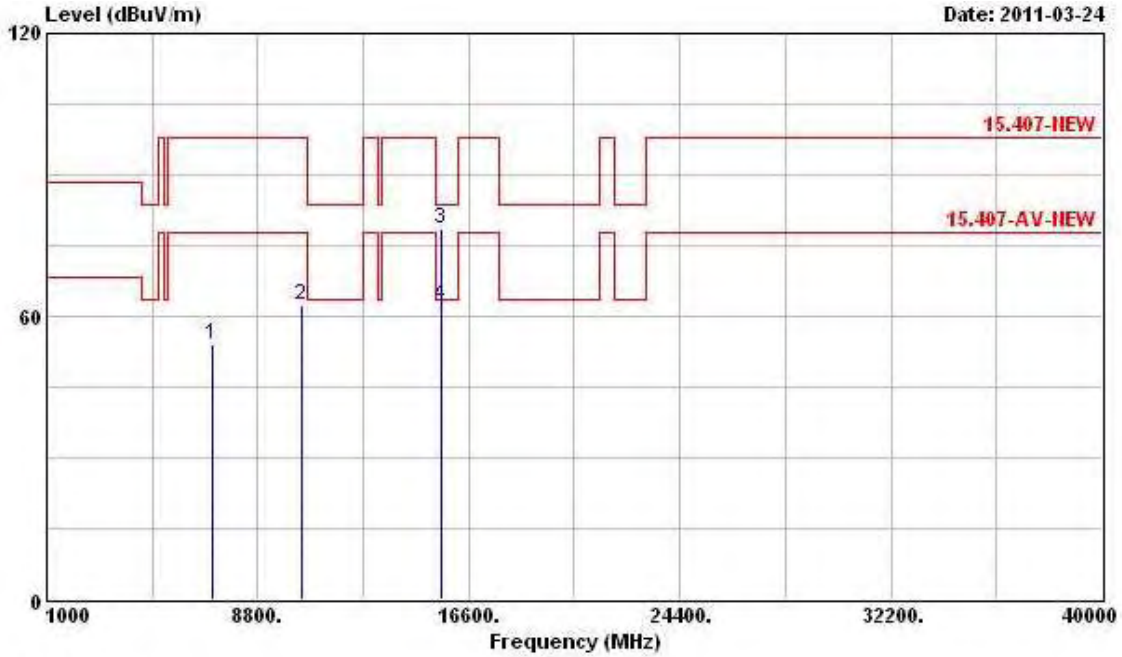
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 40

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8972.000	55.05	-42.79	97.84	45.49	38.13	6.14	34.71	Peak
2	10400.000	59.03	-38.81	97.84	46.34	40.04	6.75	34.10	Peak
3	15600.000	58.28	-5.26	63.54	39.93	42.82	8.45	32.92	Average
4	15600.000	72.45	-11.09	83.54	54.10	42.82	8.45	32.92	Peak

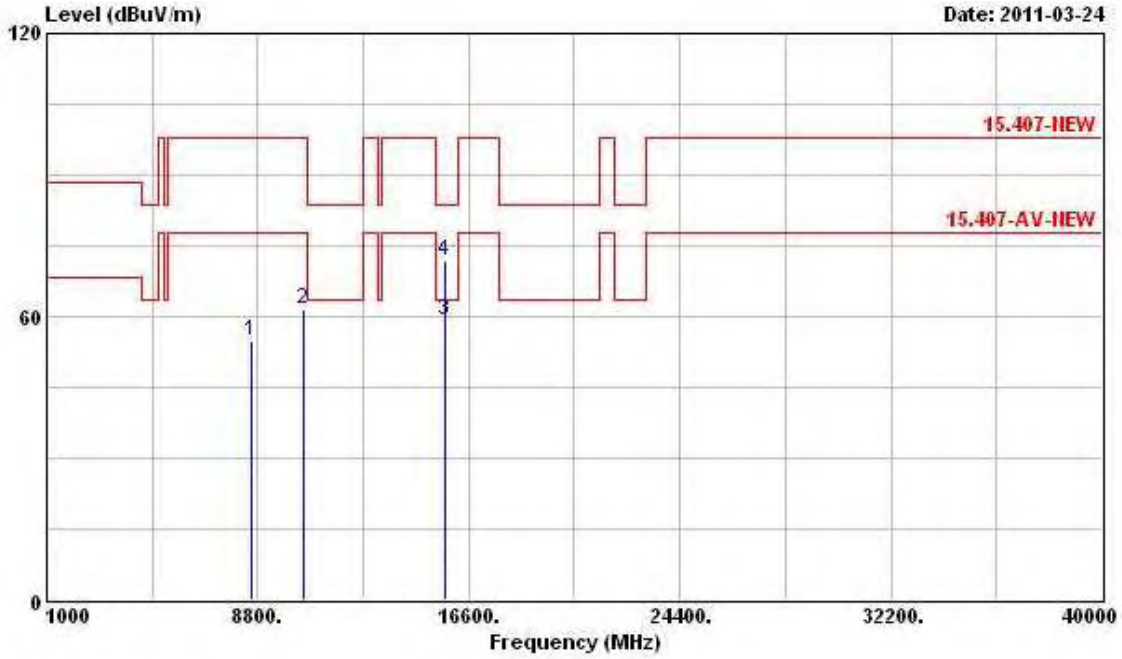
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7140.000	53.97	-43.87	97.84	44.81	37.83	5.61	34.28	Peak
2	10400.000	62.36	-35.48	97.84	49.67	40.04	6.75	34.10	Peak
3	15600.000	78.60	-4.94	83.54	60.25	42.82	8.45	32.92	Peak
4	@15600.000	62.41	-1.13	63.54	44.06	42.82	8.45	32.92	Average

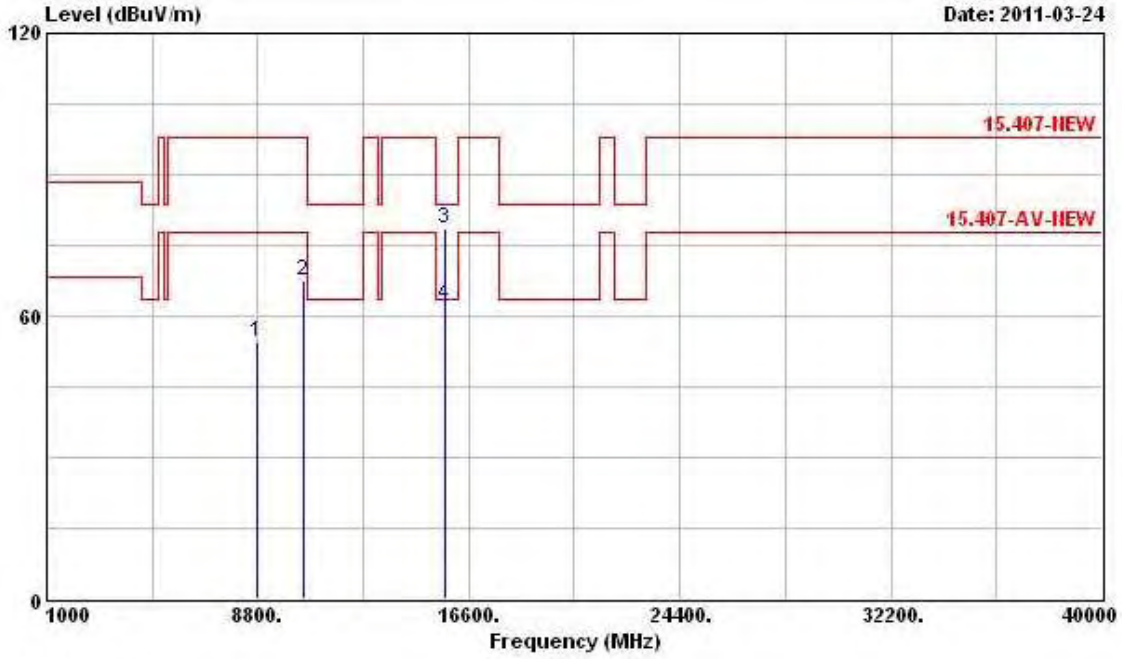
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 48

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8568.000	54.94	-42.90	97.84	44.80	38.45	5.97	34.28	Peak
2	10480.000	61.63	-36.21	97.84	48.75	40.09	6.82	34.03	Peak
3	15720.000	59.26	-4.28	63.54	40.99	42.84	8.46	33.03	Average
4	15720.000	71.98	-11.56	83.54	53.71	42.84	8.46	33.03	Peak

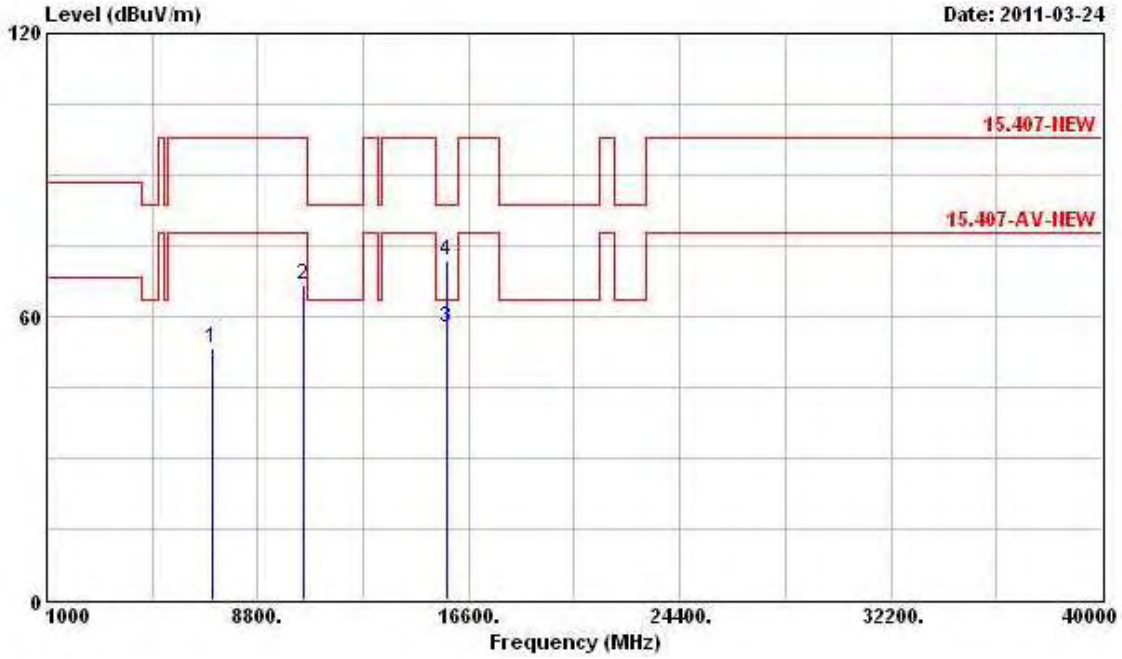
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8774.000	54.63	-43.21	97.84	44.78	38.29	6.06	34.50	Peak
2	10480.000	67.59	-30.25	97.84	54.71	40.09	6.82	34.03	Peak
3	15720.000	78.70	-4.84	83.54	60.43	42.84	8.46	33.03	Peak
4	@15720.000	62.39	-1.15	63.54	44.12	42.84	8.46	33.03	Average

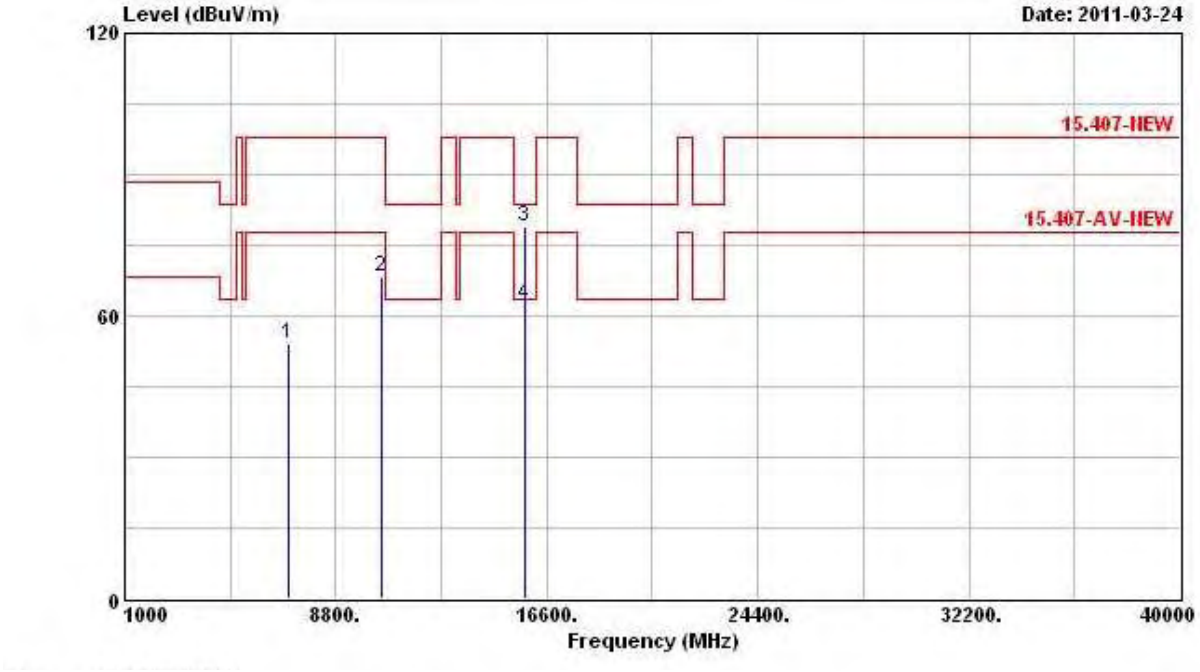
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 52

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7100.000	53.42	-44.42	97.84	44.27	37.82	5.61	34.28	Peak
2	10520.000	66.72	-31.12	97.84	53.76	40.11	6.85	34.00	Peak
3	15780.000	57.80	-5.74	63.54	39.59	42.86	8.46	33.11	Average
4	15780.000	71.73	-11.81	83.54	53.52	42.86	8.46	33.11	Peak

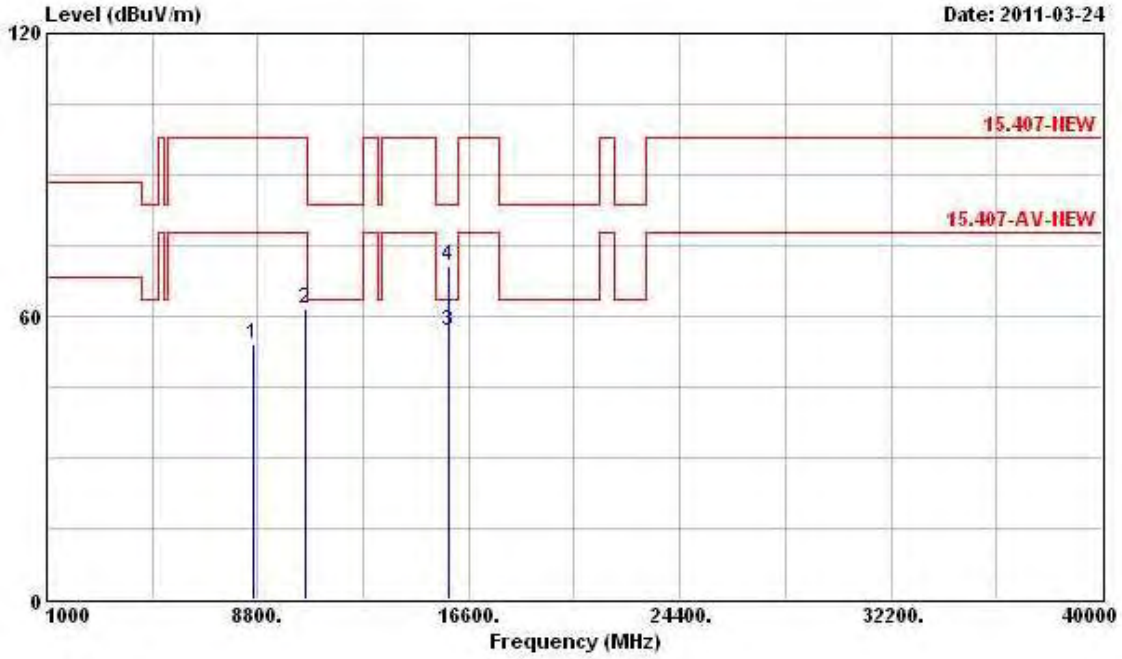
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7044.000	54.10	-43.74	97.84	44.97	37.81	5.60	34.28	Peak
2	10520.000	68.42	-29.42	97.84	55.46	40.11	6.85	34.00	Peak
3	15780.000	78.85	-4.69	83.54	60.64	42.86	8.46	33.11	Peak
4	@15780.000	62.42	-1.12	63.54	44.21	42.86	8.46	33.11	Average

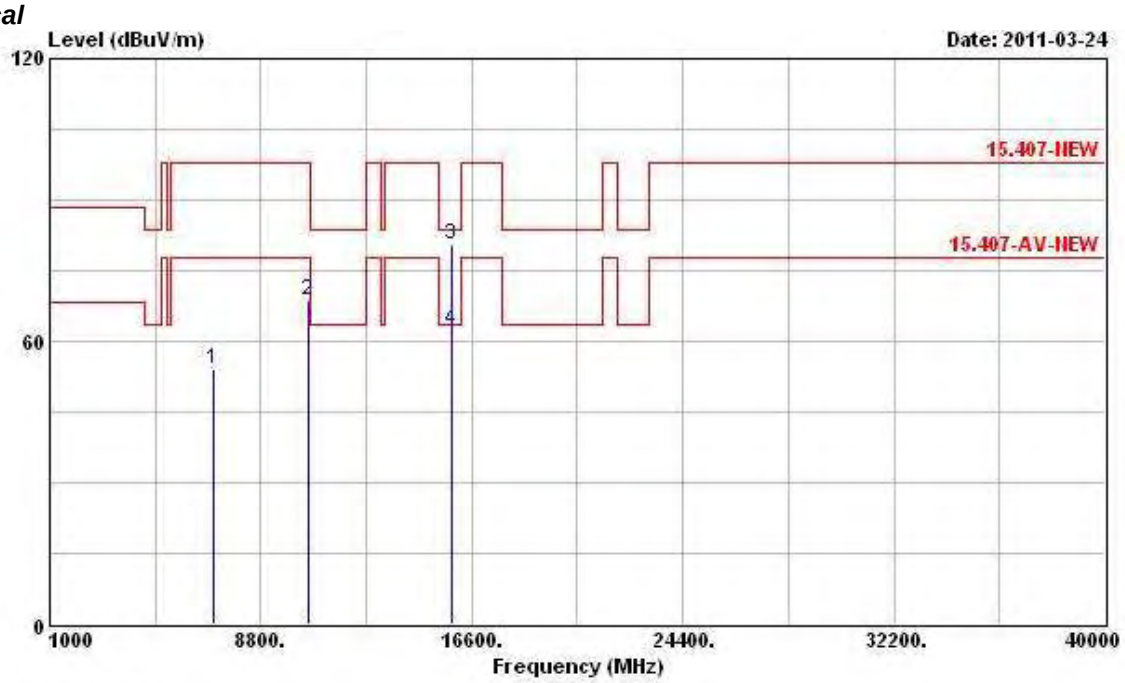
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 56

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8644.000	54.10	-43.74	97.84	44.07	38.38	6.01	34.36	Peak
2	10560.000	61.44	-36.40	97.84	48.37	40.13	6.88	33.94	Peak
3	15840.000	56.93	-6.61	63.54	38.76	42.87	8.46	33.16	Average
4	15840.000	70.68	-12.86	83.54	52.51	42.87	8.46	33.16	Peak

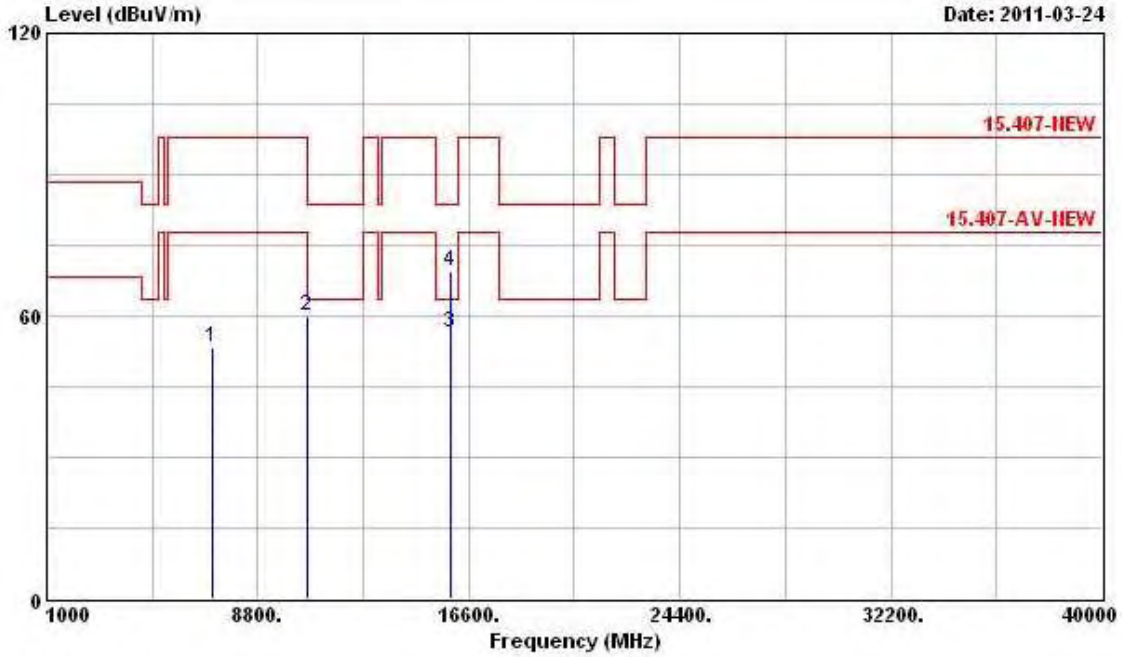
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7040.000	53.98	-43.86	97.84	44.85	37.81	5.60	34.28	Peak
2	10560.000	68.82	-29.02	97.84	55.75	40.13	6.88	33.94	Peak
3	15840.000	80.46	-3.08	83.54	62.29	42.87	8.46	33.16	Peak
4	@15840.000	62.24	-1.30	63.54	44.07	42.87	8.46	33.16	Average

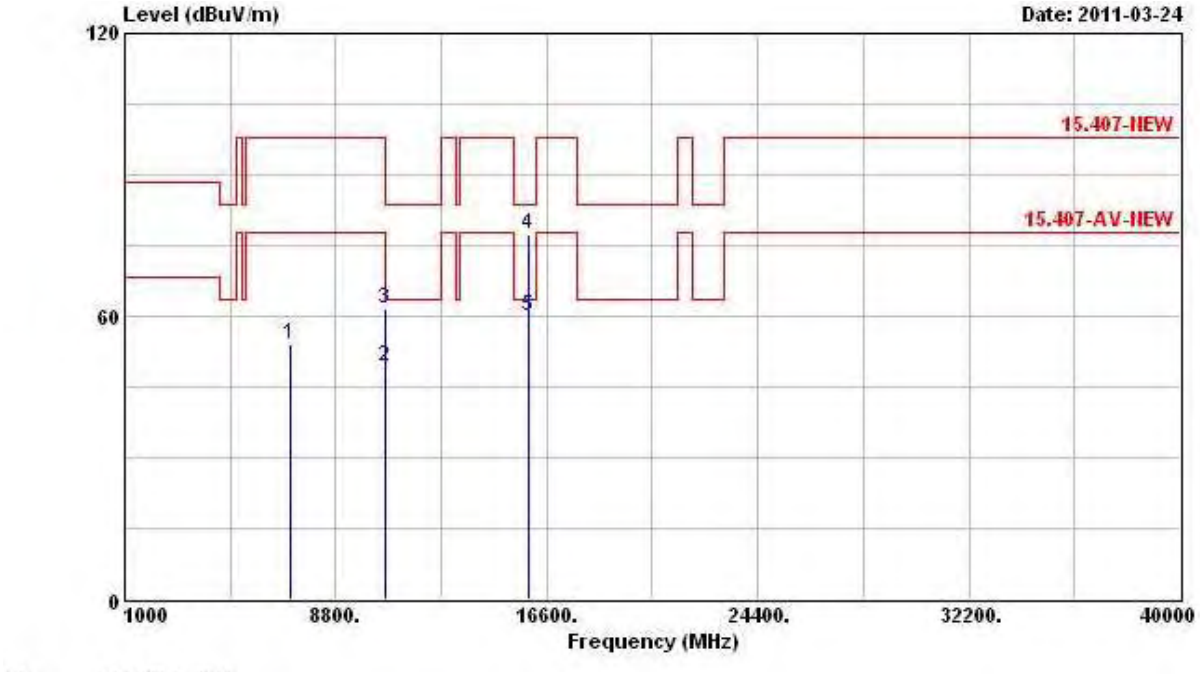
Final Test Date	Mar. 24, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 64

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7124.000	53.29	-44.55	97.84	44.14	37.82	5.61	34.28	Peak
2	10640.000	60.16	-3.38	63.54	46.89	40.18	6.93	33.84	PK
3	15960.000	56.42	-7.12	63.54	38.35	42.89	8.47	33.29	Average
4	15960.000	69.33	-14.21	83.54	51.26	42.89	8.47	33.29	Peak

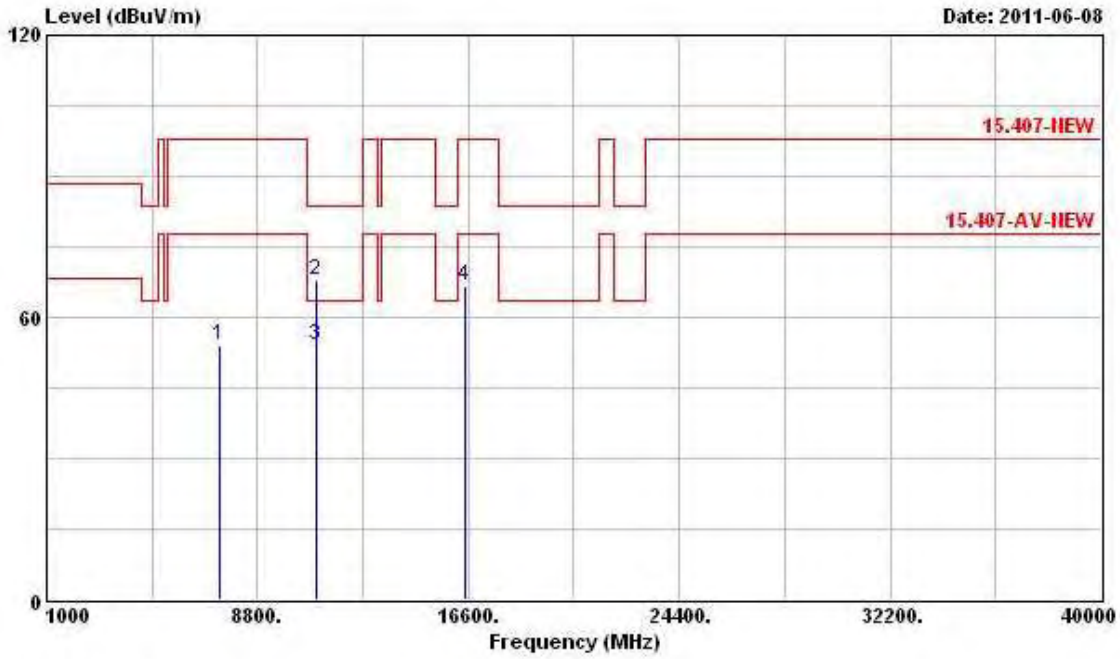
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7096.000	54.11	-43.73	97.84	44.96	37.82	5.61	34.28	Peak
2	10640.000	49.23	-14.31	63.54	35.96	40.18	6.93	33.84	Average
3	10640.000	61.76	-21.78	83.54	48.49	40.18	6.93	33.84	Peak
4	15960.000	77.36	-6.18	83.54	59.29	42.89	8.47	33.29	Peak
5	15960.000	60.06	-3.48	63.54	41.99	42.89	8.47	33.29	Average

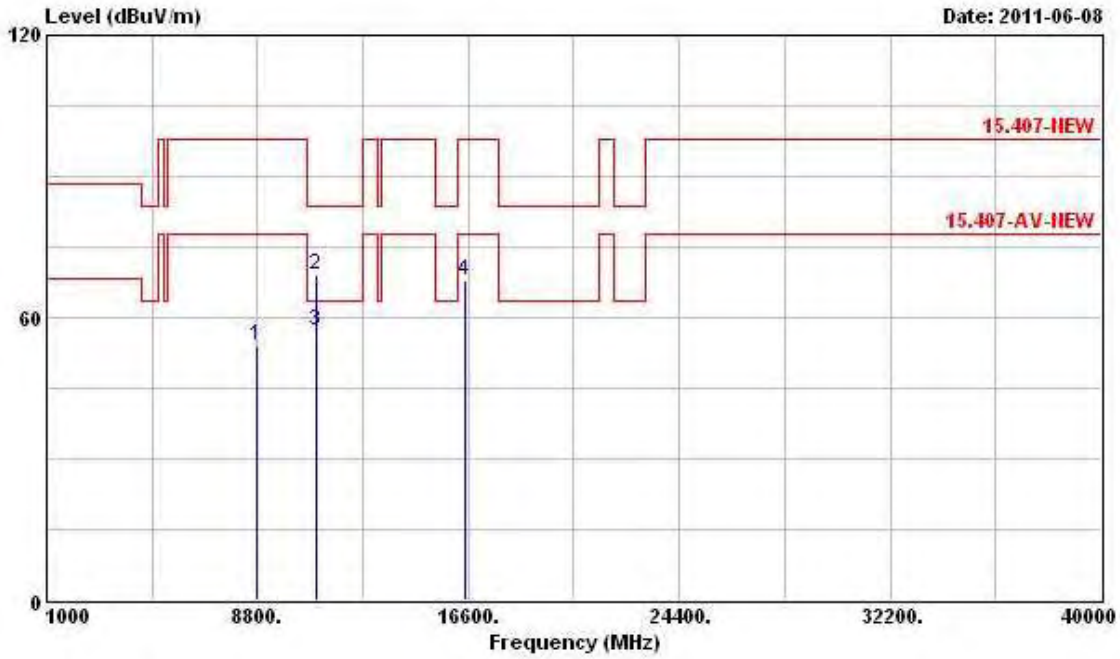
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11a Ch. 100

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7418.000	53.92	-23.92	77.84	44.67	37.89	5.65	34.29	PK	---	---
2	10993.000	67.93	-15.61	83.54	53.75	40.40	7.17	33.39	Peak	---	---
3	@10993.000	54.17	-9.37	63.54	39.99	40.40	7.17	33.39	Average	---	---
4	16500.000	66.87	-30.97	97.84	47.91	43.50	8.24	32.78	Peak	---	---

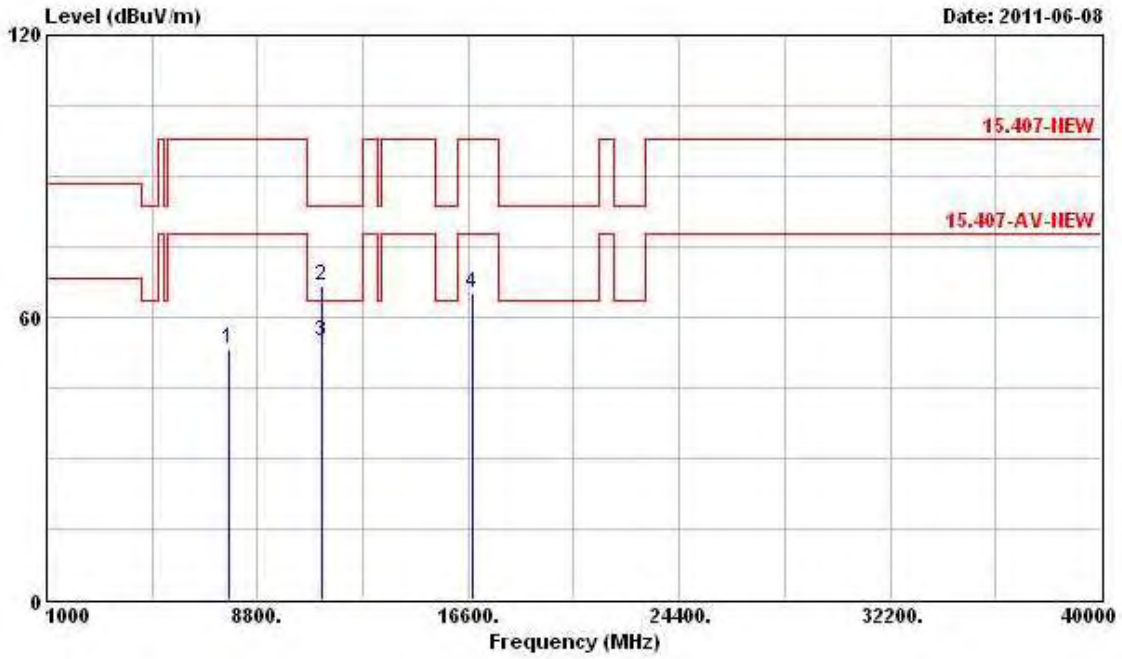
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8782.000	54.08	-43.76	97.84	44.23	38.27	6.08	34.50	Peak	---	---
2	10982.000	69.18	-14.36	83.54	55.04	40.39	7.17	33.42	Peak	---	---
3	@10982.000	57.15	-6.39	63.54	43.01	40.39	7.17	33.42	Average	---	---
4	16504.000	67.74	-30.10	97.84	48.75	43.50	8.27	32.78	Peak	---	---

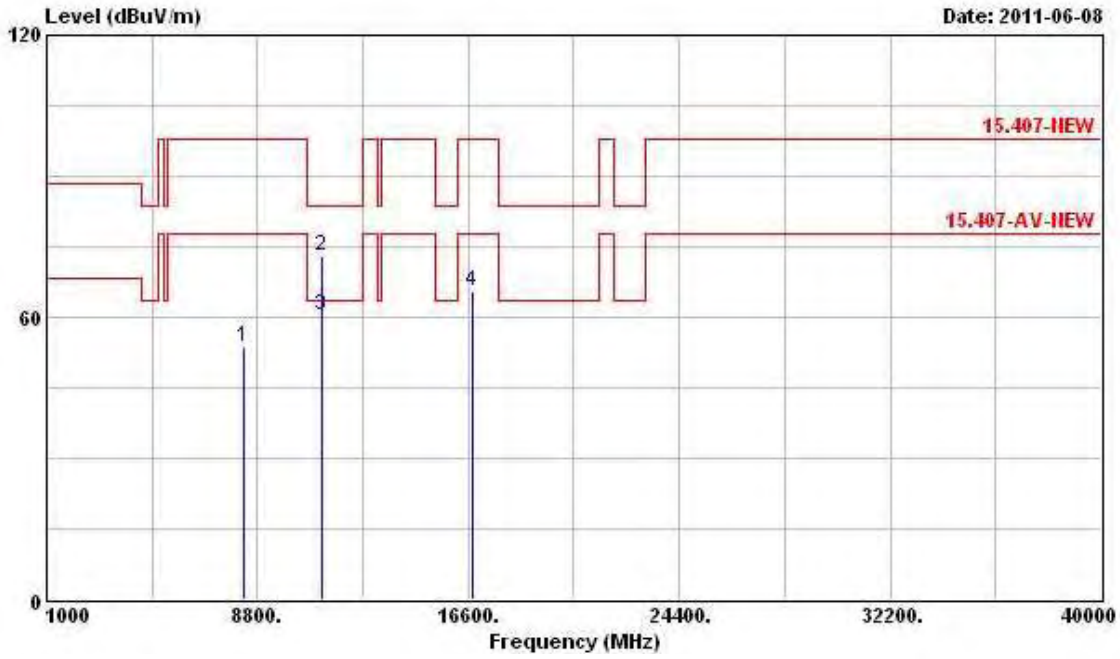
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11a Ch. 116

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7770.000	53.24	-24.60	77.84	43.77	38.06	5.74	34.33	PK	---	---
2	11158.000	66.82	-16.72	83.54	52.82	40.47	7.00	33.47	Peak	---	---
3	@11158.000	54.96	-8.58	63.54	40.96	40.47	7.00	33.47	Average	---	---
4	16740.000	65.27	-32.57	97.84	45.76	43.60	8.47	32.56	Peak	---	---

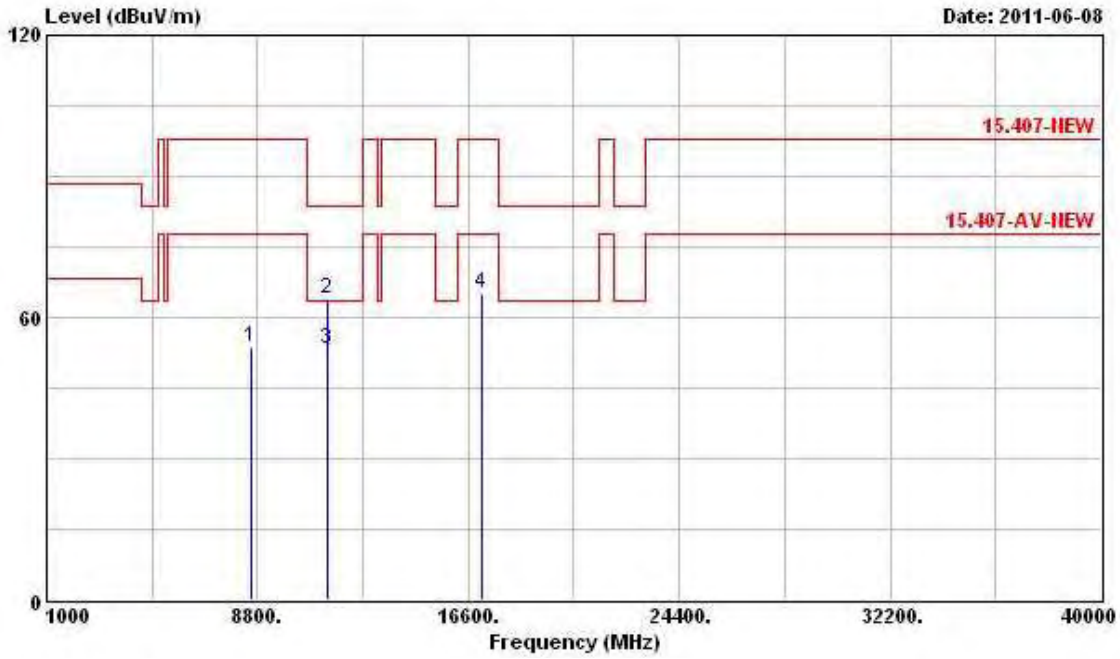
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8265.000	53.63	-24.21	77.84	43.67	38.36	5.88	34.28	PK	---	---
2	@11158.000	73.05	-10.49	83.54	59.05	40.47	7.00	33.47	Peak	---	---
3	@11158.000	60.26	-3.28	63.54	46.26	40.47	7.00	33.47	Average	---	---
4	16740.000	65.54	-32.30	97.84	46.03	43.60	8.47	32.56	Peak	---	---

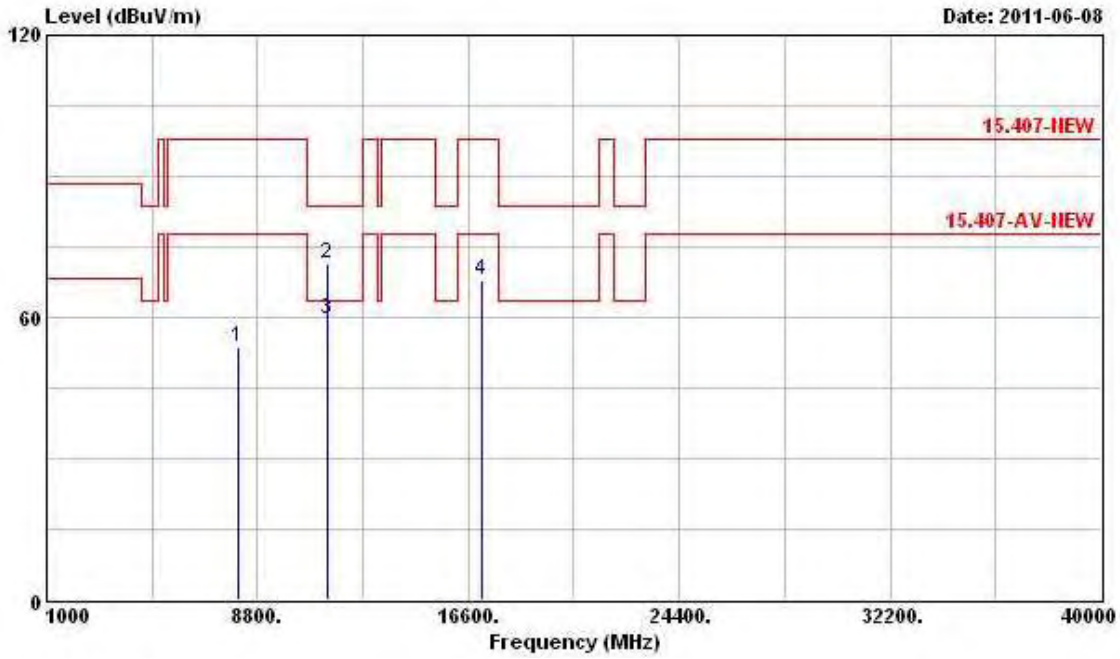
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11a Ch. 140

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8573.000	53.49	-44.35	97.84	43.35	38.45	5.97	34.28	Peak	---	---
2	11389.000	63.98	-19.56	83.54	50.27	40.55	6.75	33.59	Peak	---	---
3	@11389.000	53.15	-10.39	63.54	39.44	40.55	6.75	33.59	Average	---	---
4	17100.000	65.22	-32.62	97.84	45.25	43.64	8.61	32.28	Peak	---	---

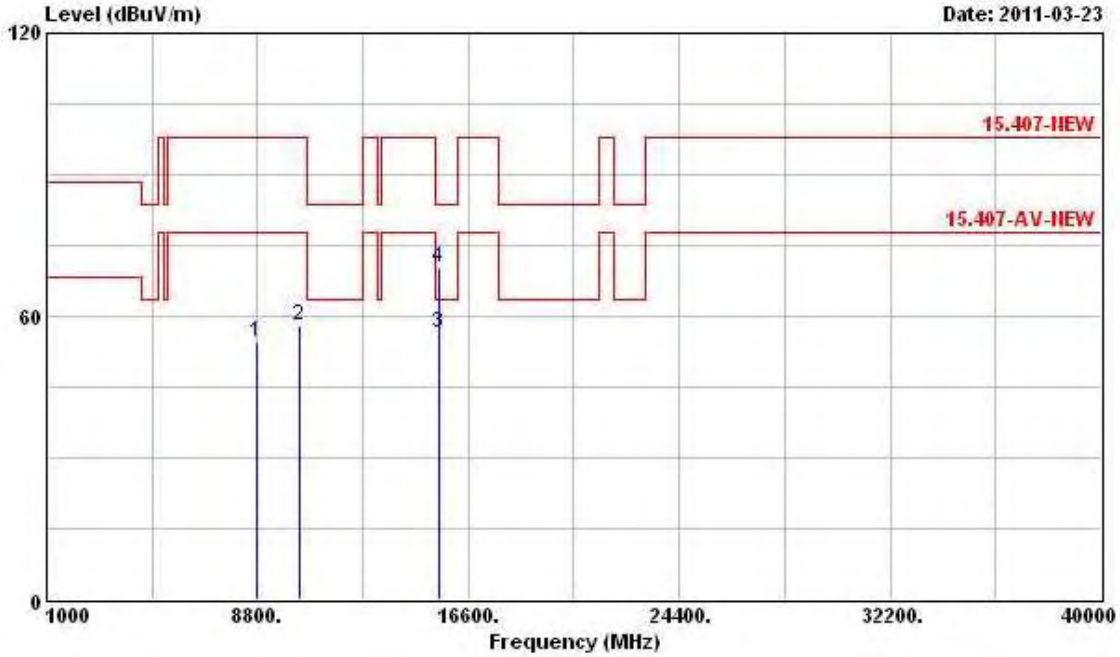
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8078.000	53.79	-24.05	77.84	44.07	38.24	5.82	34.34	PK	---	---
2	11389.000	71.29	-12.25	83.54	57.58	40.55	6.75	33.59	Peak	---	---
3	@11389.000	59.48	-4.06	63.54	45.77	40.55	6.75	33.59	Average	---	---
4	17100.000	68.09	-29.75	97.84	48.12	43.64	8.61	32.28	Peak	---	---

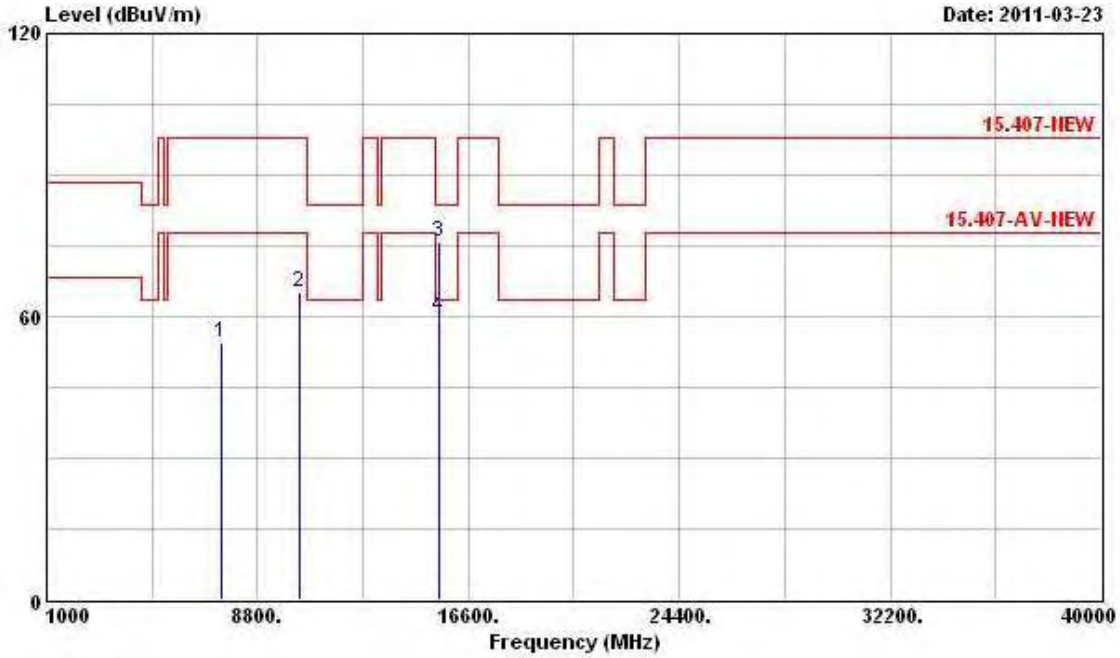
Final Test Date	Mar. 23, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 36 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8792.000	54.30	-43.54	97.84	44.47	38.27	6.08	34.52	Peak
2	10360.000	57.94	-39.90	97.84	45.35	40.02	6.71	34.14	Peak
3	15540.000	56.42	-7.12	63.54	38.00	42.81	8.45	32.84	Average
4	15540.000	70.25	-13.29	83.54	51.83	42.81	8.45	32.84	Peak

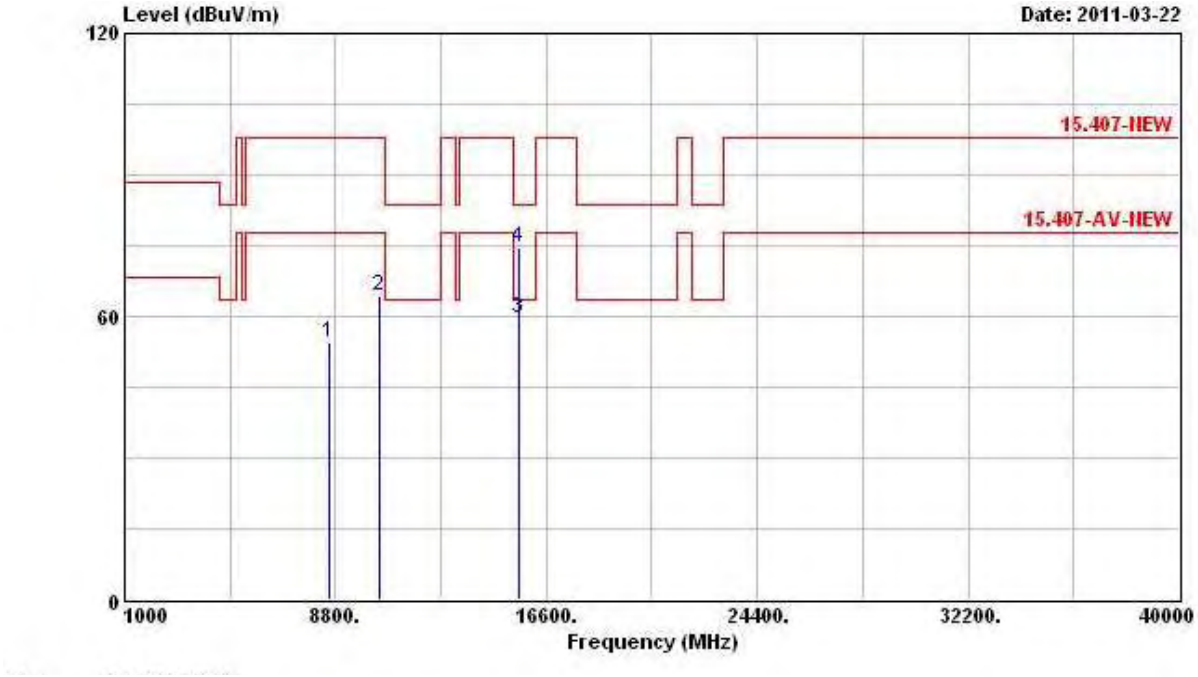
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7468.000	54.54	-23.30	77.84	45.28	37.89	5.66	34.29	PK
2	10360.000	65.13	-32.71	97.84	52.54	40.02	6.71	34.14	Peak
3	15540.000	75.97	-7.57	83.54	57.55	42.81	8.45	32.84	Peak
4	15540.000	59.94	-3.60	63.54	41.52	42.81	8.45	32.84	Average

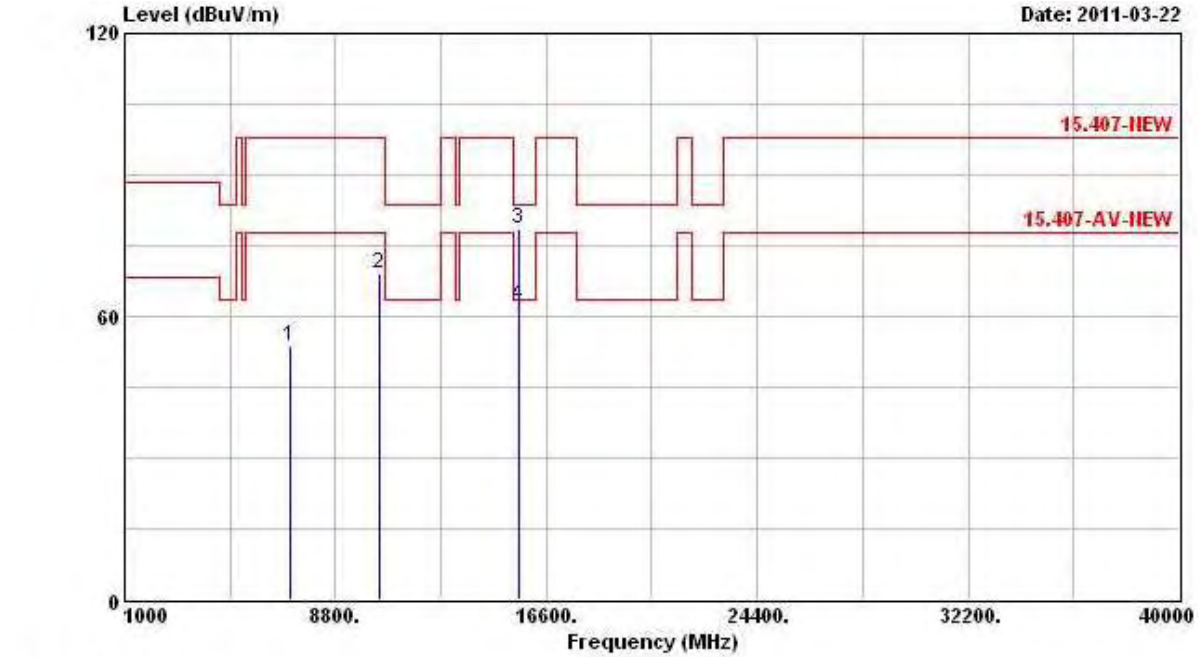
Final Test Date	Mar. 22, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 40 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8566.000	54.63	-43.21	97.84	44.49	38.45	5.97	34.28	Peak
2	10400.000	64.48	-33.36	97.84	51.79	40.04	6.75	34.10	Peak
3	15600.000	59.49	-4.05	63.54	41.14	42.82	8.45	32.92	Average
4	15600.000	74.77	-8.77	83.54	56.42	42.82	8.45	32.92	Peak

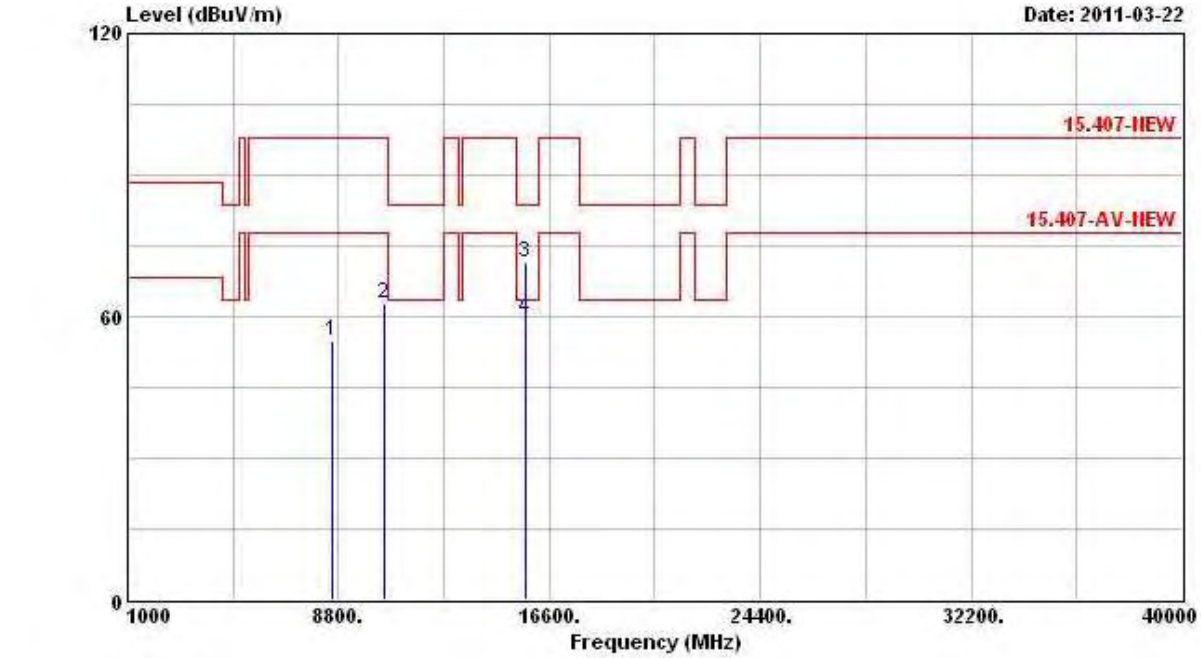
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7132.000	53.87	-43.97	97.84	44.71	37.83	5.61	34.28	Peak
2	10400.000	68.99	-28.85	97.84	56.30	40.04	6.75	34.10	Peak
3	15600.000	78.42	-5.12	83.54	60.07	42.82	8.45	32.92	Peak
4	@15600.000	62.44	-1.10	63.54	44.09	42.82	8.45	32.92	Average

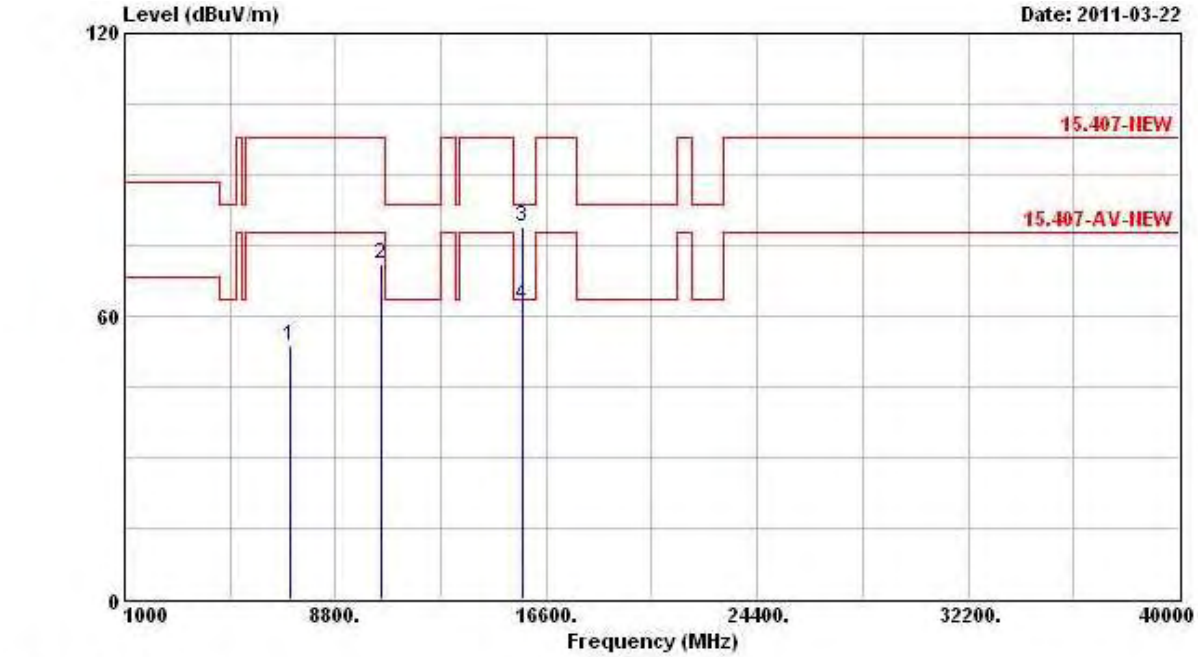
Final Test Date	Mar. 22, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 48 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8567.000	54.88	-42.96	97.84	44.74	38.45	5.97	34.28	Peak
2	10480.000	62.68	-35.16	97.84	49.80	40.09	6.82	34.03	Peak
3	15720.000	71.50	-12.04	83.54	53.23	42.84	8.46	33.03	Peak
4	15720.000	59.48	-4.06	63.54	41.21	42.84	8.46	33.03	Average

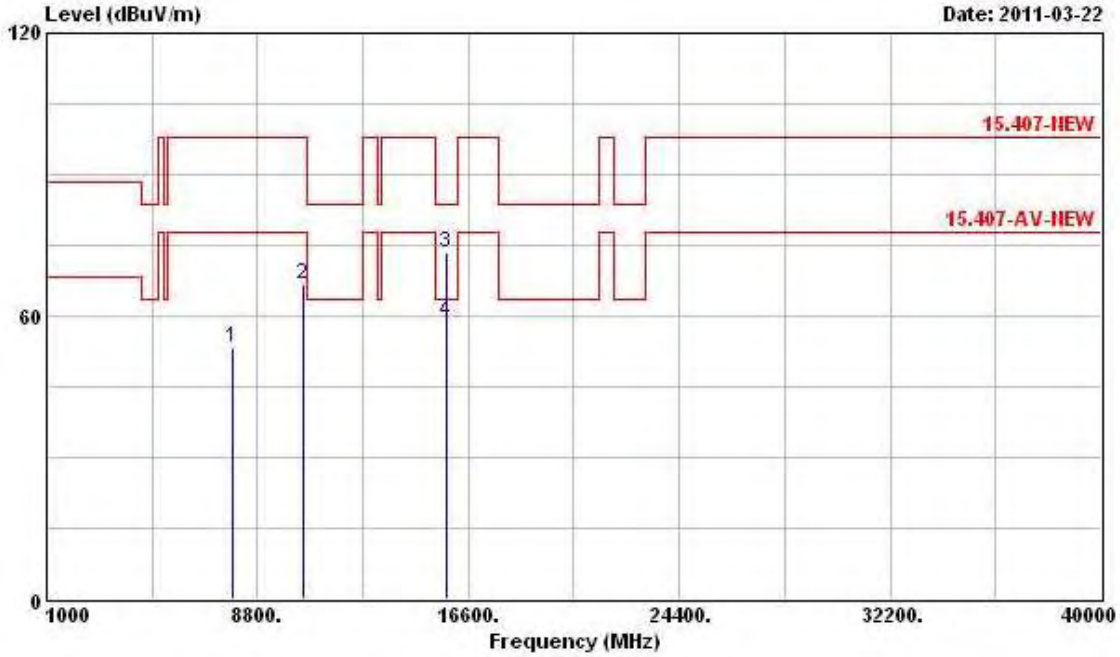
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7148.000	53.50	-44.34	97.84	44.33	37.83	5.62	34.28	Peak
2	10480.000	70.86	-26.98	97.84	57.98	40.09	6.82	34.03	Peak
3	15720.000	79.12	-4.42	83.54	60.85	42.84	8.46	33.03	Peak
4	@15720.000	62.32	-1.22	63.54	44.05	42.84	8.46	33.03	Average

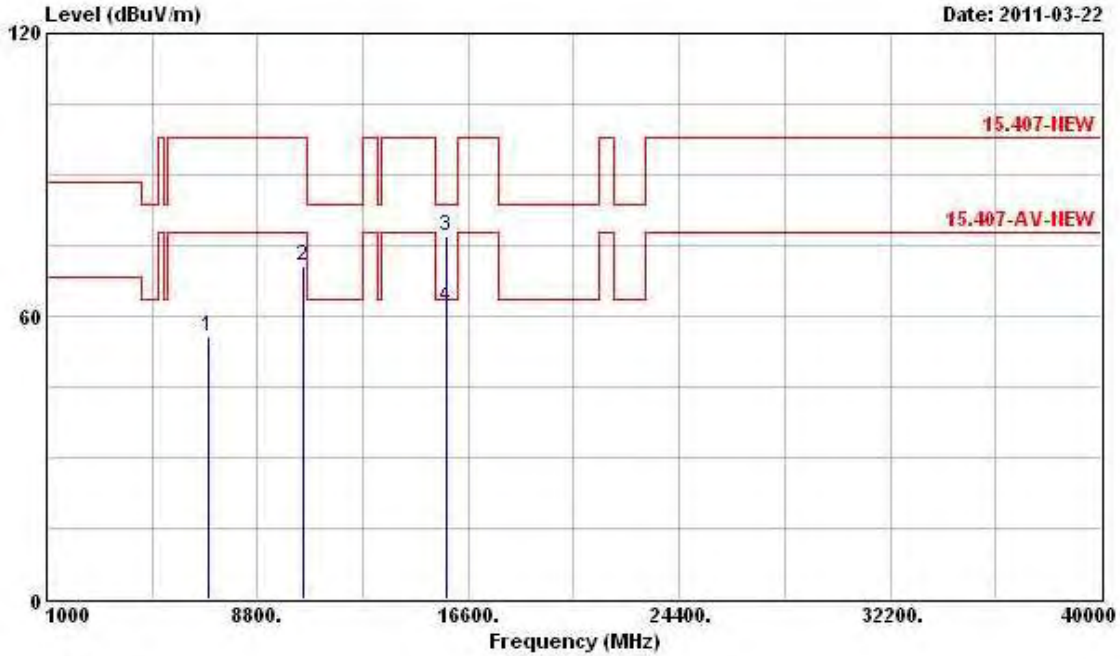
Final Test Date	Mar. 22, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 52 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7855.000	53.24	-44.60	97.84	43.71	38.11	5.77	34.35	Peak
2	10520.000	66.80	-31.04	97.84	53.84	40.11	6.85	34.00	Peak
3	15780.000	73.52	-10.02	83.54	55.31	42.86	8.46	33.11	Peak
4	15780.000	58.72	-4.82	63.54	40.51	42.86	8.46	33.11	Average

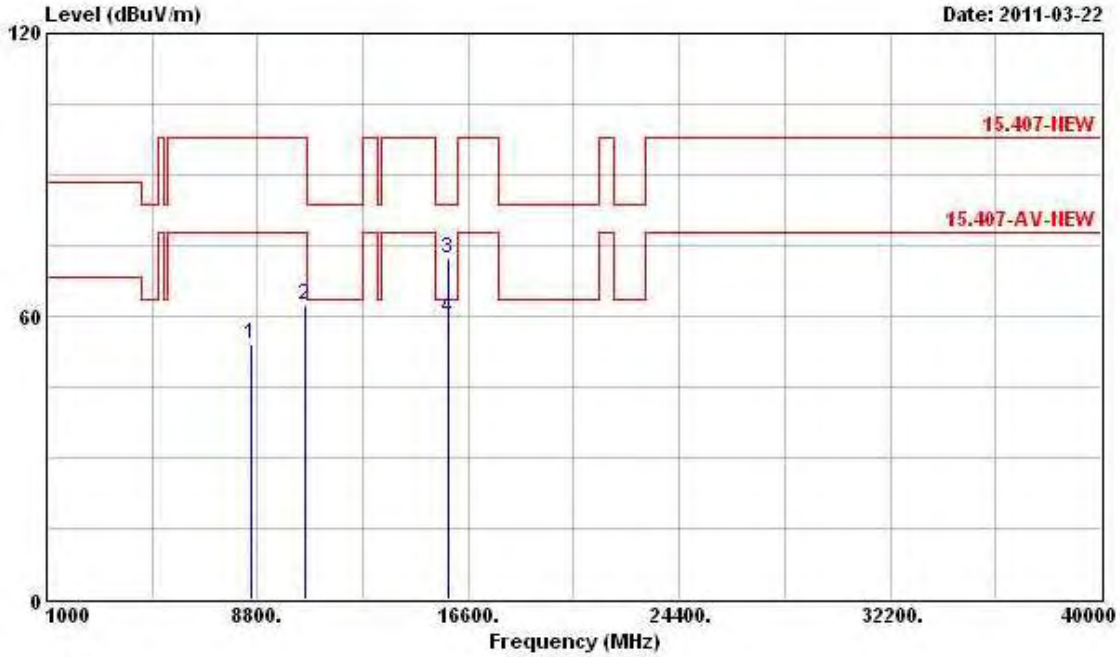
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7012.000	55.52	-42.32	97.84	46.40	37.80	5.60	34.28	Peak
2	10520.000	70.60	-27.24	97.84	57.64	40.11	6.85	34.00	Peak
3	15780.000	77.00	-6.54	83.54	58.79	42.86	8.46	33.11	Peak
4	@15780.000	61.90	-1.64	63.54	43.69	42.86	8.46	33.11	Average

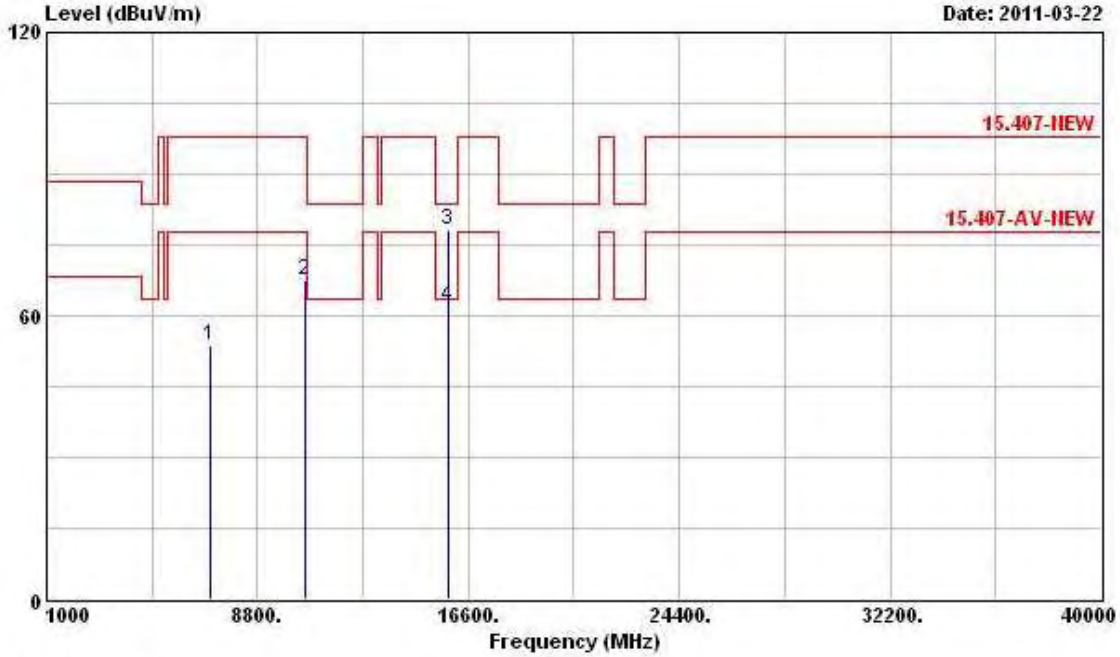
Final Test Date	Mar. 22, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 56 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8575.000	54.07	-43.77	97.84	43.95	38.43	5.97	34.28	Peak
2	10560.000	62.36	-35.48	97.84	49.29	40.13	6.88	33.94	Peak
3	15840.000	72.30	-11.24	83.54	54.13	42.87	8.46	33.16	Peak
4	15840.000	59.42	-4.12	63.54	41.25	42.87	8.46	33.16	Average

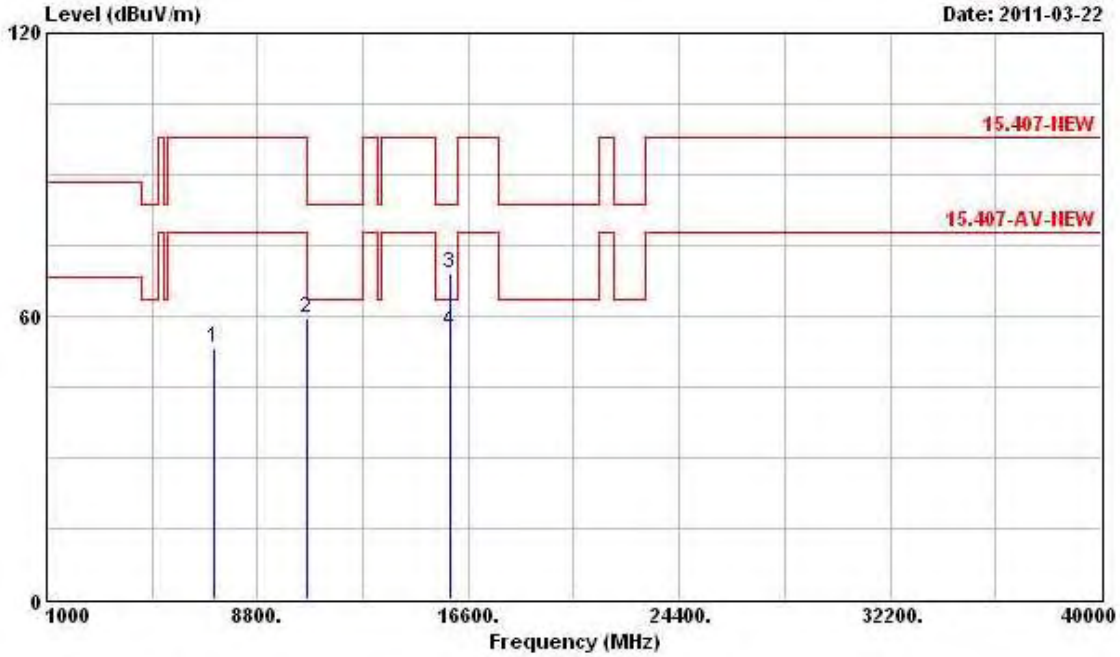
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7040.000	53.74	-44.10	97.84	44.61	37.81	5.60	34.28	Peak
2	10560.000	67.40	-30.44	97.84	54.33	40.13	6.88	33.94	Peak
3	15840.000	78.06	-5.48	83.54	59.89	42.87	8.46	33.16	Peak
4	@15840.000	62.12	-1.42	63.54	43.95	42.87	8.46	33.16	Average

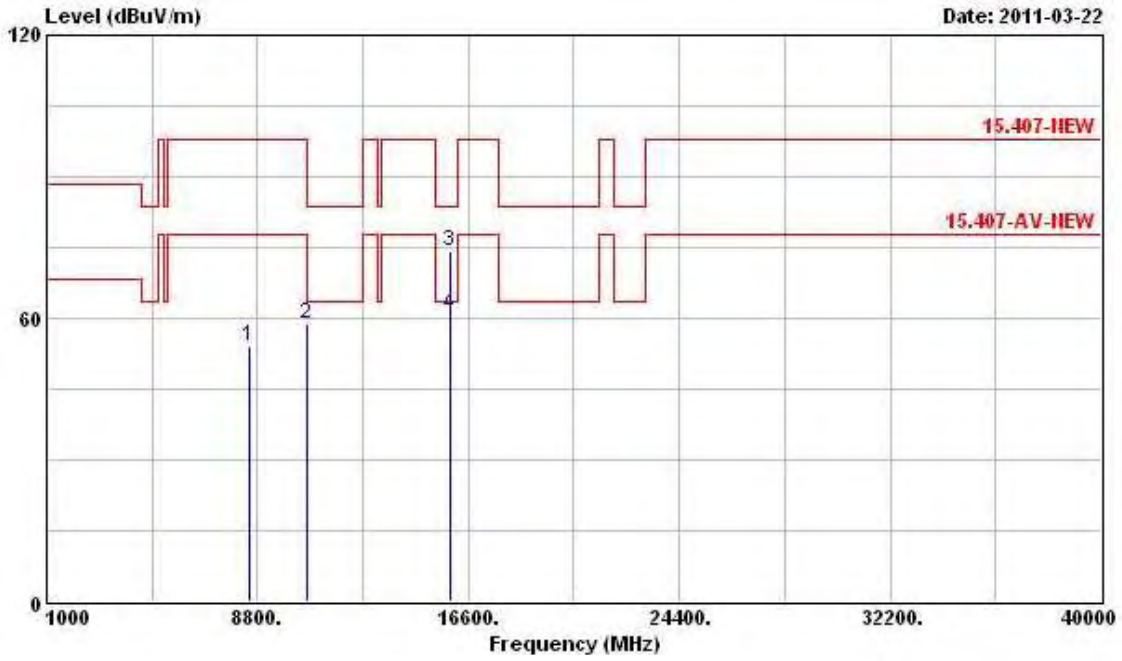
Final Test Date	Mar. 22, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 64 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7200.200	53.48	-44.36	97.84	44.31	37.84	5.62	34.29	Peak
2	10640.000	59.71	-3.83	63.54	46.44	40.18	6.93	33.84	PK
3	15960.000	69.20	-14.34	83.54	51.13	42.89	8.47	33.29	Peak
4	15960.000	56.91	-6.63	63.54	38.84	42.89	8.47	33.29	Average

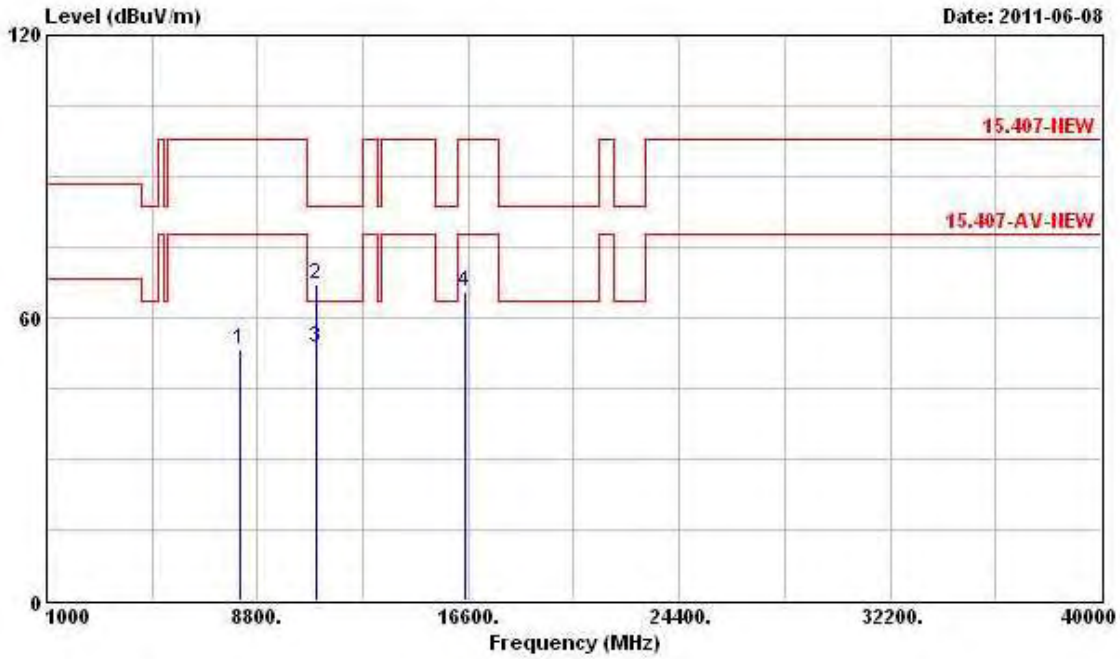
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8519.700	54.15	-43.69	97.84	43.93	38.49	5.96	34.23	Peak
2	10640.000	58.80	-4.74	63.54	45.53	40.18	6.93	33.84	PK
3	15960.000	74.02	-9.52	83.54	55.95	42.89	8.47	33.29	Peak
4	@15960.000	60.82	-2.72	63.54	42.75	42.89	8.47	33.29	Average

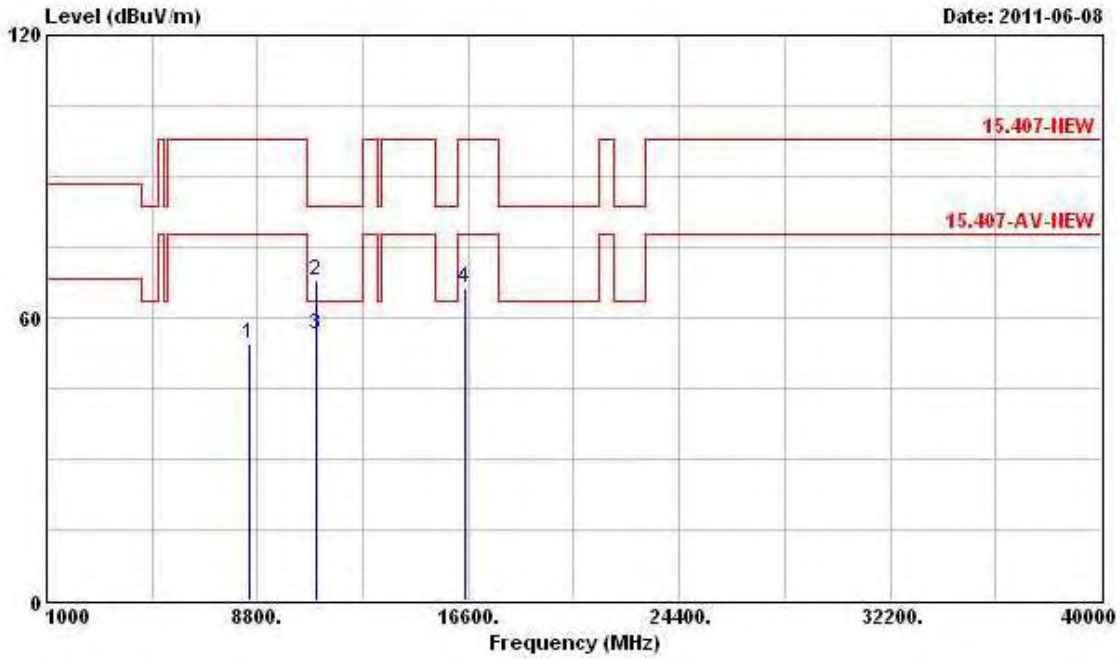
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 100 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8122.000	53.14	-24.70	77.84	43.36	38.27	5.84	34.33	PK	---	---
2	10982.000	67.25	-16.29	83.54	53.11	40.39	7.17	33.42	Peak	---	---
3	@10982.000	53.70	-9.84	63.54	39.56	40.39	7.17	33.42	Average	---	---
4	16500.000	65.53	-32.31	97.84	46.57	43.50	8.24	32.78	Peak	---	---

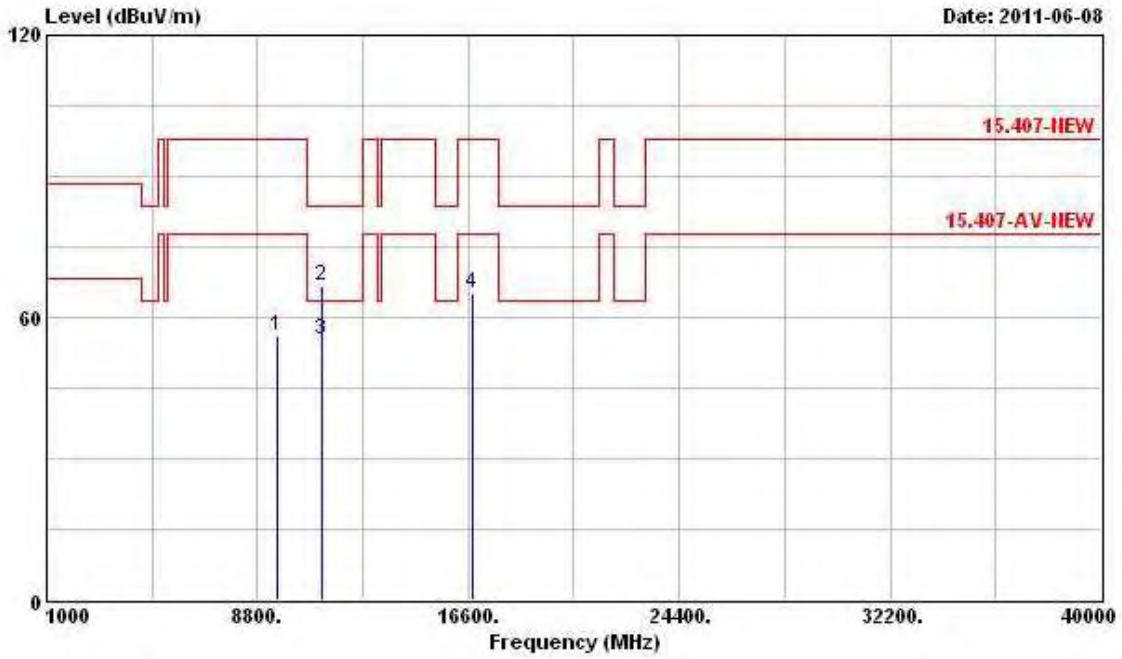
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8518.000	54.44	-43.40	97.84	44.22	38.49	5.96	34.23	Peak	---	---
2	10993.000	67.97	-15.57	83.54	53.79	40.40	7.17	33.39	Peak	---	---
3	@10993.000	56.52	-7.02	63.54	42.34	40.40	7.17	33.39	Average	---	---
4	16500.000	66.17	-31.67	97.84	47.21	43.50	8.24	32.78	Peak	---	---

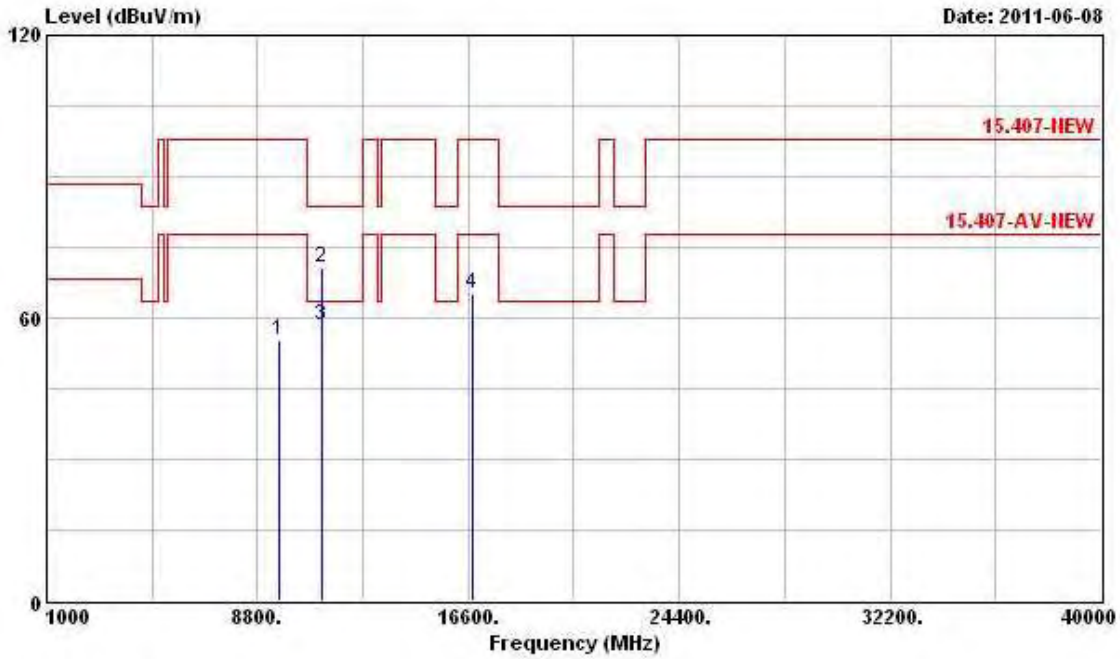
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 116 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	9530.000	55.99	-41.85	97.84	45.09	39.24	6.33	34.67	Peak	---	---
2	11158.000	66.73	-16.81	83.54	52.73	40.47	7.00	33.47	Peak	---	---
3	@11158.000	55.46	-8.08	63.54	41.46	40.47	7.00	33.47	Average	---	---
4	16740.000	65.13	-32.71	97.84	45.62	43.60	8.47	32.56	Peak	---	---

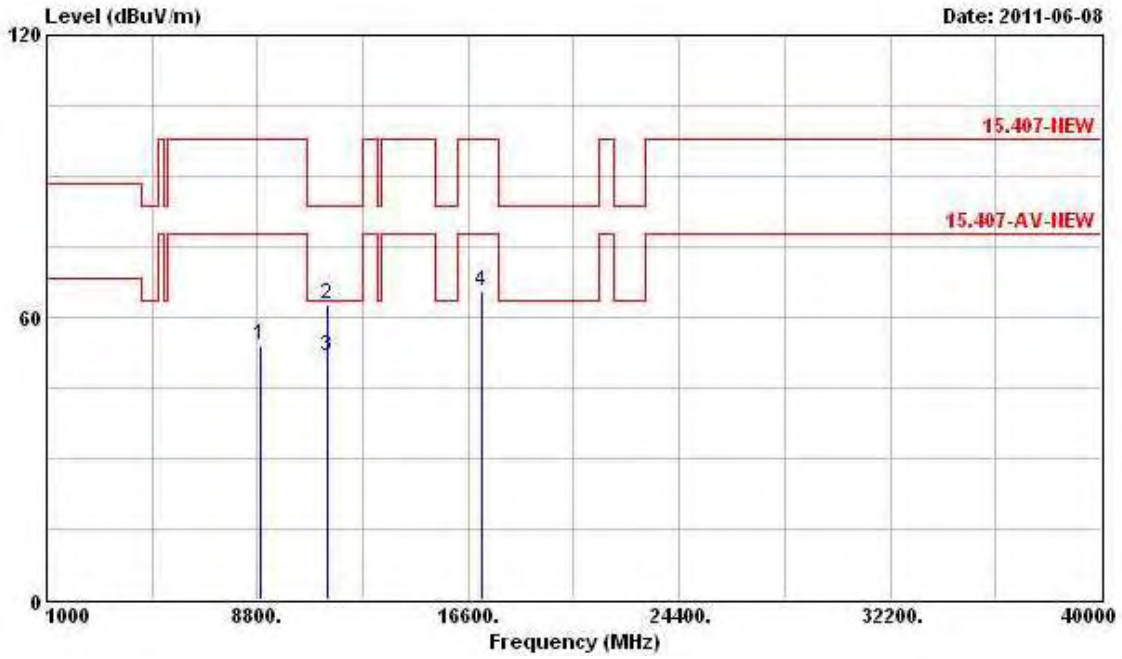
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	9585.000	55.43	-42.41	97.84	44.45	39.30	6.33	34.65	Peak	---	---
2	11158.000	70.81	-12.73	83.54	56.81	40.47	7.00	33.47	Peak	---	---
3	@11158.000	58.50	-5.04	63.54	44.50	40.47	7.00	33.47	Average	---	---
4	16740.000	64.98	-32.86	97.84	45.47	43.60	8.47	32.56	Peak	---	---

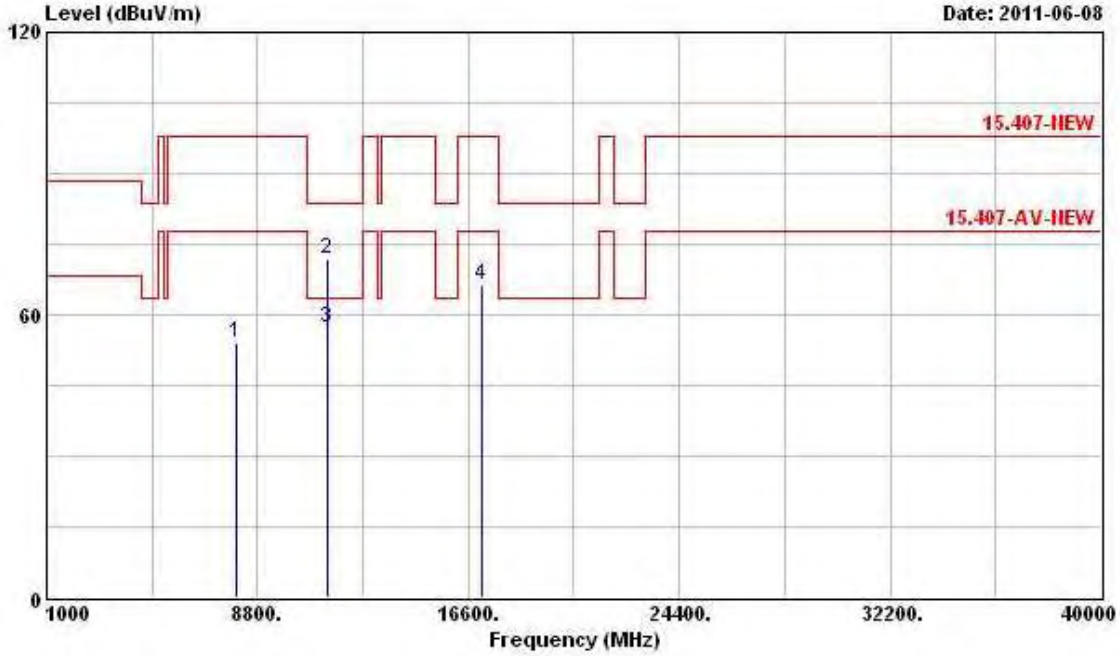
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 140 (20MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8914.000	54.18	-43.66	97.84	44.51	38.17	6.13	34.63	Peak	---	---
2	11389.000	62.81	-20.73	83.54	49.10	40.55	6.75	33.59	Peak	---	---
3	11389.000	51.69	-11.85	63.54	37.98	40.55	6.75	33.59	Average	---	---
4	17100.000	65.40	-32.44	97.84	45.43	43.64	8.61	32.28	Peak	---	---

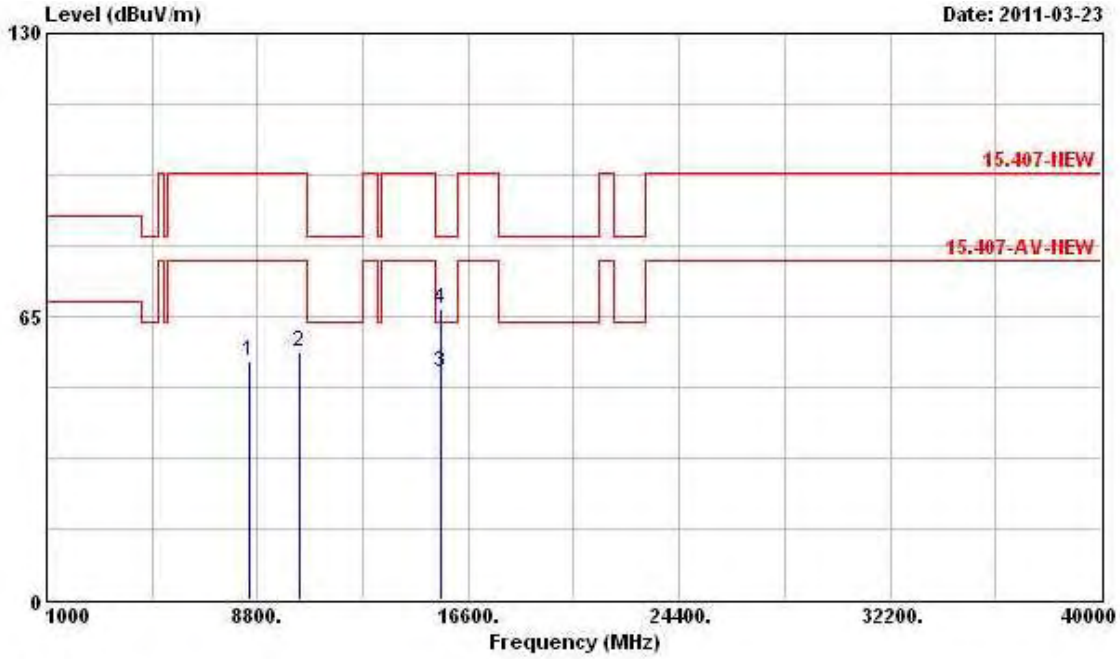
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7990.000	54.04	-43.80	97.84	44.42	38.19	5.80	34.37	Peak	---	---
2	11389.000	71.93	-11.61	83.54	58.22	40.55	6.75	33.59	Peak	---	---
3	@11389.000	57.15	-6.39	63.54	43.44	40.55	6.75	33.59	Average	---	---
4	17100.000	66.25	-31.59	97.84	46.28	43.64	8.61	32.28	Peak	---	---

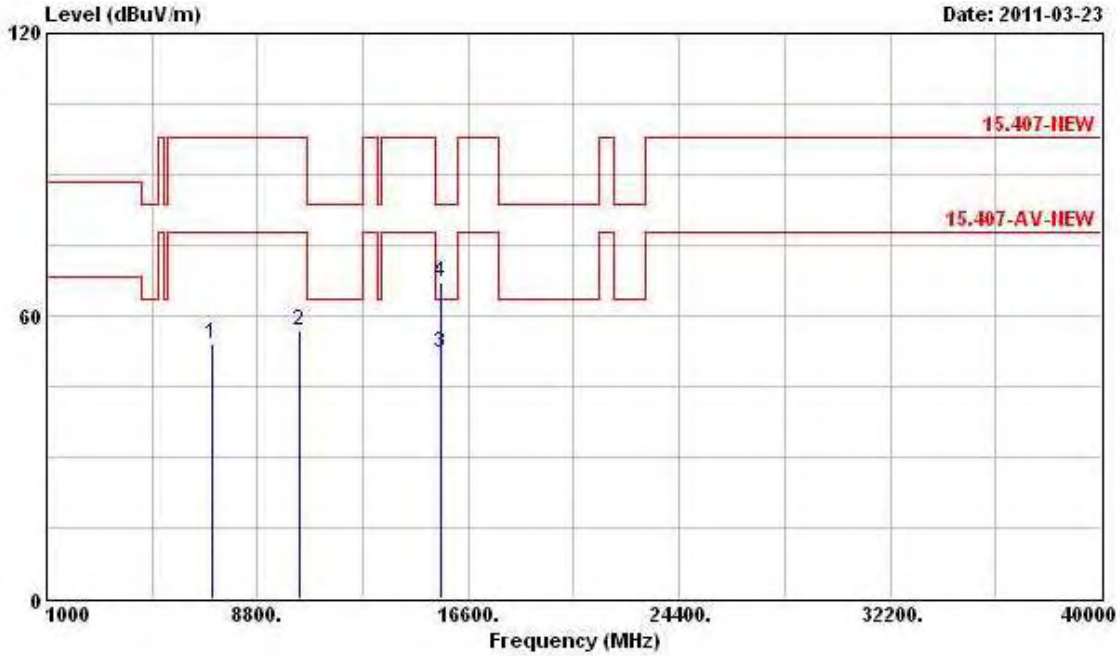
Final Test Date	Mar. 23 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 38 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8510.000	54.90	-42.94	97.84	44.68	38.49	5.96	34.23	Peak
2	10380.000	56.78	-41.06	97.84	44.12	40.03	6.75	34.12	Peak
3	15570.000	52.12	-11.42	63.54	33.73	42.81	8.45	32.87	Average
4	15570.000	66.57	-16.97	83.54	48.18	42.81	8.45	32.87	Peak

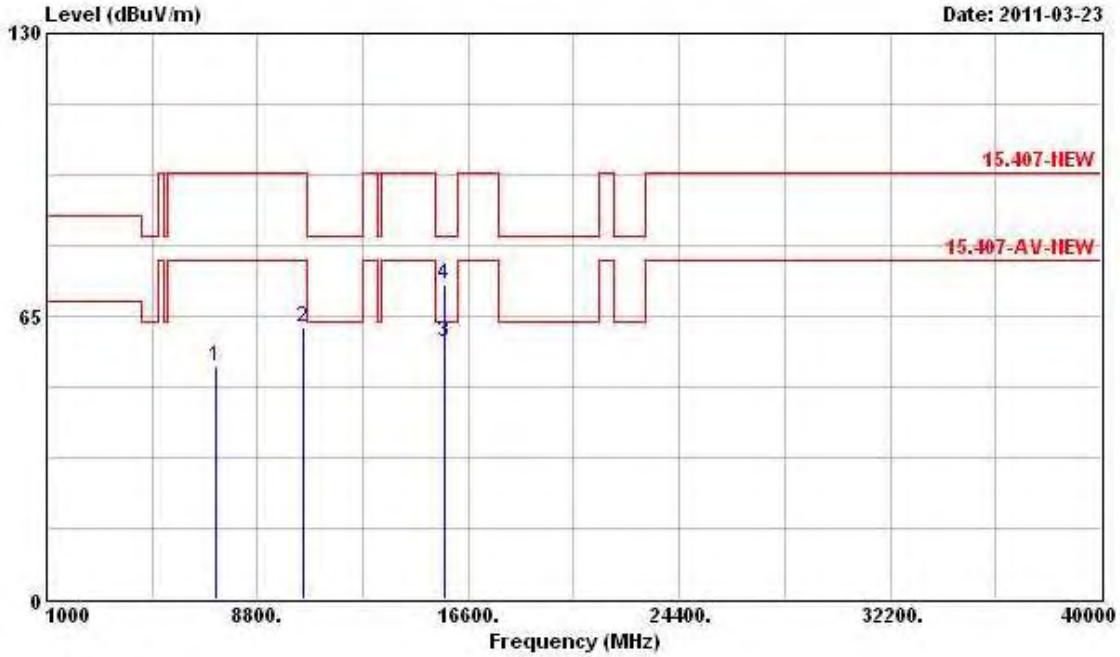
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7120.000	53.99	-43.85	97.84	44.84	37.82	5.61	34.28	Peak
2	10380.000	56.90	-40.94	97.84	44.24	40.03	6.75	34.12	Peak
3	15570.000	52.11	-11.43	63.54	33.72	42.81	8.45	32.87	Average
4	15570.000	67.25	-16.29	83.54	48.86	42.81	8.45	32.87	Peak

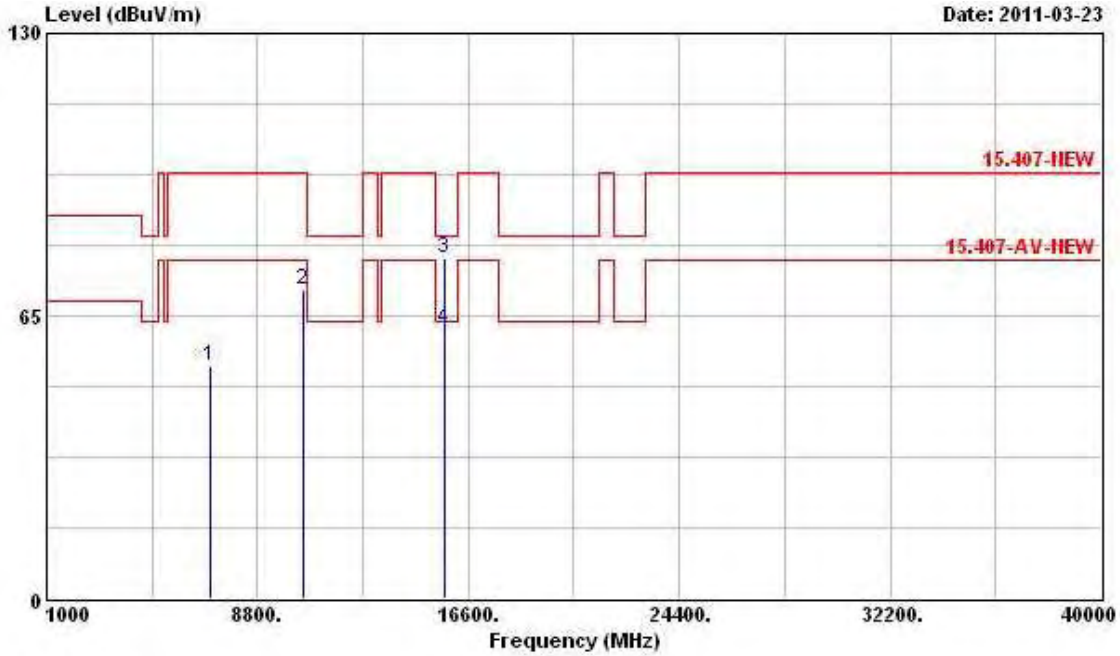
Final Test Date	Mar. 23 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 46 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7248.000	53.24	-44.60	97.84	44.05	37.85	5.63	34.29	Peak
2	10460.000	62.44	-35.40	97.84	49.60	40.07	6.82	34.05	Peak
3	15690.000	58.99	-4.55	63.54	40.69	42.84	8.46	33.00	Average
4	15690.000	72.15	-11.39	83.54	53.85	42.84	8.46	33.00	Peak

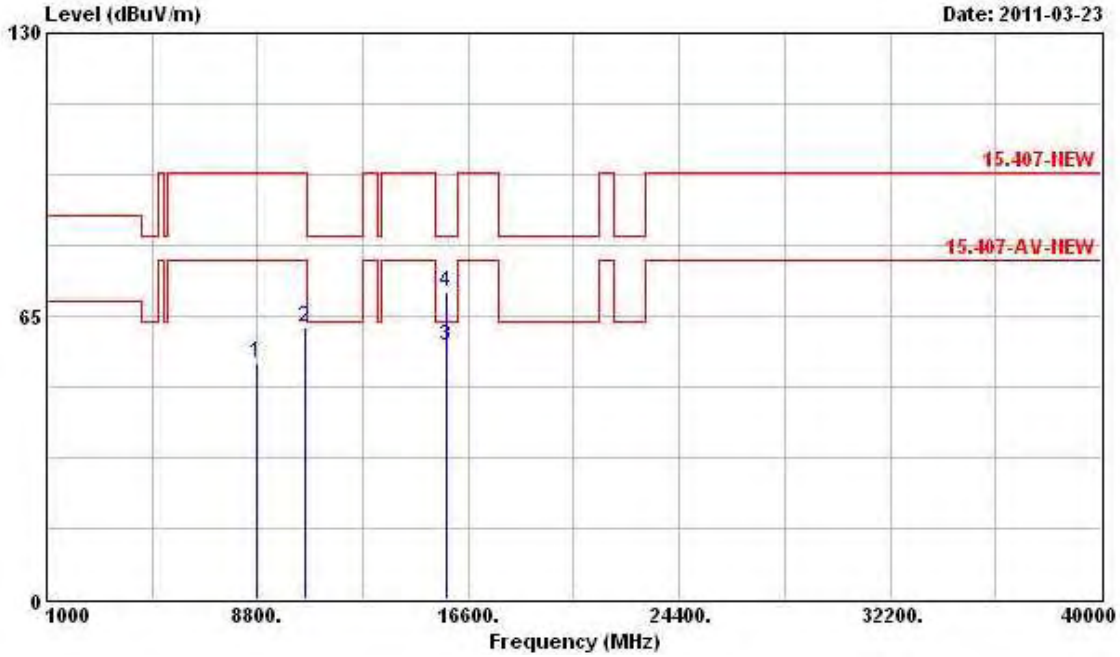
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7056.000	53.40	-44.44	97.84	44.27	37.81	5.60	34.28	Peak
2	10460.000	70.82	-27.02	97.84	57.98	40.07	6.82	34.05	Peak
3	15690.000	78.24	-5.30	83.54	59.94	42.84	8.46	33.00	Peak
4	@15690.000	61.96	-1.58	63.54	43.66	42.84	8.46	33.00	Average

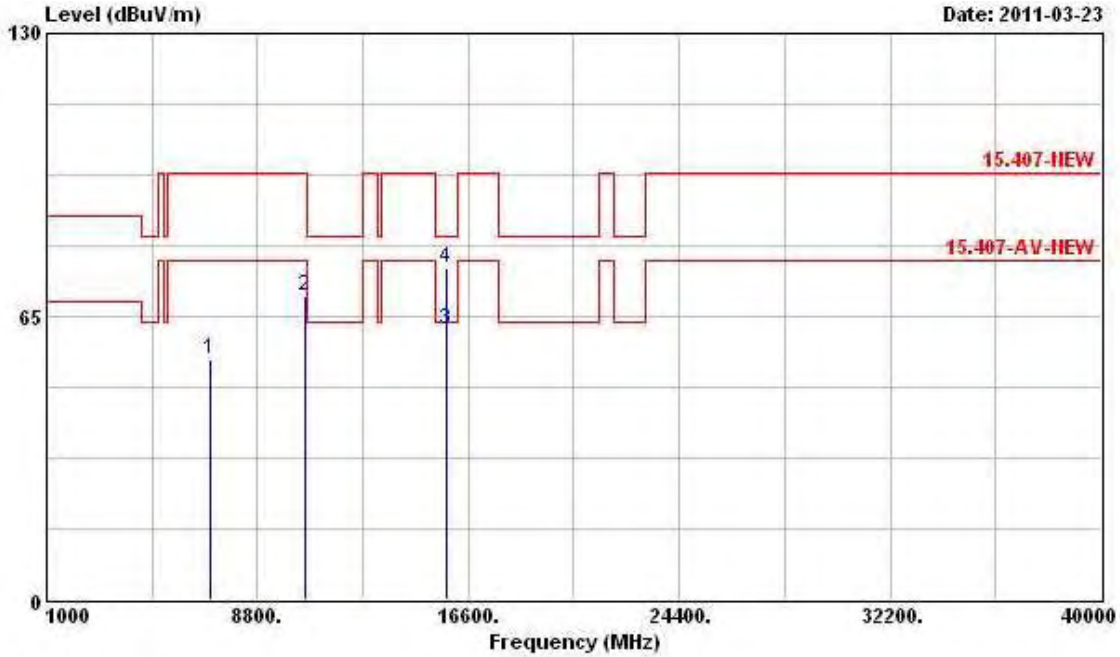
Final Test Date	Mar. 23 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 54 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8804.000	54.26	-43.58	97.84	44.44	38.26	6.08	34.52	Peak
2	10540.000	62.27	-35.57	97.84	49.24	40.12	6.88	33.97	Peak
3	15810.000	58.35	-5.19	63.54	40.16	42.86	8.46	33.13	Average
4	15810.000	70.72	-12.82	83.54	52.53	42.86	8.46	33.13	Peak

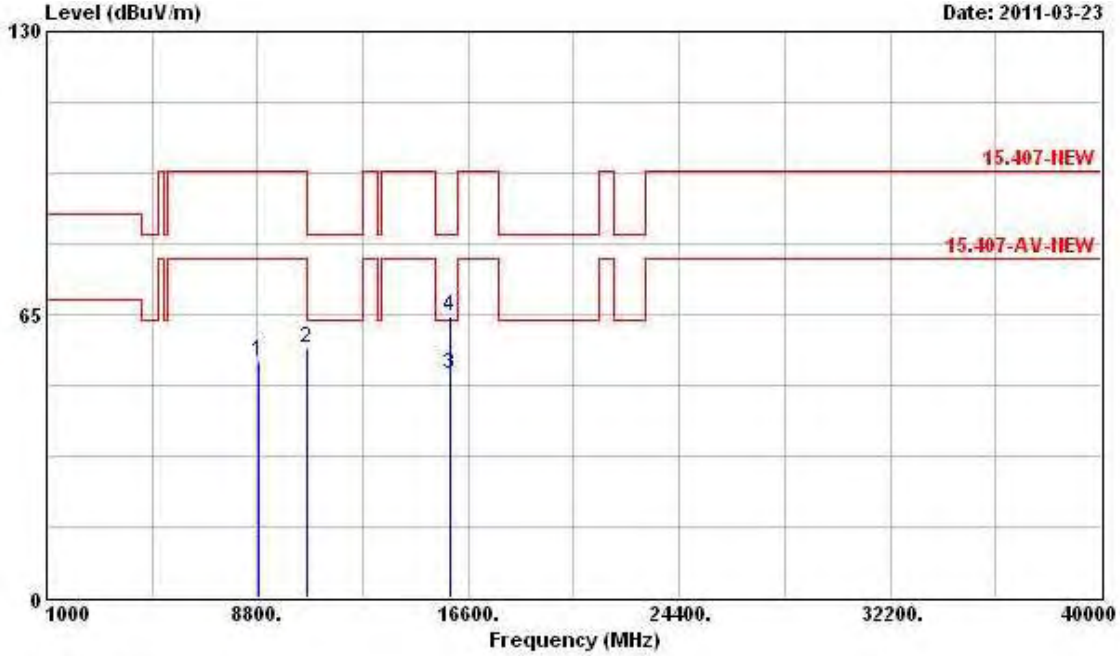
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7024.000	54.97	-42.87	97.84	45.85	37.80	5.60	34.28	Peak
2	10540.000	69.88	-27.96	97.84	56.85	40.12	6.88	33.97	Peak
3	@15810.000	61.80	-1.74	63.54	43.61	42.86	8.46	33.13	Average
4	15810.000	76.17	-7.37	83.54	57.98	42.86	8.46	33.13	Peak

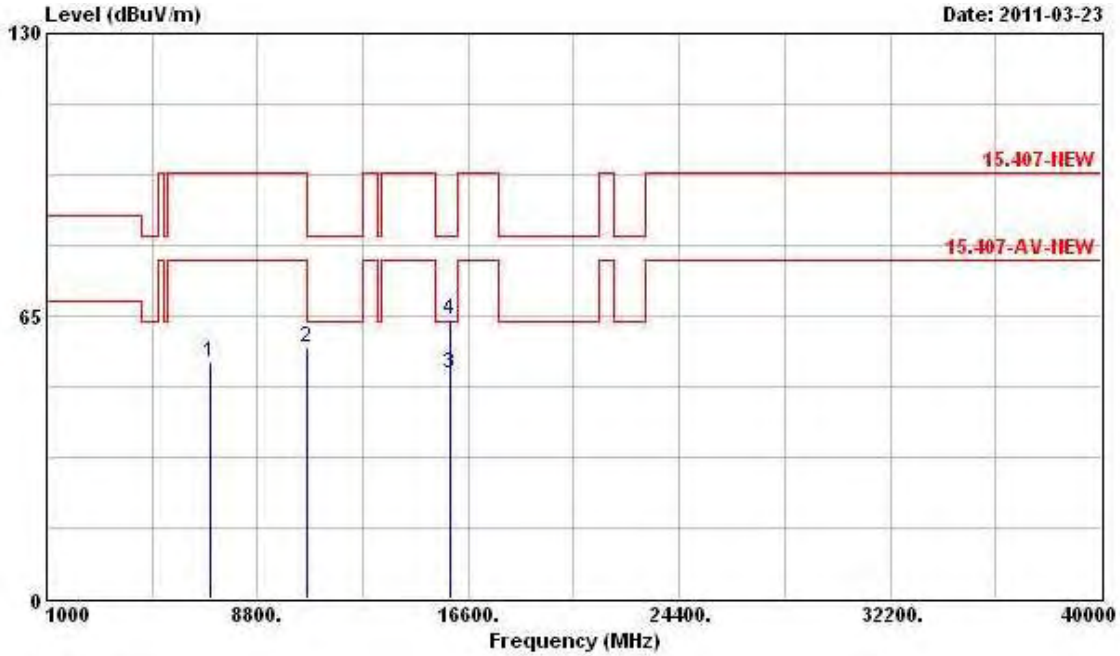
Final Test Date	Mar. 23 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 62 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8814.000	54.30	-43.54	97.84	44.49	38.25	6.08	34.52	Peak
2	10620.000	57.12	-6.42	63.54	43.89	40.17	6.93	33.87	PK
3	15930.000	51.37	-12.17	63.54	33.25	42.89	8.47	33.24	Average
4	15930.000	64.37	-19.17	83.54	46.25	42.89	8.47	33.24	Peak

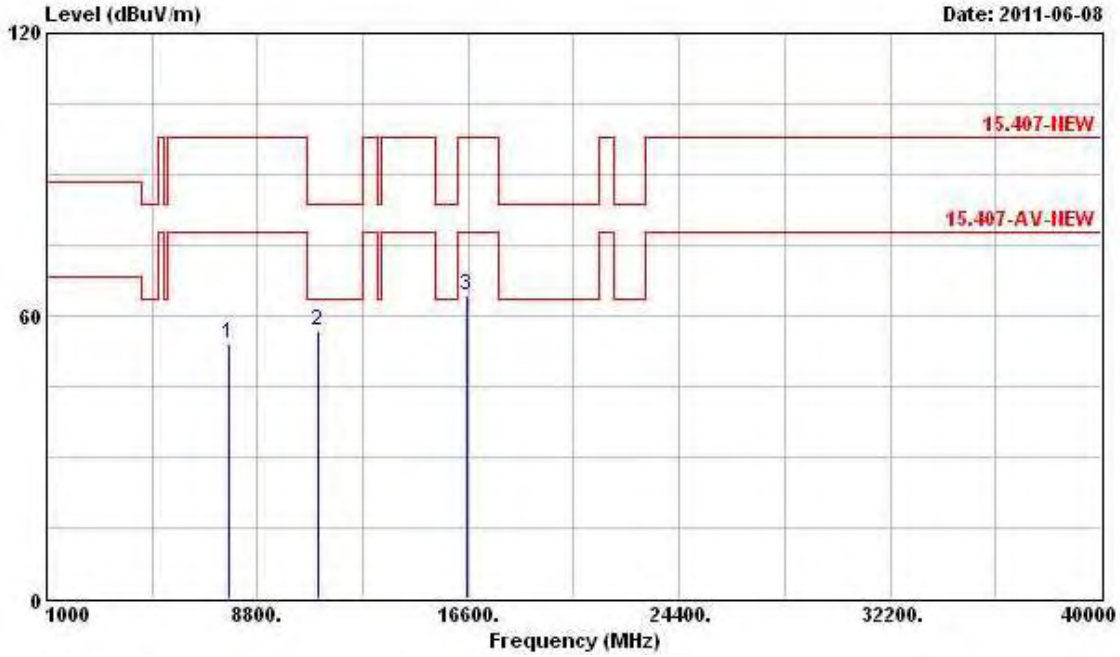
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7060.000	54.31	-43.53	97.84	45.18	37.81	5.60	34.28	Peak
2	10620.000	57.67	-5.87	63.54	44.44	40.17	6.93	33.87	PK
3	15930.000	51.61	-11.93	63.54	33.49	42.89	8.47	33.24	Average
4	15930.000	64.17	-19.37	83.54	46.05	42.89	8.47	33.24	Peak

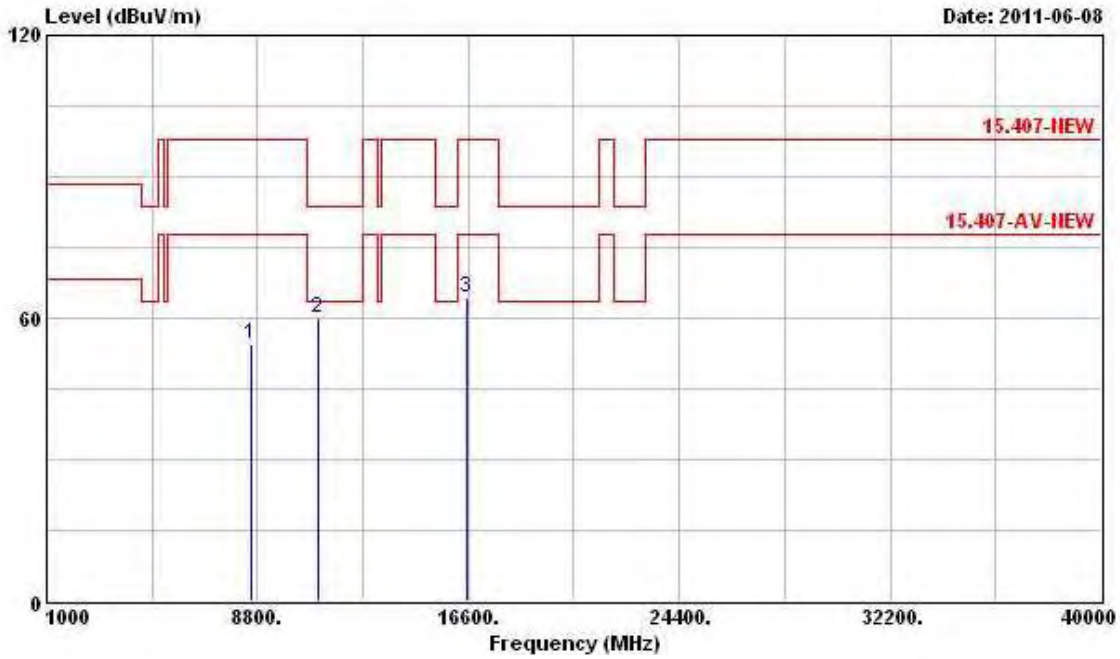
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 102 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	7770.000	54.24	-23.60	77.84	44.77	38.06	5.74	34.33	PK	---	---
2	@11020.000	56.76	-6.78	63.54	42.62	40.41	7.13	33.40	PK	---	---
3	16530.000	64.43	-33.41	97.84	45.41	43.51	8.27	32.76	Peak	---	---

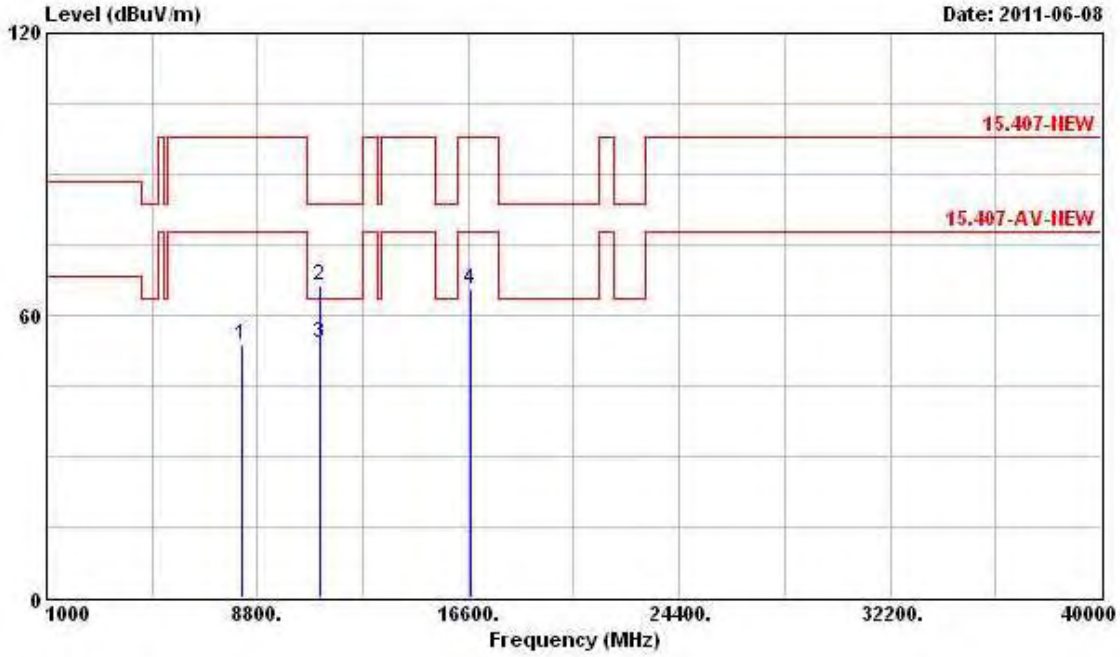
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8562.000	54.60	-43.24	97.84	44.46	38.45	5.97	34.28	Peak	---	---
2	11026.000	60.14	-23.40	63.54	46.00	40.41	7.13	33.40	Peak	---	---
3	16530.000	64.35	-33.49	97.84	45.33	43.51	8.27	32.76	Peak	---	---

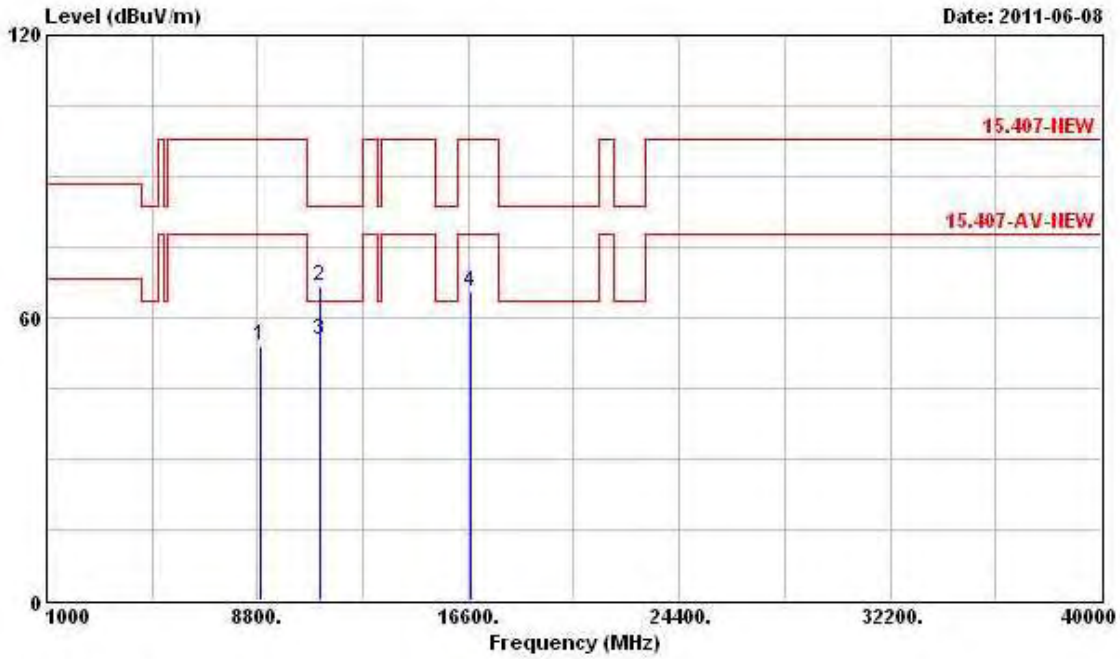
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 110 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8221.000	53.74	-24.10	77.84	43.85	38.33	5.86	34.30	PK	---	---
2	11081.000	66.23	-17.31	83.54	52.14	40.43	7.09	33.43	Peak	---	---
3	@11081.000	54.09	-9.45	63.54	40.00	40.43	7.09	33.43	Average	---	---
4	16650.000	65.45	-32.39	97.84	46.16	43.56	8.37	32.64	Peak	---	---

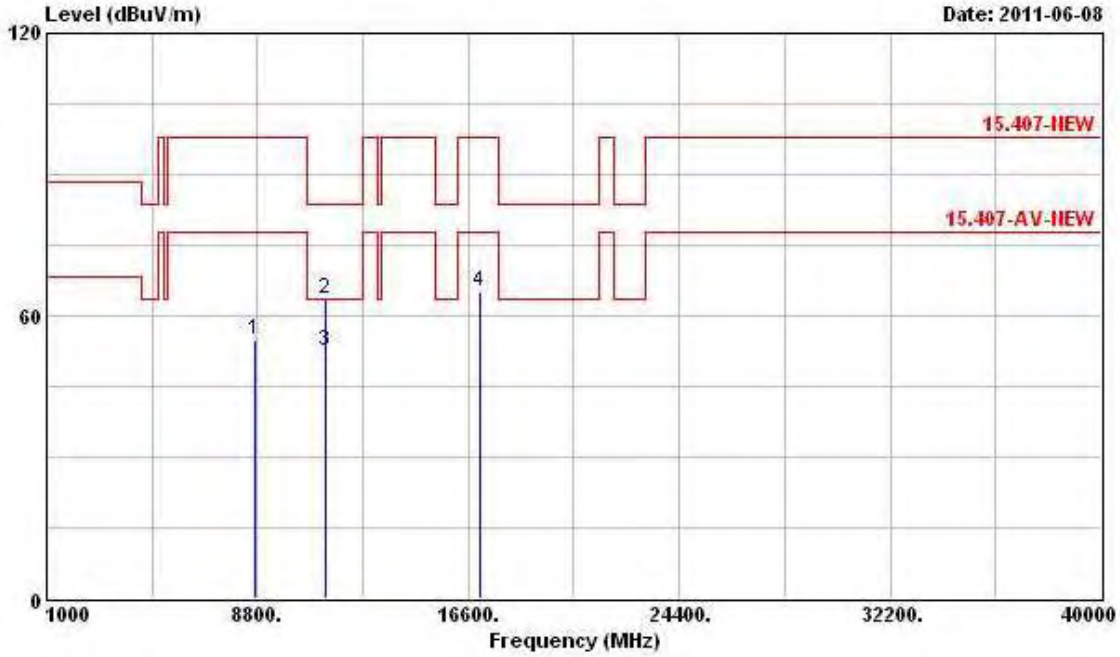
Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8914.000	54.07	-43.77	97.84	44.40	38.17	6.13	34.63	Peak	---	---
2	11081.000	66.57	-16.97	83.54	52.48	40.43	7.09	33.43	Peak	---	---
3	@11081.000	55.30	-8.24	63.54	41.21	40.43	7.09	33.43	Average	---	---
4	16650.000	65.68	-32.16	97.84	46.39	43.56	8.37	32.64	Peak	---	---

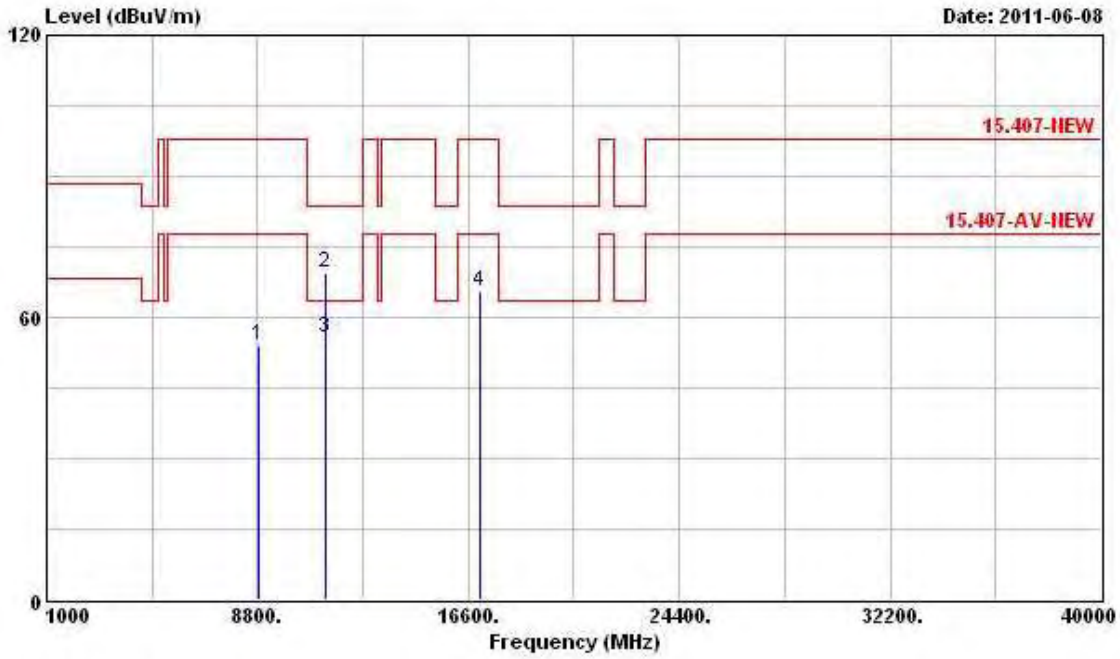
Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 134 (40MHz)

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8738.000	54.71	-43.13	97.84	44.80	38.31	6.04	34.44	Peak	---	---
2	11340.000	63.41	-20.13	83.54	49.64	40.53	6.80	33.56	Peak	---	---
3	@11340.000	52.33	-11.21	63.54	38.56	40.53	6.80	33.56	Average	---	---
4	17010.000	65.23	-32.61	97.84	45.20	43.69	8.65	32.31	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8841.000	54.07	-43.77	97.84	44.30	38.23	6.09	34.55	Peak	---	---
2	11340.000	69.38	-14.16	83.54	55.61	40.53	6.80	33.56	Peak	---	---
3	@11340.000	55.85	-7.69	63.54	42.08	40.53	6.80	33.56	Average	---	---
4	17010.000	65.49	-32.35	97.84	45.46	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.

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

Final Test Date	Mar. 23, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11a Ch. 36, 40, 48

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5150.000	61.74	-1.80	63.54	20.75	36.21	4.78	0.00	Average
2 @	5185.000	110.36			69.30	36.26	4.80	0.00	Average
1 @	5148.700	81.17	-2.37	83.54	40.18	36.21	4.78	0.00	Peak
2 @	5185.000	120.49			79.43	36.26	4.80	0.00	Peak

The item 2 is fundamental emissions.

Channel 40

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5126.100	58.46	-5.08	63.54	17.49	36.19	4.78	0.00	Average
2 @	5207.400	110.02			68.93	36.28	4.81	0.00	Average
3	5377.800	58.96	-4.58	63.54	17.55	36.54	4.87	0.00	Average
1	5122.200	72.09	-11.45	83.54	31.15	36.16	4.78	0.00	Peak
2 @	5202.600	120.98			79.89	36.28	4.81	0.00	Peak
3	5391.300	72.76	-10.78	83.54	31.34	36.54	4.88	0.00	Peak

The item 2 is fundamental emissions.

Channel 48

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5118.900	58.40	-5.14	63.54	17.46	36.16	4.78	0.00	Average
2 @	5243.700	111.15			69.98	36.35	4.82	0.00	Average
3	5399.700	58.93	-4.61	63.54	17.49	36.56	4.88	0.00	Average
1	5109.000	72.09	-11.45	83.54	31.16	36.16	4.77	0.00	Peak
2 @	5237.400	122.11			80.96	36.33	4.82	0.00	Peak
3	5358.600	72.60	-10.94	83.54	31.24	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

Final Test Date	Mar. 23, 2011	Test Site No.	03CH02-HY
Temperature	23℃	Humidity	51.5%
Test Engineer	Daniel	Configuration	802.11a Ch. 52, 56, 64

Channel 52

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5119.800	58.41	-5.13	63.54	17.47	36.16	4.78	0.00	Average
2 @	5265.300	112.38			71.19	36.37	4.82	0.00	Average
3	5393.700	58.96	-4.58	63.54	17.54	36.54	4.88	0.00	Average
1	5117.400	73.02	-10.52	83.54	32.08	36.16	4.78	0.00	Peak
2 @	5265.300	123.12			81.93	36.37	4.82	0.00	Peak
3	5393.400	72.82	-10.72	83.54	31.40	36.54	4.88	0.00	Peak

The item 2 is fundamental emissions.

Channel 56

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5117.700	58.35	-5.19	63.54	17.41	36.16	4.78	0.00	Average
2 @	5285.400	111.30			70.06	36.40	4.84	0.00	Average
3	5397.000	58.91	-4.63	63.54	17.47	36.56	4.88	0.00	Average
1	5139.000	72.15	-11.39	83.54	31.18	36.19	4.78	0.00	Peak
2 @	5283.000	122.09			80.85	36.40	4.84	0.00	Peak
3	5362.500	72.49	-11.05	83.54	31.11	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5313.850	109.71			68.42	36.44	4.85	0.00	Average
2	5350.000	60.01	-3.53	63.54	18.65	36.49	4.87	0.00	Average
1 @	5313.500	120.35			79.06	36.44	4.85	0.00	Peak
2 @	5350.530	82.54	-1.00	83.54	41.18	36.49	4.87	0.00	Peak

The item 1 is fundamental emissions.

Final Test Date	Jun. 08, 2011	Test Site No.	03CH02-HY
Temperature	23℃	Humidity	51.5%
Test Engineer	Chris	Configuration	802.11a Ch. 100, 116, 140

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5458.960	82.11	-1.43	83.54	40.58	36.63	4.90	0.00	Peak	---	---
2 @	5494.480	127.91			86.32	36.68	4.91	0.00	Peak	---	---
1 @	5458.960	62.11	-1.43	63.54	20.58	36.63	4.90	0.00	Average	---	---
2 @	5494.160	116.84			75.25	36.68	4.91	0.00	Average	---	---

The item 2 is fundamental emissions.

Channel 116

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5439.600	73.71	-9.83	83.54	32.20	36.61	4.90	0.00	Peak	---	---
2 @	5576.880	127.19			85.46	36.78	4.95	0.00	Peak	---	---
3	5730.480	74.07	-23.77	97.84	32.06	36.97	5.04	0.00	Peak	---	---
1 @	5439.600	61.46	-2.08	63.54	19.95	36.61	4.90	0.00	Average	---	---
2 @	5585.840	115.42			73.64	36.80	4.98	0.00	Average	---	---
3	5746.800	60.28	-17.56	77.84	18.22	36.99	5.07	0.00	Average	---	---

The item 2 is fundamental emissions.

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5701.160	127.54			85.55	36.95	5.04	0.00	Peak	---	---
2 @	5726.360	90.12	-7.72	97.84	48.11	36.97	5.04	0.00	Peak	---	---
1 @	5706.020	116.04			74.05	36.95	5.04	0.00	Average	---	---
2	5725.880	66.46	-11.38	77.84	24.45	36.97	5.04	0.00	Average	---	---

The item 1 is fundamental emissions.

Final Test Date	Mar. 23, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 36, 40, 48 (20MHz)

Channel 36

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5150.000	61.78	-1.76	63.54	20.79	36.21	4.78	0.00	Average
2 @	5186.600	107.27			66.21	36.26	4.80	0.00	Average
1	5149.500	80.15	-3.39	83.54	39.16	36.21	4.78	0.00	Peak
2 @	5174.300	121.18			80.12	36.26	4.80	0.00	Peak

The item 2 is fundamental emissions.

Channel 40

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5127.000	58.67	-4.87	63.54	17.70	36.19	4.78	0.00	Average
2 @	5206.500	108.59			67.50	36.28	4.81	0.00	Average
3	5393.700	58.63	-4.91	63.54	17.21	36.54	4.88	0.00	Average
1	5139.300	72.78	-10.76	83.54	31.81	36.19	4.78	0.00	Peak
2 @	5206.500	123.06			81.97	36.28	4.81	0.00	Peak
3	5364.600	72.27	-11.27	83.54	30.89	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

Channel 48

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5108.100	58.55	-4.99	63.54	17.62	36.16	4.77	0.00	Average
2 @	5247.000	109.96			68.79	36.35	4.82	0.00	Average
3	5393.400	58.50	-5.04	63.54	17.08	36.54	4.88	0.00	Average
1	5135.400	71.96	-11.58	83.54	30.99	36.19	4.78	0.00	Peak
2 @	5247.000	123.54			82.37	36.35	4.82	0.00	Peak
3	5379.300	72.37	-11.17	83.54	30.96	36.54	4.87	0.00	Peak

The item 2 is fundamental emissions.

Final Test Date	Mar. 23, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Daniel	**Configuration**	802.11n Ch. 52, 56, 64 (20MHz)

Channel 52

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5111.700	58.57	-4.97	63.54	17.64	36.16	4.77	0.00	Average
2 @	5265.300	109.99			68.80	36.37	4.82	0.00	Average
3	5387.400	58.53	-5.01	63.54	17.12	36.54	4.87	0.00	Average
1	5122.500	72.52	-11.02	83.54	31.58	36.16	4.78	0.00	Peak
2 @	5263.800	123.88			82.69	36.37	4.82	0.00	Peak
3	5358.900	72.56	-10.98	83.54	31.20	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

Channel 56

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5126.100	58.51	-5.03	63.54	17.54	36.19	4.78	0.00	Average
2 @	5276.100	108.91			67.67	36.40	4.84	0.00	Average
3	5399.400	58.45	-5.09	63.54	17.01	36.56	4.88	0.00	Average
1	5115.000	72.08	-11.46	83.54	31.14	36.16	4.78	0.00	Peak
2 @	5283.000	122.70			81.46	36.40	4.84	0.00	Peak
3	5357.400	71.94	-11.60	83.54	30.58	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

Channel 64

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5314.620	106.49			65.20	36.44	4.85	0.00	Average
2 @	5350.000	60.88	-2.66	63.54	19.52	36.49	4.87	0.00	Average
1 @	5313.290	120.06			78.77	36.44	4.85	0.00	Peak
2 @	5350.530	82.02	-1.52	83.54	40.66	36.49	4.87	0.00	Peak

The item 1 is fundamental emissions.

Final Test Date	Jun. 08, 2011	Test Site No.	03CH02-HY
Temperature	23℃	Humidity	51.5%
Test Engineer	Chris	Configuration	802.11n Ch. 100, 116, 140 (20MHz)

Channel 100

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5459.360	82.02	-1.52	83.54	40.49	36.63	4.90	0.00	Peak	---	---
2 @	5505.440	126.98	-----	-----	85.35	36.70	4.93	0.00	Peak	---	---
1 @	5459.040	62.01	-1.53	63.54	20.48	36.63	4.90	0.00	Average	---	---
2 @	5493.600	112.92			71.33	36.68	4.91	0.00	Average	---	---

The item 2 is fundamental emissions.

Channel 116

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5439.600	73.41	-10.13	83.54	31.90	36.61	4.90	0.00	Peak	---	---
2 @	5584.560	126.42			84.64	36.80	4.98	0.00	Peak	---	---
3	5746.800	73.31	-24.53	97.84	31.25	36.99	5.07	0.00	Peak	---	---
1 @	5439.600	62.01	-1.53	63.54	20.50	36.61	4.90	0.00	Average	---	---
2 @	5574.320	112.06			70.33	36.78	4.95	0.00	Average	---	---
3	5740.720	60.28	-17.56	77.84	18.22	36.99	5.07	0.00	Average	---	---

The item 2 is fundamental emissions.

Channel 140

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5694.260	126.32			84.37	36.93	5.02	0.00	Peak	---	---
2 @	5725.160	90.70	-7.14	97.84	48.69	36.97	5.04	0.00	Peak	---	---
1 @	5705.720	112.22			70.23	36.95	5.04	0.00	Average	---	---
2 @	5724.980	69.87	-7.97	77.84	27.86	36.97	5.04	0.00	Average	---	---

The item 1 is fundamental emissions.

Final Test Date	Mar. 23, 2011	Test Site No.	03CH02-HY
Temperature	23℃	Humidity	51.5%
Test Engineer	Daniel	Configuration	802.11n Ch. 38, 46, 54 (40MHz)

Channel 38

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5150.000	61.95	-1.59	63.54	20.96	36.21	4.78	0.00	Average
2 @	5202.410	98.23			57.14	36.28	4.81	0.00	Average
1	5150.000	78.02	-5.52	83.54	37.03	36.21	4.78	0.00	Peak
2 @	5191.850	113.28			72.20	36.28	4.80	0.00	Peak

The item 2 is fundamental emissions.

Channel 46

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5149.750	62.36	-1.18	63.54	21.37	36.21	4.78	0.00	Average
2 @	5244.500	106.33			65.16	36.35	4.82	0.00	Average
3	5358.750	59.02	-4.52	63.54	17.66	36.49	4.87	0.00	Average
1	5149.500	79.42	-4.12	83.54	38.43	36.21	4.78	0.00	Peak
2 @	5244.750	121.67			80.50	36.35	4.82	0.00	Peak
3	5366.750	72.99	-10.55	83.54	31.61	36.51	4.87	0.00	Peak

The item 2 is fundamental emissions.

Channel 54

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	5112.600	59.00	-4.54	63.54	18.07	36.16	4.77	0.00	Average
2 @	5280.900	106.08			64.84	36.40	4.84	0.00	Average
3	5350.000	59.67	-3.87	63.54	18.31	36.49	4.87	0.00	Average
1	5117.700	72.59	-10.95	83.54	31.65	36.16	4.78	0.00	Peak
2 @	5286.600	122.44			81.20	36.40	4.84	0.00	Peak
3	5350.500	74.22	-9.32	83.54	32.86	36.49	4.87	0.00	Peak

The item 2 is fundamental emissions.

Final Test Date	Jun. 08, 2011	Test Site No.	03CH02-HY
Temperature	23℃	Humidity	51.5%
Test Engineer	Chris	Configuration	802.11n Ch. 62, 102 (40MHz)

Channel 62

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	5297.500	98.94			57.68	36.42	4.84	0.00	Average
2 @	5350.000	62.24	-1.30	63.54	20.88	36.49	4.87	0.00	Average
1 @	5326.600	114.18			72.86	36.47	4.85	0.00	Peak
2	5351.000	79.83	-3.71	83.54	38.47	36.49	4.87	0.00	Peak

The item 1 is fundamental emissions.

Channel 102

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5459.800	77.49	-6.05	83.54	35.96	36.63	4.90	0.00	Peak	---	---
2 @	5493.800	117.26			75.67	36.68	4.91	0.00	Peak	---	---
1 @	5460.000	62.33	-1.21	63.54	20.80	36.63	4.90	0.00	Average	---	---
2 @	5496.300	103.21			61.62	36.68	4.91	0.00	Average	---	---

The item 2 is fundamental emissions.

Final Test Date	Jun. 08, 2011	**Test Site No.**	03CH02-HY
Temperature	23℃	**Humidity**	51.5%
Test Engineer	Chris	**Configuration**	802.11n Ch. 110, 134 (40MHz)

Channel 110

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5459.800	76.44	-7.10	83.54	34.91	36.63	4.90	0.00	Peak	---	---
2 @	5533.300	123.55			81.88	36.74	4.93	0.00	Peak	---	---
3	5727.700	74.13	-23.71	97.84	32.12	36.97	5.04	0.00	Peak	---	---
1 @	5440.000	61.06	-2.48	63.54	19.55	36.61	4.90	0.00	Average	---	---
2 @	5534.500	108.67			67.00	36.74	4.93	0.00	Average	---	---
3	5728.600	60.14	-17.70	77.84	18.13	36.97	5.04	0.00	Average	---	---

The item 2 is fundamental emissions.

Channel 134

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 @	5653.400	123.62			81.73	36.89	5.00	0.00	Peak	---	---
2	5726.300	82.02	-15.82	97.84	40.01	36.97	5.04	0.00	Peak	---	---
1 @	5654.200	107.41			65.52	36.89	5.00	0.00	Average	---	---
2	5725.000	63.25	-14.59	77.84	21.24	36.97	5.04	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

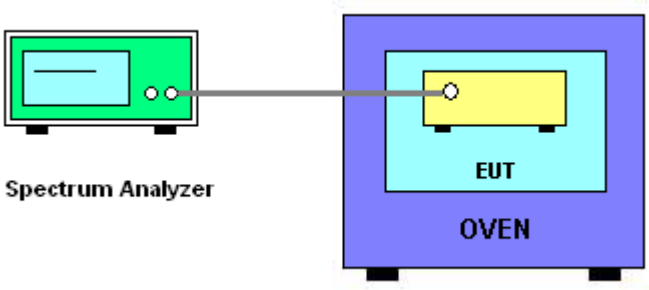
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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 × 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

Voltage	Measurement Frequency (MHz)
(V)	**IEEE 802.11a 5280 MHz**
126.5	5279.999819
110	5279.999996
93.5	5279.999832
Max. Deviation (MHz)	**0.000181**
Max. Deviation (ppm)	**0.03**

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	**IEEE 802.11a 5280 MHz**
-20	5279.999413
-10	5279.999157
0	5279.999543
10	5279.999314
20	5279.999996
30	5279.999370
40	5279.998744
50	5279.998159
Max. Deviation (MHz)	**0.001841**
Max. Deviation (ppm)	**0.35**

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
(V)	IEEE 802.11n (40MHz) 5310 MHz
126.5	5309.999819
110	5309.999996
93.5	5309.999832
Max. Deviation (MHz)	0.000181
Max. Deviation (ppm)	0.03

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)
(℃)	IEEE 802.11n (40MHz) 5310 MHz
-20	5309.999413
-10	5309.999157
0	5309.999543
10	5309.993314
20	5309.999996
30	5309.999370
40	5309.998744
50	5309.998159
Max. Deviation (MHz)	0.006686
Max. Deviation (ppm)	1.26

3.9 Antenna Requirements

3.9.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

3.9.2 Antenna Connector Construction

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

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Sep. 14, 2010	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Jan. 31, 2011	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 01, 2011	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	Conduction (CO01-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832010001	9kHz – 30MHz	Mar. 02, 2011	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	Conduction (CO01-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, 2010	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Oct. 22, 2010	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 02, 2010	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 02, 2010	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100302	10MHz-40GHz	Nov. 19, 2010	Conducted (TH01-HY)
Power Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	Dec. 03, 2010	Conducted (TH01-HY)
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	Dec. 03, 2010	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.

Original

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100004	9 kHz - 40 GHz	Nov. 17, 2010	Radiation (03CH02-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30 MHz - 1 GHz 3m	May 01, 2010	Radiation (03CH02-HY)
Amplifier	Agilent	8447D	2944A11146	100 kHz – 1.3 GHz	Jul. 23, 2010	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1GHz – 26.5 GHz	Jul. 23, 2010	Radiation (03CH02-HY)
Horn Antenna	ETS-LINDGREN	3117	00091920	1GHz~18GHz	Nov. 11, 2010	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30MHz ~ 1GHz	Mar. 07, 2011	Radiation (03CH02-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX106	03CH02-HY	1GHz~40GHz	Mar. 07, 2011	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30 MHz - 2 GHz	Oct. 16, 2010	Radiation (03CH02-HY)
Turn Table	HD	DS 420	420/649/00	0 - 360 degree	N/A	Radiation (03CH02-HY)
Antenna Mast	HD	MA 240	240/559/00	1 m - 4 m	N/A	Radiation (03CH02-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul. 29, 2010*	Radiation (03CH02-HY)

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

Additional

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100004	9 kHz - 40 GHz	Nov. 17, 2010	Radiation (03CH02-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30 MHz - 1 GHz 3m	May. 11, 2011	Radiation (03CH02-HY)
Amplifier	Agilent	8447D	2944A11146	100 kHz – 1.3 GHz	Jul. 23, 2010	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1GHz – 26.5 GHz	Jul. 23, 2010	Radiation (03CH02-HY)
Horn Antenna	ETS-LINDGREN	3117	00091920	1GHz~18GHz	Nov. 11, 2010	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30MHz ~ 1GHz	Mar. 07, 2011	Radiation (03CH02-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX106	03CH02-HY	1GHz~40GHz	Mar. 07, 2011	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30 MHz - 2 GHz	Oct. 16, 2010	Radiation (03CH02-HY)
Turn Table	HD	DS 420	420/649/00	0 - 360 degree	N/A	Radiation (03CH02-HY)
Antenna Mast	HD	MA 240	240/559/00	1 m - 4 m	N/A	Radiation (03CH02-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	Jul. 29, 2010*	Radiation (03CH02-HY)

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

5 TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd 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. : L1190-110111

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 Arrangment with Foreign Authorities

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 11, 2011

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