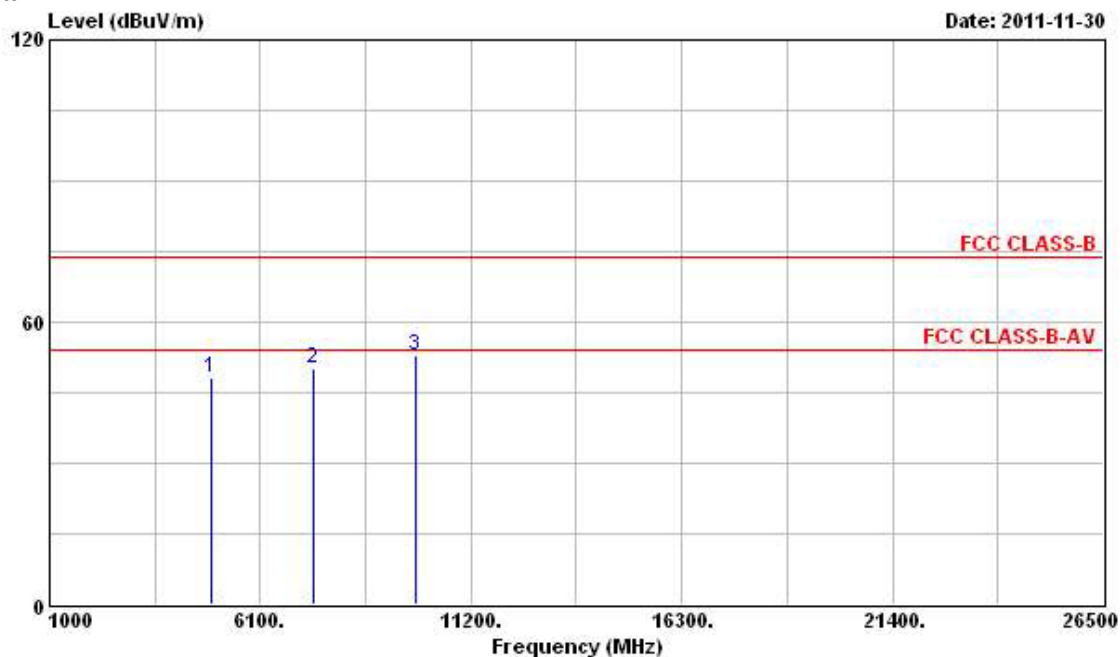


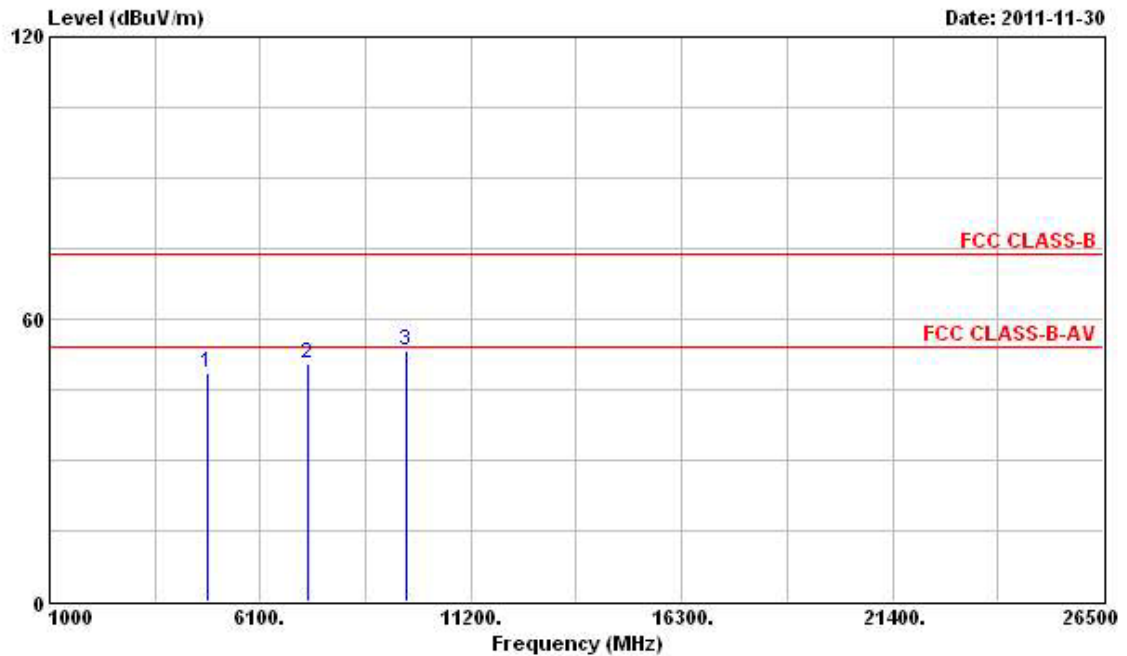
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4924.000	48.32	-5.68	54.00	43.18	35.23	4.68	34.77	PK	---	---
2	7386.000	49.99	-4.01	54.00	42.50	36.96	5.65	35.12	PK	---	---
3	9848.000	53.08			43.38	38.81	6.38	35.49	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

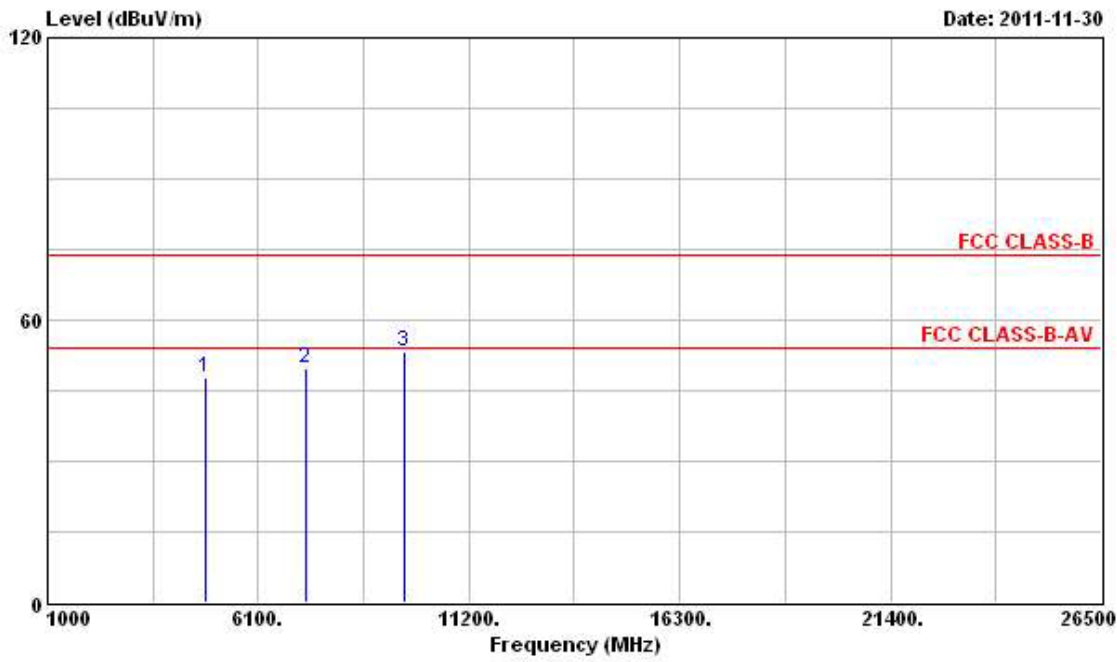
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 1

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4824.000	48.47	-5.53	54.00	42.93	35.76	4.58	34.80	PK	---	---
2	7236.000	50.55			42.15	37.85	5.63	35.08	Peak	---	---
3	9648.000	53.33			43.07	39.39	6.34	35.47	Peak	---	---

Note: The items 2 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

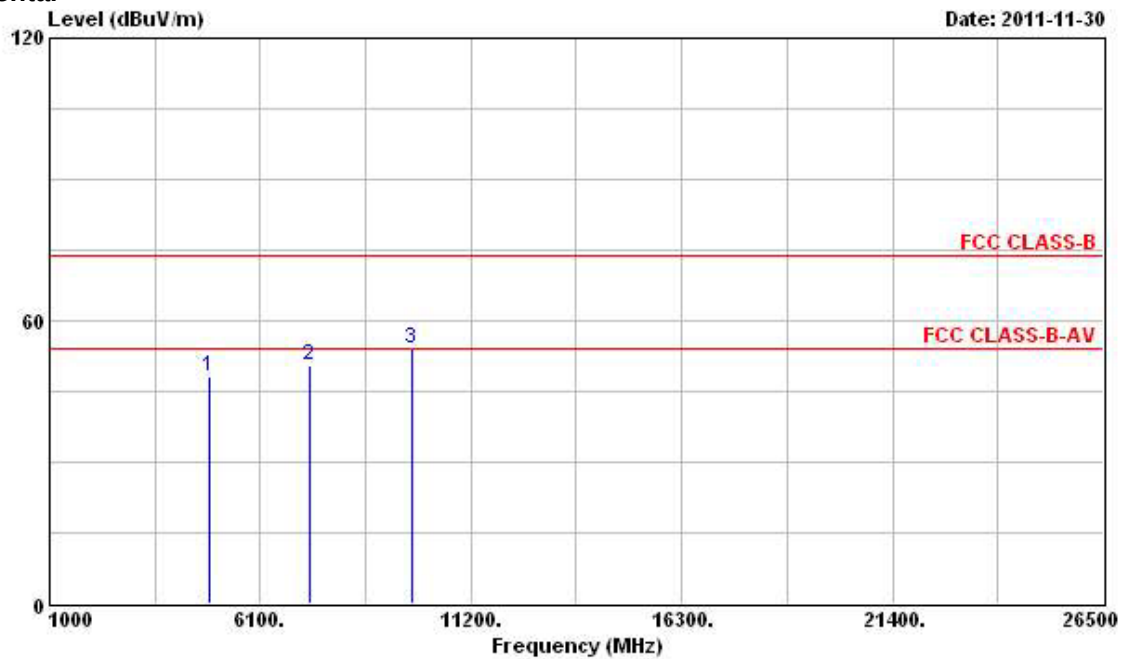
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4824.000	47.79	-6.21	54.00	42.88	35.13	4.58	34.80	PK	---
2	7236.000	49.75			42.30	36.90	5.63	35.08	Peak	---
3	9648.000	53.17			43.71	38.59	6.34	35.47	Peak	---

Note: The items 2 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

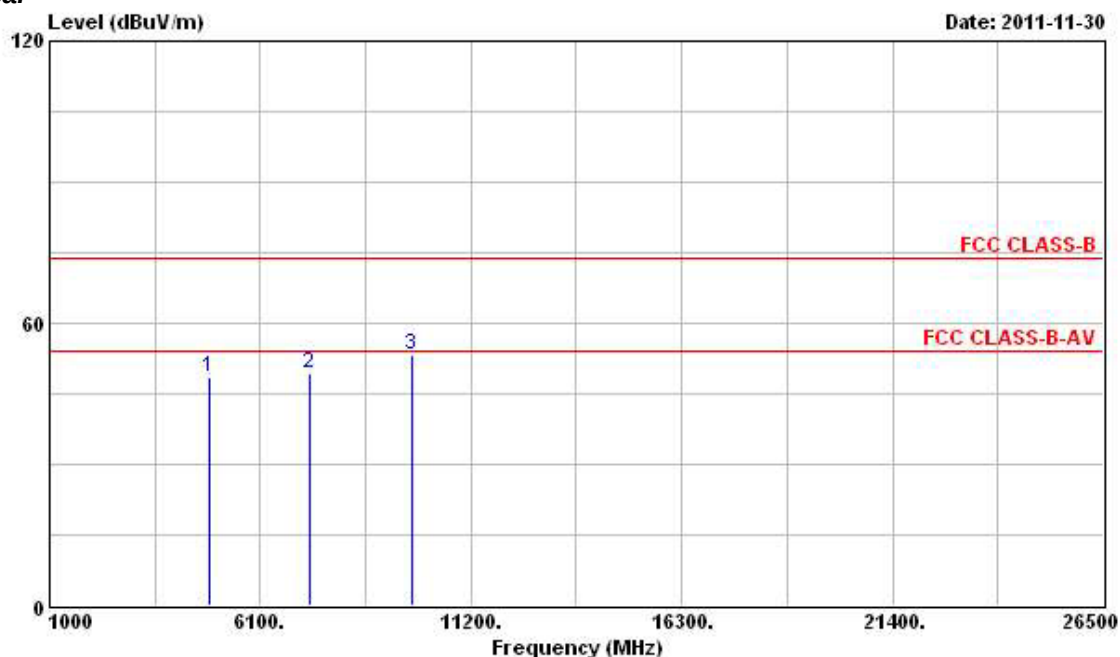
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 6

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	48.30	-5.70	54.00	42.64	35.83	4.61	34.78	PK	---	---
2	7311.000	50.54	-3.46	54.00	42.14	37.86	5.64	35.10	PK	---	---
3	9748.000	54.05			43.66	39.51	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

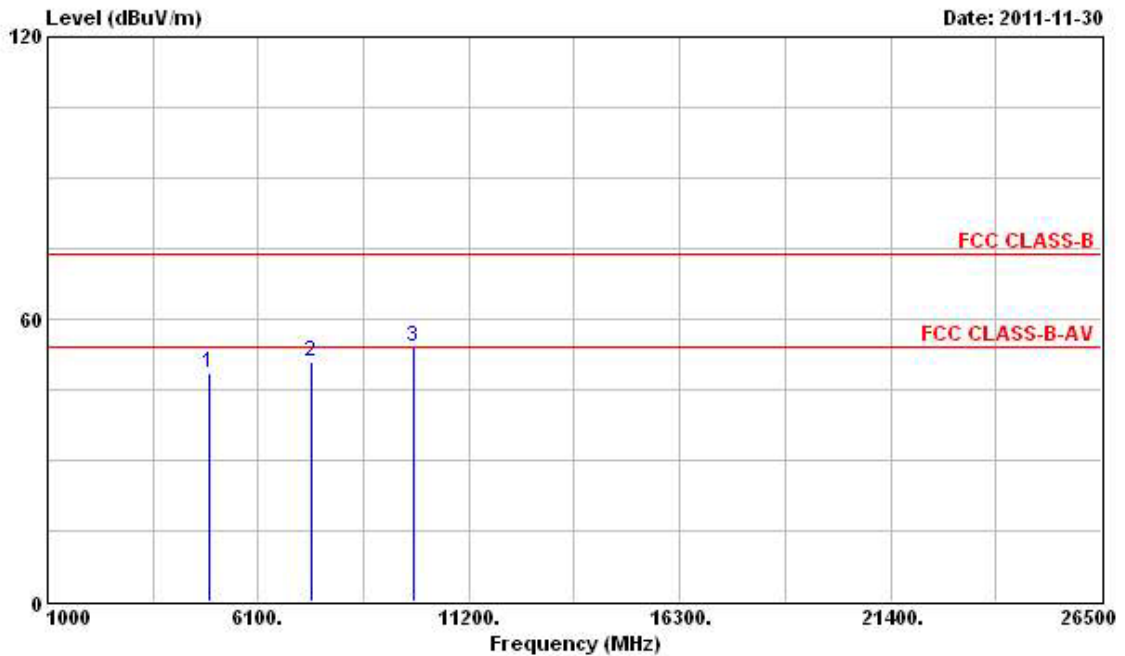
Vertical



	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4874.000	48.37	-5.63	54.00	43.36	35.18	4.61	34.78	PK	---
2	7311.000	49.35	-4.65	54.00	41.89	36.92	5.64	35.10	PK	---
3	9748.000	53.32			43.73	38.71	6.36	35.48	Peak	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

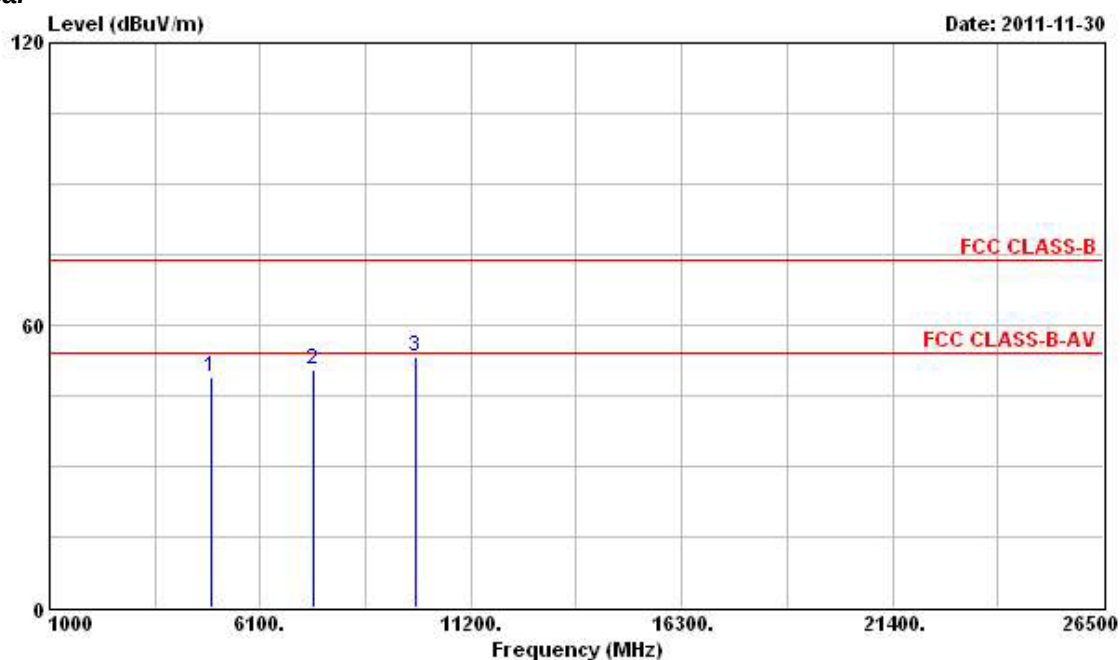
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 11

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4924.000	48.60	-5.40	54.00	42.79	35.90	4.68	34.77	PK	---	---
2	7386.000	50.77	-3.23	54.00	42.36	37.88	5.65	35.12	PK	---	---
3	9848.000	54.25			43.75	39.61	6.38	35.49	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

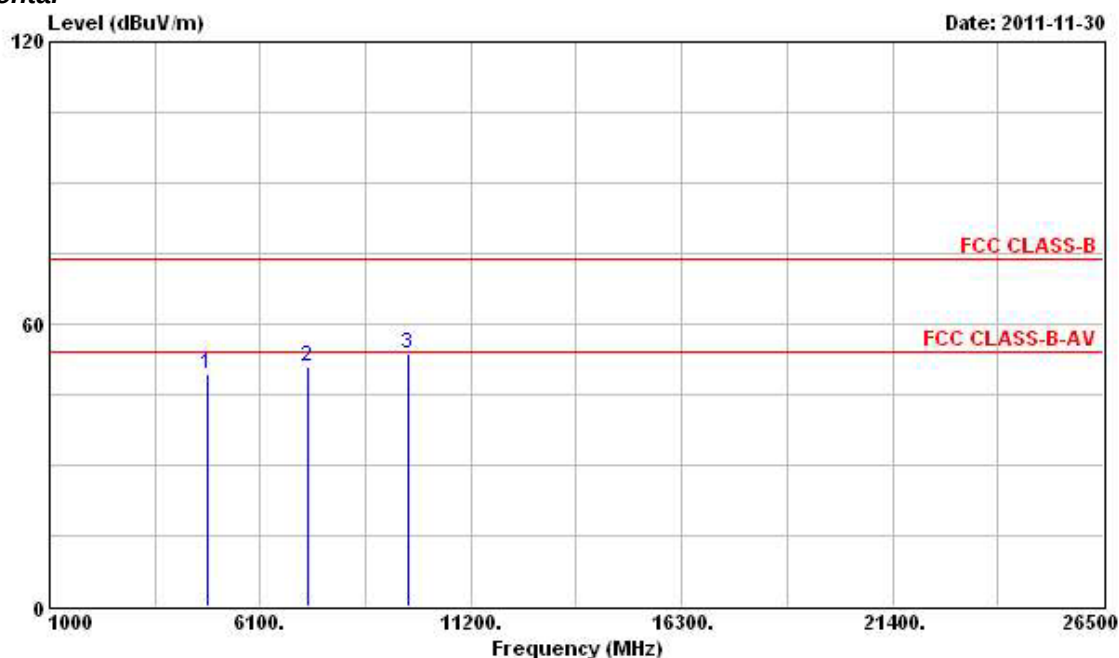
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4924.000	48.84	-5.16	54.00	43.70	35.23	4.68	34.77	PK	---	---
2	7386.000	50.59	-3.41	54.00	43.10	36.96	5.65	35.12	PK	---	---
3	9848.000	53.48			43.78	38.81	6.38	35.49	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

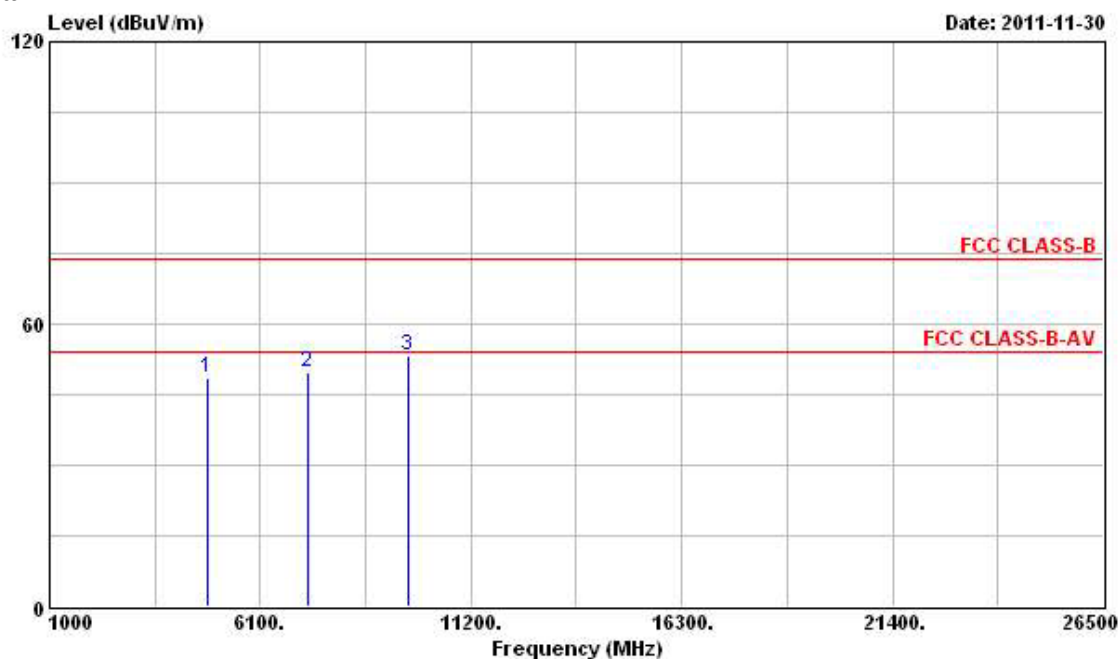
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 3

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4844.000	49.30	-4.70	54.00	43.70	35.78	4.61	34.79	PK	---	---
2	7266.000	50.88	-3.12	54.00	42.48	37.86	5.63	35.09	PK	---	---
3	9688.000	53.75			43.45	39.43	6.35	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

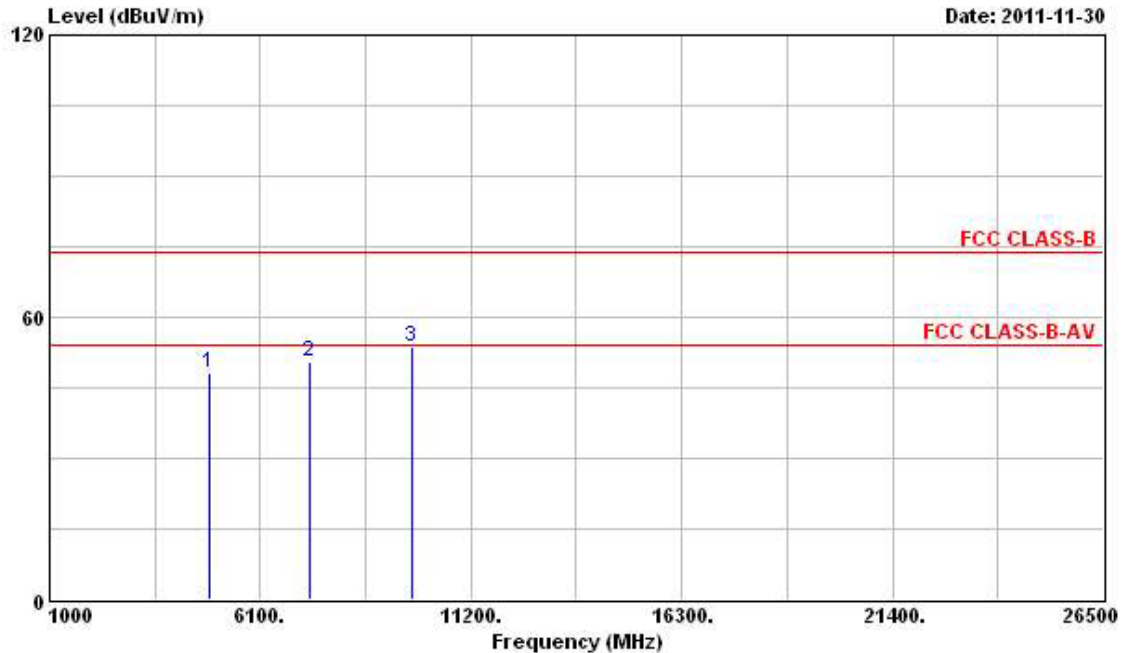
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4844.000	48.63	-5.37	54.00	43.67	35.14	4.61	34.79	PK	---	---
2	7266.000	49.72	-4.28	54.00	42.27	36.91	5.63	35.09	PK	---	---
3	9688.000	53.46			43.96	38.63	6.35	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

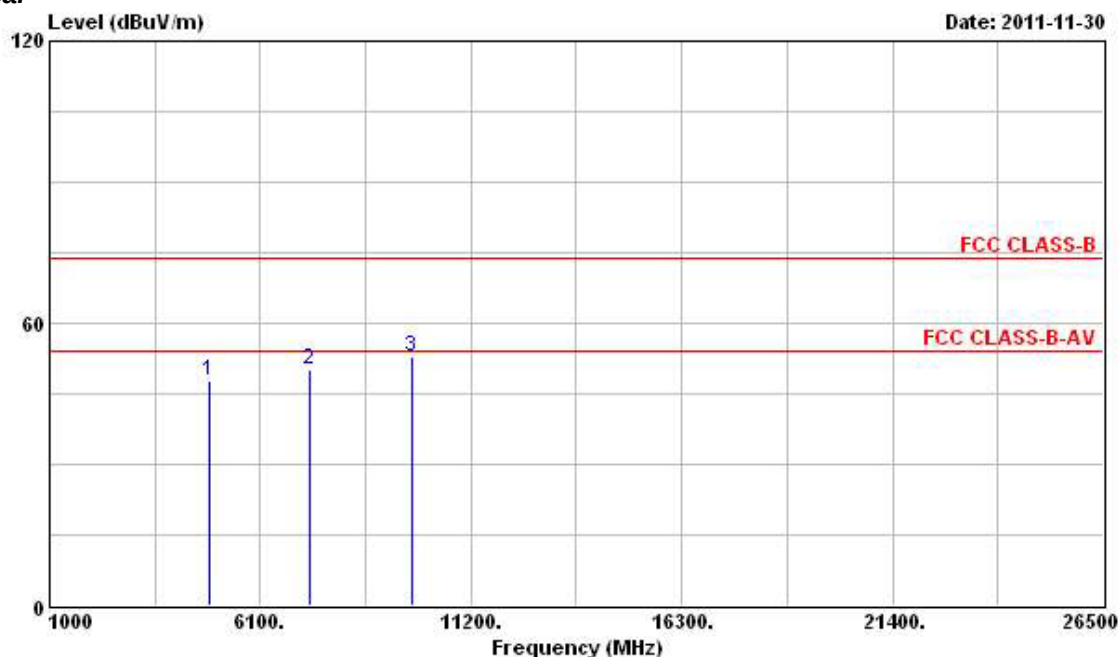
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 6

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	48.27	-5.73	54.00	42.61	35.83	4.61	34.78	PK	---	---
2	7311.000	50.65	-3.35	54.00	42.25	37.86	5.64	35.10	PK	---	---
3	9748.000	53.86			43.47	39.51	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical

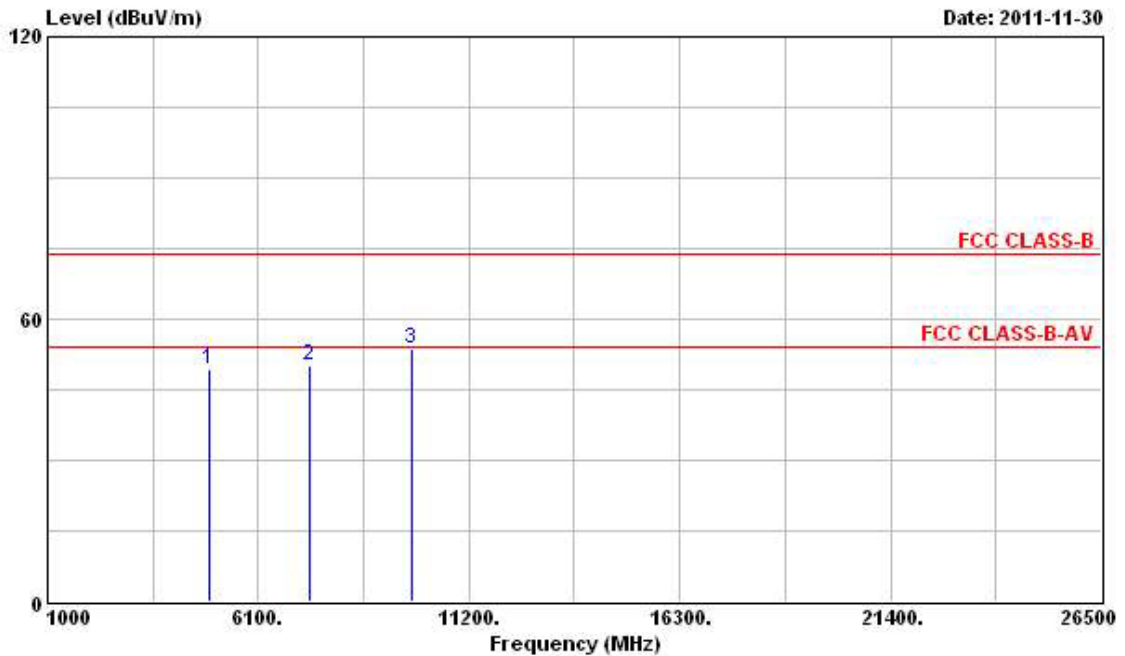


SECTION 01

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	47.61	-6.39	54.00	42.60	35.18	4.61	34.78	PK	---	---
2	7311.000	50.13	-3.87	54.00	42.67	36.92	5.64	35.10	PK	---	---
3	9748.000	52.96			43.37	38.71	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

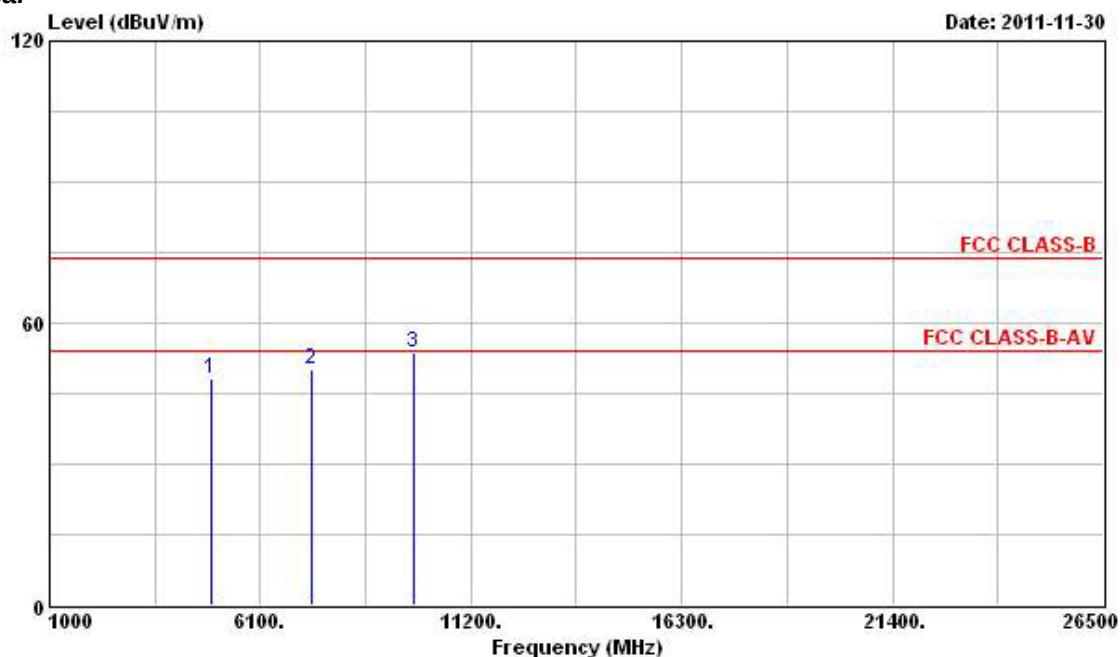
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 9

Horizontal

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4904.000	49.28	-4.72	54.00	43.54	35.88	4.64	34.78	PK	---
2	7356.000	50.12	-3.88	54.00	41.72	37.87	5.64	35.11	PK	---
3	9808.000	53.71			43.25	39.57	6.37	35.48	Peak	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical



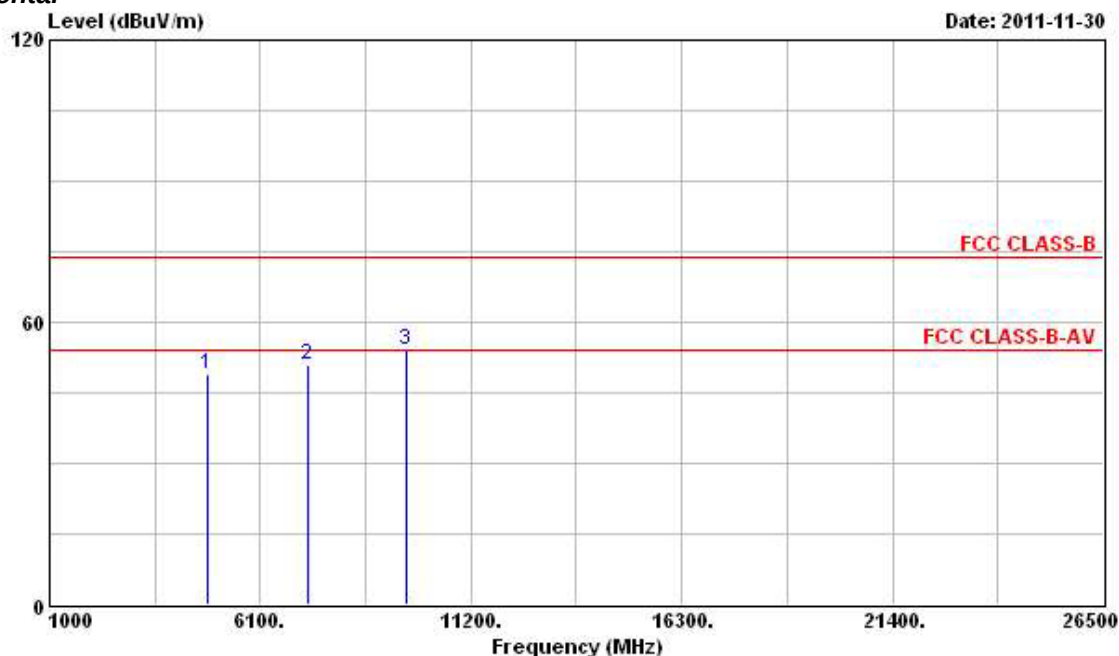
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4904.000	47.97	-6.03	54.00	42.90	35.21	4.64	34.78	PK	---	---
2	7356.000	50.03	-3.97	54.00	42.56	36.94	5.64	35.11	PK	---	---
3	9808.000	53.72			44.06	38.77	6.37	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

For Two Chains:

Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 1

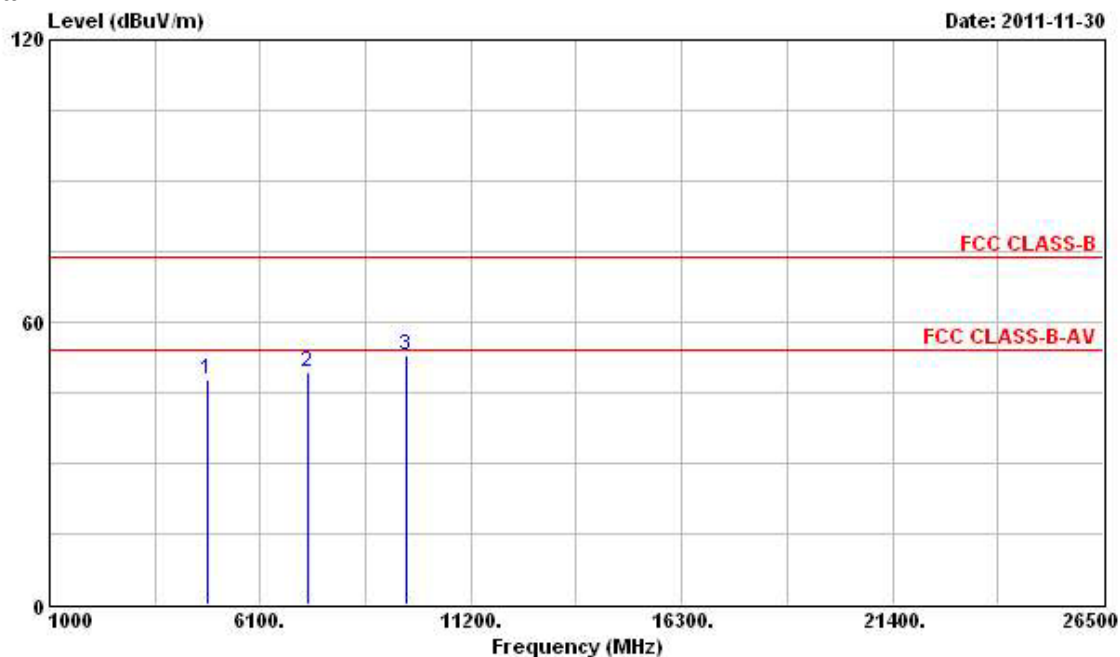
Horizontal



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4824.000	48.90	-5.10	54.00	43.36	35.76	4.58	34.80	PK	---	---
2	7236.000	50.98			42.58	37.85	5.63	35.08	Peak	---	---
3	9648.000	54.20			43.94	39.39	6.34	35.47	Peak	---	---

Note: The items 2 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

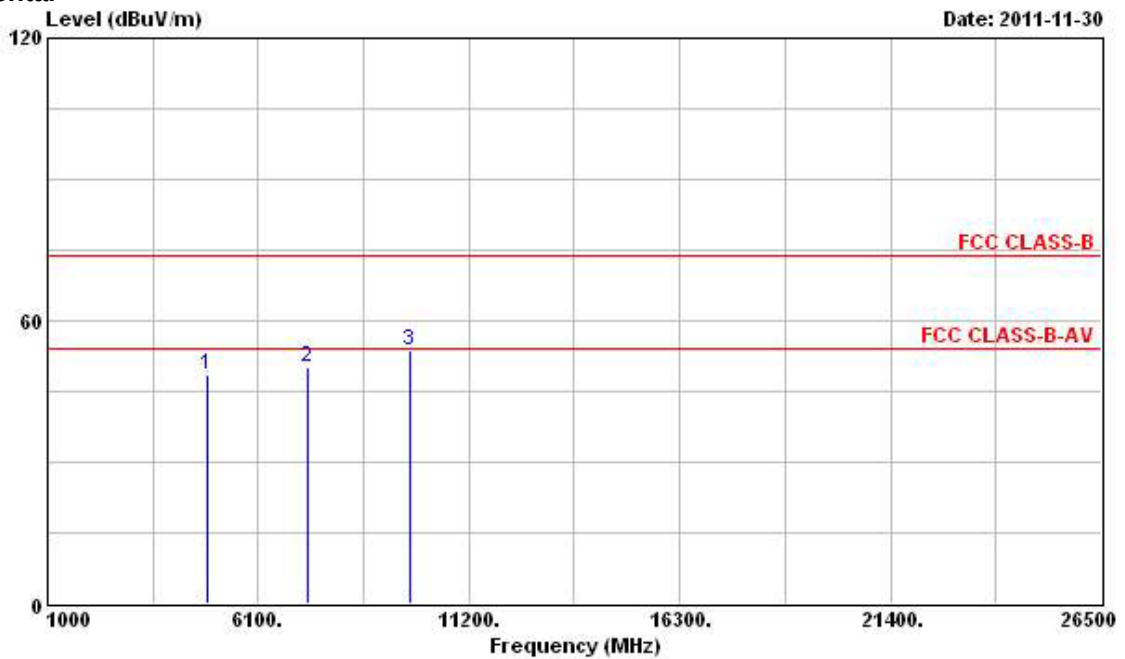
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4824.000	47.74	-6.26	54.00	42.83	35.13	4.58	34.80	PK	---	---
2	7236.000	49.51			42.06	36.90	5.63	35.08	Peak	---	---
3	9648.000	52.82			43.36	38.59	6.34	35.47	Peak	---	---

Note: The items 2 and 3 are on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

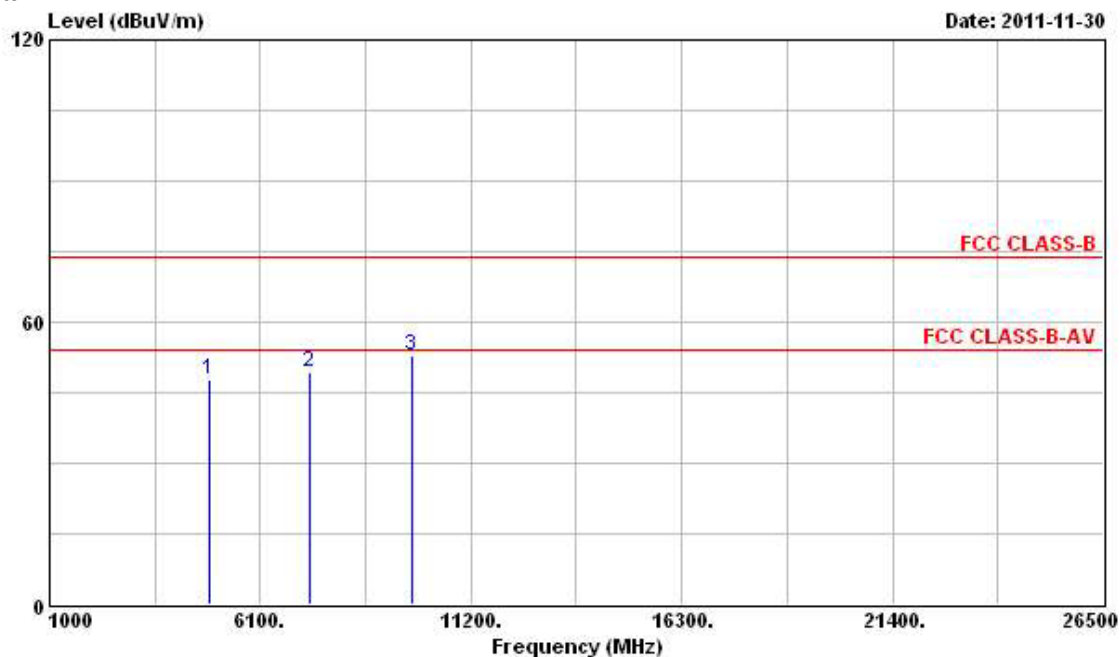
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 6

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	48.75	-5.25	54.00	43.09	35.83	4.61	34.78	PK	---	---
2	7311.000	50.23	-3.77	54.00	41.83	37.86	5.64	35.10	PK	---	---
3	9748.000	53.59			43.20	39.51	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

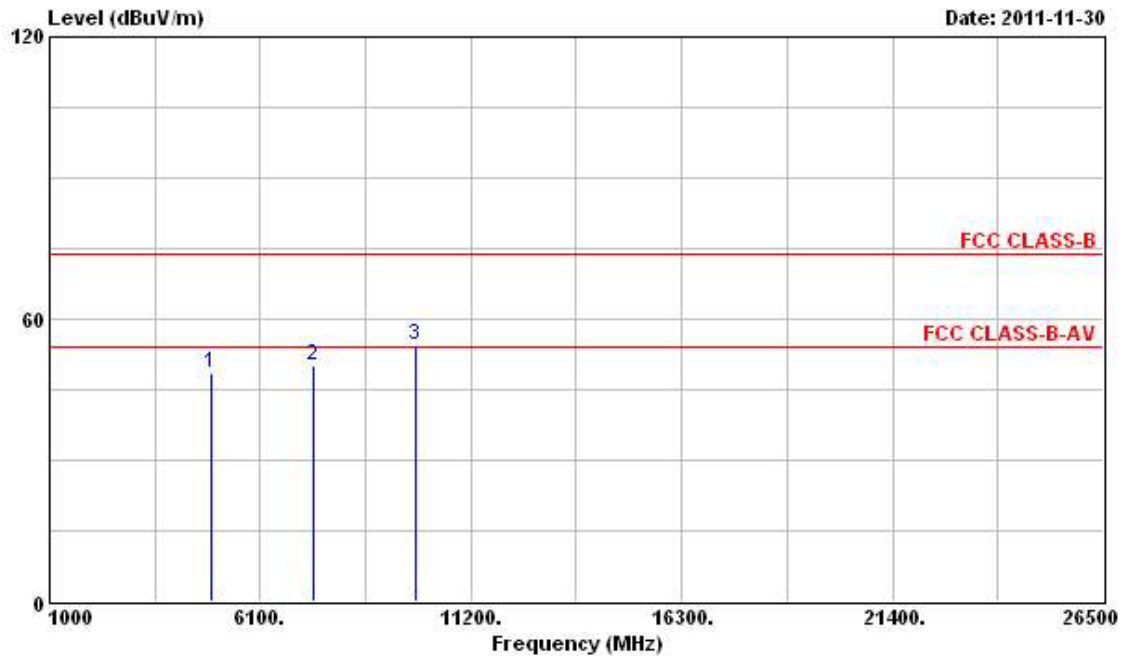
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	47.78	-6.22	54.00	42.77	35.18	4.61	34.78	PK	---	---
2	7311.000	49.37	-4.63	54.00	41.91	36.92	5.64	35.10	PK	---	---
3	9748.000	52.78			43.19	38.71	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

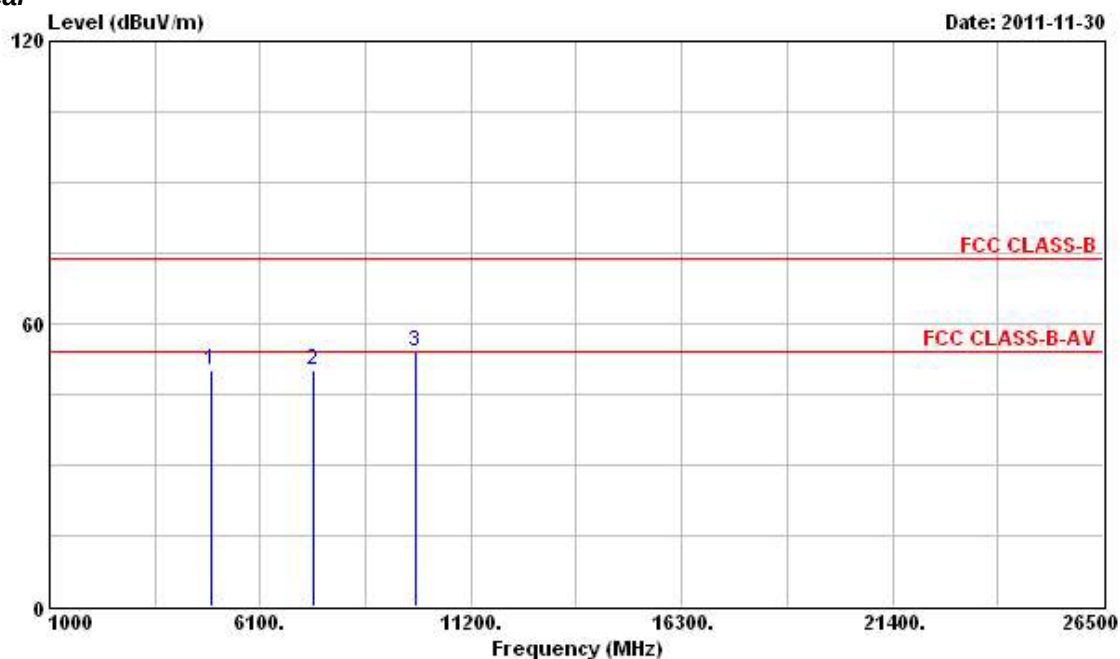
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch. 11

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4924.000	48.69	-5.31	54.00	42.88	35.90	4.68	34.77	PK	---	---
2	7386.000	50.20	-3.80	54.00	41.79	37.88	5.65	35.12	PK	---	---
3	9848.000	54.45			43.95	39.61	6.38	35.49	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

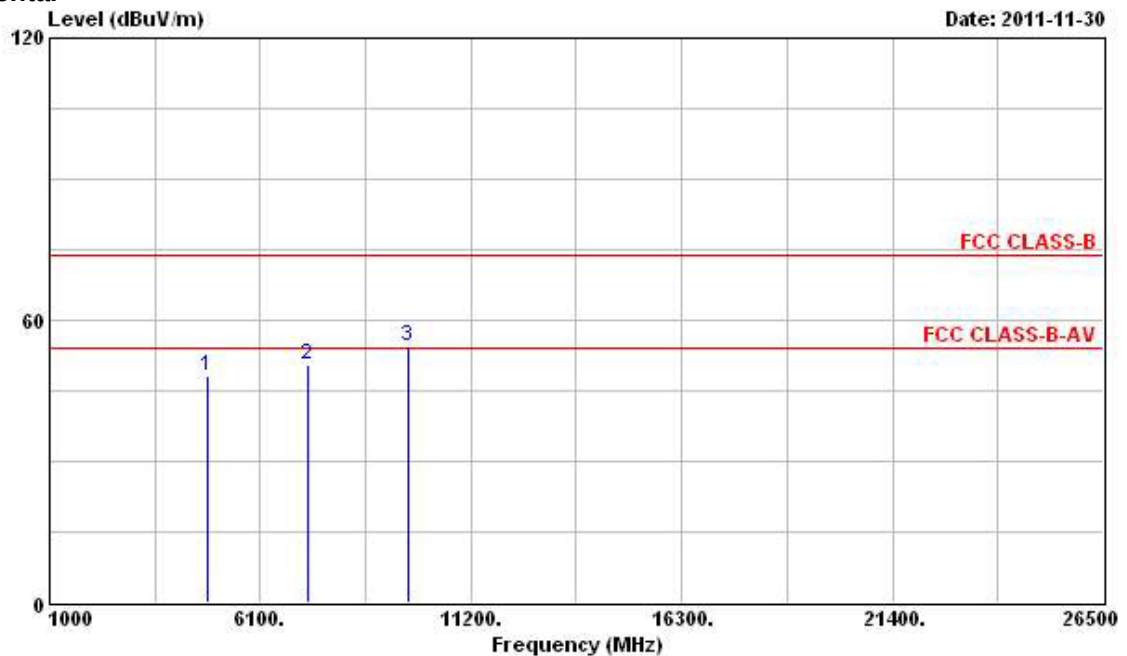
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4924.000	50.29	-3.71	54.00	45.15	35.23	4.68	34.77	PK	---	---
2	7386.000	50.07	-3.93	54.00	42.58	36.96	5.65	35.12	PK	---	---
3	9848.000	54.10			44.40	38.81	6.38	35.49	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

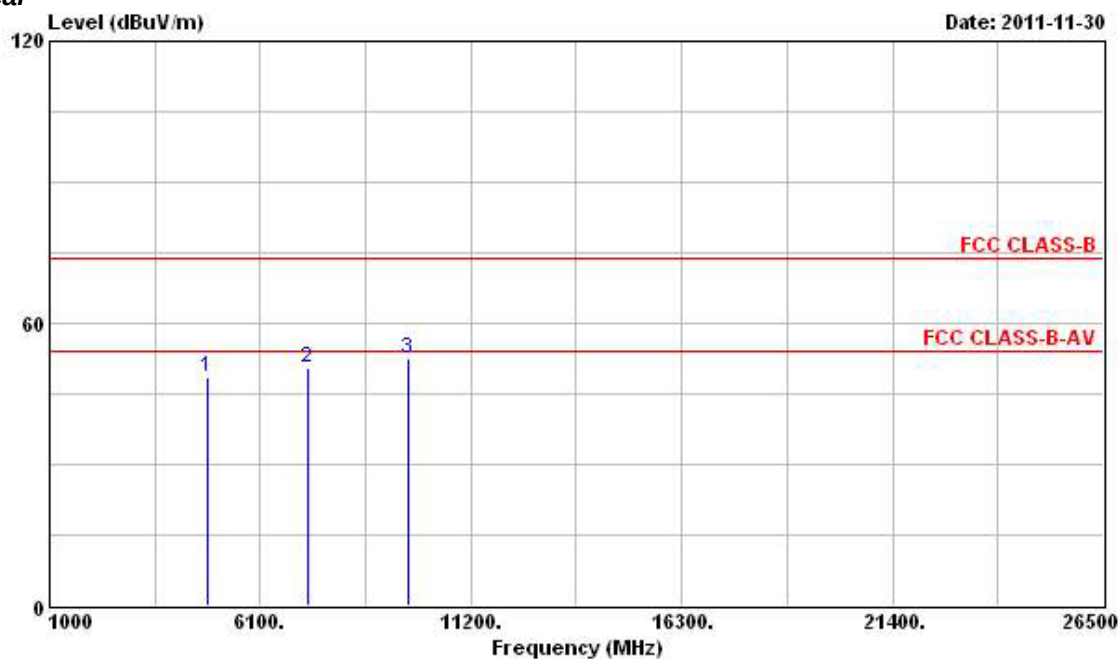
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 3

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4844.000	48.04	-5.96	54.00	42.44	35.78	4.61	34.79	PK	---	---
2	7266.000	50.65	-3.35	54.00	42.25	37.86	5.63	35.09	PK	---	---
3	9688.000	54.28			43.98	39.43	6.35	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

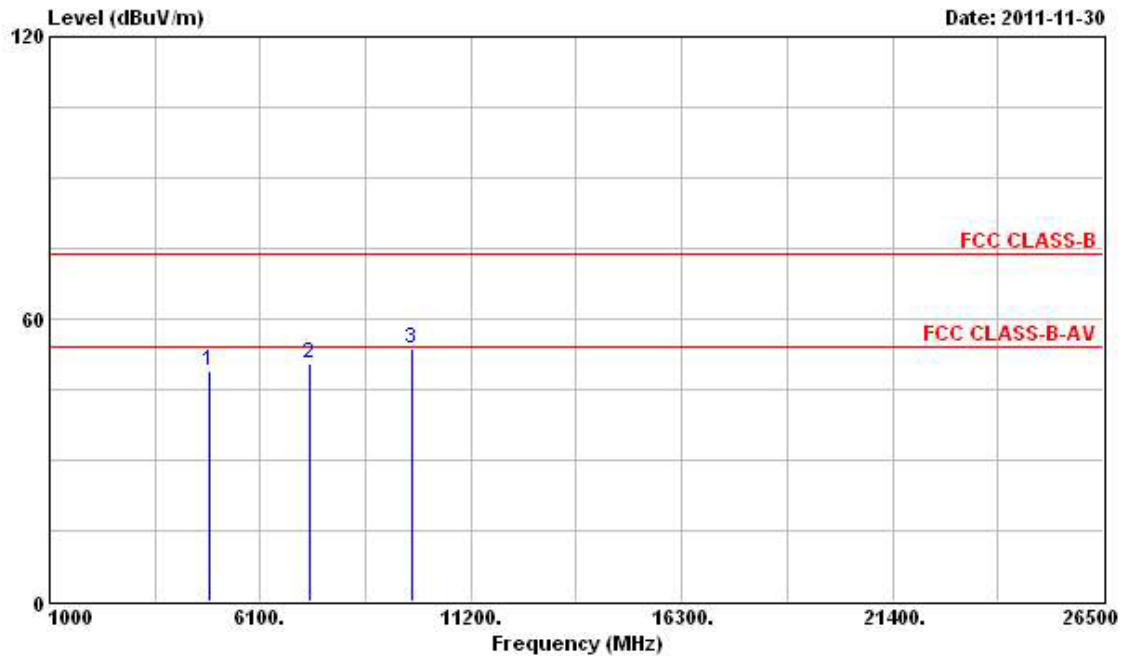
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4844.000	48.38	-5.62	54.00	43.42	35.14	4.61	34.79	PK	---	---
2	7266.000	50.44	-3.56	54.00	42.99	36.91	5.63	35.09	PK	---	---
3	9688.000	52.66			43.16	38.63	6.35	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

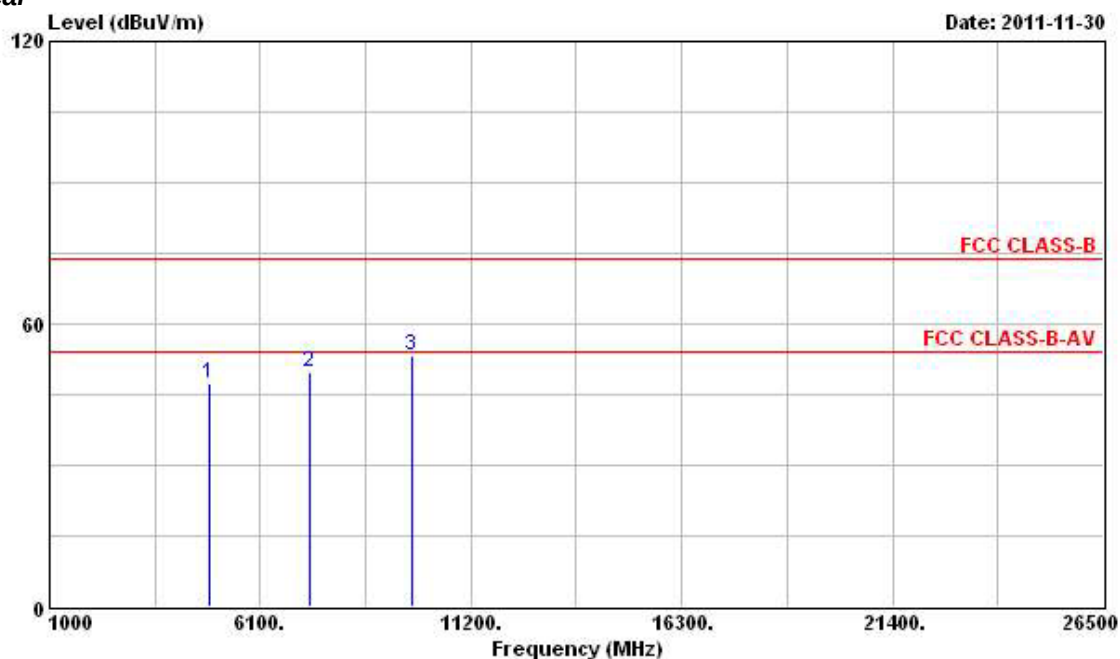
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 6

Horizontal

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	49.11	-4.89	54.00	43.45	35.83	4.61	34.78	PK	---	---
2	7311.000	50.43	-3.57	54.00	42.03	37.86	5.64	35.10	PK	---	---
3	9748.000	53.71			43.32	39.51	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

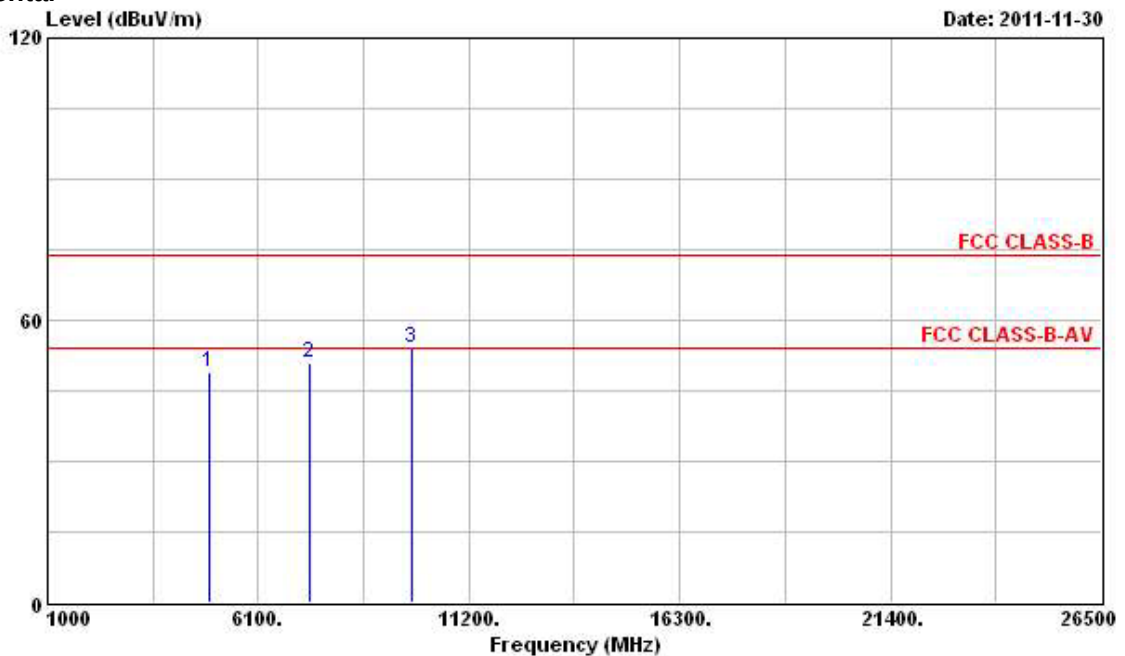
Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	4874.000	47.49	-6.51	54.00	42.48	35.18	4.61	34.78	PK	---	---
2	7311.000	49.58	-4.42	54.00	42.12	36.92	5.64	35.10	PK	---	---
3	9748.000	53.29			43.70	38.71	6.36	35.48	Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

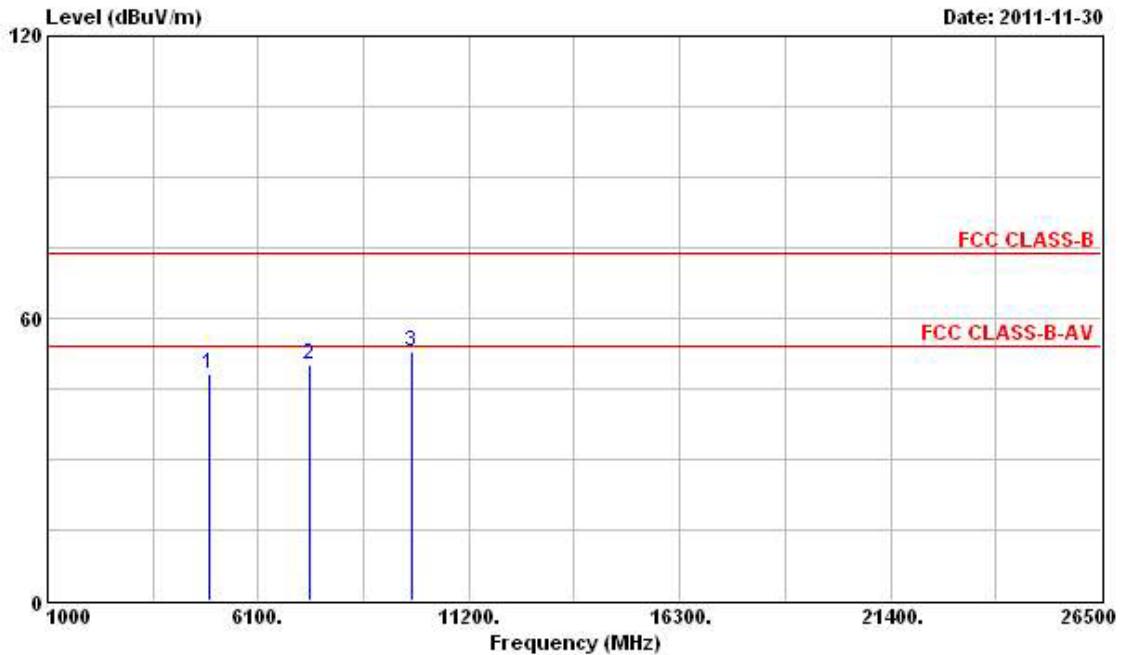
Final Test Date	Nov. 30, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch. 9

Horizontal

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp			
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	
			dB	dBuV/m	dBuV	dB/m	dB	dB		
1	4904.000	48.84	-5.16	54.00	43.10	35.88	4.64	34.78	PK	---
2	7356.000	50.80	-3.20	54.00	42.40	37.87	5.64	35.11	PK	---
3	9808.000	53.98			43.52	39.57	6.37	35.48	Peak	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

Vertical



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Preamp Loss Factor	Preamp	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4904.000	48.14	-5.86	54.00	43.07	35.21	4.64	34.78 PK	---	---
2	7356.000	50.17	-3.83	54.00	42.70	36.94	5.64	35.11 PK	---	---
3	9808.000	52.91			43.25	38.77	6.37	35.48 Peak	---	---

Note: The item 3 is on un-restricted band, so the limit is -20dB for the field strength of the fundamental emissions (see section 3.6.7).

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

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

3.6 Band Edge and Fundamental Emissions Measurement

3.6.1 Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter measurement is based on the maximum conducted output power, the attenuation required under this paragraph shall be 30dB instead of 20dB. In addition, radiated emissions which fall in section 15.205(a) the restricted bands must also comply with the radiated emission limit specified in section 15.209(a).

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 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)	1MHz / 1MHz for Peak

3.6.3 Test Procedures

1. The test procedure is the same as section 3.5.3; 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.

3.6.4 Test Setup Layout

This test setup layout is the same as that shown in section 3.5.4.

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 Test Result of Band Edge and Fundamental Emissions

For Single Chain:

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11b Ch. 1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2387.140	52.64	-1.36	54.00	17.83	31.79	3.02	0.00	Average	---	---
2 @	2412.410	109.58			74.70	31.86	3.02	0.00	Average	---	---
1	2386.380	64.61	-9.39	74.00	29.80	31.79	3.02	0.00	Peak	---	---
2 X	2410.130	118.11			83.23	31.86	3.02	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2435.780	108.48			73.51	31.92	3.05	0.00	Average	---	---
1 X	2435.780	116.98			82.01	31.92	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2462.570	106.11			70.97	32.06	3.08	0.00	Average	---	---
2	2487.650	52.51	-1.49	54.00	17.23	32.20	3.08	0.00	Average	---	---
1 X	2461.810	114.63			79.52	32.06	3.05	0.00	Peak	---	---
2	2487.460	64.88	-9.12	74.00	29.67	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

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

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11g Ch.1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2390.000	52.47	-1.53	54.00	17.66	31.79	3.02	0.00	Average	---	---
2 X	2408.420	102.04			67.16	31.86	3.02	0.00	Average	---	---
1	2390.000	70.21	-3.79	74.00	35.40	31.79	3.02	0.00	Peak	---	---
2 X	2405.570	113.44			78.56	31.86	3.02	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2435.780	104.17			69.20	31.92	3.05	0.00	Average	---	---
1 X	2441.100	116.05			81.01	31.99	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2467.890	97.97			62.83	32.06	3.08	0.00	Average	---	---
2	2483.500	52.35	-1.65	54.00	17.14	32.13	3.08	0.00	Average	---	---
1 X	2464.660	109.78			74.64	32.06	3.08	0.00	Peak	---	---
2	2483.500	71.19	-2.81	74.00	35.98	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

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

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch.1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2390.000	52.31	-1.69	54.00	17.50	31.79	3.02	0.00	Average	---	---
2 X	2418.300	100.81			65.93	31.86	3.02	0.00	Average	---	---
1	2390.000	71.14	-2.86	74.00	36.33	31.79	3.02	0.00	Peak	---	---
2 X	2415.450	112.13			77.25	31.86	3.02	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2435.210	104.01			69.04	31.92	3.05	0.00	Average	---	---
1 X	2432.740	115.44			80.47	31.92	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2469.220	97.22			62.08	32.06	3.08	0.00	Average	---	---
2	2483.500	52.98	-1.02	54.00	17.77	32.13	3.08	0.00	Average	---	---
1 X	2465.610	108.62			73.48	32.06	3.08	0.00	Peak	---	---
2	2483.660	70.89	-3.11	74.00	35.68	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

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

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch.3, 6, 9

Channel 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2390.000	52.48	-1.52	54.00	17.67	31.79	3.02	0.00	Average	---	---
2 X	2418.490	94.04			59.16	31.86	3.02	0.00	Average	---	---
1	2390.000	71.83	-2.17	74.00	37.02	31.79	3.02	0.00	Peak	---	---
2 X	2424.380	105.29			70.32	31.92	3.05	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2435.020	100.08			65.11	31.92	3.05	0.00	Average	---	---
1 X	2432.930	112.61			77.64	31.92	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 9

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2466.370	90.94			55.80	32.06	3.08	0.00	Average	---	---
2	2483.500	52.86	-1.14	54.00	17.65	32.13	3.08	0.00	Average	---	---
1 X	2461.620	102.81			67.70	32.06	3.05	0.00	Peak	---	---
2	2483.500	71.44	-2.56	74.00	36.23	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

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

For Two Chains:

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (20MHz) Ch.1, 6, 11

Channel 1

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2390.000	52.47	-1.53	54.00	17.66	31.79	3.02	0.00	Average	---	---
2 X	2405.380	100.19			65.31	31.86	3.02	0.00	Average	---	---
1	2390.000	69.43	-4.57	74.00	34.62	31.79	3.02	0.00	Peak	---	---
2 X	2406.330	112.62			77.74	31.86	3.02	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2437.300	107.30			72.26	31.99	3.05	0.00	Average	---	---
1 X	2432.170	119.30			84.33	31.92	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 11

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2469.220	98.12			62.98	32.06	3.08	0.00	Average	---	---
2	2483.500	52.92	-1.08	54.00	17.71	32.13	3.08	0.00	Average	---	---
1 X	2457.060	110.91			75.80	32.06	3.05	0.00	Peak	---	---
2	2483.660	70.64	-3.36	74.00	35.43	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

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

Final Test Date	Dec. 07, 2011	Test Site No.	03CH02-HY
Temperature	22.3°C	Humidity	62%
Test Engineer	Daniel	Configuration	802.11n (40MHz) Ch.3, 6, 9

Channel 3

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	2390.000	52.73	-1.27	54.00	17.92	31.79	3.02	0.00	Average	---	---
2 X	2434.260	94.20			59.23	31.92	3.05	0.00	Average	---	---
1	2390.000	70.87	-3.13	74.00	36.06	31.79	3.02	0.00	Peak	---	---
2 X	2416.210	106.85			71.97	31.86	3.02	0.00	Peak	---	---

The item 2 is Fundamental Emissions.

Channel 6

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2437.300	103.04			68.00	31.99	3.05	0.00	Average	---	---
1 X	2441.290	116.82			81.78	31.99	3.05	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Channel 9

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 X	2443.380	92.56			57.52	31.99	3.05	0.00	Average	---	---
2	2483.500	52.98	-1.02	54.00	17.77	32.13	3.08	0.00	Average	---	---
1 X	2446.420	106.26			71.22	31.99	3.05	0.00	Peak	---	---
2	2483.470	70.69	-3.31	74.00	35.48	32.13	3.08	0.00	Peak	---	---

The item 1 is Fundamental Emissions.

Note:

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

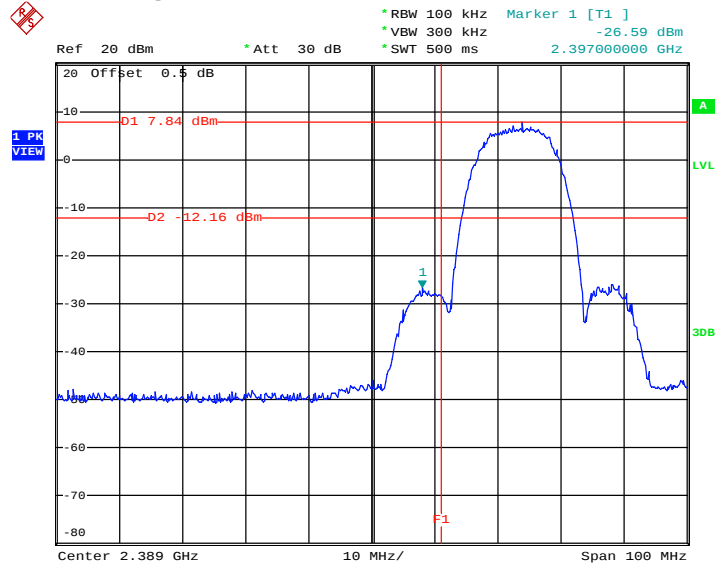
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

For Emission not in Restricted Band

Final Test Date	Dec. 09, 2011	Test Site No.	TH01-HY
Temperature	23.3~23.8°C	Humidity	37~65%
Test Engineer	Ian	Configurations	802.11b/g/n

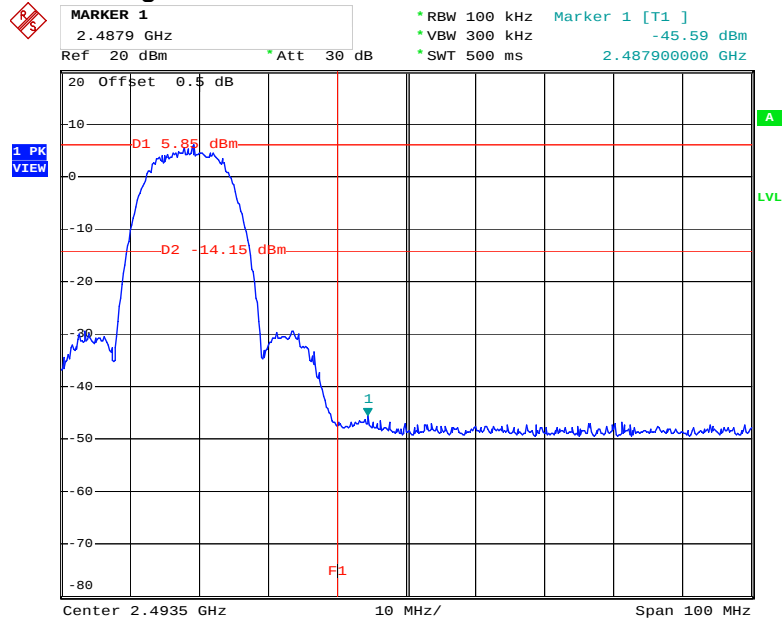
For Single Chain:

Low Band Edge Plot on Configuration IEEE 802.11b Port 1 / 2412 MHz



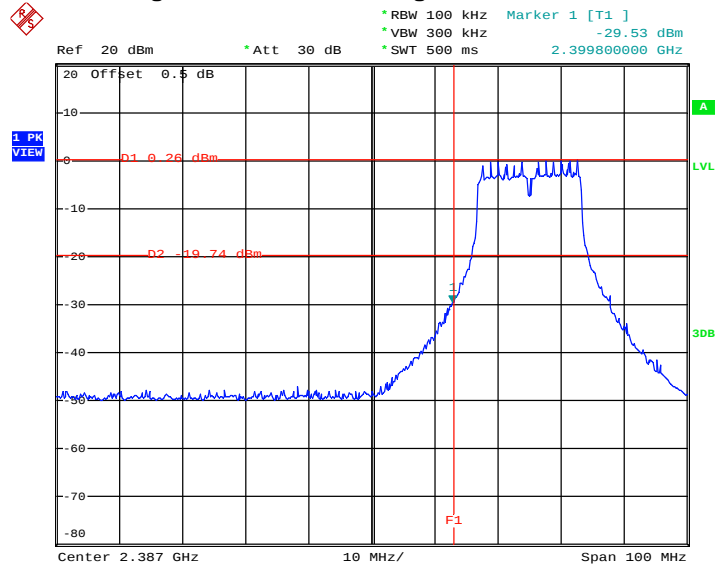
Date: 1.DEC.2011 14:20:44

High Band Edge Plot on Configuration IEEE 802.11b Port 1 / 2462 MHz



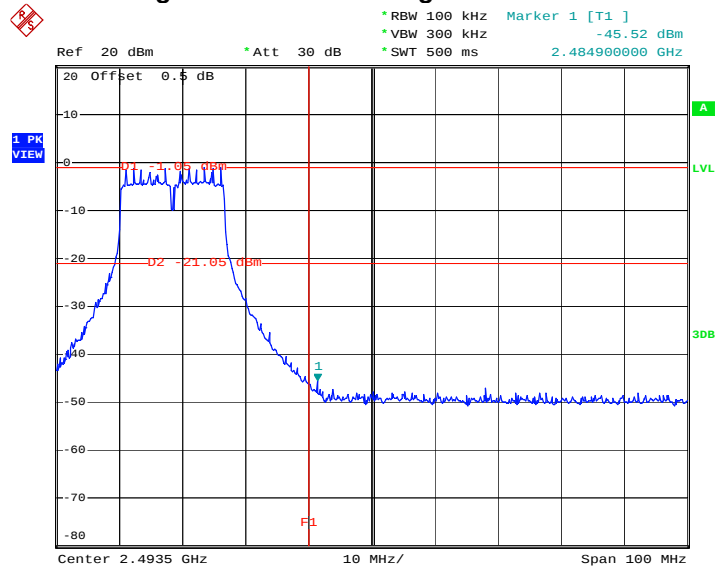
Date: 9.DEC.2011 19:43:38

Low Band Edge Plot on Configuration IEEE 802.11g Port 1 / 2412 MHz



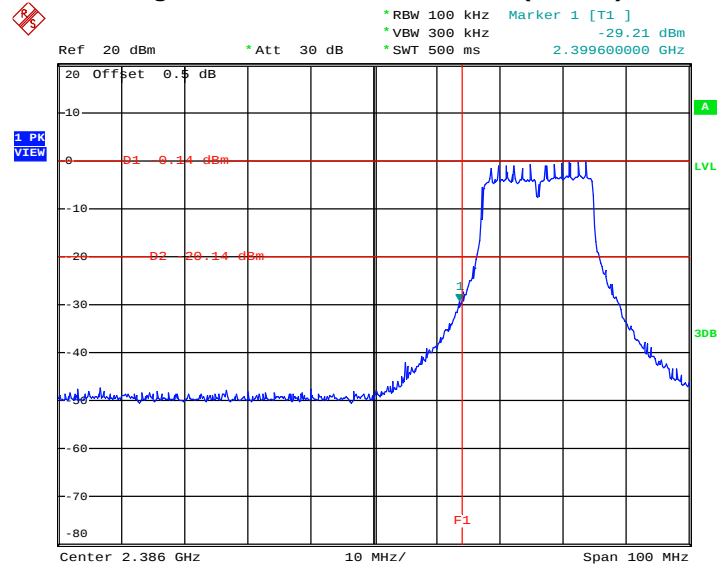
Date: 1.DEC.2011 14:49:02

High Band Edge Plot on Configuration IEEE 802.11g Port 1 / 2462 MHz



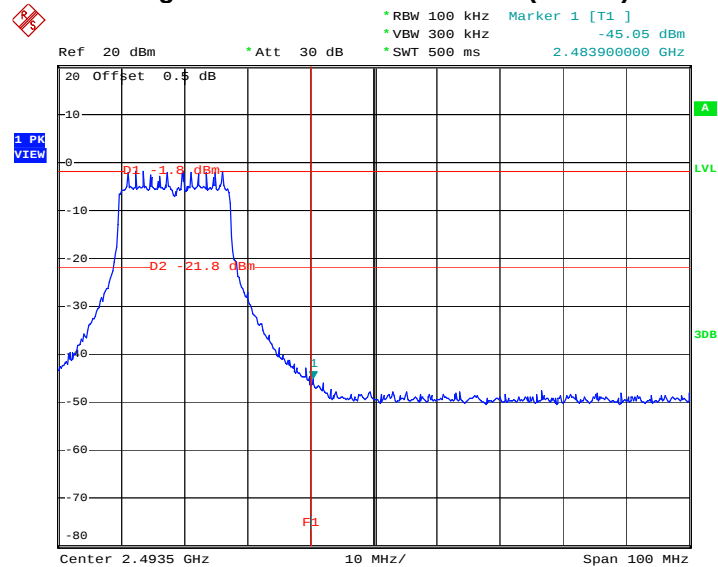
Date: 9.DEC.2011 19:31:55

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) / 2412 MHz



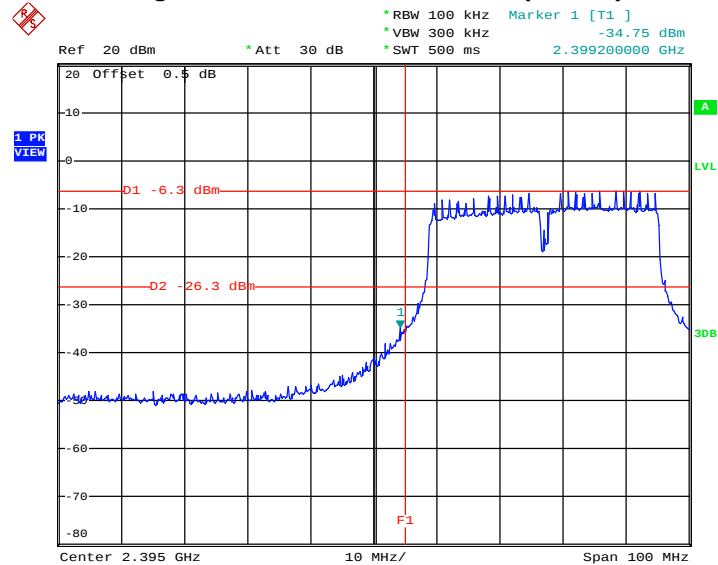
Date: 1.DEC.2011 15:38:36

High Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) / 2462 MHz



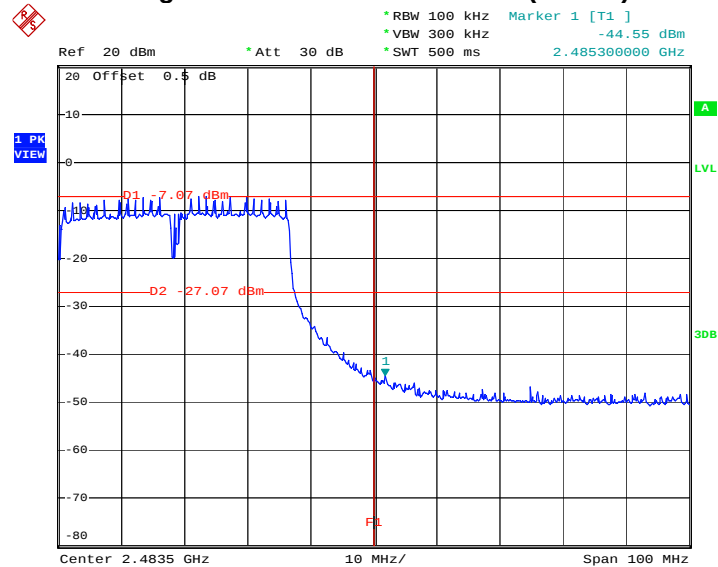
Date: 9.DEC.2011 19:52:18

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) / 2422 MHz



Date: 1.DEC.2011 16:06:07

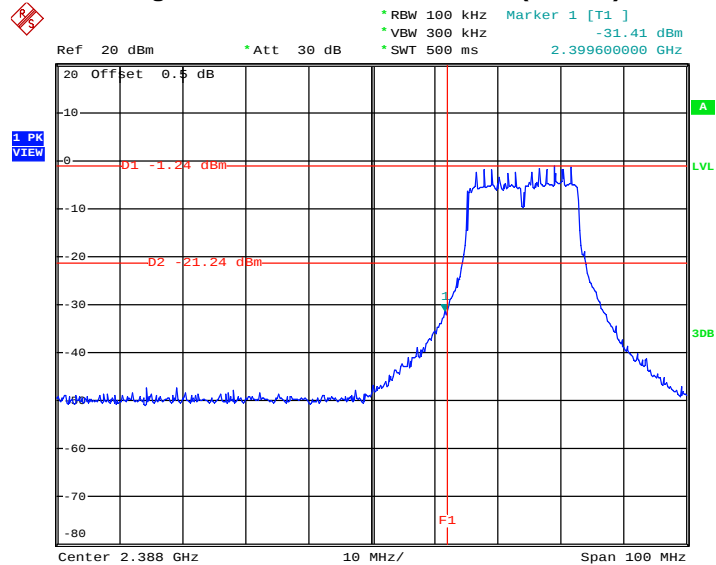
High Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) / 2452 MHz



Date: 9.DEC.2011 19:26:57

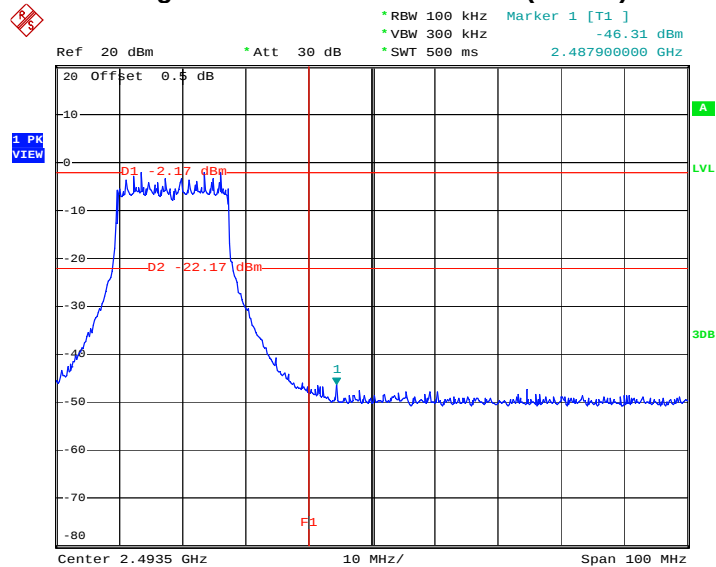
For Two Chains

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) Port 1 / 2412 MHz



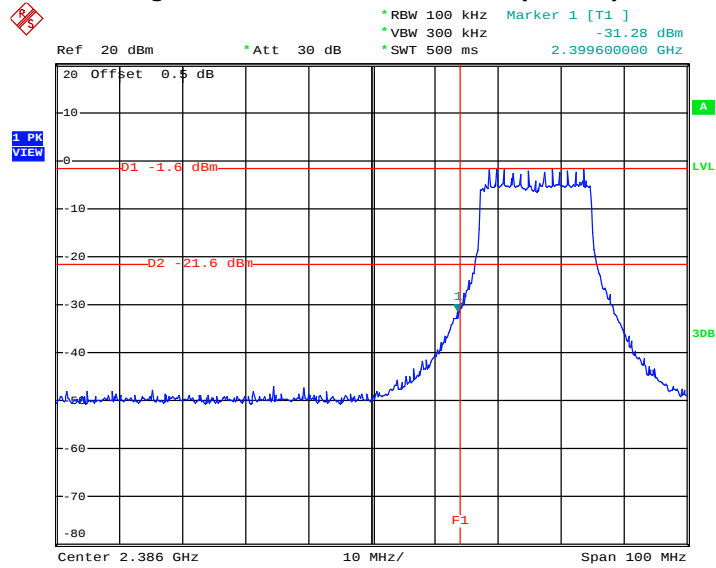
Date: 1.DEC.2011 17:14:55

High Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) Port 1 / 2462 MHz



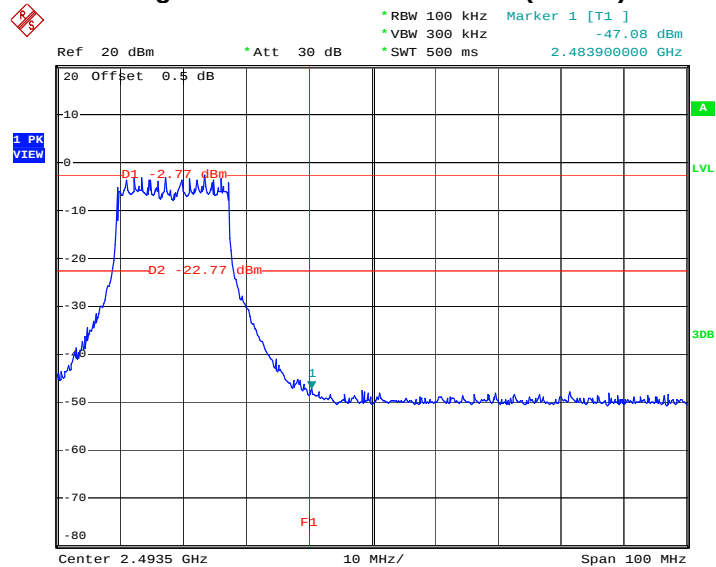
Date: 9.DEC.2011 20:17:00

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) Port 2 / 2412 MHz



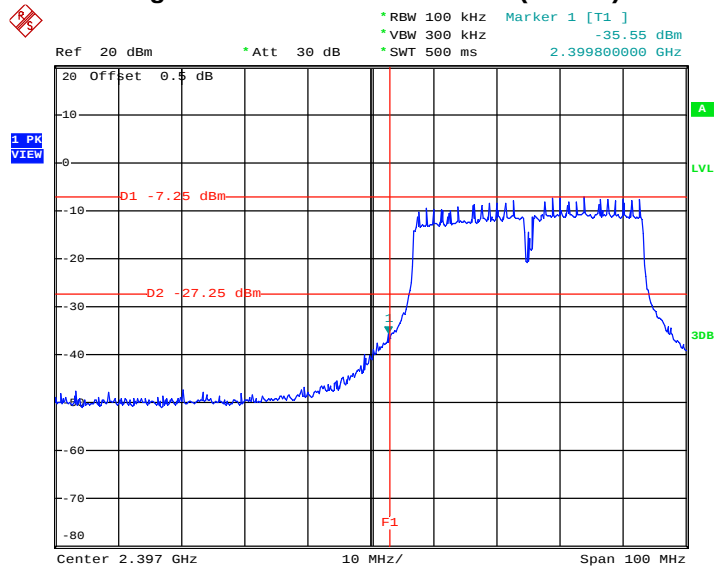
Date: 1.DEC.2011 17:17:55

High Band Edge Plot on Configuration IEEE 802.11n Port 1 (20MHz) Port 2 / 2462 MHz



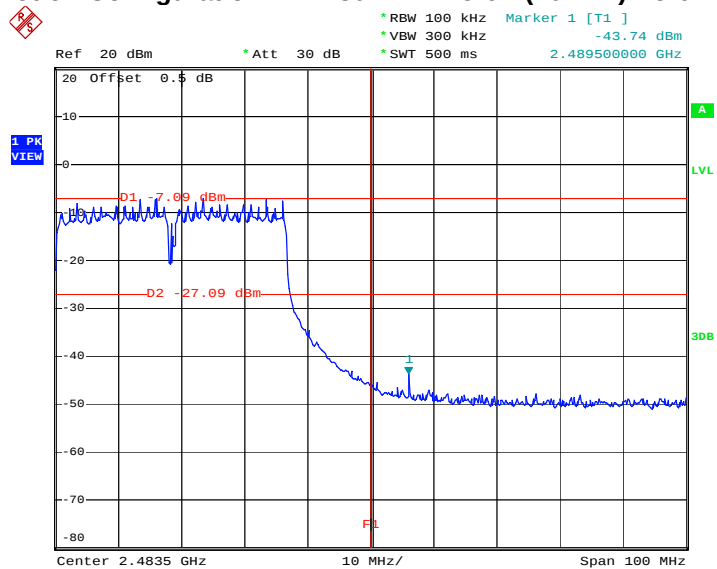
Date: 9.DEC.2011 20:20:14

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) Port 1 / 2422 MHz



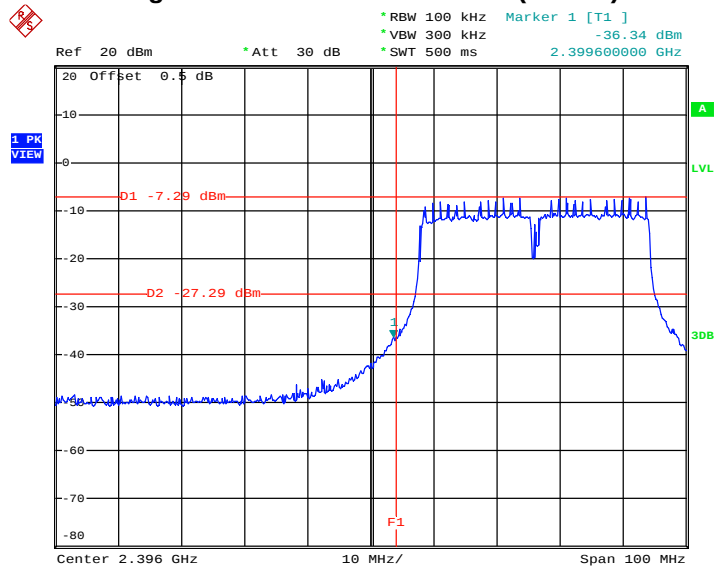
Date: 1.DEC.2011 20:08:36

High Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) Port 1 / 2452 MHz



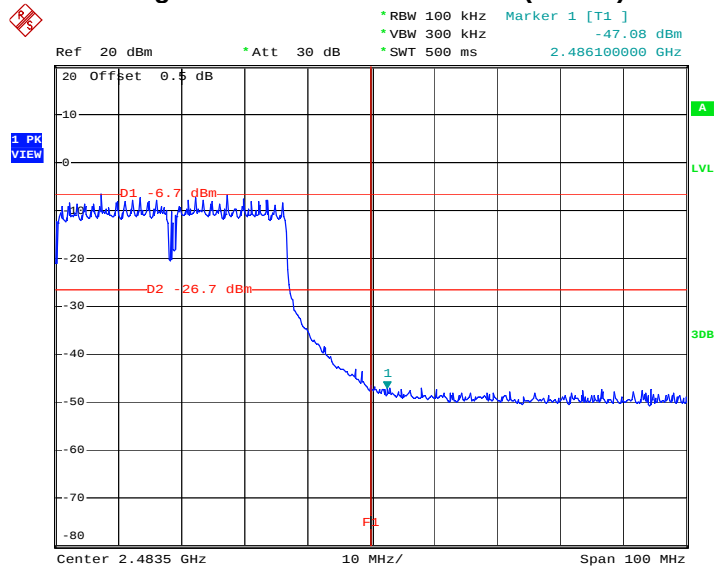
Date: 9.DEC.2011 20:41:44

Low Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) Port 2 / 2422 MHz



Date: 1.DEC.2011 19:45:28

High Band Edge Plot on Configuration IEEE 802.11n Port 1 (40MHz) Port 2 / 2452 MHz



Date: 9.DEC.2011 20:44:59

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Connector Construction

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

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9 kHz ~ 2.75 GHz	Apr. 20, 2011	Conduction (CO04-HY)
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz – 30MHz	Jan. 17, 2011	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9 kHz ~ 30 MHz	May 04, 2011	Conduction (CO04-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	CB049	9 kHz ~ 30 MHz	Apr. 21, 2011	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	FSP 30	100023	9 KHz ~ 30 GHz	Mar. 15, 2011	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Jun. 03, 2011	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Nov. 17, 2011	Conducted (TH01-HY)
RF Cable-1m	Jye Bao	RG142	CB034-1m	20 MHz ~ 7 GHz	N/A	Conducted (TH01-HY)
RF Cable-2m	Jye Bao	RG142	CB035-2m	20 MHz ~ 1 GHz	N/A	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10 MHz ~ 40 GHz	Jun. 07, 2011	Conducted (TH01-HY)
Power Sensor	Anritsu	MA2411B	0917017	300 MHz ~ 40 GHz	Jan. 06, 2011	Conducted (TH01-HY)
Power Meter	Anritsu	ML2495A	0949003	300 MHz ~ 40 GHz	Jan. 06, 2011	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	Jun. 09, 2011*	Conducted (TH01-HY)

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

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP40	100305/040	9 kHz ~ 40 GHz	Feb. 11, 2011	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. 25, 2011	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1 GHz ~ 26.5 GHz	Jul. 25, 2011	Radiation (03CH02-HY)
Horn Antenna	ETS-LINDGREN	3117	00091920	1 GHz ~ 18 GHz	Nov. 15, 2011	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz ~ 1 GHz	Mar. 07, 2011	Radiation (03CH02-HY)
RF Cable-high	SUHNER	SUCOFLEX106	03CH02-HY	1 GHz ~ 40 GHz	Mar. 07, 2011	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30 MHz ~ 2 GHz	Oct. 22, 2011	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.

5 TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 nd Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 724, 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
Arrangement with Foreign Authorities

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

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