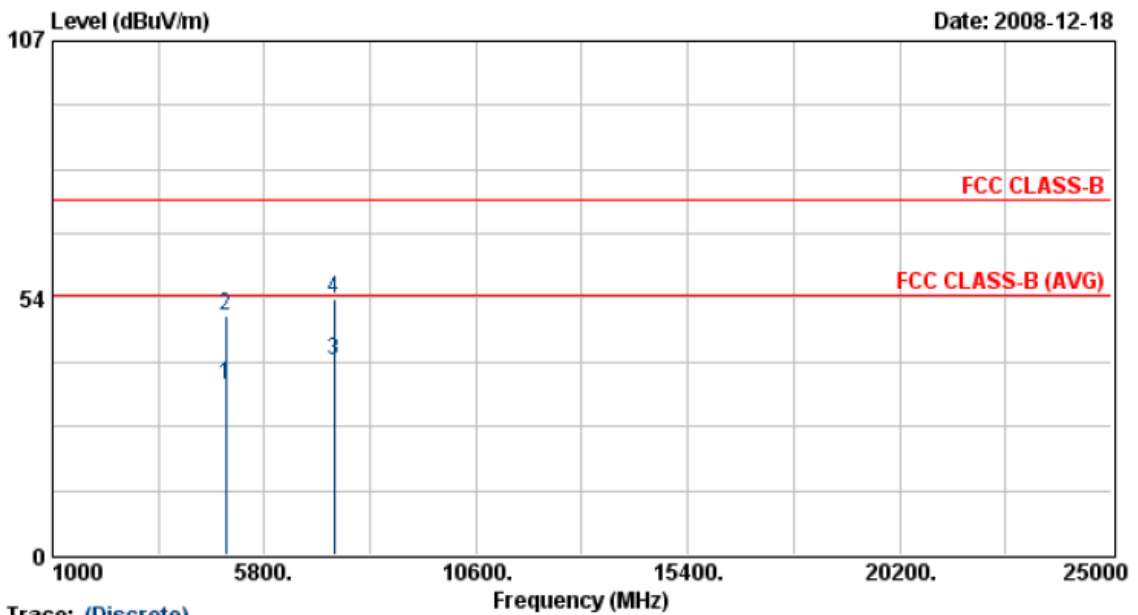




Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 11	Humidity	: 75 %
Modulation Type	: 802.11n HT20	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 65 Mbps



Trace: (Discrete)

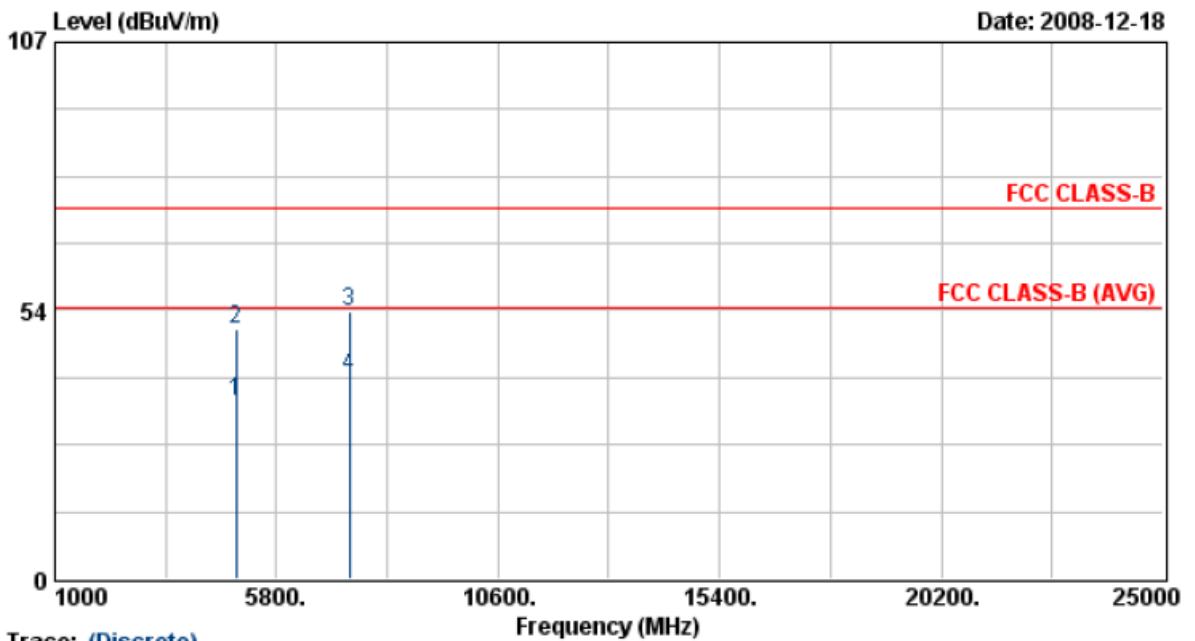
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4919.20	29.44	5.80	35.24	54.00	-18.76	Average	100	218
2	4925.13	43.93	5.82	49.75	74.00	-24.25	Peak	100	218
3	7386.15	30.74	9.70	40.44	54.00	-13.56	Average	100	218
4	7389.90	43.74	9.72	53.46	74.00	-20.54	Peak	100	218

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 11	Humidity	: 75 %
Modulation Type	: 802.11n HT20	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 65 Mbps



Trace: (Discrete)

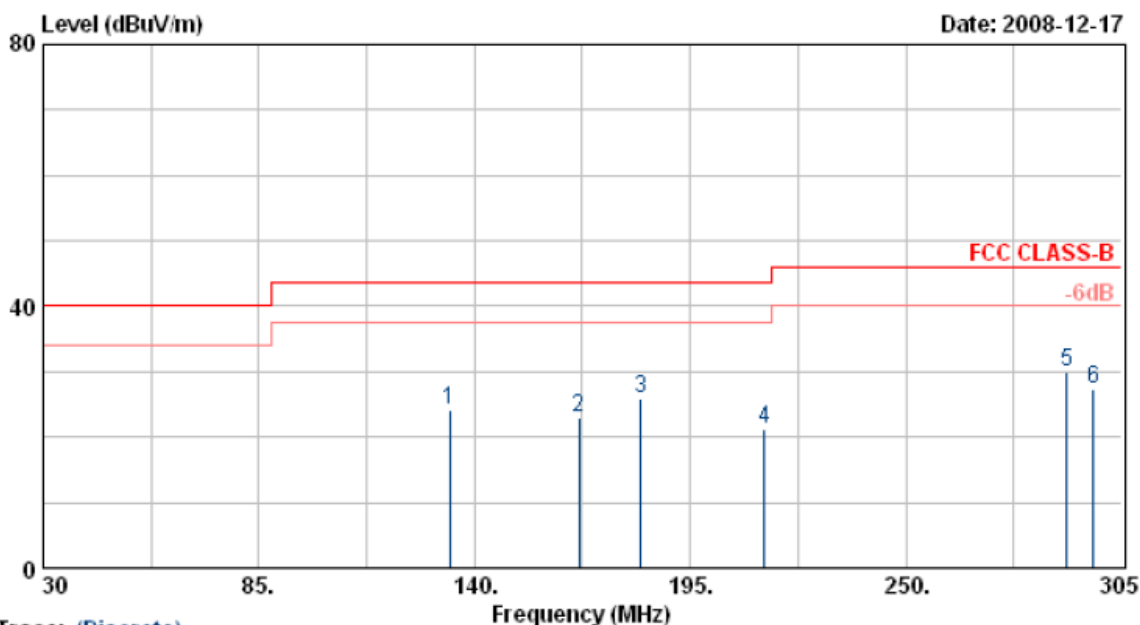
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4919.45	29.47	5.80	35.28	54.00	-18.72	Average	100	218
2	4922.55	43.83	5.81	49.64	74.00	-24.36	Peak	100	218
3	7381.75	43.43	9.68	53.11	74.00	-20.89	Peak	100	218
4	7383.35	30.73	9.69	40.41	54.00	-13.59	Average	100	218

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 24 °C
Operation Channel	: 3	Humidity	: 65 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

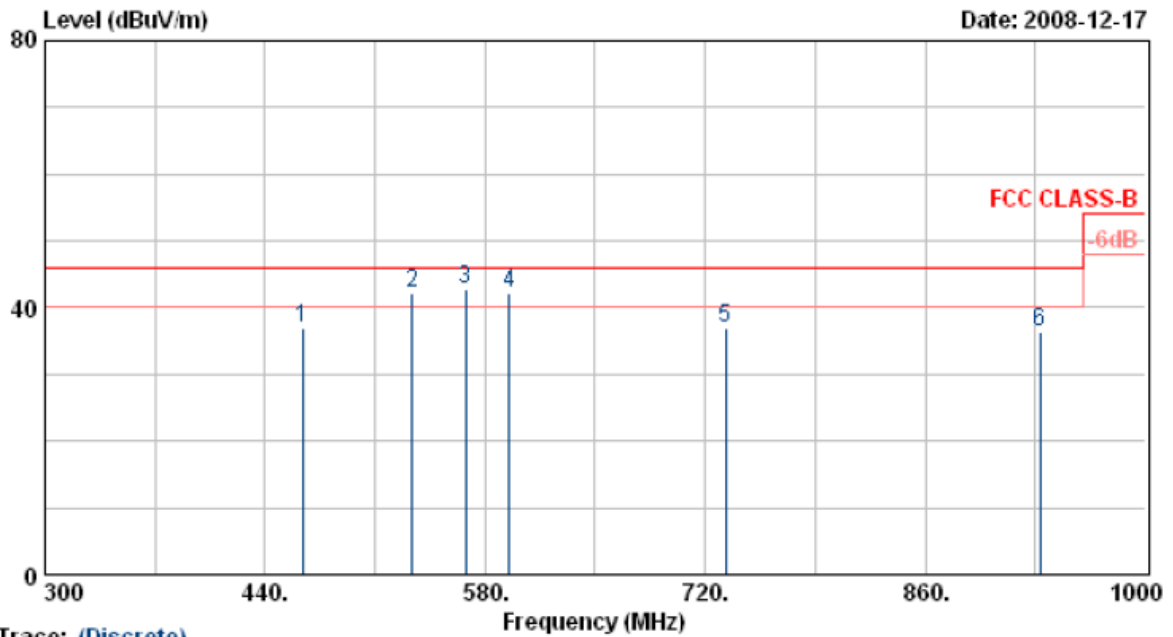
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	133.68	39.56	-15.29	24.27	43.50	-19.23	Peak	150	0
2	166.68	35.82	-12.91	22.91	43.50	-20.59	Peak	150	0
3	182.35	35.37	-9.41	25.96	43.50	-17.54	Peak	150	0
4	213.98	33.08	-11.72	21.36	43.50	-22.14	Peak	150	0
5	290.98	36.90	-6.98	29.92	46.00	-16.08	Peak	150	0
6	297.85	36.09	-8.80	27.29	46.00	-18.71	Peak	150	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11MIMO mode at channel 3,6,9 are almost the same below 1GHz, so that the channel 3 was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 24 °C
Operation Channel	: 3	Humidity	: 65 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

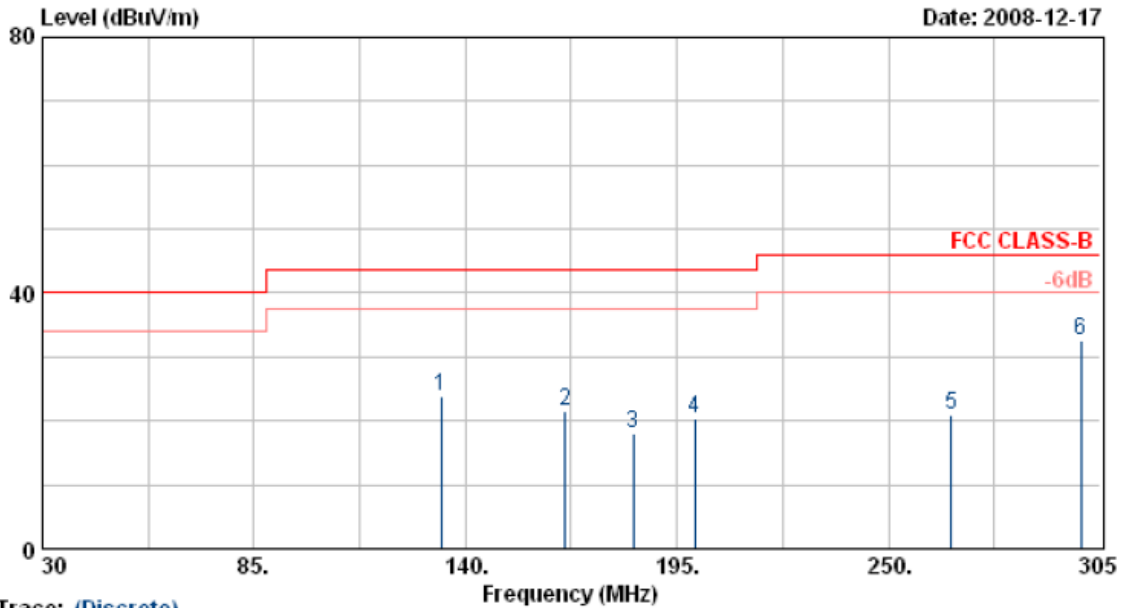
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	463.80	41.45	-4.60	36.85	46.00	-9.15	Peak	100	0
2	533.80	46.02	-3.83	42.19	46.00	-3.81	QP	100	0
3	567.40	41.35	1.35	42.69	46.00	-3.31	QP	100	0
4	595.40	42.47	-0.39	42.08	46.00	-3.92	QP	100	0
5	733.30	33.99	2.88	36.87	46.00	-9.13	Peak	100	0
6	932.80	37.47	-1.10	36.36	46.00	-9.64	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11MIMO mode at channel 3,6,9 are almost the same below 1GHz, so that the channel 3 was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 24 °C
Operation Channel	: 3	Humidity	: 65 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

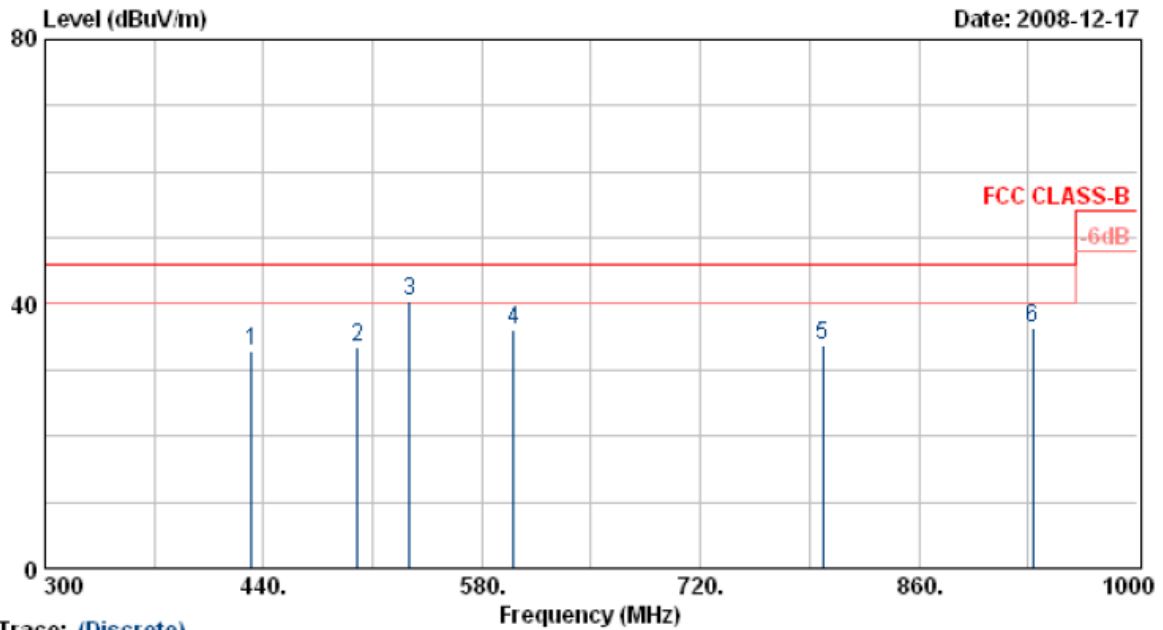
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	133.68	43.26	-19.43	23.83	43.50	-19.67	Peak	150	0
2	165.85	40.24	-18.74	21.50	43.50	-22.01	Peak	150	0
3	183.73	36.17	-18.19	17.99	43.50	-25.51	Peak	150	0
4	199.68	34.83	-14.61	20.22	43.50	-23.28	Peak	150	0
5	266.23	36.52	-15.48	21.04	46.00	-24.96	Peak	150	0
6	300.05	47.05	-14.49	32.56	46.00	-13.44	Peak	150	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11MIMO mode at channel 3,6,9 are almost the same below 1GHz, so that the channel 3 was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 24 °C
Operation Channel	: 3	Humidity	: 65 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

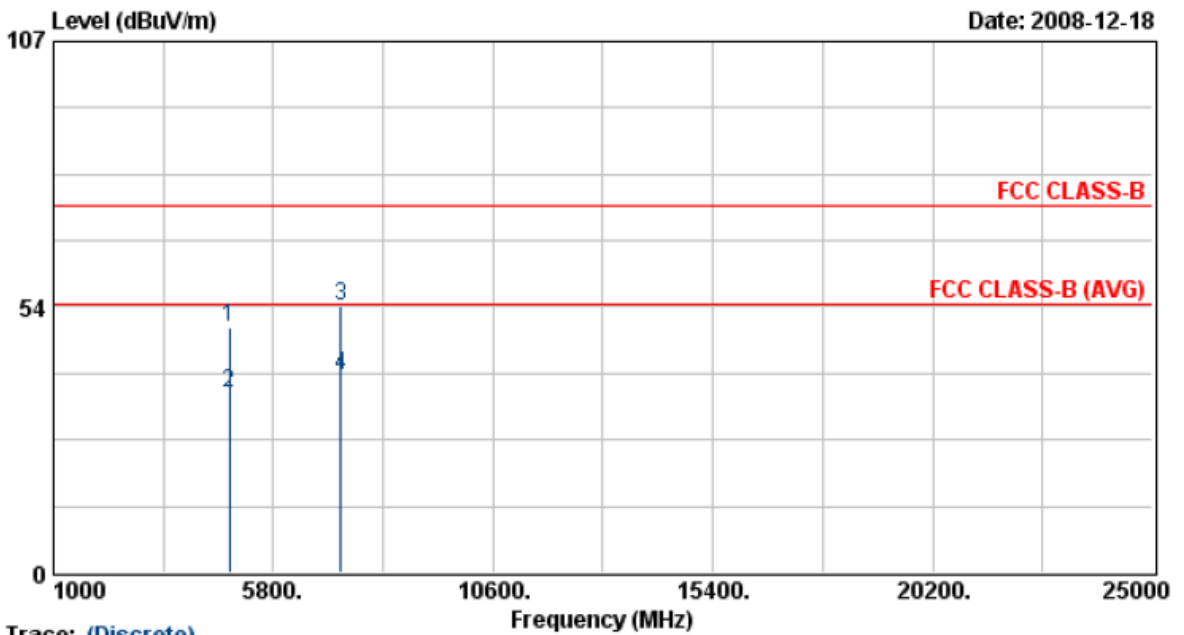
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	432.30	42.49	-9.65	32.84	46.00	-13.16	Peak	100	0
2	500.20	37.85	-4.27	33.58	46.00	-12.42	Peak	100	0
3	533.80	43.38	-2.88	40.50	46.00	-5.50	QP	100	0
4	600.30	38.90	-2.78	36.12	46.00	-9.88	Peak	100	0
5	798.40	34.63	-0.77	33.86	46.00	-12.14	Peak	100	0
6	932.80	31.42	5.06	36.48	46.00	-9.52	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11MIMO mode at channel 3,6,9 are almost the same below 1GHz, so that the channel 3 was chosen as representative in final test.
5. The data is worse case.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 3	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

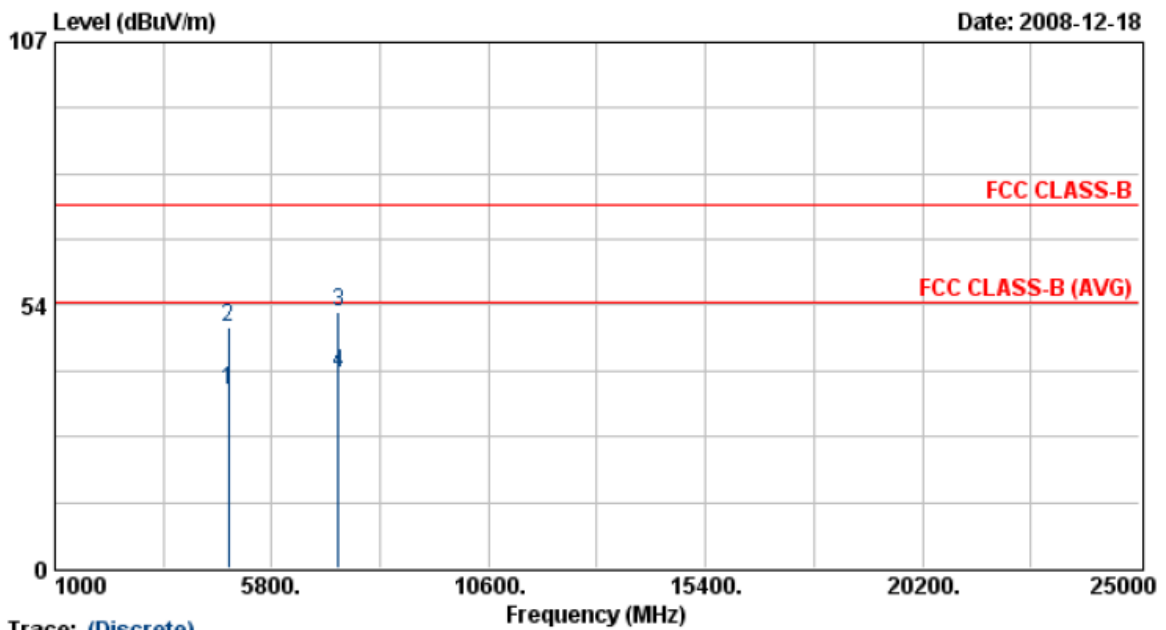
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4839.20	43.64	5.58	49.22	74.00	-24.78	Peak	100	218
2	4844.20	30.53	5.59	36.12	54.00	-17.88	Average	100	228
3	7269.65	44.39	9.19	53.58	74.00	-20.42	Peak	100	228
4	7270.38	30.59	9.19	39.78	54.00	-14.22	Average	100	228

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 3	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

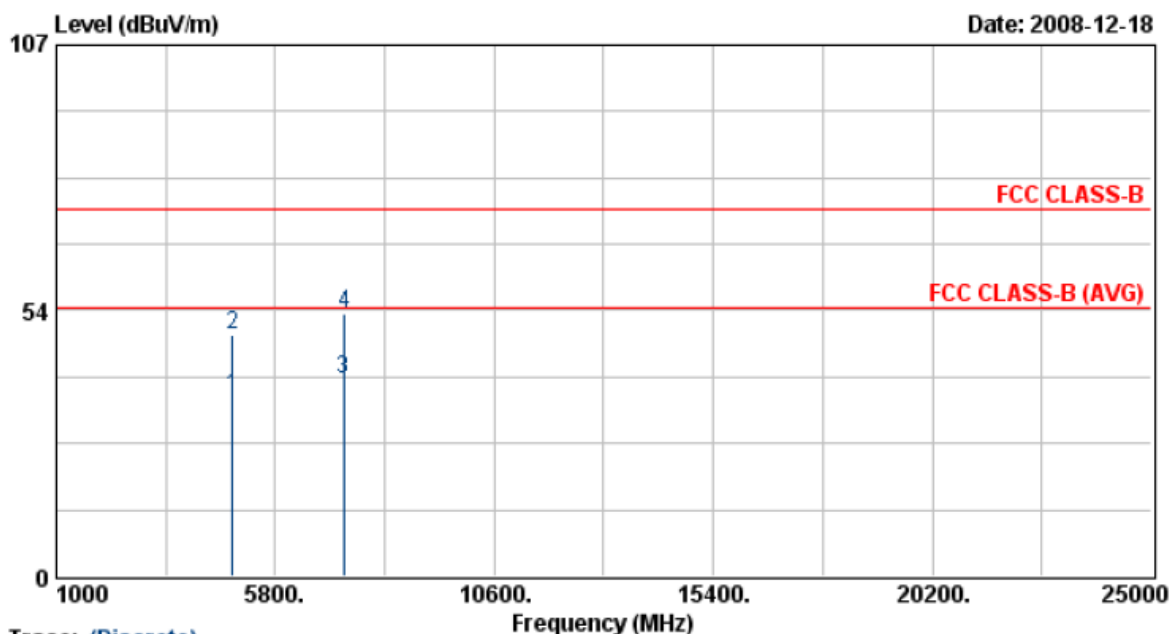
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4844.33	30.56	5.59	36.16	54.00	-17.84	Average	100	228
2	4846.95	43.57	5.60	49.17	74.00	-24.83	Peak	100	228
3	7267.88	43.00	9.18	52.18	74.00	-21.82	Peak	100	228
4	7270.63	30.59	9.20	39.78	54.00	-14.22	Average	100	228

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 6	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

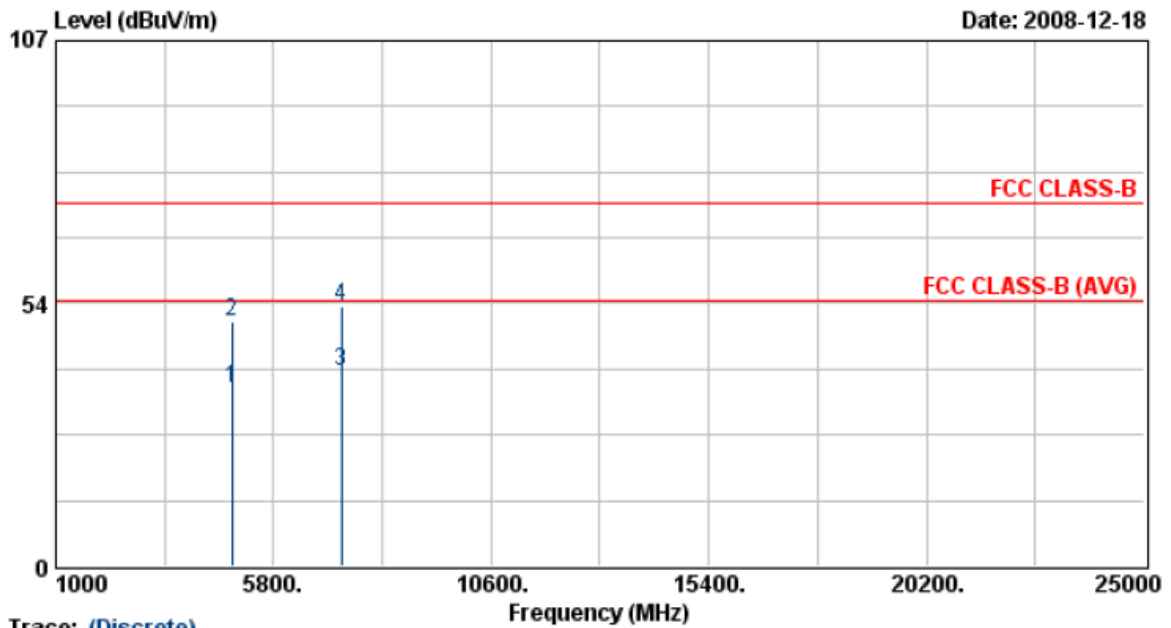
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4869.73	30.43	5.67	36.10	54.00	-17.90	Average	100	228
2	4872.80	43.02	5.67	48.69	74.00	-25.31	Peak	100	228
3	7306.20	30.46	9.35	39.81	54.00	-14.19	Average	100	228
4	7307.35	43.39	9.36	52.75	74.00	-21.25	Peak	100	228

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 6	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

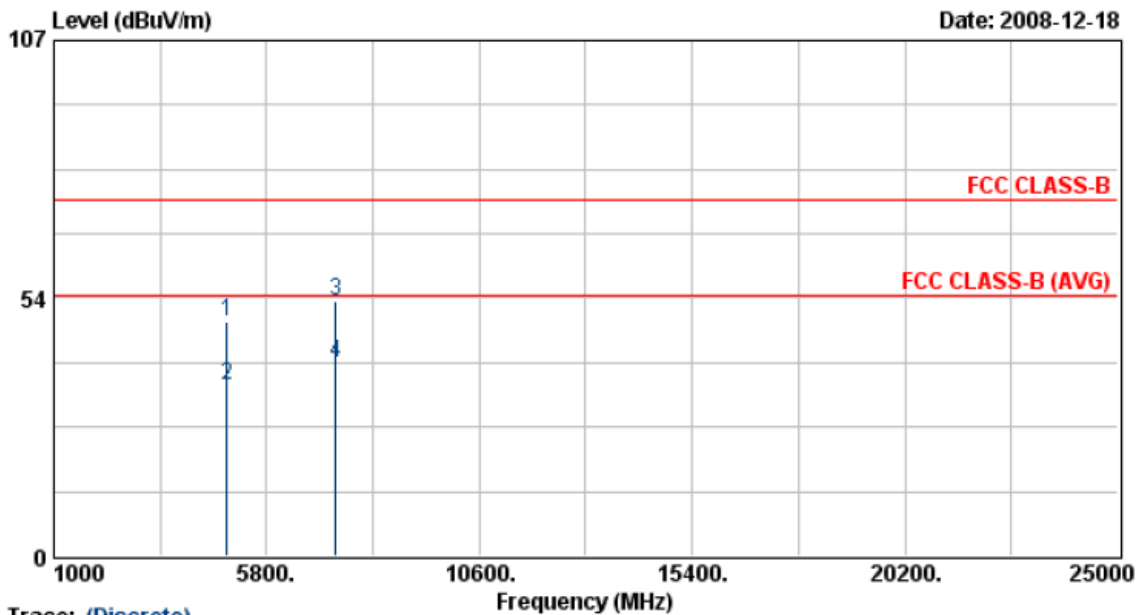
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4873.28	30.45	5.68	36.12	54.00	-17.88	Average	100	217
2	4878.73	44.30	5.69	49.99	74.00	-24.01	Peak	100	217
3	7306.03	30.46	9.35	39.81	54.00	-14.19	Average	100	217
4	7306.78	43.40	9.35	52.75	74.00	-21.25	Peak	100	217

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 9	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

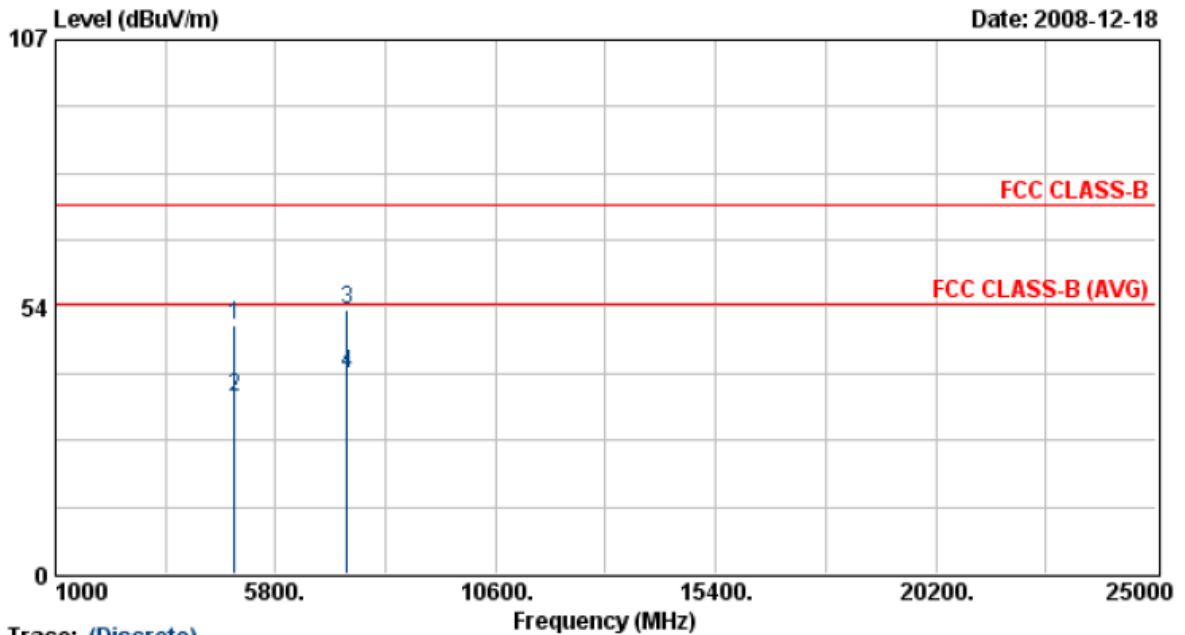
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4906.08	42.93	5.77	48.70	74.00	-25.30	Peak	100	232
2	4908.58	29.51	5.77	35.28	54.00	-18.72	Average	100	232
3	7351.35	43.42	9.55	52.97	74.00	-21.03	Peak	100	232
4	7360.35	30.53	9.59	40.12	54.00	-13.88	Average	100	232

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Transmit / Receive	Temperature	: 18 °C
Operation Channel	: 9	Humidity	: 75 %
Modulation Type	: 802.11n HT40	Atmospheric Pressure	: 1007 hPa
Memo	:	Rate	: 135 Mbps



Trace: (Discrete)

Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		cm	Deg
1	4901.50	43.88	5.75	49.63	74.00	-24.37	Peak	100	233
2	4907.45	29.50	5.77	35.28	54.00	-18.72	Average	100	233
3	7354.18	43.41	9.56	52.97	74.00	-21.03	Peak	100	233
4	7357.95	30.50	9.58	40.08	54.00	-13.92	Average	100	233

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.

Test engineer: Ben



6. 6dB Bandwidth Measurement Data

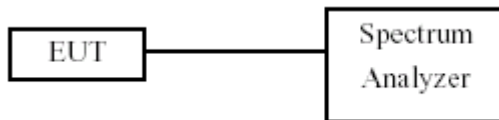
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 100 KHz and VBW to 100 KHz.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.

6.3 Test Setup Layout



6.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2008/02/22	2009/02/21

6.5 Test Result and Data

Test Date: Dec. 06, 2008

Temperature: 25°C

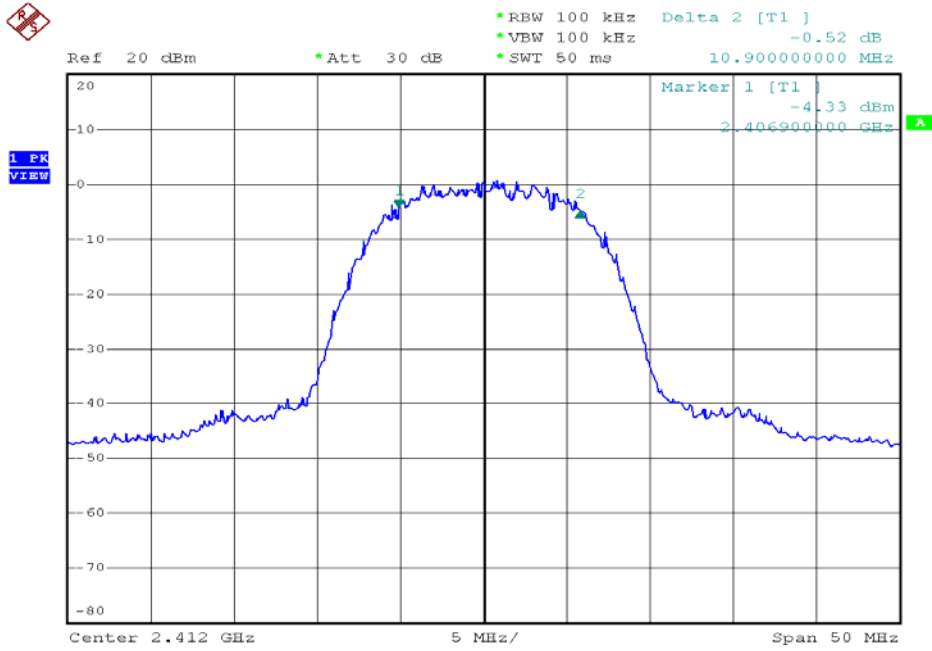
Atmospheric pressure: 1010 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
802.11b (11Mbps)	01	2412	10.9
	06	2437	10.9
	11	2462	11.3
802.11g (54Mbps)	01	2412	16.5
	06	2437	16.5
	11	2462	16.5
802.11n HT20 (65Mbps)	01	2412	17.3
	06	2437	17.3
	11	2462	17.4
802.11n HT40 (135Mbps)	03	2422	35.8
	06	2437	35.4
	09	2452	35.2

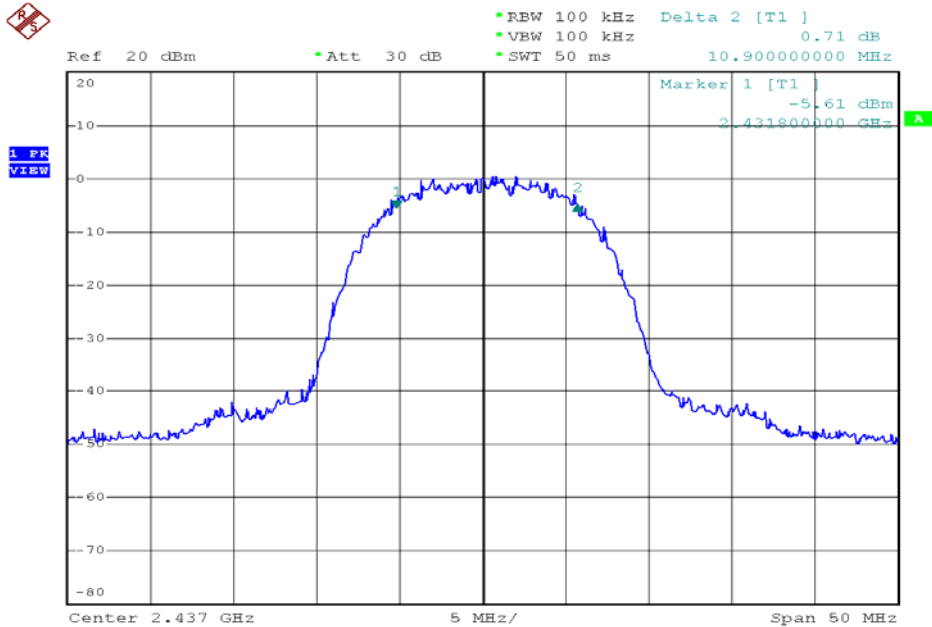


Modulation Standard: 802.11b (11Mbps)
Channel: 01



Date: 6.DEC.2008 10:48:58

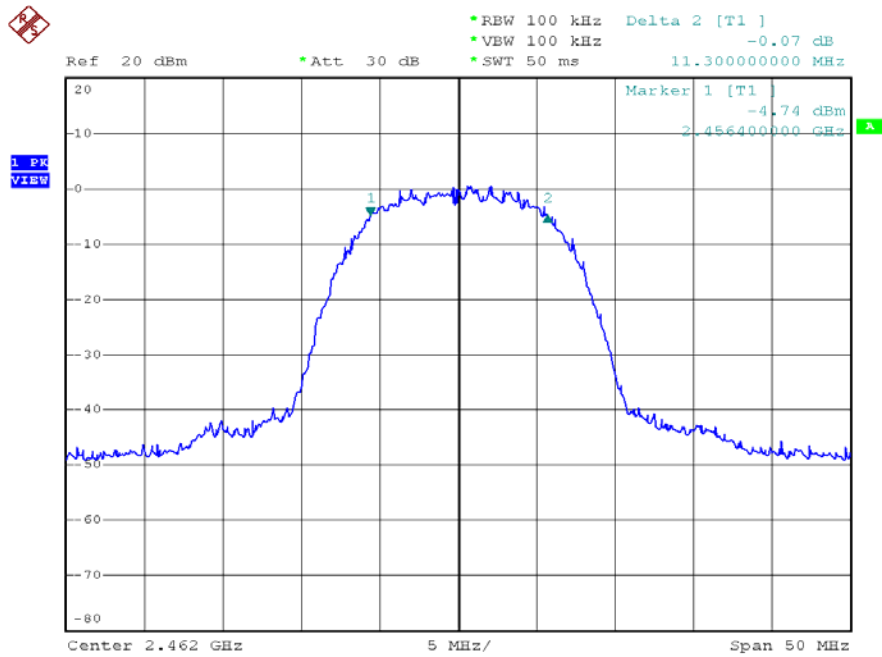
Modulation Standard: 802.11b (11Mbps)
Channel: 06



Date: 6.DEC.2008 10:58:19

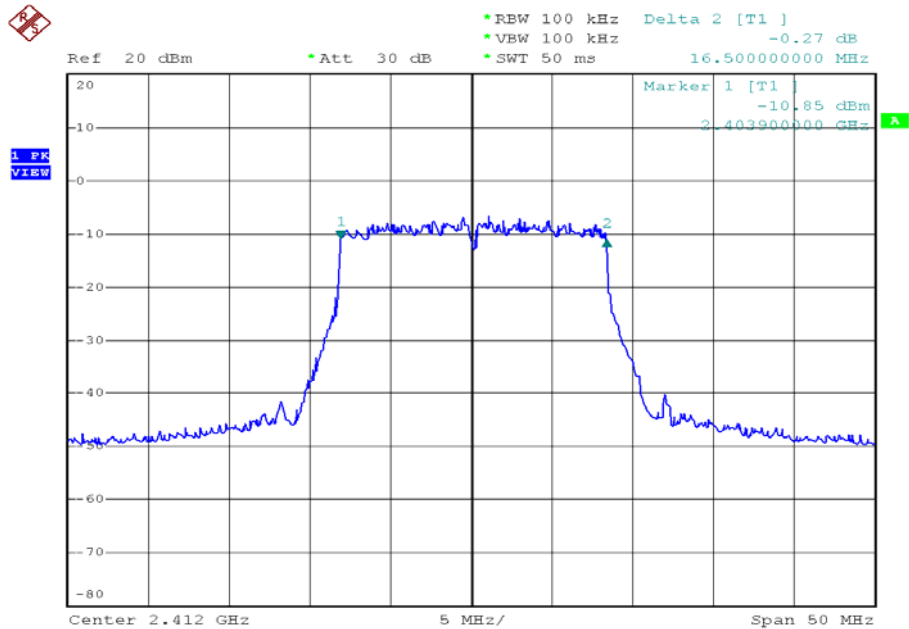


Modulation Standard: 802.11b (11Mbps)
Channel: 11



Date: 6.DEC.2008 11:03:08

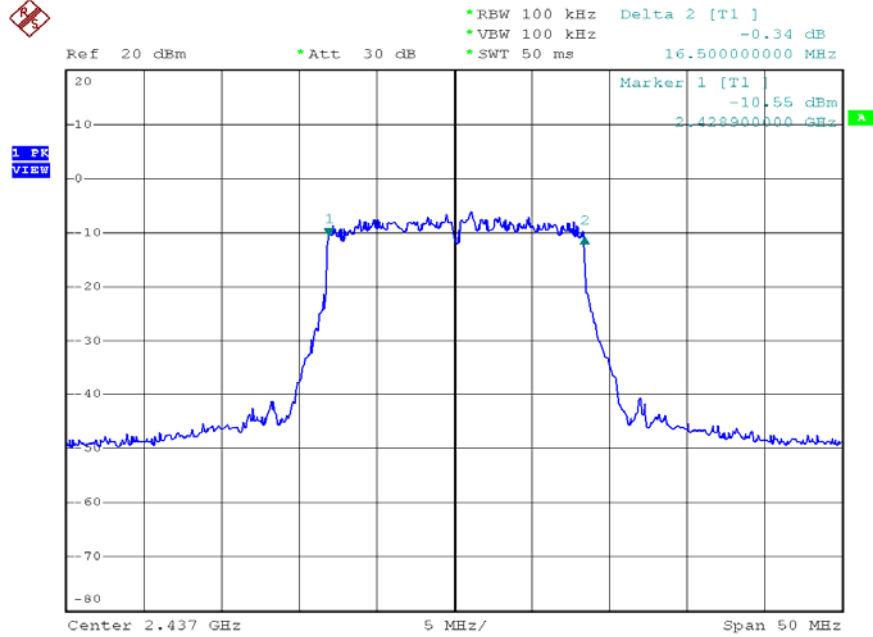
Modulation Standard: 802.11g (54Mbps)
Channel: 01



Date: 6.DEC.2008 11:08:24

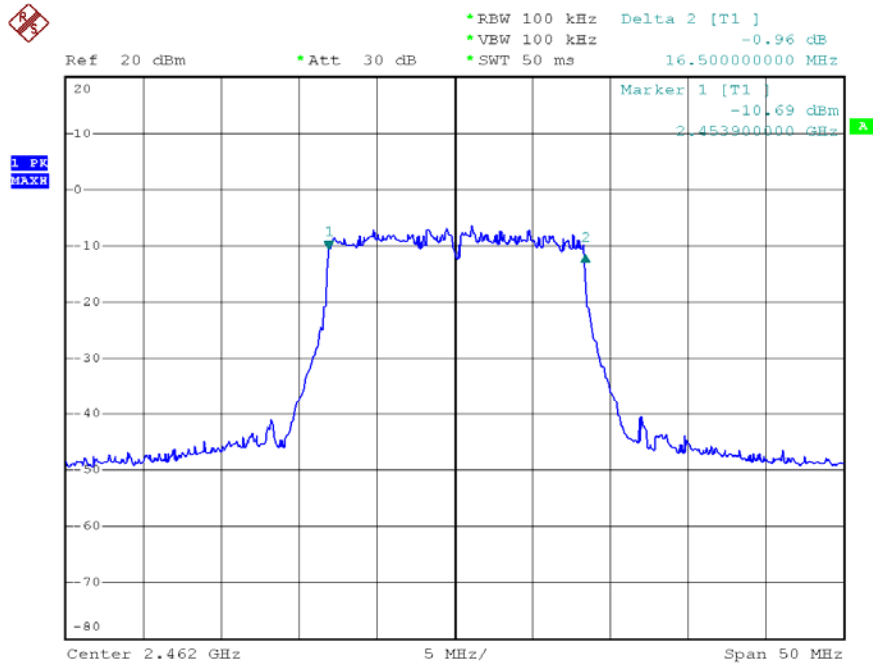


Modulation Standard: 802.11g (54Mbps)
Channel: 06



Date: 6.DEC.2008 11:13:21

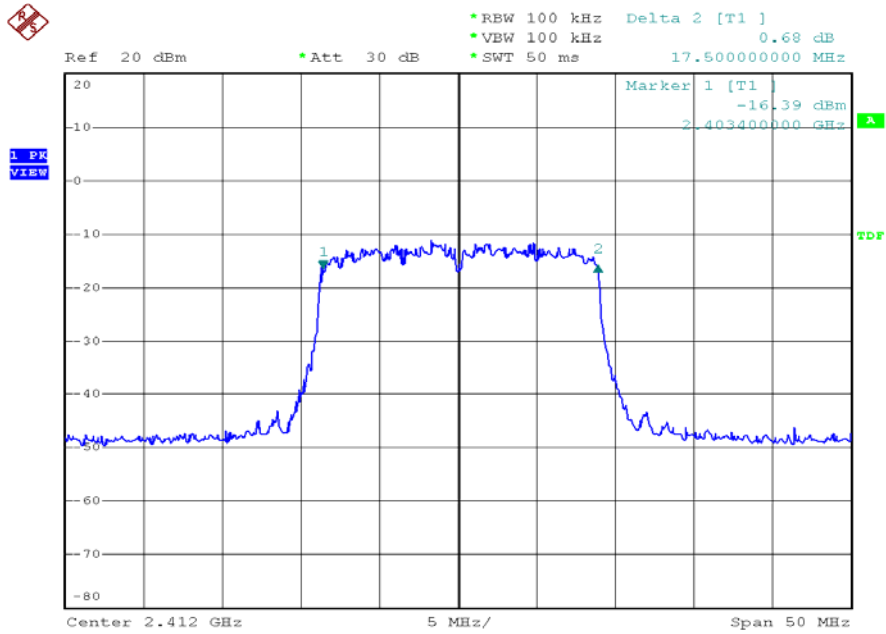
Modulation Standard: 802.11g (54Mbps)
Channel: 11



Date: 6.DEC.2008 11:16:48

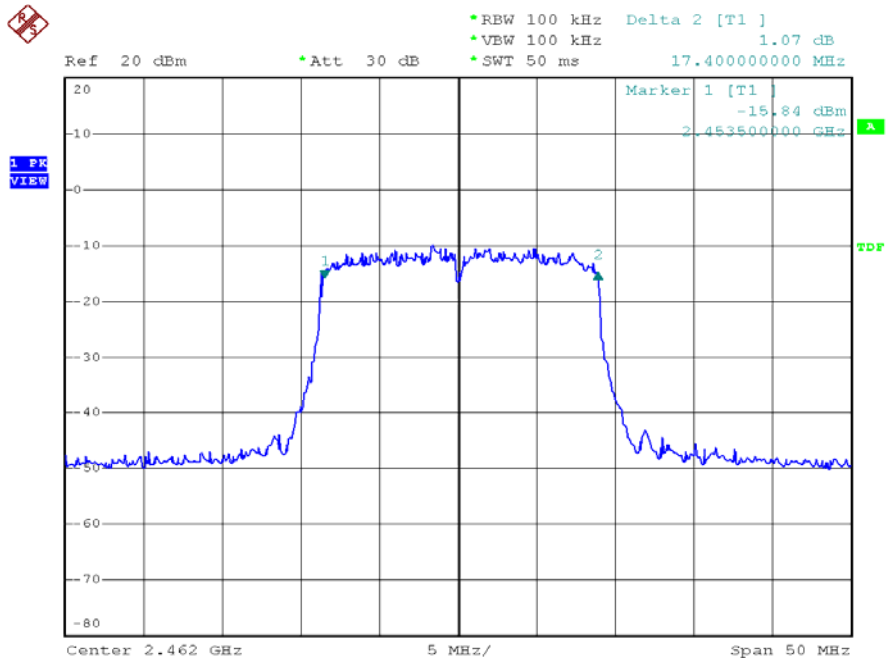


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 01



Date: 18.DEC.2008 11:12:56

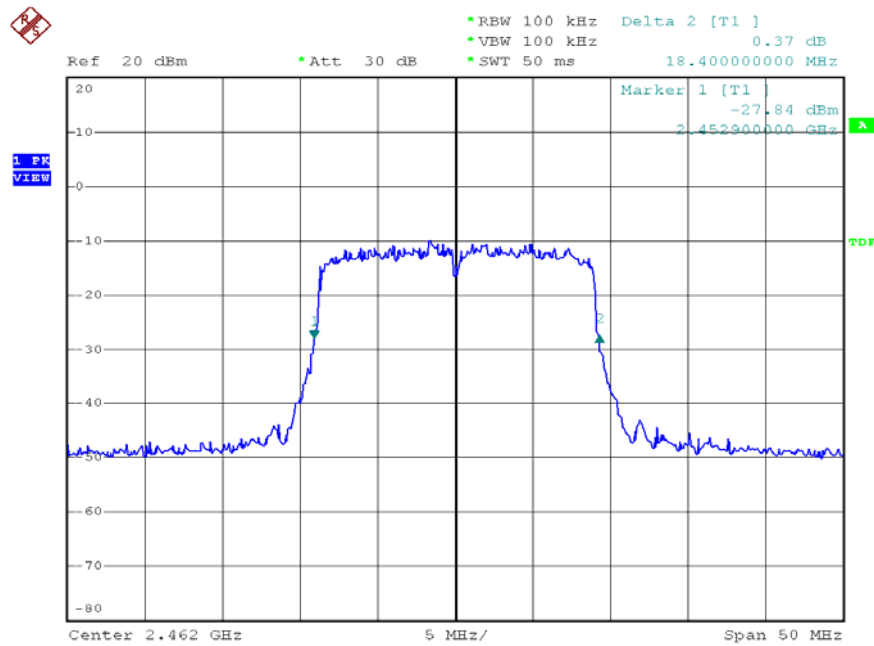
Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 06



Date: 18.DEC.2008 13:44:23

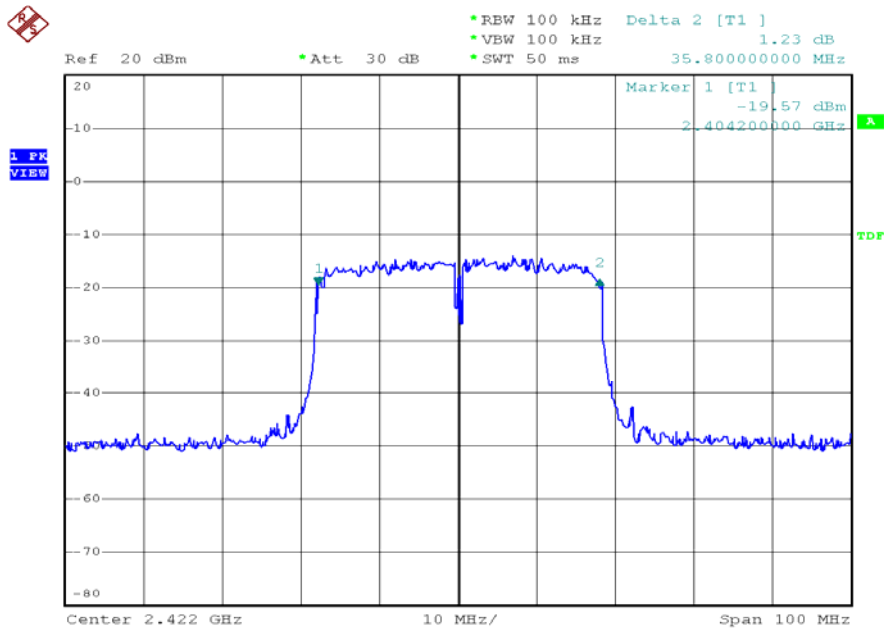


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 11



Date: 18.DEC.2008 13:44:48

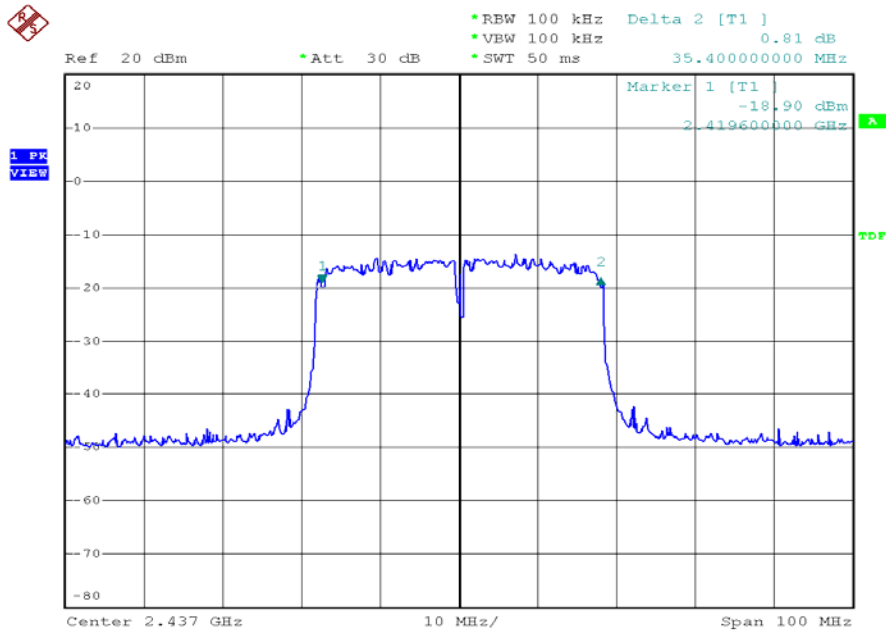
Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 03



Date: 18.DEC.2008 11:48:23

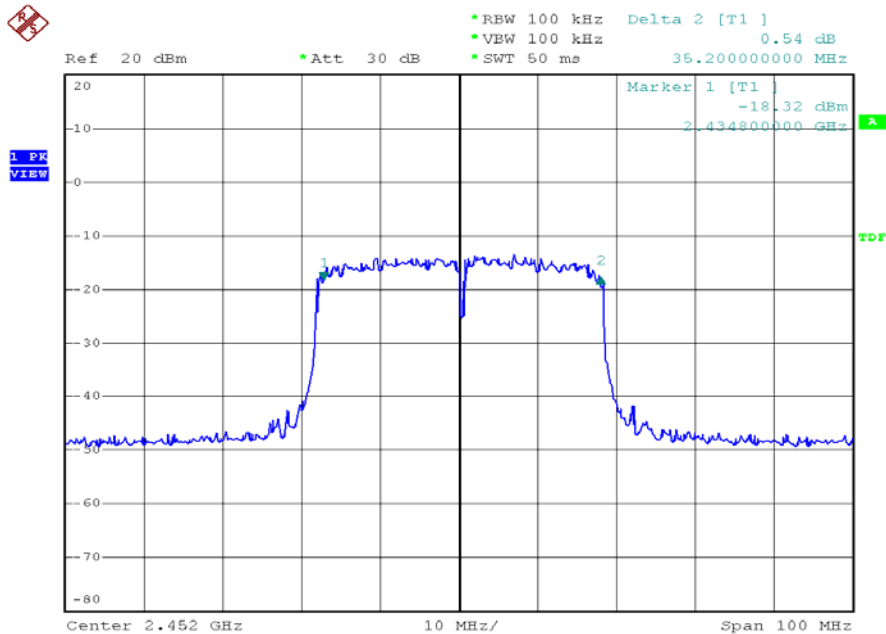


Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 06



Date: 18.DEC.2008 11:55:36

Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 9



Date: 18.DEC.2008 13:21:59



7. Maximum Peak Output Power

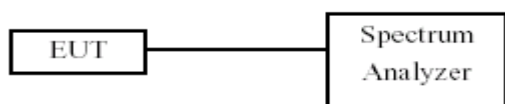
7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

7.2 Test Procedures

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

7.3 Test Setup Layout



7.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2008/02/22	2009/02/21

7.5 Test Result and Data

Test Date: Dec. 06, 2008

Temperature: 22°C

Atmospheric pressure: 1010 hPa

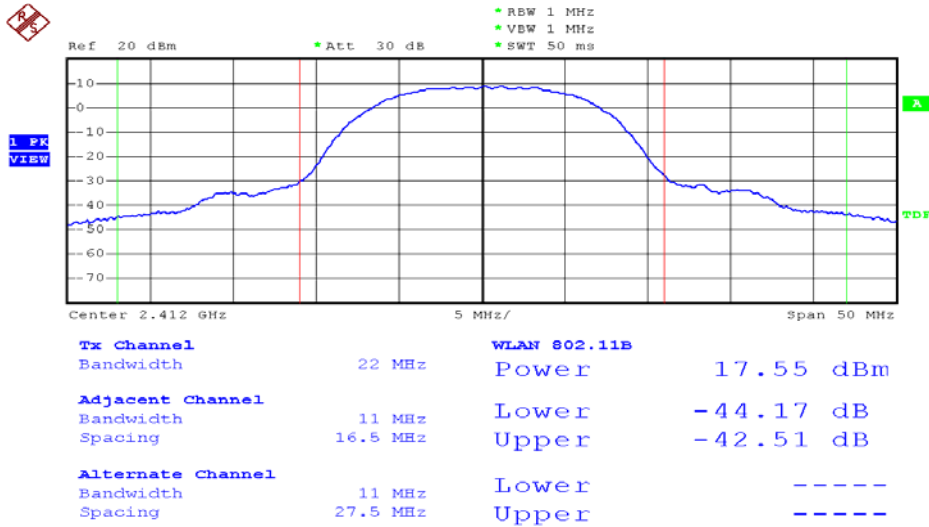
Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
802.11b (11Mbps)	01	2412	17.55	56.9
	06	2437	17.40	55.0
	11	2462	17.63	57.9
802.11g (54Mbps)	01	2412	13.72	23.6
	06	2437	14.03	25.3
	11	2462	14.09	25.6

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)	Peak Power Output (mW)
802.11n HT20 (65Mbps)	01	2412	13.94	24.8
	06	2437	13.69	23.4
	11	2462	13.83	24.2
802.11n HT40 (135Mbps)	03	2422	13.87	24.4
	06	2437	13.91	24.6
	09	2452	14.12	25.8

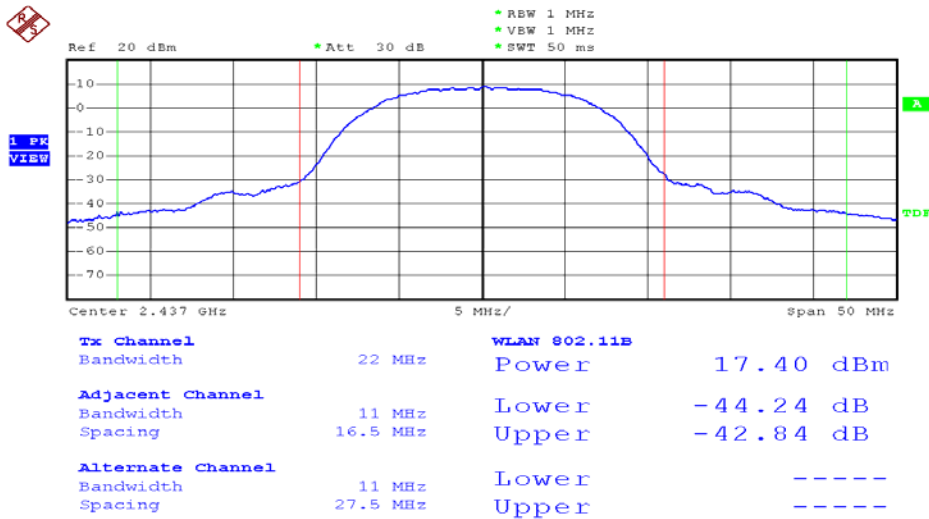


Modulation Standard: 802.11b (11Mbps)
Channel: 01



Date: 5.DEC.2008 17:43:16

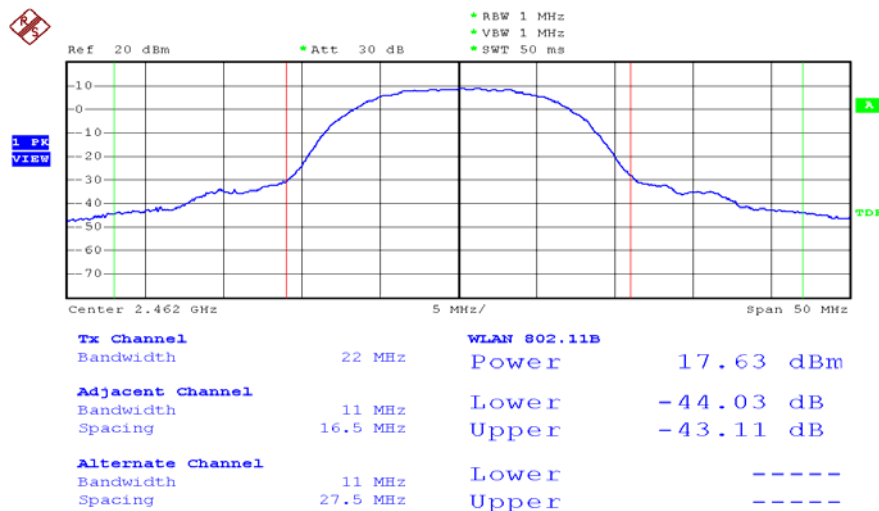
Modulation Standard: 802.11b (11Mbps)
Channel: 06



Date: 5.DEC.2008 17:45:03

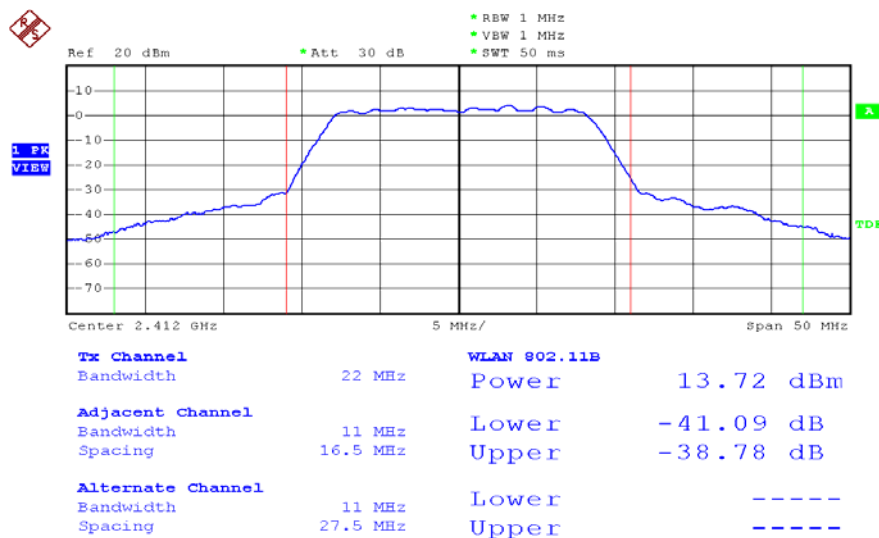


Modulation Standard: 802.11b (11Mbps)
Channel: 11



Date: 5.DEC.2008 17:46:34

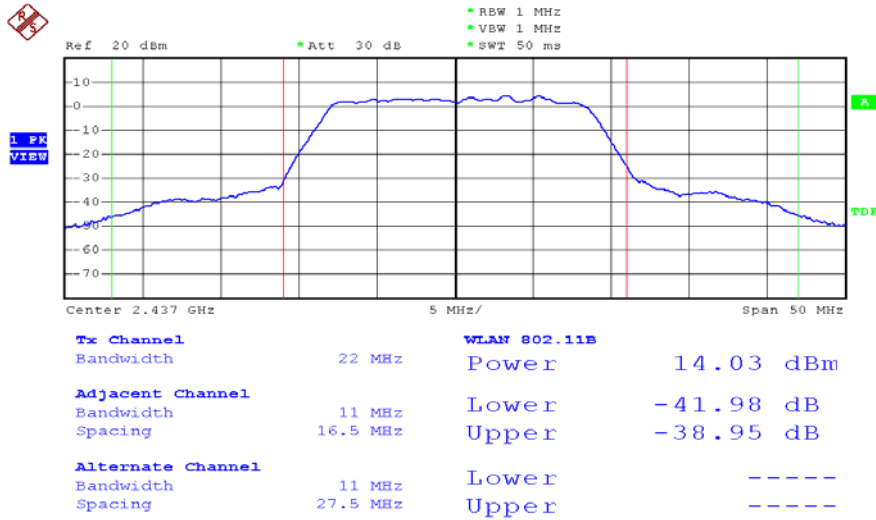
Modulation Standard: 802.11g (54Mbps)
Channel: 01



Date: 5.DEC.2008 17:49:18

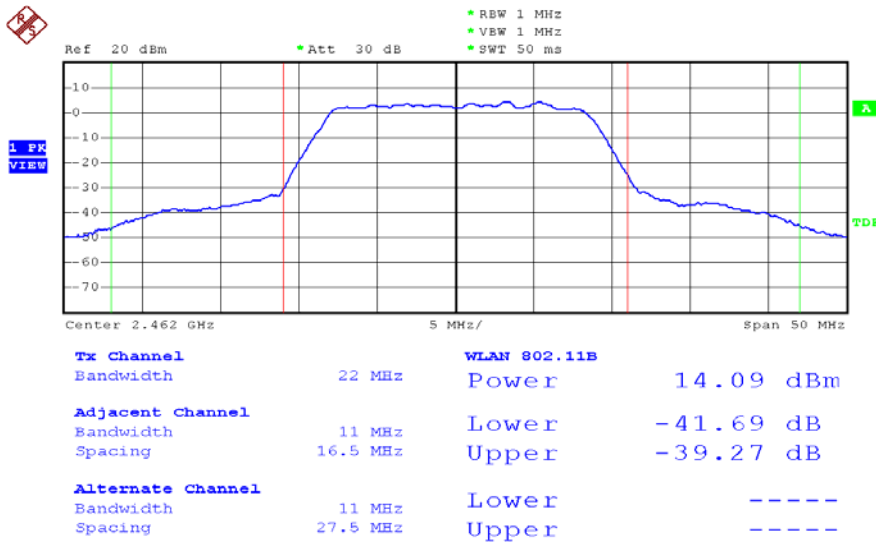


Modulation Standard: 802.11g (54Mbps)
Channel: 06



Date: 5.DEC.2008 17:53:00

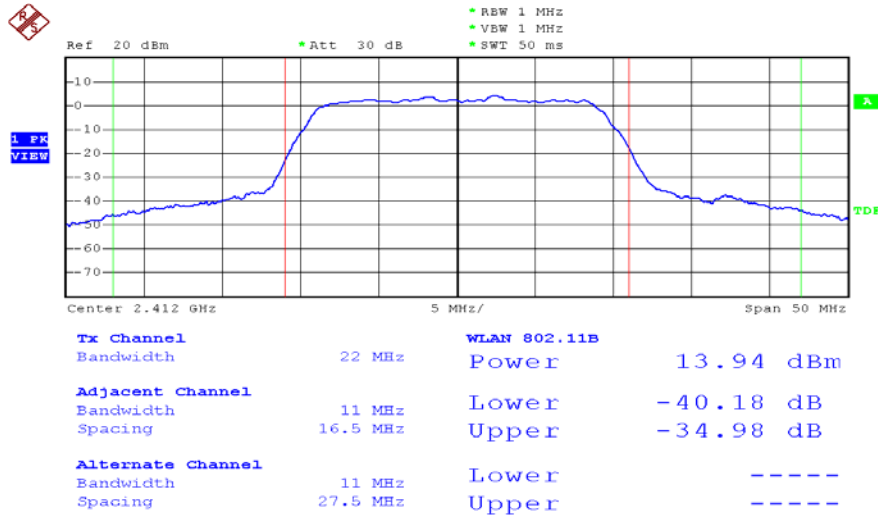
Modulation Standard: 802.11g (54Mbps)
Channel: 11



Date: 5.DEC.2008 17:56:22

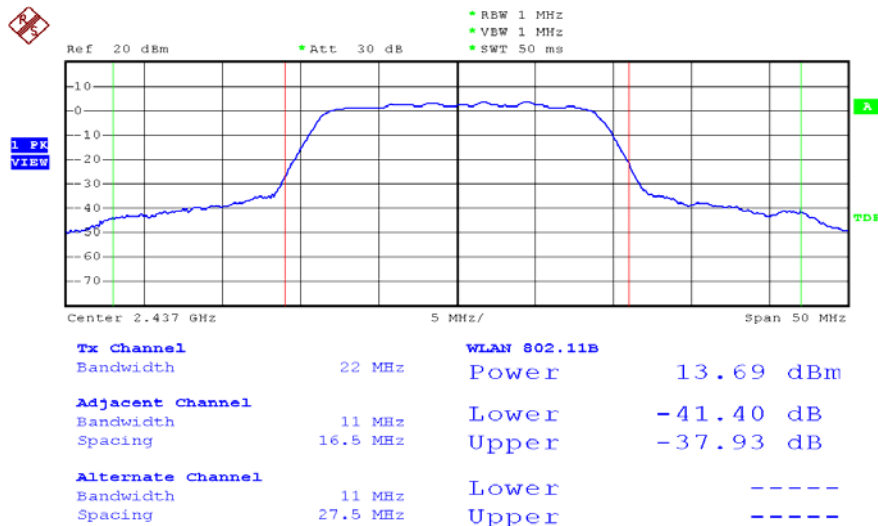


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 01



Date: 5.DEC.2008 18:00:49

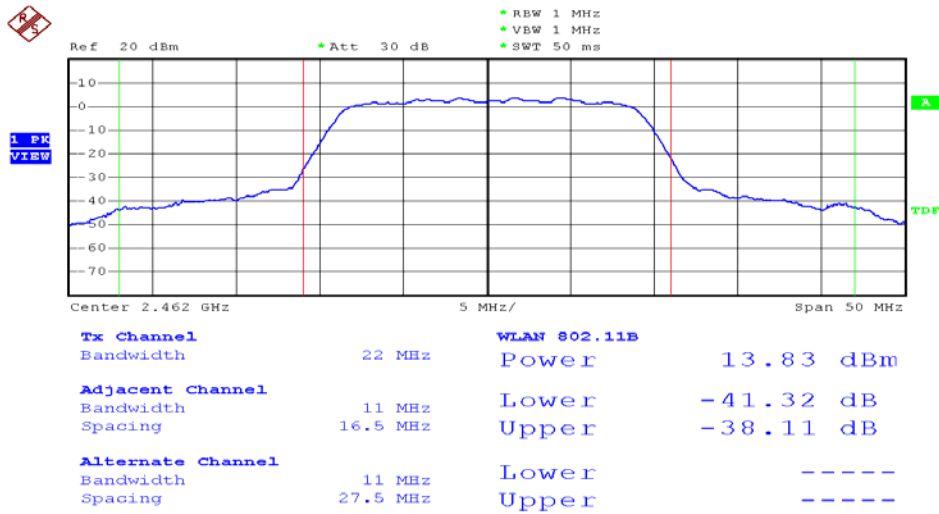
Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 06



Date: 5.DEC.2008 18:02:12

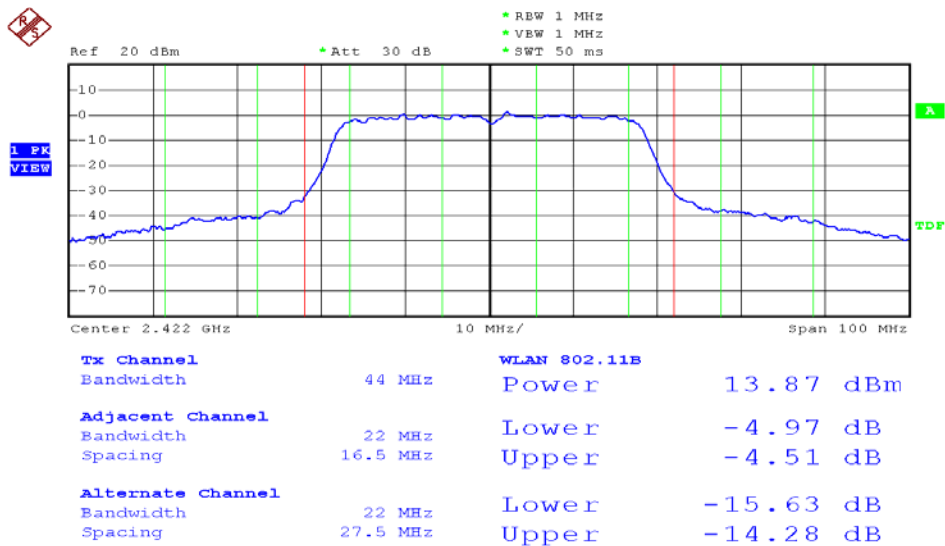


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 11



Date: 5.DEC.2008 18:03:40

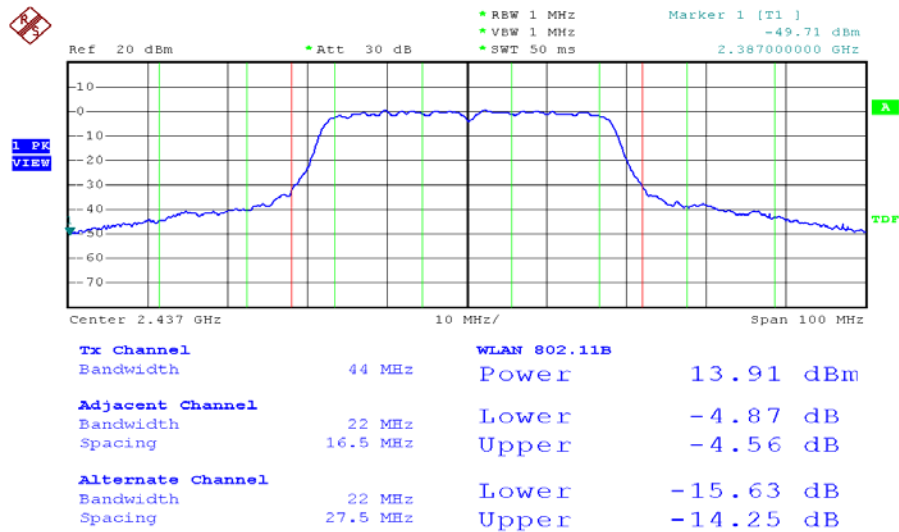
Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 03



Date: 5.DEC.2008 17:31:56

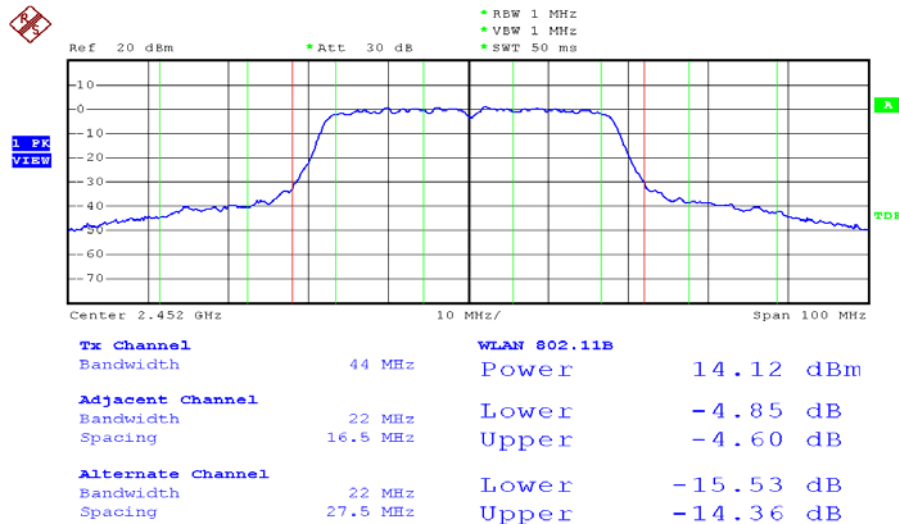


Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 06



Date: 5.DEC.2008 17:35:29

Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 09



Date: 5.DEC.2008 17:37:24



8. Band Edges Measurement

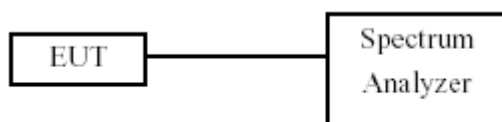
8.1 Test Limit

Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

8.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer via a low lose cable.
- Set both RBW and VBW of spectrum analyzer to 100 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- The band edges was measured and recorded.

8.3 Test Setup Layout



8.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2008/02/22	2009/02/21

8.5 Test Result and Data

Test Date: Dec. 06, 2008

Temperature: 22°C

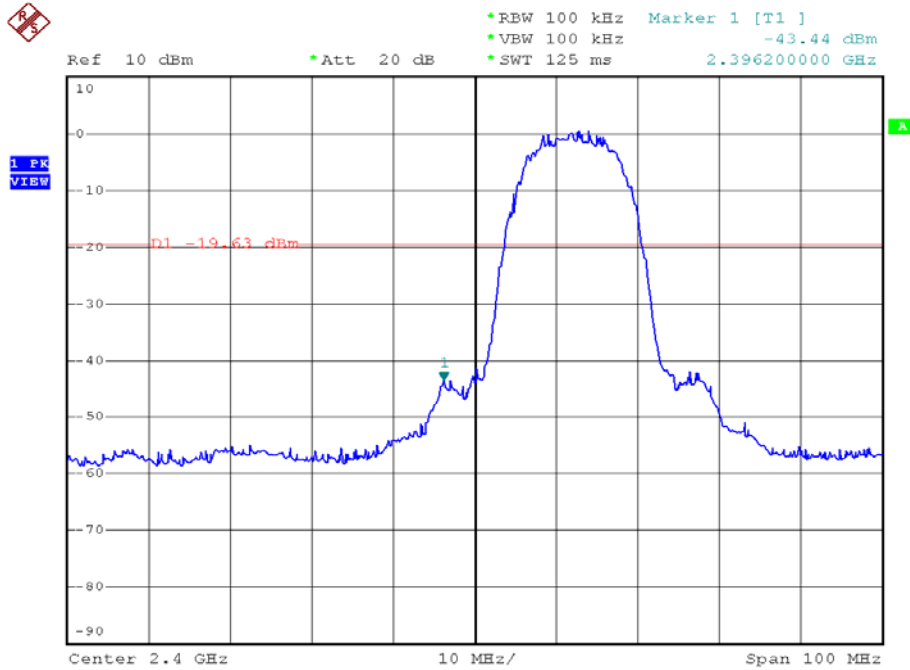
Atmospheric pressure: 1007 hPa

Humidity: 75%

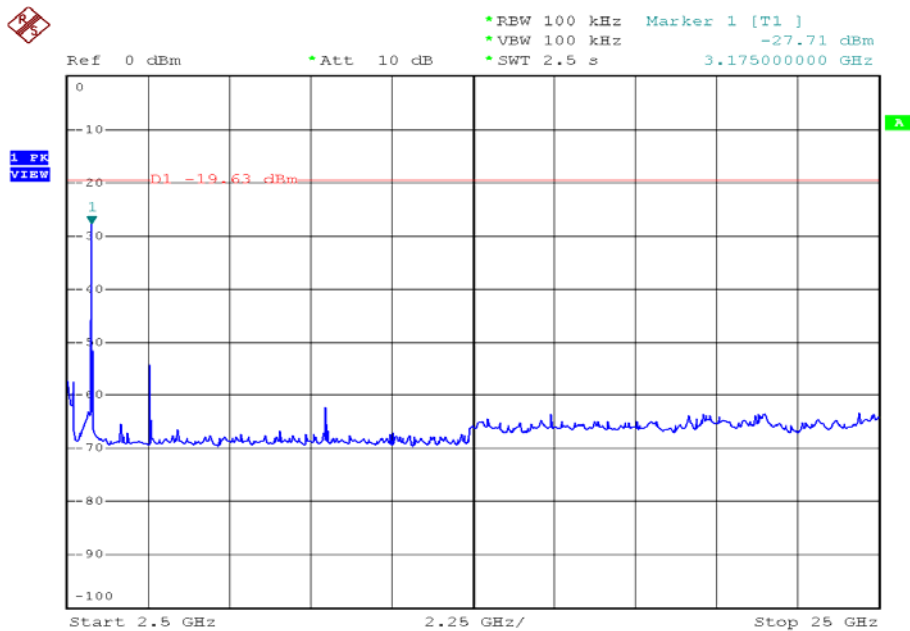
Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)	maximum value (dBm)
802.11b (11Mbps)	01	2412	3175.00	-27.71
	11	2462	3265.00	-37.26
802.11g (54Mbps)	01	2412	3175.00	-28.71
	11	2462	3265.00	-34.63
802.11n HT20 (65Mbps)	01	2412	3175.00	-28.48
	11	2462	3265.00	-34.26
802.11n HT40 (135Mbps)	03	2422	3220.00	-39.42
	09	2452	3265.00	-33.83



Modulation Standard: 802.11b (11Mbps)
Channel: 01



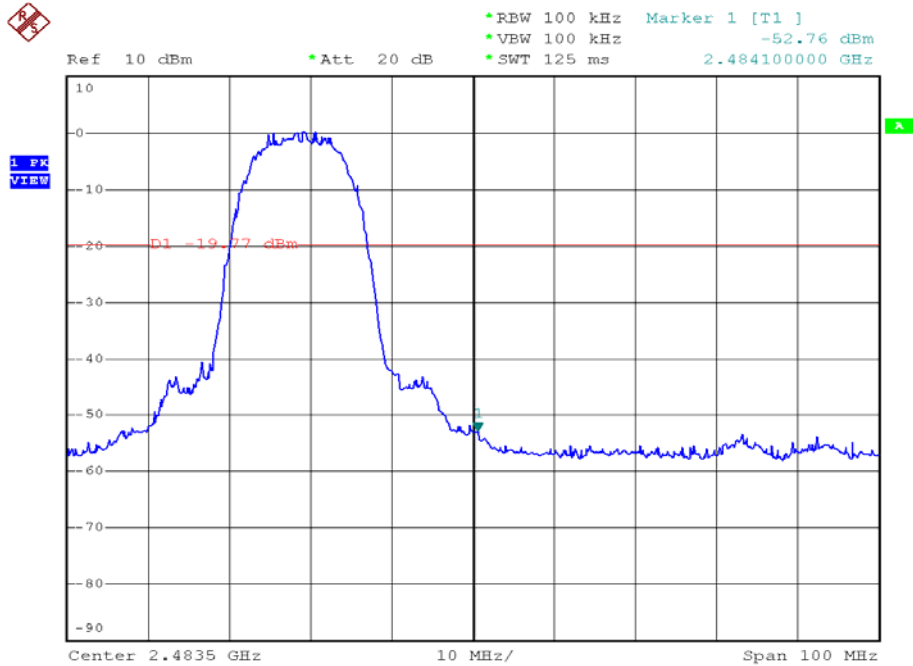
Date: 6.DEC.2008 13:28:44



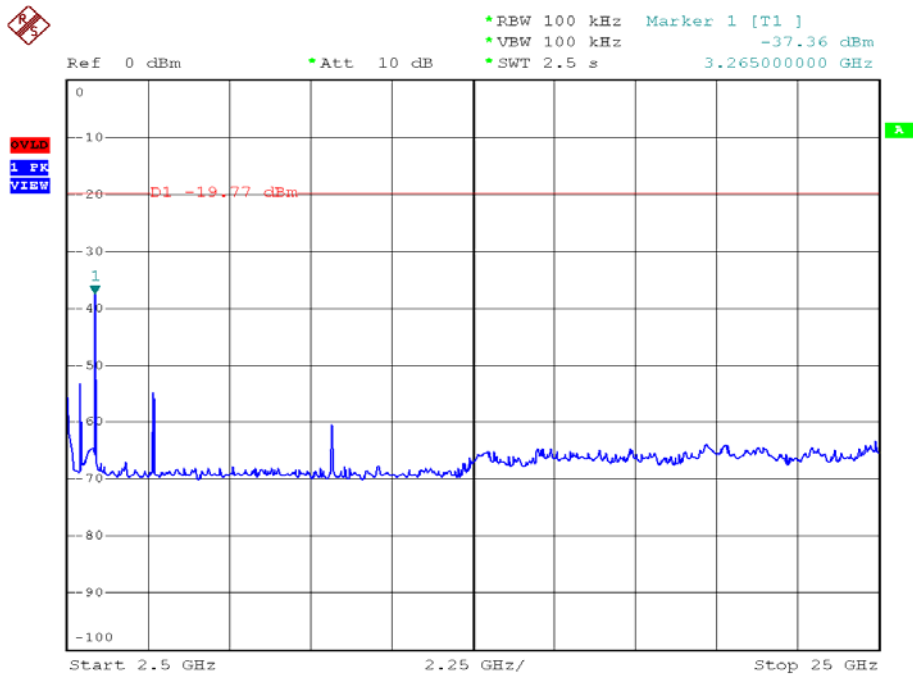
Date: 6.DEC.2008 13:35:43



Modulation Standard: 802.11b (11Mbps)
Channel: 11



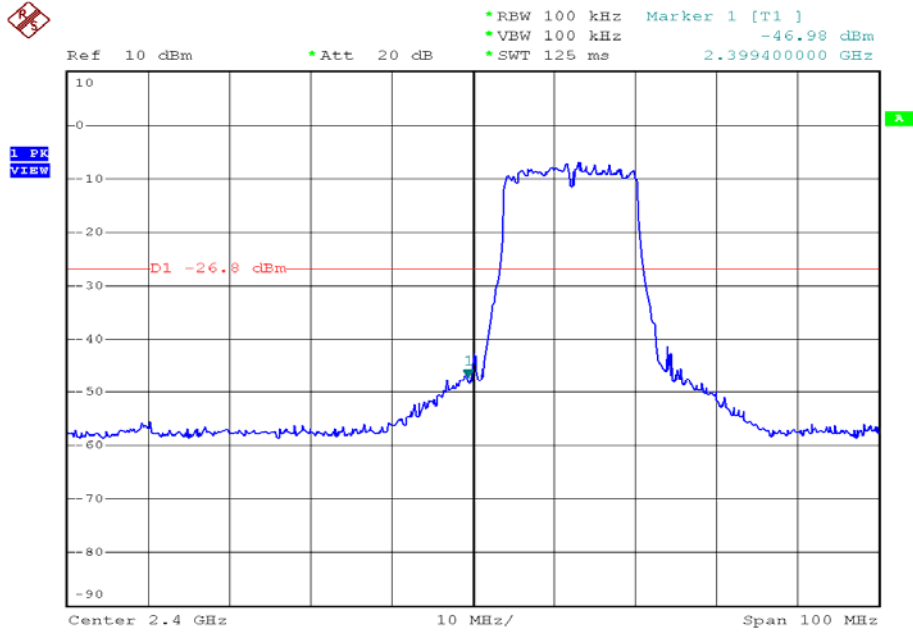
Date: 6.DEC.2008 13:55:59



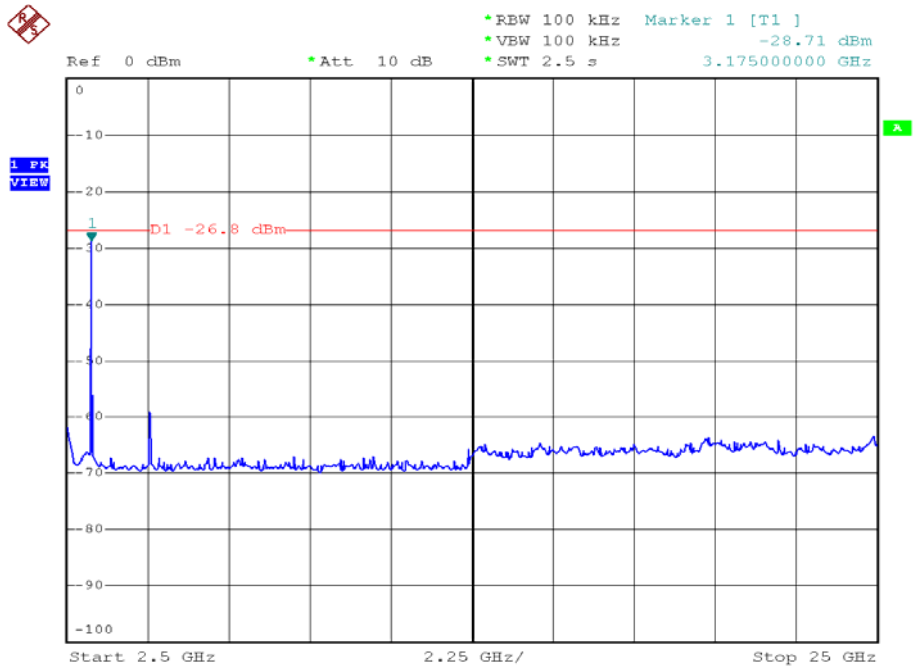
Date: 6.DEC.2008 13:57:54



Modulation Standard: 802.11g (54Mbps)
Channel: 01



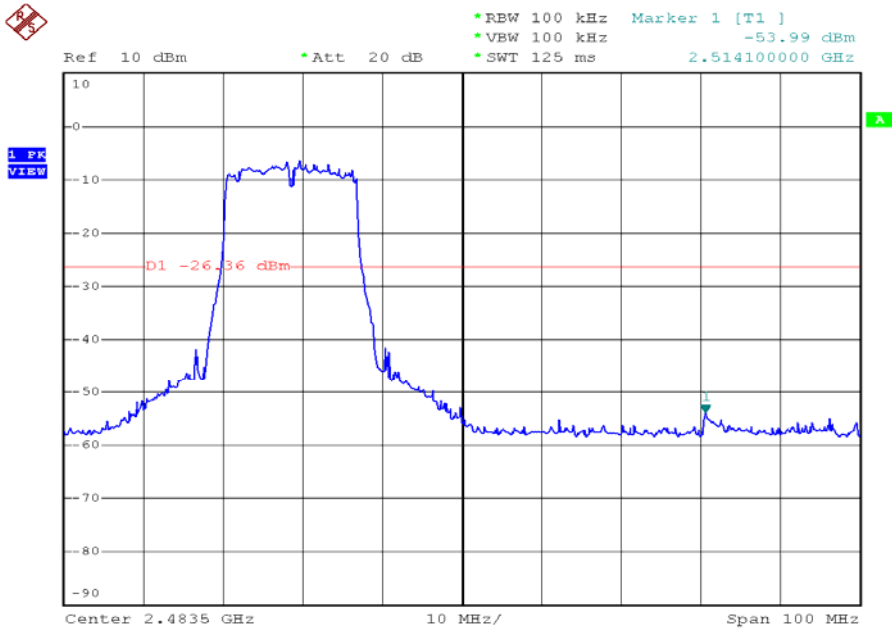
Date: 6.DEC.2008 14:06:05



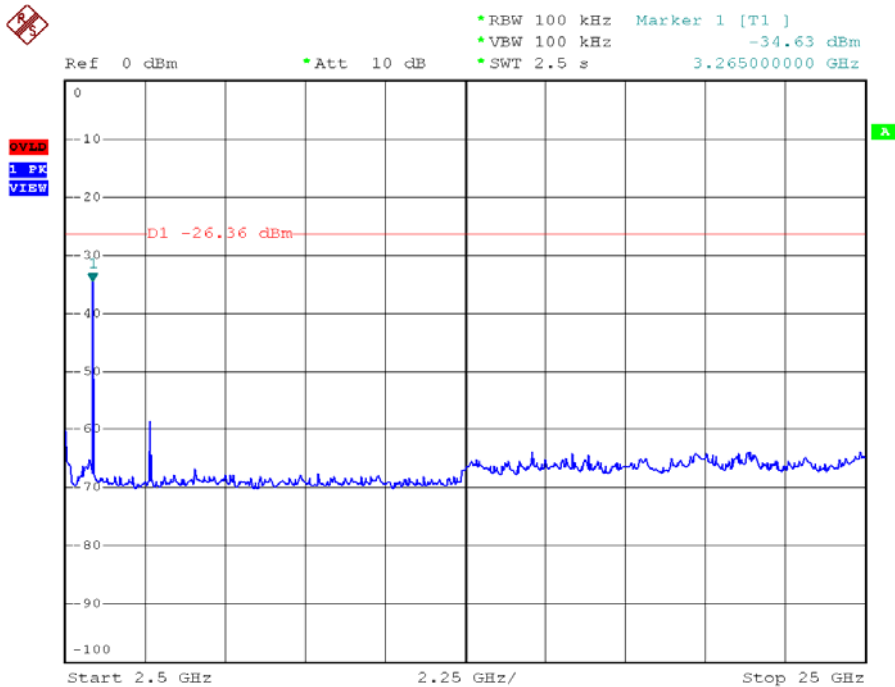
Date: 6.DEC.2008 14:08:45



Modulation Standard: 802.11g (54Mbps)
Channel: 11



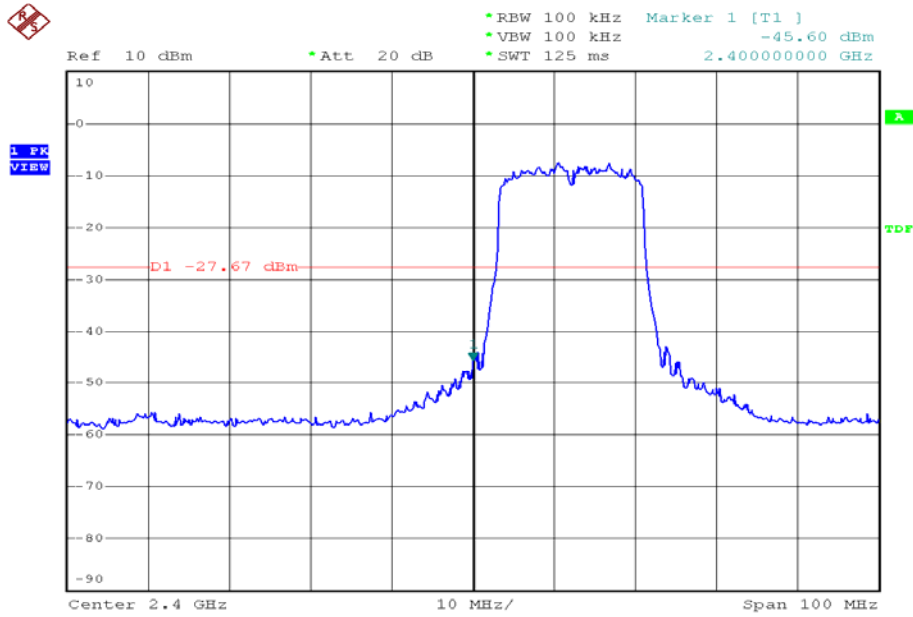
Date: 6.DEC.2008 14:35:24



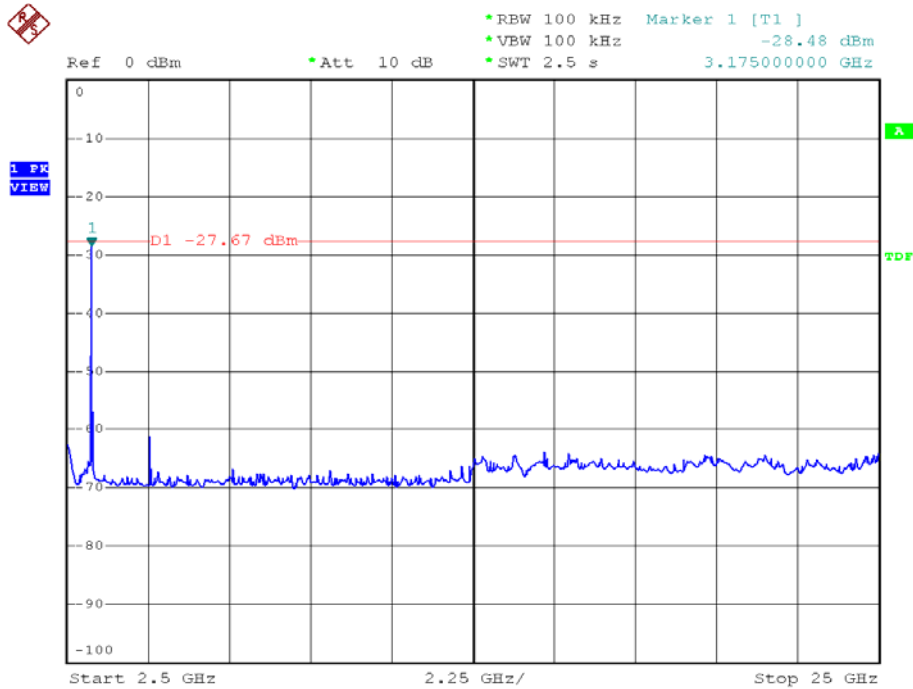
Date: 6.DEC.2008 14:38:51



Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 01



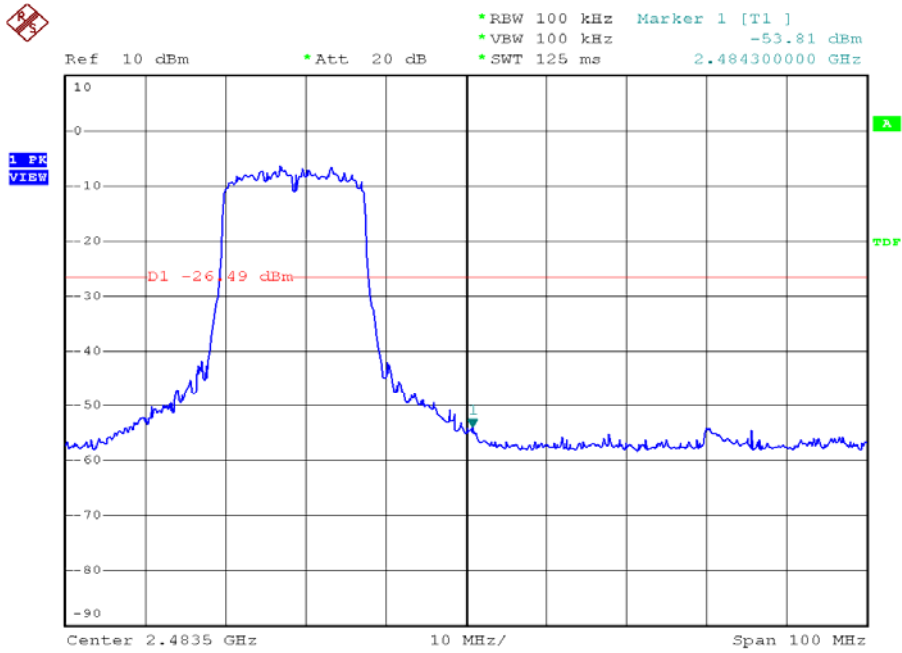
Date: 6.DEC.2008 14:47:43



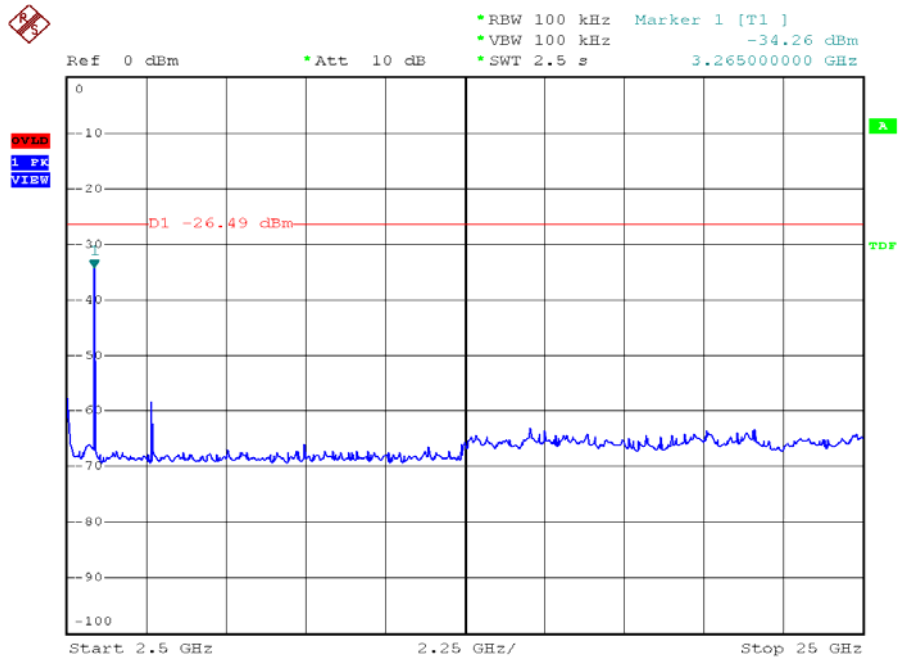
Date: 6.DEC.2008 14:50:14



Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 11



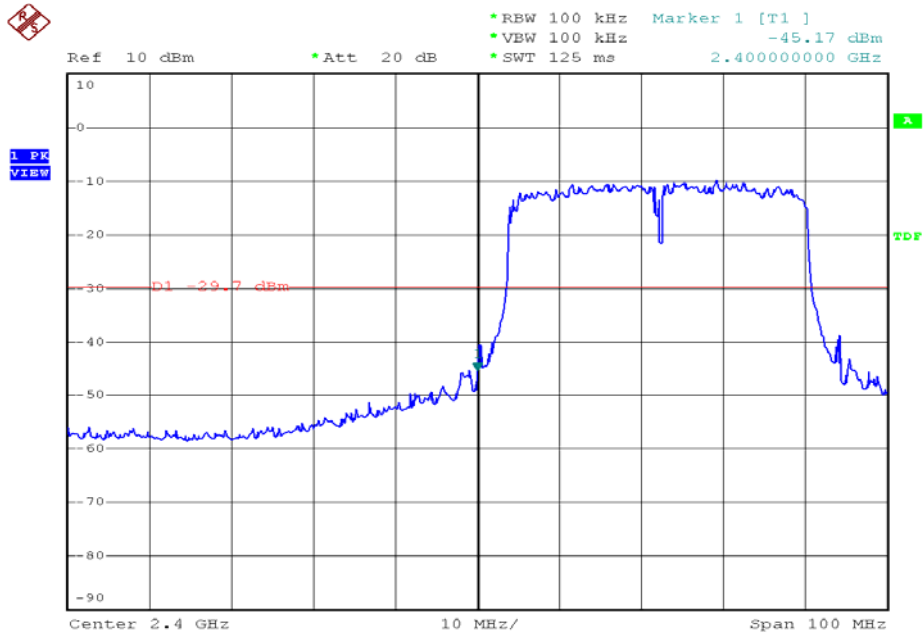
Date: 6.DEC.2008 14:53:51



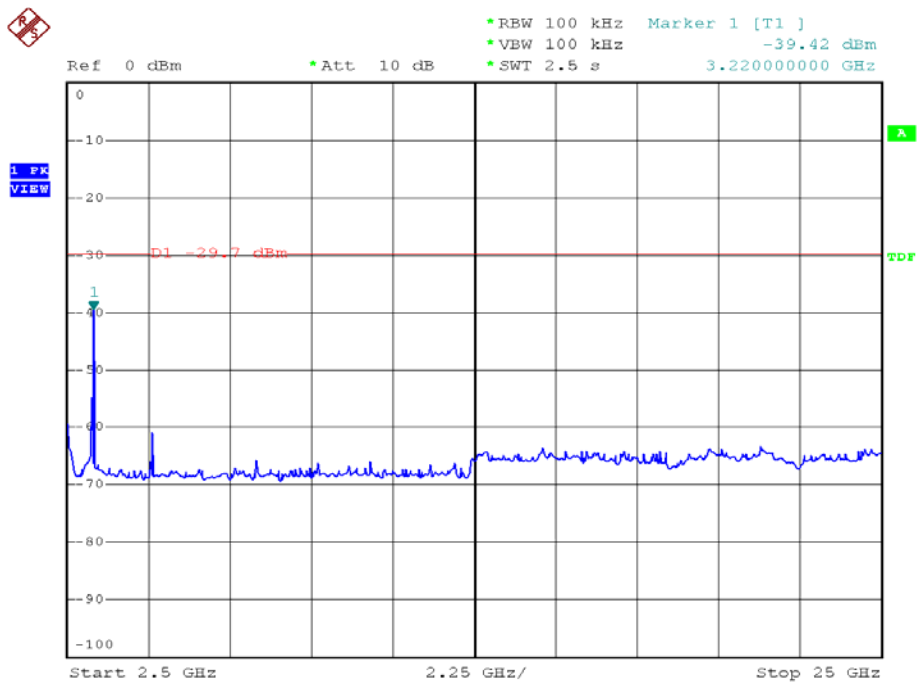
Date: 6.DEC.2008 14:56:04



Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 03



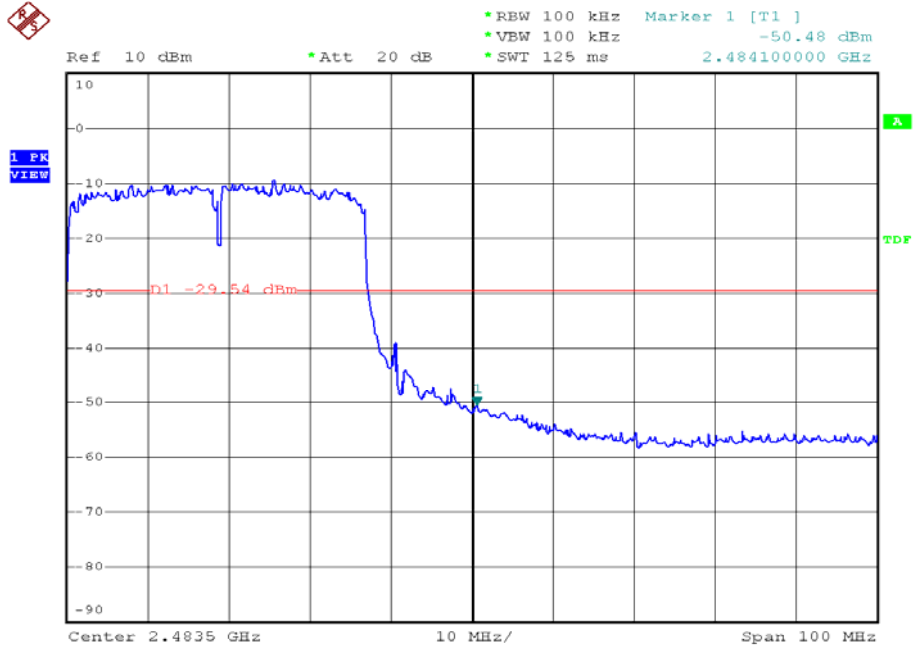
Date: 6.DEC.2008 15:10:45



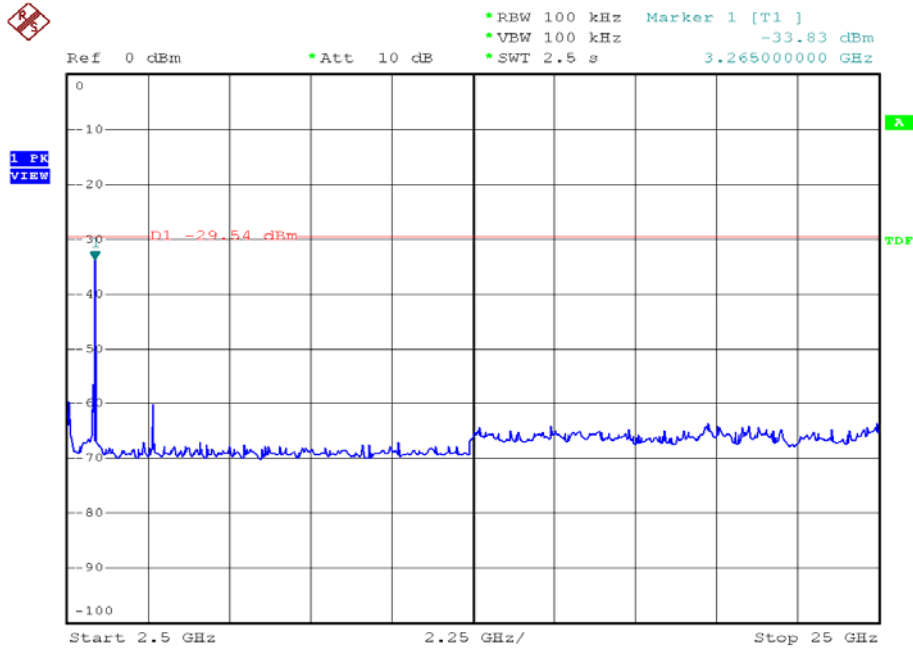
Date: 6.DEC.2008 15:13:03



Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 09



Date: 6.DEC.2008 15:17:38



Date: 6.DEC.2008 15:19:10

**8.6 Restrict Band Emission Measurement Data**

Test Date : Dec. 18, 2008
 Temperature : 18°C
 Humidity : 75%
 Atmospheric Pressure : 1007 hPa

Modulation Standard: IEEE 802.11b (11Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2363.24	H	50.21	-3.59	46.62	Peak	74	54	-27.38	224	1.0
2332.13	H	39.51	-3.70	35.80	Ave	74	54	-18.20	224	1.0
2389.25	V	51.13	-3.50	47.63	Peak	74	54	-26.37	215	1.0
2389.97	V	38.66	-3.50	35.16	Ave	74	54	-18.84	215	1.0
Channel 11						Fundamental Frequency: 2462 MHz				
2483.74	H	50.31	-3.16	47.15	Peak	74	54	-26.85	221	1.0
2483.51	H	39.02	-3.16	35.86	Ave	74	54	-18.14	221	1.0
2499.77	V	50.33	-3.10	47.22	Peak	74	54	-26.78	220	1.0
2497.49	V	38.25	-3.11	35.14	Ave	74	54	-18.86	220	1.0

Modulation Standard: IEEE 802.11g (54Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2339.78	H	50.64	-3.68	46.96	Peak	74	54	-27.04	223	1.0
2359.67	H	38.47	-3.61	34.87	Ave	74	54	-19.13	223	1.0
2433.37	V	50.48	-3.66	46.82	Peak	74	54	-27.18	223	1.0
2389.97	V	37.98	-3.50	34.48	Ave	74	54	-19.52	223	1.0
Channel 11						Fundamental Frequency: 2462 MHz				
2487.23	H	50.31	-3.15	47.16	Peak	74	54	-26.84	223	1.0
2483.58	H	38.31	-3.16	35.15	Ave	74	54	-18.85	223	1.0
2484.57	V	49.99	-3.16	46.84	Peak	74	54	-27.16	222	1.0
2496.47	V	38.19	-3.11	35.07	Ave	74	54	-18.93	222	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz



Test Date : Dec. 18, 2008
 Temperature : 18°C
 Humidity : 75%
 Atmospheric Pressure : 1007 hPa

Modulation Standard: IEEE 802.11n HT20 (65Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2374.16	H	50.37	-3.55	46.82	Peak	74	54	-27.18	216	1.0
2360.18	H	38.41	-3.60	34.81	Ave	74	54	-19.19	216	1.0
2355.08	V	49.99	-3.62	46.37	Peak	74	54	-27.63	232	1.0
2389.87	V	37.94	-3.50	34.44	Ave	74	54	-39.56	232	1.0
Channel 11						Fundamental Frequency: 2462 MHz				
2484.19	H	50.24	-3.16	47.08	Peak	74	54	-26.92	219	1.0
2483.58	H	38.42	-3.16	35.26	Ave	74	54	-18.74	219	1.0
2485.71	V	50.08	-3.15	46.93	Peak	74	54	-27.07	216	1.0
2494.00	V	38.18	-3.12	35.06	Ave	74	54	-18.94	216	1.0

Modulation Standard: IEEE 802.11n HT40 (135Mbps)

Channel 3						Fundamental Frequency: 2422 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading	Corrected Factor	Result (dBuV/m)	Remark	Limit@3m (dBuV/m)		Margin (dB)	Table (Deg.)	Ant High (m)
						Peak	Ave.			
2389.46	H	51.26	-3.50	47.77	Peak	74	54	-26.23	220	1.0
2389.87	H	39.03	-3.50	35.54	Ave	74	54	-18.46	220	1.0
2386.40	V	50.23	-3.51	46.72	Peak	74	54	-27.28	229	1.0
2389.87	V	38.57	-3.50	35.07	Ave	74	54	-18.93	229	1.0
Channel 9						Fundamental Frequency: 2452 MHz				
2484.31	H	50.95	-3.16	47.80	Peak	74	54	-26.20	219	1.0
2483.93	H	39.48	-3.16	36.32	Ave	74	54	-17.68	219	1.0
2497.11	V	50.31	-3.11	47.20	Peak	74	54	-26.80	234	1.0
2484.12	V	38.29	-3.16	35.14	Ave	74	54	-18.86	234	1.0

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz



9. Power Spectral Density

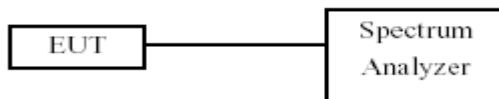
9.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2 Test Procedures

- The transmitter output was connected to spectrum analyzer.
- The spectrum analyzer's resolution bandwidth were set at 3KHz RBW and 30KHz VBW as that of the fundamental frequency. Set the sweep time=span/3KHz.
- The power spectral density was measured and recorded.
- The Sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

9.3 Test Setup Layout



9.4 Measurement equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2008/02/22	2009/02/21

9.5 Test Result and Data

Test Date: Dec. 06, 2008

Temperature: 22°C

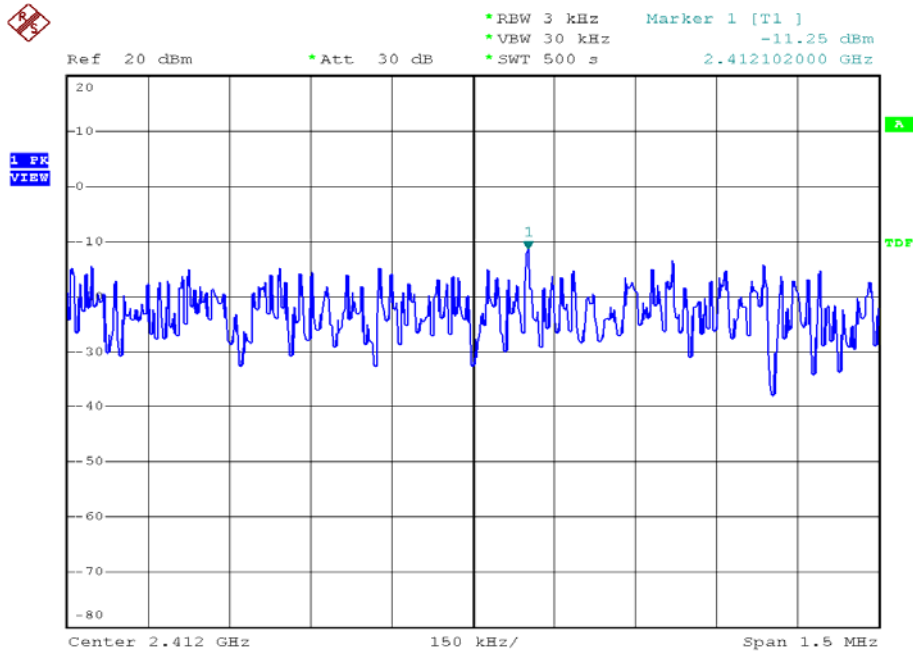
Atmospheric pressure: 1007 hPa

Humidity: 75%

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)
802.11b (11Mbps)	01	2412	-11.25
	06	2437	-11.27
	11	2462	-11.10
802.11g (54Mbps)	01	2412	-15.76
	06	2437	-15.36
	11	2462	-15.25
802.11n HT20 (65Mbps)	01	2412	-15.49
	06	2437	-14.88
	11	2462	-14.76
802.11n HT40 (135Mbps)	03	2422	-15.89
	06	2437	-15.52
	09	2452	-15.45

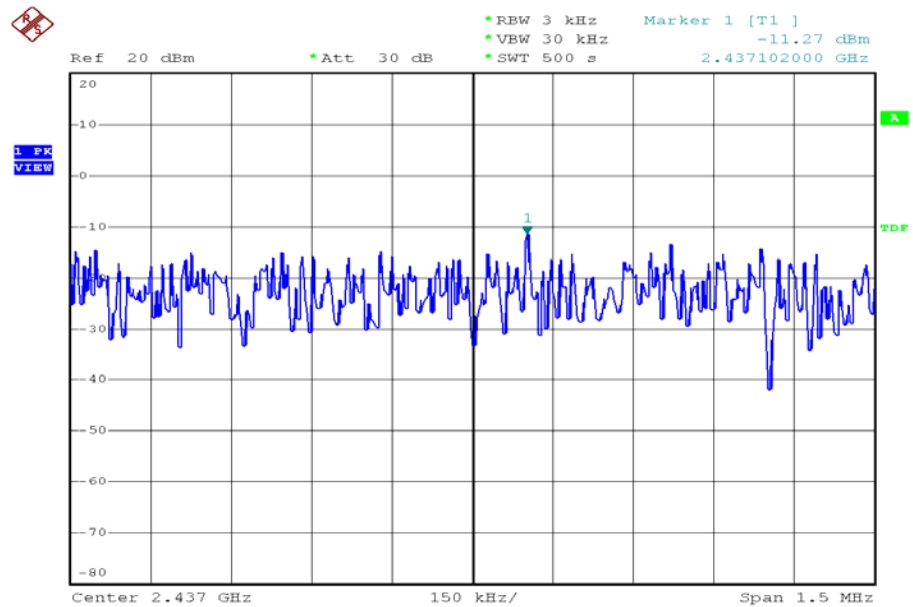


Modulation Standard: 802.11b (11Mbps)
Channel: 01



Date: 6.DEC.2008 16:29:50

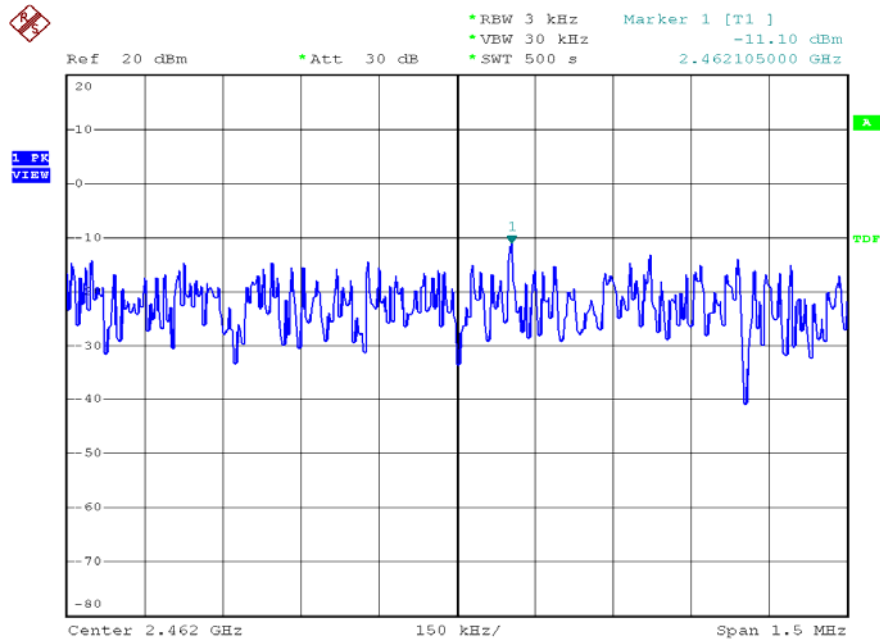
Modulation Standard: 802.11b (11Mbps)
Channel: 06



Date: 6.DEC.2008 16:49:45

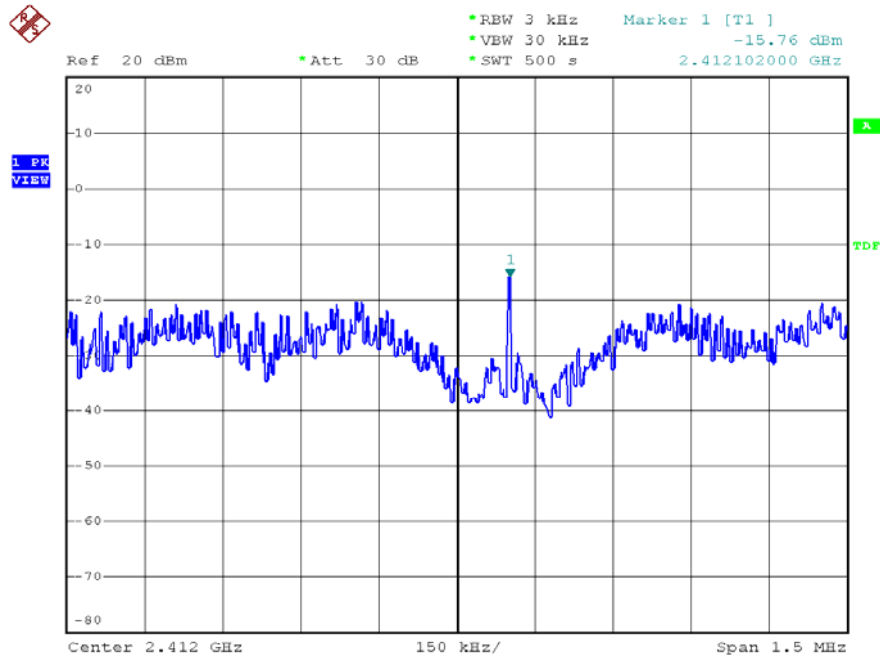


Modulation Standard: 802.11b (11Mbps)
Channel: 11



Date: 6.DEC.2008 17:08:41

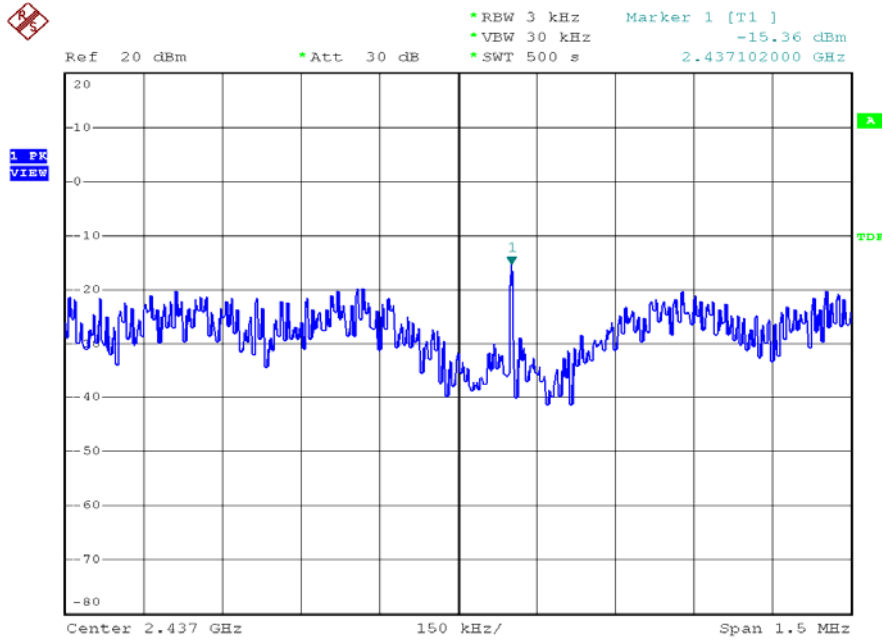
Modulation Standard: 802.11g (54Mbps)
Channel: 01



Date: 6.DEC.2008 17:32:11

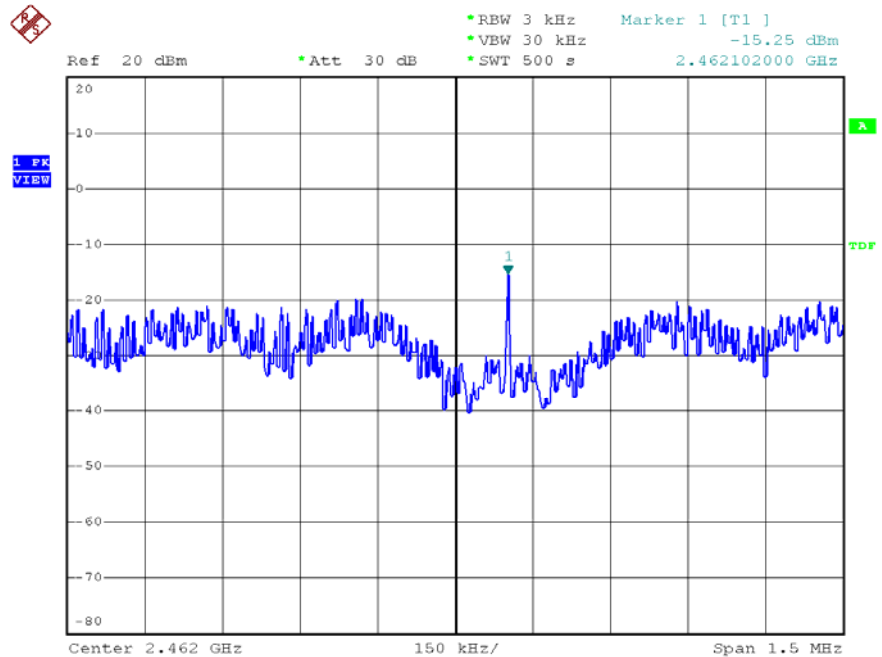


Modulation Standard: 802.11g (54Mbps)
Channel: 06



Date: 6.DEC.2008 17:51:03

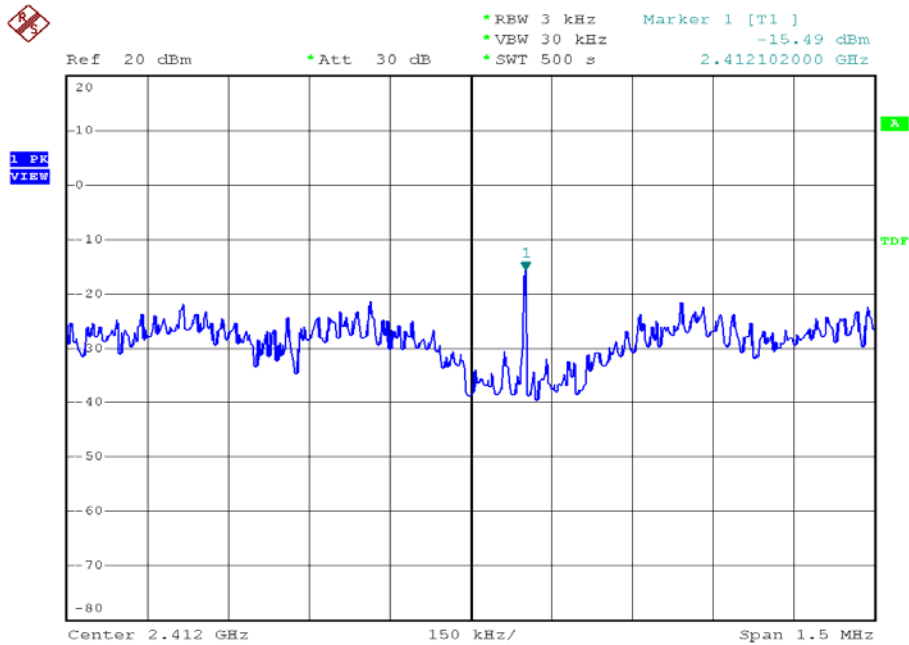
Modulation Standard: 802.11g (54Mbps)
Channel: 11



Date: 6.DEC.2008 18:02:18

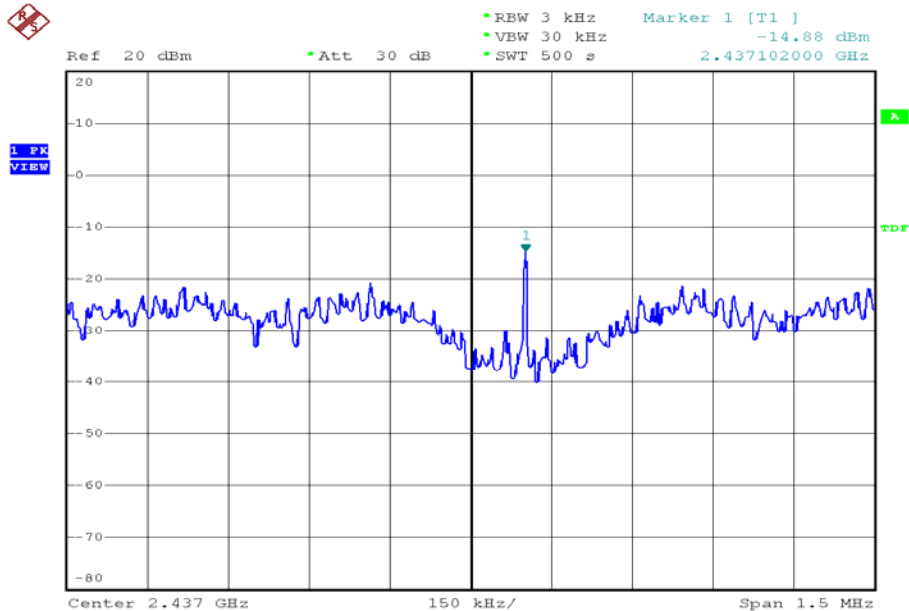


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 01



Date: 6.DEC.2008 18:09:02

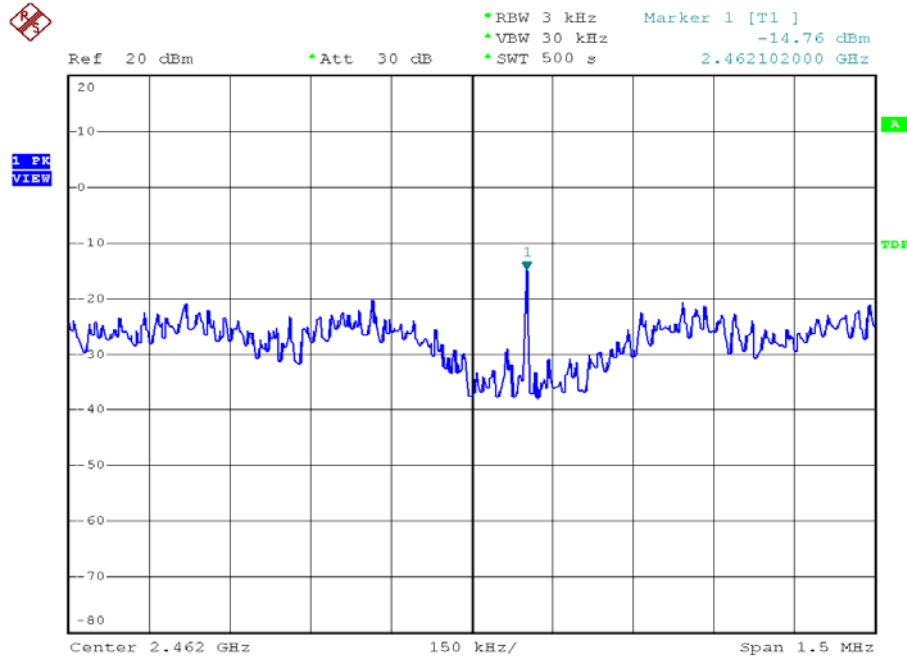
Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 06



Date: 6.DEC.2008 18:23:48

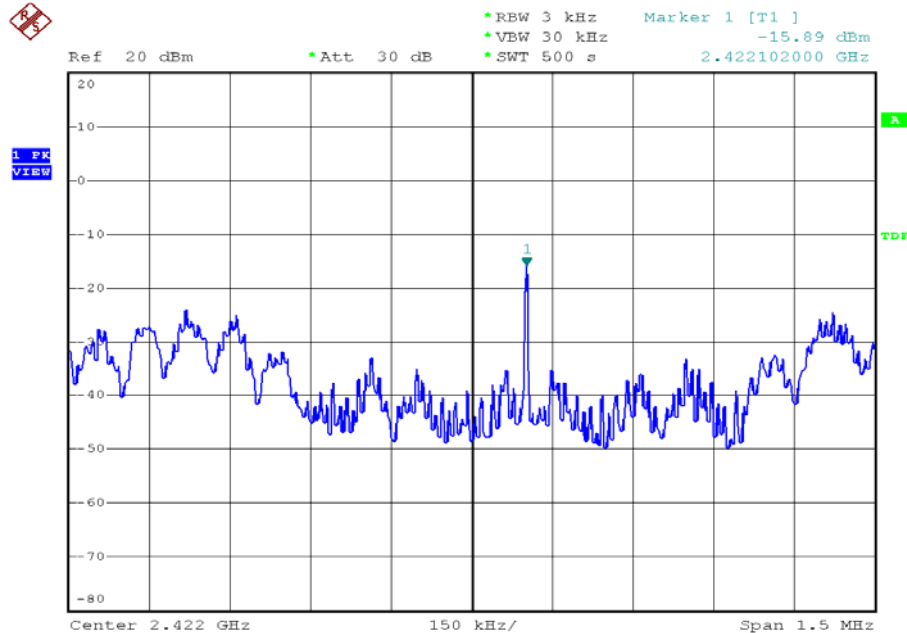


Modulation Standard: 802.11n HT20 (65Mbps)
Channel: 11



Date: 6.DEC.2008 18:40:22

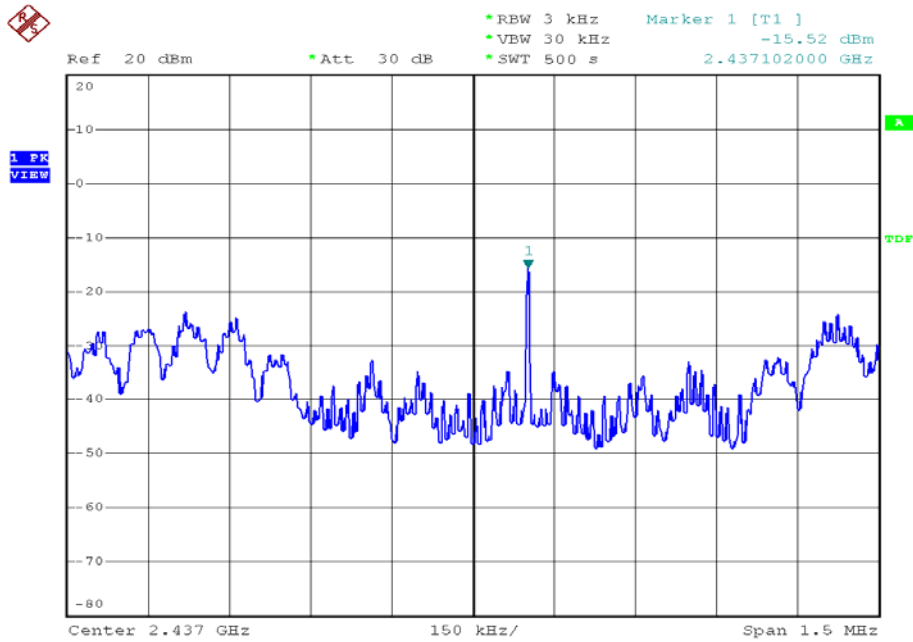
Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 03



Date: 6.DEC.2008 18:56:58

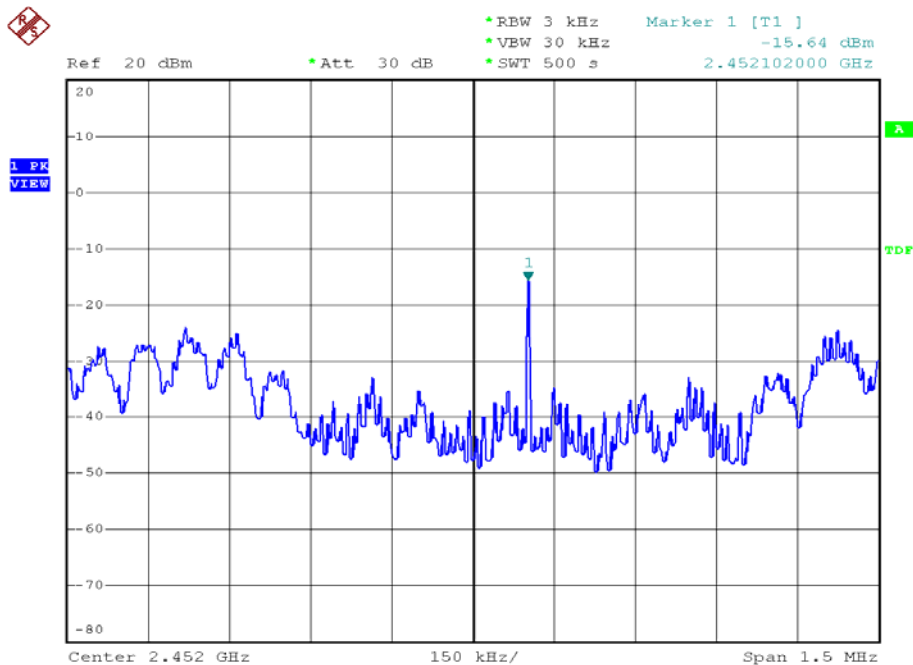


Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 06



Date: 6.DEC.2008 19:09:31

Modulation Standard: 802.11n HT40 (135Mbps)
Channel: 09



Date: 6.DEC.2008 19:23:45



10. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

10.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.