ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT AND INDUSTRY CANADA RSS 210 CLASS II PC REPORT

OF

Product Name:	**Notebook Computer**
Brand Name:	**Acer, Gateway, Packard Bell**
Model Name of Host	**NAV50, NAV60**
Model No. of WLAN Modular:	**RTL8191SE**
Model Difference:	**Model Name Difference:NAV50 for Acer, NAV60 for Gateway ,Packard Bell**
FCC ID:	**HLZ-RTL8191SE**
IC:	**1754F-RTL8191SE**
Report No.:	**EH/2010/10043**
Issue Date:	**Feb. 08, 2010**
FCC Rule Part:	**§15.247 / DTS**
IC Rule Part:	**RSS-210 issue 7:2007, Annex 8**
Prepared for:	**ACER INCORPORATED** **8F, 88, SEC. 1, HSIN TAI WU RD., HSICHIH** **TAIPEI HSIEN 221, TAIWAN, R. O. C.**
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Testing Laboratory
0513

VERIFICATION OF COMPLIANCE

Applicant:	Acer, Gateway, Packard Bell No.188,Wen Hua 2nd Road,Kuei Shan Hsiang,Tao Yuan Hsien,Taiwan
Product Name:	Notebook Computer
Brand Name:	Acer, Gateway, Packard Bell
FCC ID:	HLZ-RTL8191SE
IC:	1754F-RTL8191SE
Model Name of Host:	NAV50, NAV60
Model No. of WLAN Modular:	RTL8191SE
Model Difference:	Model Name Difference:NAV50 for Acer, NAV60 for Gateway ,Packard Bell
File Number:	EH/2010/10043
Date of test:	Jan. 27, 2010 ~ Feb. 06, 2010
Date of EUT Received:	Jan. 27, 2010

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247 and IC RSS 210 issue 7: 2007 Annex 8.
The test results of this report relate only to the tested sample identified in this report.

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	Vincent Su / Manager		

Version

Version No.	Date	Description
00	Feb. 08, 2010	Initial creation of document

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1 GENERAL INFORMATION

1.1 Product Description

Notebook General Information:

Notebook Applicant	Acer, Gateway, Packard Bell No.188,Wen Hua 2nd Road,Kuei Shan Hsiang,Tao Yuan Hsien,Taiwan	
Product name:	Notebook Computer	
Brand Name:	Acer, Gateway, Packard Bell	
Model Name:	NAV50, NAV60	
Model Difference:	Model Name Difference:NAV50 for Acer, NAV60 for Gateway ,Packard Bell	
Display size:	10.1''	
WLAN FCC ID:	HLZ-RTL8191SE	
WLAN IC ID:	1754F-RTL8191SE	
Class II Permissive change:	Adding an NAV50, NAV60 series laptop.	
Power Supply:	10.8 Vdc Li-lio battery or 19Vdc from AC/DC power adapter	
	Battery:	Model: UM09H56
	Adapter:	Model: IU40-11190-010S, Supplier: LEI

WLAN: 802.11 b/g/n module:

Modular report No.:	Report No: FR8D2518, SPORTON International Inc.
Frequency Range	2412MHz–2462MHz, 802.11 b/g and 802.11n HT20 2422MHz–2452MHz, 802.11n HT40
Channel number	11 channels for 802.11 b/g and 802.11n HT20 9 channels for 802.11n HT40
Output Power	802.11b :18.11dBm 802.11g :16.54dBm 802.11n_20M:16.48 dBm 802.11n_40M:16.52 dBm
Modulation Technology	DSSS, OFDM
Antenna Designation	Antenna Type :PIFA , Main: -2.83dBi , AUX:-1.96dBi
Modulation type	CCK, DQPSK, DBPSK for DSSS 64QAM. 16QAM, QPSK, BPSK for OFDM
Transition Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n 20MHz: 6.5/7.2/13/14.4/19.5/21.7/26/28.9/39/43.3/52//57.8/58.5/65.0/72.2 Mbps 802.11 n 40MHz: 13.5/15/27/30/40.5/45/54/60/81/90/108/120/121.5/135/150 Mbps
WLAN Module Model	RTL8191SE

The EUT is compliance with IEEE 802.11 b/g /n Standard.

This test report applies for 802.11b/g/n WLAN.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: HLZ-RTL8191SE** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules and
IC: 1754F-RTL8191SE filing to comply with Industry Canada RSS-210 issue 7: 2007 Annex 8.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003) and RSS-Gen: 2007.. Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003. FCC Registration Number are: 990257 and 236194, Canada Registration Number: 4620A-1.

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No. 29, Pau-Tou-Tsuo Valley Chia-Pau Tsuen, Linkou Hsiang, Taipei county, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 94644.

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna. according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

2.4 Configuration of Tested System

Fig. 2-1 Radiated Emission Configuration

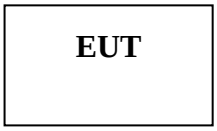


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Test soft ware	Realtek	Realtek RTL8192S PCI-E 802.11B/G/N 300M	Version: 5.1010.0930. 2008	N/A	N/A

3 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.247(b)/ §A8.4(2)	Peak Output Power	Compliant
§15.247(c)/ §A8.5	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.247(c)/ §A8.5	Spurious Emission	Compliant
§15.203/ RSS-GEN 7.1.4, RSS-210 issue 7,§A8.4	Antenna Requirement	Compliant

4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.
Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

802.11 b mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 1Mbps data rate are chosen for above testing.

802.11 g mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6Mbps data rate are chosen for above testing.

802.11 n mode(20M): Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6.5 Mbps data rate are chosen for conducted power testing.

802.11 n_40MHz: Lowest (2422MHz), Mid(2437MHz) and high (2452MHz) with 13.5 Mbps highest data rate are chosen for above testing.

5 PEAK OUTPUT POWER MEASUREMENT

5.1 Standard Applicable:

According to §15.247(a)(2), (b)

(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(c) Operation with directional antenna gains greater than 6 dBi.

(1) Fixed point-to-point operation:

(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

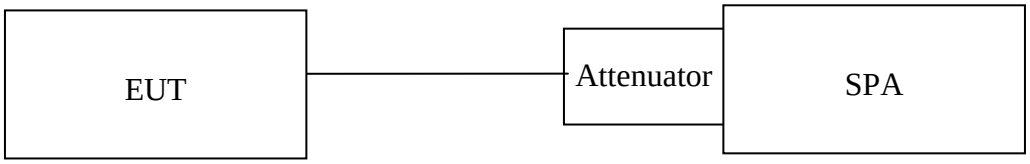
(ii) Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

According to RSS-210 issue 7,§A8.4(2), For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, the maximum conducted output power shall not exceed 1 W. For all other frequency hopping systems, the maximum peak conducted output power shall not exceed 0.125 W.

5.2 Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2009	07/03/2010
Spectrum Analyzer	R&S	FSP 40	100034	02/22/2009	02/21/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	01/05/2010	01/04/2011
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2009	07/04/2010

5.3 .Test Set-up:



5.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum. (Channel power function, RBW =1, VBW = 3MHz, Bandwidth=26dB Emission Bandwidth)
3. Peak power is then measured using internal channel power integration function of SPA.
4. Power is integrated over a bandwidth greater than or equal to 26dBc bandwidth
5. Record the max.reading.
6. Repeat above procedures until all frequency measured was completed.

Note: occupied bandwidth can be referenced to modular report: FR8D2518

5.5 Measurement Result:

Peak Output Power

802.11b

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	18.11	0.00	18.11	0.06471	1
2437.00	17.62	0.00	17.62	0.05781	1
2462.00	17.72	0.00	17.72	0.05916	1

802.11g

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	16.54	0.00	16.54	0.04508	1
2437.00	16.52	0.00	16.52	0.04487	1
2462.00	15.15	0.00	15.15	0.03273	1

802.11n(20M)

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2412.00	16.39	0.00	16.39	0.04355	1
2437.00	16.48	0.00	16.48	0.04446	1
2462.00	15.07	0.00	15.07	0.03214	1

802.11n(40M)

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2422.00	16.52	0.00	16.52	0.04487	1
2437.00	16.49	0.00	16.49	0.04457	1
2452.00	14.50	0.00	14.50	0.02818	1

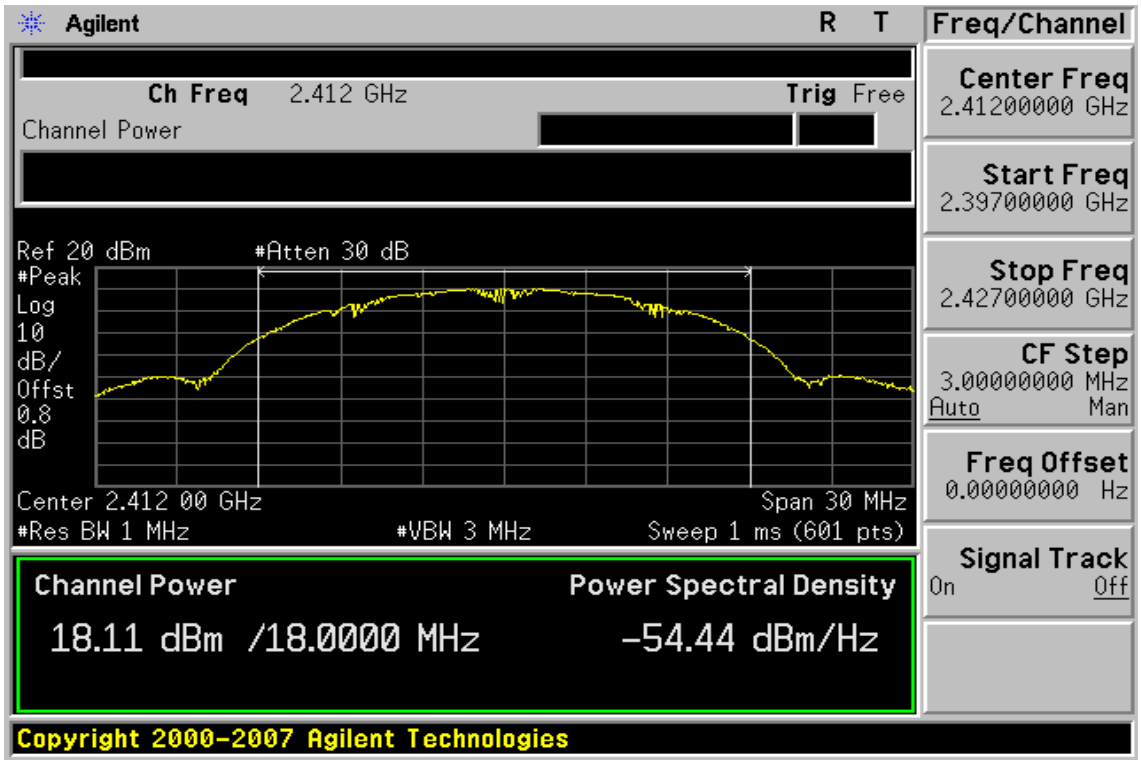
Cable loss = 0

**Note: Offset 0.8dB*

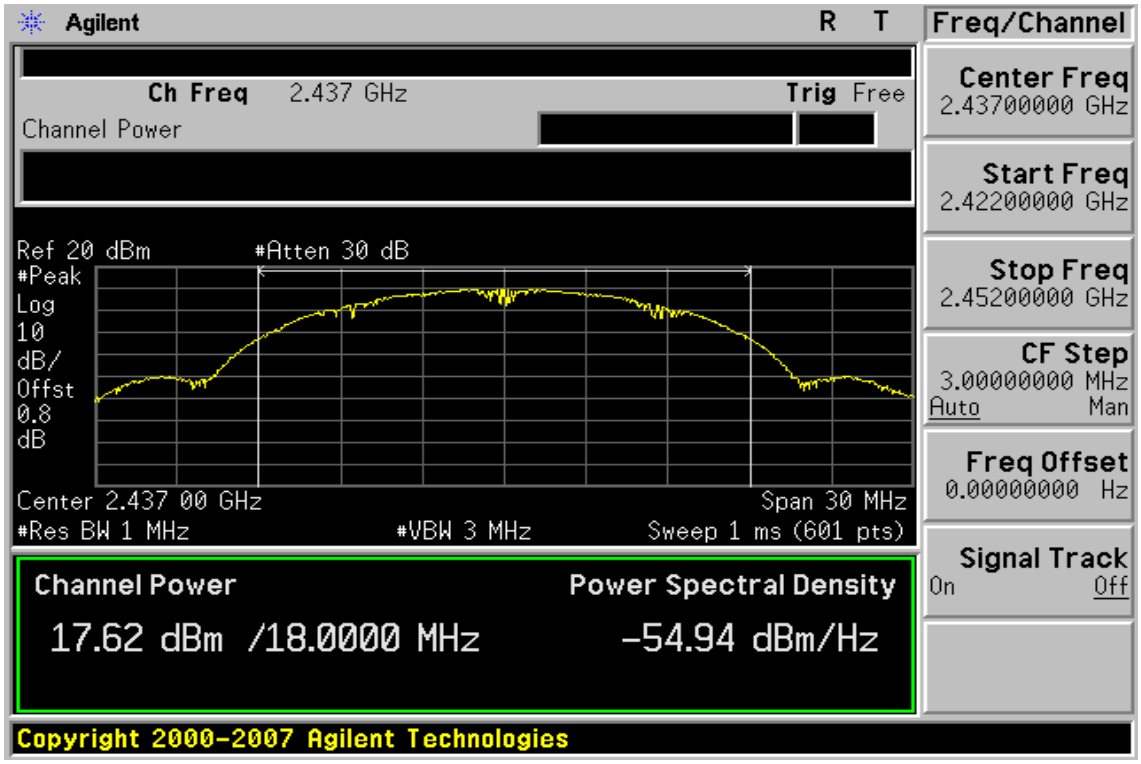
Note: Refer to next page for plots.

802.11b, 1Mbps

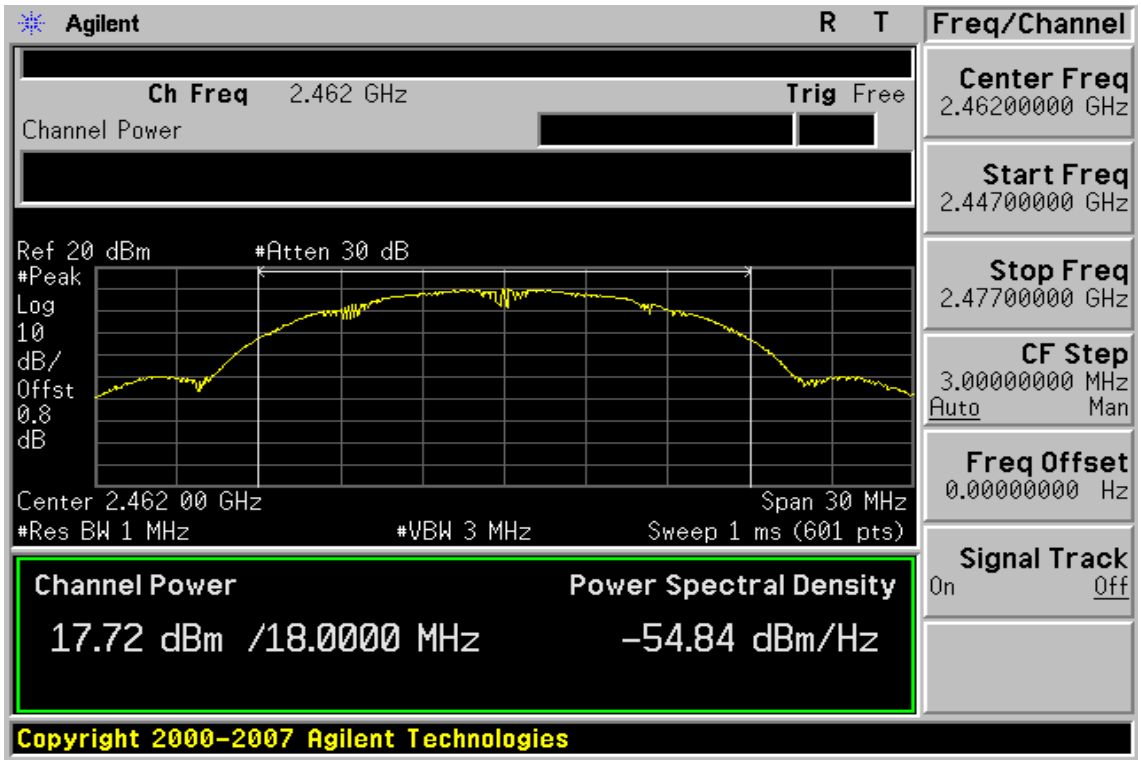
Power Output Plot (CH Low)



Power Output Plot (CH Mid)

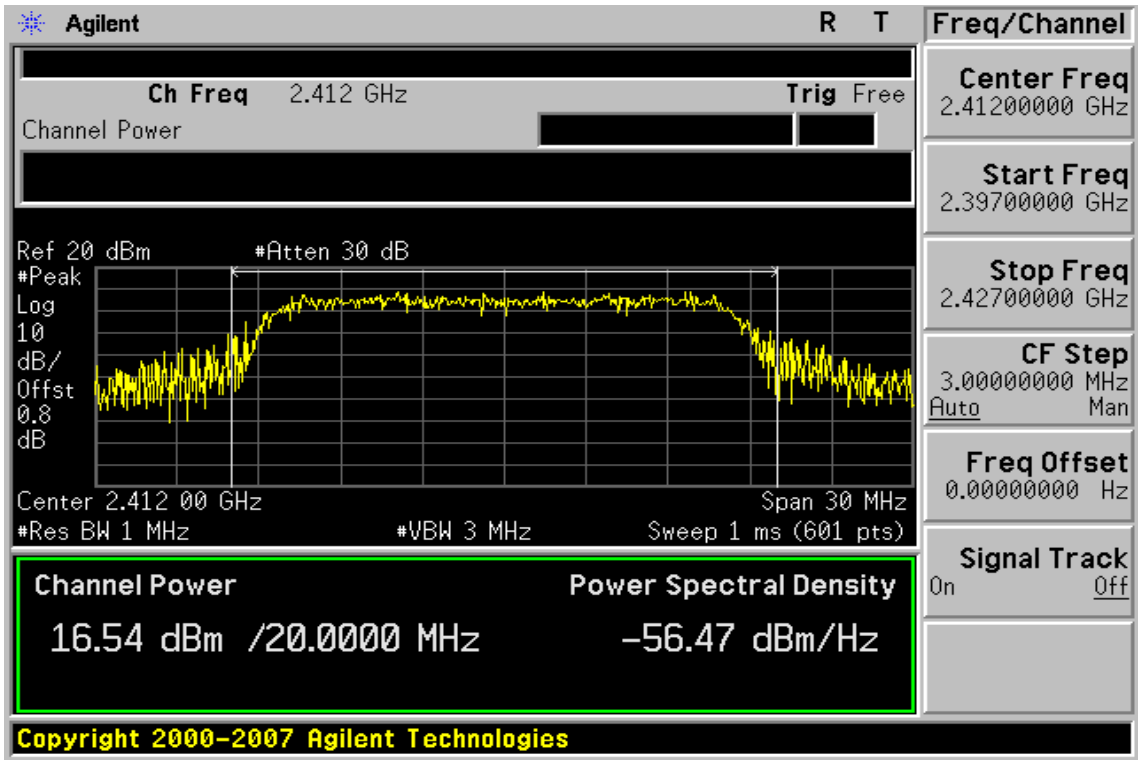


Power Output Plot (CH High)

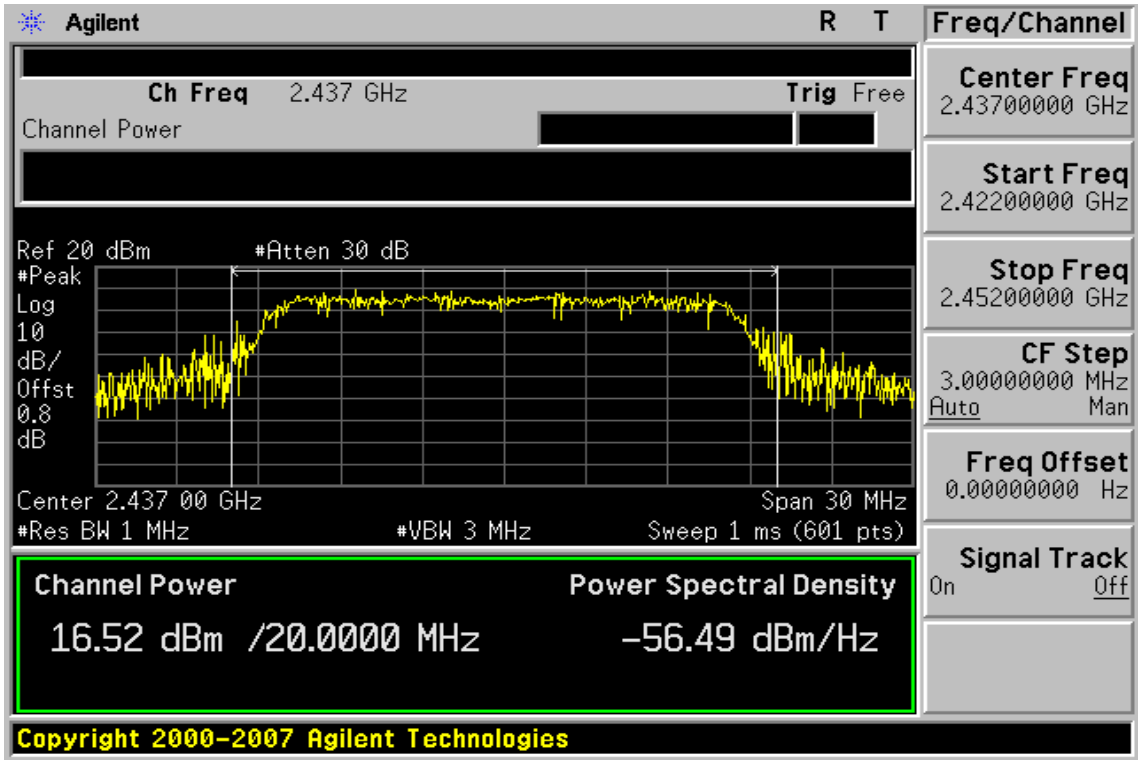


802.11g, 6Mbps

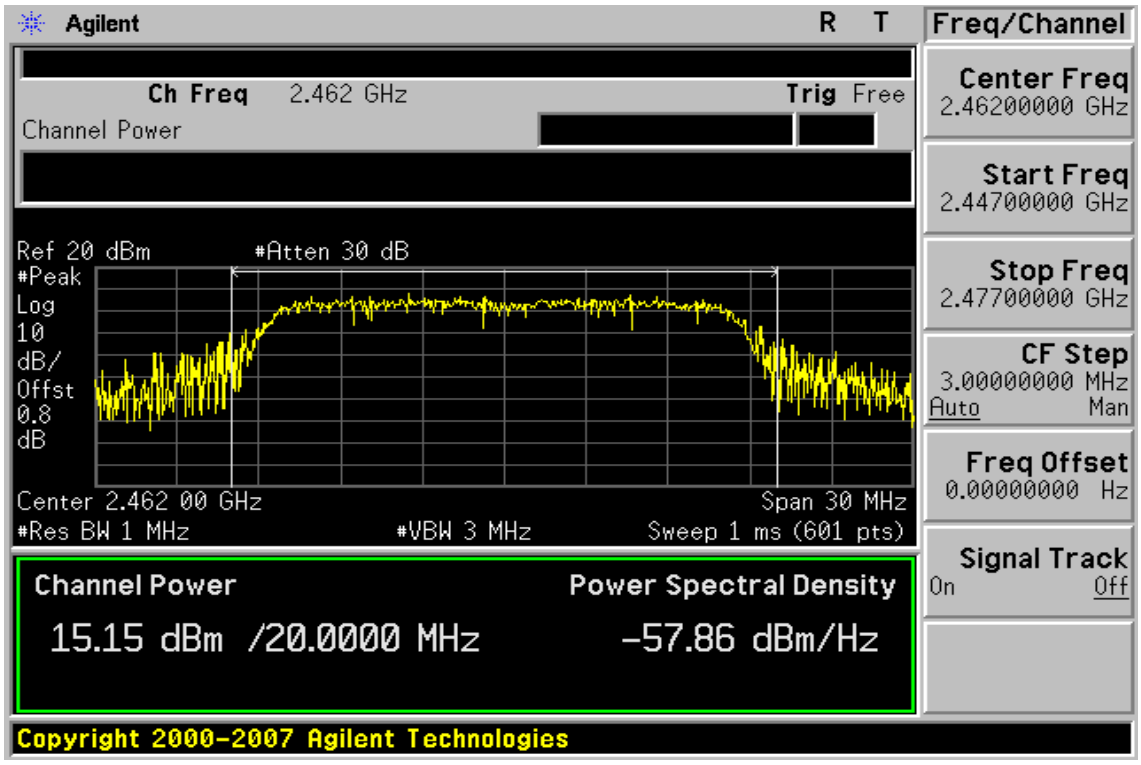
Power Output Plot (CH Low)



Power Output Plot (CH Mid)

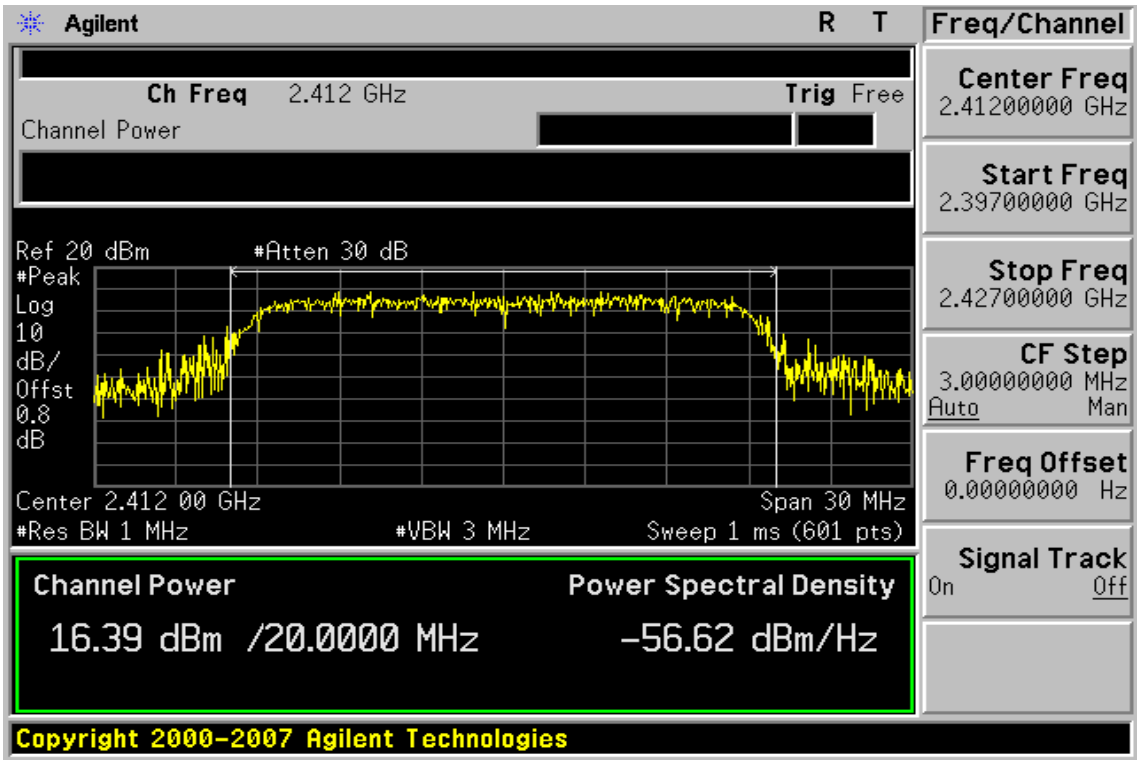


Power Output Plot (CH High)

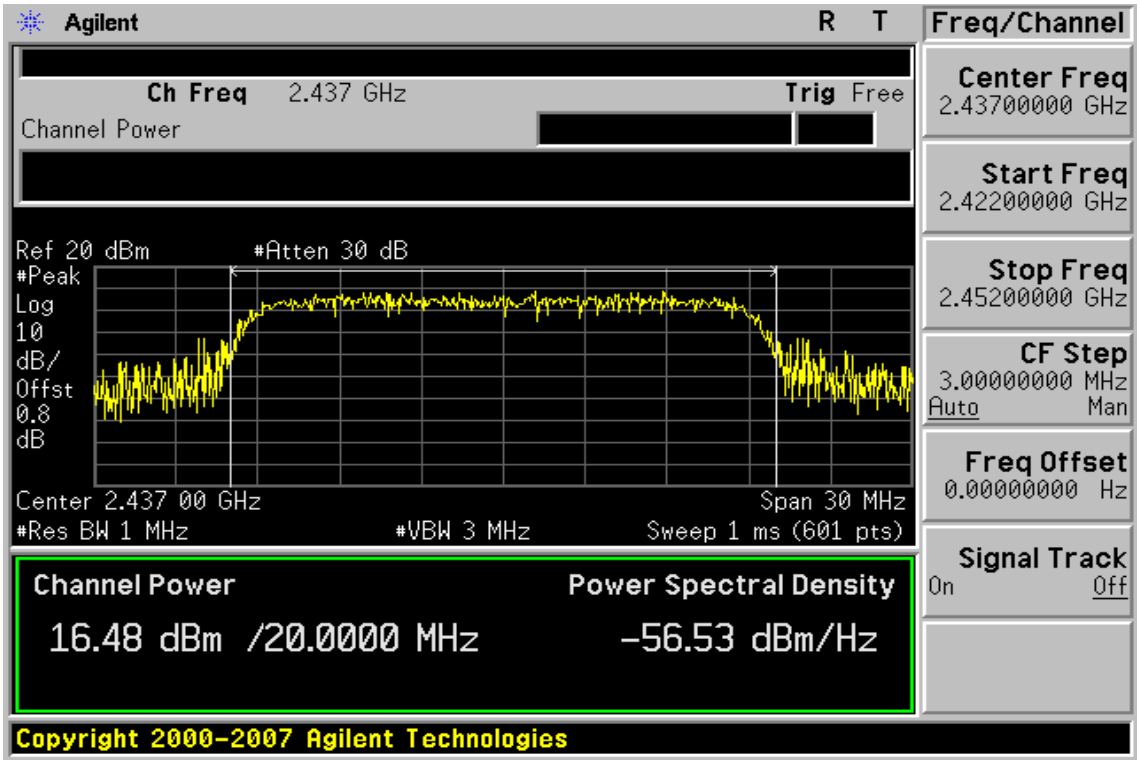


802.11n (20M), 6.5Mps

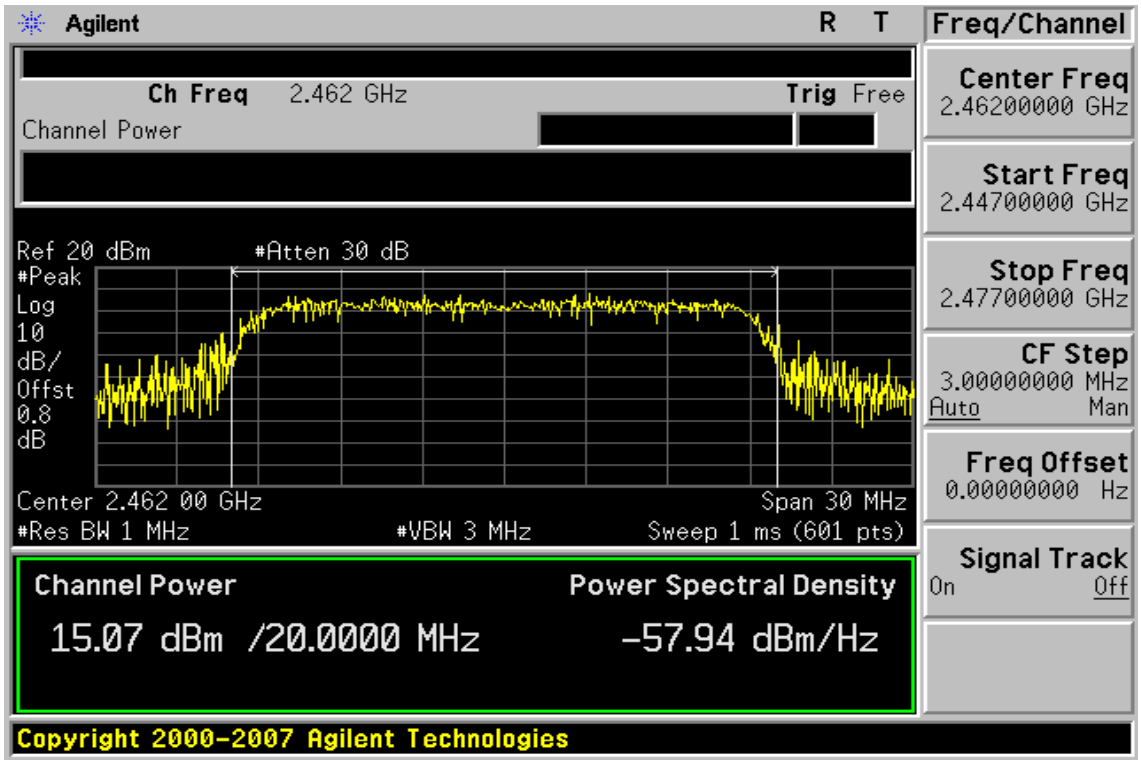
Power Output Plot (CH Low)



Power Output Plot (CH Mid)

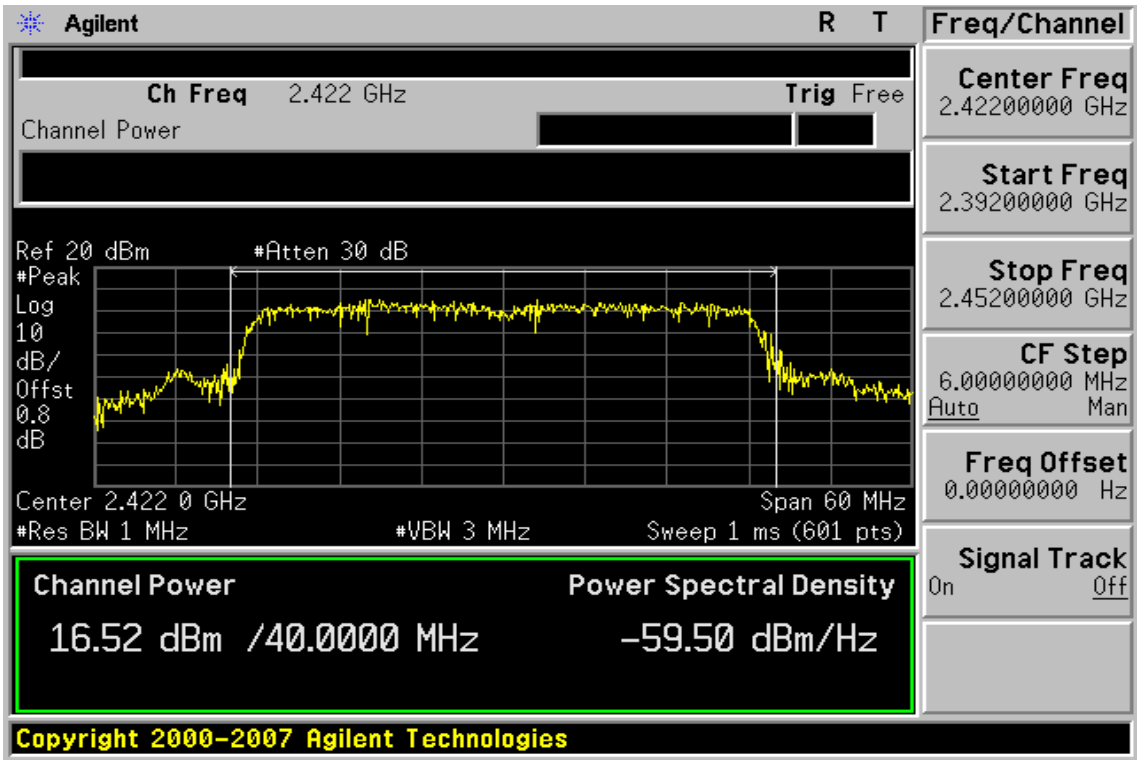


Power Output Plot (CH High)

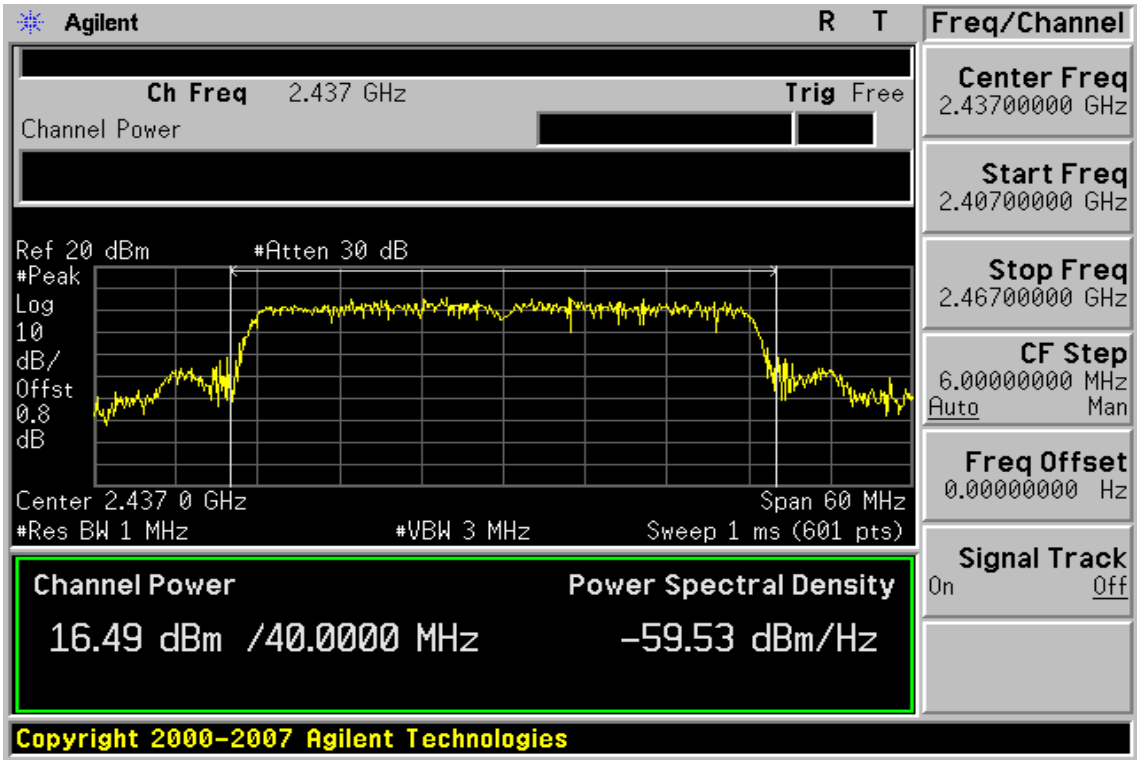


802.11n (40M), 13.5Mps

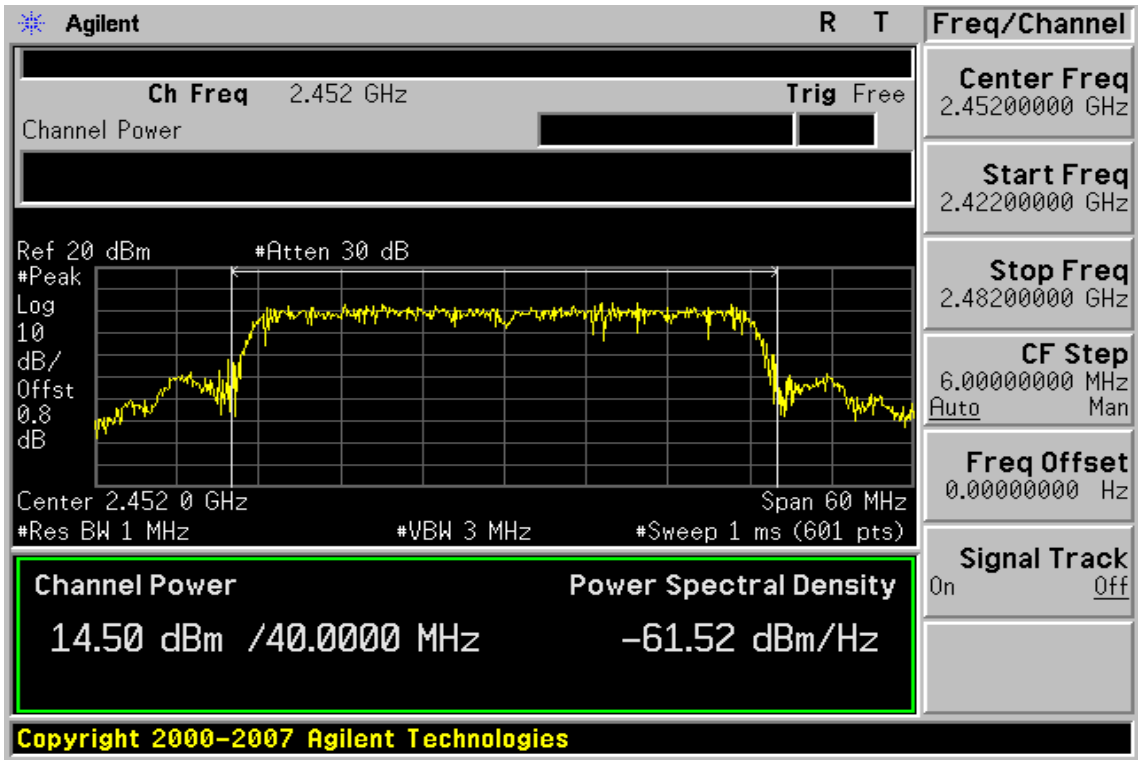
Power Output Plot (CH Low)



Power Output Plot (CH Mid)



Power Output Plot (CH High)



6 100KHz BANDWIDTH OF BAND EDGES MEASUREMENT

6.1 Standard Applicable:

According to §15.247(c), in any 100 KHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in 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, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in15.209(a).

According to RSS-210 issue 7,§A8.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

6.2 Measurement Equipment Used:

6.2.1. Conducted Emission at antenna port:

Refer to section 6.2 for details.

6.2.2. Radiated emission:

966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2010	02/11/2011
Loop antenna	MESSTEC	FLA30	03/10086	07/08/2009	07/07/2011
Bilog Antenna	SCHWAZBECK	VULB9160	3158	11/29/2009	11/28/2011
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2009	11/29/2010
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2010	01/04/2011
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	01/05/2010	01/04/2011
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2010	01/04/2011
3m Site	SGS	966 chamber	N/A	11/08/2009	11/09/2010

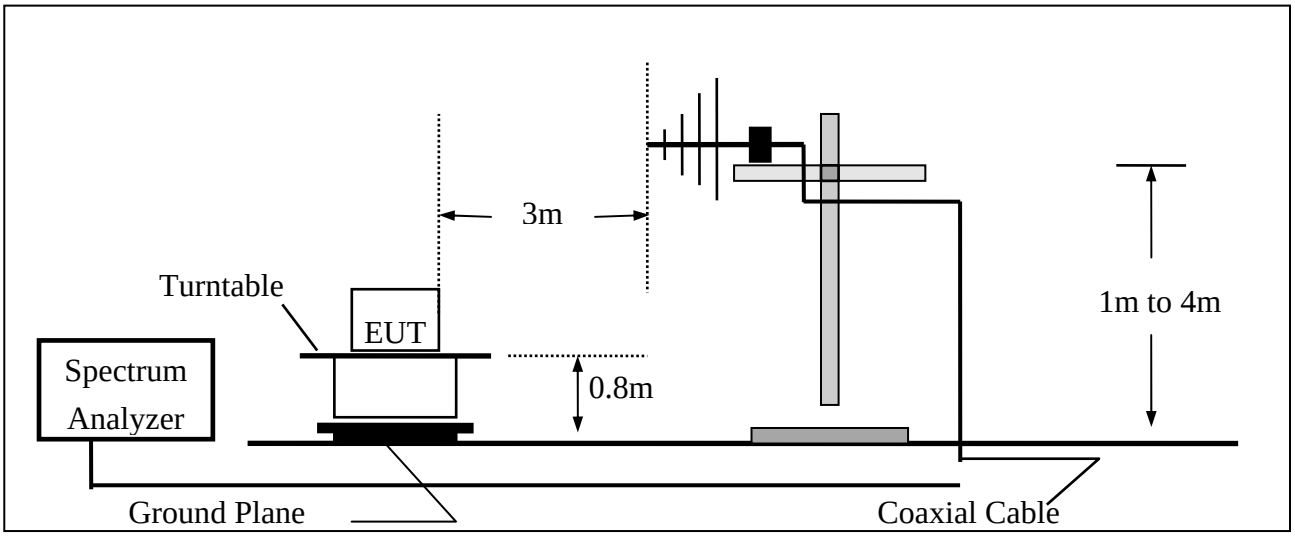
6.3 Test SET-UP:

6.3.1 Conducted Emission at antenna port:

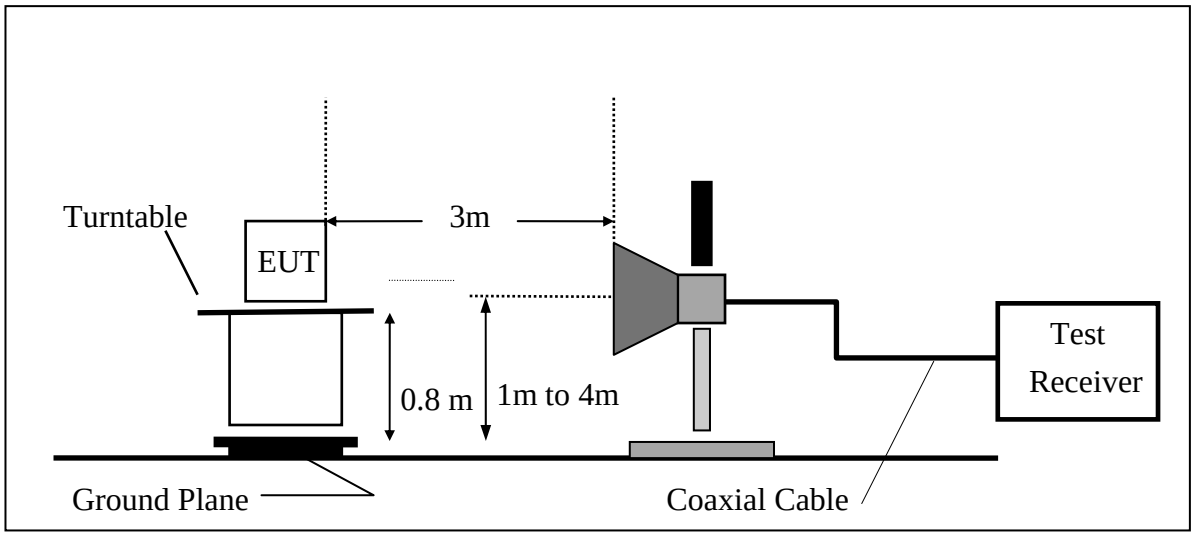
Refer to section 6.3 for details.

6.3.2 Radiated emission:

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



6.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW, VBW=100KHz, Span=25MHz, Sweep = auto
5. Mark Peak, 2.390GHz and 2.4835GHz and record the max. level.
6. Repeat above procedures until all frequency measured were complete.

6.5 Field Strength Calculation:

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

6.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

Radiated Emission: 802.11 b mode

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Tmperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	62.86	53.03	-10.76	52.10	42.27	74.00	54.00	-11.73	Av

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	62.98	53.47	-10.76	52.22	42.71	74.00	54.00	-11.29	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 b mode

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	62.55	52.95	-10.46	52.09	42.49	74.00	54.00	-11.51	Av

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	63.18	53.11	-10.46	52.72	42.65	74.00	54.00	-11.35	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 g mode

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Tmperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	65.94	55.68	-10.76	55.18	44.92	74.00	54.00	-9.08	Av

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	71.75	58.23	-10.76	60.99	47.47	74.00	54.00	-6.53	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 g mode

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	63.65	53.77	-10.46	53.19	43.31	74.00	54.00	-10.69	Av

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	66.05	57.22	-10.46	55.59	46.76	74.00	54.00	-7.24	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11n HT20 mode

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Tmperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	68.20	58.35	-10.76	57.44	47.59	74.00	54.00	-6.41	Av

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	75.24	62.28	-10.76	64.48	51.52	74.00	54.00	-2.48	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11n HT20 mode

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	63.96	54.27	-10.46	53.50	43.81	74.00	54.00	-10.19	Av

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	69.08	60.11	-10.46	58.62	49.65	74.00	54.00	-4.35	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11n HT40 mode

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2422 MHz	Test By	Brian
Tmperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	64.09	55.20	-10.76	53.33	44.44	74.00	54.00	-9.56	Av

Operation Mode	TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2422 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2390.00	69.11	60.35	-10.76	58.35	49.59	74.00	54.00	-4.41	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11n HT40 mode

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2452 MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	65.41	55.98	-10.46	54.95	45.52	74.00	54.00	-8.48	Av

Operation Mode	TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2452 MHz	Test By	Brian
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	70.06	61.03	-10.46	59.60	50.57	74.00	54.00	-3.43	Av

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column。

(3) Spectrum Peak Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

7 SPURIOUS RADIATED EMISSION TEST

7.1 Standard Applicable

According to §15.247(c), all other emissions outside these bands shall not exceed the general radiated emission limits specified in §15.209(a). And according to §15.33(a)(1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

According to RSS-210 issue 7,§A8.5, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

7.2 Measurement Equipment Used:

7.2.1. Conducted Emission at antenna port:

Refer to section 6.2 for details.

7.2.2. Radiated emission:

Refer to section 7.2.2 for details.

7.3 Test SET-UP:

7.3.1. Conducted Emission at antenna port:

Refer to section 6.3 for details.

7.3.2. Radiated emission:

Refer to section 7.3 for details.

7.4 Measurement Procedure:

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. When measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. Repeat above procedures until all frequency measured were complete.

7.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

7.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode	802.11b TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
232.73	V	Peak	58.58	-30.08	28.50	46.00	-17.50
349.13	V	Peak	59.66	-27.22	32.44	46.00	-13.56
407.33	V	Peak	57.25	-25.84	31.41	46.00	-14.59
458.74	V	Peak	52.00	-24.91	27.09	46.00	-18.91
814.73	V	Peak	55.18	-20.00	35.18	46.00	-10.82
824.43	V	Peak	56.74	-19.93	36.81	46.00	-9.19
140.58	H	Peak	49.60	-27.44	22.16	43.50	-21.34
235.64	H	Peak	54.40	-29.99	24.41	46.00	-21.59
349.13	H	Peak	55.48	-27.22	28.26	46.00	-17.74
407.33	H	Peak	52.97	-25.84	27.13	46.00	-18.87
814.73	H	Peak	55.03	-20.00	35.03	46.00	-10.97
824.43	H	Peak	55.66	-19.93	35.73	46.00	-10.27

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode	802.11b TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	58.74	-29.99	28.75	46.00	-17.25
349.13	V	Peak	61.25	-27.22	34.03	46.00	-11.97
407.33	V	Peak	56.79	-25.84	30.95	46.00	-15.05
412.18	V	Peak	56.29	-25.78	30.51	46.00	-15.49
814.73	V	Peak	55.36	-20.00	35.36	46.00	-10.64
824.43	V	Peak	55.68	-19.93	35.75	46.00	-10.25
143.49	H	Peak	49.34	-27.31	22.03	43.50	-21.47
293.84	H	Peak	53.04	-28.67	24.37	46.00	-21.63
349.13	H	Peak	54.86	-27.22	27.64	46.00	-18.36
407.33	H	Peak	53.56	-25.84	27.72	46.00	-18.28
812.79	H	Peak	54.48	-20.01	34.47	46.00	-11.53
824.43	H	Peak	55.65	-19.93	35.72	46.00	-10.28

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b)

Operation Mode	802.11b TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	59.79	-29.99	29.80	46.00	-16.20
349.13	V	Peak	59.38	-27.22	32.16	46.00	-13.84
353.98	V	Peak	58.32	-27.11	31.21	46.00	-14.79
412.18	V	Peak	55.32	-25.78	29.54	46.00	-16.46
814.73	V	Peak	55.23	-20.00	35.23	46.00	-10.77
824.43	V	Peak	56.37	-19.93	36.44	46.00	-9.56
235.64	H	Peak	53.44	-29.99	23.45	46.00	-22.55
327.79	H	Peak	53.94	-27.68	26.26	46.00	-19.74
349.13	H	Peak	54.93	-27.22	27.71	46.00	-18.29
458.74	H	Peak	52.02	-24.91	27.11	46.00	-18.89
812.79	H	Peak	54.26	-20.01	34.25	46.00	-11.75
824.43	H	Peak	55.54	-19.93	35.61	46.00	-10.39

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode	802.11g TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	60.36	-29.99	30.37	46.00	-15.63
327.79	V	Peak	55.77	-27.68	28.09	46.00	-17.91
349.13	V	Peak	60.25	-27.22	33.03	46.00	-12.97
407.33	V	Peak	56.19	-25.84	30.35	46.00	-15.65
814.73	V	Peak	55.75	-20.00	35.75	46.00	-10.25
824.43	V	Peak	56.15	-19.93	36.22	46.00	-9.78
135.73	H	Peak	50.41	-27.87	22.54	43.50	-20.96
349.13	H	Peak	53.39	-27.22	26.17	46.00	-19.83
407.33	H	Peak	52.09	-25.84	26.25	46.00	-19.75
458.74	H	Peak	51.56	-24.91	26.65	46.00	-19.35
526.64	H	Peak	51.70	-24.20	27.50	46.00	-18.50
824.43	H	Peak	55.38	-19.93	35.45	46.00	-10.55

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode	802.11g TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	61.12	-29.99	31.13	46.00	-14.87
327.79	V	Peak	55.81	-27.68	28.13	46.00	-17.87
349.13	V	Peak	59.44	-27.22	32.22	46.00	-13.78
407.33	V	Peak	55.71	-25.84	29.87	46.00	-16.13
814.73	V	Peak	56.29	-20.00	36.29	46.00	-9.71
824.43	V	Peak	56.71	-19.93	36.78	46.00	-9.22
235.64	H	Peak	57.59	-29.99	27.60	46.00	-18.40
327.79	H	Peak	54.14	-27.68	26.46	46.00	-19.54
349.13	H	Peak	54.20	-27.22	26.98	46.00	-19.02
523.73	H	Peak	50.69	-24.26	26.43	46.00	-19.57
814.73	H	Peak	54.65	-20.00	34.65	46.00	-11.35
824.43	H	Peak	54.37	-19.93	34.44	46.00	-11.56

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11g)

Operation Mode	802.11g TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
232.73	V	Peak	58.04	-30.08	27.96	46.00	-18.04
327.79	V	Peak	56.72	-27.68	29.04	46.00	-16.96
349.79	V	Peak	58.32	-27.22	31.10	46.00	-14.90
412.18	V	Peak	56.43	-25.78	30.65	46.00	-15.35
814.73	V	Peak	56.11	-20.00	36.11	46.00	-9.89
824.43	V	Peak	56.27	-19.93	36.34	46.00	-9.66
327.79	H	Peak	54.49	-27.68	26.81	46.00	-19.19
349.13	H	Peak	53.52	-27.22	26.30	46.00	-19.70
407.33	H	Peak	51.59	-25.84	25.75	46.00	-20.25
523.73	H	Peak	51.31	-24.26	27.05	46.00	-18.95
814.73	H	Peak	53.51	-20.00	33.51	46.00	-12.49
824.43	H	Peak	55.22	-19.93	35.29	46.00	-10.71

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
232.78	V	Peak	58.64	-30.06	28.58	46.00	-17.42
329.73	V	Peak	56.22	-27.53	28.69	46.00	-17.31
349.13	V	Peak	58.77	-27.22	31.55	46.00	-14.45
412.18	V	Peak	55.45	-25.78	29.67	46.00	-16.33
814.73	V	Peak	55.80	-20.00	35.80	46.00	-10.20
824.43	V	Peak	54.57	-19.93	34.64	46.00	-11.36
235.64	H	Peak	55.73	-29.99	25.74	46.00	-20.26
327.79	H	Peak	54.16	-27.68	26.48	46.00	-19.52
353.98	H	Peak	54.40	-27.11	27.29	46.00	-18.71
523.73	H	Peak	50.26	-24.26	26.00	46.00	-20.00
814.73	H	Peak	53.75	-20.00	33.75	46.00	-12.25
824.43	H	Peak	55.23	-19.93	35.30	46.00	-10.70

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
232.73	V	Peak	61.60	-30.08	31.52	46.00	-14.48
349.13	V	Peak	60.09	-27.22	32.87	46.00	-13.13
353.98	V	Peak	59.33	-27.11	32.22	46.00	-13.78
407.33	V	Peak	55.69	-25.84	29.85	46.00	-16.15
814.73	V	Peak	55.47	-20.00	35.47	46.00	-10.53
824.43	V	Peak	56.49	-19.93	36.56	46.00	-9.44
140.58	H	Peak	50.42	-27.44	22.98	43.50	-20.52
327.79	H	Peak	53.34	-27.68	25.66	46.00	-20.34
349.13	H	Peak	53.37	-27.22	26.15	46.00	-19.85
458.74	H	Peak	51.11	-24.91	26.20	46.00	-19.80
814.73	H	Peak	53.34	-20.00	33.34	46.00	-12.66
824.43	H	Peak	55.97	-19.93	36.04	46.00	-9.96

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	58.02	-29.99	28.03	46.00	-17.97
327.79	V	Peak	55.45	-27.68	27.77	46.00	-18.23
349.13	V	Peak	58.57	-27.22	31.35	46.00	-14.65
412.18	V	Peak	55.29	-25.78	29.51	46.00	-16.49
814.73	V	Peak	55.33	-20.00	35.33	46.00	-10.67
824.43	V	Peak	55.25	-19.93	35.32	46.00	-10.68
138.64	H	Peak	51.44	-27.58	23.86	43.50	-19.64
235.64	H	Peak	56.45	-29.99	26.46	46.00	-19.54
349.13	H	Peak	54.23	-27.22	27.01	46.00	-18.99
526.64	H	Peak	51.46	-24.00	27.46	46.00	-18.54
814.73	H	Peak	53.59	-20.00	33.59	46.00	-12.41
824.43	H	Peak	55.64	-19.93	35.71	46.00	-10.29

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2422MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
232.73	V	Peak	59.68	-30.08	29.60	46.00	-16.40
349.13	V	Peak	59.45	-27.22	32.23	46.00	-13.77
407.33	V	Peak	55.43	-25.84	29.59	46.00	-16.41
458.74	V	Peak	51.90	-24.91	26.99	46.00	-19.01
814.73	V	Peak	55.99	-20.00	35.99	46.00	-10.01
824.43	V	Peak	54.89	-19.93	34.96	46.00	-11.04
138.64	H	Peak	50.24	-27.58	22.66	43.50	-20.84
235.64	H	Peak	54.15	-29.99	24.16	46.00	-21.84
349.13	H	Peak	54.74	-27.22	27.52	46.00	-18.48
526.64	H	Peak	51.03	-24.20	26.83	46.00	-19.17
814.73	H	Peak	54.87	-20.00	34.87	46.00	-11.13
824.43	H	Peak	55.53	-19.93	35.60	46.00	-10.40

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	58.20	-29.99	28.21	46.00	-17.79
349.13	V	Peak	58.49	-27.22	31.27	46.00	-14.73
353.98	V	Peak	58.37	-27.11	31.26	46.00	-14.74
407.33	V	Peak	55.04	-25.84	29.20	46.00	-16.80
812.79	V	Peak	55.56	-20.01	35.55	46.00	-10.45
824.00	V	Peak	55.85	-19.93	35.92	46.00	-10.08
232.73	H	Peak	53.60	-30.08	23.52	46.00	-22.48
327.79	H	Peak	53.06	-27.68	25.38	46.00	-20.62
349.13	H	Peak	54.30	-27.22	27.08	46.00	-18.92
526.64	H	Peak	51.00	-24.20	26.80	46.00	-19.20
812.79	H	Peak	54.37	-20.01	34.36	46.00	-11.64
824.43	H	Peak	55.41	-19.93	35.48	46.00	-10.52

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2452MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
235.64	V	Peak	49.53	-14.36	35.17	46.00	-10.83
349.13	V	Peak	42.97	-14.85	28.12	46.00	-17.88
407.33	V	Peak	43.89	-17.13	26.76	46.00	-19.24
412.18	V	Peak	44.56	-17.62	26.94	46.00	-19.06
814.73	V	Peak	42.86	-16.63	26.23	46.00	-19.77
824.43	V	Peak	32.10	-2.52	29.58	46.00	-16.42
327.79	H	Peak	52.65	-27.68	24.97	46.00	-21.03
349.13	H	Peak	54.07	-27.22	26.85	46.00	-19.15
412.18	H	Peak	53.02	-25.78	27.24	46.00	-18.76
523.73	H	Peak	51.10	-24.26	26.84	46.00	-19.16
814.73	H	Peak	53.80	-20.00	33.80	46.00	-12.20
824.43	H	Peak	56.42	-19.93	36.49	46.00	-9.51

Remark：

(1) Measuring frequencies from 30 MHz to the 1GHz。

(2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

(3) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver.
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	47.35	---	-5.98	41.37	---	74.00	54.00	-12.63	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	41.74	---	-5.98	35.76	---	74.00	54.00	-18.24	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	48.61	---	-5.97	42.64	---	74.00	54.00	-11.36	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	42.93	---	-5.97	36.96	---	74.00	54.00	-17.04	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	47.01	---	-5.91	41.10	---	74.00	54.00	-12.90	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	40.32	---	-5.91	34.41	---	74.00	54.00	-19.59	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	60 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	43.48	---	-5.98	37.50	---	74.00	54.00	-16.50	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	41.31	---	-5.98	35.33	---	74.00	54.00	-18.67	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	44.08	---	-5.97	38.11	---	74.00	54.00	-15.89	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	41.23	---	-5.97	35.26	---	74.00	54.00	-18.74	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	46.42	---	-5.91	40.51	---	74.00	54.00	-13.49	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11g)

Operation Mode	802.11g TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	41.31	---	-5.91	35.40	---	74.00	54.00	-18.60	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver.
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	41.90	---	-5.98	35.92	---	74.00	54.00	-18.08	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.0	41.43	---	-5.98	35.45	---	74.00	54.00	-18.55	Peak
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		
14472.0	----					74.00	54.00		
16884.0	----					74.00	54.00		
19296.0	----					74.00	54.00		
21708.0	----					74.00	54.00		
24120.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	45.19	---	-5.97	39.22	---	74.00	54.00	-14.78	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	41.70	---	-5.97	35.73	---	74.00	54.00	-18.27	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	44.25	---	-5.91	38.34	---	74.00	54.00	-15.66	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT20)

Operation Mode	802.11n HT20 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.0	43.01	---	-5.91	37.10	---	74.00	54.00	-16.90	Peak
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		
14772.0	----					74.00	54.00		
17234.0	----					74.00	54.00		
19696.0	----					74.00	54.00		
22158.0	----					74.00	54.00		
24620.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2422MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver.
Humidity	60 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4844.0	42.63	---	-5.98	36.65	---	74.00	54.00	-17.35	Peak
7266.0	----					74.00	54.00		
9688.0	----					74.00	54.00		
12110.0	----					74.00	54.00		
14532.0	----					74.00	54.00		
16954.0	----					74.00	54.00		
19376.0	----					74.00	54.00		
21798.0	----					74.00	54.00		
24220.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2422MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4844.0	41.53	---	-5.98	35.55	---	74.00	54.00	-18.45	Peak
7266.0	----					74.00	54.00		
9688.0	----					74.00	54.00		
12110.0	----					74.00	54.00		
14532.0	----					74.00	54.00		
16954.0	----					74.00	54.00		
19376.0	----					74.00	54.00		
21798.0	----					74.00	54.00		
24220.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	43.90	---	-5.97	37.93	---	74.00	54.00	-16.07	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4874.0	41.69	---	-5.97	35.72	---	74.00	54.00	-18.28	Peak
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		
14622.0	----					74.00	54.00		
17059.0	----					74.00	54.00		
19496.0	----					74.00	54.00		
21933.0	----					74.00	54.00		
24370.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2452MHz	Test By	Brian
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4904.0	45.57	---	-5.94	39.63	---	74.00	54.00	-14.37	Peak
7356.0	----					74.00	54.00		
9808.0	----					74.00	54.00		
12260.0	----					74.00	54.00		
14712.0	----					74.00	54.00		
17164.0	----					74.00	54.00		
19616.0	----					74.00	54.00		
22068.0	----					74.00	54.00		
24520.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n HT40)

Operation Mode	802.11n HT40 TX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2452MHz	Test By	Brian
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4904.0	42.76	---	-5.94	36.82	---	74.00	54.00	-17.18	Peak
7356.0	----					74.00	54.00		
9808.0	----					74.00	54.00		
12260.0	----					74.00	54.00		
14712.0	----					74.00	54.00		
17164.0	----					74.00	54.00		
19616.0	----					74.00	54.00		
22068.0	----					74.00	54.00		
24520.0	----					74.00	54.00		

Remark:

(1) Measuring frequencies scanned from 1GHz to the 10th harmonic of highest fundamental frequency.

(2) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
196.84	V	Peak	58.59	-31.07	27.52	43.50	-15.98
235.64	V	Peak	58.02	-29.99	28.03	46.00	-17.97
298.69	V	Peak	57.58	-28.54	29.04	46.00	-16.96
327.79	V	Peak	57.83	-27.68	30.15	46.00	-15.85
814.73	V	Peak	57.25	-20.00	37.25	46.00	-8.75
824.43	V	Peak	57.57	-29.93	27.64	46.00	-18.36
300.63	H	Peak	57.47	-28.49	28.98	46.00	-17.02
327.79	H	Peak	55.72	-27.68	28.04	46.00	-17.96
460.68	H	Peak	52.64	-24.89	27.75	46.00	-18.25
523.73	H	Peak	52.66	-24.26	28.40	46.00	-17.60
813.76	H	Peak	55.33	-20.00	35.33	46.00	-10.67
824.43	H	Peak	56.47	-19.93	36.54	46.00	-9.46

Remark：

1 Measuring frequencies from 30 MHz to the 1GHz。

2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

3 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
196.84	V	Peak	58.88	-31.07	27.81	43.50	-15.69
300.63	V	Peak	59.95	-28.49	31.46	46.00	-14.54
327.79	V	Peak	57.83	-27.68	30.15	46.00	-15.85
349.13	V	Peak	56.67	-27.22	29.45	46.00	-16.55
814.73	V	Peak	56.64	-20.00	36.64	46.00	-9.36
824.43	V	Peak	58.35	-19.93	38.42	46.00	-7.58
300.63	H	Peak	59.77	-28.49	31.28	46.00	-14.72
327.79	H	Peak	55.49	-27.68	27.81	46.00	-18.19
458.74	H	Peak	53.36	-24.91	28.45	46.00	-17.55
526.64	H	Peak	51.91	-24.20	27.71	46.00	-18.29
814.73	H	Peak	55.28	-20.00	35.28	46.00	-10.72
824.43	H	Peak	57.43	-19.93	37.50	46.00	-8.50

Remark：

1 Measuring frequencies from 30 MHz to the 1GHz。

2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

3 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
196.84	V	Peak	56.05	-31.07	24.98	43.50	-18.52
300.63	V	Peak	57.58	-28.49	29.09	46.00	-16.91
327.79	V	Peak	54.67	-27.68	26.99	46.00	-19.01
349.13	V	Peak	55.17	-27.22	27.95	46.00	-18.05
814.73	V	Peak	55.70	-20.00	35.70	46.00	-10.30
824.43	V	Peak	57.38	-19.93	37.45	46.00	-8.55
196.84	H	Peak	55.30	-31.07	24.23	43.50	-19.27
298.69	H	Peak	58.61	-28.54	30.07	46.00	-15.93
327.79	H	Peak	55.88	-27.68	28.20	46.00	-17.80
458.74	H	Peak	53.39	-24.91	28.48	46.00	-17.52
814.73	H	Peak	51.88	-20.00	31.88	46.00	-14.12
824.43	H	Peak	52.52	-19.93	32.59	46.00	-13.41

Remark：

1 Measuring frequencies from 30 MHz to the 1GHz。

2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.

3 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH Low	Test Date	Feb. 06, 2010
Fundamental Frequency	2412MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver. / Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
4824.0	V	43.31	---	-5.98	37.33	---	74.00	54.00	-16.67	Peak
7236.0	V	----					74.00	54.00		
9648.0	V	----					74.00	54.00		
12060.0	V	----					74.00	54.00		
4824.0	H	41.06	---	-5.98	35.08	---	74.00	54.00	-18.92	Peak
7236.0	H	----					74.00	54.00		
9648.0	H	----					74.00	54.00		
12060.0	H	----					74.00	54.00		

Remark:

1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

2 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

4 Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

5 Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH Mid	Test Date	Feb. 06, 2010
Fundamental Frequency	2437MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
4874.0	V	42.74	---	-5.93	36.81	---	74.00	54.00	-17.19	Peak
7311.0	V	----					74.00	54.00		
9748.0	V	----					74.00	54.00		
12185.0	V	----					74.00	54.00		
4874.0	H	41.77	---	-5.93	35.84	---	74.00	54.00	-18.16	Peak
7311.0	H	----					74.00	54.00		
9748.0	H	----					74.00	54.00		
12185.0	H	----					74.00	54.00		

Remark:

1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

2 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

4 Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

5 Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11b) (worst case)

Operation Mode	802.11b RX CH High	Test Date	Feb. 06, 2010
Fundamental Frequency	2462MHz	Test By	Brian
Temperature	25 ℃	Pol	Ver. / Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
4924.0	V	45.65	---	-5.91	39.74	---	74.00	54.00	-14.26	Peak
7386.0	V	----					74.00	54.00		
9848.0	V	----					74.00	54.00		
12310.0	V	----					74.00	54.00		
4924.0	H	42.18	---	-5.91	36.27	---	74.00	54.00	-17.73	Peak
7386.0	H	----					74.00	54.00		
9848.0	H	----					74.00	54.00		
12310.0	H	----					74.00	54.00		

Remark:

1 Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency.

2 Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

3 Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

4 Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

5 Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

8. ANTENNA REQUIREMENT

8.1. Standard Applicable:

According to §15.203, Antenna requirement.

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 a broken antenna can be

replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some

field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the

proper antenna is employed so that the limits in this Part are not exceeded.

According to RSS-GEN 7.1.4, a transmitter can only be sold or operated with antennas with which it was certified. A transmitter may be certified with multiple antenna types. An antenna type comprises antennas having similar in-band and out-of-band radiation patterns. Testing shall be performed using the highest-gain antenna of each combination of transmitter and antenna type for which certification is being sought, with the transmitter output power set at the maximum level. Any antenna of the same type and having equal or lesser gain as an antenna that had been successfully tested for certification with the transmitter, will also be considered certified with the transmitter, and may be used and marketed with the transmitter. The manufacturer shall include with the application for certification a list of acceptable antenna types to be used with the transmitter.

When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacturer. Any antenna gain in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power before using the power limits specified in RSS-210 or RSS-310 for devices of RF output powers of 10 milliwatts or less. For devices of output powers greater than 10 milliwatts, except devices subject to RSS-210 Annex 8 (Frequency Hopping and Digital Modulation Systems Operating in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz Bands) or RSS-210 Annex 9 (Local Area

Network Devices), the total antenna gain shall be added to the measured RF output power before using the specified power limits. For devices subject to RSS-210 Annex 8 or Annex 9, the antenna gain shall not be added.

8.2. Antenna Connected Construction:

The directional gains of antenna used for transmitting is Main, -2.83dBi, Aux, -1.96dBi and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.