ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT AND INDUSTRY CANADA RSS 210

OF

Product Name:	**Wireless 802.11a/b/g SDIO Adaptor**
Brand Name:	**Silex**
Model Name:	**SX-SDWAG-02**
Model Different:	**N/A**
FCC ID:	**N6C-SXSDWAG02**
IC:	**4908B-SXSDWAG02**
Report No.:	**ER/2009/50002**
Issue Date:	**May. 21, 2009**
FCC Rule Part:	**§15.247**
IC Rule Part:	**RSS-210 issue 7:2007, Annex 8**
Prepared for:	**For FCC:** **Silex Technology, Inc.** **2-3-1 Hikaridai, Seika-cho Sourakugun Kyoto 619-0237 Japan** **For IC:** **SILEX TECHNOLOGY AMERICA INC.** **495 Woodward Avenue Milton Ontario L9T 3B7 Canada**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan.**

VERIFICATION OF COMPLIANCE

Applicant:	For FCC: Silex Technology, Inc. 2-3-1 Hikaridai, Seika-cho Sourakugun Kyoto 619-0237 Japan For IC: SILEX TECHNOLOGY AMERICA INC. 495 Woodward Avenue Milton Ontario L9T 3B7 Canada
Product Name:	Wireless 802.11a/b/g SDIO Adaptor
Brand Name:	Silex
FCC ID:	N6C-SXSDWAG02
IC:	4908B-SXSDWAG02
Model No.:	SX-SDWAG-02
Model Difference:	N/A
File Number:	ER/2009/50002
Date of test:	May. 04, 2009 ~ May. 20, 2009
Date of EUT Received:	May. 04, 2009

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.

Test By:		***Date***	May. 21, 2009
	Sky Wang / Asst. Supervisor		
Prepared By:		***Date***	May. 21, 2009
	Gigi Yeh/ Clerk		
Approved By:		***Date***	May. 21, 2009
	Vincent Su / Manager		

Version

Version No.	Date	Description
00	May. 21, 2009	Initial creation of document

Table of Contents

1 GENERAL INFORMATION

1.1 Product Description

General:

Product Name:	Wireless 802.11a/b/g SDIO Adaptor
Brand Name:	Silex
Model Name:	SX-SDWAG-02
Model Difference:	N/A
Power Supply:	3.3Vdc

WLAN: 802.11 a/b/g

Frequency Range	2412MHz–2462MHz	5150MHz–5350MHz	5470MHz–5725MHz	5725MHz – 5825MHz
Channel number	11 channels	8 channels	11 channels	5 channels
Rated Power	b : 17.28 dBm g : 14.67 dBm	14.67 dBm	14.89 dBm	14.68 dBm
Modulation Technology	DSSS, OFDM	OFDM	OFDM	OFDM
Antenna Designation	Dipole Antenna, 1.5dBi	Dipole Antenna, 0.4dBi	Dipole Antenna, 1.7dBi	Dipole Antenna, 2.1dBi
Type of Emission	16M5M5D	16M6M1D	16M7M1D	22M3M4D
Modulation type	CCK, DQPSK, DBPSK for DSSS 64QAM. 16QAM, QPSK, BPSK for OFDM			
Transition Rate:	802.11 a: 6/9/12/18/24/36/48/54 Mbps; 802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps			

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

This report applies for frequency bands 2412MHz – 2462MHz; 5725MHz – 5850MHz.
Note: Devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: N6C-SXSDWAG02** filing to comply with Section 15.247 of the FCC Part 15, Subpart E Rules and **IC: 4908B-SXSDWAG02** filing to comply with Industry Canada RSS-210 issue 7: 2007 Annex 8. The composite system (digital device) is compliance with Subpart B is authorized under a DoC procedure.

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 and Subclause 8.3.1.2 of ANSI C63.4-2003.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

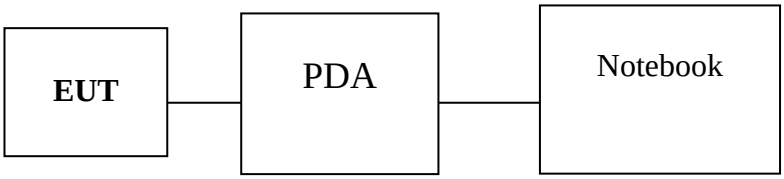


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.
1.	Notebook	IBM	T43	L3LHHN6
2.	PDA	Mio	Mio P350	WL1T6600211

3 SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)/ RSS-Gen §7.2.2	AC Power Line Conducted Emission	Compliant
§15.247(b)/ §A8.4(2)	Peak Output Power	Compliant
§15.247(b)/ §A8.2	6dB Bandwidth	Compliant
§15.247(c)/ §A8.5	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.247(c)/ §A8.5	Spurious Emission	Compliant
§15.247/,§A8.3(2)	Peak Power Density	Compliant
RSS-Gen §4.4.1	99% Power Bandwidth	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 highest data rate are chosen for full testing.
802.11 g mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6Mbps highest data rate are chosen for full testing.
802.11 a mode: Channel low (5745MHz)、mid (5785MHz) and high (5825MHz) with 6Mbps highest data rate are chosen for full testing.

5 CONDUCTED EMISSION TEST

5.1 Standard Applicable

According to §15.207 and RSS-Gen §7.2.2, frequency range within 150KHz to 30MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

5.2 EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4-2003.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The LISN was connected with 120Vac/60Hz power source.

5.3 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

5.4 Measurement Equipment Used:

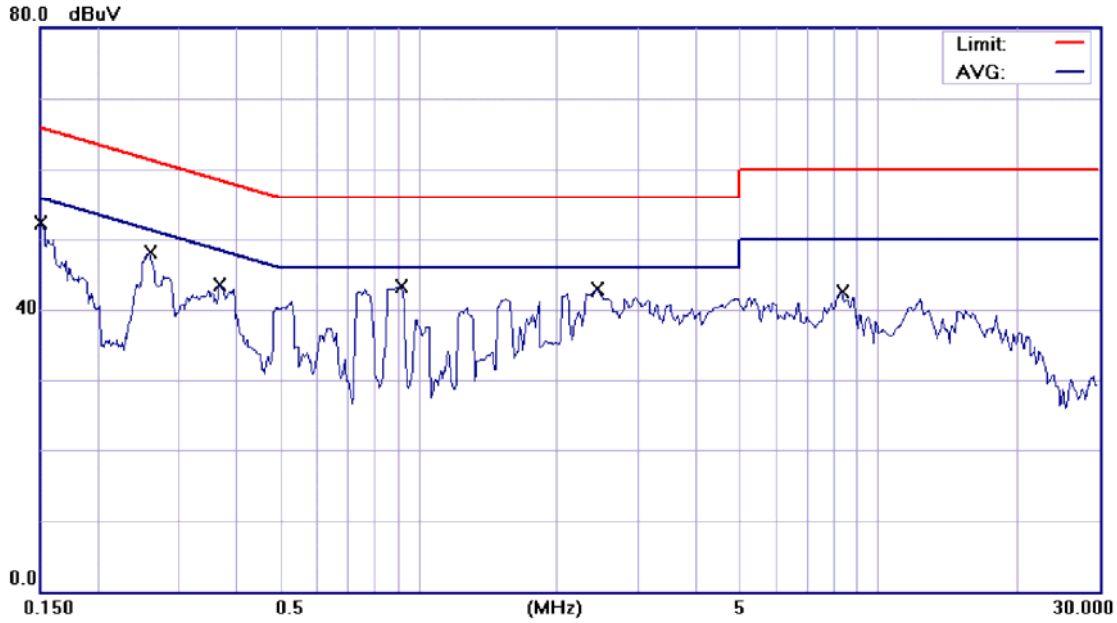
Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMI Test Receiver	R&S	ESCS30	828985/004	09/16/2008	09/15/2009
02/02/2009	02/01/2010	02/02/2009	02/01/2010	02/02/2009	02/01/2010
02/02/2009	02/01/2010	02/02/2009	02/01/2010	02/02/2009	02/01/2010
Coaxial Cables	N/A	WK CE Cable	N/A	10/30/2008	10/29/2009

5.5 Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	WLAN Link			Test Date:	May. 15, 2009
Temperature:	23 ℃	Humidity:	60%	Test By:	Sky

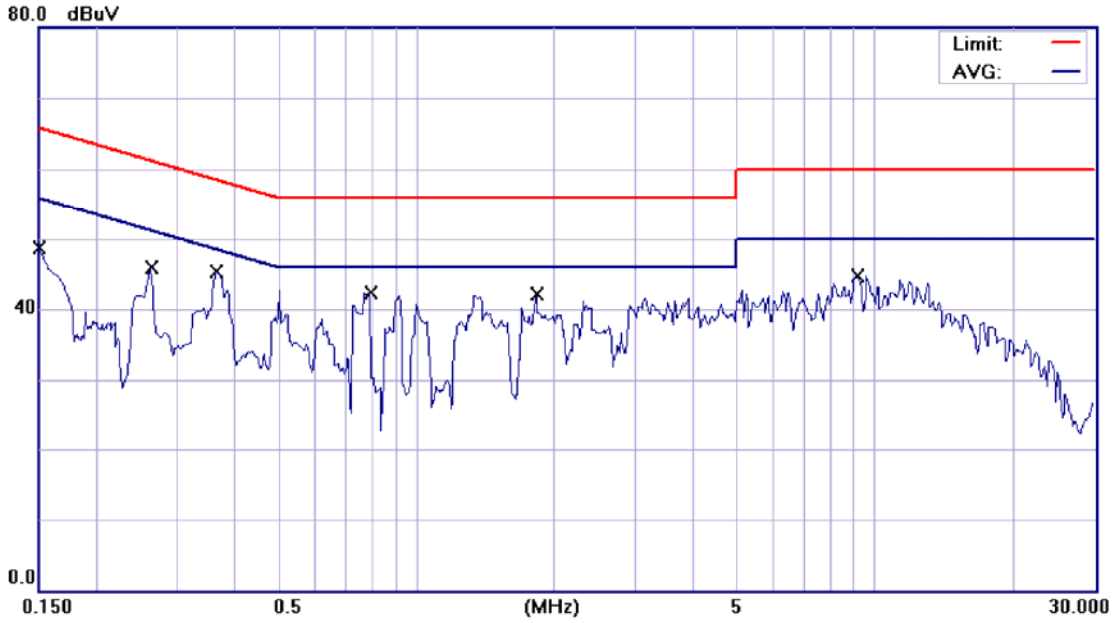


Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: Wireless 802.11a/b/g SDIO Adaptor
M/N: SX-SDWAG-02
Note: WLAN link

Phase: L1
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	52.19	0.18	52.37	66.00	-13.63	QP	
2		0.2594	47.90	0.12	48.02	61.45	-13.43	QP	
3		0.3688	43.36	0.10	43.46	58.53	-15.07	QP	
4	*	0.9180	43.22	0.10	43.32	56.00	-12.68	QP	
5		2.4375	42.83	0.14	42.97	56.00	-13.03	QP	
6		8.3281	42.26	0.33	42.59	60.00	-17.41	QP	



Site SGS CONDUCTED #1
Limit: CISPR22/11/EN55022 Class B
EUT: Wireless 802.11a/b/g SDIO Adaptor
M/N: SX-SDWAG-02
Note: WLAN link

Phase: *N*
Power: AC 120V/60Hz
Distance:

Temperature: 23 ℃
Humidity: 60 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	48.52	0.18	48.70	66.00	-17.30	QP	
2		0.2633	45.71	0.12	45.83	61.33	-15.50	QP	
3	*	0.3648	45.26	0.10	45.36	58.62	-13.26	QP	
4		0.7930	42.23	0.09	42.32	56.00	-13.68	QP	
5		1.8359	41.93	0.13	42.06	56.00	-13.94	QP	
6		9.1133	44.29	0.38	44.67	60.00	-15.33	QP	

6 PEAK OUTPUT POWER MEASUREMENT

6.1 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.

6.2 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, VBW = 1MHz,Bandwidth=26dB occupied Bandwidth)
3. Record the max. reading.
4. Repeat above procedures until all frequency measured were complete.

6.3 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	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2008	07/04/2009
Splitter	Agilent	11636B	N/A	07/05/2008	07/04/2009
DC Power Supply	HP	6038A	2929A-07548	06/27/2007	06/26/2009
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

6.4 Measurement Result

802.11b

Cable loss = 0	Peak Power Output				Limit
Frequency (MHz)	Data Rate				
	1	2	5.5	11	30dBm
2412	17.28	17.21	17.10	16.98	30dBm
2437	17.19	17.11	16.99	16.87	30dBm
2462	17.05	16.97	16.86	16.75	30dBm

802.11g

Cable loss = 0	Peak Power Output								Limit
Frequency (MHz)	Data Rate								
	6	9	12	18	24	36	48	54	30dBm
2412	14.67	14.6	14.53	14.42	14.29	14.21	14.14	14.07	30dBm
2437	14.49	14.41	14.35	14.23	14.1	14.02	13.95	13.86	30dBm
2462	14.15	14.08	14.01	13.89	13.78	13.71	13.64	13.57	30dBm

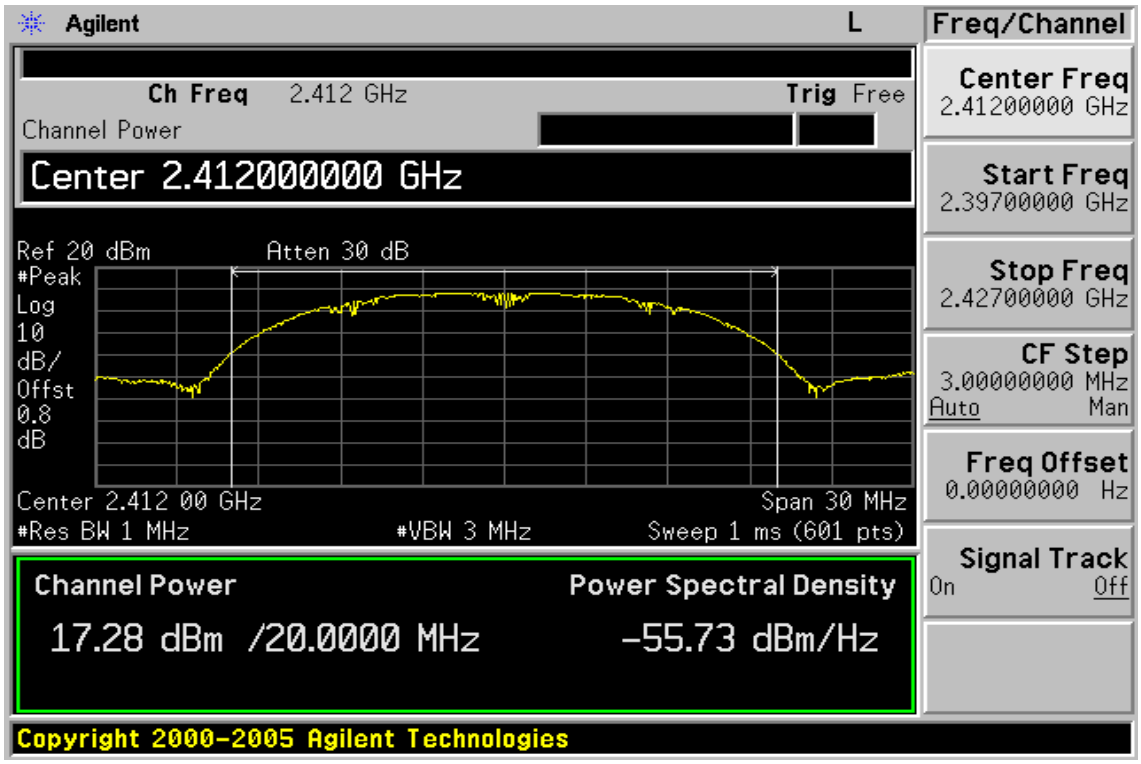
802.11a

Cable loss = 0	Peak Power Output								Limit
Frequency (MHz)	Data Rate								
	6	9	12	18	24	36	48	54	30dBm
5745	14.48	14.41	14.35	14.24	14.12	14.01	13.93	13.84	30dBm
5785	14.21	14.13	14.06	13.93	13.82	13.70	13.62	13.54	30dBm
5825	14.68	14.60	14.33	14.22	14.10	13.98	13.92	13.83	30dBm

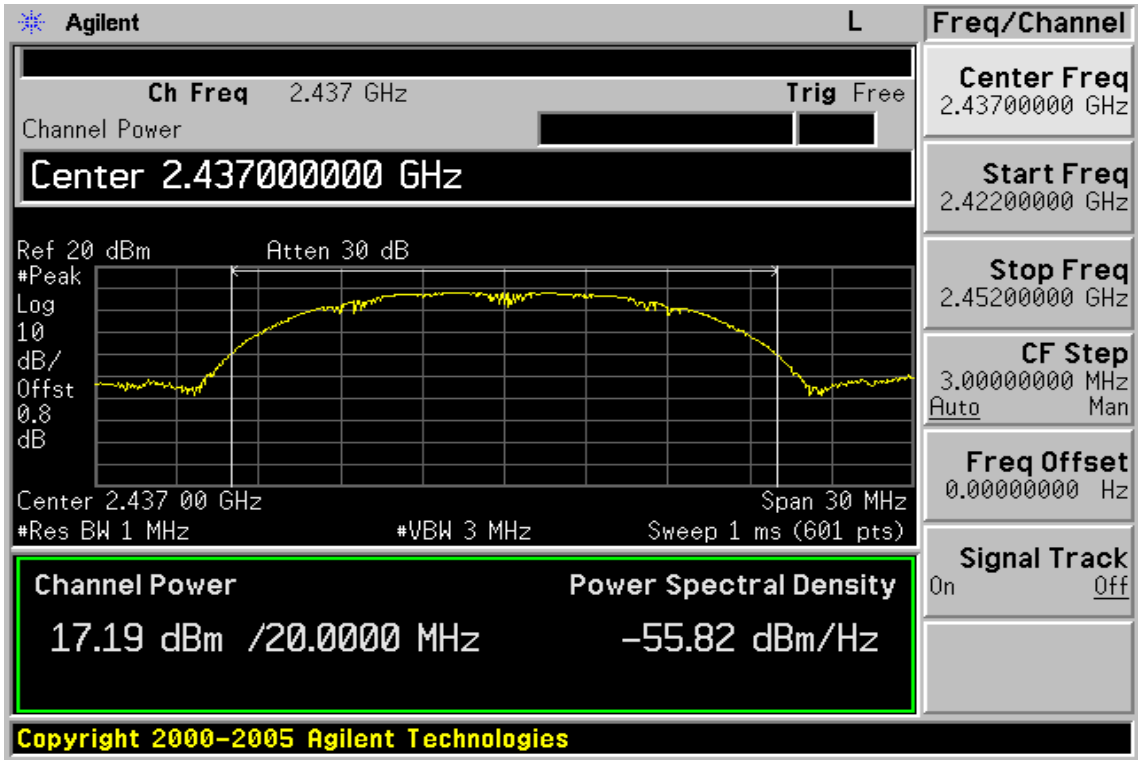
**Note: Offset 0.8dB*

802.11b, 1Mbps

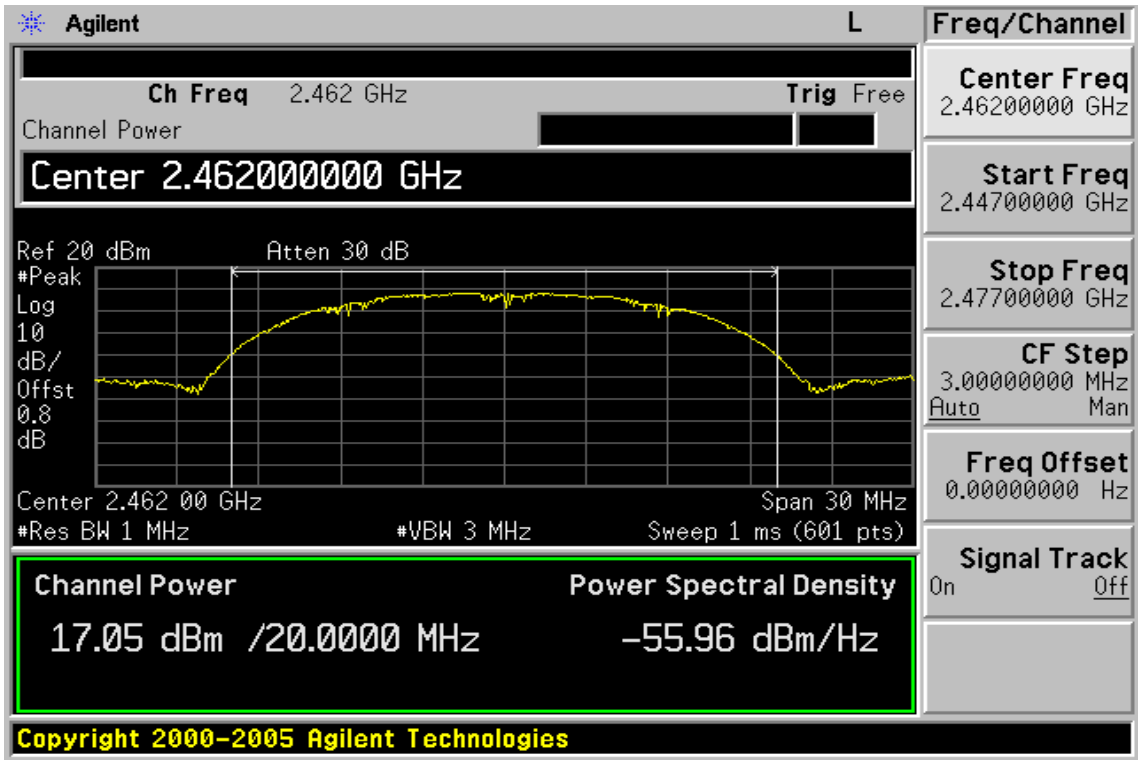
Power Output Plot (CH Low)



Power Output Plot (CH Mid)

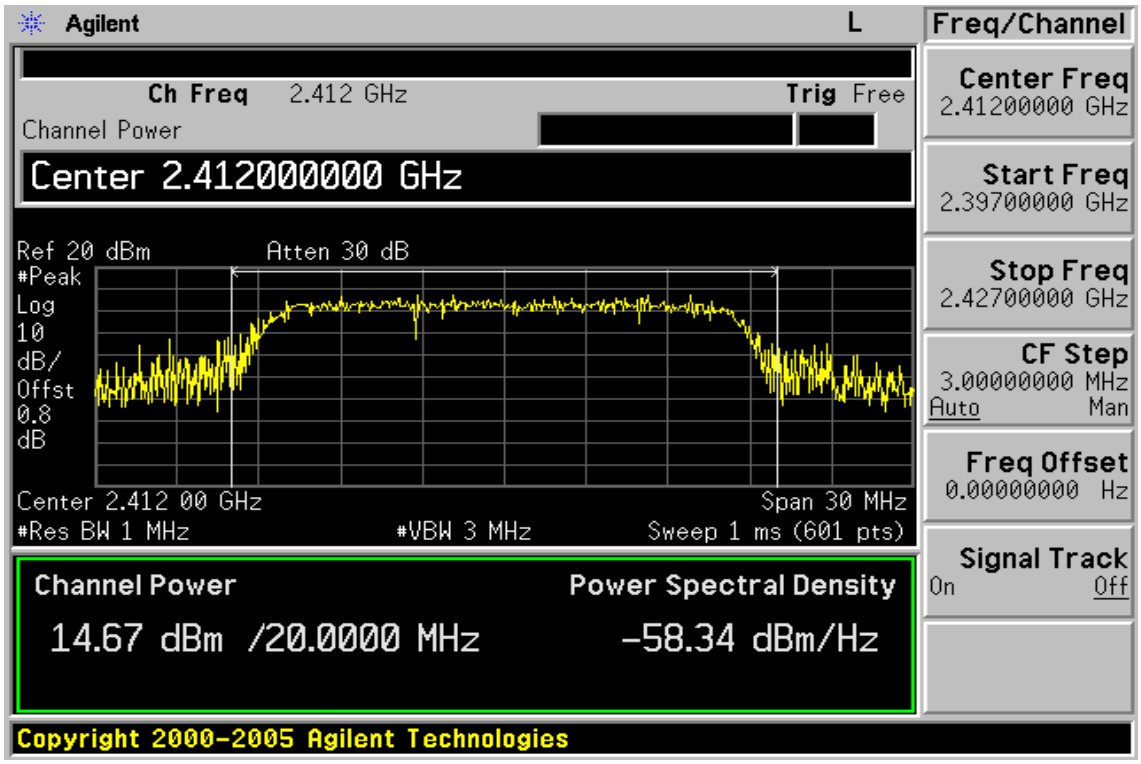


Power Output Plot (CH High)

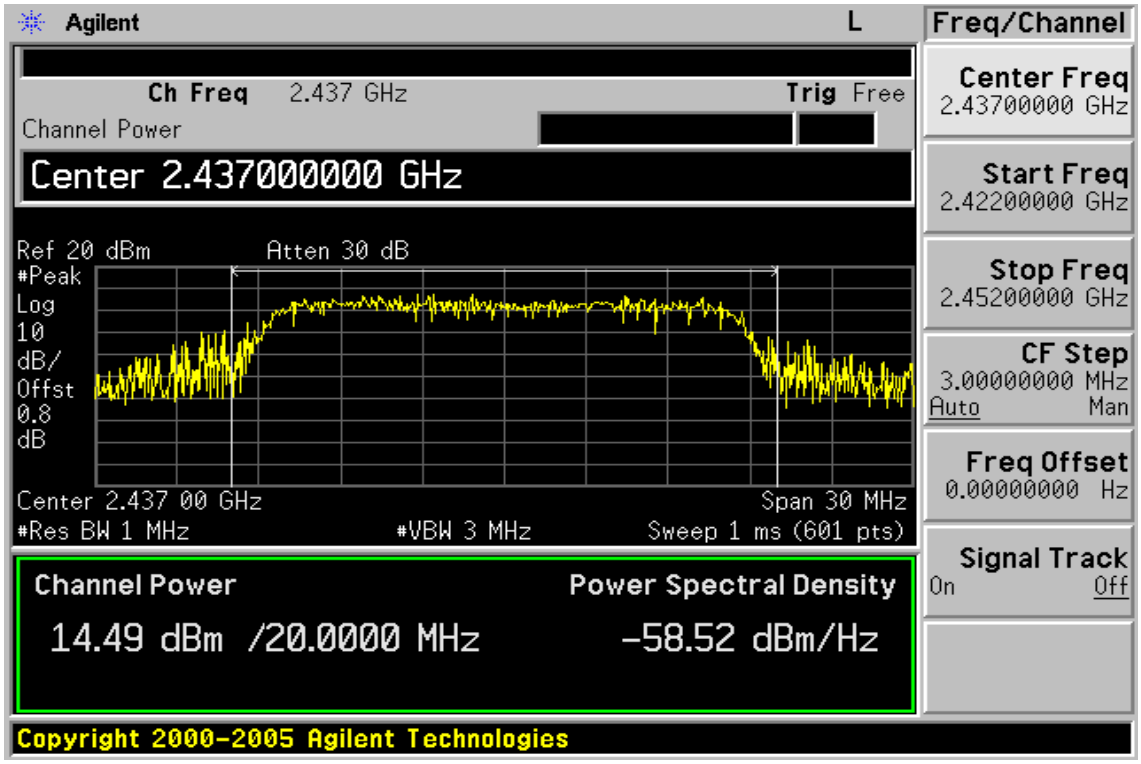


802.11g, 6Mbps

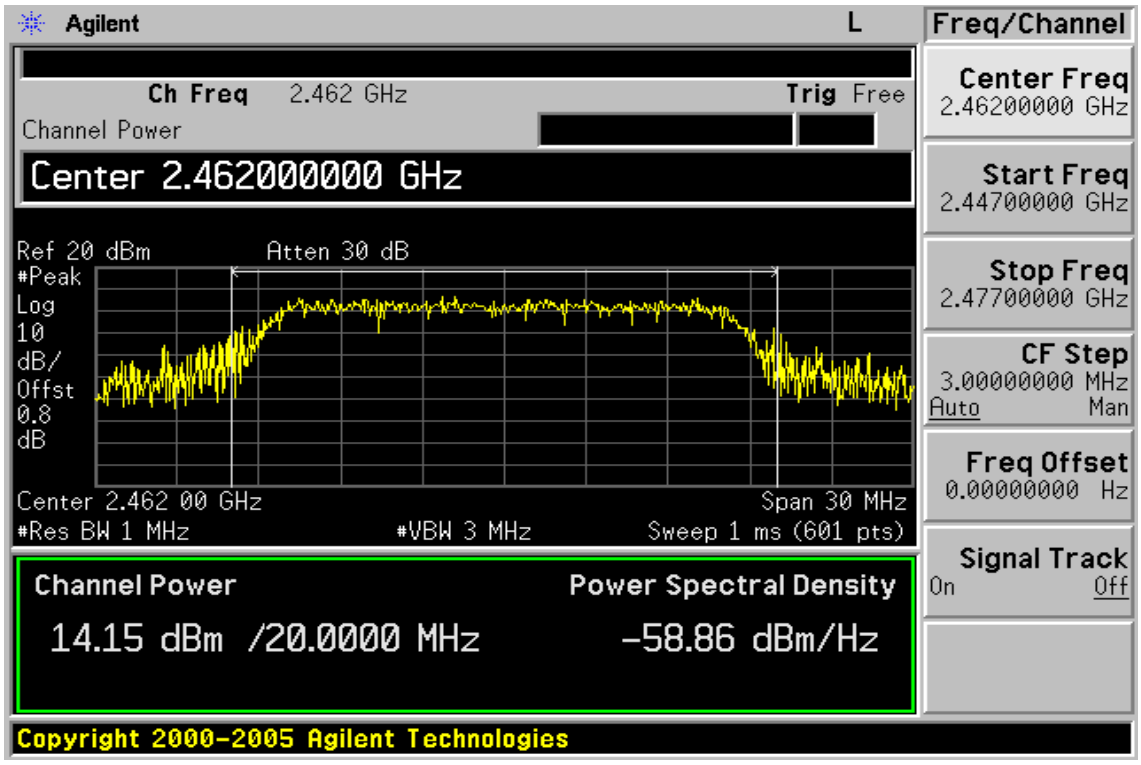
Power Output Plot (CH Low)



Power Output Plot (CH Mid)

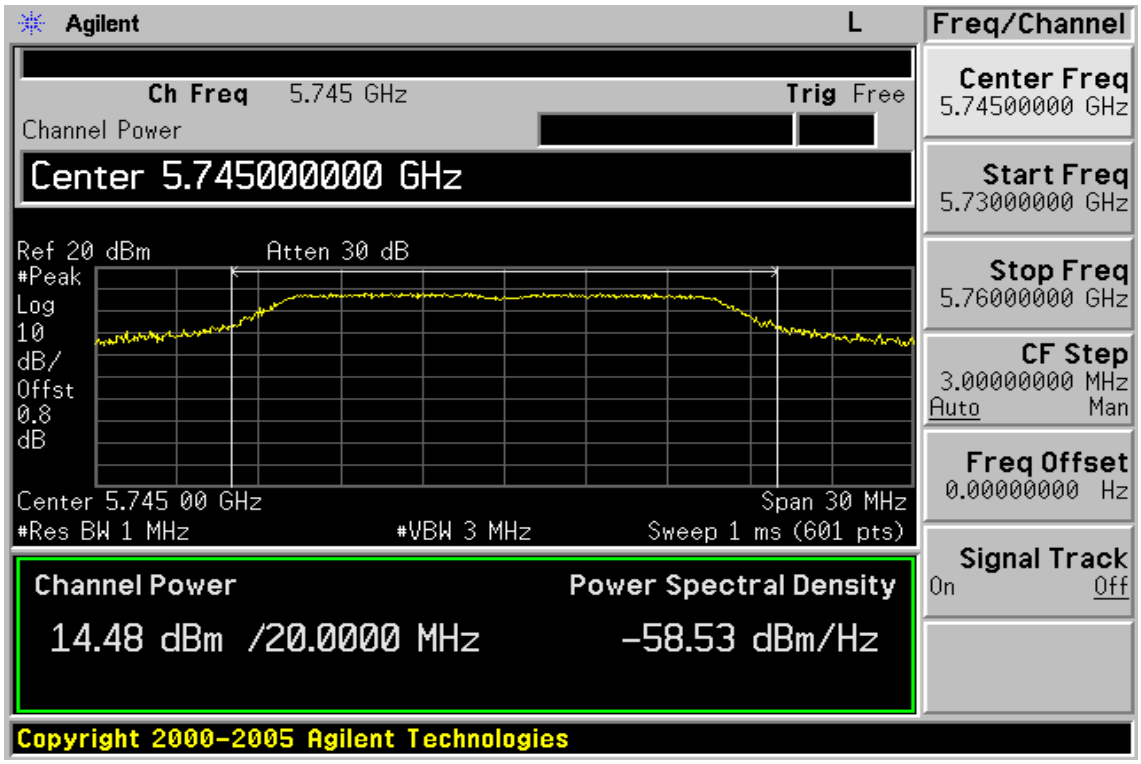


Power Output Plot (CH High)

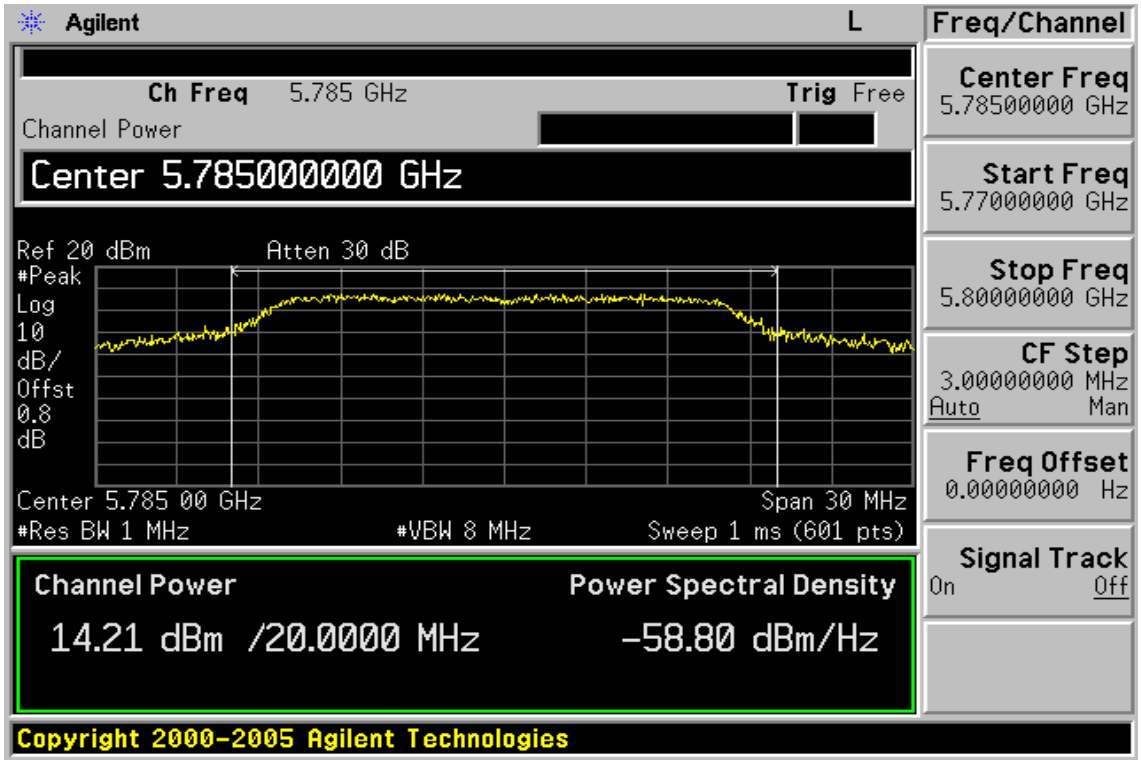


802.11a, 6Mbps

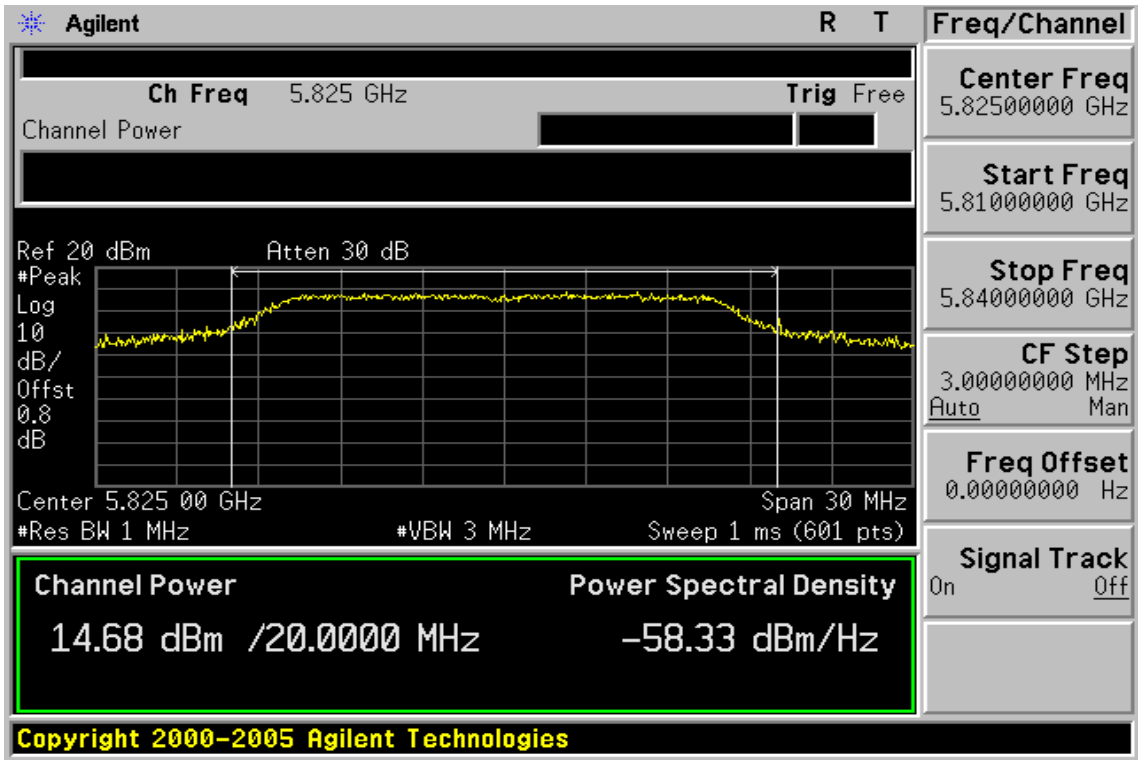
Power Output Plot (CH Low)



Power Output Plot (CH Mid)



Power Output Plot (CH High)



7 6dB Bandwidth

7.1 Standard Applicable

According to §15.247(a)(2), Systems using digital modulation techniques may operate in the 902 - 928 MHz,2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500kHz.

According to RSS 210 issue 7: 2007 Annex 8.2. Systems employing digital modulation techniques (which includes direct sequence) can now be certified under RSS-210 provided they comply with the following requirements: The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2 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 3.antenna port to the spectrum analyzer.

3.Set the spectrum analyzer as RBW=100KHz, VBW = 3*RBW, Span= 30M/50MHz, Sweep=auto

4. Mark the peak frequency and –6dB (upper and lower) frequency.

5. Repeat above procedures until all frequency measured were complete.

7.3 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	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2008	07/04/2009
Splitter	Agilent	11636B	N/A	07/05/2008	07/04/2009
DC Power Supply	HP	6038A	2929A-07548	06/27/2007	06/26/2009
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

7.4 Measurement Result

802.11b

Frequency (MHz)	**Bandwidth (MHz)**	**Bandwidth (KHz)**	**Result**
2412	12.056	> 500	PASS
2437	11.161	> 500	PASS
2462	12.084	> 500	PASS

**Offset 0.8dB*

802.11g

Frequency (MHz)	**Bandwidth (MHz)**	**Bandwidth (KHz)**	**Result**
2412	16.440	> 500	PASS
2437	16.466	> 500	PASS
2462	16.438	> 500	PASS

**Offset 0.8dB*

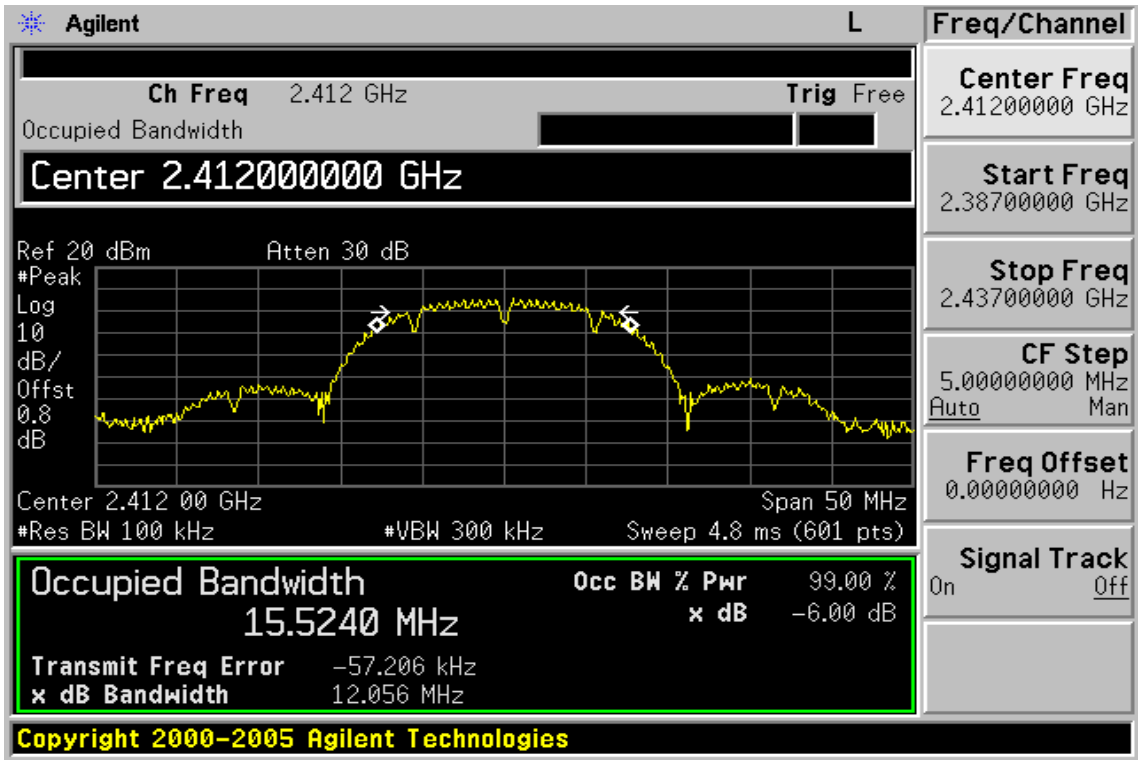
802.11a

Frequency (MHz)	**Bandwidth (MHz)**	**Bandwidth (KHz)**	**Result**
5745	16.440	> 500	PASS
5785	16.447	> 500	PASS
5825	16.191	> 500	PASS

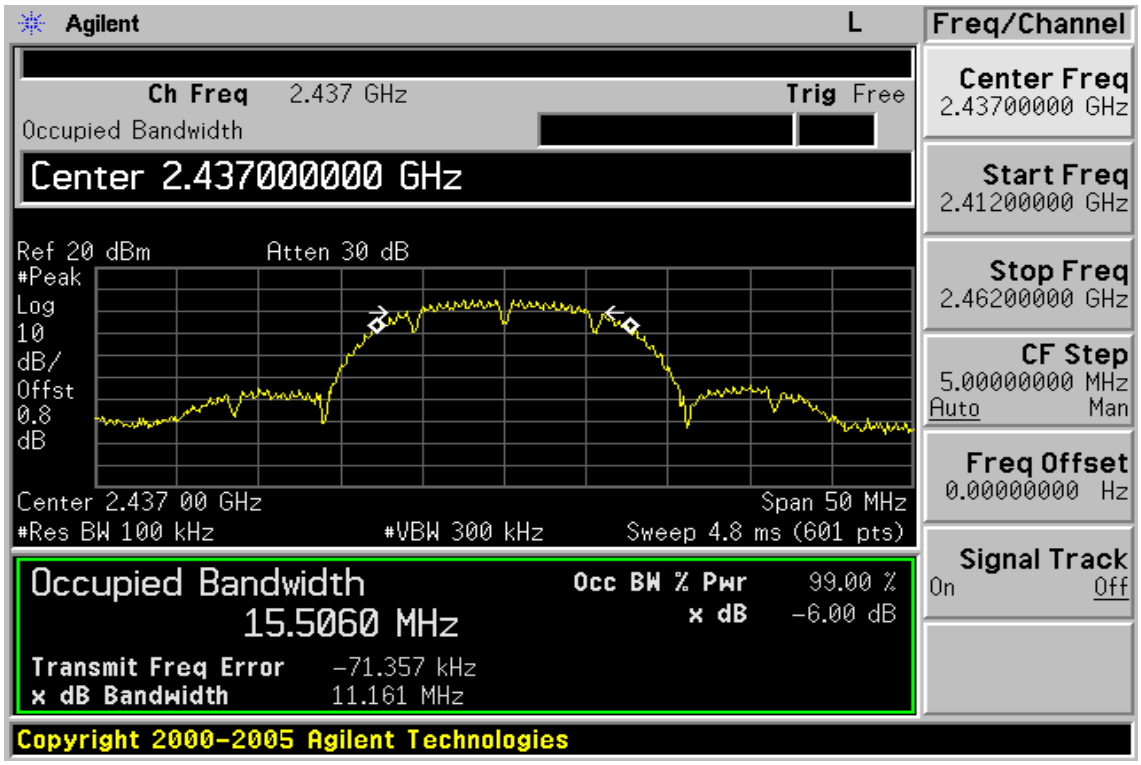
**Offset 0.8dB*

802.11b

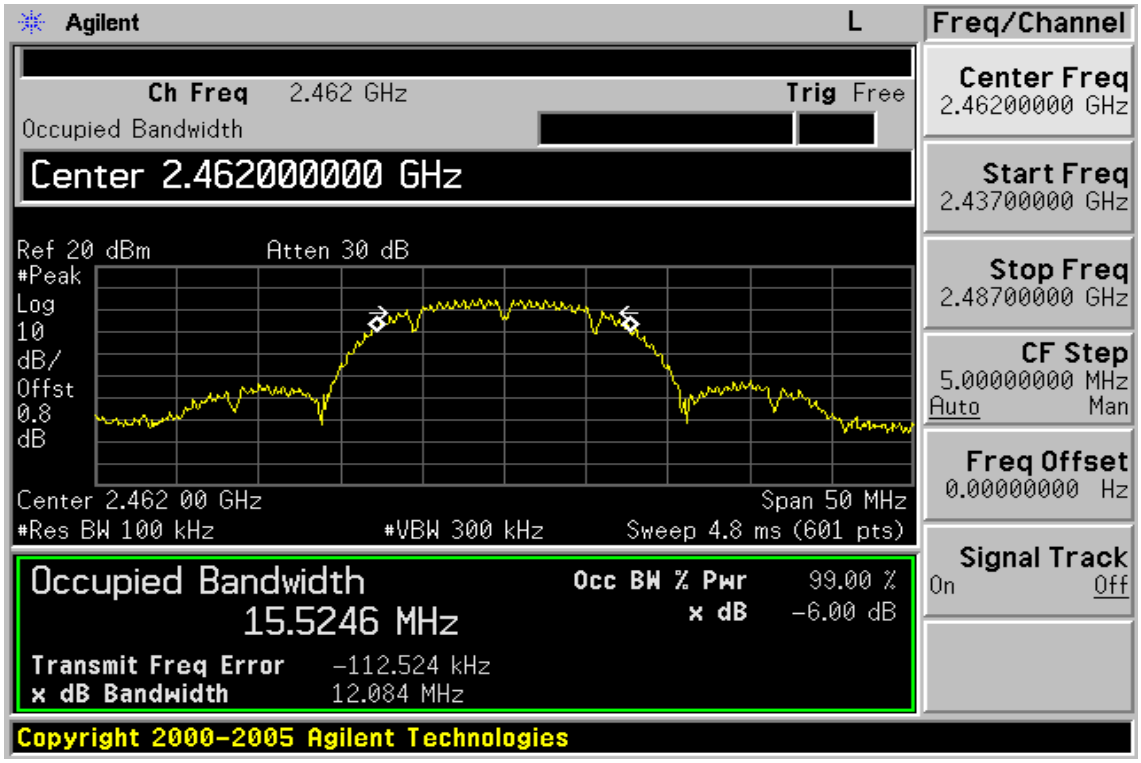
6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid

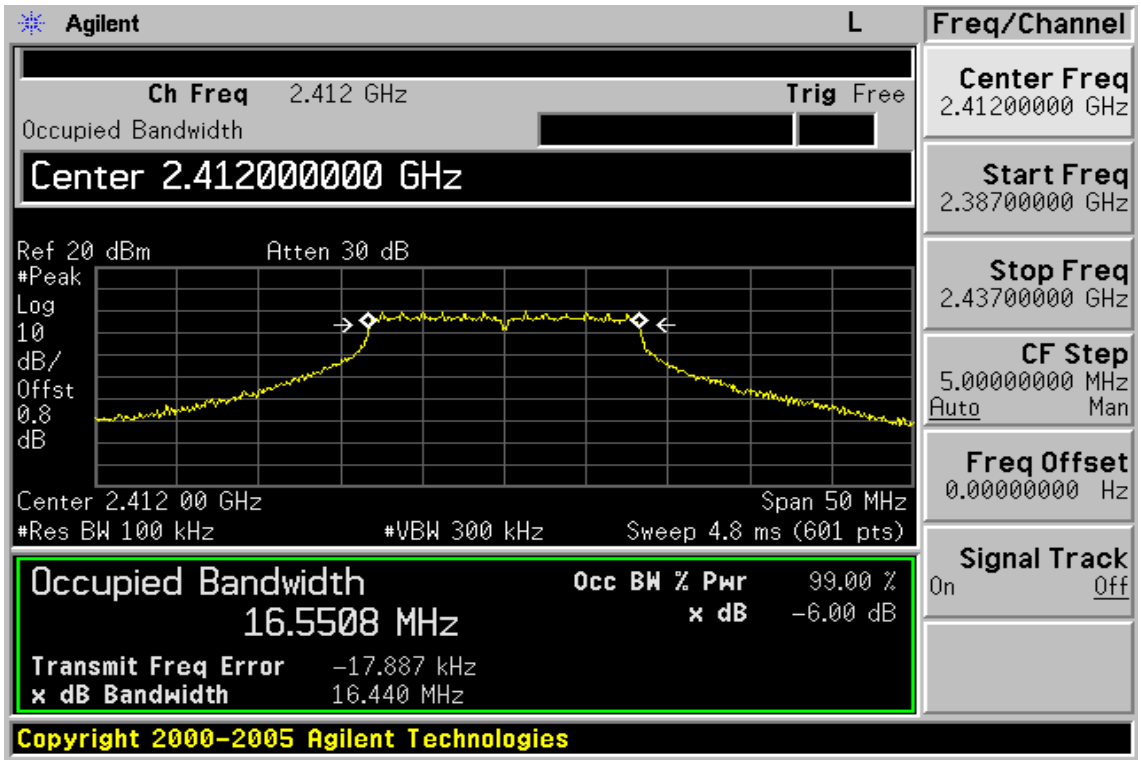


6dB Band Width Test Data CH-High

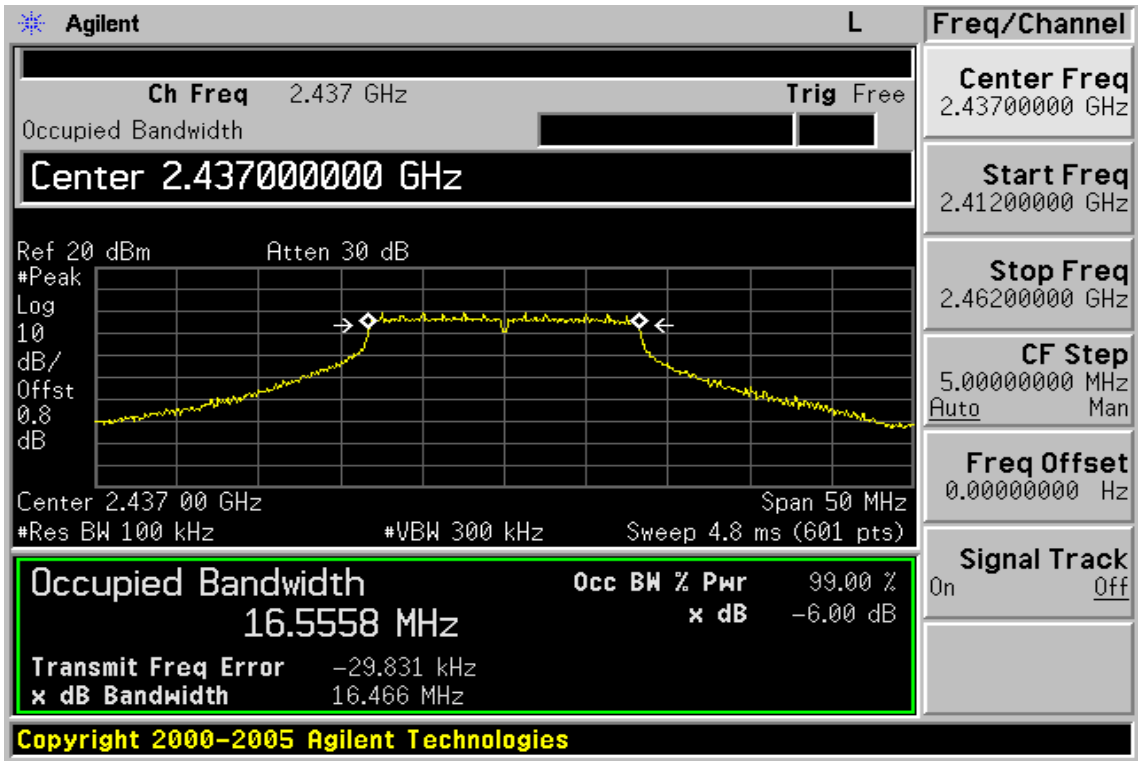


802.11g

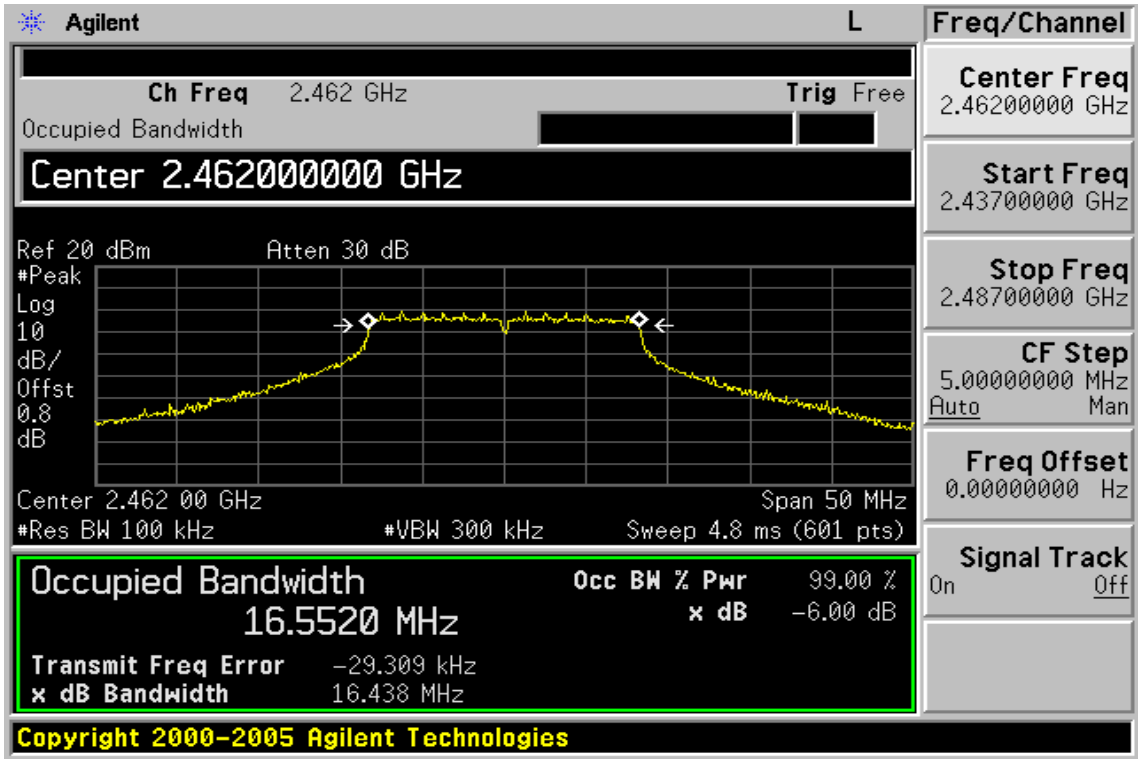
6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid

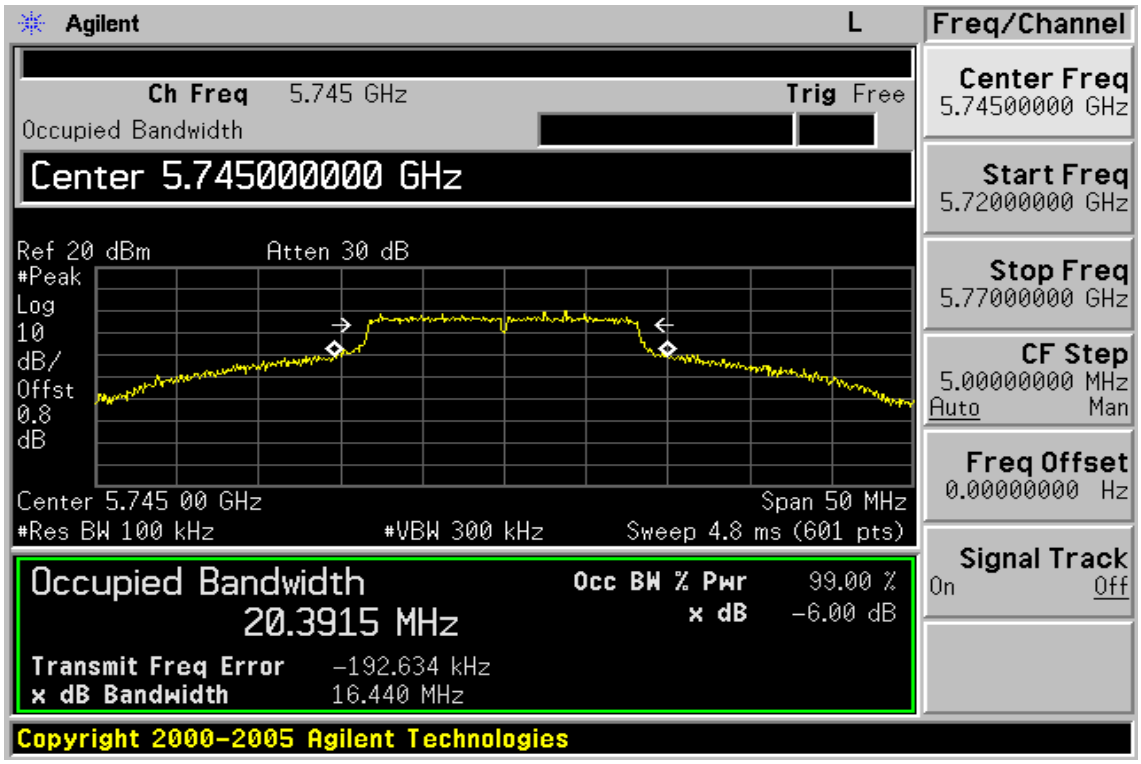


6dB Band Width Test Data CH-High

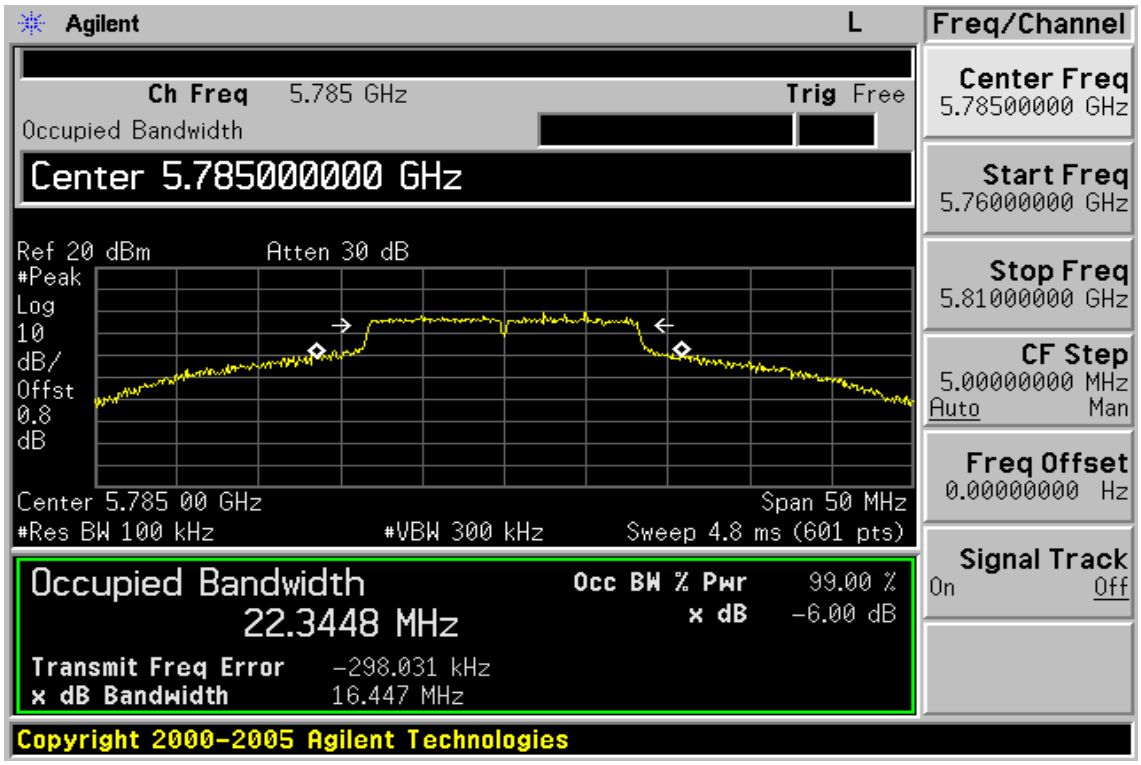


802.11a

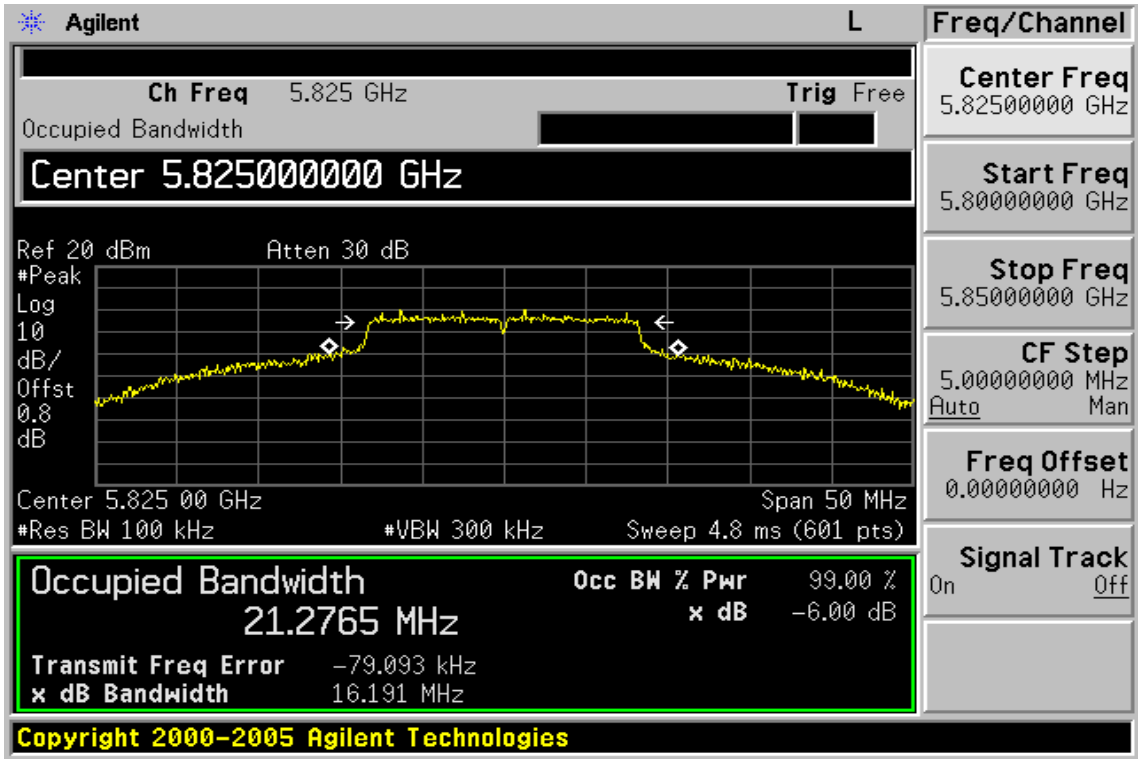
6dB Band Width Test Data CH-Low



6dB Band Width Test Data CH-Mid



6dB Band Width Test Data CH-High



8 100KHz BANDWIDTH OF BAND EDGES MEASUREMENT

8.1 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.

8.2 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=100KHz, VBW=300KHz, Span=25MHz, Sweep = auto
5. Mark Peak, 2.390GHz and 2.488GHz and record the max. level.
6. Repeat above procedures until all frequency measured were complete.

8.3 Measurement Equipment Used:

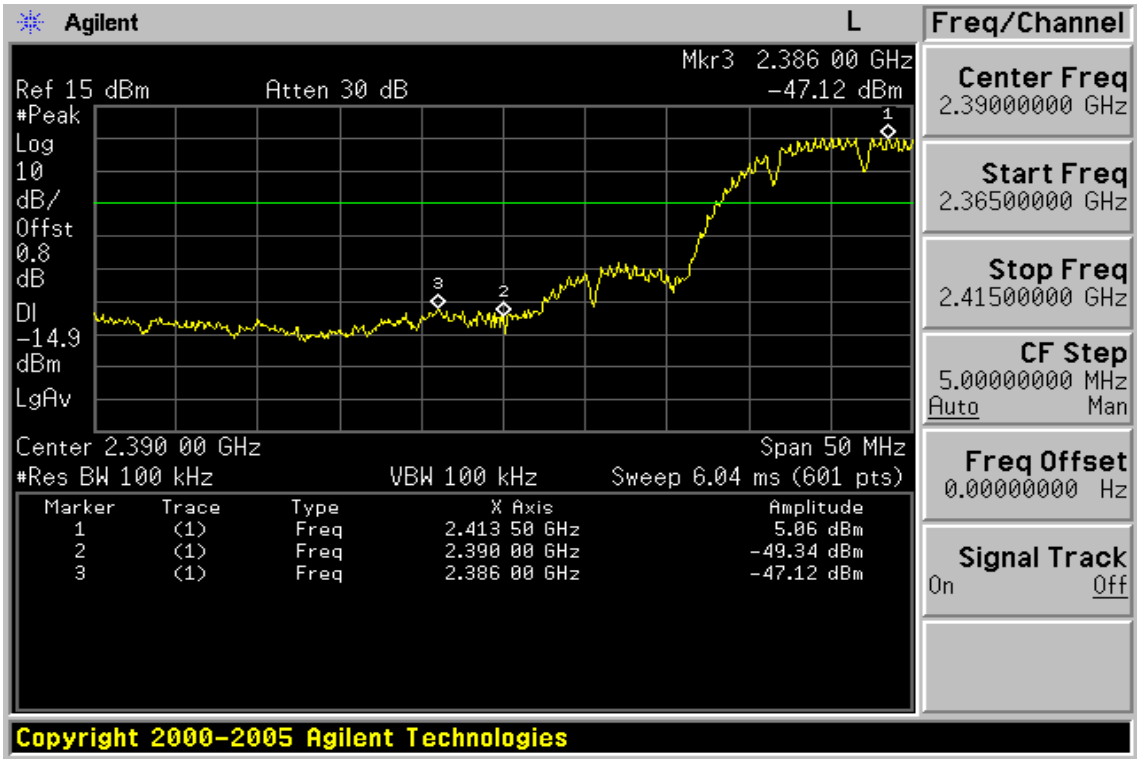
Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/19/2008	04/18/2010
Spectrum Analyzer	Agilent	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2008	07/04/2009
Splitter	Agilent	11636B	N/A	07/05/2008	07/04/2009
DC Power Supply	HP	6038A	2929A-07548	06/27/2007	06/26/2009
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

8.4 Measurement Result

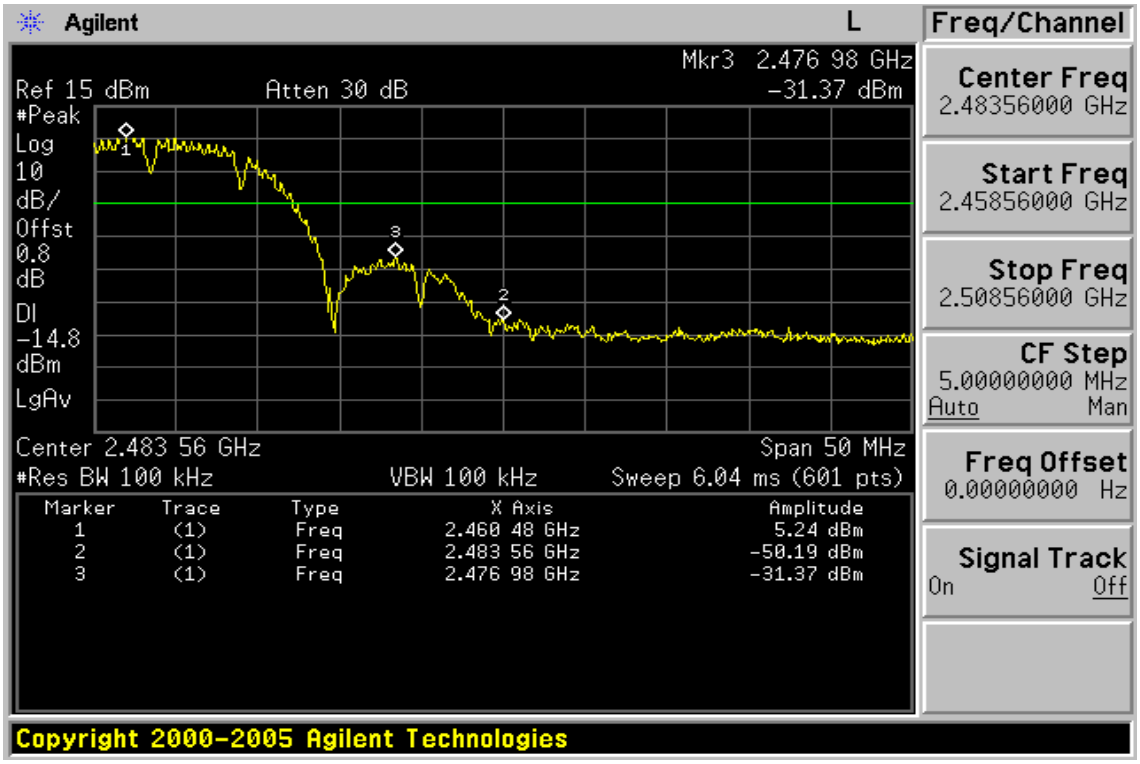
Refer to attach spectrum analyzer data chart.

802.11b

Band Edges Test Data CH-Low



Band Edges Test Data CH-High



Radiated Emission: 802.11 b mode

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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	66.36	63.24	-10.76	55.60	52.48	74.00	54.00	-1.52	AV

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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	65.57	63.16	-10.76	54.81	52.40	74.00	54.00	-1.60	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 b mode

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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
2483.50	66.03	63.04	-10.46	55.57	52.58	74.00	54.00	-1.42	AV

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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
2483.50	65.11	62.84	-10.46	54.65	52.38	74.00	54.00	-1.62	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.

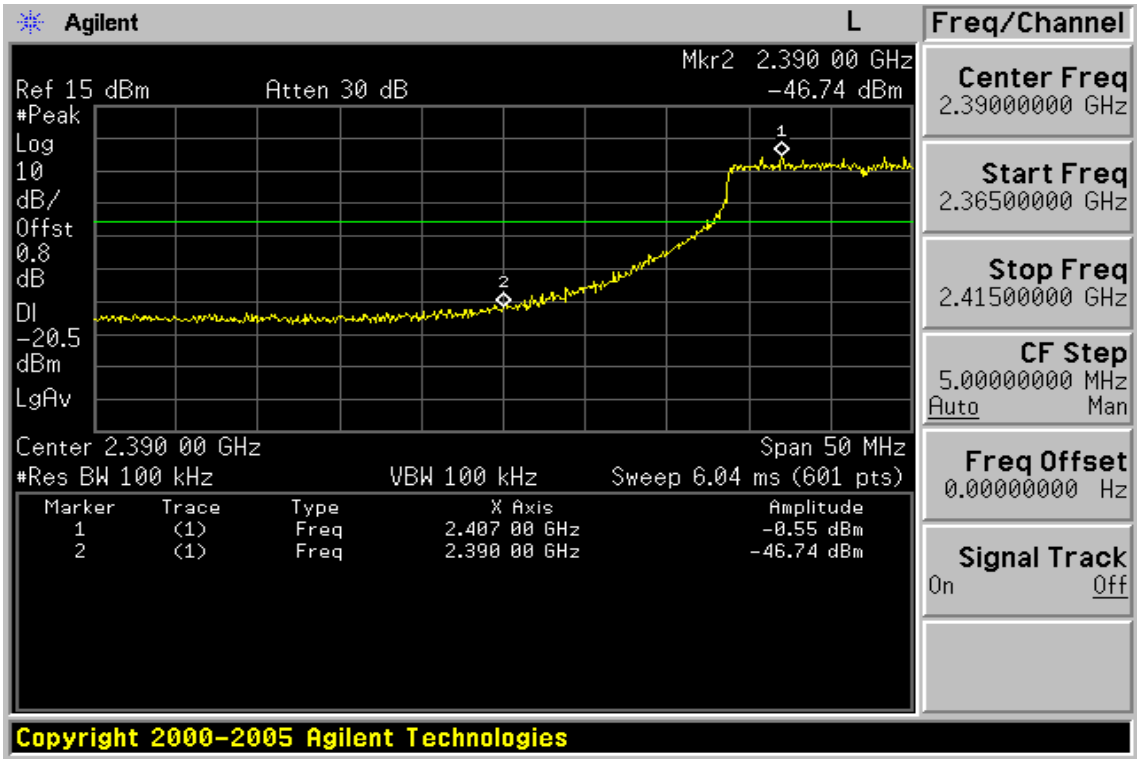
(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

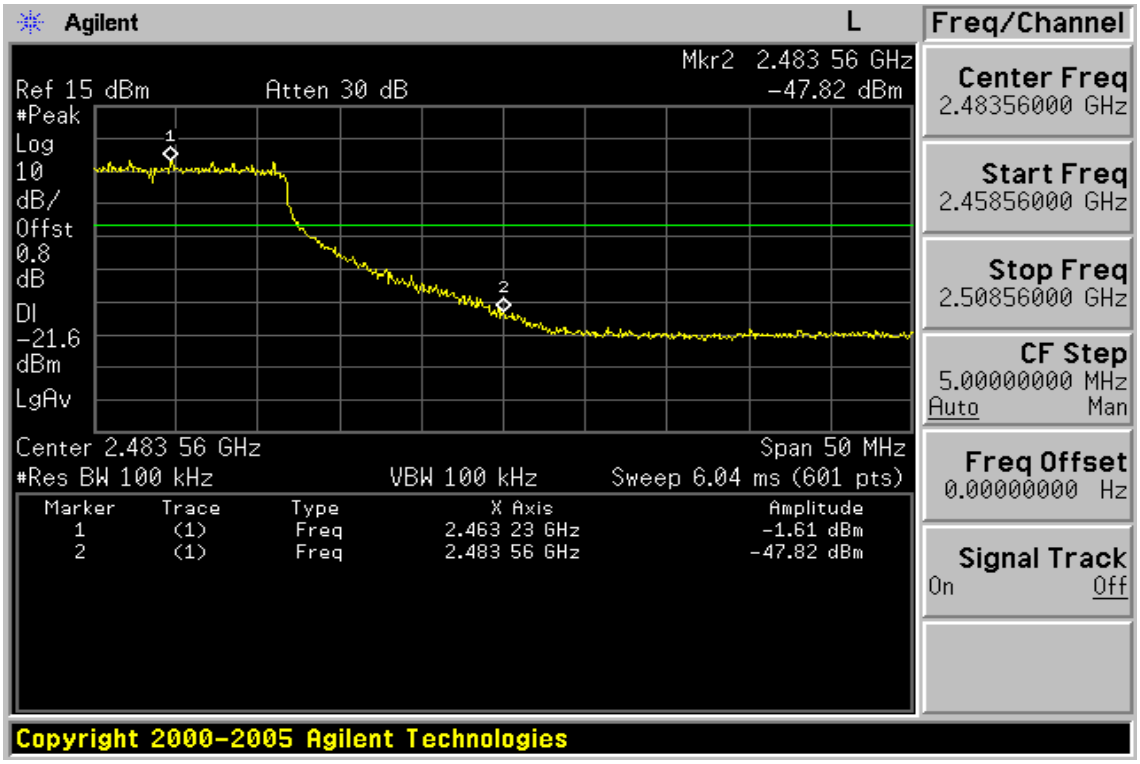
(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

802.11g

Band Edges Test Data CH-Low



Band Edges Test Data CH-High



Radiated Emission: 802.11 g mode

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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	56.45	---	-10.76	45.69	---	74.00	54.00	-8.31	Peak

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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	54.48	---	-10.76	43.72	---	74.00	54.00	-10.28	Peak

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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 g mode

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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
2483.50	54.92	---	-10.46	44.46	---	74.00	54.00	-9.54	Peak

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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
2483.50	58.09	---	-10.46	47.63	---	74.00	54.00	-6.37	Peak

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.

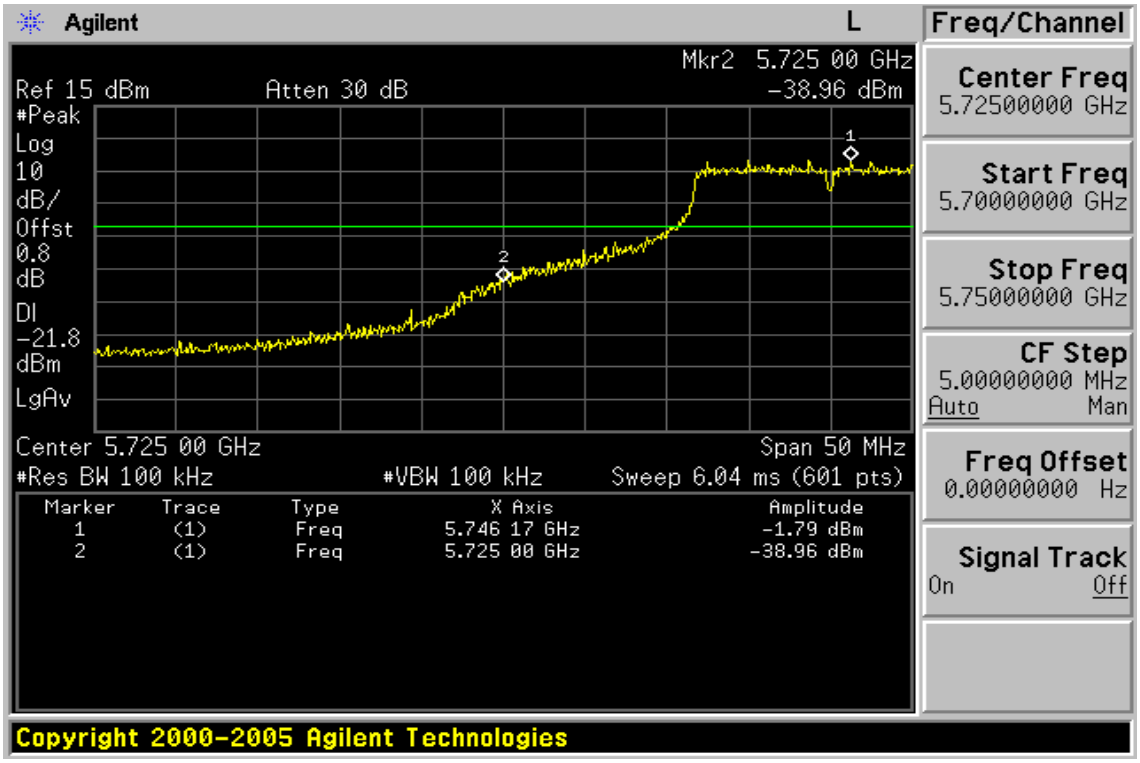
(2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

(3) Spectrum Peak Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

802.11a

Band Edges Test Data CH-Low



Band Edges Test Data CH-High

Radiated Emission: 802.11 a mode

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745 MHz	Test By	Sky
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
5725.00	45.41	40.76	8.03	53.44	48.79	74.00	54.00	-5.21	AV

Operation Mode	TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745 MHz	Test By	Sky
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
5725.00	49.40	42.71	8.03	57.43	50.74	74.00	54.00	-3.26	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Emission: 802.11 a mode

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825 MHz	Test By	Sky
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
5850.00	34.70	---	8.39	43.09	---	74.00	54.00	-10.91	Peak

Operation Mode	TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825 MHz	Test By	Sky
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
5850.00	31.70	---	8.39	40.09	---	74.00	54.00	-13.91	Peak

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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(4) Spectrum AV Setting: 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

9 SPURIOUS RADIATED EMISSION TEST

9.1 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.

9.2 EUT Setup

1 The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.

2 The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.

3 The spacing between the peripherals was 10 centimeters.

4 External I/O cables were draped along the edge of the test table and bundle when necessary.

9.3 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.

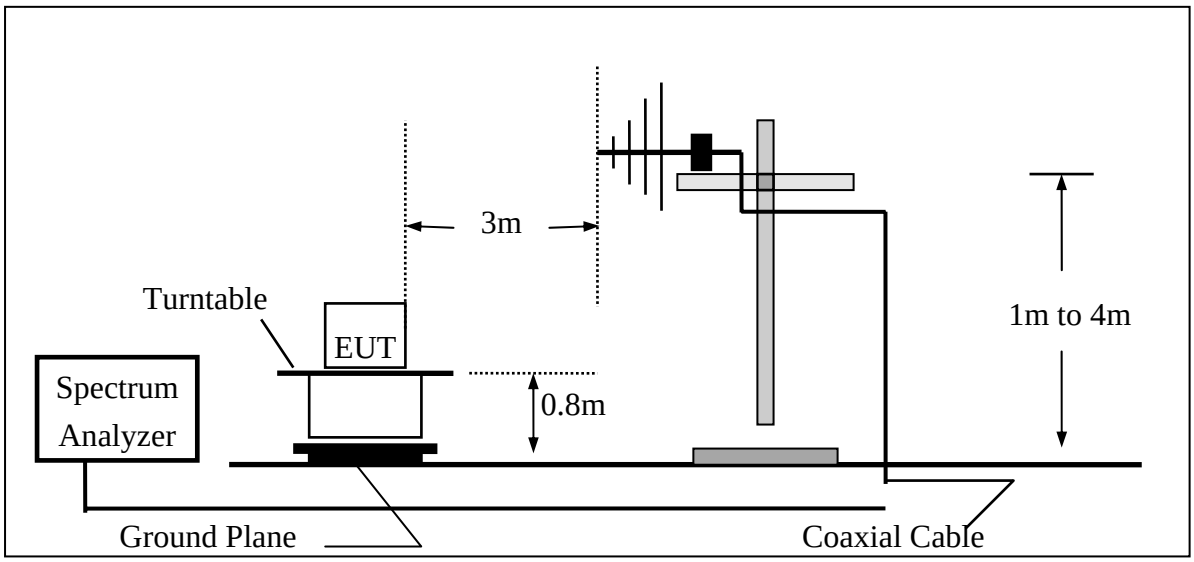
5 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

6 And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

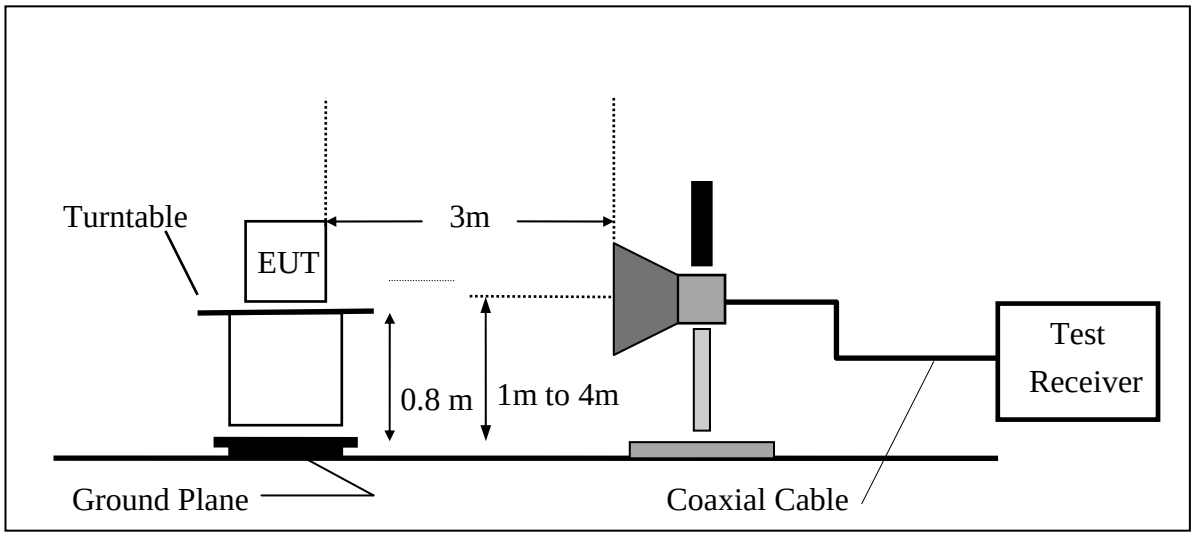
7 Repeat above procedures until all frequency measured were complete.

9.1 Test SET-UP (Block Diagram of Configuration)

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



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



9.2 Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	R&S	FSP 40	100034	02/12/2009	02/11/2010
Bilog Antenna	SCHWAZBECK	VULB9160	9160-3136	11/15/2008	11/14/2009
Dipole Antenna	SCHWAZBECK	VHAP	908/909	07/10/2008	07/09/2010
Dipole Antenna	SCHWAZBECK	UHAP	891/892	07/10/2008	07/09/2010
Hor.n antenna	SCHWAZBECK	BBHA 9120D	309	01/22/2008	01/21/2010
Horn antenna	SCHWAZBECK	BBHA 9120D	9120D-673	05/09/2008	05/08/2010
Signal Generator	R&S	SMR40	100210	01/22/2008	01/21/2010
Signal Generator	Agilent	E4438C	MY45093613	05/22/2008	05/21/2009
Pre-Amplifier	Agilent	8447D	1937A02834	11/30/2008	11/29/2009
Pre-Amplifier	Agilent	8449B	3008A01973	01/05/2009	01/04/2010
Attenuator	Mini-Circuit	BW-S20W5	001	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	001	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	001	07/05/2008	07/04/2009
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
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	01/05/2009	01/04/2010
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	01/05/2009	01/04/2010
3m Site	SGS	966 chamber	N/A	11/08/2008	11/09/2009

9.3 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

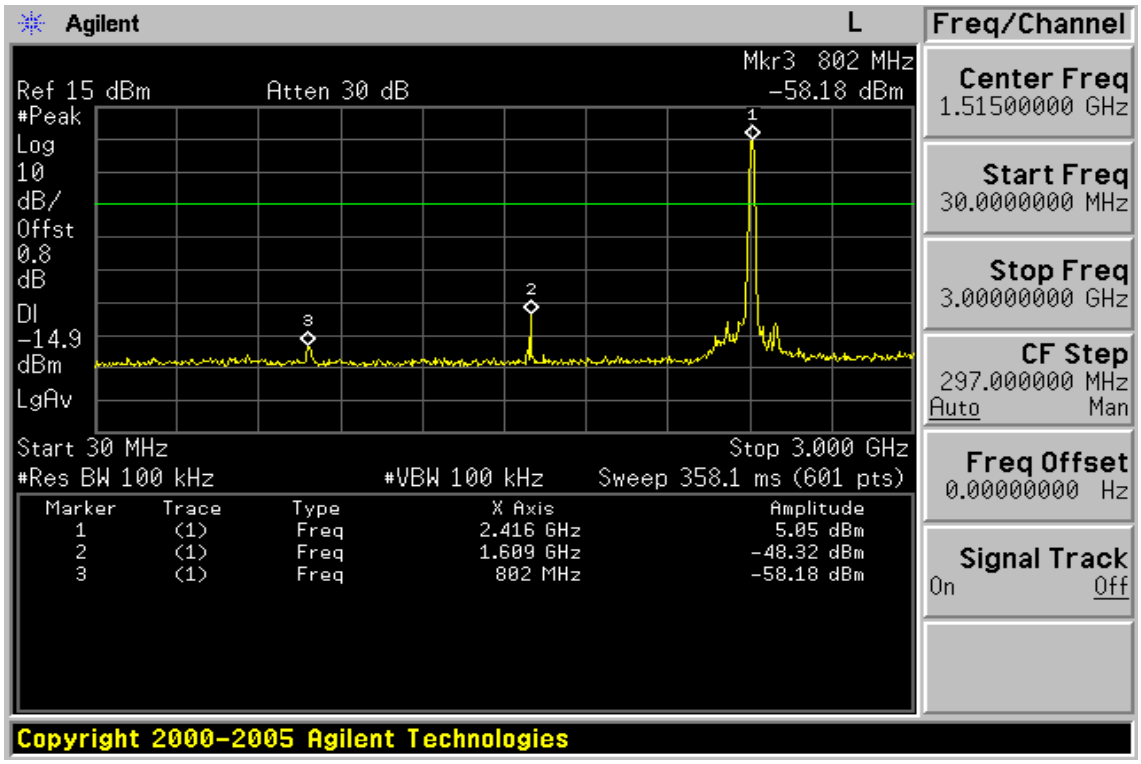
Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

9.4 Measurement Result

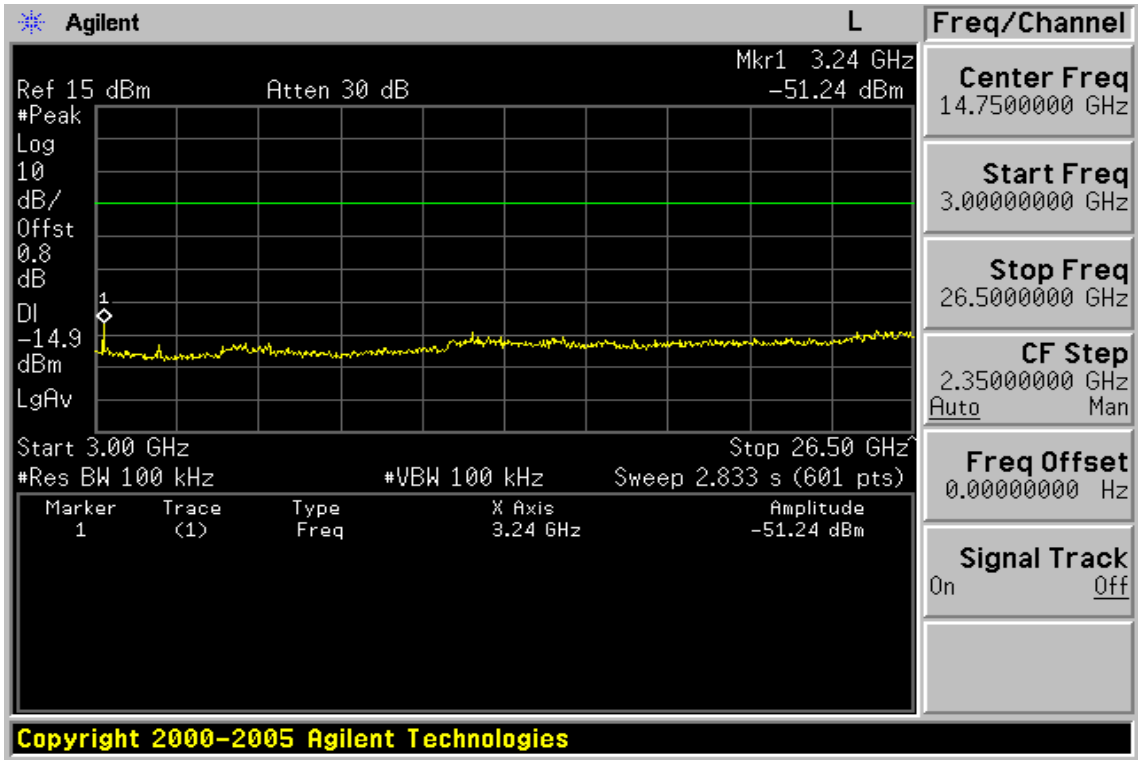
Refer to attach tabular data sheets.

Conducted Spurious Emission Measurement Result (802.11b)

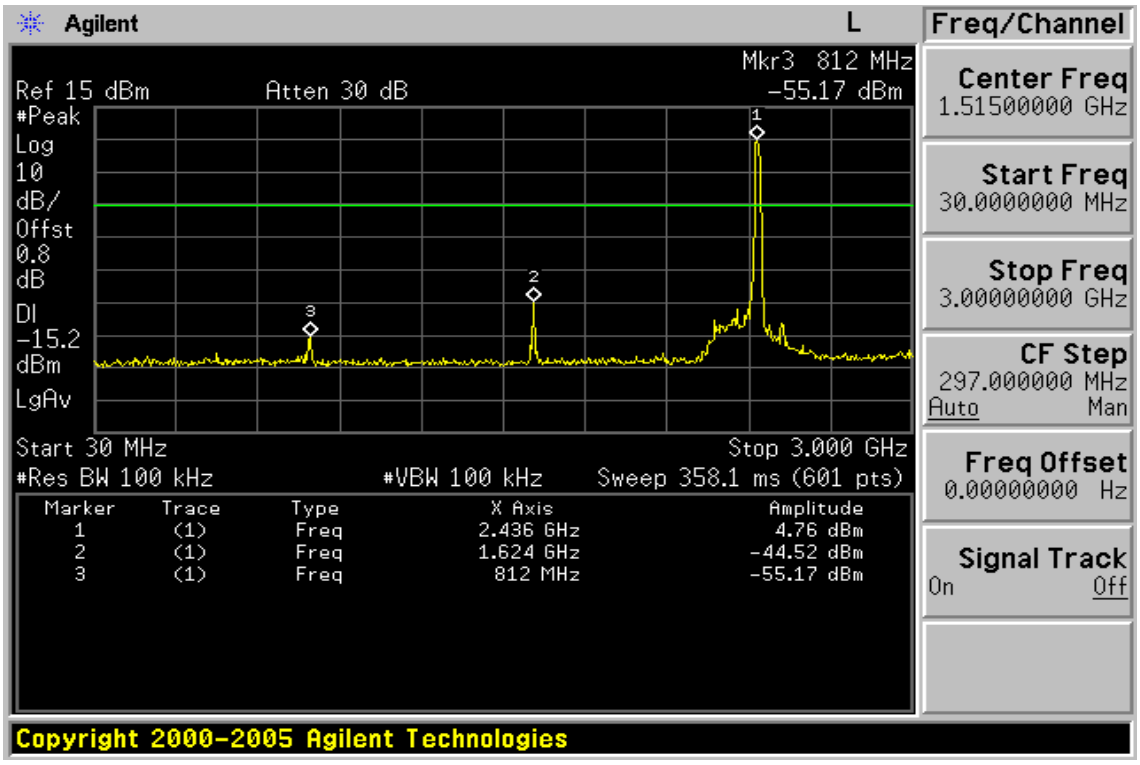
Ch Low 30MHz – 3GHz



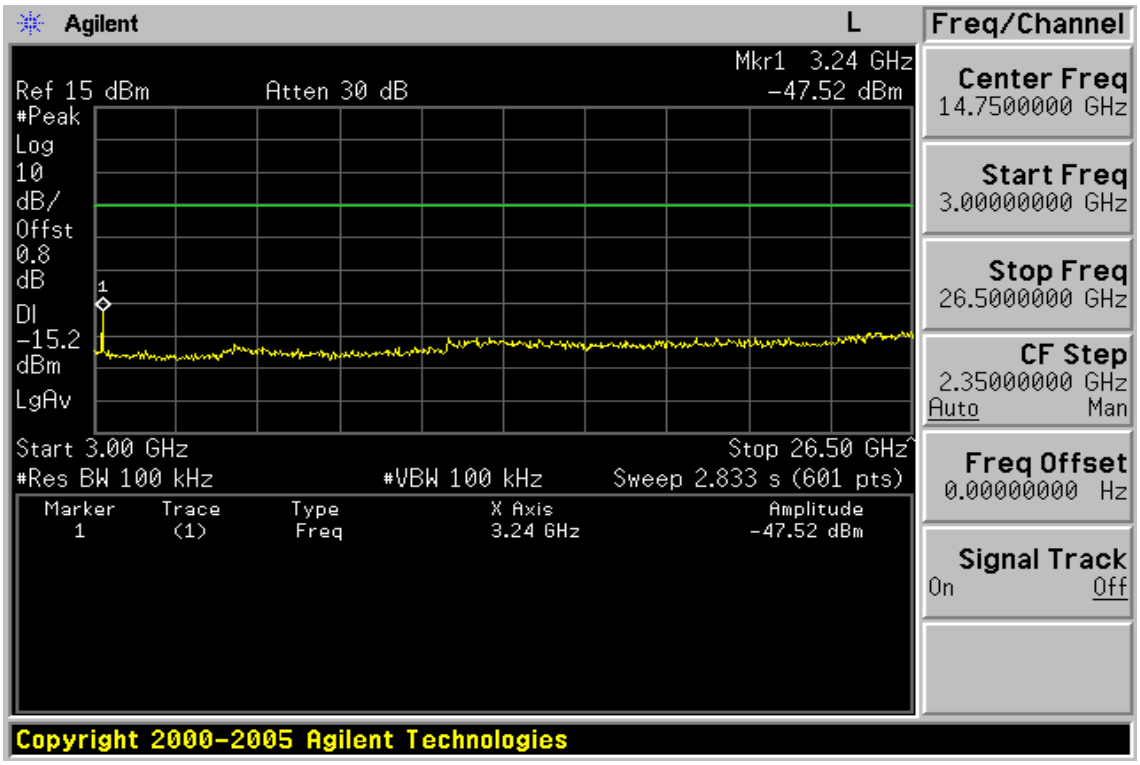
Ch Low 3GHz – 26.5GHz



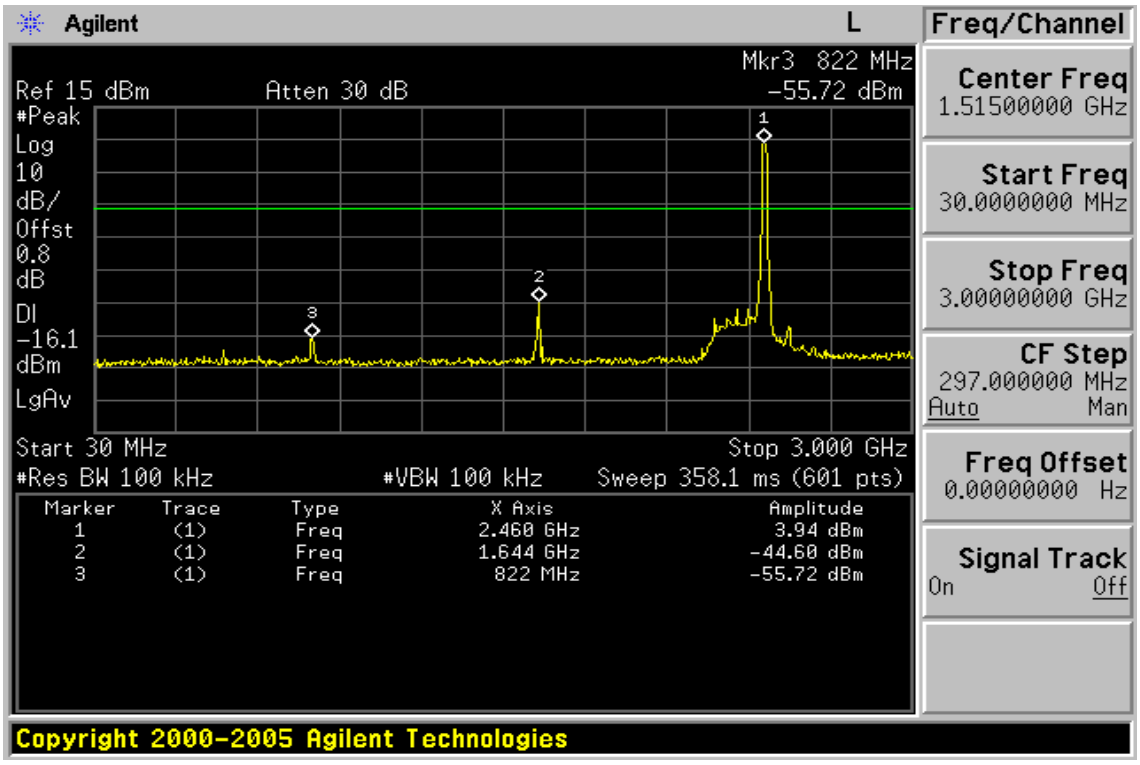
Ch Mid 30MHz – 3GHz



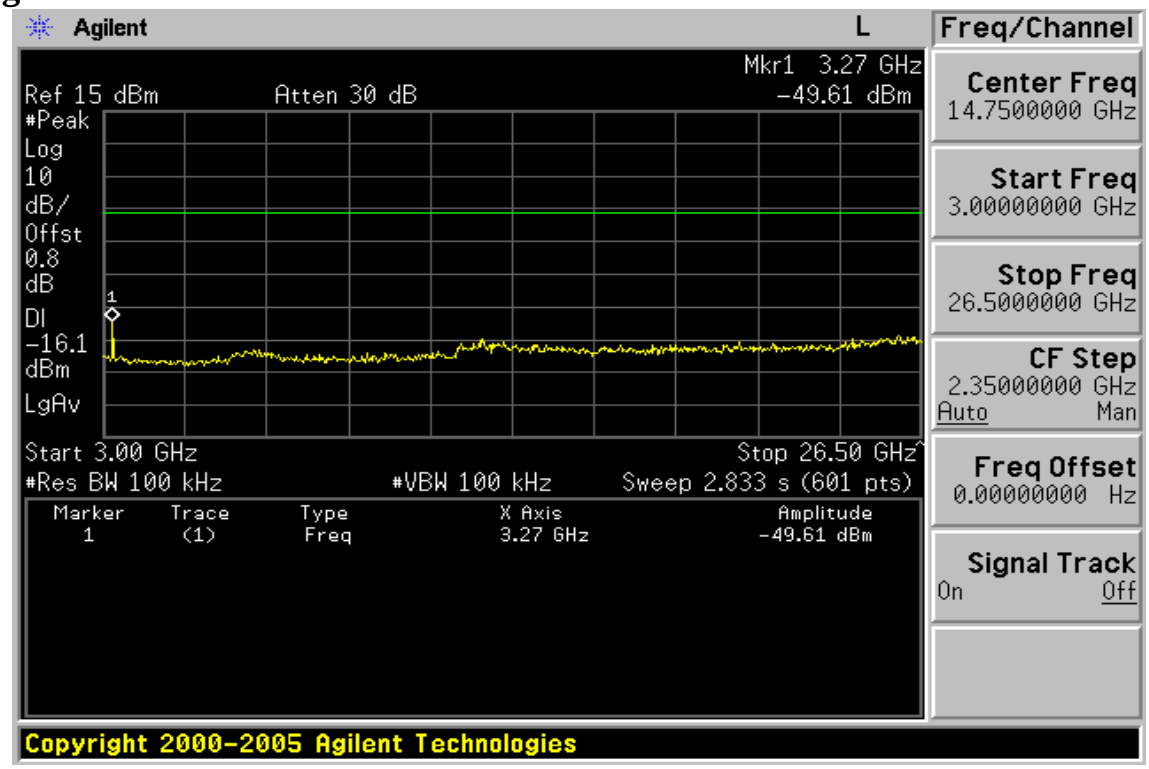
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

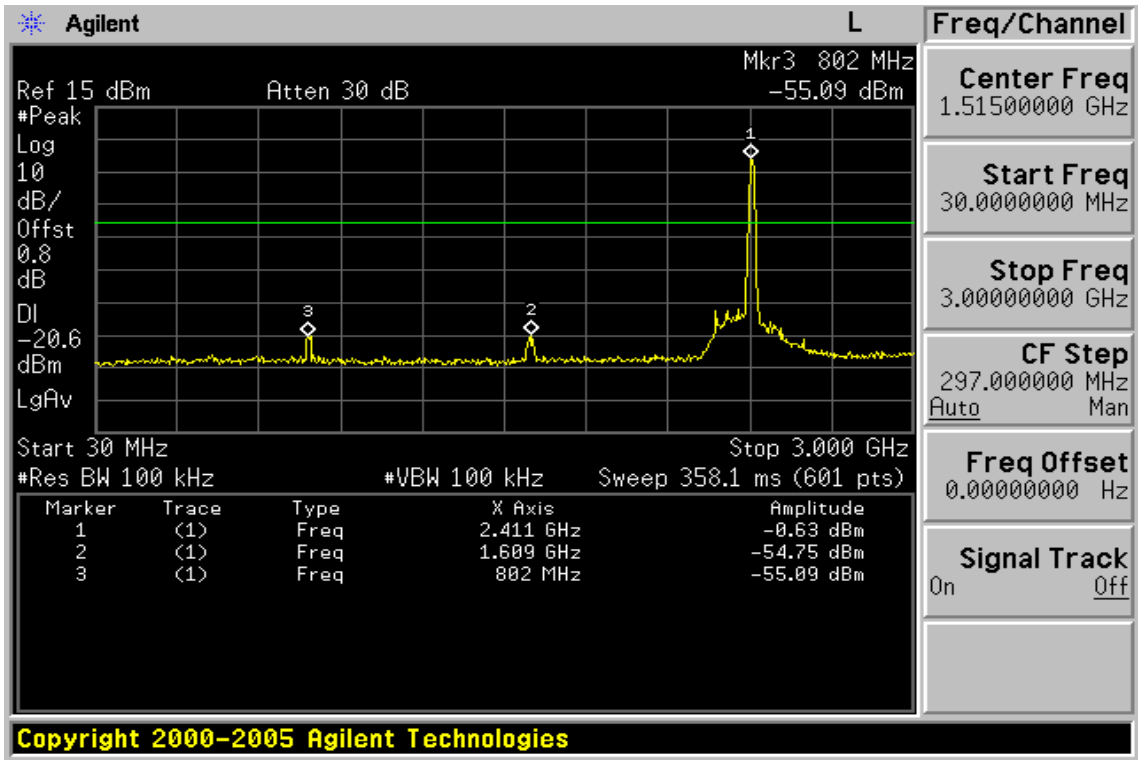


Ch High 3GHz – 26.5GHz

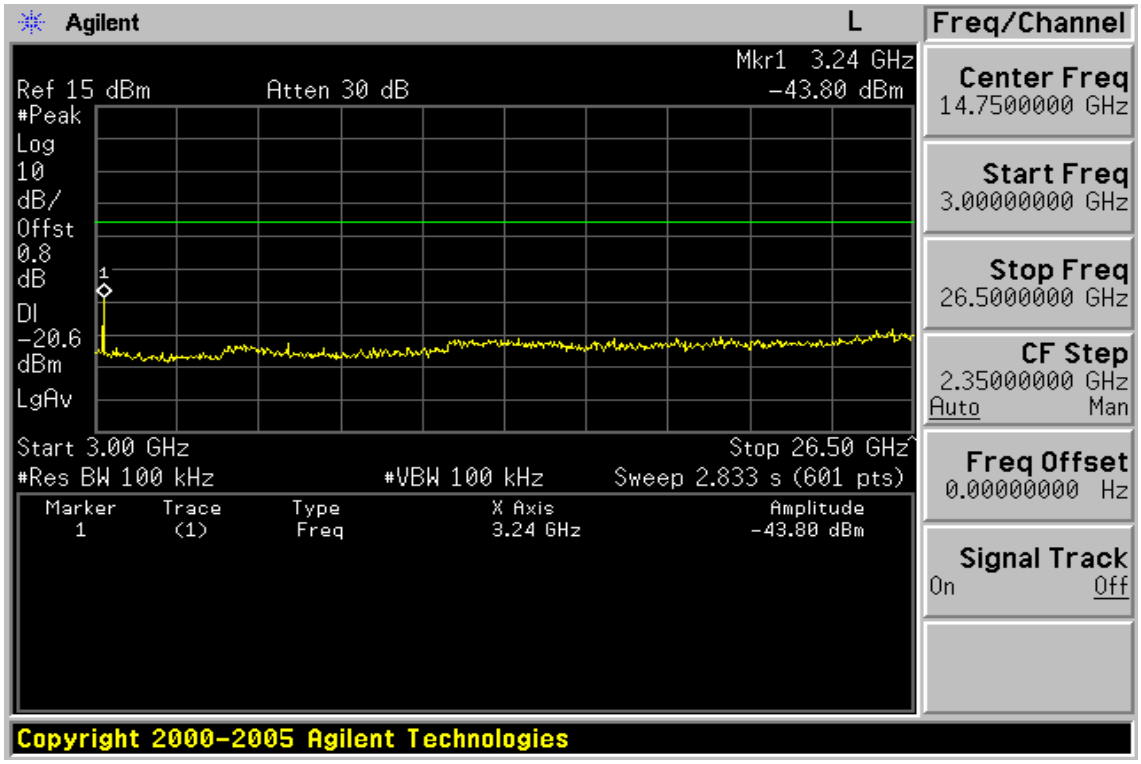


Conducted Spurious Emission Measurement Result (802.11g)

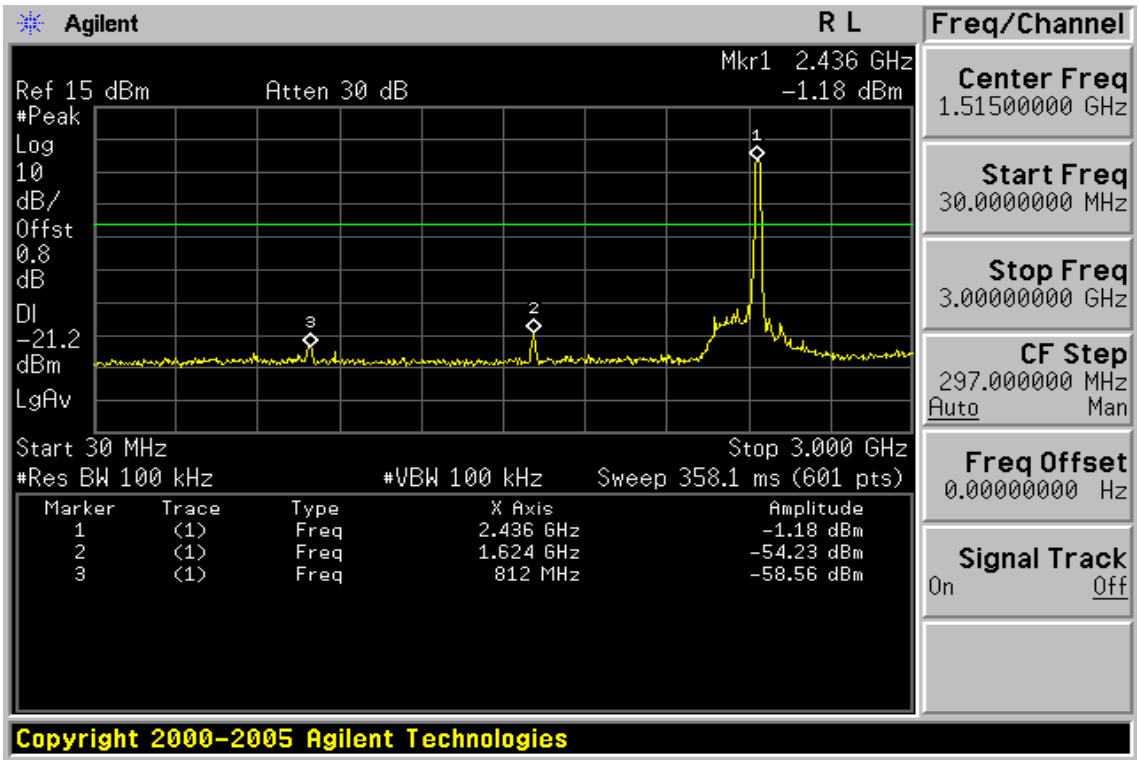
Ch Low 30MHz – 3GHz



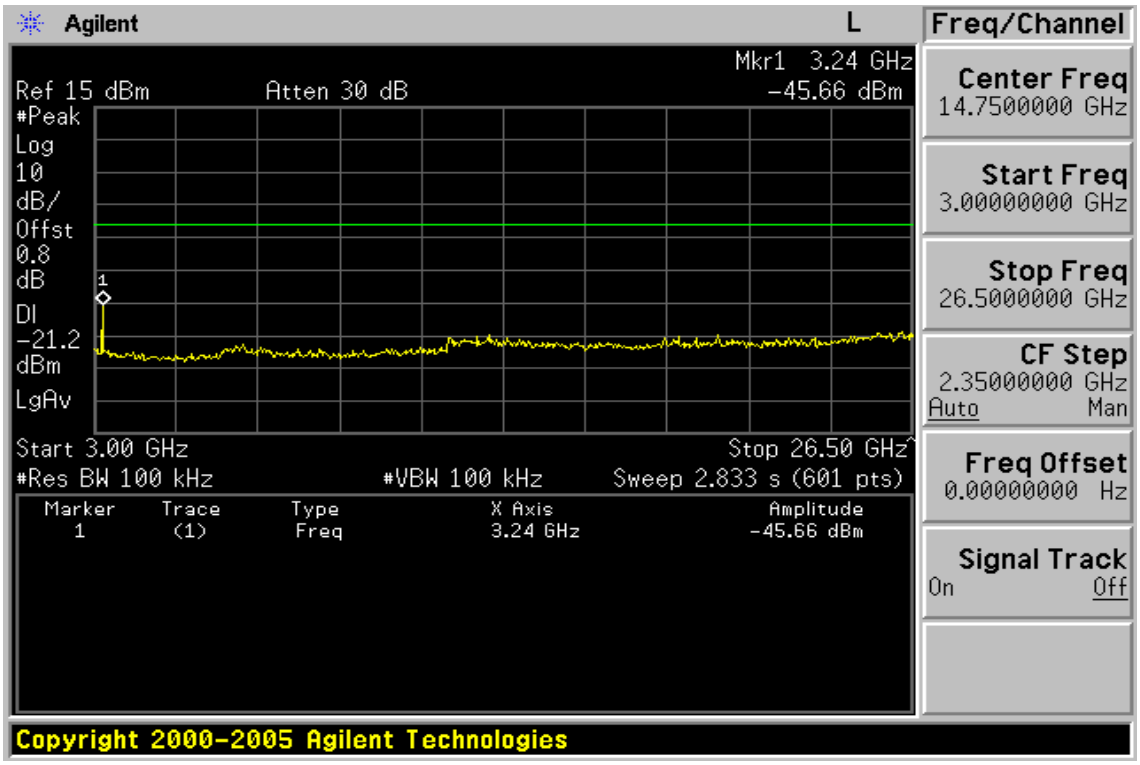
Ch Low 3GHz – 26.5GHz



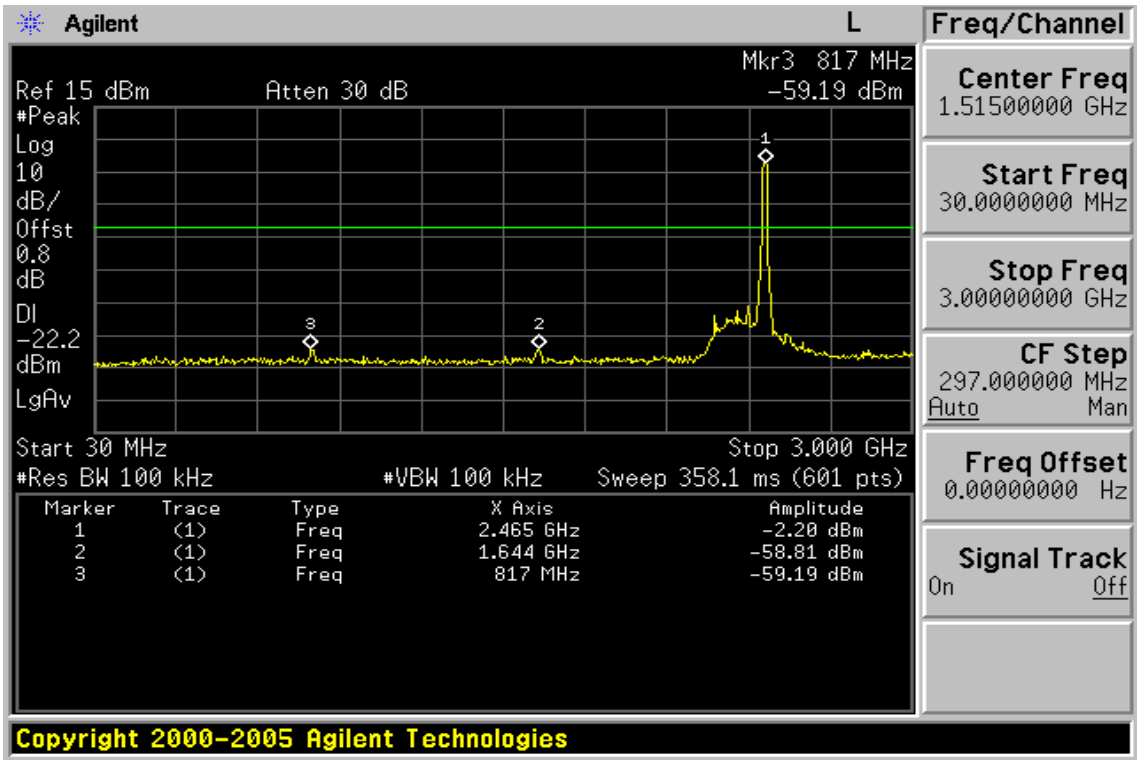
Ch Mid 30MHz – 3GHz



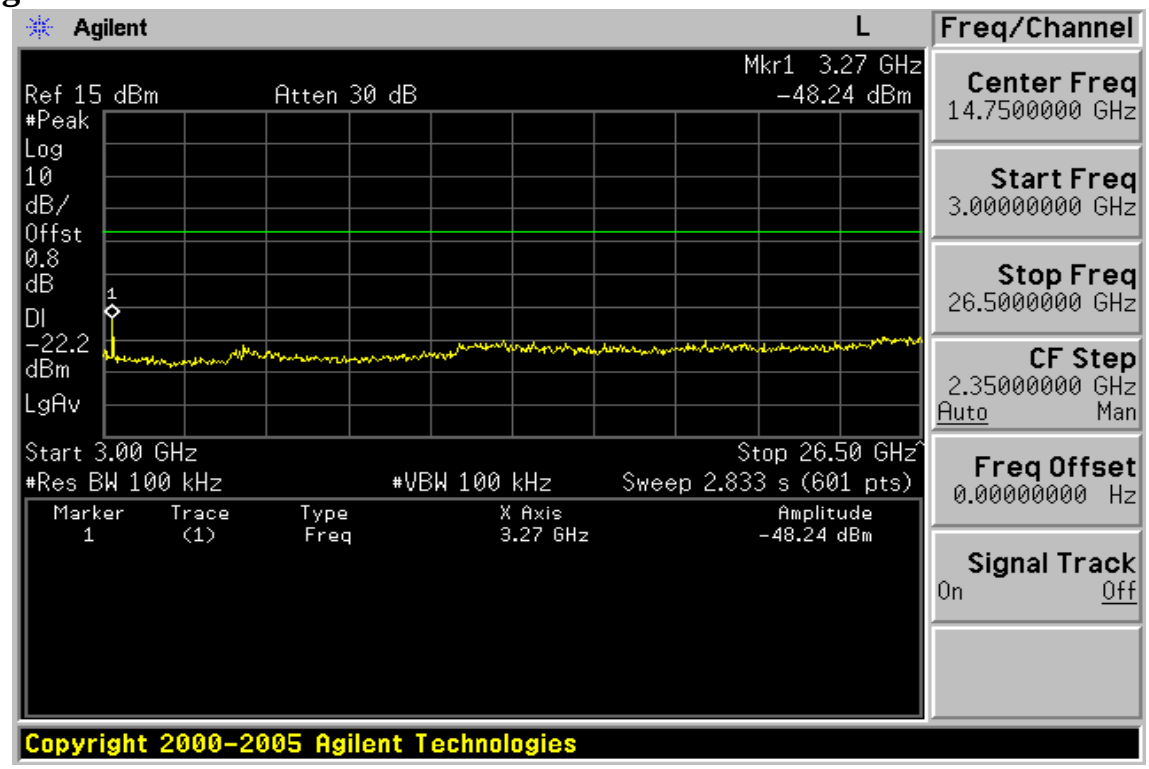
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

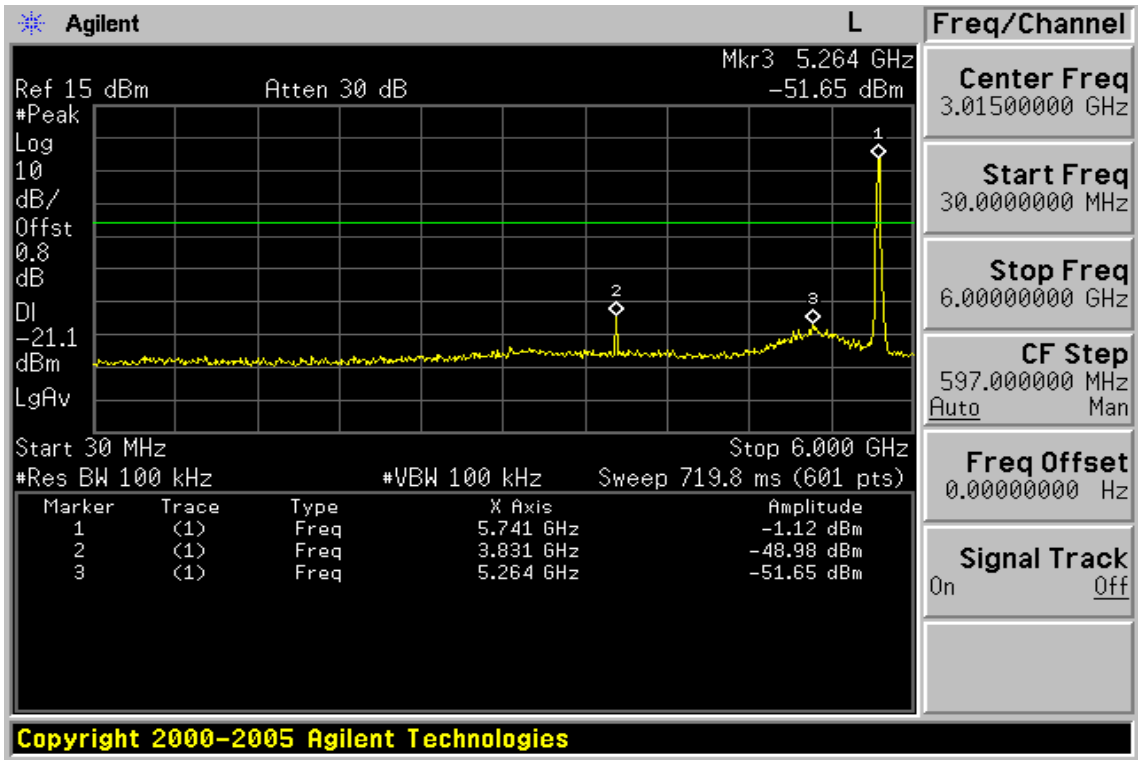


Ch High 3GHz – 26.5GHz

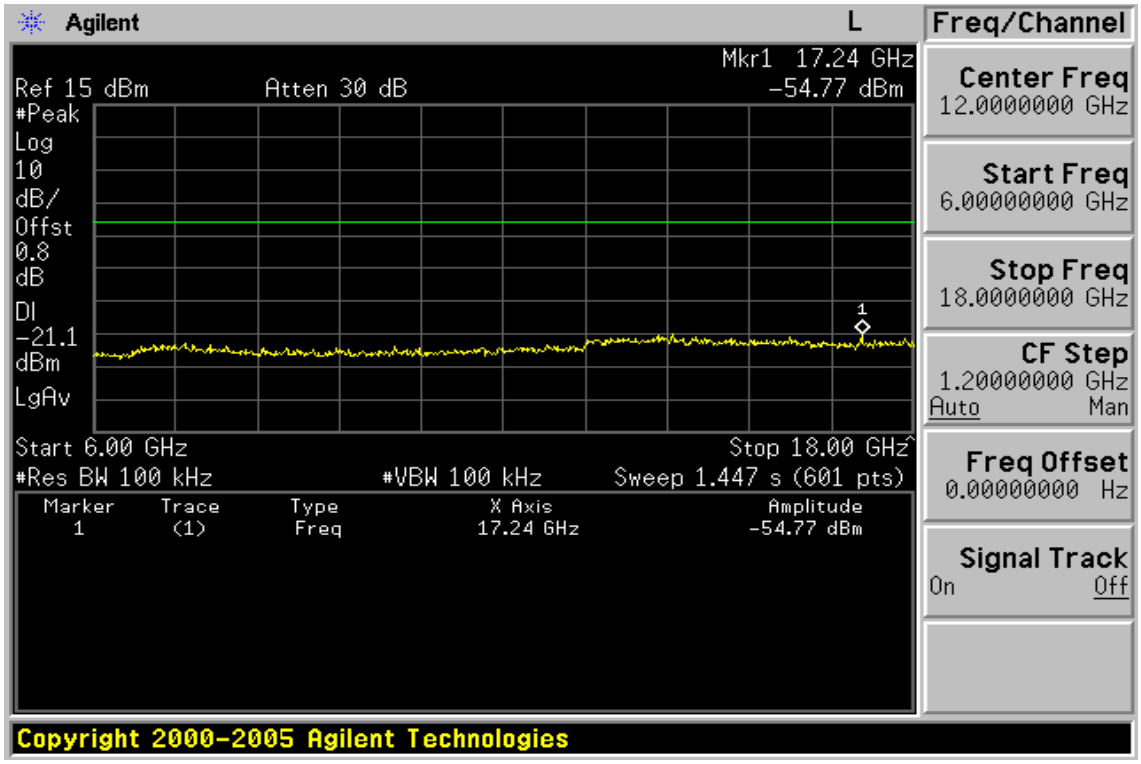


Conducted Spurious Emission Measurement Result (802.11a)

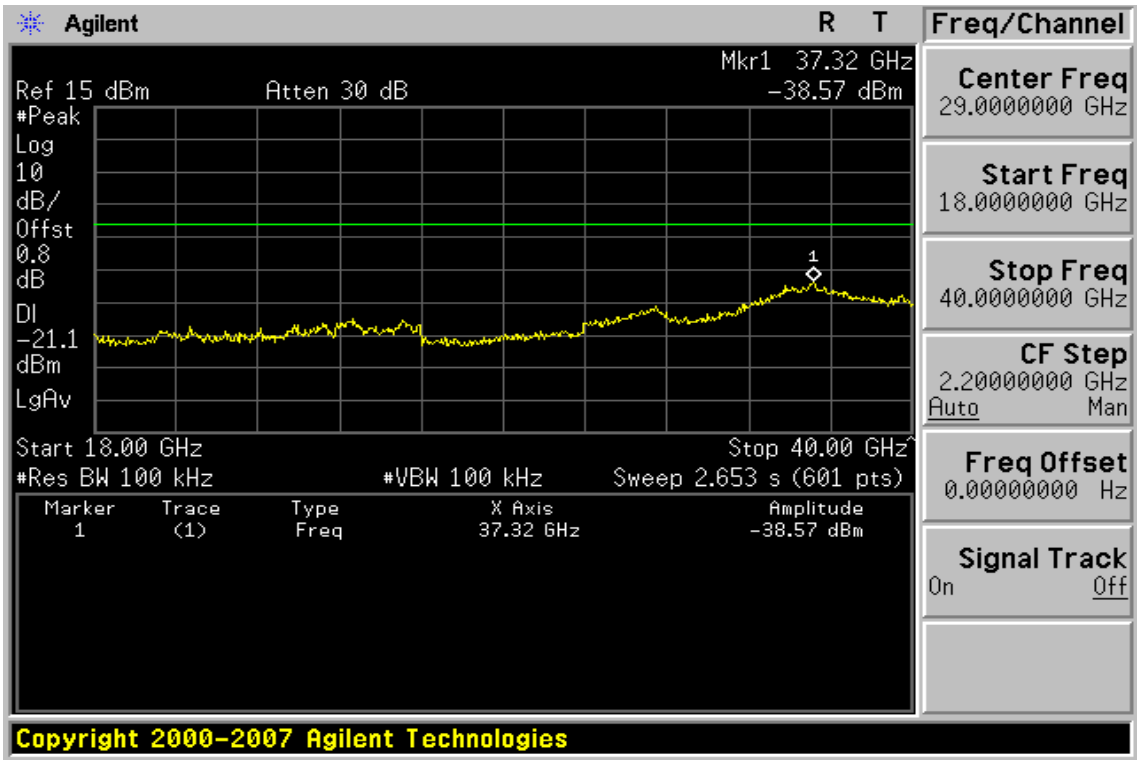
Ch Low 30MHz – 6GHz



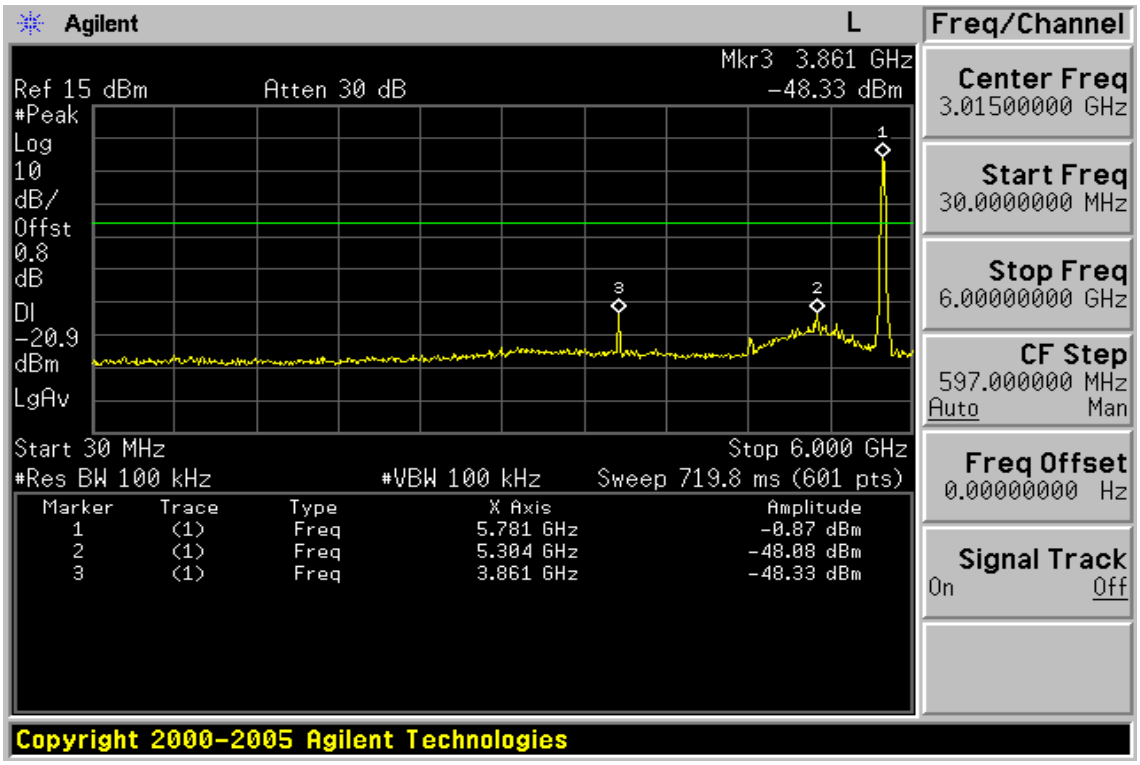
Ch Low 6GHz – 18GHz



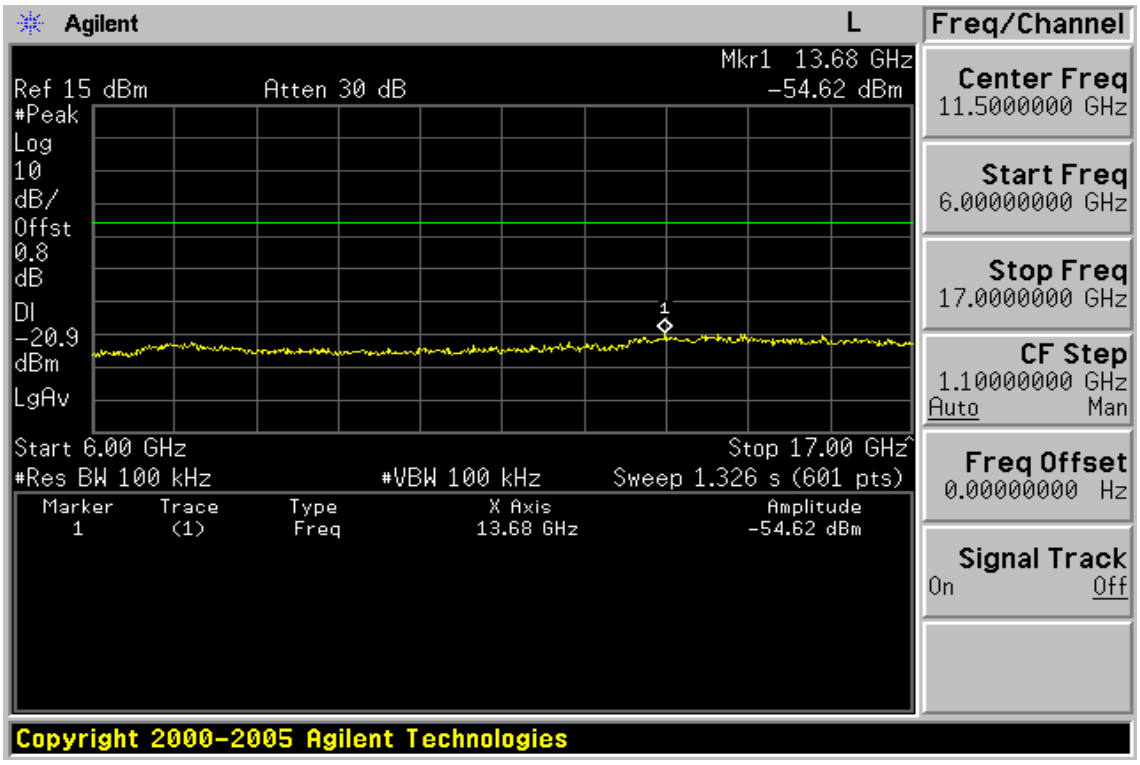
Ch Low 18GHz – 40GHz



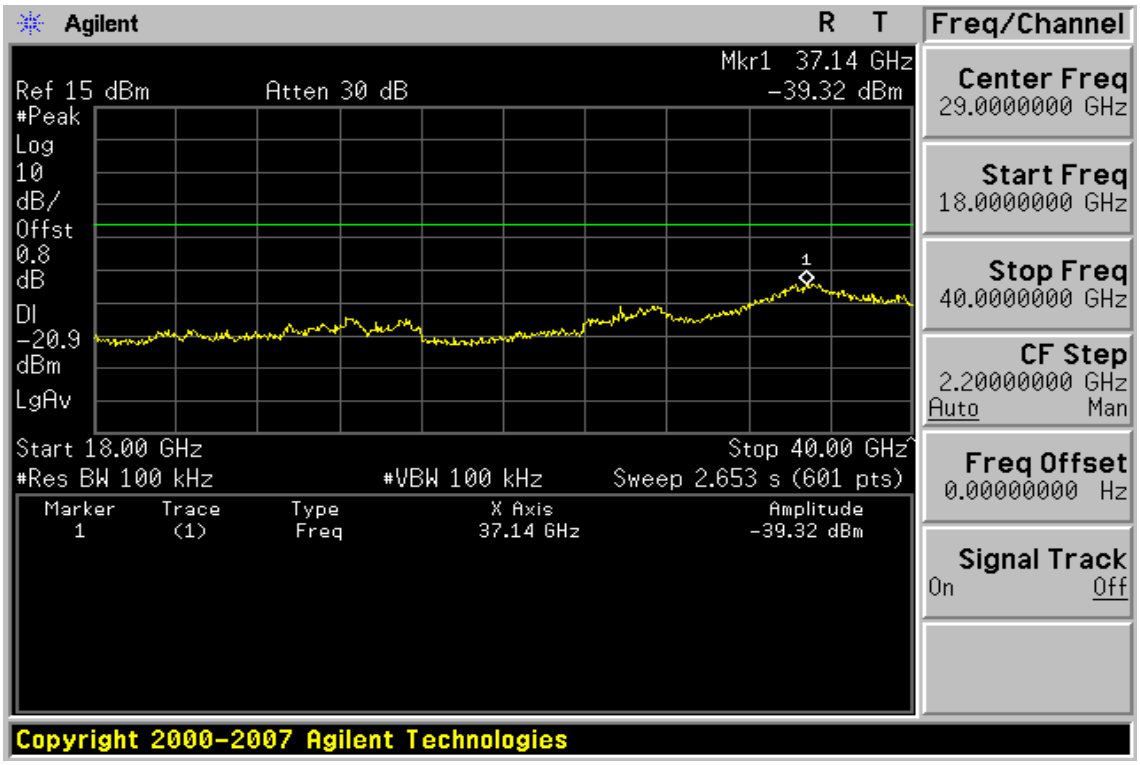
Ch Mid 30MHz – 6GHz



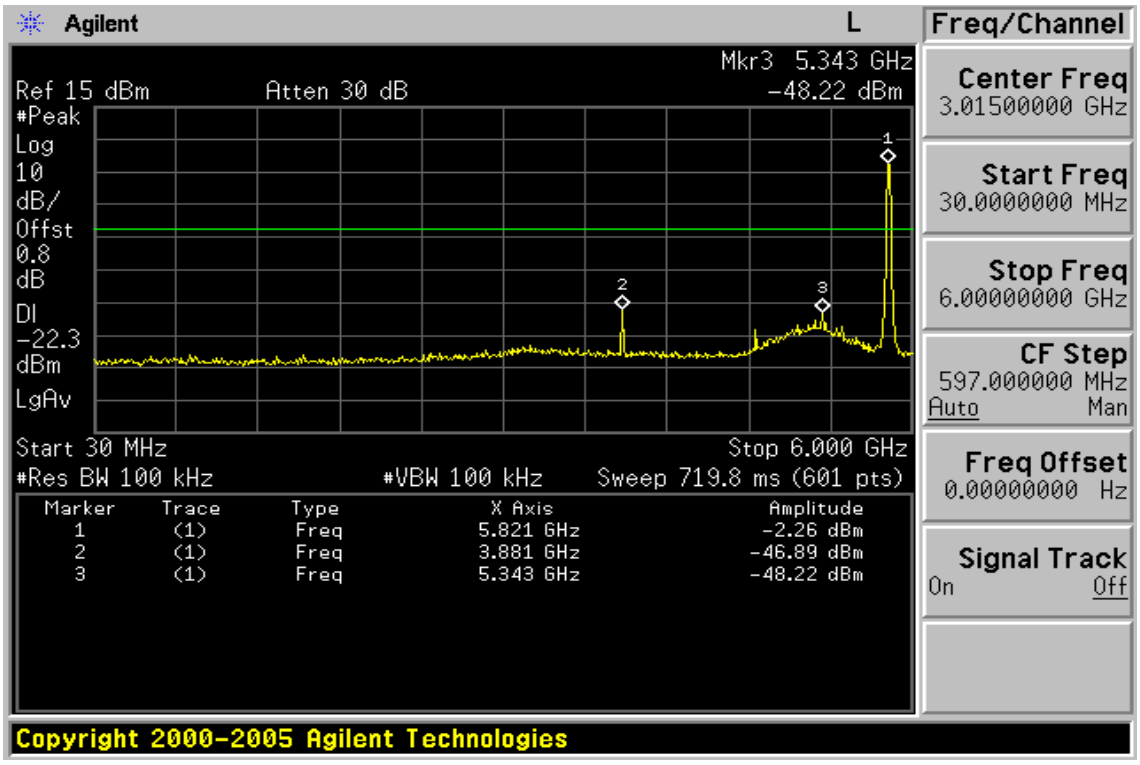
Ch Mid 6GHz – 18GHz



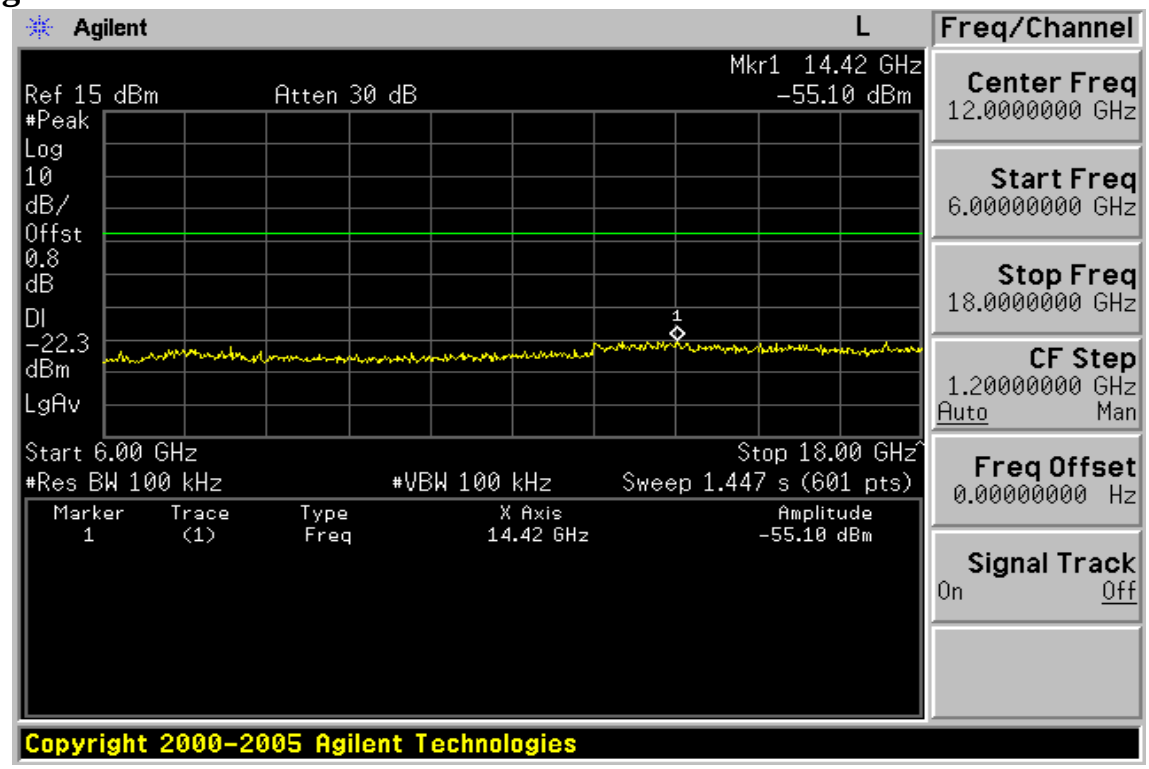
Ch Mid 18GHz – 40GHz



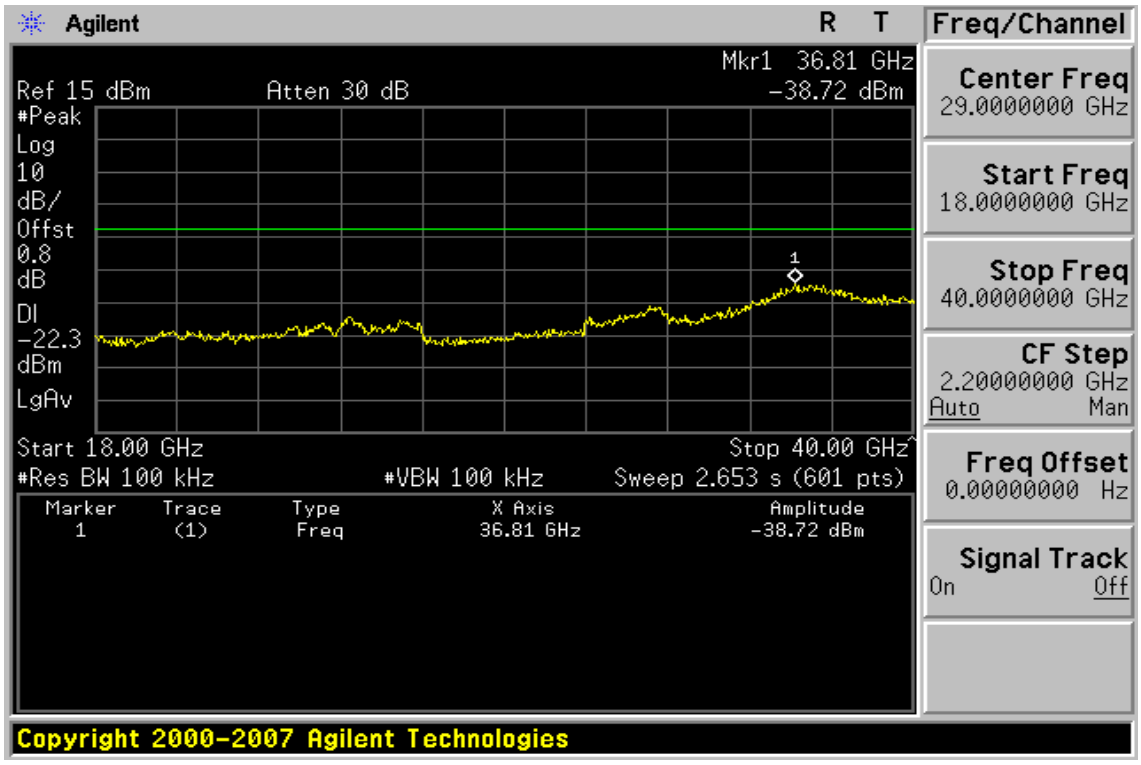
Ch High 30MHz – 6GHz



Ch High 6GHz – 18GHz



Ch High 18GHz – 40GHz



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

Operation Mode	802.11b TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)
56.19	V	Peak	61.21	-26.51	34.70	40.00	-5.30
90.14	V	Peak	62.43	-30.69	31.74	43.50	-11.76
128.94	V	Peak	69.50	-28.27	41.23	43.50	-2.27
191.99	V	Peak	62.92	-30.84	32.08	43.50	-11.42
400.54	V	Peak	51.45	-26.04	25.41	46.00	-20.59
533.43	V	Peak	48.42	-24.10	24.32	46.00	-21.68
124.09	H	Peak	67.20	-28.49	38.71	43.50	-4.79
155.13	H	Peak	55.79	-26.98	28.81	43.50	-14.69
211.39	H	Peak	60.44	-31.13	29.31	43.50	-14.19
441.28	H	Peak	53.33	-25.20	28.13	46.00	-17.87
465.53	H	Peak	53.01	-25.08	27.93	46.00	-18.07
533.43	H	Peak	52.10	-24.10	28.00	46.00	-18.00

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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)
58.13	V	Peak	60.79	-26.67	34.12	40.00	-5.88
96.93	V	Peak	62.17	-30.63	31.54	43.50	-11.96
124.09	V	Peak	70.16	-28.49	41.67	43.50	-1.83
189.08	V	Peak	64.07	-30.49	33.58	43.50	-9.92
424.49	V	Peak	50.83	-25.24	25.59	46.00	-20.41
533.43	V	Peak	49.00	-24.10	24.90	46.00	-21.10
124.09	H	Peak	66.80	-28.49	38.31	43.50	-5.19
211.39	H	Peak	59.81	-31.13	28.68	43.50	-14.82
400.54	H	Peak	53.76	-26.04	27.72	46.00	-18.28
465.53	H	Peak	53.01	-25.08	27.93	46.00	-18.07
533.43	H	Peak	52.00	-24.10	27.90	46.00	-18.10
712.88	H	Peak	49.20	-21.06	28.14	46.00	-17.86

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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)
56.19	V	Peak	60.38	-26.51	33.87	40.00	-6.13
94.99	V	Peak	63.89	-30.77	33.12	43.50	-10.38
128.94	V	Peak	69.89	-28.27	41.62	43.50	-1.88
189.08	V	Peak	63.33	-30.49	32.84	43.50	-10.66
400.54	V	Peak	54.19	-26.04	28.15	46.00	-17.85
533.43	V	Peak	50.40	-24.10	26.30	46.00	-19.70
121.18	H	Peak	66.97	-28.71	38.26	43.50	-5.24
153.19	H	Peak	55.90	-26.97	28.93	43.50	-14.57
216.24	H	Peak	59.55	-30.90	28.65	46.00	-17.35
300.63	H	Peak	56.38	-28.49	27.89	46.00	-18.11
441.28	H	Peak	53.58	-25.20	28.38	46.00	-17.62
533.43	H	Peak	52.26	-24.10	28.16	46.00	-17.84

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	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)
56.19	V	Peak	61.56	-26.51	35.05	40.00	-4.95
96.93	V	Peak	63.58	-30.63	32.95	43.50	-10.55
130.88	V	Peak	68.80	-28.16	40.64	43.50	-2.86
191.99	V	Peak	62.47	-30.84	31.63	43.50	-11.87
221.09	V	Peak	58.34	-30.56	27.78	46.00	-18.22
400.54	V	Peak	54.70	-26.04	28.66	46.00	-17.34
124.09	H	Peak	65.89	-28.49	37.40	43.50	-6.10
150.28	H	Peak	55.32	-26.97	28.35	43.50	-15.15
300.63	H	Peak	56.93	-28.49	28.44	46.00	-17.56
400.54	H	Peak	55.06	-26.04	29.02	46.00	-16.98
434.49	H	Peak	58.01	-25.24	32.77	46.00	-13.23
533.43	H	Peak	55.27	-24.10	31.17	46.00	-14.83

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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)
58.13	V	Peak	61.46	-26.67	34.79	40.00	-5.21
94.99	V	Peak	63.73	-30.77	32.96	43.50	-10.54
128.94	V	Peak	68.67	-28.27	40.40	43.50	-3.10
191.99	V	Peak	63.16	-30.84	32.32	43.50	-11.18
400.54	V	Peak	54.80	-26.04	28.76	46.00	-17.24
434.49	V	Peak	54.48	-25.24	29.24	46.00	-16.76
58.13	H	Peak	61.46	-26.67	34.79	40.00	-5.21
94.99	H	Peak	63.73	-30.77	32.96	43.50	-10.54
128.94	H	Peak	70.67	-28.27	42.40	43.50	-1.10
191.99	H	Peak	63.16	-30.84	32.32	43.50	-11.18
400.54	H	Peak	54.80	-26.04	28.76	46.00	-17.24
434.49	H	Peak	54.48	-25.24	29.24	46.00	-16.76

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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)
58.13	V	Peak	60.44	-26.67	33.77	40.00	-6.23
94.99	V	Peak	63.06	-30.77	32.29	43.50	-11.21
124.09	V	Peak	67.20	-28.49	38.71	43.50	-4.79
189.08	V	Peak	63.13	-30.49	32.64	43.50	-10.86
223.03	V	Peak	58.80	-30.44	28.36	46.00	-17.64
417.03	V	Peak	51.22	-25.64	25.58	46.00	-20.42
124.09	H	Peak	66.46	-28.49	37.97	43.50	-5.53
182.29	H	Peak	57.98	-29.76	28.22	43.50	-15.28
221.09	H	Peak	58.20	-30.56	27.64	46.00	-18.36
353.98	H	Peak	55.19	-27.11	28.08	46.00	-17.92
434.49	H	Peak	53.44	-25.24	28.20	46.00	-17.80
533.43	H	Peak	52.03	-24.10	27.93	46.00	-18.07

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) (802.11a)

Operation Mode	802.11a TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745MHz	Test By	Sky
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)
96.93	V	Peak	54.09	-17.16	36.93	43.50	-6.57
266.68	V	Peak	46.06	-13.57	32.49	46.00	-13.51
332.64	V	Peak	47.02	-12.16	34.86	46.00	-11.14
378.23	V	Peak	45.89	-10.79	35.10	46.00	-10.90
421.88	V	Peak	44.39	-9.34	35.05	46.00	-10.95
458.74	V	Peak	43.40	-8.61	34.79	46.00	-11.21
245.34	H	Peak	49.12	-13.98	35.14	46.00	-10.86
288.99	H	Peak	49.83	-13.23	36.60	46.00	-9.40
332.64	H	Peak	52.39	-12.16	40.23	46.00	-5.77
378.23	H	Peak	51.28	-10.79	40.49	46.00	-5.51
400.54	H	Peak	48.56	-9.99	38.57	46.00	-7.43
421.88	H	Peak	48.06	-9.34	38.72	46.00	-7.28

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) (802.11a)

Operation Mode	802.11a TX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785MHz	Test By	Sky
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)
96.93	V	Peak	54.14	-17.16	36.98	43.50	-6.52
264.74	V	Peak	46.73	-13.59	33.14	46.00	-12.86
332.64	V	Peak	47.11	-12.16	34.95	46.00	-11.05
378.23	V	Peak	45.70	-10.79	34.91	46.00	-11.09
421.88	V	Peak	44.39	-9.34	35.05	46.00	-10.95
453.89	V	Peak	42.28	-8.60	33.68	46.00	-12.32
245.34	H	Peak	49.71	-13.98	35.73	46.00	-10.27
288.99	H	Peak	49.97	-13.23	36.74	46.00	-9.26
332.64	H	Peak	52.38	-12.16	40.22	46.00	-5.78
378.23	H	Peak	51.28	-10.79	40.49	46.00	-5.51
400.54	H	Peak	49.20	-9.99	39.21	46.00	-6.79
421.88	H	Peak	48.43	-9.34	39.09	46.00	-6.91

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) (802.11a)

Operation Mode	802.11a TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825MHz	Test By	Sky
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)
96.93	V	Peak	54.29	-17.16	37.13	43.50	-6.37
261.83	V	Peak	44.66	-13.63	31.03	46.00	-14.97
332.64	V	Peak	47.32	-12.16	35.16	46.00	-10.84
378.23	V	Peak	46.07	-10.79	35.28	46.00	-10.72
421.88	V	Peak	44.32	-9.34	34.98	46.00	-11.02
458.74	V	Peak	42.95	-8.61	34.34	46.00	-11.66
245.34	H	Peak	49.35	-13.98	35.37	46.00	-10.63
288.99	H	Peak	49.88	-13.23	36.65	46.00	-9.35
332.64	H	Peak	52.59	-12.16	40.43	46.00	-5.57
378.23	H	Peak	51.18	-10.79	40.39	46.00	-5.61
421.88	H	Peak	47.96	-9.34	38.62	46.00	-7.38

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	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)	
1598.0	50.15	---	-13.95	36.20	---	74.00	54.00	-17.80	Peak
4824.0	50.12	---	-6.01	44.11	---	74.00	54.00	-9.89	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)	
1598.0	48.35	---	-13.95	34.40	---	74.00	54.00	-19.60	Peak
3203.5	52.41	---	-10.39	42.02	---	74.00	54.00	-11.98	Peak
4824.0	53.05	---	-6.01	47.04	---	74.00	54.00	-6.96	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)	
1611.0	50.48	---	-13.85	36.63	---	74.00	54.00	-17.37	Peak
4874.0	49.62	---	-5.97	43.65	---	74.00	54.00	-10.35	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)	
1611.0	52.35	---	-13.85	38.50	---	74.00	54.00	-15.50	Peak
3236.0	58.46	---	-10.40	48.06	---	74.00	54.00	-5.94	Peak
4874.0	55.96	---	-5.97	49.99	---	74.00	54.00	-4.01	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)	
1643.5	49.64	---	-13.76	35.88	---	74.00	54.00	-18.12	Peak
3288.0	48.65	---	-10.37	38.28	---	74.00	54.00	-15.72	Peak
4924.0	50.94	---	-5.91	45.03	---	74.00	54.00	-8.97	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)	
1643.5	51.49	---	-13.76	37.73	---	74.00	54.00	-16.27	Peak
3288.0	53.89	---	-10.37	43.52	---	74.00	54.00	-10.48	Peak
4924.0	57.08	---	-5.91	51.17	---	74.00	54.00	-2.83	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)	
3203.5	49.27	---	-10.39	38.88	---	74.00	54.00	-15.12	Peak
4824.0	44.44	---	-6.01	38.43	---	74.00	54.00	-15.57	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)	
3203.5	58.74	---	-10.39	48.35	---	74.00	54.00	-5.65	Peak
4824.0	45.06	---	-6.01	39.05	---	74.00	54.00	-14.95	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)	
3236.0	46.15	---	-10.40	35.75	---	74.00	54.00	-18.25	Peak
4874.0	44.19	---	-5.93	38.26	---	74.00	54.00	-15.74	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)	
3236.0	54.05	---	-10.40	43.65	---	74.00	54.00	-10.35	Peak
4874.0	45.60	---	-5.93	39.67	---	74.00	54.00	-14.33	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)	
4924.0	44.55	---	-5.94	38.61	---	74.00	54.00	-15.39	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, 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	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)	
3288.0	53.77	---	-10.37	43.40	---	74.00	54.00	-10.60	Peak
4924.0	46.34	---	-5.94	40.40	---	74.00	54.00	-13.60	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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745MHz	Test By	Sky
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)	
3822.0	38.56	---	3.15	41.71	---	74.00	54.00	-12.29	Peak
11490.0	----					74.00	54.00		
17235.0	----					74.00	54.00		
22980.0	----					74.00	54.00		
28725.0	----					74.00	54.00		
34470.0	----					74.00	54.00		
40215.0	----					74.00	54.00		
45960.0	----					74.00	54.00		
51705.0	----					74.00	54.00		
57450.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745MHz	Test By	Sky
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)	
3832.0	42.42	---	3.15	45.57	---	74.00	54.00	-8.43	Peak
11490.0	----					74.00	54.00		
17235.0	----					74.00	54.00		
22980.0	----					74.00	54.00		
28725.0	----					74.00	54.00		
34470.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785MHz	Test By	Sky
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)	
3862.0	37.23	---	3.22	40.45	---	74.00	54.00	-13.55	Peak
11570.0	----					74.00	54.00		
17355.0	----					74.00	54.00		
23140.0	----					74.00	54.00		
28925.0	----					74.00	54.00		
34710.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785MHz	Test By	Sky
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)	
3862.0	41.60	---	3.22	44.82	---	74.00	54.00	-9.18	Peak
11570.0	----					74.00	54.00		
17355.0	----					74.00	54.00		
23140.0	----					74.00	54.00		
28925.0	----					74.00	54.00		
34710.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825MHz	Test By	Sky
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)	
3874.0	36.84	---	3.25	40.09	---	74.00	54.00	-13.91	Peak
11650.0	----					74.00	54.00		
17475.0	----					74.00	54.00		
23300.0	----					74.00	54.00		
29125.0	----					74.00	54.00		
34950.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

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

Operation Mode	802.11a TX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825MHz	Test By	Sky
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)	
3874.0	43.93	---	3.25	47.18	---	74.00	54.00	-6.82	Peak
11650.0	----					74.00	54.00		
17475.0	----					74.00	54.00		
23300.0	----					74.00	54.00		
29125.0	----					74.00	54.00		
34950.0	----					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- 40GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	802.11b RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)
53.13	V	Peak	61.56	-26.67	34.89	40.00	-5.11
94.99	V	Peak	63.14	-30.77	32.37	43.50	-11.13
124.09	V	Peak	67.46	-28.49	38.97	43.50	-4.53
189.08	V	Peak	62.63	-30.49	32.14	43.50	-11.36
421.88	V	Peak	56.74	-25.54	31.20	46.00	-14.80
533.43	V	Peak	48.89	-24.10	24.79	46.00	-21.21
124.09	H	Peak	66.77	-28.49	38.28	43.50	-5.22
150.28	H	Peak	54.65	-26.97	27.68	43.50	-15.82
216.24	H	Peak	57.82	-30.90	26.92	46.00	-19.08
412.18	H	Peak	53.53	-25.78	27.75	46.00	-18.25
465.53	H	Peak	52.47	-25.08	27.39	46.00	-18.61
533.43	H	Peak	52.21	-24.10	28.11	46.00	-17.89

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)

Operation Mode	802.11b RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)
56.19	V	Peak	59.70	-26.51	33.19	40.00	-6.81
94.99	V	Peak	63.01	-30.77	32.24	43.50	-11.26
124.09	V	Peak	68.99	-28.49	40.50	43.50	-3.00
189.08	V	Peak	62.33	-30.49	31.84	43.50	-11.66
434.49	V	Peak	52.92	-25.24	27.68	46.00	-18.32
533.43	V	Peak	50.79	-24.10	26.69	46.00	-19.31
121.18	H	Peak	68.12	-28.71	39.41	43.50	-4.09
153.19	H	Peak	54.83	-26.97	27.86	43.50	-15.64
293.84	H	Peak	55.05	-28.67	26.38	46.00	-19.62
400.54	H	Peak	56.35	-26.04	30.31	46.00	-15.69
434.49	H	Peak	53.81	-25.24	28.57	46.00	-17.43
533.43	H	Peak	54.07	-24.10	29.97	46.00	-16.03

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)

Operation Mode	802.11b RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)
56.19	V	Peak	60.51	-26.51	34.00	40.00	-6.00
129.91	V	Peak	68.94	-28.16	40.78	43.50	-2.72
189.08	V	Peak	62.81	-30.49	32.32	43.50	-11.18
400.54	V	Peak	53.84	-26.04	27.80	46.00	-18.20
434.49	V	Peak	50.88	-25.24	25.64	46.00	-20.36
533.43	V	Peak	51.18	-24.10	27.08	46.00	-18.92
121.18	H	Peak	67.06	-28.71	38.35	43.50	-5.15
155.13	H	Peak	55.10	-26.98	28.12	43.50	-15.38
221.09	H	Peak	57.69	-30.56	27.13	46.00	-18.87
400.54	H	Peak	59.44	-26.04	33.40	46.00	-12.60
434.49	H	Peak	54.52	-25.24	29.28	46.00	-16.72
533.43	H	Peak	55.69	-24.10	31.59	46.00	-14.41

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 (below 1GHz)

Operation Mode	802.11g RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412MHz	Test By	Sky
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)
58.13	V	Peak	60.87	-26.67	34.20	40.00	-5.80
96.93	V	Peak	63.13	-30.63	32.50	43.50	-11.00
130.88	V	Peak	68.61	-28.16	40.45	43.50	-3.05
189.08	V	Peak	62.91	-30.49	32.42	43.50	-11.08
221.09	V	Peak	57.64	-30.56	27.08	46.00	-18.92
444.19	V	Peak	52.66	-25.15	27.51	46.00	-18.49
124.09	H	Peak	65.27	-28.49	36.78	43.50	-6.72
150.28	H	Peak	54.60	-26.97	27.63	43.50	-15.87
174.53	H	Peak	55.78	-28.62	27.16	43.50	-16.34
286.08	H	Peak	56.44	-28.84	27.60	46.00	-18.40
465.53	H	Peak	53.36	-25.08	28.28	46.00	-17.72
533.43	H	Peak	52.79	-24.10	28.69	46.00	-17.31

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)

Operation Mode	802.11g RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437MHz	Test By	Sky
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)
58.13	V	Peak	61.68	-26.67	35.01	40.00	-4.99
128.94	V	Peak	68.51	-28.27	40.24	43.50	-3.26
189.08	V	Peak	62.50	-30.49	32.01	43.50	-11.49
286.08	V	Peak	53.70	-28.84	24.86	46.00	-21.14
407.33	V	Peak	52.28	-25.84	26.44	46.00	-19.56
434.49	V	Peak	50.92	-25.24	25.68	46.00	-20.32
124.09	H	Peak	65.57	-28.49	37.08	43.50	-6.42
153.19	H	Peak	54.51	-26.97	27.54	43.50	-15.96
400.54	H	Peak	57.08	-26.04	31.04	46.00	-14.96
429.64	H	Peak	53.01	-25.34	27.67	46.00	-18.33
465.53	H	Peak	53.33	-25.08	28.25	46.00	-17.75
533.43	H	Peak	52.03	-24.10	27.93	46.00	-18.07

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)

Operation Mode	802.11g RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462MHz	Test By	Sky
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)
56.19	V	Peak	60.51	-26.51	34.00	40.00	-6.00
96.93	V	Peak	62.16	-30.63	31.53	43.50	-11.97
130.88	V	Peak	68.35	-28.16	40.19	43.50	-3.31
189.08	V	Peak	62.81	-30.49	32.32	43.50	-11.18
400.54	V	Peak	53.84	-26.04	27.80	46.00	-18.20
533.43	V	Peak	51.18	-24.10	27.08	46.00	-18.92
124.09	H	Peak	65.61	-24.49	41.12	43.50	-2.38
153.19	H	Peak	55.16	-26.97	28.19	43.50	-15.31
431.58	H	Peak	60.54	-25.29	35.25	46.00	-10.75
465.53	H	Peak	52.95	-25.08	27.87	46.00	-18.13
533.43	H	Peak	52.56	-24.10	28.46	46.00	-17.54
667.29	H	Peak	49.42	-21.69	27.73	46.00	-18.27

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)

Operation Mode	802.11a RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745MHz	Test By	Sky
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)
96.93	V	Peak	54.01	-17.16	36.85	43.50	-6.65
266.68	V	Peak	46.02	-13.57	32.45	46.00	-13.55
332.64	V	Peak	47.06	-12.16	34.90	46.00	-11.10
378.23	V	Peak	45.64	-10.79	34.85	46.00	-11.15
421.88	V	Peak	44.33	-9.34	34.99	46.00	-11.01
453.89	V	Peak	43.28	-8.60	34.68	46.00	-11.32
245.34	H	Peak	49.50	-13.98	35.52	46.00	-10.48
288.99	H	Peak	49.68	-13.23	36.45	46.00	-9.55
332.64	H	Peak	52.45	-12.16	40.29	46.00	-5.71
378.23	H	Peak	51.32	-10.79	40.53	46.00	-5.47
400.54	H	Peak	50.07	-9.99	40.08	46.00	-5.92
421.88	H	Peak	48.41	-9.34	39.07	46.00	-6.93

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)

Operation Mode	802.11a RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785MHz	Test By	Sky
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)
96.93	V	Peak	54.32	-17.16	37.16	43.50	-6.34
266.68	V	Peak	45.38	-13.57	31.81	46.00	-14.19
332.64	V	Peak	48.29	-12.16	36.13	46.00	-9.87
378.23	V	Peak	45.50	-10.79	34.71	46.00	-11.29
400.54	V	Peak	45.84	-9.99	35.85	46.00	-10.15
421.88	V	Peak	44.03	-9.34	34.69	46.00	-11.31
245.34	H	Peak	49.19	-13.98	35.21	46.00	-10.79
288.99	H	Peak	49.81	-13.23	36.58	46.00	-9.42
332.64	H	Peak	52.36	-12.16	40.20	46.00	-5.80
378.23	H	Peak	51.01	-10.79	40.22	46.00	-5.78
400.54	H	Peak	47.90	-9.99	37.91	46.00	-8.09

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)

Operation Mode	802.11a RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825MHz	Test By	Sky
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)
96.93	V	Peak	54.21	-17.16	37.05	43.50	-6.45
300.63	V	Peak	45.89	-13.11	32.78	46.00	-13.22
332.64	V	Peak	46.83	-12.16	34.67	46.00	-11.33
378.23	V	Peak	45.52	-10.79	34.73	46.00	-11.27
421.88	V	Peak	43.88	-9.34	34.54	46.00	-11.46
465.53	V	Peak	40.04	-8.55	31.49	46.00	-14.51
245.34	H	Peak	49.55	-13.98	35.57	46.00	-10.43
288.99	H	Peak	49.39	-13.23	36.16	46.00	-9.84
332.64	H	Peak	52.34	-12.16	40.18	46.00	-5.82
378.23	H	Peak	51.09	-10.79	40.30	46.00	-5.70
421.88	H	Peak	47.96	-9.34	38.62	46.00	-7.38

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)

Operation Mode	802.11b RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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)	
1936.0	47.89	---	-13.01	34.88	---	74.00	54.00	-19.12	Peak
4824.0	----					74.00	54.00		
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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)	
3203.5	46.93	---	-10.39	36.54	---	74.00	54.00	-17.46	Peak
4824.0	----					74.00	54.00		
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437 MHz	Test By	Sky
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)	
3236.0	48.08	---	-10.40	37.68	---	74.00	54.00	-16.32	Peak
4874.0	----					74.00	54.00		
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437 MHz	Test By	Sky
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)	
3236.0	48.08	---	-10.40	37.68	---	74.00	54.00	-16.32	Peak
4874.0	----					74.00	54.00		
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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)	
3288.0	47.03	---	-10.37	36.66	---	74.00	54.00	-17.34	Peak
4924.0	----					74.00	54.00		
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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)	
3288.0	50.50	---	-10.37	40.13	---	74.00	54.00	-13.87	Peak
4924.0	----					74.00	54.00		
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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)	
1936.0	47.72	---	-13.01	34.71	---	74.00	54.00	-19.29	Peak
4824.0	----					74.00	54.00		
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	2412 MHz	Test By	Sky
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)	
3203.5	46.63	---	-10.39	36.24	---	74.00	54.00	-17.76	Peak
4824.0	----					74.00	54.00		
7236.0	----					74.00	54.00		
9648.0	----					74.00	54.00		
12060.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437 MHz	Test By	Sky
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)	
3138.5	45.77	---	-10.38	35.39	---	74.00	54.00	-18.61	Peak
4874.0	----					74.00	54.00		
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	2437 MHz	Test By	Sky
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)	
3236.0	48.00	---	-10.40	37.60	---	74.00	54.00	-16.40	Peak
4874.0	----					74.00	54.00		
7311.0	----					74.00	54.00		
9748.0	----					74.00	54.00		
12185.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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)	
3288.0	47.00	---	-10.37	36.63	---	74.00	54.00	-17.37	Peak
4924.0	----					74.00	54.00		
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	2462 MHz	Test By	Sky
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)	
3288.0	50.10	---	-10.37	39.73	---	74.00	54.00	-14.27	Peak
4924.0	----					74.00	54.00		
7386.0	----					74.00	54.00		
9848.0	----					74.00	54.00		
12310.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745 MHz	Test By	Sky
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)	
3832.0	34.49	---	3.15	37.64	---	74.00	54.00	-16.36	Peak
11490.0	----					74.00	54.00		
17235.0	----					74.00	54.00		
22980.0	----					74.00	54.00		
28725.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH Low	Test Date	May. 12, 2009
Fundamental Frequency	5745 MHz	Test By	Sky
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)	
3832.0	29.77	---	3.15	32.92	---	74.00	54.00	-21.08	Peak
11490.0	----					74.00	54.00		
17235.0	----					74.00	54.00		
22980.0	----					74.00	54.00		
28725.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785 MHz	Test By	Sky
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)	
3862.0	33.91	---	3.22	37.13	---	74.00	54.00	-16.87	Peak
11570.0	----					74.00	54.00		
17355.0	----					74.00	54.00		
23140.0	----					74.00	54.00		
28925.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH Mid	Test Date	May. 12, 2009
Fundamental Frequency	5785 MHz	Test By	Sky
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)	
3862.0	29.71	---	3.22	32.93	---	74.00	54.00	-21.07	Peak
11570.0	----					74.00	54.00		
17355.0	----					74.00	54.00		
23140.0	----					74.00	54.00		
28925.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825 MHz	Test By	Sky
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)	
3874.0	33.89	---	3.25	37.14	---	74.00	54.00	-16.86	Peak
11650.0	----					74.00	54.00		
17475.0	----					74.00	54.00		
23300.0	----					74.00	54.00		
29125.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11a RX CH High	Test Date	May. 12, 2009
Fundamental Frequency	5825 MHz	Test By	Sky
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)	
3874.0	30.05	---	3.25	33.30	---	74.00	54.00	-20.70	Peak
11650.0	----					74.00	54.00		
17475.0	----					74.00	54.00		
23300.0	----					74.00	54.00		
29125.0	----					74.00	54.00		

Remark：

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

(2) Datas 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- 40GHz, RBW= 3MHz, VBW= 1MHz, Sweep time= 200 ms.

(5) Spectrum AV Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

10 Peak Power Spectral Density

10.1 Standard Applicable

According to §15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

According to RSS-210 issue 7, §A8.2(2) and §A8.3(2), The transmitter power spectral density (into the antenna) shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0 second duration.

10.2 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 the spectrum analyzer as RBW = 3KHz, VBW = 10KHz, Span = 1.5MHz, Sweep=100s
4. Record the max. reading.
5. Repeat above procedures until all frequency measured were complete.

10.3 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	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2008	07/04/2009
Splitter	Agilent	11636B	N/A	07/05/2008	07/04/2009
DC Power Supply	HP	6038A	2929A-07548	06/27/2007	06/26/2009
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

10.4 Measurement Result

802.11b

Frequency MHz	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-8.01	0.00	-8.01	8
2437	-8.29	0.00	-8.29	8
2462	-8.52	0.00	-8.52	8

**Offset 0.8dB*

802.11g

Frequency MHz	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-13.02	0.00	-13.02	8
2437	-14.03	0.00	-14.03	8
2462	-14.76	0.00	-14.76	8

**Offset 0.8dB*

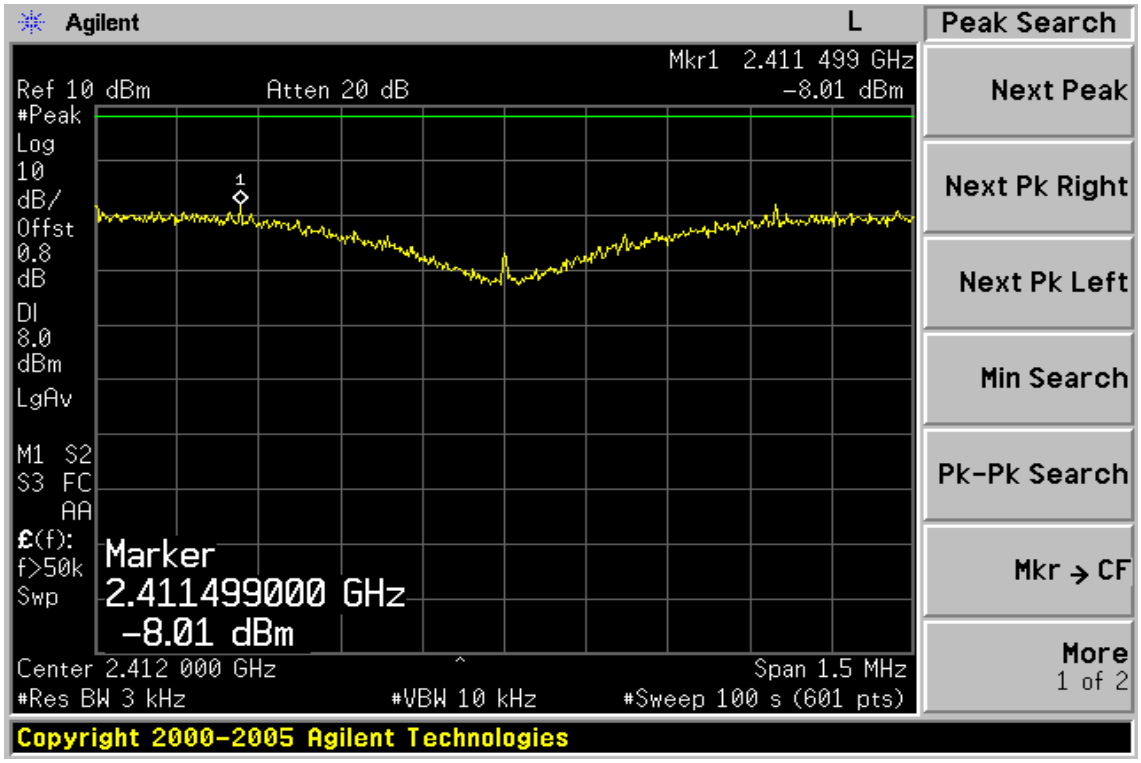
802.11a

Frequency MHz	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
5745	-13.91	0.00	-13.91	8
5785	-14.33	0.00	-14.33	8
5825	-14.20	0.00	-14.20	8

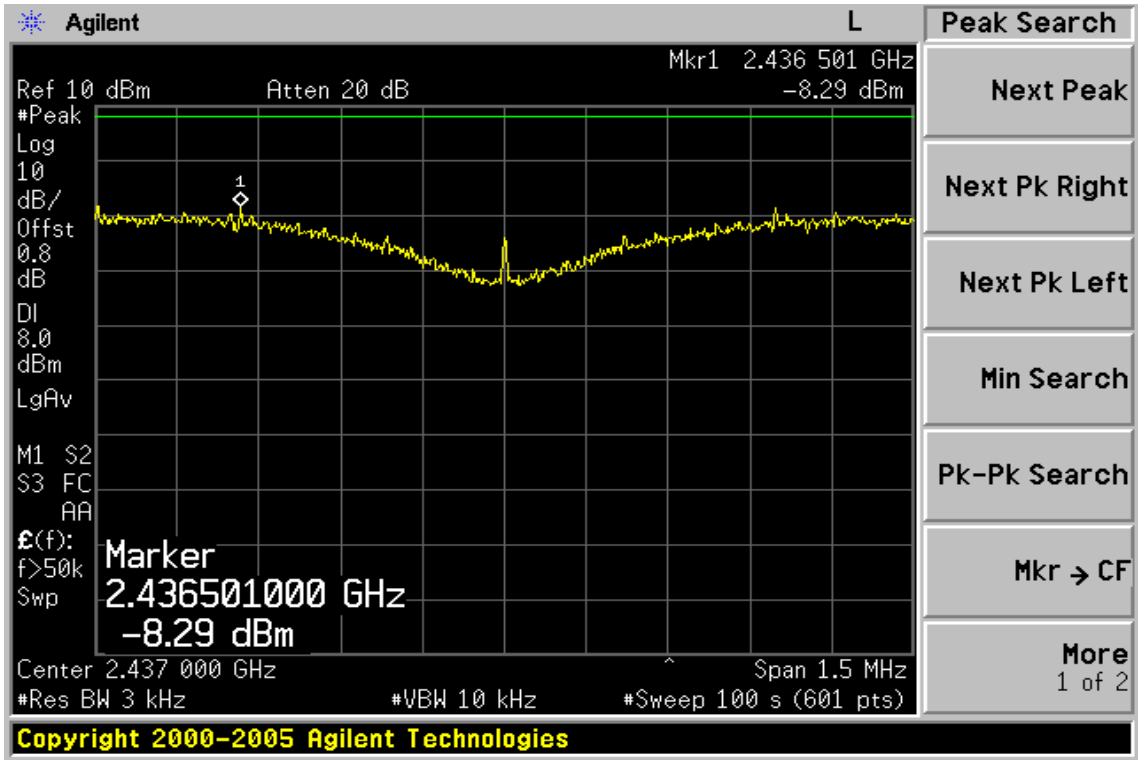
**Offset 0.8dB*

802.11b

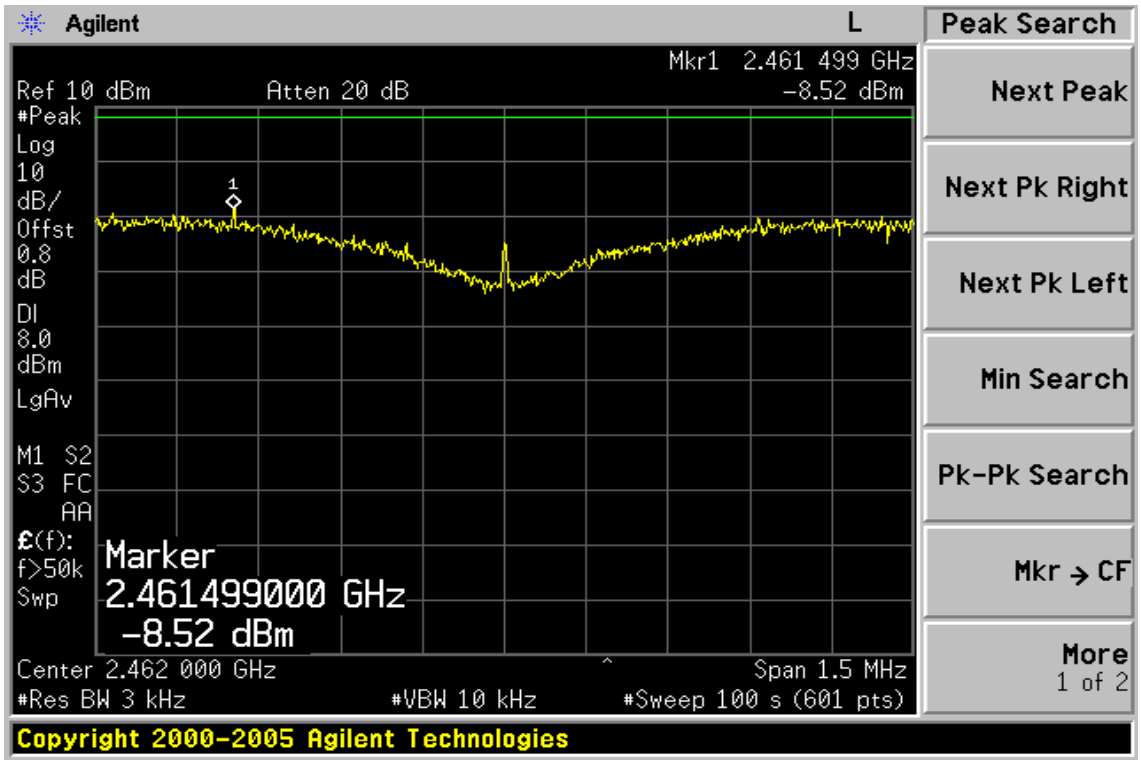
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

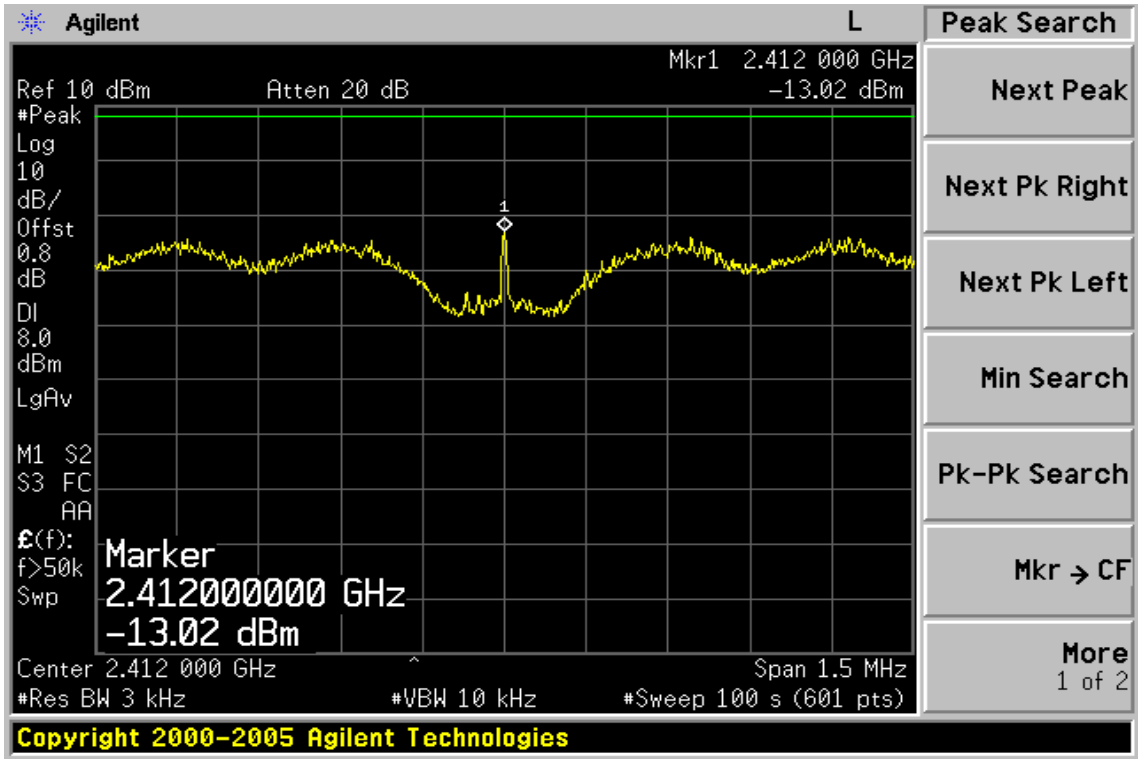


Power Spectral Density Test Plot (CH-High)

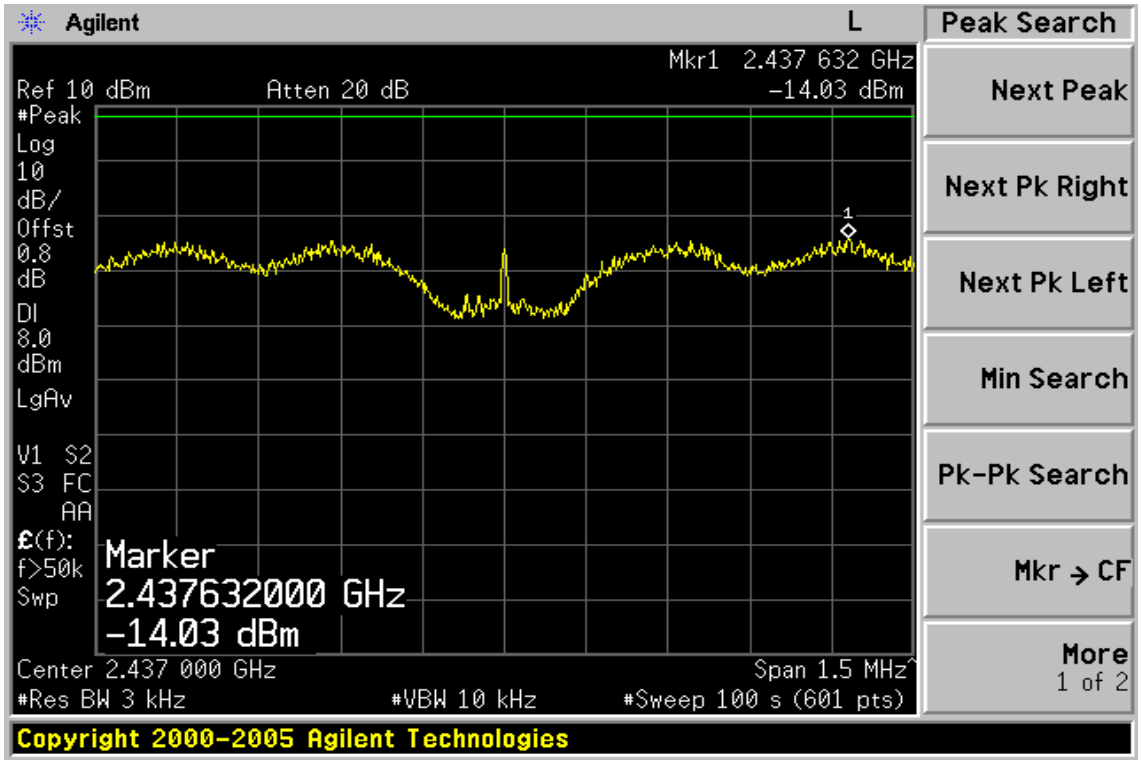


802.11g

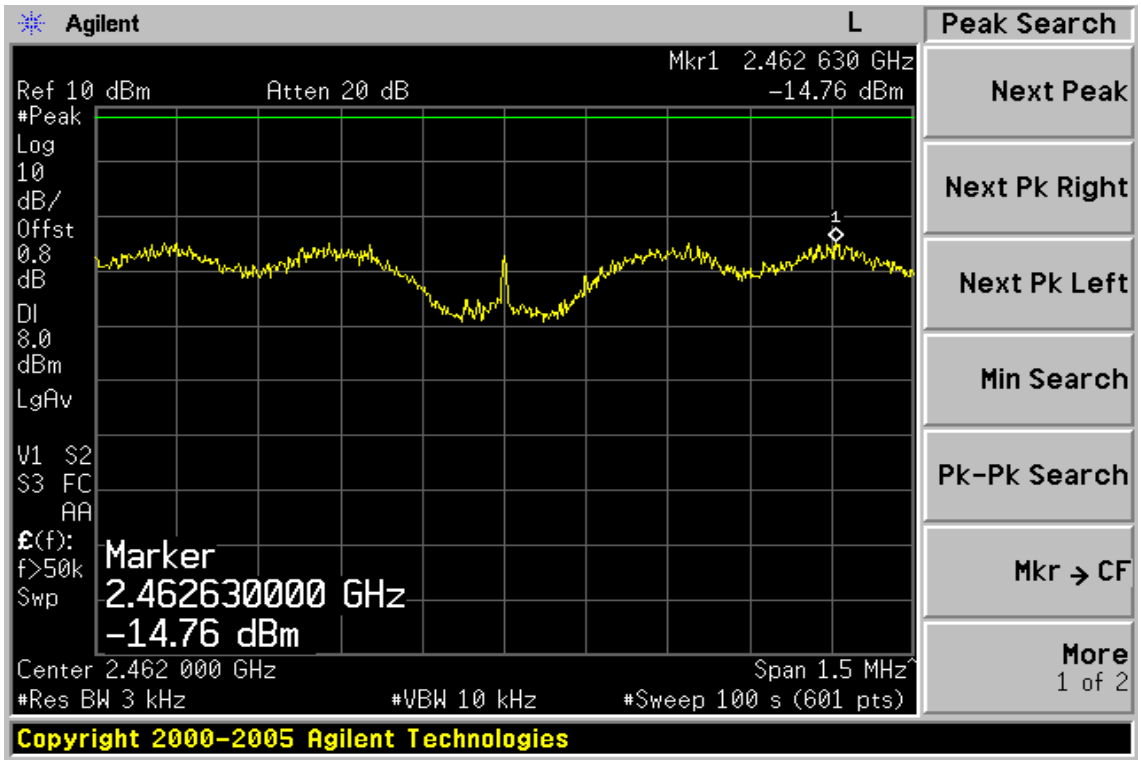
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

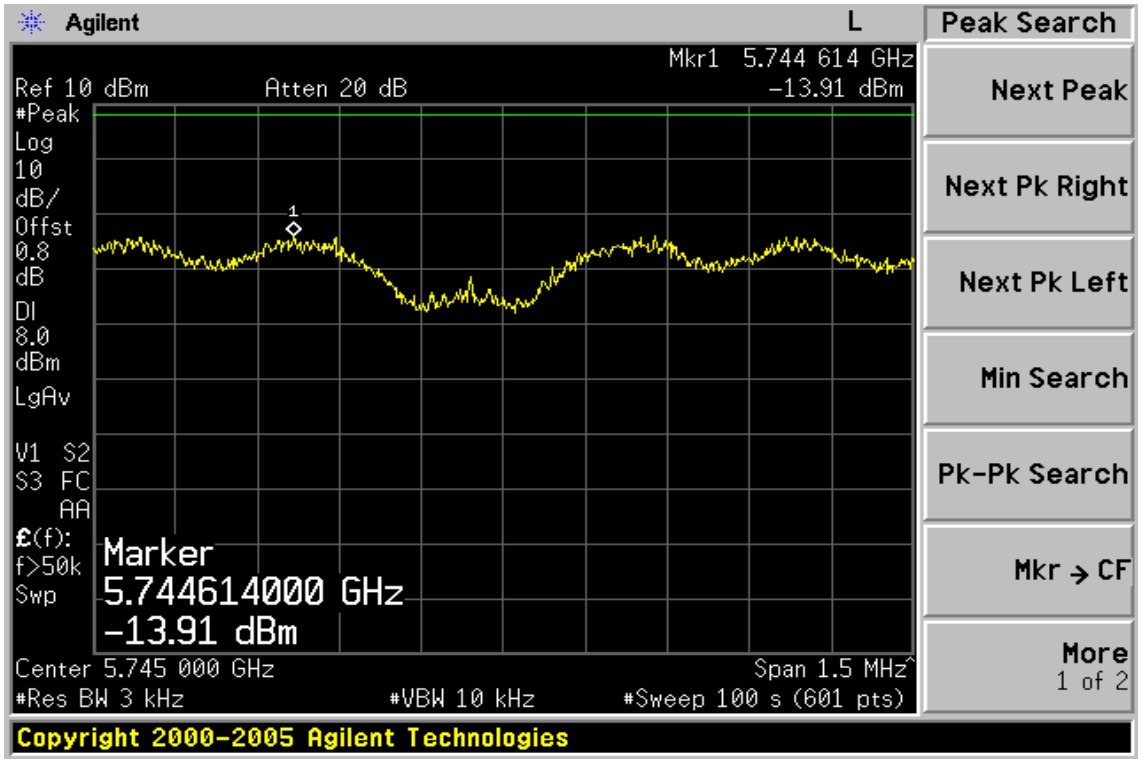


Power Spectral Density Test Plot (CH-High)

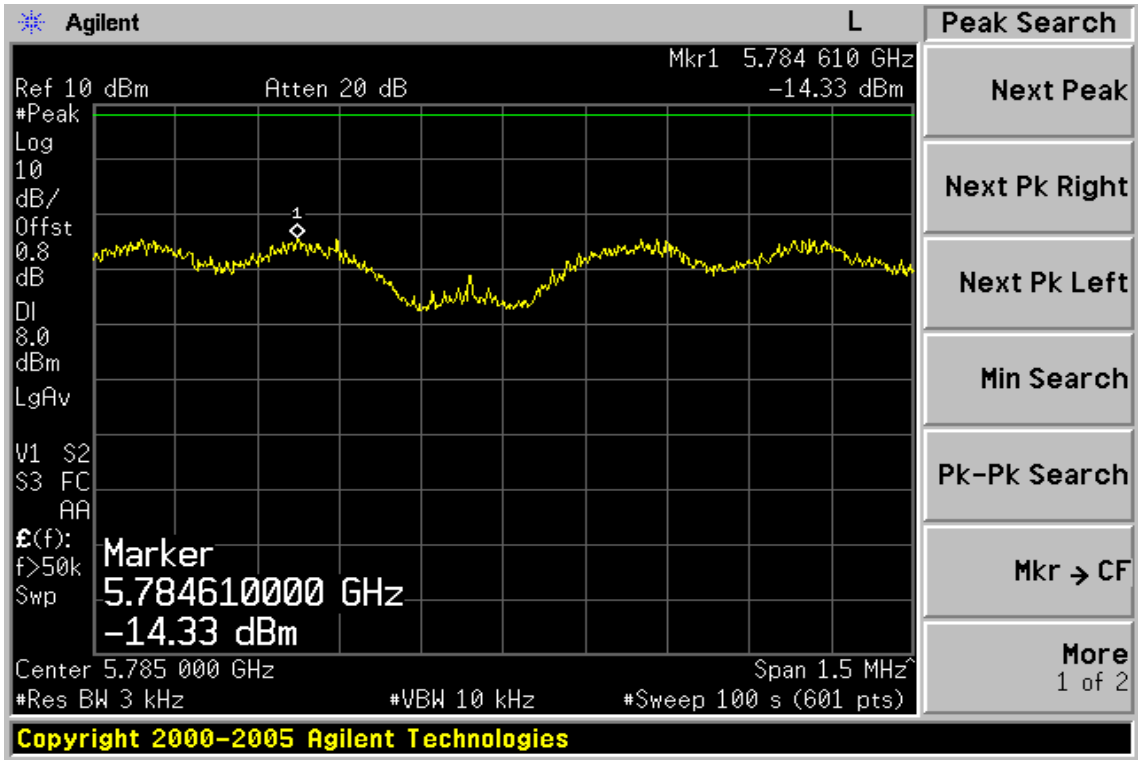


802.11a

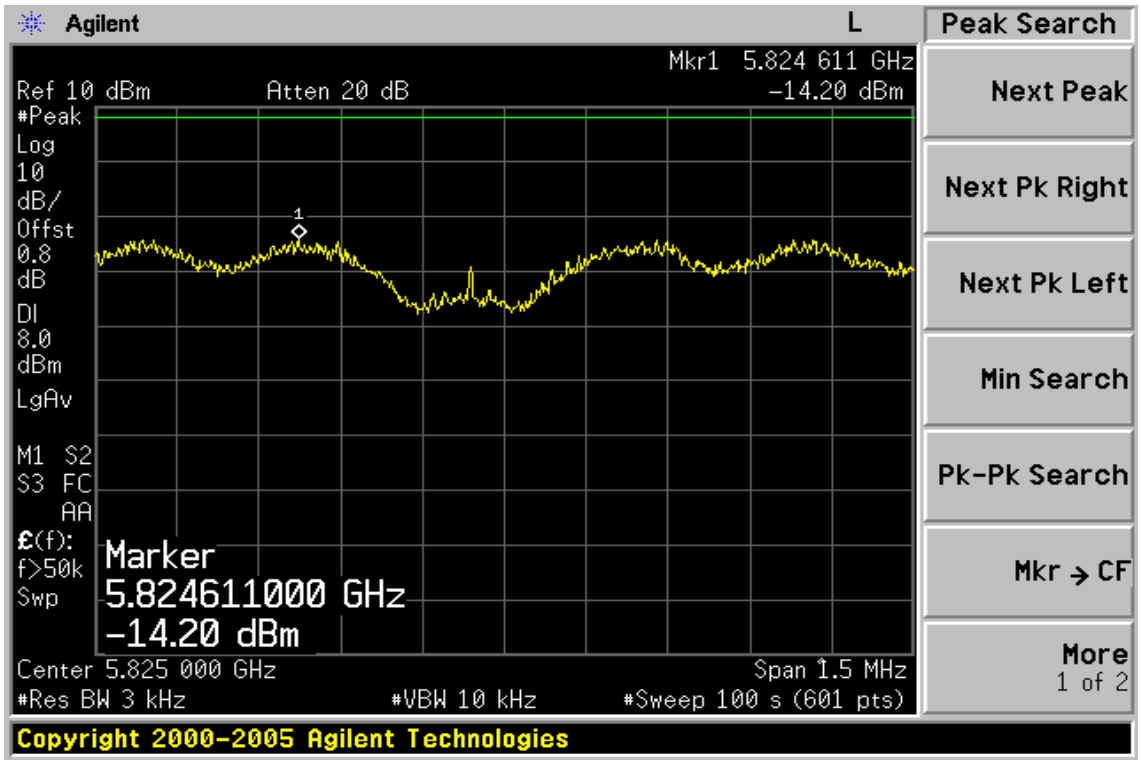
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



Power Spectral Density Test Plot (CH-High)



11 99% Bandwidth Measurement

11.1 Standard Applicable

RSS-Gen §4.4.1, the transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual.

The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded.

The span between the two recorded frequencies is the occupied bandwidth.

11.2 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	E4440A	US41160416	01/23/2008	01/22/2010
Radio Communication Analyzer	R&S	CMU200	102189	05/13/208	05/12/2010
800 – 1000MHz Filter	Micro-Tronics	BRM13462	001	01/05/2009	01/04/2010
1800 – 2000MHz Filter	Micro-Tronics	BRM13463	001	01/05/2009	01/04/2010
Temperature Chamber	TERCHY	MHG-120LF	911009	04/14/2008	04/13/2010
Temperature Chamber	GIANT FORCE	GTH-150-40-CP-AR	MAA0512-018	02/05/2008	02/04/2010
DC Block	Agilent	BLK-18	155452	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S20W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S10W5	N/A	07/05/2008	07/04/2009
Attenuator	Mini-Circuit	BW-S6W5	N/A	07/05/2008	07/04/2009
Splitter	Agilent	11636B	N/A	07/05/2008	07/04/2009
DC Power Supply	HP	6038A	2929A-07548	06/27/2007	06/26/2009
DC Power Supply	Topward	3303D	981327	10/26/2007	10/25/2009

11.3 Test Set-up:

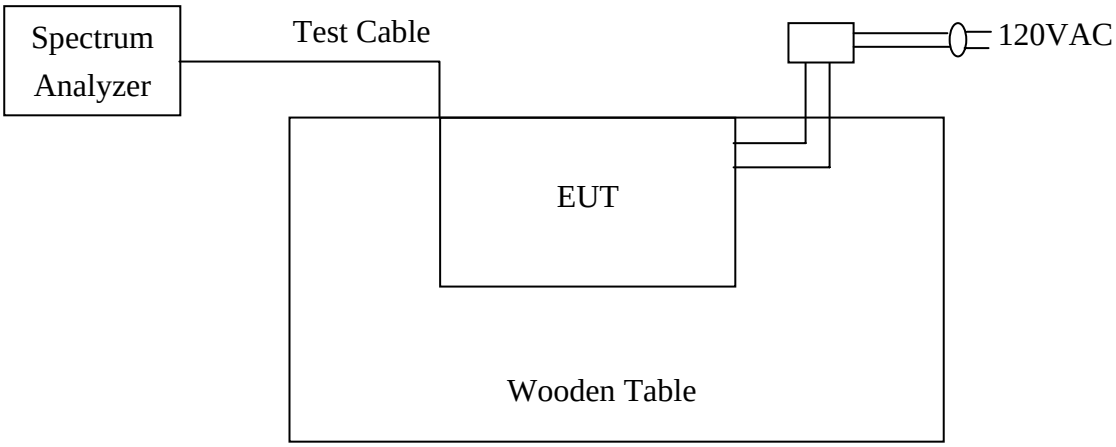


Fig. 4

Fig. 4 : Measurement setup for testing on Antenna connector

11.4 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 the spectrum analyzer as RBW=1% of the approximate emission bandwidth, VBW = 3 times RBW, Span= approximately 20dB below the peak level. Sweep=auto
4. Turn on the 99% bandwidth function, max reading..
5. Repeat above procedures until all frequency measured were complete.

11.5 Measurement Result

802.11b

Frequency MHz	Bandwidth (MHz)
2412	15.52
2437	15.51
2462	15.53

802.11g

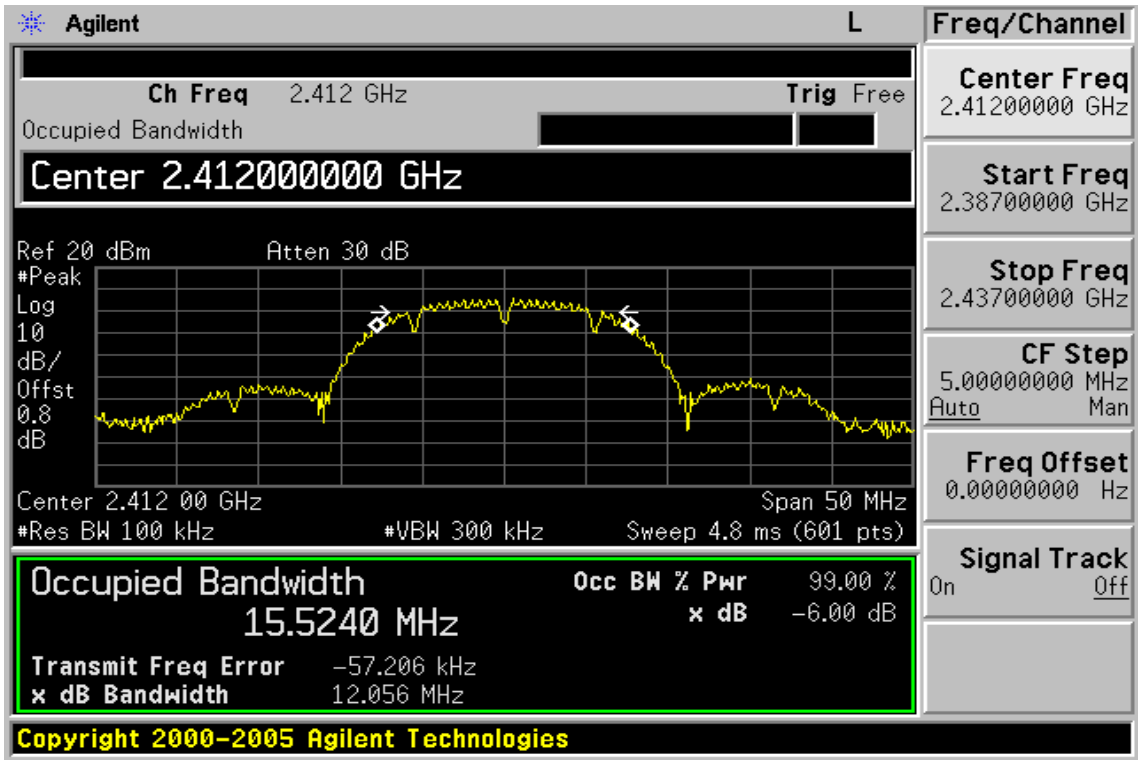
Frequency MHz	Bandwidth (MHz)
2412	16.56
2437	16.56
2462	16.55

802.11a

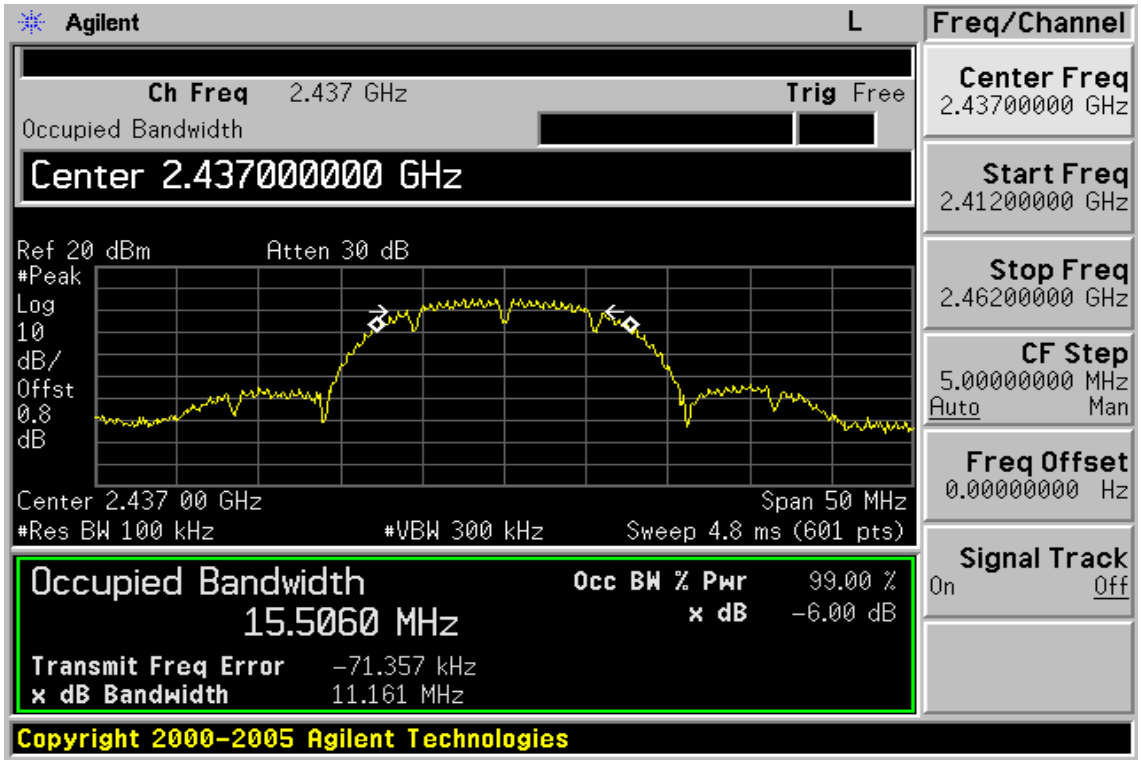
Frequency MHz	Bandwidth (MHz)
5745	20.39
5785	22.35
5825	21.28

802.11b

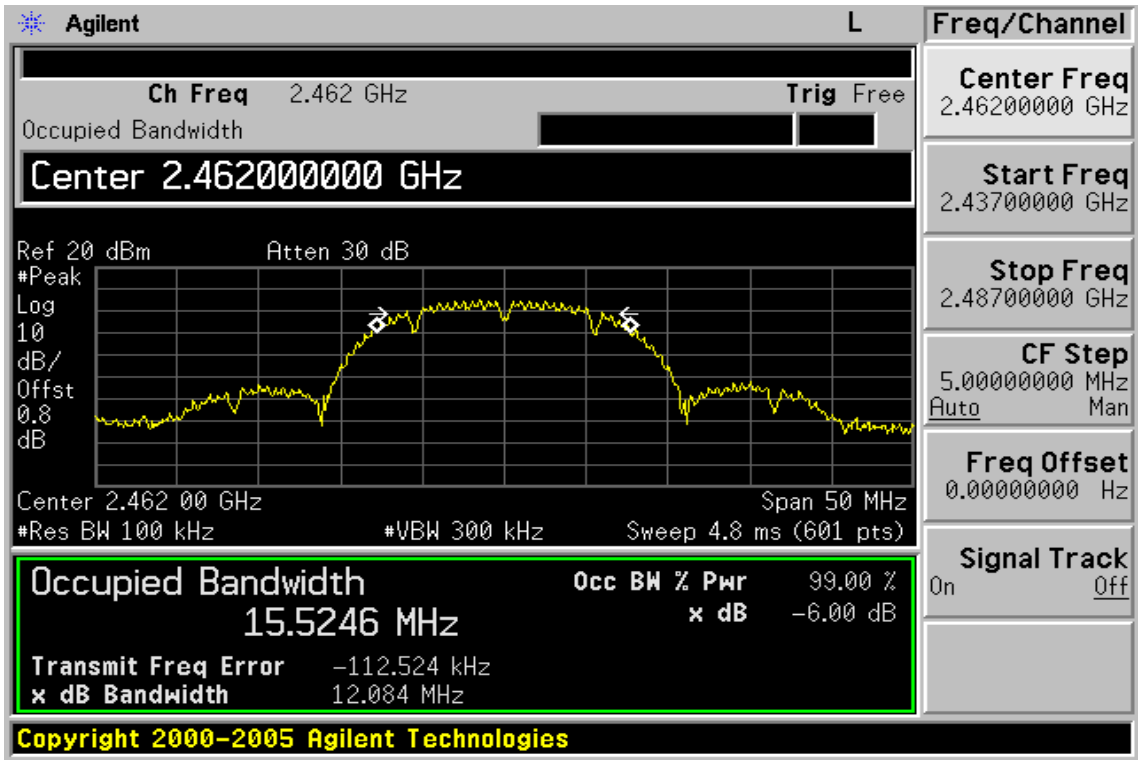
99% Band Width Test Data CH-Low



99% Band Width Test Data CH-Mid

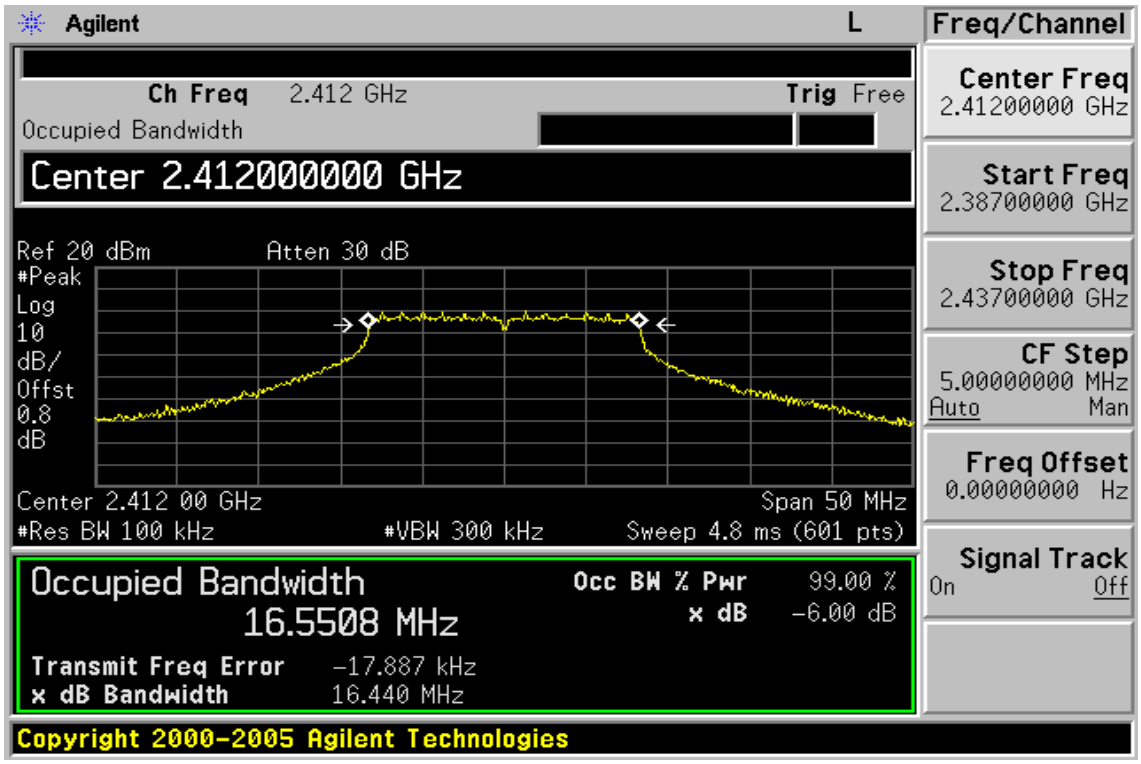


99% Band Width Test Data CH-High

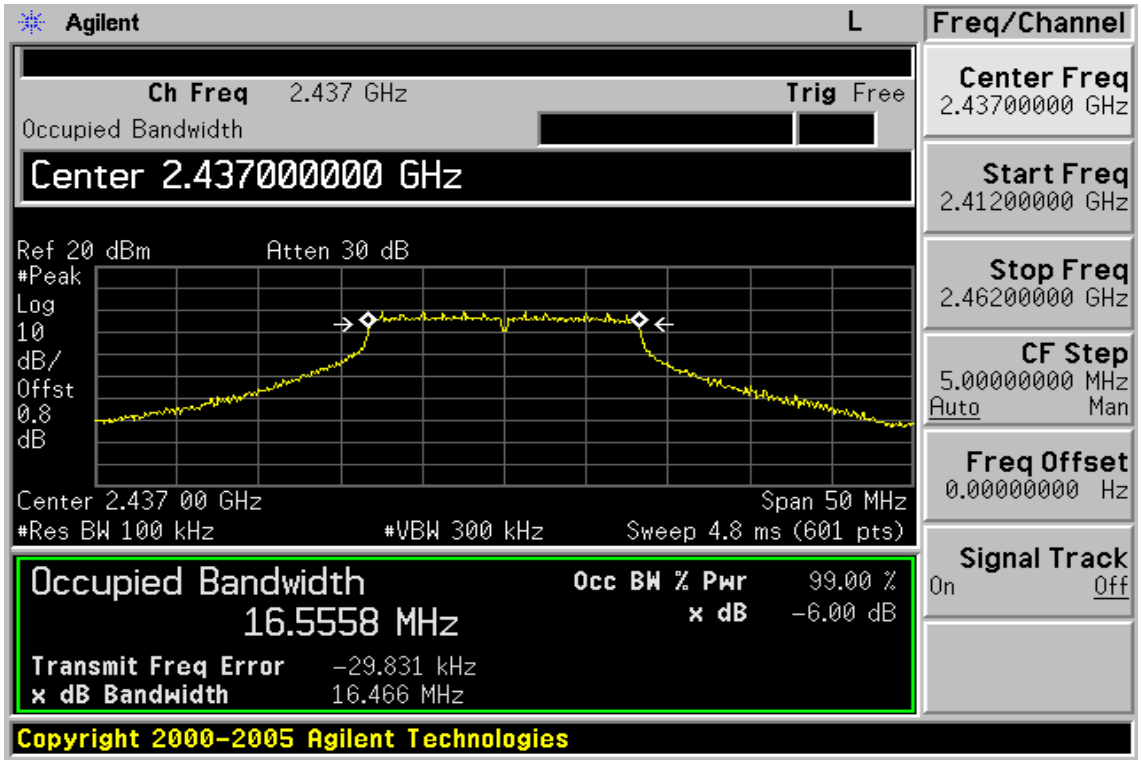


802.11g

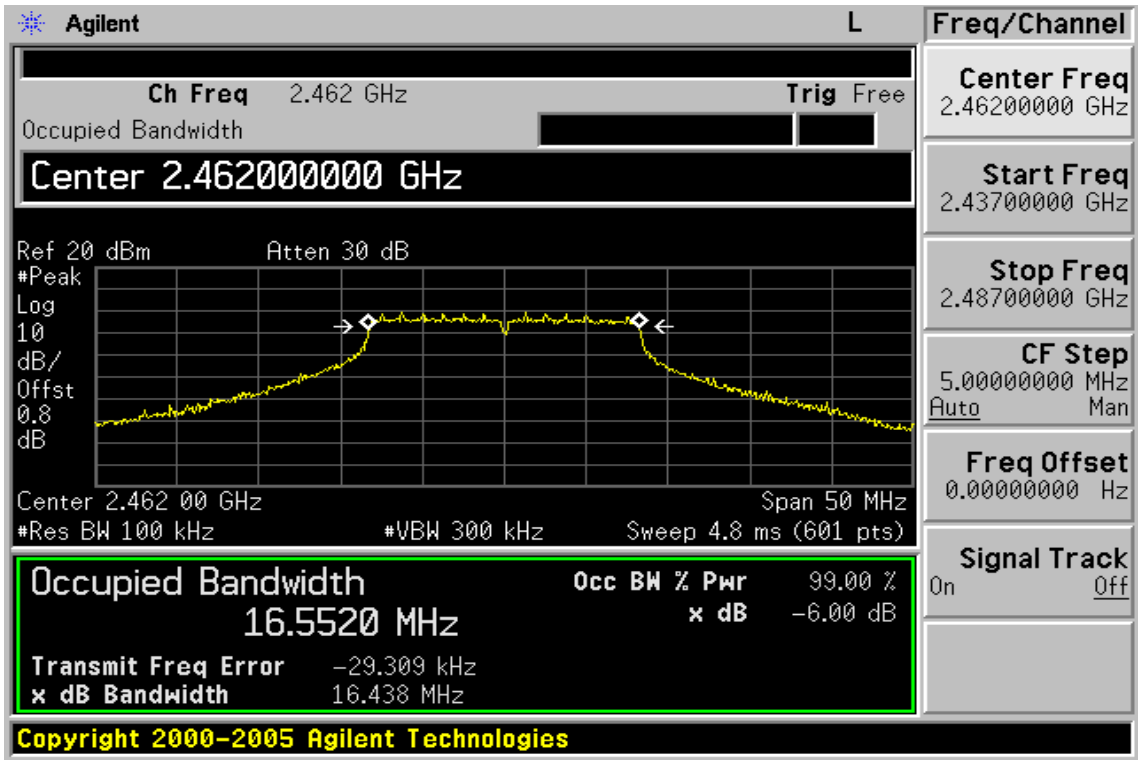
99% Band Width Test Data CH-Low



99% Band Width Test Data CH-Mid

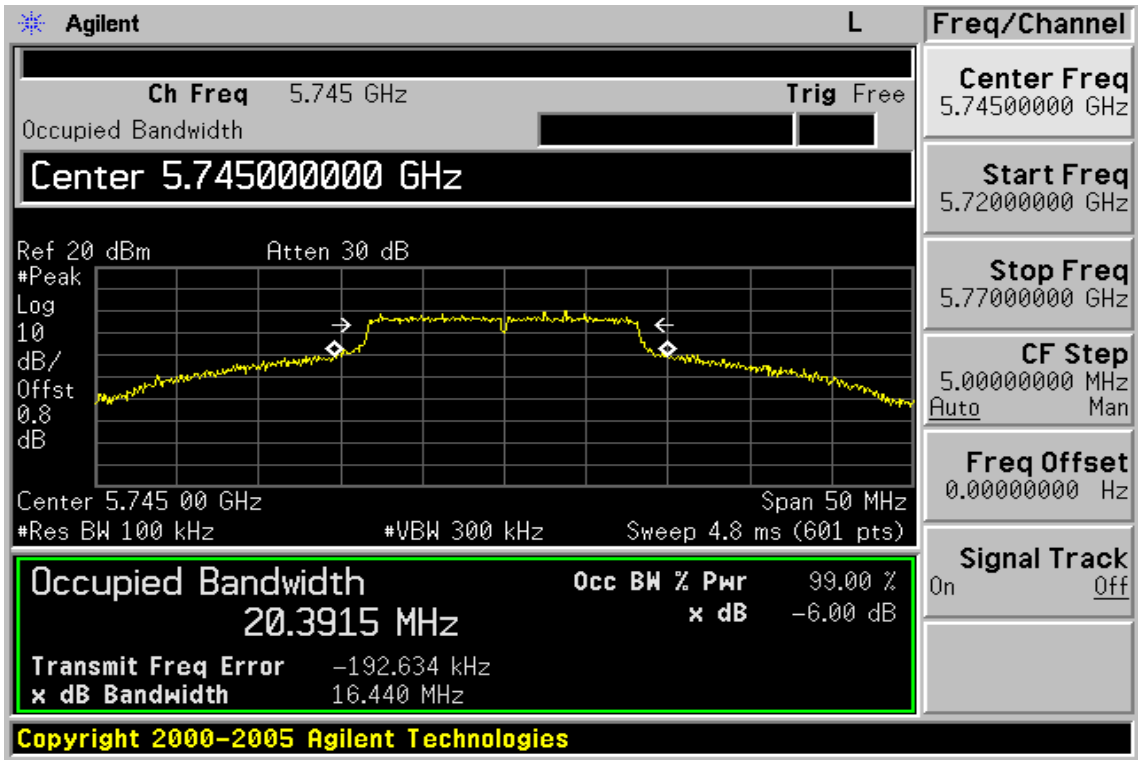


99% Band Width Test Data CH-High

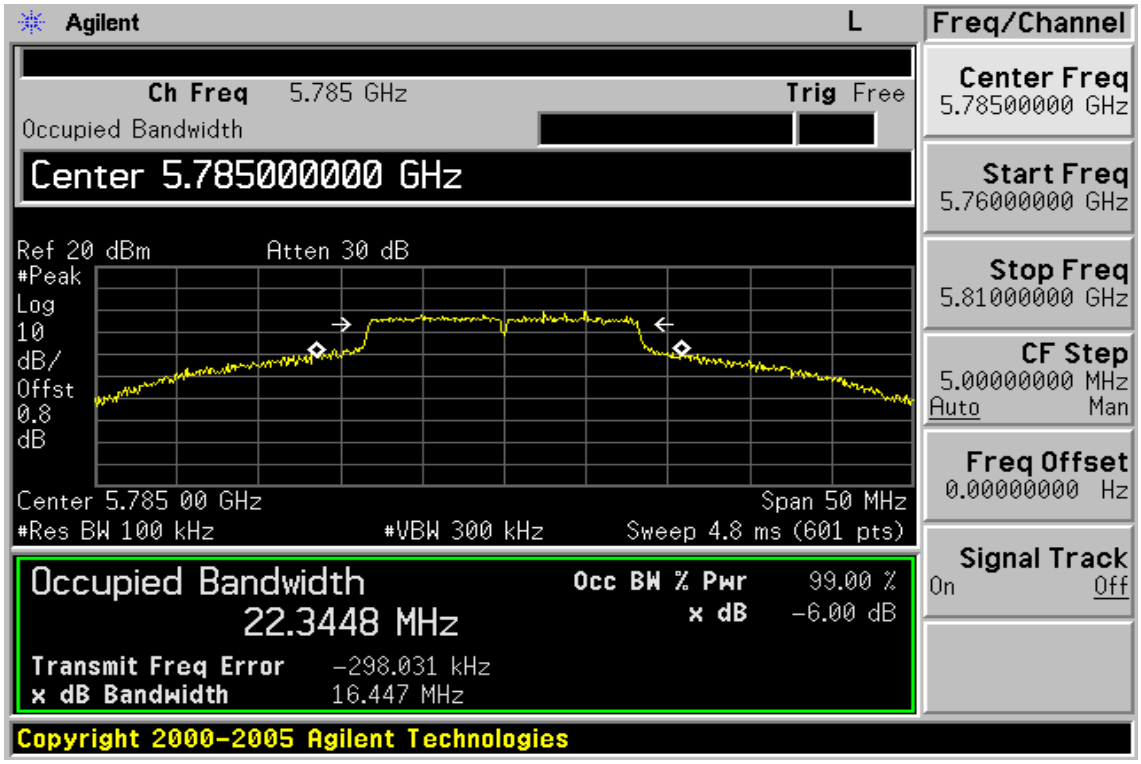


802.11a

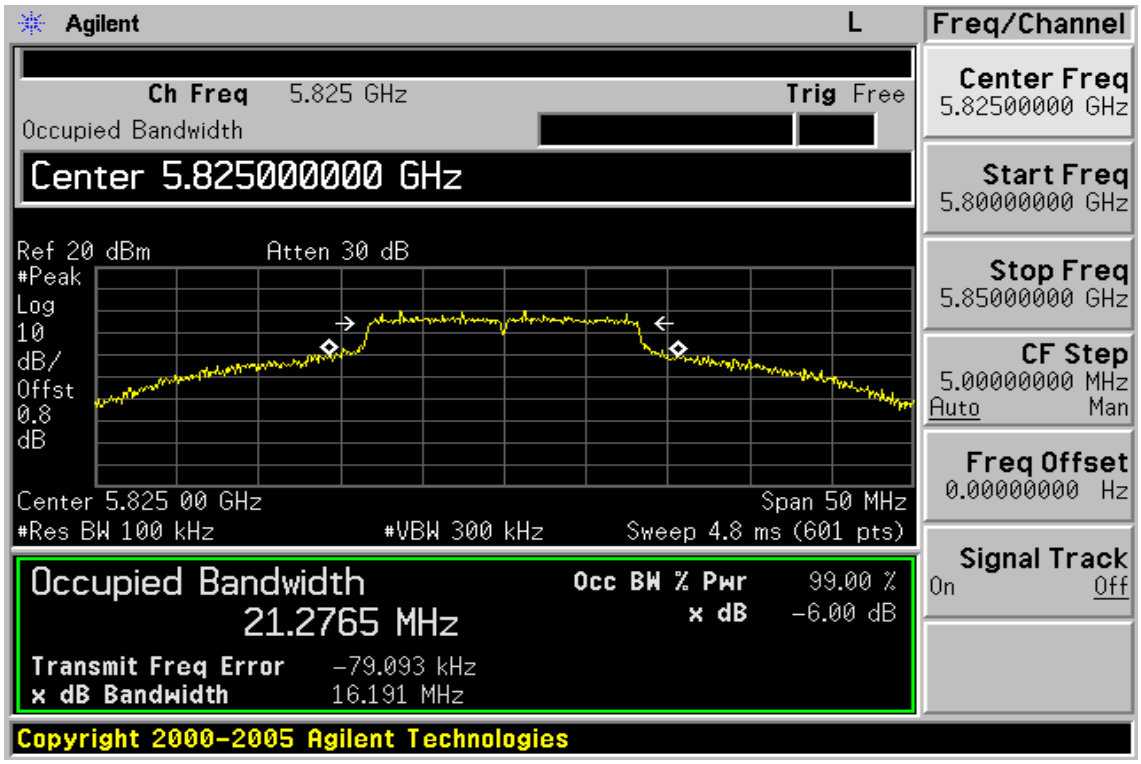
99% Band Width Test Data CH-Low



99% Band Width Test Data CH-Mid



99% Band Width Test Data CH-High



12 ANTENNA REQUIREMENT

12.1. 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 high-est-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.

12.2. Antenna Connected Construction

The directional gins of antenna used for transmitting is 1.5dBi for 2.4GHz, 0.4dBi for 5.2GHz, 2.1dBi for 5.8GHz, and the antenna connector is designed with unique type RF connector and no consideration of replacement. Please see EUT photo and antenna spec.for details.