ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

Product Name:	**WLAN 11n USB Adapter**
Brand Name:	**CC&C**
Model Name:	**WL-6200A**
Model Different:	**N/A**
FCC ID:	**PANWL6200A**
Report No.:	**ER/2008/10022**
Issue Date:	**Feb. 04, 2008**
Rule Part:	**§15.247**
Prepared for:	**CC&C Technologies, Inc.** **8F, 150, Jian Yi Road, Chung Ho City, Taipei County, Taiwan 235, R. O. C.**
Prepared by:	**SGS Taiwan Ltd.** **Electronics & Communication Laboratory** **No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei County, Taiwan**

Testing Laboratory
0513

VERIFICATION OF COMPLIANCE

Applicant:	CC&C Technologies, Inc. 8F, 150, Jian Yi Road, Chung Ho City, Taipei County, Taiwan 235, R. O. C.
Equipment Under Test:	WLAN 11n USB Adapter
Brand Name:	CC&C
Model No.:	WL-6200A
Model Difference:	N/A
FCC ID:	PANWL6200A
File Number:	ER/2008/10022
Date of test:	Jan. 09, 2008 ~ Feb. 04, 2008
Date of EUT Received:	Jan. 09, 2008

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. 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.

The test results of this report relate only to the tested sample identified in this report.

Test By:		***Date***	Feb. 04, 2008
	Jason Wu / Asst. Supervisor		
Prepared By:		***Date***	Feb. 04, 2008
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Approved By:		***Date***	Feb. 04, 2008
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Version

Version No.	Date
00	Feb. 04, 2008

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1. GENERAL INFORMATION

1.1. General:

Product Name:	WLAN 11n USB Adapter
Brand Name:	CC&C
Model Number:	WL-6200A
Model Difference:	N/A
Power Supply:	5Vdc for USB Port of Host PC
Hardware Version:	N/A
Software Version:	N/A

802.11 b/g/n WLAN:

Frequency Range & Channel number:	802.11 b/g/n_20MHz: 2412 – 2462 MHz, 11 channels 802.11 n_40MHz: 2422 – 2452 MHz, 7 channels
Rated Power:	802.11 b: 10.54 dBm (peak) 802.11 g: 10.19 dBm (peak) 802.11 n_20MHz: 10.20 dBm (peak) 802.11 n_40MHz: 10.31 dBm (peak)
Modulation type:	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Transmission Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 - 130Mbps 802.11 n_40MHz: 13.5 - 270Mbps
Antenna Designation:	Printed Antenna Right: 0.38 dBi; Left: 2.94 dBi
Type of Emission:	802.11 b: 10M2G1D 802.11 g: 16M5D1D 802.11 n_20MHz: 17M8 D1D 802.11 n_40MHz: 36M4D1D

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

1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section 15.247 of the FCC Part 15, Subpart C Rules. 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). 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. 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. 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 according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

2.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System

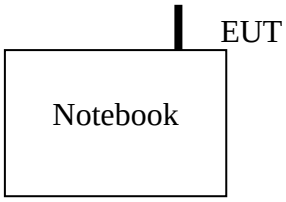


Fig. 2-2 Configuration of Tested System 802.11 b/g mode

Fig. 2-3 Configuration of Tested System 802.11 n mode

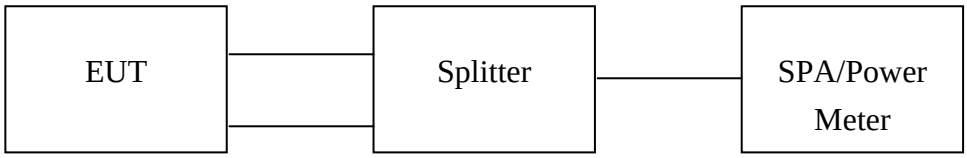


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	FCC ID	Series No.	Data Cable	Power Cord
1.	Notebook	IBM	T60	N/A	L3DK794	Shielded	Un-shield
2.	Test software	ART	Revision 8.0 build # 31 ART_11n	N/A	N/A	N/A	N/A

3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)	AC Power Line Conducted Emission	Compliant
§15.247(b) (3),(4)(c)	Peak Output Power	Compliant
§15.247(a)(2)	6dB Bandwidth	Compliant
§15.247(d)	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.247(d)	Spurious Emission	Compliant
§15.247(e)	Peak Power Density	Compliant
§15.203	Antenna Requirement	Compliant

4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Test program was 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 1 and 11Mbps data rate were chosen for full testing. The Worst case 1Mbps was reported for radiated spurious emission.

802.11 g mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6 and 54Mbps data rate were chosen for full testing. The Worst case 6Mbps was reported for radiated spurious emission.

802.11 n_20M mode: Channel low (2412MHz)、mid (2437MHz) and high (2462MHz) with 6.5 and 130Mbps data rate were chosen for full testing. The Worst case 6.5Mbps was reported for radiated spurious emission.

802.11 n_40M mode: Channel low (2422MHz)、mid (2437MHz) and high (2452MHz) with 13.5 and 270Mbps data rate were chosen for full testing. The Worst case 13.5Mbps was reported for radiated spurious emission.

5. CONDUCTED EMISSION TEST

5.1. Standard Applicable

According to §15.207. frequency within 150KHz to 30MHz shall not exceed the Limit table as below.

Frequency range	Limits dB(uV)	
MHz	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 110Vac/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:

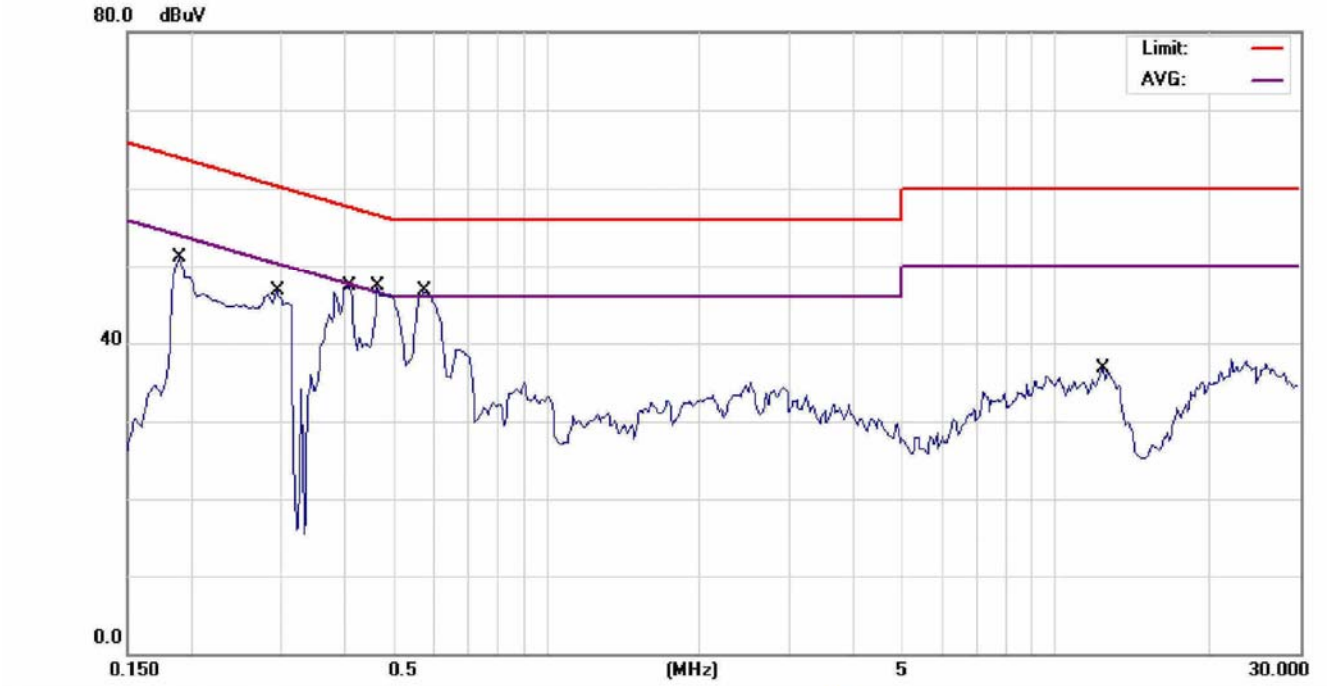
Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
EMC Analyzer	HP	8594EM	3624A00203	09/02/2007	09/03/2008
EMI Test Receiver	R&S	ESCS30	828985/004	06/09/2007	06/10/2008
Transient Limiter	HP	11947A	3107A02062	09/02/2007	09/03/2008
LISN	Rolf-Heine	NNB-2/16Z	99012	12/31/2007	12/30/2008
LISN	Rolf-Heine	NNB-2/16Z	99013	01/10/2008	01/09/2009
LISN	FCC	FCC-LISN-50/250-25-2-01	04034	01/11/2008	01/10/2009
Coaxial Cables	N/A	N/A	CE01	01/11/2008	01/10/2009

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:	Normal Operation Mode			Test Date:	Jan. 22, 2008
Temperature:	24 ℃	Humidity:	62%	Test By:	Jason

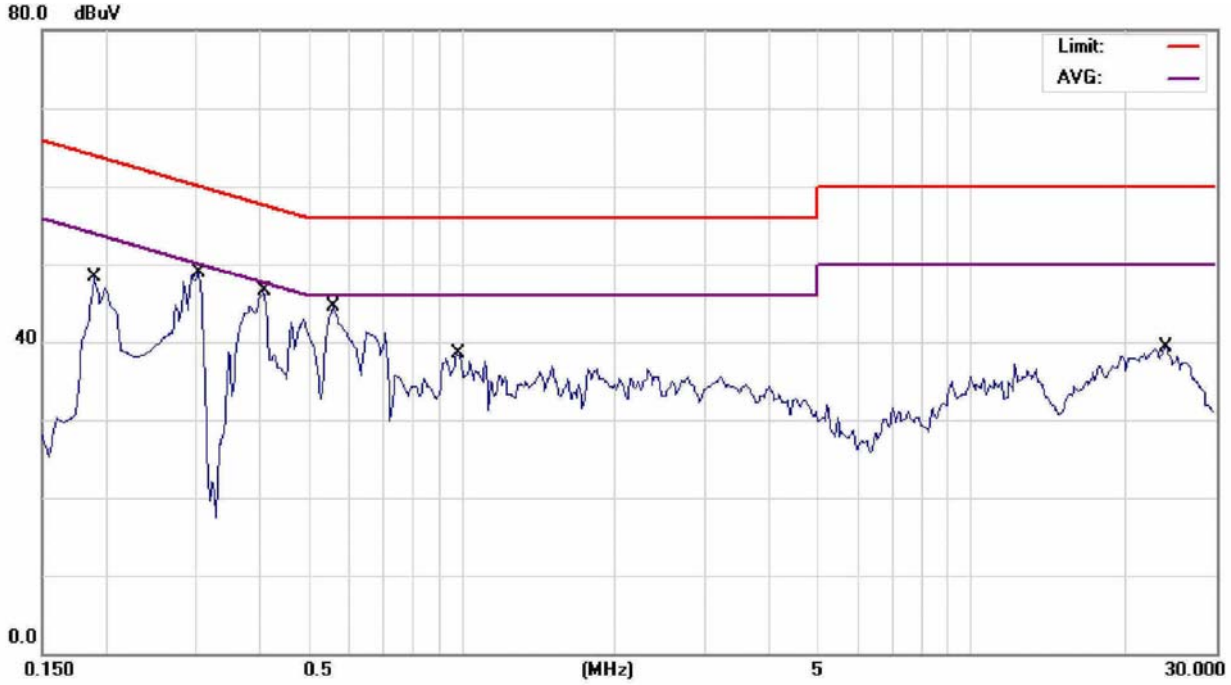


Site SGS CONDUCTED #1
Limit: CISPR22 Class B Conduction(QP)
EUT: WLAN 11n USB Adapter
M/N: WL-6200A
Note: Operation

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

Temperature: 24 ℃
Humidity: 62 %
Air Pressure: hpa

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1900	50.88	0.25	51.13	64.04	-12.91	QP	
2		0.2950	46.73	0.02	46.75	60.38	-13.63	QP	
3		0.4100	45.70	0.02	45.72	57.65	-11.93	QP	
4		0.4100	36.80	0.02	36.82	47.65	-10.83	AVG	
5		0.4650	44.70	0.02	44.72	56.60	-11.88	QP	
6		0.4650	36.90	0.02	36.92	46.60	-9.68	AVG	



Site SGS CONDUCTED #1	Phase: N	Temperature: 24 ℃
Limit: CISPR22 Class B Conduction(QP)	Power: AC 120V/60Hz	Humidity: 62 %
EUT: WLAN 11n USB Adapter	Distance:	Air Pressure: hpa
M/N: WL-6200A		
Note: Operation		

No.	Mk.	Freq.	Reading Level	Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1900	48.22	0.02	48.24	64.04	-15.80	QP	
2	*	0.3050	48.91	0.02	48.93	60.11	-11.18	QP	
3		0.4100	46.43	0.02	46.45	57.65	-11.20	QP	
4		0.5600	44.46	0.02	44.48	56.00	-11.52	QP	
5		0.9800	38.45	0.01	38.46	56.00	-17.54	QP	
6		24.1200	38.95	0.40	39.35	60.00	-20.65	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.

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= 1MHz, VBW = 3MHz, 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	04/27/2007	04/27/2008
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2007	07/03/2008
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Splitter	Agilent	11667B	N/A	09/23/2007	09/22/2008
Attenuator	Mini-Circuit	BW-S6W5	N/A	01/05/2008	01/04/2009

6.4. Measurement Result

Test Results (802.11b) 1M (Left Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	10.34	0.00	10.34	30	PASS
MID	2437.00	10.54	0.00	10.54	30	PASS
HIGH	2462.00	10.15	0.00	10.15	30	PASS

offset: 10.1dB

Test Results (802.11g) 6M (Left Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	10.05	0.00	10.05	30	PASS
MID	2437.00	10.10	0.00	10.10	30	PASS
HIGH	2462.00	10.19	0.00	10.19	30	PASS

offset: 10.1dB

Test Results (802.11n 20M) 6.5M (Left Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	3.38	0.00	3.38	30	PASS
MID	2437.00	3.87	0.00	3.87	30	PASS
HIGH	2462.00	3.47	0.00	3.47	30	PASS

offset: 0.1dB

Test Results (802.11n 20M) 6.5M (Right Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	9.39	0.00	9.39	30	PASS
MID	2437.00	9.67	0.00	9.67	30	PASS
HIGH	2462.00	9.70	0.00	9.70	30	PASS

offset: 0.1dB

Test Results (802.11n 20M) 6.5M (Left Antenna + Right Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	10.03	0.00	10.03	30	PASS
MID	2437.00	10.20	0.00	10.20	30	PASS
HIGH	2462.00	10.19	0.00	10.19	30	PASS

offset: 7.8dB

Test Results (802.11n 40M) 13.5M (Left Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2422.00	3.39	0.00	3.39	30	PASS
MID	2437.00	4.00	0.00	4.00	30	PASS
HIGH	2452.00	3.57	0.00	3.57	30	PASS

offset: 0.1dB

Test Results (802.11n 40M) 13.5M (Right Antenna):

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2422.00	9.22	0.00	9.22	30	PASS
MID	2437.00	9.42	0.00	9.42	30	PASS
HIGH	2452.00	9.32	0.00	9.32	30	PASS

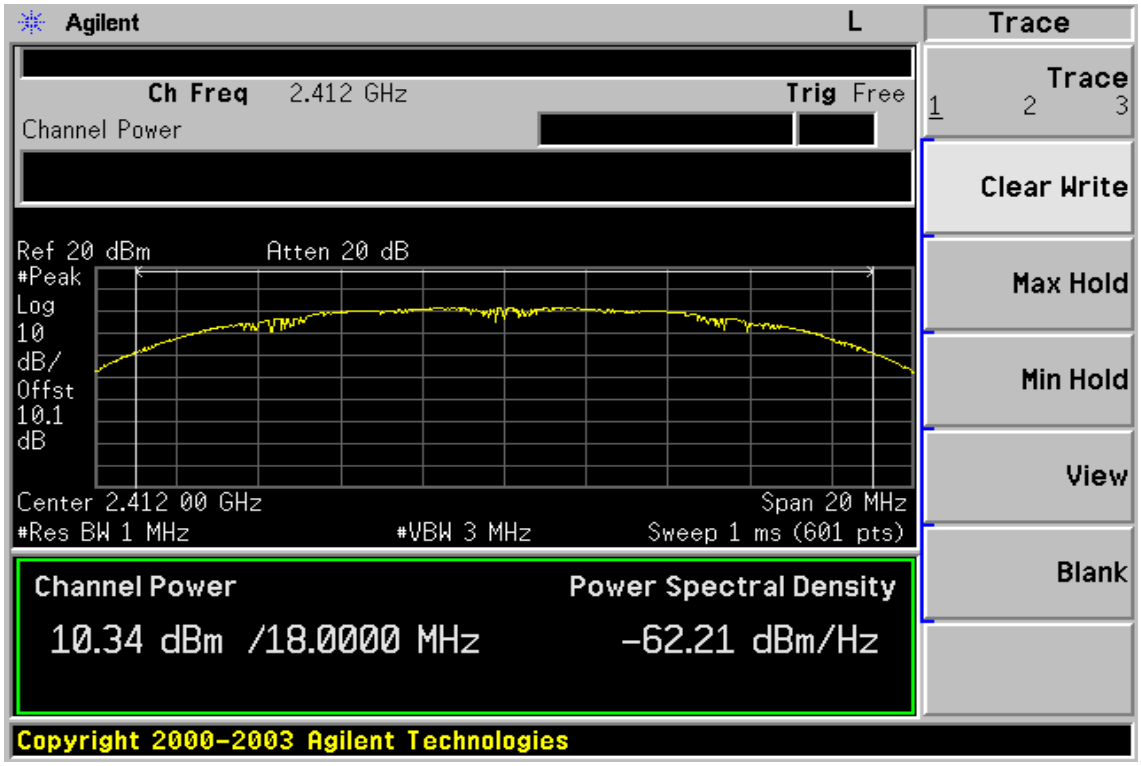
offset: 0.1dB

Test Results (802.11n 40M) 13.5M (Left Antenna + Right Antenna):

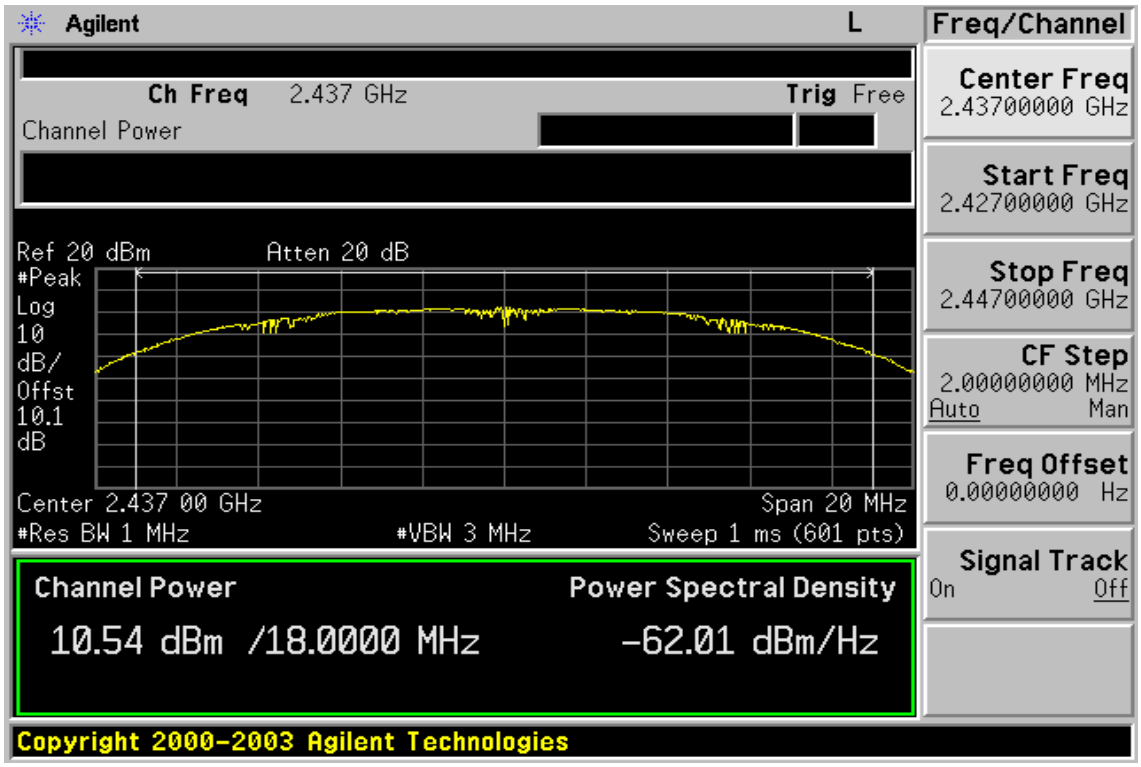
CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2422.00	10.23	0.00	10.23	30	PASS
MID	2437.00	10.12	0.00	10.12	30	PASS
HIGH	2452.00	10.31	0.00	10.31	30	PASS

offset: 7.8dB

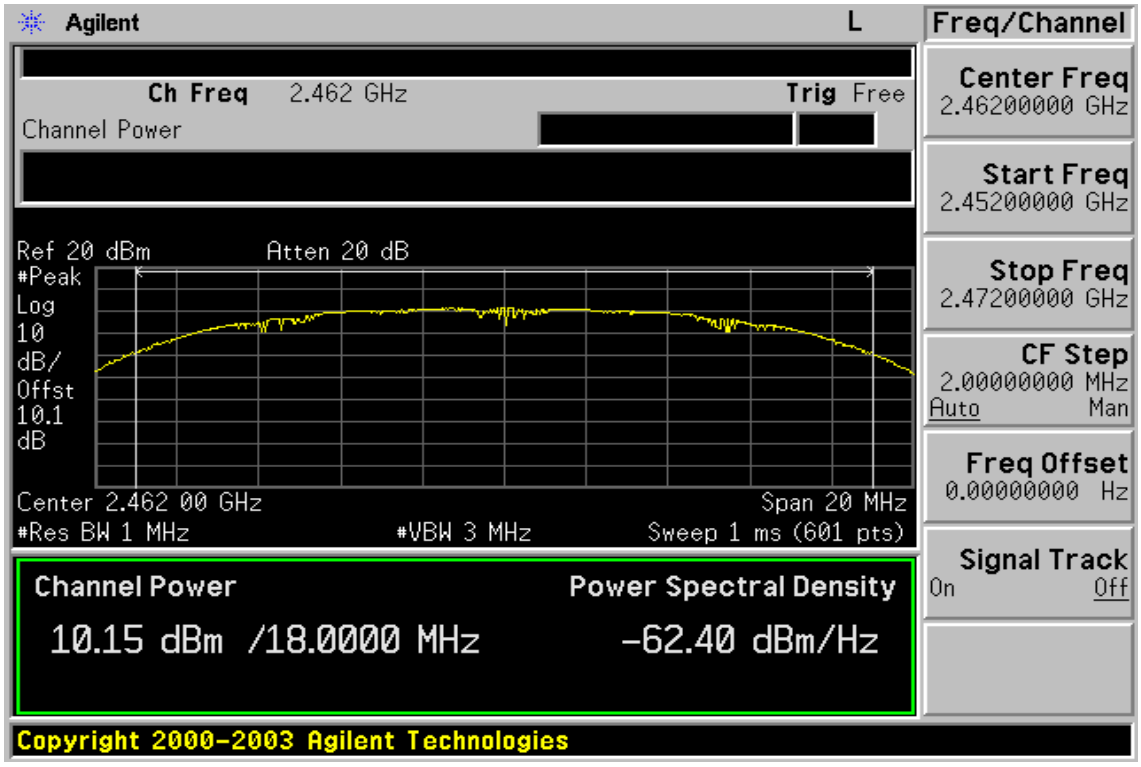
Peak Power Output Data Plot (CH Low) 802.11b, 1M mode (Left Antenna)



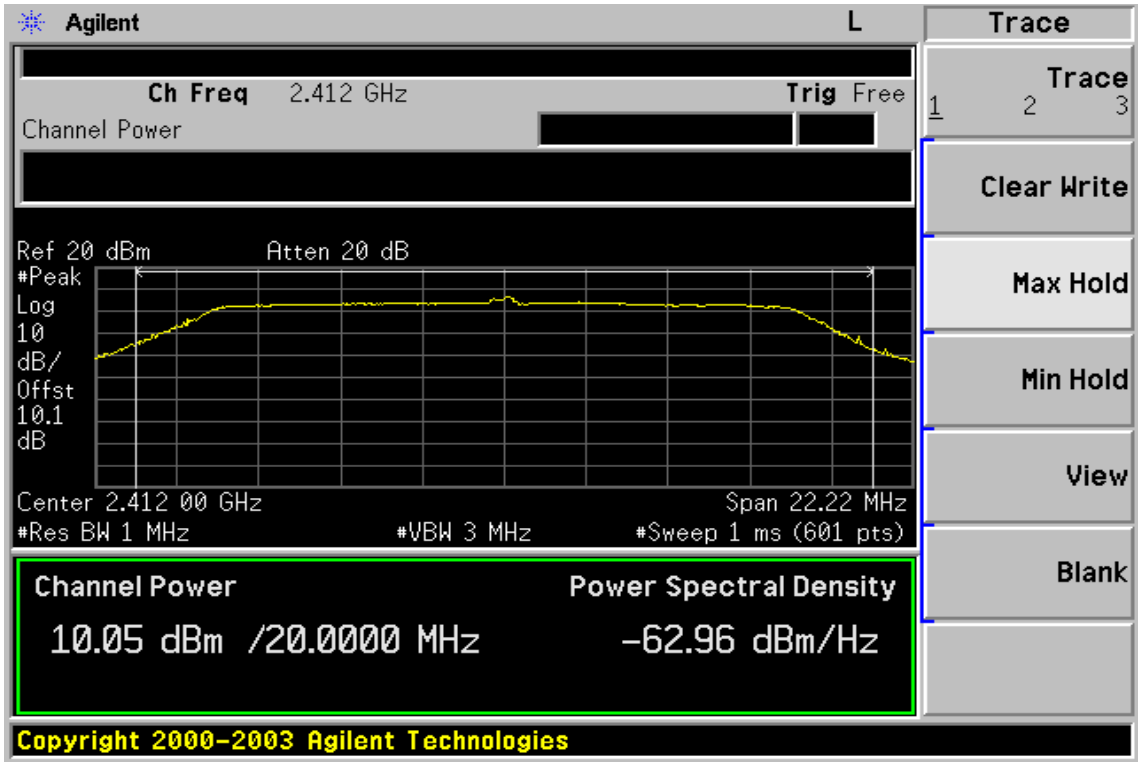
Peak Power Output Data Plot (CH Mid) 802.11b , 1M mode (Left Antenna)



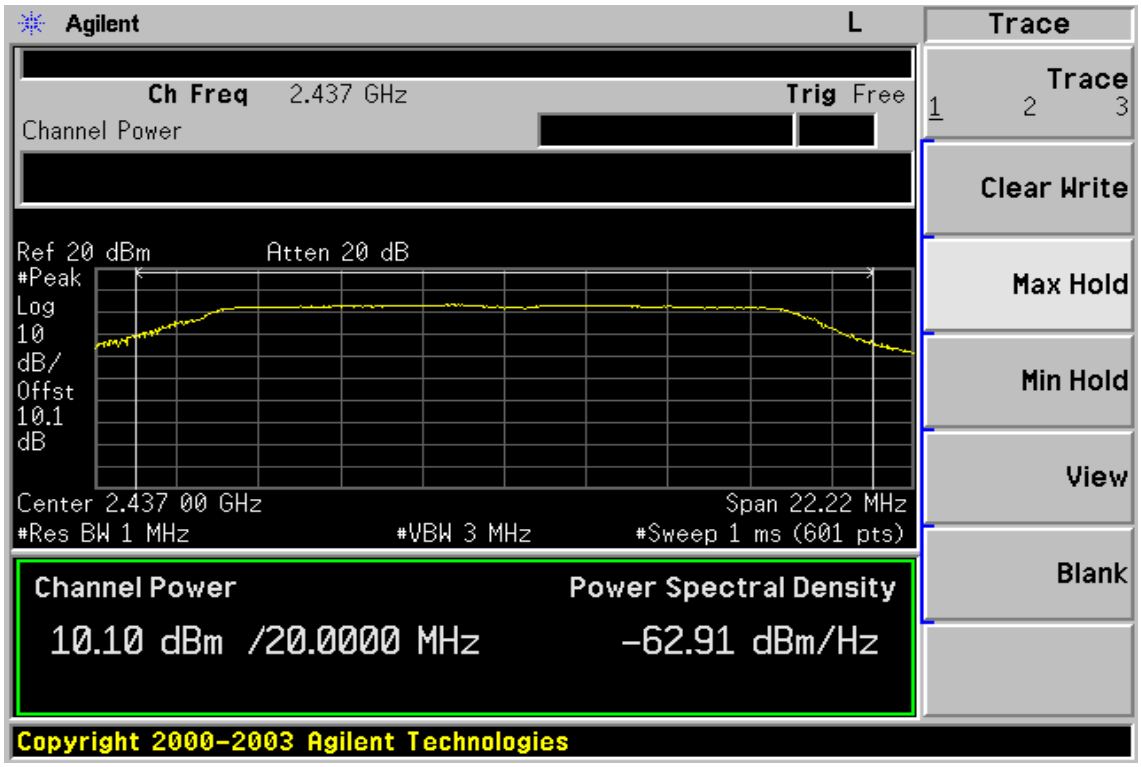
Peak Power Output Data Plot (CH High) 802.11b, 1M mode (Left Antenna)



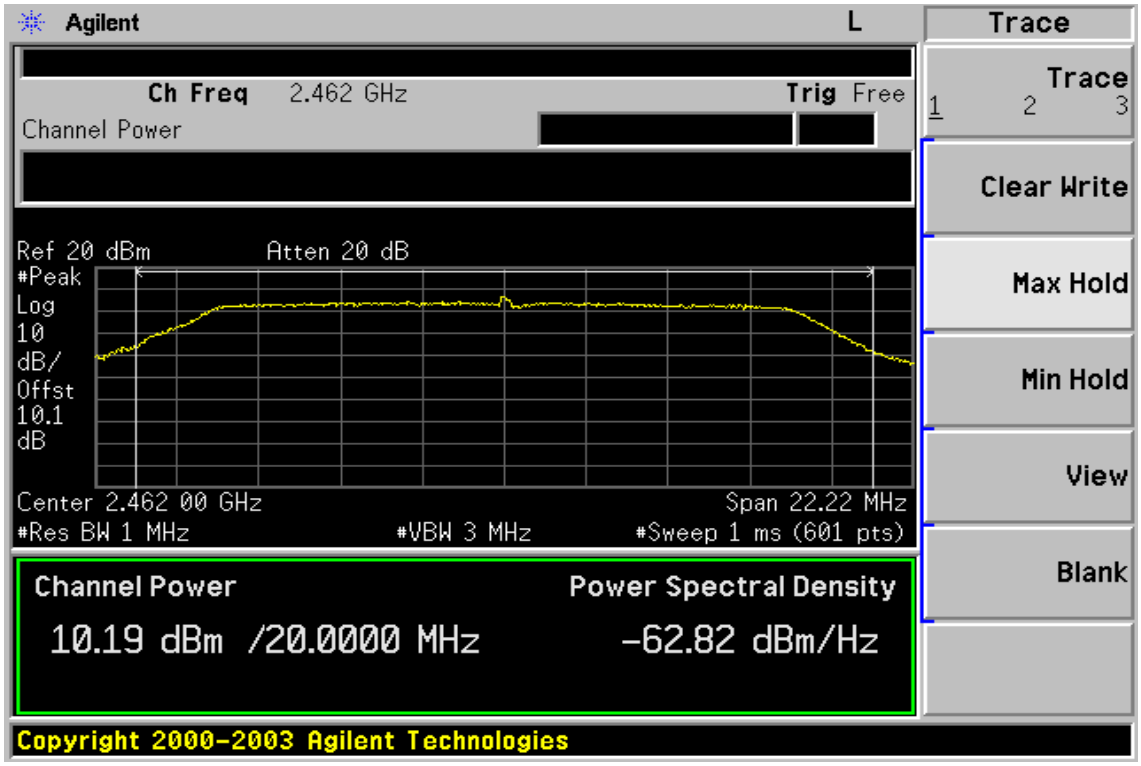
Peak Power Output Data Plot (CH Low) 802.11g, 6M mode (Left Antenna)



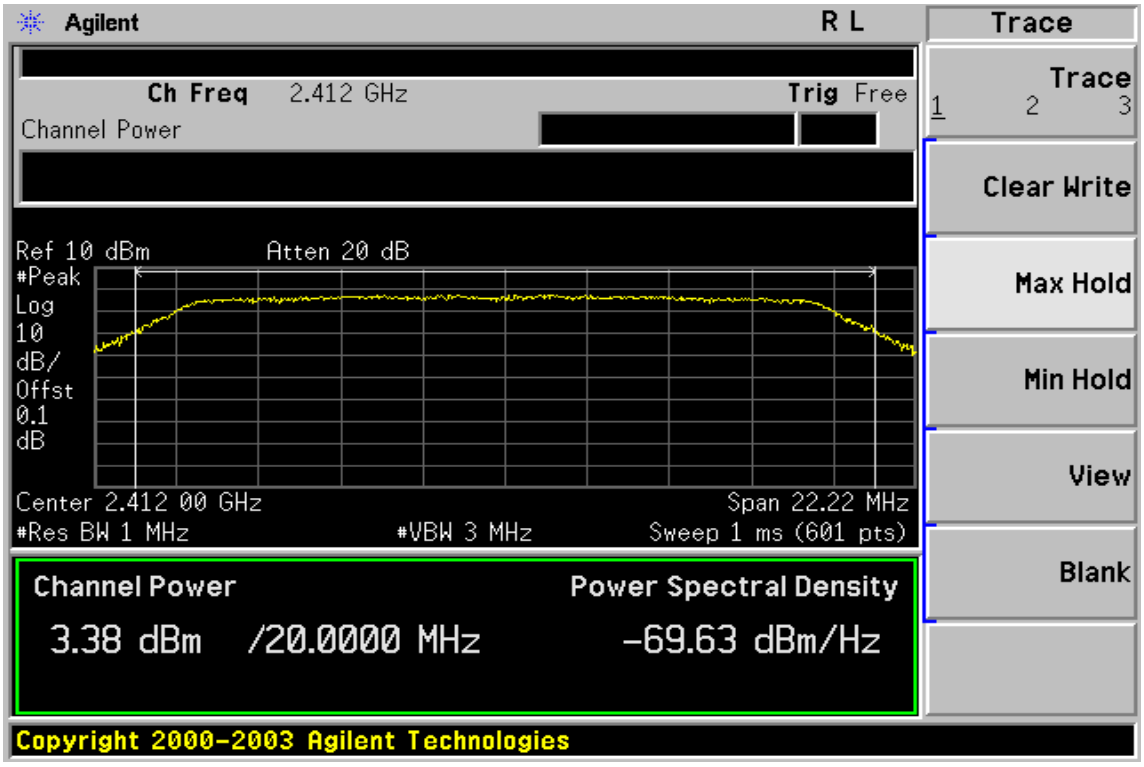
Peak Power Output Data Plot (CH Mid) 802.11g, 6M mode (Left Antenna)



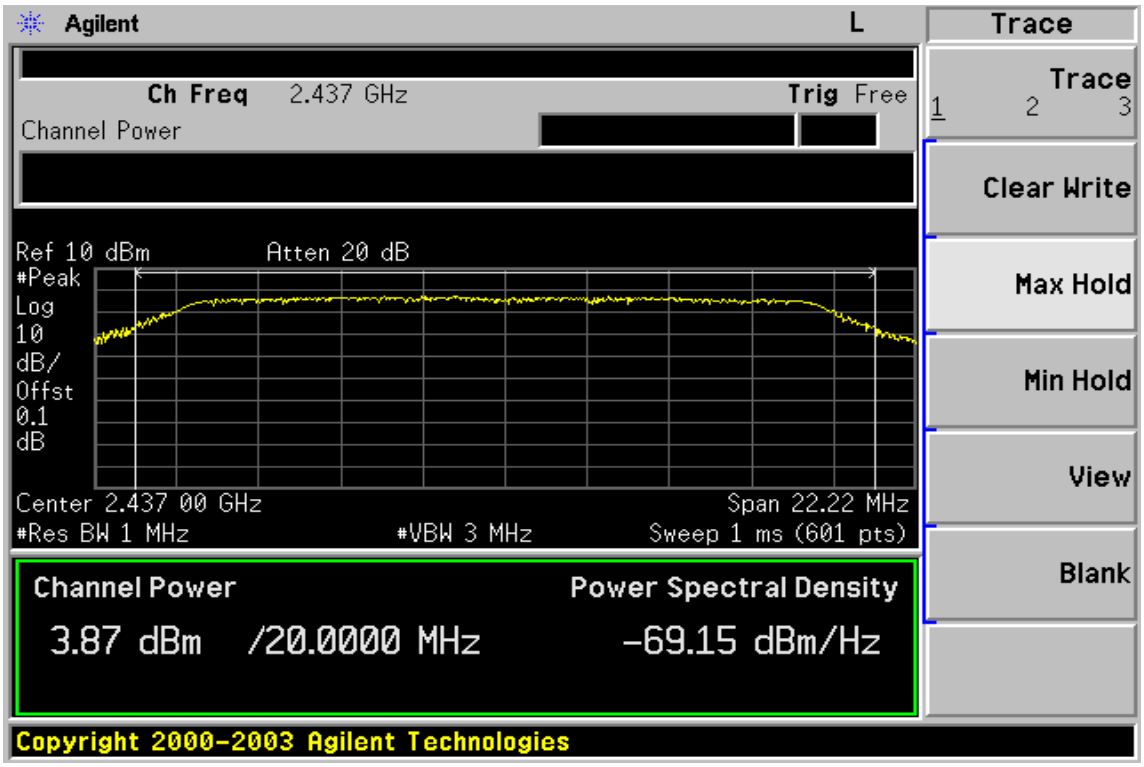
Peak Power Output Data Plot (CH High) 802.11g, 6M mode (Left Antenna)



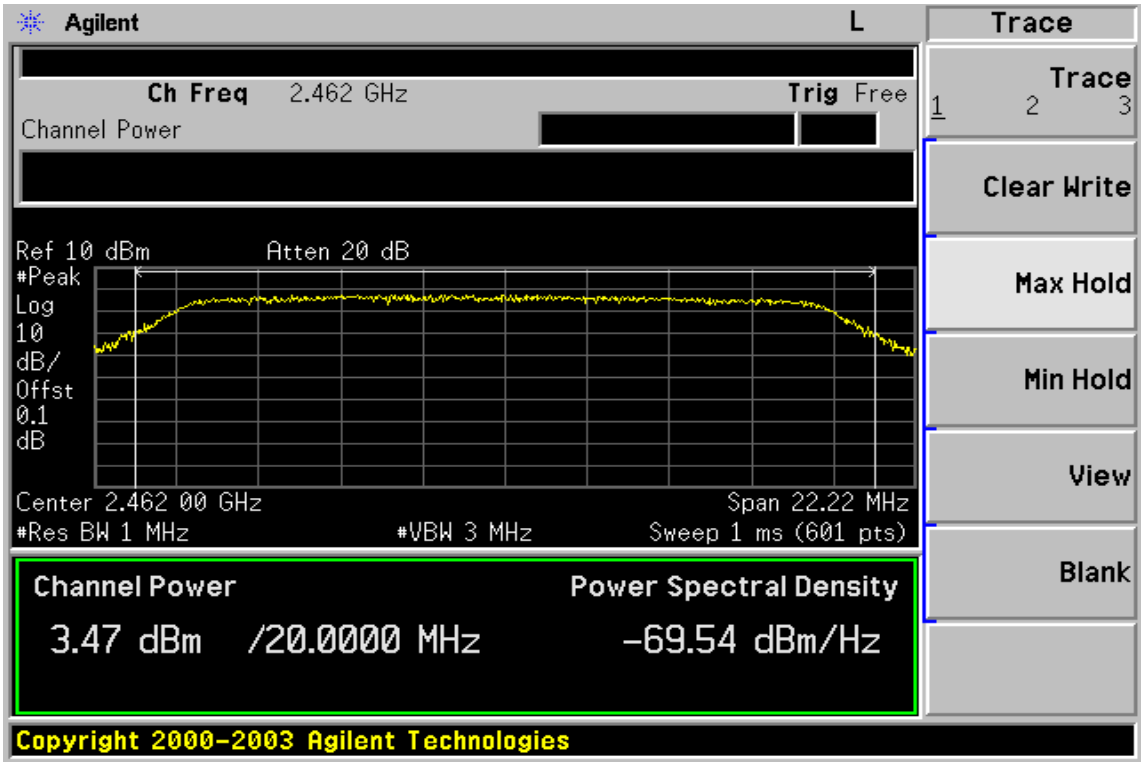
Peak Power Output Data Plot (CH Low) 802.11n_20M, 6.5M mode (Left Antenna)



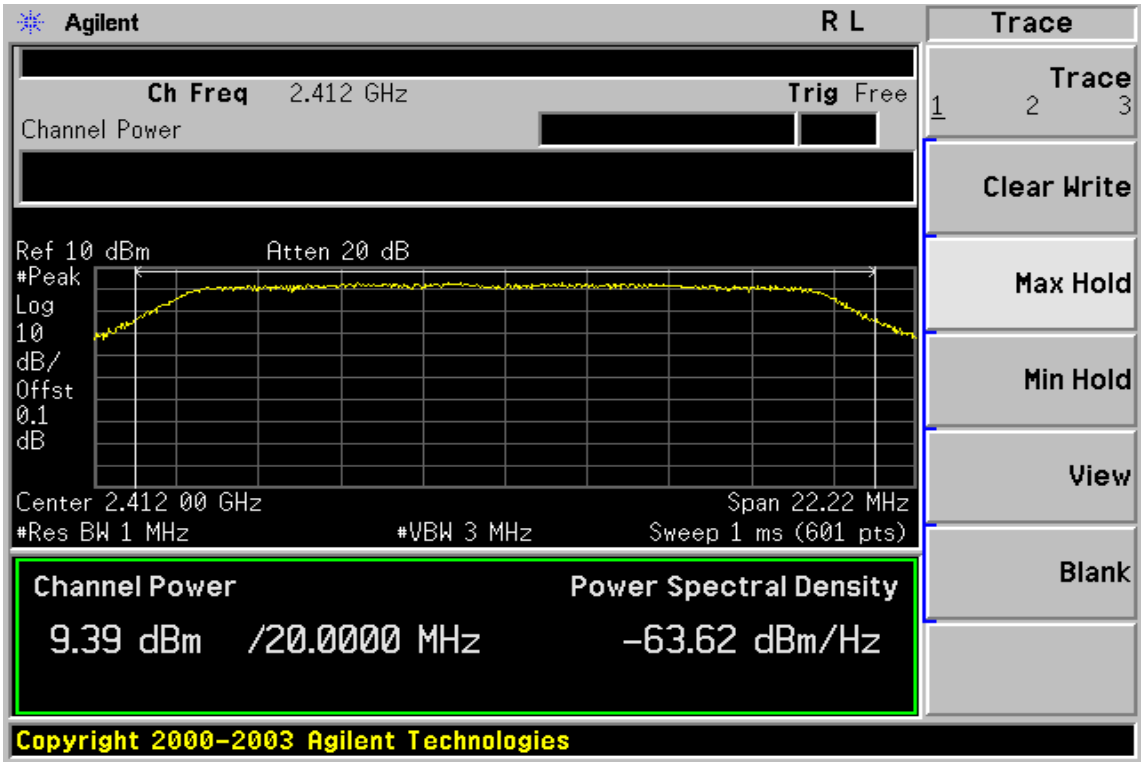
Peak Power Output Data Plot (CH Mid) 802.11n_20M, 6.5M mode (Left Antenna)



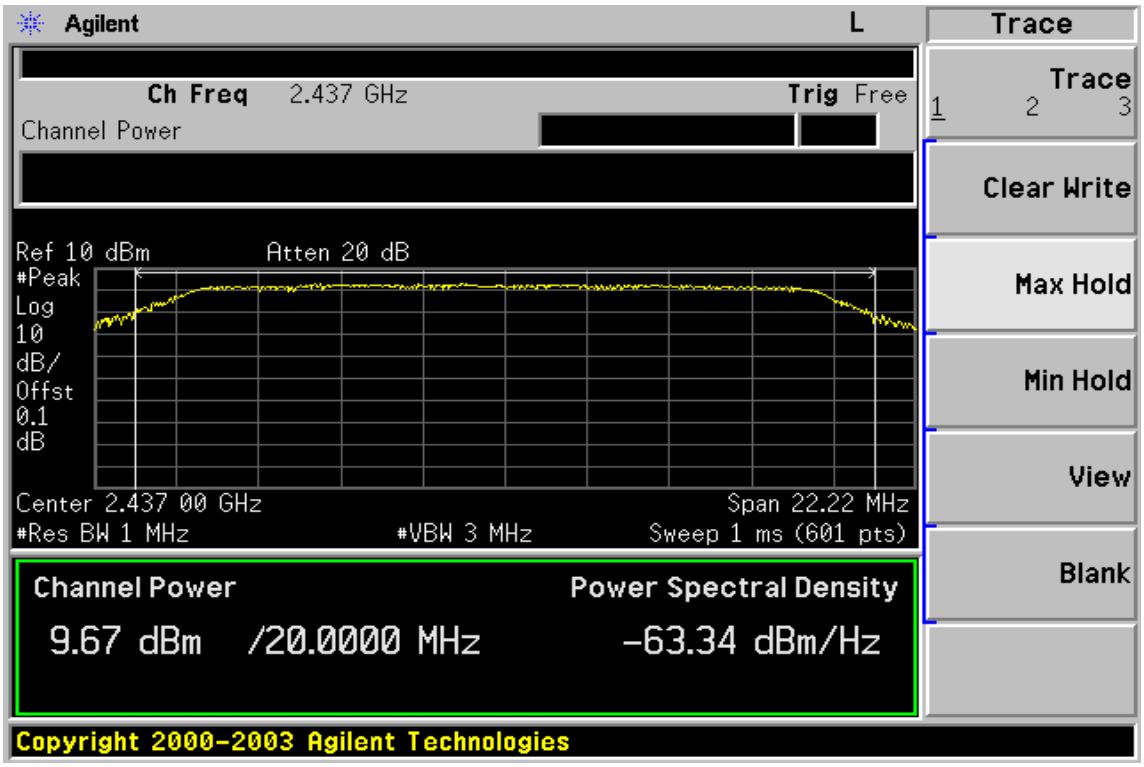
Peak Power Output Data Plot (CH High) 802.11n_20M, 6.5M mode (Left Antenna)



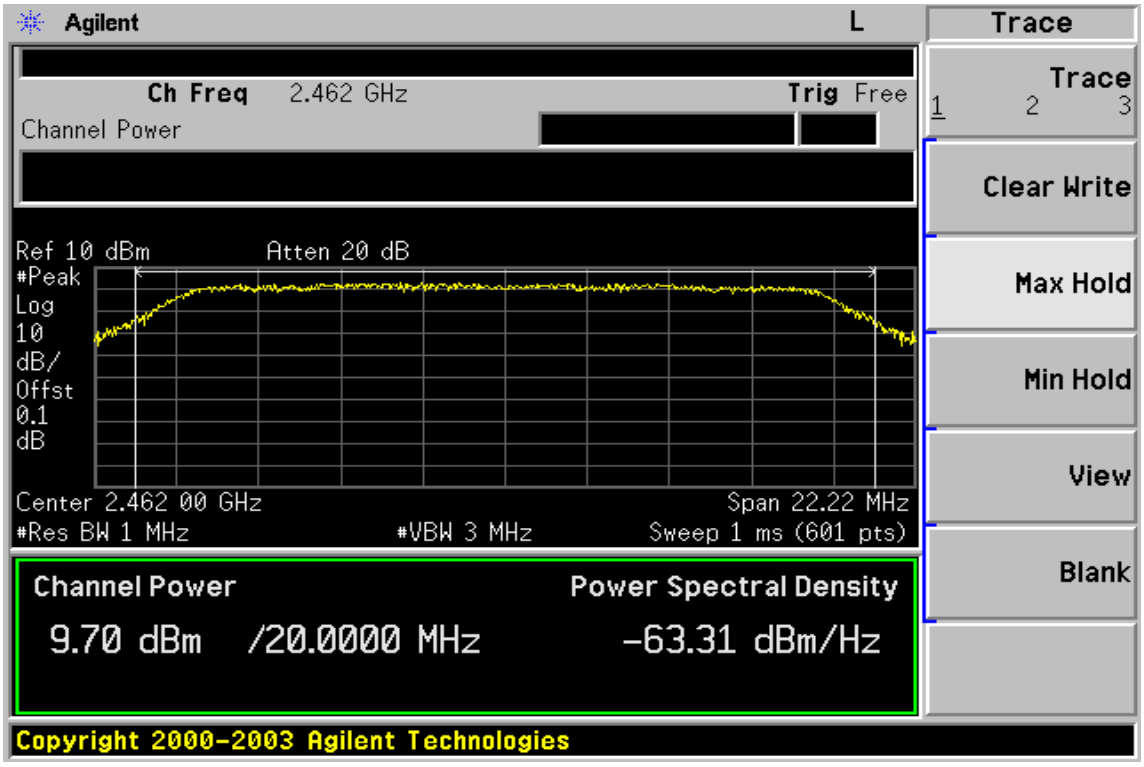
Peak Power Output Data Plot (CH Low) 802.11n_20M, 6.5M mode (Right Antenna)



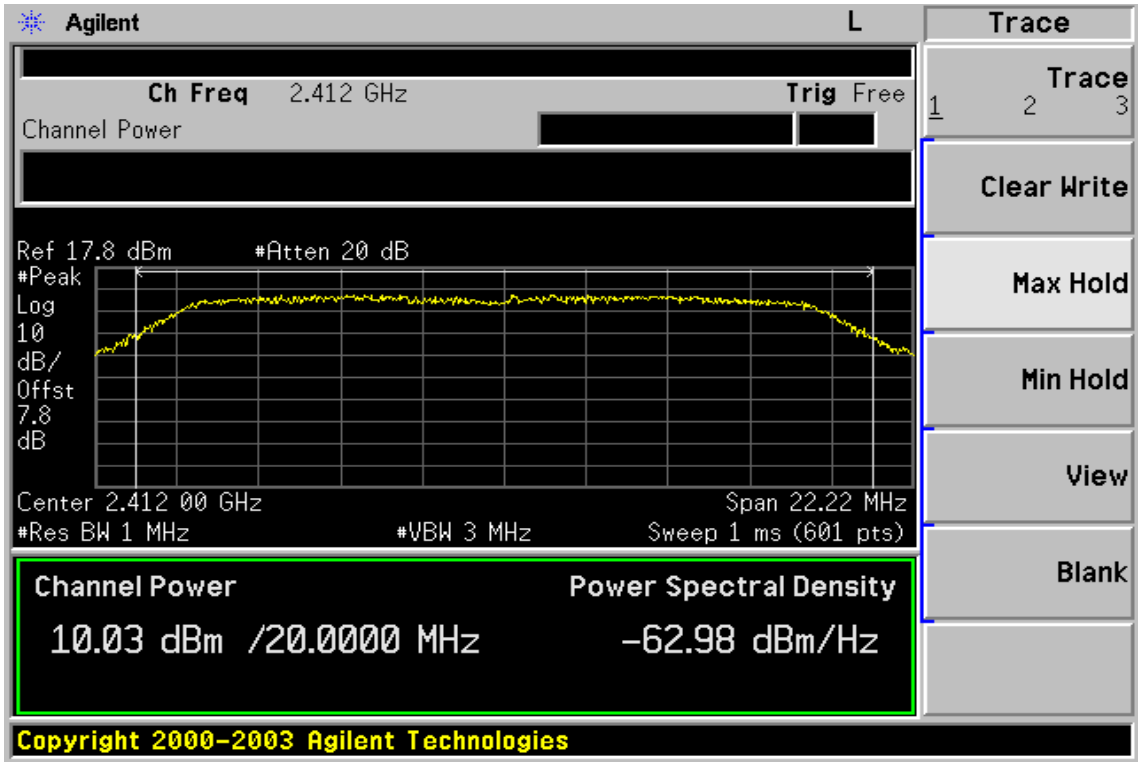
Peak Power Output Data Plot (CH Mid) 802.11n_20M, 6.5M mode (Right Antenna)



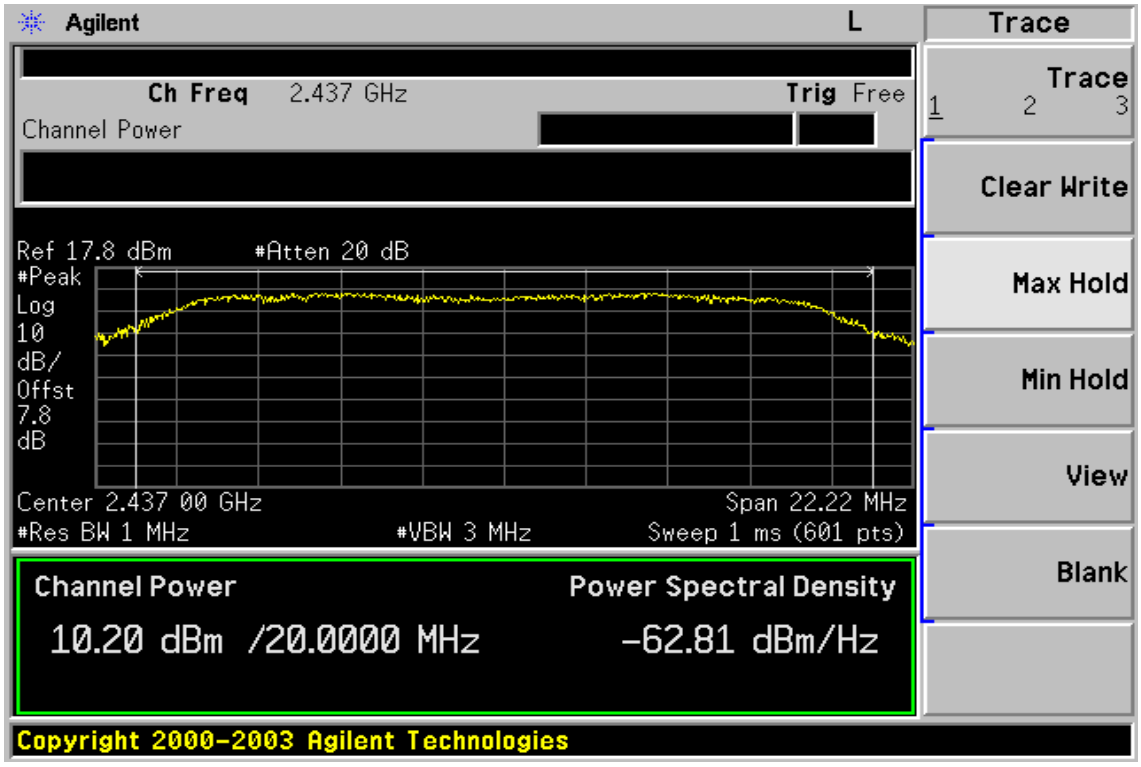
Peak Power Output Data Plot (CH High) 802.11n_20M, 6.5M mode (Right Antenna)



Peak Power Output Data Plot
(CH Low) 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)

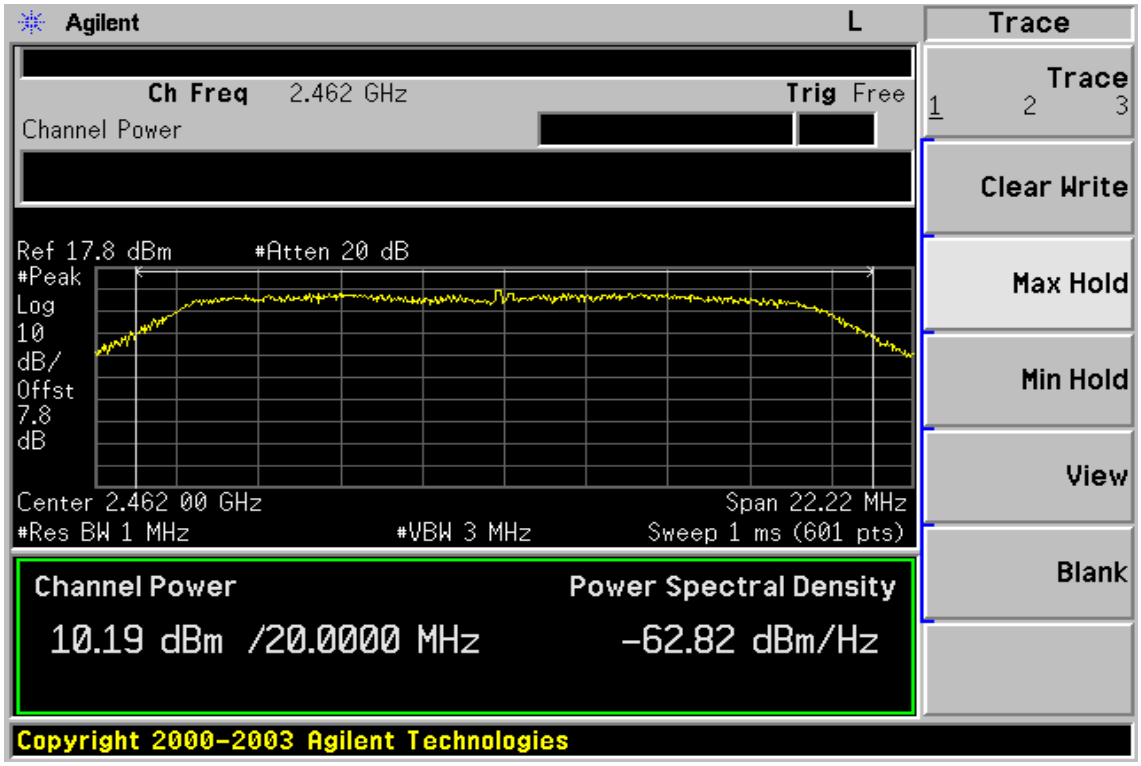


Peak Power Output Data Plot
(CH Mid) 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)

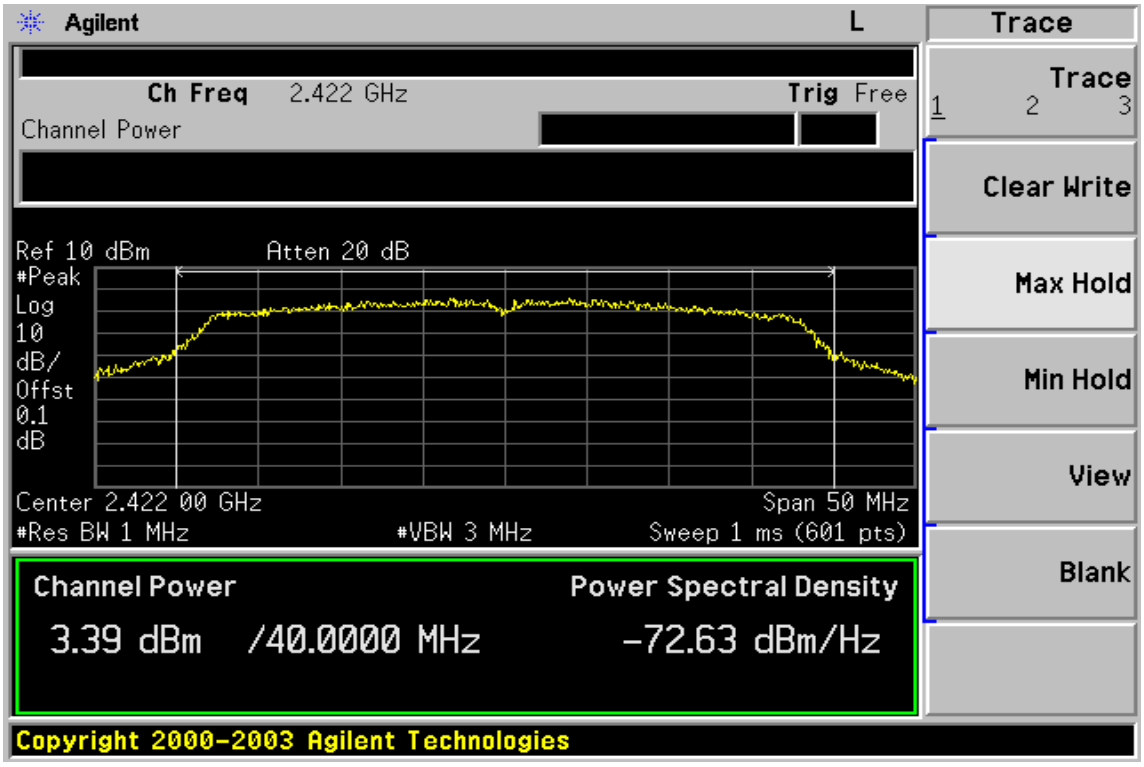


Peak Power Output Data Plot

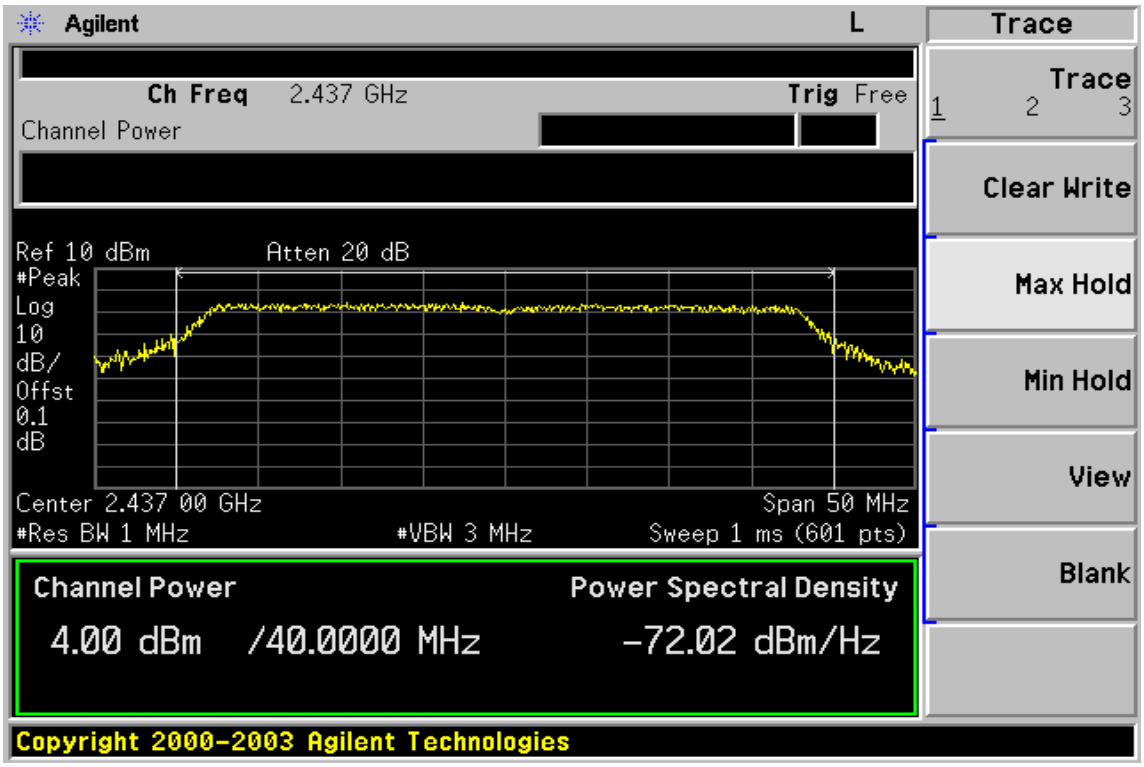
(CH High) 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



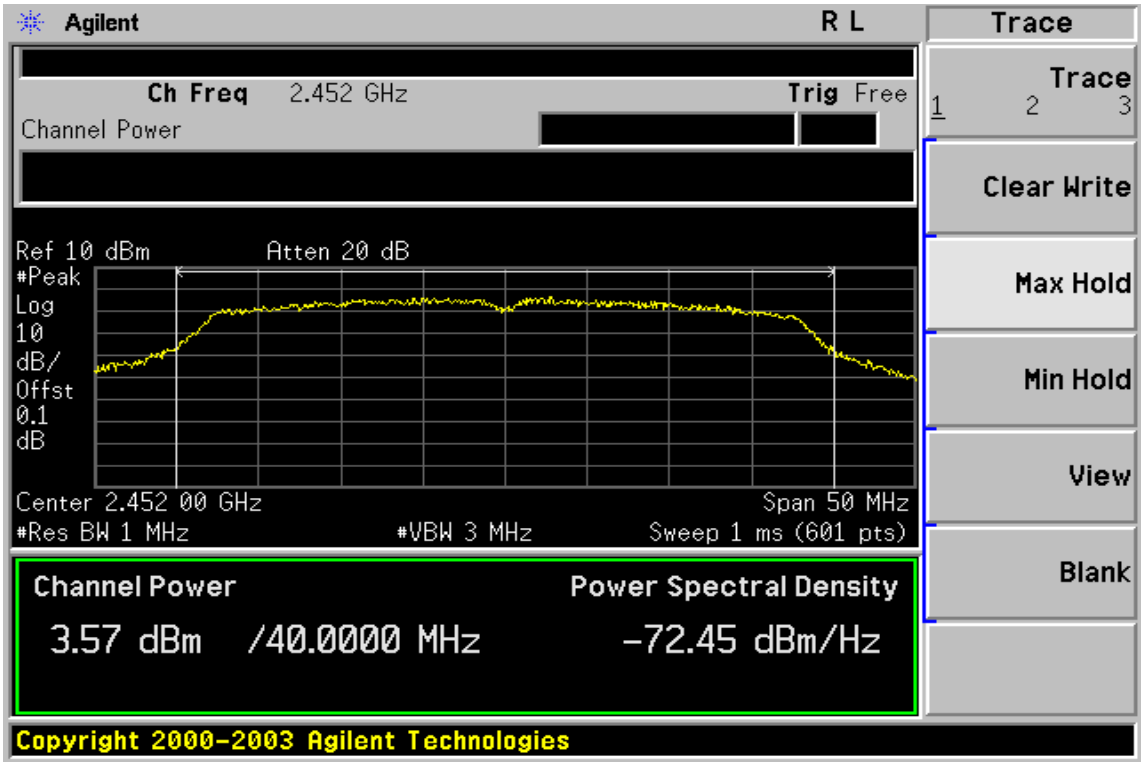
Peak Power Output Data Plot (CH Low) 802.11n_40M, 13.5M mode (Left Antenna)



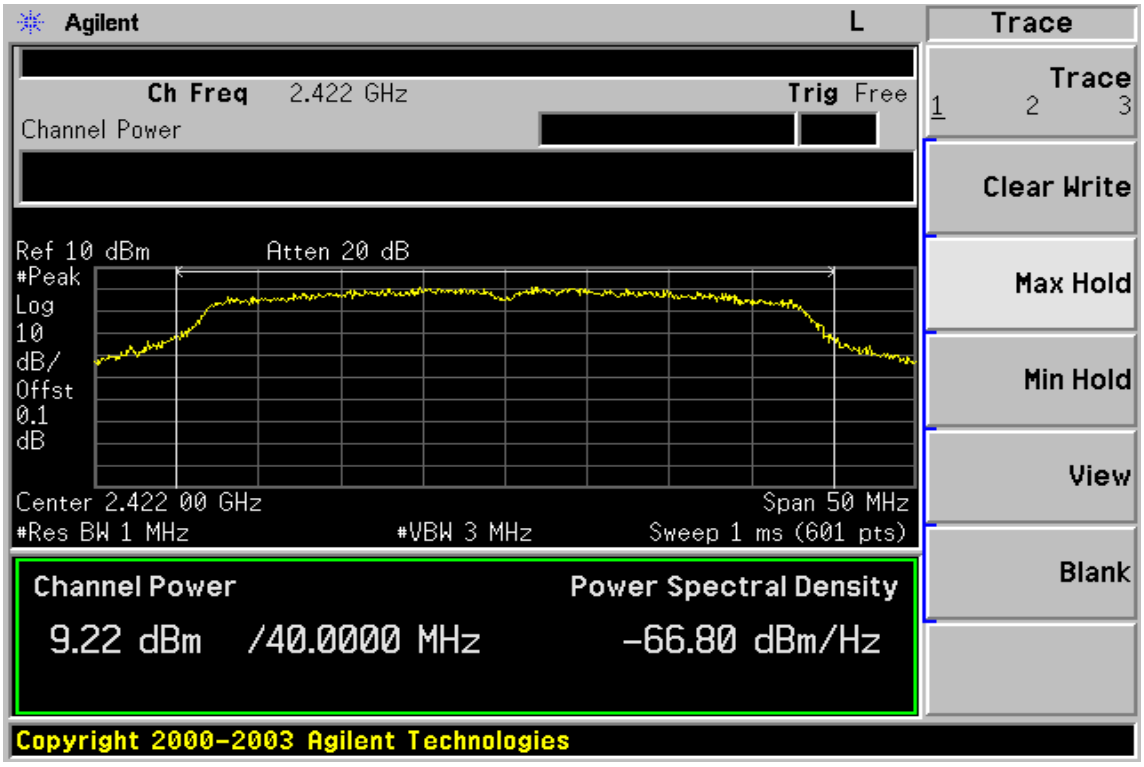
Peak Power Output Data Plot (CH Mid) 802.11n_40M, 13.5M mode (Left Antenna)



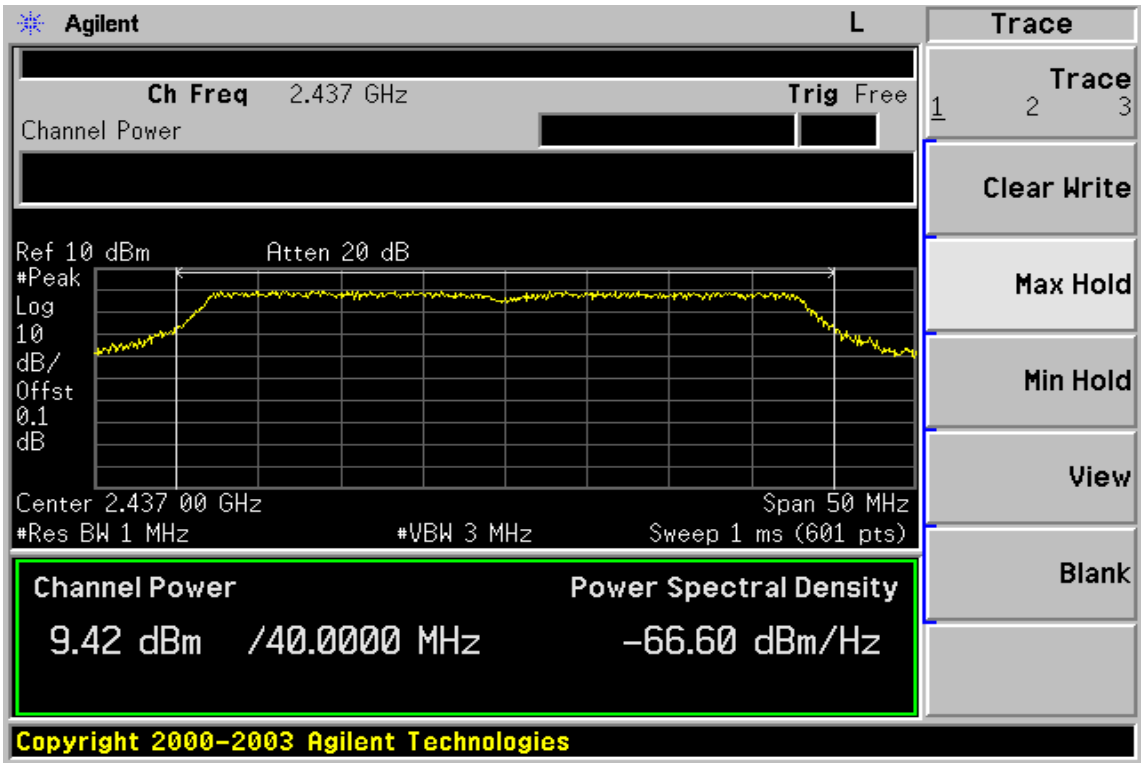
Peak Power Output Data Plot (CH High) 802.11n _40M, 13.5M mode (Left Antenna)



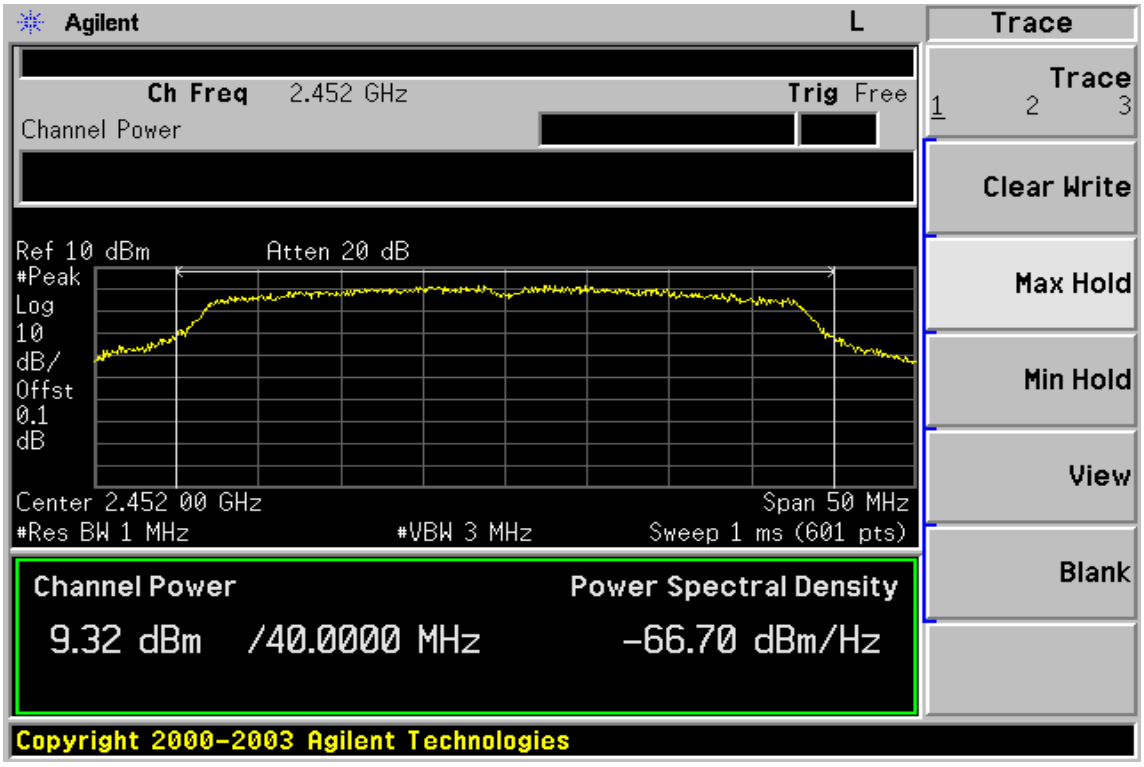
Peak Power Output Data Plot (CH Low) 802.11n_40M, 13.5M mode (Right Antenna)



Peak Power Output Data Plot (CH Mid) 802.11n_40M, 13.5M mode (Right Antenna)

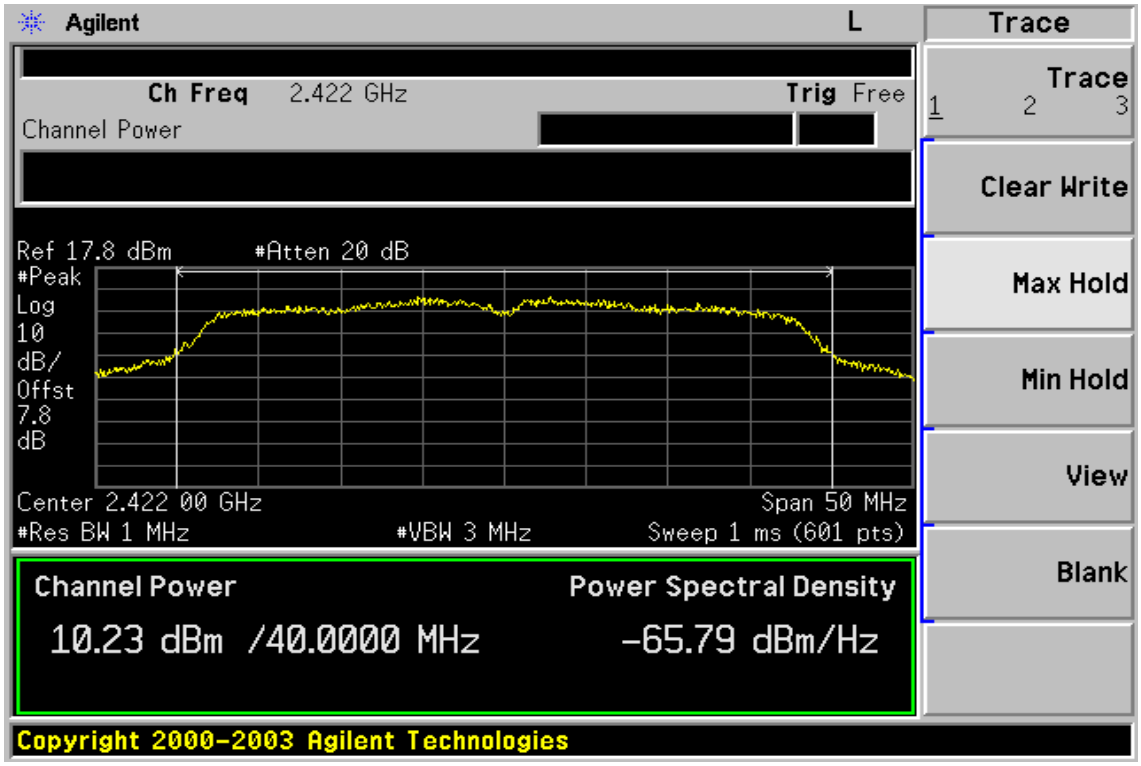


Peak Power Output Data Plot (CH High) 802.11n_40M, 13.5M mode (Right Antenna)



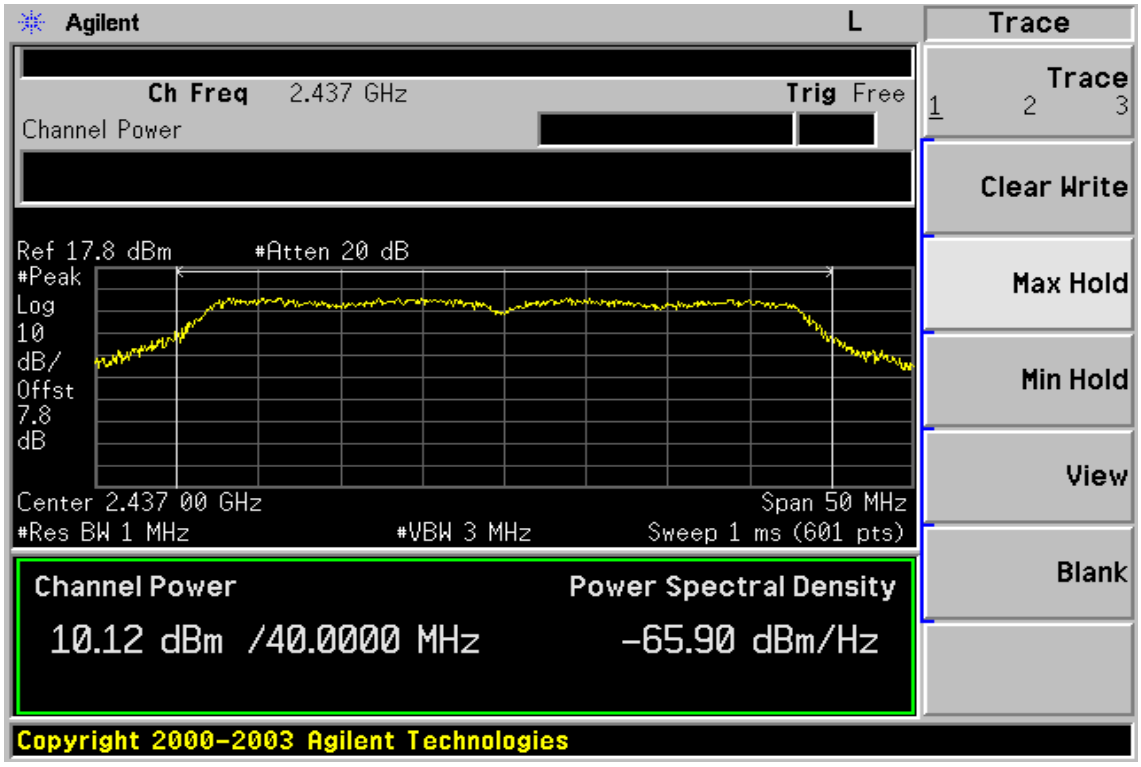
Peak Power Output Data Plot

(CH Low) 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



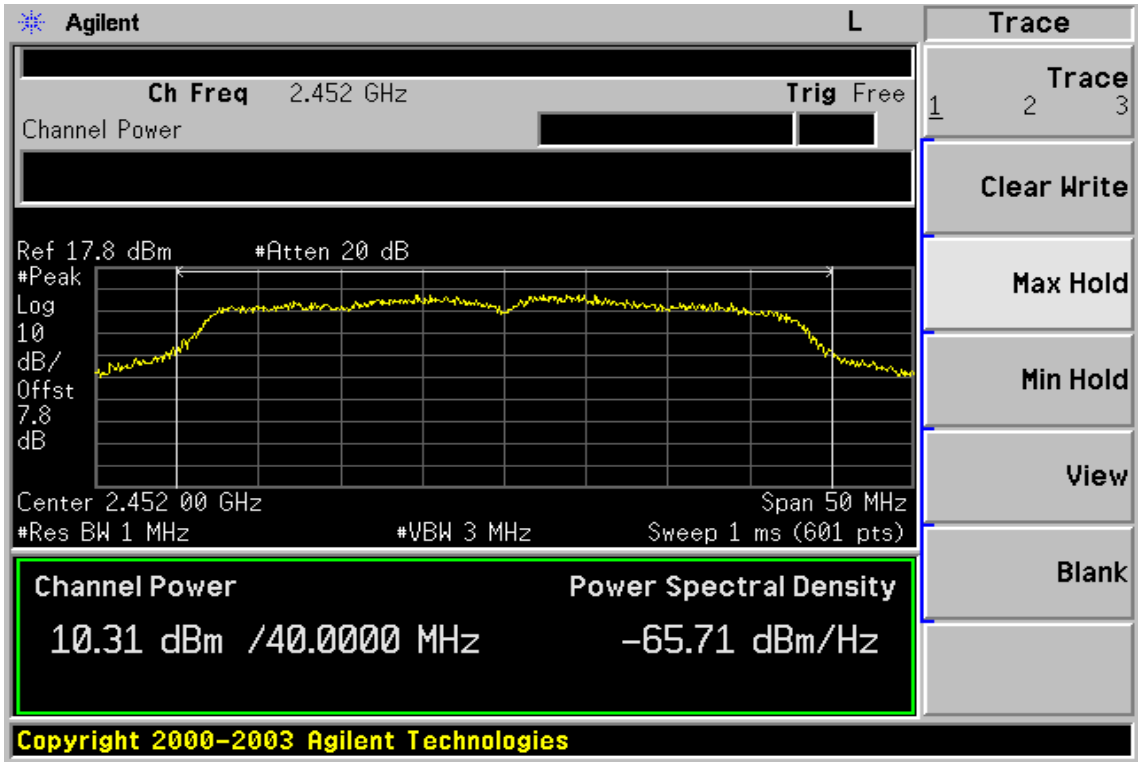
Peak Power Output Data Plot

(CH Mid) 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



Peak Power Output Data Plot

(CH High) 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



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.

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=1% bandwidth, VBW =3* RBW, Span= 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	04/27/2007	04/27/2008
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2007	07/03/2008
Splitter	Agilent	11667B	N/A	09/23/2007	09/22/2008
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S6W5	N/A	01/05/2008	01/04/2009

7.4. Measurement Result

Test Results (802.11b) 1M (Left Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2412	10.228	> 500	PASS
2437	10.231	> 500	PASS
2462	10.229	> 500	PASS

Test Results (802.11g) 6M (Left Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2412	16.458	> 500	PASS
2437	16.419	> 500	PASS
2462	16.376	> 500	PASS

Test Results (802.11n_20M) 6.5M (Left Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2412	17.782	> 500	PASS
2437	17.220	> 500	PASS
2462	17.643	> 500	PASS

Test Results (802.11n_20M) 6.5M (Right Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2412	17.788	> 500	PASS
2437	17.662	> 500	PASS
2462	17.637	> 500	PASS

Test Results (802.11n_20M) 6.5M (Left Antenna + Right Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2412	17.200	> 500	PASS
2437	17.540	> 500	PASS
2462	17.255	> 500	PASS

Test Results (802.11n_40M) 13.5M (Left Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2422	32.679	> 500	PASS
2437	35.428	> 500	PASS
2452	31.357	> 500	PASS

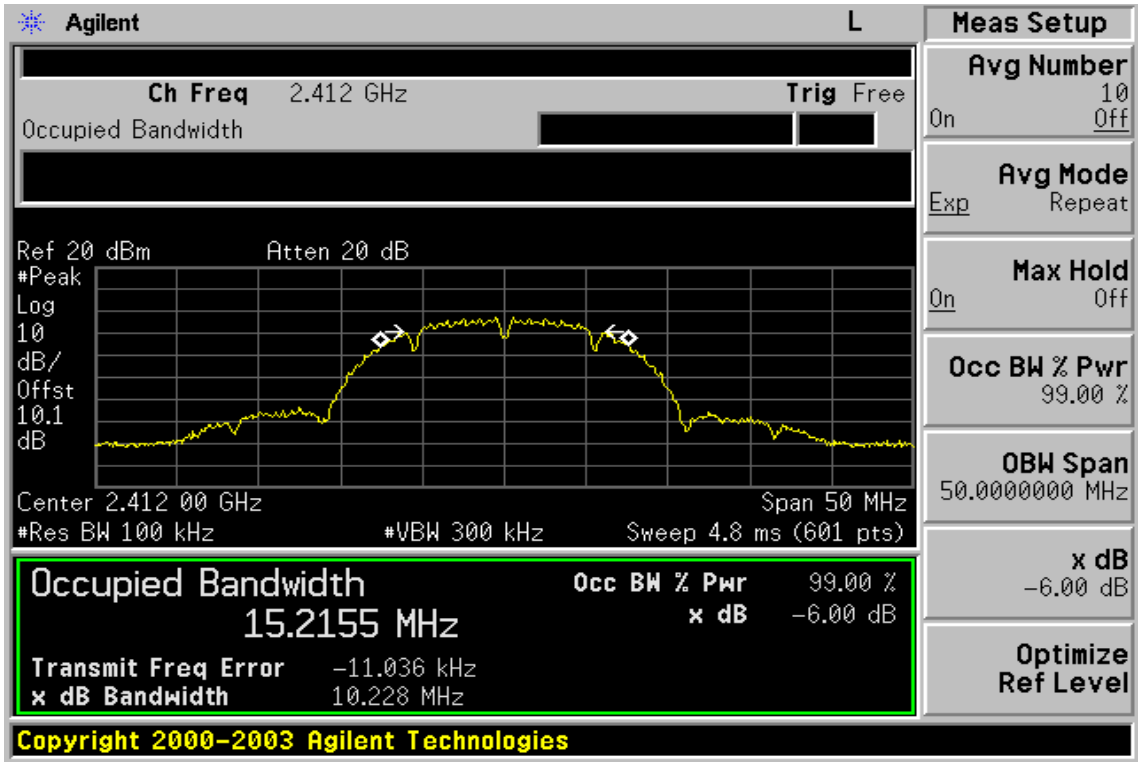
Test Results (802.11n_40M) 13.5M (Right Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2422	31.366	> 500	PASS
2437	36.386	> 500	PASS
2452	31.415	> 500	PASS

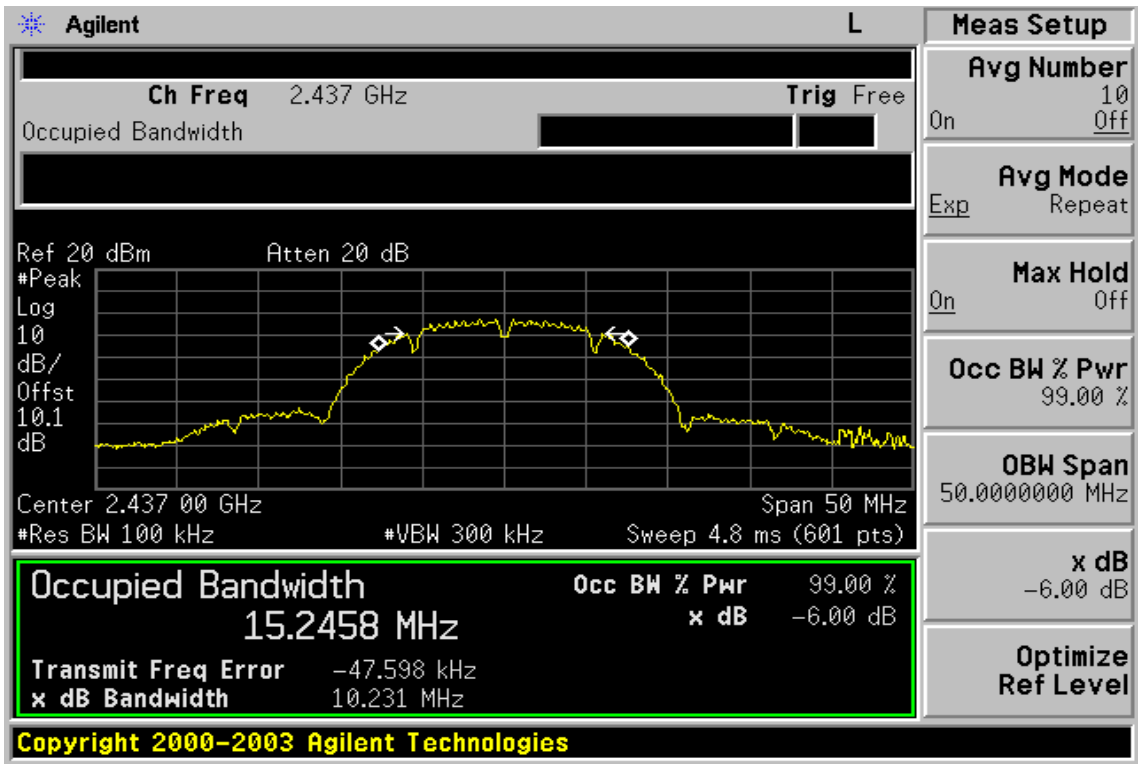
Test Results (802.11n_40M) 13.5M (Left Antenna + Right Antenna):

CH	Bandwidth (MHz)	Limit Bandwidth (KHz)	Result
2422	32.646	> 500	PASS
2437	35.728	> 500	PASS
2452	32.640	> 500	PASS

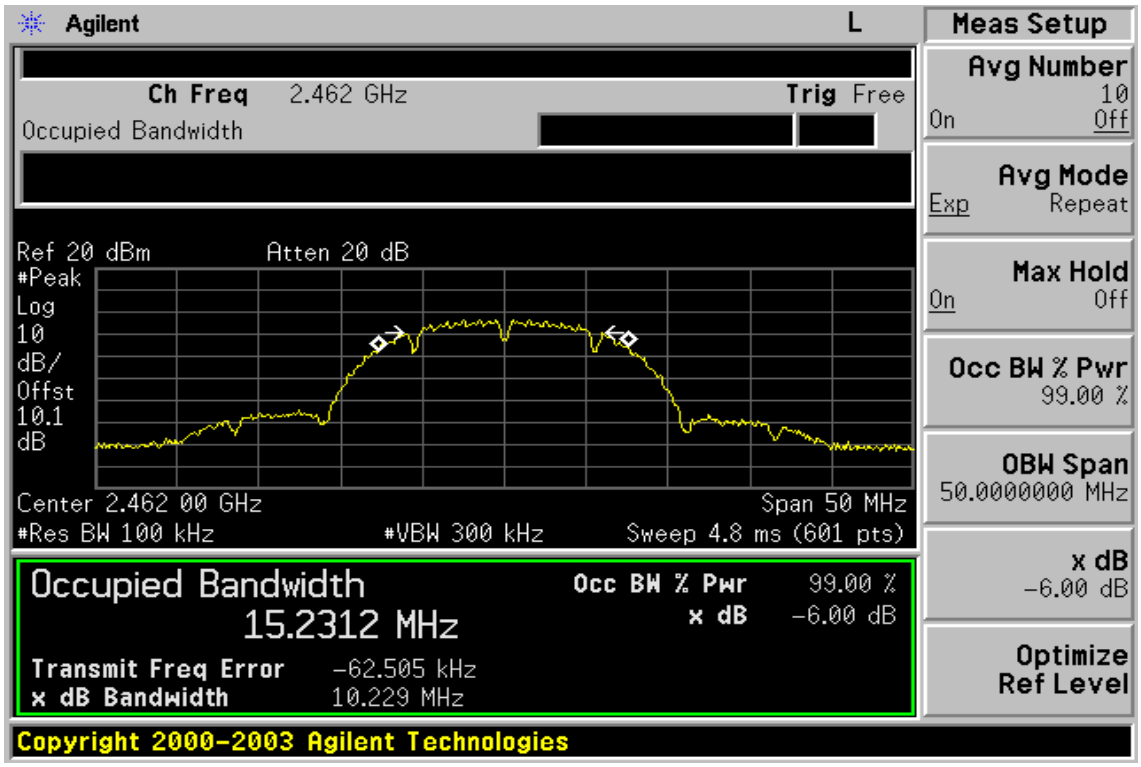
6dB Band Width Test Data CH-Low, 802.11b, 1M mode (Left Antenna)



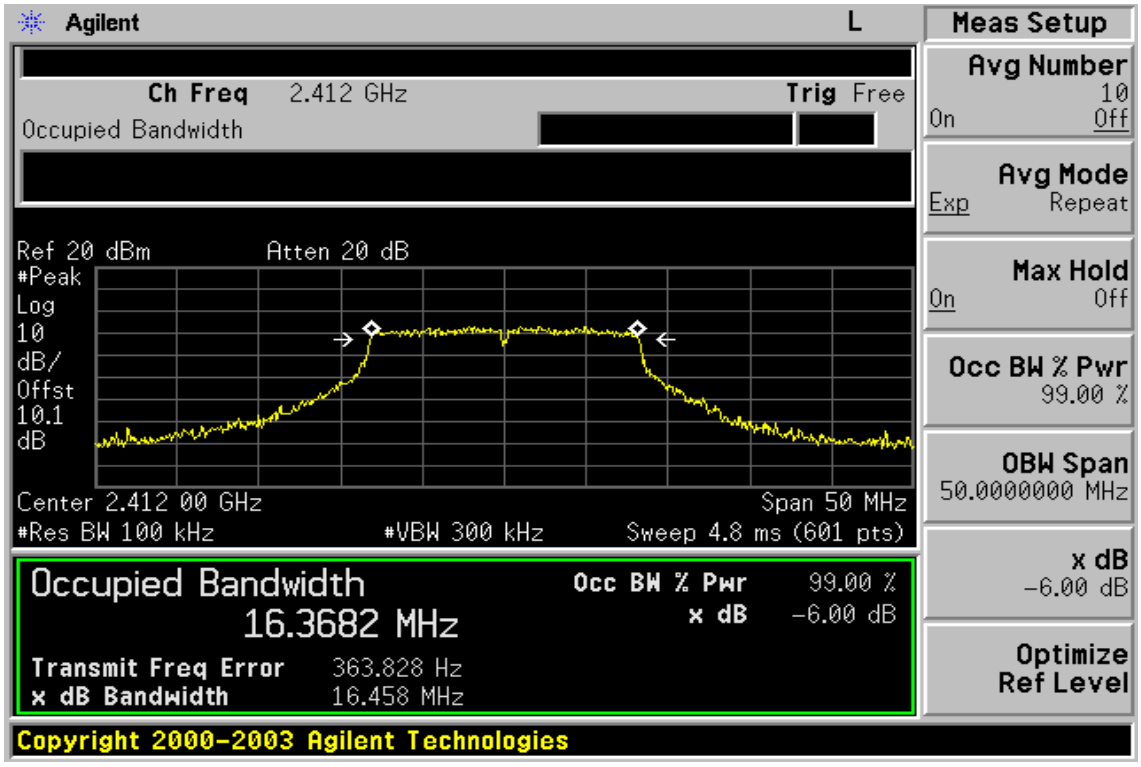
6dB Band Width Test Data CH-Mid, 802.11b, 1M mode (Left Antenna)



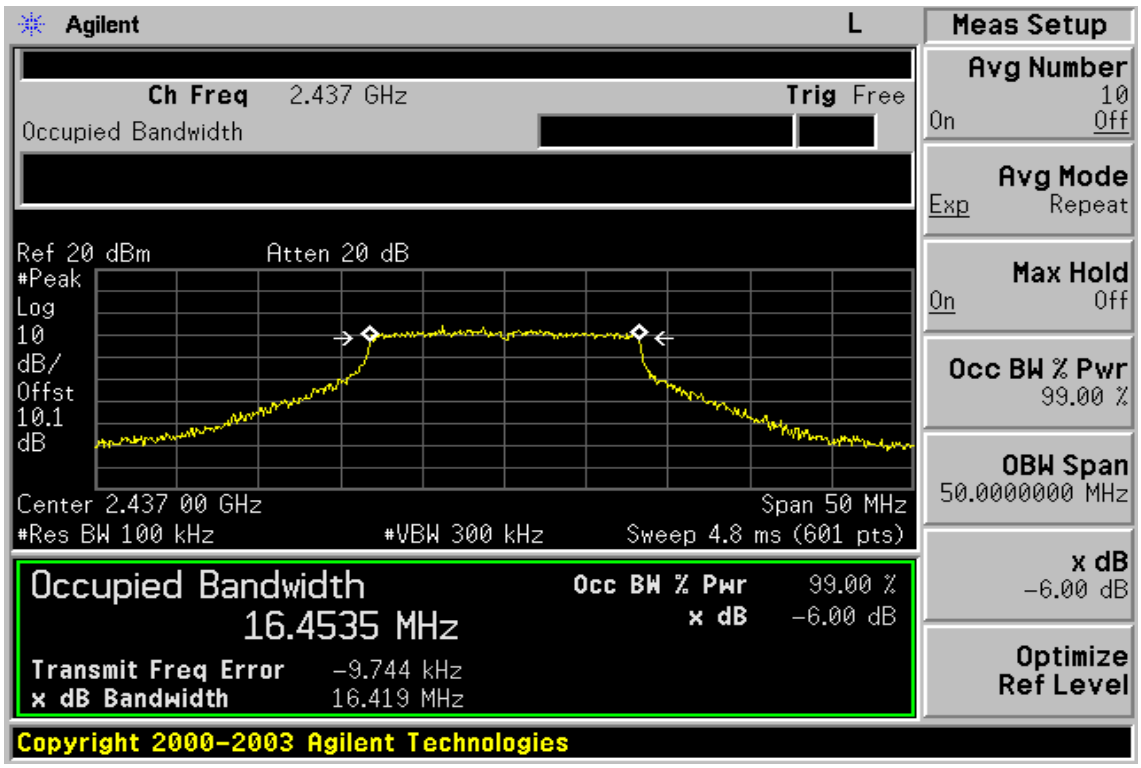
6dB Band Width Test Data CH-High, 802.11b, 1M mode (Left Antenna)



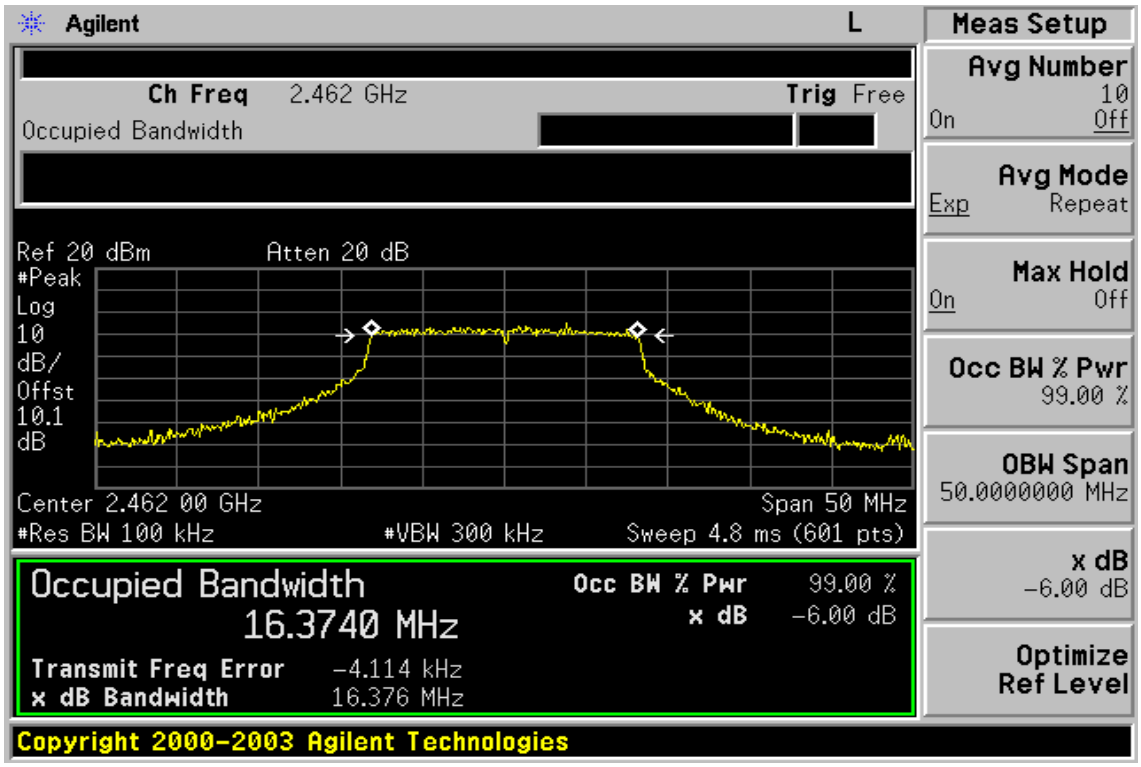
6dB Band Width Test Data CH-Low, 802.11g, 6M mode (Left Antenna)



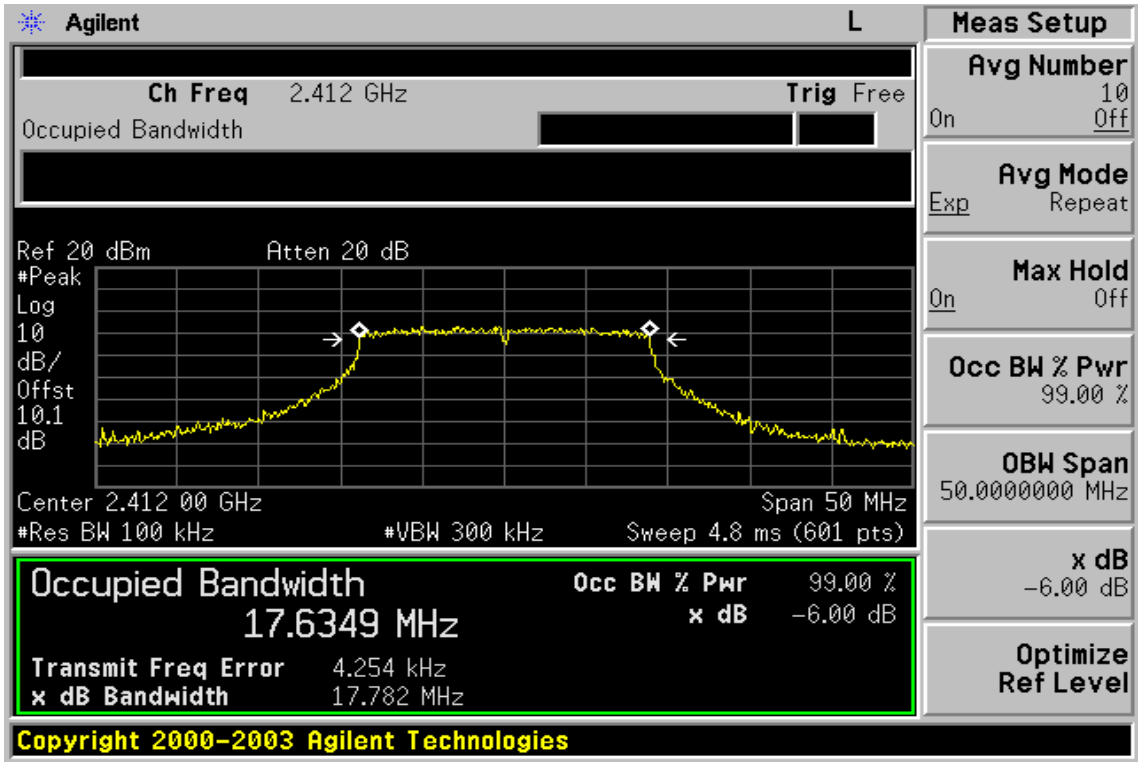
6dB Band Width Test Data CH-Mid, 802.11g, 6M mode (Left Antenna)



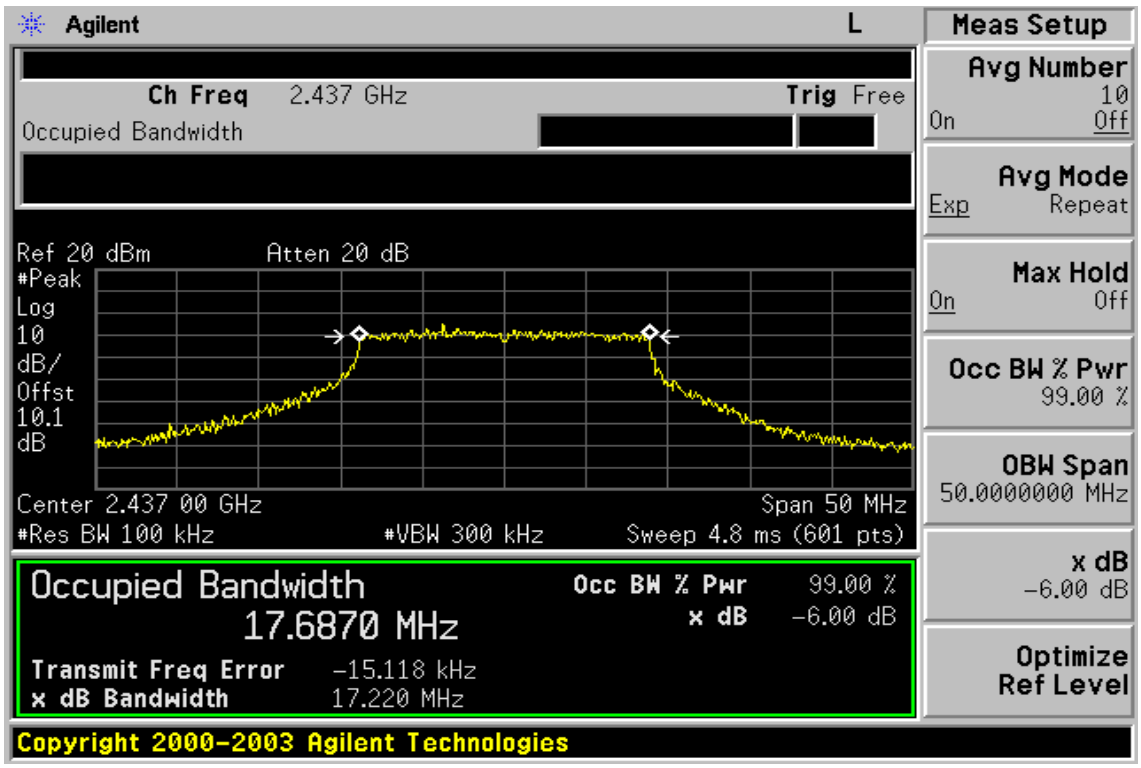
6dB Band Width Test Data CH-High, 802.11g, 6M mode (Left Antenna)



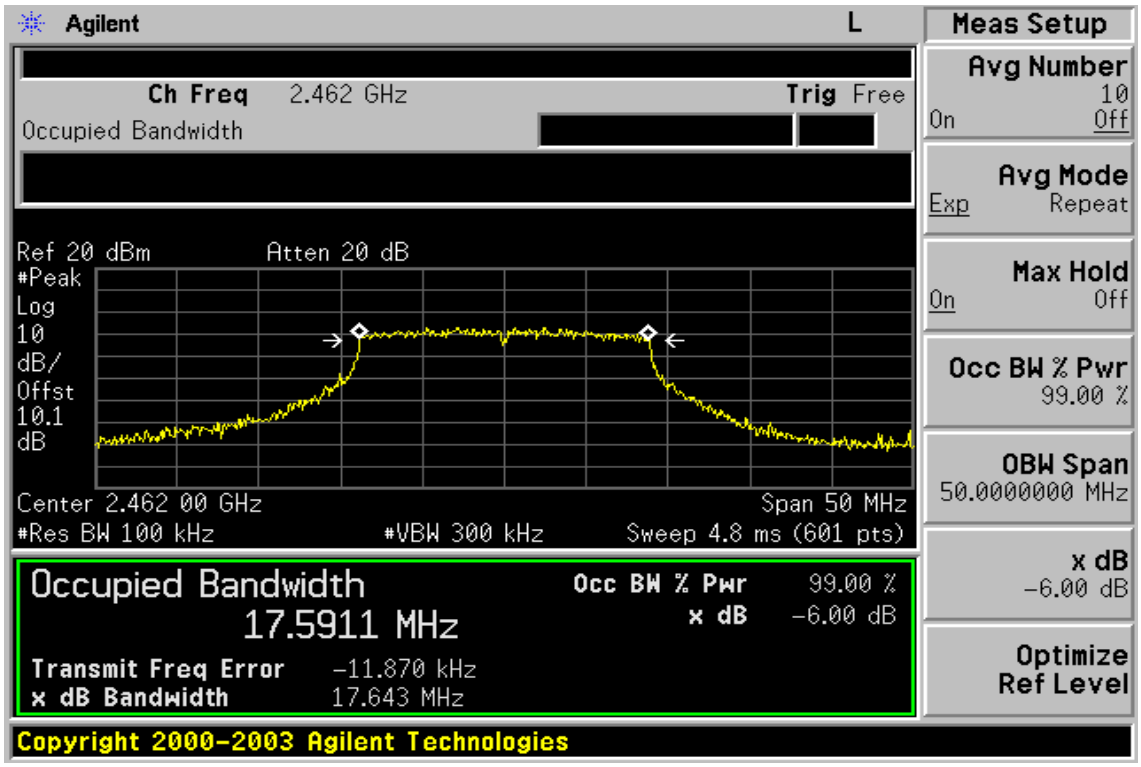
6dB Band Width Test Data CH-Low, 802.11n_20M, 6.5M mode (Left Antenna)



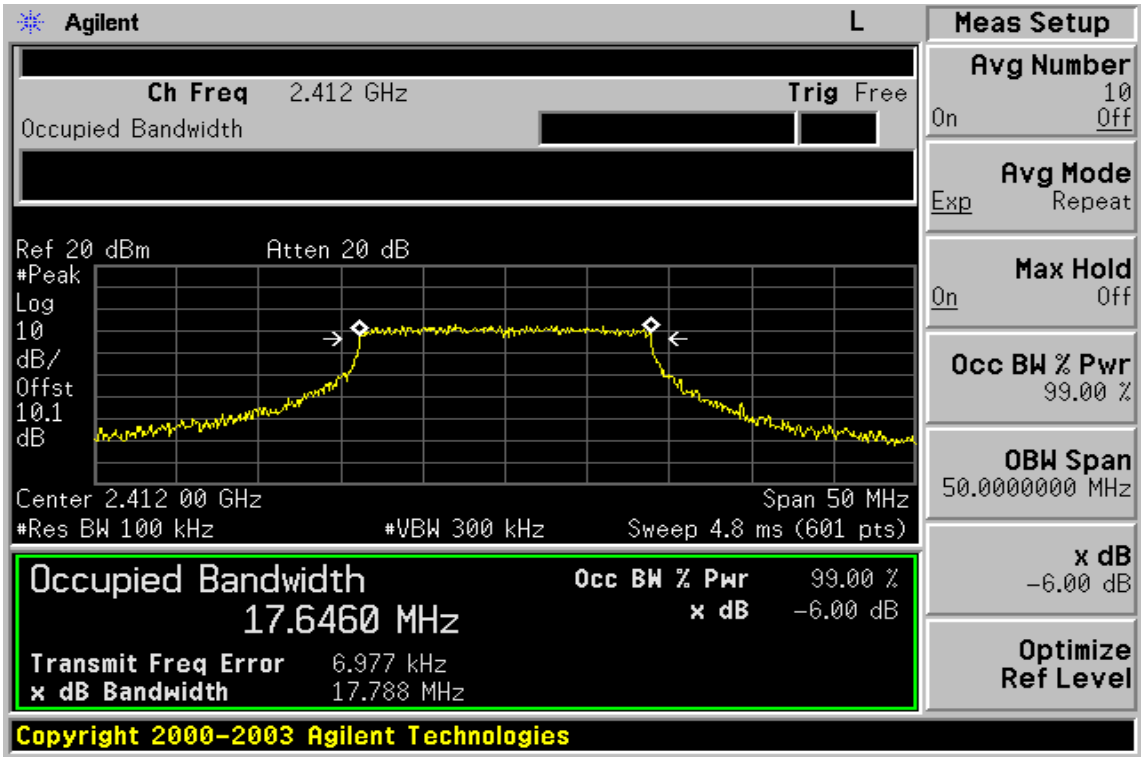
6dB Band Width Test Data CH-Mid, 802.11n_20M, 6.5M mode (Left Antenna)



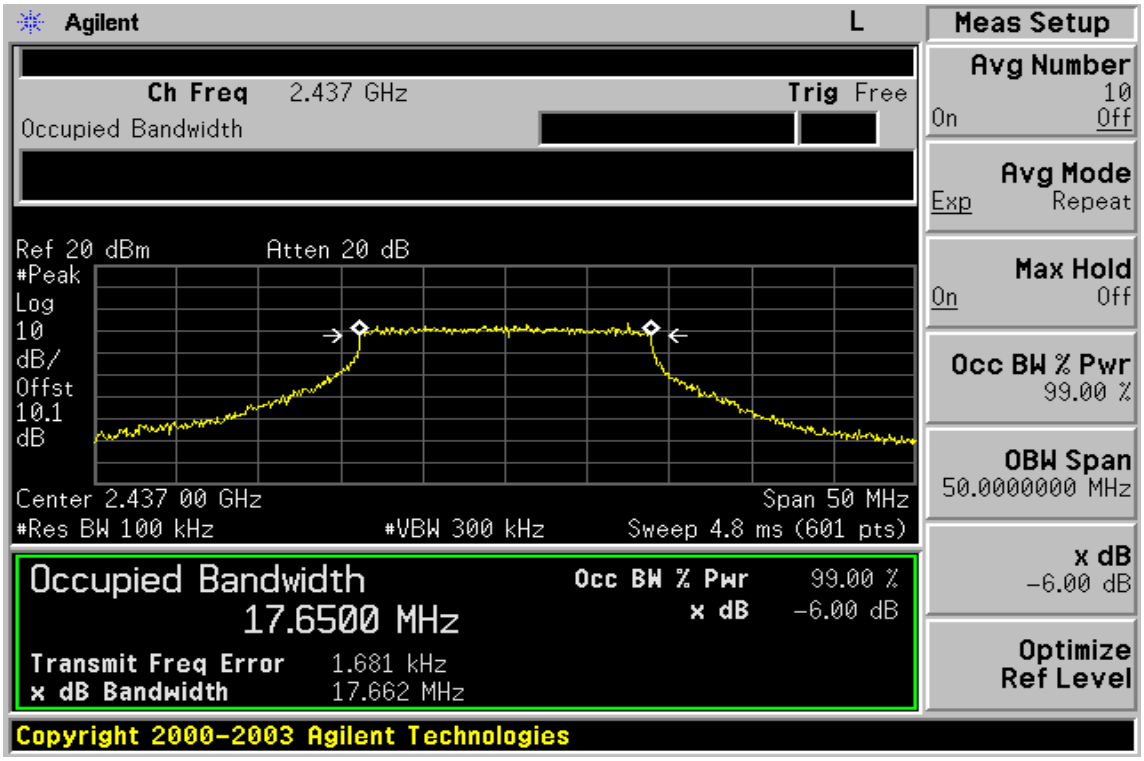
6dB Band Width Test Data CH-High, 802.11n_20M, 6.5M mode (Left Antenna)



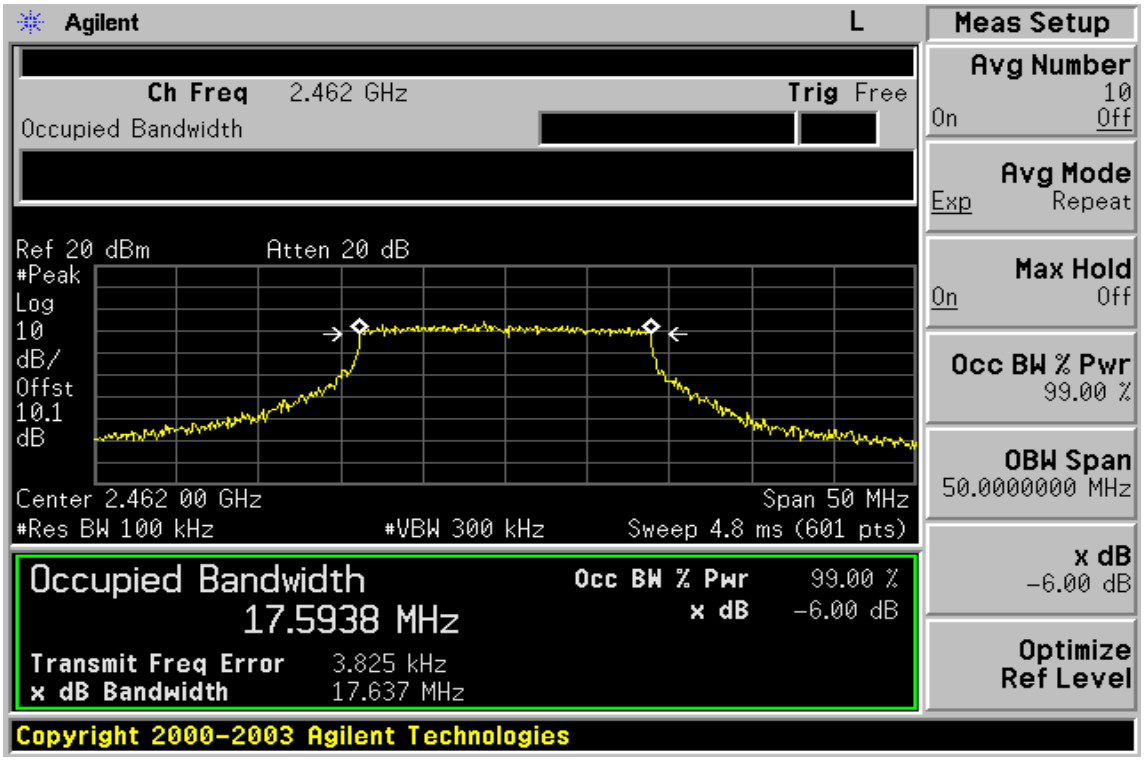
6dB Band Width Test Data CH-Low, 802.11n_20M, 6.5M mode (Right Antenna)



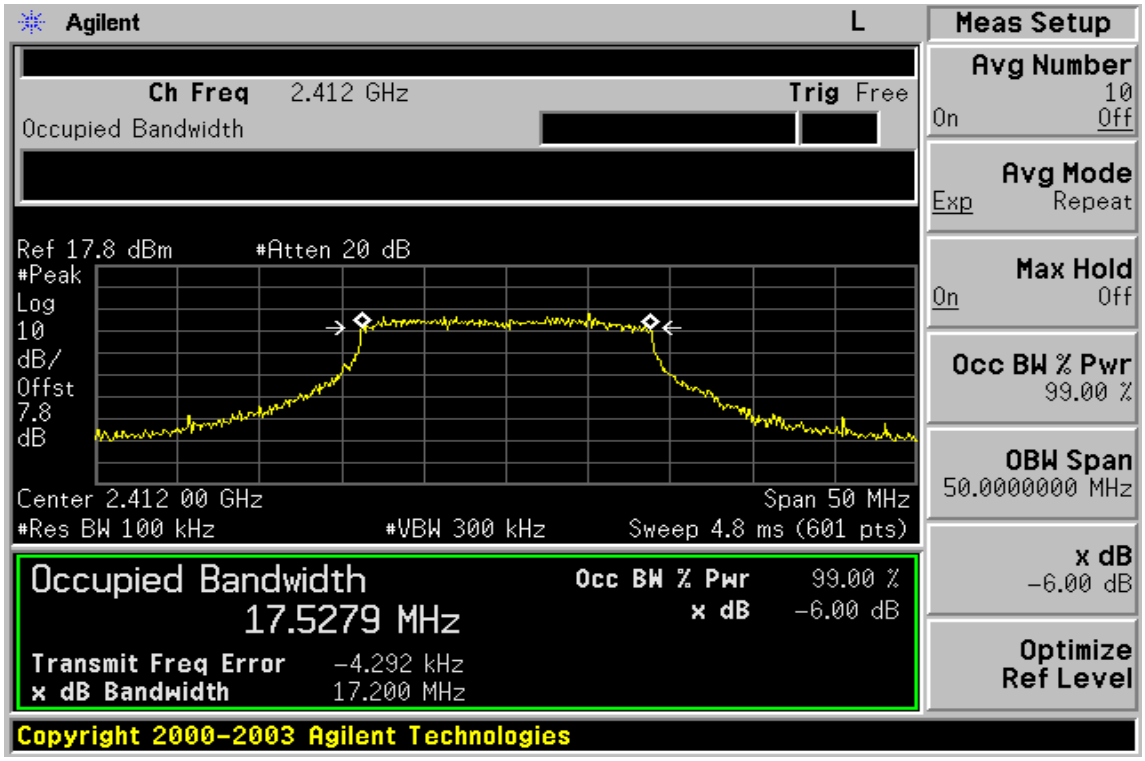
6dB Band Width Test Data CH-Mid, 802.11n_20M, 6.5M mode (Right Antenna)



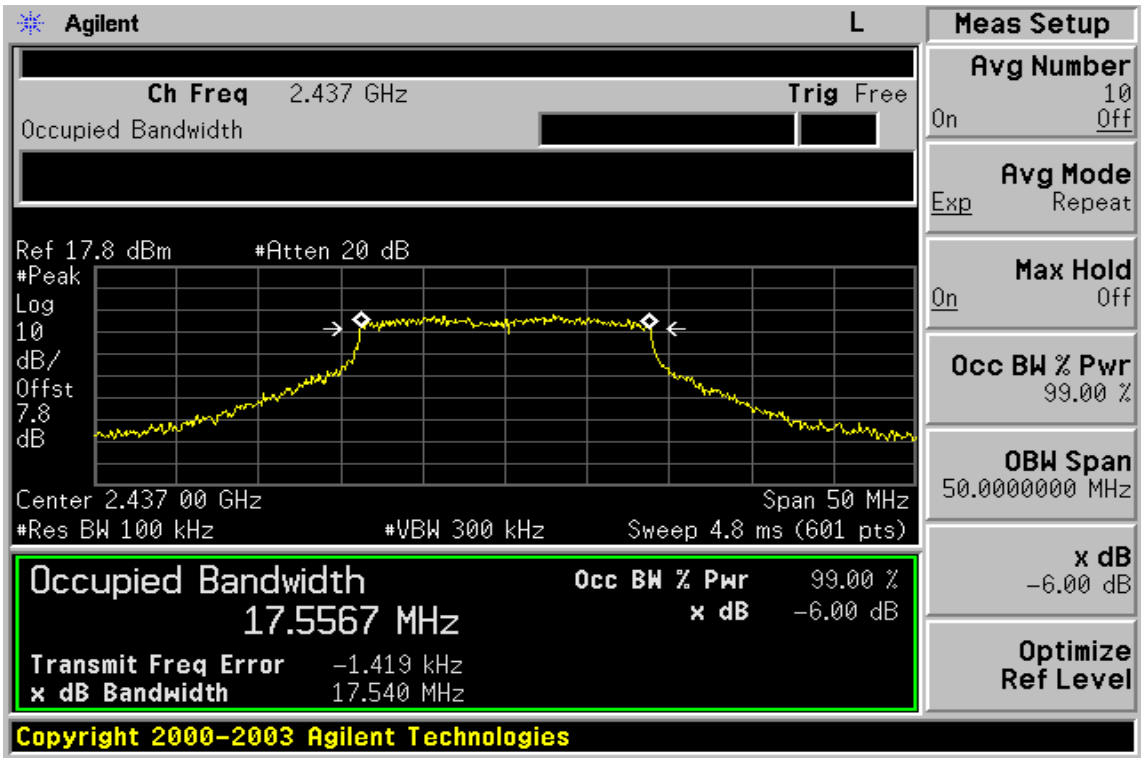
6dB Band Width Test Data CH-High, 802.11n_20M, 6.5M mode (Right Antenna)



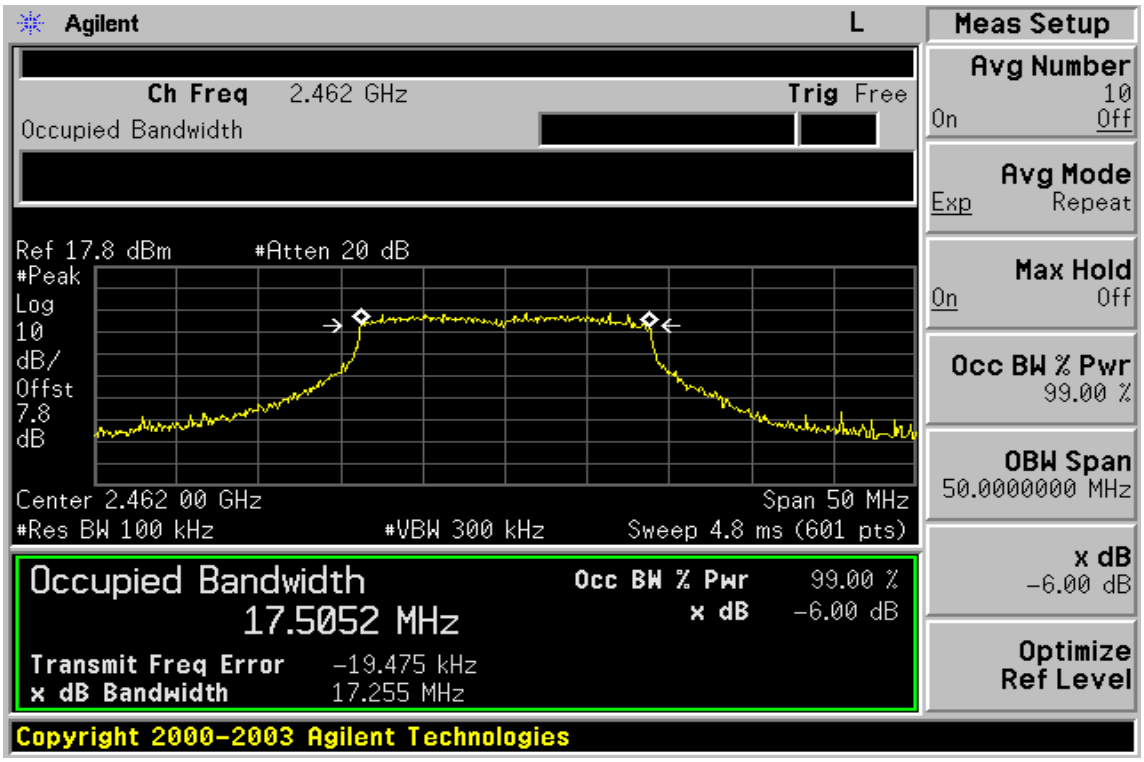
6dB Band Width Test Data CH-Low, 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



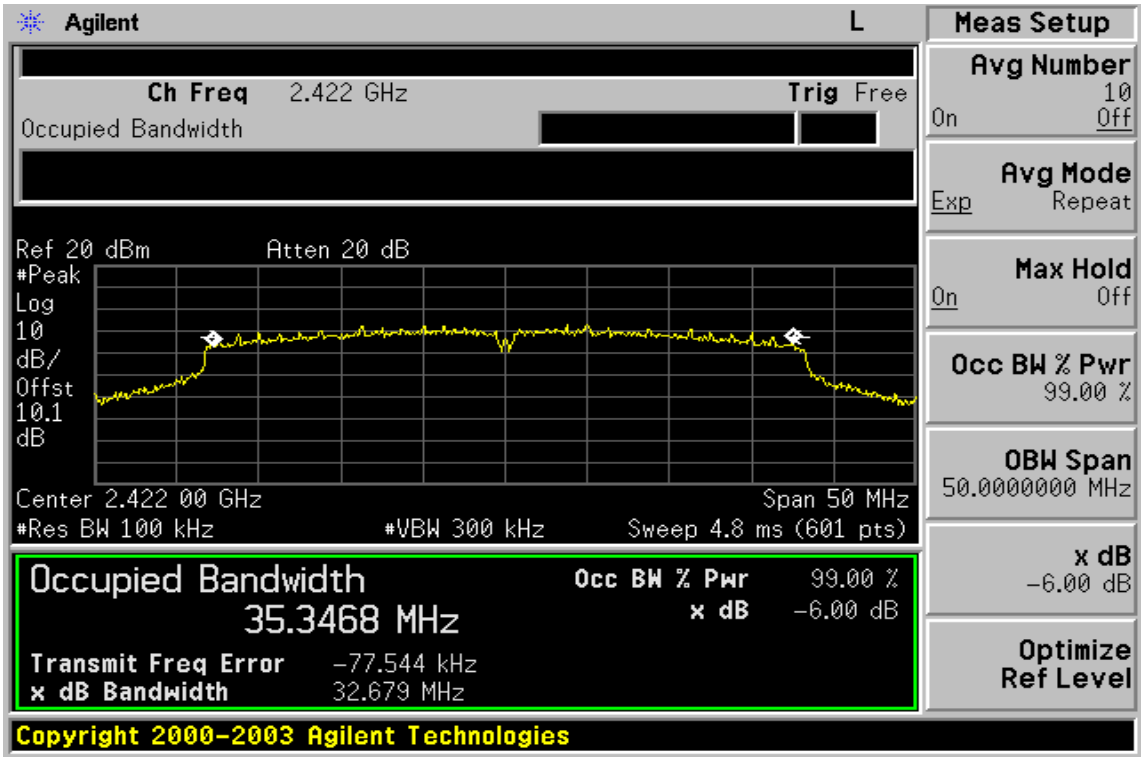
6dB Band Width Test Data CH-Mid, 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



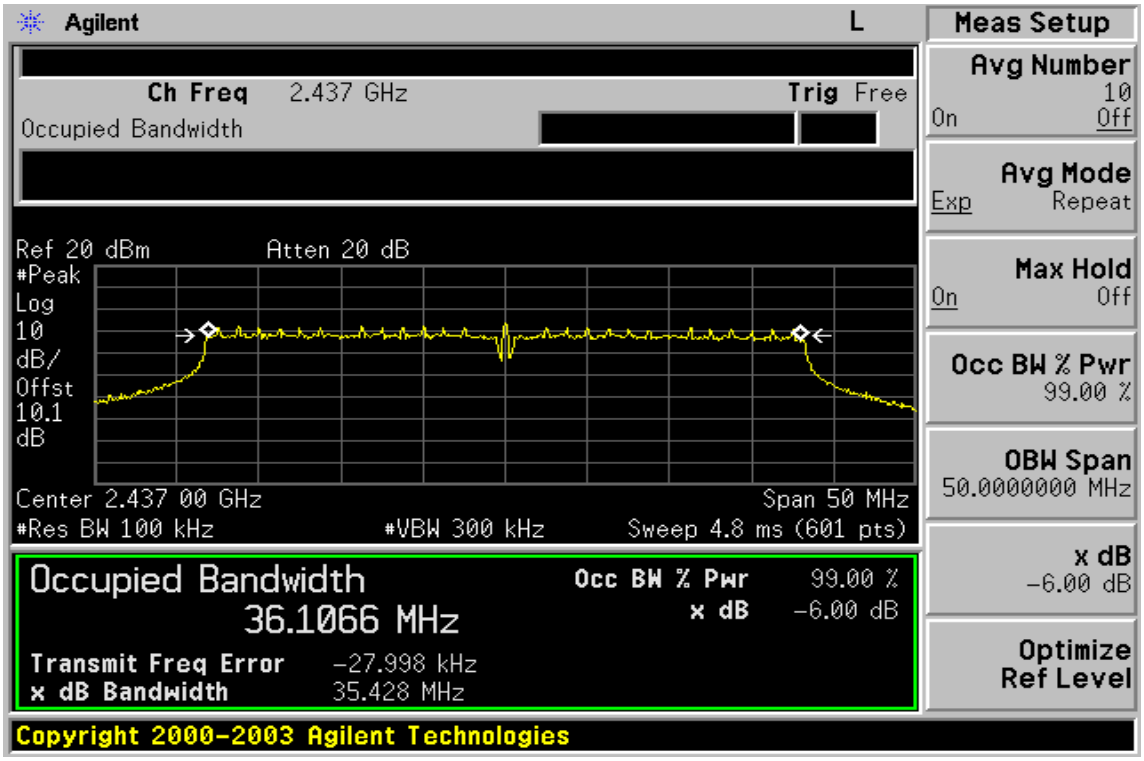
6dB Band Width Test Data CH-High, 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



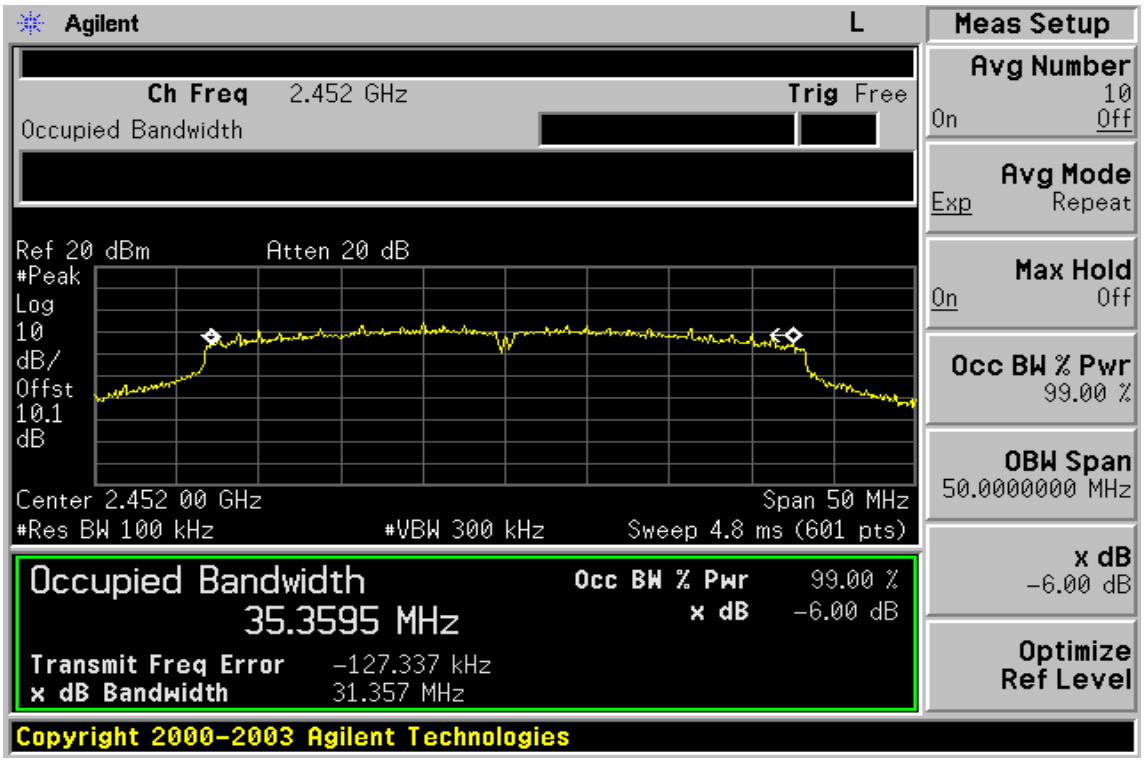
6dB Band Width Test Data CH-Low, 802.11n_40M, 13.5M mode (Left Antenna)



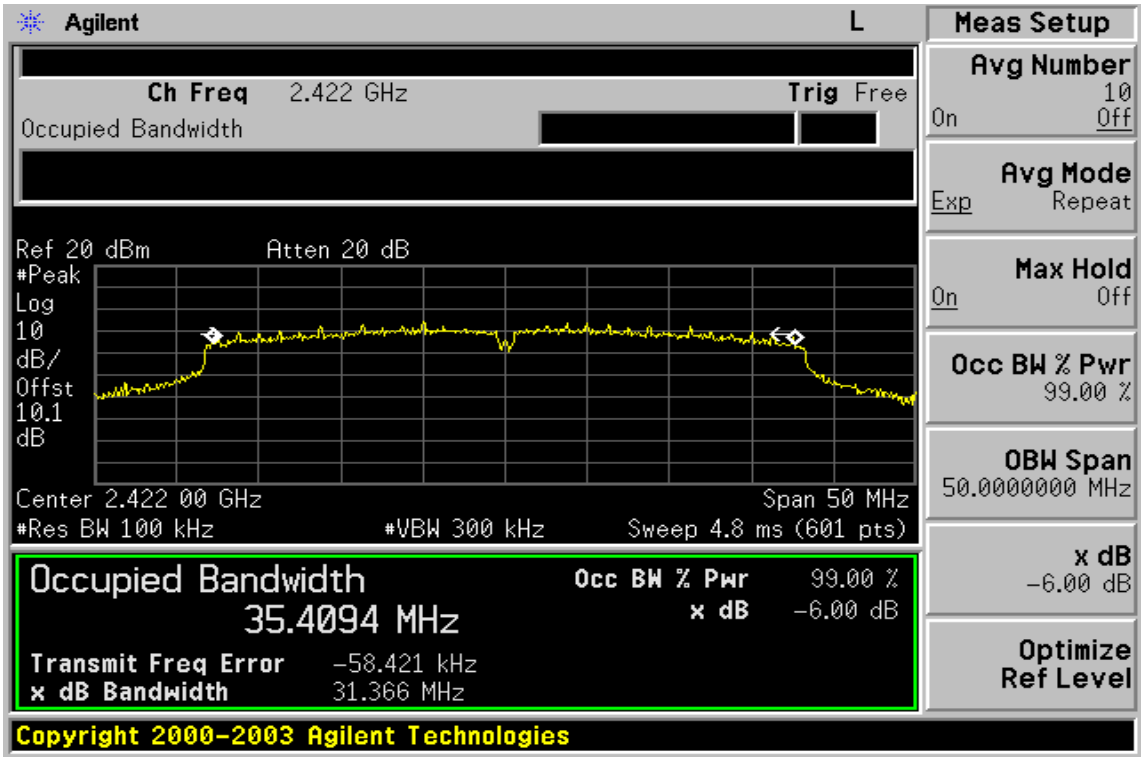
6dB Band Width Test Data CH-Mid, 802.11n_40M, 13.5M mode (Left Antenna)



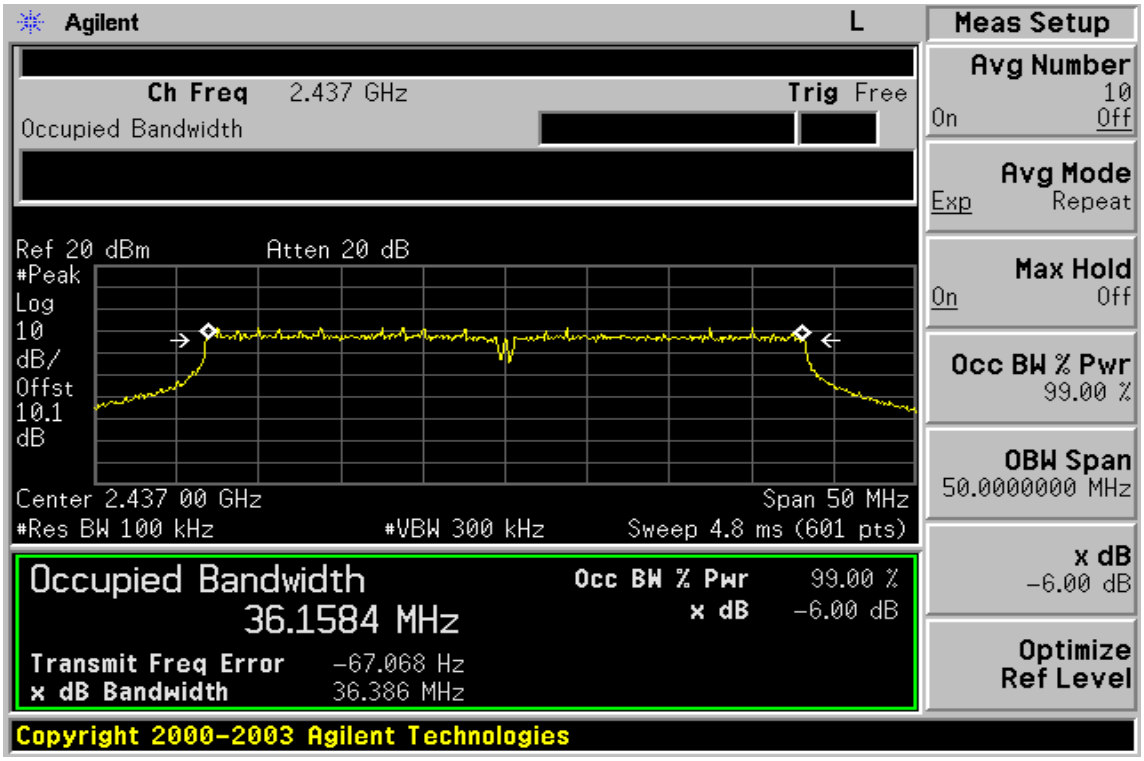
6dB Band Width Test Data CH-High, 802.11n_40M, 13.5M mode (Left Antenna)



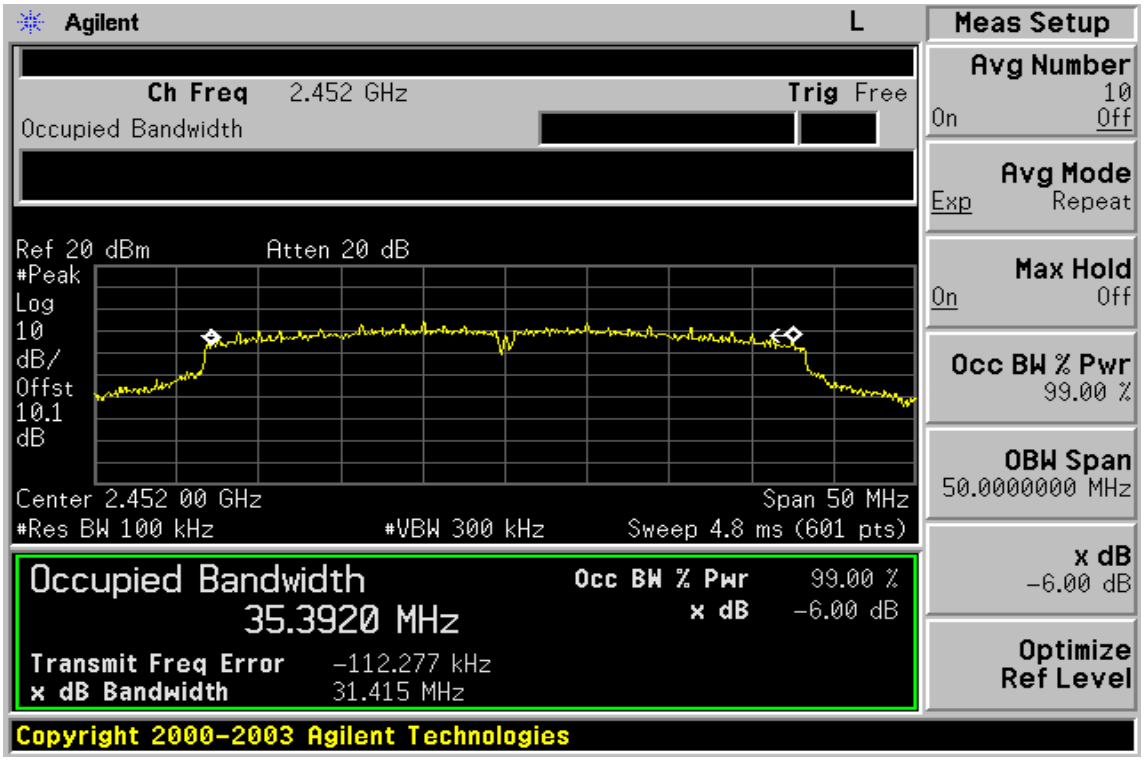
6dB Band Width Test Data CH-Low, 802.11n_40M, 13.5M mode (Right Antenna)



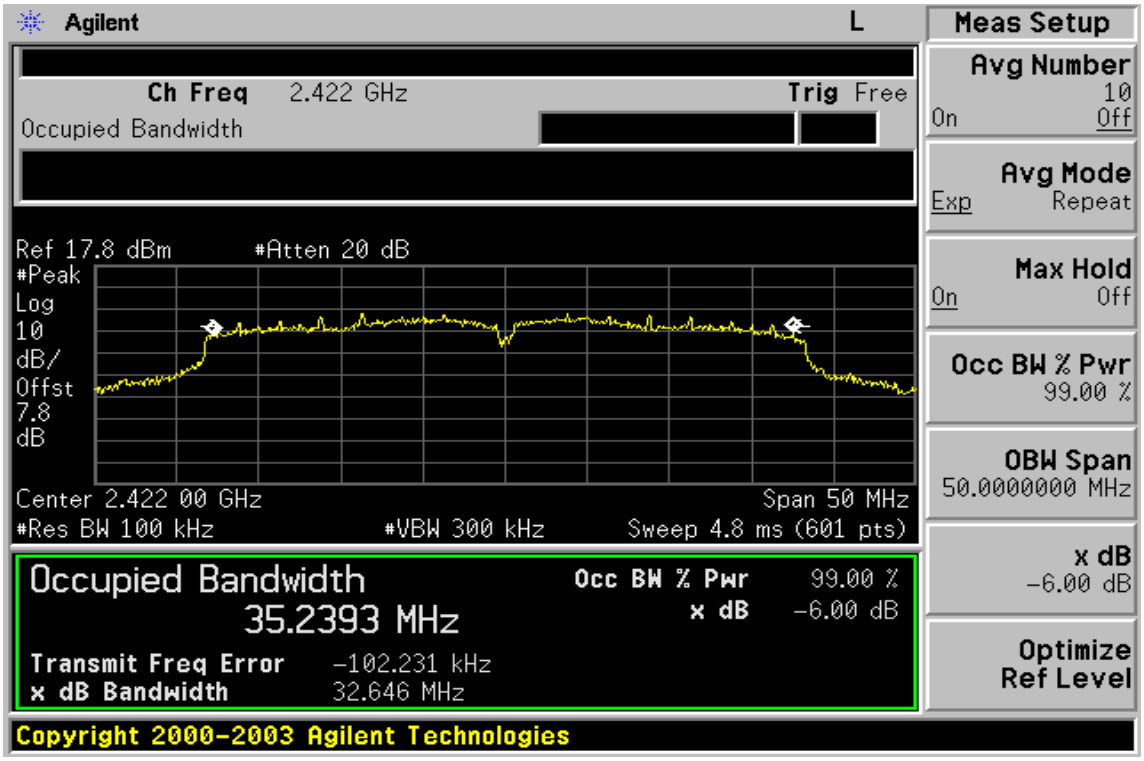
6dB Band Width Test Data CH-Mid, 802.11n_40M, 13.5M mode (Right Antenna)



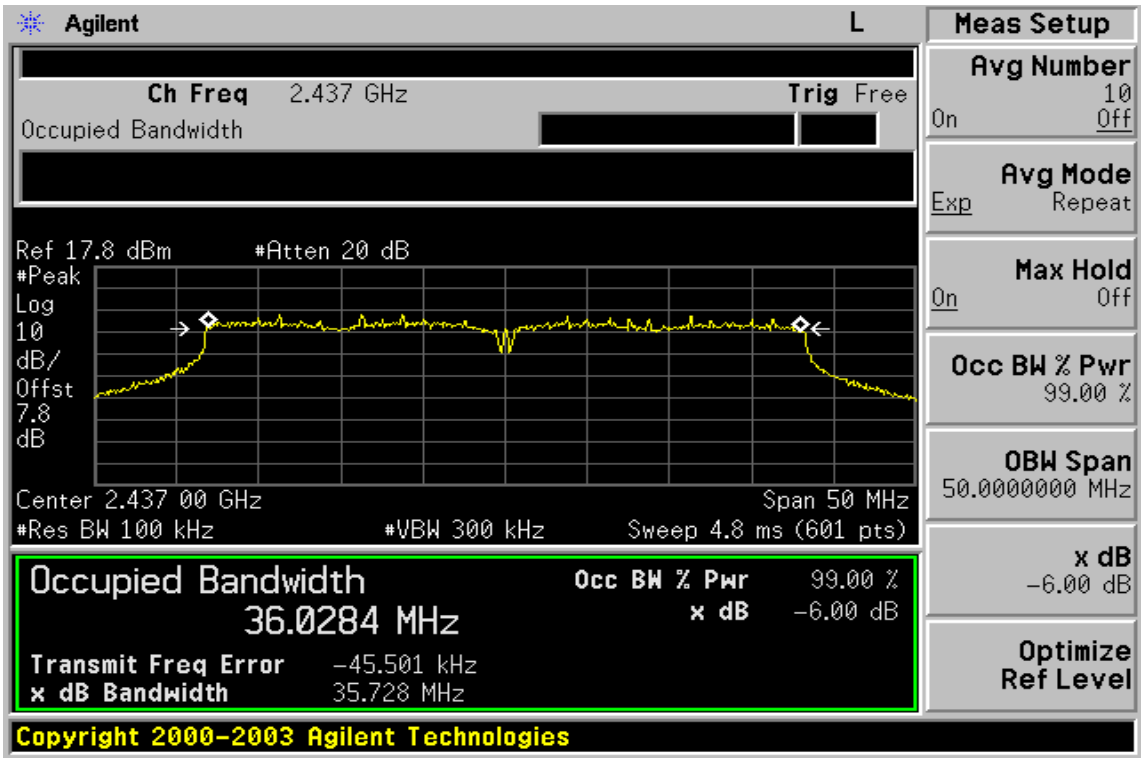
6dB Band Width Test Data CH-High, 802.11n_40M, 13.5M mode (Right Antenna)



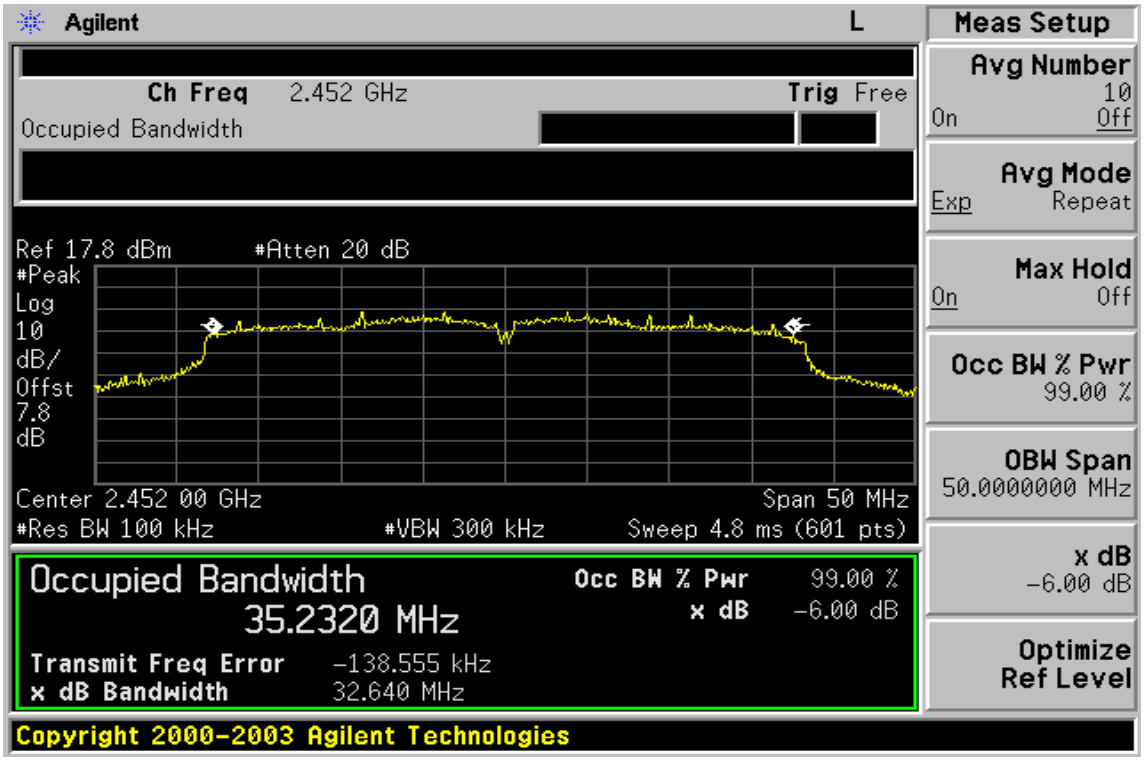
6dB Band Width Test Data CH-Low, 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



6dB Band Width Test Data CH-Mid, 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



6dB Band Width Test Data CH-High, 802.11n_40M, 13.5M mode (Left Antenna+ Right Antenna)



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).

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, VBW=100KHz, Span=30MHz, Sweep = auto
5. Mark Peak, 2.390GHz and 2.4835GHz and record the max. level.
6. Repeat above procedures until all frequency measured were complete.

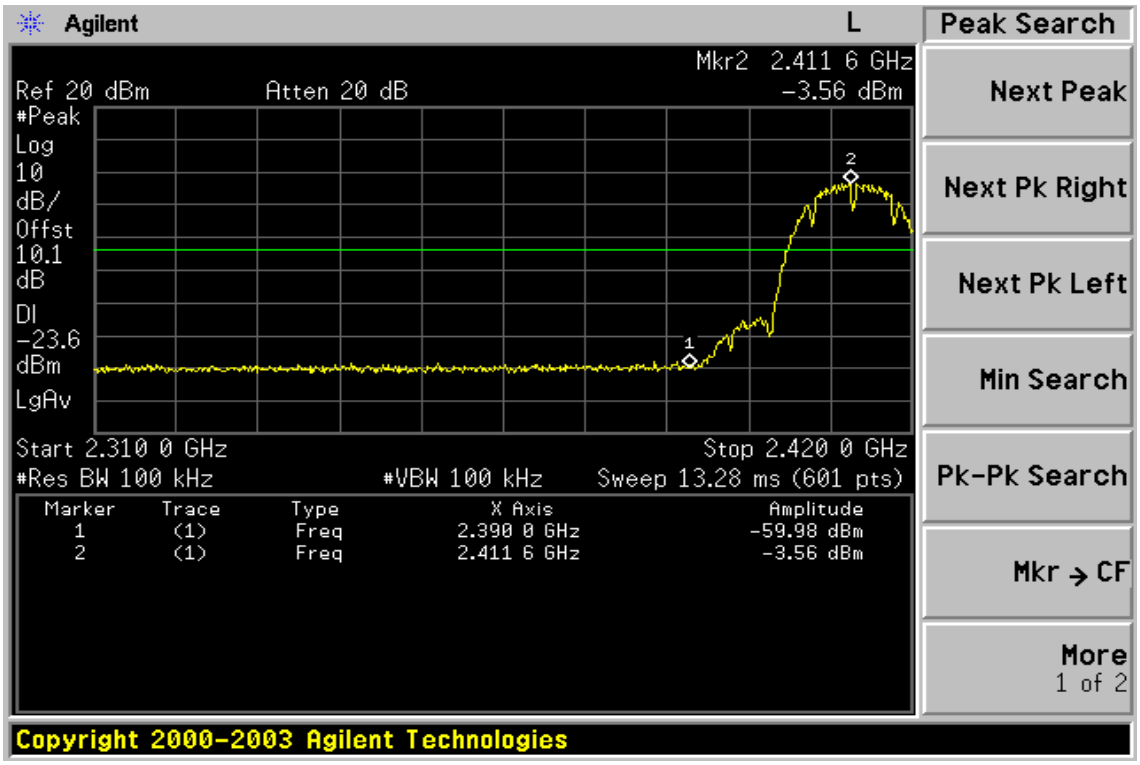
8.3. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/27/2007	04/27/2008
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2007	07/03/2008
Splitter	Agilent	11667B	N/A	09/23/2007	09/22/2008
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S6W5	N/A	01/05/2008	01/04/2009

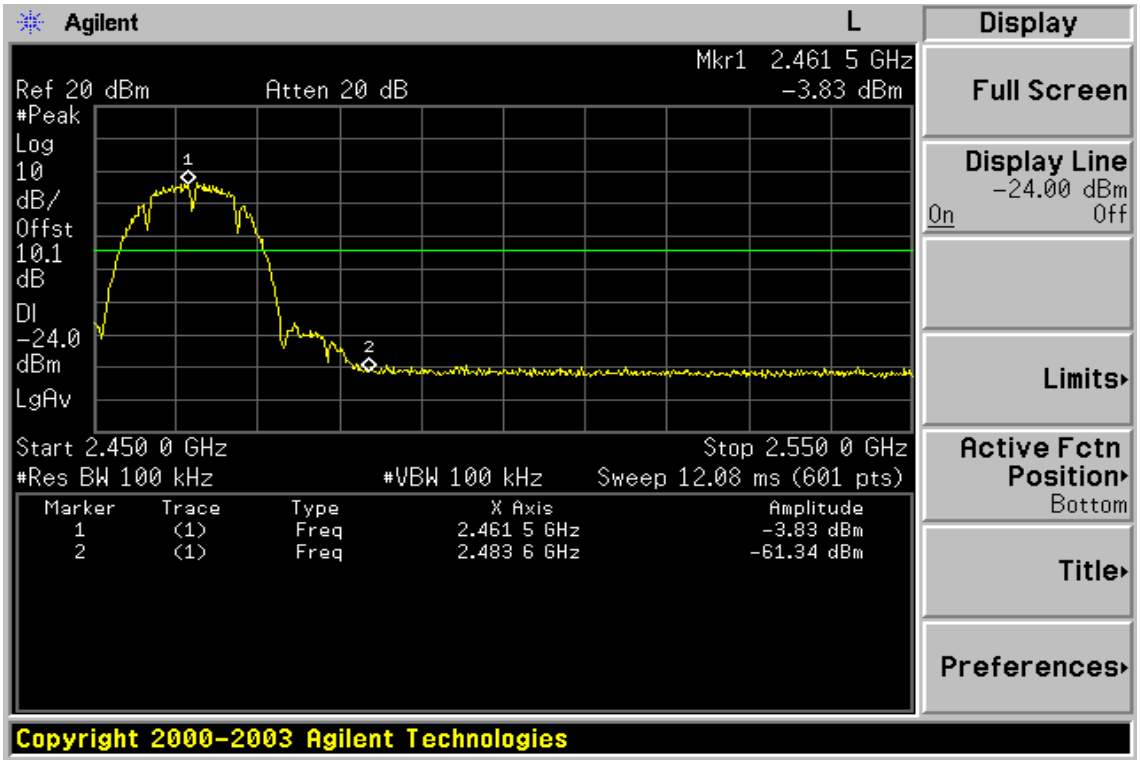
8.4. Measurement Result

Refer to attach spectrum analyzer data chart.

Band Edges Test Data CH-Low, 802.11b, 1M mode (Left Antenna)



Band Edges Test Data CH-High, 802.11b,1M mode (Left Antenna)



Radiated Emission: The Worst Mode

Operation Mode	TX CH Low 802.11b mode 1M	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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
2390.00	34.73	---	-1.39	33.34	---	74.00	54.00	-20.66	Peak

Operation Mode	TX CH Low 802.11b mode 1M	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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	36.37	---	-1.39	34.98	---	74.00	54.00	-19.02	Peak

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB 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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

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

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

Radiated Emission: The Worst Mode

Operation Mode	TX CH High 802.11b mode 1M	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	34.14	---	-0.92	33.22	---	74.00	54.00	-20.78	Peak

Operation Mode	TX CH High 802.11b mode 1M	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	34.53	---	-0.92	33.61	---	74.00	54.00	-20.39	Peak

Remark：

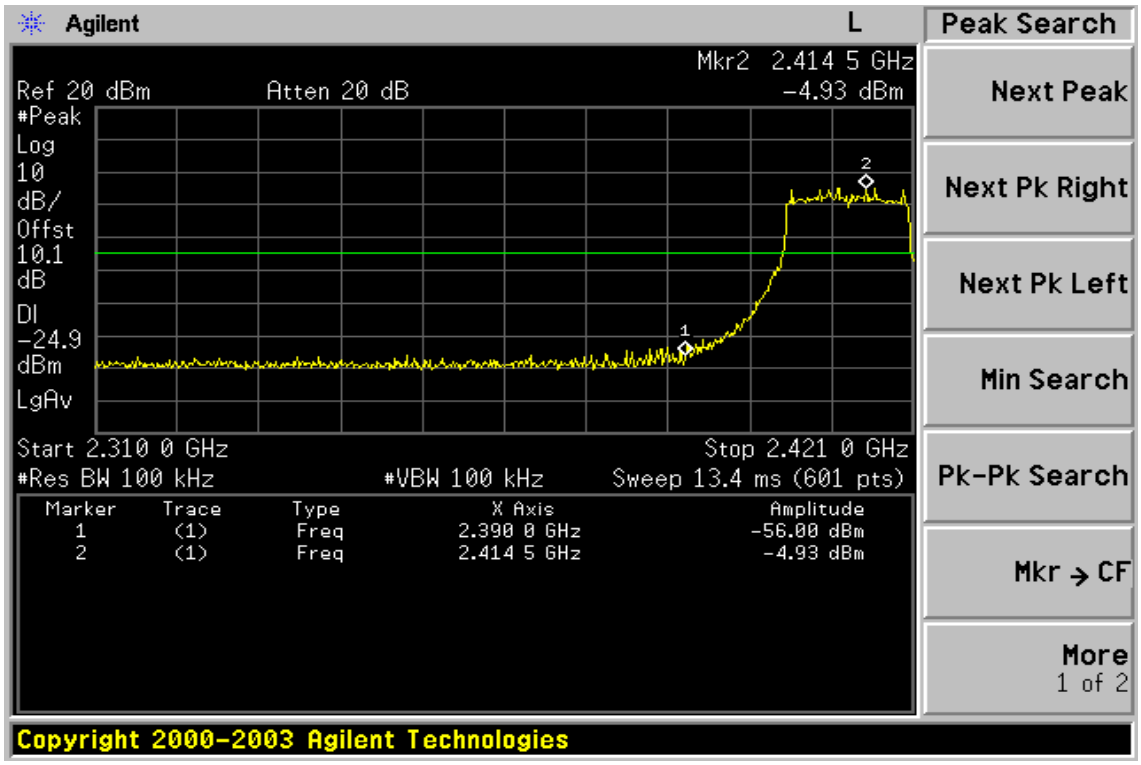
(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB below the permissible limits or the field strength is too small to be measured.

(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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

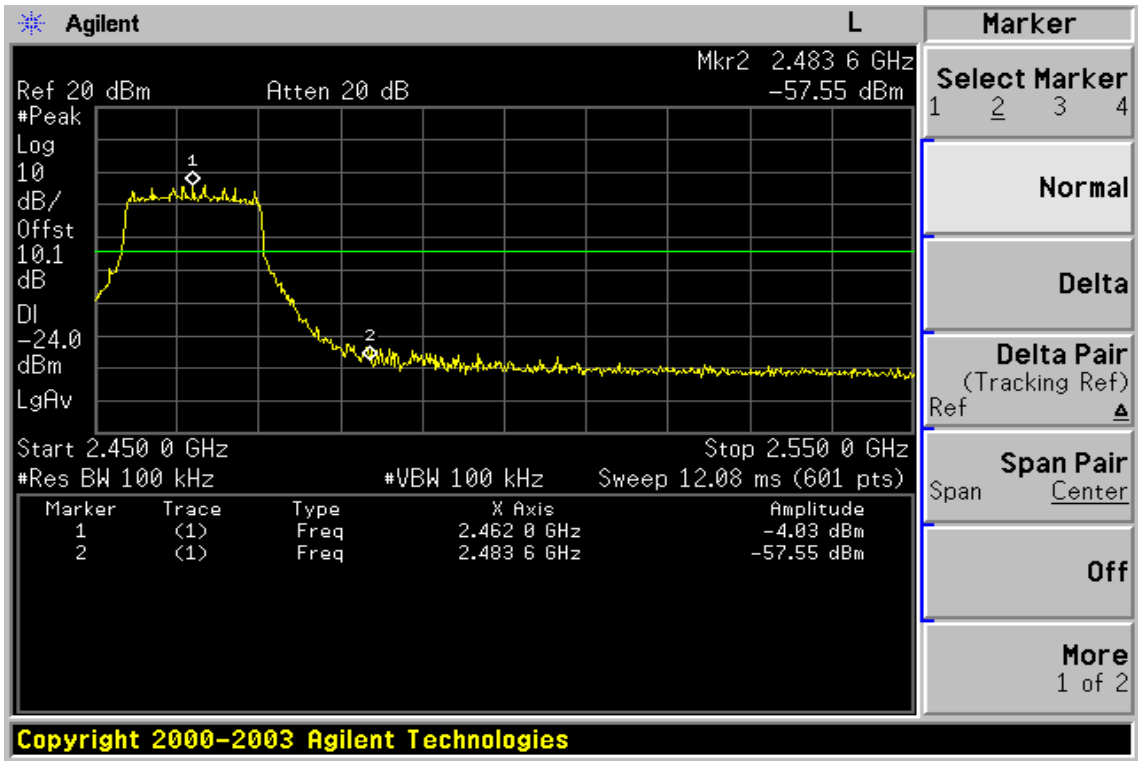
(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

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

Band Edges Test Data CH-Low, 802.11g, 6M mode (Left Antenna)



Band Edges Test Data CH-High, 802.11g, 6M mode (Left Antenna)



Radiated Emission: The Worst Mode

Operation Mode	TX CH Low 802.11g mode 6M	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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
2390.00	35.82	---	-1.39	34.43	---	74.00	54.00	-19.57	Peak

Operation Mode	TX CH Low 802.11g mode 6M	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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	39.93	---	-1.39	38.54	---	74.00	54.00	-15.46	Peak

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB 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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

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

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

Radiated Emission: The Worst Mode

Operation Mode	TX CH High 802.11g mode 6M	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	34.93	---	-0.92	34.01	---	74.00	54.00	-19.99	Peak

Operation Mode	TX CH High 802.11g mode 6M	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	38.13	---	-0.92	37.21	---	74.00	54.00	-16.79	Peak

Remark：

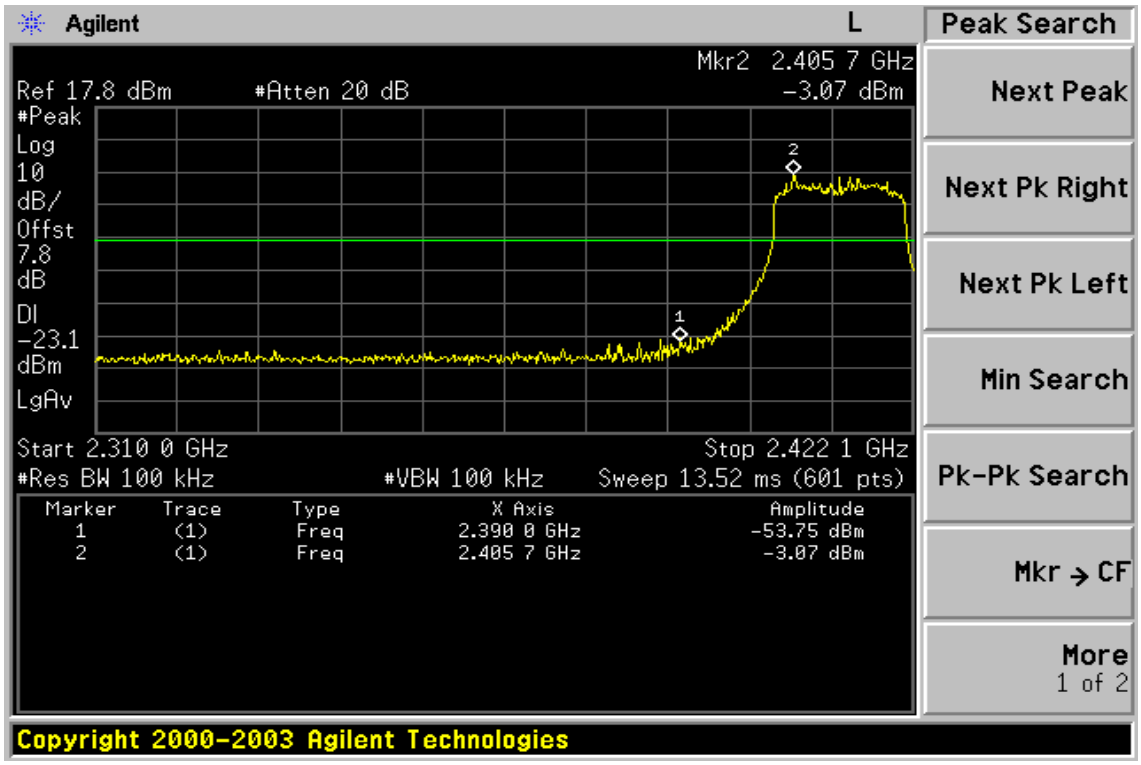
(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB below the permissible limits or the field strength is too small to be measured.

(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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

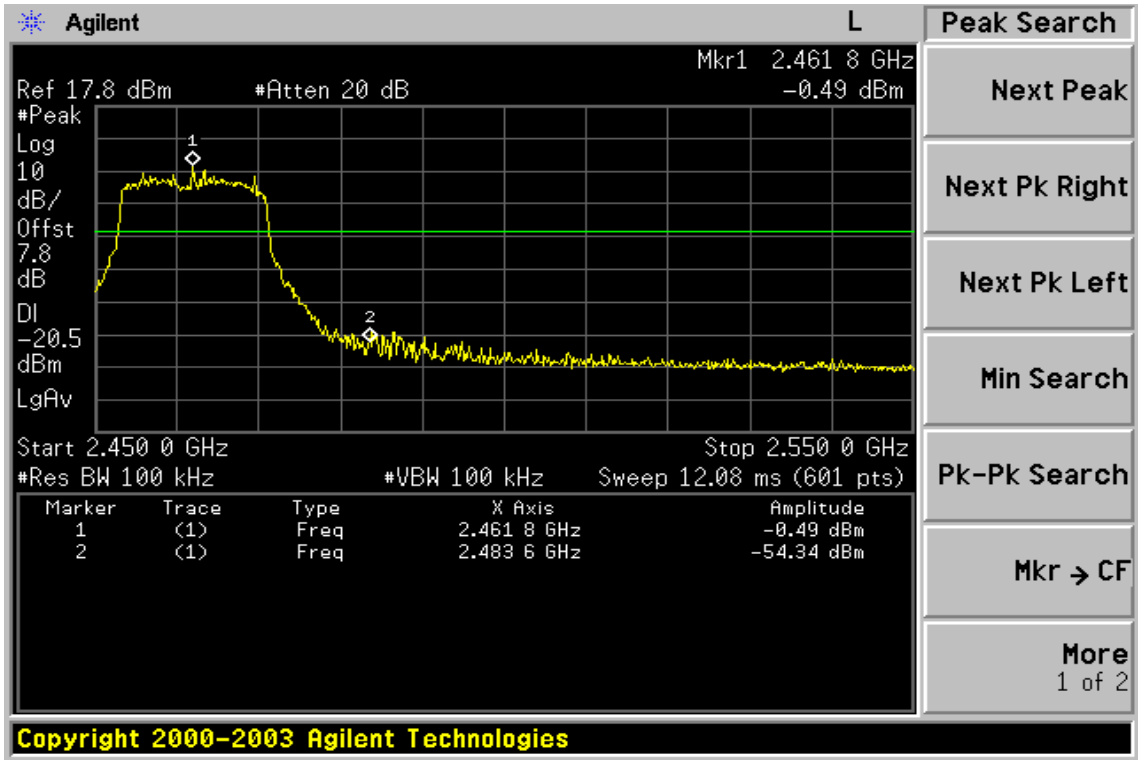
(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

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

Band Edges Test Data CH-Low, 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



Band Edges Test Data CH-High, 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)



Radiated Emission: The Worst Mode

Operation Mode	TX CH Low 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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
2390.00	35.52	---	-1.39	34.13	---	74.00	54.00	-19.87	Peak

Operation Mode	TX CH Low 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2412 MHz	Test By	Jason
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	38.06	---	-1.39	36.67	---	74.00	54.00	-17.33	Peak

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB 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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

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

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

Radiated Emission: The worst mode

Operation Mode	TX CH Low 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	34.23	---	-0.92	33.31	---	74.00	54.00	-20.69	Peak

Operation Mode	TX CH Low 802.11n_20M, 6.5M mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2462 MHz	Test By	Jason
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	36.38	---	-0.92	35.46	---	74.00	54.00	-18.54	Peak

Remark：

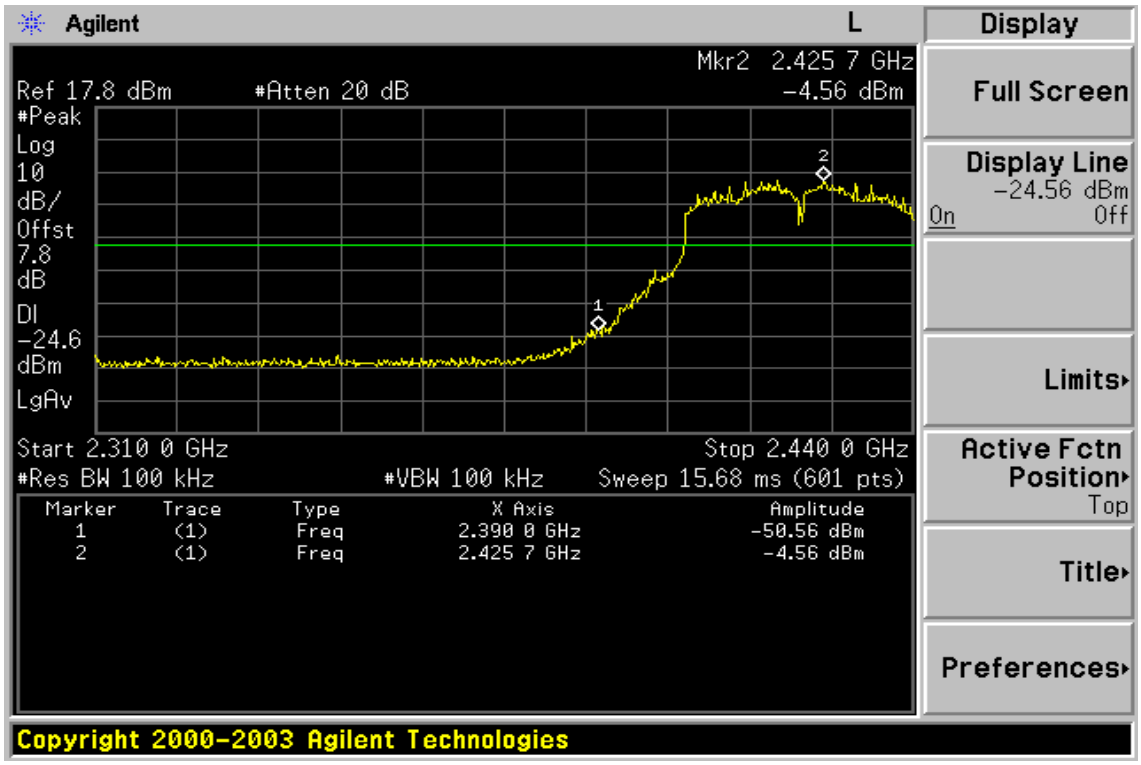
(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB below the permissible limits or the field strength is too small to be measured.

(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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

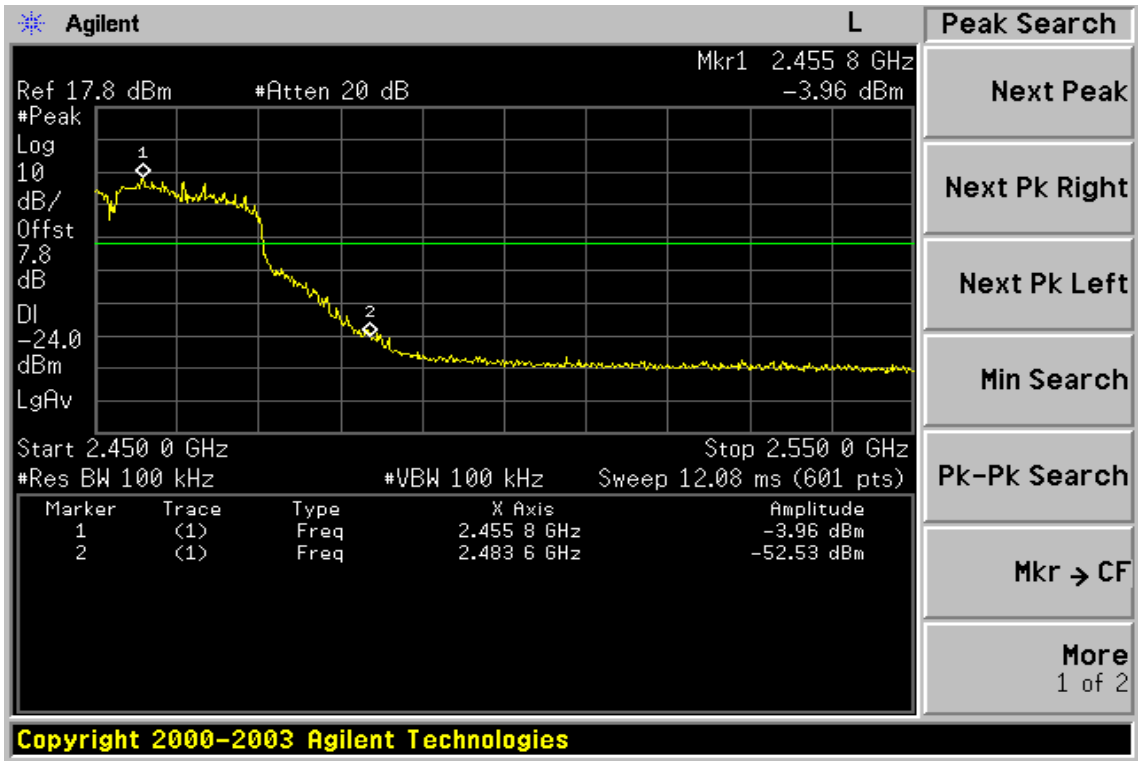
(3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.

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

Band Edges Test Data CH-Low, 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



Band Edges Test Data CH-High, 802.11n_40M, 13.5M mode (Left Antenna + Right Antenna)



Radiated Emission: The worst mode

Operation Mode	TX CH Low 802.11n_40M, 13.5M Mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2422 MHz	Test By	Jason
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
2390.00	35.64	---	-1.39	34.25	---	74.00	54.00	-19.75	Peak

Operation Mode	TX CH Low 802.11n_40M, 13.5M Mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2422 MHz	Test By	Jason
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	37.99	---	-1.39	36.60	---	74.00	54.00	-17.40	Peak

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB 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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

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

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

Radiated Emission:

Operation Mode	TX CH Low 802.11n_40M, 13.5M Mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2452 MHz	Test By	Jason
Temperature	25℃	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	34.75	---	-0.92	33.83	---	74.00	54.00	-20.17	Peak

Operation Mode	TX CH Low 802.11n_40M, 13.5M Mode (Left Antenna + Right Antenna)	Test Date	Jan. 21, 2008
Fundamental Frequency	2452 MHz	Test By	Jason
Temperature	25 ℃	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
2483.56	36.69	---	-0.92	35.77	---	74.00	54.00	-18.23	Peak

Remark：

(1) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 6dB 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。 When measured Peak value is under AV Limit, It doesn't need to measure AV value again.

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

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

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.

9.2. EUT Setup

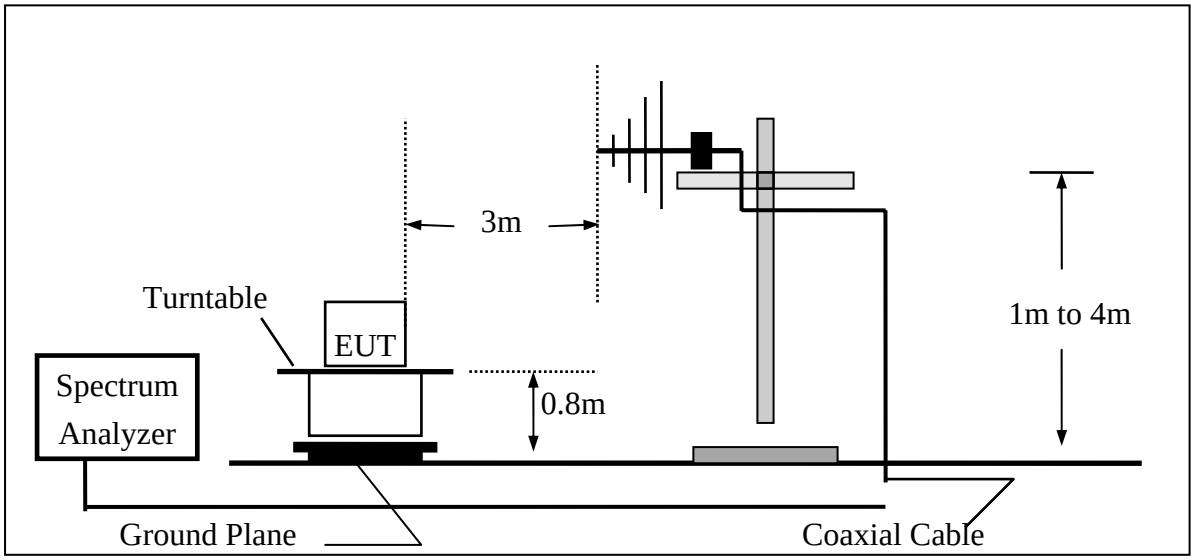
1. The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was put in the front of the test table. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The spacing between the peripherals 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

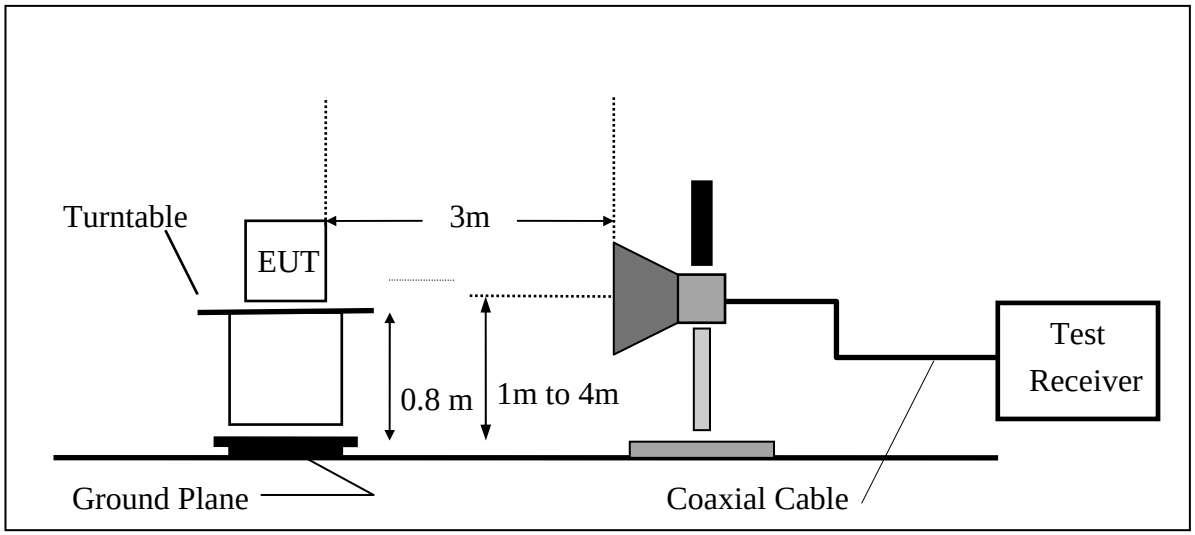
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until all frequency measured were complete.

9.4. 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



9.5. Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	04/27/2007	04/27/2008
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2007	07/03/2008
Bi-log Antenna	SCHWAZBECK	VULB9160	3224	11/14/2007	11/13/2008
Horn antenna	SCHWAZBECK	BBHA 9120D	309/320	12/14/2007	12/13/2008
Horn antenna	SCHWAZBECK	BBHA 9170	184/185	12/13/2007	12/12/2008
Pre-Amplifier	HP	8447D	2944A09469	07/19/2007	07/18/2008
Pre-Amplifier	HP	8494B	3008A00578	02/26/2007	02/25/2008
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	10/09/2007	10/08/2008
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	10/09/2007	10/08/2008
Site NSA	SGS	966 chamber	N/A	11/17/2007	11/16/2008

9.6. 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

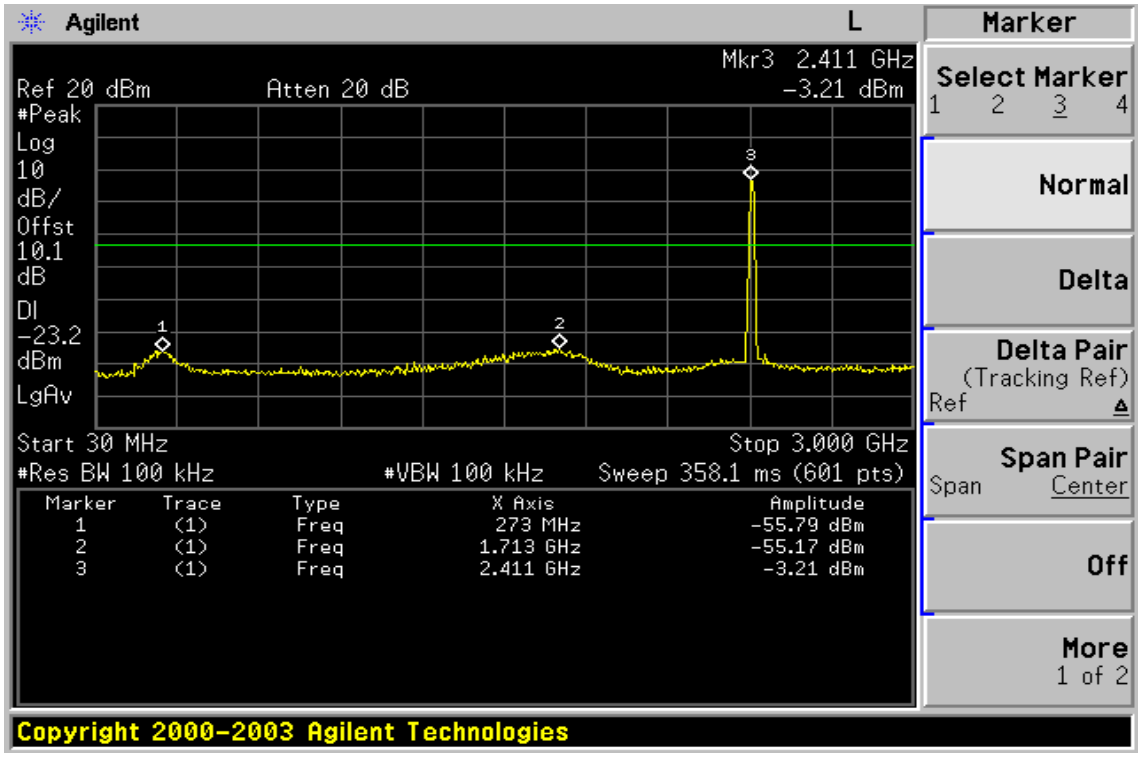
Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

9.7. Measurement Result

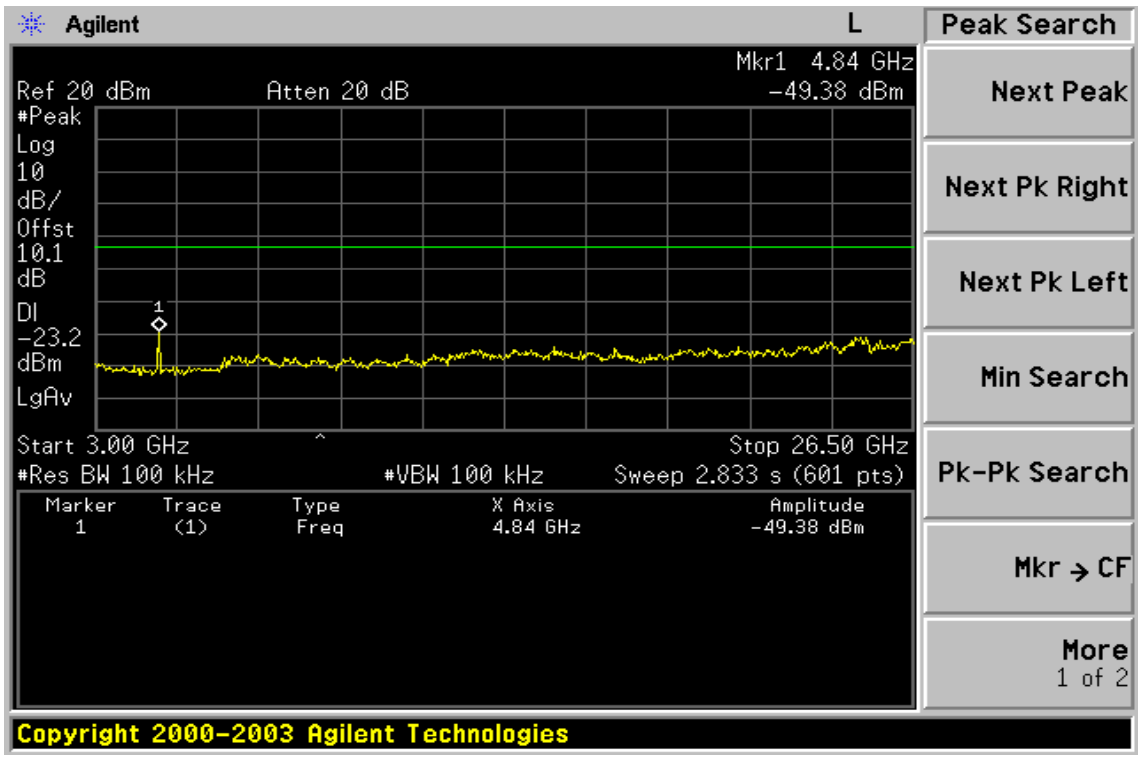
Refer to attach tabular data sheets.

Conducted Spurious Emission Measurement Result (802.11b), 1M (Left Antenna)

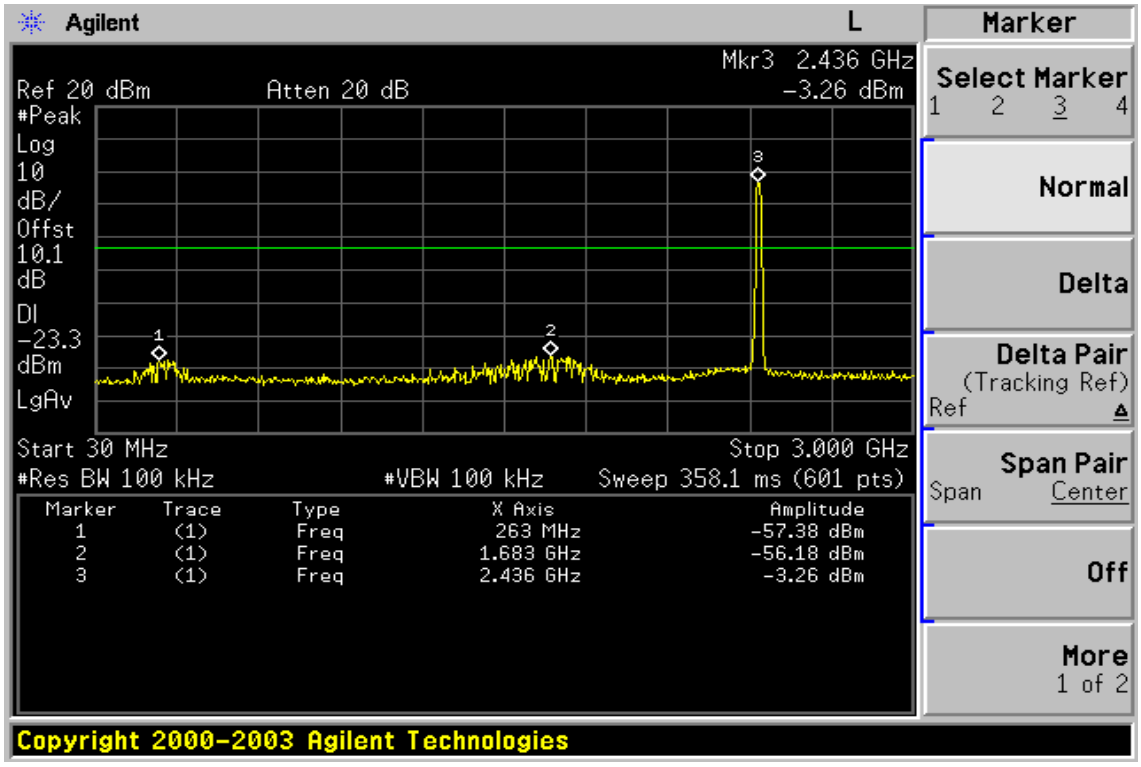
Ch Low 30MHz – 3GHz



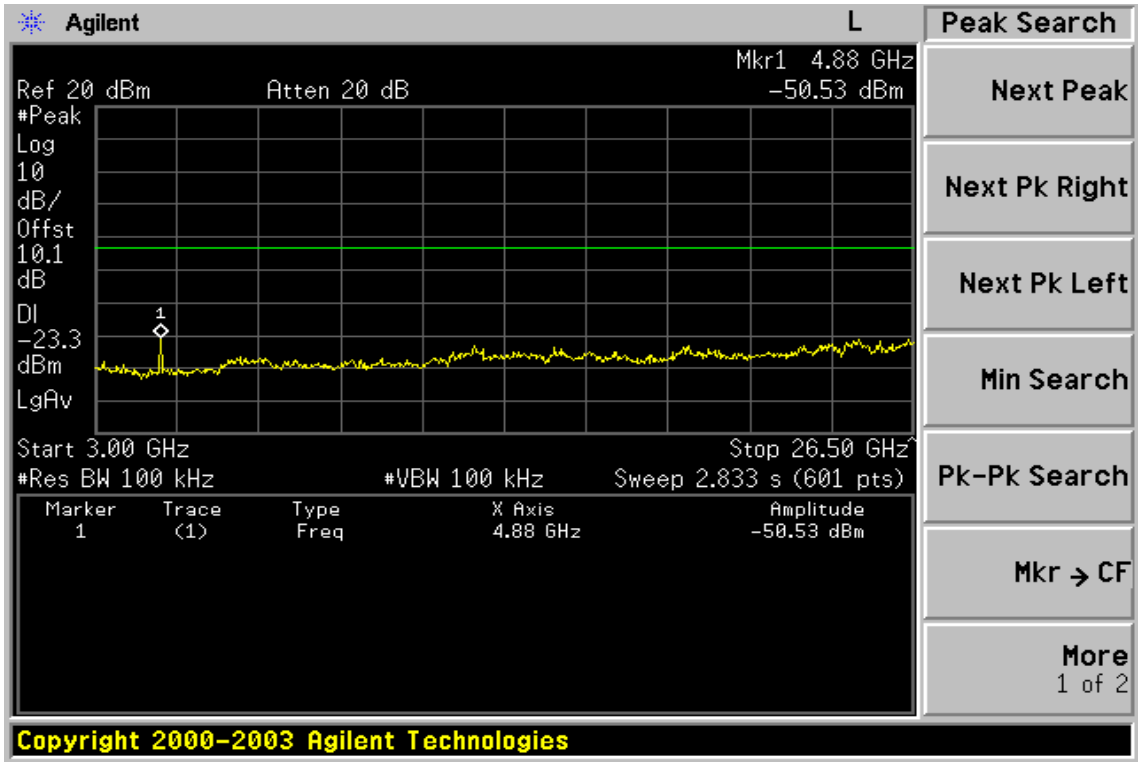
Ch Low 3GHz – 26.5GHz



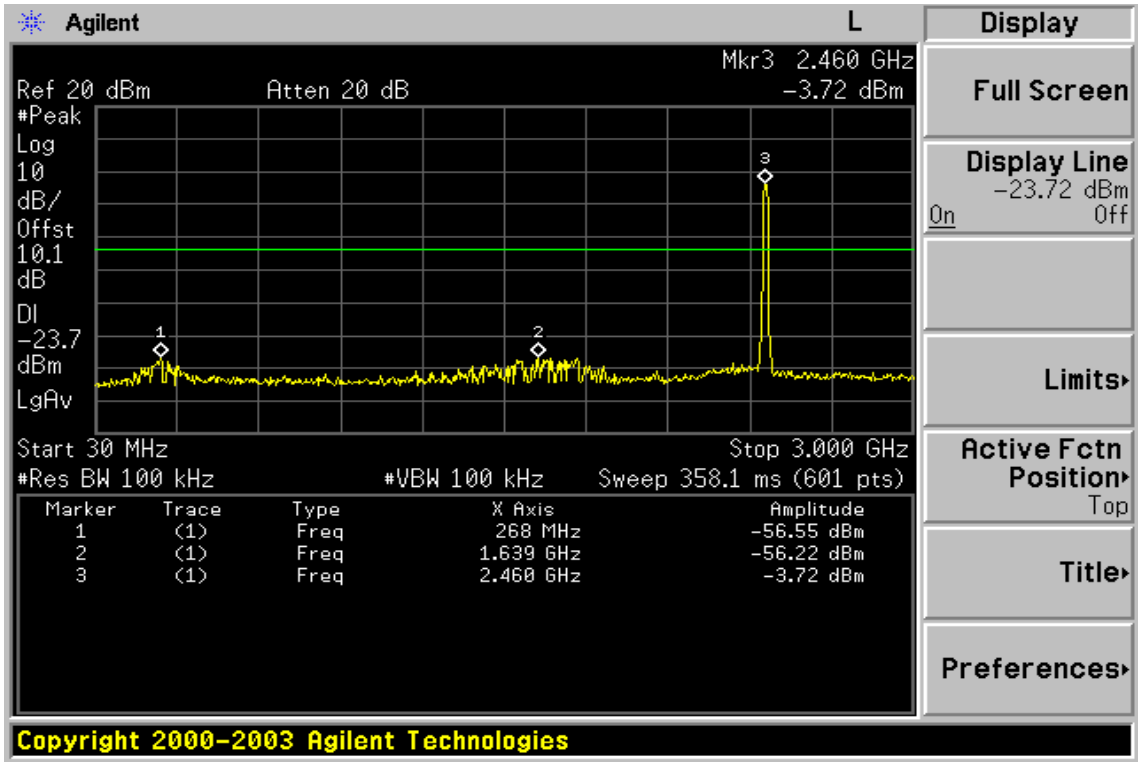
Ch Mid 30MHz – 3GHz



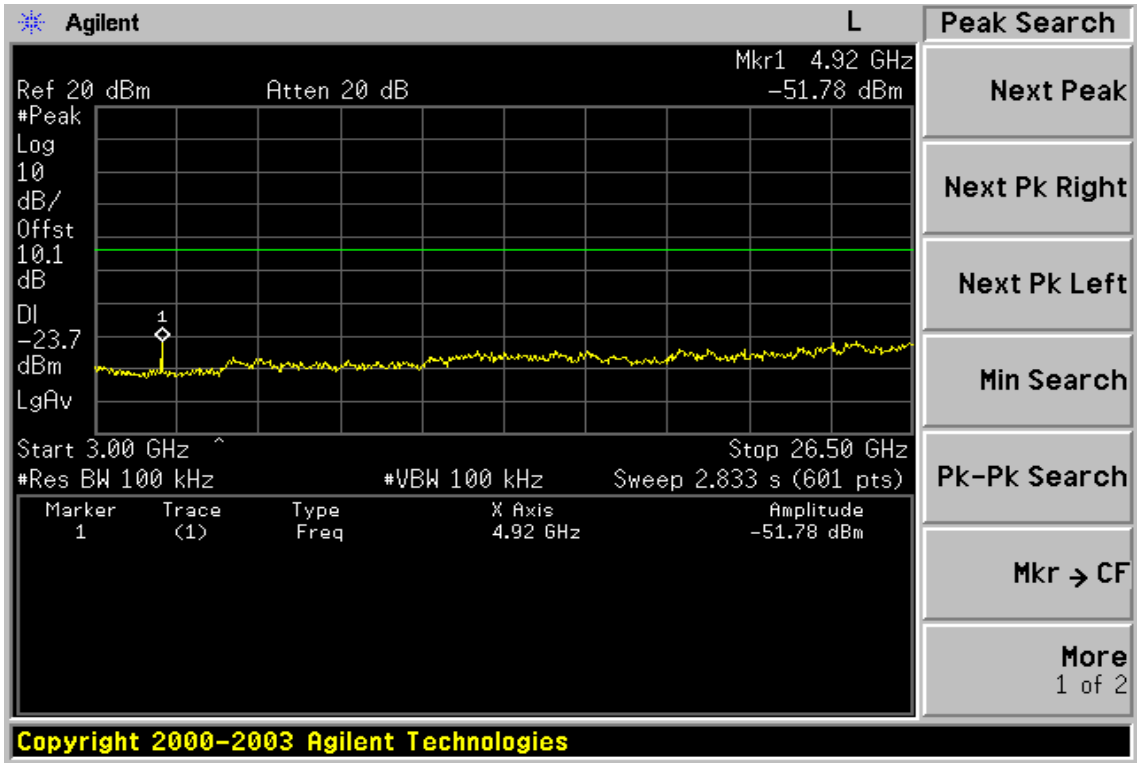
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

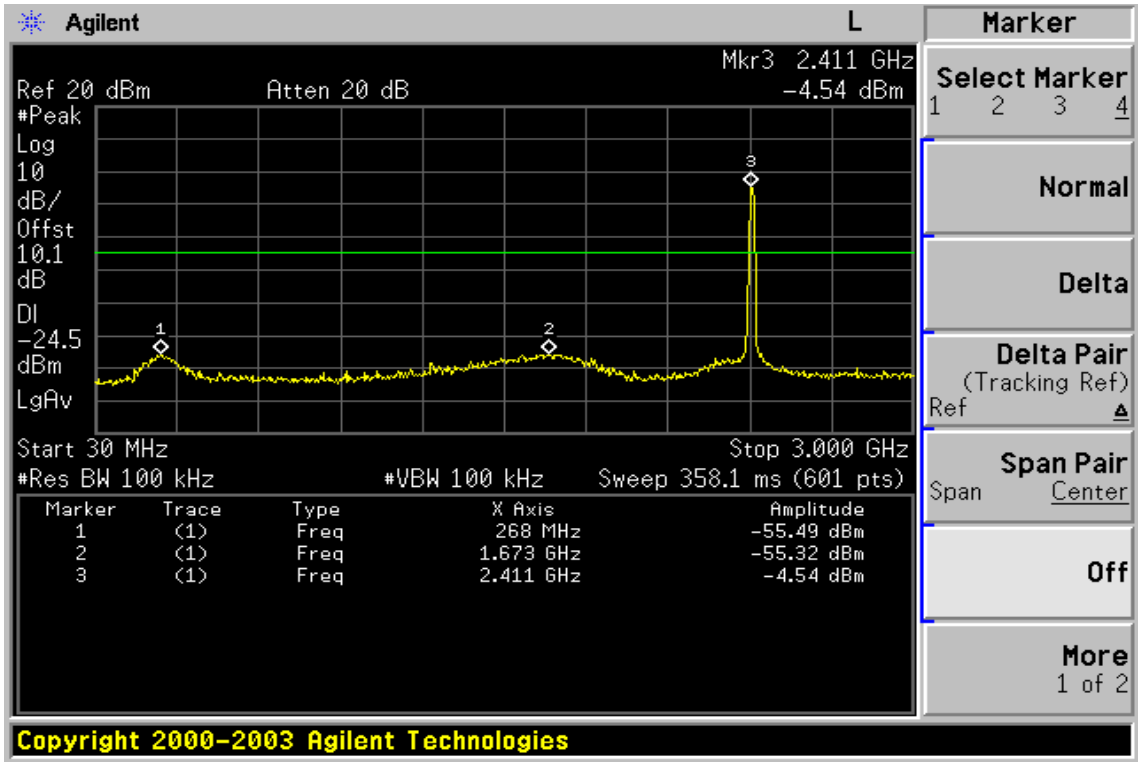


Ch High 3GHz – 26.5GHz

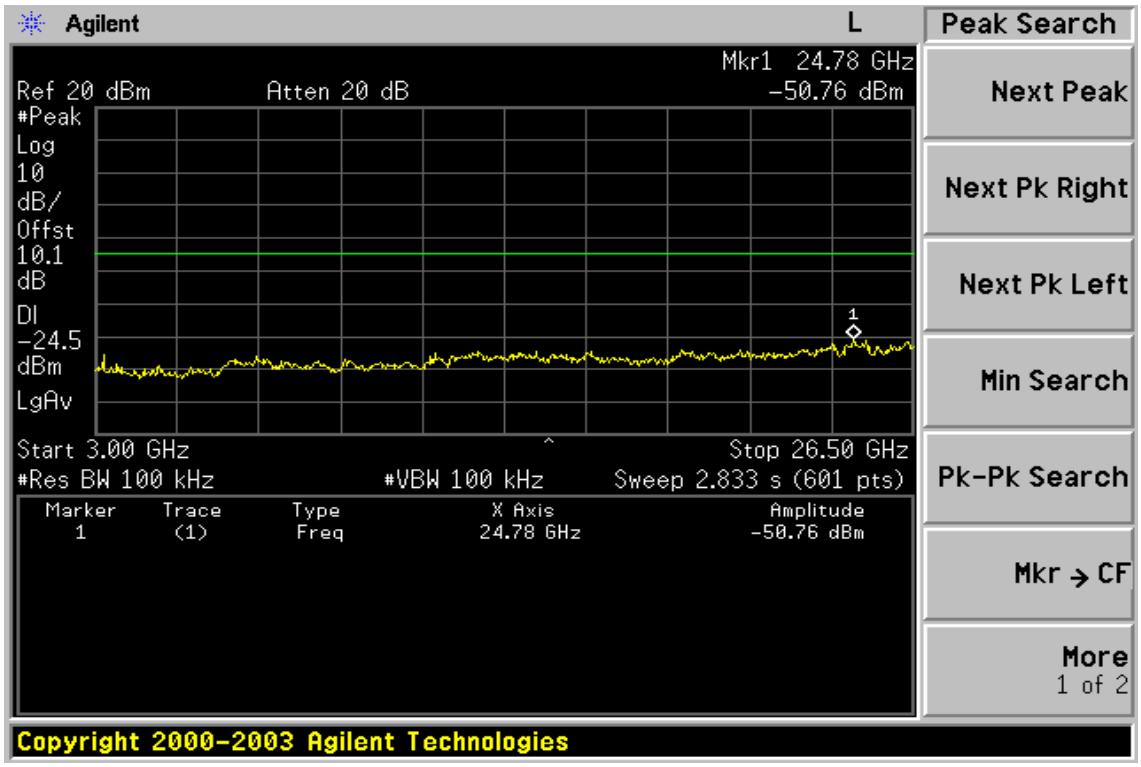


Conducted Spurious Emission Measurement Result (802.11g), 6M (Left Antenna)

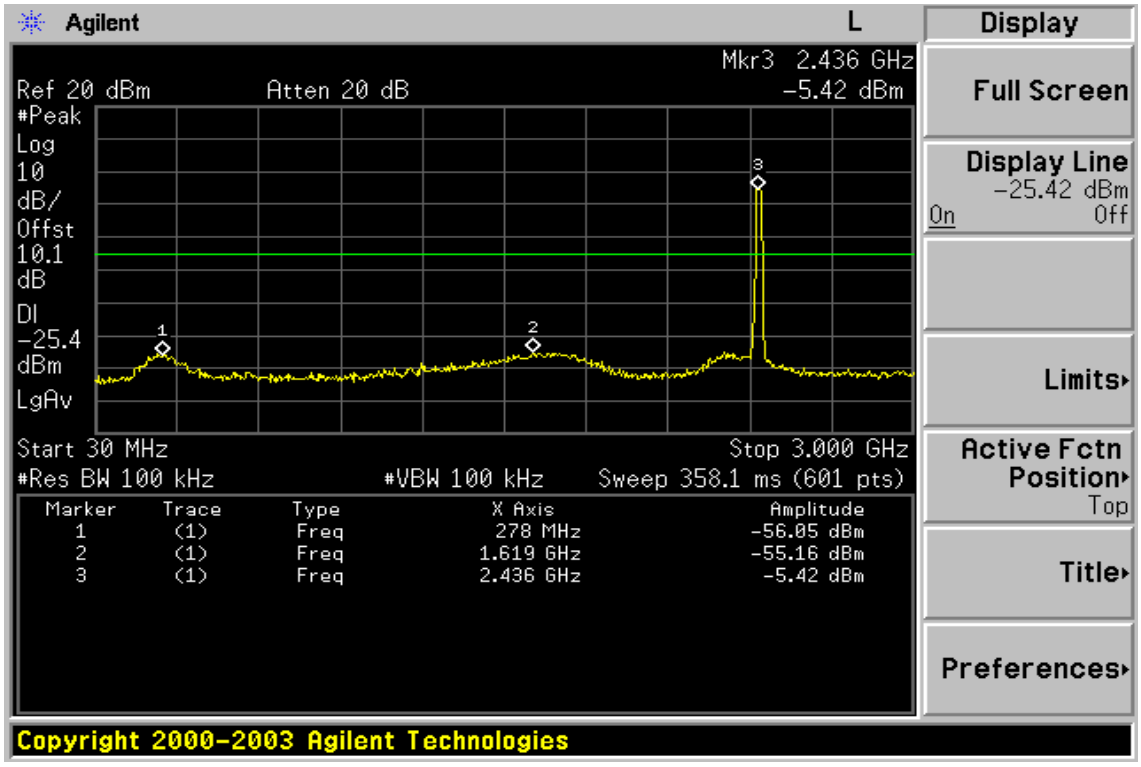
Ch Low 30MHz – 3GHz



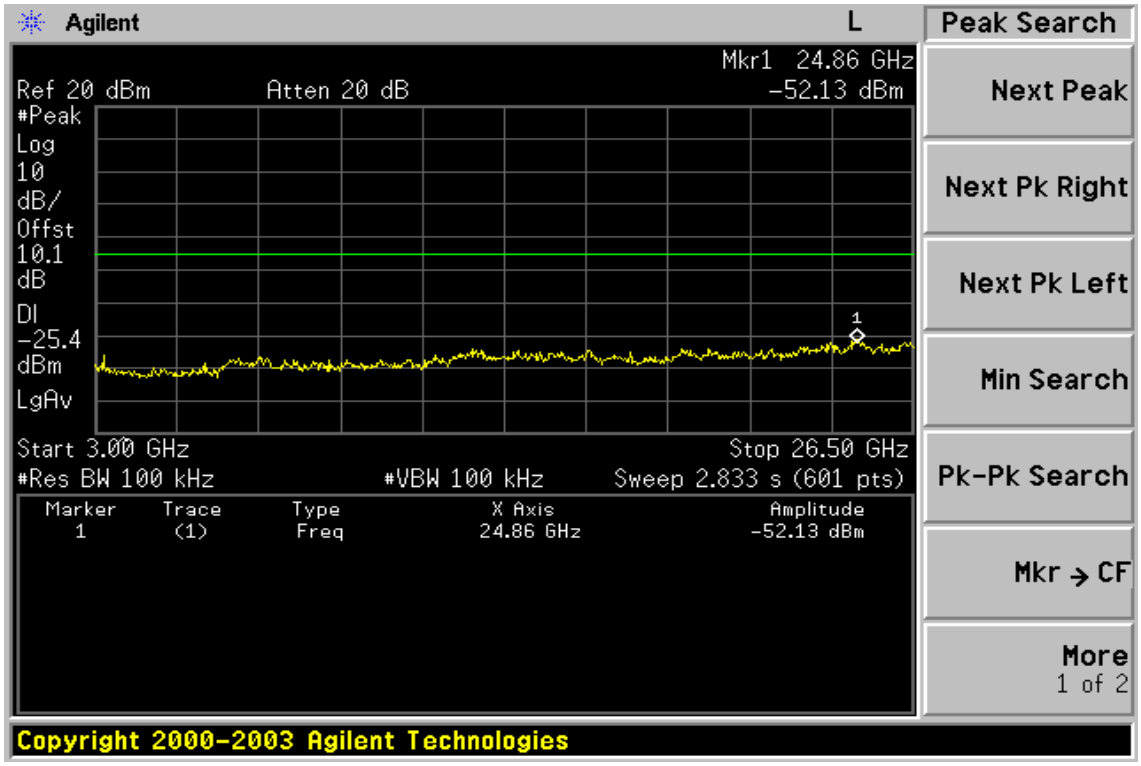
Ch Low 3GHz – 26.5GHz



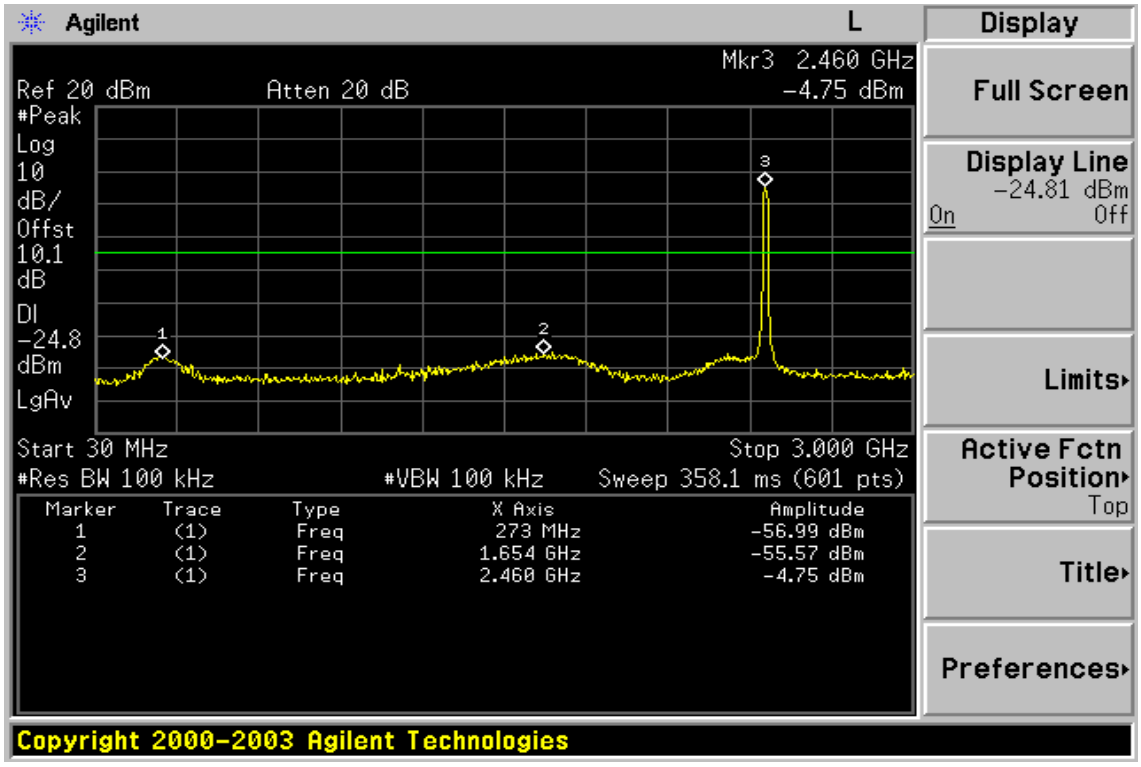
Ch Mid 30MHz – 3GHz



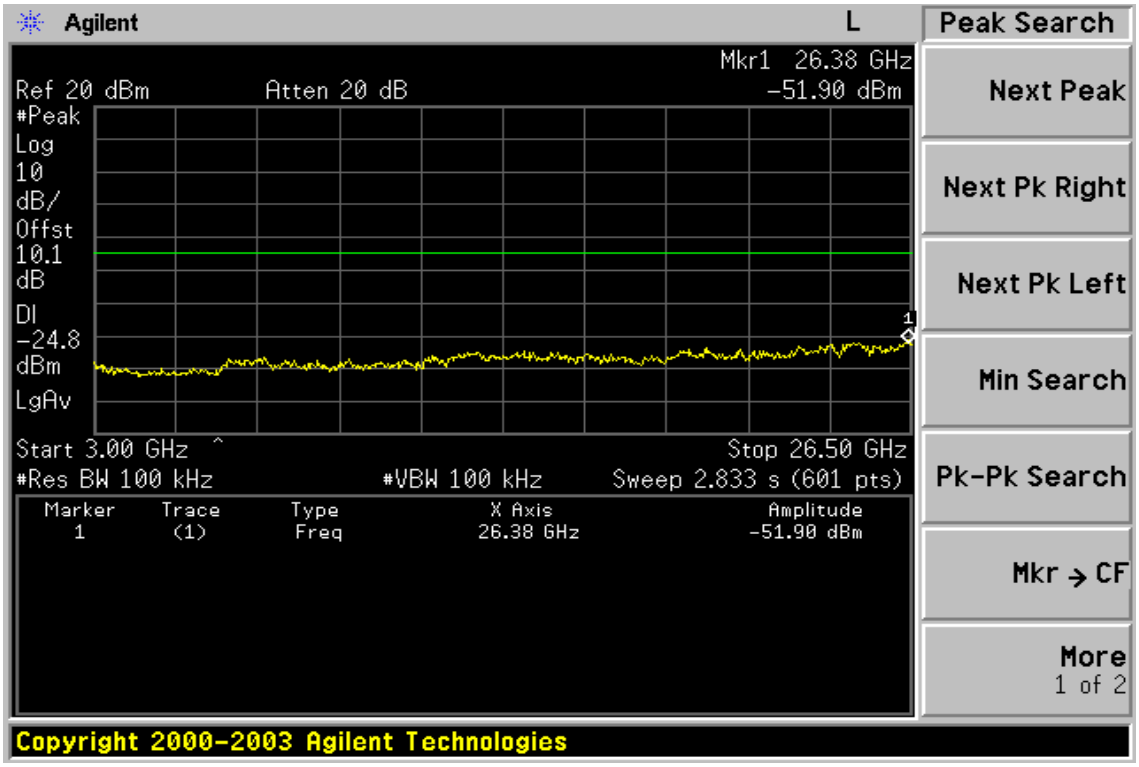
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

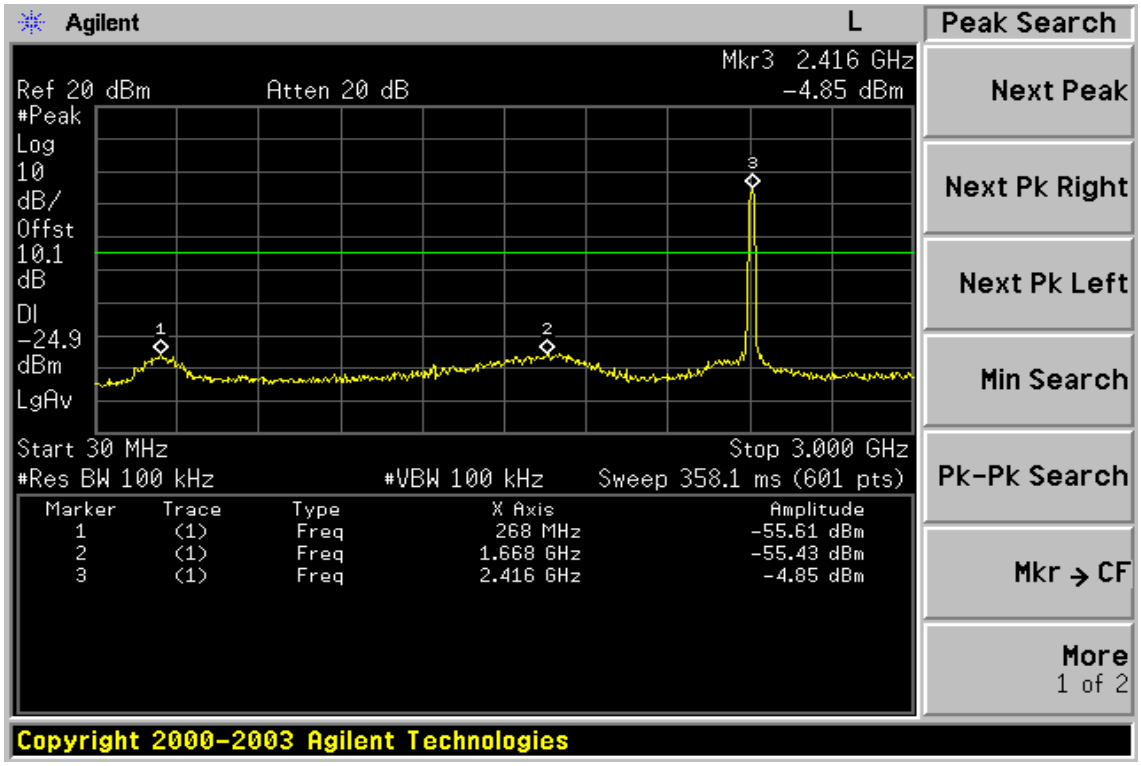


Ch High 3GHz – 26.5GHz

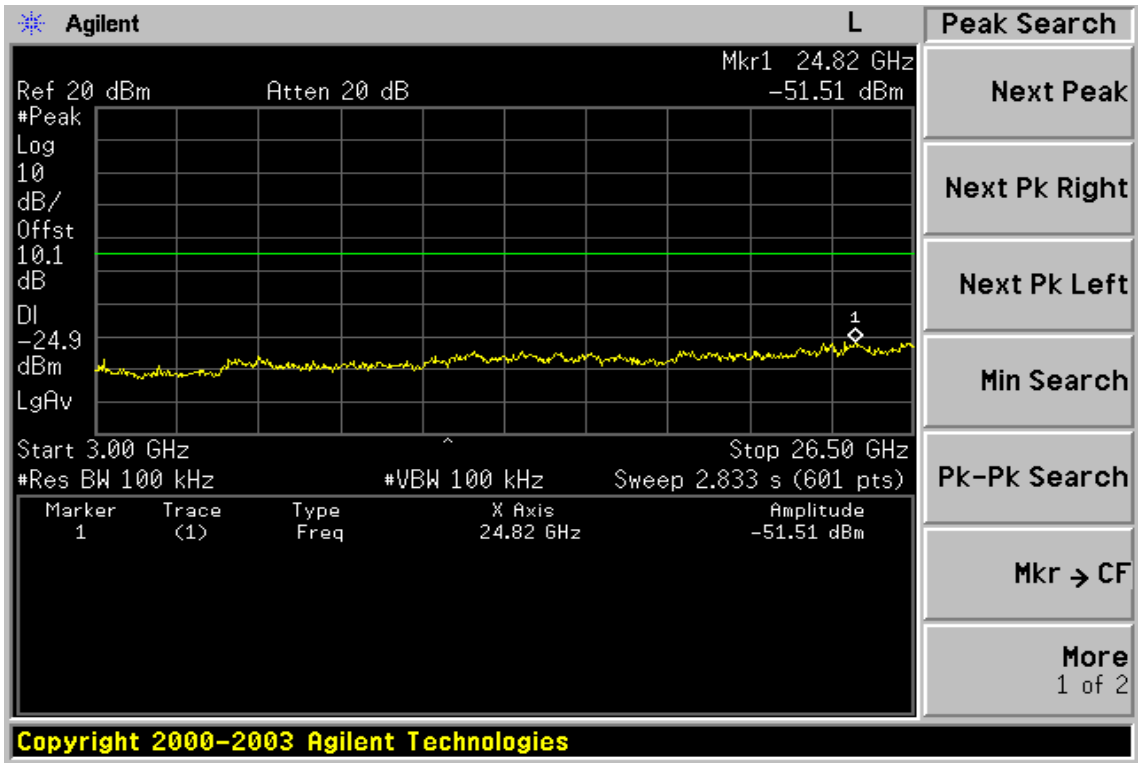


Conducted Spurious Emission Measurement Result (802.11n_20M) 6.5M (Left Antenna)

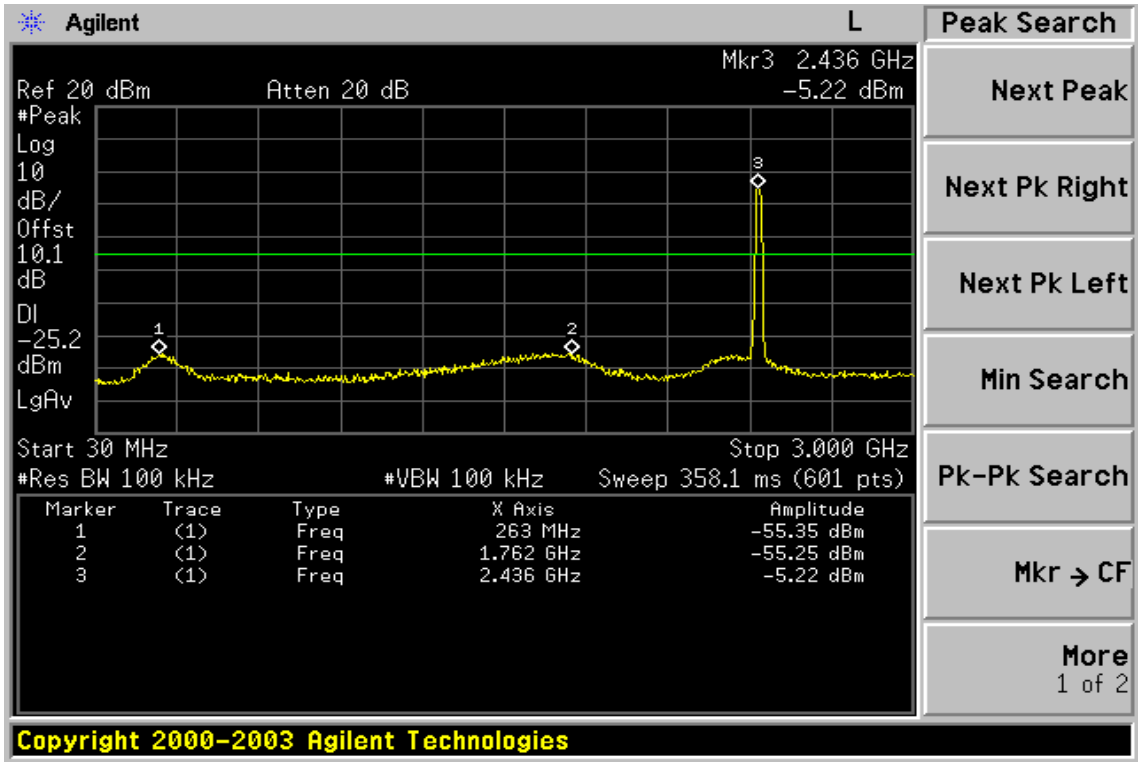
Ch Low 30MHz – 3GHz



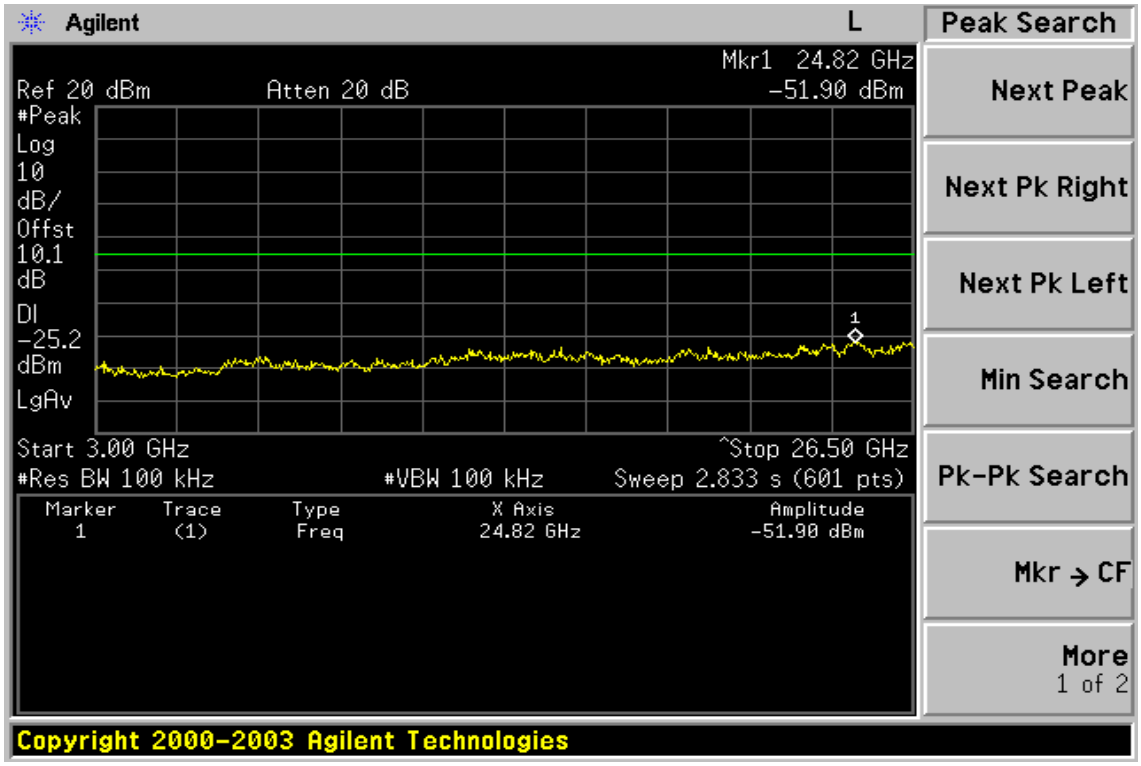
Ch Low 3GHz – 26.5GHz



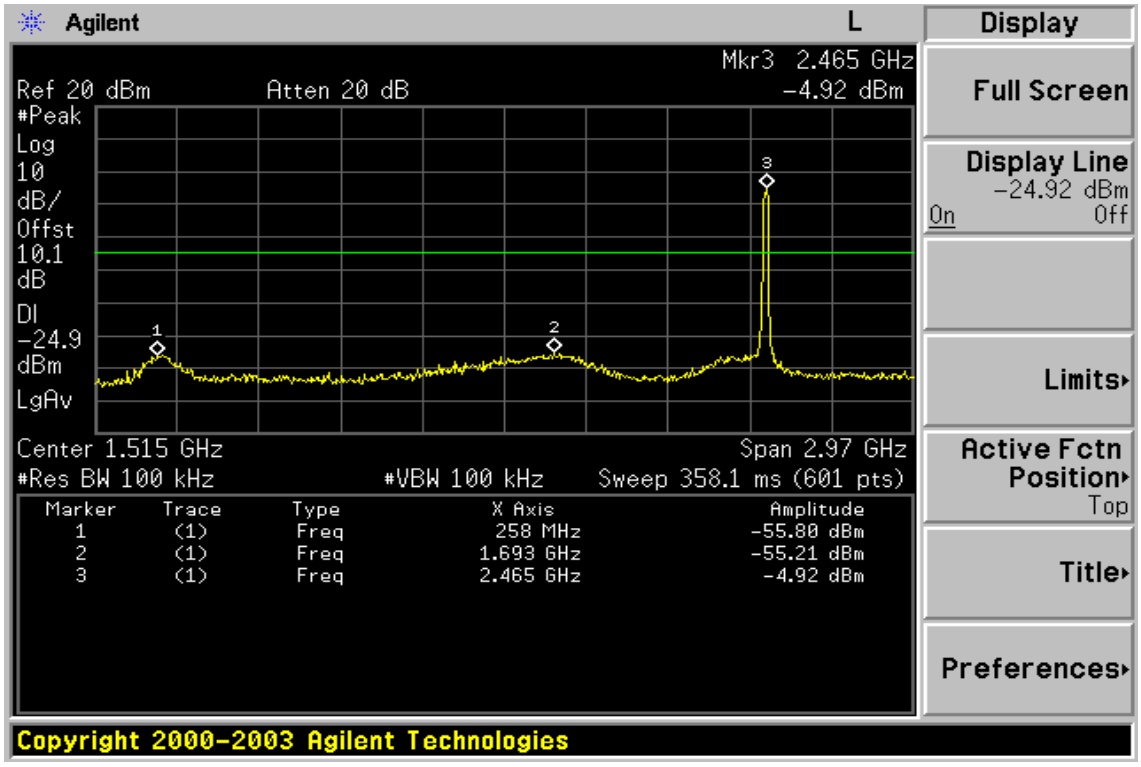
Ch Mid 30MHz – 3GHz



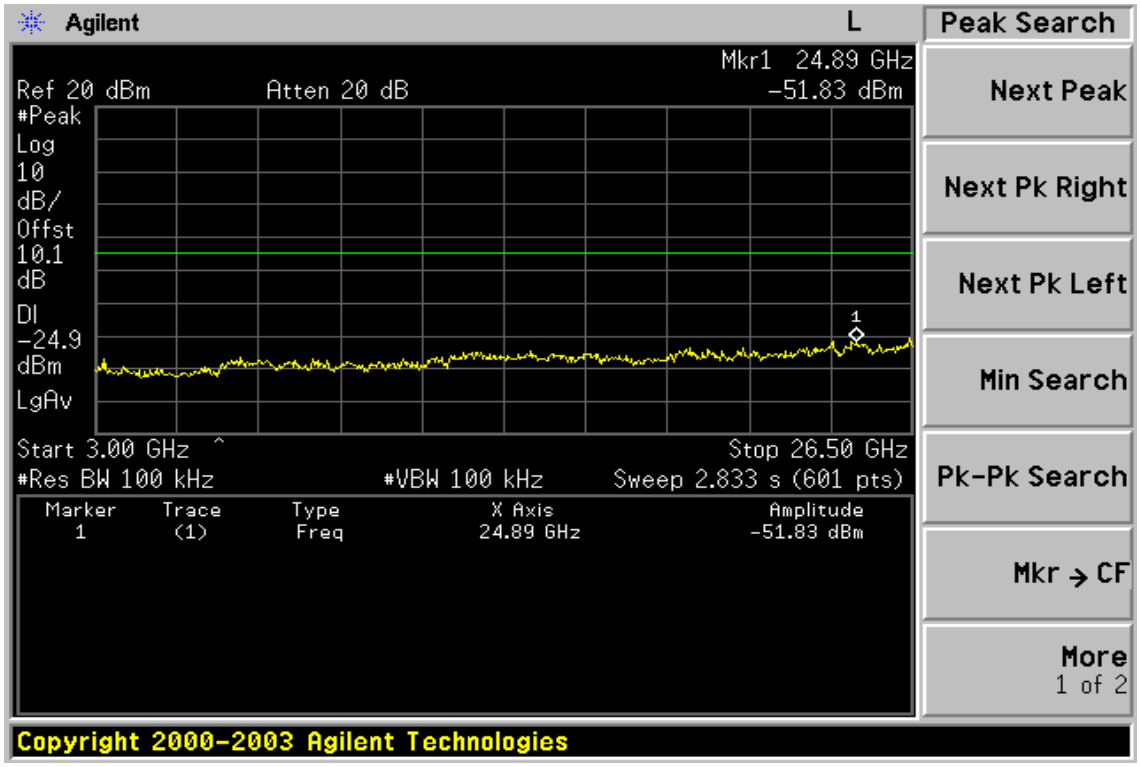
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

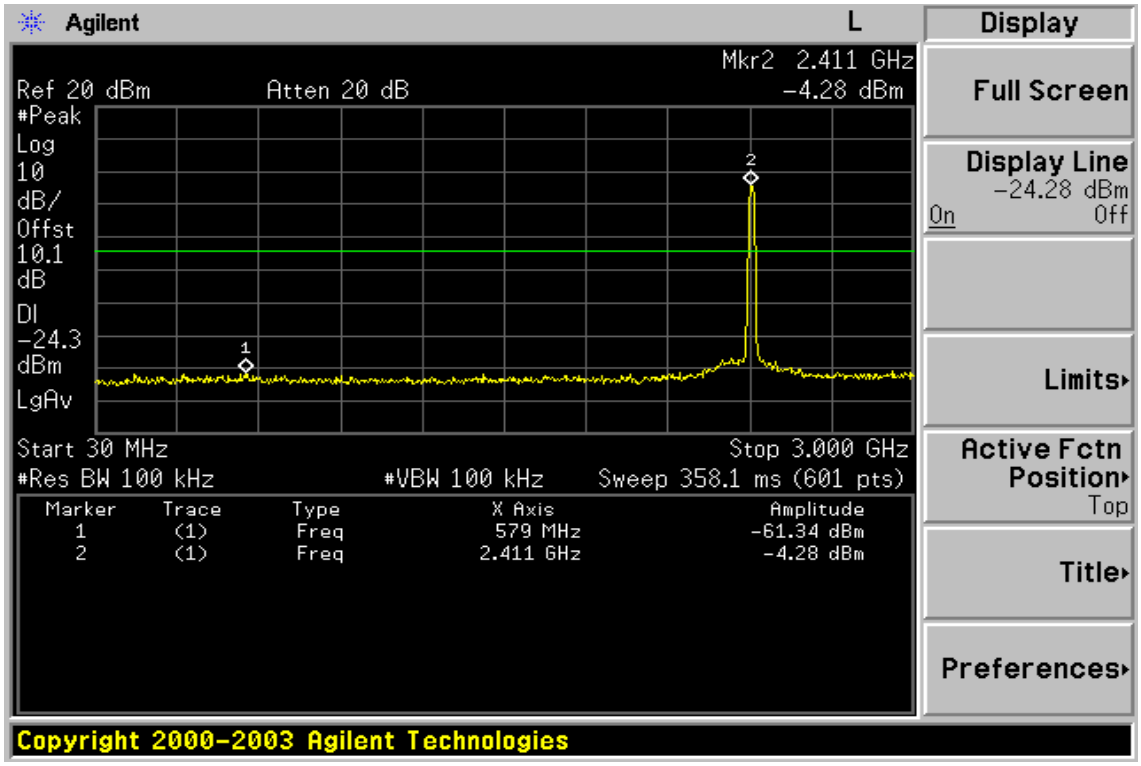


Ch High 3GHz – 26.5GHz

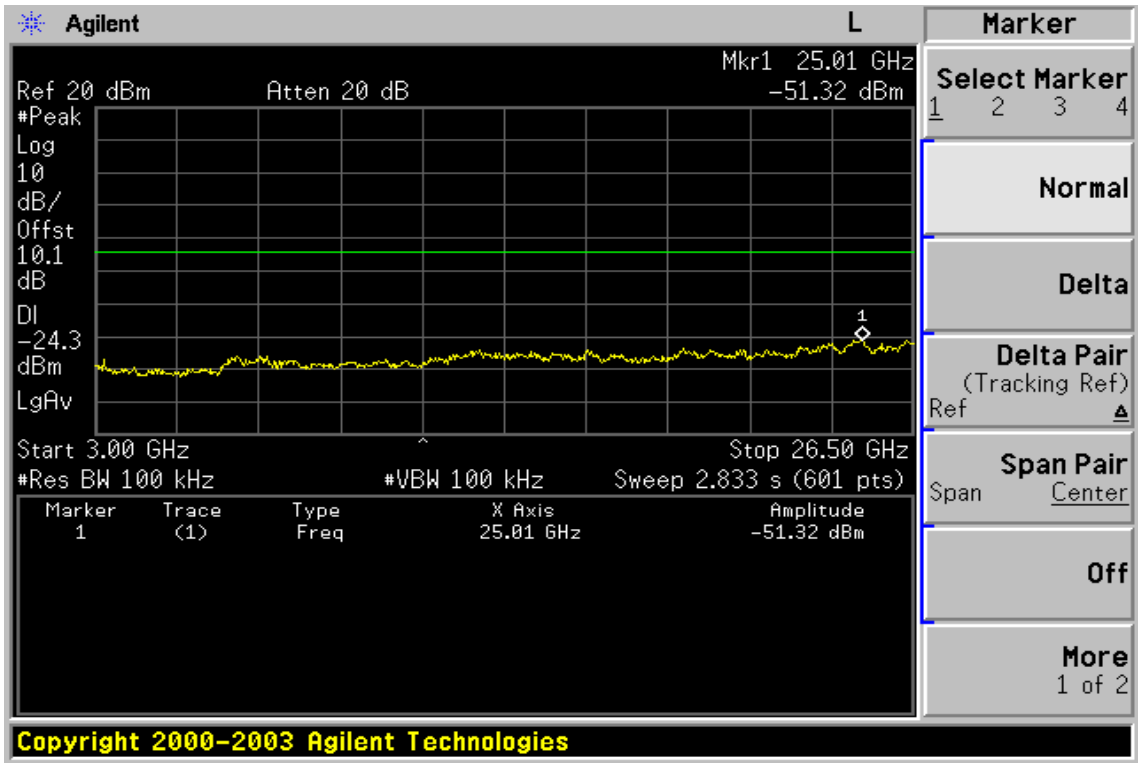


Conducted Spurious Emission Measurement Result (802.11n_20M) 6.5M (Right Antenna)

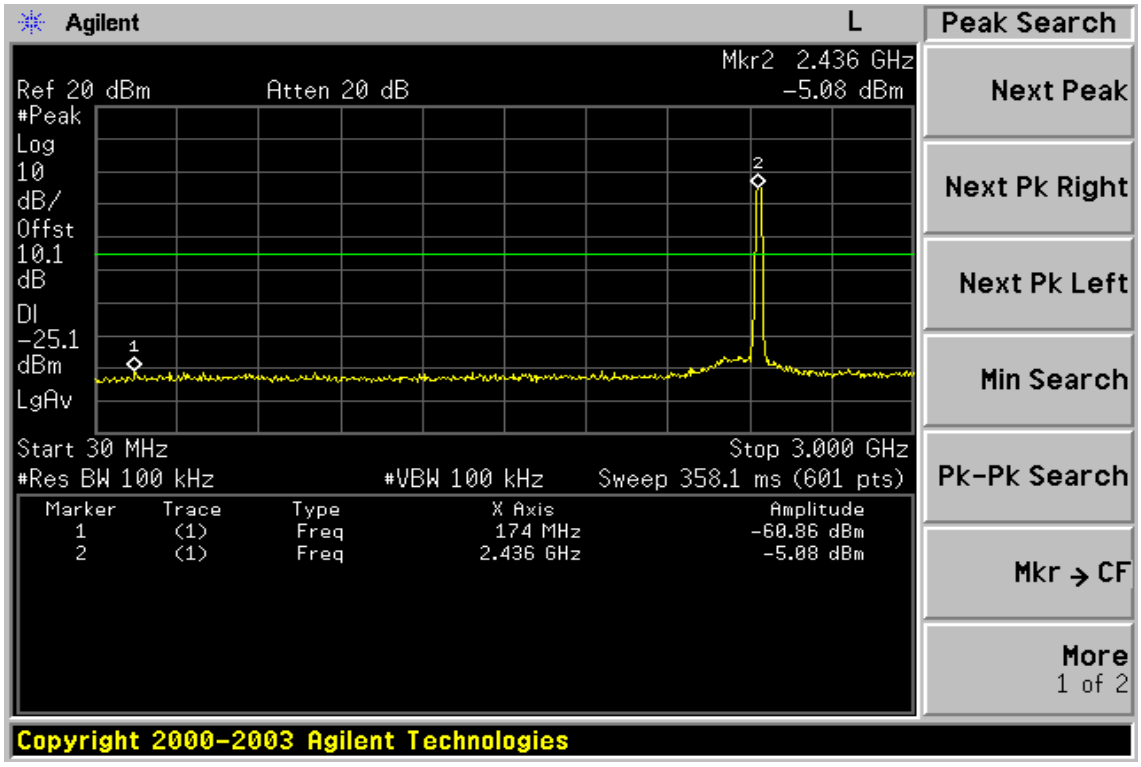
Ch Low 30MHz – 3GHz



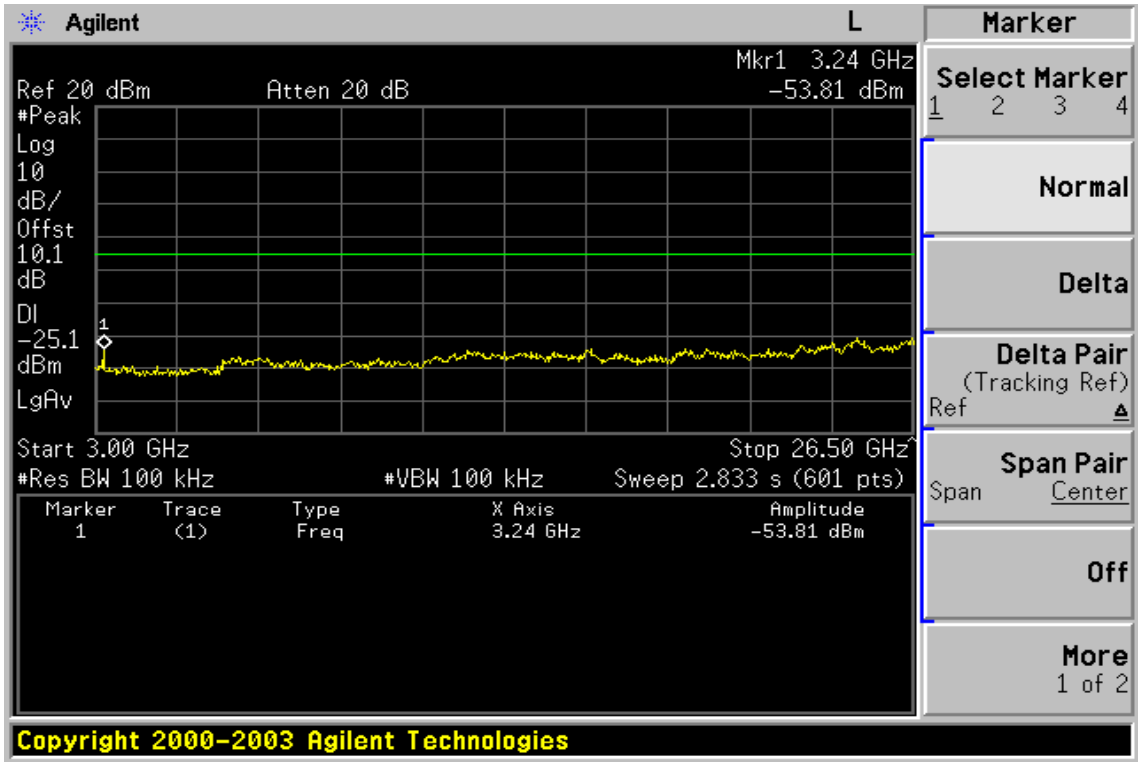
Ch Low 3GHz – 26.5GHz



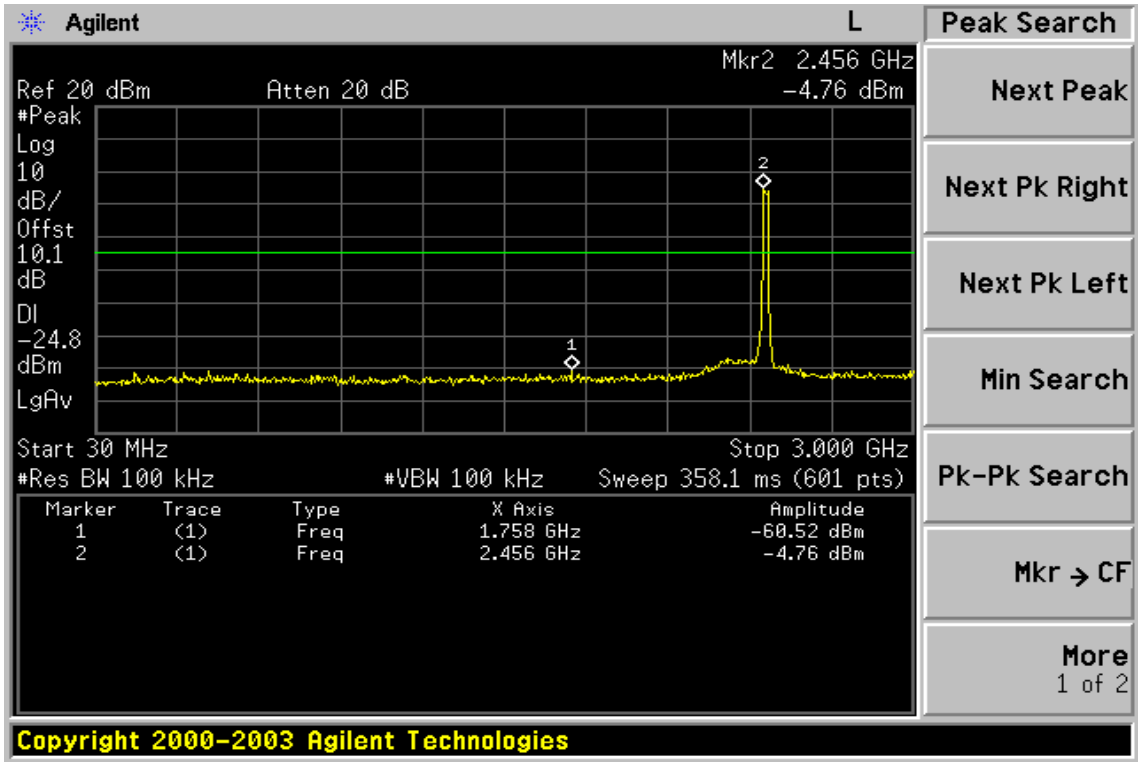
Ch Mid 30MHz – 3GHz



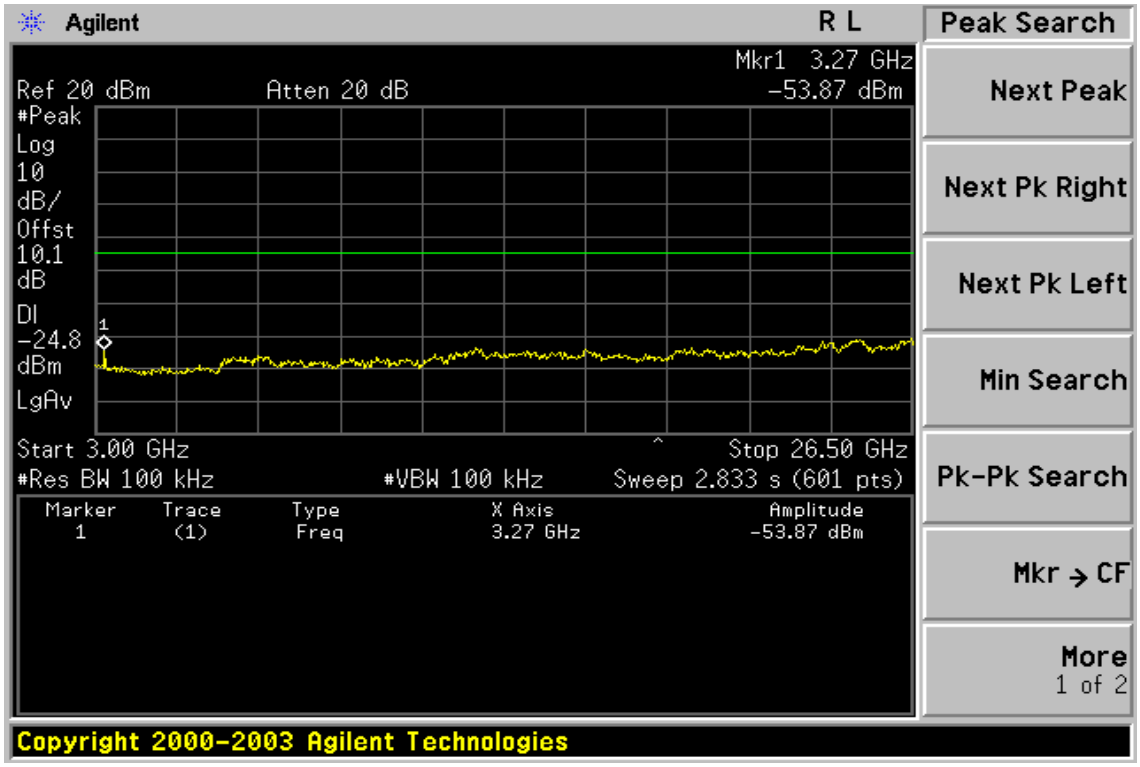
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

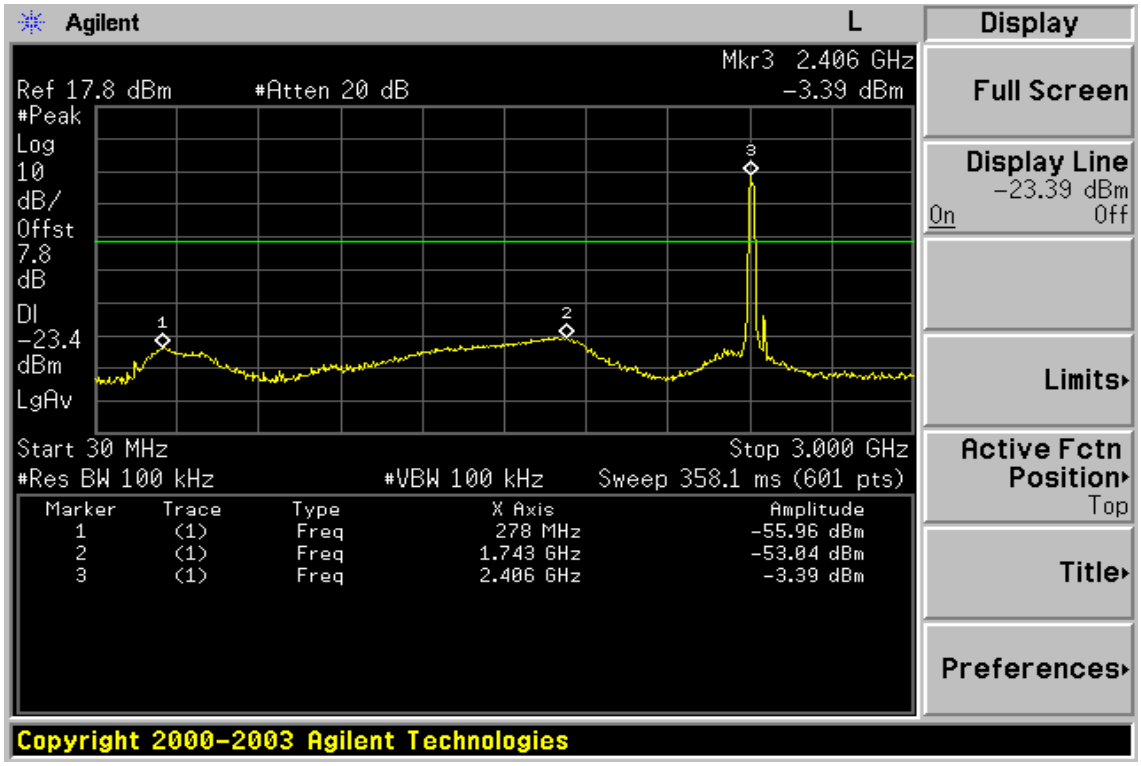


Ch High 3GHz – 26.5GHz

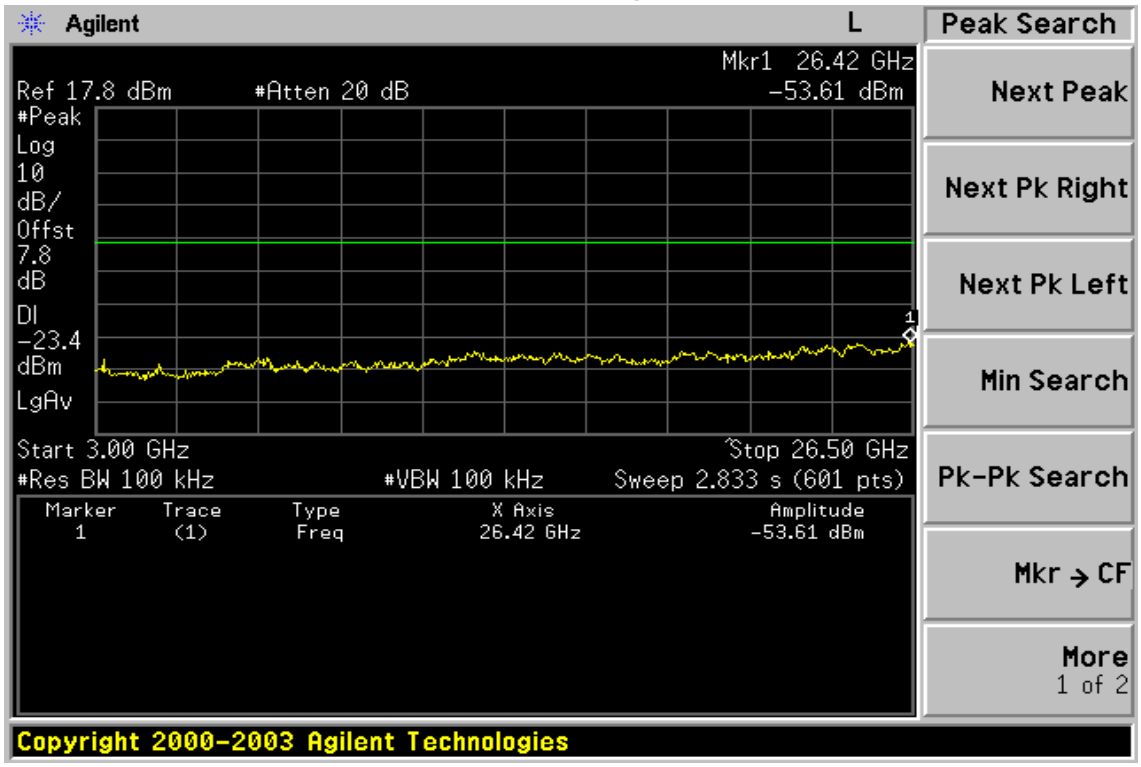


Conducted Spurious Emission Measurement Result (802.11n_20M) 6.5M

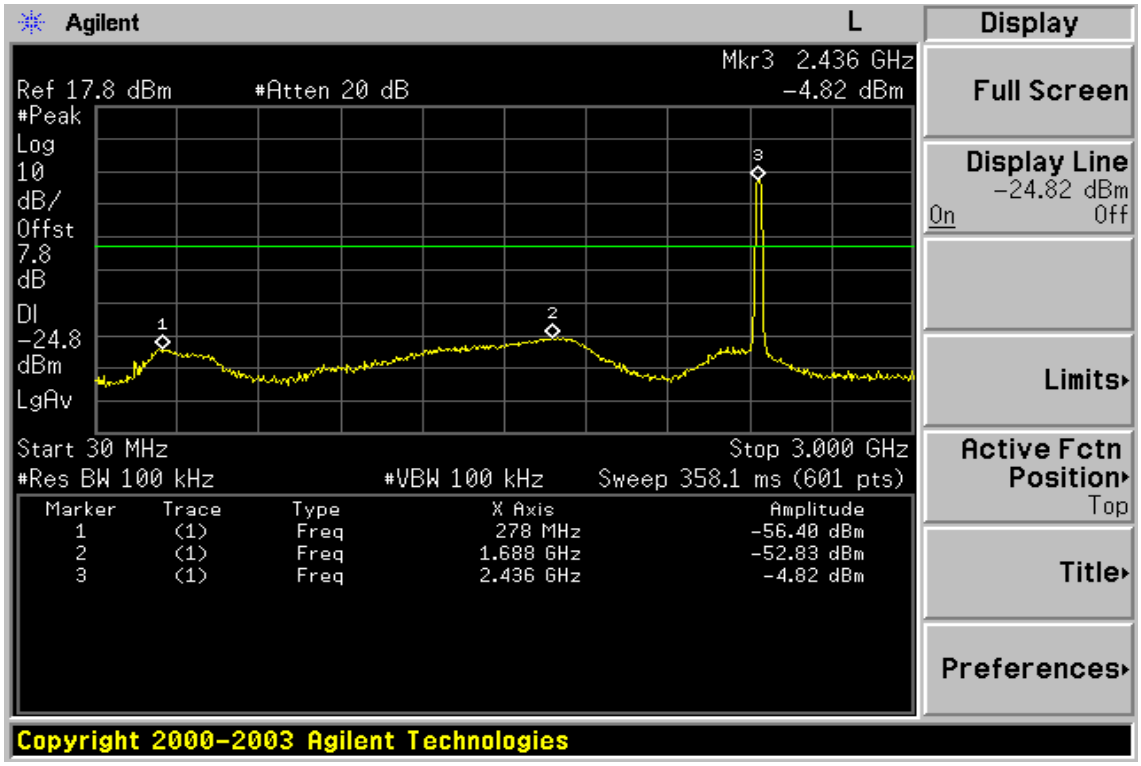
Ch Low 30MHz – 3GHz (Left Antenna + Right Antenna)



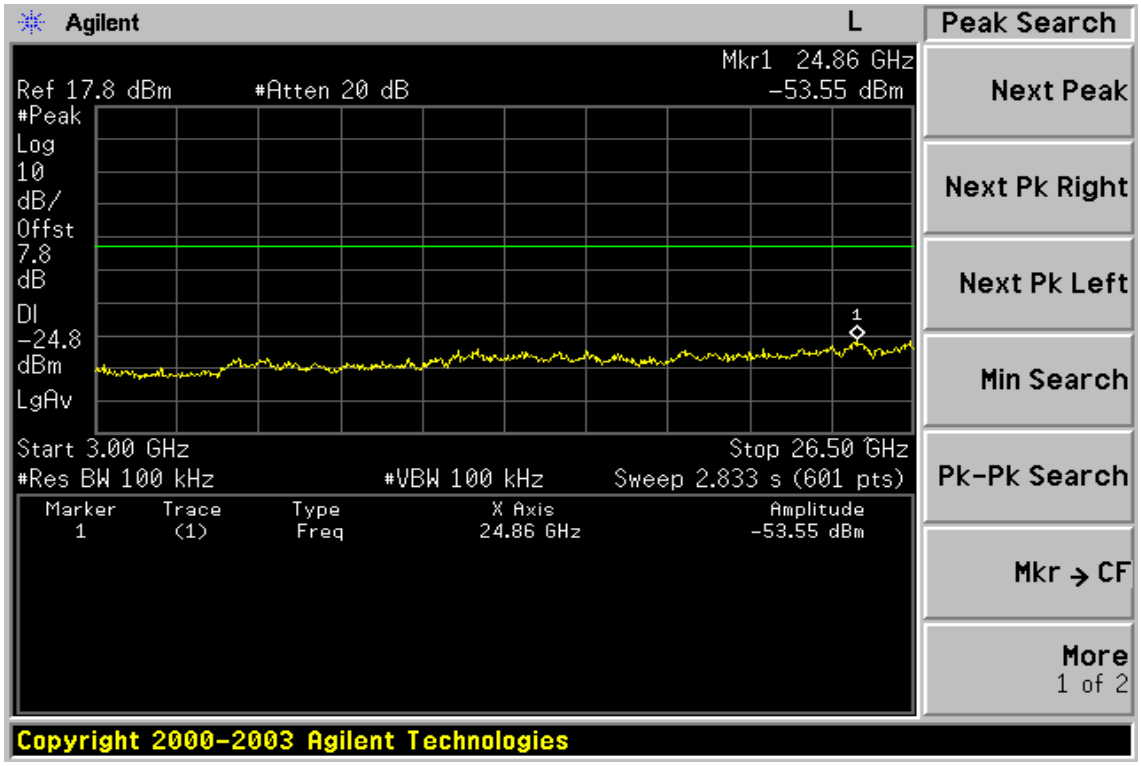
Ch Low 3GHz – 26.5GHz (Left Antenna + Right Antenna)



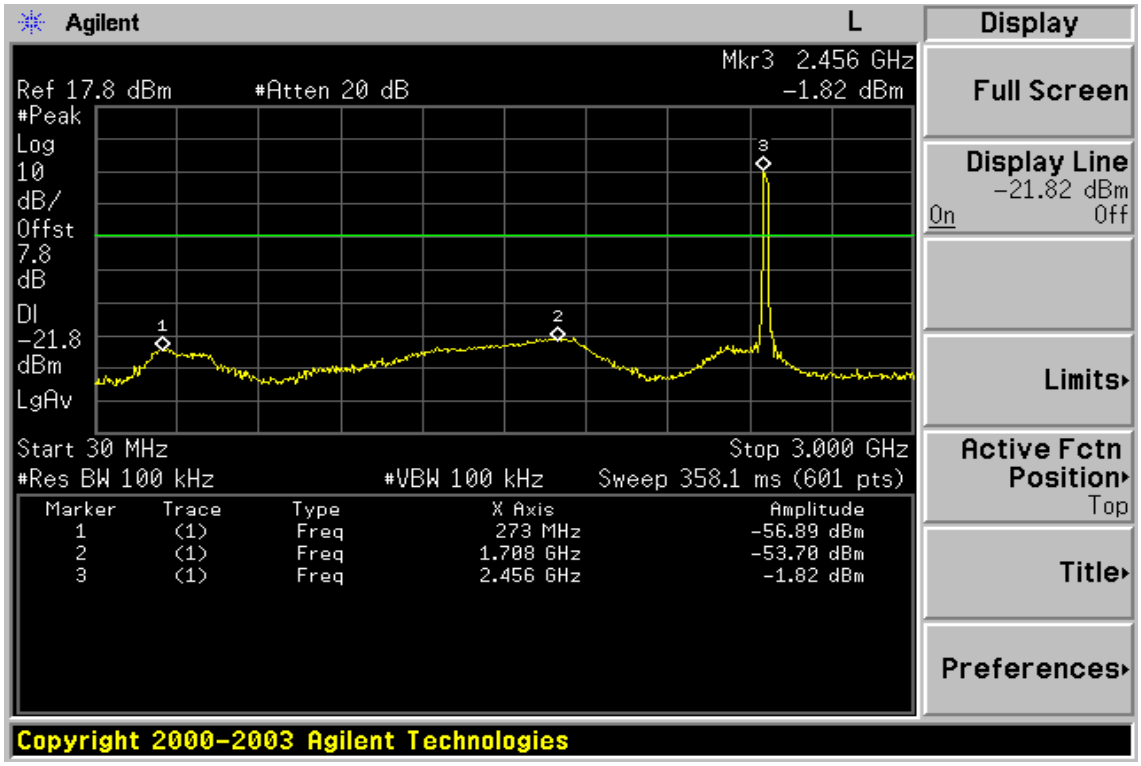
Ch Mid 30MHz – 3GHz (Left Antenna + Right Antenna)



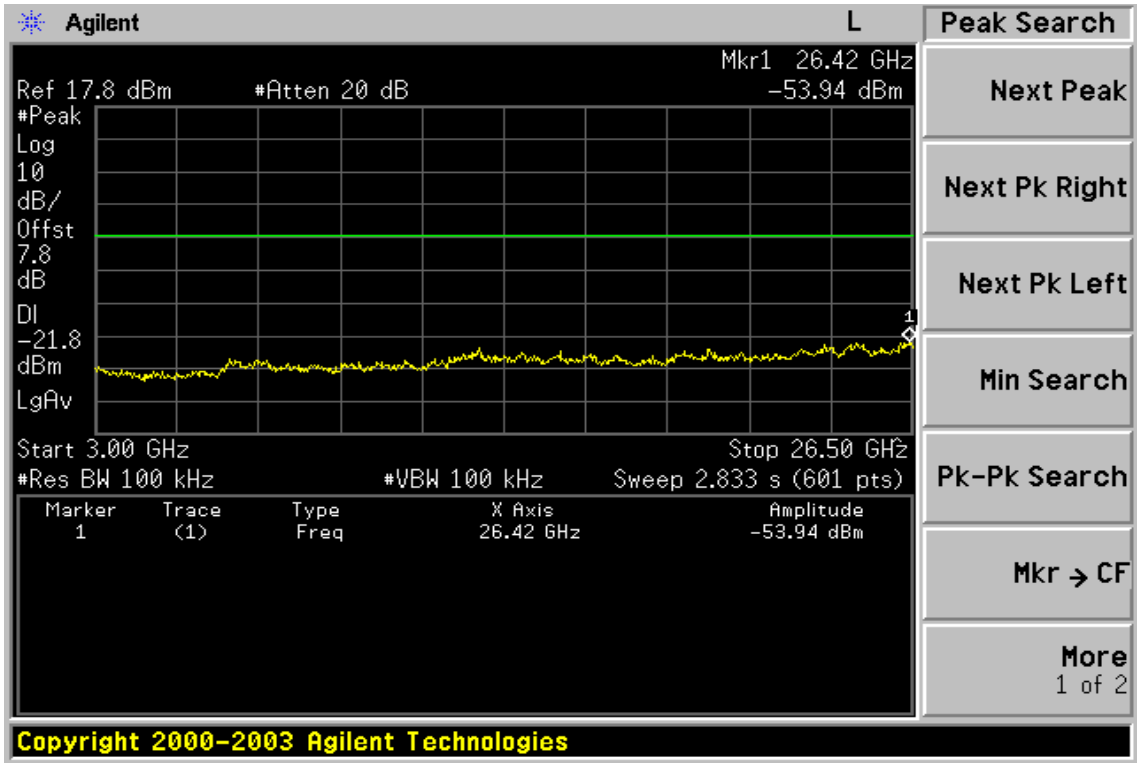
Ch Mid 3GHz – 26.5GHz (Left Antenna + Right Antenna)



Ch High 30MHz – 3GHz (Left Antenna + Right Antenna)

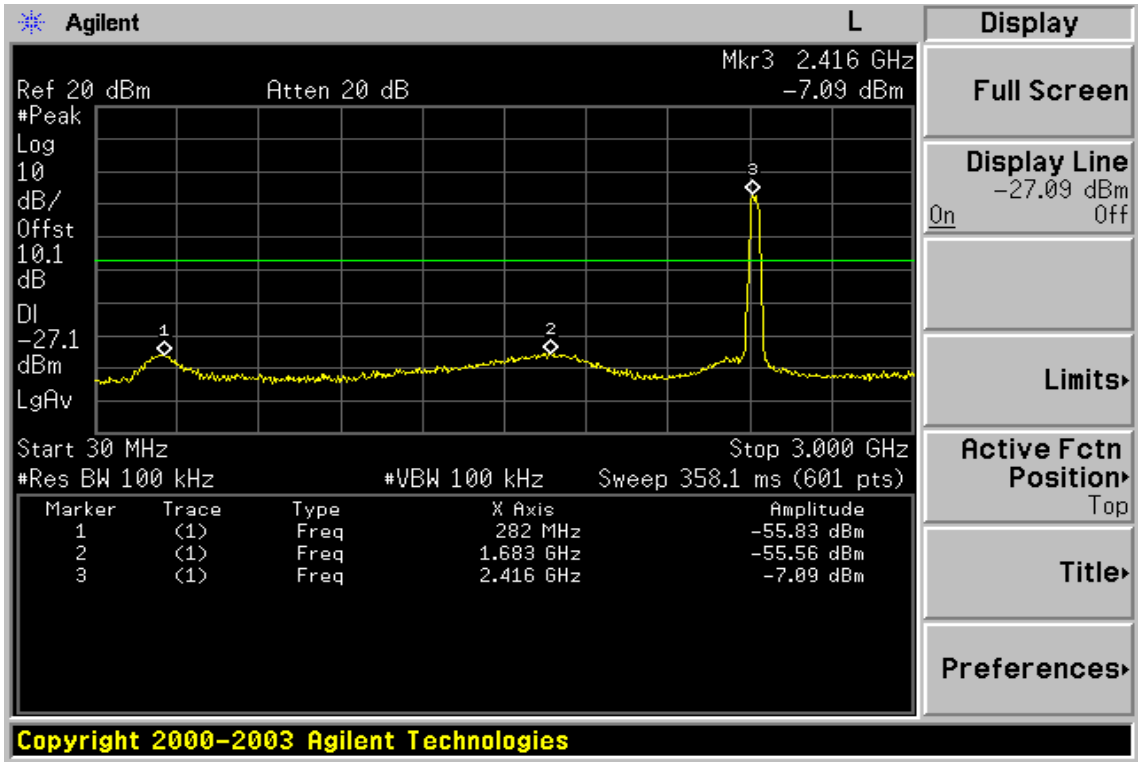


Ch High 3GHz – 26.5GHz (Left Antenna + Right Antenna)

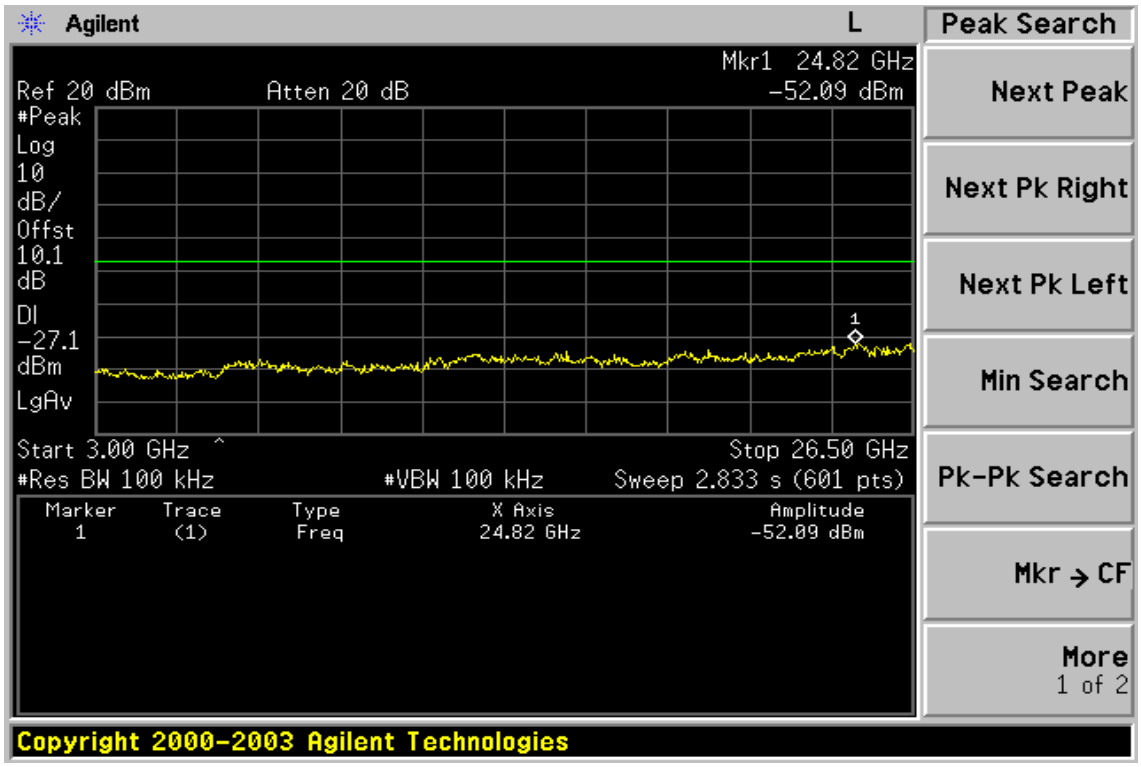


Conducted Spurious Emission Measurement Result (802.11n_40M) 13.5M (Left Antenna)

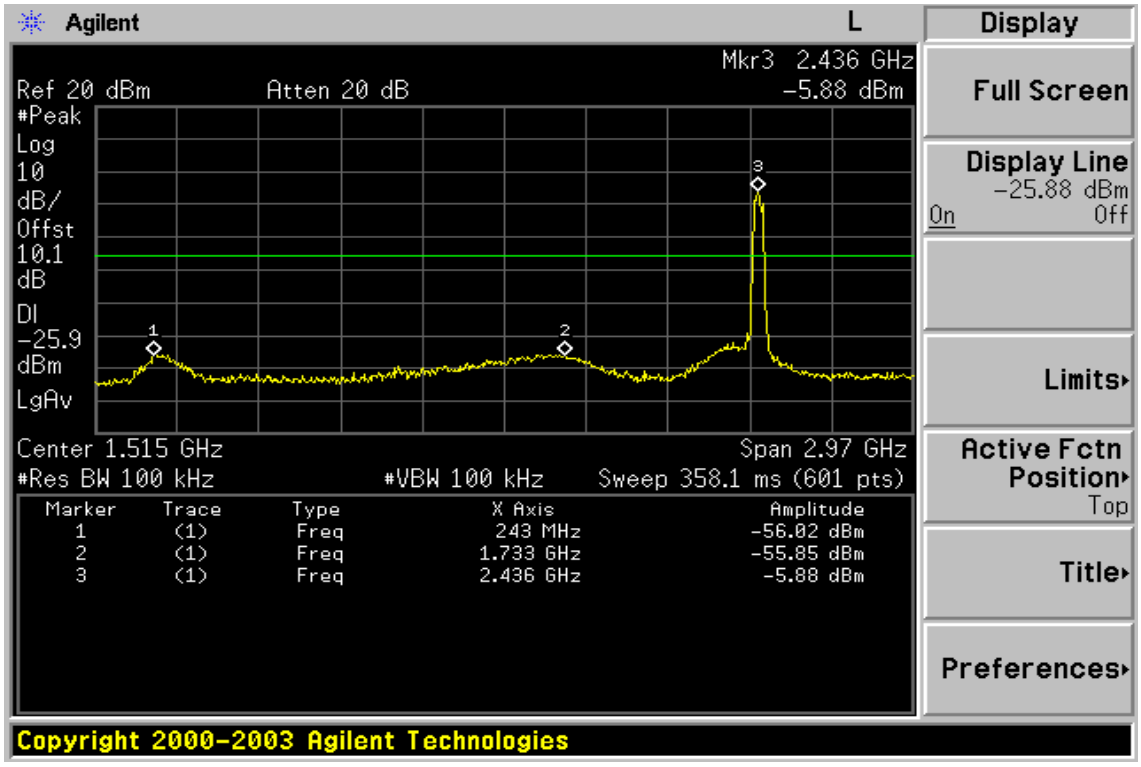
Ch Low 30MHz – 3GHz



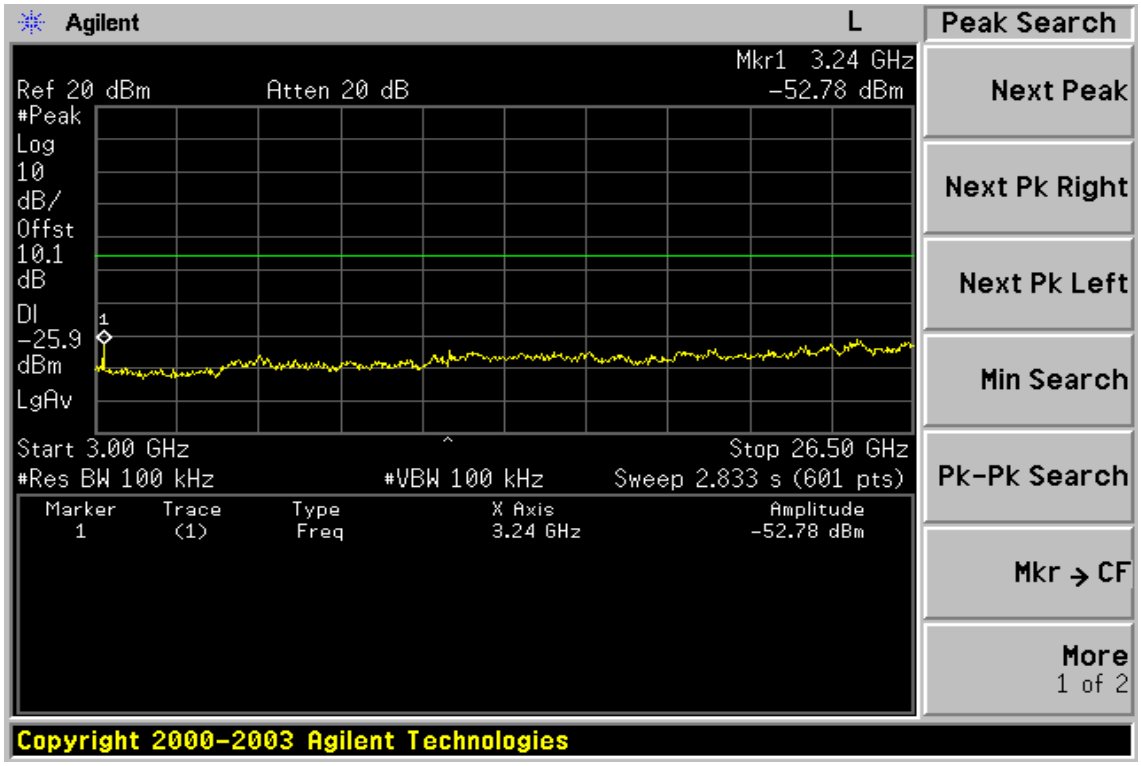
Ch Low 3GHz – 26.5GHz



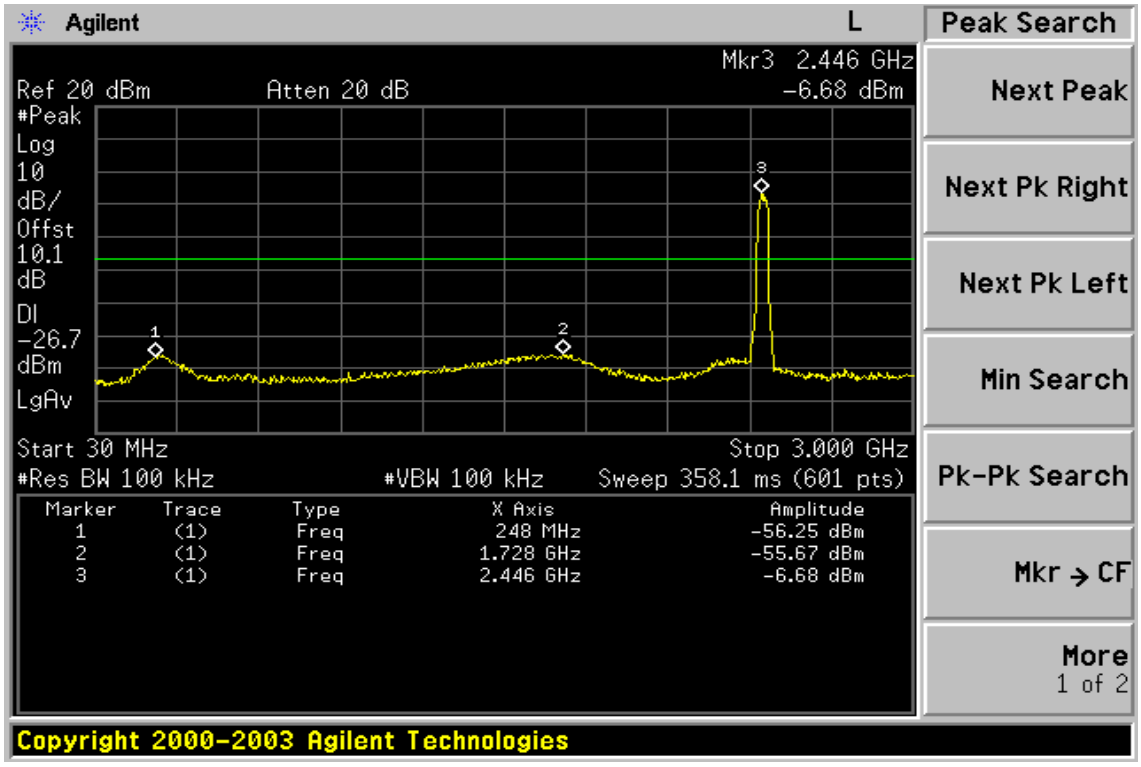
Ch Mid 30MHz – 3GHz



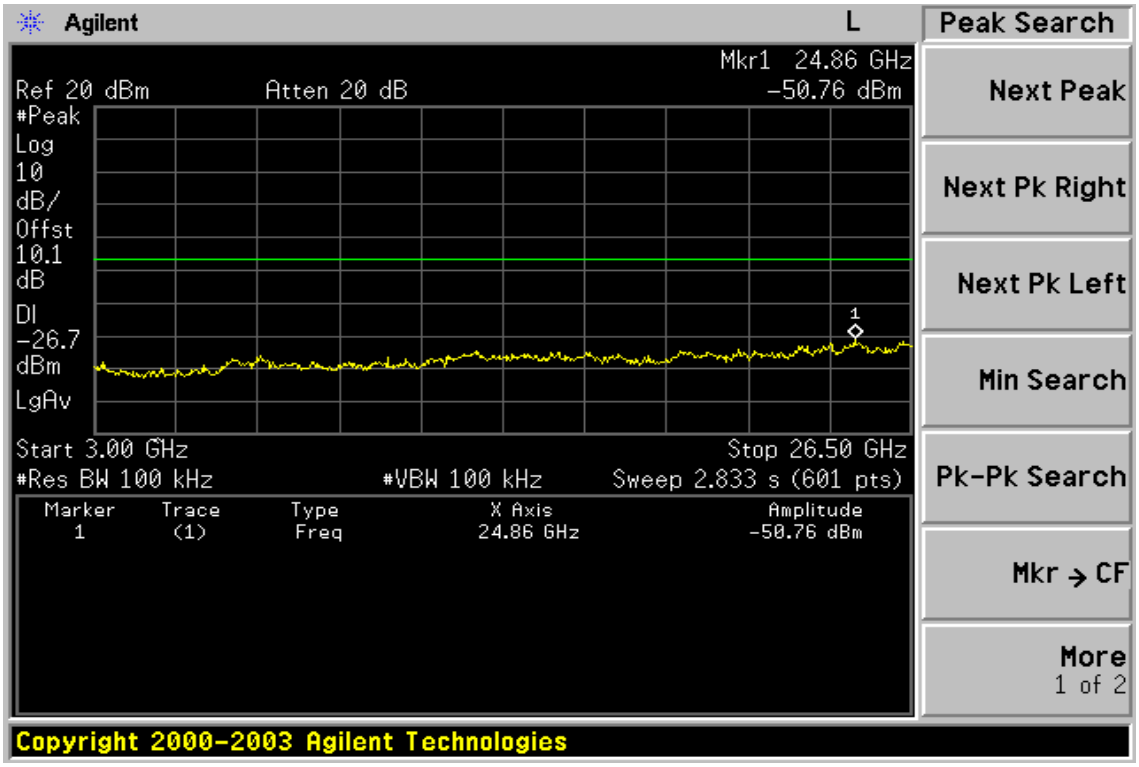
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

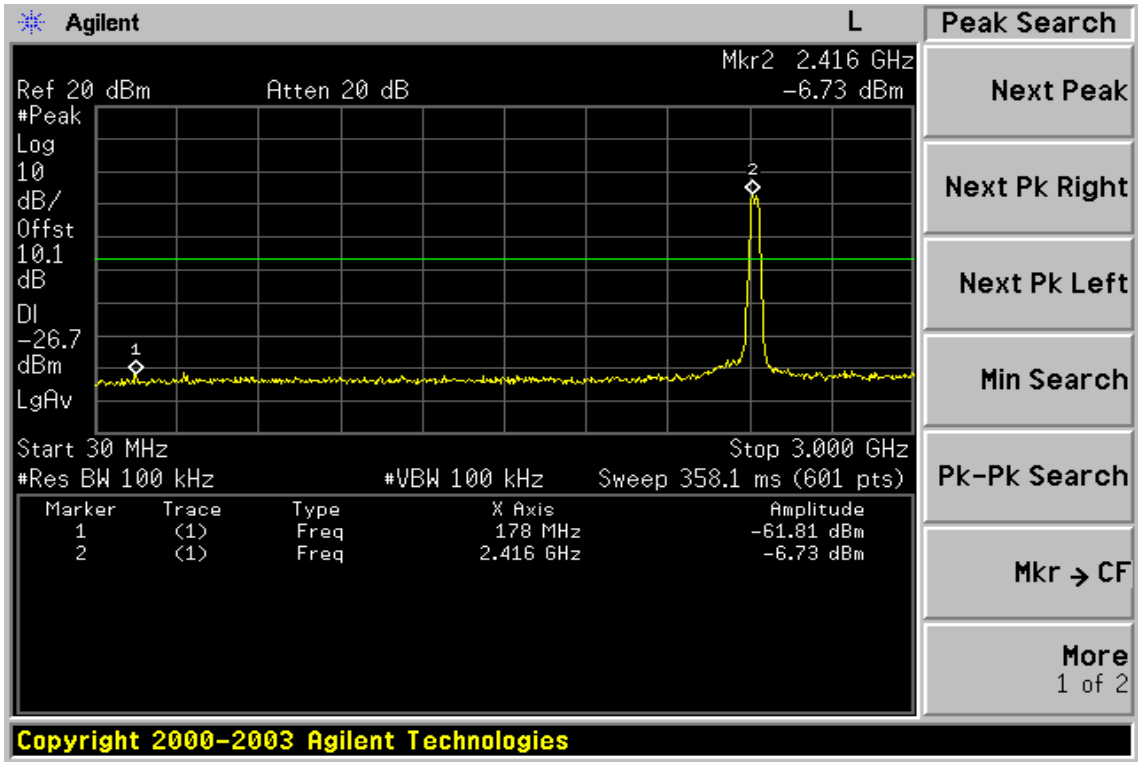


Ch High 3GHz – 26.5GHz

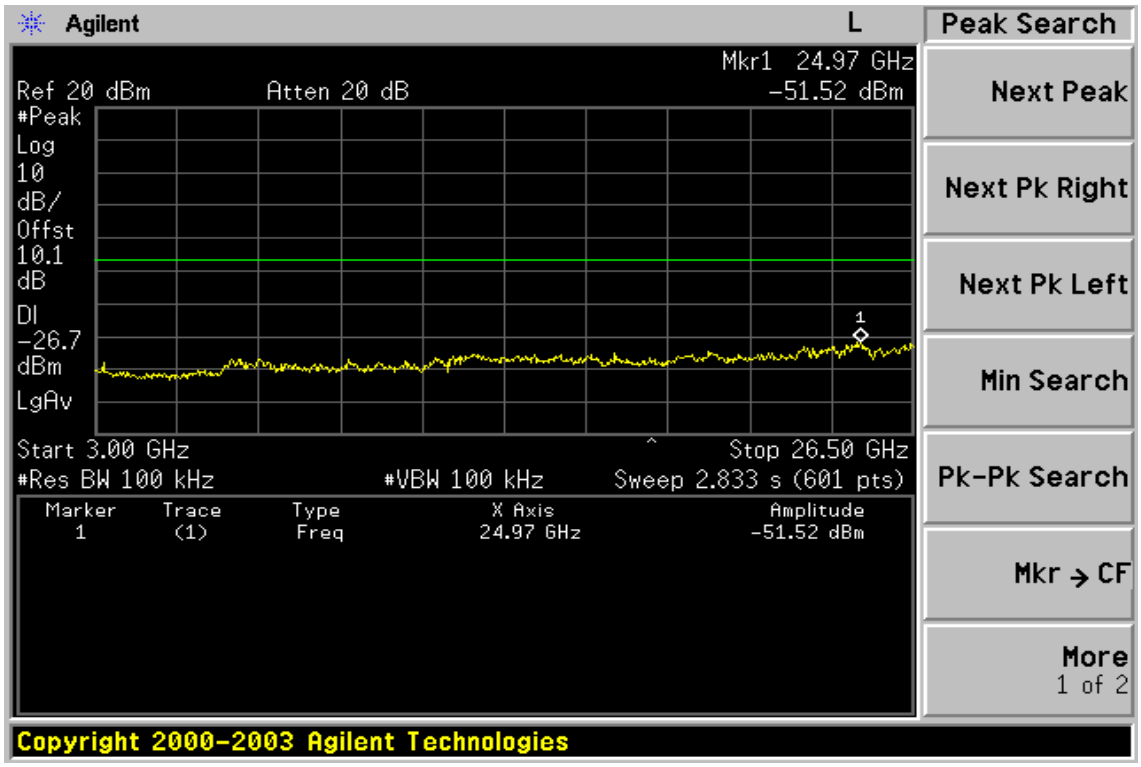


Conducted Spurious Emission Measurement Result (802.11n_40M) 13.5M (Right Antenna)

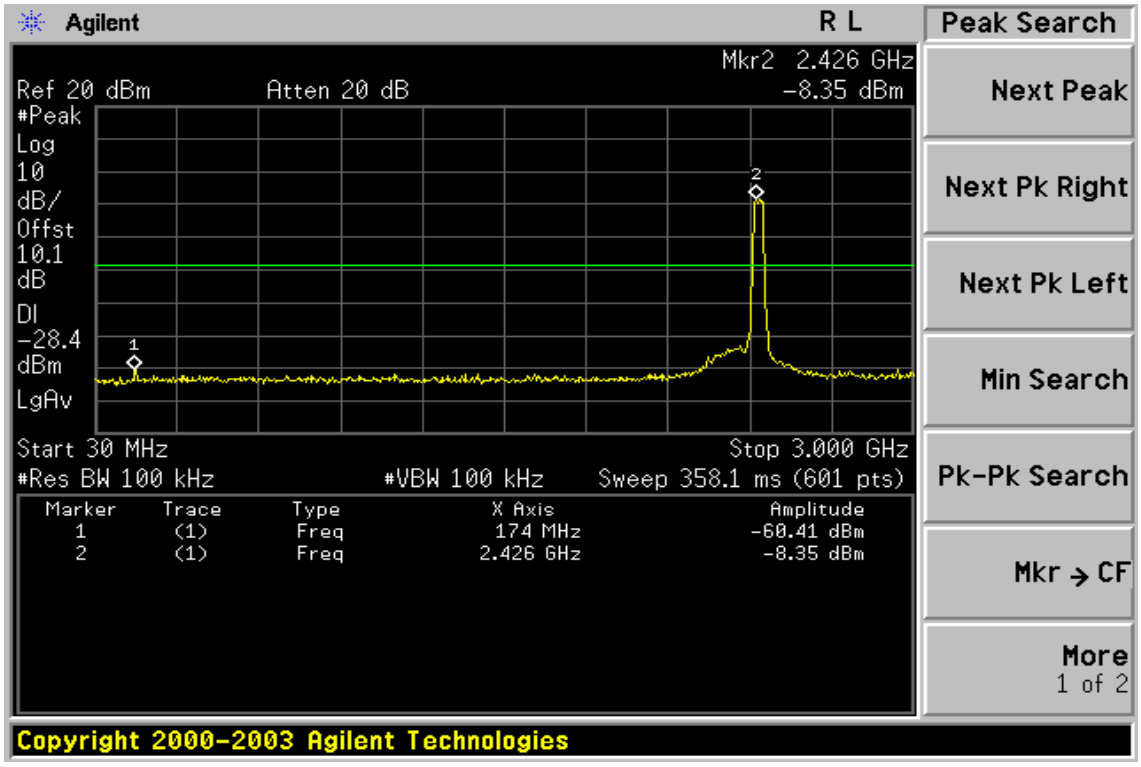
Ch Low 30MHz – 3GHz



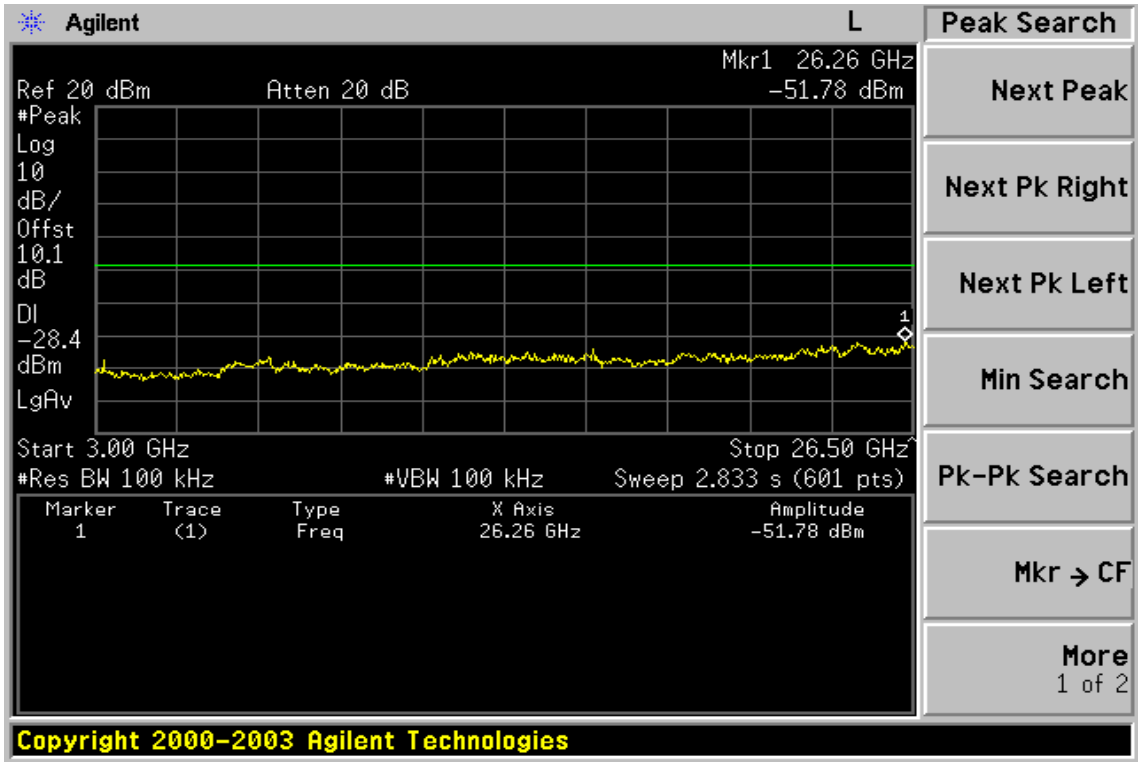
Ch Low 3GHz – 26.5GHz



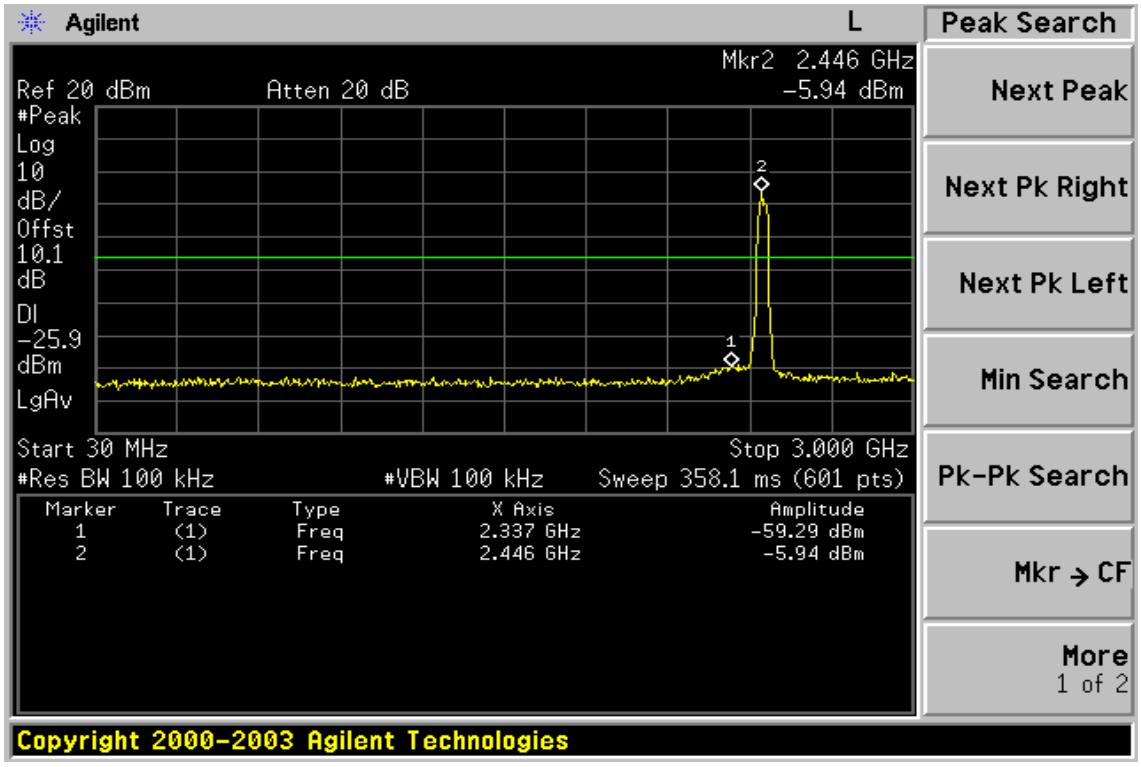
Ch Mid 30MHz – 3GHz



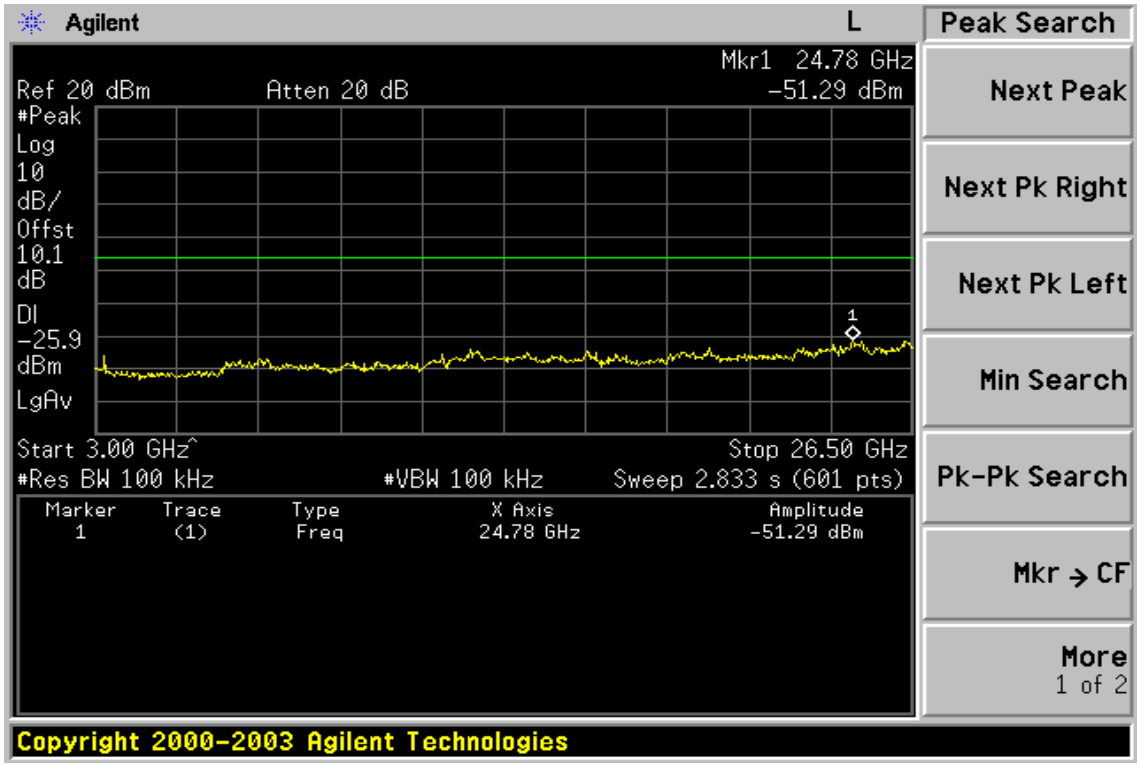
Ch Mid 3GHz – 26.5GHz



Ch High 30MHz – 3GHz

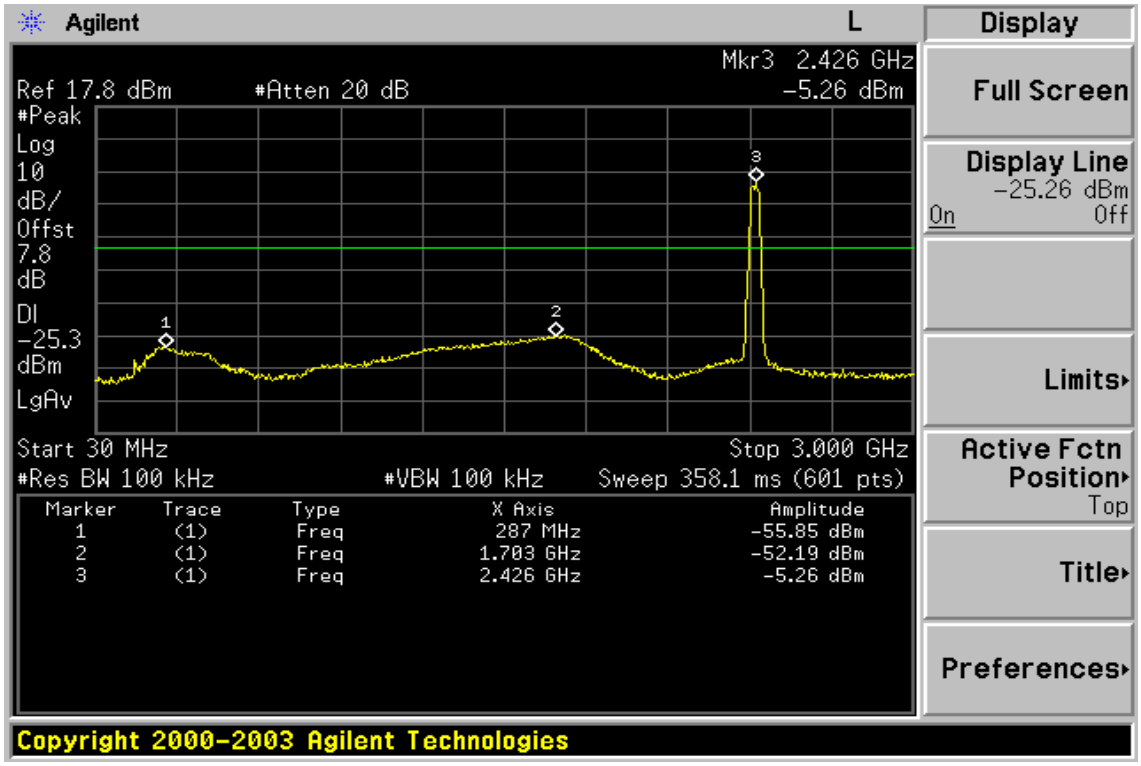


Ch High 3GHz – 26.5GHz

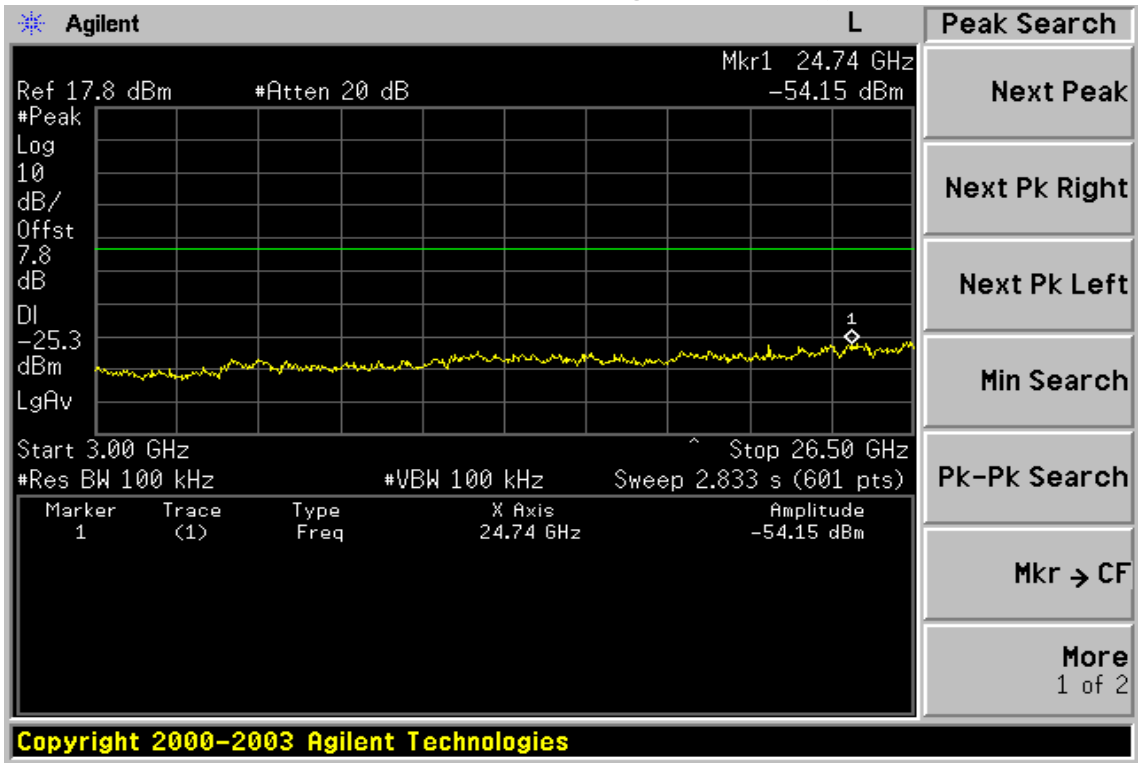


Conducted Spurious Emission Measurement Result (802.11n_40M) 13.5M

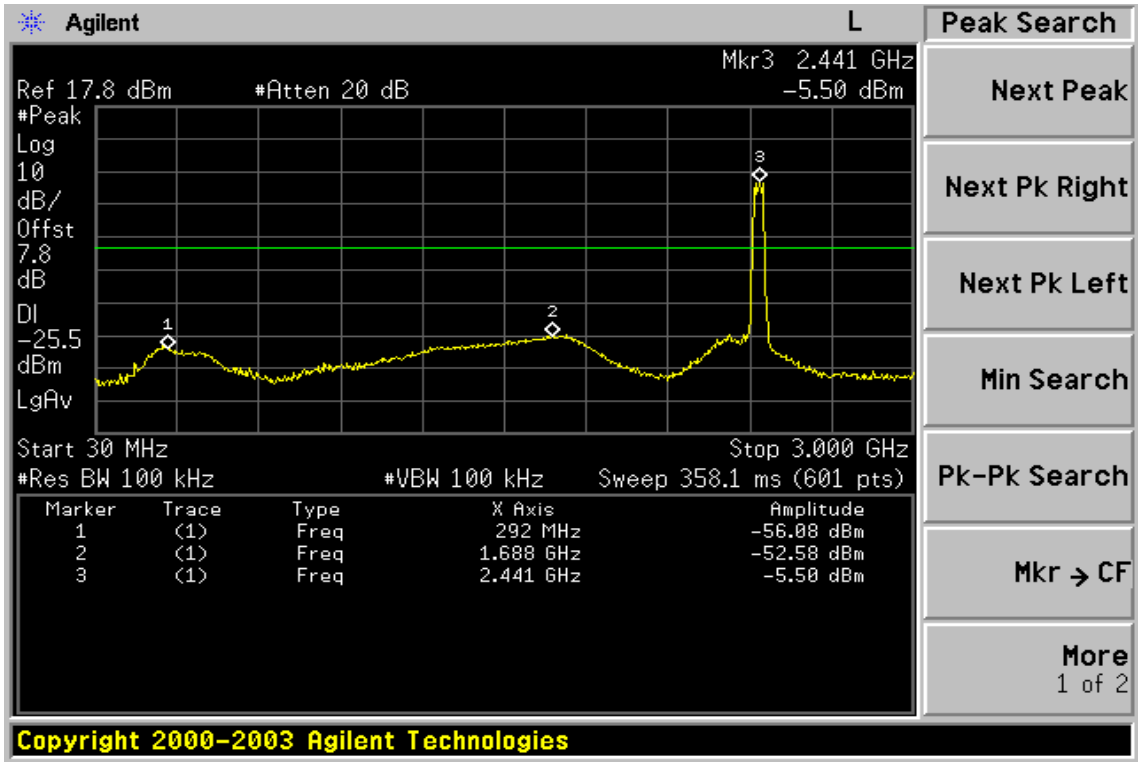
Ch Low 30MHz – 3GHz (Left Antenna + Right Antenna)



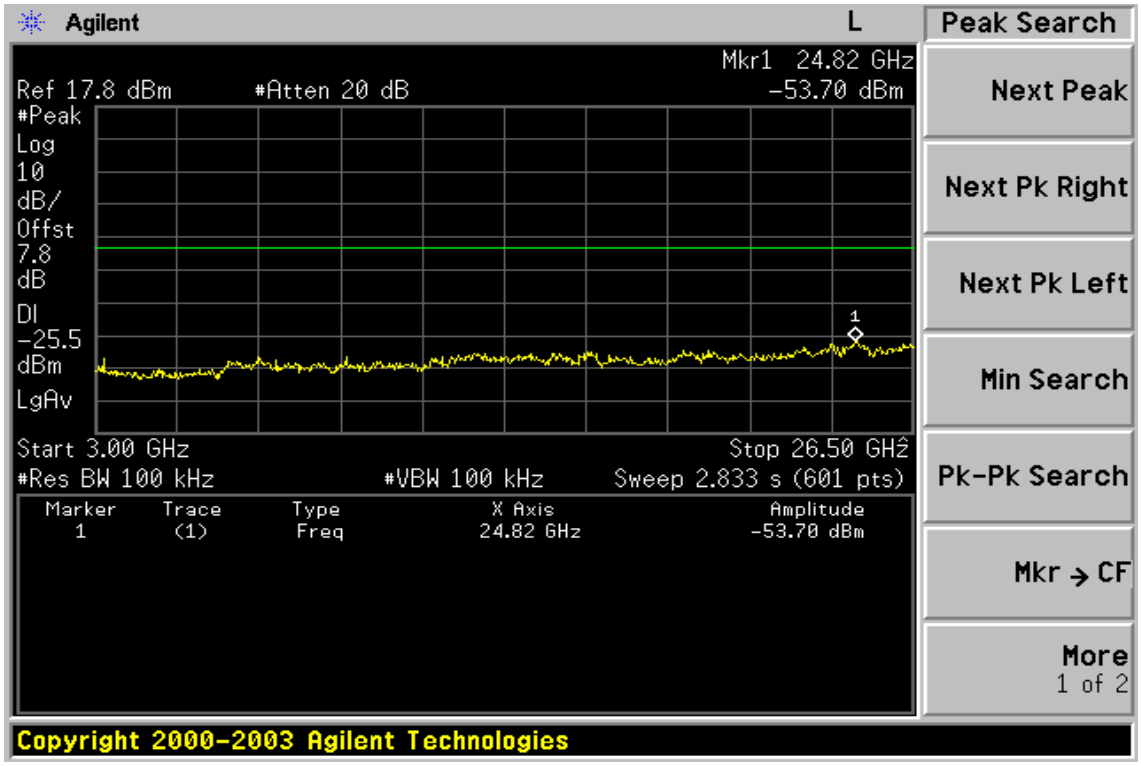
Ch Low 3GHz – 26.5GHz (Left Antenna + Right Antenna)



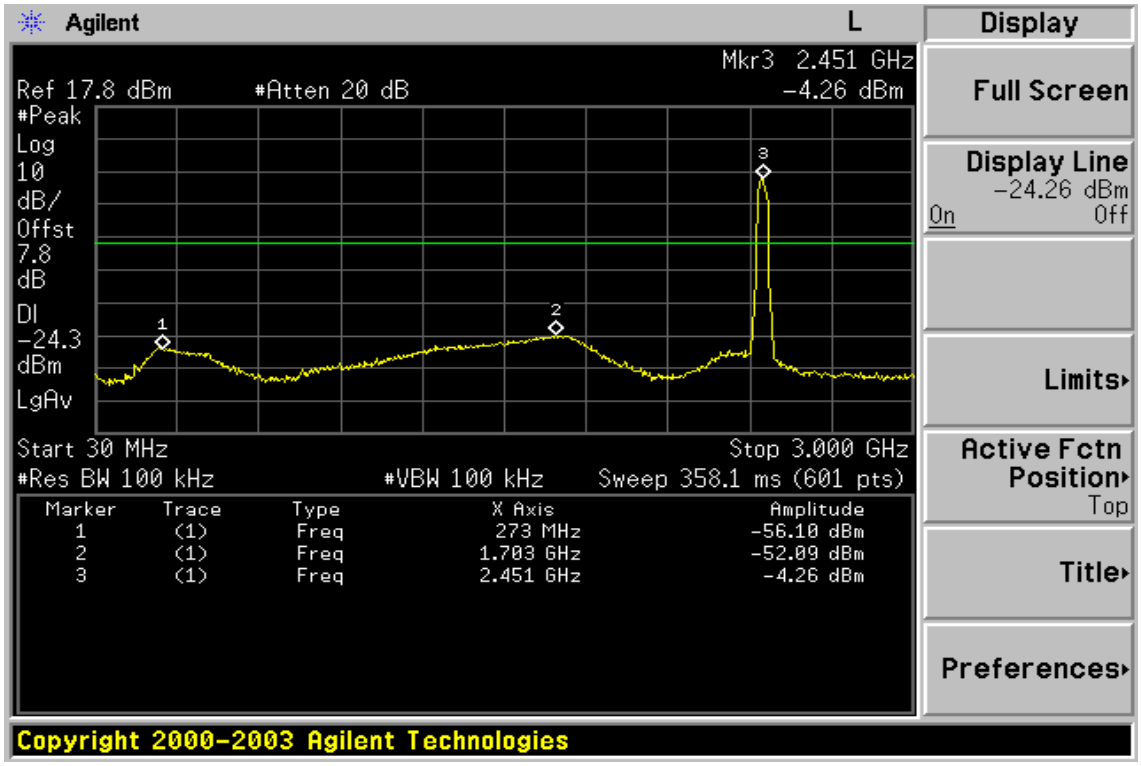
Ch Mid 30MHz – 3GHz (Left Antenna + Right Antenna)



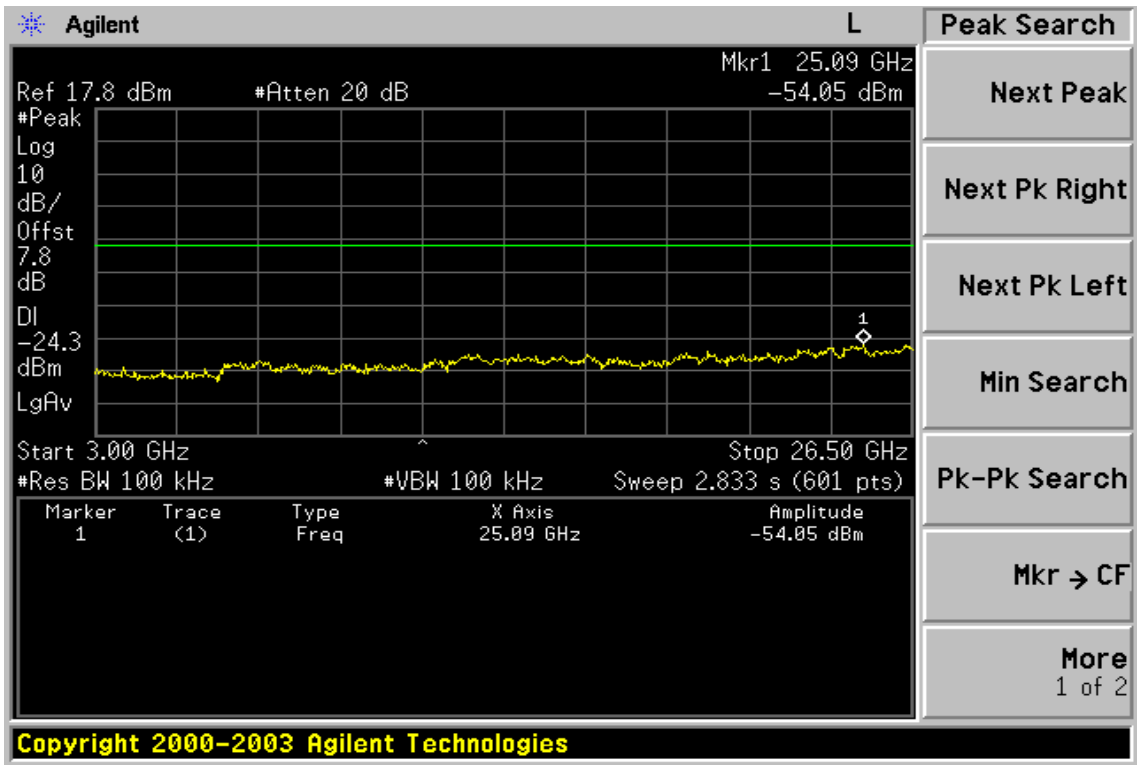
Ch Mid 3GHz – 26.5GHz (Left Antenna + Right Antenna)



Ch High 30MHz – 3GHz (Left Antenna + Right Antenna)



Ch High 3GHz – 26.5GHz (Left Antenna + Right Antenna)



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

Operation Mode	802.11b TX CH Low 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
240.49	V	Peak	48.12	-14.11	34.01	46.00	-11.99
264.74	V	Peak	46.45	-13.59	32.86	46.00	-13.14
390.84	V	Peak	42.09	-10.31	31.78	46.00	-14.22
453.89	V	Peak	44.99	-8.60	36.39	46.00	-9.61
720.64	V	Peak	38.92	-4.73	34.19	46.00	-11.81
31.94	H	Peak	49.18	-14.82	34.36	40.00	-5.64
240.49	H	Peak	45.43	-14.11	31.32	46.00	-14.68
298.69	H	Peak	47.44	-13.13	34.31	46.00	-11.69
366.59	H	Peak	42.76	-11.17	31.59	46.00	-14.41
720.64	H	Peak	37.33	-4.73	32.60	46.00	-13.40

Remark：

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

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

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

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

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

Operation Mode	802.11b TX CH Mid 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
62.98	V	Peak	44.17	-14.85	29.32	40.00	-10.68
240.49	V	Peak	48.29	-14.11	34.18	46.00	-11.82
264.74	V	Peak	49.21	-13.59	35.62	46.00	-10.38
300.63	V	Peak	45.30	-13.11	32.19	46.00	-13.81
453.89	V	Peak	44.99	-8.60	36.39	46.00	-9.61
499.48	V	Peak	40.76	-8.51	32.25	46.00	-13.75
30.00	H	Peak	49.03	-14.97	34.06	40.00	-5.94
240.49	H	Peak	44.73	-14.11	30.62	46.00	-15.38
298.69	H	Peak	43.50	-13.13	30.37	46.00	-15.63
363.68	H	Peak	42.40	-11.27	31.13	46.00	-14.87
431.58	H	Peak	39.36	-9.09	30.27	46.00	-15.73
720.64	H	Peak	39.45	-4.73	34.72	46.00	-11.28

Remark：

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

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

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

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

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

Operation Mode	802.11b TX CH High 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
61.04	V	Peak	45.68	-14.75	30.93	40.00	-9.07
240.49	V	Peak	49.02	-14.11	34.91	46.00	-11.09
259.89	V	Peak	46.54	-13.64	32.90	46.00	-13.10
363.68	V	Peak	43.43	-11.27	32.16	46.00	-13.84
453.89	V	Peak	45.55	-8.60	36.95	46.00	-9.05
720.64	V	Peak	39.42	-4.73	34.69	46.00	-11.31
30.00	H	Peak	50.06	-14.97	35.09	40.00	-4.91
232.73	H	Peak	46.89	-14.37	32.52	46.00	-13.48
266.68	H	Peak	44.84	-13.57	31.27	46.00	-14.73
300.63	H	Peak	44.22	-13.11	31.11	46.00	-14.89
720.64	H	Peak	36.21	-4.73	31.48	46.00	-14.52

Remark：

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

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

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

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

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

Operation Mode	802.11g TX CH Low 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
62.98	V	Peak	44.76	-14.85	29.91	40.00	-10.09
240.49	V	Peak	50.25	-14.11	36.14	46.00	-9.86
266.68	V	Peak	48.09	-13.57	34.52	46.00	-11.48
298.69	V	Peak	45.24	-13.13	32.11	46.00	-13.89
455.83	V	Peak	44.99	-8.61	36.38	46.00	-9.62
720.64	V	Peak	39.96	-4.73	35.23	46.00	-10.77
30.00	H	Peak	48.74	-14.97	33.77	40.00	-6.23
65.89	H	Peak	42.17	-15.09	27.08	40.00	-12.92
240.49	H	Peak	44.93	-14.11	30.82	46.00	-15.18
453.89	H	Peak	39.06	-8.60	30.46	46.00	-15.54
720.64	H	Peak	40.24	-4.73	35.51	46.00	-10.49

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 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
65.89	V	Peak	44.49	-15.09	29.40	40.00	-10.60
240.49	V	Peak	50.45	-14.11	36.34	46.00	-9.66
264.74	V	Peak	48.53	-13.59	34.94	46.00	-11.06
366.59	V	Peak	42.10	-11.17	30.93	46.00	-15.07
455.83	V	Peak	43.20	-8.61	34.59	46.00	-11.41
720.64	V	Peak	38.50	-4.73	33.77	46.00	-12.23
31.94	H	Peak	49.21	-14.82	34.39	40.00	-5.61
240.49	H	Peak	45.56	-14.11	31.45	46.00	-14.55
366.59	H	Peak	41.14	-11.17	29.97	46.00	-16.03
455.83	H	Peak	40.00	-8.61	31.39	46.00	-14.61
720.64	H	Peak	40.91	-4.73	36.18	46.00	-9.82

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 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
62.98	V	Peak	44.45	-14.85	29.60	40.00	-10.40
240.49	V	Peak	49.99	-14.11	35.88	46.00	-10.12
266.68	V	Peak	48.16	-13.57	34.59	46.00	-11.41
366.59	V	Peak	42.13	-11.17	30.96	46.00	-15.04
453.89	V	Peak	43.40	-8.60	34.80	46.00	-11.20
720.64	V	Peak	40.66	-4.73	35.93	46.00	-10.07
30.00	H	Peak	49.50	-14.97	34.53	40.00	-5.47
240.49	H	Peak	46.36	-14.11	32.25	46.00	-13.75
363.68	H	Peak	44.32	-11.27	33.05	46.00	-12.95
455.83	H	Peak	38.83	-8.61	30.22	46.00	-15.78
720.64	H	Peak	41.27	-4.73	36.54	46.00	-9.46

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M TX CH Low 6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
61.04	V	Peak	44.79	-14.75	30.04	40.00	-9.96
240.49	V	Peak	50.14	-14.11	36.03	46.00	-9.97
266.68	V	Peak	48.62	-13.59	35.03	46.00	-10.97
363.68	V	Peak	44.36	-11.27	33.09	46.00	-12.91
453.89	V	Peak	44.55	-8.60	35.95	46.00	-10.05
720.64	V	Peak	42.24	-4.73	37.51	46.00	-8.49
31.94	H	Peak	49.74	-14.82	34.92	40.00	-5.08
240.49	H	Peak	46.96	-14.11	32.85	46.00	-13.15
298.69	H	Peak	45.89	-13.13	32.76	46.00	-13.24
366.59	H	Peak	41.18	-11.17	30.01	46.00	-15.99
431.58	H	Peak	39.70	-9.09	30.61	46.00	-15.39
720.64	H	Peak	41.69	-4.73	36.96	46.00	-9.04

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M TX CH Mid 6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
96.93	V	Peak	45.32	-17.16	28.16	43.50	-15.34
240.49	V	Peak	49.25	-14.11	35.14	46.00	-10.86
264.74	V	Peak	47.59	-13.59	34.00	46.00	-12.00
455.83	V	Peak	45.28	-8.61	36.67	46.00	-9.33
499.48	V	Peak	41.12	-8.51	32.61	46.00	-13.39
720.64	V	Peak	42.17	-4.73	37.44	46.00	-8.56
30.00	H	Peak	49.95	-14.97	34.98	40.00	-5.02
240.49	H	Peak	45.53	-14.11	31.42	46.00	-14.58
298.69	H	Peak	45.78	-13.13	32.65	46.00	-13.35
366.59	H	Peak	43.11	-11.17	31.94	46.00	-14.06
453.89	H	Peak	40.01	-8.60	31.41	46.00	-14.59
720.64	H	Peak	41.16	-4.73	36.43	46.00	-9.57

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M TX CH High 6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
62.98	V	Peak	43.99	-14.85	29.14	40.00	-10.86
240.49	V	Peak	48.89	-14.11	34.78	46.00	-11.22
266.68	V	Peak	46.26	-13.57	32.69	46.00	-13.31
366.59	V	Peak	41.39	-11.17	30.22	46.00	-15.78
453.89	V	Peak	44.29	-8.60	35.69	46.00	-10.31
720.64	V	Peak	41.27	-4.73	36.54	46.00	-9.46
30.00	H	Peak	49.94	-14.97	34.97	40.00	-5.03
240.49	H	Peak	45.43	-14.11	31.32	46.00	-14.68
720.64	H	Peak	41.44	-4.73	36.71	46.00	-9.29

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M TX CH Low 13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2422MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
61.04	V	Peak	43.08	-14.75	28.33	40.00	-11.67
240.49	V	Peak	48.47	-14.11	34.36	46.00	-11.64
259.89	V	Peak	46.13	-13.64	32.49	46.00	-13.51
366.59	V	Peak	42.56	-11.17	31.39	46.00	-14.61
453.89	V	Peak	45.00	-8.60	36.40	46.00	-9.60
720.64	V	Peak	42.82	-4.73	38.09	46.00	-7.91
30.00	H	Peak	49.53	-14.97	34.56	40.00	-5.44
240.49	H	Peak	46.04	-14.11	31.93	46.00	-14.07
300.63	H	Peak	44.59	-13.11	31.48	46.00	-14.52
366.59	H	Peak	42.10	-11.17	30.93	46.00	-15.07
455.83	H	Peak	39.10	-8.61	30.49	46.00	-15.51
720.64	H	Peak	41.34	-4.73	36.61	46.00	-9.39

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M TX CH Mid 13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
61.04	V	Peak	43.29	-14.75	28.54	40.00	-11.46
240.49	V	Peak	48.52	-14.11	34.41	46.00	-11.59
266.68	V	Peak	47.78	-13.57	34.21	46.00	-11.79
337.49	V	Peak	42.29	-12.05	30.24	46.00	-15.76
455.83	V	Peak	43.53	-8.61	34.92	46.00	-11.08
720.64	V	Peak	41.69	-4.73	36.96	46.00	-9.04
30.00	H	Peak	50.27	-14.97	35.30	40.00	-4.70
240.49	H	Peak	46.46	-14.11	32.35	46.00	-13.65
298.69	H	Peak	47.73	-13.13	34.60	46.00	-11.40
366.59	H	Peak	42.31	-11.17	31.14	46.00	-14.86
455.83	H	Peak	40.13	-8.61	31.52	46.00	-14.48
720.64	H	Peak	41.53	-4.73	36.80	46.00	-9.20

Remark：

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

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

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

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

Radiated Spurious Emission Measurement Result (below 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M TX CH High 13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2452MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
61.04	V	Peak	44.80	-14.75	30.05	40.00	-9.95
240.49	V	Peak	50.81	-14.11	36.70	46.00	-9.30
266.68	V	Peak	48.42	-13.57	34.85	46.00	-11.15
366.59	V	Peak	41.70	-11.17	30.53	46.00	-15.47
453.89	V	Peak	44.03	-8.60	35.43	46.00	-10.57
720.64	V	Peak	40.11	-4.73	35.38	46.00	-10.62
58.13	H	Peak	42.67	-14.66	28.01	40.00	-11.99
240.49	H	Peak	45.84	-14.11	31.73	46.00	-14.27
300.63	H	Peak	43.63	-13.11	30.52	46.00	-15.48
363.68	H	Peak	42.44	-11.27	31.17	46.00	-14.83
453.89	H	Peak	40.36	-8.60	31.76	46.00	-14.24
720.64	H	Peak	41.80	-4.73	37.07	46.00	-8.93

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 (above 1GHz) (802.11b)

Operation Mode	802.11b TX CH Low 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	23 ℃	Pol	Ver.
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4824.00	36.11	--	6.02	42.13	--	75.00	54.00	-11.87	Peak
7236.00	----								
9648.00	----								
12060.00	----								
14472.00	----								
16884.00	----								
19296.00	----								
21708.00	----								
24120.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11b TX CH Low 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
4824.00	----							
7236.00	----							
9648.00	----							
12060.00	----							
14472.00	----							
16884.00	----							
19296.00	----							
21708.00	----							
24120.00	----							

Remark：

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

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

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

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

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

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

Operation Mode	802.11b TX CH Mid 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	39.53	--	-3.73	35.80	--	74.00	54.00	-18.20	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11b TX CH Mid 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
4874.00	----							
7311.00	----							
9748.00	----							
12185.00	----							
14622.00	----							
17059.00	----							
19496.00	----							
21933.00	----							
24370.00	----							

Remark：

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

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

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

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

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

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

Operation Mode	802.11b TX CH High 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1448.50	39.58	--	-6.14	33.44	--	74.00	54.00	-20.56	Peak
1825.50	39.23	--	-4.32	34.91	--	74.00	54.00	-19.09	Peak
1936.00	40.34	--	-3.73	36.61	--	74.00	54.00	-17.39	Peak
4924.00	37.52	--	6.32	43.84	--	75.00	54.00	-10.16	Peak
7386.00	----								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11b TX CH High 1Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4924.00	39.95	--	6.32	46.27	--	75.00	54.00	-7.73	Peak
7386.00	---								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH Low 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	25 ℃	Pol	Ver.
Humidity	60 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1448.50	38.53	--	-6.14	32.39	--	74.00	54.00	-21.61	Peak
1936.00	38.04	--	-3.73	34.31	--	74.00	54.00	-19.69	Peak
4824.00	----								
7236.00	----								
9648.00	----								
12060.00	----								
14472.00	----								
16884.00	----								
19296.00	----								
21708.00	----								
24120.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH Low 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
4824.00	----							
7236.00	----							
9648.00	----							
12060.00	----							
14472.00	----							
16884.00	----							
19296.00	----							
21708.00	----							
24120.00	----							

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH Mid 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	39.89	--	-3.73	36.16	--	74.00	54.00	-17.84	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH Mid 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
2540.50	37.26	--	-0.72	36.54	--	74.00	54.00	-17.46	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH High 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	23 ℃	Pol	Ver
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	39.30	--	-3.73	35.57	--	74.00	54.00	-18.43	Peak
4924.00	----								
7386.00	----								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

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

Operation Mode	802.11g TX CH High 6Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz	Test By	Jason
Temperature	23 ℃	Pol	Hor
Humidity	54 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
2553.50	38.78	--	-0.69	38.09	--	74.00	54.00	-15.91	Peak
4924.00	----								
7386.00	---								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH Low	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz			Test By	Jason
Temperature	25 ℃			Pol	Ver.
Humidity	60 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	38.10	--	-3.73	34.37	--	75.00	54.00	-19.63	Peak
4824.00	----								
7236.00	----								
9648.00	----								
12060.00	----								
14472.00	----								
16884.00	----								
19296.00	----								
21708.00	----								
24120.00	----								

Remark :

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH Low	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2412MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1578.50	38.84	--	-5.52	33.32	--	75.00	54.00	-20.68	Peak
2248.00	37.36	--	-2.15	35.21	--	75.00	54.00	-18.79	Peak
4824.00	----								
7236.00	----								
9648.00	----								
12060.00	----								
14472.00	----								
16884.00	----								
19296.00	----								
21708.00	----								
24120.00	----								

Remark :

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH Mid	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz			Test By	Jason
Temperature	23 ℃			Pol	Ver
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1448.50	39.13	--	-6.14	32.99	--	74.00	54.00	-21.01	Peak
1825.50	38.58	--	-4.32	34.26	--	74.00	54.00	-19.74	Peak
2618.50	37.75	--	-0.52	37.23	--	74.00	54.00	-16.77	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH Mid	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
3255.50	37.91	--	1.23	39.14	--	74.00	54.00	-14.86	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH High	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz			Test By	Jason
Temperature	23 ℃			Pol	Ver
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	38.93	--	-3.73	35.20	--	74.00	54.00	-18.80	Peak
4924.00	----								
7386.00	----								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_20M)

Operation Mode	802.11n 20M	TX CH High	6.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2462MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
2553.50	37.87	--	-0.69	37.18	--	74.00	54.00	-16.82	Peak
3288.00	37.69	--	1.36	39.05	--	74.00	54.00	-14.95	Peak
4924.00	---								
7386.00	---								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH Low	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2422MHz			Test By	Jason
Temperature	25 ℃			Pol	Ver.
Humidity	60 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1448.50	38.25	--	-6.14	32.11	--	74.00	54.00	-21.89	Peak
1936.00	38.20	--	-3.73	34.47	--	74.00	54.00	-19.53	Peak
4824.00	----								
7236.00	----								
9648.00	----								
12060.00	----								
14472.00	----								
16884.00	----								
19296.00	----								
21708.00	----								
24120.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH Low	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2422MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
4824.00	----							
7236.00	----							
9648.00	----							
12060.00	----							
14472.00	----							
16884.00	----							
19296.00	----							
21708.00	----							
24120.00	----							

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH Mid	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz			Test By	Jason
Temperature	23 ℃			Pol	Ver
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1448.50	39.22	--	-6.14	33.08	--	74.00	54.00	-20.92	Peak
1936.00	38.70	--	-3.73	34.97	--	74.00	54.00	-19.03	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH Mid	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2437MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
3255.50	38.24	--	1.23	39.47	--	74.00	54.00	-14.53	Peak
4874.00	----								
7311.00	----								
9748.00	----								
12185.00	----								
14622.00	----								
17059.00	----								
19496.00	----								
21933.00	----								
24370.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH High	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2452MHz			Test By	Jason
Temperature	23 ℃			Pol	Ver
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
1936.00	39.40	--	-3.73	35.67	--	74.00	54.00	-18.33	Peak
4924.00	----								
7386.00	----								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

Radiated Spurious Emission Measurement Result (above 1GHz) (802.11n_40M)

Operation Mode	802.11n 40M	TX CH High	13.5Mbps	Test Date	Jan. 22, 2008
Fundamental Frequency	2452MHz			Test By	Jason
Temperature	23 ℃			Pol	Hor
Humidity	54 %				

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
2248.00	37.02	--	-2.15	34.87	--	74.00	54.00	-19.13	Peak
2573.00	38.44	--	-0.65	37.79	--	74.00	54.00	-16.21	Peak
3288.00	38.60	--	1.36	39.96	--	74.00	54.00	-14.04	Peak
4924.00	----								
7386.00	---								
9848.00	----								
12310.00	----								
14772.00	----								
17234.00	----								
19696.00	----								
22158.00	----								
24620.00	----								

Remark：

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

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

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

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

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

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.

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	04/27/2007	04/27/2008
Spectrum Analyzer	Agilent	E7405A	US41160416	07/04/2007	07/03/2008
Splitter	Agilent	11667B	N/A	09/23/2007	09/22/2008
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S6W5	N/A	01/05/2008	01/04/2009

10.4. Measurement Result

802.11b, 1M (Left Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-18.60	0.00	-18.60	8
2437	-17.97	0.00	-17.97	8
2462	-18.96	0.00	-18.96	8

Note: offset 10.1 dB for insertion loss

802.11g, 6M (Left Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-15.04	0.00	-15.04	8
2437	-16.21	0.00	-16.21	8
2462	-16.01	0.00	-16.01	8

Note: offset 10.1 dB for insertion loss

802.11n_20M, 6.5M (Left Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-21.51	0.00	-21.51	8
2437	-20.75	0.00	-20.75	8
2462	-19.52	0.00	-19.52	8

Note: offset 0.1 dB for insertion loss

802.11n_20M, 6.5M (Right Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-12.60	0.00	-12.60	8
2437	-9.58	0.00	-9.58	8
2462	-12.77	0.00	-12.77	8

Note: offset 0.1 dB for insertion loss

802.11n_20M, 6.5M (Left Antenna + Right Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2412	-10.65	0.00	-10.65	8
2437	-7.48	0.00	-7.48	8
2462	-9.79	0.00	-9.79	8

Note: offset 7.8 dB for insertion loss

802.11n_40M, 13.5M (Left Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2422	-21.75	0.00	-21.75	8
2437	-14.73	0.00	-14.73	8
2452	-23.14	0.00	-23.14	8

Note: offset 0.1 dB for insertion loss

802.11n_40M, 13.5M (Right Antenna)

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2422	-22.90	0.00	-22.90	8
2437	-12.43	0.00	-12.43	8
2452	-17.77	0.00	-17.77	8

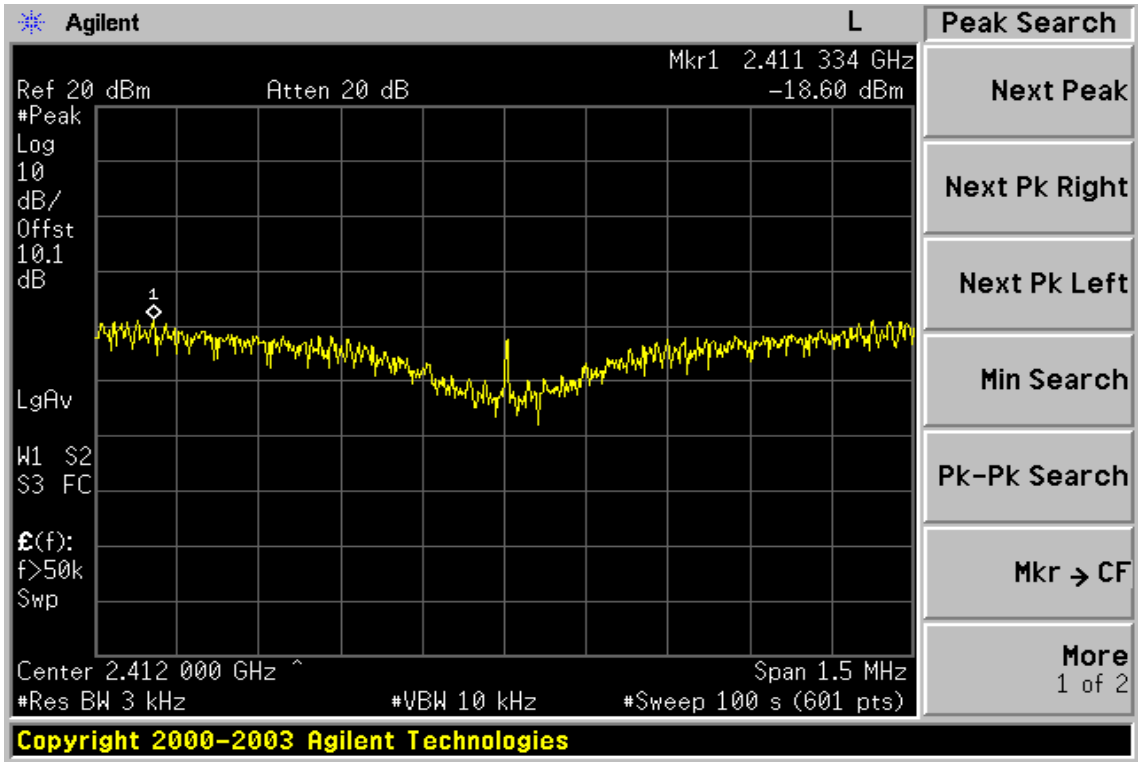
Note: offset 0.1 dB for insertion loss

802.11n_40M, 13.5M (Left Antenna + Right Antenna)

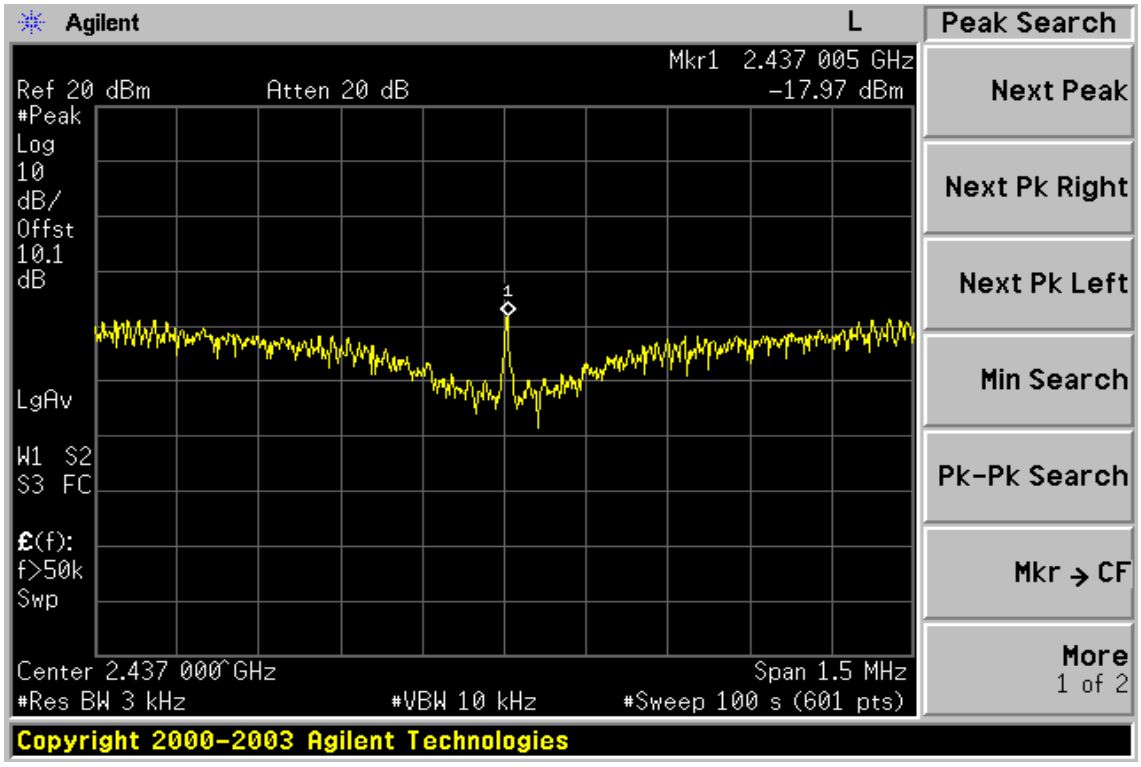
CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
2422	-20.43	0.00	-20.43	8
2437	-10.17	0.00	-10.17	8
2452	-15.93	0.00	-15.93	8

Note: offset 7.8 dB for insertion loss

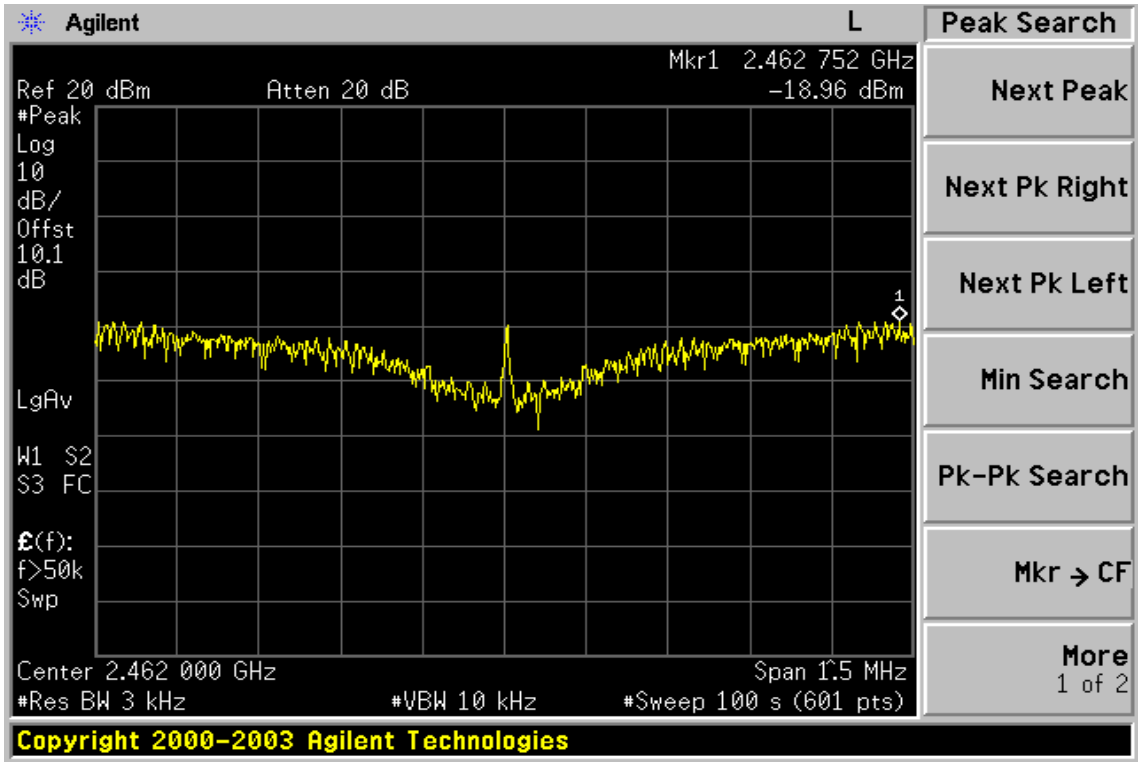
802.11b, 1M Power Spectral Density Test Plot (CH-Low) (Left Antenna)



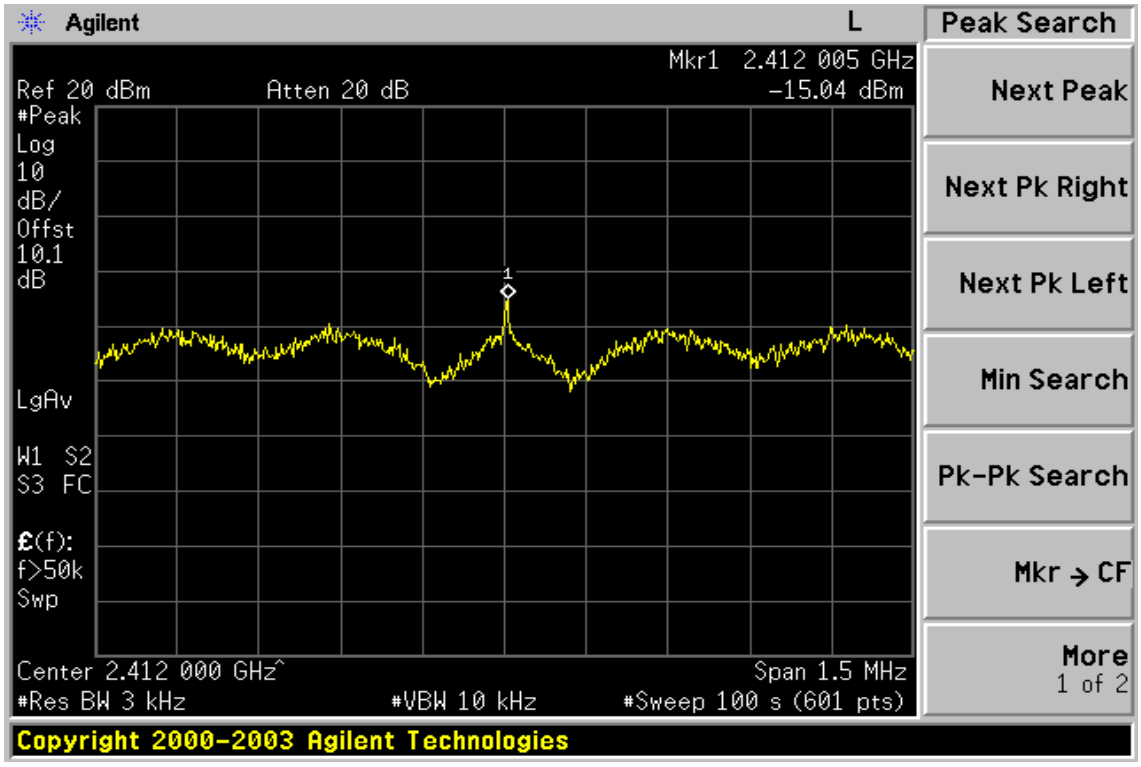
Power Spectral Density Test Plot (CH-Mid)



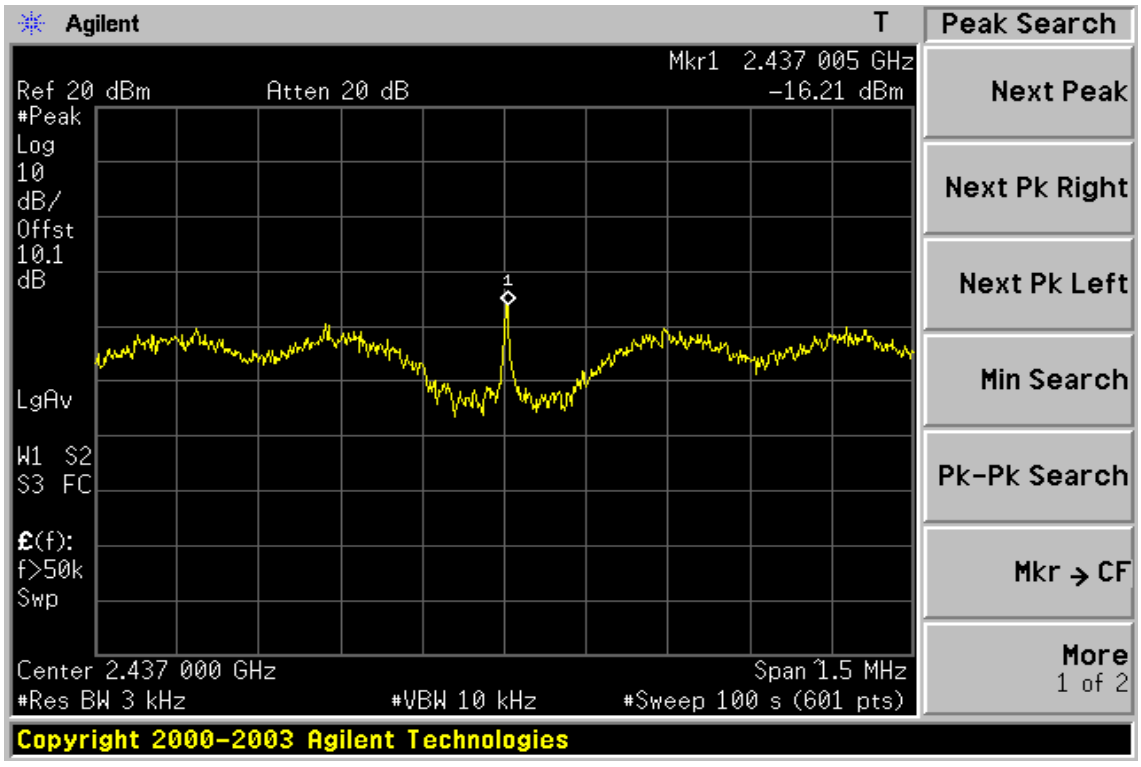
Power Spectral Density Test Plot (CH-High)



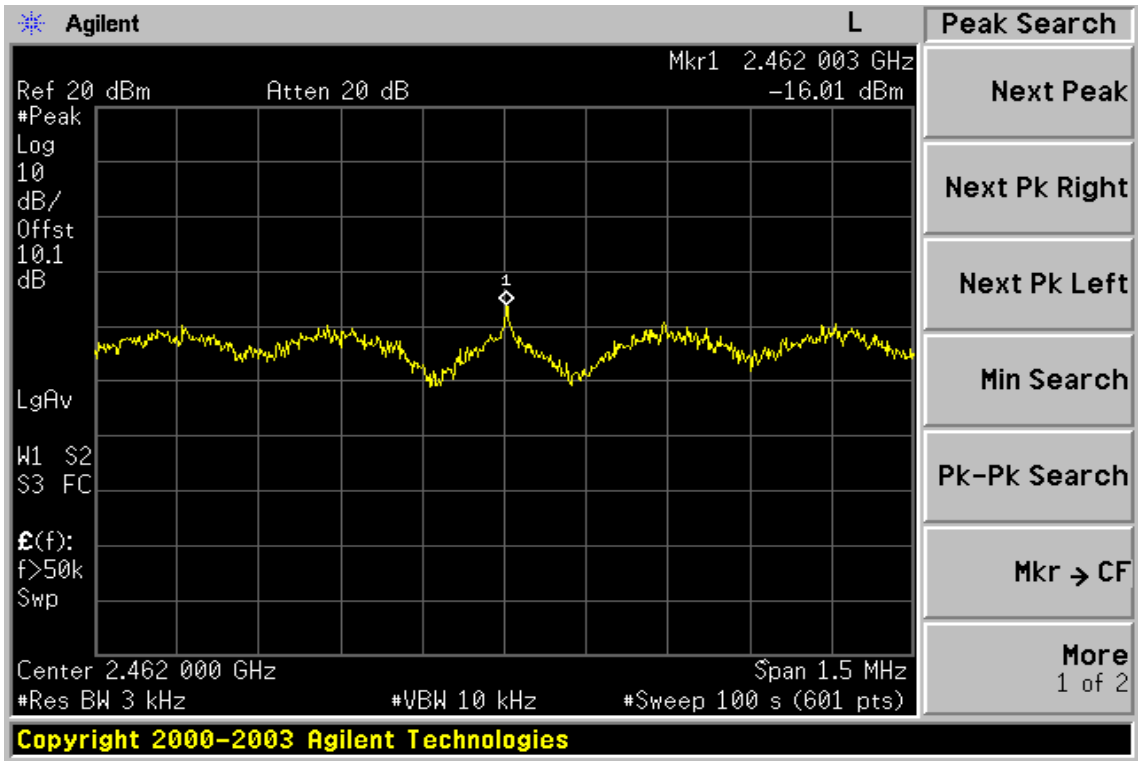
802.11g, 6M Power Spectral Density Test Plot (CH-Low) (Left Antenna)



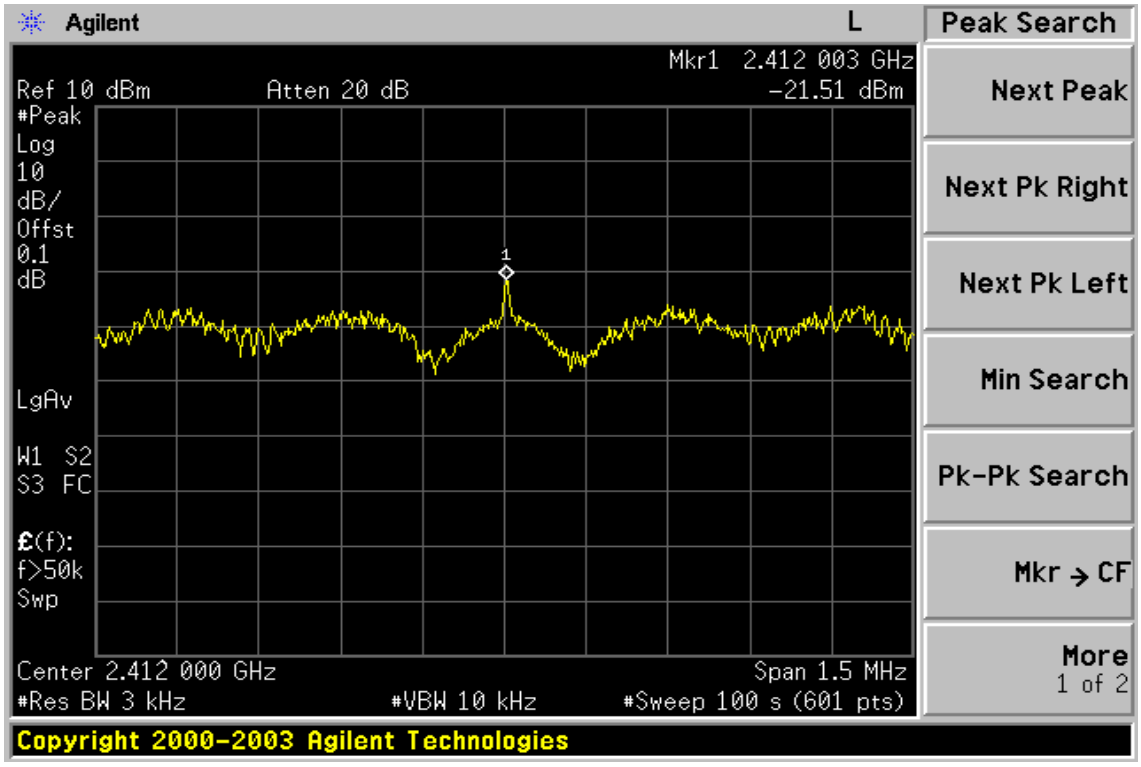
Power Spectral Density Test Plot (CH-Mid)



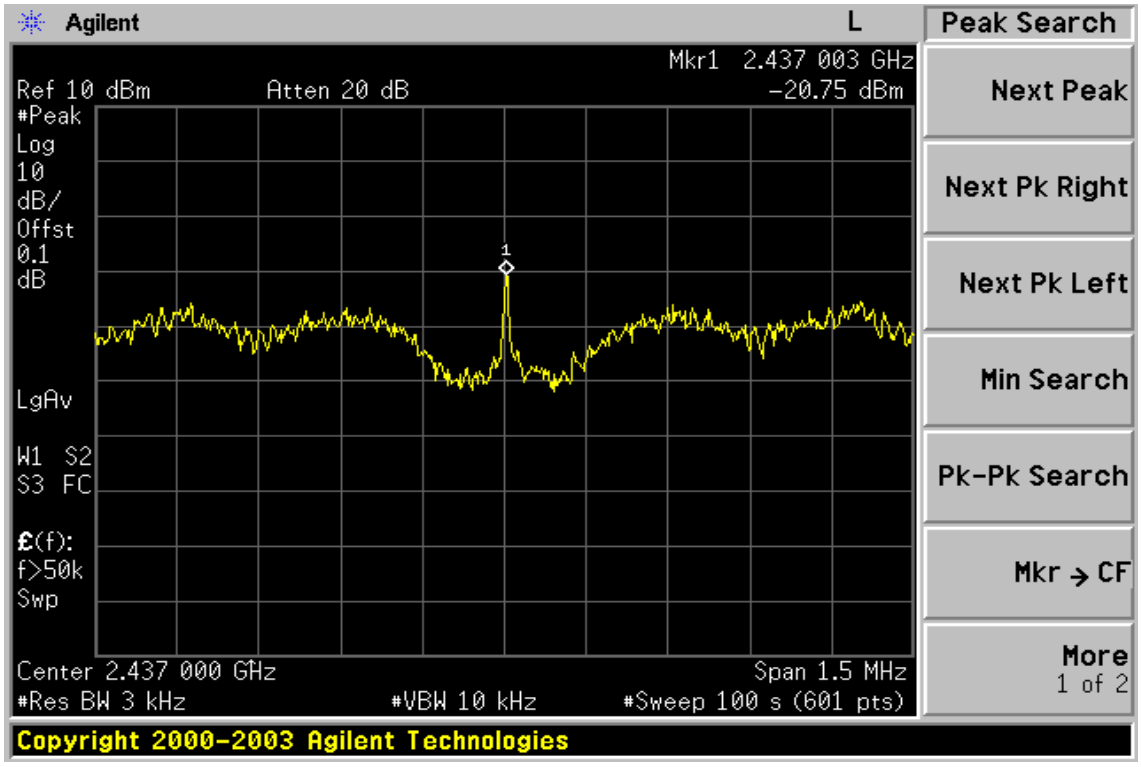
Power Spectral Density Test Plot (CH-High)



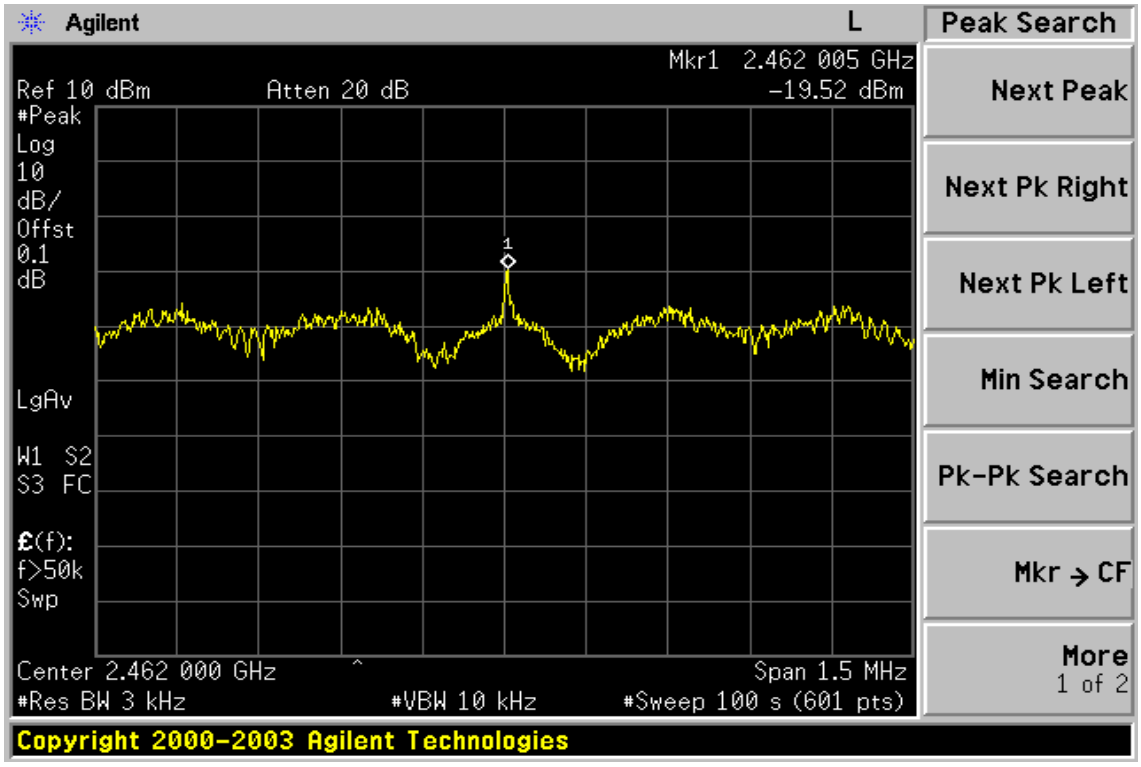
802.11n_20M, 6.5M Power Spectral Density Test Plot (CH-Low) (Left Antenna)



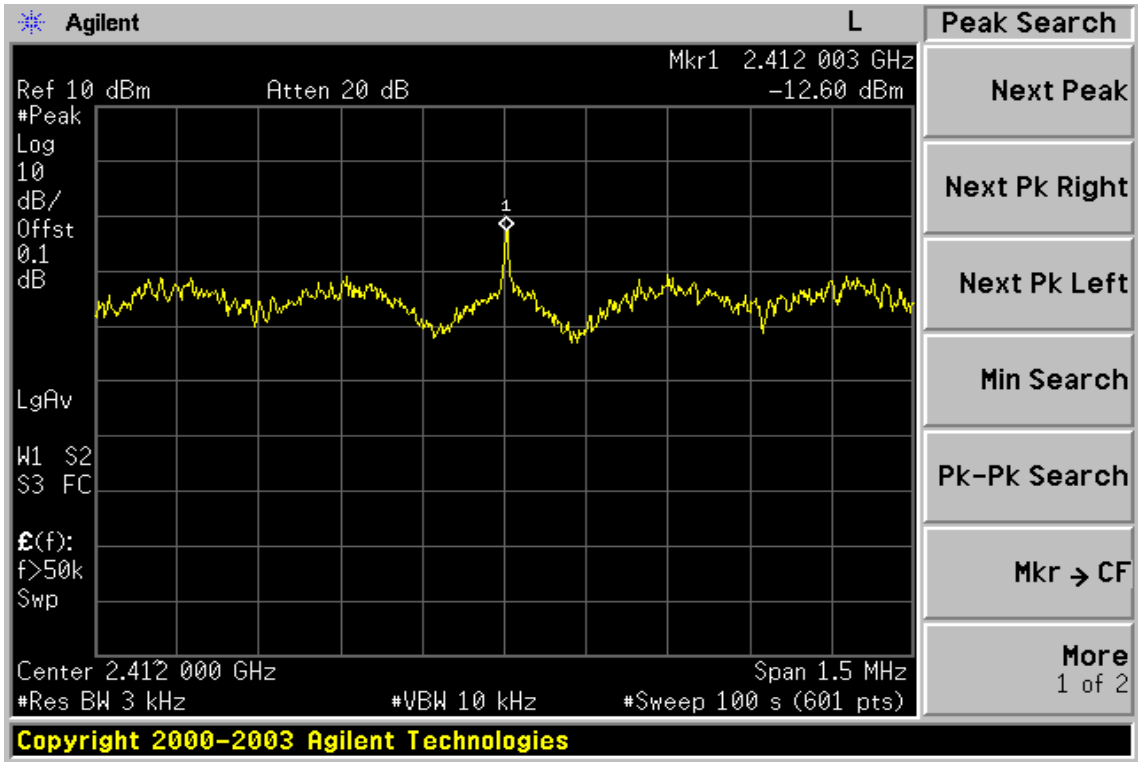
Power Spectral Density Test Plot (CH-Mid)



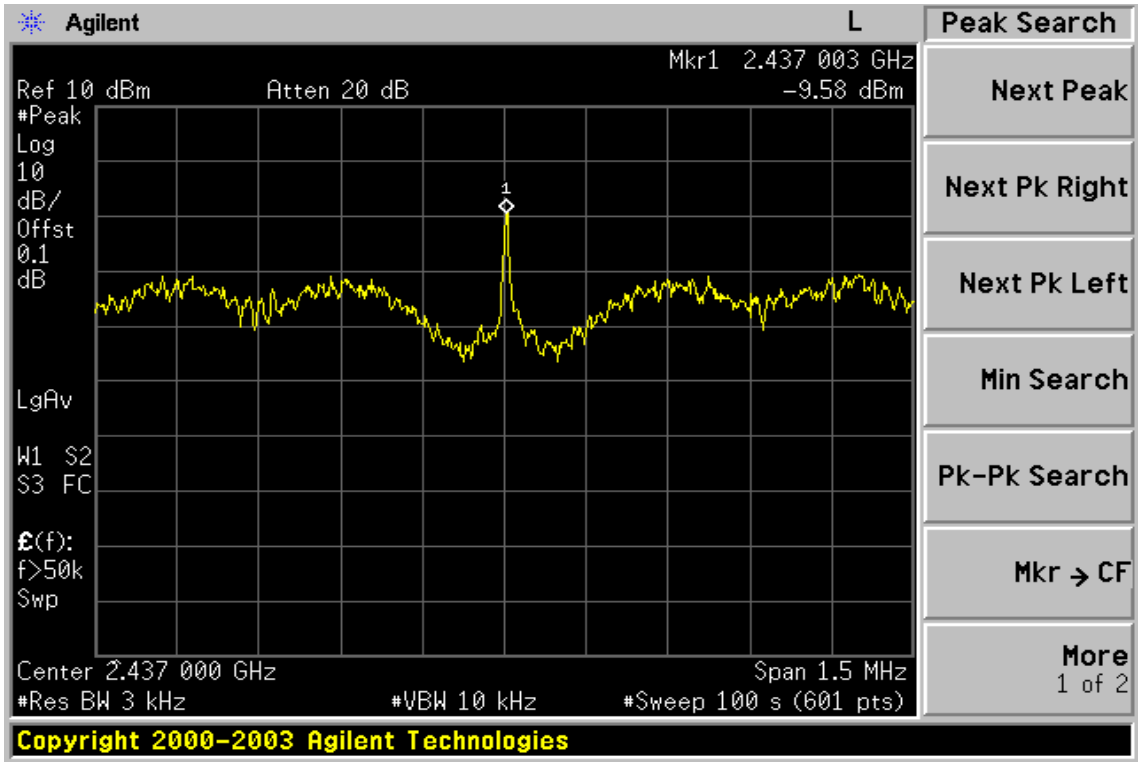
Power Spectral Density Test Plot (CH-High)



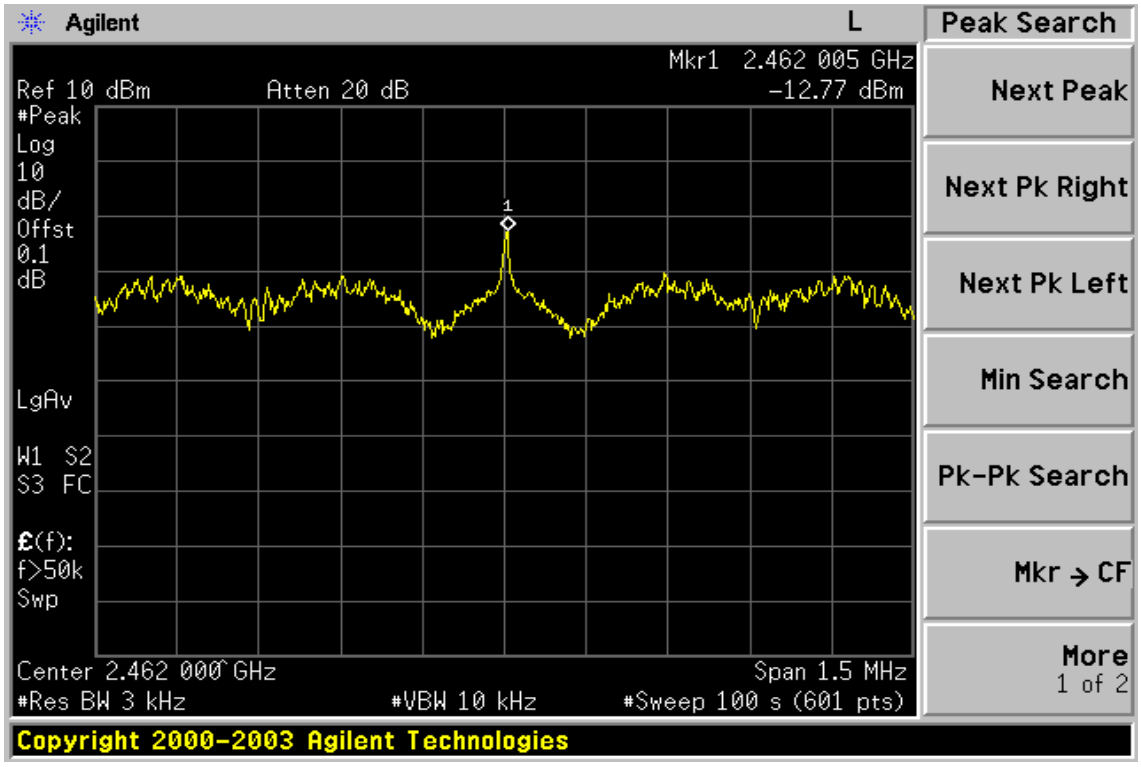
802.11n_20M, 6.5M Power Spectral Density Test Plot (CH-Low) (Right Antenna)



Power Spectral Density Test Plot (CH-Mid)

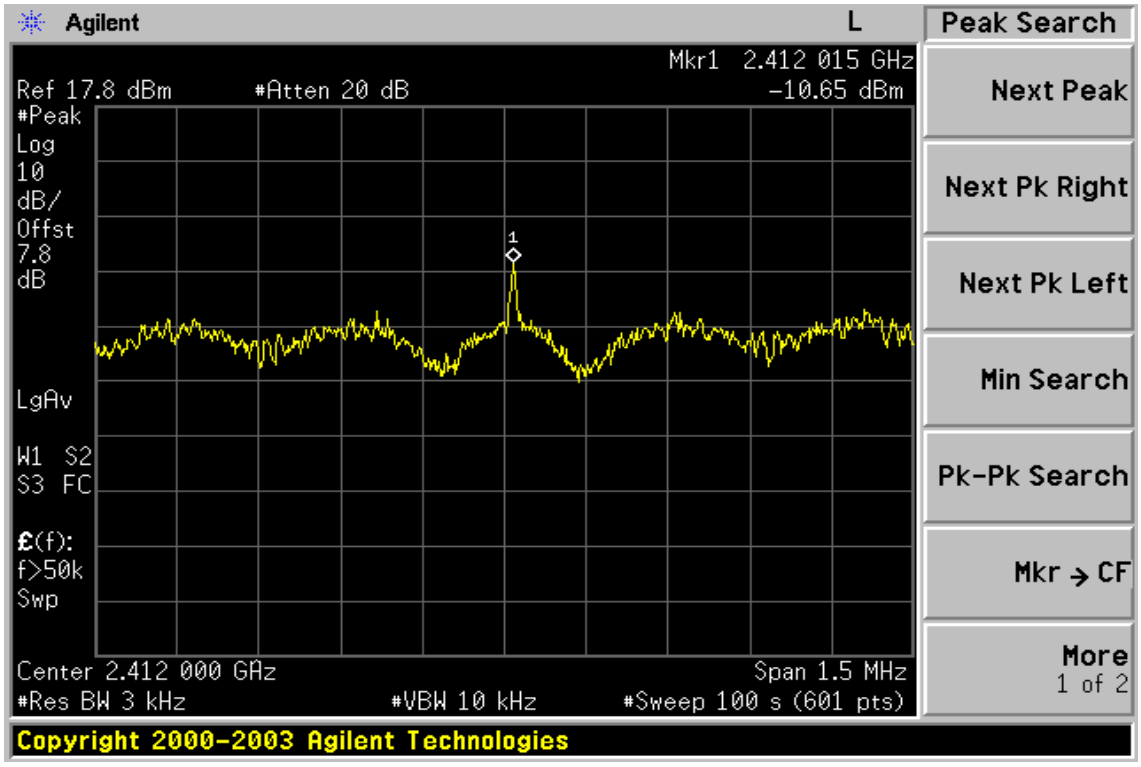


Power Spectral Density Test Plot (CH-High)

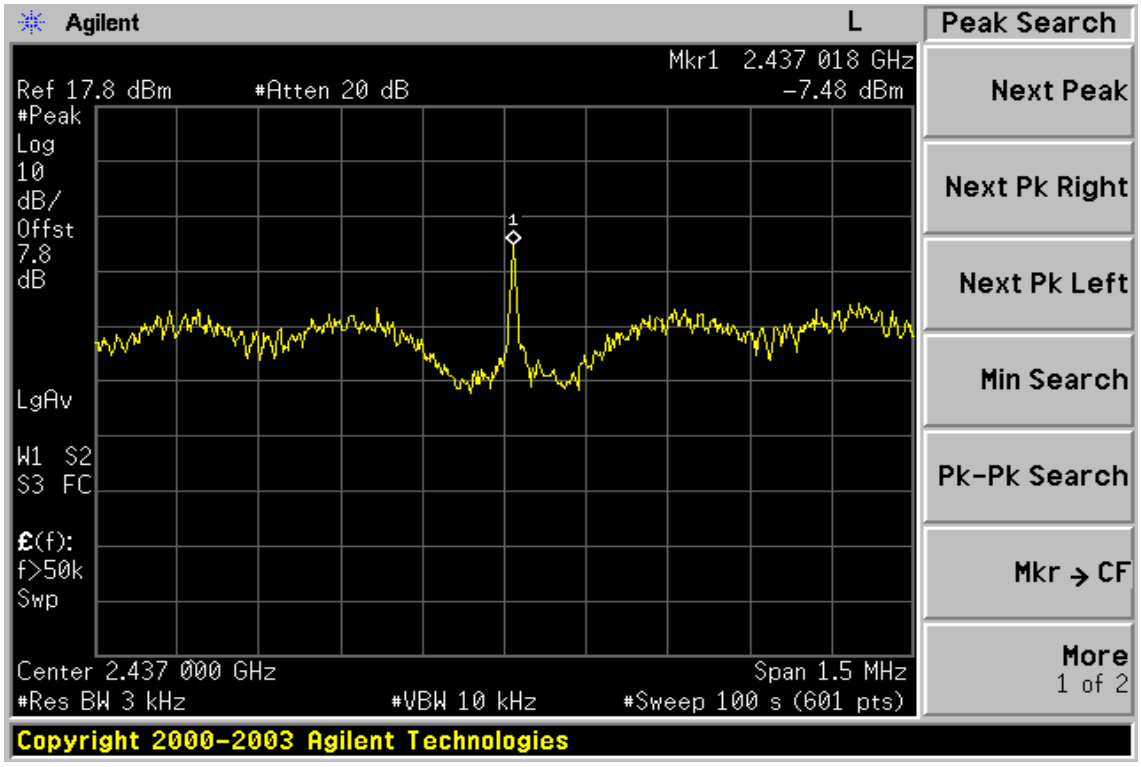


802.11n_20M, 6.5M (Left Antenna + Right Antenna)

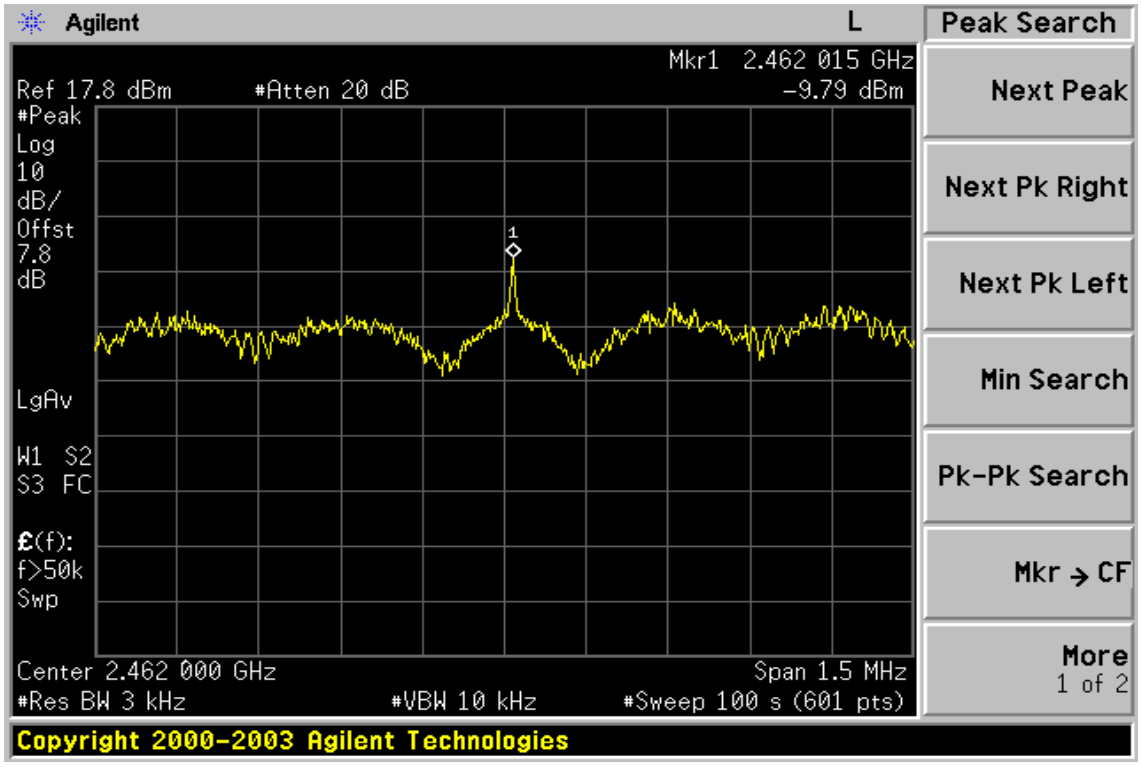
Power Spectral Density Test Plot (CH-Low)



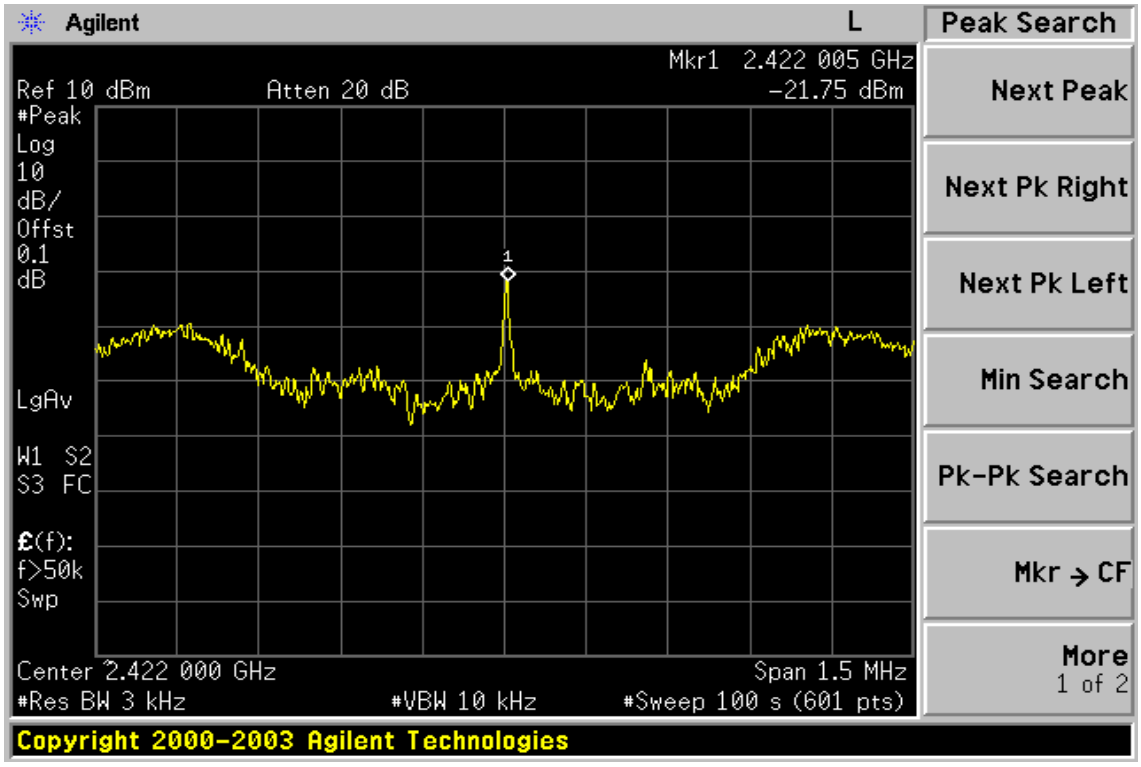
Power Spectral Density Test Plot (CH-Mid)



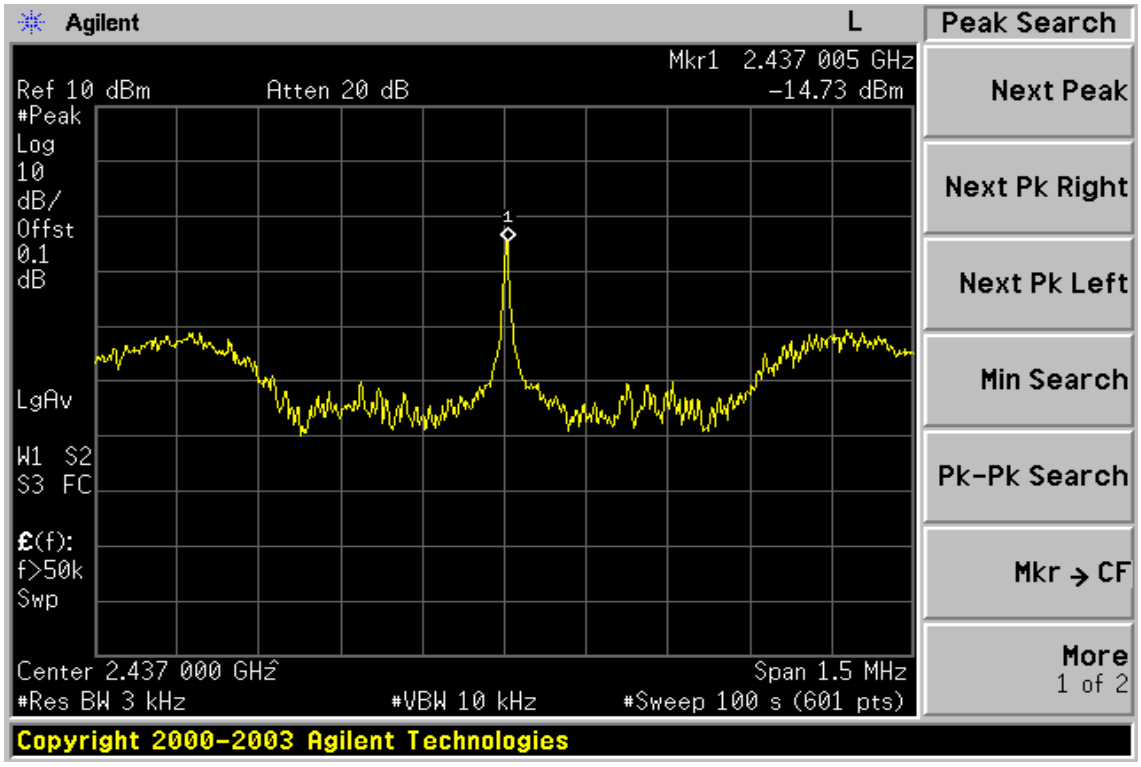
Power Spectral Density Test Plot (CH-High)



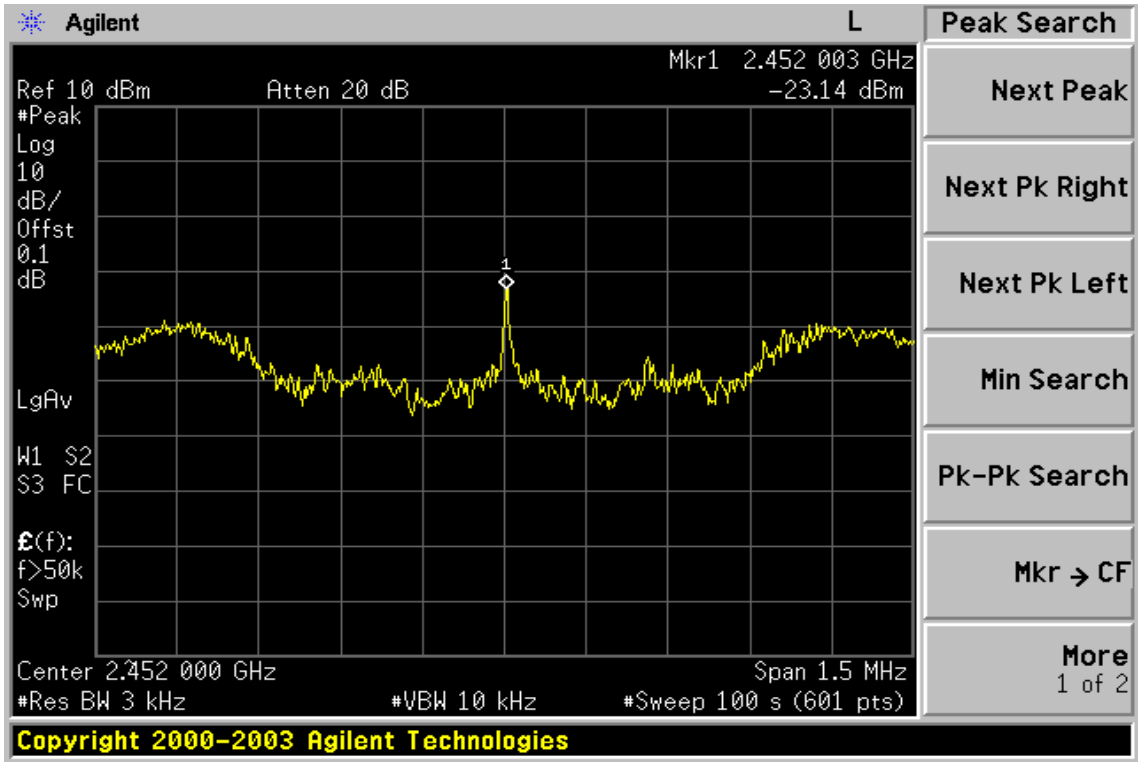
802.11n_40M, 13.5M Power Spectral Density Test Plot (CH-Low) (Left Antenna)



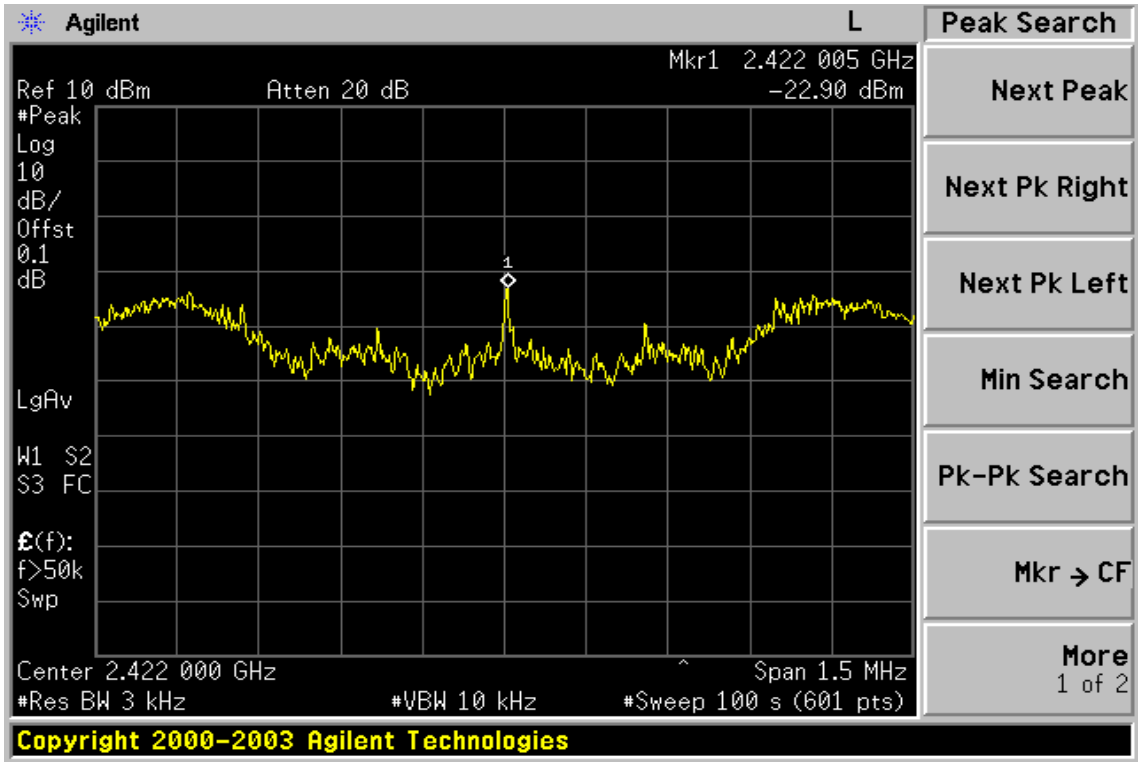
Power Spectral Density Test Plot (CH-Mid)



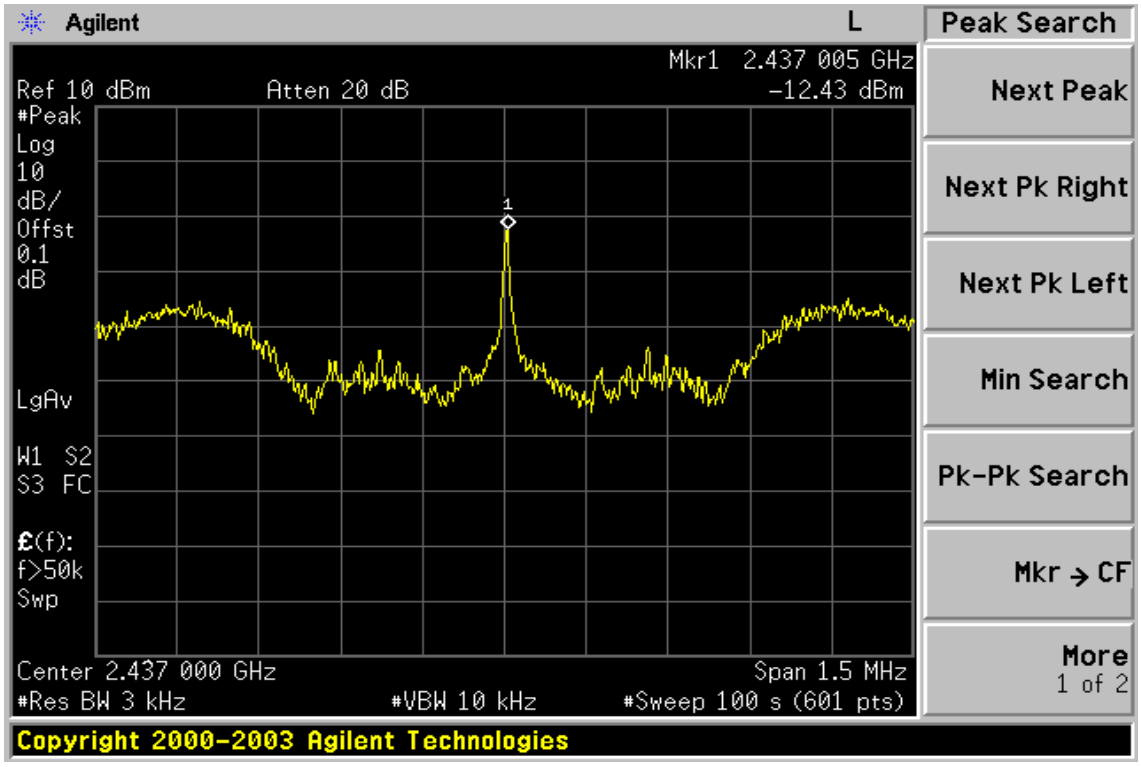
Power Spectral Density Test Plot (CH-High)



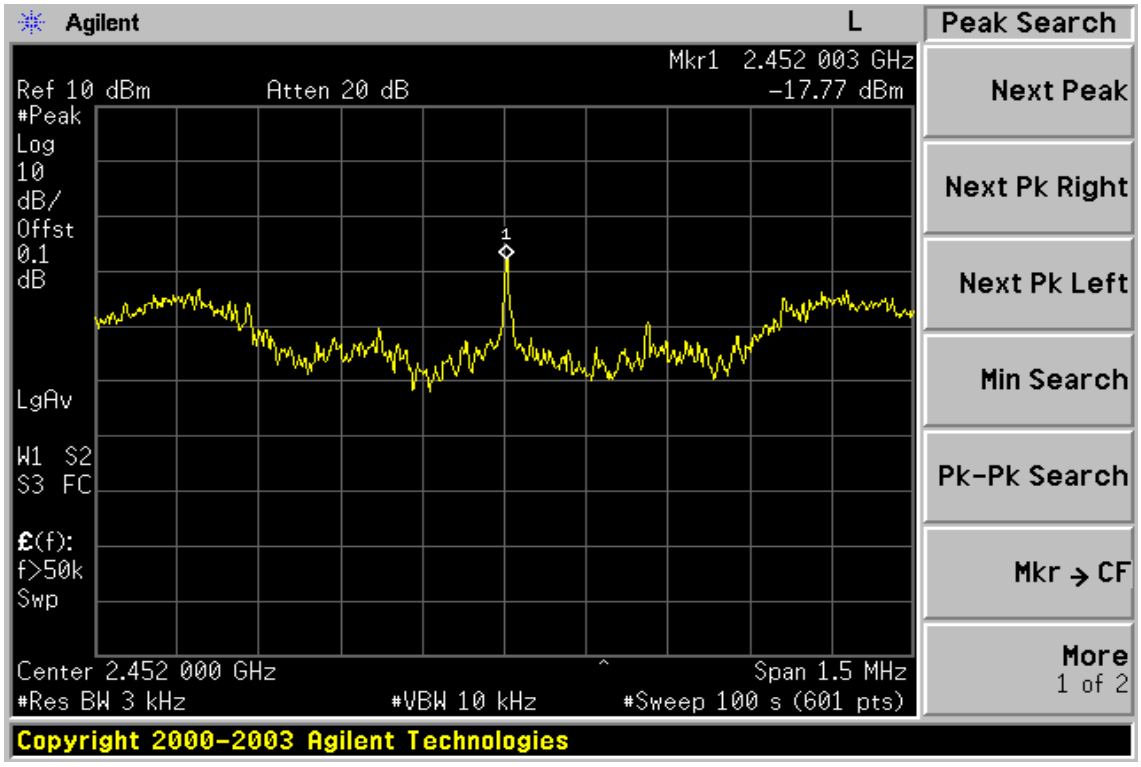
802.11n_40M, 13.5M Power Spectral Density Test Plot (CH-Low) (Right Antenna)



Power Spectral Density Test Plot (CH-Mid)

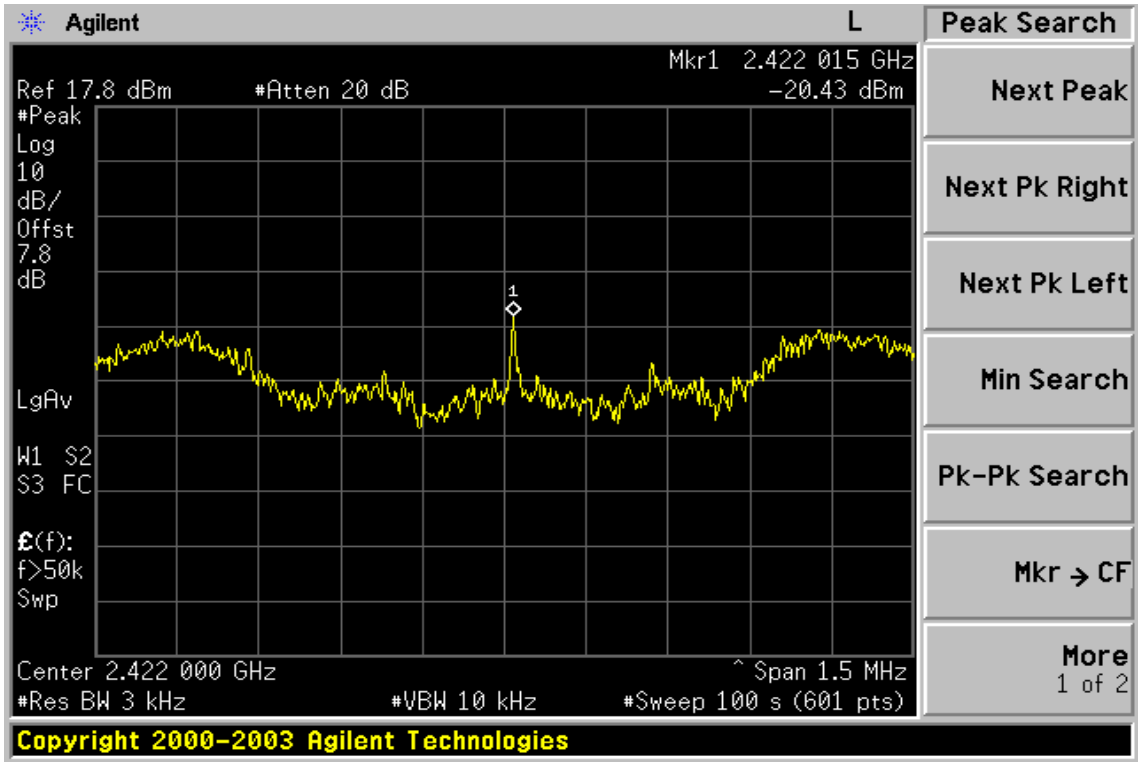


Power Spectral Density Test Plot (CH-High)

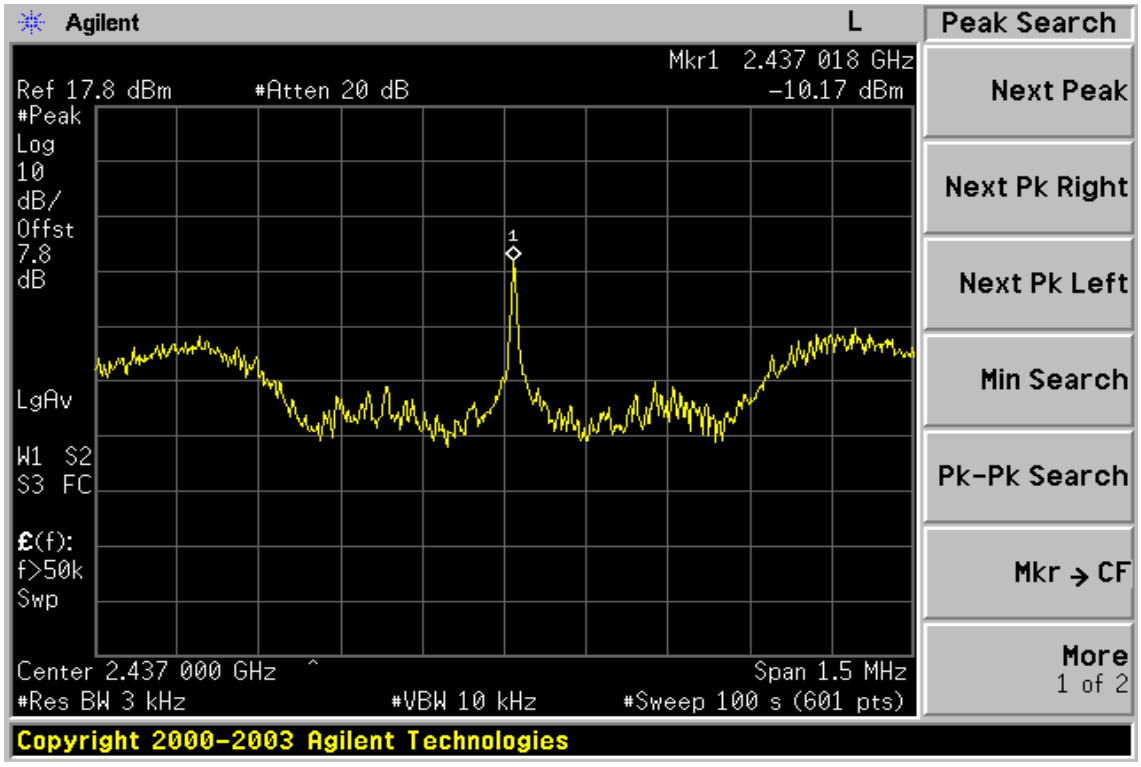


802.11n_40M, 13.5M (Left Antenna + Right Antenna)

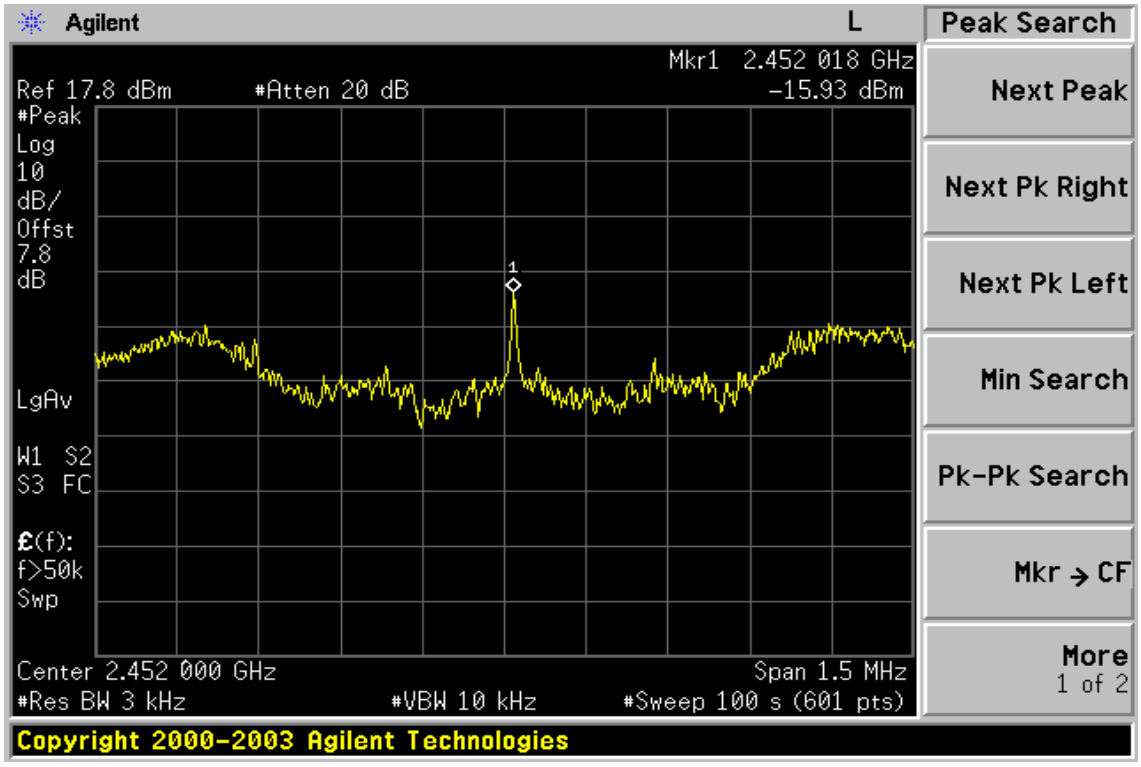
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



Power Spectral Density Test Plot (CH-High)



11. ANTENNA REQUIREMENT

11.1. 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.

11.2. Antenna Connected Construction

The directional gains of antenna used for transmitting is Right: 0.38 dBi; Left: 2.94 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.