FCC PART 15, SUBPART C
IC RSS-247, ISSUE 1, MAY 2015

TEST AND MEASUREMENT REPORT

For

ABB Inc.

3055 Orchard Dr., San Jose, CA 95134, USA

FCC ID: P9J-642401
IC: 4751A-642401

Report Type:	**Product Type:**
CIIPC Report	802.11b/g/n Wi-Fi Module

Prepared By:	Leonard Gray Test Engineer
Report Number:	R1603107-247 Rev A
Report Date:	2016-08-17
Reviewed By:	Bo Li RF Supervisor

Bay Area Compliance Laboratories Corp.
1274 Anvilwood Avenue,
Sunnyvale, CA 94089, USA
Tel: (408) 732-9162
Fax: (408) 732-9164

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by A2LA*, NIST, or any agency of the Federal Government.
* This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "*"

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1603107-247	CIIPC Report	2016-05-23
1	R1603107-247 Rev A	Updated section 1.1, 1.2, 2.5 and EUT internal photos	2016-08-17

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test and measurement report has been compiled on behalf of *ABB Inc.*, and their product*, FCC ID: P9J-642401, IC: 4751A-642401*, model number: *M41010X0G*, which henceforth is referred to as the EUT (Equipment under Test). The EUT is a wireless 802.11 b/g/n radio module within a host.

Note: Tested Model: M41010X0G
Models Declare Similar: MicrOS M4101060G, MicrOS M4101060, MicrOS M4101000G and MicrOS M4101000. Please refer to Exhibit D-Declaration of Similarity Letter.

1.2 Mechanical Description of EUT

The EUT host measures approximately 25cm (L) x 25 cm (W) x 9 cm (H) and weighs approximately 1.6 kg.

The EUT module measures approximately 11cm (L) x 10.5 cm (W) x 2 cm (H) and weighs approximately 0.5 kg.

The data gathered are from a typical production sample provided by the manufacturer with serial number: R1603107-01, assigned by BACL.

1.3 Objective

This report is prepared on behalf of *ABB Inc.,* in accordance with Part 2, Subpart J, and Part 15, Subparts B and C of the Federal Communication Commission's rules and IC RSS-247 Issue 1, May 2015.

The objective is to determine compliance with FCC Part 15.247 rules and with IC RSS-247 rules for Output Power, Antenna Requirements, 6 dB Bandwidth, power spectral density, 100 kHz Bandwidth of Band Edges Measurement, Spurious Emissions, Conducted and Radiated Spurious Emissions.

1.4 Related Submittal(s)/Grant(s)

N/A

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and FCC KDB 558074 D01 DTS Meas Guidance v03r05: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on CISPR16-4-2:2011, The Treatment of Uncertainty in EMC Measurements, the values ranging from $\pm$2.0 dB for Conducted Emissions tests and $\pm$4.0 dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL Corp.

1.7 Test Facility

Bay area compliance Laboratories Corp. (BACL) is:
1-An independent Commercial Test Laboratory accredited to **ISO 17025: 2005** by **A2LA**, in the fields of: Electromagnetic Compatibility & Telecommunications covering Emissions, Immunity, Radio, RF Exposure, Safety and Telecom. This includes NEBS (Network Equipment Building System), Wireless RF, Telecommunications Terminal Equipment (TTE); Network Equipment; Information Technology Equipment (ITE); Medical Electrical Equipment; Industrial, Commercial, and Medical Test Equipment; Professional Audio and Video Equipment; Electronic (Digital) Products; Industrial and Scientific Instruments; Cabled Distribution Systems and Energy Efficiency Lighting.

2- An ENERGY STAR Recognized Laboratory, for the LM80 Testing, a wide variety of Luminares and Computers.

3- A NIST Designated Phase-I and Phase-II CAB including: ACMA (Australian Communication and Media Authority), BSMI (Bureau of Standards, Metrology and Inspection of Taiwan), IDA (Infocomm Development Authority of Singapore), IC(Industry Canada), Korea (Ministry of Communications Radio Research Laboratory), NCC (Formerly DGT; Directorate General of Telecommunication of Chinese Taipei) OFTA (Office of the Telecommunications Authority of Hong Kong), Vietnam, VCCI – Voluntary Control Council for Interference of Japan and a designated EU CAB (Conformity Assessment Body) (Notified Body) for the EMC and R&TTE Directives.

4- A Product Certification Body accredited to **ISO 17065: 2012** by **A2LA** to certify:
2. Radio Standards Specifications (RSS) in the Category I Equipment Standards List and All Broadcasting Technical Standards (BETS) in Category I Equipment Standards List for Industry Canada.
3. Radio Communication Equipment for Singapore.
4. Radio Equipment Specifications, GMDSS Marine Radio Equipment Specifications, and Fixed Network Equipment Specifications for Hong Kong.
5. Japan MIC Telecommunication Business Law (A1, A2) and Radio Law (B1, B2 and B3).
6. Audio/Video, Battery Charging Systems, Computers, Displays, Enterprise Servers, Imaging Equipment, Set-Top Boxes, Telephony, Televisions, Ceiling Fans, CFLs (Including GU24s),Decorative Light Strings, Integral LED Lamps, Luminaires, Residential Ventilating Fans.

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test site at BACL Corp. has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997, and Article 8 of the VCCI regulations on December 25, 1997. The test site also complies with the test methods and procedures set forth in CISPR 22:2008 §10.4 for measurements below 1 GHz and §10.6 for measurements above 1 GHz as well as ANSI C63.3-2013, ANSI C63.4-2014, TIA/EIA-603 & CISPR 24:2010.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: A-0027. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL Corp. is an American Association for Laboratory Accreditation (A2LA) accredited laboratory (Lab Code 3297-02). The current scope of accreditations can be found at

http://www.a2la.org/scopepdf/3297-02.pdf?CFID=1132286&CFTOKEN=e42a3240dac3f6ba-6DE17DCB-1851-9E57-477422F667031258&jsessionid=8430d44f1f47cf2996124343c704b367816b

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.10-2013 and FCC KDB 558074 D01 DTS Meas Guidance v03r05.

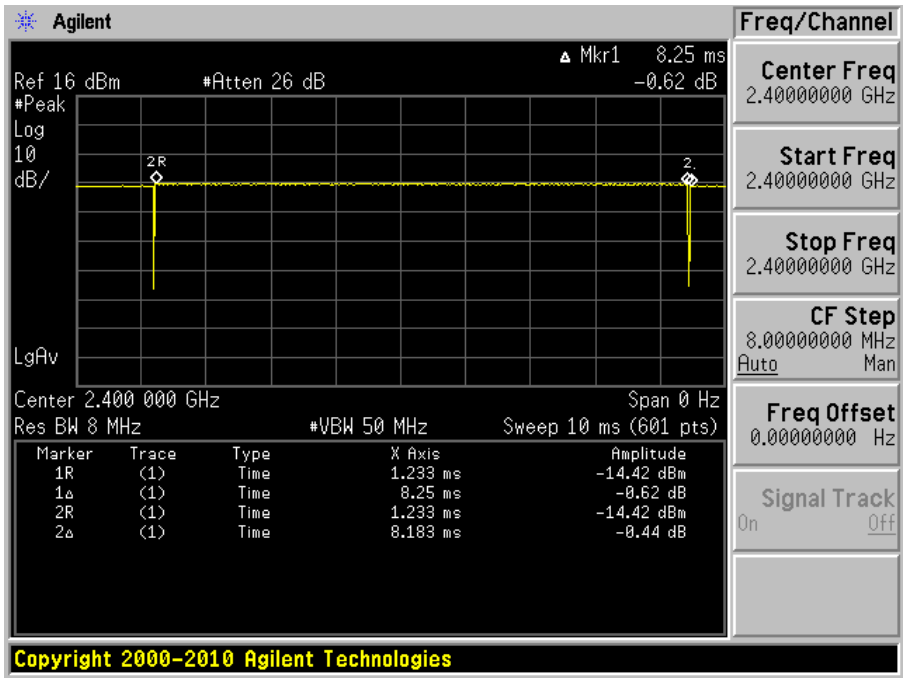
The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

The worst-case data rates are determined to be as follows for each mode based upon investigation by measuring the average power, peak power and PPSD across all data rates bandwidths, and modulations.

2.2 EUT Exercise Software

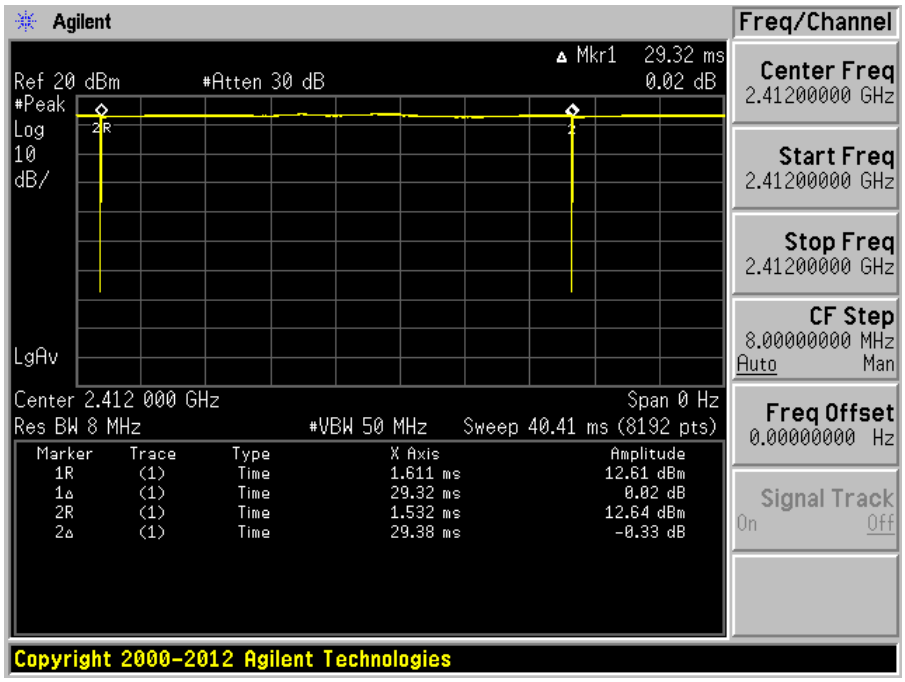
The software “tx99tool” and “artgui” was provided by customer.

802.11b 20MHz Bandwidth Duty Cycle



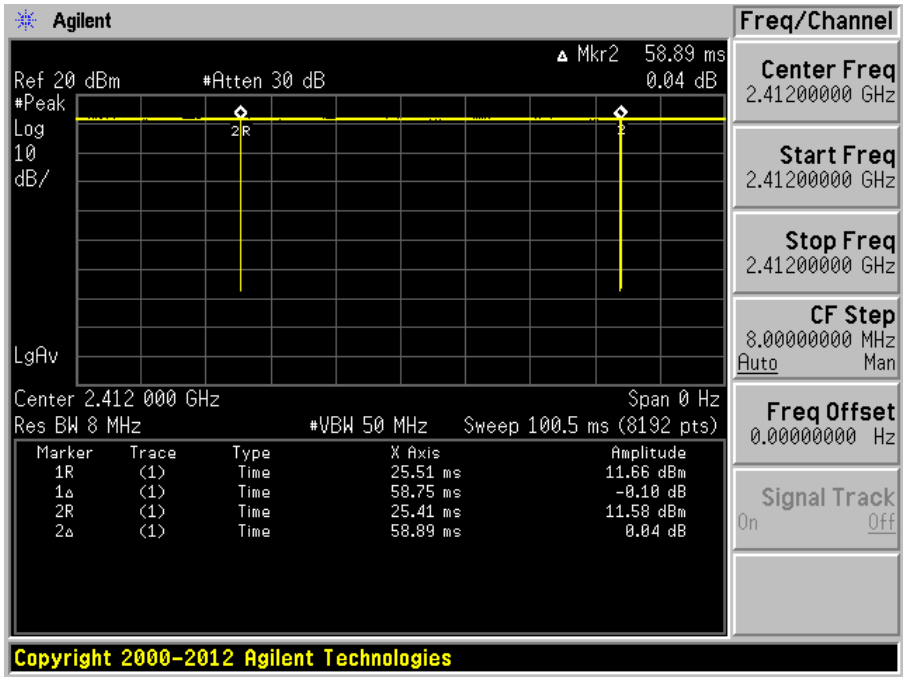
On time = 8.183ms; Total time = 8.25ms
Duty Cycle = 8.183/8.25=99.19%

802.11b 10MHz Bandwidth Duty Cycle



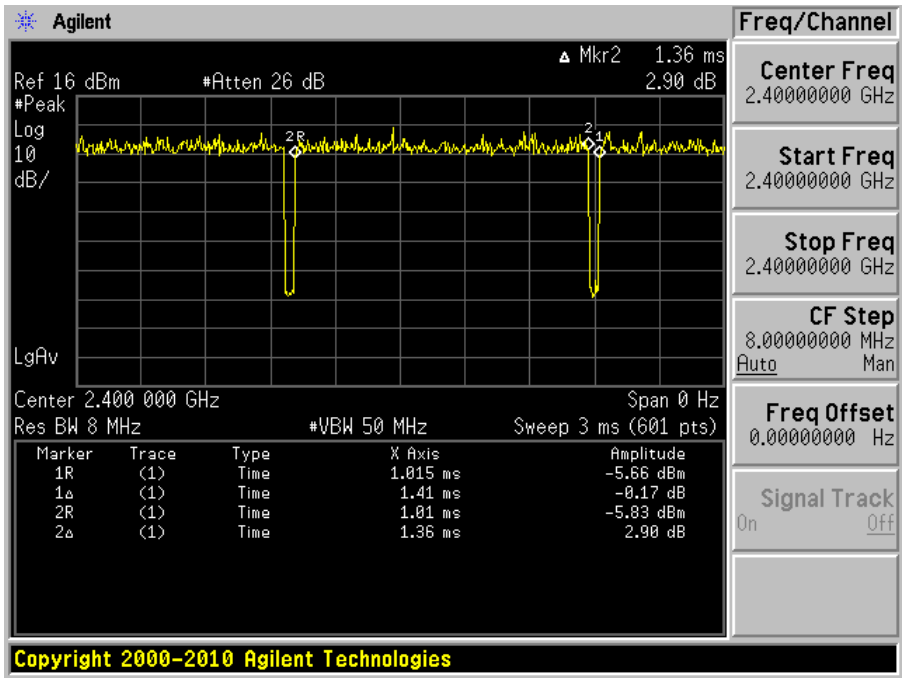
On time = 29.38ms; Total time = 29.32ms
Duty Cycle = 29.32/29.38=99.8%

802.11b 5MHz Bandwidth Duty Cycle



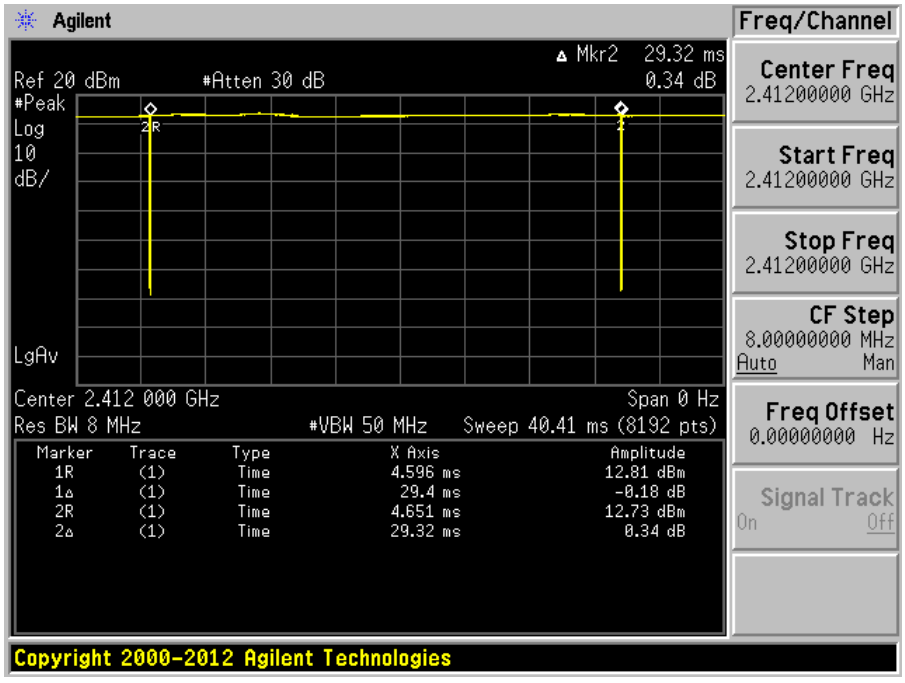
On time = 58.75ms; Total time = 58.89ms
Duty Cycle = 58.75/58.89=99.8%

802.11g 20 MHz Bandwidth Duty Cycle



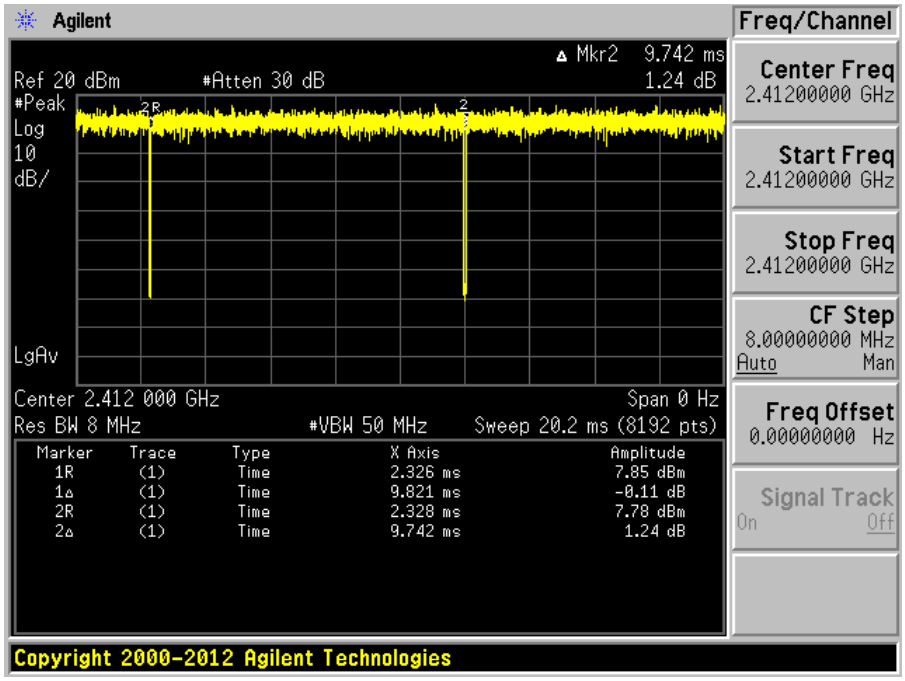
On time = 1.36ms; Total time = 1.41ms
Duty Cycle = 1.36/1.41=96.45%

802.11g 10MHz Bandwidth Duty Cycle



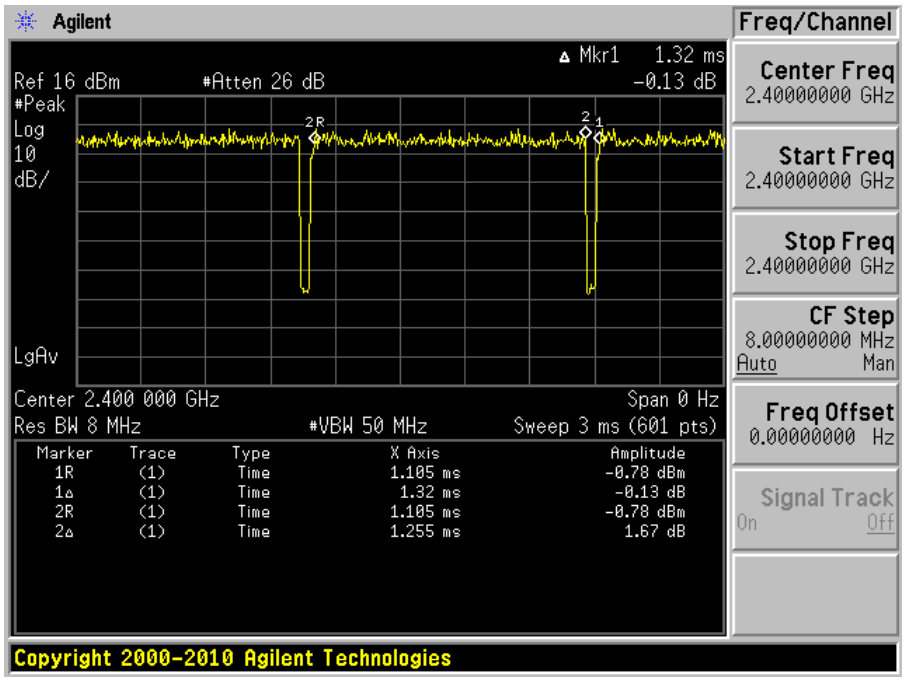
On time = 29.32ms; Total time = 29.4ms
Duty Cycle = 29.32/29.4=99.73%

802.11g 5 MHz Bandwidth Duty Cycle



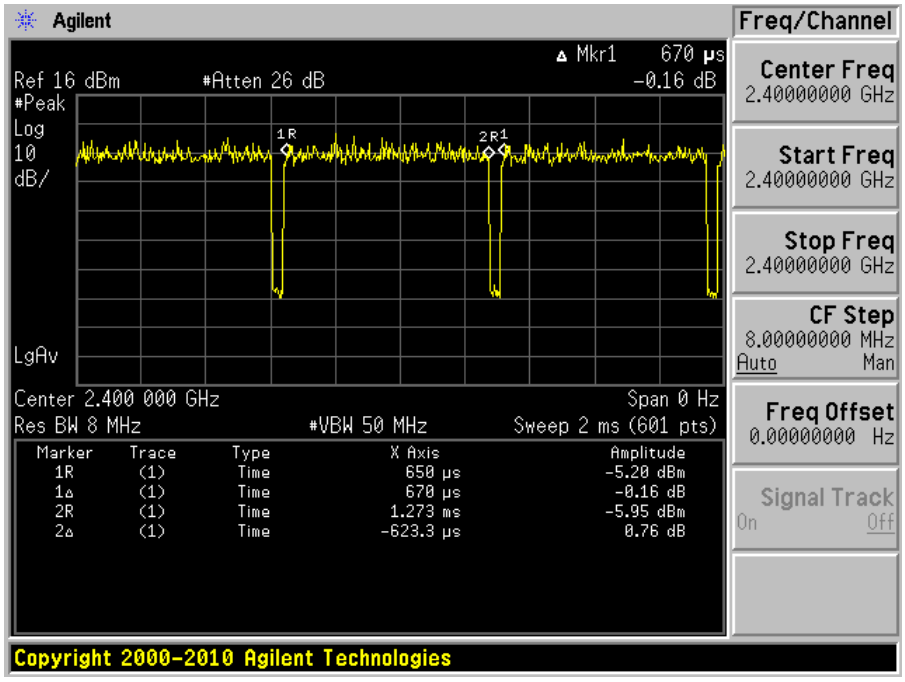
On time = 9.742ms; Total time = 9.821ms
Duty Cycle = 9.742/9.821=99.2%

802.11n20 Duty Cycle



On time = 1.255ms; Total time = 1.32ms
Duty Cycle = 1.36/1.41=95.08%

802.11n40 Duty Cycle



On time = 623.3us; Total time = 670us
Duty Cycle = 623.3/670=93.03%

2.3 Equipment Modifications

No modifications were made to the EUT.

2.4 Local Support Equipment

Manufacturer	Description	Model	Serial Number
ABB	EUT Power Supply	Tropos BB063001	-
Phihong	Switching Power Supply	Q060629	P03000715A1
Dell	Laptop	Latitude E5430	-

2.5 EUT Internal Configuration Details

Manufacturer	Description	Model
ABB, Inc.	Radio Modules	FCC ID: P9J-642401/ IC ID: 4751A-642401
Ublox	EVA-8M	EVA-8M
ABB, Inc.	2 Ethernet and 1 Serial Interface	-

Note: The ethernet and serial interfaces are on the same board as radio module.

2.6 Power Supply and Line Filter

N/A

2.7 Interface Ports and Cabling

Cable Description	Length (m)	To	From
USB-Ethernet	< 1m	EUT	Laptop
USB-Ethernet	< 1m	EUT	Laptop
USB-Serial	< 1m	EUT	Laptop

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & IC Rules	Description of Test	Results
FCC §15.203 IC RSS-Gen §8.3	Antenna Requirement	Compliant
FCC §15.207(a) IC RSS-Gen §8.8	AC Line Conducted Emissions	Compliant
FCC §2.1091, §15.247(i) IC RSS-102	RF Exposure	Compliant
FCC §15.247 (d) IC RSS-247 §5.5	Spurious Emissions at Antenna Port	Compliant
FCC §15.205 IC RSS-Gen §8.10	Restricted Bands	Compliant
FCC §15.209, §15.247 (d) IC RSS-247 §5.5, RSS-Gen §8.9	Radiated Spurious Emissions	Compliant
FCC §15.247(a)(2) IC RSS-247 §5.2, RSS-Gen §6.6	6 dB&99% Emission Bandwidth	Compliant
FCC §15.247(b)(3) IC RSS-247 §5.4	Maximum Peak Output Power	Compliant
FCC §15.247(d) IC RSS-247 §5.5	100 kHz Bandwidth of Frequency Band Edge	Compliant
FCC §15.247(e) IC RSS-247 §5.2	Power Spectral Density	Compliant

4 FCC §2.1091, §15.247(i) & IC RSS §102 - RF Exposure

4.1 Applicable Standards

According to FCC §15.247(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* (100)	30
1.34-30	824/f	2.19/f	* ($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

According to RSS-102, For the purpose of this standard, Industry Canada has adopted the SAR and RF field strength limits established in Health Canada's RF exposure guideline, Safety Code 6.18

RF Field Strength Limits for Devices Used by the General Public
(Uncontrolled Environment)

Frequency Range (MHz)	Electric Field Strength (V/m rms)	Magnetic Field Strength (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
Limits for General Population/Uncontrolled Exposure				
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/f	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
1500-100,000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158f^{0.5}$	$421 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000/f^{1.2}$

Note: *f* is frequency in MHz. *Based on nerve stimulation (NS). ** Based on specific absorption rate (SAR).

4.2 MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density
P = power input to antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

4.3 MPE Results

RF Exposure for FCC

Maximum peak output power at antenna input terminal (dBm):	22.85
Maximum peak output power at antenna input terminal (mW):	192.7525
Prediction distance (cm):	25
Prediction frequency (MHz):	2412
Maximum Antenna Gain, typical (dBi):	13
Maximum Antenna Gain (numeric):	19.95262
Power density of prediction frequency at 25.0 cm (mW/cm^2):	0.49
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2):	1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 25 cm is 0.49 mW/cm^2. Limit is 1.0 mW/cm^2.

RF Exposure for IC

Maximum peak output power at antenna input terminal (dBm):	22.85
Maximum peak output power at antenna input terminal (mW):	192.7525
Prediction distance (cm):	25
Prediction frequency (MHz):	2412
Maximum Antenna Gain, typical (dBi):	13
Maximum Antenna Gain (numeric):	19.95262
Power density of prediction frequency at 25.0 cm (W/m^2):	4.9
FCC MPE limit for uncontrolled exposure at prediction frequency (W/m^2):	5.366

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 25 cm is 4.9 W/m^2. Limit is 5.366 W/m^2.

5 FCC §15.203 & IC RSS-Gen §8.3 - Antenna Requirements

5.1 Applicable Standards

According to FCC §15.203:

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.

And according to FCC §15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

According to IC RSS-Gen §8.3: Transmitter Antenna

The applicant for equipment certification, as per RSP-100, must provide a list of all antenna types that may be used with the license-exempt transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna.

License-exempt transmitters that have received equipment certification may operate with different types of antennas. However, it is not permissible to exceed the maximum equivalent isotropically radiated power (e.i.r.p.) limits specified in the applicable standard (RSS) for the license-exempt apparatus.

Testing shall be performed using the highest gain antenna of each combination of license-exempt transmitter and antenna type, with the transmitter output power set at the maximum level. 9 When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

User manuals for transmitters equipped with detachable antennas shall also contain the following notice in a conspicuous location:

This radio transmitter (identify the device by certification number) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi).

5.2 Antenna List and Details

Antenna Type	Antenna Gain (dBi) @ 2.4-2.5 GHz
Dual-polarized, directional	13

6 FCC §15.207 & IC RSS-Gen §8.8 – AC Line Conducted Emissions

6.1 Applicable Standards

As per FCC §15.207 and IC RSS-Gen §8.8 conducted limits:

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequencies ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56 Note	56 to 46 Note
0.5-5	56	46
5-30	60	50

Note: Decreases with the logarithm of the frequency.

6.2 Test Setup

The measurement was performed at shield room, using the setup per ANSI C63.4-2014 measurement procedure. The specification used was FCC §15.207 and IC RSS-Gen §8.8 limits.

External I/O cables were draped along the edge of the test table and bundle when necessary.
The EUT was connected to laptop, the AC/DC power adapter of the laptop was connected with LISN-1 which provided 120 V/60 Hz AC power.

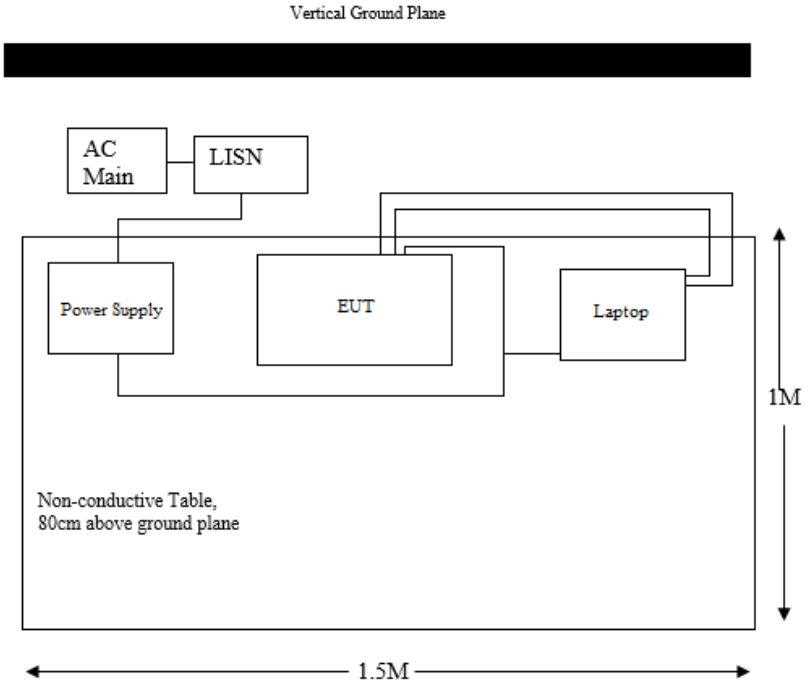
6.3 Test Procedure

During the conducted emissions test, the power cord of the EUT host system was connected to the mains outlet of the LISN-1 and the power cord of the support equipment was connected to LISN-2.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the peak detection mode, quasi-peak and average. Quasi-Peak readings are distinguished with a “QP.” Average readings are distinguished with an “Ave”.

6.4 Test Setup Block Diagram



6.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Cable Loss (CL), the Attenuator Factor (Atten) to indicated Amplitude (Ai) reading. The basic equation is as follows:

CA = Ai + CL + Atten

For example, a corrected amplitude of 46.2 dBuV = Indicated Reading (32.5 dBuV) + Cable Loss (3.7 dB) + Attenuator (10 dB)

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corrected Amplitude - Limit

6.6 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Rohde & Schwarz	Receiver, EMI Test	ESCI 1166.5950K03	100044	2015-07-23	1 year
FCC	LISN	FCC-LISN-50-25-2-10-CISPR16	160131	2016-04-07	1 year
Keysight Technologies	RF Limiter	11867A	MY42242932	2015-12-15	1 year
Rohde & Schwarz	Impulse Limiter	ESH3-Z2	101963	2015-07-15	1 year
Solar Electronics Company	High Pass Filter	Type 7930-100	7930150204	2016-03-09	1 year
Suirong	30 ft conductive emission cable	LMR 400	-	2016-03-05	1 year
Hewlett-Packard	5 ft N-type RF cable	-	1268	Cal. Not Required	N/A

Statement of Traceability: BACL Corp. *attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.*

6.7 Test Environmental Conditions

Temperature:	20-25º C
Relative Humidity:	40-45 %
ATM Pressure:	101.2-103.5 kPa

The testing was performed by Leonard Gray on 2016-04-22 in 5m chamber3.

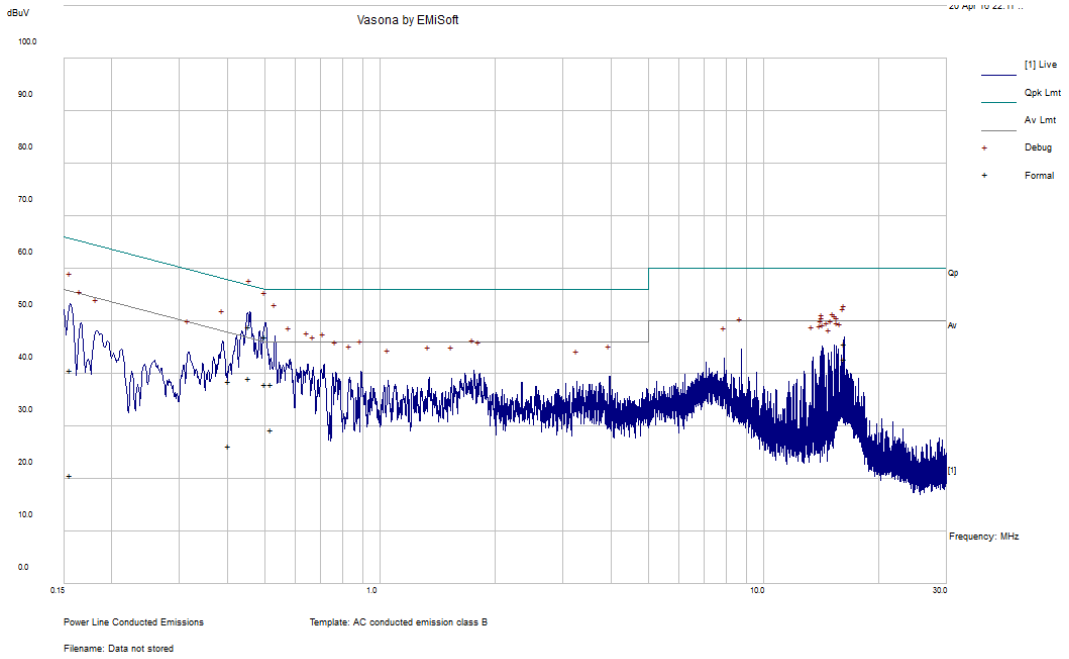
6.8 Summary of Test Results

According to the recorded data in following table, the EUT complied with the FCC 15C and IC RSS-Gen standard's conducted emissions limits, with the margin reading of:

Connection: AC/DC adapter connected to 120 V/60 Hz, AC			
Margin (dB)	**Frequency (MHz)**	**Conductor Mode (Line/Neutral)**	**Range (MHz)**
-7.24	16.22729	Line	0.15-30

6.9 Conducted Emissions Test Plots and Data

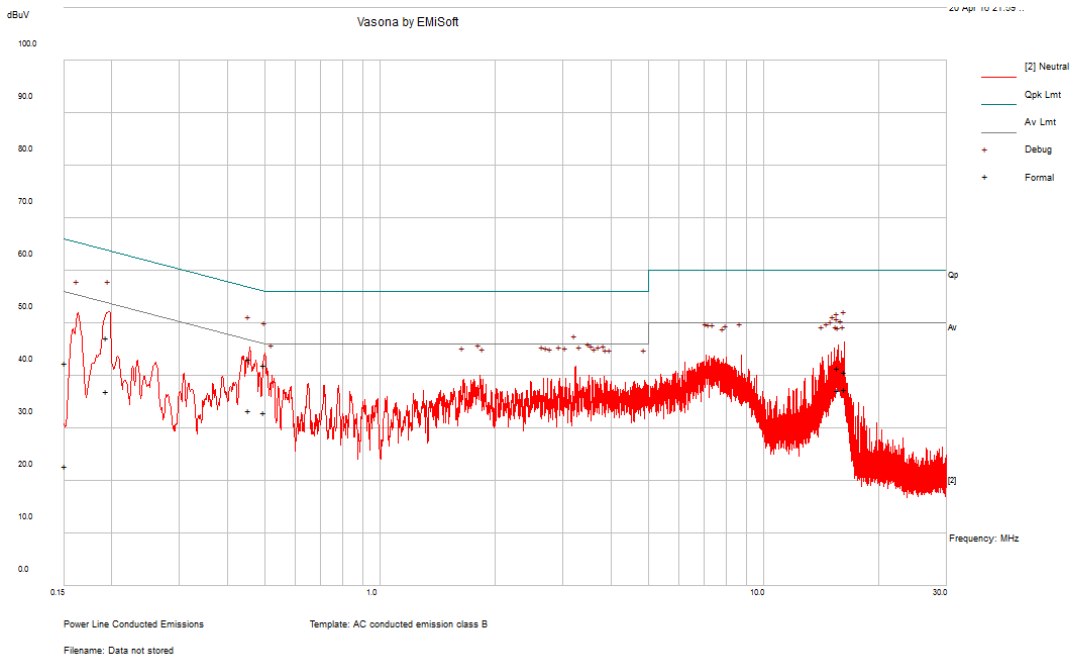
120 V, 60 Hz – Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.45465	48.89	Line	56.79	-7.9	QP
0.501306	47.02	Line	56	-8.98	QP
0.521658	37.98	Line	56	-18.02	QP
0.404184	38.67	Line	57.77	-19.1	QP
0.156138	40.74	Line	65.67	-24.92	QP
16.22729	45.61	Line	60	-14.39	QP

Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.45465	39.08	Line	46.79	-7.71	Ave
0.501306	37.92	Line	46	-8.08	Ave
0.521658	29.39	Line	46	-16.61	Ave
0.404184	26.37	Line	47.77	-21.4	Ave
0.156138	20.72	Line	55.67	-34.95	Ave
16.22729	42.76	Line	50	-7.24	Ave

120 V, 60 Hz – Neutral



Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.455643	43.23	Neutral	56.77	-13.54	QP
0.194364	47.17	Neutral	63.85	-16.68	QP
0.50043	42.08	Neutral	56	-13.92	QP
0.151146	42.51	Neutral	65.94	-23.43	QP
16.2257	40.72	Neutral	60	-19.28	QP
15.61511	41.38	Neutral	60	-18.62	QP

Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.455643	33.34	Neutral	46.77	-13.43	Ave
0.194364	37.01	Neutral	53.85	-16.84	Ave
0.50043	33.07	Neutral	46	-12.93	Ave
0.151146	22.91	Neutral	55.94	-33.02	Ave
16.2257	37.43	Neutral	50	-12.57	Ave
15.61511	37.22	Neutral	50	-12.78	Ave

7 FCC §15.209, §15.247(d) & IC RSS-247 §5.5, RSS-Gen §8.9, §8.10 - Spurious Radiated Emissions

7.1 Applicable Standards

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	960 – 1240	4. 5 – 5. 15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5. 35 – 5. 46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 –167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3 3458 – 3 358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

As per FCC §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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 in §15.209(a) (see §15.205(c).

As per IC RSS-Gen 8.9,

> Except when the requirements applicable to a given device state otherwise, emissions from licence-exempt transmitters shall comply with the field strength limits shown in Table 4 or Table 5 below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission.

Table 4 – General Field Strength Limits for Licence-Exempt Transmitters at Frequencies Above 30 MHz

Frequency (MHz)	Field Strength (µv/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960*	500

* Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

Note: Transmitting devices are not permitted in restricted frequency bands unless stated otherwise in the specific RSS.

As per IC RSS-247 5.5, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

As per IC RSS-Gen 8.10, Restricted bands, identified in Table 6, are designated primarily for safety-of-life services (distress calling and certain aeronautical bands), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following restrictions apply: (a) Fundamental components of modulation of licence-exempt radio apparatus shall not fall within the restricted bands of Table 6 except for apparatus complying under RSS-287; (b) Unwanted emissions that fall into restricted bands of Table 6 shall comply with the limits specified in RSS-Gen; and (c) Unwanted emissions that do not fall within the restricted frequency bands of Table 6 shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

Table 6 – Restricted Frequency Bands*

MHz
0.090-0.110
2.1735-2.1905
3.020-3.026
4.125-4.128
4.17725-4.17775
4.20725-4.20775
5.677-5.683
6.215-6.218
6.26775-6.26825
6.31175-6.31225
8.291-8.294
8.362-8.366
8.37625-8.38675
8.41425-8.41475
12.29-12.293
12.51975-12.52025
12.57675-12.57725
13.36-13.41
16.42-16.423
16.69475-16.69525
16.80425-16.80475
25.5-25.67
37.5-38.25
73-74.6
74.8-75.2
108-138
156.52475-156.52525
156.7-156.9

MHz
240-285
322-335.4
399.9-410
608-614
960-1427
1435-1626.5
1645.5-1646.5
1660-1710
1718.8-1722.2
2200-2300
2310-2390
2655-2900
3260-3267
3332-3339
3345.8-3358
3500-4400
4500-5150
5350-5460
7250-7750
8025-8500

GHz
9.0-9.2
9.3-9.5
10.6-12.7
13.25-13.4
14.47-14.5
15.35-16.2
17.7-21.4
22.01-23.12
23.6-24.0
31.2-31.8
36.43-36.5
Above 38.6

* Certain frequency bands listed in Table 6 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to the devices are set out in the 200- and 300-series of RSSs, such as RSS-210 and RSS-310, which contain the requirements that apply to licence-exempt radio apparatus.

7.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.10-2013. The specification used was the FCC 15 Subpart C/IC RSS-247 limits.

The spacing between the peripherals was 10 centimeters.

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

7.3 Test Procedure

For the radiated emissions test, the EUT host, and all support equipment power cords was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 meter, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

The spectrum analyzer or receiver is set as:

Below 1000 MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 1000 MHz:

(1) Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
(2) Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

7.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

CA = Ai + AF + CL + Atten – Ga

For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corrected Amplitude – Limit

7.5 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4440A	US 42221851	2015-06-23	1 year
Rohde & Schwarz	Receiver, EMI Test	ESCI 1166.5950K03	100044	2015-07-23	1 year
Sunol Science Corp	System Controller	SC99V	011003-1	N/R	N/R
Sunol Sciences	Antenna, Biconi-Log	JB1	A013105-3	2015-07-11	2 year
A.R.A	Antenna, Horn	DRG-118/A	1132	2015-09-21	2 year
HP	Pre-Amplifier	8447D	2944A06639	2015-06-08	1 year
Suirong	30 ft conductive emission cable	LMR 400	-	2016-03-05	1 year
-	SMA cable	-	C0001	Each time[1]	N/A
IW Microwave	High Frequency Cable	DC-1531	KPS-1501A3960KPS	2015-08-10	1 year
Agilent	Pre-Amplifier	8449B	3008A01978	2015-09-02	1year

Note[1]: cable and attenuator included in the test set-up will be checked each time before testing.
***Statement of Traceability: BACL** attests that all calibrations have been performed per the A2LA requirements, traceable to NIST.*

7.6 Test Environmental Conditions

Temperature:	20-25º C
Relative Humidity:	40-45 %
ATM Pressure:	101.2-103.5 kPa

The testing was performed by Leonard Gray on 2016-04-14 to 2016-05-12 in 5m chamber3.

7.7 Summary of Test Results

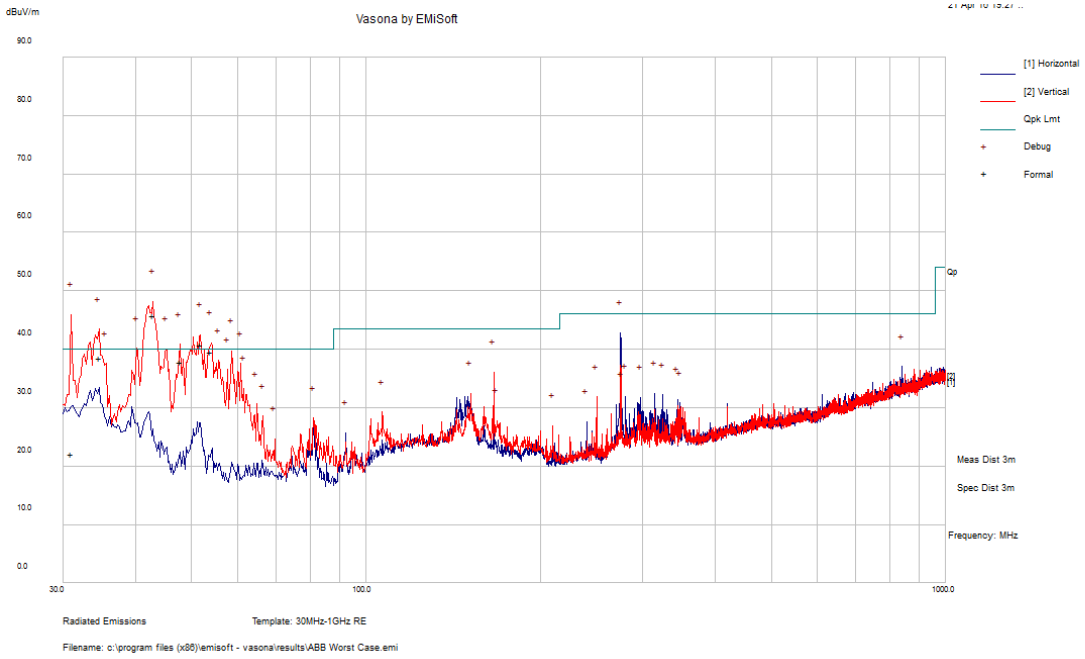
According to the data hereinafter, the EUT complied with the FCC Title 47, Part 15C and IC RSS-247 standard's radiated emissions limits, and had the worst margin of:

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Mode, Channel**
-0.37	53.8495	Vertical	802.11g 5MHz, Low Channel

Please refer to the following table and plots for specific test result details

7.8 Radiated Emissions Test Data and Plots

1) 30 MHz – 1 GHz



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comments (PK/QP/Ave.)
42.93625	39.17	105	V	167	40	-0.83	QP
31.063	22.12	271	V	109	40	-17.88	QP
34.662	38.56	155	V	155	40	-1.44	QP
51.8105	36.54	142	V	0	40	-3.46	QP
53.8495	39.63	100	V	39	40	-0.37	QP
47.79975	37.81	203	V	75	40	-2.19	QP

2) 1 – 25 GHz

Note: duty cycle already consider in the test result

802.11b Mode 20MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	74.84	0	171	V	28.45	5.22	0.00	108.51	-	-	Peak
2412	79.06	0	198	H	29.04	5.22	0.00	113.32	-	-	Peak
2412	70.11	0	180	V	28.45	5.22	0.00	103.78	-	-	Ave
2412	75.47	0	182	H	29.04	5.22	0.00	109.73	-	-	Ave
2390	26.84	0	100	V	28.45	5.22	0.00	60.51	74.00	-13.50	Peak
2390	26.96	0	100	H	29.04	5.22	0.00	61.22	74.00	-12.78	Peak
2390	13.47	0	180	V	28.45	5.22	0.00	47.14	54.00	-6.87	Ave
2390	13.04	0	180	H	29.04	5.22	0.00	47.30	54.00	-6.70	Ave
4824	47.360	0	100	V	32.42	7.76	38.01	49.53	74.00	-24.47	Peak
4824	47.680	0	100	H	32.47	7.76	38.01	49.91	74.00	-24.09	Peak
4824	33.600	22	340	V	32.42	7.76	38.01	35.77	54.00	-18.23	Ave
4824	33.640	319	167	H	32.47	7.76	38.01	35.87	54.00	-18.13	Ave
7236	56.570	245	306	V	36.16	9.71	37.53	64.91	74.00	-9.09	Peak
7236	56.840	316	239	H	36.69	9.71	37.53	65.71	74.00	-8.29	Peak
7236	32.230	0	100	V	36.16	9.71	37.53	40.57	54.00	-13.43	Ave
7236	32.250	0	100	H	36.69	9.71	37.53	41.12	54.00	-12.88	Ave
9648	48.000	0	100	V	37.17	11.37	38.00	58.54	74.00	-15.46	Peak
9648	47.840	0	100	H	37.77	11.37	38.00	58.98	74.00	-15.02	Peak
9648	33.310	0	100	V	37.17	11.37	38.00	43.85	54.00	-10.15	Ave
9648	33.280	0	100	H	37.77	11.37	38.00	44.42	54.00	-9.58	Ave
Middle Channel 2437 MHz											
2437	74.67	0	163	V	28.448	5.22	0.00	108.34	-	-	Peak
2437	79.42	0	189	H	29.042	5.22	0.00	113.68	-	-	Peak
2437	69.56	0	204	V	28.448	5.22	0.00	103.23	-	-	Ave
2437	75.96	0	164	H	29.042	5.22	0.00	110.22	-	-	Ave
4874	47.76	0	100	V	32.608	7.93	37.92	50.38	74.00	-23.62	Peak
4874	47.89	0	100	H	32.638	7.93	37.92	50.54	74.00	-23.46	Peak
4874	32.75	0	100	V	32.608	7.93	37.92	35.37	54.00	-18.63	Ave
4874	32.81	0	100	H	32.638	7.93	37.92	35.46	54.00	-18.54	Ave
7311	59.42	29	113	V	36.406	9.86	37.53	68.15	74.00	-5.85	Peak
7311	58.99	340	231	H	37.148	9.86	37.53	68.46	74.00	-5.54	Peak
7311	32.11	0	100	V	36.406	9.86	37.53	40.84	54.00	-13.16	Ave
7311	32.12	0	100	H	37.148	9.86	37.53	41.59	54.00	-12.41	Ave
9748	47.92	0	100	V	37.101	11.48	38.27	58.23	74.00	-15.77	Peak
9748	47.9	0	100	H	37.923	11.48	38.27	59.03	74.00	-14.97	Peak
9748	33.03	0	100	V	37.101	11.48	38.27	43.34	54.00	-10.66	Ave
9748	33.04	0	100	H	37.923	11.48	38.27	44.17	54.00	-9.83	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	78.64	0	179	V	28.91	5.47	0.00	113.03	-	-	Peak
2462	71.91	0	187	H	29.41	5.47	0.00	106.80	-	-	Peak
2462	75.07	0	155	V	28.91	5.47	0.00	109.46	-	-	Ave
2462	67.68	0	189	H	29.41	5.47	0.00	102.57	-	-	Ave
2483.5	26.6	0	100	V	28.91	5.47	0.00	60.99	74.00	-13.01	Peak
2483.5	27.26	0	100	H	29.41	5.47	0.00	62.15	74.00	-11.85	Peak
2483.5	13.1	0	100	V	28.91	5.47	0.00	47.49	54.00	-6.51	Ave
2483.5	13.08	0	100	H	29.41	5.47	0.00	47.97	54.00	-6.03	Ave
4924	49.730	8	126	V	32.61	7.93	37.85	52.42	74.00	-21.58	Peak
4924	51.690	41	187	H	32.99	7.93	37.85	54.76	74.00	-19.24	Peak
4924	38.920	9	126	V	32.61	7.93	37.85	41.61	54.00	-12.39	Ave
4924	45.930	41	187	H	32.99	7.93	37.85	49.00	54.00	-5.00	Ave
7386	61.980	21	102	V	36.31	9.86	37.62	70.52	74.00	-3.48	Peak
7386	62.440	348	210	H	37.14	9.86	37.62	71.81	74.00	-2.19	Peak
7386	39.510	21	102	V	36.31	9.86	37.62	48.05	54.00	-5.95	Ave
7386	39.560	348	210	H	37.14	9.86	37.62	48.93	54.00	-5.07	Ave
9848	45.850	0	100	V	37.18	11.59	38.38	56.24	74.00	-17.76	Peak
9848	46.400	0	100	H	37.99	11.59	38.38	57.60	74.00	-16.40	Peak
9848	34.610	0	100	V	37.18	11.59	38.38	45.00	54.00	-9.00	Ave
9848	34.530	0	100	H	37.99	11.59	38.38	45.73	54.00	-8.27	Ave

802.11g Mode 20 MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	84.2	0	171	V	28.45	5.22	0.00	117.87	-	-	Peak
2412	82.49	0	150	H	29.04	5.22	0.00	116.75	-	-	Peak
2412	69.73	0	180	V	28.45	5.22	0.00	103.40	-	-	Ave
2412	69.99	0	176	H	29.04	5.22	0.00	104.25	-	-	Ave
2390	27.86	0	100	V	28.45	5.22	0.00	61.53	74.00	-12.48	Peak
2390	27.34	0	100	H	29.04	5.22	0.00	61.60	74.00	-12.40	Peak
2390	13.46	0	100	V	28.45	5.22	0.00	47.13	54.00	-6.88	Ave
2390	13.19	0	100	H	29.04	5.22	0.00	47.45	54.00	-6.55	Ave
4824	46.960	0	100	V	32.42	7.76	38.01	49.13	74.00	-24.87	Peak
4824	46.730	0	100	H	32.47	7.76	38.01	48.96	74.00	-25.04	Peak
4824	35.390	0	100	V	32.42	7.76	38.01	37.56	54.00	-16.44	Ave
4824	35.530	0	100	H	32.47	7.76	38.01	37.76	54.00	-16.24	Ave
7236	61.810	31	128	V	36.16	9.71	37.53	70.15	74.00	-3.85	Peak
7236	58.820	327	100	H	36.69	9.71	37.53	67.69	74.00	-6.31	Peak
7236	39.880	31	128	V	36.16	9.71	37.53	48.22	54.00	-5.78	Ave
7236	35.570	327	100	H	36.69	9.71	37.53	44.44	54.00	-9.56	Ave
9648	46.540	0	100	V	37.17	11.37	38.00	57.08	74.00	-16.92	Peak
9648	47.450	0	100	H	37.77	11.37	38.00	58.59	74.00	-15.41	Peak
9648	35.720	0	100	V	37.17	11.37	38.00	46.26	54.00	-7.74	Ave
9648	35.710	0	100	H	37.77	11.37	38.00	46.85	54.00	-7.15	Ave
Middle Channel 2437 MHz											
2437	83.27	0	183	V	28.448	5.22	0.00	116.94	-	-	Peak
2437	82.45	0	193	H	29.042	5.22	0.00	116.71	-	-	Peak
2437	69.37	0	171	V	28.448	5.22	0.00	103.04	-	-	Ave
2437	69.78	0	170	H	29.042	5.22	0.00	104.04	-	-	Ave
4874	46.98	0	100	V	32.608	7.93	37.92	49.60	74.00	-24.40	Peak
4874	46.86	0	100	H	32.638	7.93	37.92	49.51	74.00	-24.49	Peak
4874	35.43	0	100	V	32.608	7.93	37.92	38.05	54.00	-15.95	Ave
4874	35.5	0	100	H	32.638	7.93	37.92	38.15	54.00	-15.85	Ave
7311	61.31	35	199	V	36.406	9.86	37.53	70.04	74.00	-3.96	Peak
7311	61.41	326	216	H	37.148	9.86	37.53	70.88	74.00	-3.12	Peak
7311	39.11	35	199	V	36.406	9.86	37.53	47.84	54.00	-6.16	Ave
7311	39.16	326	216	H	37.148	9.86	37.53	48.63	54.00	-5.37	Ave
9748	47.38	0	100	V	37.101	11.48	38.27	57.69	74.00	-16.31	Peak
9748	47.1	0	100	H	37.923	11.48	38.27	58.23	74.00	-15.77	Peak
9748	35.54	0	100	V	37.101	11.48	38.27	45.85	54.00	-8.15	Ave
9748	35.5	0	100	H	37.923	11.48	38.27	46.63	54.00	-7.37	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	83.38	0	157	V	28.91	5.47	0.00	117.77	-	-	Peak
2462	83.18	0	210	H	29.41	5.47	0.00	118.07	-	-	Peak
2462	69.79	0	187	V	28.91	5.47	0.00	104.18	-	-	Ave
2462	70.37	0	167	H	29.41	5.47	0.00	105.26	-	-	Ave
2483.5	37.65	0	211	V	28.91	5.47	0.00	72.04	74.00	-1.96	Peak
2483.5	33.33	0	218	H	29.41	5.47	0.00	68.22	74.00	-5.78	Peak
2483.5	16.51	0	155	V	28.91	5.47	0.00	50.90	54.00	-3.10	Ave
2483.5	14.69	0	220	H	29.41	5.47	0.00	49.58	54.00	-4.42	Ave
4924	47.430	0	100	V	32.61	7.93	37.85	50.12	74.00	-23.88	Peak
4924	47.040	0	100	H	32.99	7.93	37.85	50.11	74.00	-23.89	Peak
4924	35.600	0	100	V	32.61	7.93	37.85	38.29	54.00	-15.71	Ave
4924	35.800	0	100	H	32.99	7.93	37.85	38.87	54.00	-15.13	Ave
7386	58.430	22	105	V	36.31	9.86	37.62	66.97	74.00	-7.03	Peak
7386	60.410	335	220	H	37.14	9.86	37.62	69.78	74.00	-4.22	Peak
7386	35.570	22	105	V	36.31	9.86	37.62	44.11	54.00	-9.89	Ave
7386	39.090	335	220	H	37.14	9.86	37.62	48.46	54.00	-5.54	Ave
9848	46.790	0	100	V	37.18	11.59	38.38	57.18	74.00	-16.82	Peak
9848	46.100	0	100	H	37.99	11.59	38.38	57.30	74.00	-16.70	Peak
9848	34.890	0	100	V	37.18	11.59	38.38	45.28	54.00	-8.72	Ave
9848	34.570	0	100	H	37.99	11.59	38.38	45.77	54.00	-8.23	Ave

802.11n20 Mode

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	82.55	0	181	V	28.45	5.22	0.00	116.22	-	-	Peak
2412	82.66	0	222	H	29.04	5.22	0.00	116.92	-	-	Peak
2412	69.68	0	168	V	28.45	5.22	0.00	103.35	-	-	Ave
2412	69.56	0	199	H	29.04	5.22	0.00	103.82	-	-	Ave
2390	30.9	0	181	V	28.45	5.22	0.00	64.57	74.00	-9.44	Peak
2390	26.55	0	222	H	29.04	5.22	0.00	60.81	74.00	-13.19	Peak
2390	14.39	0	168	V	28.45	5.22	0.00	48.06	54.00	-5.95	Ave
2390	13.57	0	199	H	29.04	5.22	0.00	47.83	54.00	-6.17	Ave
4824	47.700	0	100	V	32.42	7.76	38.01	49.87	74.00	-24.13	Peak
4824	47.710	0	100	H	32.47	7.76	38.01	49.94	74.00	-24.06	Peak
4824	33.080	0	100	V	32.42	7.76	38.01	35.25	54.00	-18.75	Ave
4824	33.140	0	100	H	32.47	7.76	38.01	35.37	54.00	-18.63	Ave
7236	46.870	0	100	V	36.16	9.71	37.53	55.21	74.00	-18.79	Peak
7236	46.270	0	100	H	36.69	9.71	37.53	55.14	74.00	-18.86	Peak
7236	32.660	0	100	V	36.16	9.71	37.53	41.00	54.00	-13.00	Ave
7236	32.630	0	100	H	36.69	9.71	37.53	41.50	54.00	-12.50	Ave
9648	47.250	0	100	V	37.17	11.37	38.00	57.79	74.00	-16.21	Peak
9648	48.400	0	100	H	37.77	11.37	38.00	59.54	74.00	-14.46	Peak
9648	33.590	0	100	V	37.17	11.37	38.00	44.13	54.00	-9.87	Ave
9648	33.620	0	100	H	37.77	11.37	38.00	44.76	54.00	-9.24	Ave
Middle Channel 2437 MHz											
2437	82.9	0	148	V	28.448	5.22	0.00	116.57	-	-	Peak
2437	82.9	0	211	H	29.042	5.22	0.00	117.16	-	-	Peak
2437	69.28	0	165	V	28.448	5.22	0.00	102.95	-	-	Ave
2437	69.79	0	166	H	29.042	5.22	0.00	104.05	-	-	Ave
4874	47.77	0	100	V	32.608	7.93	37.92	50.39	74.00	-23.61	Peak
4874	47.51	0	100	H	32.638	7.93	37.92	50.16	74.00	-23.84	Peak
4874	32.89	0	100	V	32.608	7.93	37.92	35.51	54.00	-18.49	Ave
4874	32.9	0	100	H	32.638	7.93	37.92	35.55	54.00	-18.45	Ave
7311	54.21	350	300	V	36.406	9.86	37.53	62.94	74.00	-11.06	Peak
7311	55.43	352	229	H	37.148	9.86	37.53	64.90	74.00	-9.10	Peak
7311	32.23	0	100	V	36.406	9.86	37.53	40.96	54.00	-13.04	Ave
7311	32.27	0	100	H	37.148	9.86	37.53	41.74	54.00	-12.26	Ave
9748	47.54	0	100	V	37.101	11.48	38.27	57.85	74.00	-16.15	Peak
9748	47.34	0	100	H	37.923	11.48	38.27	58.47	74.00	-15.53	Peak
9748	33.11	0	100	V	37.101	11.48	38.27	43.42	54.00	-10.58	Ave
9748	33.13	0	100	H	37.923	11.48	38.27	44.26	54.00	-9.74	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	80.46	0	199	V	28.91	5.47	0.00	114.85	-	-	Peak
2462	81.63	0	156	H	29.41	5.47	0.00	116.52	-	-	Peak
2462	67.58	0	179	V	28.91	5.47	0.00	101.97	-	-	Ave
2462	68.45	0	167	H	29.41	5.47	0.00	103.34	-	-	Ave
2483.5	38.48	0	172	V	28.91	5.47	0.00	72.87	74.00	-1.13	Peak
2483.5	34.96	0	179	H	29.41	5.47	0.00	69.85	74.00	-4.15	Peak
2483.5	16.08	0	161	V	28.91	5.47	0.00	50.47	54.00	-3.53	Ave
2483.5	14.86	0	130	H	29.41	5.47	0.00	49.75	54.00	-4.25	Ave
4924	47.820	0	100	V	32.61	7.93	37.85	50.51	74.00	-23.49	Peak
4924	48.390	0	100	H	32.99	7.93	37.85	51.46	74.00	-22.54	Peak
4924	33.010	0	100	V	32.61	7.93	37.85	35.70	54.00	-18.30	Ave
4924	33.080	0	100	H	32.99	7.93	37.85	36.15	54.00	-17.85	Ave
7386	52.020	327	254	V	36.31	9.86	37.62	60.56	74.00	-13.44	Peak
7386	51.690	353	238	H	37.14	9.86	37.62	61.06	74.00	-12.94	Peak
7386	32.290	0	100	V	36.31	9.86	37.62	40.83	54.00	-13.17	Ave
7386	32.330	0	100	H	37.14	9.86	37.62	41.70	54.00	-12.30	Ave
9848	46.980	0	100	V	37.18	11.59	38.38	57.37	74.00	-16.63	Peak
9848	46.980	0	100	H	37.99	11.59	38.38	58.18	74.00	-15.82	Peak
9848	31.990	0	100	V	37.18	11.59	38.38	42.38	54.00	-11.62	Ave
9848	32.000	0	100	H	37.99	11.59	38.38	43.20	54.00	-10.80	Ave

802.11n40 Mode

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2422 MHz											
2422	80.41	0	167	V	28.45	5.22	0.00	114.08	-	-	Peak
2422	80.1	0	210	H	29.04	5.22	0.00	114.36	-	-	Peak
2422	65.31	0	170	V	28.45	5.22	0.00	98.98	-	-	Ave
2422	65.98	0	186	H	29.04	5.22	0.00	100.24	-	-	Ave
2390	33.26	0	154	V	28.45	5.22	0.00	66.93	74.00	-7.08	Peak
2390	33.21	0	154	H	29.04	5.22	0.00	67.47	74.00	-6.53	Peak
2390	16.96	0	154	V	28.45	5.22	0.00	50.63	54.00	-3.38	Ave
2390	14.89	0	191	H	29.04	5.22	0.00	49.15	54.00	-4.85	Ave
4844	47.440	0	100	V	32.42	7.76	38.01	49.61	74.00	-24.39	Peak
4844	47.400	0	100	H	32.47	7.76	38.01	49.63	74.00	-24.37	Peak
4844	32.740	0	100	V	32.42	7.76	38.01	34.91	54.00	-19.09	Ave
4844	32.760	0	100	H	32.47	7.76	38.01	34.99	54.00	-19.01	Ave
7266	52.540	345	307	V	36.16	9.71	37.53	60.88	74.00	-13.12	Peak
7266	53.290	353	253	H	36.69	9.71	37.53	62.16	74.00	-11.84	Peak
7266	32.450	0	100	V	36.16	9.71	37.53	40.79	54.00	-13.21	Ave
7266	32.440	0	100	H	36.69	9.71	37.53	41.31	54.00	-12.69	Ave
9688	46.320	0	100	V	37.17	11.37	38.00	56.86	74.00	-17.14	Peak
9688	46.140	0	100	H	37.77	11.37	38.00	57.28	74.00	-16.72	Peak
9688	32.690	0	100	V	37.17	11.37	38.00	43.23	54.00	-10.77	Ave
9688	32.740	0	100	H	37.77	11.37	38.00	43.88	54.00	-10.12	Ave
Middle Channel 2437 MHz											
2437	79.35	0	148	V	28.448	5.22	0.00	113.02	-	-	Peak
2437	80.39	0	159	H	29.042	5.22	0.00	114.65	-	-	Peak
2437	65.2	0	189	V	28.448	5.22	0.00	98.87	-	-	Ave
2437	65.8	0	163	H	29.042	5.22	0.00	100.06	-	-	Ave
4874	47.58	0	100	V	32.608	7.93	37.92	50.20	74.00	-23.80	Peak
4874	47.59	0	100	H	32.638	7.93	37.92	50.24	74.00	-23.76	Peak
4874	32.83	0	100	V	32.608	7.93	37.92	35.45	54.00	-18.55	Ave
4874	32.86	0	100	H	32.638	7.93	37.92	35.51	54.00	-18.49	Ave
7311	54.53	330	248	V	36.406	9.86	37.53	63.26	74.00	-10.74	Peak
7311	55.95	332	238	H	37.148	9.86	37.53	65.42	74.00	-8.58	Peak
7311	32.3	0	100	V	36.406	9.86	37.53	41.03	54.00	-12.97	Ave
7311	32.29	0	100	H	37.148	9.86	37.53	41.76	54.00	-12.24	Ave
9748	48.09	0	100	V	37.101	11.48	38.27	58.40	74.00	-15.60	Peak
9748	48.51	0	100	H	37.923	11.48	38.27	59.64	74.00	-14.36	Peak
9748	33.03	0	100	V	37.101	11.48	38.27	43.34	54.00	-10.66	Ave
9748	33.06	0	100	H	37.923	11.48	38.27	44.19	54.00	-9.81	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2452 MHz											
2452	76.95	0	146	V	28.91	5.47	0.00	111.34	-	-	Peak
2452	78.48	0	206	H	29.41	5.47	0.00	113.37	-	-	Peak
2452	63.42	0	165	V	28.91	5.47	0.00	97.81	-	-	Ave
2452	63.8	0	197	H	29.41	5.47	0.00	98.69	-	-	Ave
2483.5	34.03	0	217	V	28.91	5.47	0.00	68.42	74.00	-5.58	Peak
2483.5	38.08	0	132	H	29.41	5.47	0.00	72.97	74.00	-1.03	Peak
2483.5	15.93	0	161	V	28.91	5.47	0.00	50.32	54.00	-3.68	Ave
2483.5	16.2	0	217	H	29.41	5.47	0.00	51.09	54.00	-2.91	Ave
4904	47.390	0	100	V	32.61	7.93	37.85	50.08	74.00	-23.92	Peak
4904	47.590	0	100	H	32.99	7.93	37.85	50.66	74.00	-23.34	Peak
4904	32.950	0	100	V	32.61	7.93	37.85	35.64	54.00	-18.36	Ave
4904	32.930	0	100	H	32.99	7.93	37.85	36.00	54.00	-18.00	Ave
7356	51.590	331	248	V	36.31	9.86	37.62	60.13	74.00	-13.87	Peak
7356	53.900	329	245	H	37.14	9.86	37.62	63.27	74.00	-10.73	Peak
7356	32.460	0	100	V	36.31	9.86	37.62	41.00	54.00	-13.00	Ave
7356	32.480	0	100	H	37.14	9.86	37.62	41.85	54.00	-12.15	Ave
9808	48.360	0	100	V	37.18	11.59	38.38	58.75	74.00	-15.25	Peak
9808	47.470	0	100	H	37.99	11.59	38.38	58.67	74.00	-15.33	Peak
9808	32.970	0	100	V	37.18	11.59	38.38	43.36	54.00	-10.64	Ave
9808	32.980	0	100	H	37.99	11.59	38.38	44.18	54.00	-9.82	Ave

802.11b Mode 10 MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	83.61	11	166	V	28.45	5.22	0.00	117.28	-	-	Peak
2412	76.27	4	159	H	29.04	5.22	0.00	110.53	-	-	Peak
2412	79.77	11	166	V	28.45	5.22	0.00	113.44	-	-	Ave
2412	73.01	4	159	H	29.04	5.22	0.00	107.27	-	-	Ave
2390	28.28	11	166	V	28.45	5.22	0.00	61.95	74.00	-12.06	Peak
2390	26.47	4	159	H	29.04	5.22	0.00	60.73	74.00	-13.27	Peak
2390	18.91	11	166	V	28.45	5.22	0.00	52.58	54.00	-1.43	Ave
2390	17.25	4	159	H	29.04	5.22	0.00	51.51	54.00	-2.49	Ave
4824	46.650	0	100	V	32.42	7.76	38.01	48.82	74.00	-25.18	Peak
4824	46.710	0	100	H	32.47	7.76	38.01	48.94	74.00	-25.06	Peak
4824	35.310	0	100	V	32.42	7.76	38.01	37.48	54.00	-16.52	Ave
4824	35.710	0	100	H	32.47	7.76	38.01	37.94	54.00	-16.06	Ave
7236	59.560	36	118	V	36.16	9.71	37.53	67.90	74.00	-6.10	Peak
7236	56.690	326	100	H	36.69	9.71	37.53	65.56	74.00	-8.44	Peak
7236	34.970	36	118	V	36.16	9.71	37.53	43.31	54.00	-10.69	Ave
7236	34.930	326	100	H	36.69	9.71	37.53	43.80	54.00	-10.20	Ave
9648	43.160	0	100	V	37.17	11.37	38.00	53.70	74.00	-20.30	Peak
9648	41.910	0	100	H	37.77	11.37	38.00	53.05	74.00	-20.95	Peak
9648	31.110	0	100	V	37.17	11.37	38.00	41.65	54.00	-12.35	Ave
9648	31.050	0	100	H	37.77	11.37	38.00	42.19	54.00	-11.81	Ave
Middle Channel 2437 MHz											
2437	83.21	10	169	V	28.448	5.22	0.00	116.88	-	-	Peak
2437	76.63	6	177	H	29.042	5.22	0.00	110.89	-	-	Peak
2437	79.6	10	169	V	28.448	5.22	0.00	113.27	-	-	Ave
2437	73.48	6	177	H	29.042	5.22	0.00	107.74	-	-	Ave
4874	46.53	0	100	V	32.608	7.93	37.92	49.15	74.00	-24.85	Peak
4874	45.23	0	100	H	32.638	7.93	37.92	47.88	74.00	-26.12	Peak
4874	35.5	0	100	V	32.608	7.93	37.92	38.12	54.00	-15.88	Ave
4874	35.51	0	100	H	32.638	7.93	37.92	38.16	54.00	-15.84	Ave
7311	59.79	36	122	V	36.406	9.86	37.53	68.52	74.00	-5.48	Peak
7311	58.56	332	229	H	37.148	9.86	37.53	68.03	74.00	-5.97	Peak
7311	38.42	36	122	V	36.406	9.86	37.53	47.15	54.00	-6.85	Ave
7311	37.37	332	229	H	37.148	9.86	37.53	46.84	54.00	-7.16	Ave
9748	45.59	0	100	V	37.101	11.48	38.27	55.90	74.00	-18.10	Peak
9748	44.84	0	100	H	37.923	11.48	38.27	55.97	74.00	-18.03	Peak
9748	34.42	0	100	V	37.101	11.48	38.27	44.73	54.00	-9.27	Ave
9748	34.41	0	100	H	37.923	11.48	38.27	45.54	54.00	-8.46	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	77.35	9	175	V	28.91	5.47	0.00	111.74	-	-	Peak
2462	82.98	10	189	H	29.41	5.47	0.00	117.87	-	-	Peak
2462	73.35	9	175	V	28.91	5.47	0.00	107.74	-	-	Ave
2462	79.15	10	189	H	29.41	5.47	0.00	114.04	-	-	Ave
2483.5	26.18	9	175	V	28.91	5.47	0.00	60.57	74.00	-13.43	Peak
2483.5	26.01	10	189	H	29.41	5.47	0.00	60.90	74.00	-13.10	Peak
2483.5	15.56	9	175	V	28.91	5.47	0.00	49.95	54.00	-4.05	Ave
2483.5	15.57	10	189	H	29.41	5.47	0.00	50.46	54.00	-3.54	Ave
4924	46.640	0	100	V	32.61	7.93	37.85	49.33	74.00	-24.67	Peak
4924	45.400	0	100	H	32.99	7.93	37.85	48.47	74.00	-25.53	Peak
4924	36.000	0	100	V	32.61	7.93	37.85	38.69	54.00	-15.31	Ave
4924	36.410	0	100	H	32.99	7.93	37.85	39.48	54.00	-14.52	Ave
7386	55.900	22	112	V	36.31	9.86	37.62	64.44	74.00	-9.56	Peak
7386	57.990	334	221	H	37.14	9.86	37.62	67.36	74.00	-6.64	Peak
7386	35.130	22	112	V	36.31	9.86	37.62	43.67	54.00	-10.33	Ave
7386	35.080	334	221	H	37.14	9.86	37.62	44.45	54.00	-9.55	Ave
9848	44.540	0	100	V	37.18	11.59	38.38	54.93	74.00	-19.07	Peak
9848	44.840	0	100	H	37.99	11.59	38.38	56.04	74.00	-17.96	Peak
9848	34.390	0	100	V	37.18	11.59	38.38	44.78	54.00	-9.22	Ave
9848	34.370	0	100	H	37.99	11.59	38.38	45.57	54.00	-8.43	Ave

802.11g Mode 10 MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	87.76	7	234	V	28.45	5.22	0.00	121.43	-	-	Peak
2412	86.77	0	221	H	29.04	5.22	0.00	121.03	-	-	Peak
2412	73.93	7	234	V	28.45	5.22	0.00	107.60	-	-	Ave
2412	73.87	0	221	H	29.04	5.22	0.00	108.13	-	-	Ave
2390	27.77	7	234	V	28.45	5.22	0.00	61.44	74.00	-12.57	Peak
2390	26.23	0	221	H	29.04	5.22	0.00	60.49	74.00	-13.51	Peak
2390	14.12	7	234	V	28.45	5.22	0.00	47.79	54.00	-6.22	Ave
2390	13.8	0	221	H	29.04	5.22	0.00	48.06	54.00	-5.94	Ave
4824	47.180	0	100	V	32.42	7.76	38.01	49.35	74.00	-24.65	Peak
4824	47.160	0	100	H	32.47	7.76	38.01	49.39	74.00	-24.61	Peak
4824	32.060	0	100	V	32.42	7.76	38.01	34.23	54.00	-19.77	Ave
4824	32.010	0	100	H	32.47	7.76	38.01	34.24	54.00	-19.76	Ave
7236	57.860	36	127	V	36.16	9.71	37.53	66.20	74.00	-7.80	Peak
7236	56.770	333	252	H	36.69	9.71	37.53	65.64	74.00	-8.36	Peak
7236	31.600	36	127	V	36.16	9.71	37.53	39.94	54.00	-14.06	Ave
7236	31.760	333	252	H	36.69	9.71	37.53	40.63	54.00	-13.37	Ave
9648	47.120	0	100	V	37.17	11.37	38.00	57.66	74.00	-16.34	Peak
9648	48.270	0	100	H	37.77	11.37	38.00	59.41	74.00	-14.59	Peak
9648	32.810	0	100	V	37.17	11.37	38.00	43.35	54.00	-10.65	Ave
9648	32.790	0	100	H	37.77	11.37	38.00	43.93	54.00	-10.07	Ave
Middle Channel 2437 MHz											
2437	86.89	0	223	V	28.448	5.22	0.00	120.56	-	-	Peak
2437	87.27	5	226	H	29.042	5.22	0.00	121.53	-	-	Peak
2437	73.62	0	223	V	28.448	5.22	0.00	107.29	-	-	Ave
2437	74.03	5	226	H	29.042	5.22	0.00	108.29	-	-	Ave
4874	47.32	0	100	V	32.608	7.93	37.92	49.94	74.00	-24.06	Peak
4874	46.79	0	100	H	32.638	7.93	37.92	49.44	74.00	-24.56	Peak
4874	31.95	0	100	V	32.608	7.93	37.92	34.57	54.00	-19.43	Ave
4874	31.8	0	100	H	32.638	7.93	37.92	34.45	54.00	-19.55	Ave
7311	58.98	34	125	V	36.406	9.86	37.53	67.71	74.00	-6.29	Peak
7311	58.56	328	257	H	37.148	9.86	37.53	68.03	74.00	-5.97	Peak
7311	31.39	34	125	V	36.406	9.86	37.53	40.12	54.00	-13.88	Ave
7311	31.31	328	257	H	37.148	9.86	37.53	40.78	54.00	-13.22	Ave
9748	47.59	0	100	V	37.101	11.48	38.27	57.90	74.00	-16.10	Peak
9748	46.71	0	100	H	37.923	11.48	38.27	57.84	74.00	-16.16	Peak
9748	32.15	0	100	V	37.101	11.48	38.27	42.46	54.00	-11.54	Ave
9748	32.14	0	100	H	37.923	11.48	38.27	43.27	54.00	-10.73	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	86.82	0	228	V	28.91	5.47	0.00	121.21	-	-	Peak
2462	87.04	5	210	H	29.41	5.47	0.00	121.93	-	-	Peak
2462	73.39	0	228	V	28.91	5.47	0.00	107.78	-	-	Ave
2462	74.1	5	210	H	29.41	5.47	0.00	108.99	-	-	Ave
2483.5	27.19	0	228	V	28.91	5.47	0.00	61.58	74.00	-12.42	Peak
2483.5	27.36	5	210	H	29.41	5.47	0.00	62.25	74.00	-11.75	Peak
2483.5	13.19	0	228	V	28.91	5.47	0.00	47.58	54.00	-6.42	Ave
2483.5	13.2	5	210	H	29.41	5.47	0.00	48.09	54.00	-5.91	Ave
4924	45.540	0	100	V	32.61	7.93	37.85	48.23	74.00	-25.77	Peak
4924	46.040	0	100	H	32.99	7.93	37.85	49.11	74.00	-24.89	Peak
4924	31.160	0	100	V	32.61	7.93	37.85	33.85	54.00	-20.15	Ave
4924	31.100	0	100	H	32.99	7.93	37.85	34.17	54.00	-19.83	Ave
7386	55.170	28	144	V	36.31	9.86	37.62	63.71	74.00	-10.29	Peak
7386	56.120	332	267	H	37.14	9.86	37.62	65.49	74.00	-8.51	Peak
7386	31.250	28	144	V	36.31	9.86	37.62	39.79	54.00	-14.21	Ave
7386	31.280	332	267	H	37.14	9.86	37.62	40.65	54.00	-13.35	Ave
9848	47.080	0	100	V	37.18	11.59	38.38	57.47	74.00	-16.53	Peak
9848	46.790	0	100	H	37.99	11.59	38.38	57.99	74.00	-16.01	Peak
9848	31.830	0	100	V	37.18	11.59	38.38	42.22	54.00	-11.78	Ave
9848	31.850	0	100	H	37.99	11.59	38.38	43.05	54.00	-10.95	Ave

802.11b Mode 5 MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	86.39	0	182	V	28.45	5.22	0.00	120.06	-	-	Peak
2412	78.58	0	166	H	29.04	5.22	0.00	112.84	-	-	Peak
2412	80.7	0	182	V	28.45	5.22	0.00	114.37	-	-	Ave
2412	73.98	0	166	H	29.04	5.22	0.00	108.24	-	-	Ave
2390	26.08	0	182	V	28.45	5.22	0.00	59.75	74.00	-14.26	Peak
2390	26.05	0	166	H	29.04	5.22	0.00	60.31	74.00	-13.69	Peak
2390	15.95	0	182	V	28.45	5.22	0.00	49.62	54.00	-4.39	Ave
2390	15.33	0	166	H	29.04	5.22	0.00	49.59	54.00	-4.41	Ave
4824	52.120	0	100	V	32.42	7.76	38.01	54.29	74.00	-19.71	Peak
4824	46.610	0	100	H	32.47	7.76	38.01	48.84	74.00	-25.16	Peak
4824	34.010	0	100	V	32.42	7.76	38.01	36.18	54.00	-17.82	Ave
4824	34.030	0	100	H	32.47	7.76	38.01	36.26	54.00	-17.74	Ave
7236	49.760	7	188	V	36.16	9.71	37.53	58.10	74.00	-15.90	Peak
7236	50.280	327	197	H	36.69	9.71	37.53	59.15	74.00	-14.85	Peak
7236	33.140	7	188	V	36.16	9.71	37.53	41.48	54.00	-12.52	Ave
7236	33.060	327	197	H	36.69	9.71	37.53	41.93	54.00	-12.07	Ave
9648	47.620	0	100	V	37.17	11.37	38.00	58.16	74.00	-15.84	Peak
9648	47.800	0	100	H	37.77	11.37	38.00	58.94	74.00	-15.06	Peak
9648	32.270	0	100	V	37.17	11.37	38.00	42.81	54.00	-11.19	Ave
9648	32.310	0	100	H	37.77	11.37	38.00	43.45	54.00	-10.55	Ave
Middle Channel 2437 MHz											
2437	85.57	0	158	V	28.448	5.22	0.00	119.24	-	-	Peak
2437	78.07	0	168	H	29.042	5.22	0.00	112.33	-	-	Peak
2437	79.91	0	158	V	28.448	5.22	0.00	113.58	-	-	Ave
2437	74.25	0	168	H	29.042	5.22	0.00	108.51	-	-	Ave
4874	46.83	0	100	V	32.608	7.93	37.92	49.45	74.00	-24.55	Peak
4874	47.41	0	100	H	32.638	7.93	37.92	50.06	74.00	-23.94	Peak
4874	33.92	0	100	V	32.608	7.93	37.92	36.54	54.00	-17.46	Ave
4874	33.85	0	100	H	32.638	7.93	37.92	36.50	54.00	-17.50	Ave
7311	53.68	27	102	V	36.406	9.86	37.53	62.41	74.00	-11.59	Peak
7311	51.45	55	180	H	37.148	9.86	37.53	60.92	74.00	-13.08	Peak
7311	32.8	27	102	V	36.406	9.86	37.53	41.53	54.00	-12.47	Ave
7311	32.88	55	180	H	37.148	9.86	37.53	42.35	54.00	-11.65	Ave
9748	47.83	0	100	V	37.101	11.48	38.27	58.14	74.00	-15.86	Peak
9748	47.57	0	100	H	37.923	11.48	38.27	58.70	74.00	-15.30	Peak
9748	33.94	0	100	V	37.101	11.48	38.27	44.25	54.00	-9.75	Ave
9748	33.96	0	100	H	37.923	11.48	38.27	45.09	54.00	-8.91	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	84.85	0	167	V	28.91	5.47	0.00	119.24	-	-	Peak
2462	76.2	3	172	H	29.41	5.47	0.00	111.09	-	-	Peak
2462	78.95	0	167	V	28.91	5.47	0.00	113.34	-	-	Ave
2462	71.28	3	172	H	29.41	5.47	0.00	106.17	-	-	Ave
2483.5	26.72	0	167	V	28.91	5.47	0.00	61.11	74.00	-12.89	Peak
2483.5	26.92	3	172	H	29.41	5.47	0.00	61.81	74.00	-12.19	Peak
2483.5	14.1	0	167	V	28.91	5.47	0.00	48.49	54.00	-5.51	Ave
2483.5	14.07	3	172	H	29.41	5.47	0.00	48.96	54.00	-5.04	Ave
4924	59.580	0	100	V	32.61	7.93	37.85	62.27	74.00	-11.73	Peak
4924	58.160	0	100	H	32.99	7.93	37.85	61.23	74.00	-12.77	Peak
4924	34.170	0	100	V	32.61	7.93	37.85	36.86	54.00	-17.14	Ave
4924	34.090	0	100	H	32.99	7.93	37.85	37.16	54.00	-16.84	Ave
7386	50.310	21	207	V	36.31	9.86	37.62	58.85	74.00	-15.15	Peak
7386	51.600	316	179	H	37.14	9.86	37.62	60.97	74.00	-13.03	Peak
7386	32.790	21	207	V	36.31	9.86	37.62	41.33	54.00	-12.67	Ave
7386	32.620	316	179	H	37.14	9.86	37.62	41.99	54.00	-12.01	Ave
9848	47.860	0	100	V	37.18	11.59	38.38	58.25	74.00	-15.75	Peak
9848	47.800	0	100	H	37.99	11.59	38.38	59.00	74.00	-15.00	Peak
9848	34.380	0	100	V	37.18	11.59	38.38	44.77	54.00	-9.23	Ave
9848	34.390	0	100	H	37.99	11.59	38.38	45.59	54.00	-8.41	Ave

802.11g Mode 5 MHz Bandwidth

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 2412 MHz											
2412	89.42	0	174	V	28.45	5.22	0.00	123.09	-	-	Peak
2412	88.79	0	167	H	29.04	5.22	0.00	123.05	-	-	Peak
2412	76.22	0	174	V	28.45	5.22	0.00	109.89	-	-	Ave
2412	76.39	0	167	H	29.04	5.22	0.00	110.65	-	-	Ave
2390	26.61	0	174	V	28.45	5.22	0.00	60.28	74.00	-13.73	Peak
2390	26.6	0	167	H	29.04	5.22	0.00	60.86	74.00	-13.14	Peak
2390	15.07	0	174	V	28.45	5.22	0.00	48.74	54.00	-5.27	Ave
2390	14.69	0	167	H	29.04	5.22	0.00	48.95	54.00	-5.05	Ave
4824	51.310	0	100	V	32.42	7.76	38.01	53.48	74.00	-20.52	Peak
4824	47.040	0	100	H	32.47	7.76	38.01	49.27	74.00	-24.73	Peak
4824	33.660	0	100	V	32.42	7.76	38.01	35.83	54.00	-18.17	Ave
4824	33.590	0	100	H	32.47	7.76	38.01	35.82	54.00	-18.18	Ave
7236	52.470	22	200	V	36.16	9.71	37.53	60.81	74.00	-13.19	Peak
7236	51.270	315	225	H	36.69	9.71	37.53	60.14	74.00	-13.86	Peak
7236	32.920	22	200	V	36.16	9.71	37.53	41.26	54.00	-12.74	Ave
7236	32.890	315	225	H	36.69	9.71	37.53	41.76	54.00	-12.24	Ave
9648	47.090	0	100	V	37.17	11.37	38.00	57.63	74.00	-16.37	Peak
9648	48.050	0	100	H	37.77	11.37	38.00	59.19	74.00	-14.81	Peak
9648	33.450	0	100	V	37.17	11.37	38.00	43.99	54.00	-10.01	Ave
9648	33.470	0	100	H	37.77	11.37	38.00	44.61	54.00	-9.39	Ave
Middle Channel 2437 MHz											
2437	89.41	0	183	V	28.448	5.22	0.00	123.08	-	-	Peak
2437	88.75	0	167	H	29.042	5.22	0.00	123.01	-	-	Peak
2437	75.78	0	183	V	28.448	5.22	0.00	109.45	-	-	Ave
2437	76.19	0	167	H	29.042	5.22	0.00	110.45	-	-	Ave
4874	59.81	0	100	V	32.608	7.93	37.92	62.43	74.00	-11.57	Peak
4874	47.52	0	100	H	32.638	7.93	37.92	50.17	74.00	-23.83	Peak
4874	33.77	0	100	V	32.608	7.93	37.92	36.39	54.00	-17.61	Ave
4874	33.67	0	100	H	32.638	7.93	37.92	36.32	54.00	-17.68	Ave
7311	54.42	36	100	V	36.406	9.86	37.53	63.15	74.00	-10.85	Peak
7311	52.86	56	179	H	37.148	9.86	37.53	62.33	74.00	-11.67	Peak
7311	32.95	36	100	V	36.406	9.86	37.53	41.68	54.00	-12.32	Ave
7311	32.96	56	179	H	37.148	9.86	37.53	42.43	54.00	-11.57	Ave
9748	47.2	0	100	V	37.101	11.48	38.27	57.51	74.00	-16.49	Peak
9748	48.23	0	100	H	37.923	11.48	38.27	59.36	74.00	-14.64	Peak
9748	34.13	0	100	V	37.101	11.48	38.27	44.44	54.00	-9.56	Ave
9748	34.11	0	100	H	37.923	11.48	38.27	45.24	54.00	-8.76	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel 2462 MHz											
2462	89.56	0	163	V	28.91	5.47	0.00	123.95	-	-	Peak
2462	88.38	0	155	H	29.41	5.47	0.00	123.27	-	-	Peak
2462	75.94	0	163	V	28.91	5.47	0.00	110.33	-	-	Ave
2462	75.8	0	155	H	29.41	5.47	0.00	110.69	-	-	Ave
2483.5	27.38	0	163	V	28.91	5.47	0.00	61.77	74.00	-12.23	Peak
2483.5	27.07	0	155	H	29.41	5.47	0.00	61.96	74.00	-12.04	Peak
2483.5	14.43	0	163	V	28.91	5.47	0.00	48.82	54.00	-5.18	Ave
2483.5	14.39	0	155	H	29.41	5.47	0.00	49.28	54.00	-4.72	Ave
4924	51.680	0	100	V	32.61	7.93	37.85	54.37	74.00	-19.63	Peak
4924	47.610	0	100	H	32.99	7.93	37.85	50.68	74.00	-23.32	Peak
4924	33.870	0	100	V	32.61	7.93	37.85	36.56	54.00	-17.44	Ave
4924	33.820	0	100	H	32.99	7.93	37.85	36.89	54.00	-17.11	Ave
7386	52.220	22	207	V	36.31	9.86	37.62	60.76	74.00	-13.24	Peak
7386	51.990	322	180	H	37.14	9.86	37.62	61.36	74.00	-12.64	Peak
7386	32.710	22	207	V	36.31	9.86	37.62	41.25	54.00	-12.75	Ave
7386	32.740	322	180	H	37.14	9.86	37.62	42.11	54.00	-11.89	Ave
9848	48.430	0	100	V	37.18	11.59	38.38	58.82	74.00	-15.18	Peak
9848	47.890	0	100	H	37.99	11.59	38.38	59.09	74.00	-14.91	Peak
9848	34.140	0	100	V	37.18	11.59	38.38	44.53	54.00	-9.47	Ave
9848	34.180	0	100	H	37.99	11.59	38.38	45.38	54.00	-8.62	Ave

8 FCC §15.247(a) (2) & IC RSS-247 §5.2 - 6 dB & 99% Emission Bandwidth

8.1 Applicable Standards

According to FCC §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 500 kHz

According to IC RSS-247 5.2 (1), DTSs include systems that employ digital modulation techniques resulting in spectral characteristics similar to direct sequence systems. The minimum 6 dB bandwidth shall be 500 kHz for bands 902 -928 MHz and 2400 – 2483.5 MHz.

8.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v03r05: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 8: DTS bandwidth

8.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4440A	US42221851	2015-06-23	1 year
-	SMA Cable	-	C0001	Each Time[1]	N/A
Mini-Circuits	Attenuator	BW-S10W5	1430	Each Time[1]	N/A

Note[1]: cable and attenuator included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.*

8.4 Test Environmental Conditions

Temperature:	22º C
Relative Humidity:	42 %
ATM Pressure:	102.7 kPa

The testing was performed by Todd Moy/Leonard Gray from 2016-04-20 to 2016-05-12 in RF site.

8.5 Test Results

Chain 0

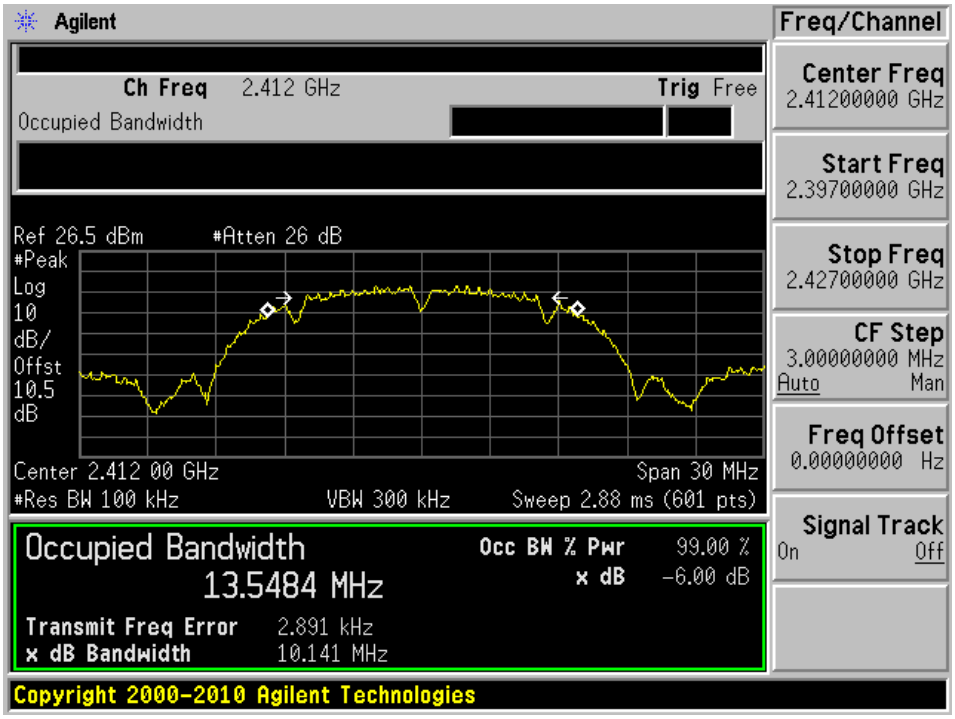
Channel	Frequency (MHz)	99 % OBW (MHz)	6 dB OBW (MHz)	6 dB OBW Limit (kHz)	Result
802.11b					
Low	2412	13.5484	10.141	≥ 500	Pass
Middle	2437	13.7664	10.049	≥ 500	Pass
High	2462	13.4916	9.883	≥ 500	Pass
802.11b-10MHz					
Low	2412	6.7642	5.103	≥ 500	Pass
Middle	2437	6.8183	5.103	≥ 500	Pass
High	2462	6.7575	5.055	≥ 500	Pass
802.11b-5MHz					
Low	2412	3.4633	2.583	≥ 500	Pass
Middle	2437	3.4561	2.582	≥ 500	Pass
High	2462	3.4362	2.579	≥ 500	Pass
802.11g					
Low	2412	16.4608	16.342	≥ 500	Pass
Middle	2437	16.5005	16.398	≥ 500	Pass
High	2462	16.4631	16.025	≥ 500	Pass
802.11g-10MHz					
Low	2412	8.2197	8.209	≥ 500	Pass
Middle	2437	8.2077	8.215	≥ 500	Pass
High	2462	8.2242	8.196	≥ 500	Pass
802.11g-5MHz					
Low	2412	4.1813	4.161	≥ 500	Pass
Middle	2437	4.1766	4.129	≥ 500	Pass
High	2462	4.1955	4.125	≥ 500	Pass
802.11n20					
Low	2412	17.6424	17.570	≥ 500	Pass
Middle	2437	17.6608	17.564	≥ 500	Pass
High	2462	17.6307	17.324	≥ 500	Pass
802.11n40					
Low	2422	36.2928	36.198	≥ 500	Pass
Middle	2437	36.3002	36.429	≥ 500	Pass
High	2452	36.2308	35.914	≥ 500	Pass

Chain 1

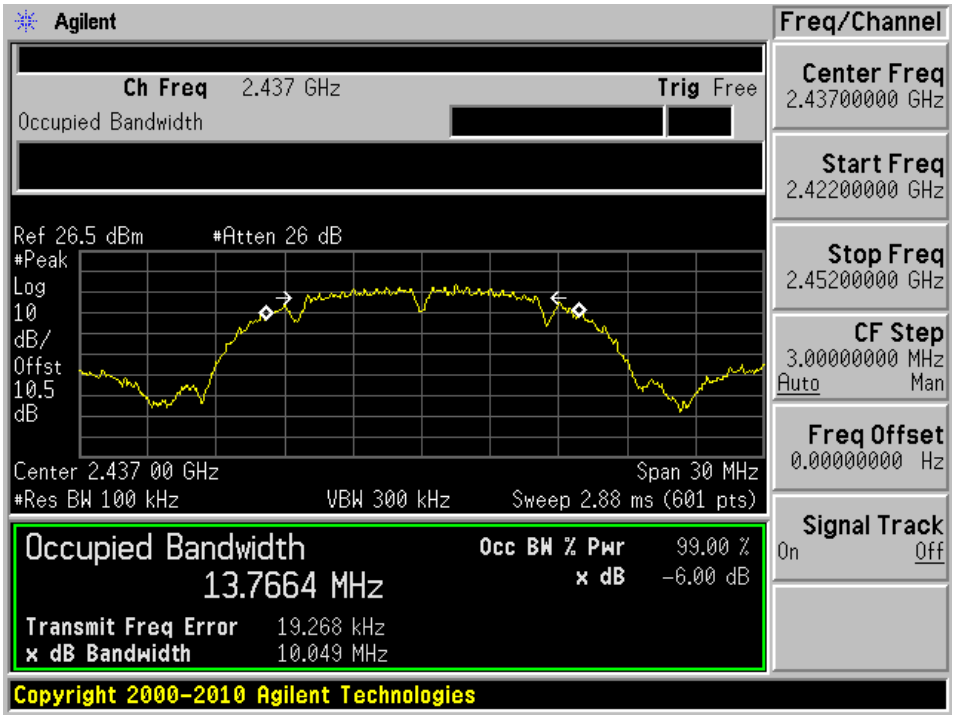
Channel	Frequency (MHz)	99 % OBW (MHz)	6 dB OBW (MHz)	6 dB OBW Limit (kHz)	Result
802.11b					
Low	2412	13.7344	9.267	≥ 500	Pass
Middle	2437	13.4960	10.081	≥ 500	Pass
High	2462	13.6359	9.625	≥ 500	Pass
802.11b-10MHz					
Low	2412	6.8425	5.081	≥ 500	Pass
Middle	2437	6.7465	5.092	≥ 500	Pass
High	2462	6.7871	5.101	≥ 500	Pass
802.11b-5MHz					
Low	2412	3.4642	2.584	≥ 500	Pass
Middle	2437	3.4170	2.579	≥ 500	Pass
High	2462	3.4842	2.585	≥ 500	Pass
802.11g					
Low	2412	16.4710	16.369	≥ 500	Pass
Middle	2437	16.4888	16.375	≥ 500	Pass
High	2462	16.4825	15.762	≥ 500	Pass
802.11g-10MHz					
Low	2412	8.2197	8.228	≥ 500	Pass
Middle	2437	8.2303	8.232	≥ 500	Pass
High	2462	8.2102	8.205	≥ 500	Pass
802.11g-5MHz					
Low	2412	4.1829	4.149	≥ 500	Pass
Middle	2437	4.1796	4.131	≥ 500	Pass
High	2462	4.1987	4.167	≥ 500	Pass
802.11n20					
Low	2412	17.6833	16.907	≥ 500	Pass
Middle	2437	17.6643	17.325	≥ 500	Pass
High	2462	17.6523	16.980	≥ 500	Pass
802.11n40					
Low	2422	36.2044	35.892	≥ 500	Pass
Middle	2437	36.3019	36.474	≥ 500	Pass
High	2452	36.2684	35.927	≥ 500	Pass

Please refer to the following plots for detailed test results

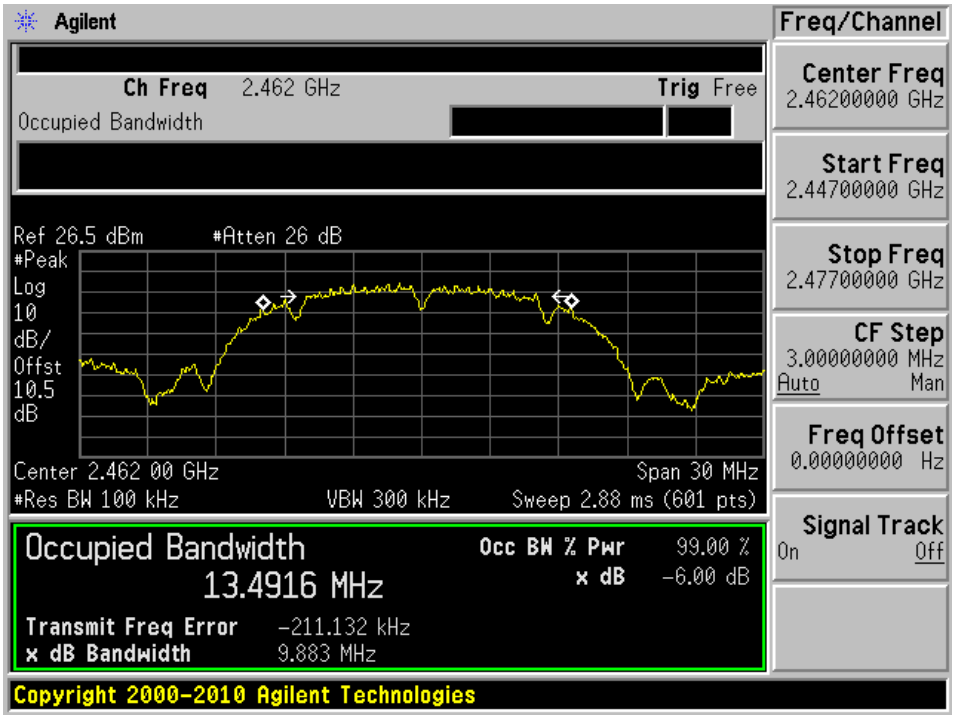
802.11b - 2412 MHz



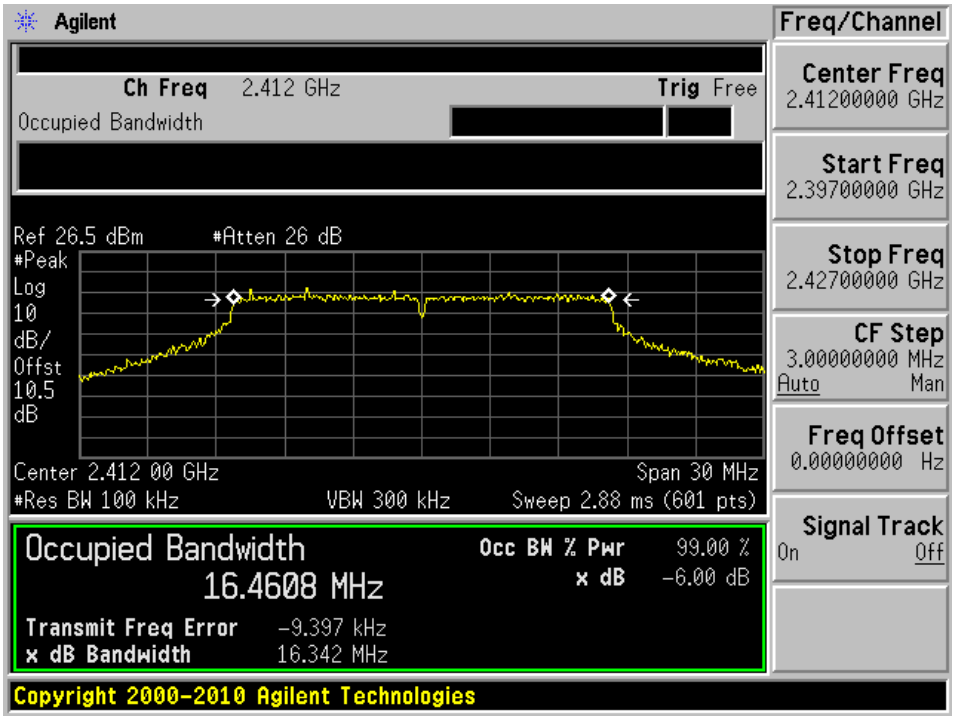
802.11b - 2437 MHz



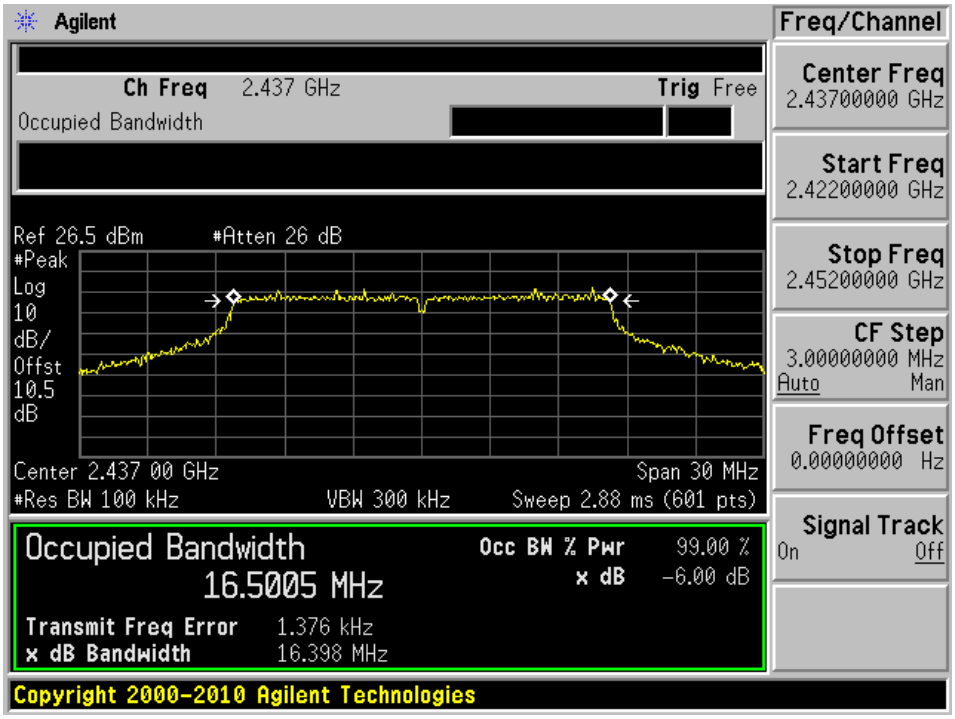
802.11b - 2462 MHz



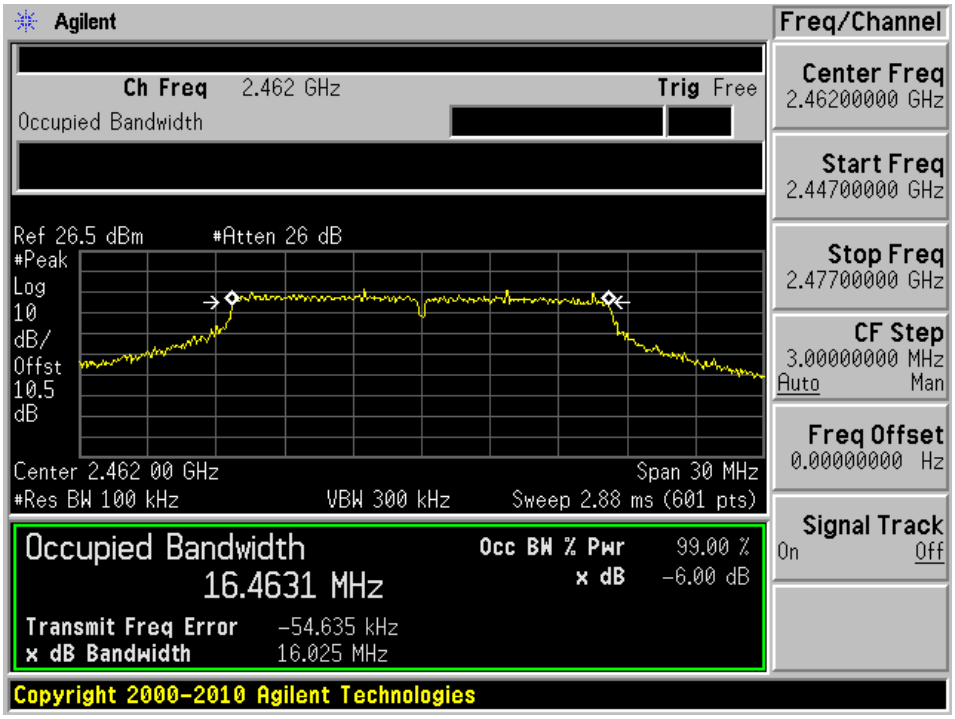
802.11g - 2412 MHz



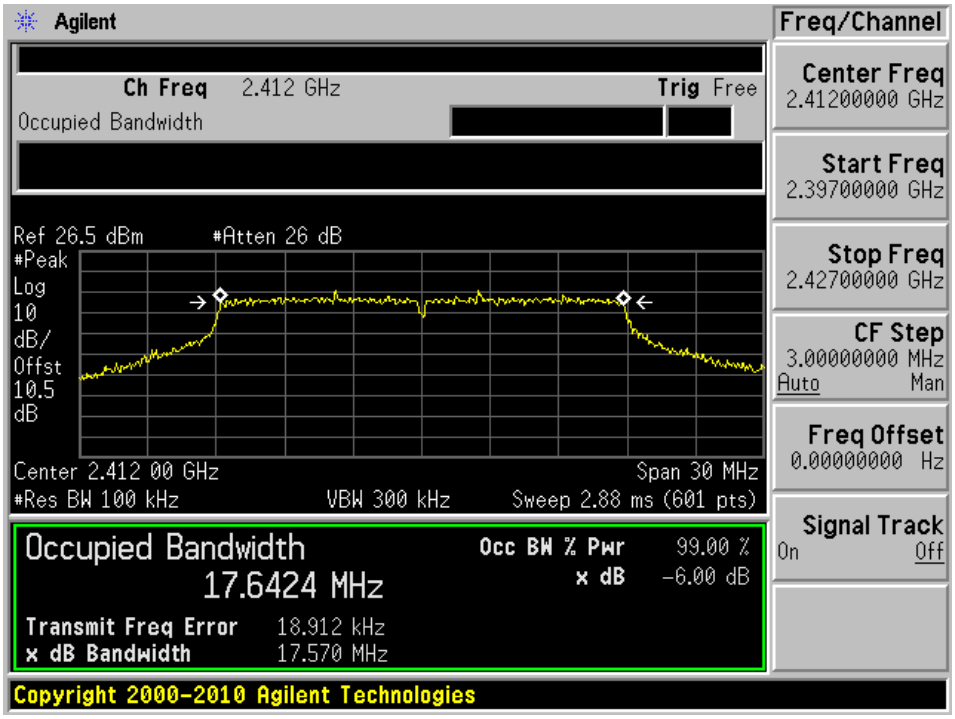
802.11g - 2437 MHz



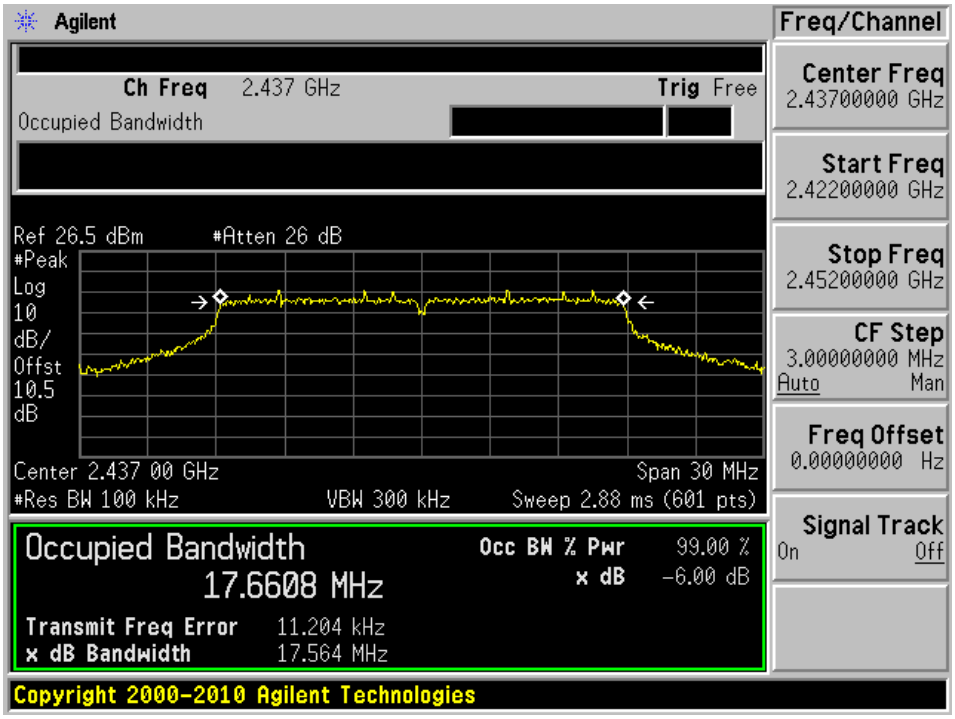
802.11g - 2462 MHz



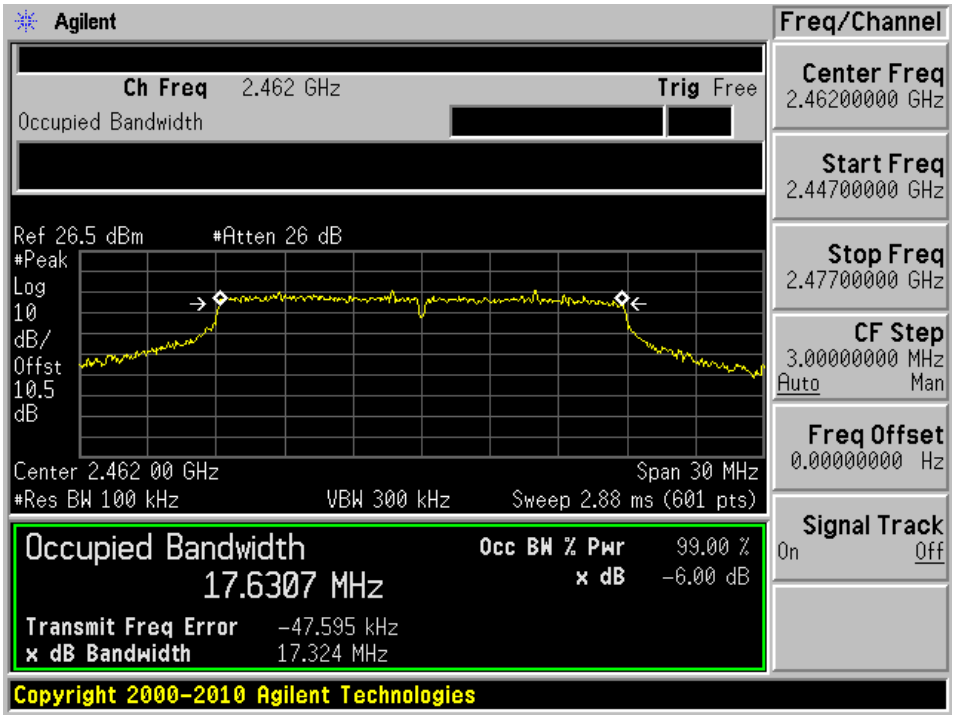
802.11n20 - 2412 MHz



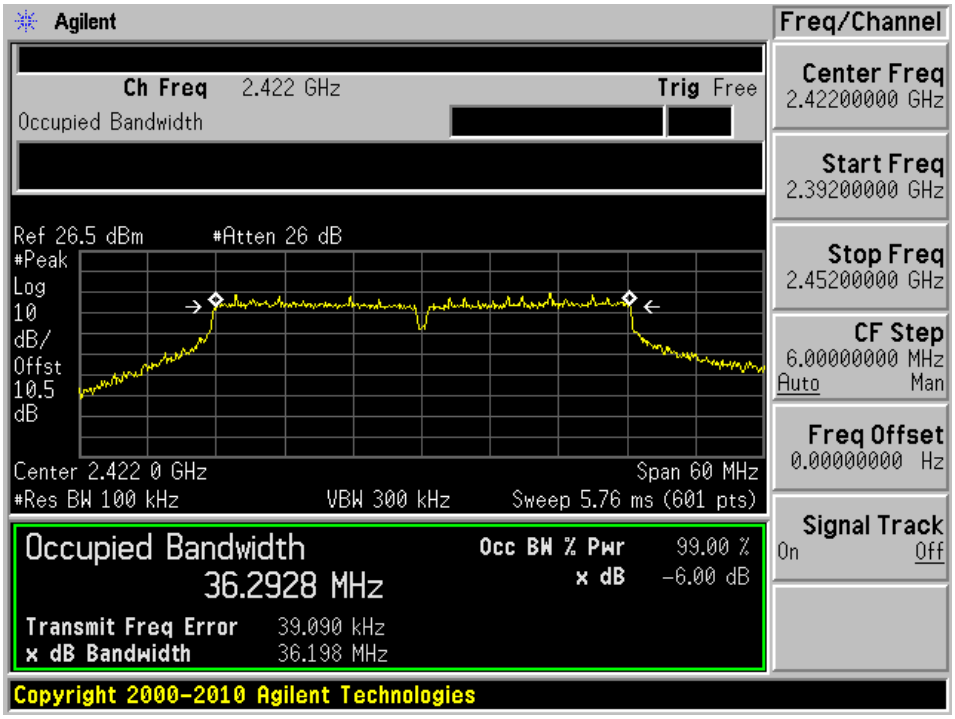
802.11n20 - 2437 MHz



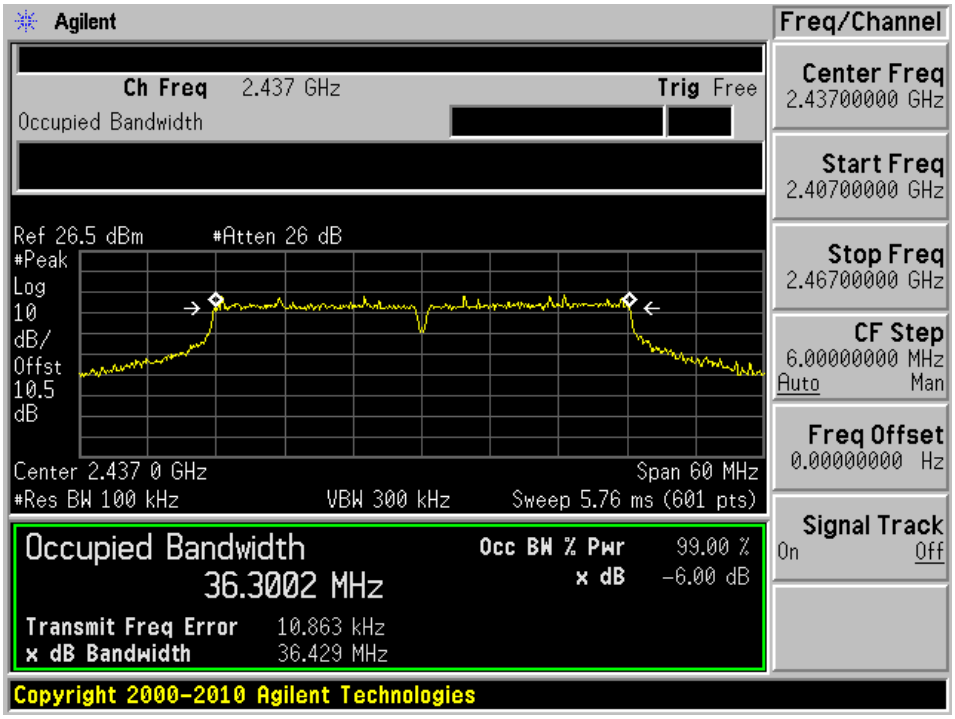
802.11n20 - 2462 MHz



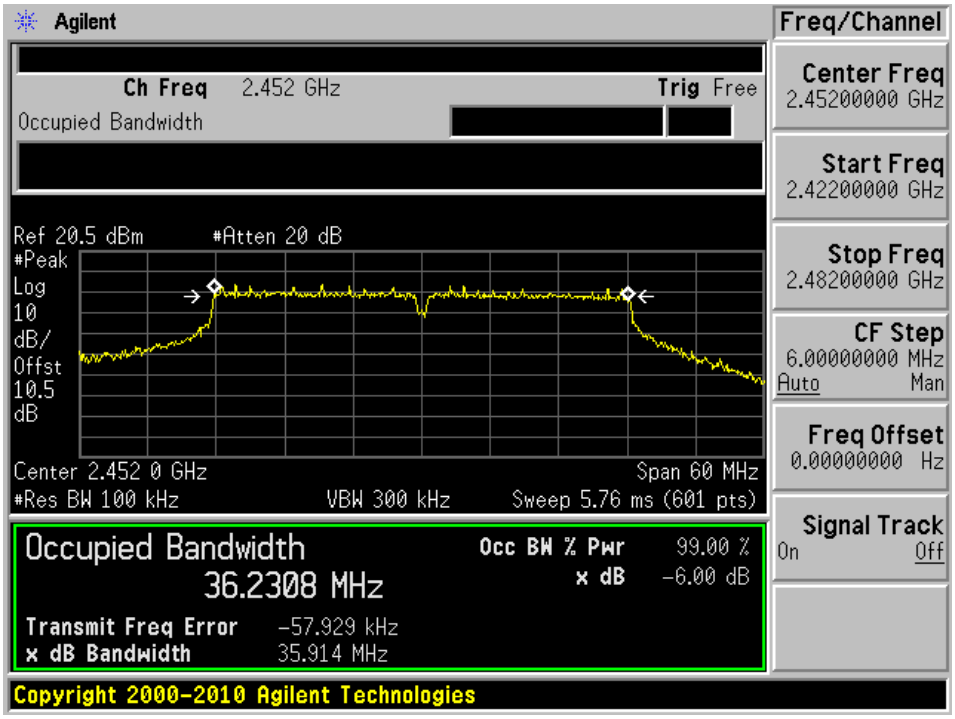
802.11n40 - 2422 MHz



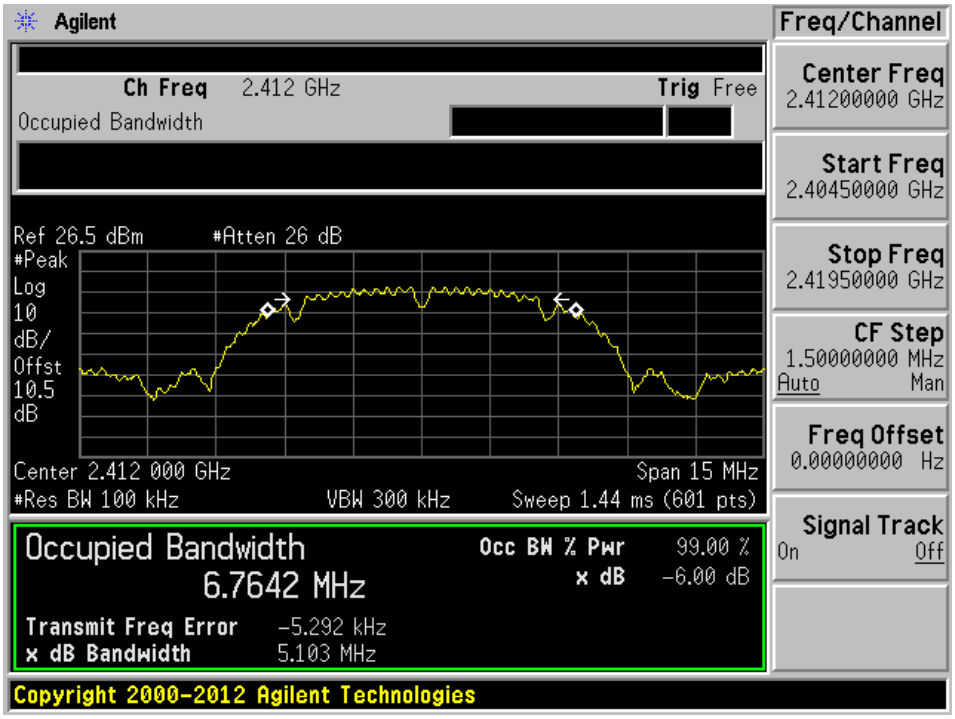
802.11n40 - 2437 MHz



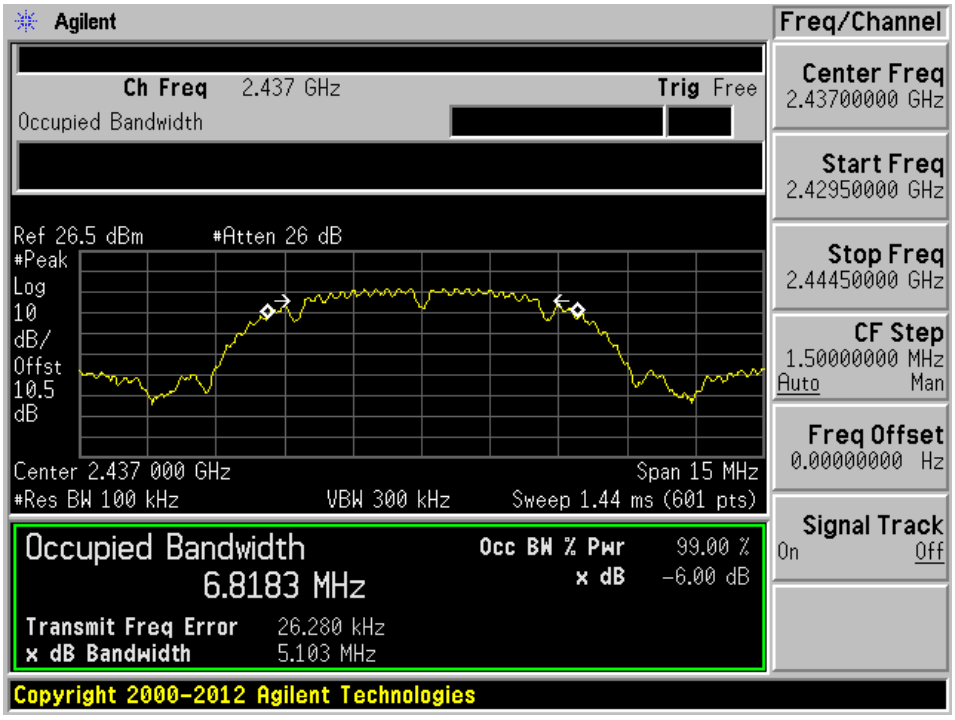
802.11n40 - 2452 MHz



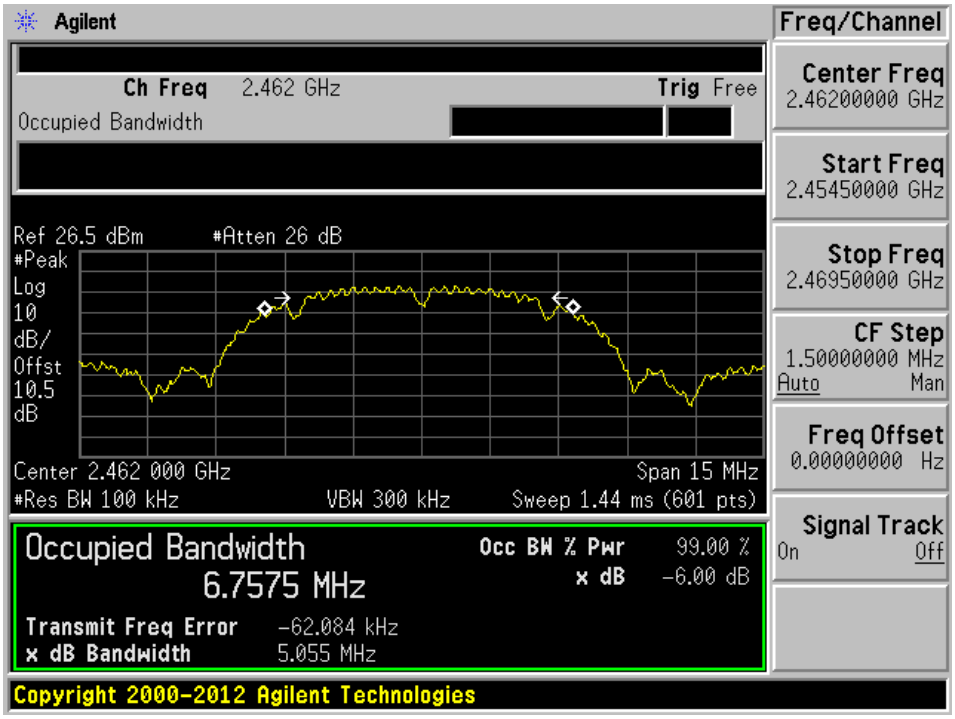
802.11b 10MHz - 2412 MHz



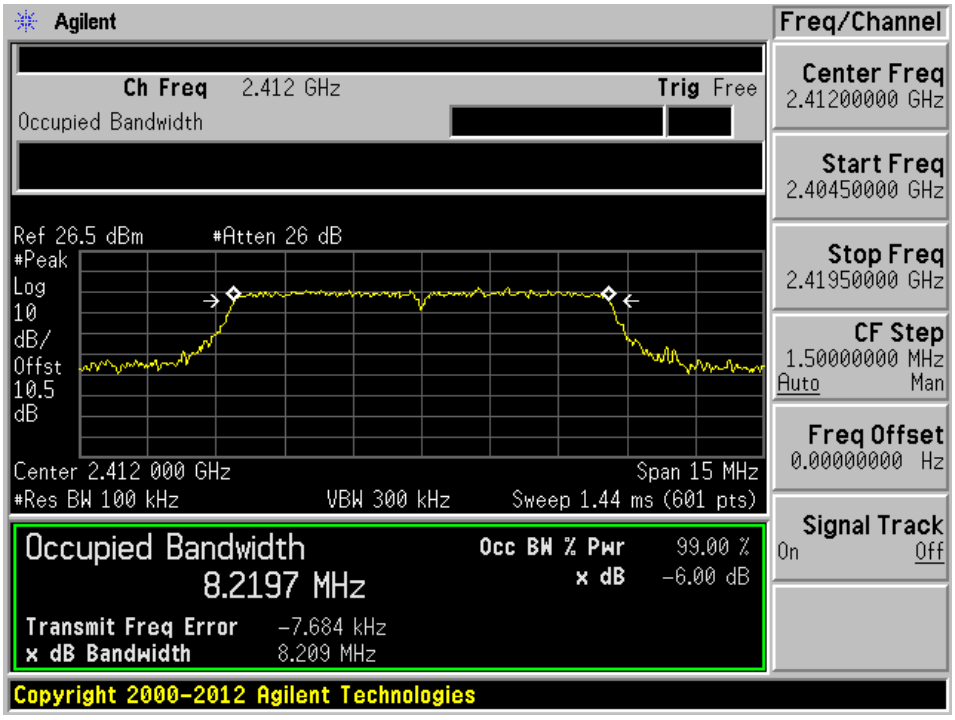
802.11b 10MHz - 2437 MHz



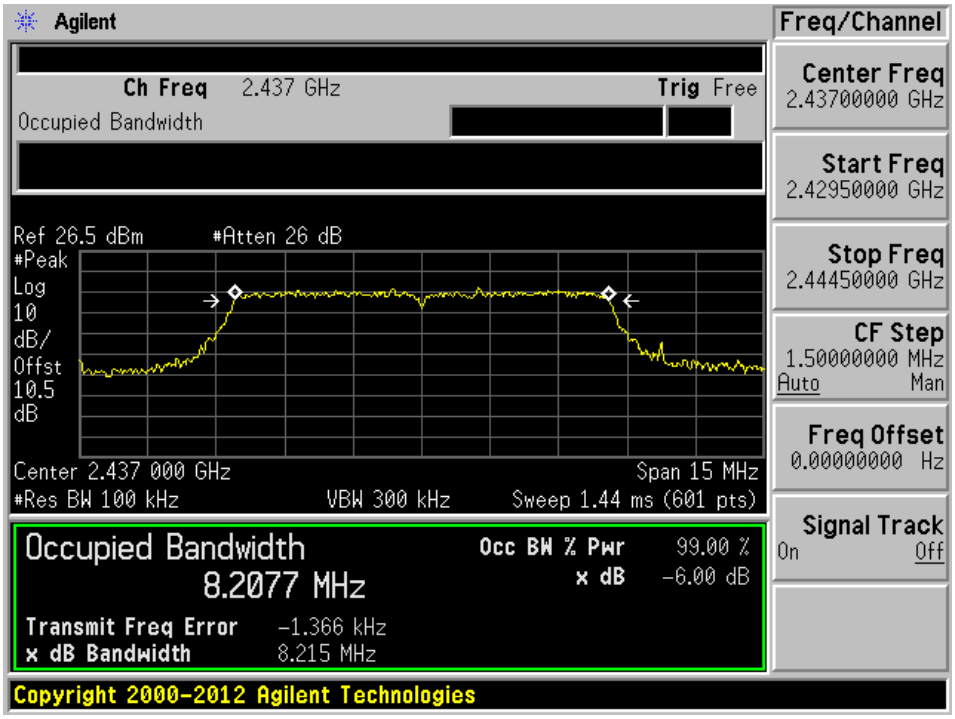
802.11b 10MHz - 2462 MHz



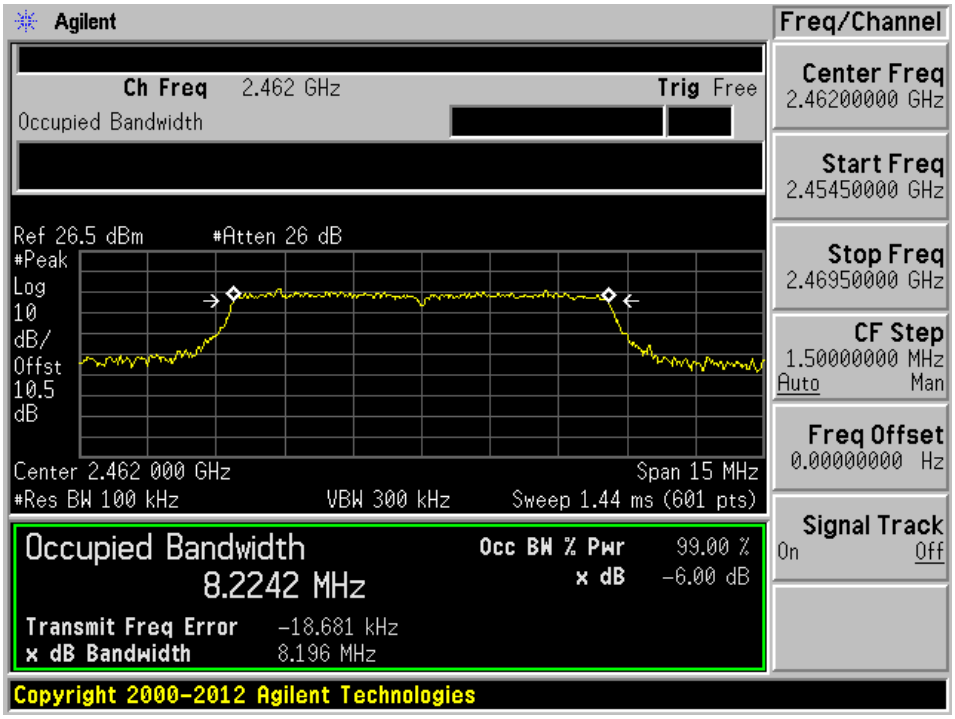
802.11g 10MHz - 2412 MHz



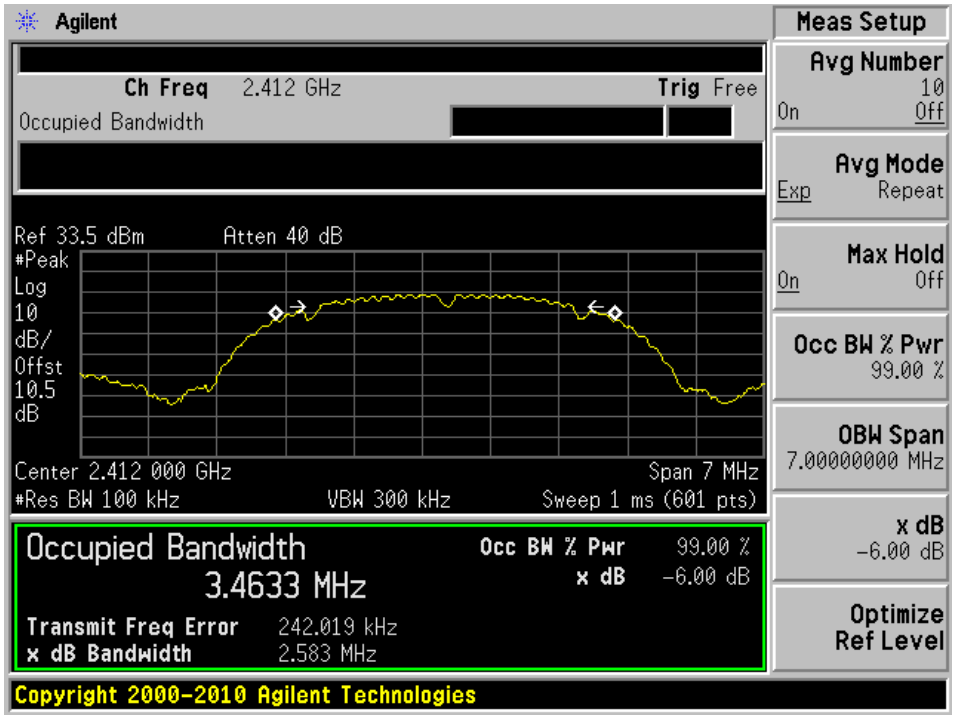
802.11g 10MHz - 2437 MHz



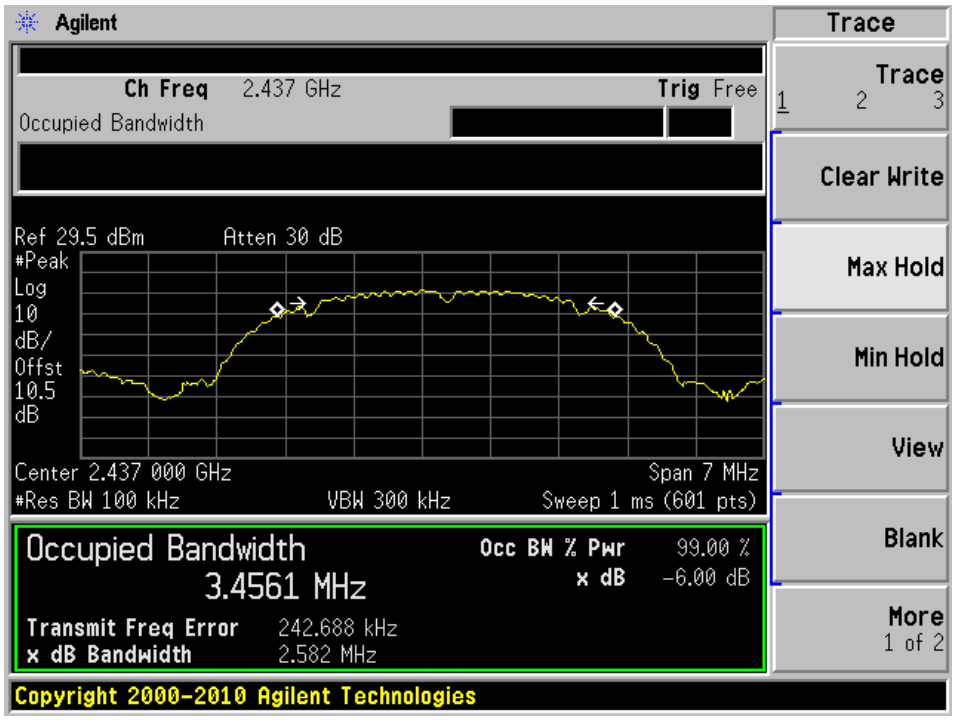
802.11g 10MHz - 2462 MHz



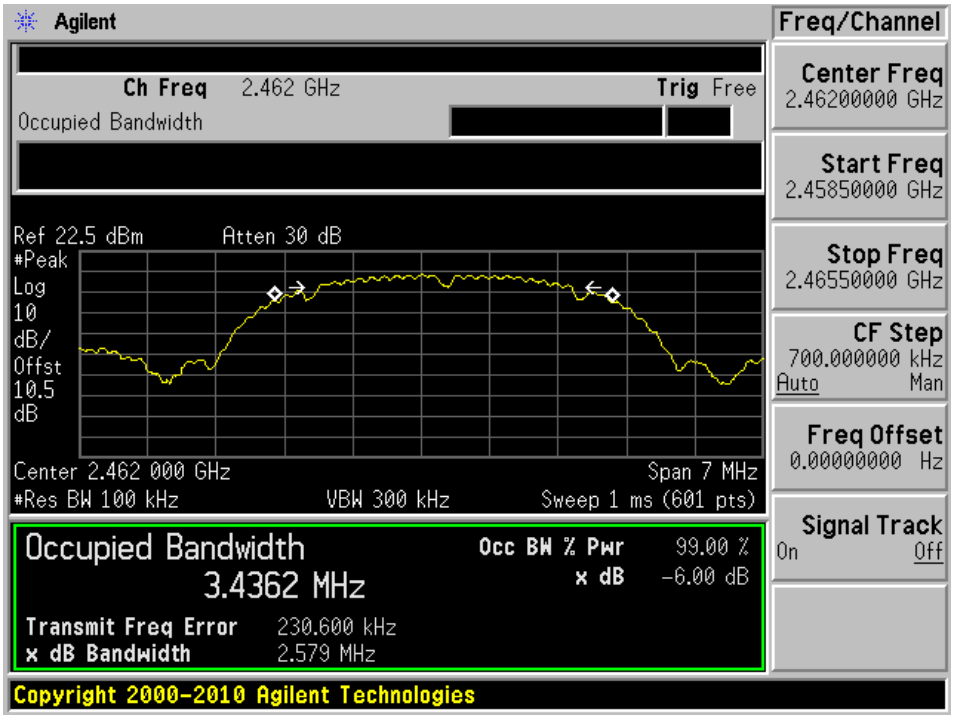
802.11b 5MHz - 2412 MHz



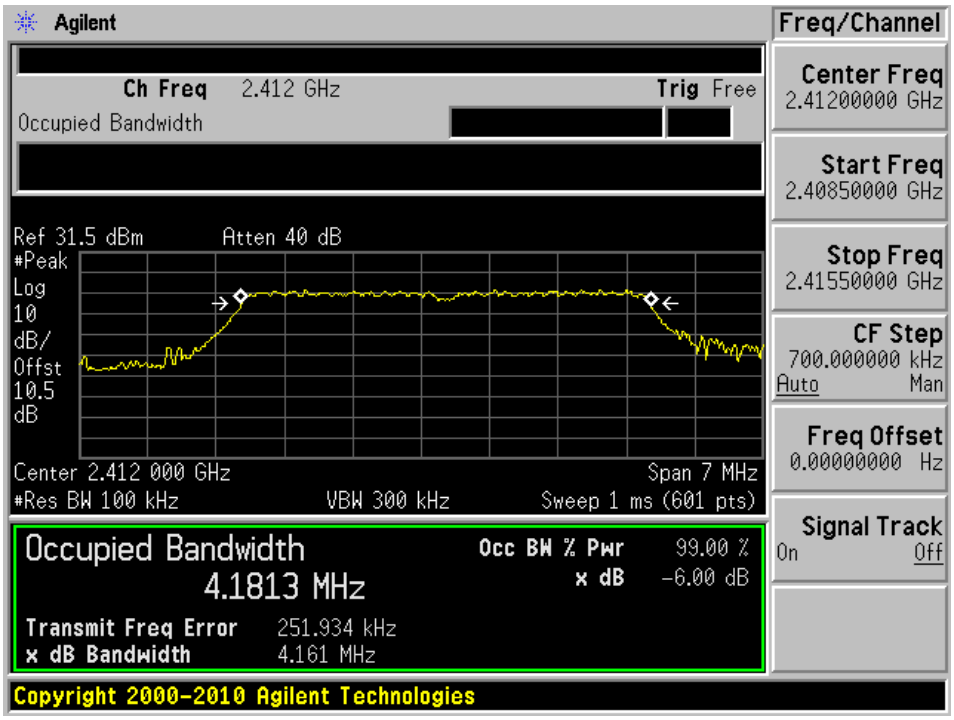
802.11b 5MHz - 2437 MHz



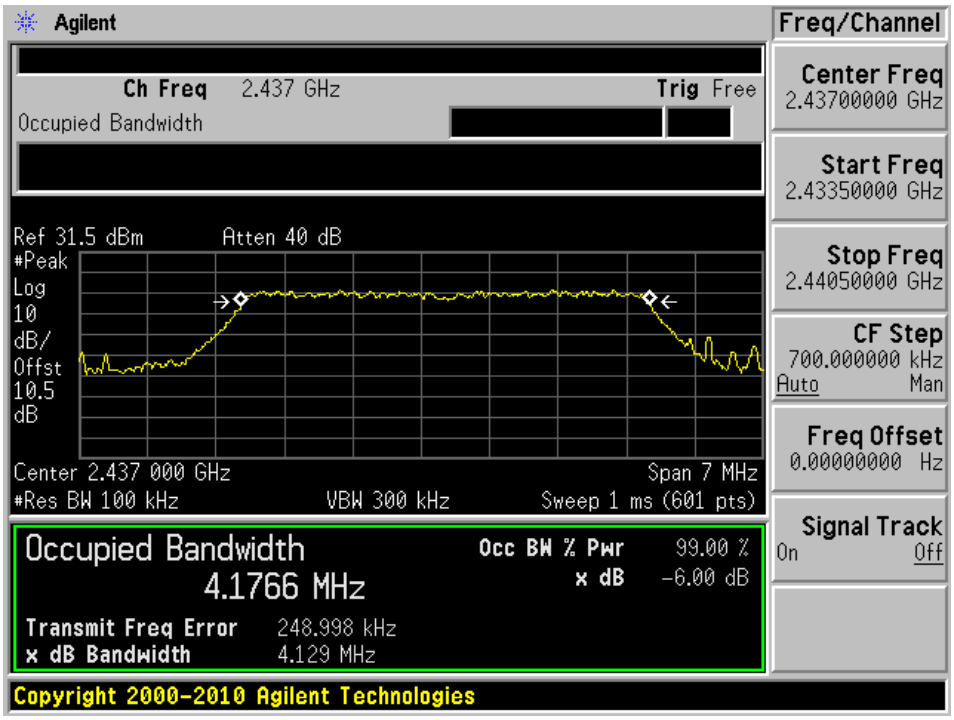
802.11b 5MHz - 2462 MHz



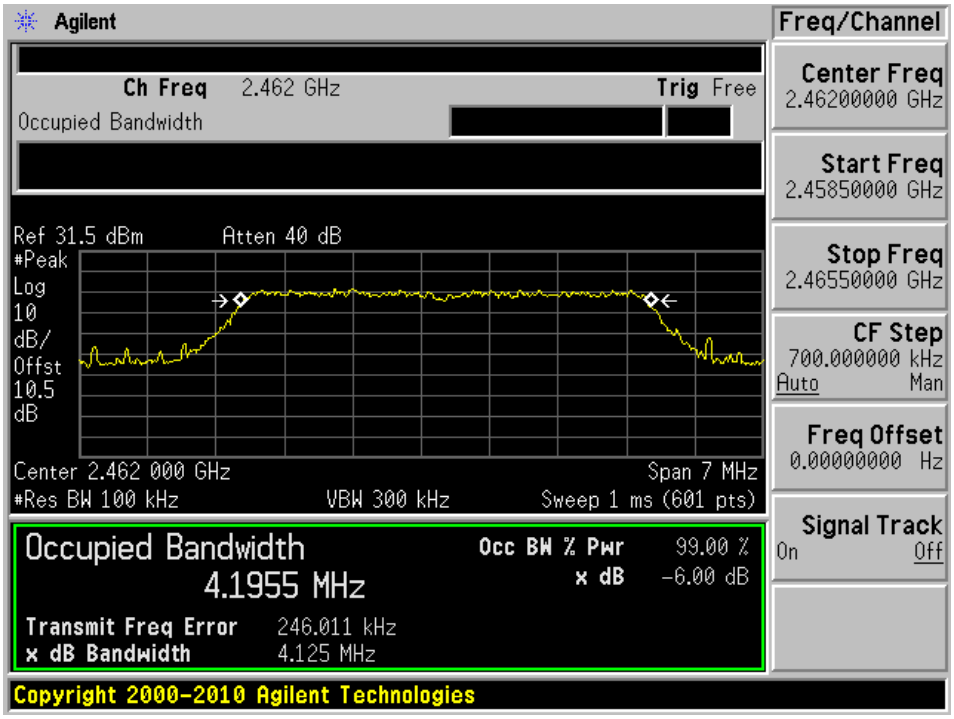
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz

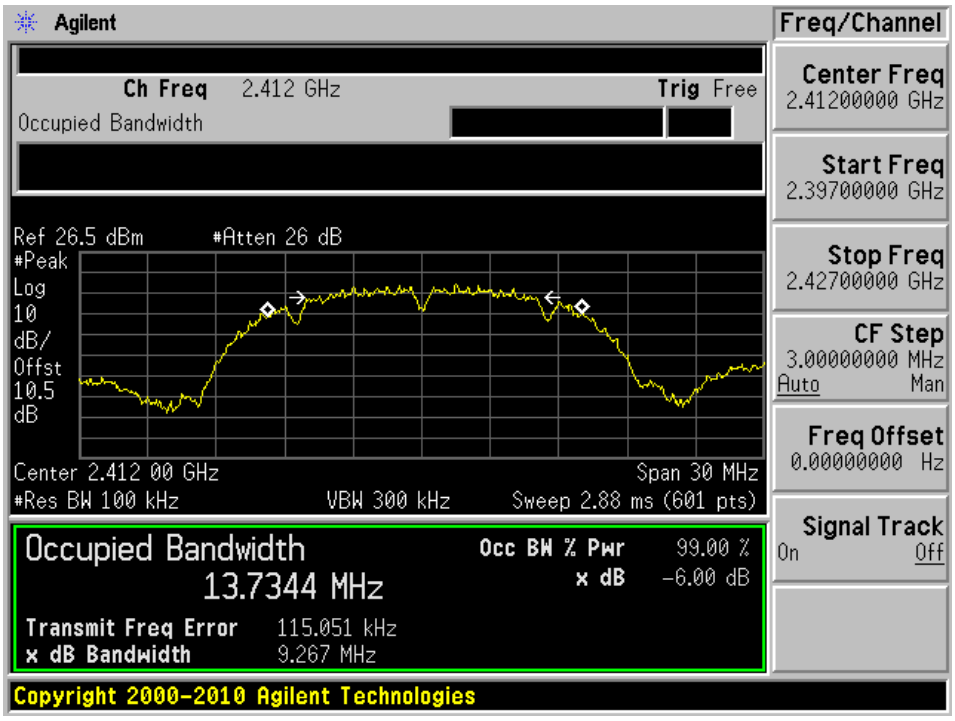


802.11g 5MHz - 2462 MHz

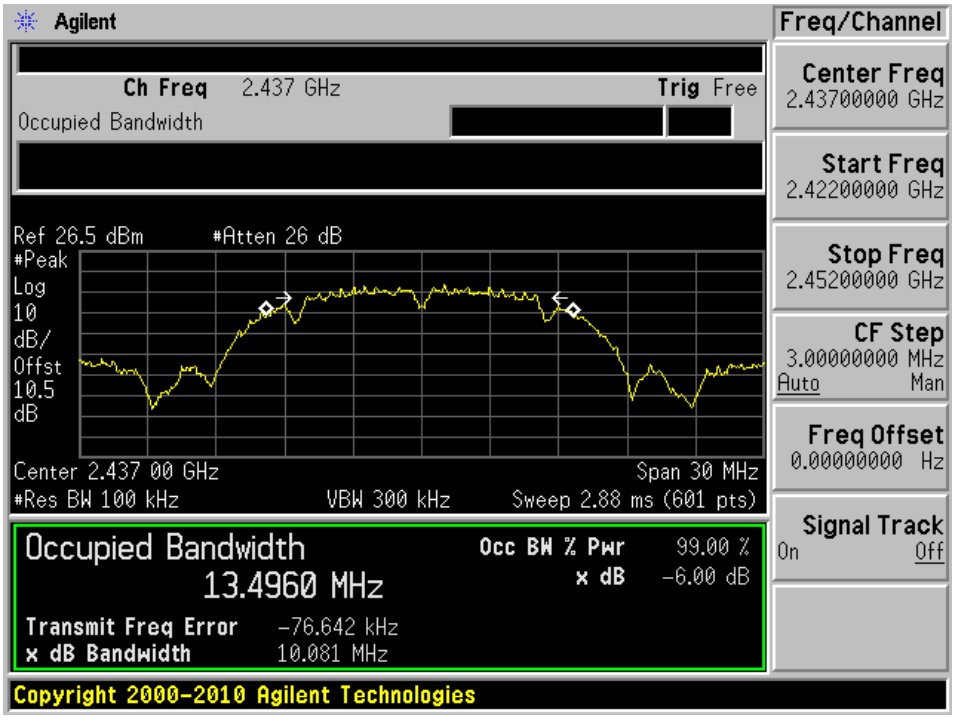


Chain 1

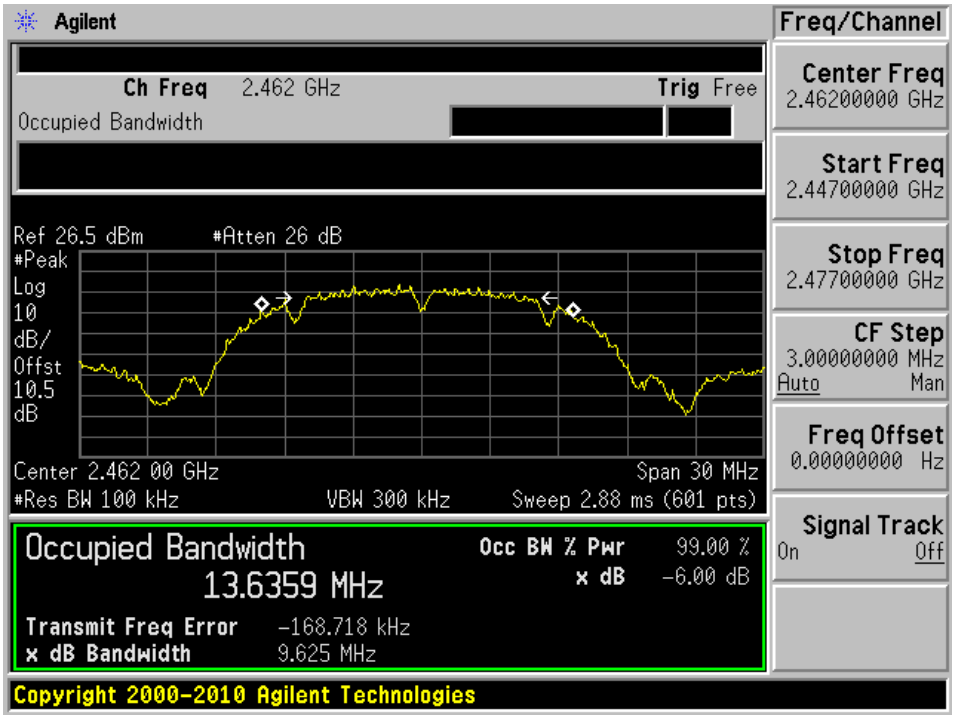
802.11b - 2412 MHz



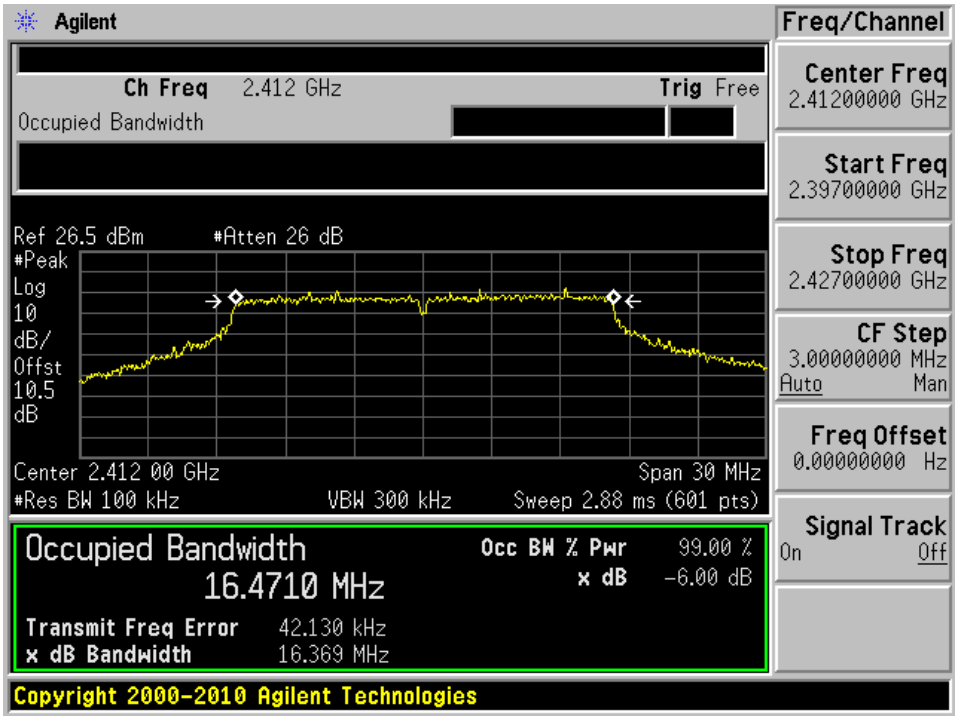
802.11b - 2437 MHz



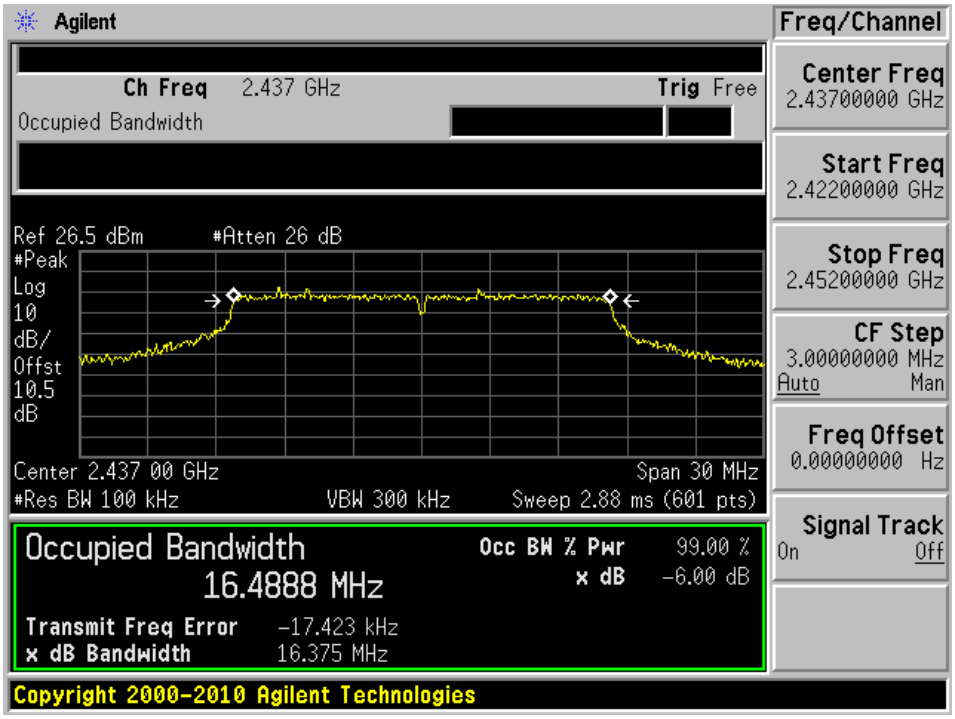
802.11b - 2462 MHz



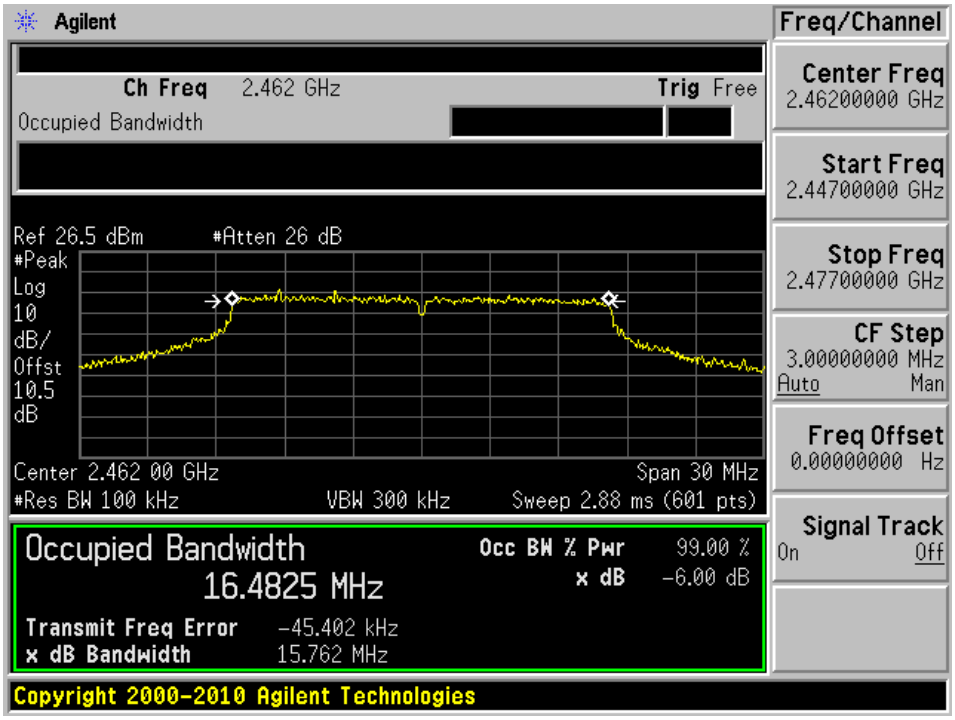
802.11g - 2412 MHz



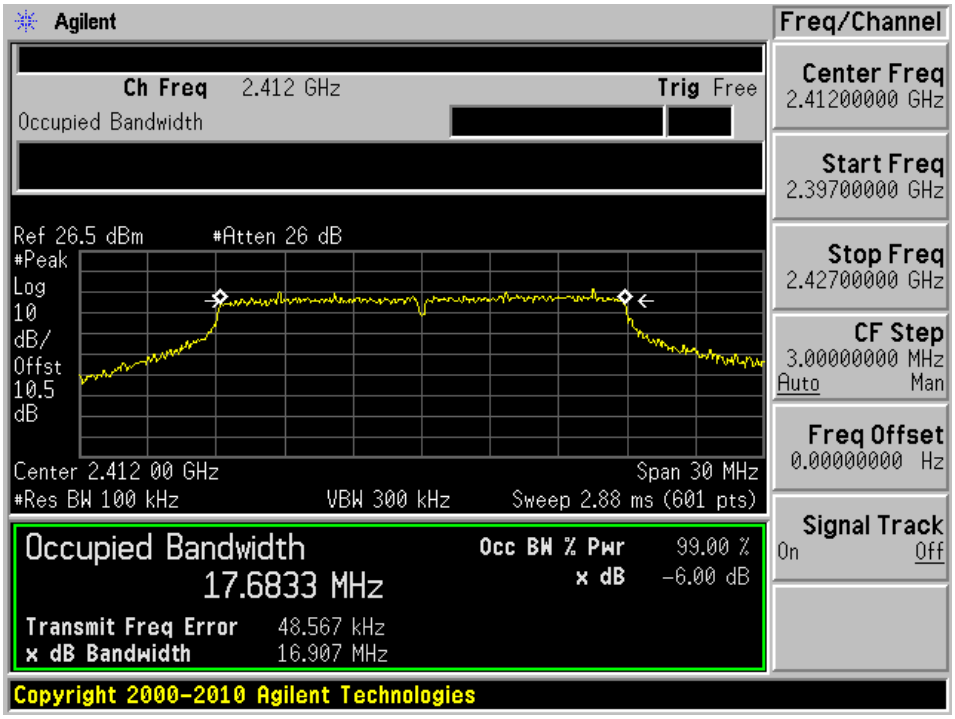
802.11g - 2437 MHz



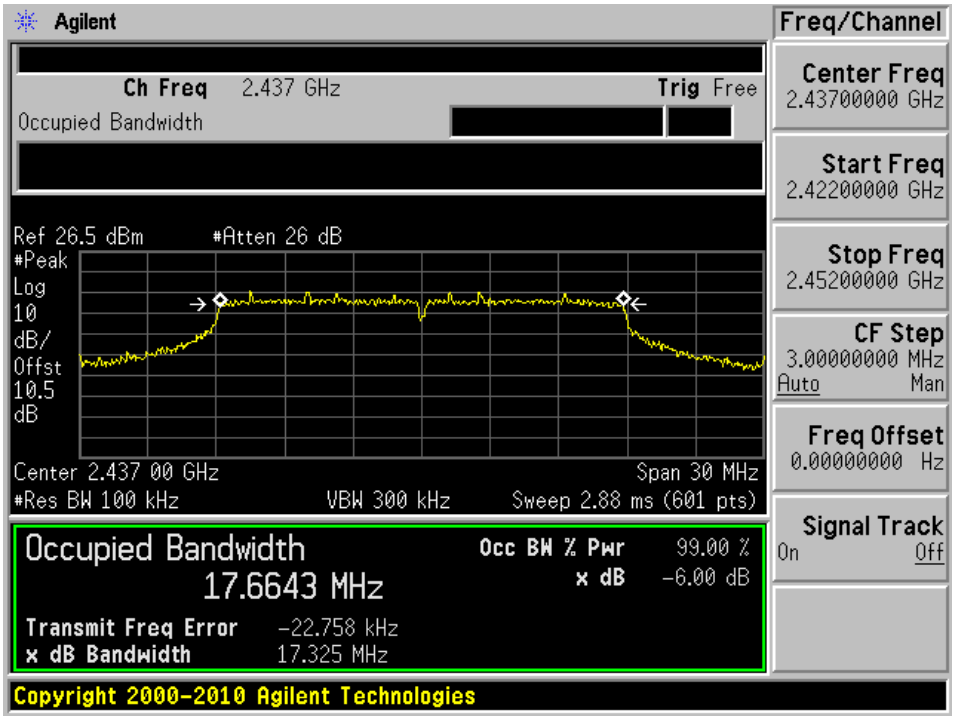
802.11g - 2462 MHz



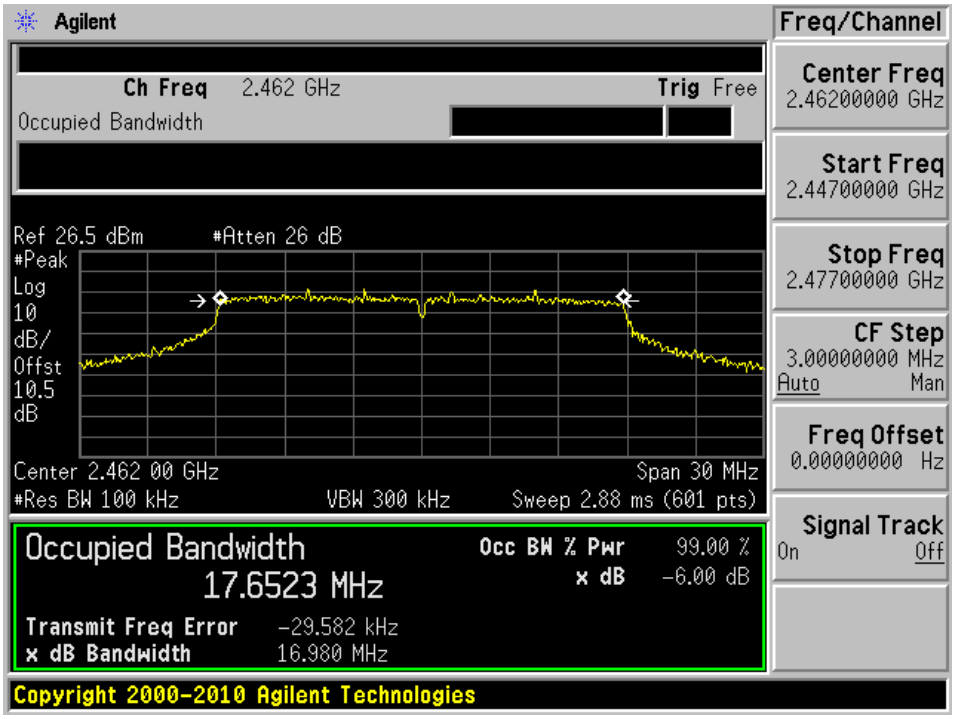
802.11n20 - 2412 MHz



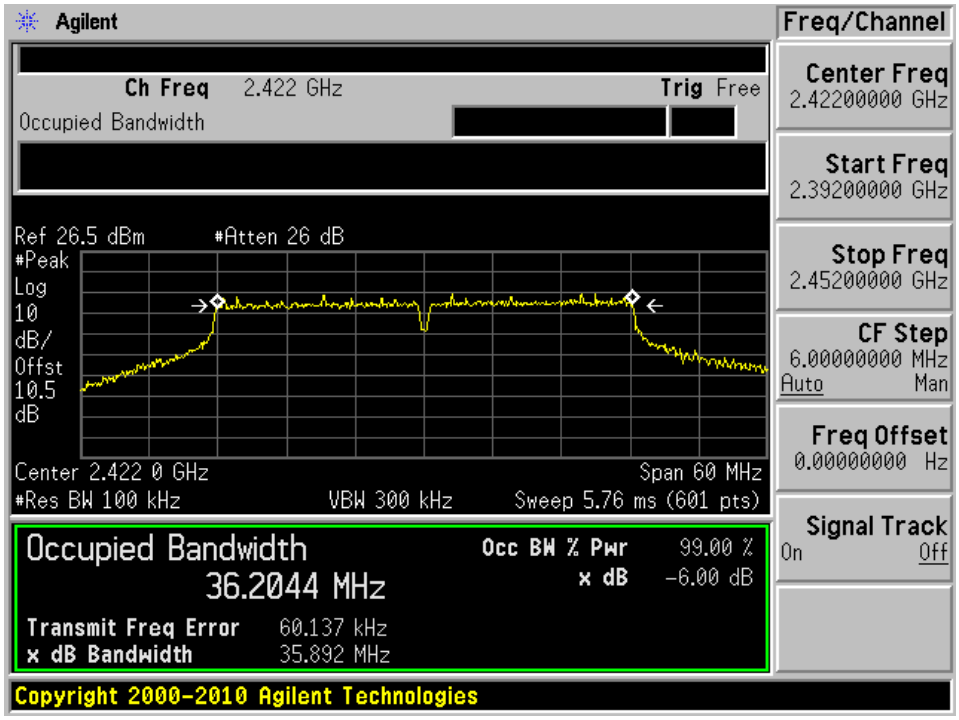
802.11n20 - 2437 MHz



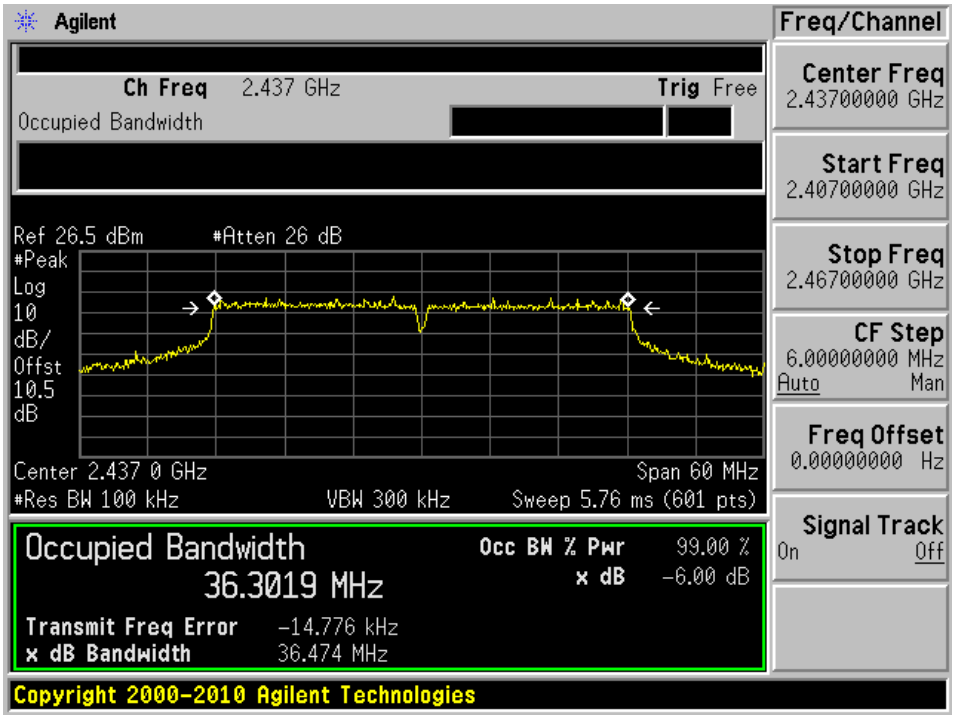
802.11n20 - 2462 MHz



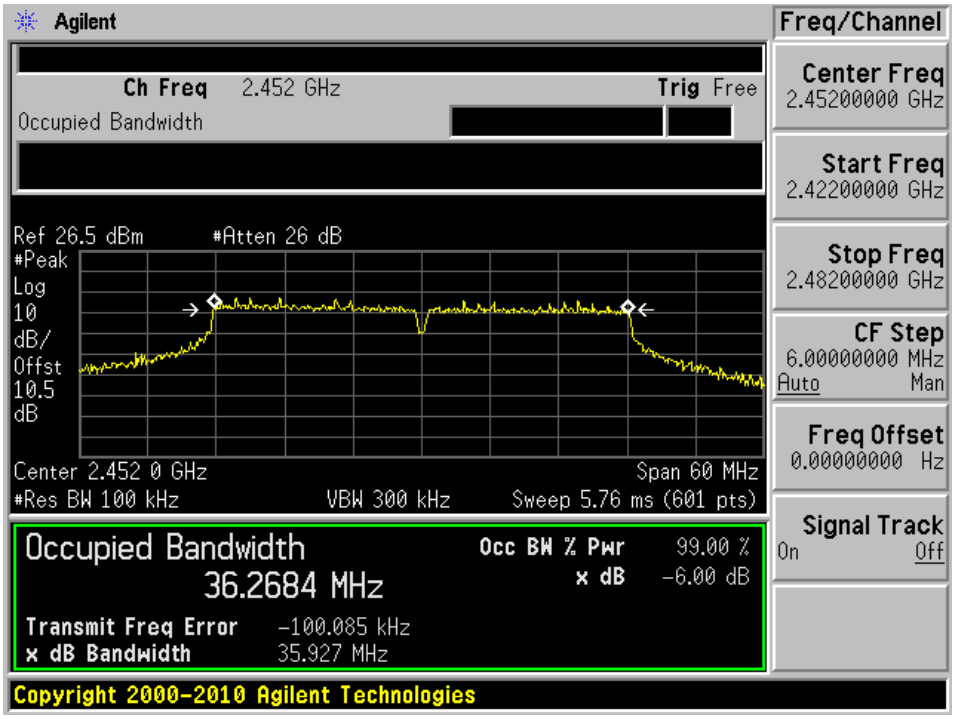
802.11n40 - 2422 MHz



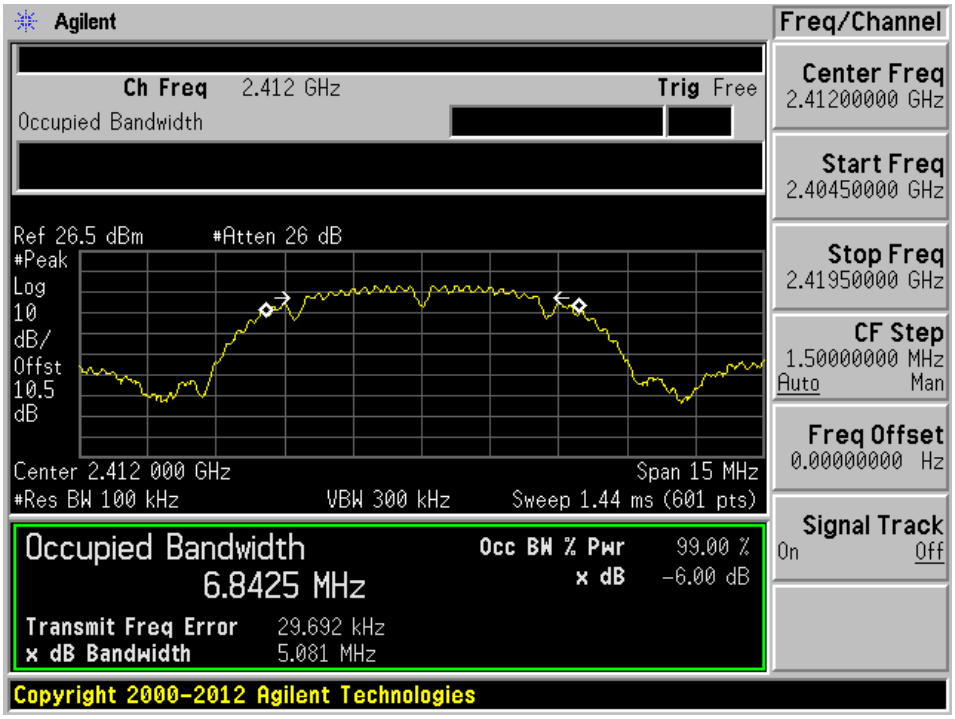
802.11n40 - 2437 MHz



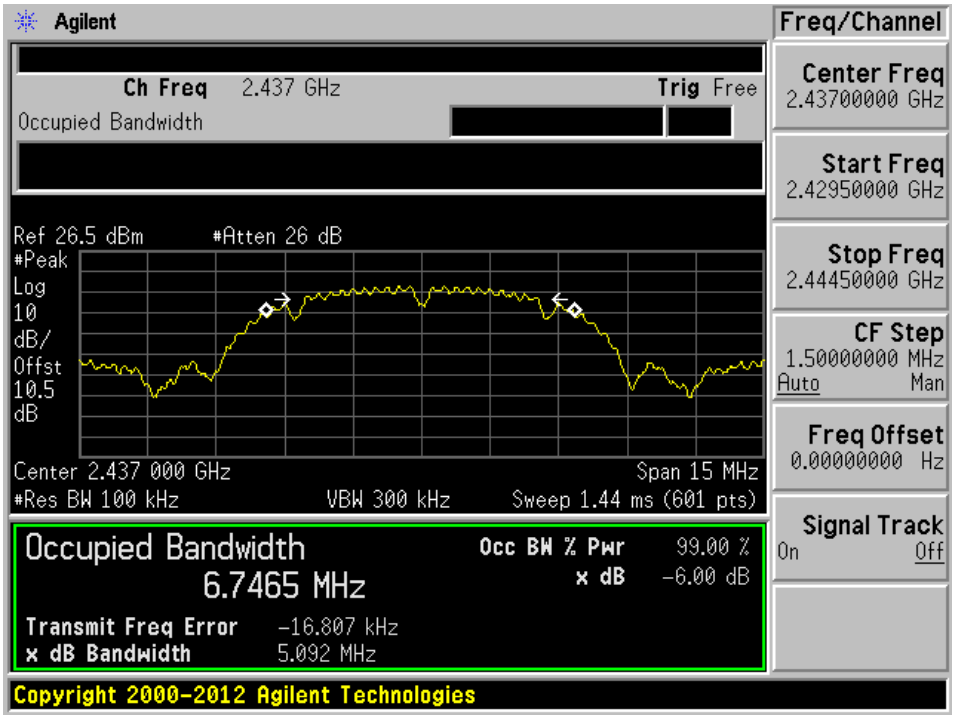
802.11n40 - 2452 MHz



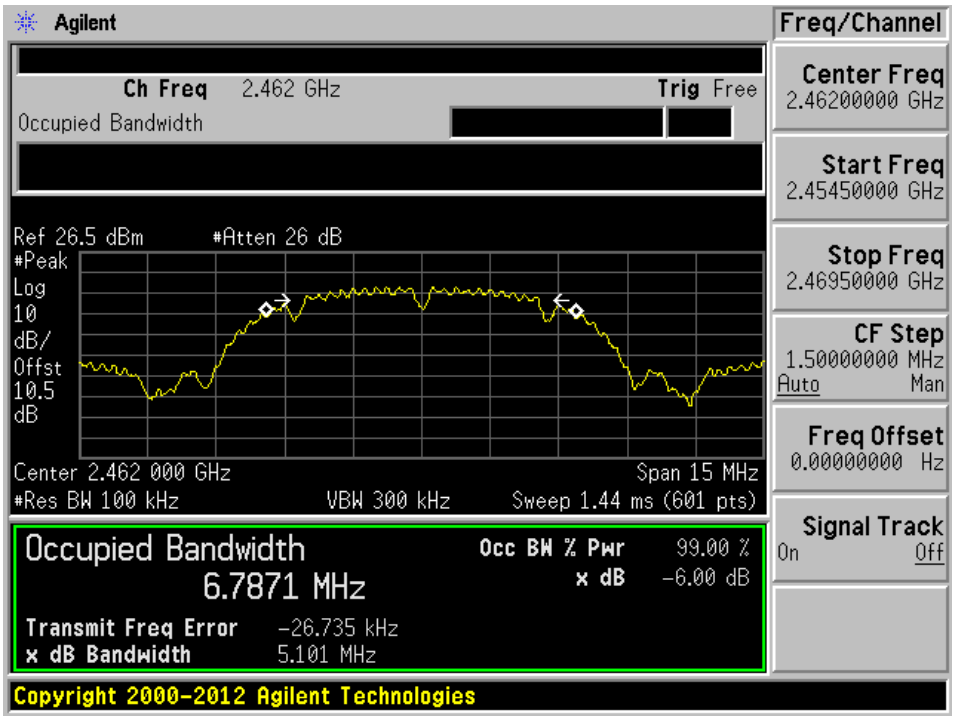
802.11b 10MHz - 2412 MHz



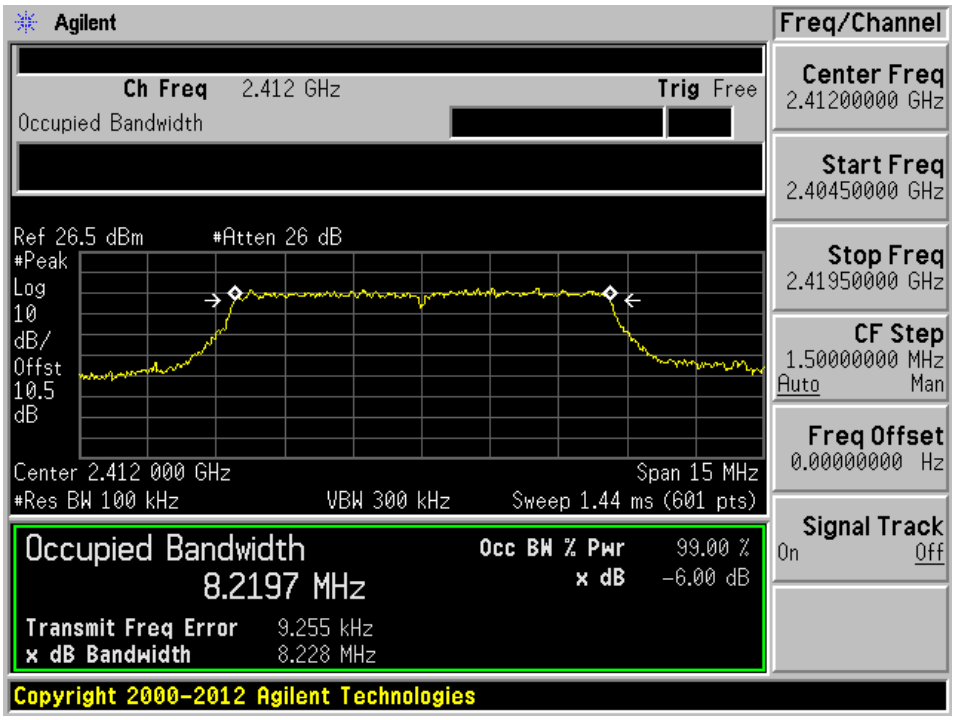
802.11b 10MHz - 2437 MHz



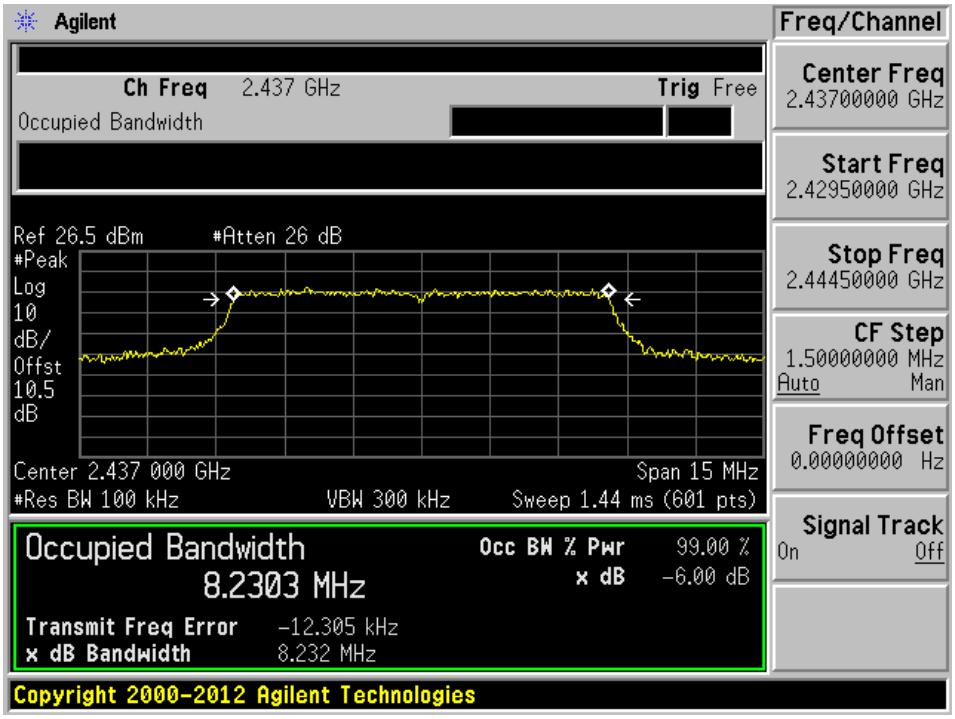
802.11b 10MHz - 2462 MHz



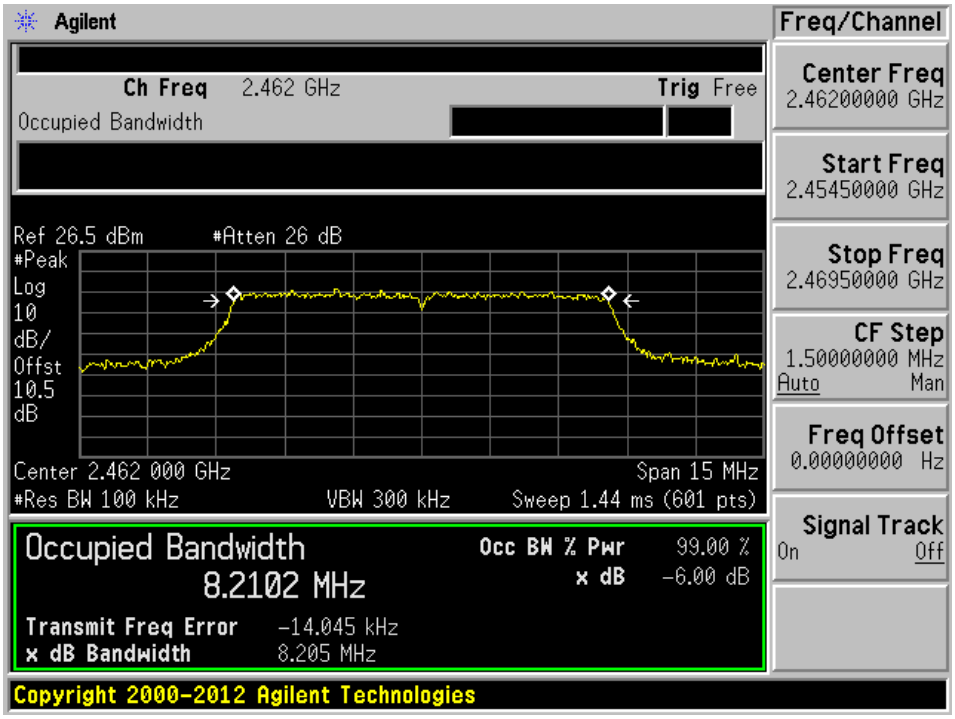
802.11g 10MHz - 2412 MHz



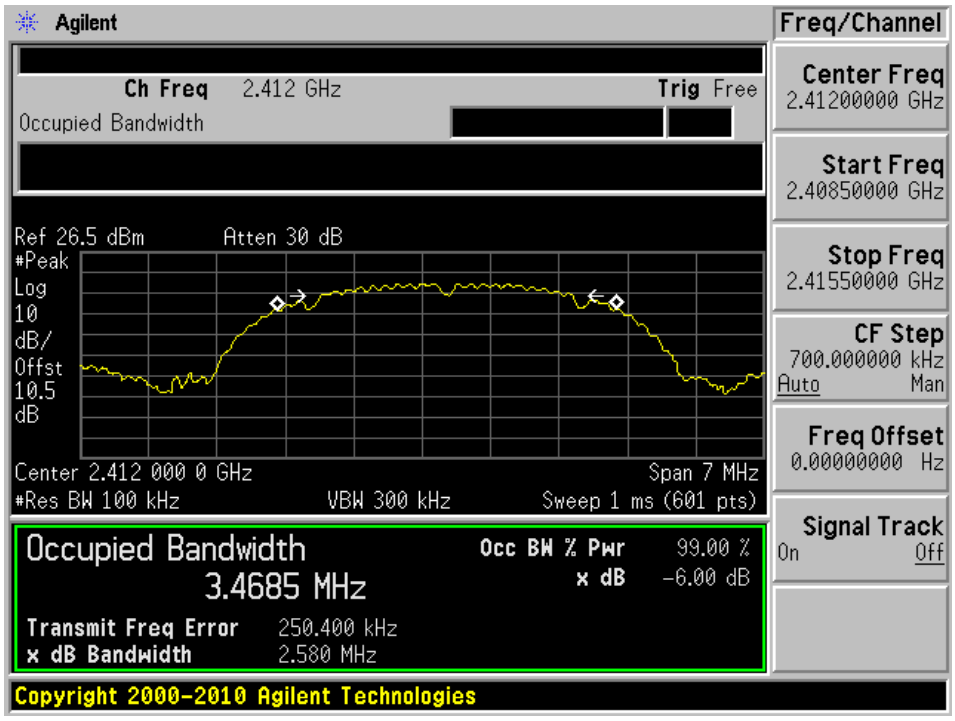
802.11g 10MHz - 2437 MHz



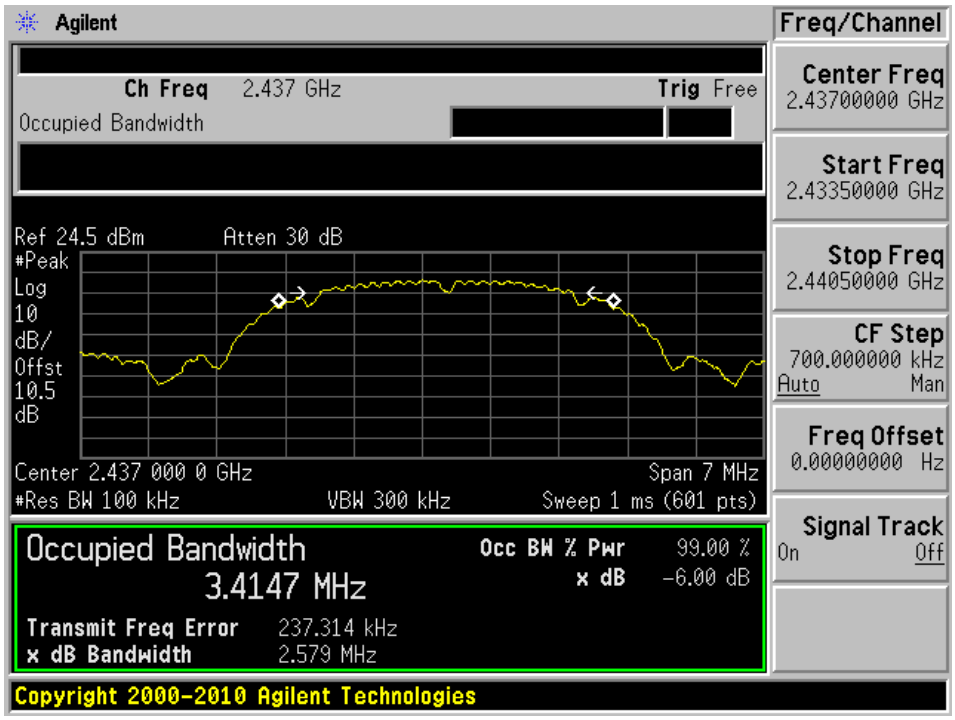
802.11g 10MHz - 2462 MHz



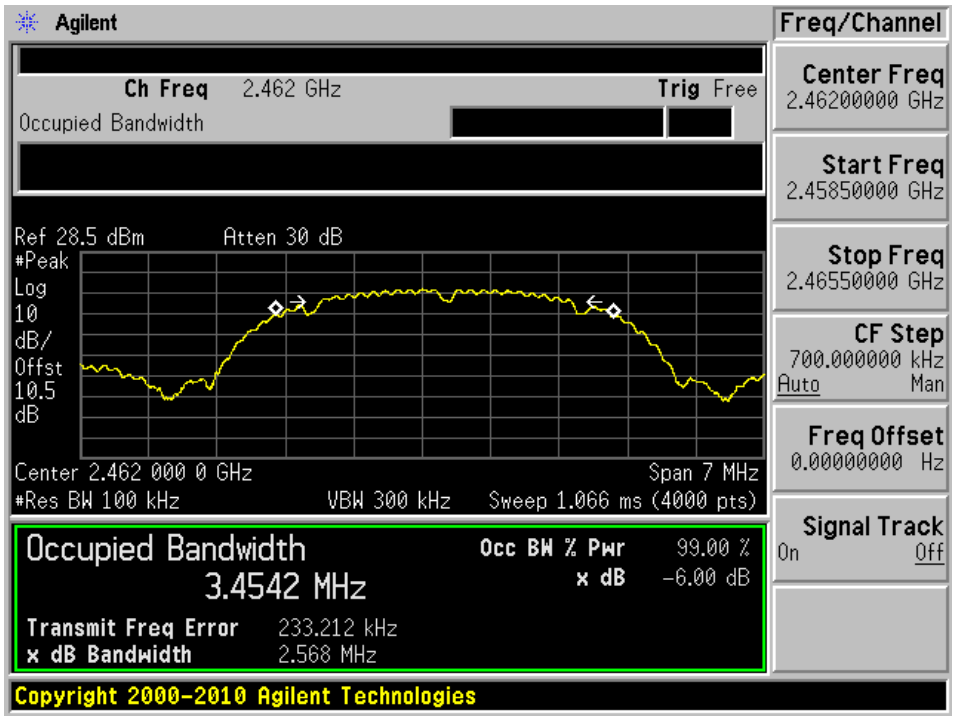
802.11b 5MHz - 2412 MHz



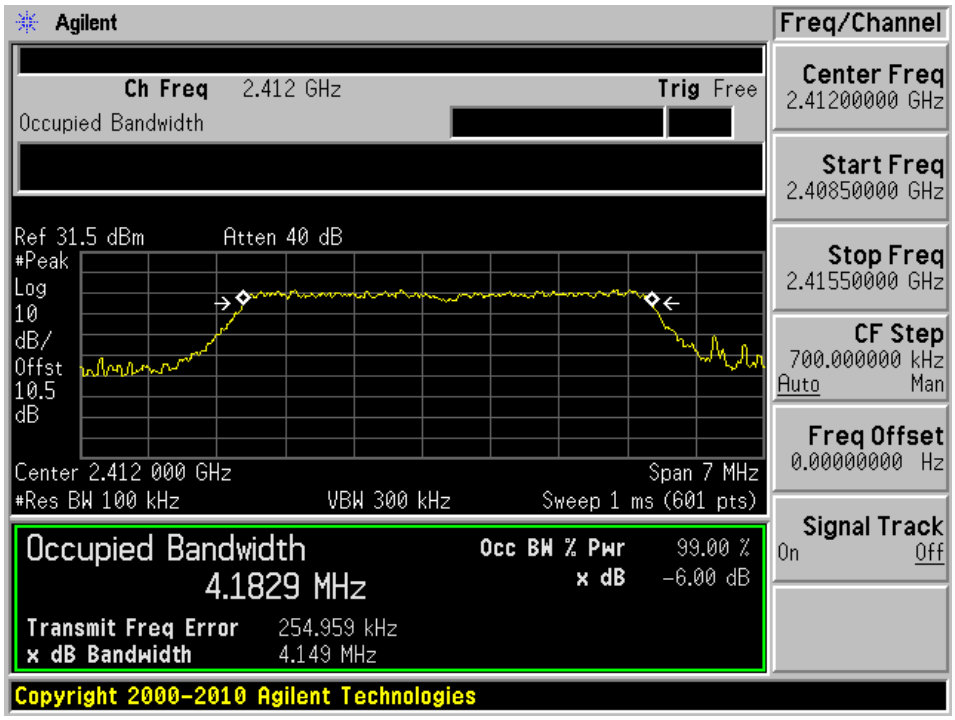
802.11b 5MHz - 2437 MHz



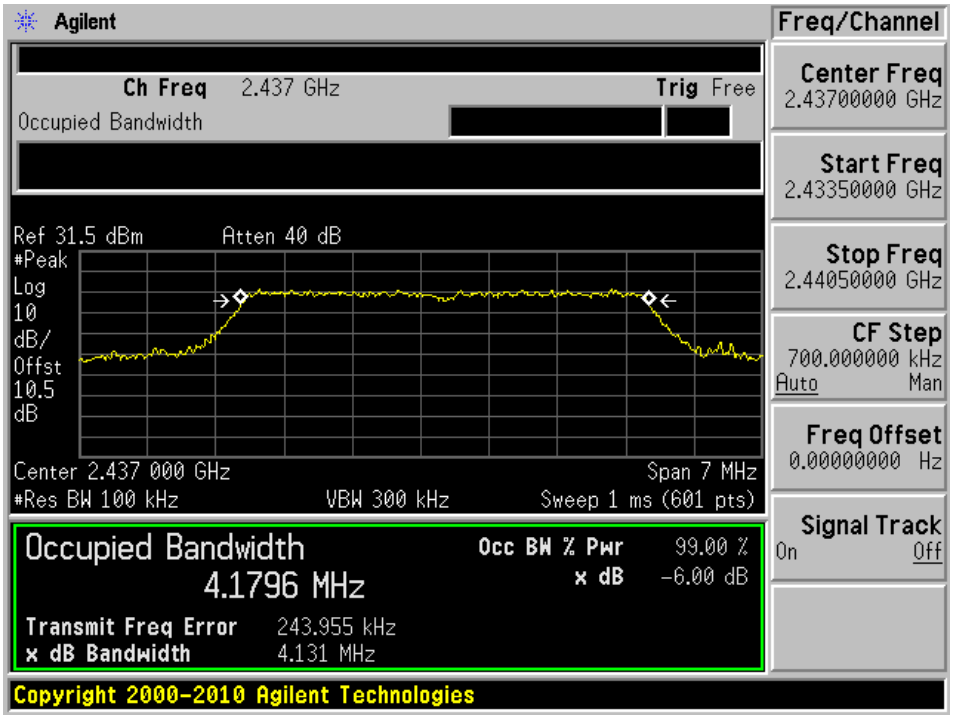
802.11b 5MHz - 2462 MHz



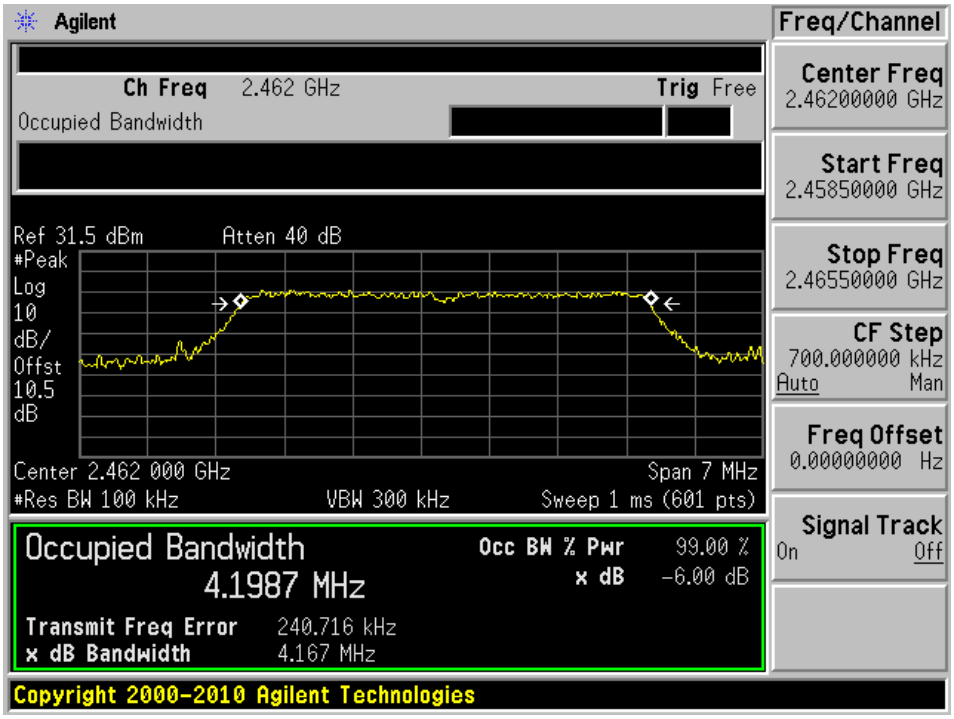
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz



802.11g 5MHz - 2462 MHz



9 FCC §15.247(b) & IC RSS-247 §5.4 - Output Power Measurement

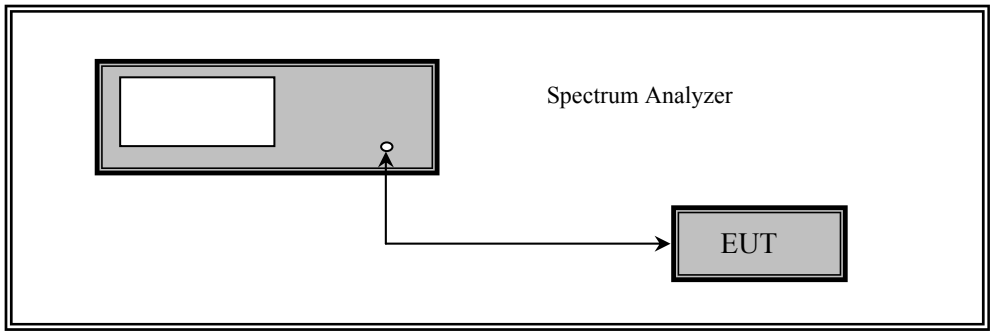
9.1 Applicable Standards

According to FCC §15.247(b) for systems using digital modulation in the 902~928 MHz, 2400~2483.5 MHz, and 5725~5850 MHz bands: 1 Watt.

According to IC RSS-247 §5.4 (4), for DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. Except as provided in Section 5.4(5), the e.i.r.p. shall not exceed 4 W.

9.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v03r05: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 9: Fundamental emission output power



9.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4440A	US42221851	2015-06-23	1 year
-	SMA Cable	-	C0001	Each Time[1]	N/A
Mini-Circuits	Attenuator	BW-S10W5	1430	Each Time[1]	N/A

[1] cable and attenuator included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.*

9.4 Test Environmental Conditions

Temperature:	21-24º C
Relative Humidity:	40-44 %
ATM Pressure:	102.1-103.5 kPa

The testing was performed by Todd Moy/Leonard Gray on 2016-04-20/2016-05-12 in RF site.

9.5 Test Results

Channel	Frequency (MHz)	Average Conducted Output Power (dBm)		Total Output Power (dBm)	Limit (dBm)	Margin (dB)
		Chain 0	Chain 1			
802.11b						
Low	2412	19.22	19.66	22.45	23	-0.55
Middle	2437	19.03	19.19	22.12	23	-0.88
High	2462	19.77	19.01	22.42	23	-0.58
802.11b 10 MHz Bandwidth						
Low	2412	17.53	18.38	20.99	23	-2.01
Middle	2437	17.30	18.05	20.70	23	-2.30
High	2462	18.26	18.11	21.20	23	-1.80
802.11g 10 MHz Bandwidth						
Low	2412	18.73	19.52	22.15	23	-0.85
Middle	2437	18.71	19.24	21.99	23	-1.01
High	2462	18.38	18.23	21.32	23	-1.68
802.11b 5 MHz Bandwidth						
Low	2412	19.51	19.55	22.54	23	-0.46
Middle	2437	19.51	19.47	22.5	23	-0.5
High	2462	19.4	20.09	22.77	23	-0.23
802.11g 5 MHz Bandwidth						
Low	2412	19.7	19.97	22.85	23	-0.15
Middle	2437	19.43	19.56	22.51	23	-0.49
High	2462	19.94	19.29	22.64	23	-0.36

Note: $P_{OUT} = P_{Limit} - (G_{TX} - 6)$, where:

P_{OUT} is the maximum conducted output power in dBm,
P_{Limit} is the output power limit in dBm,
G_{TX} is the maximum transmitting antenna directional gain in dBi.

The P_{Limit} is 30 dBm, and G_{TX} is 13dBi, thus the maximum conducted output power limit is 23 dBm

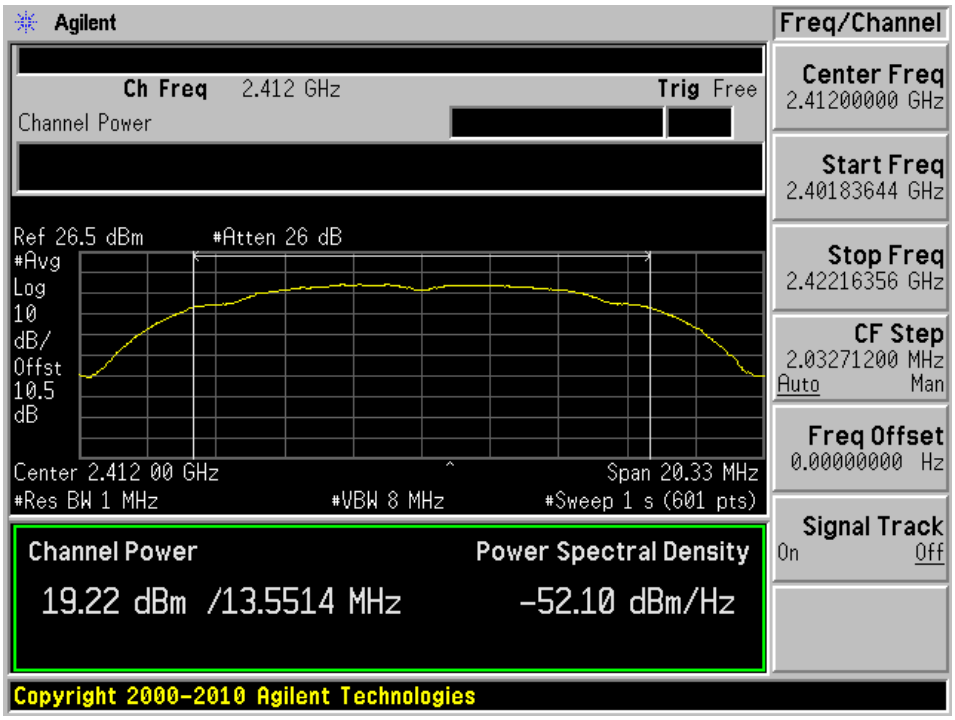
Channel	Frequency (MHz)	Average Conducted Output Power (dBm)		Total Output Power (dBm)	Duty Cycle Factor (dB)	Cord. Output Power (dBm)	Limit (dBm)	Margin (dB)
		Chain 0	Chain 1					
802.11g								
Low	2412	19.83	19.25	22.56	0.16	22.72	23	-0.28
Middle	2437	19.46	19.82	22.65	0.16	22.81	23	-0.19
High	2462	19.17	18.79	21.99	0.16	22.15	23	-0.85
802.11n20								
Low	2412	18.56	19.17	21.89	0.22	22.11	23	-0.89
Middle	2437	18.76	18.07	21.44	0.22	21.66	23	-1.34
High	2462	19.01	18.92	21.98	0.22	22.2	23	-0.8
802.11n40								
Low	2422	19.04	19.69	22.39	0.31	22.7	23	-0.3
Middle	2437	18.47	18.75	21.62	0.31	21.93	23	-1.07
High	2452	17.73	17.07	20.42	0.31	20.73	23	-2.27

Duty Cycle correction factor:

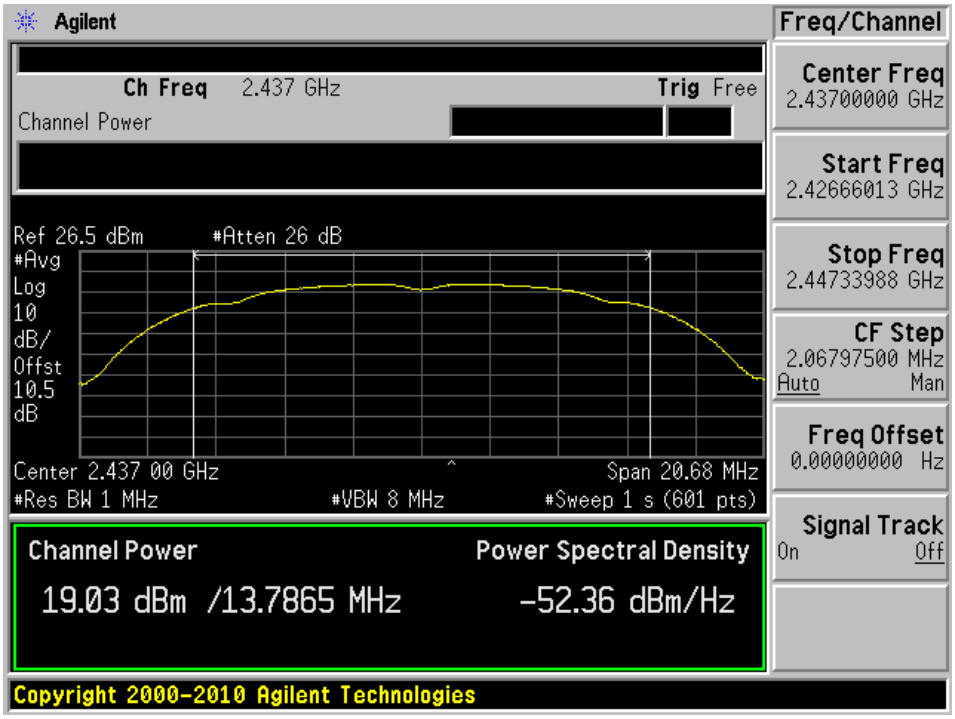
g mode: Duty cycle=96.45%, the factor is 10log (1/96.45%) = 0.16 dB
n20 mode: Duty cycle=95.08%, the factor is 10log (1/95.08%) = 0.22 dB
n40 mode: Duty cycle=93.03%, the factor is 10log (1/93.03%) = 0.31 dB

Chain 0

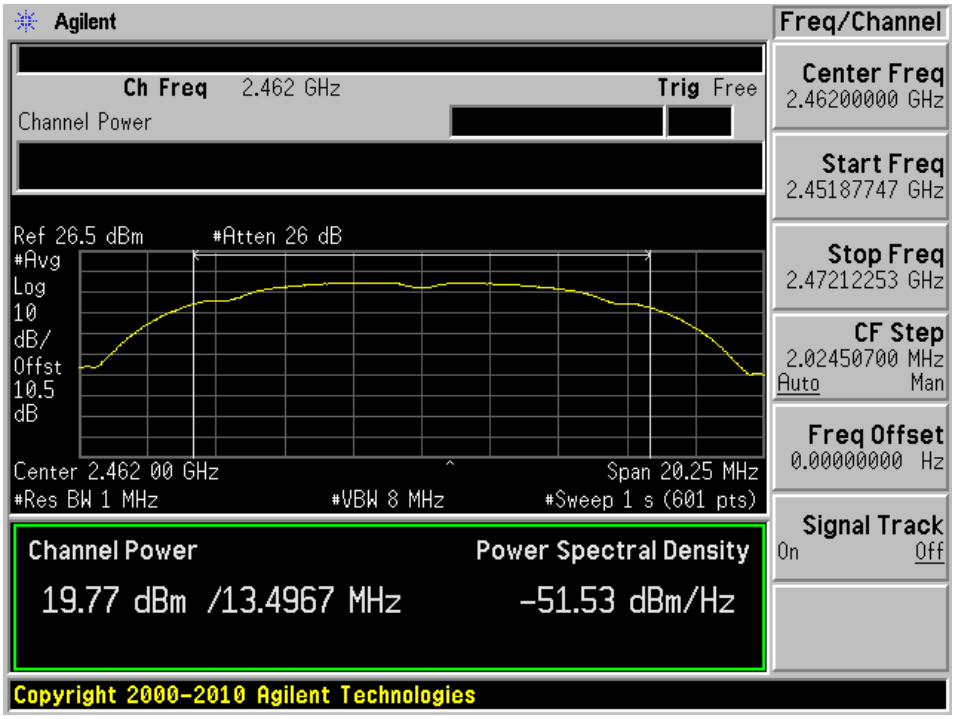
802.11b - 2412 MHz



802.11b - 2437 MHz



802.11b - 2462 MHz



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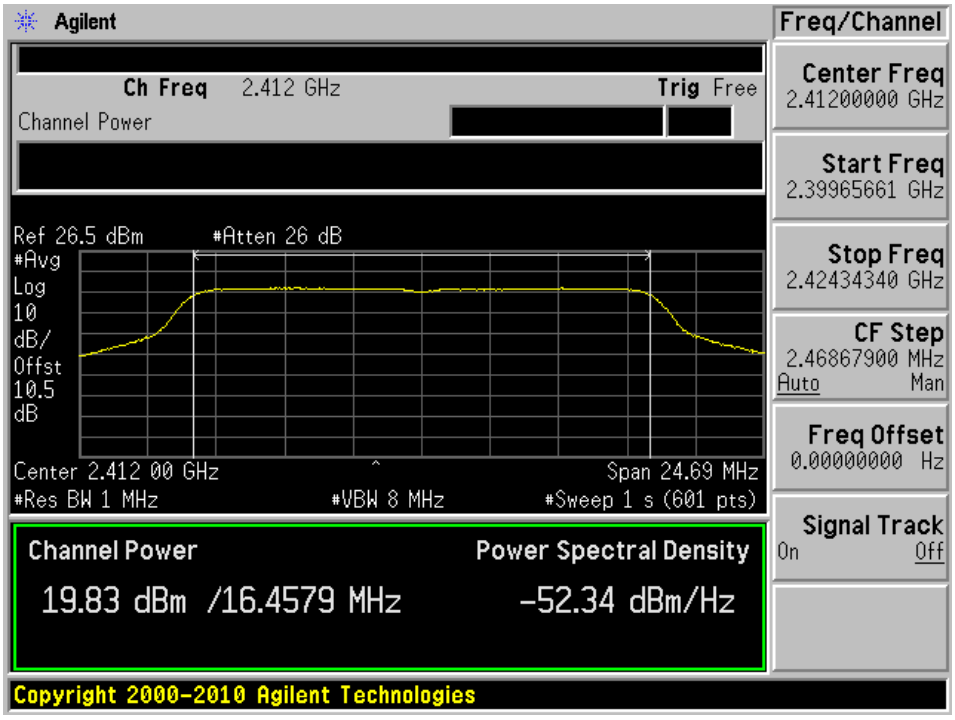
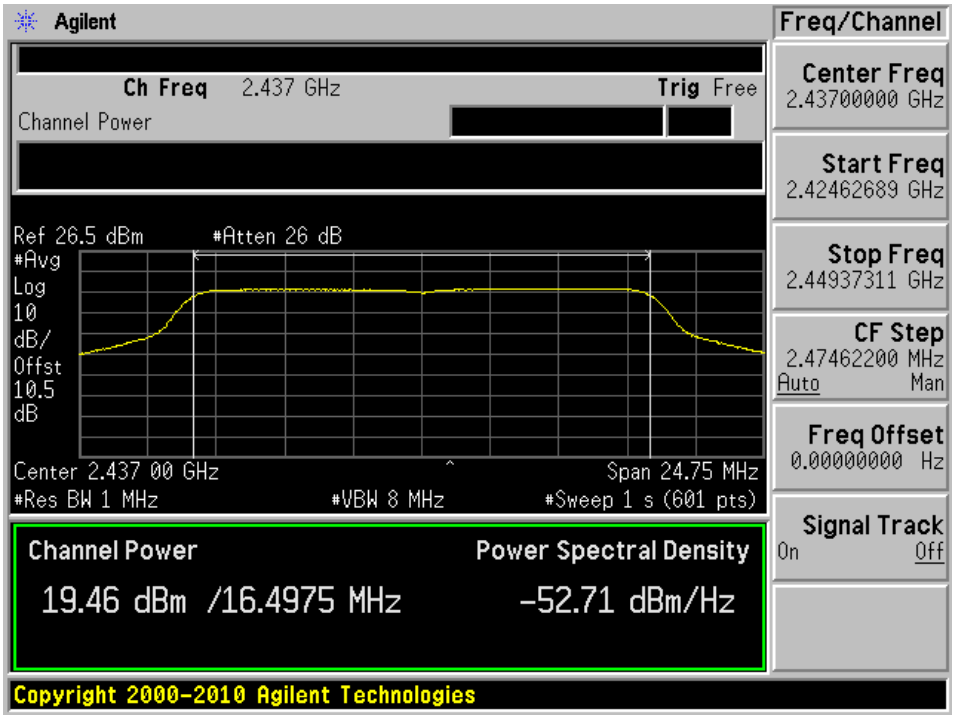
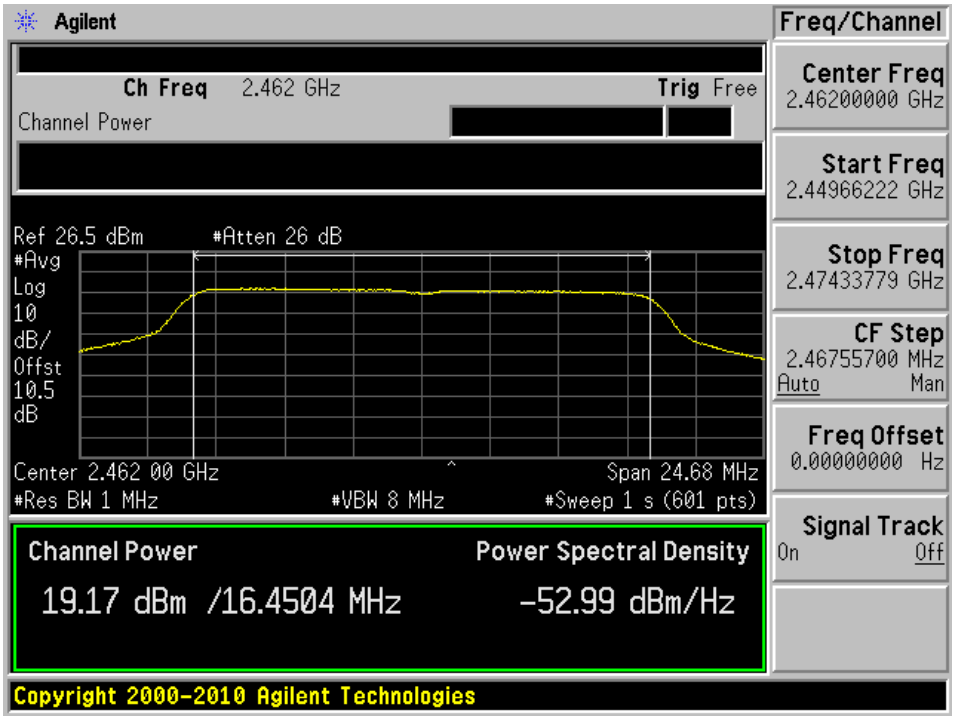


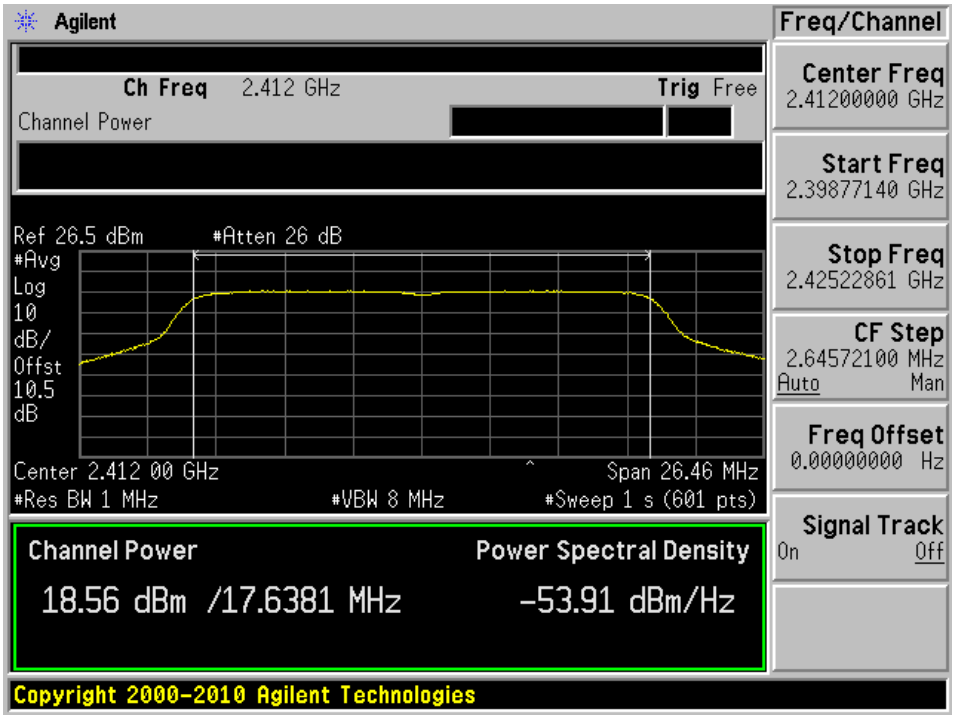
802.11g - 2437 MHz



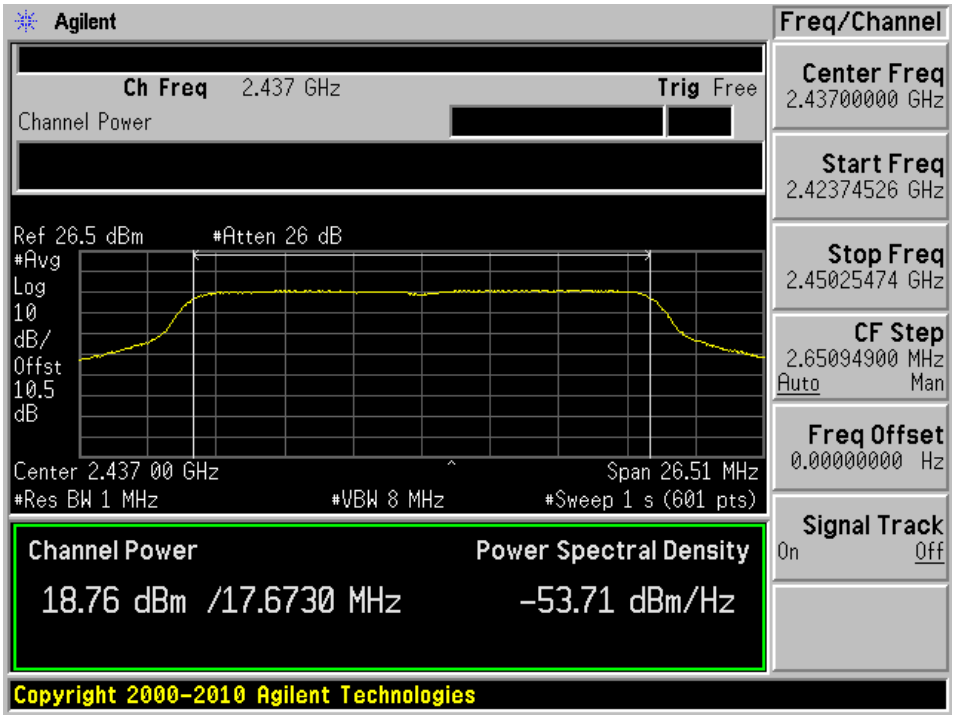
802.11g - 2462 MHz



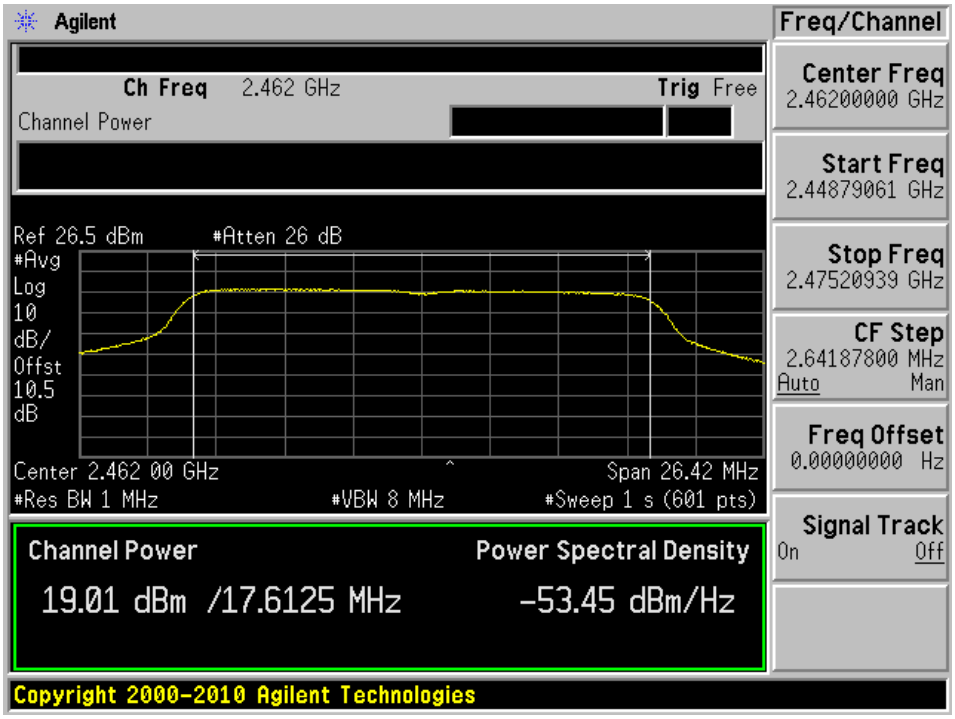
802.11n20 - 2412 MHz



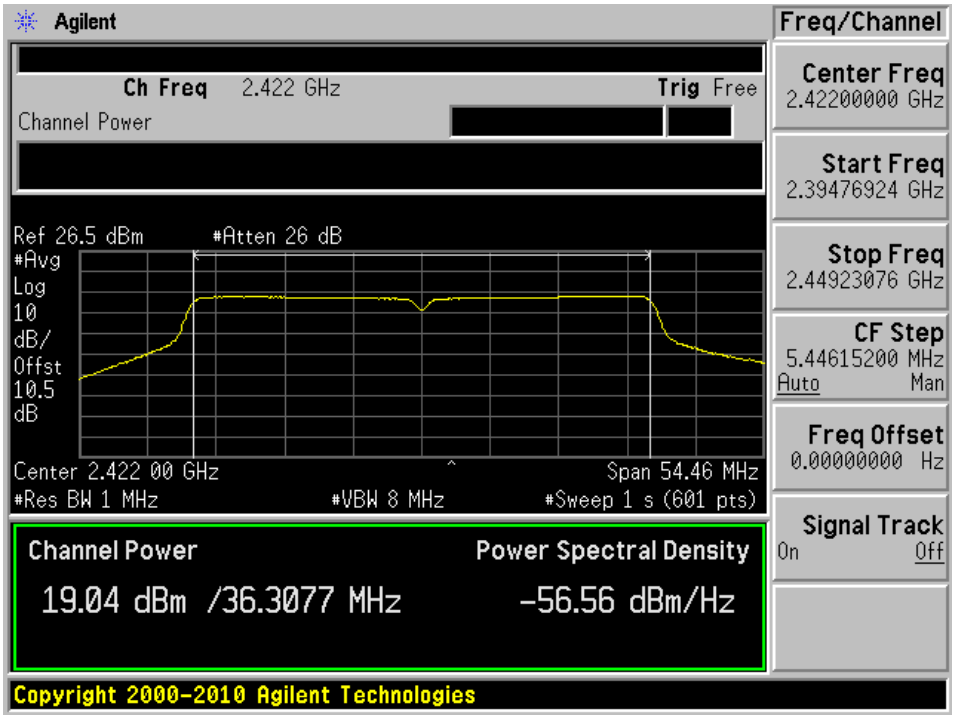
802.11n20 - 2437 MHz



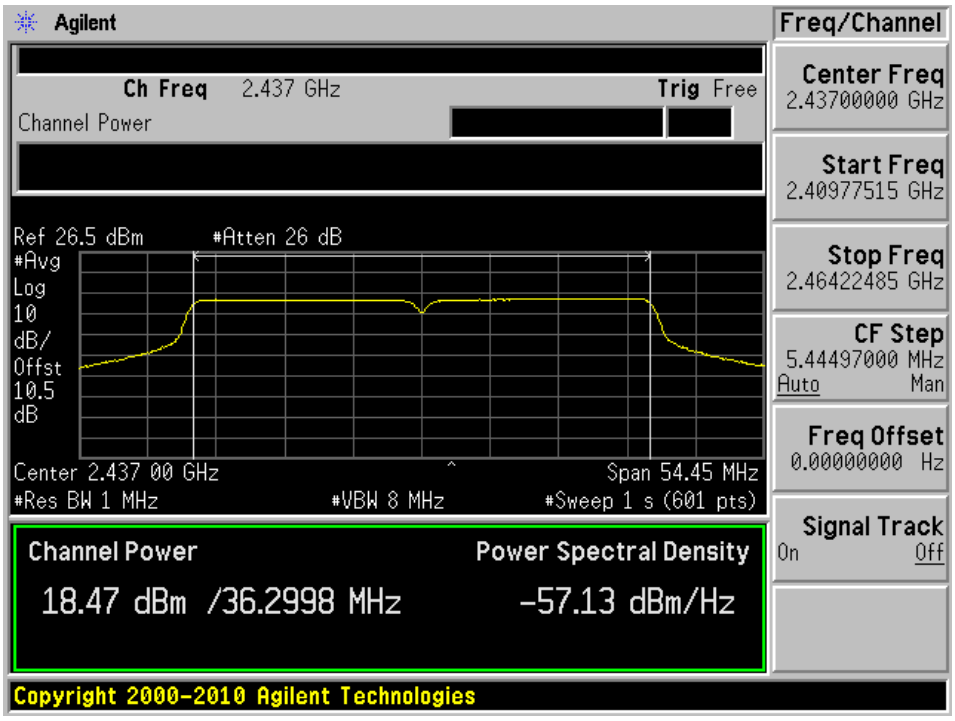
802.11n20 - 2462 MHz



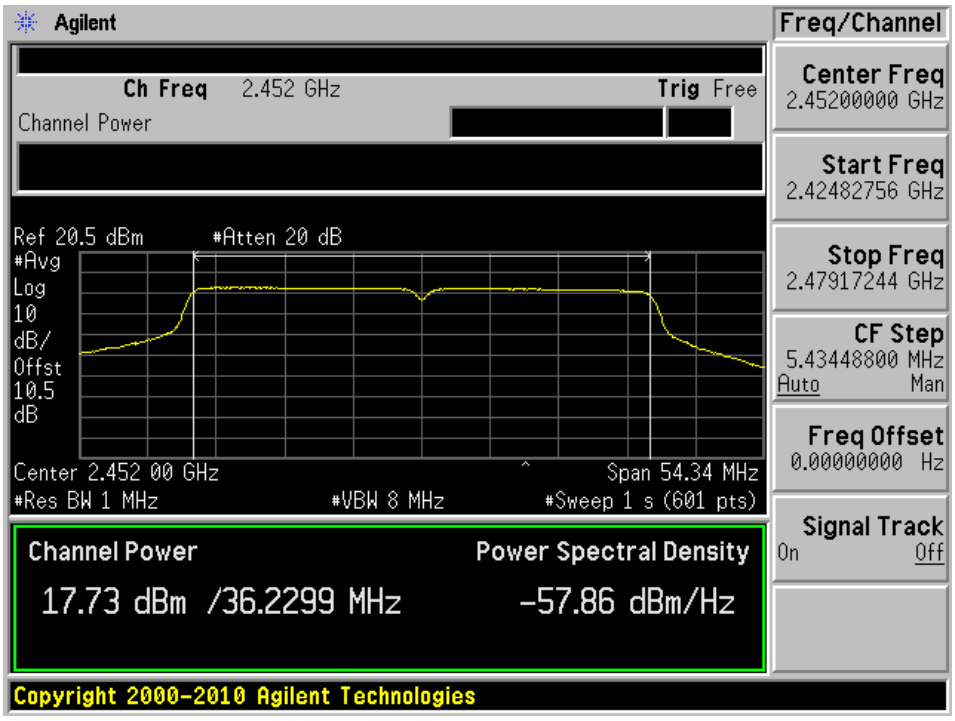
802.11n40 - 2422 MHz



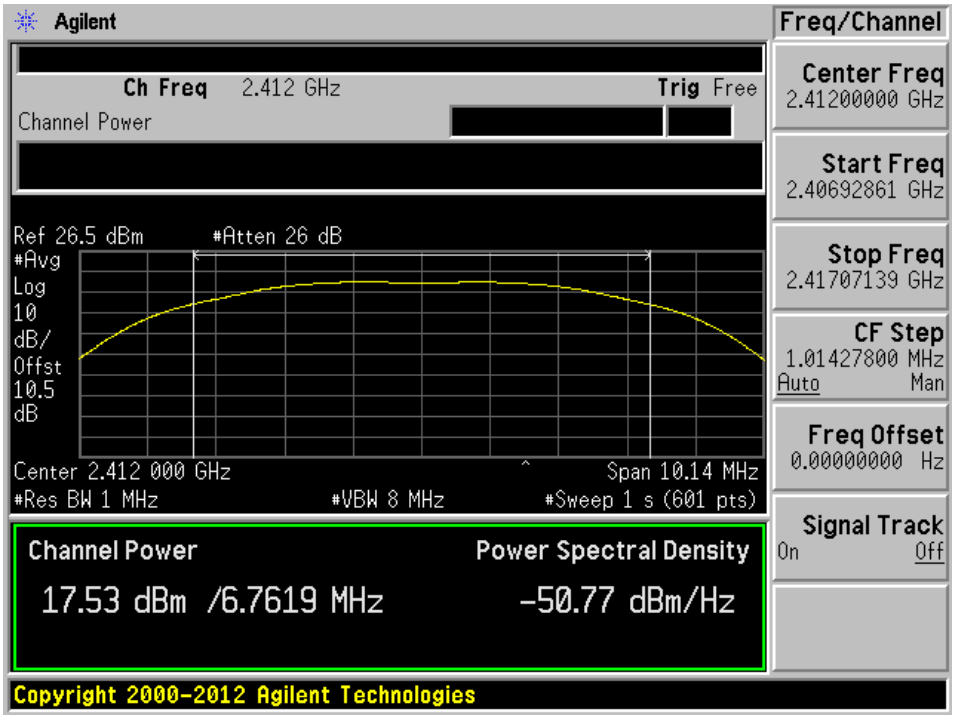
802.11n40 - 2437 MHz



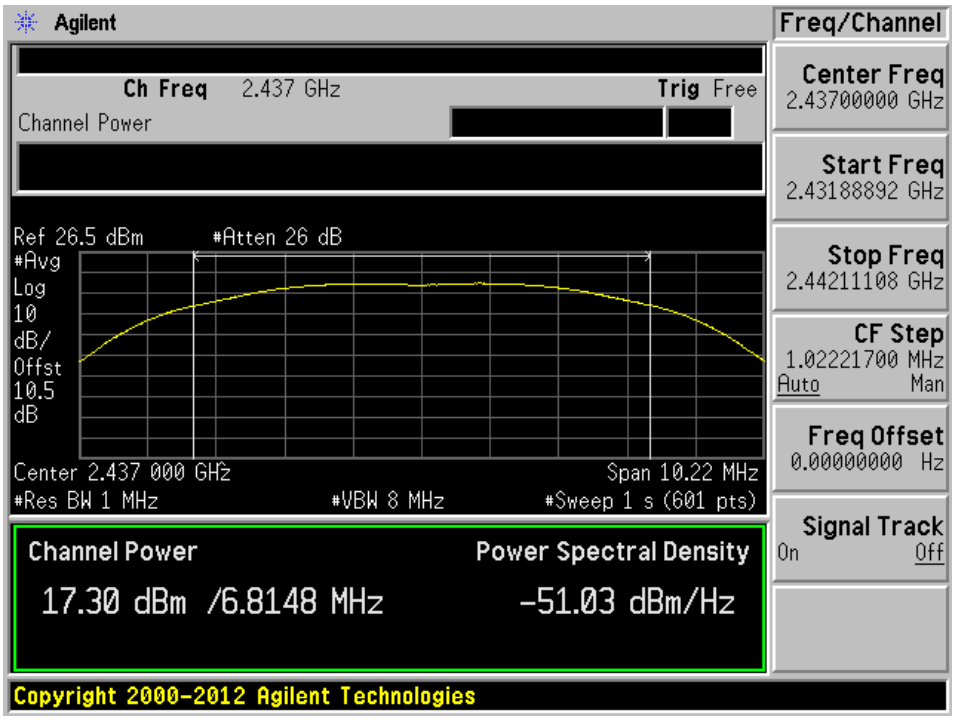
802.11n40 - 2452 MHz



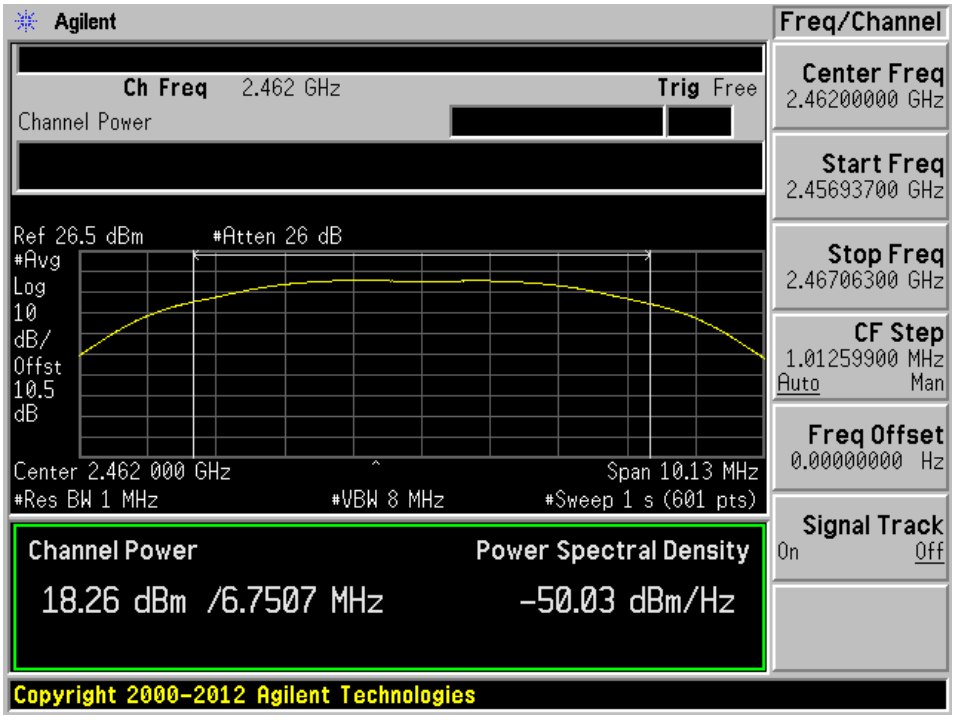
802.11b 10MHz - 2412 MHz



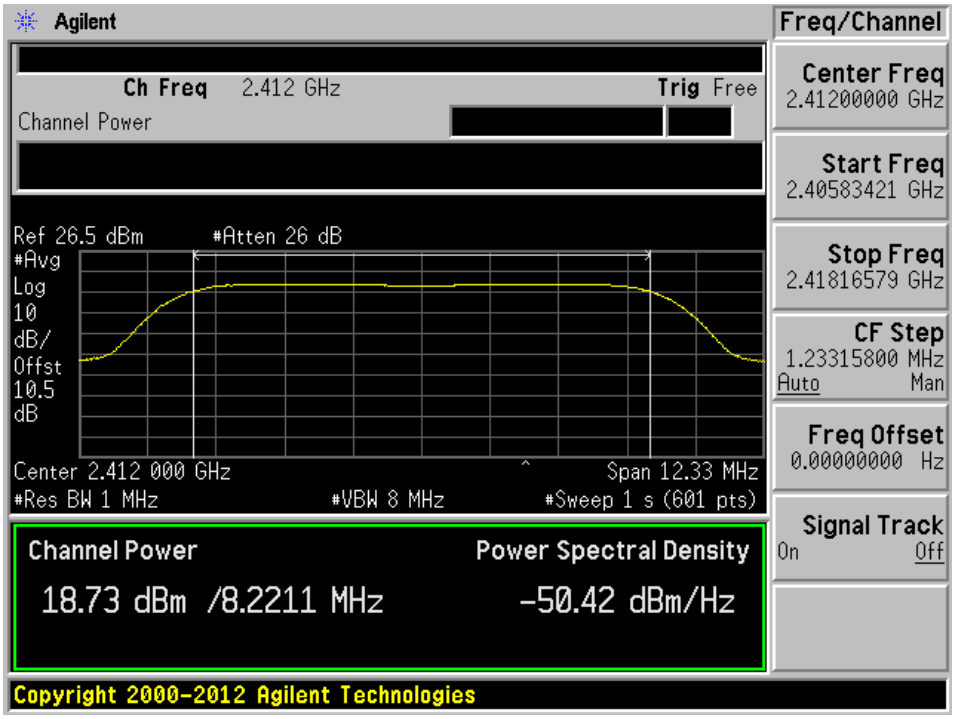
802.11b 10MHz - 2437 MHz



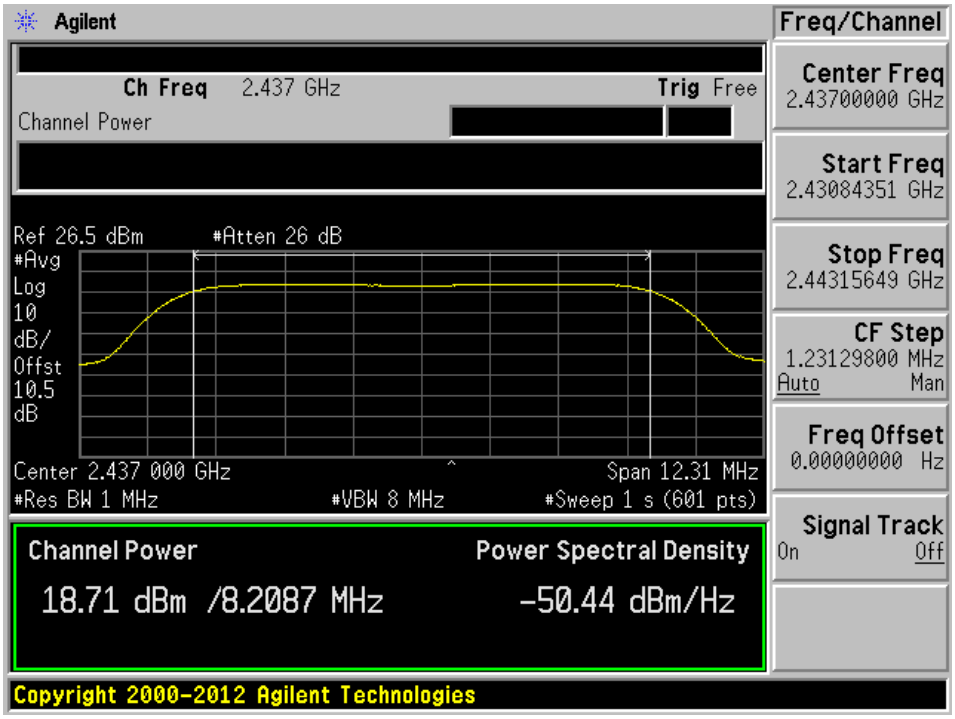
802.11b 10MHz - 2462 MHz



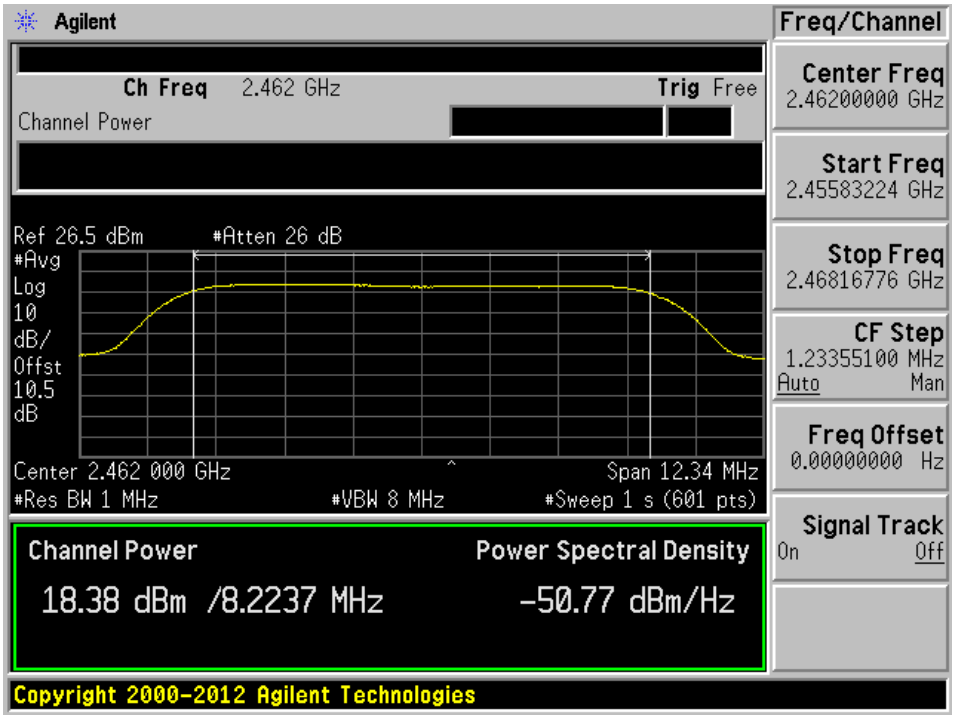
802.11g 10MHz - 2412 MHz



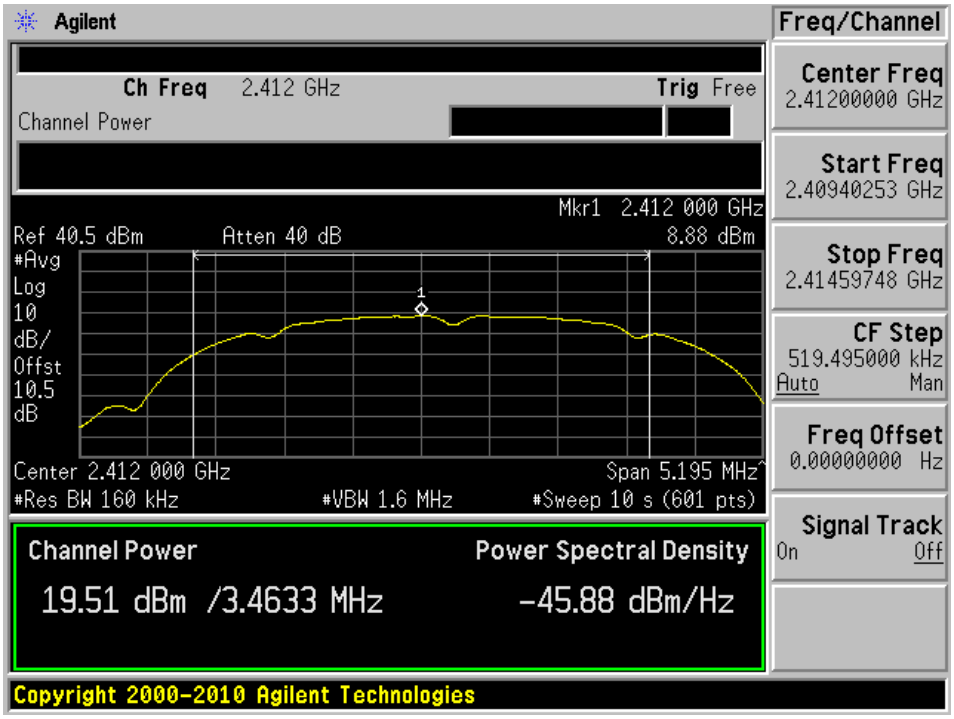
802.11g 10MHz - 2437 MHz



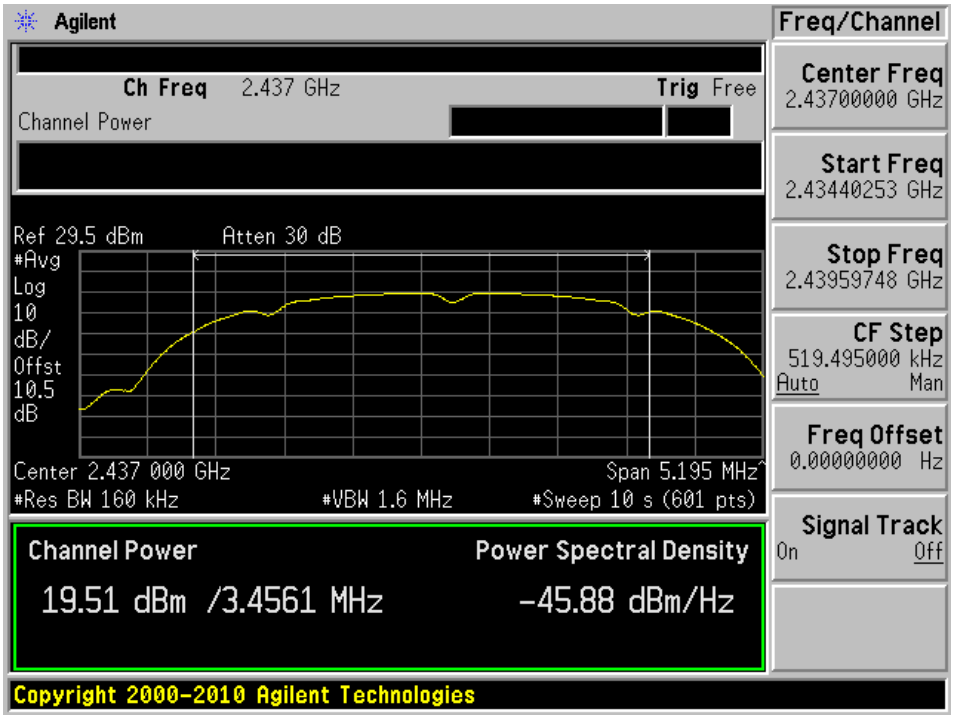
802.11g 10MHz - 2462 MHz



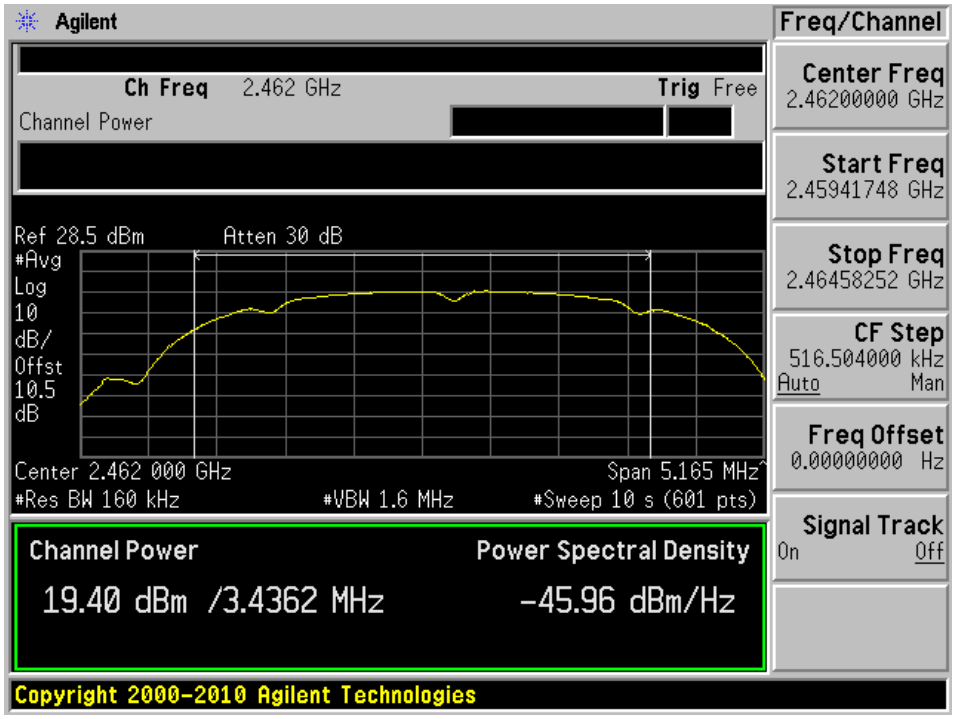
802.11b 5MHz - 2412 MHz



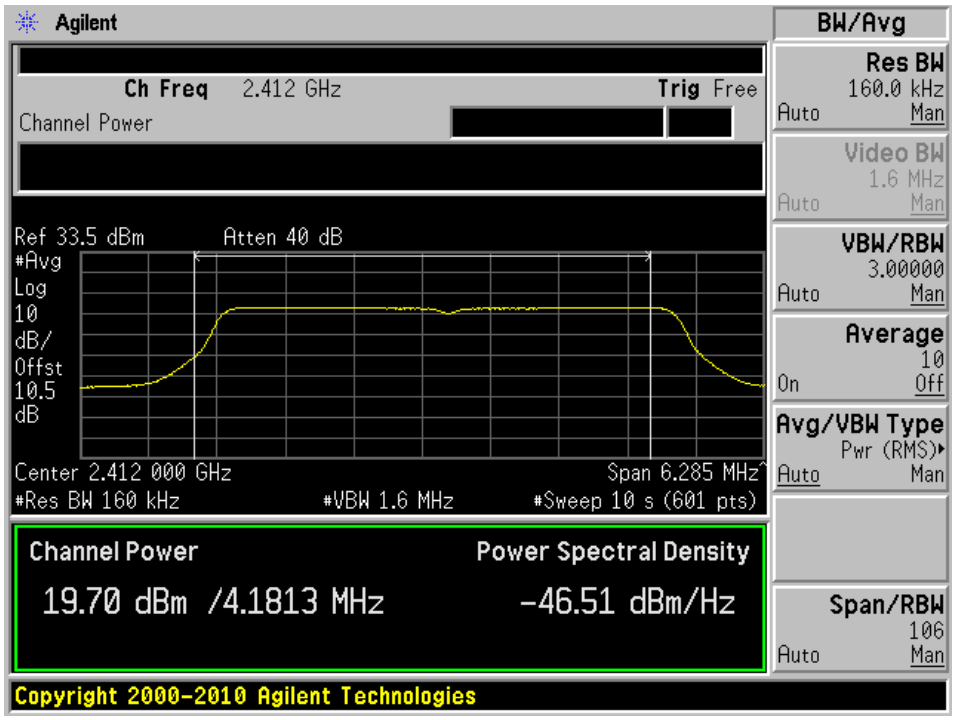
802.11b 5MHz - 2437 MHz



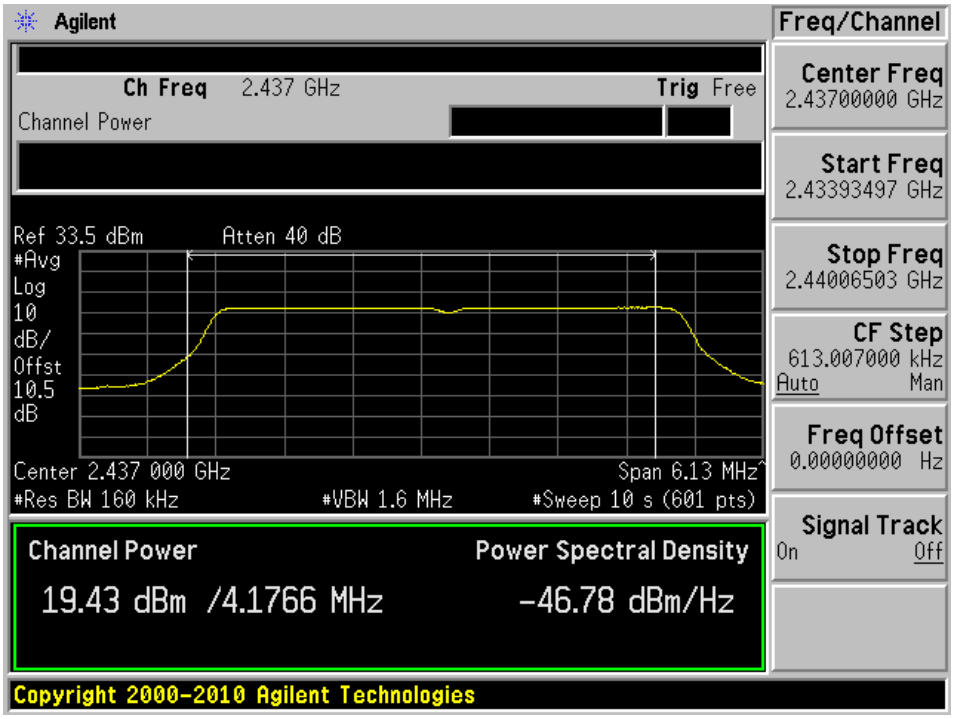
802.11b 5MHz - 2462 MHz



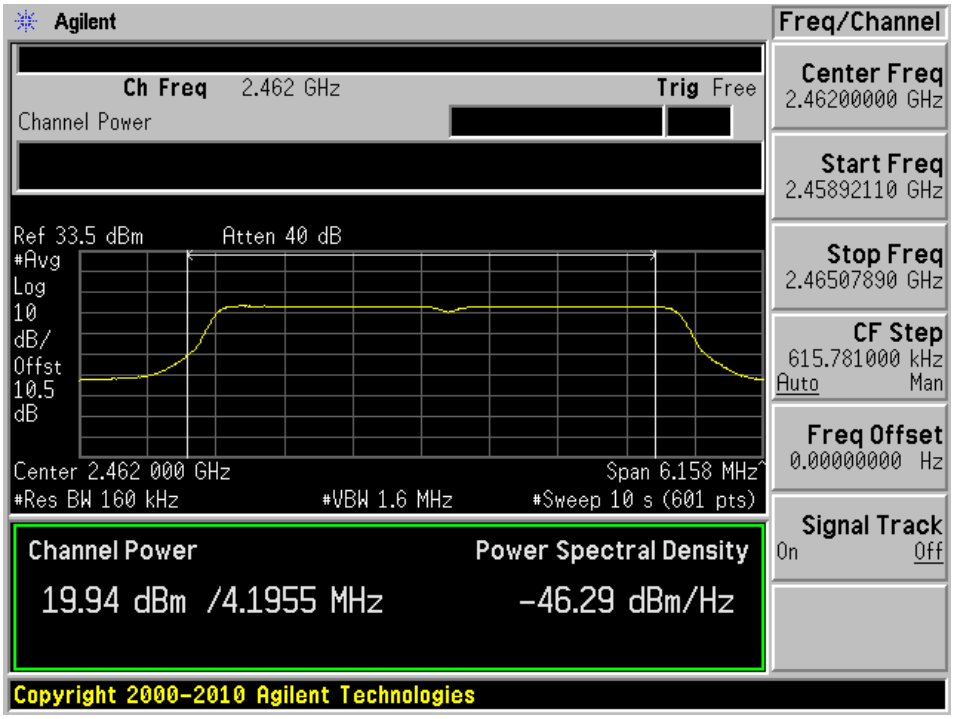
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz

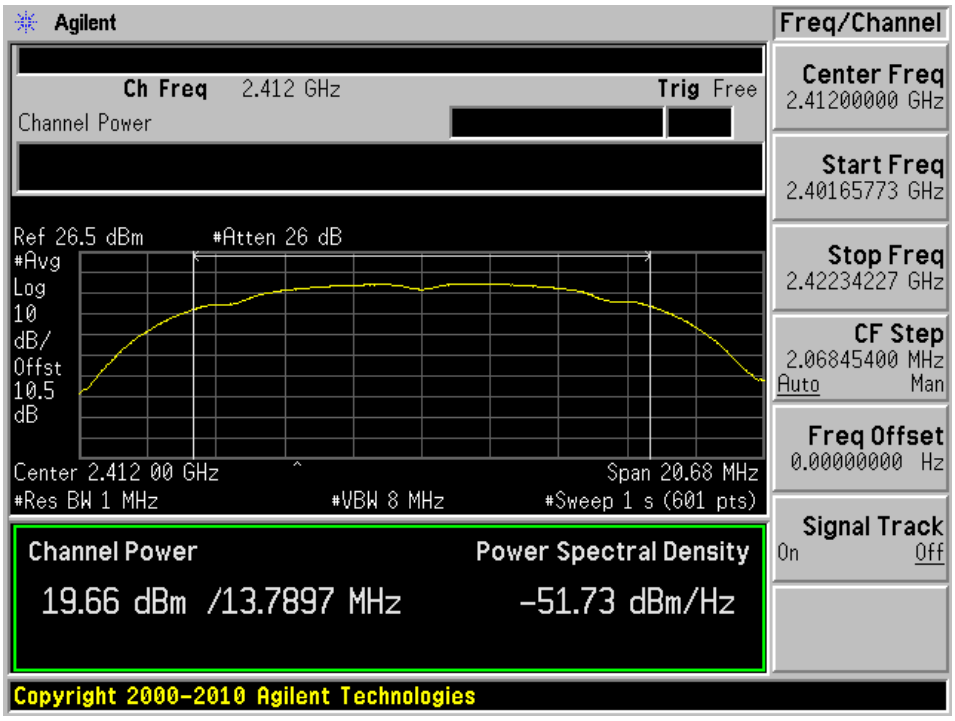


802.11g 5MHz - 2462 MHz

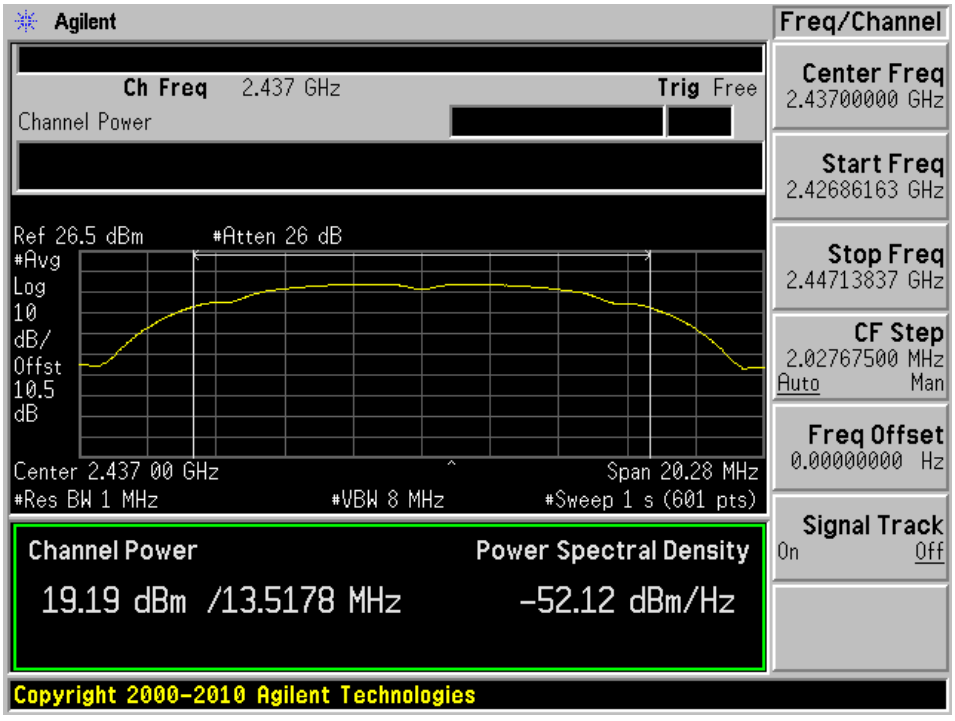


Chain 1

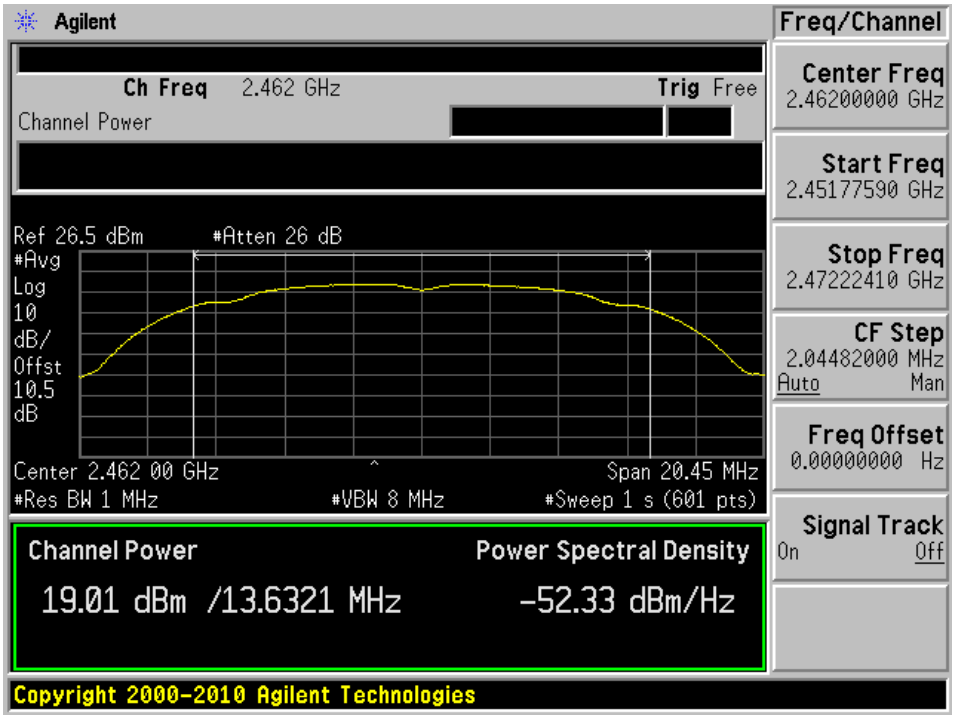
802.11b - 2412 MHz



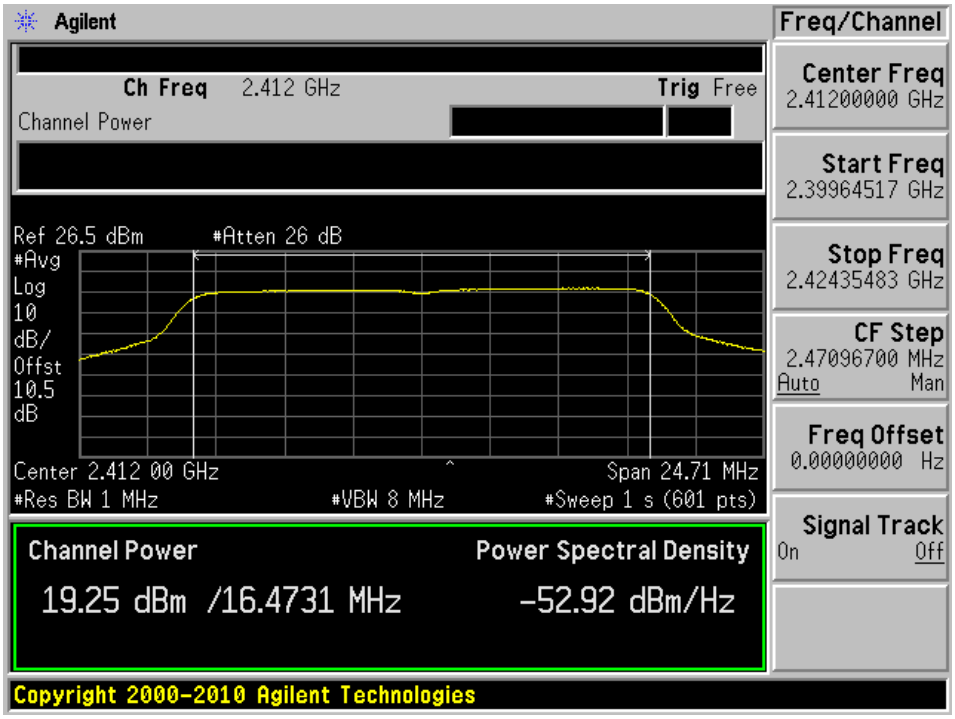
802.11b - 2437 MHz



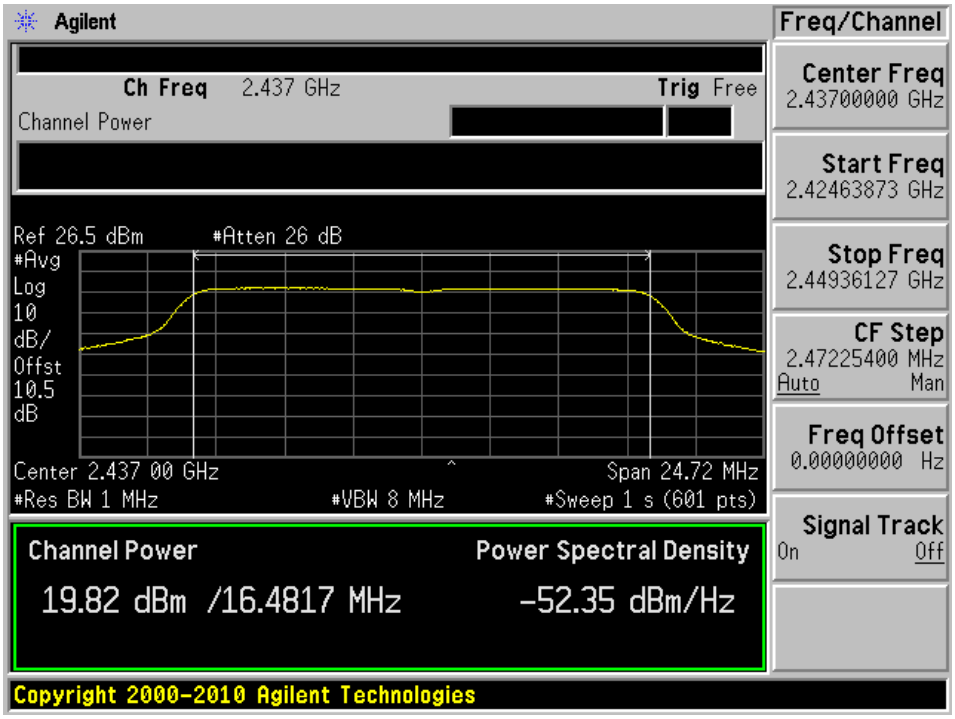
802.11b - 2462 MHz



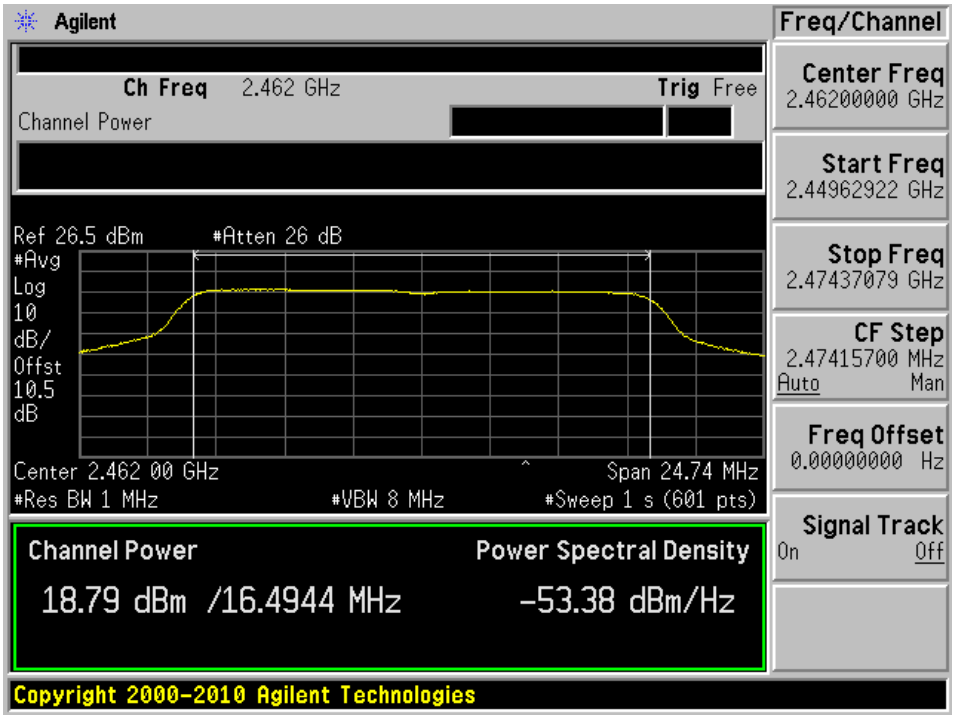
802.11g - 2412 MHz



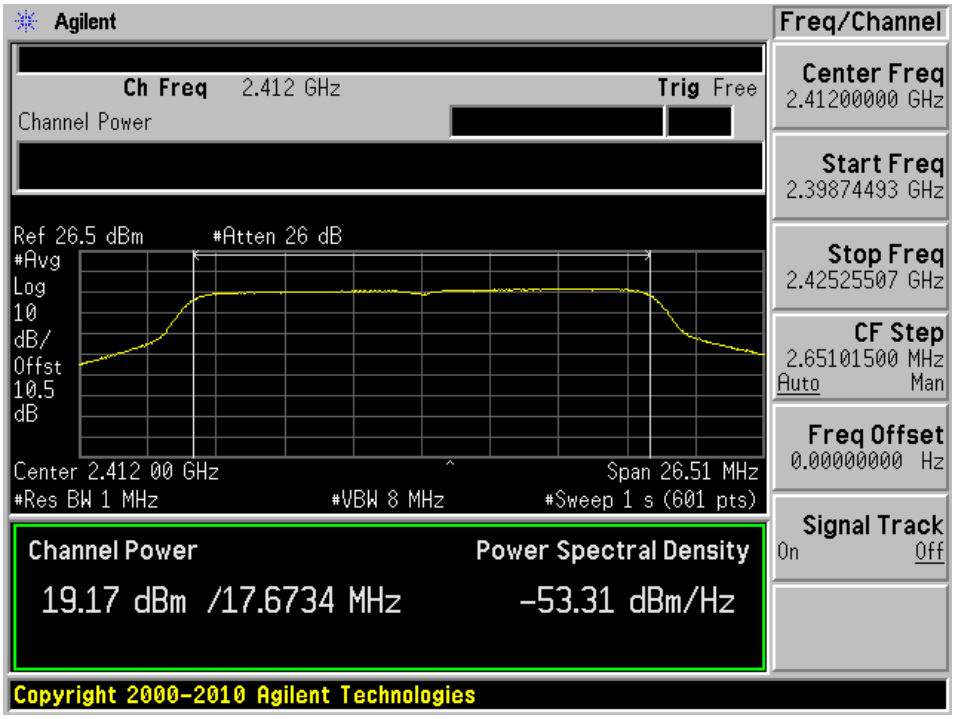
802.11g - 2437 MHz



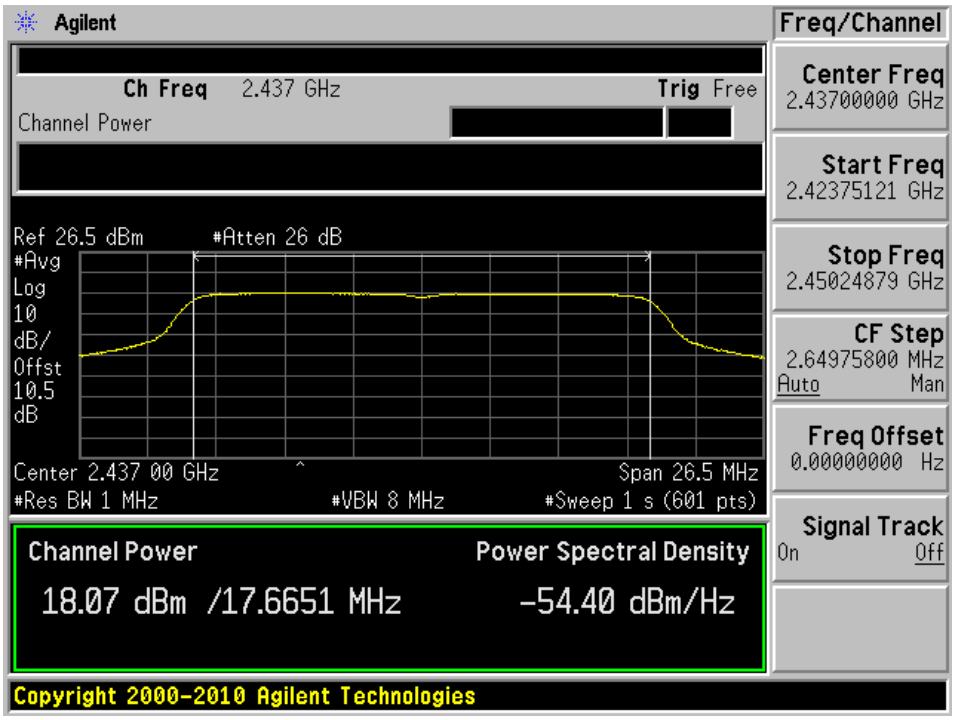
802.11g - 2462 MHz



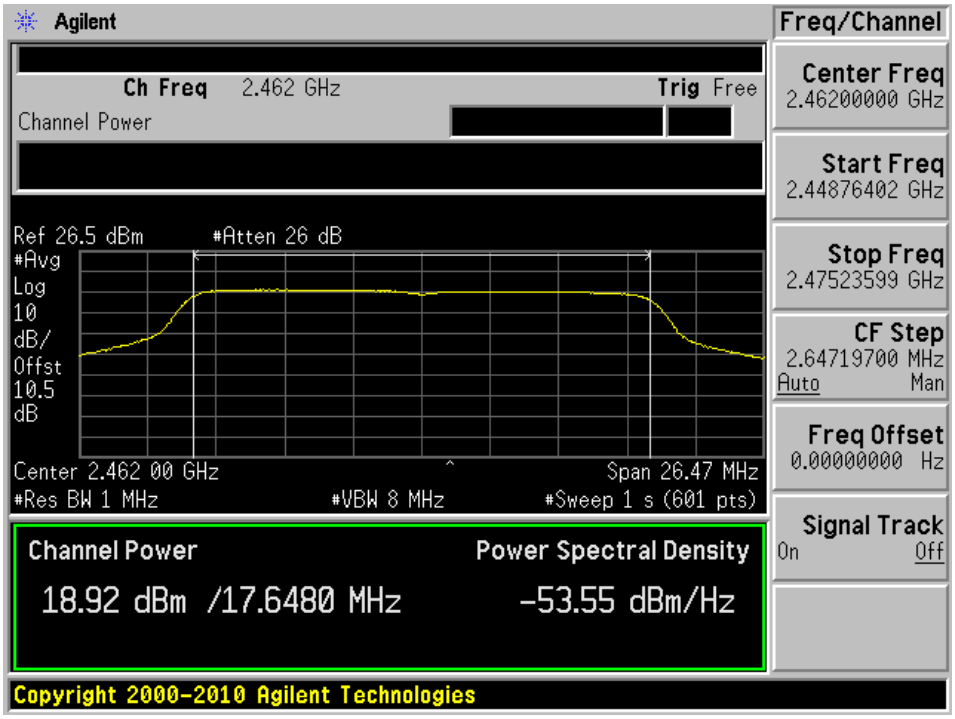
802.11n20 - 2412 MHz



802.11n20 - 2437 MHz



802.11n20 - 2462 MHz



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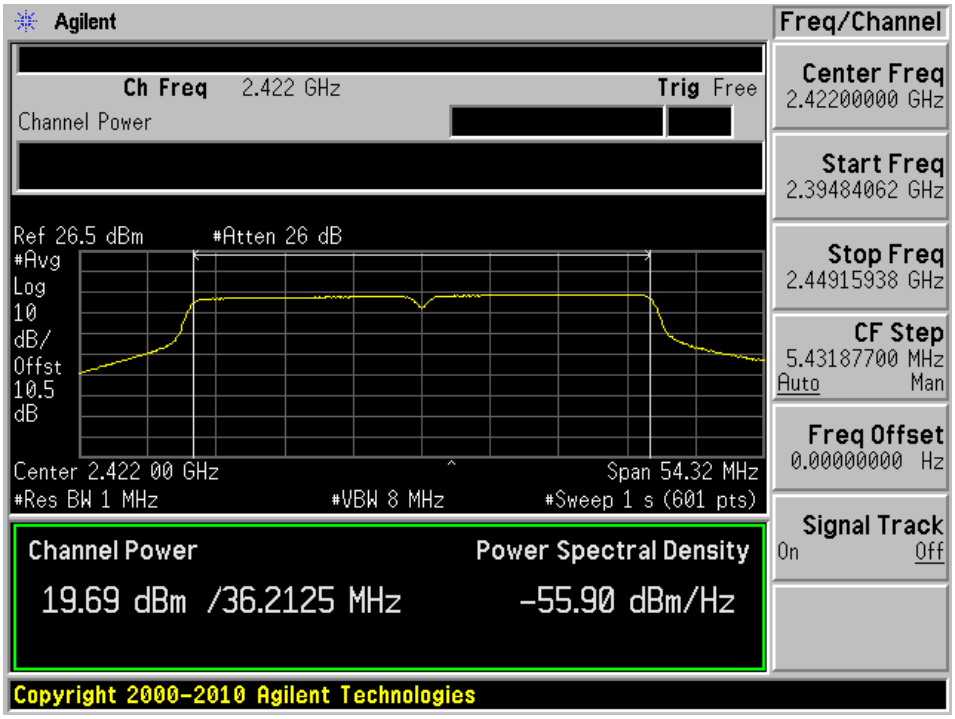
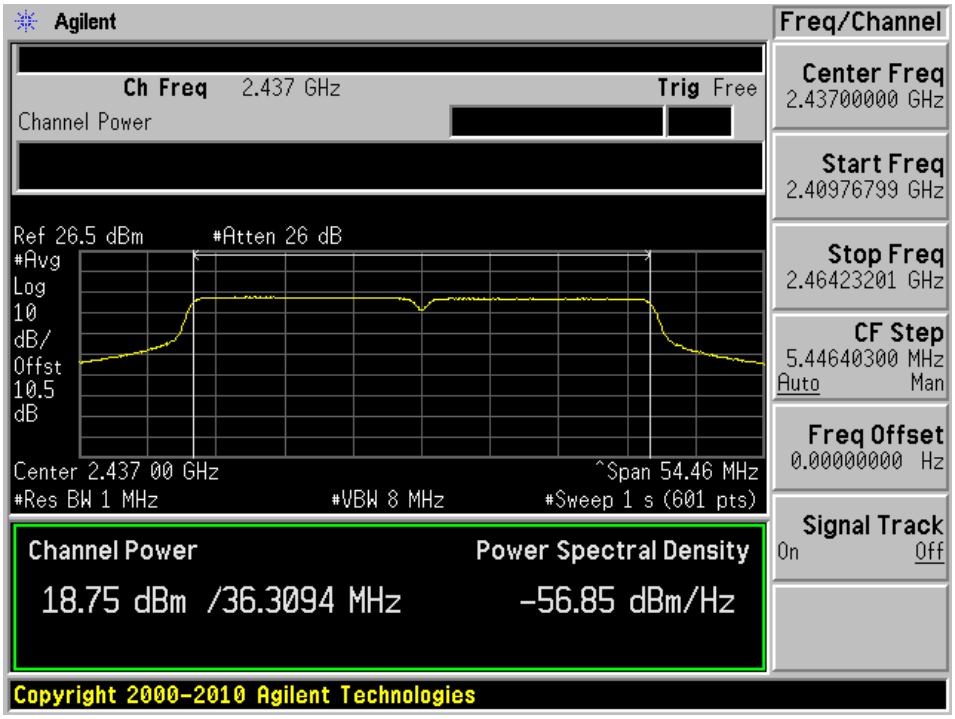
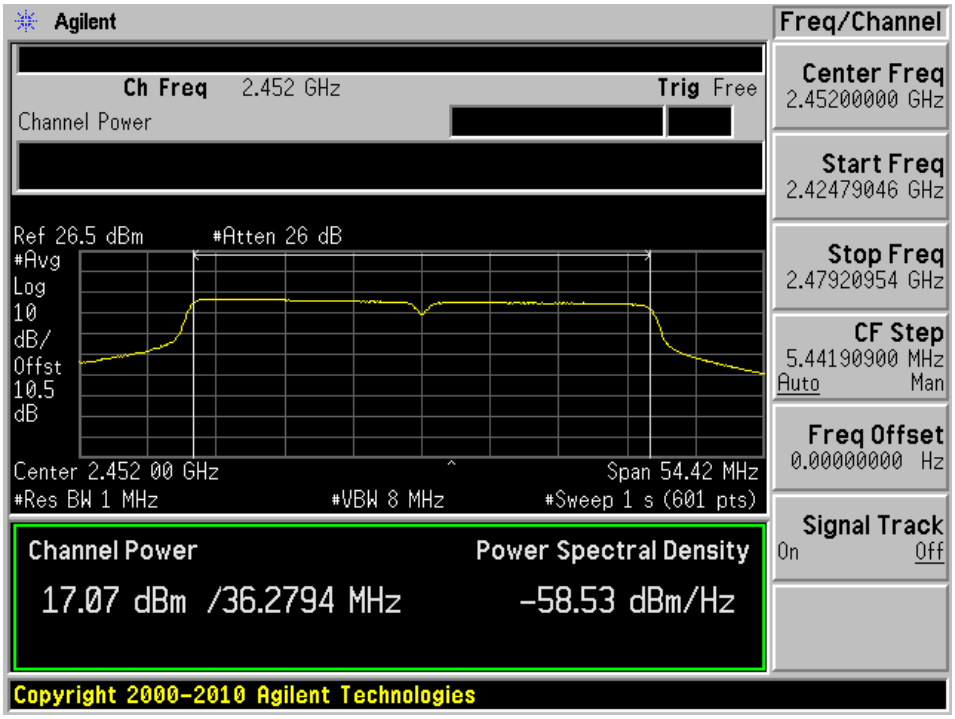


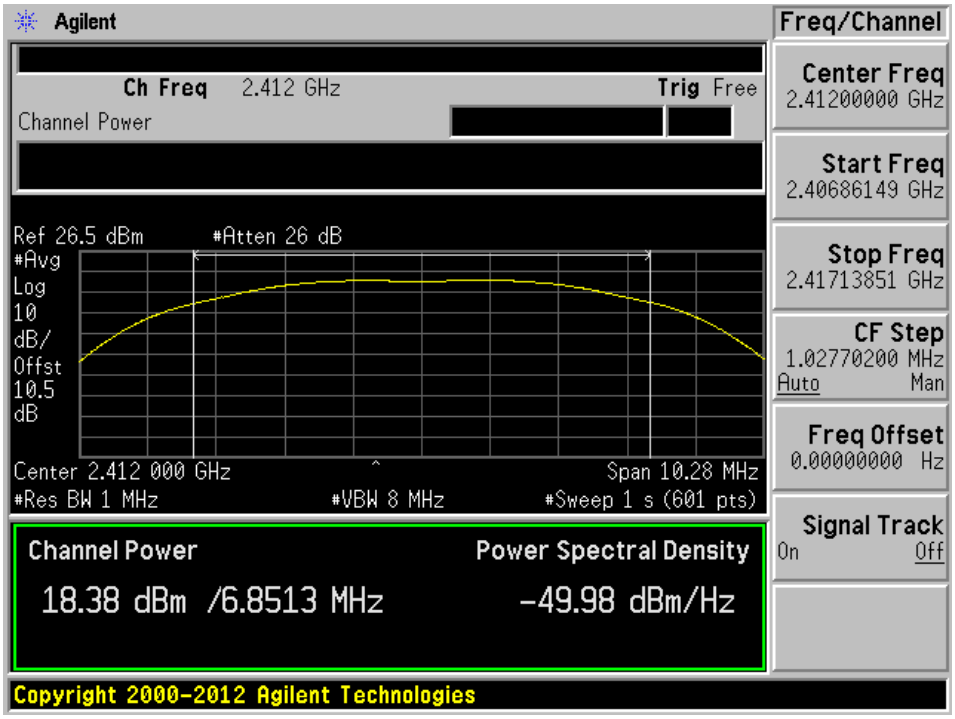
802.11n40 - 2437 MHz



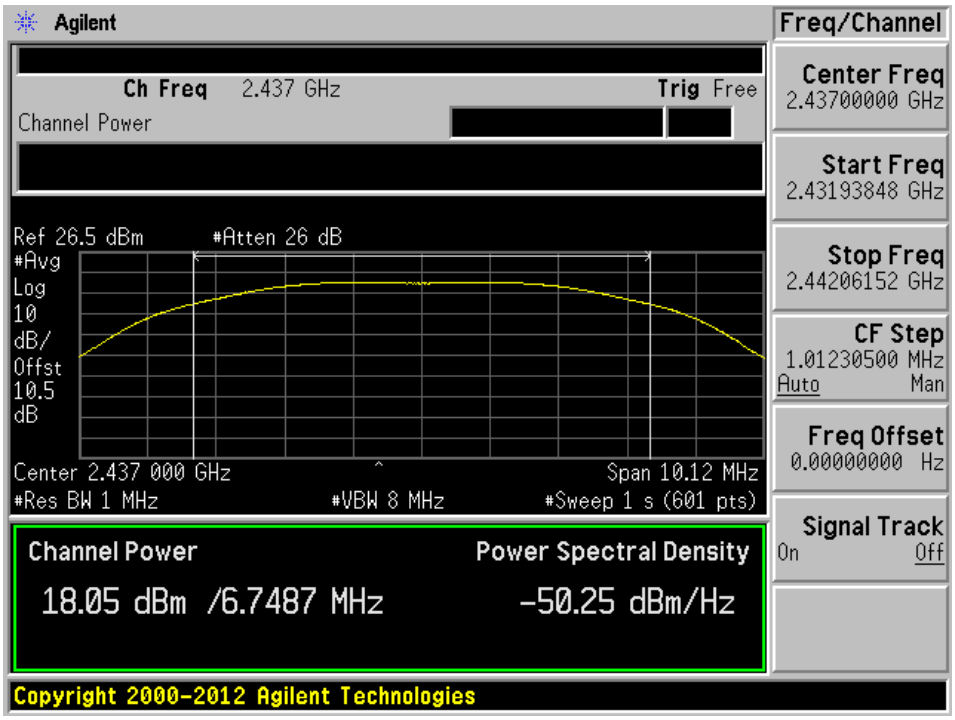
802.11n40 - 2452 MHz



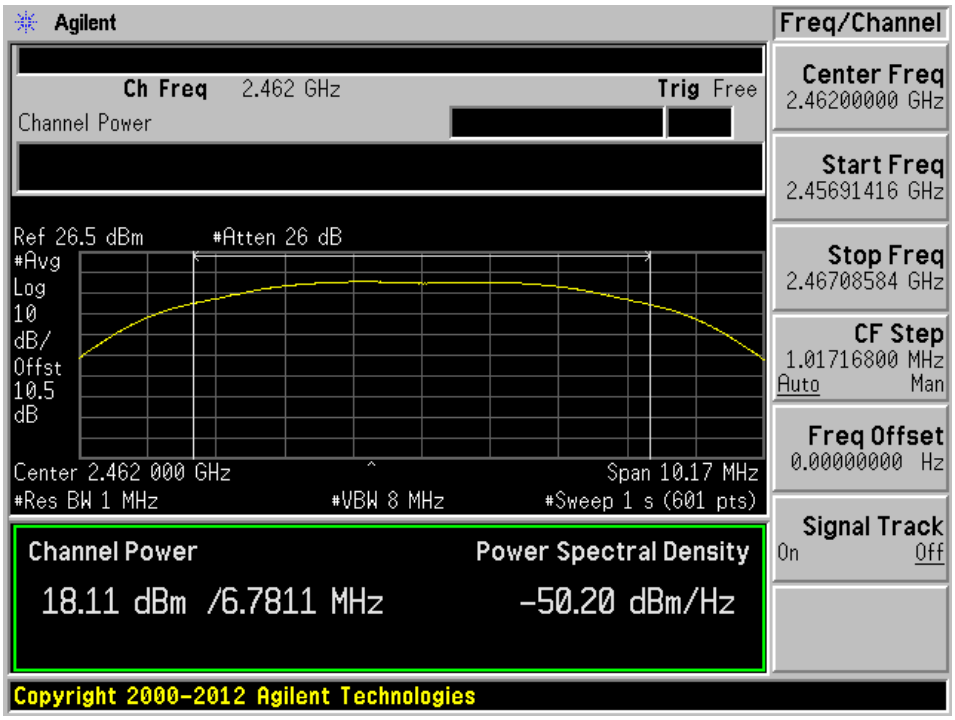
802.11b 10MHz - 2412 MHz



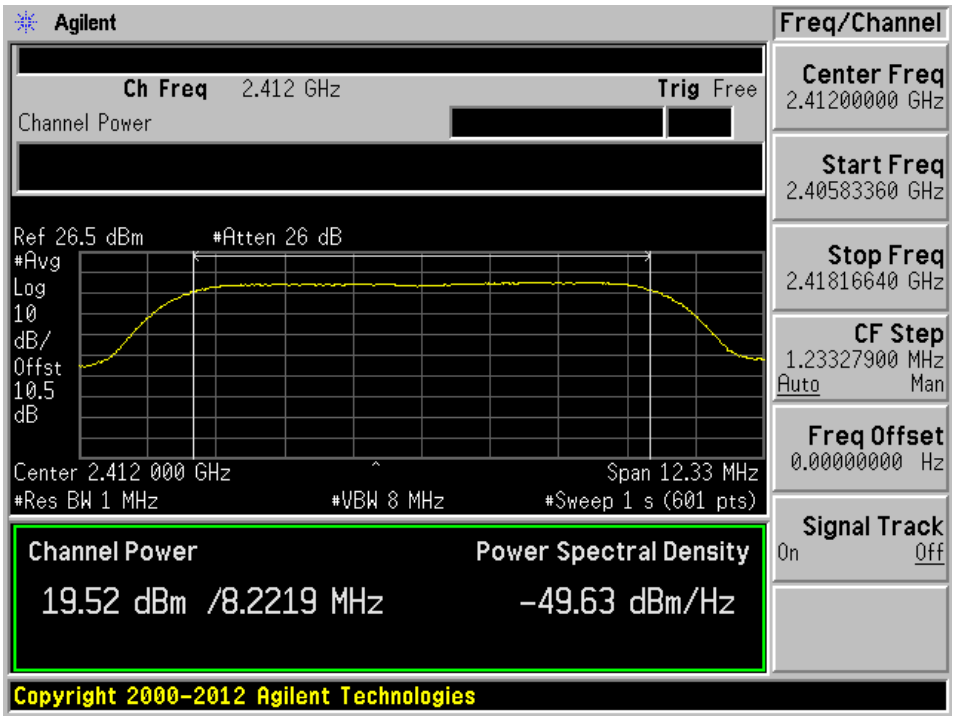
802.11b 10MHz - 2437 MHz



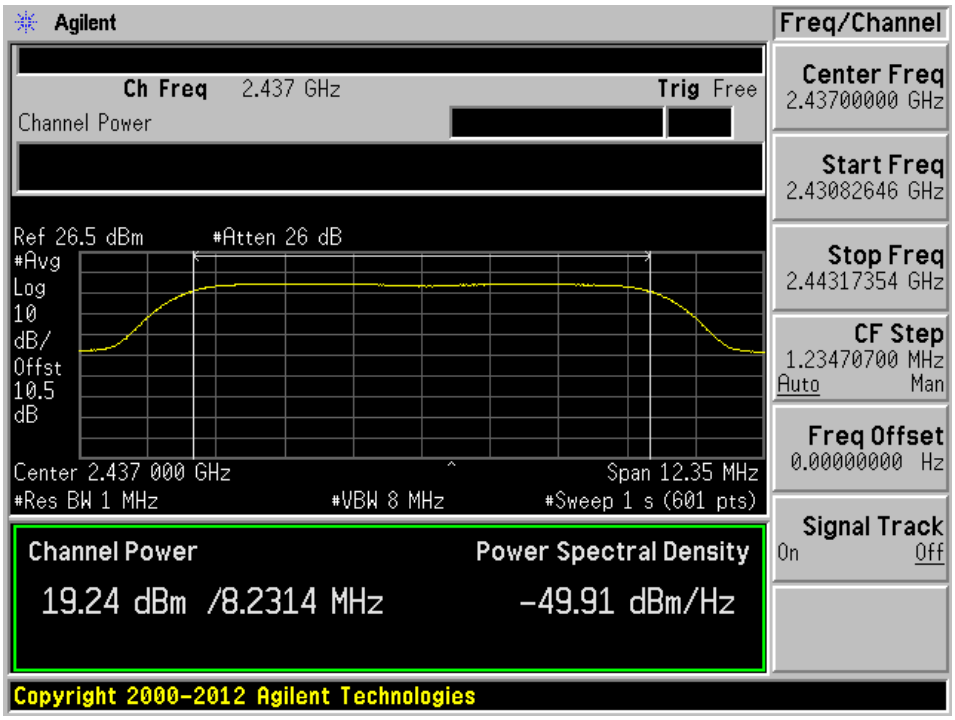
802.11b 10MHz - 2462 MHz



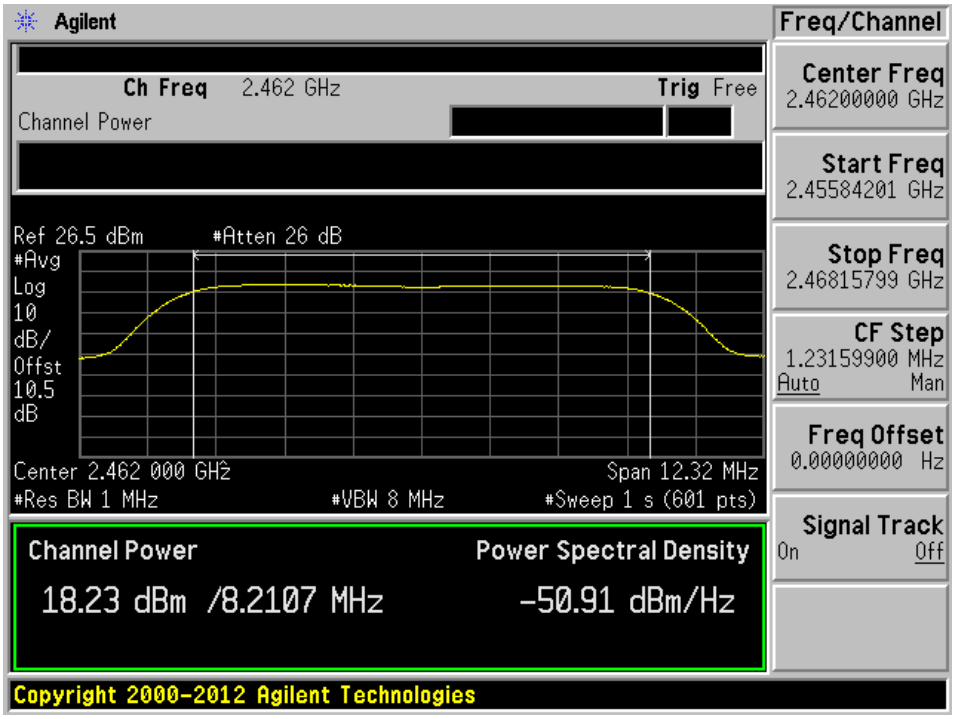
802.11g 10MHz - 2412 MHz



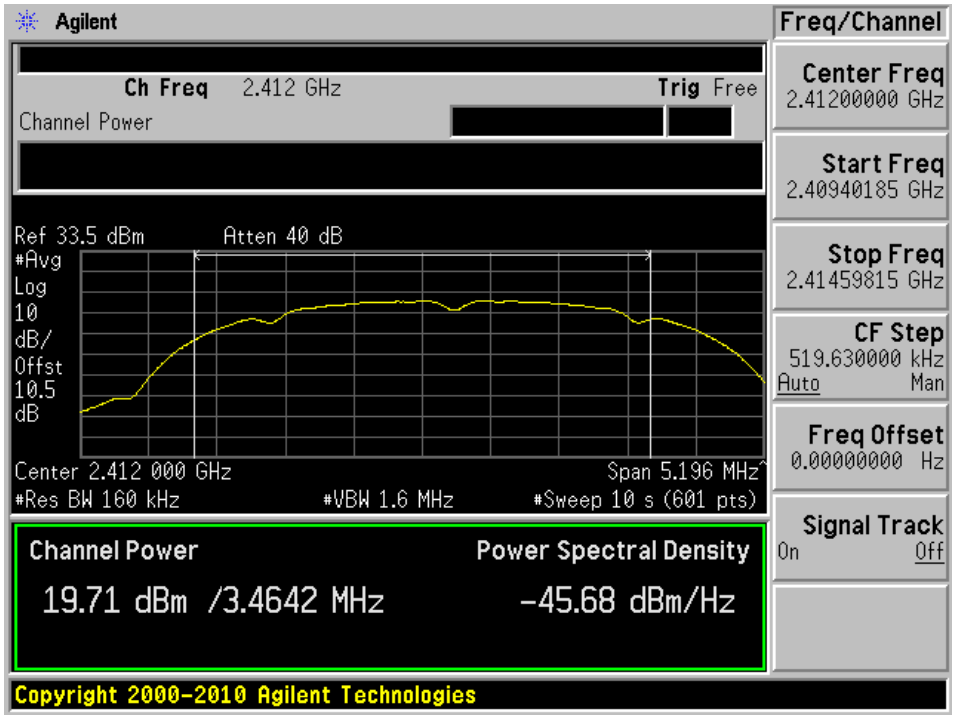
802.11g 10MHz - 2437 MHz



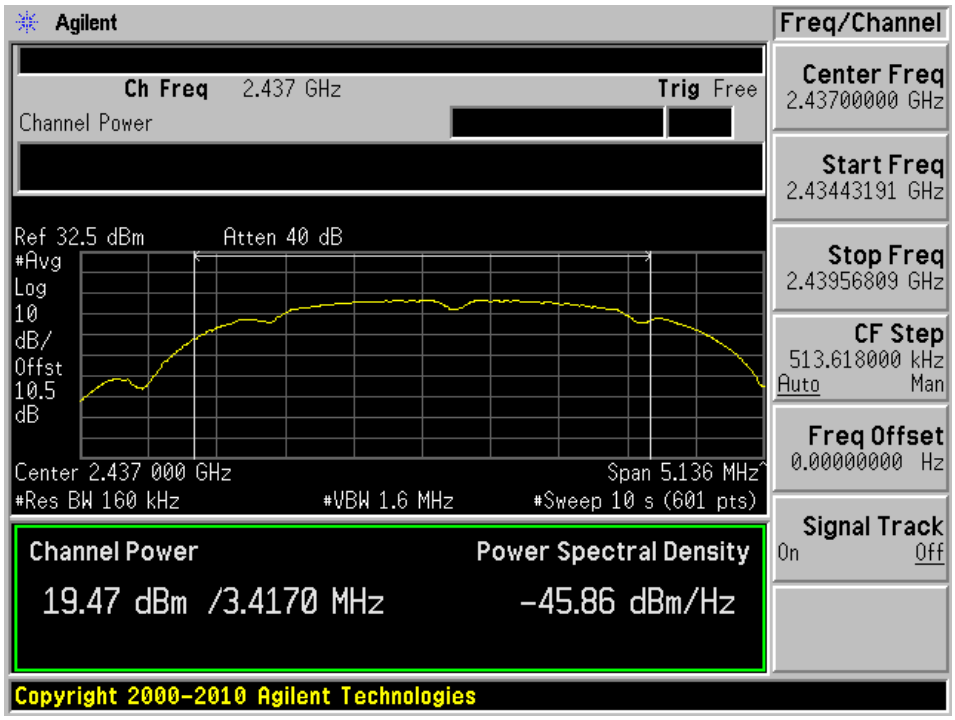
802.11g 10MHz - 2462 MHz



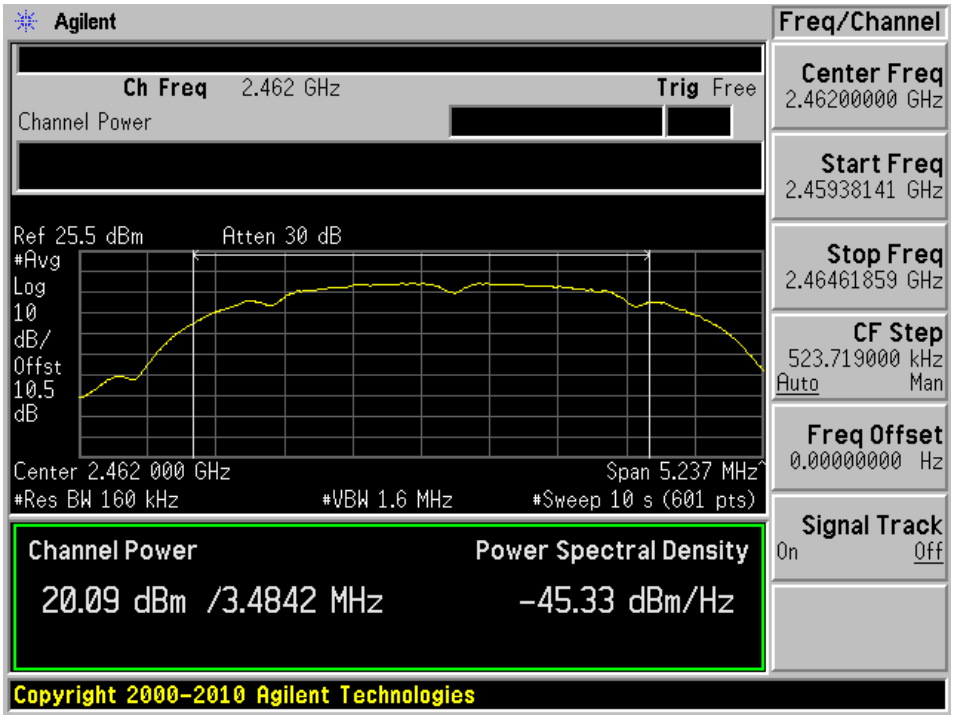
802.11b 5MHz - 2412 MHz



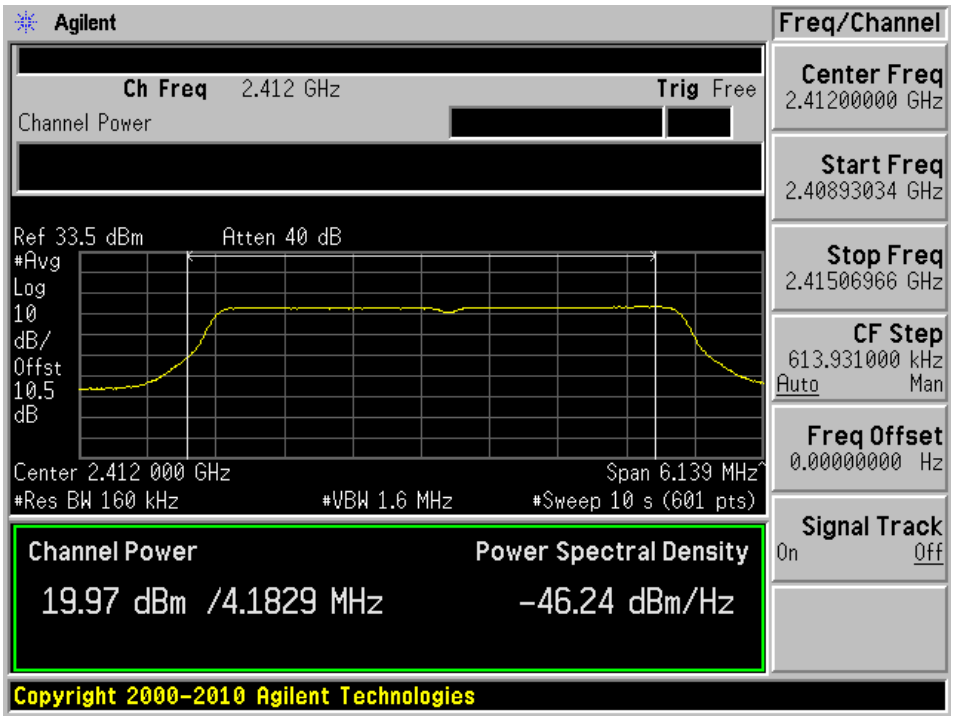
802.11b 5MHz - 2437 MHz



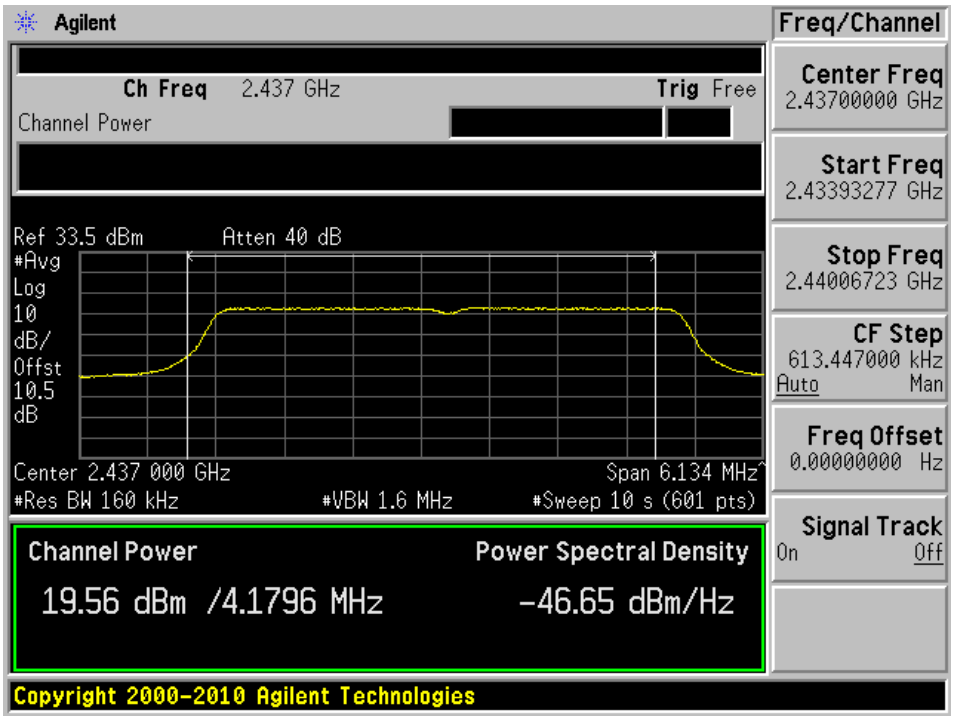
802.11b 5MHz - 2462 MHz



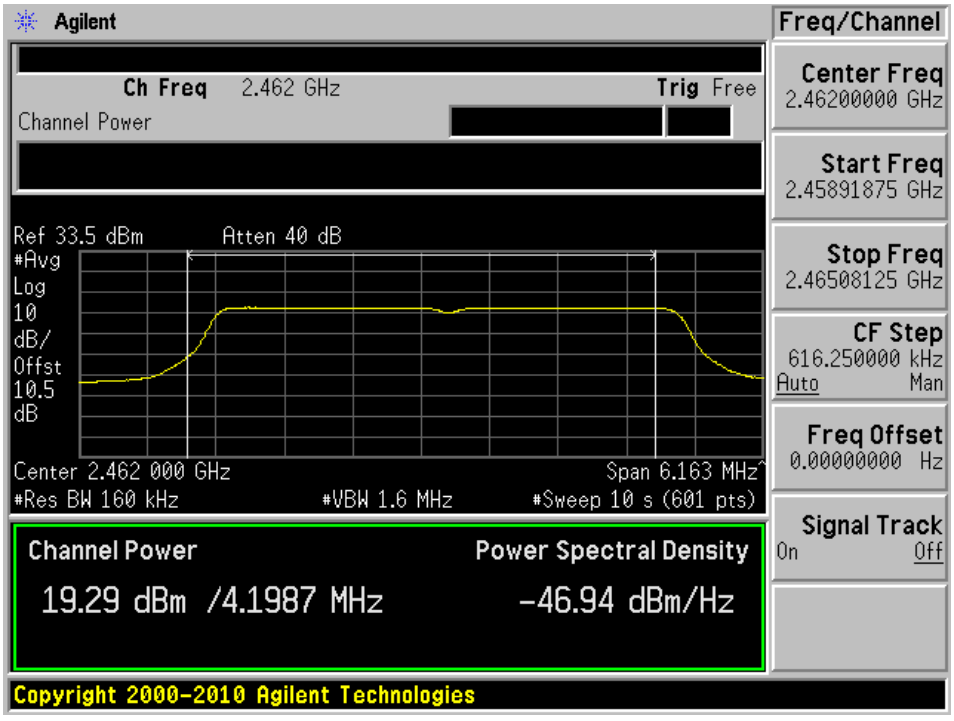
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz



802.11g 5MHz - 2462 MHz



10 FCC §15.247(d) & IC RSS-247 §5.5 - Spurious Emissions at Antenna Port & Band Edges

10.1 Applicable Standards

According to FCC §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emissions limits specified in §15.209(a) see §15.205(c).

For IC RSS-247 §5.5, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

10.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v03r05: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 13: Band-edge measurements

10.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4440A	US42221851	2015-06-23	1 year
-	SMA Cable	-	C0001	Each Time[1]	N/A
Mini-Circuits	Attenuator	BW-S10W5	1430	Each Time[1]	N/A

Note[1]: cable and attenuator included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.*

10.4 Test Environmental Conditions

Temperature:	22º C
Relative Humidity:	42 %
ATM Pressure:	102.7 kPa

The testing was performed by Todd Moy/Leonard Gray on 2016-04-20/2016-05-12 in RF site.

10.5 Test Results

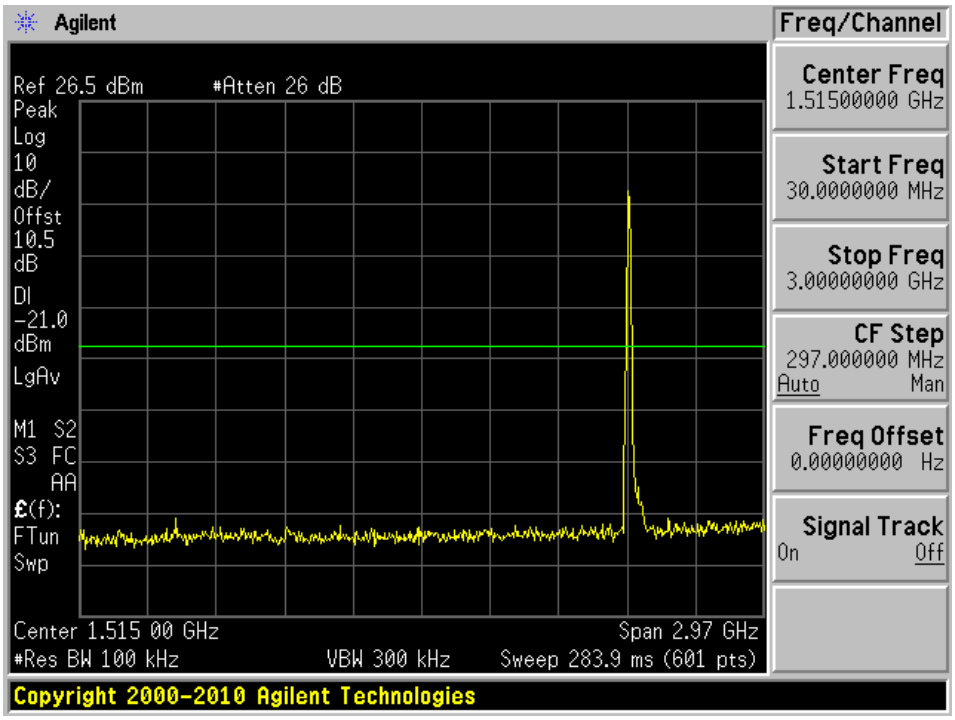
Please refer to the following plots.

Note: 802.11b/802.11g 5 MHz complied with the average limit for maximum conducted (average) output power and average power spectral density (PSD) thus the attenuation limit is 30 dB.

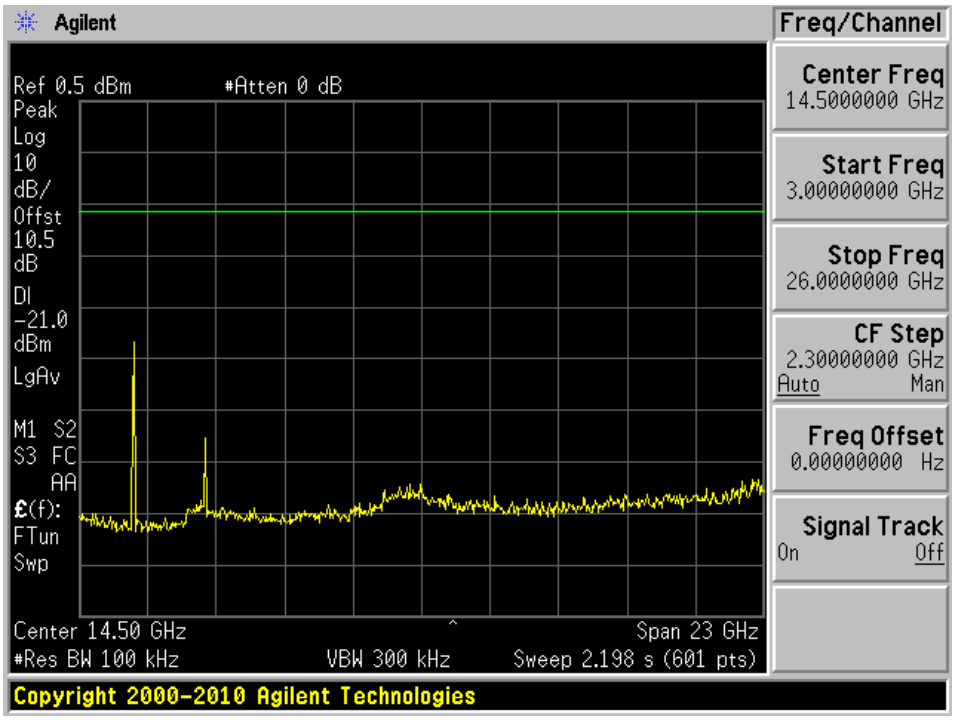
Conducted Spurious Emissions

Chain 0

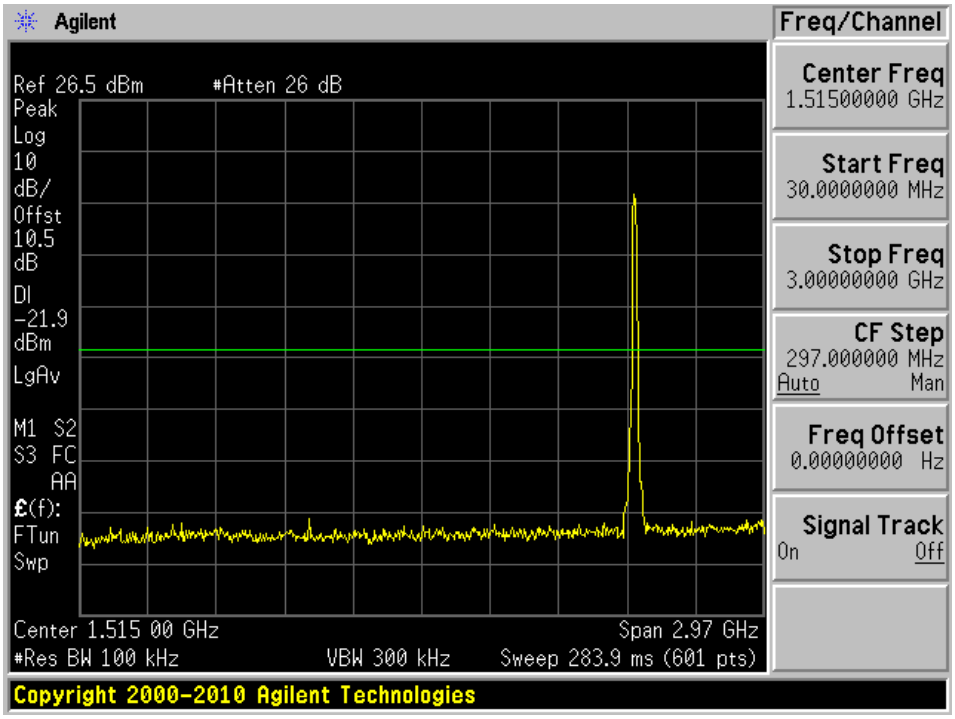
802.11b-2412 MHz (30 MHz-3 GHz)



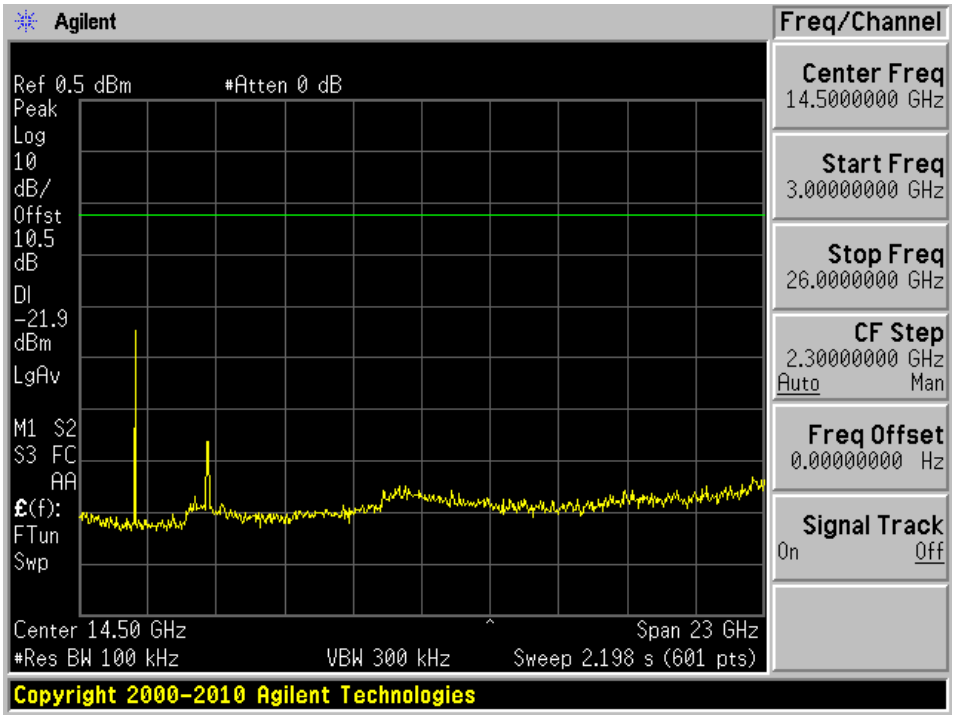
802.11b-2412 MHz (3-26 GHz)



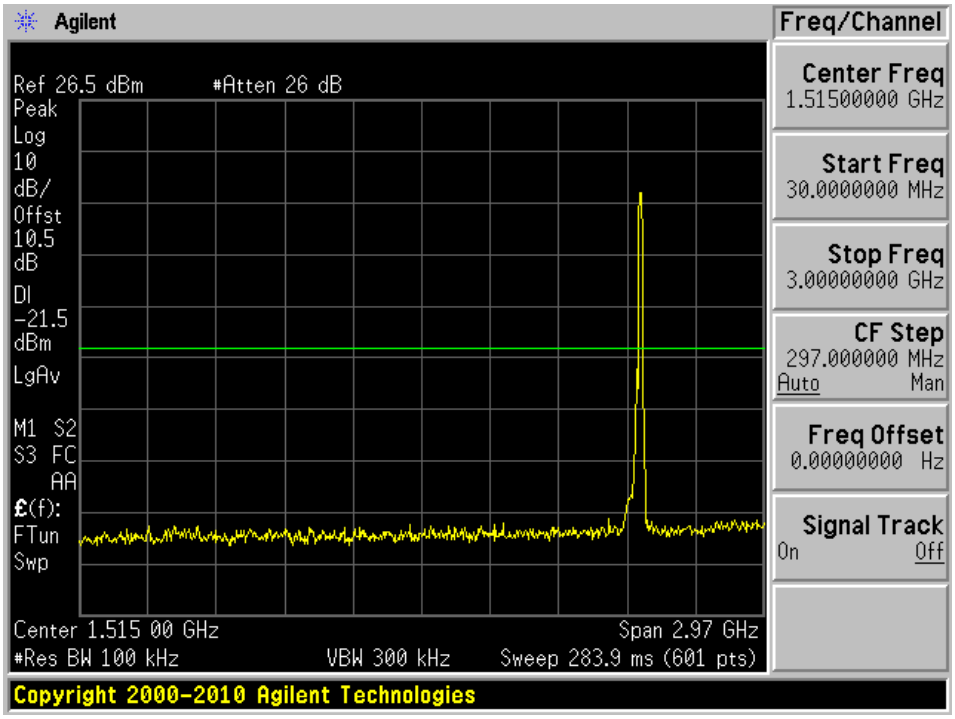
802.11b-2437 MHz (30 MHz-3 GHz)



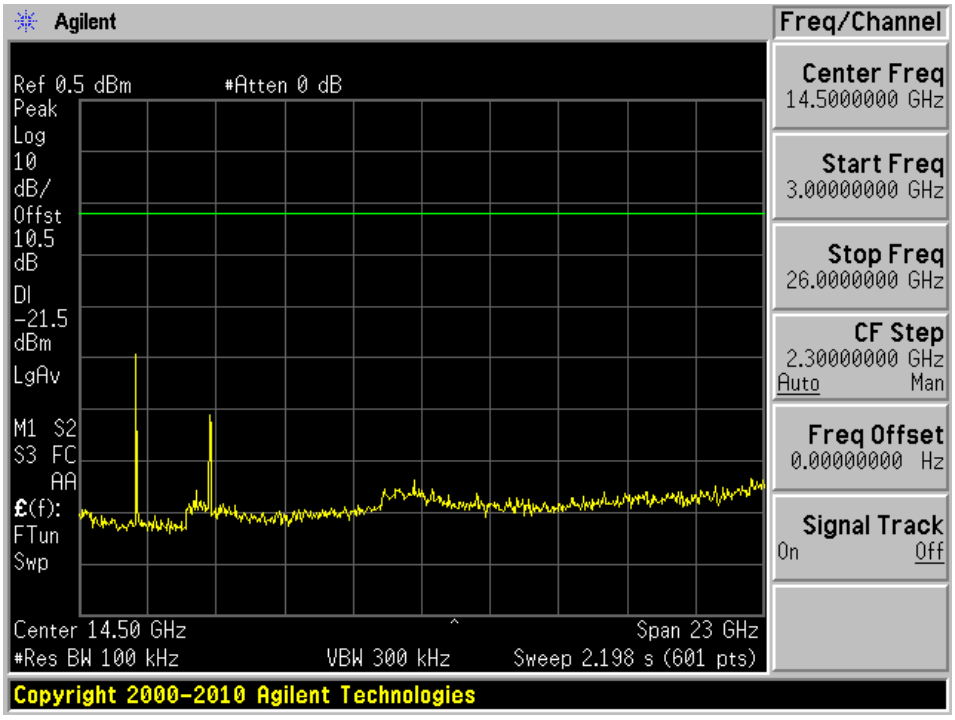
802.11b-2437 MHz (3-26 GHz)



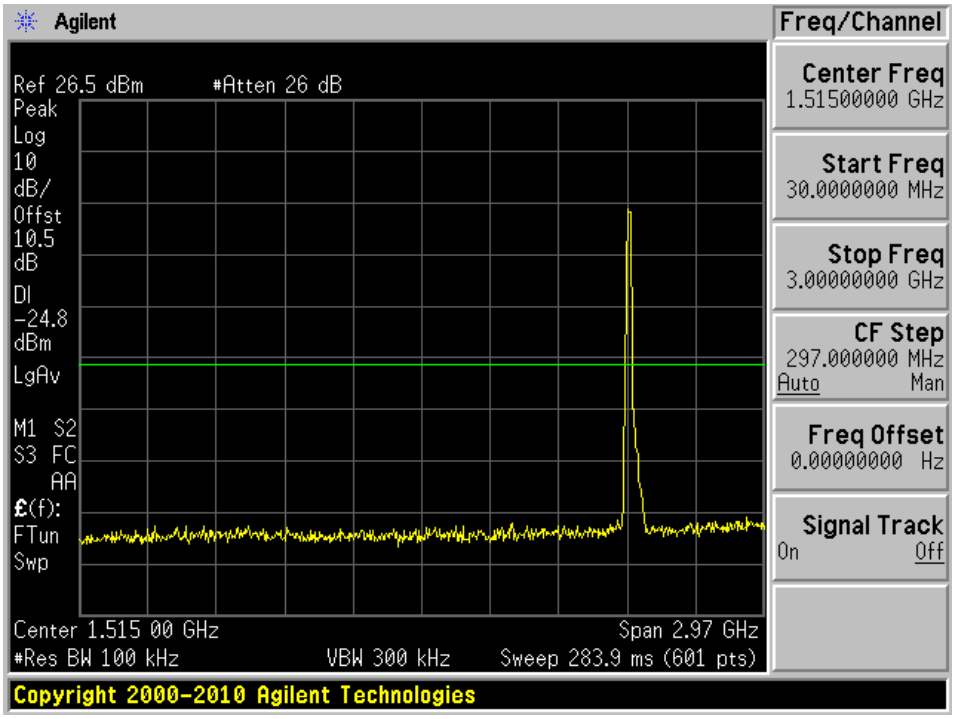
802.11b-2462 MHz (30 MHz-3 GHz)



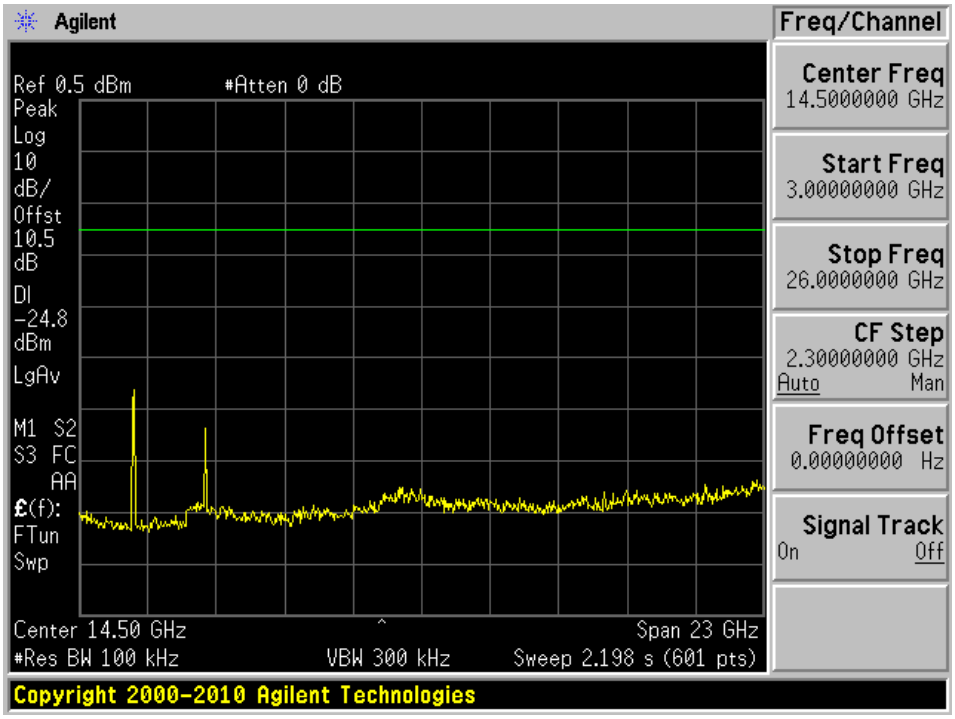
802.11b-2462 MHz (3-26 GHz)



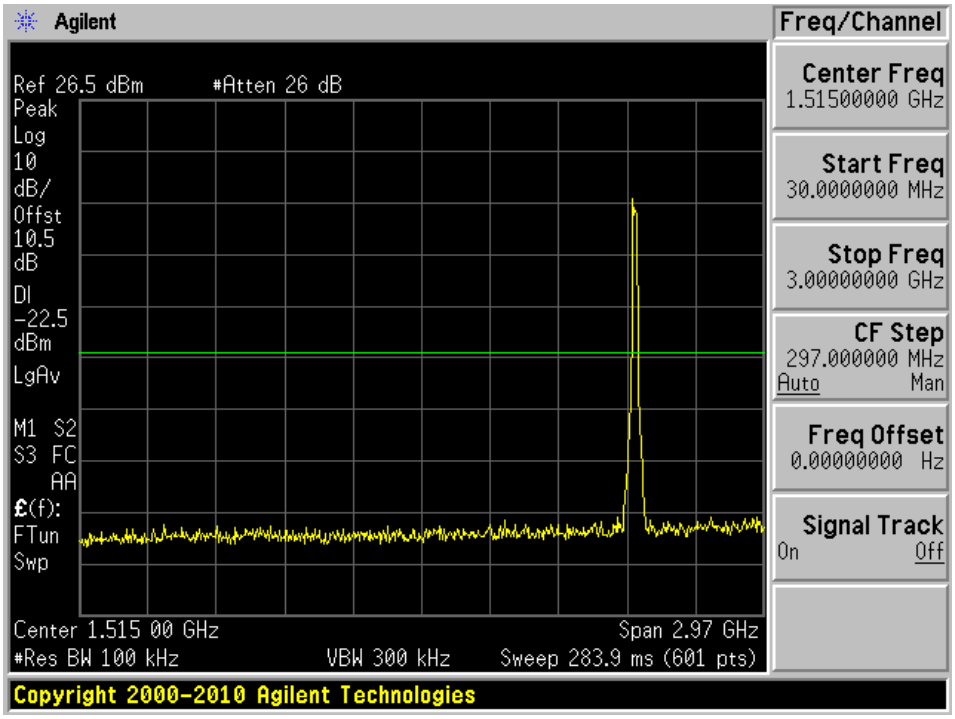
802.11g-2412 MHz (30 MHz-3 GHz)



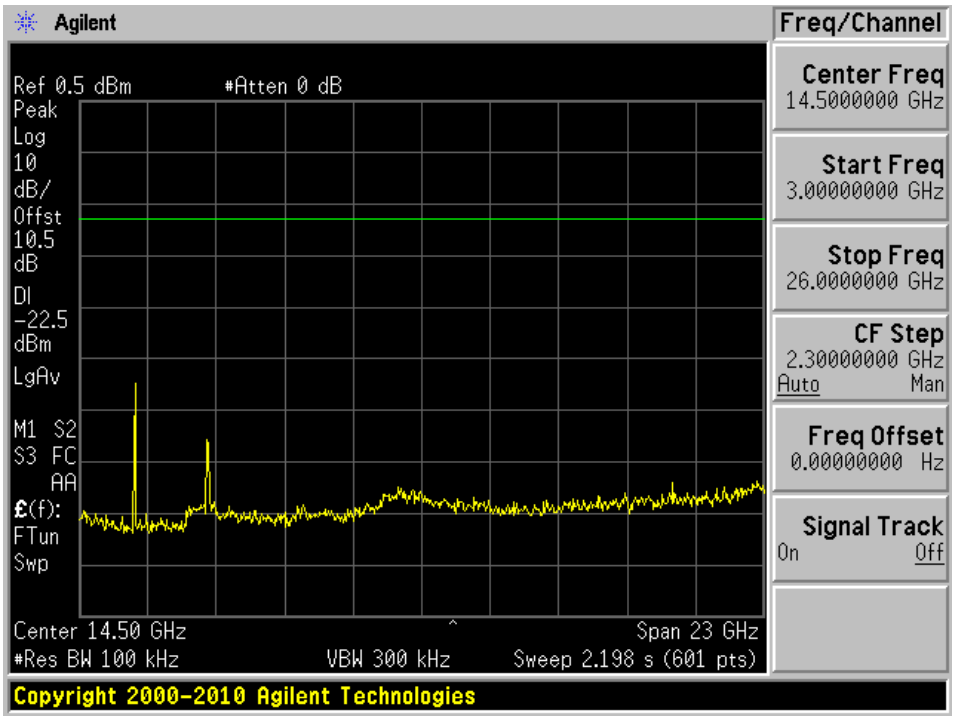
802.11g-2412 MHz (3-26 GHz)



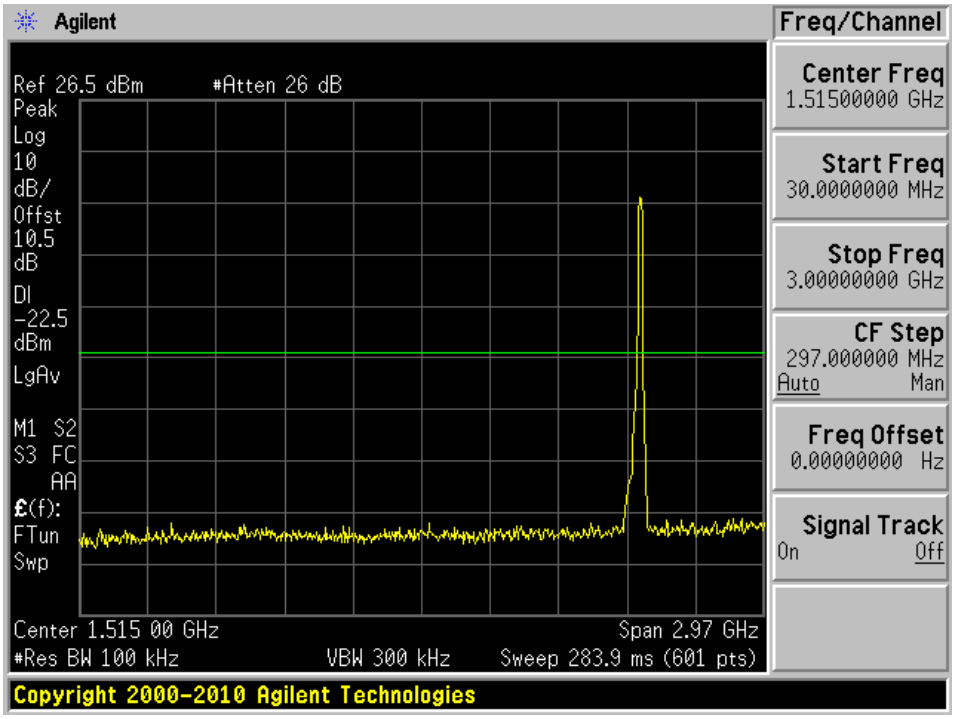
802.11g-2437 MHz (30 MHz-3 GHz)



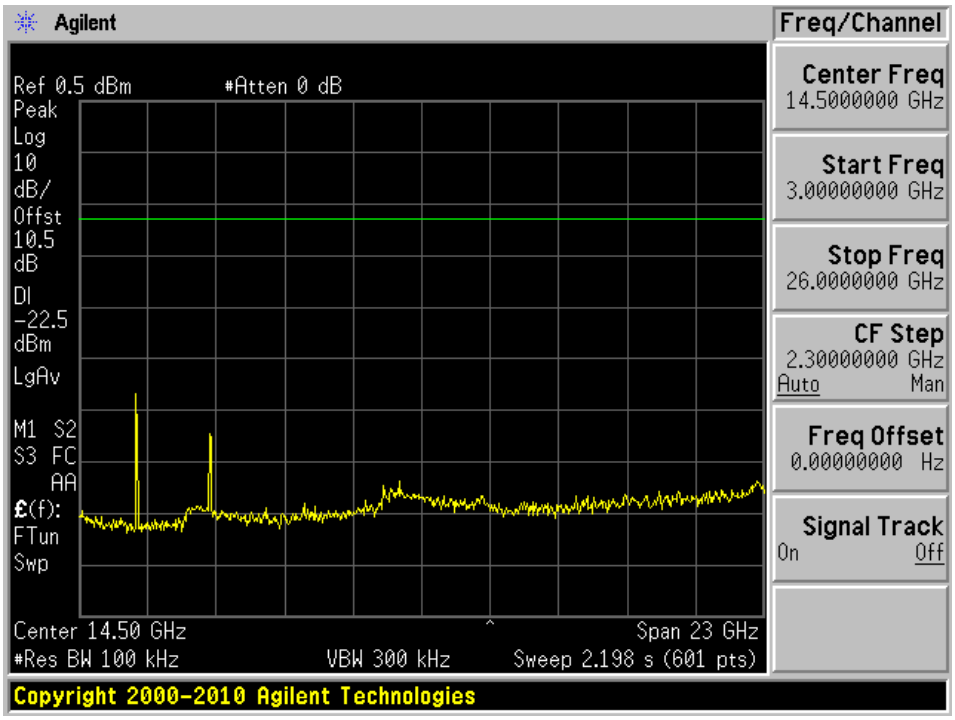
802.11g-2437 MHz (3-26 GHz)



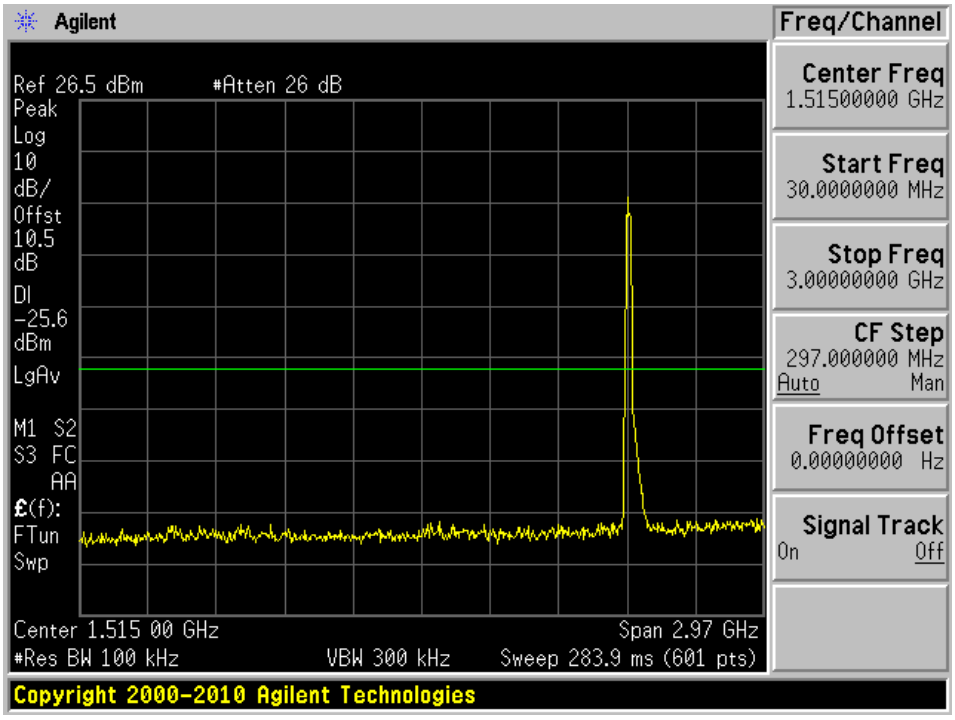
802.11g-2462 MHz (30 MHz-3 GHz)



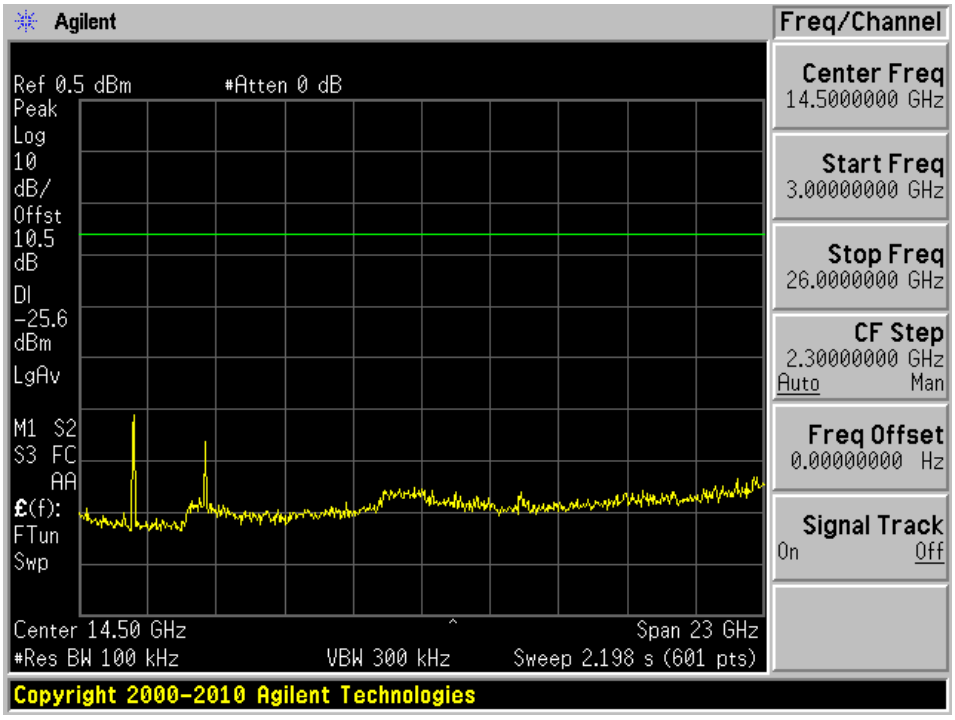
802.11g-2462 MHz (3-26 GHz)



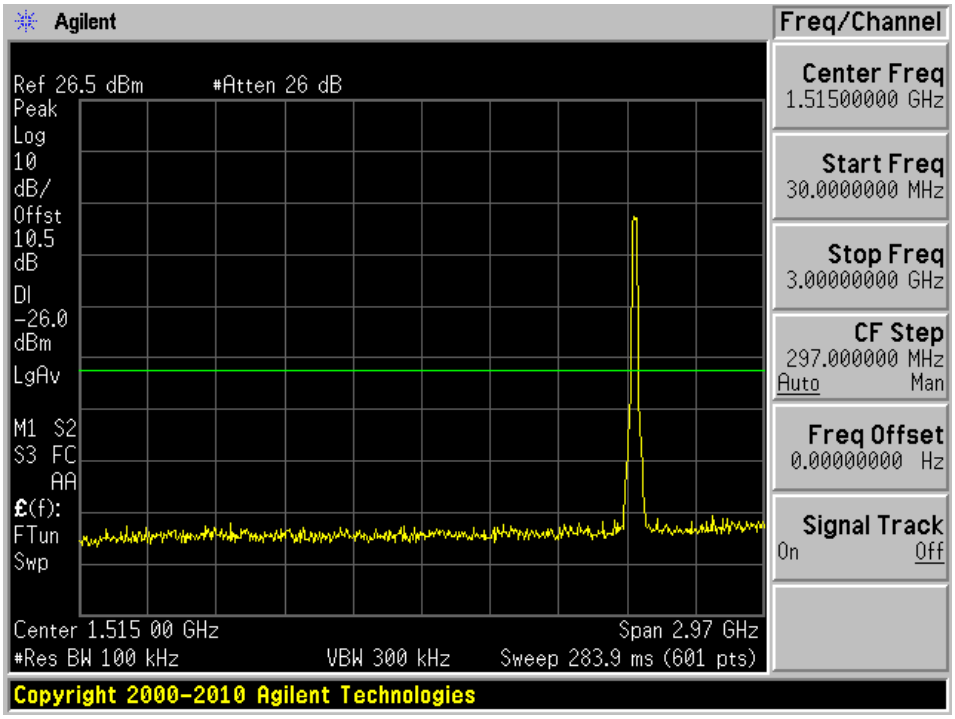
802.11n20-2412 MHz (30 MHz-3 GHz)



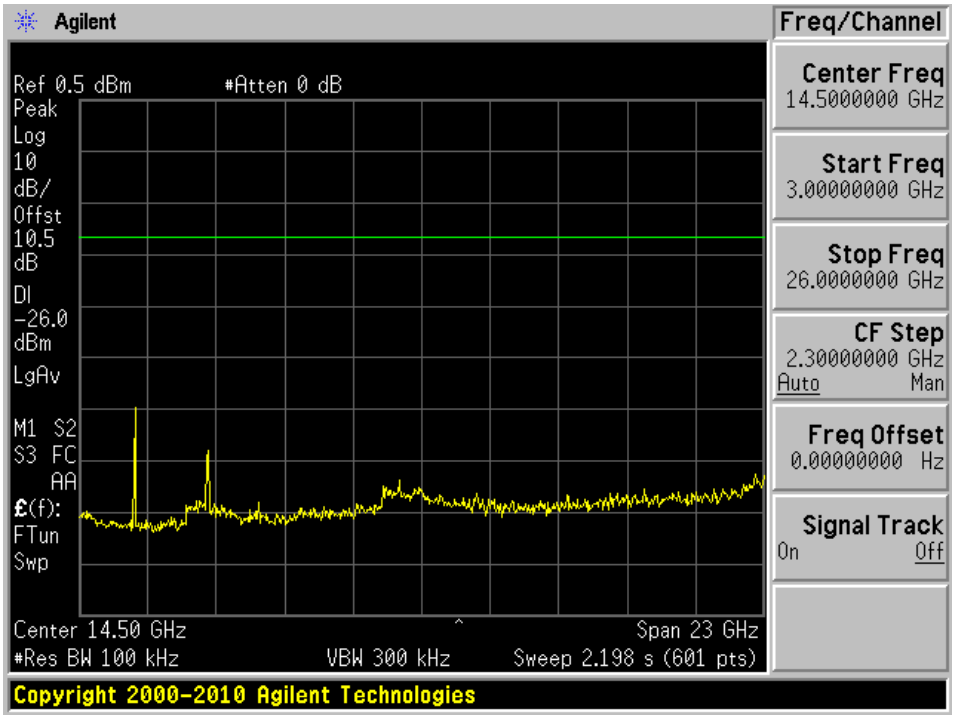
802.11n20-2412 MHz (3-26 GHz)



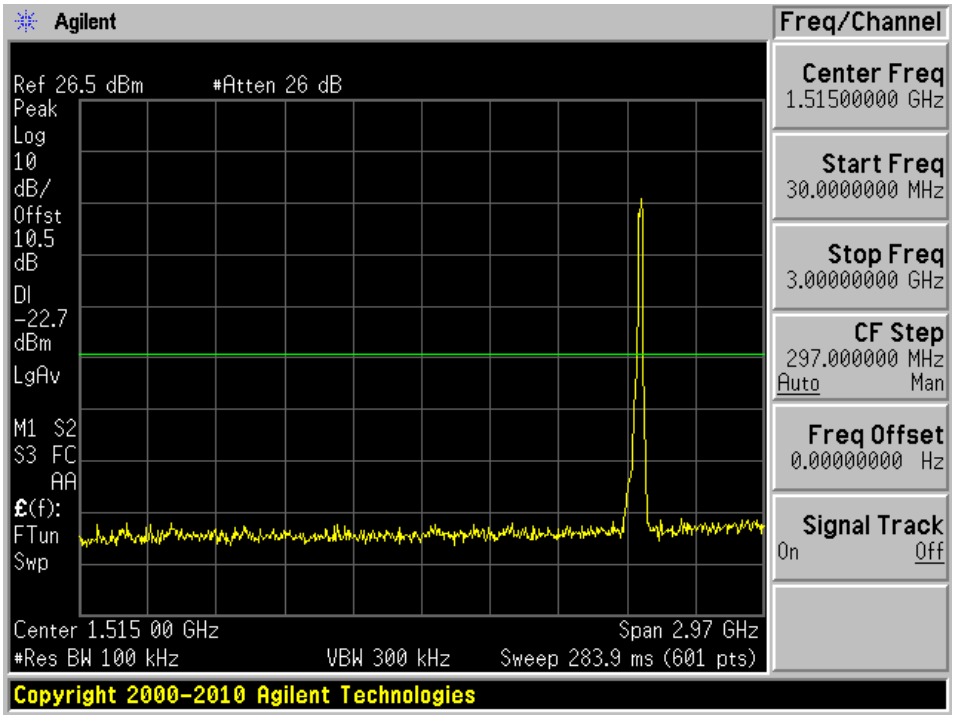
802.11n20-2437 MHz (30 MHz-3 GHz)



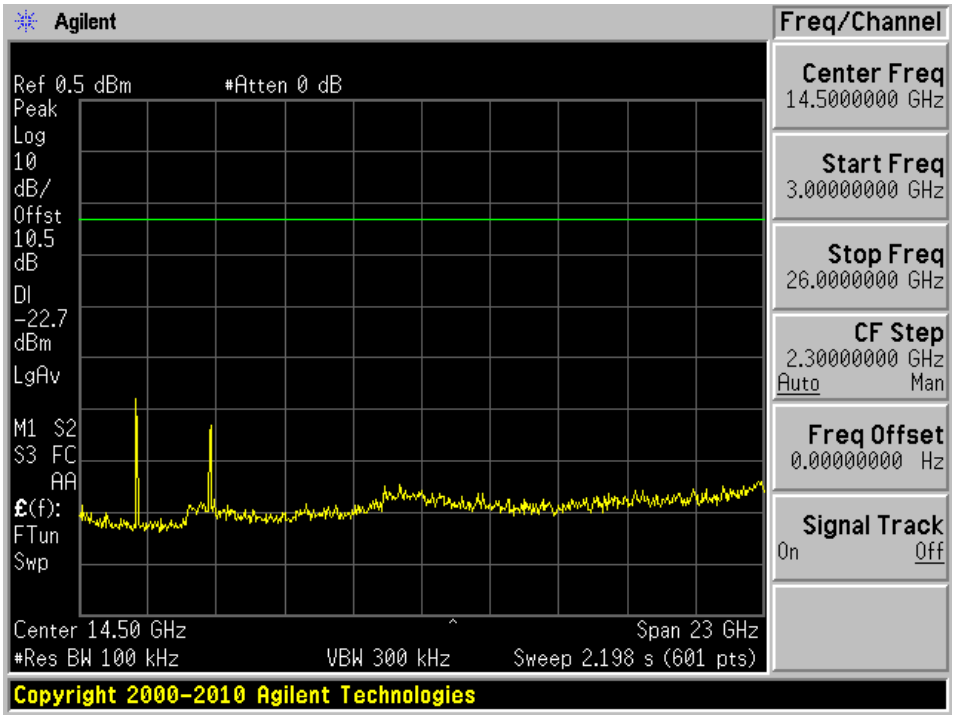
802.11n20-2437 MHz (3-26 GHz)



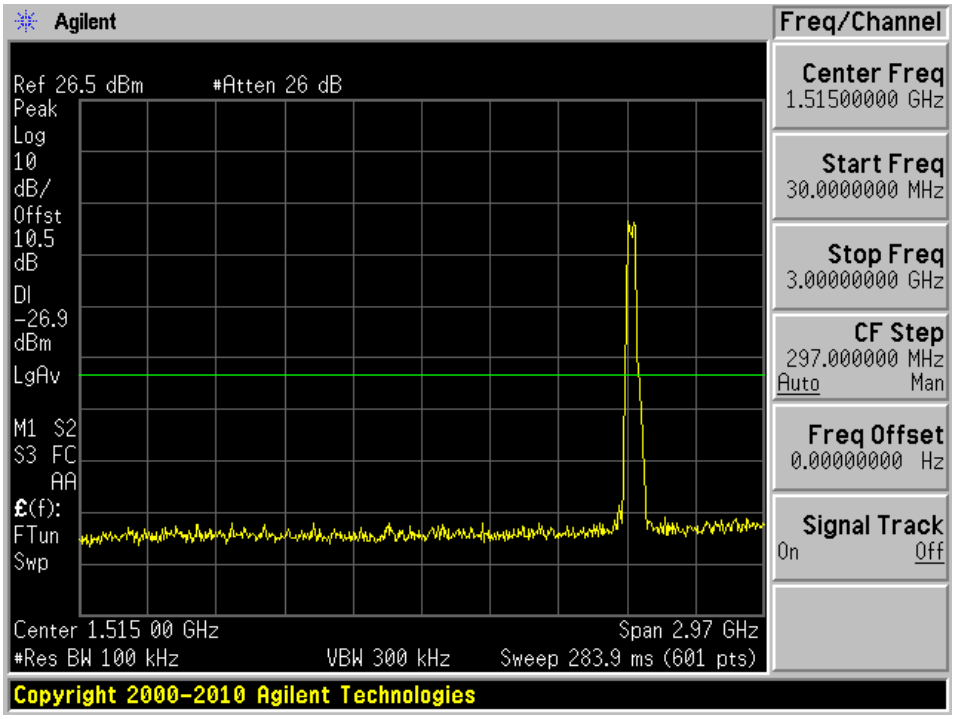
802.11n20-2462 MHz (30 MHz-3 GHz)



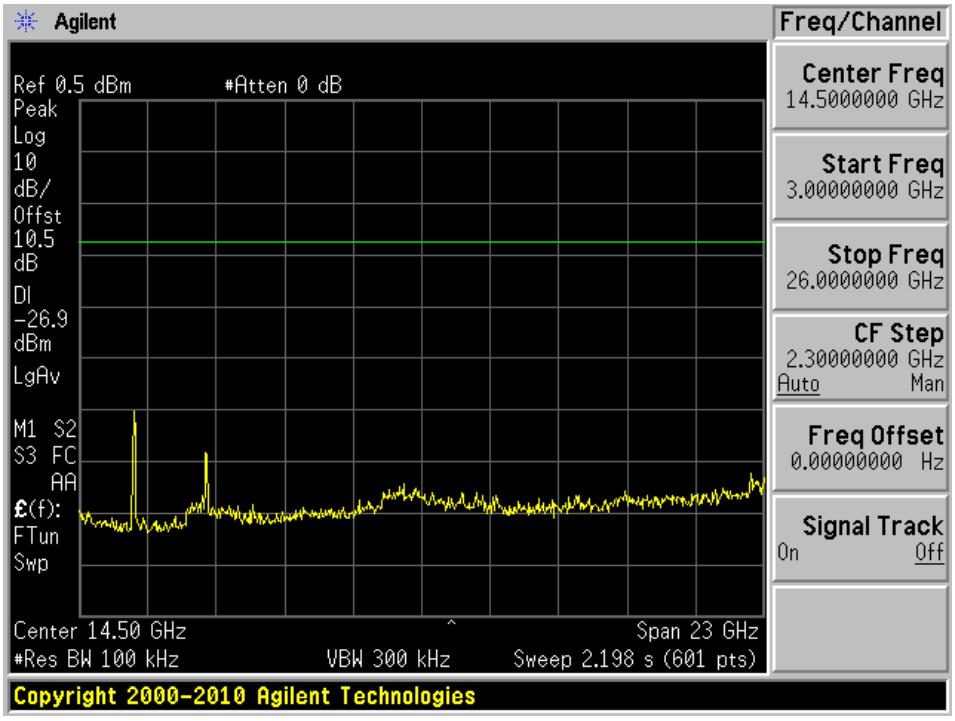
802.11n20-2462 MHz (3-26 GHz)



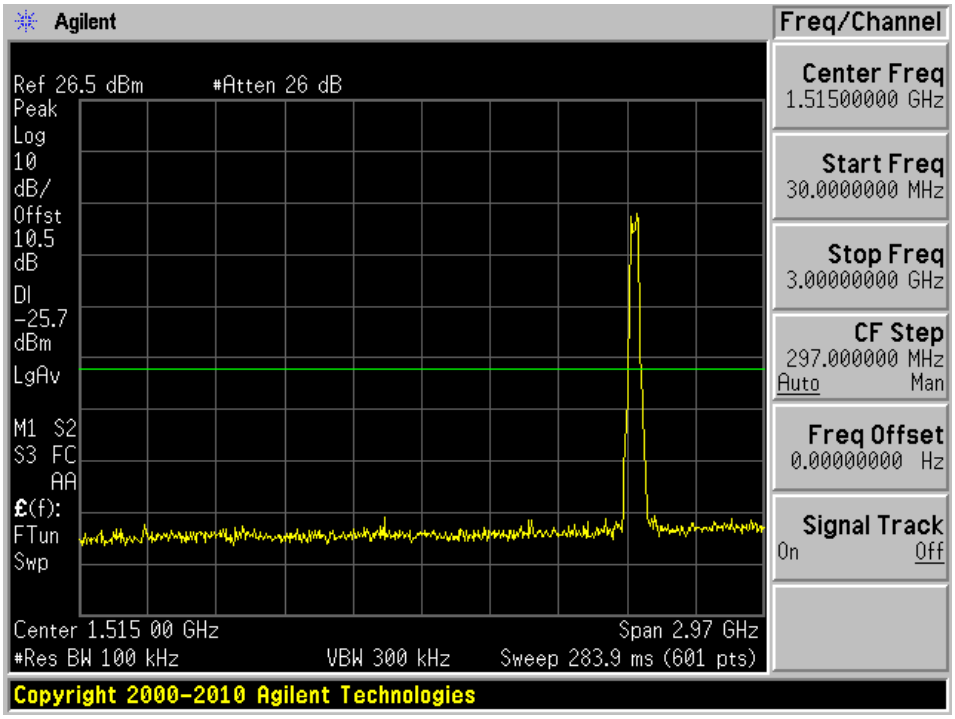
802.11n40-2422 MHz (30 MHz-3 GHz)



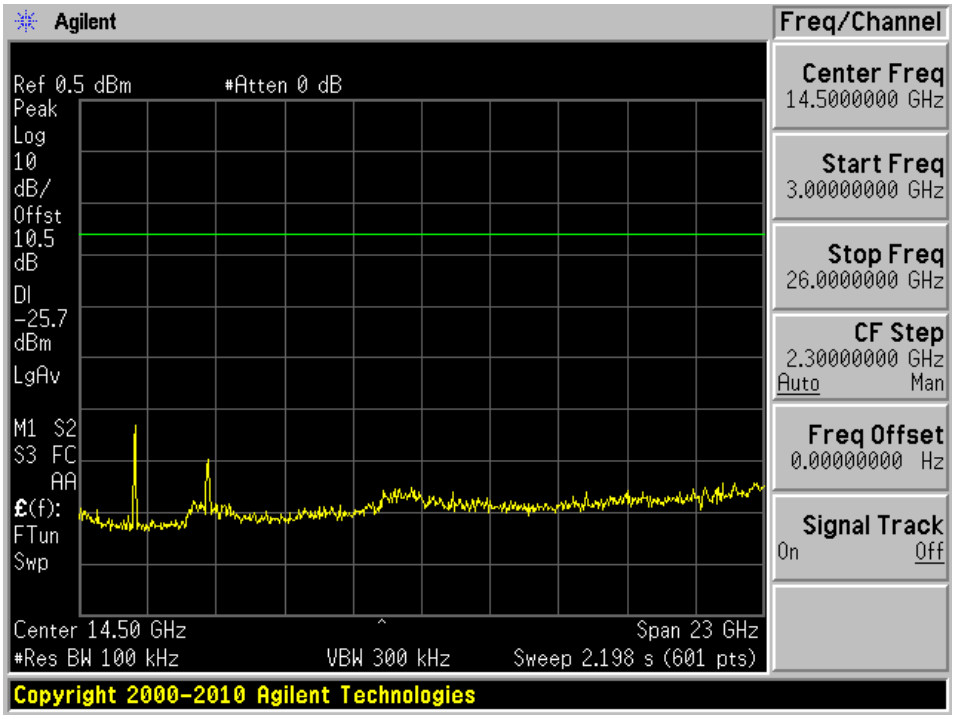
802.11n40-2422 MHz (3-26 GHz)



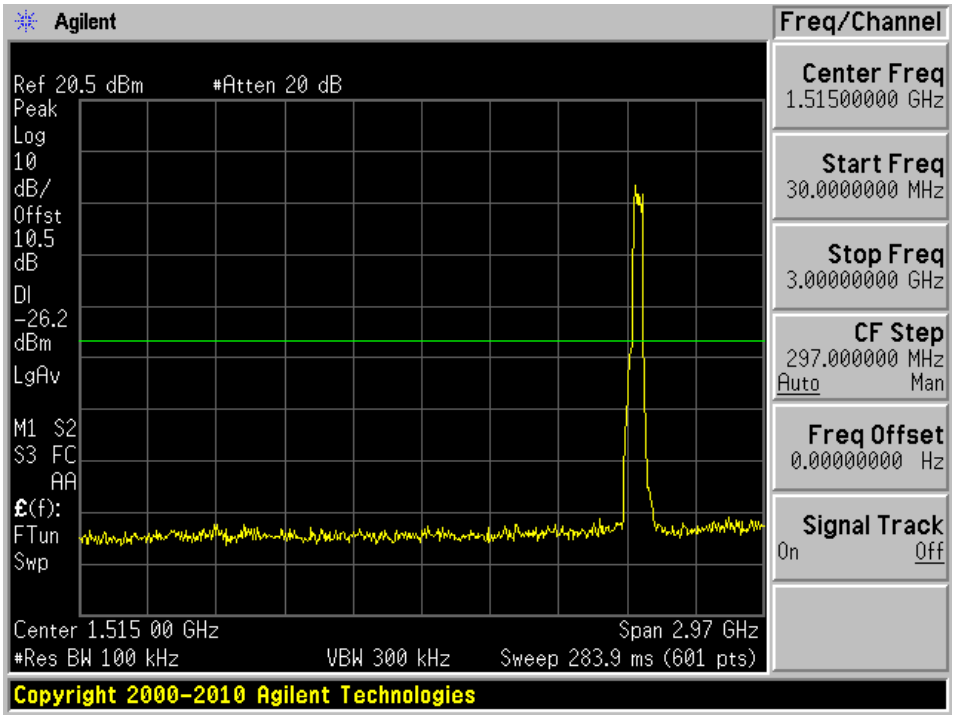
802.11n40-2437 MHz (30 MHz-3 GHz)



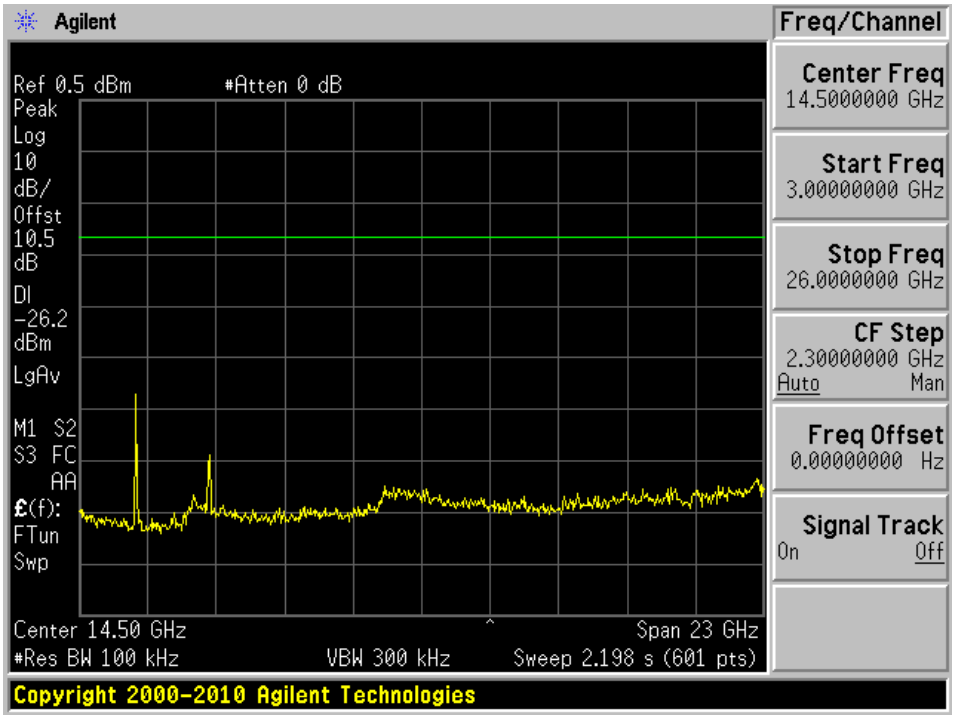
802.11n40-2437 MHz (3-26 GHz)



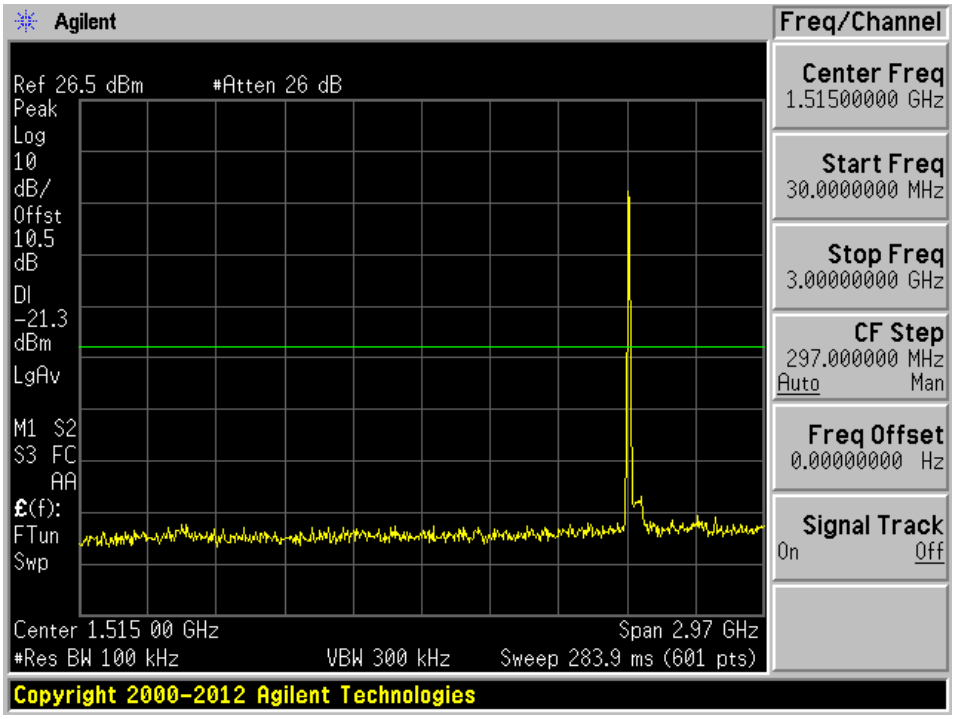
802.11n40-2452 MHz (30 MHz-3 GHz)



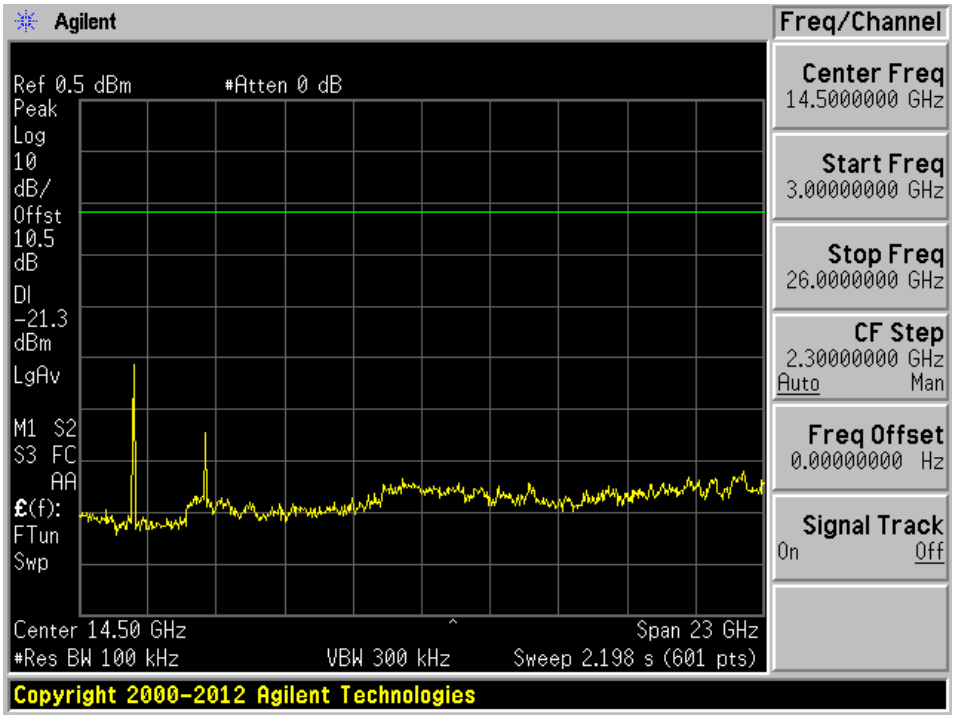
802.11n40-2452 MHz (3-26 GHz)



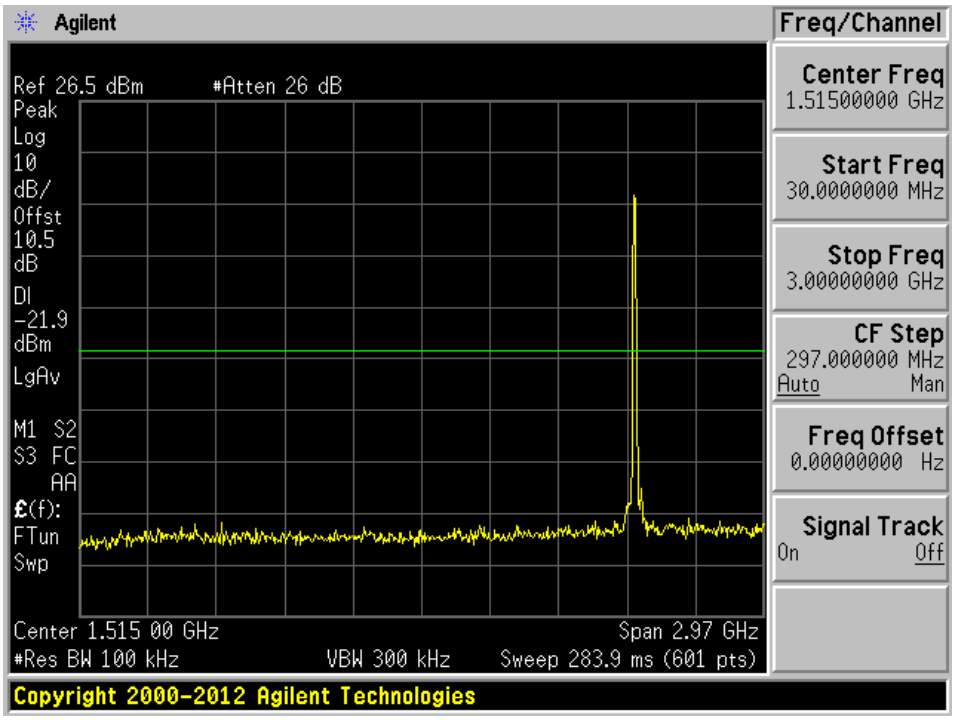
802.11b-2412 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



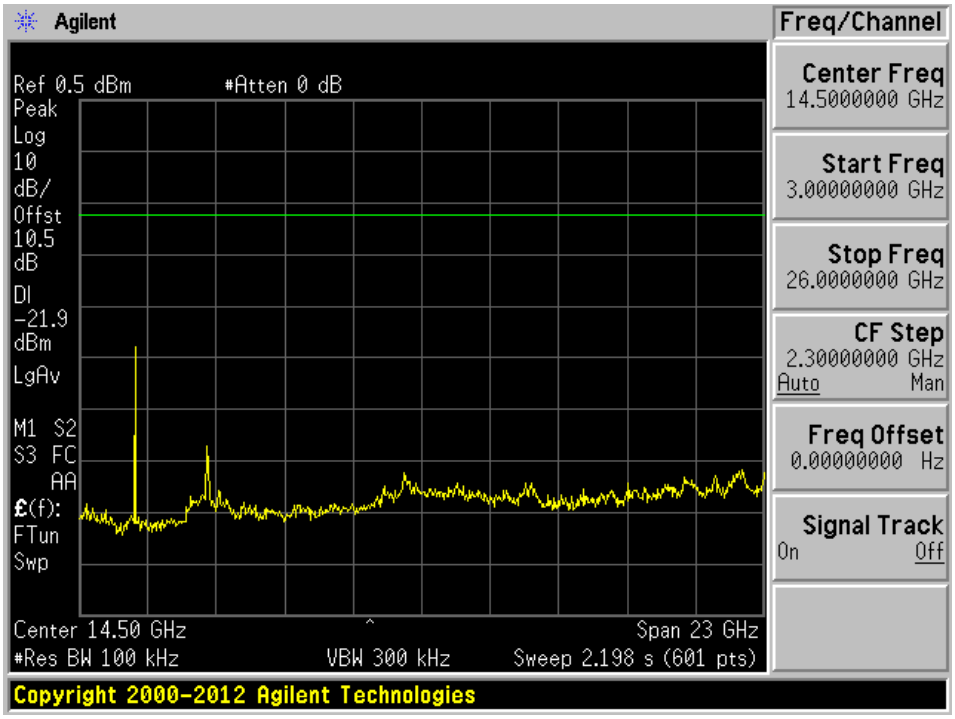
802.11b-2412 MHz 10 MHz Bandwidth (3-26 GHz)



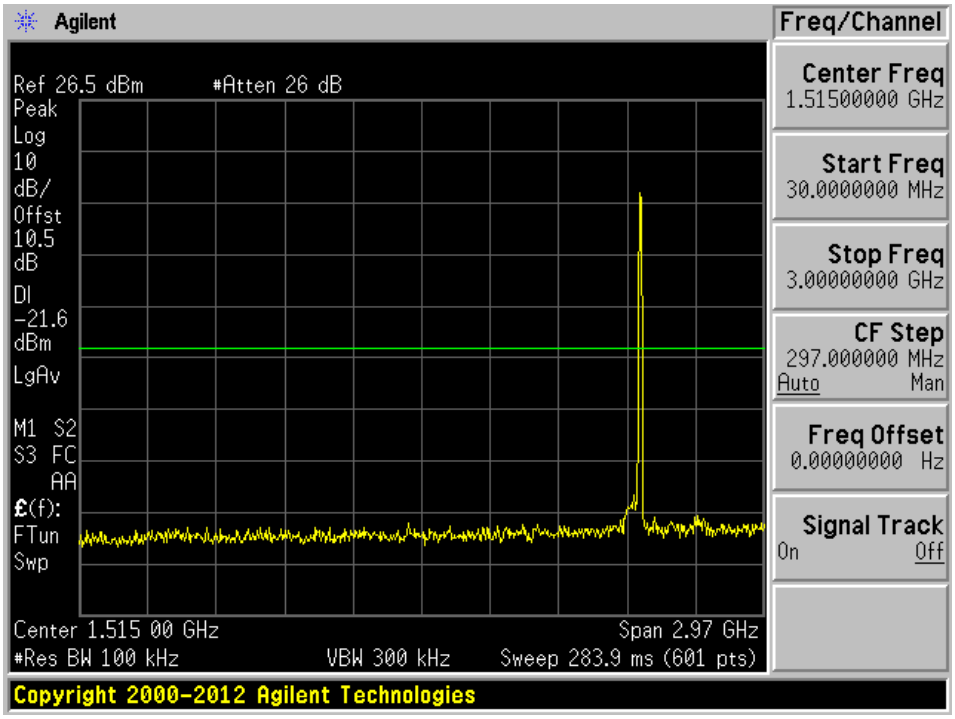
802.11b-2437 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



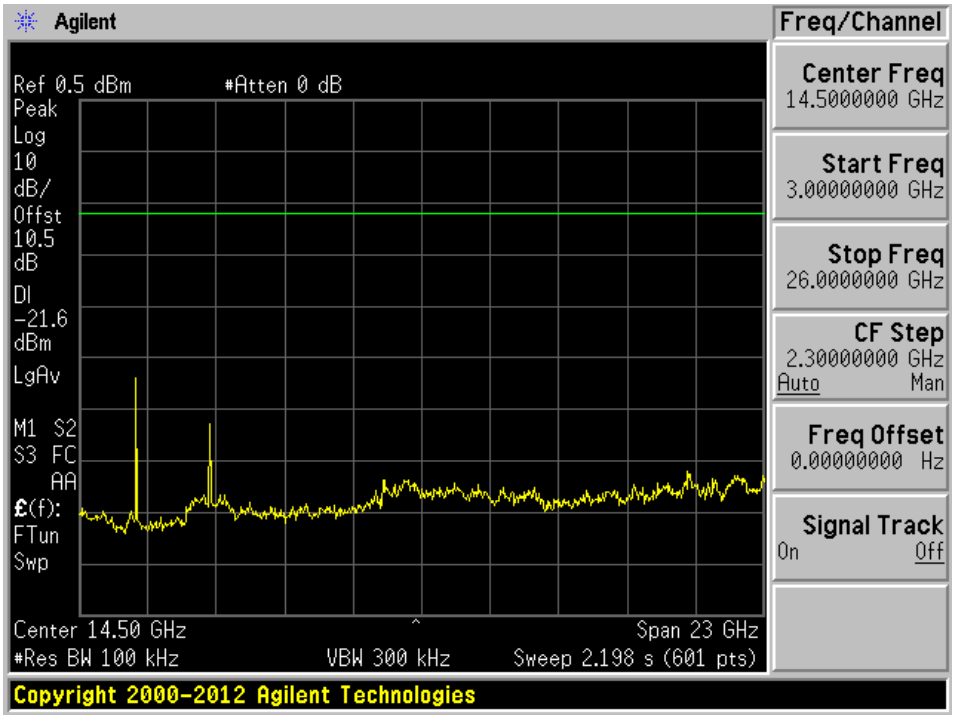
802.11b-2437 MHz 10 MHz Bandwidth (3-26 GHz)



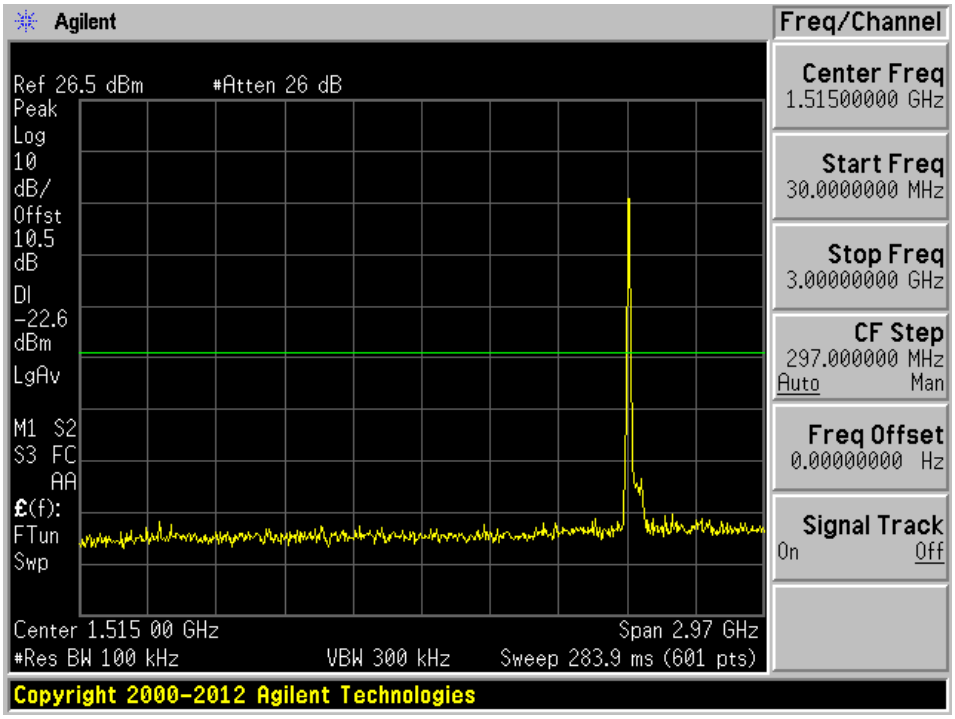
802.11b-2462 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



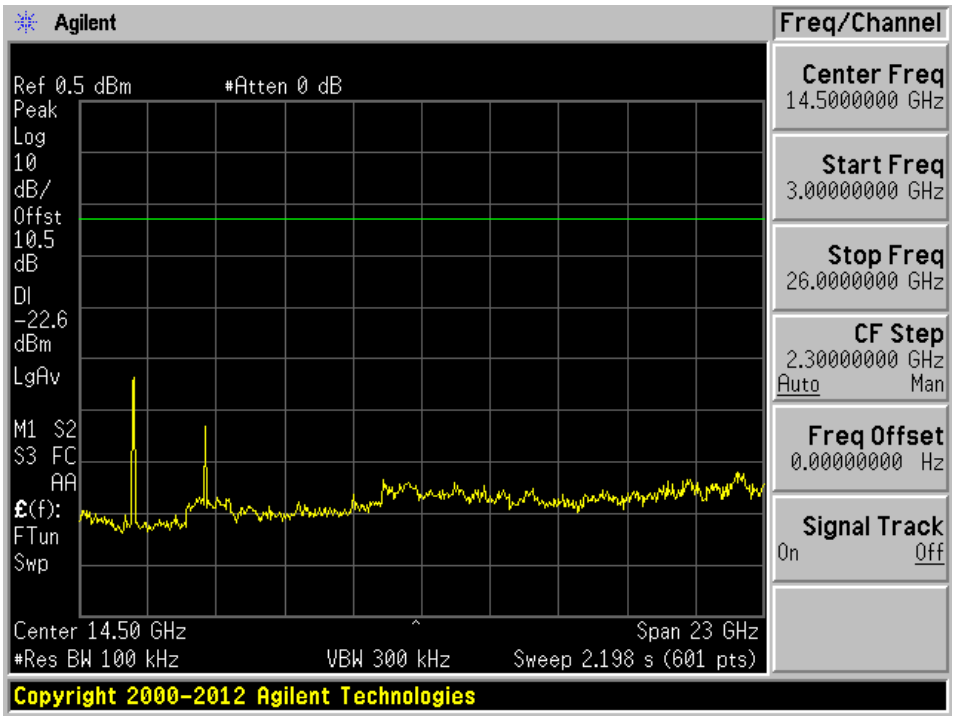
802.11b-2462 MHz 10 MHz Bandwidth (3-26 GHz)



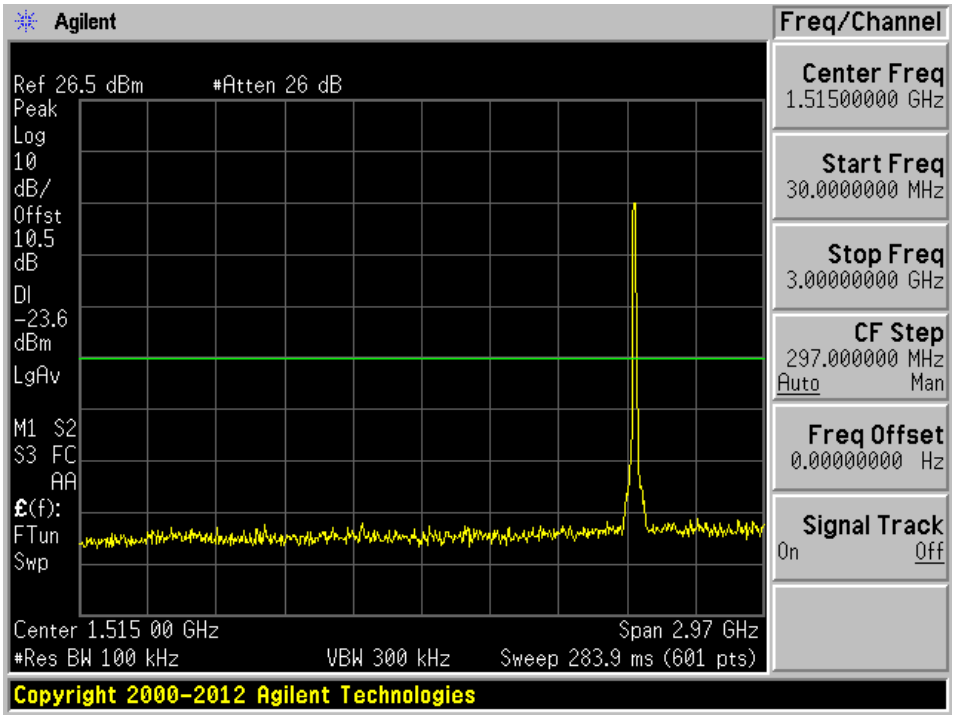
802.11g-2412 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



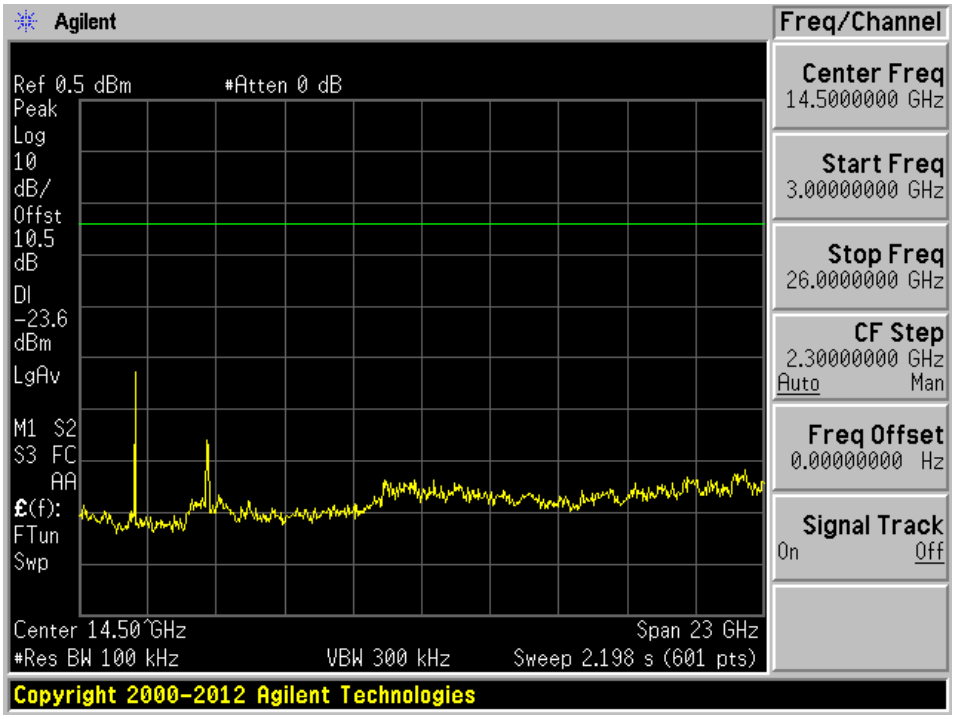
802.11g-2412 MHz 10 MHz Bandwidth (3-26 GHz)



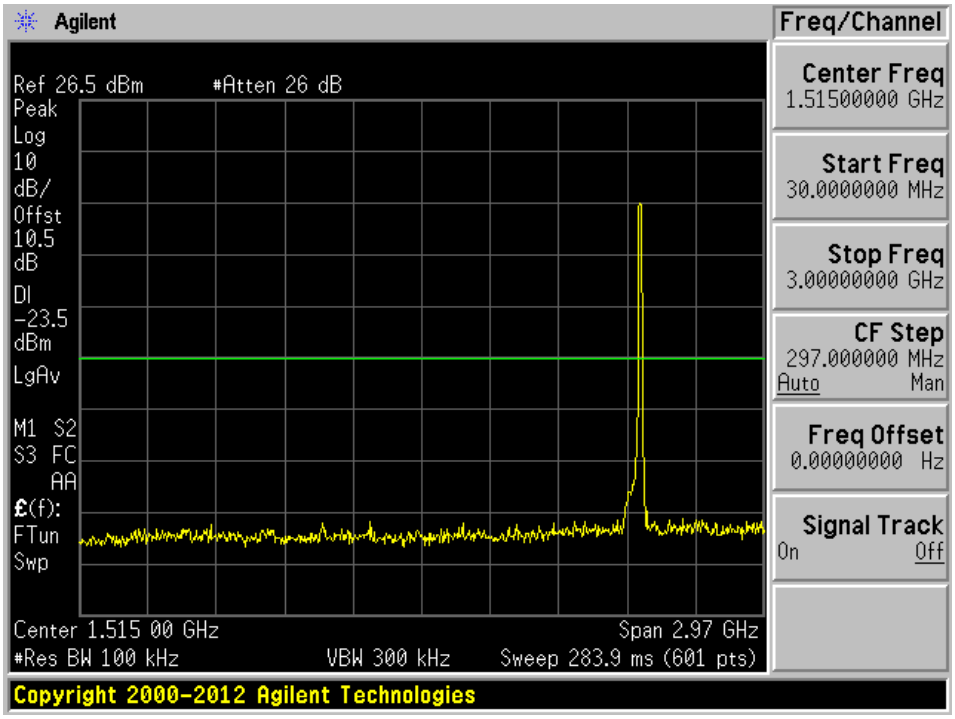
802.11g-2437 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



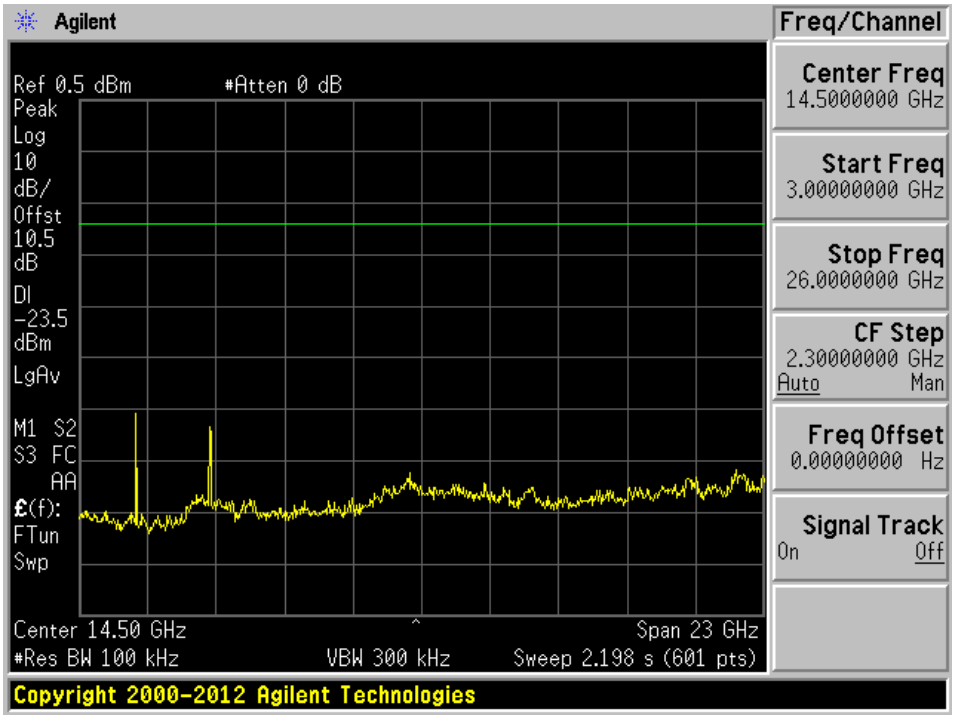
802.11g-2437 MHz 10 MHz Bandwidth (3-26 GHz)



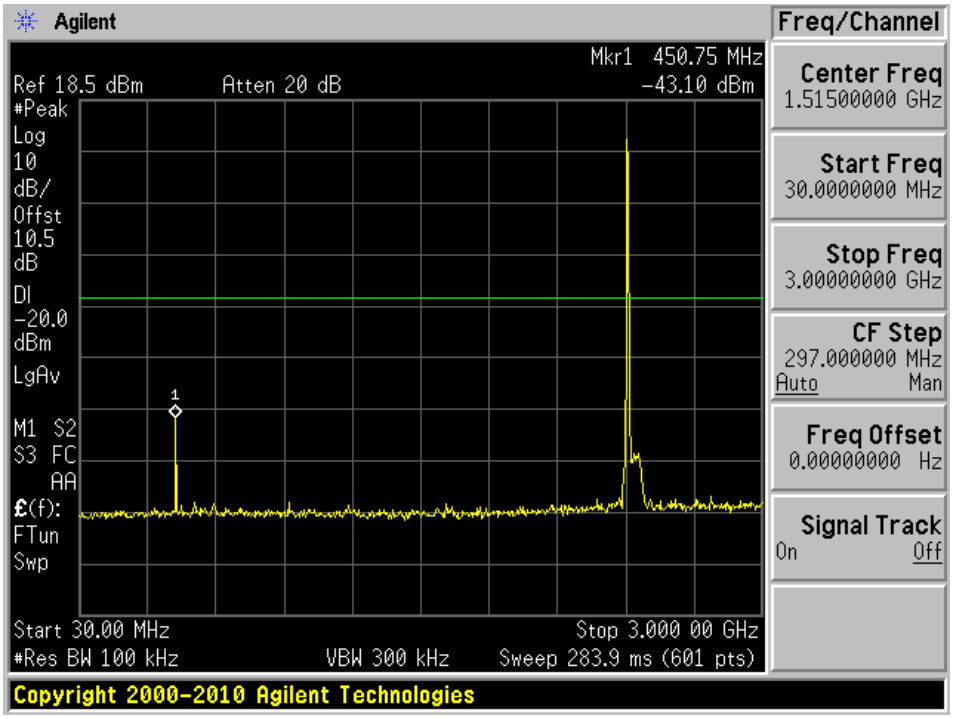
802.11g-2462 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



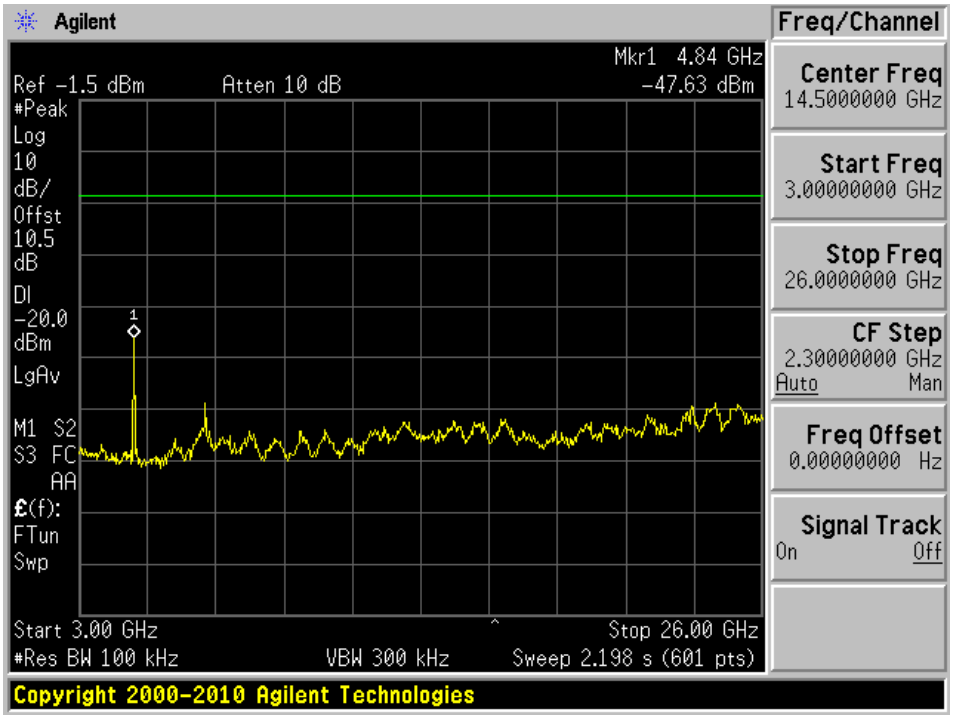
802.11g-2462 MHz 10 MHz Bandwidth (3-26 GHz)



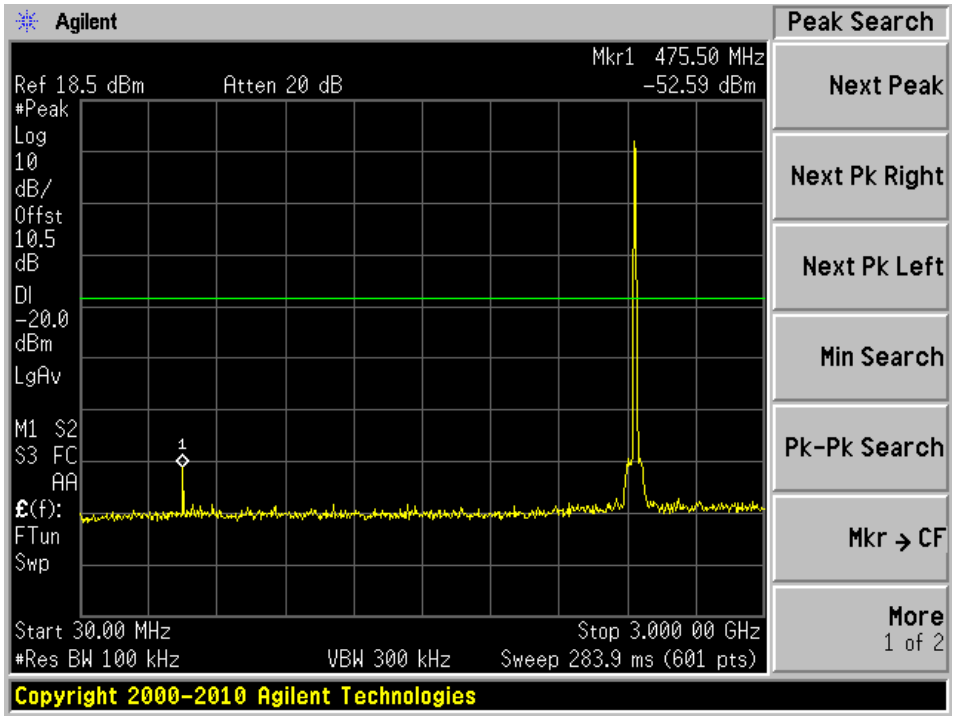
802.11b-2412 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



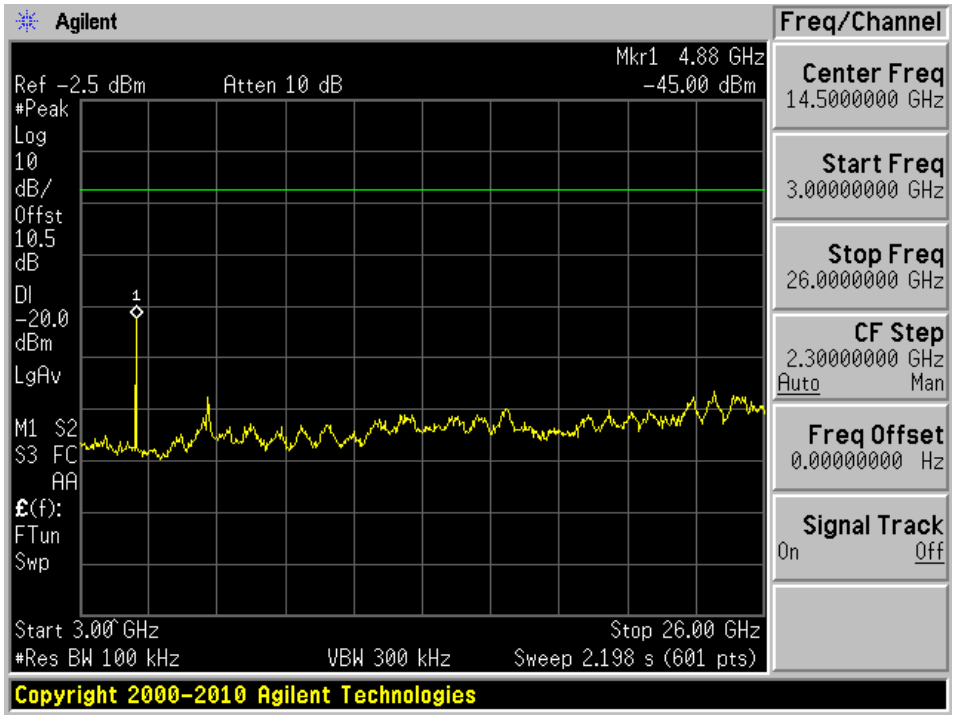
802.11b-2412 MHz 5 MHz Bandwidth (3-26 GHz)



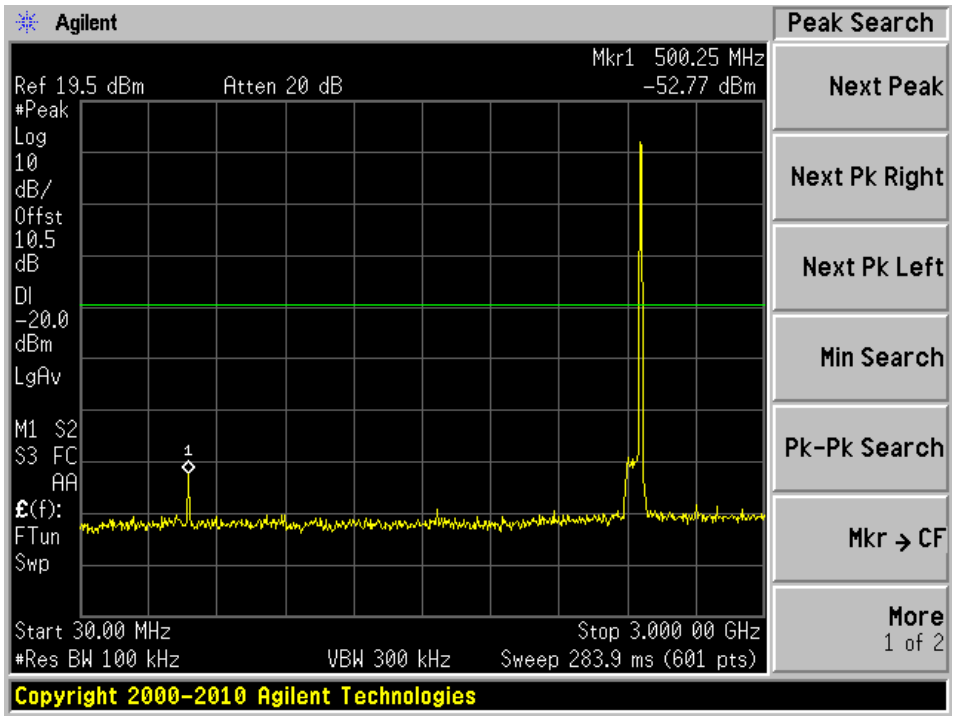
802.11b-2437 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



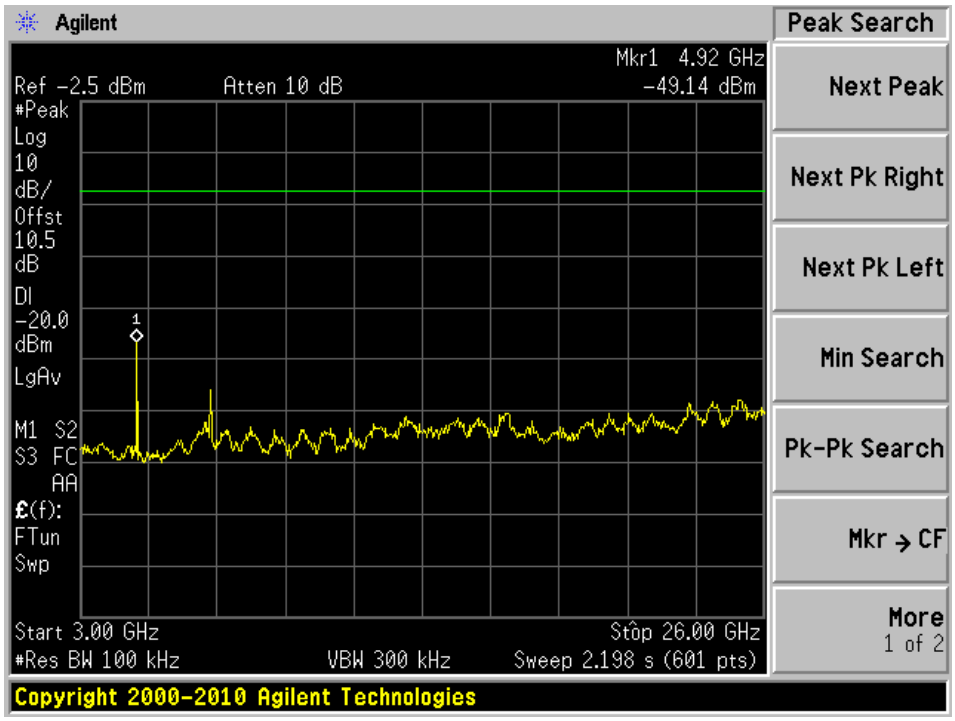
802.11b-2437 MHz 5 MHz Bandwidth (3-26 GHz)



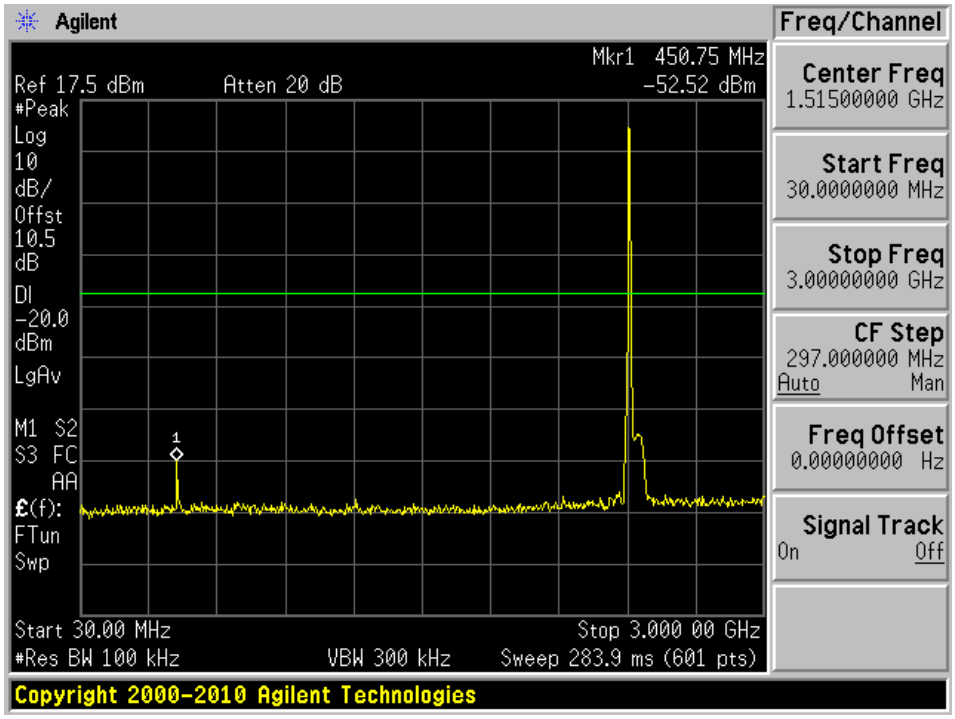
802.11b-2462 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



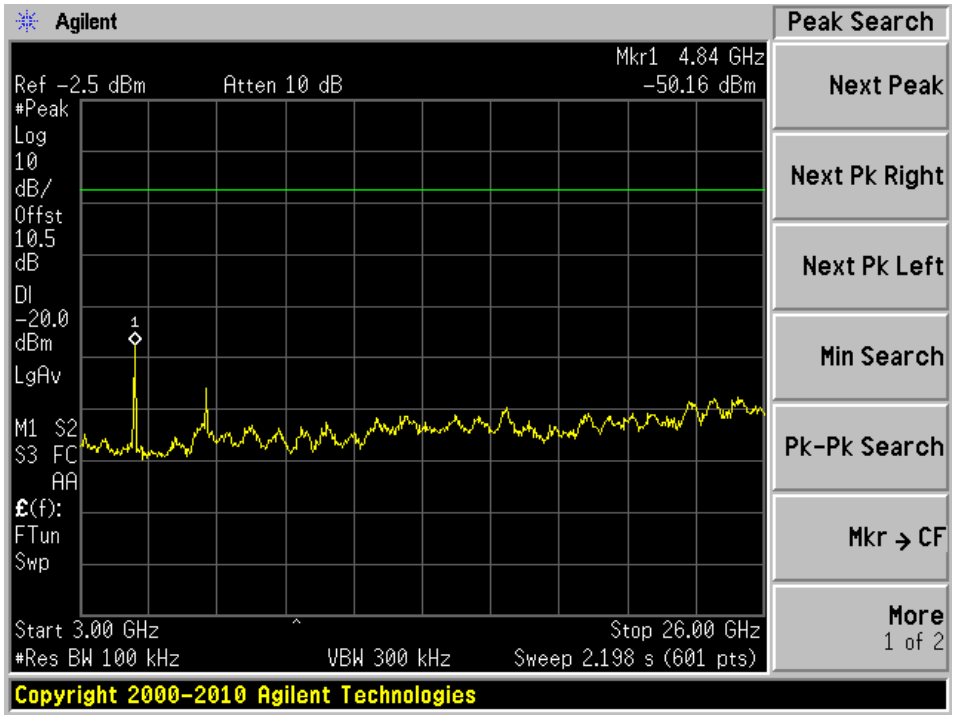
802.11b-2462 MHz 5 MHz Bandwidth (3-26 GHz)



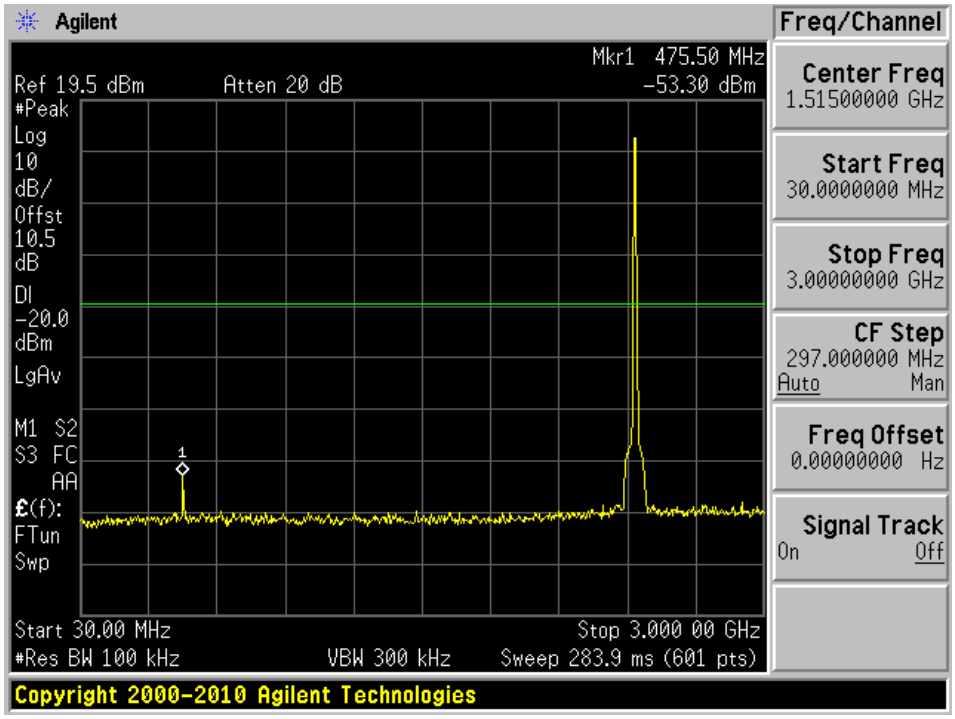
802.11g-2412 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



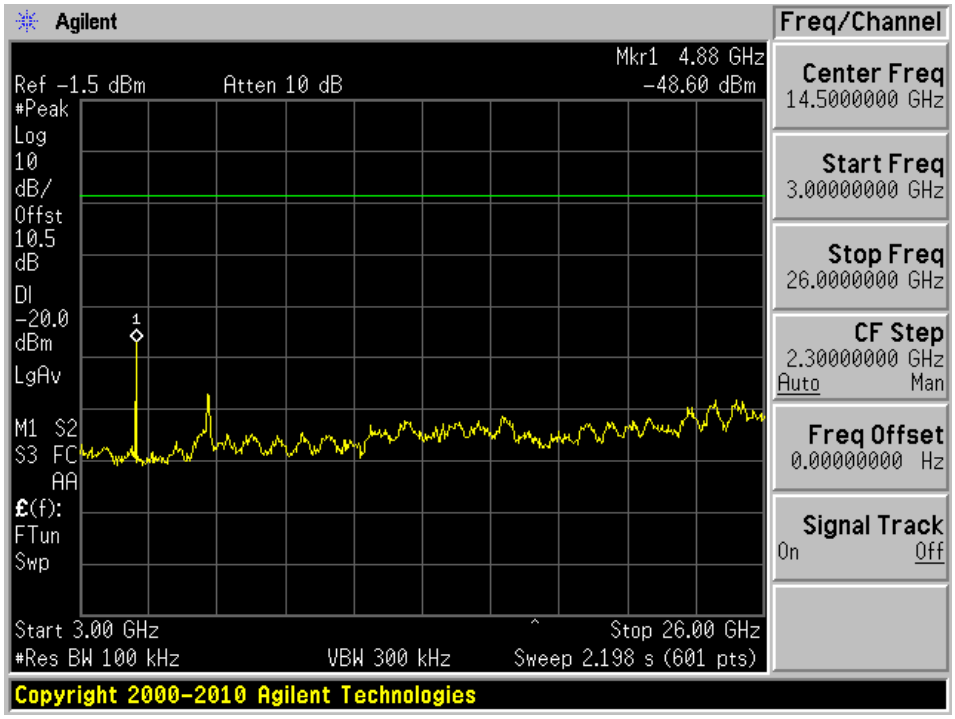
802.11g-2412 MHz 5 MHz Bandwidth (3-26 GHz)



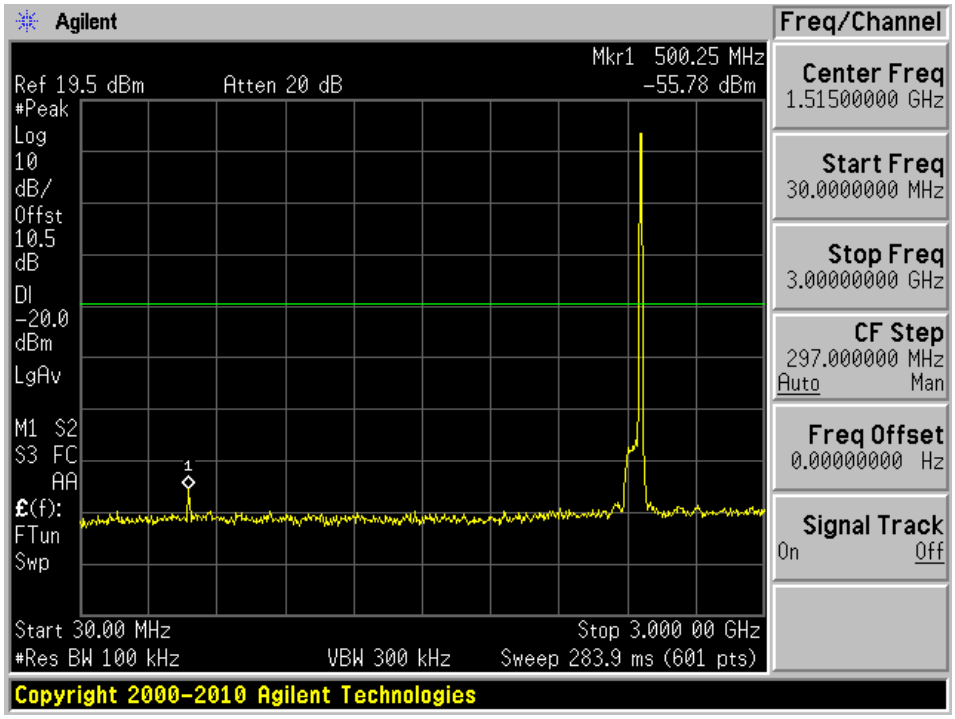
802.11g-2437 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



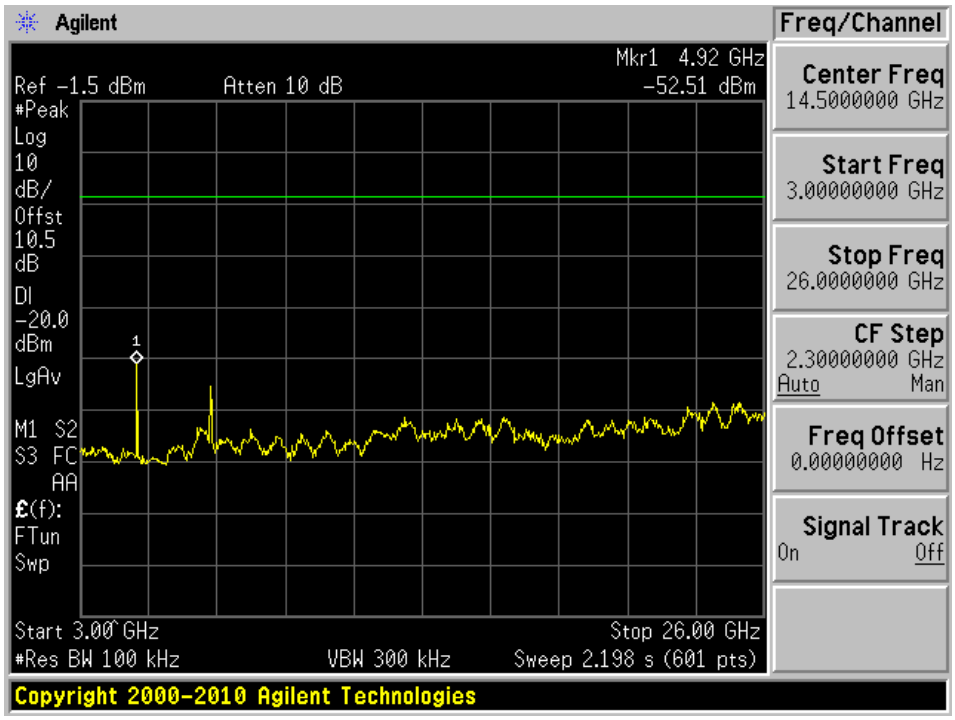
802.11g-2437 MHz 5 MHz Bandwidth (3-26 GHz)



802.11g-2462 MHz 5 MHz Bandwidth (30 MHz-3 GHz)

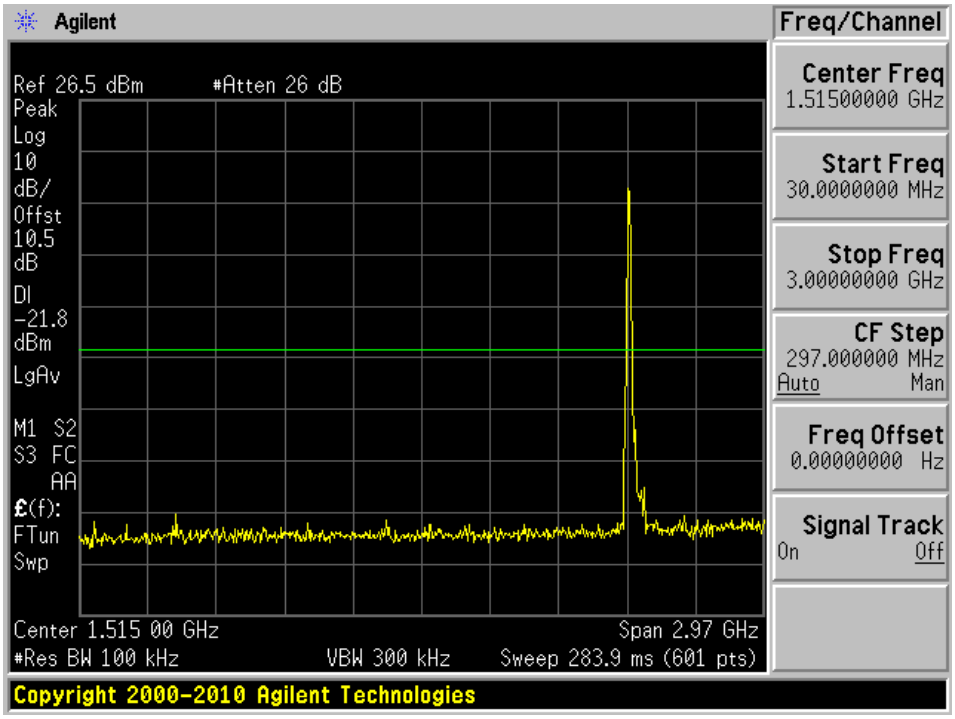


802.11g-2462 MHz 5 MHz Bandwidth (3-26 GHz)

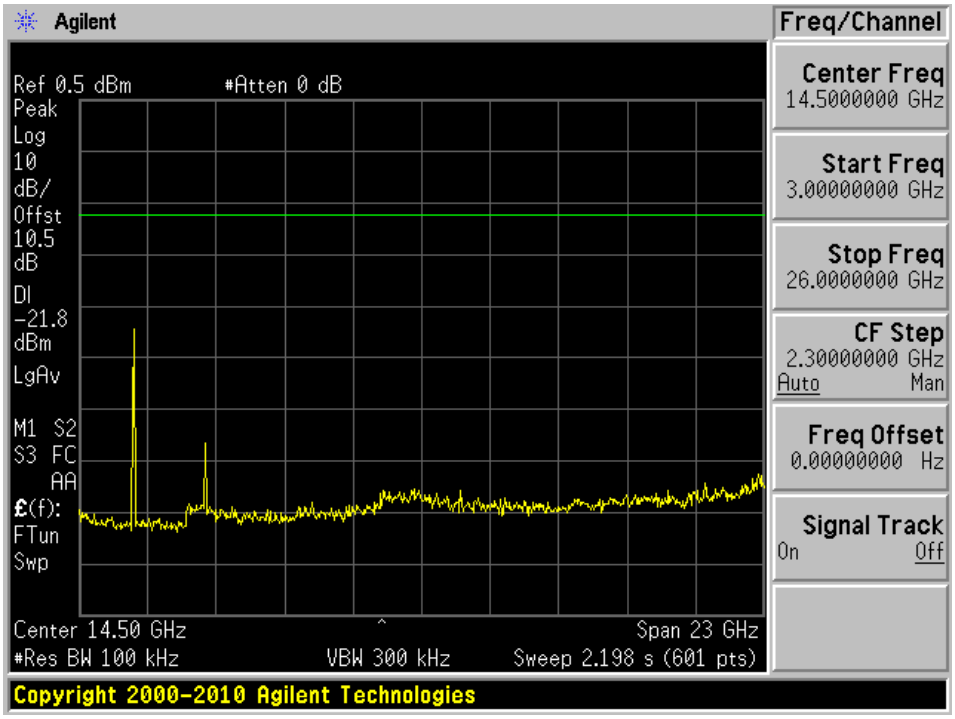


Chain 1

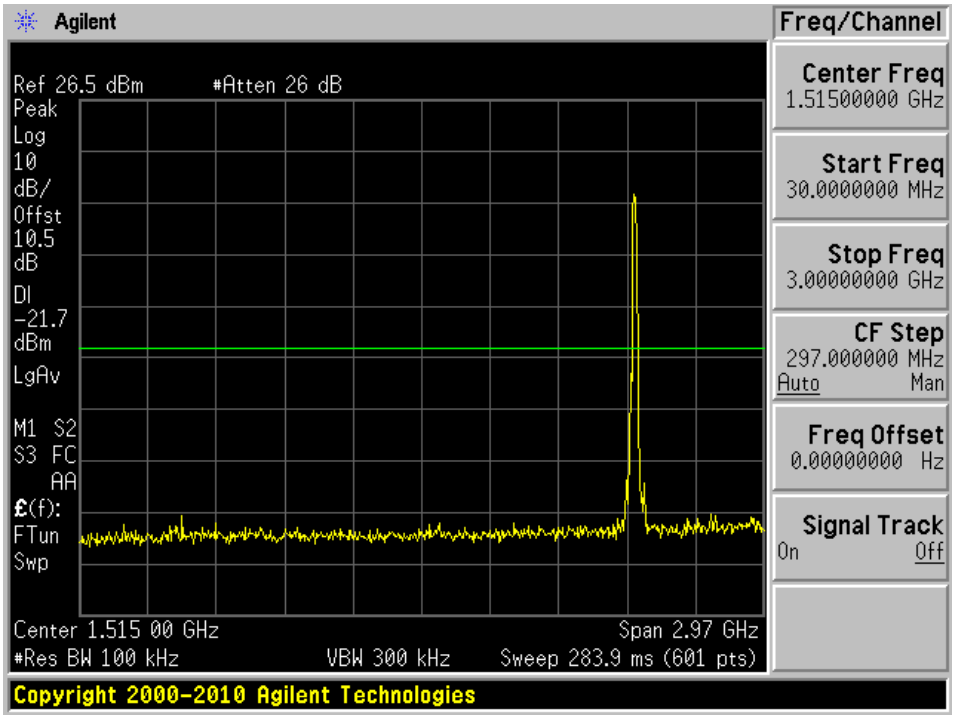
802.11b-2412 MHz (30 MHz-3 GHz)



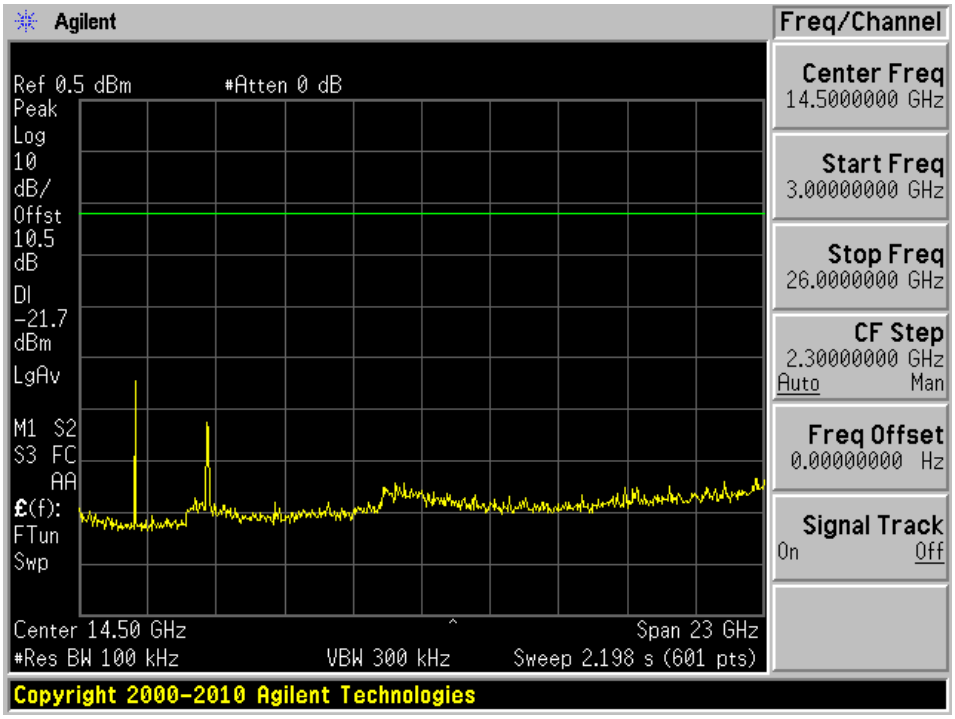
802.11b-2412 MHz (3-26 GHz)



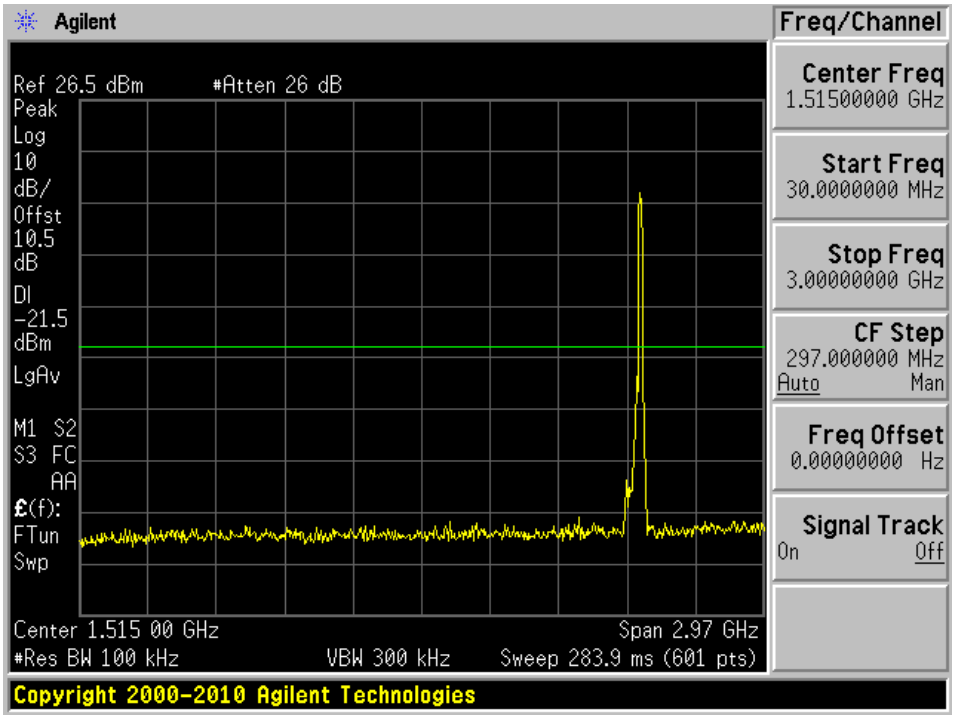
802.11b-2437 MHz (30 MHz-3 GHz)



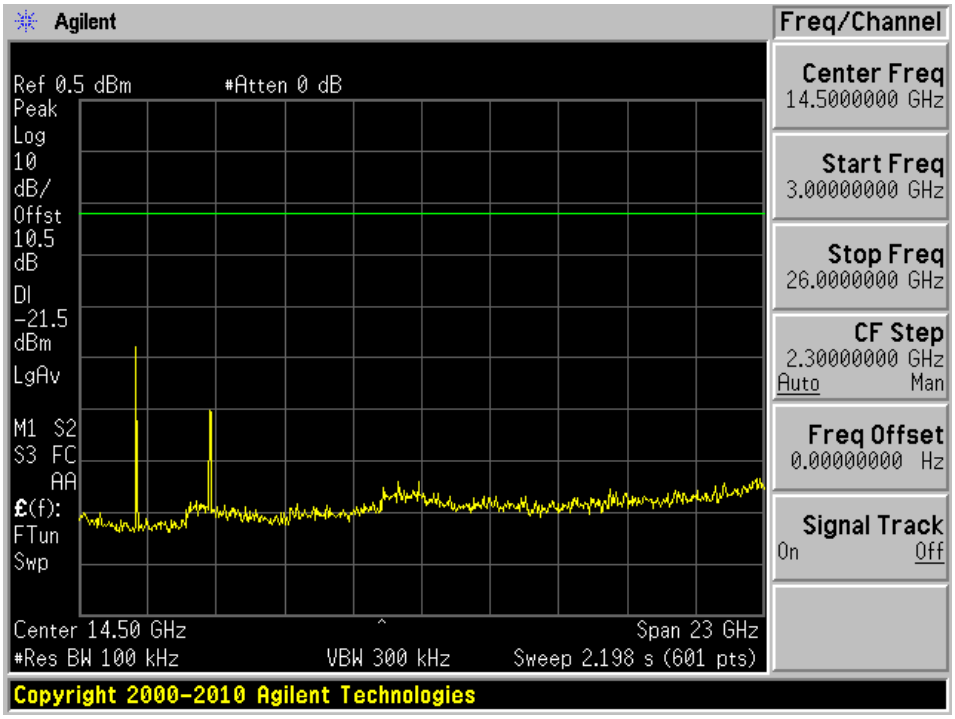
802.11b-2437 MHz (3-26 GHz)



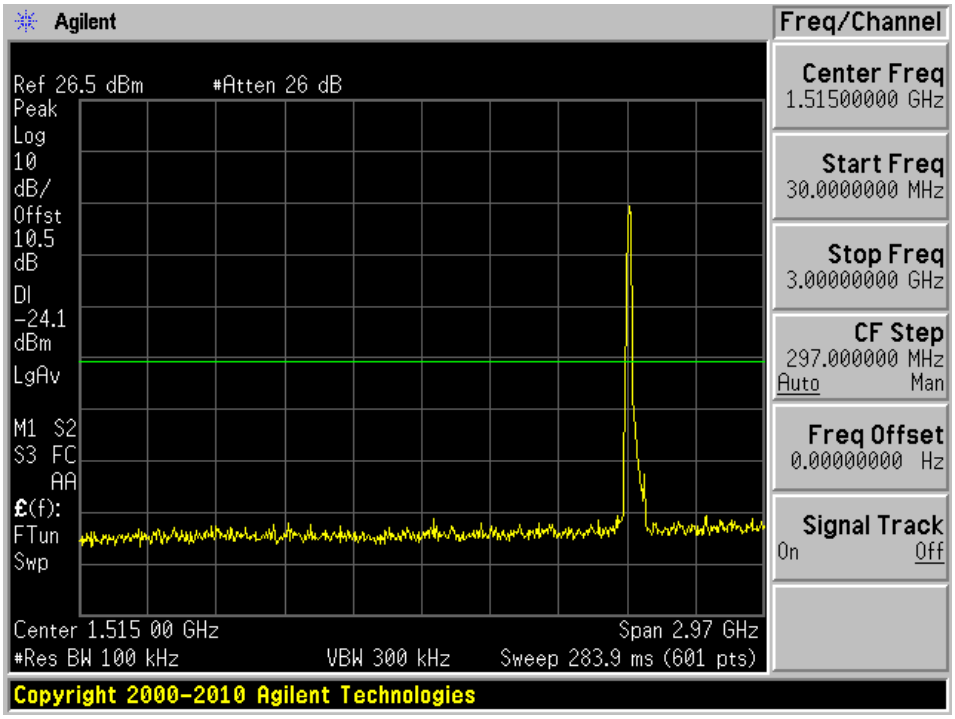
802.11b-2462 MHz (30 MHz-3 GHz)



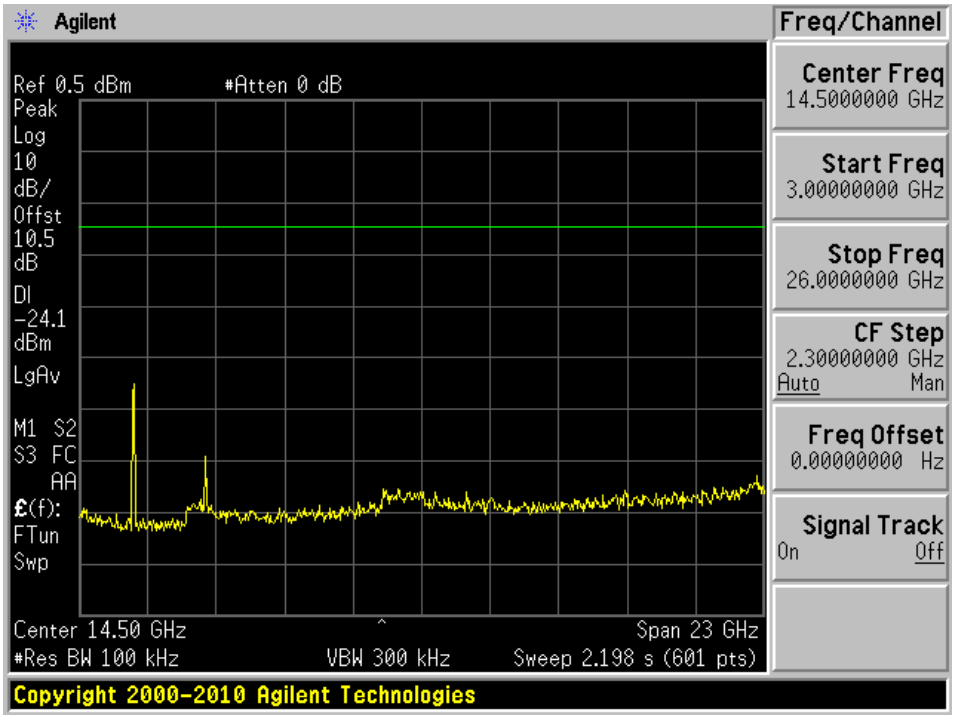
802.11b-2462 MHz (3-26 GHz)



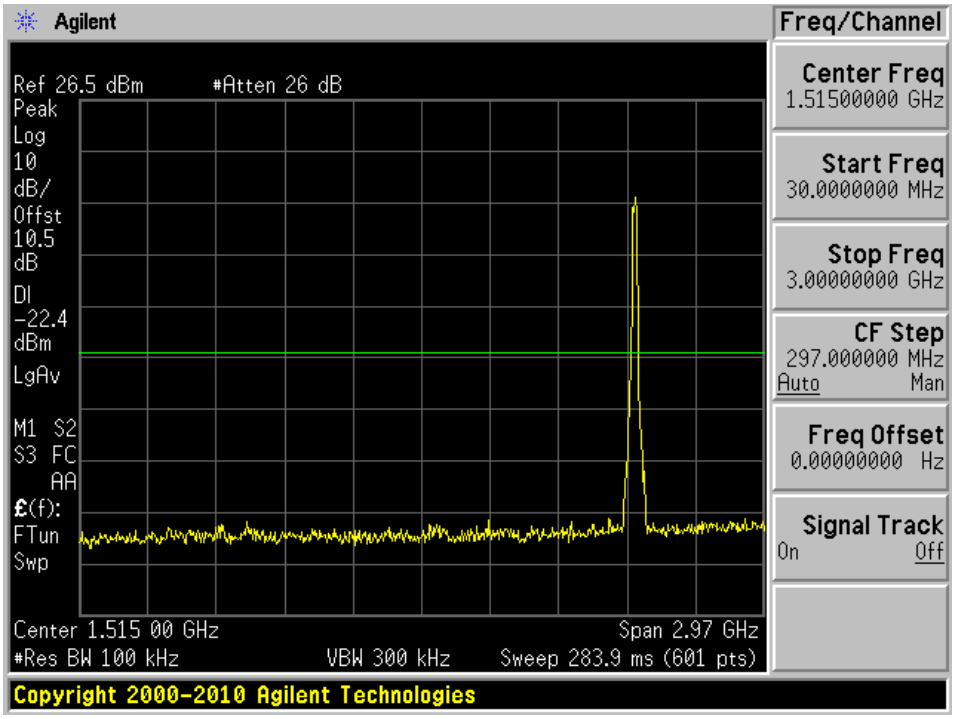
802.11g-2412 MHz (30 MHz-3 GHz)



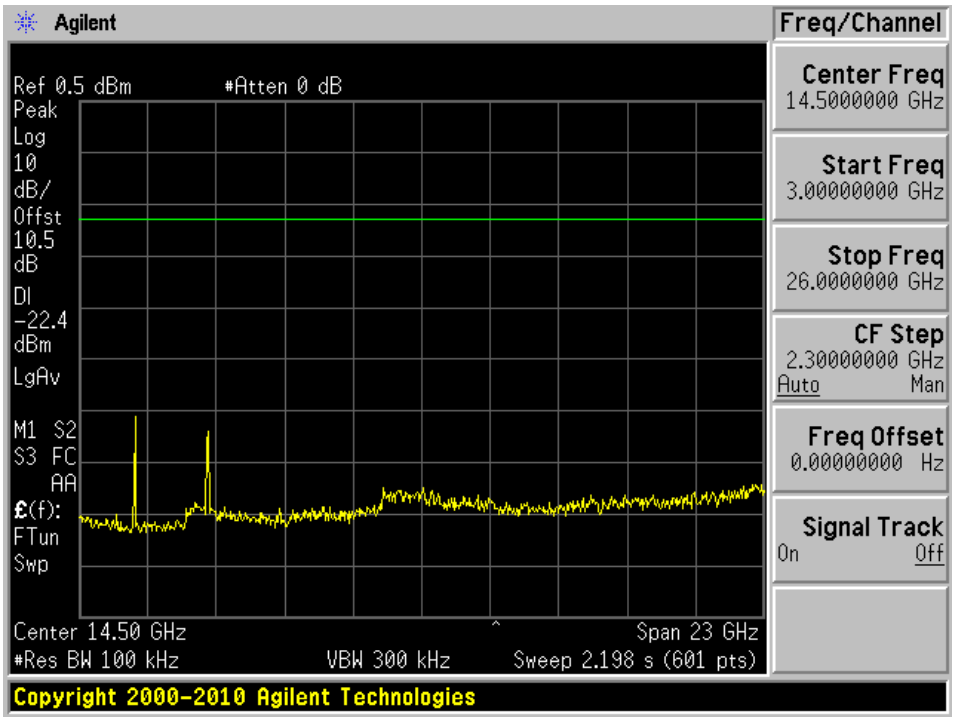
802.11g-2412 MHz (3-26 GHz)



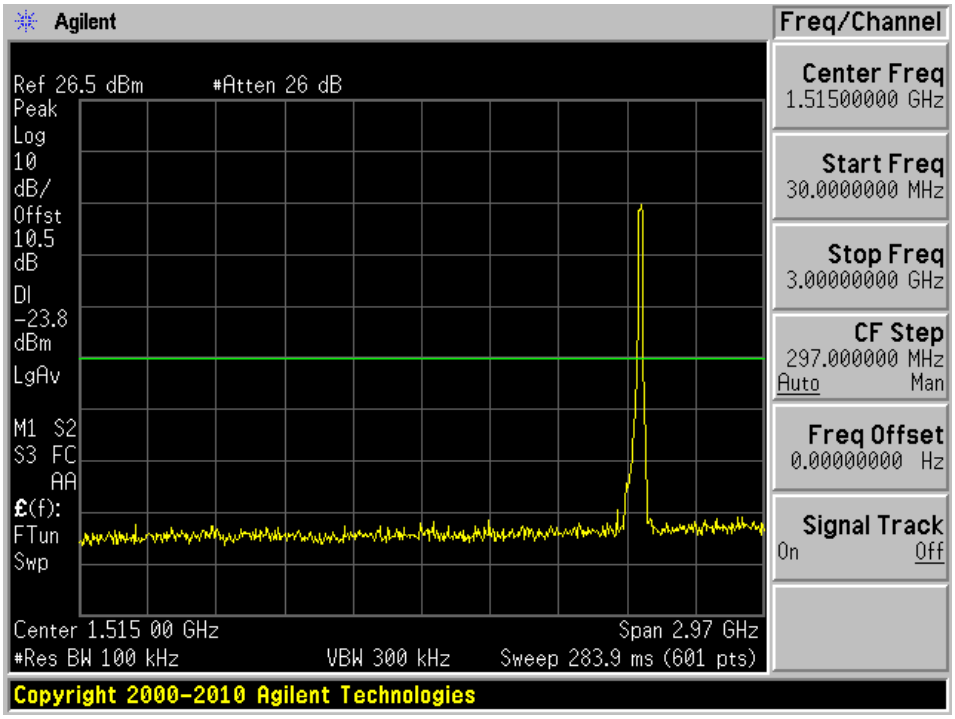
802.11g-2437 MHz (30 MHz-3 GHz)



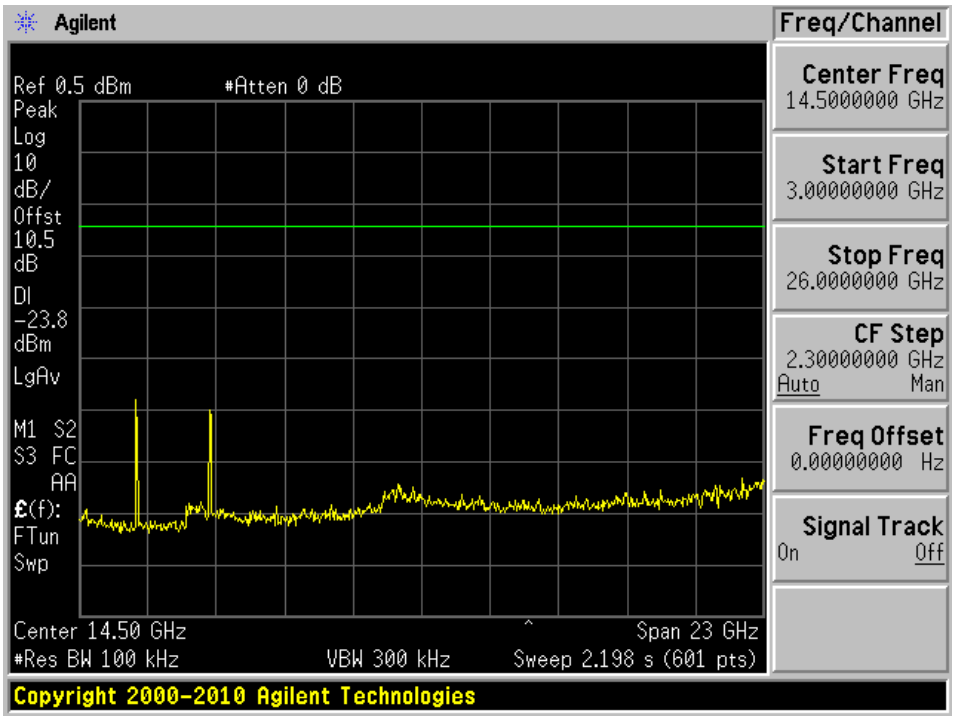
802.11g-2437 MHz (3-26 GHz)



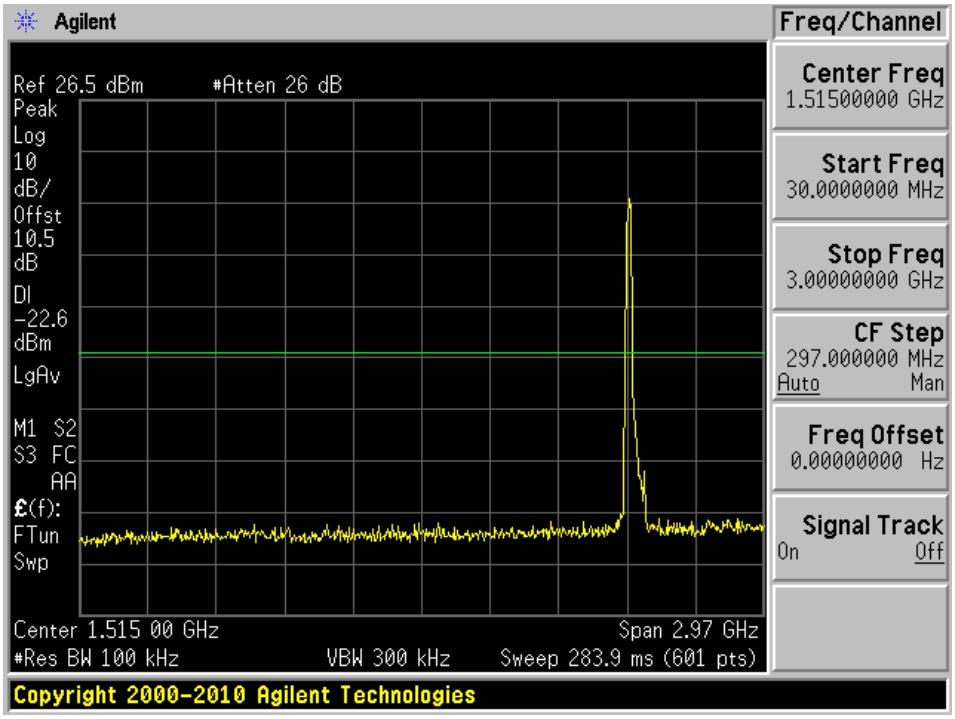
802.11g-2462 MHz (30 MHz-3 GHz)



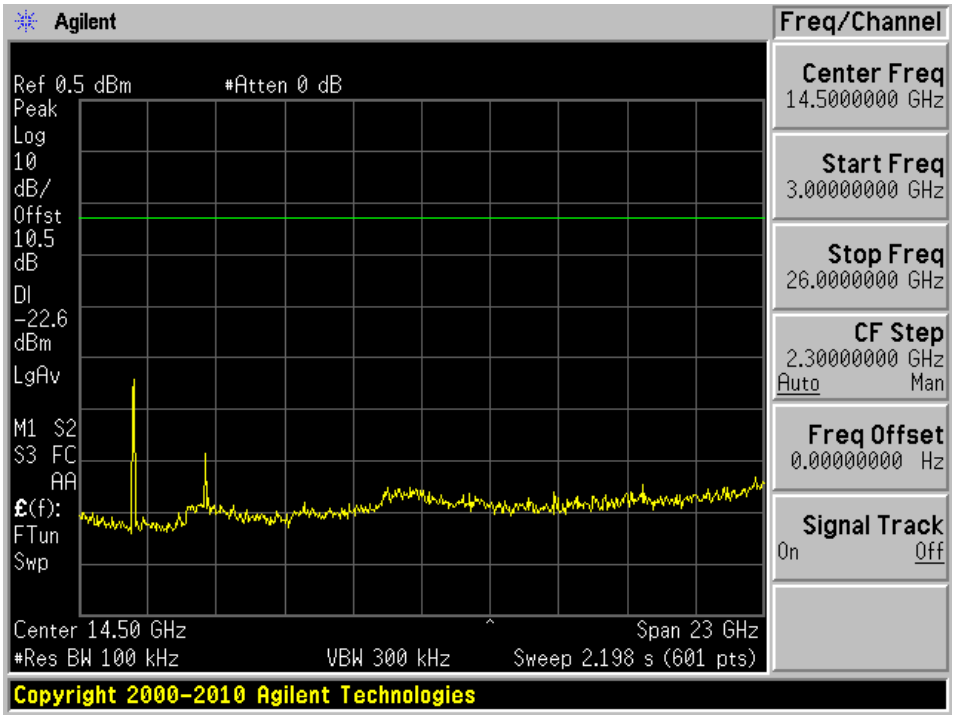
802.11g-2462 MHz (3-26 GHz)



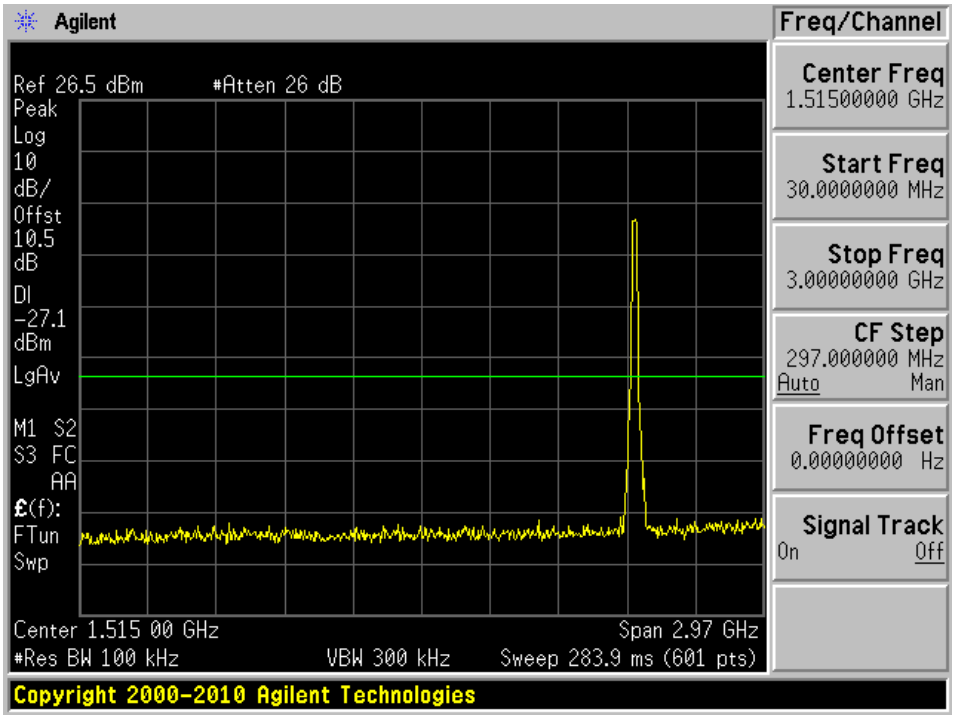
802.11n20-2412 MHz (30 MHz-3 GHz)



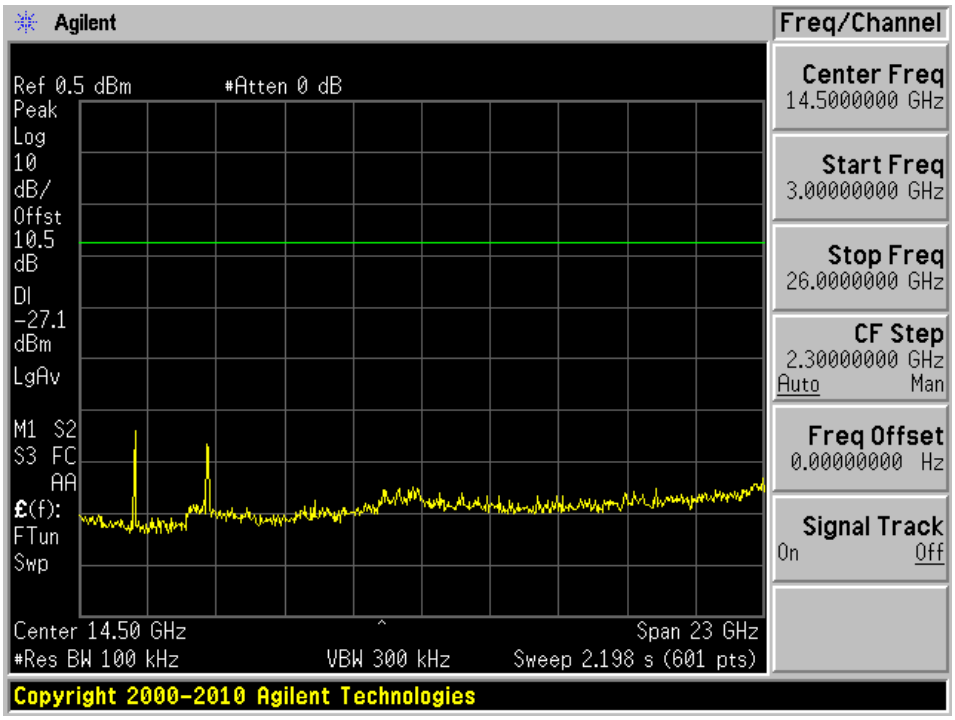
802.11n20-2412 MHz (3-26 GHz)



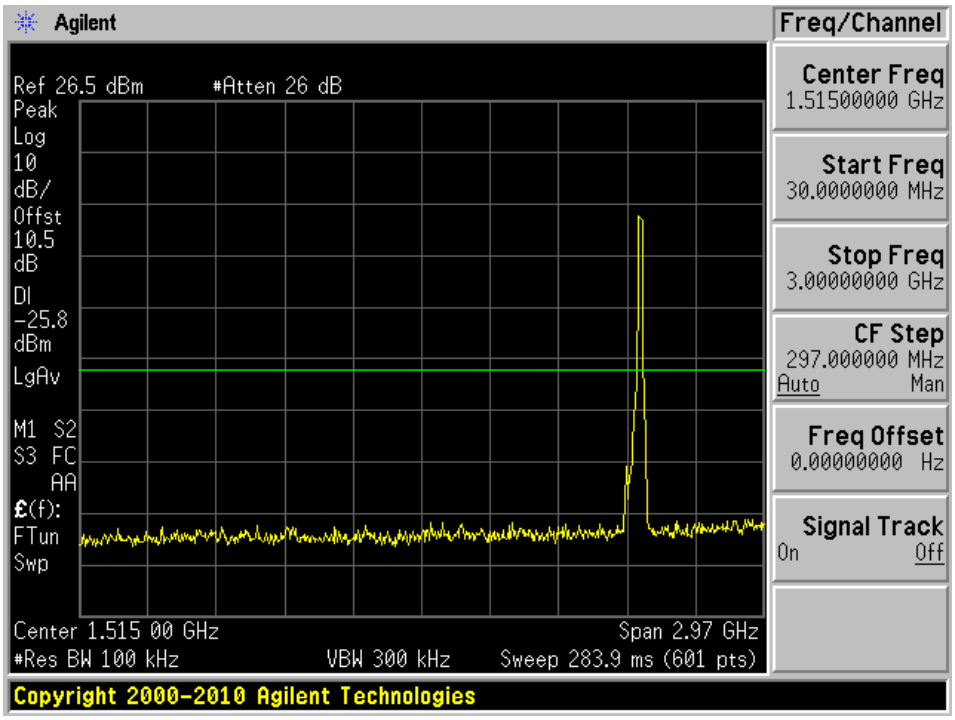
802.11n20-2437 MHz (30 MHz-3 GHz)



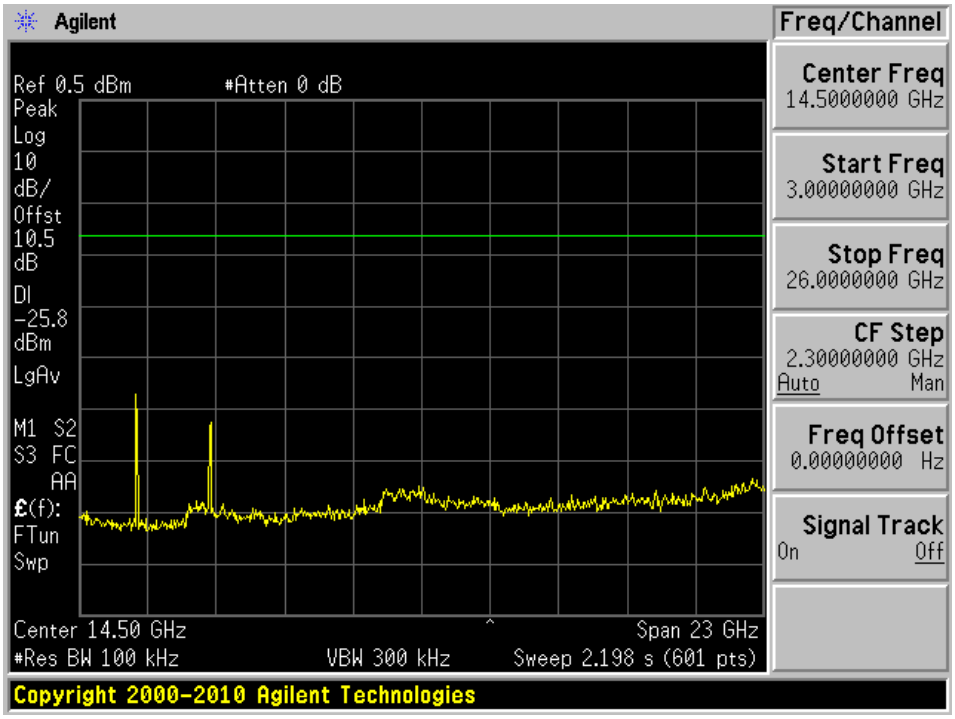
802.11n20-2437 MHz (3-26 GHz)



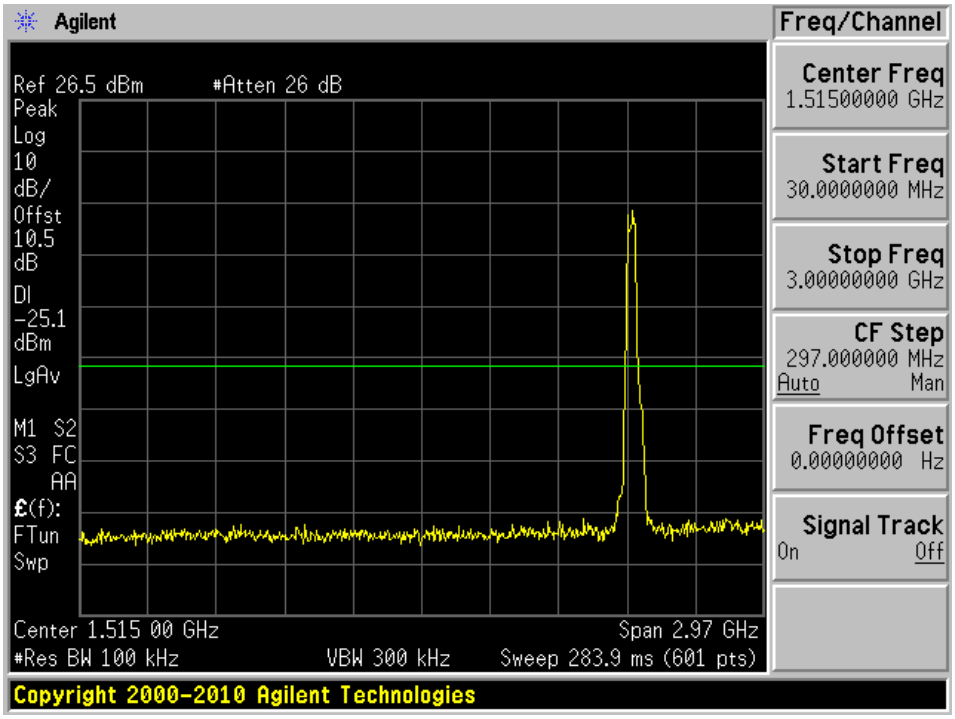
802.11n20-2462 MHz (30 MHz-3 GHz)



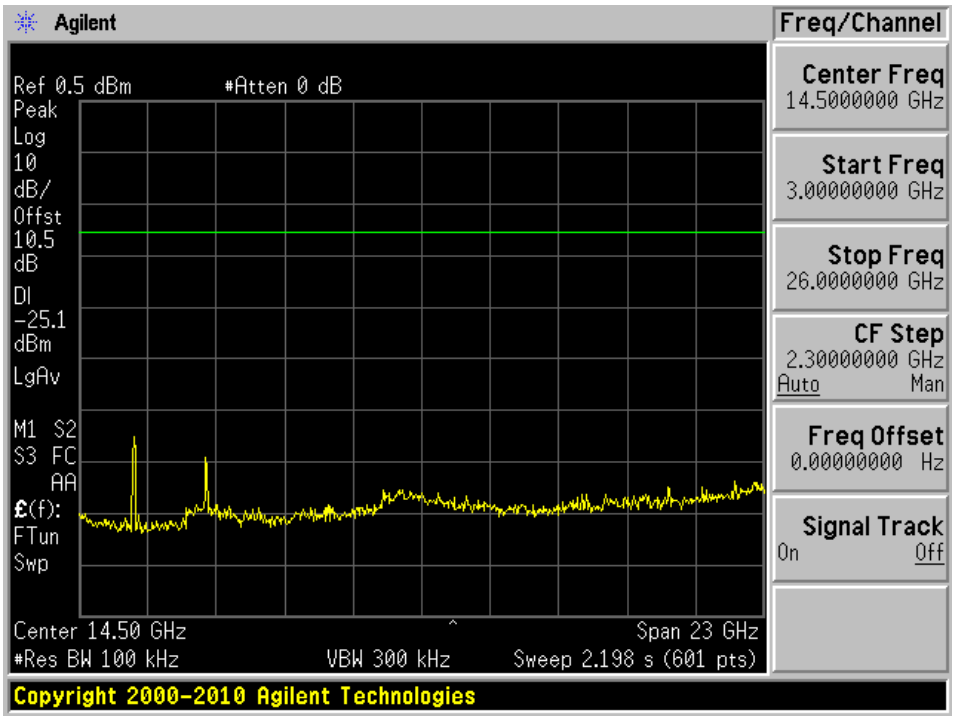
802.11n20-2462 MHz (3-26 GHz)



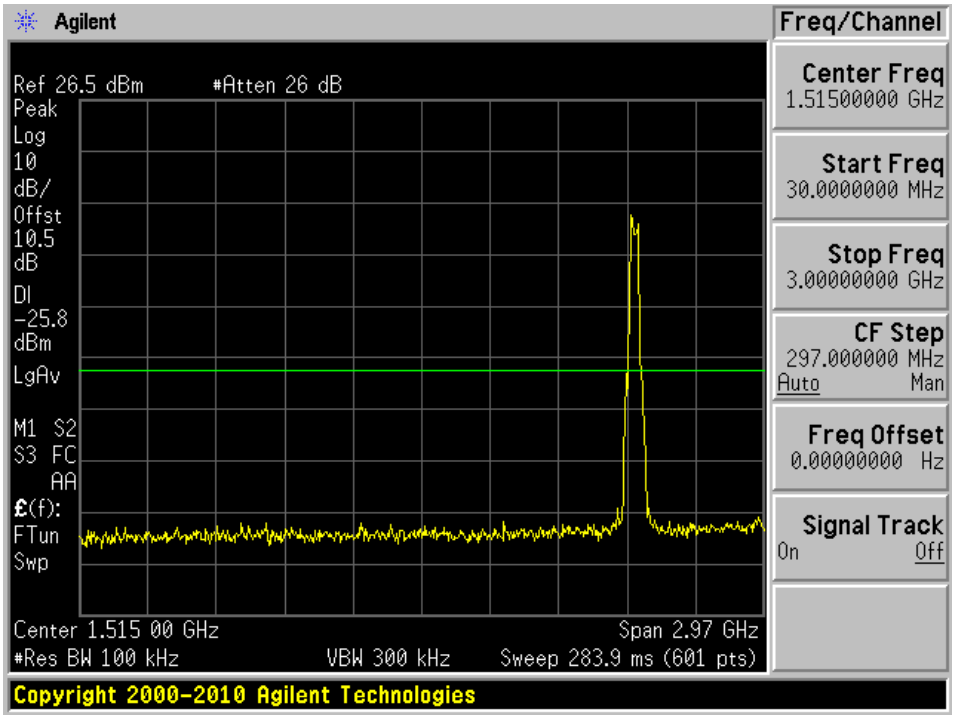
802.11n40-2422 MHz (30 MHz-3 GHz)



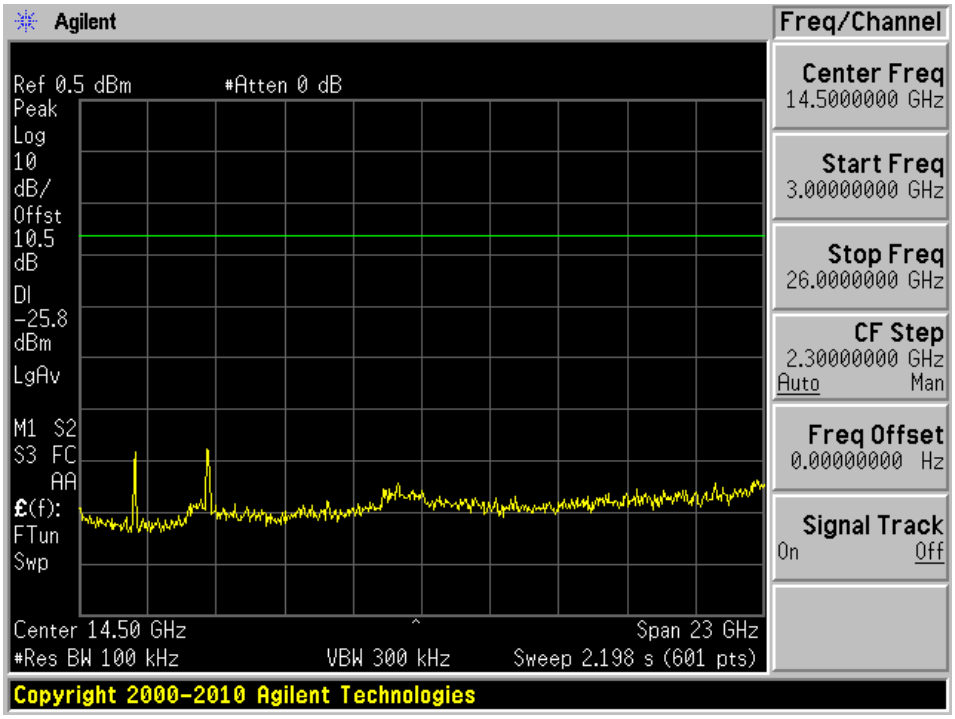
802.11n40-2422 MHz (3-26 GHz)



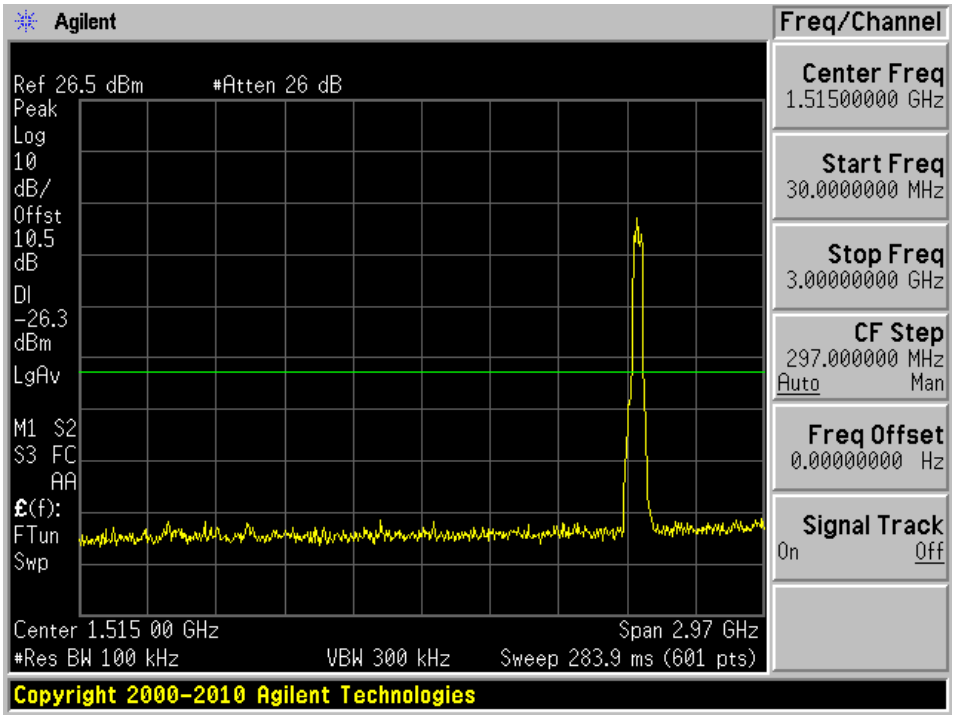
802.11n40-2437 MHz (30 MHz-3 GHz)



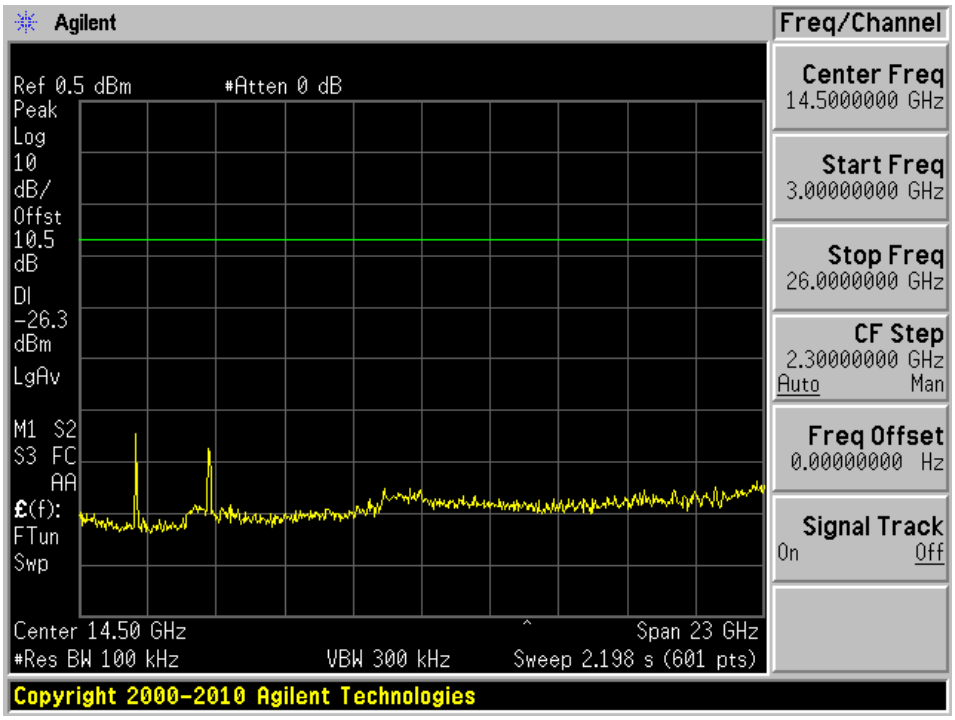
802.11n40-2437 MHz (3-26 GHz)



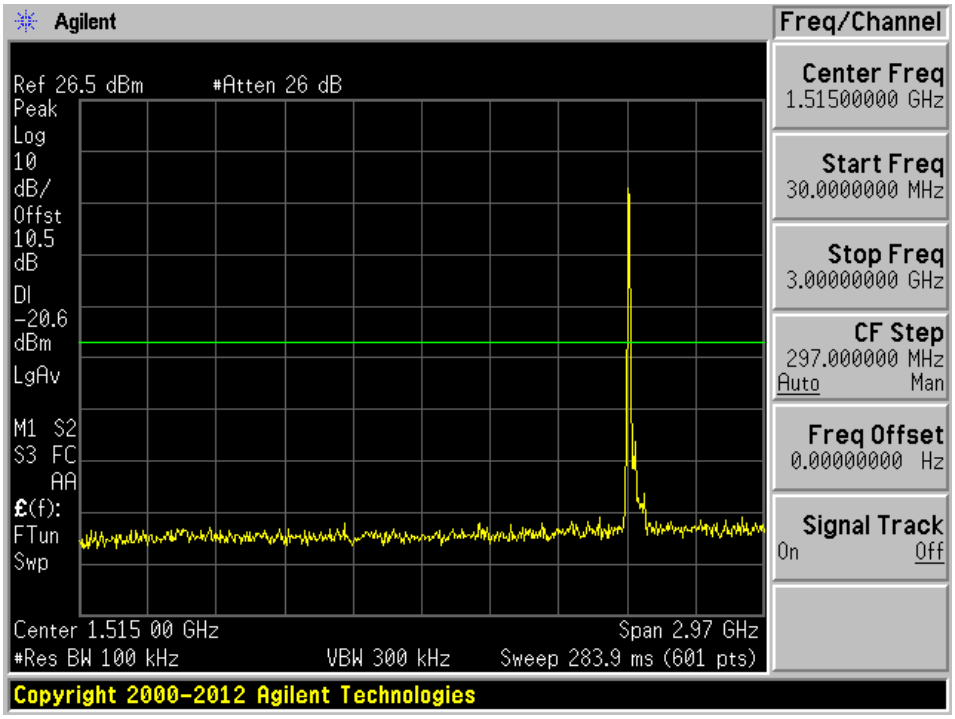
802.11n40-2452 MHz (30 MHz-3 GHz)



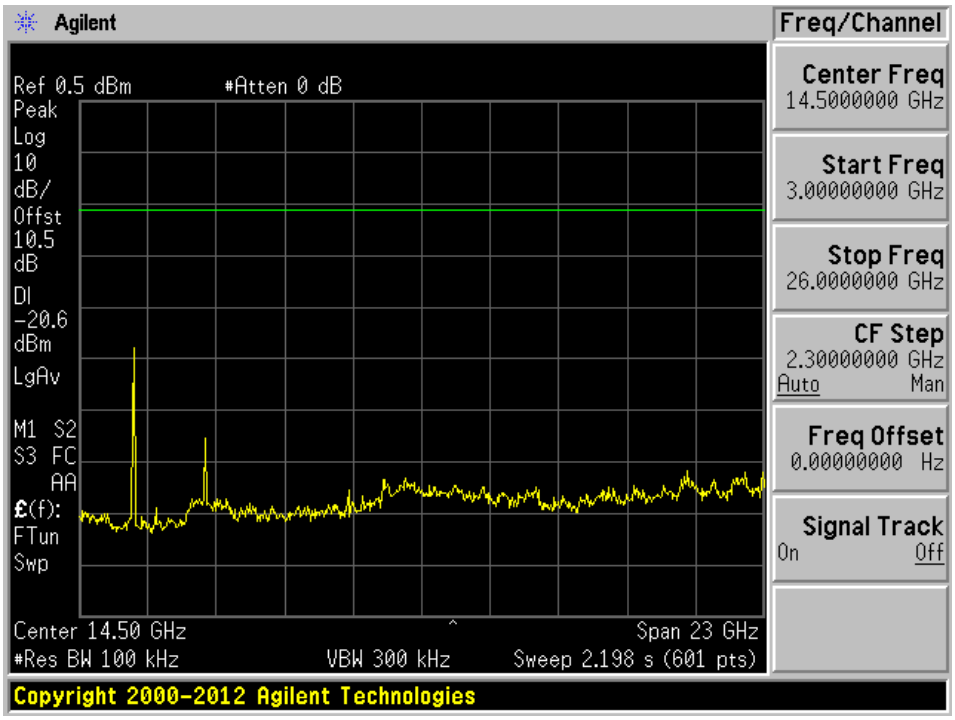
802.11n40-2452 MHz (3-26 GHz)



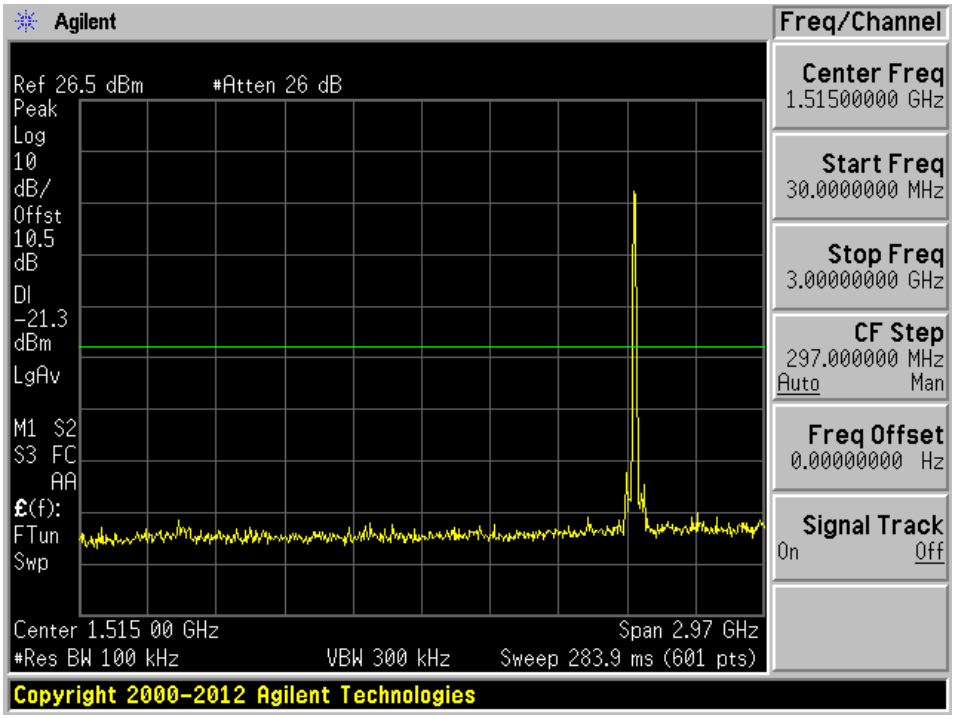
802.11b-2412 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



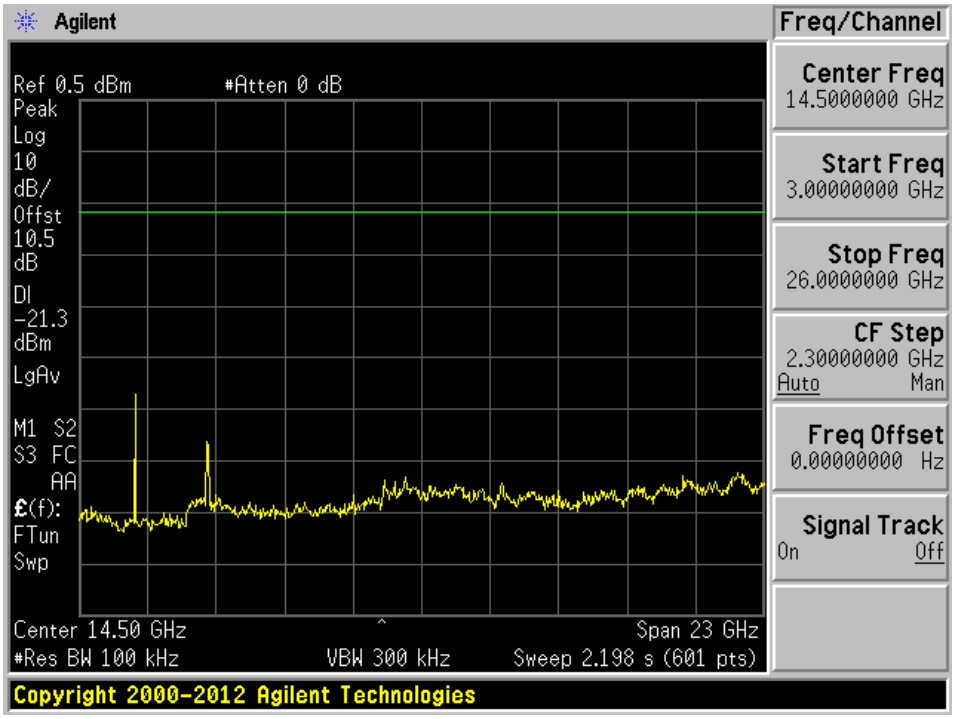
802.11b-2412 MHz 10 MHz Bandwidth (3-26 GHz)



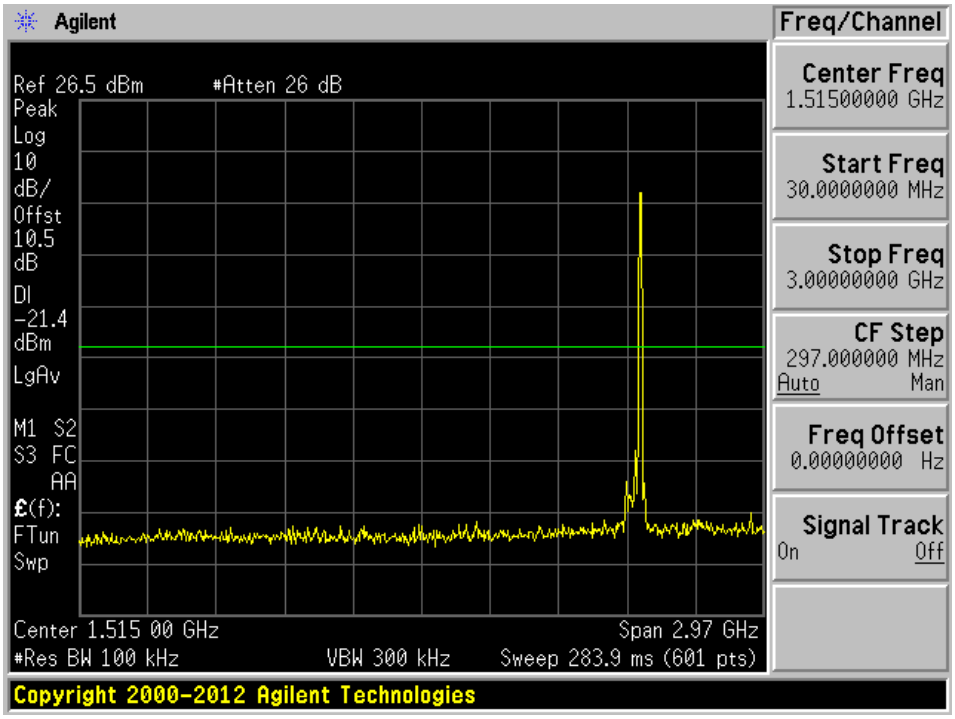
802.11b-2437 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



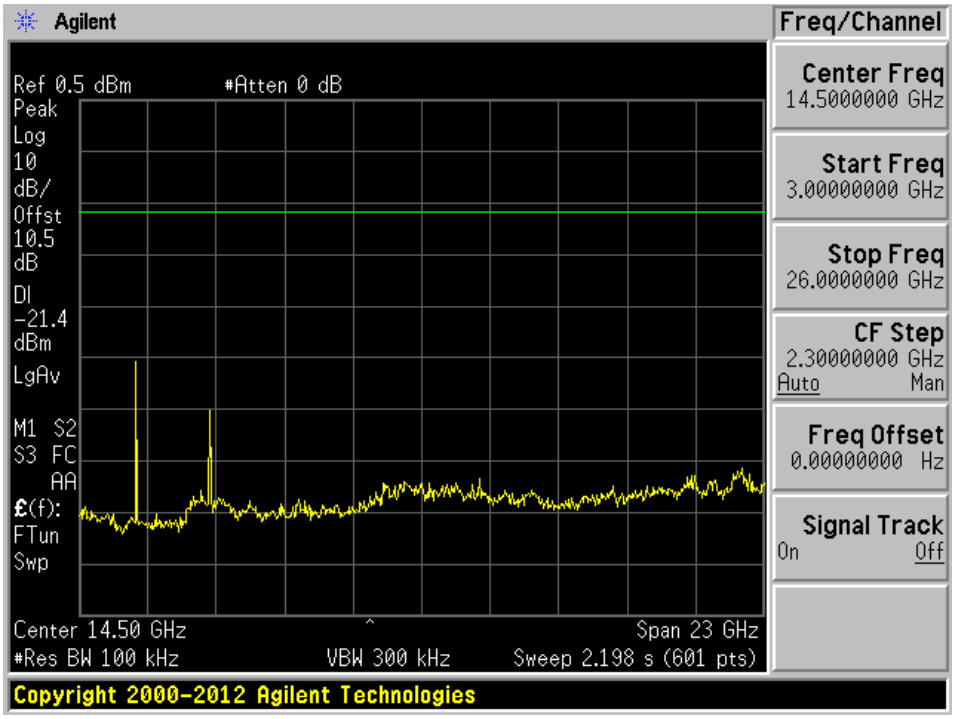
802.11b-2437 MHz 10 MHz Bandwidth (3-26 GHz)



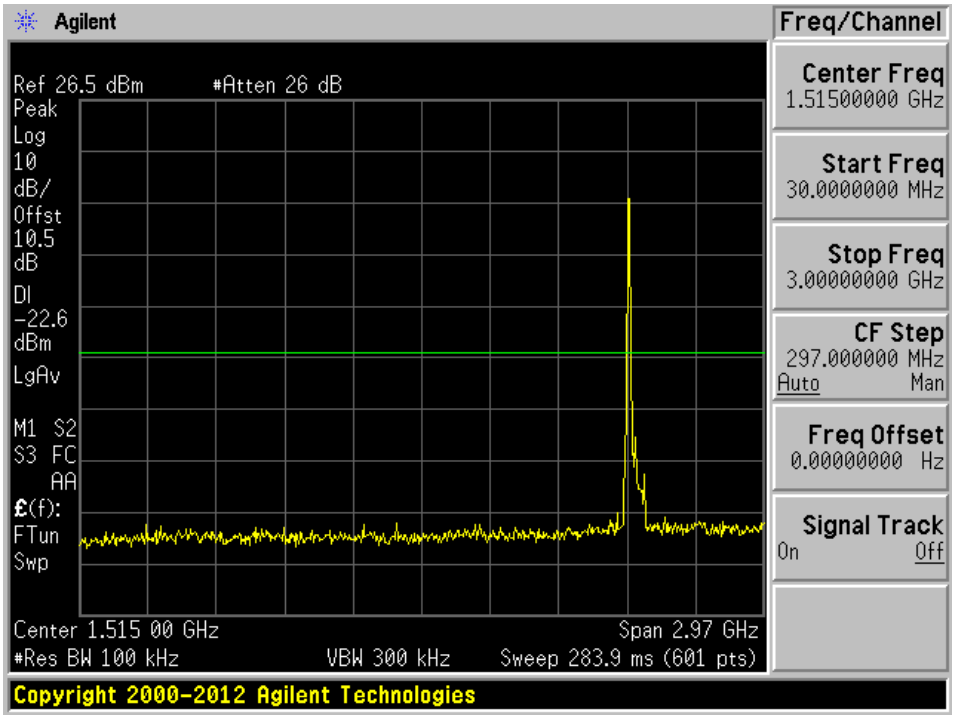
802.11b-2462 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



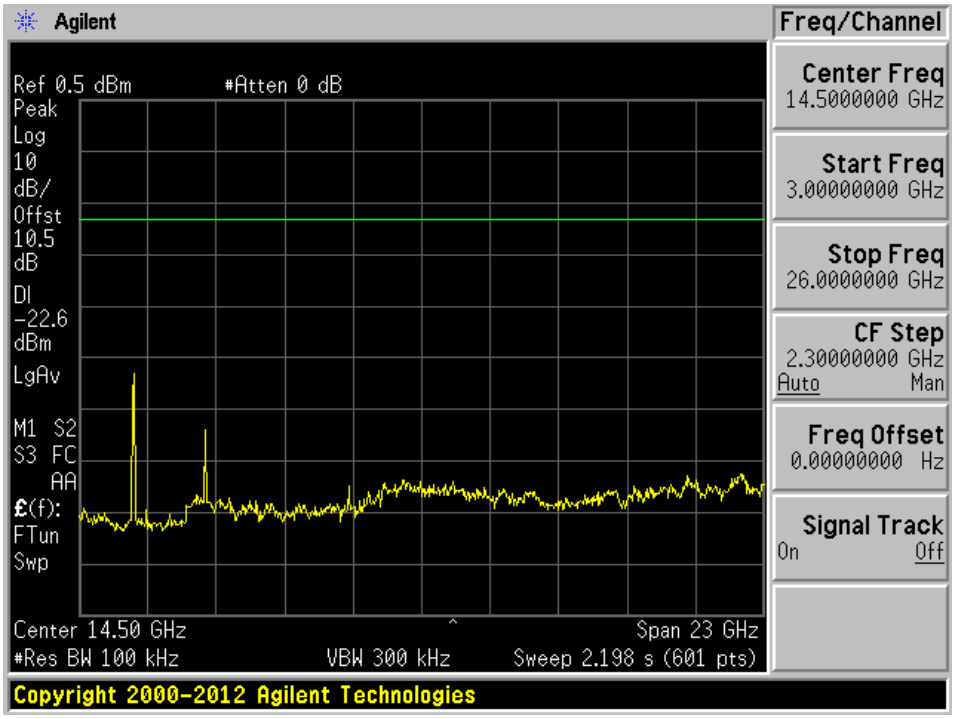
802.11b-2462 MHz 10 MHz Bandwidth (3-26 GHz)



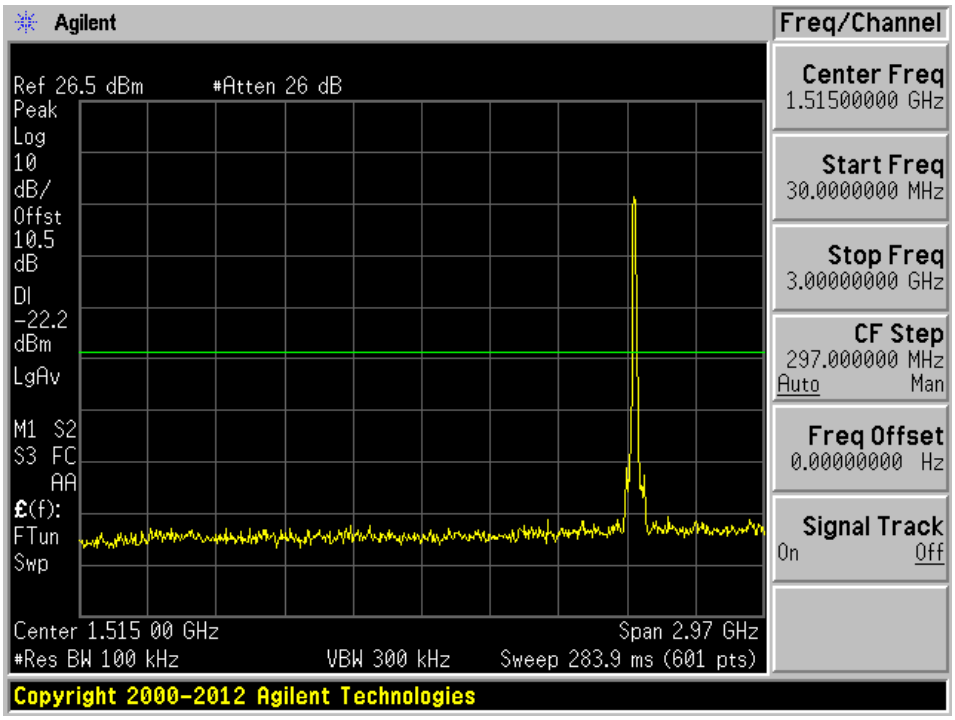
802.11g-2412 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



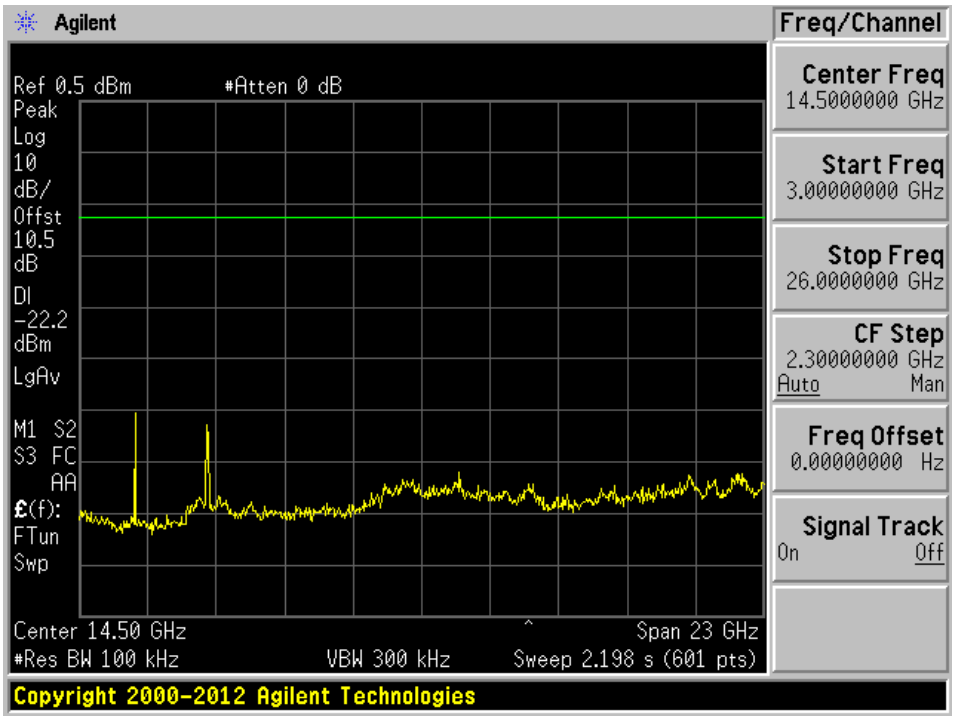
802.11g-2412 MHz 10 MHz Bandwidth (3-26 GHz)



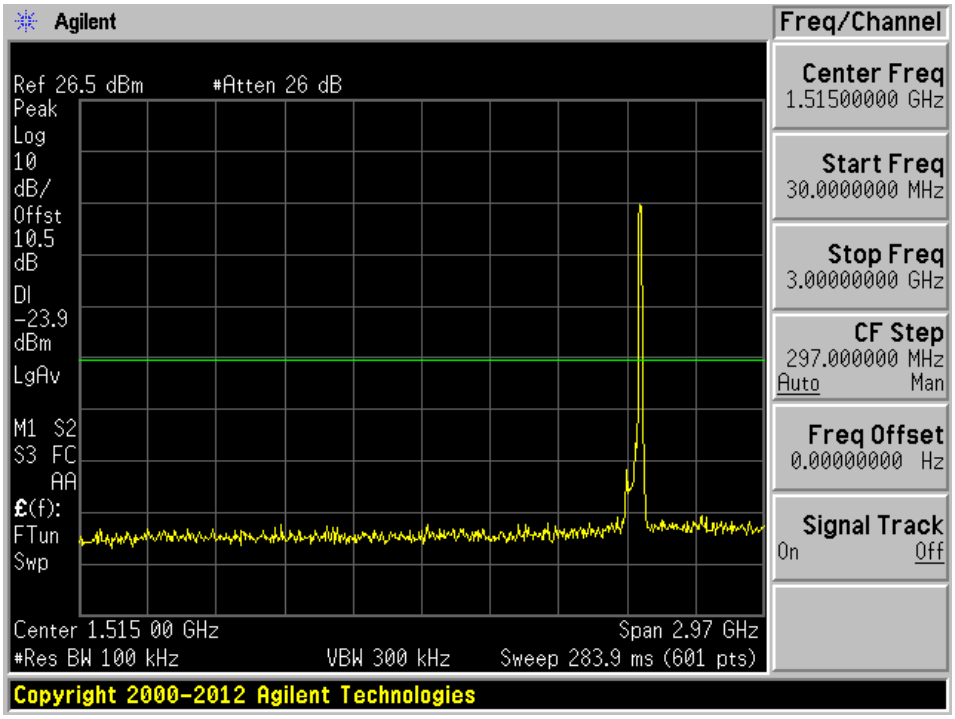
802.11g-2437 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



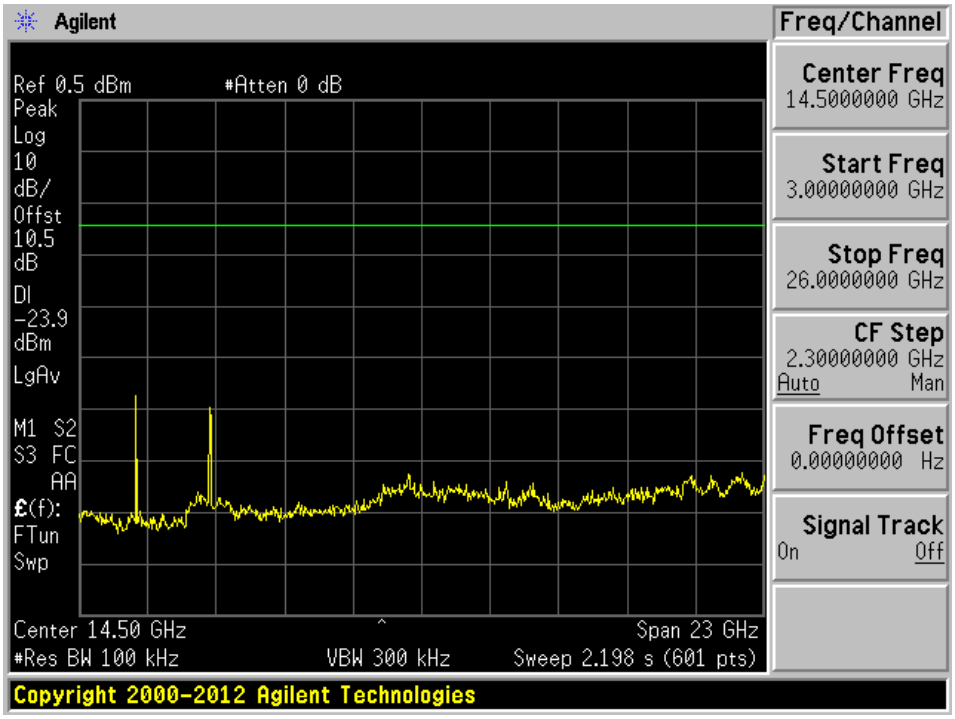
802.11g-2437 MHz 10 MHz Bandwidth (3-26 GHz)



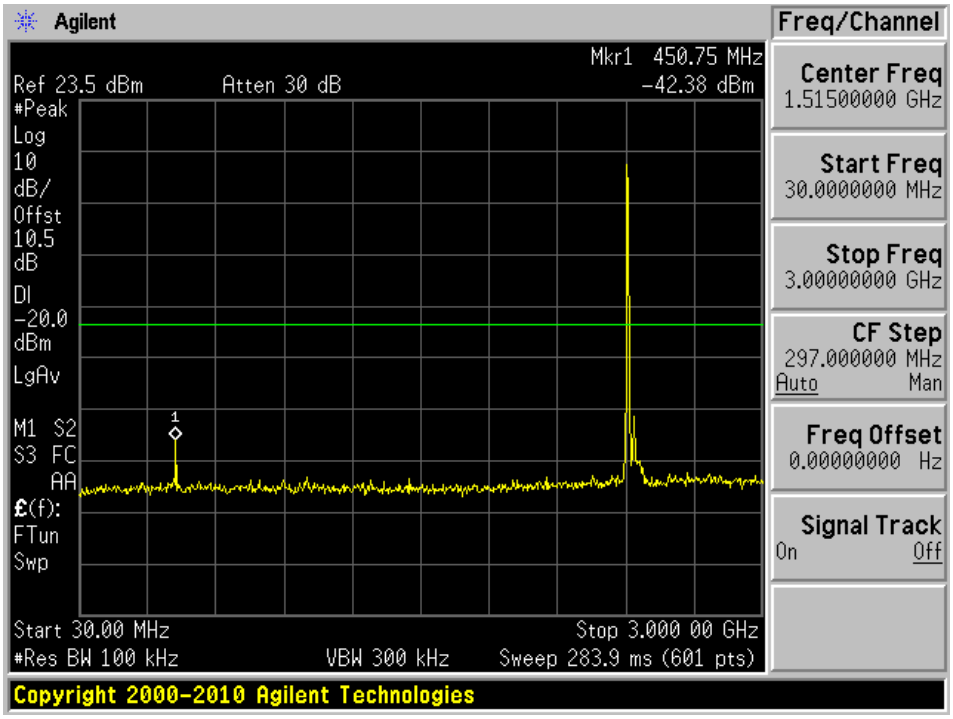
802.11g-2462 MHz 10 MHz Bandwidth (30 MHz-3 GHz)



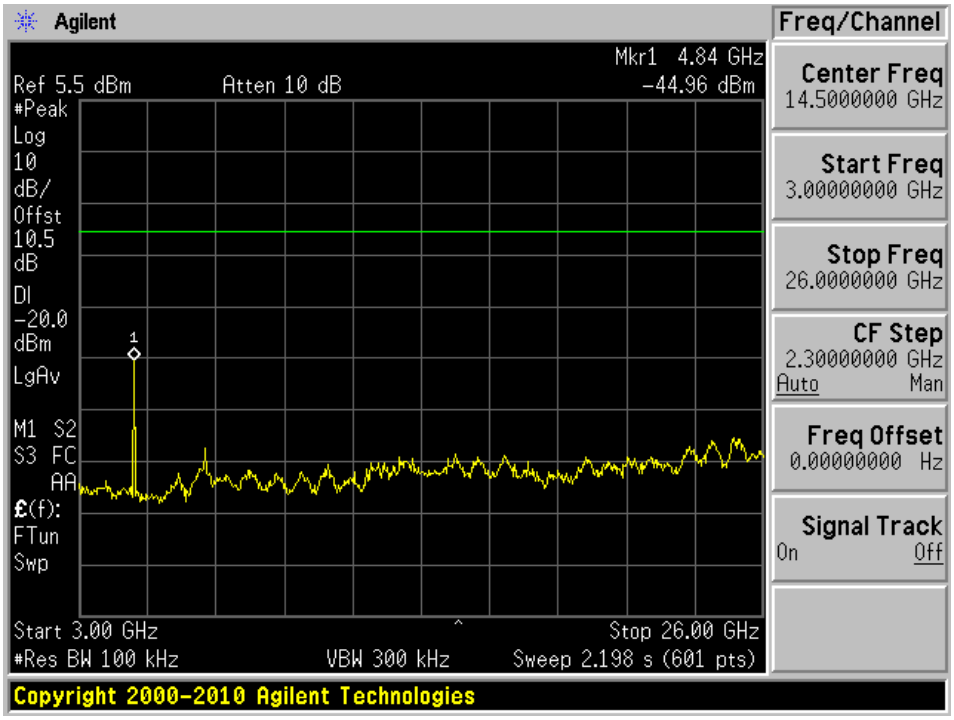
802.11g-2462 MHz 10 MHz Bandwidth (3-26 GHz)



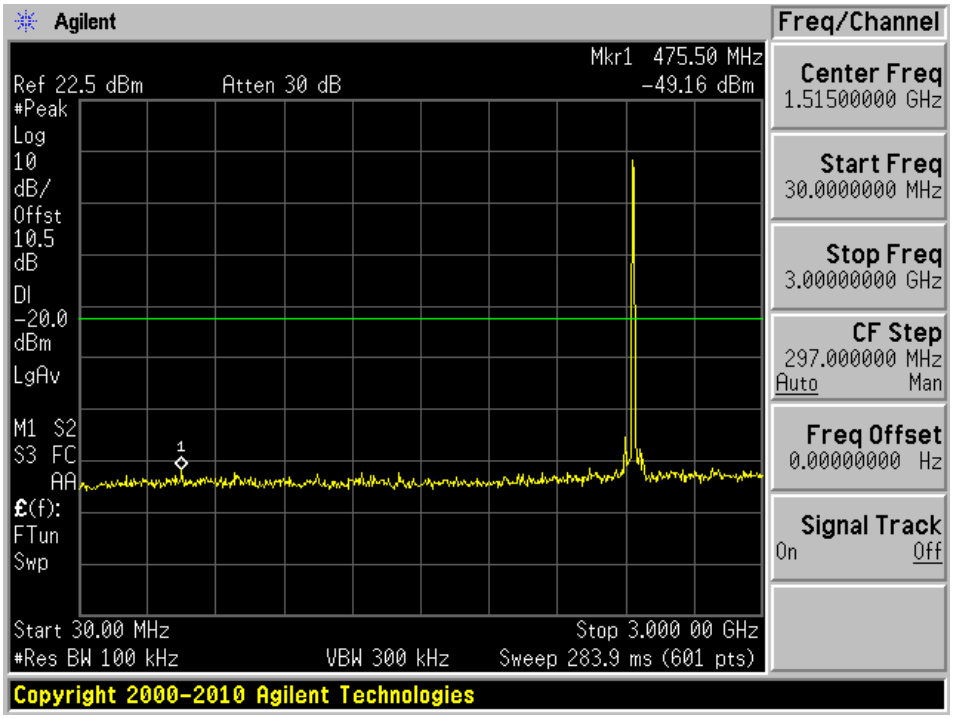
802.11b-2412 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



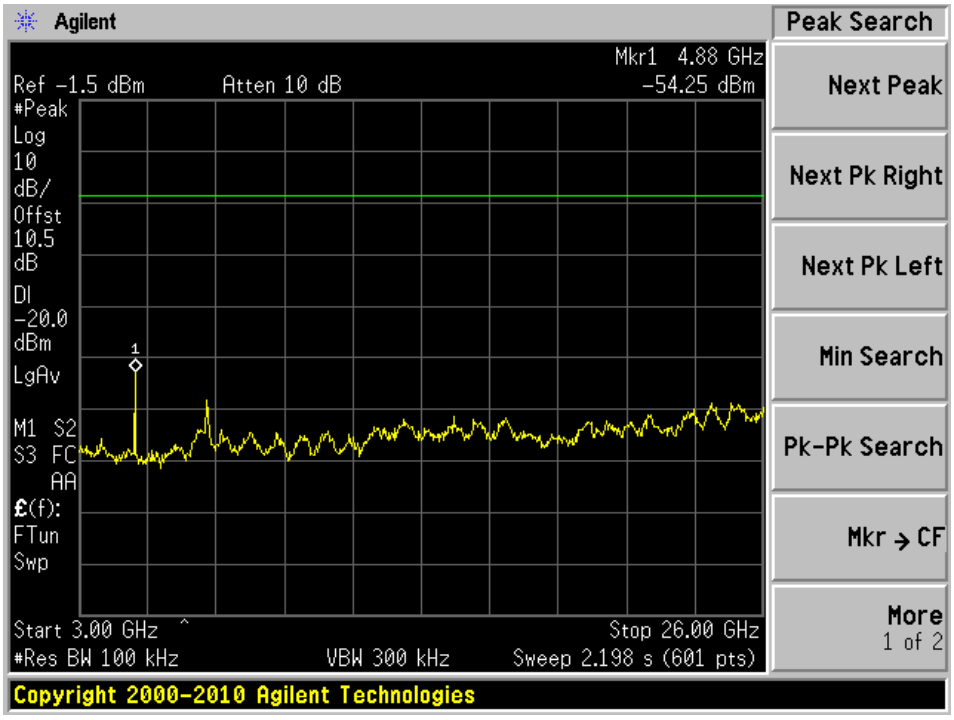
802.11b-2412 MHz 5 MHz Bandwidth (3-26 GHz)



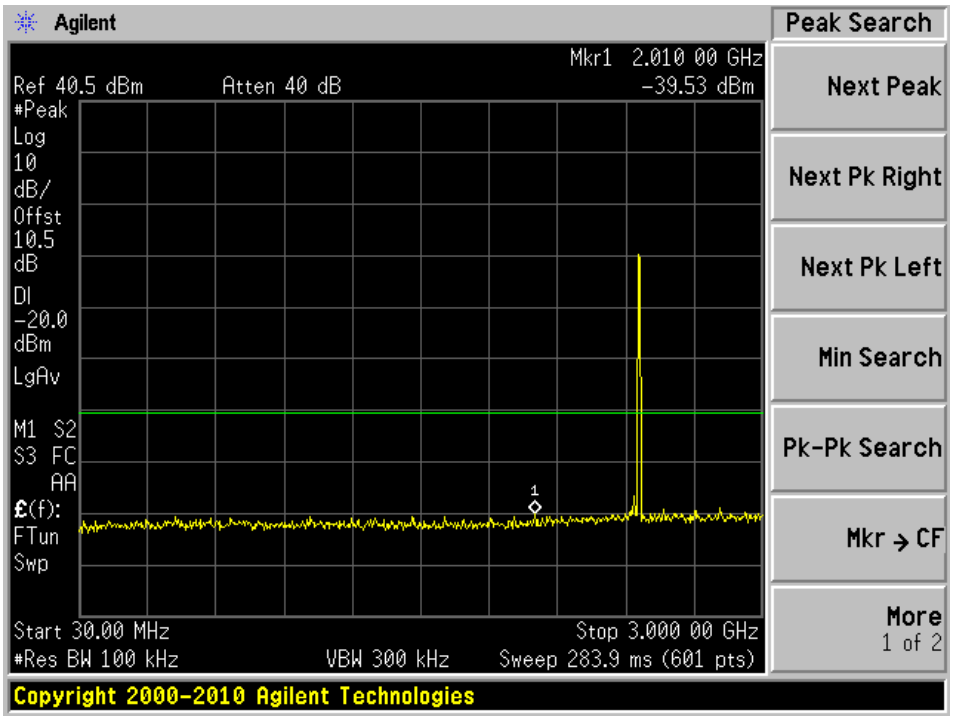
802.11b-2437 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



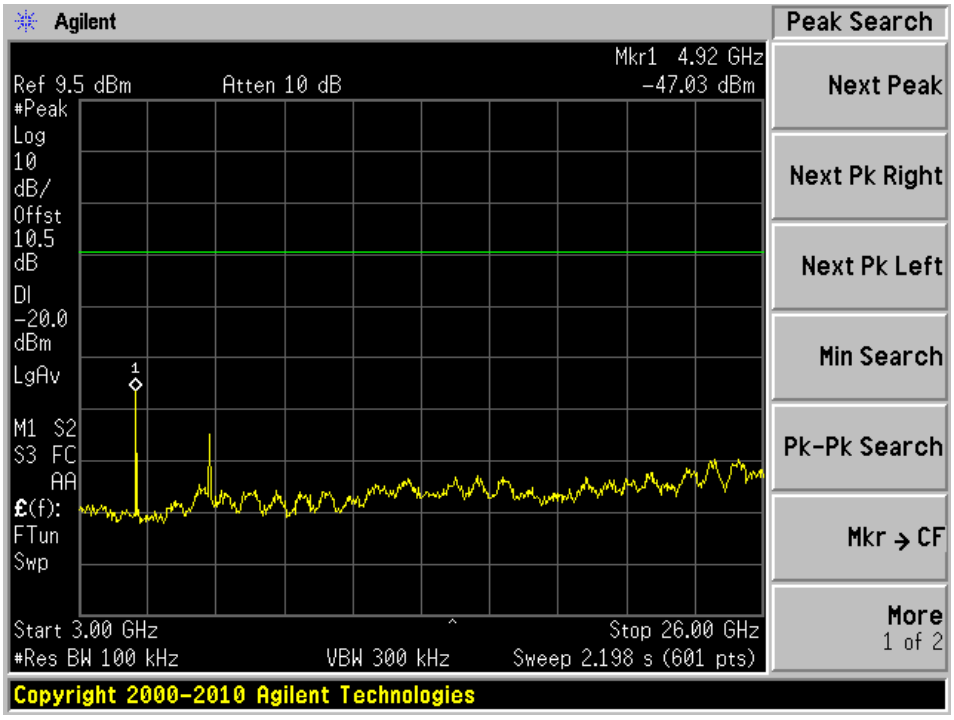
802.11b-2437 MHz 5 MHz Bandwidth (3-26 GHz)



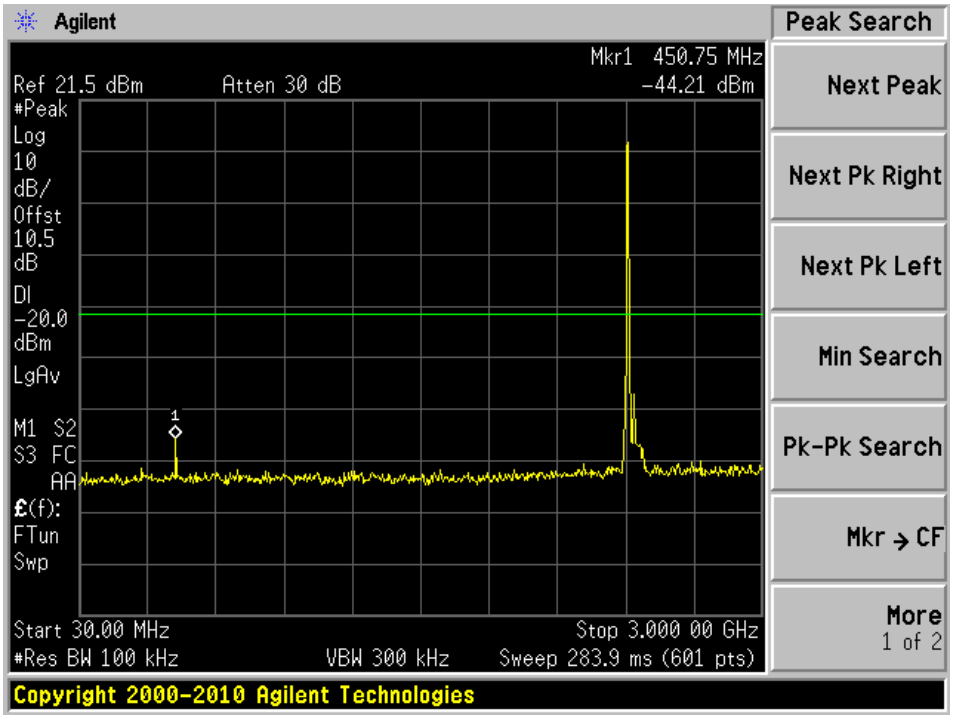
802.11b-2462 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



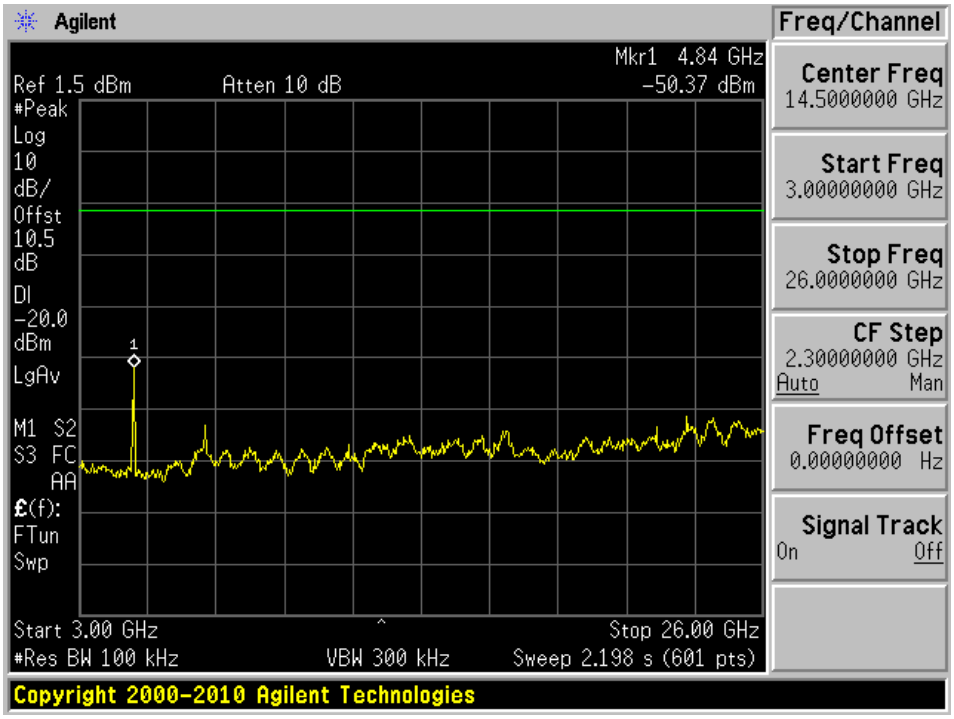
802.11b-2462 MHz 5 MHz Bandwidth (3-26 GHz)



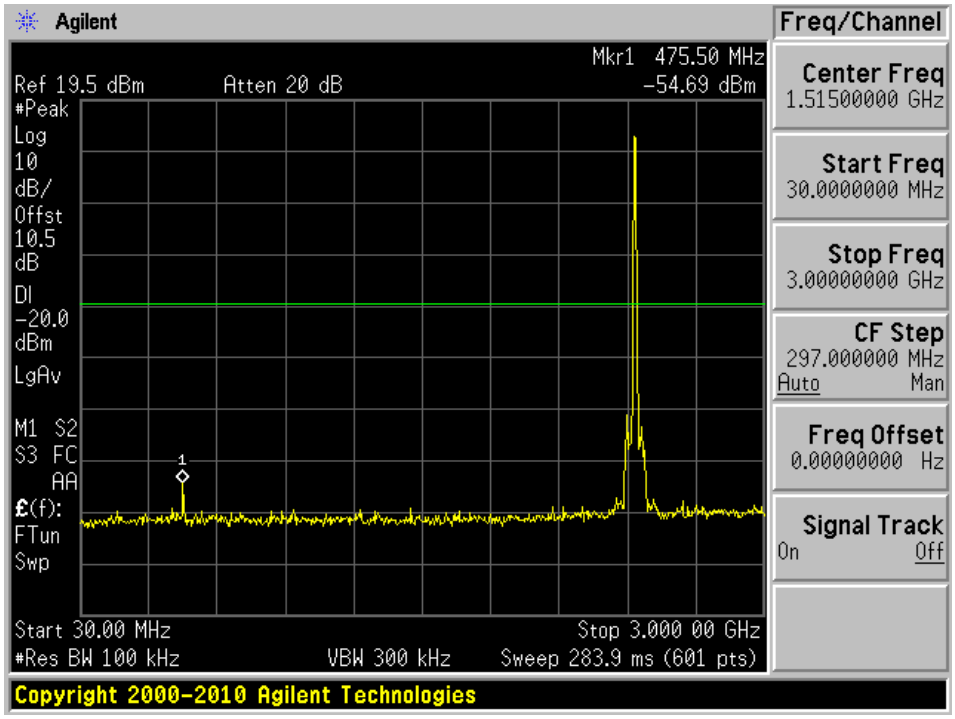
802.11g-2412 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



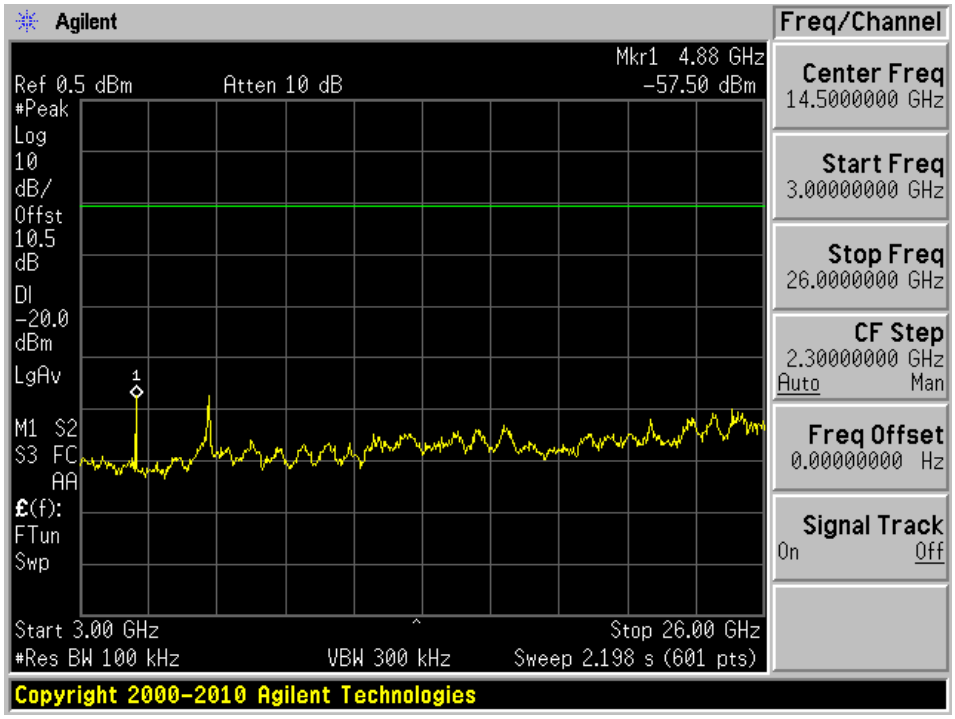
802.11g-2412 MHz 5 MHz Bandwidth (3-26 GHz)



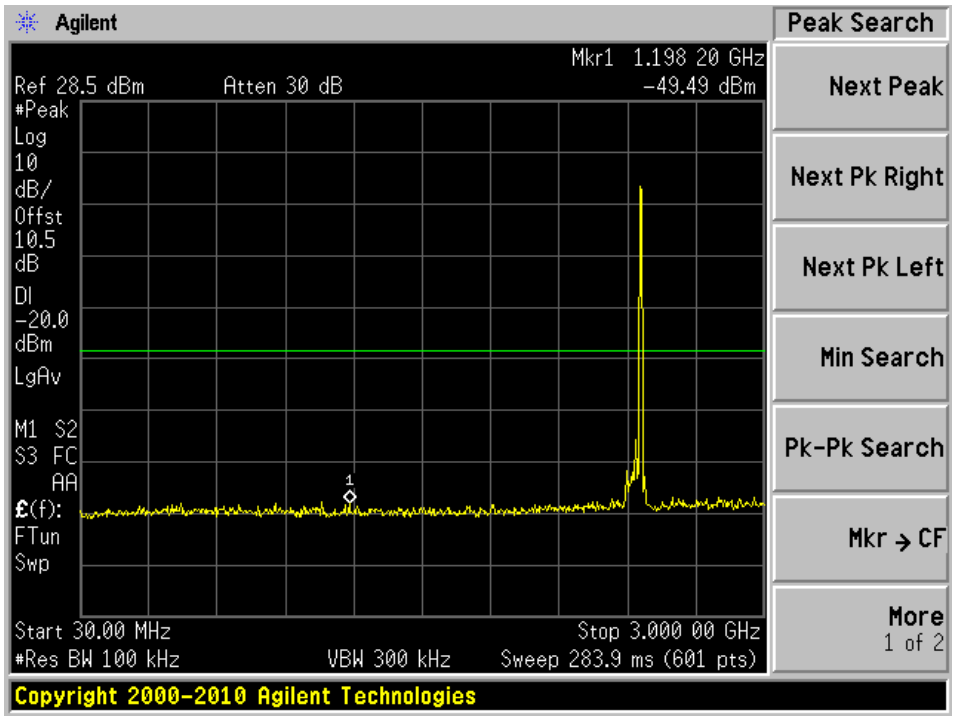
802.11g-2437 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



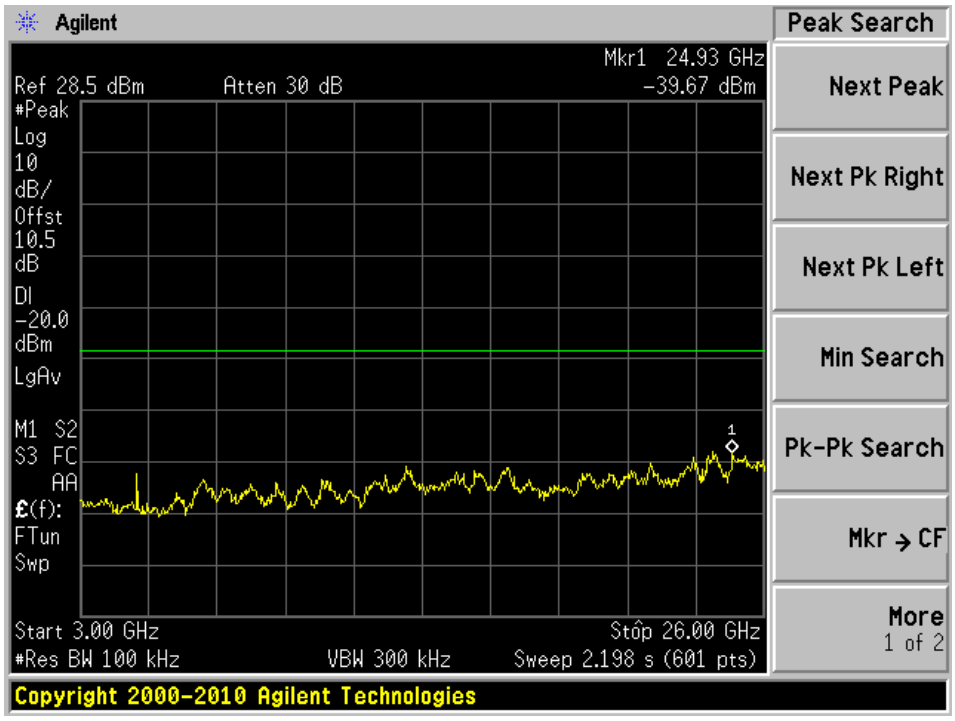
802.11g-2437 MHz 5 MHz Bandwidth (3-26 GHz)



802.11g-2462 MHz 5 MHz Bandwidth (30 MHz-3 GHz)



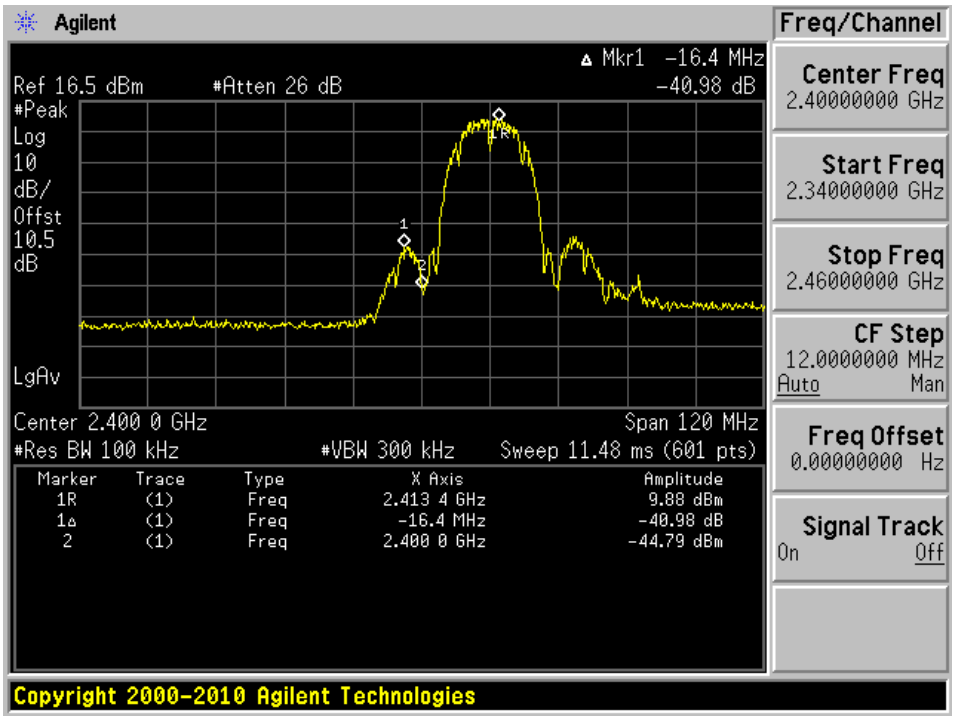
802.11g-2462 MHz 5 MHz Bandwidth (3-26 GHz)



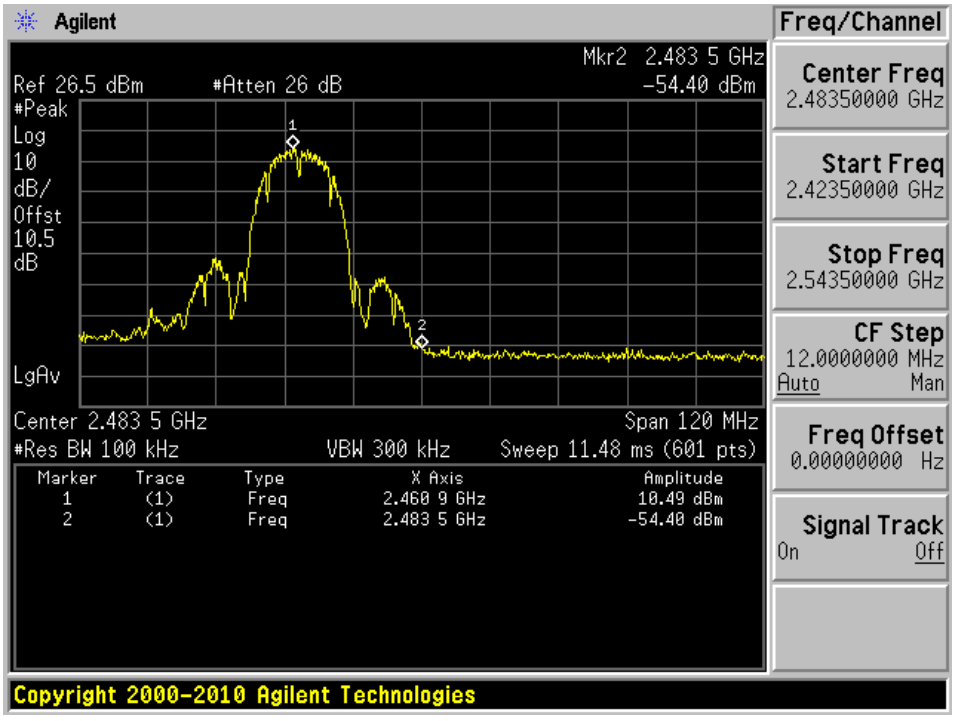
Band Edge

Chain 0

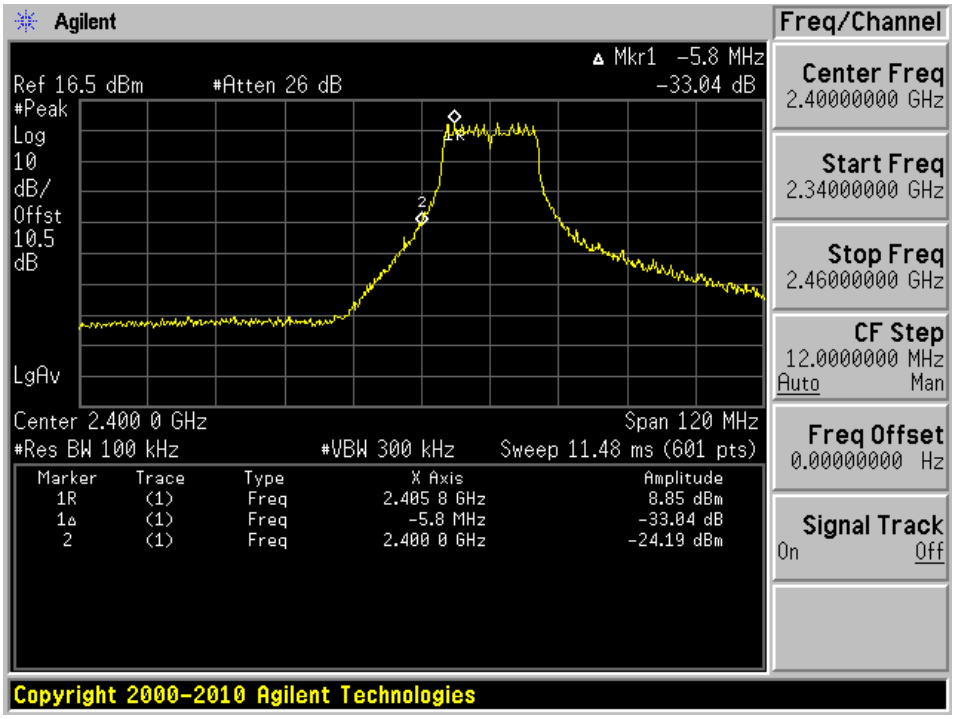
802.11b - Low Band Edge



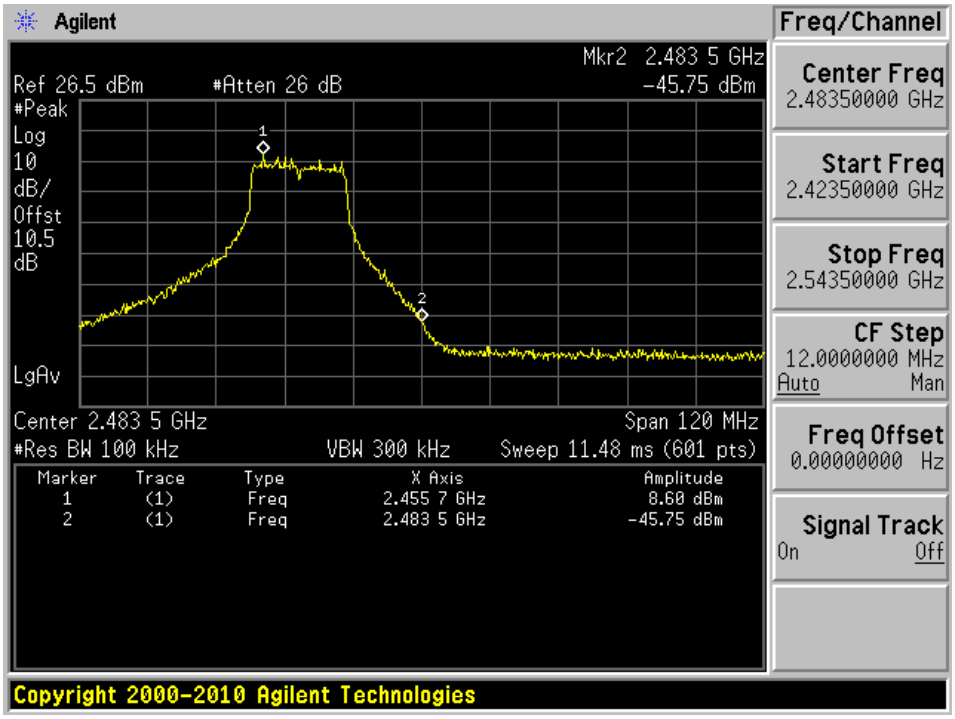
802.11b - High Band Edge



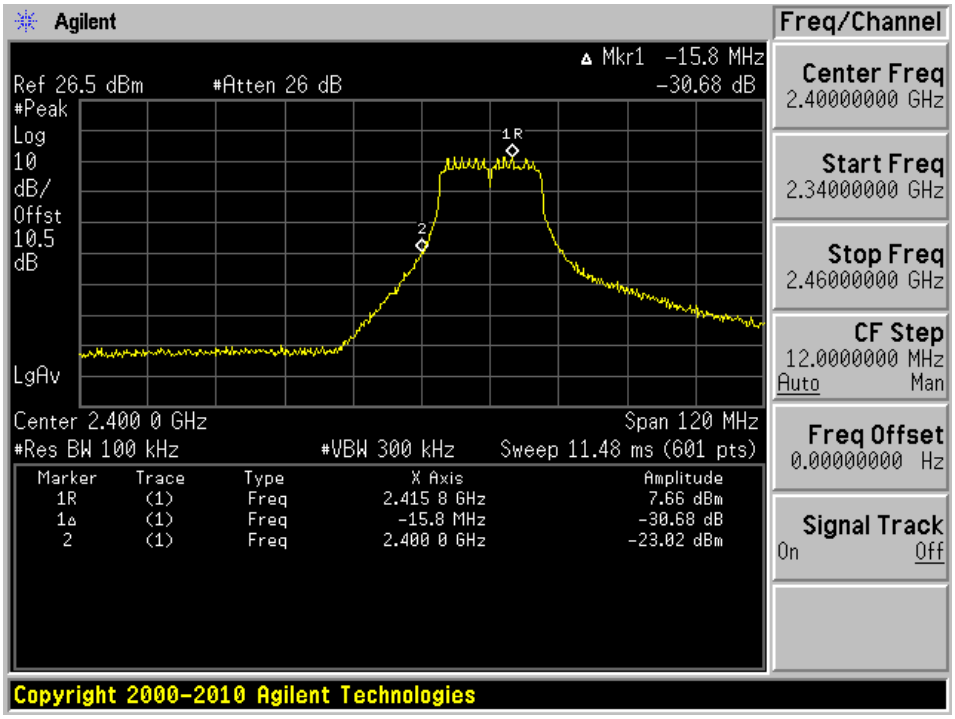
802.11g - Low Band Edge



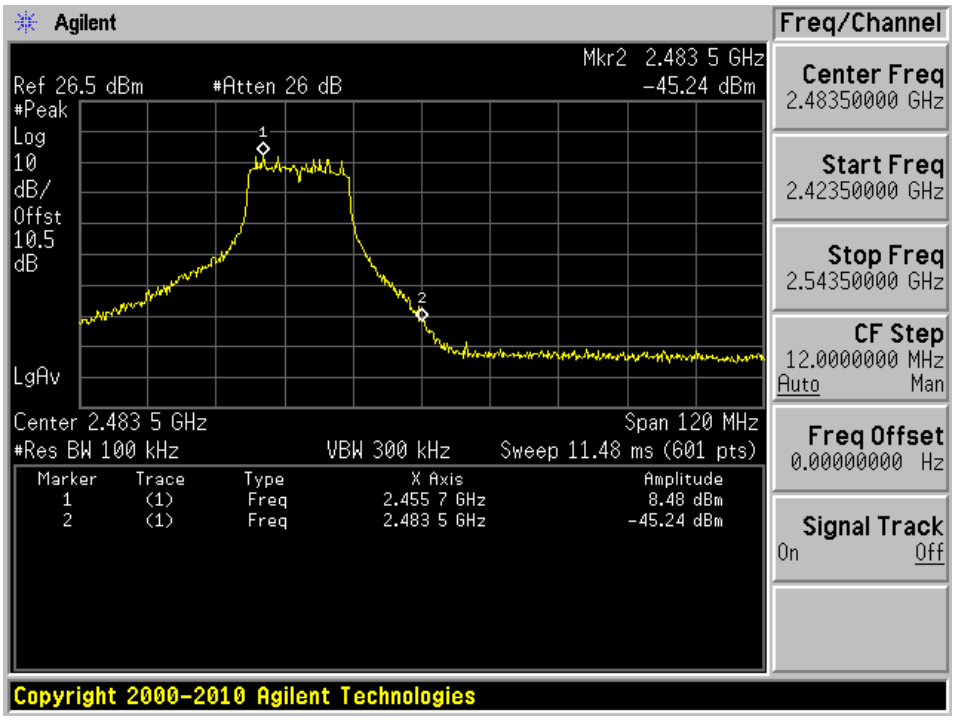
802.11g - High Band Edge



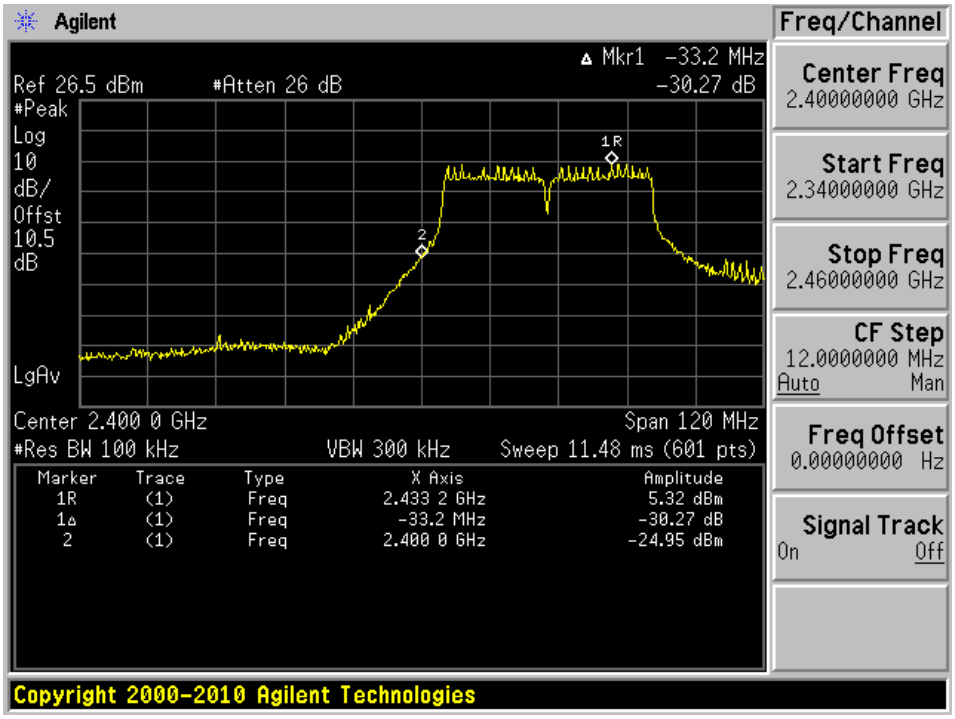
802.11n20 - Low Band Edge



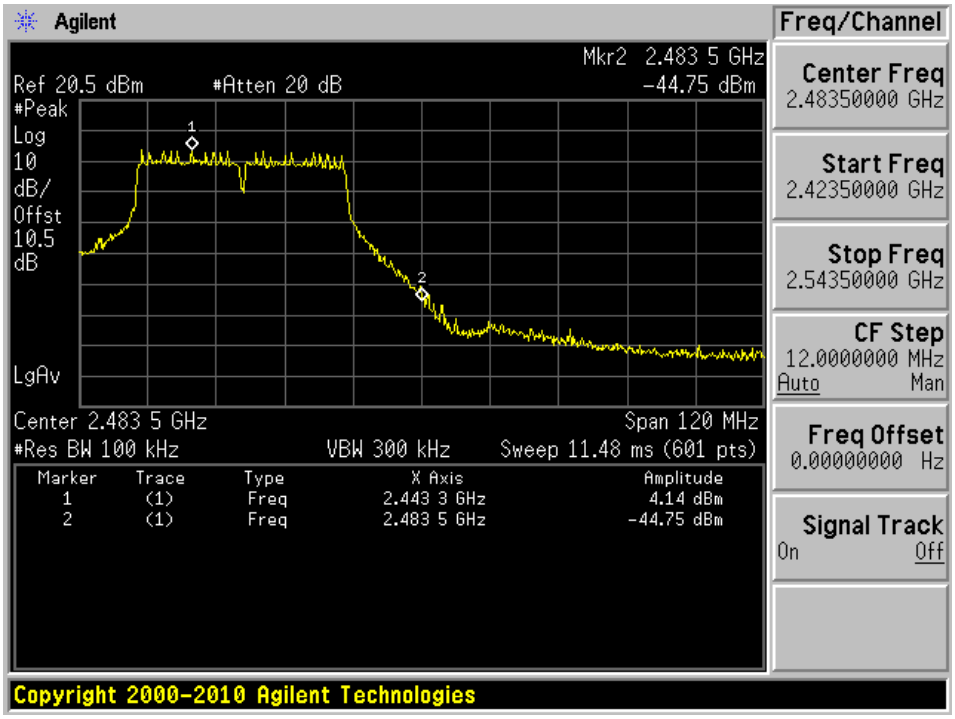
802.11n20 - High Band Edge



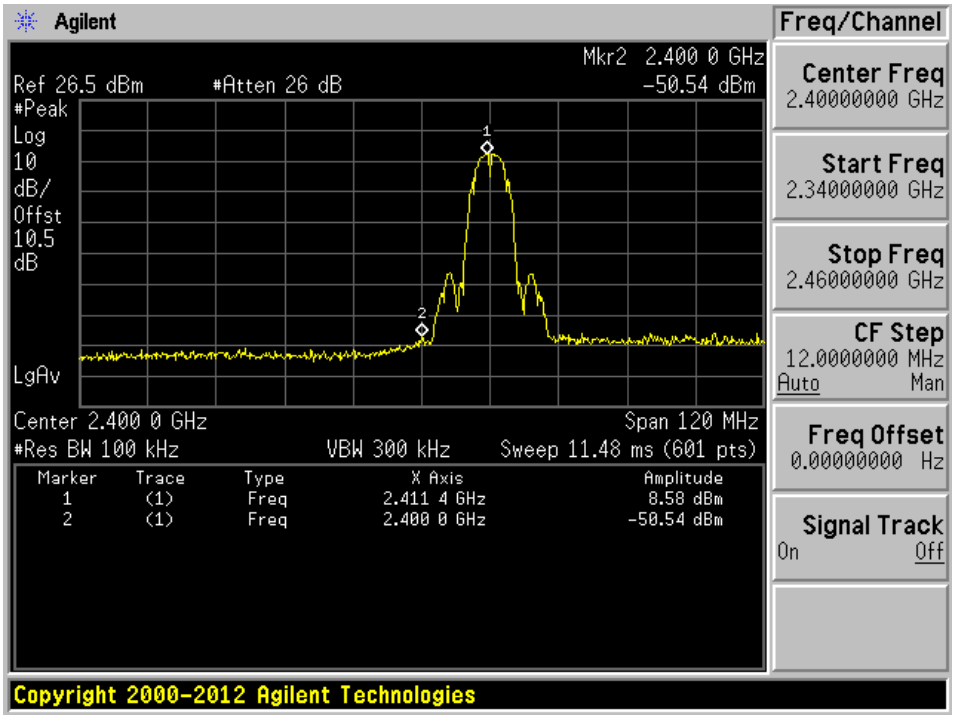
802.11n40 - Low Band Edge



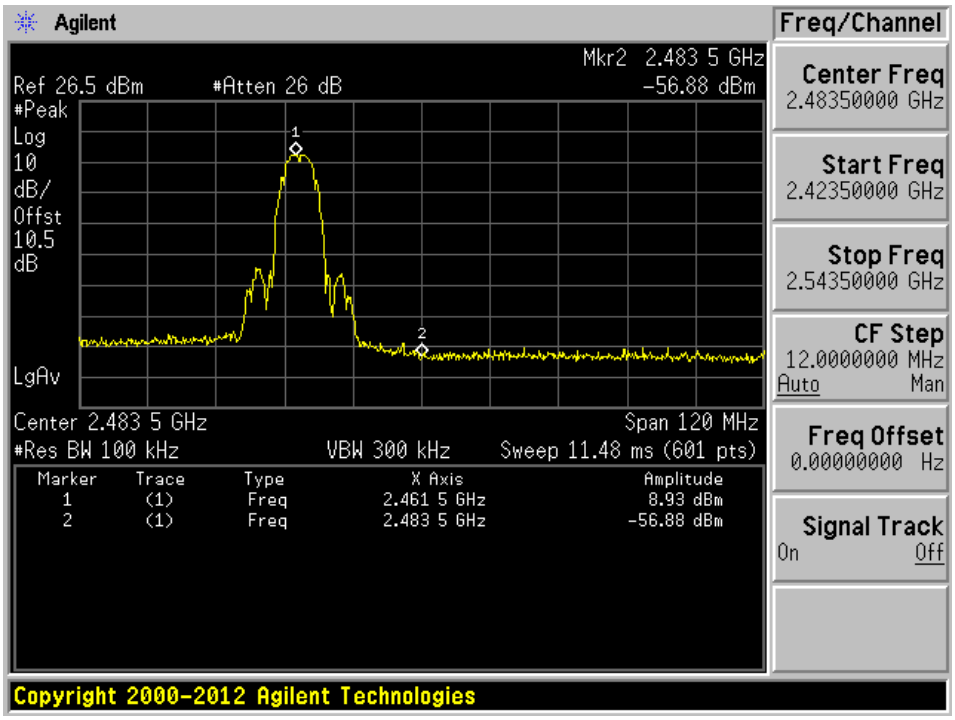
802.11n40 - High Band Edge



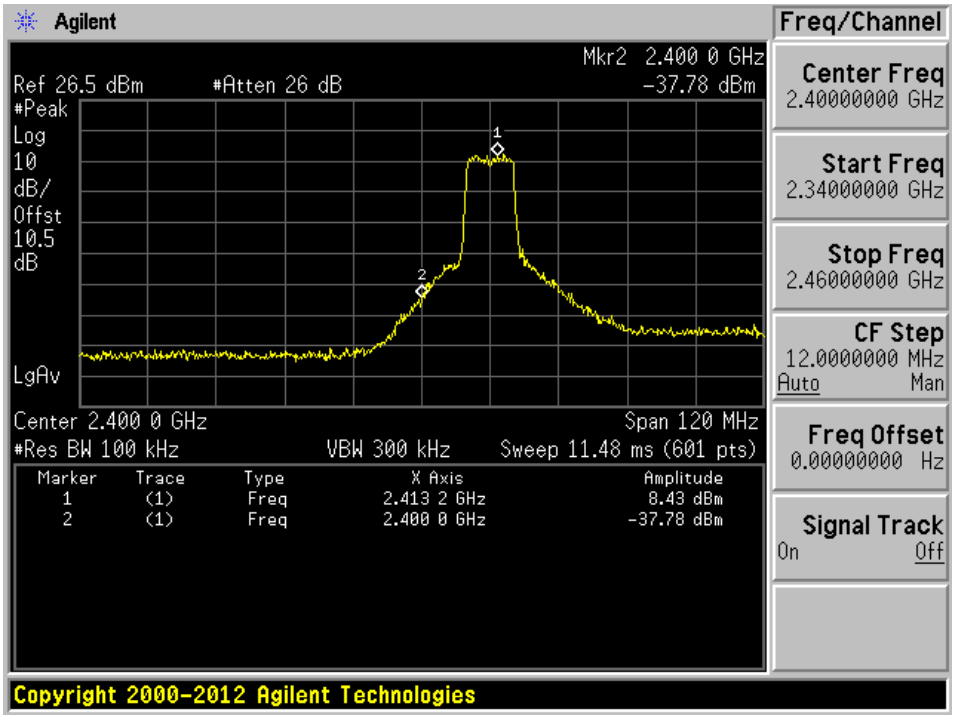
802.11b 10 MHz - Low Band Edge



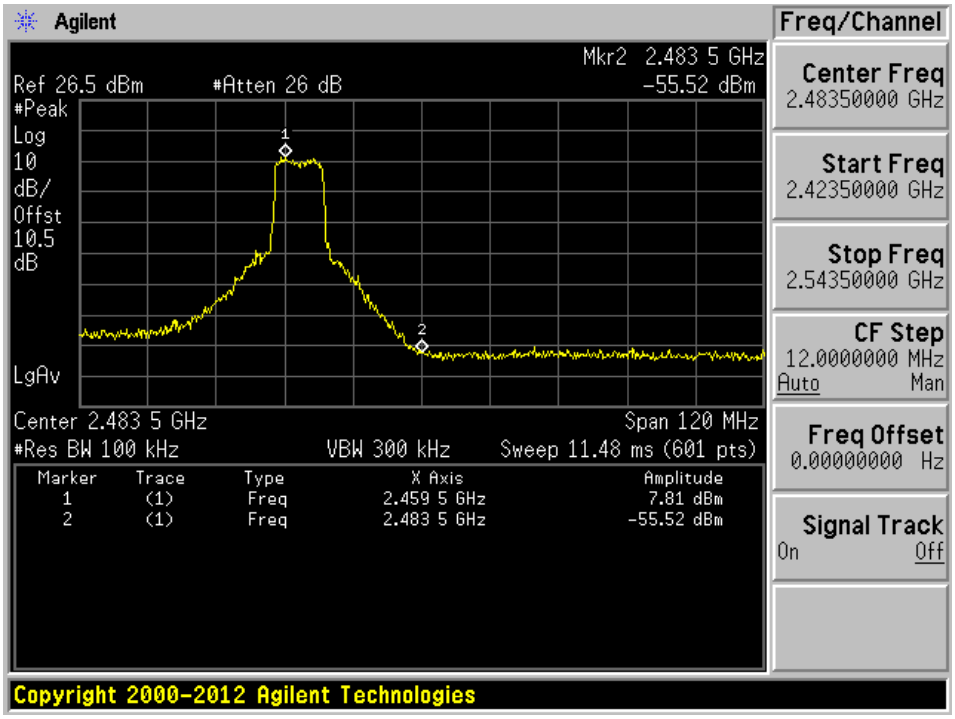
802.11b 10 MHz - High Band Edge



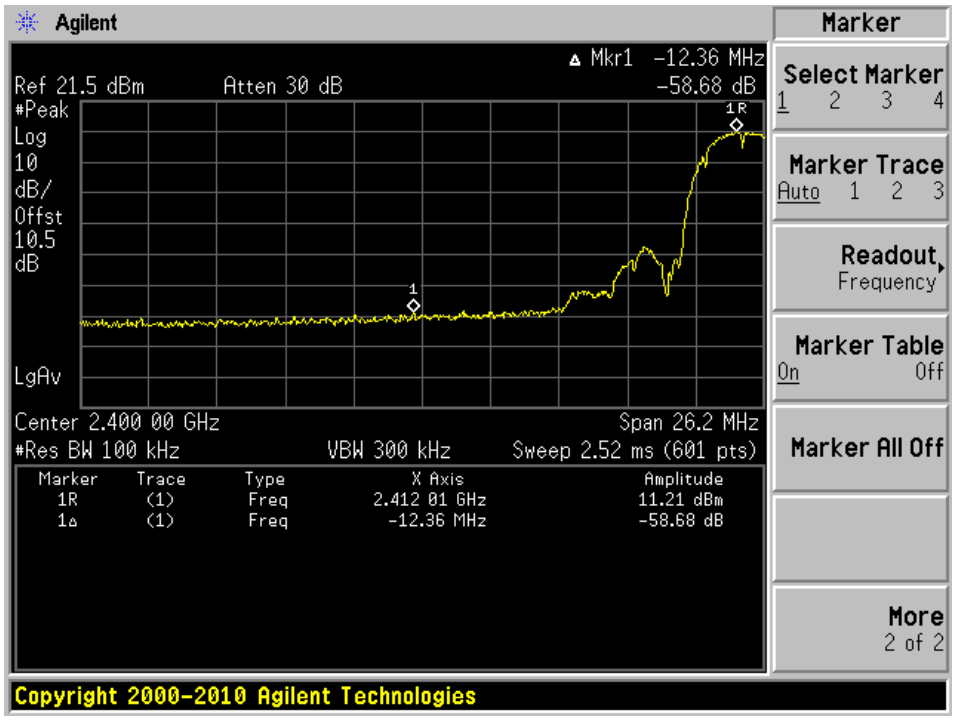
802.11g 10 MHz - Low Band Edge



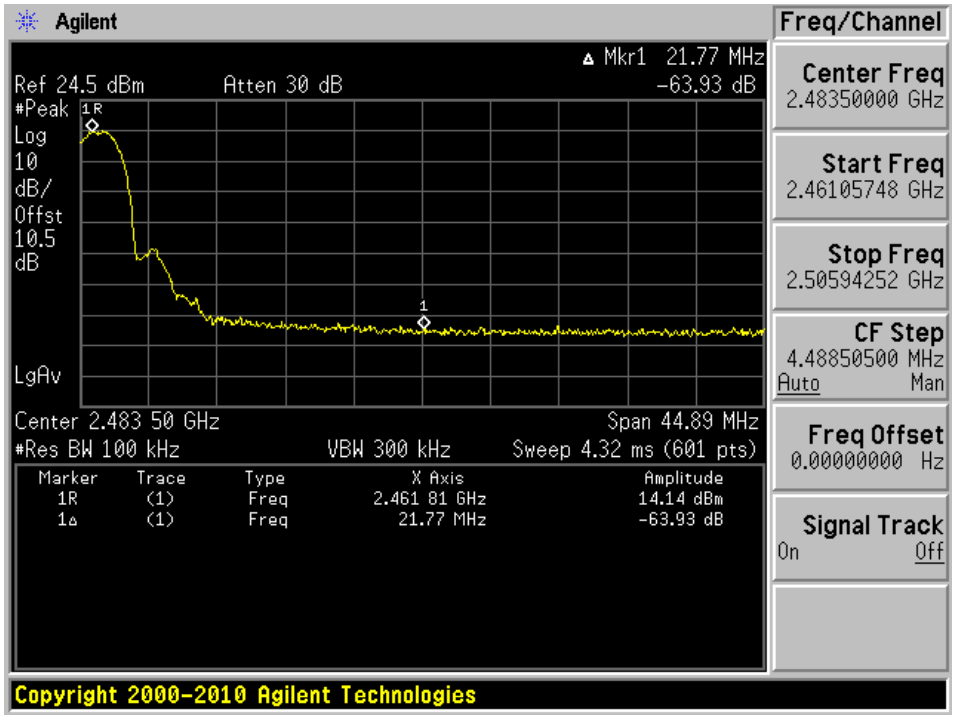
802.11g 10 MHz - High Band Edge



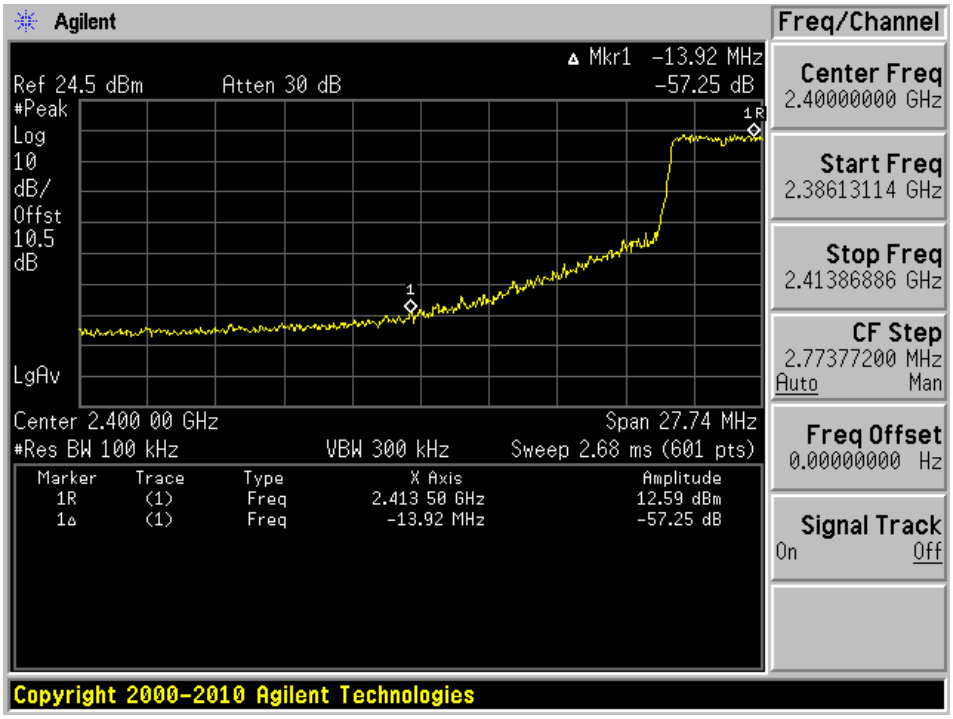
802.11b 5 MHz - Low Band Edge



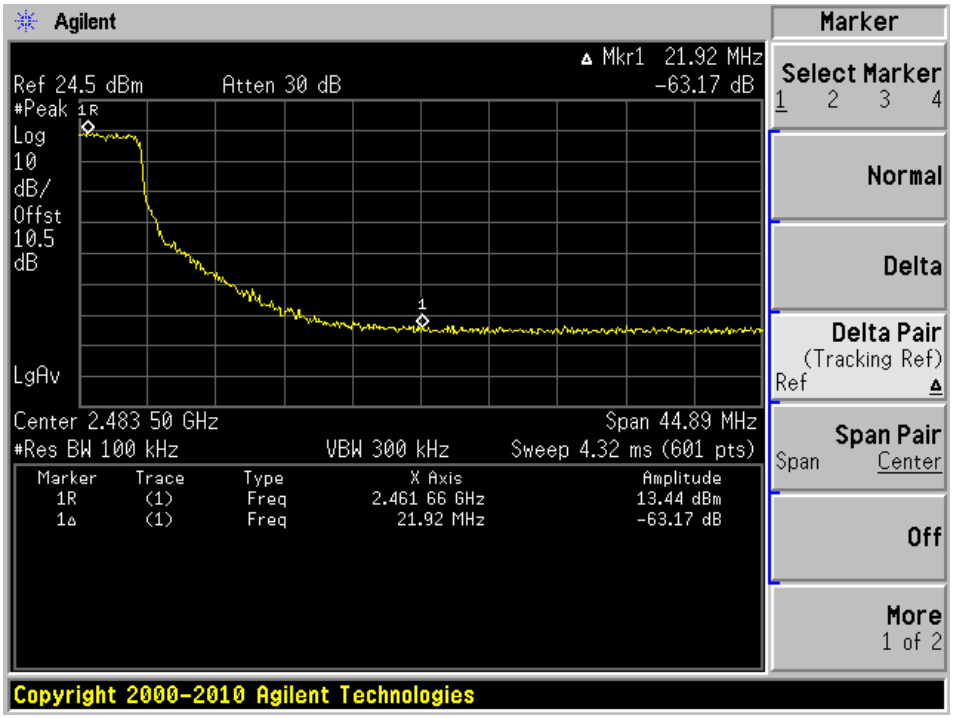
802.11b 5 MHz - High Band Edge



802.11g 5 MHz - Low Band Edge

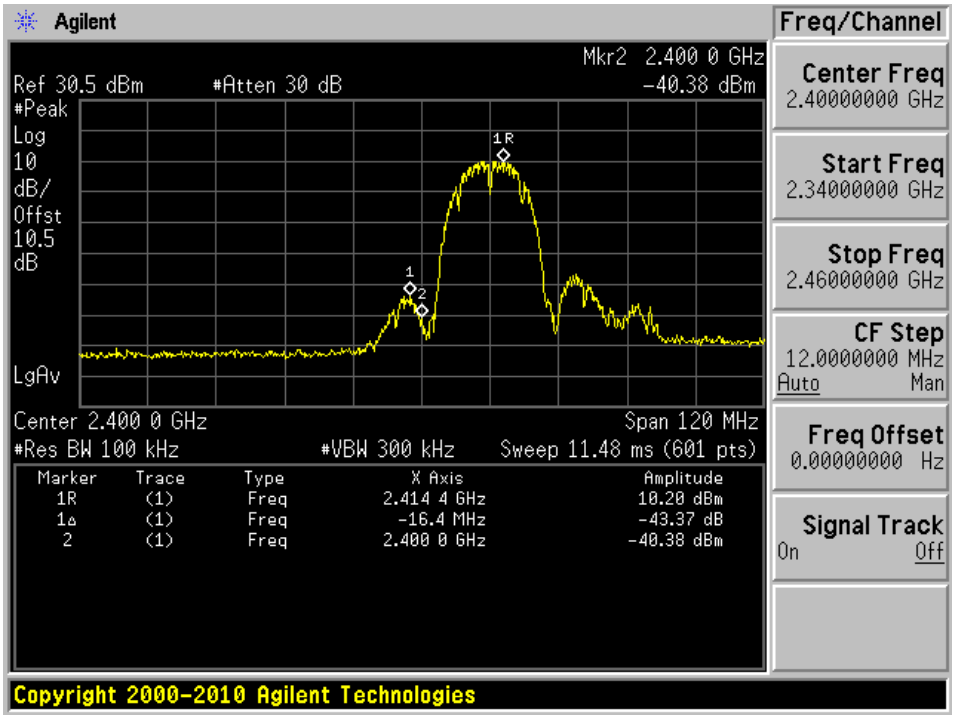


802.11g 5 MHz - High Band Edge

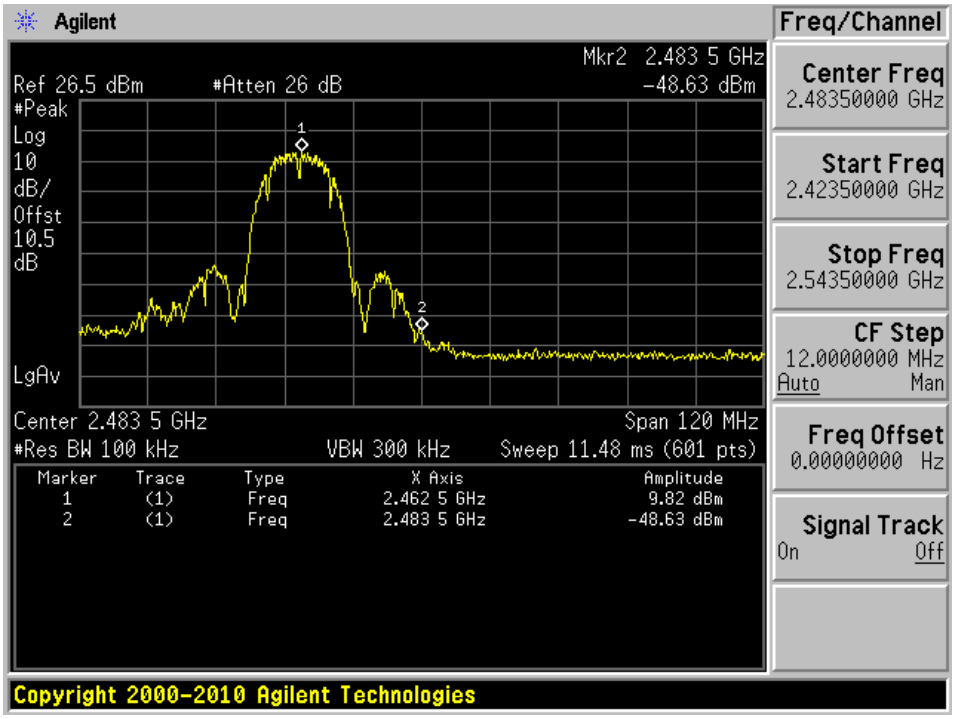


Chain 1

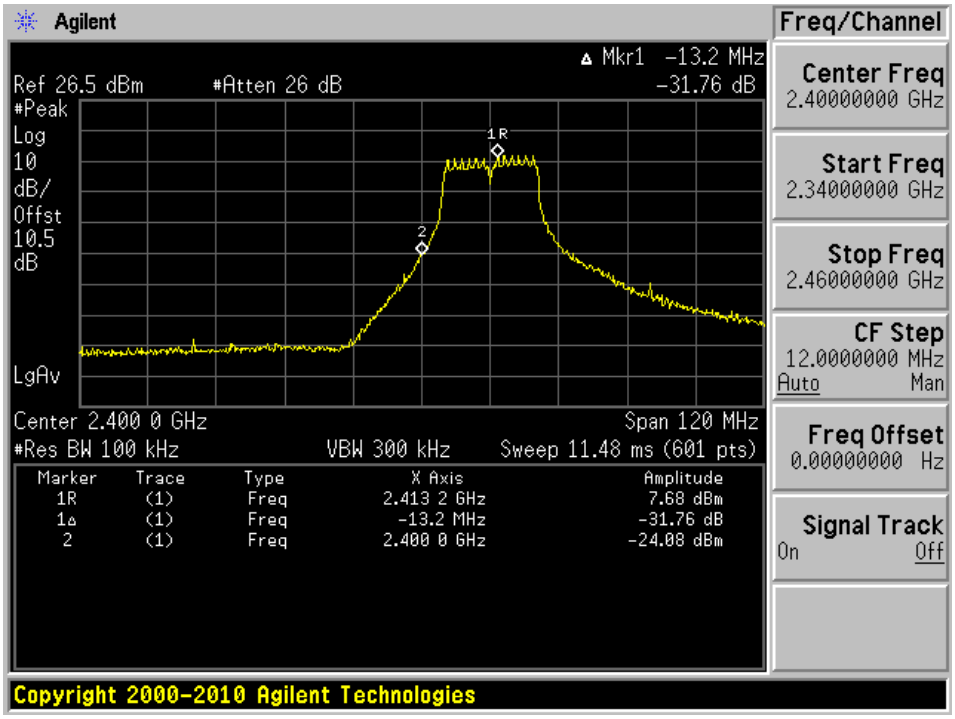
802.11b - Low Band Edge



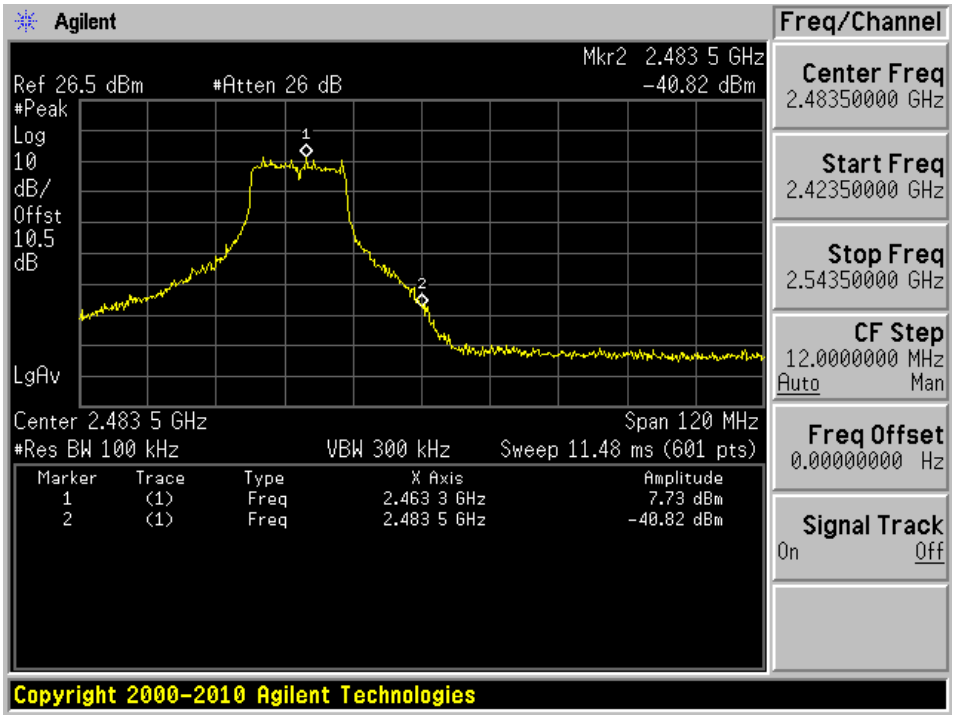
802.11b - High Band Edge



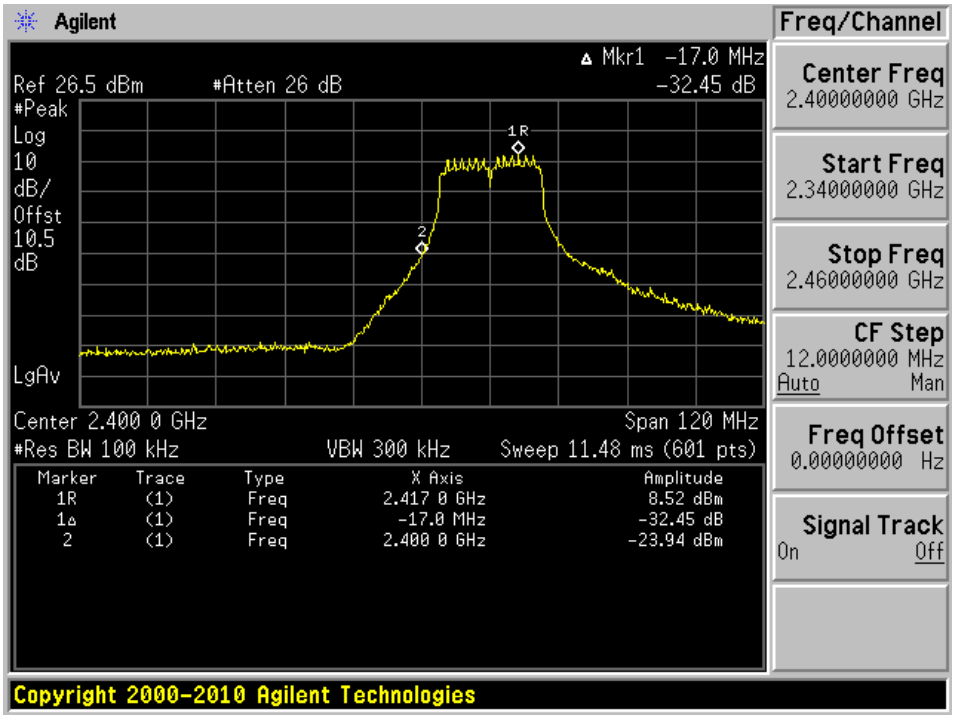
802.11g - Low Band Edge



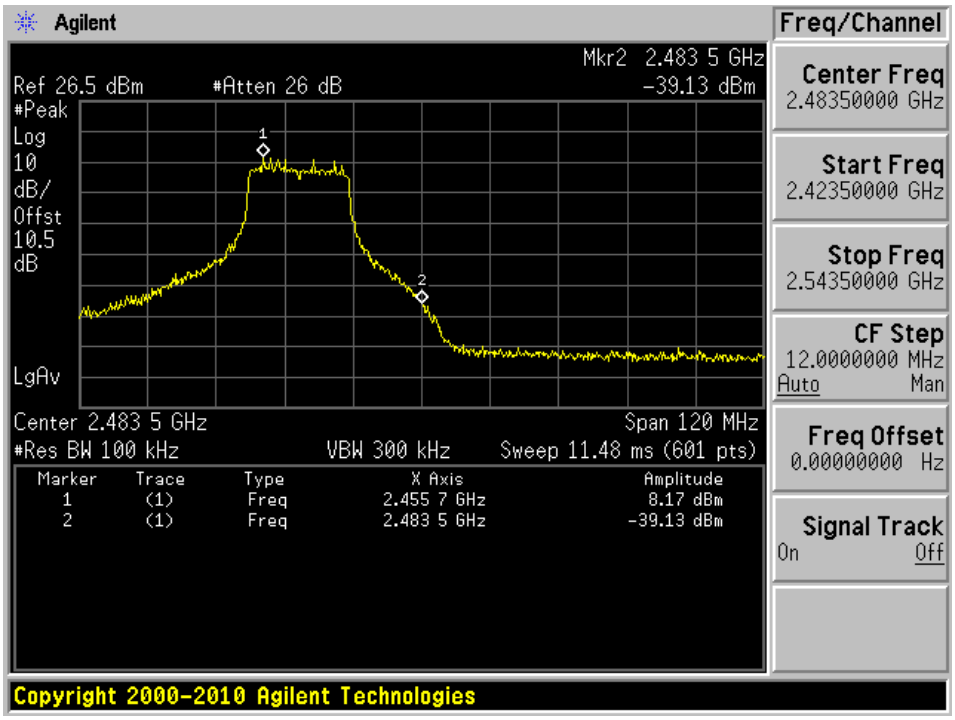
802.11g - High Band Edge



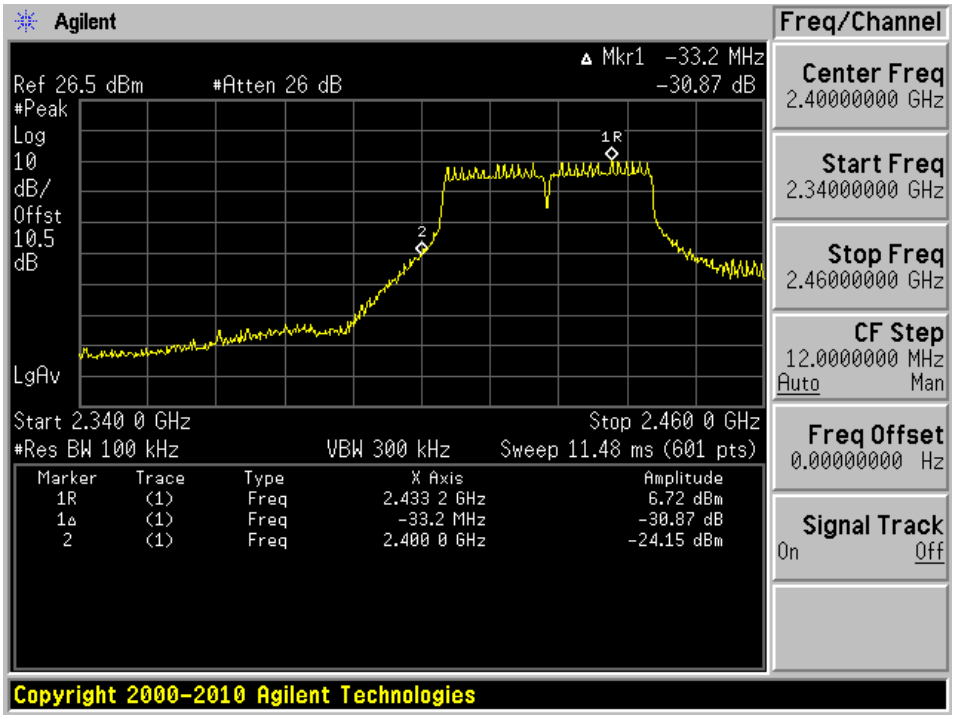
802.11n20 - Low Band Edge



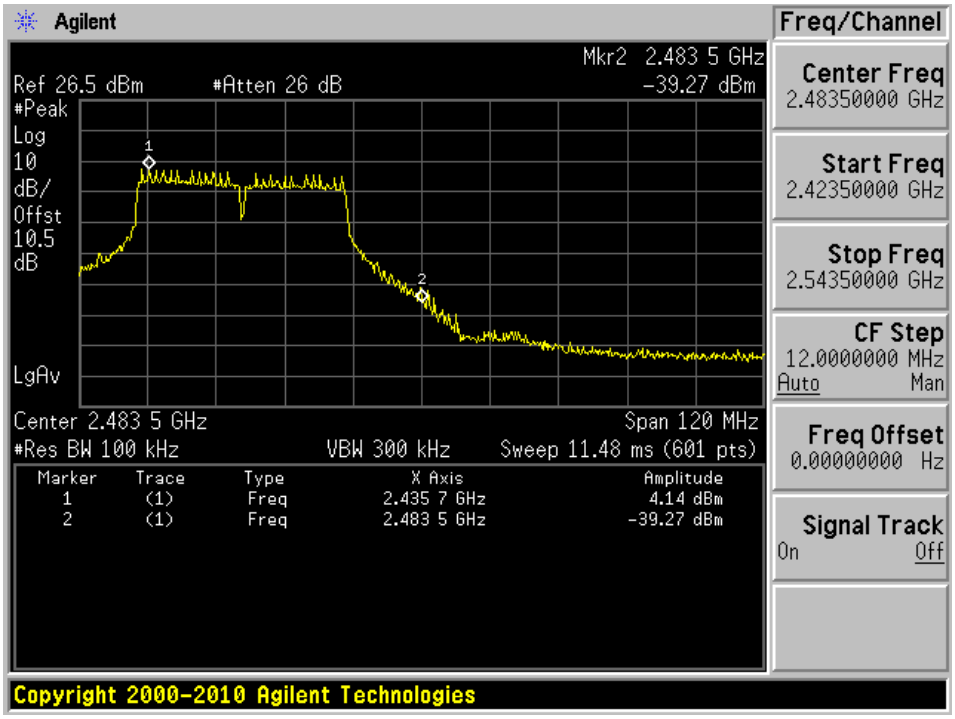
802.11n20 - High Band Edge



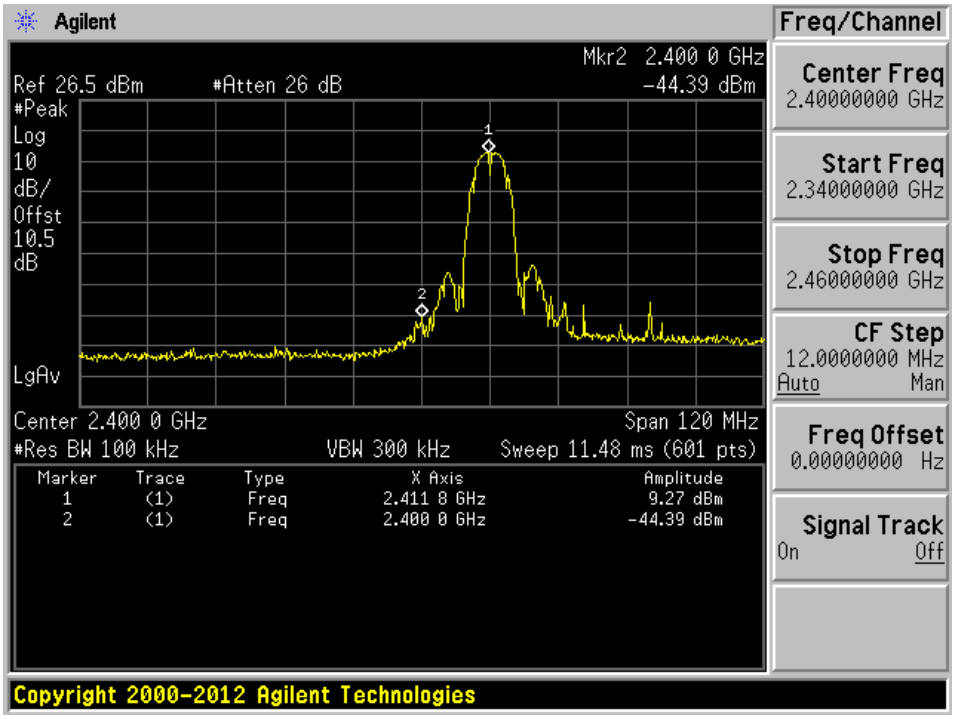
802.11n40 - Low Band Edge



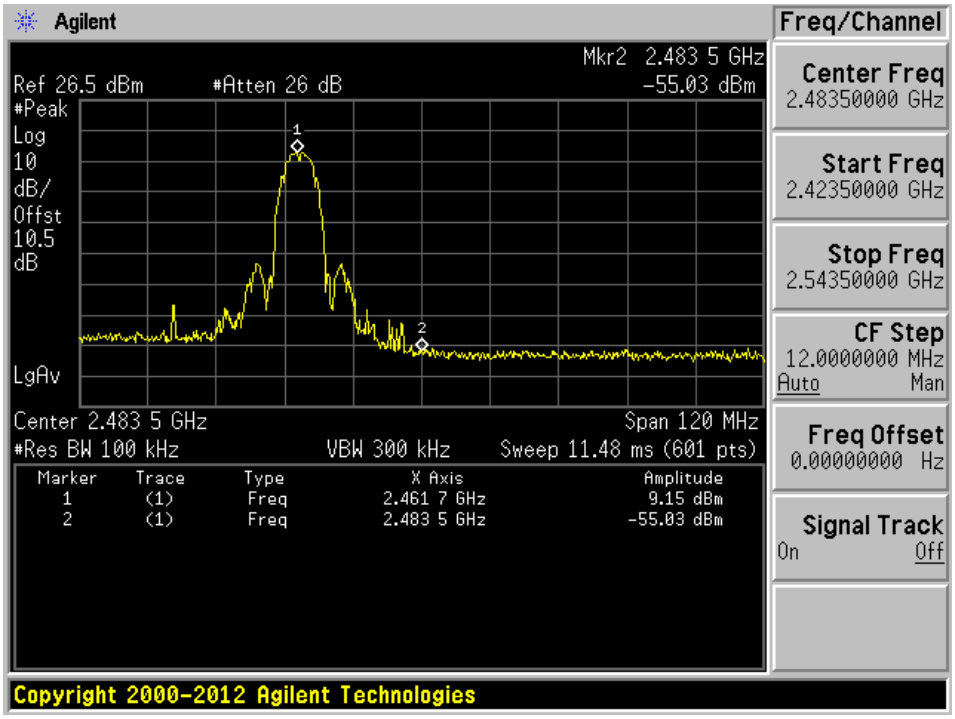
802.11n40 - High Band Edge



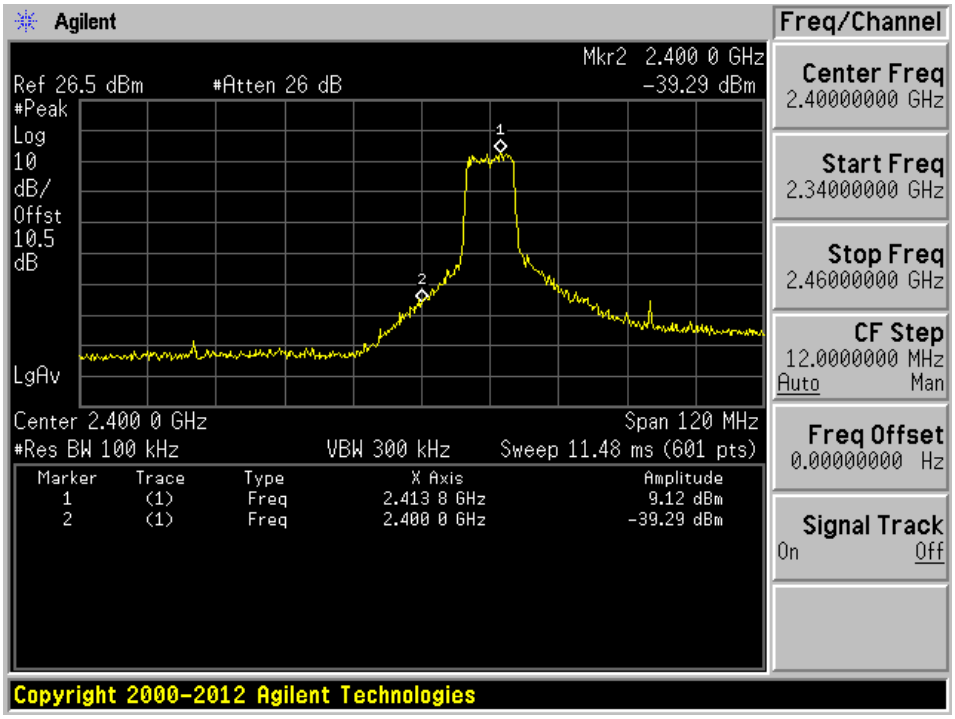
802.11b 10 MHz - Low Band Edge



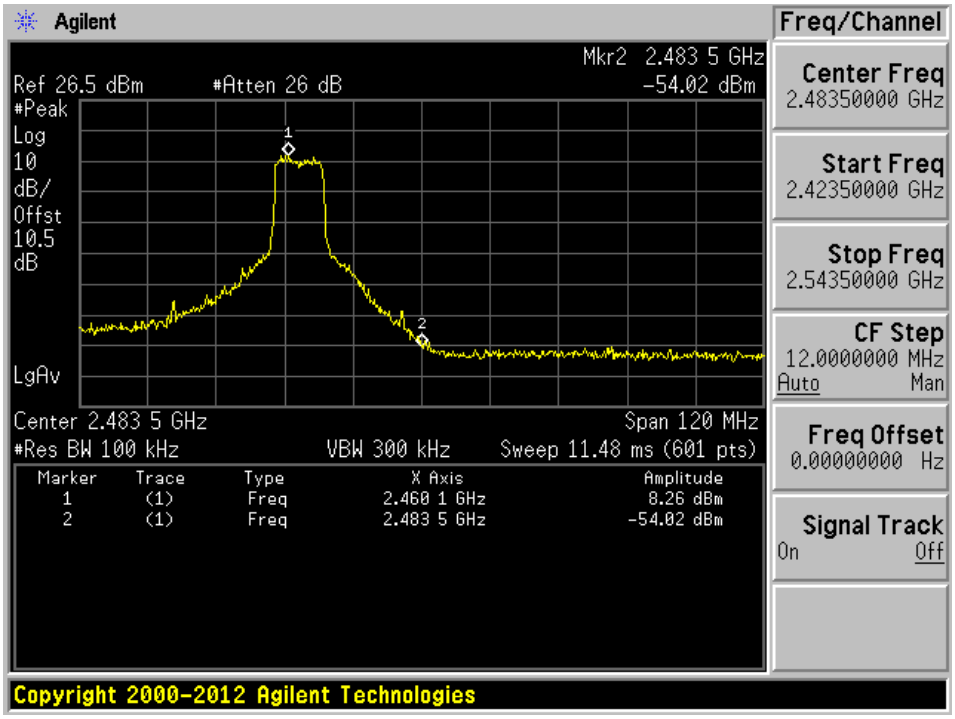
802.11b 10 MHz - High Band Edge



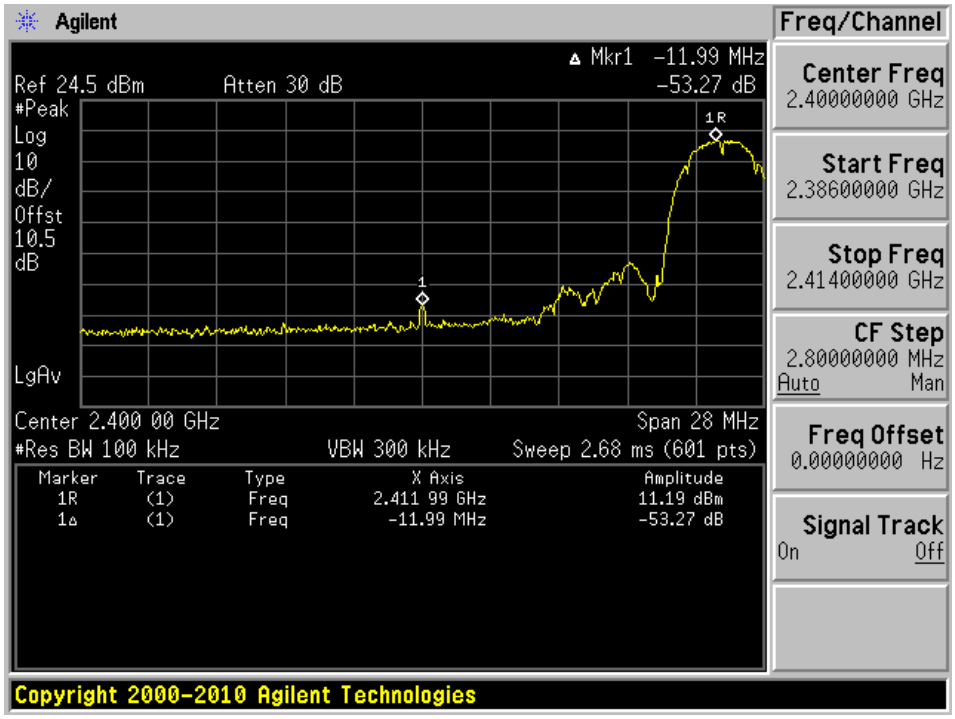
802.11g 10 MHz - Low Band Edge



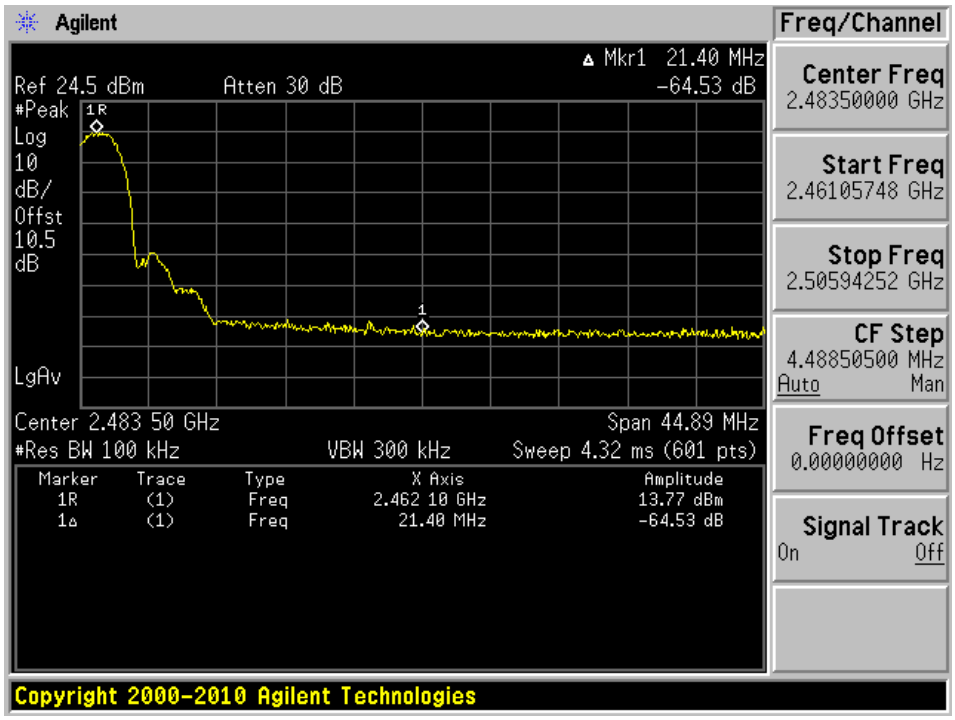
802.11g 10 MHz - High Band Edge



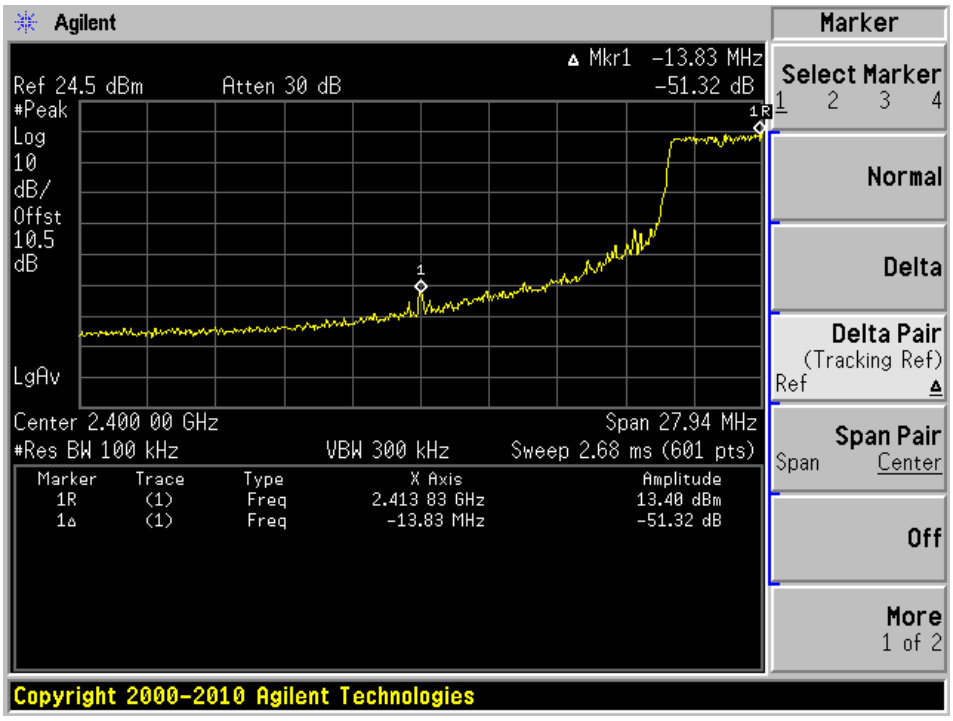
802.11b 5 MHz - Low Band Edge



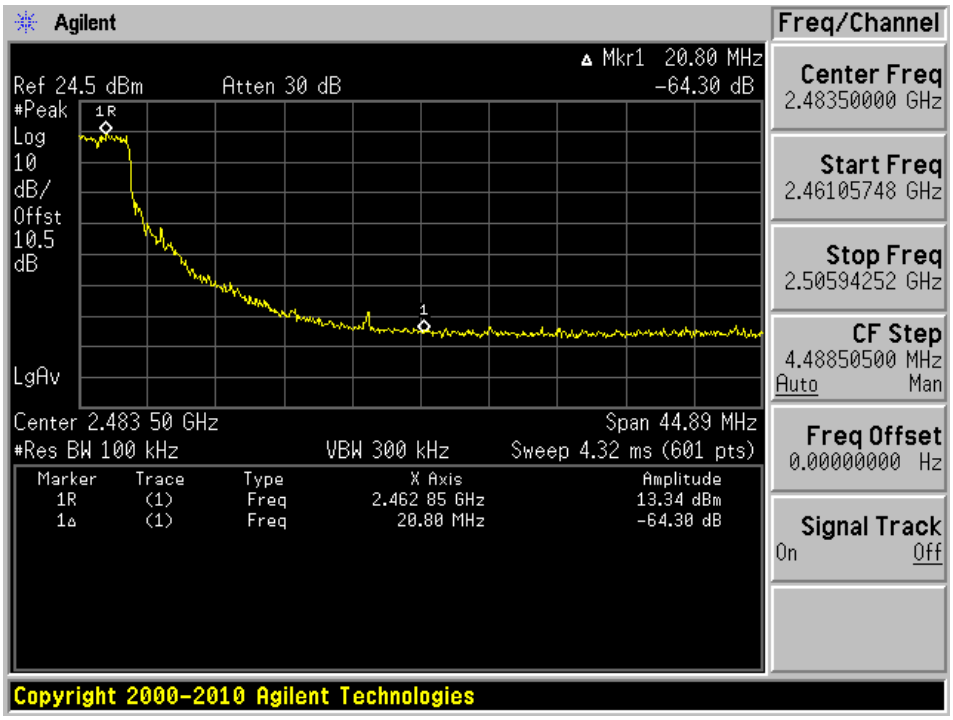
802.11b 5 MHz - High Band Edge



802.11g 5 MHz - Low Band Edge



802.11g 5 MHz - High Band Edge



11 FCC §15.247(e) & ICC RSS-247 §5.2 - Power Spectral Density

11.1 Applicable Standards

According to FCC §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.

According to RSS-247 §5.2(2), DTSs include systems that employ digital modulation techniques resulting in spectral characteristics similar to direct sequence systems. The following applies to the bands 902-928 MHz and 2400- 2483.5 MHz1 : The transmitter power spectral density conducted from the transmitter 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 Section 5.4(4), (i.e. the power spectral density shall be determined using the same method as is used to determine the conducted output power).

11.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v03r05: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 10: Maximum power spectral density level in the fundamental emission

11.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4440A	US42221851	2015-06-23	1 year
-	SMA Cable	-	C0001	Each Time[1]	N/A
Mini-Circuits	Attenuator	BW-S10W5	1430	Each Time[1]	N/A

Note[1]: cable and attenuator included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.*

11.4 Test Environmental Conditions

Temperature:	21-25 ºC
Relative Humidity:	42-45 %
ATM Pressure:	102.1-103.7 kPa

The testing was performed by Todd Moy/Leonard Gray on 2016-04-20/2016-05-12 in RF site.

11.5 Test Results

Please refer to the following table and plots for the details.

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Total Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
		Chain 0	Chain 1			
802.11b						
Low	2412	-5.32	-4.50	-1.88	1	-2.88
Middle	2437	-4.84	-5.04	-1.93	1	-2.93
High	2462	-4.39	-5.58	-1.93	1	-2.93
802.11g						
Low	2412	-5.99	-5.05	-2.48	1	-3.48
Middle	2437	-5.95	-4.92	-2.39	1	-3.39
High	2462	-5.02	-6.16	-2.54	1	-3.54
802.11n20						
Low	2412	-6.96	-6.69	-3.81	1	-4.81
Middle	2437	-6.05	-7.33	-3.63	1	-4.63
High	2462	-5.96	-6.10	-3.02	1	-4.02
802.11n40						
Low	2422	-9.50	-8.89	-6.17	1	-7.17
Middle	2437	-10.41	-10.25	-7.32	1	-8.32
High	2452	-10.36	-10.40	-7.37	1	-8.37
802.11b 10MHz Bandwidth						
Low	2412	-3.13	-2.41	0.26	1	-0.74
Middle	2437	-2.82	-3.12	0.04	1	-0.96
High	2462	-3.49	-2.98	-0.22	1	-1.22
802.11g 10MHz Bandwidth						
Low	2412	-2.50	-2.42	0.55	1	-0.45
Middle	2437	-3.49	-3.27	-0.37	1	-1.37
High	2462	-3.80	-2.98	-0.36	1	-1.36
802.11b 5MHz Bandwidth						
Low	2412	-7.093	-7.075	-4.07	1	-5.07
Middle	2437	-7.313	-7.193	-4.24	1	-5.24
High	2462	-6.849	-6.368	-3.59	1	-4.59
802.11g 5MHz Bandwidth						
Low	2412	-8.640	-8.771	-5.69	1	-6.69
Middle	2437	-9.341	-8.923	-6.12	1	-7.12
High	2462	-8.625	-9.081	-5.84	1	-6.84

Note: $PSD_{OUT} = PSD_{Limit} - (G_{TX} - 6)$, where:

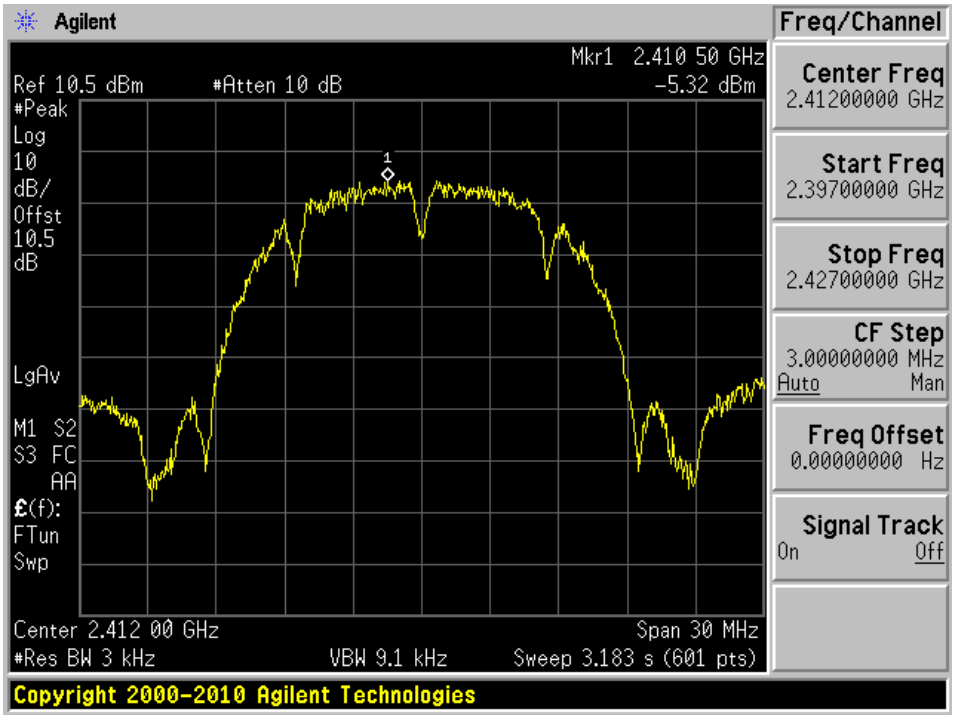
PSD_{OUT} is the maximum conducted power spectral density in dBm/3kHz,
PSD_{Limit} is the power spectral density limit in dBm/3kHz,
G_{TX} is the maximum transmitting antenna directional gain in dBi.

The PSD_{Limit} is 8dBm/3kHz, and G_{TX} is 13 dBi, thus the maximum PSD limit is 1dBm/3kHz

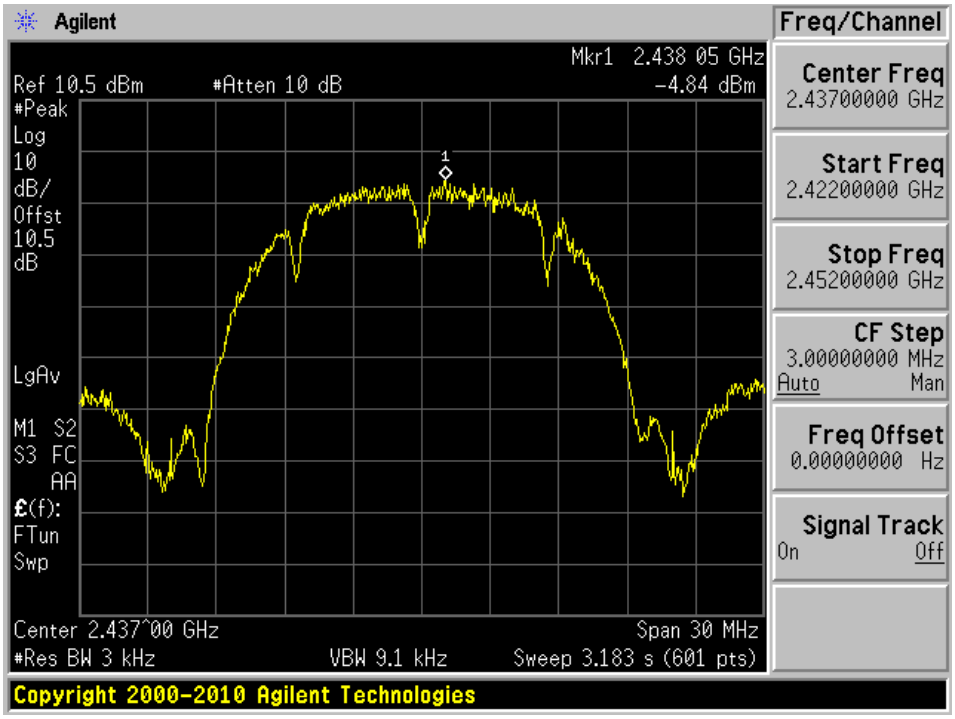
Note: 802.11b/802.11g 5MHz were tested utilizing the average power spectral density (PSD) method as described in KDB 558074 D01 DTS Meas. Guidance v03v05.

Chain 0

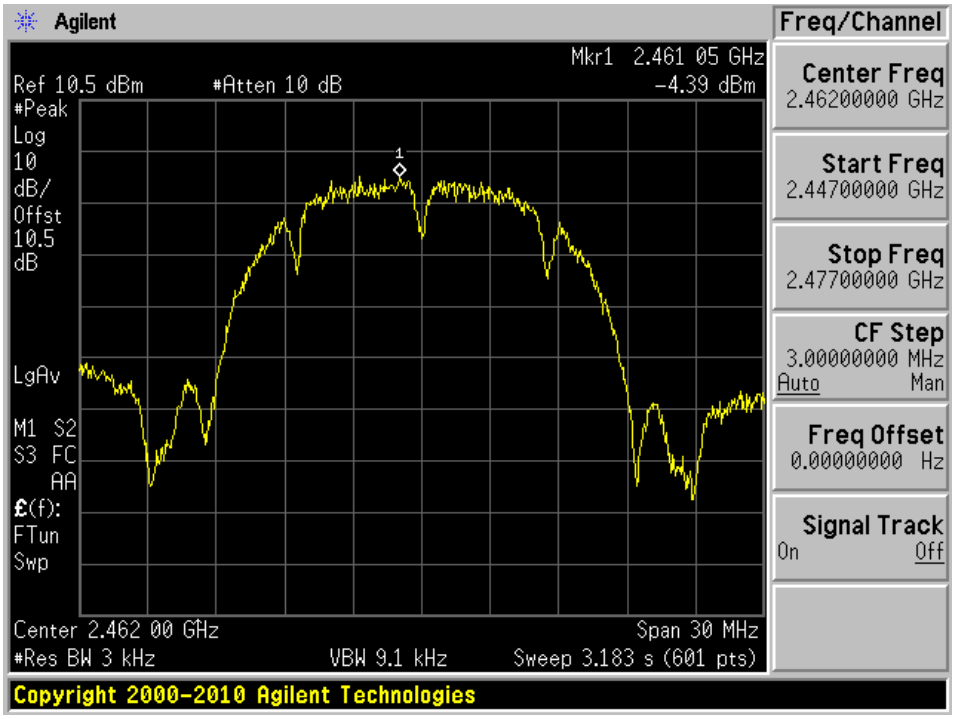
802.11b - 2412 MHz



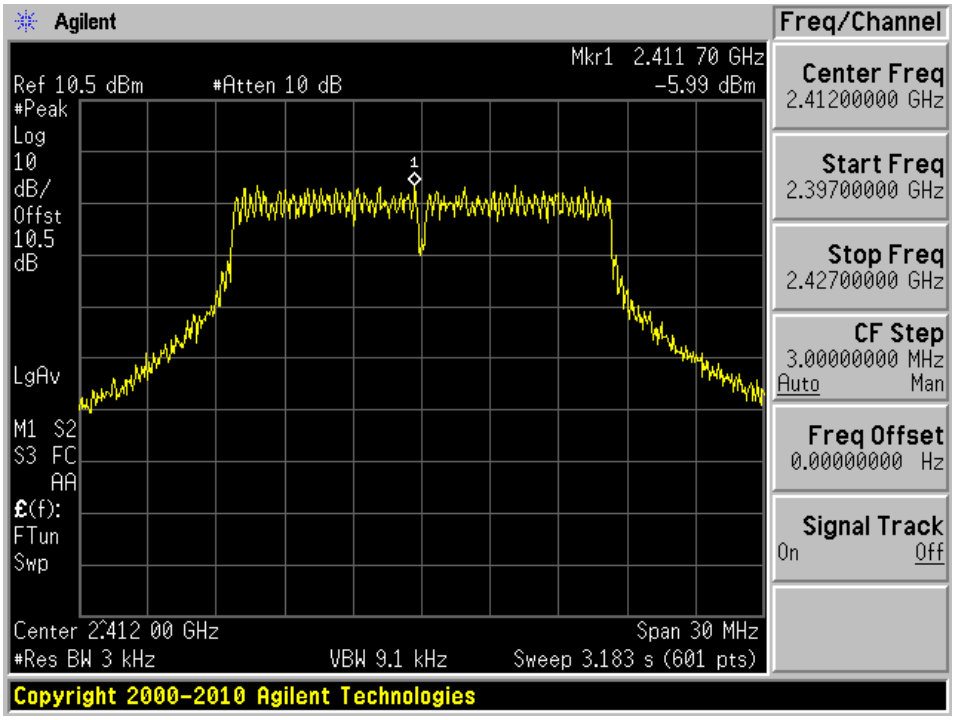
802.11b - 2437 MHz



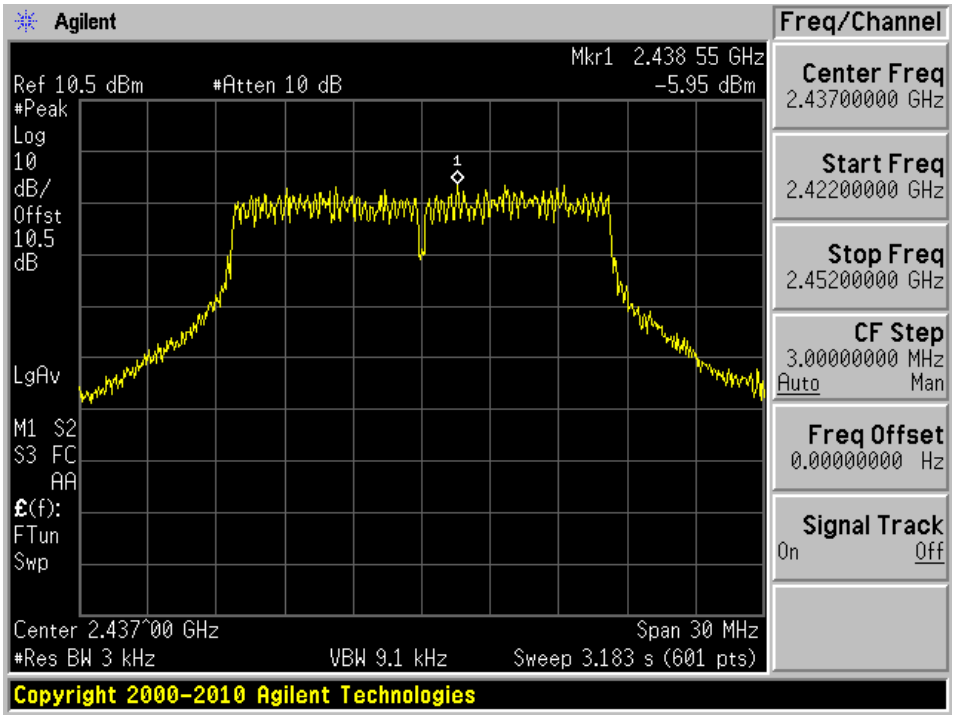
802.11b - 2462 MHz



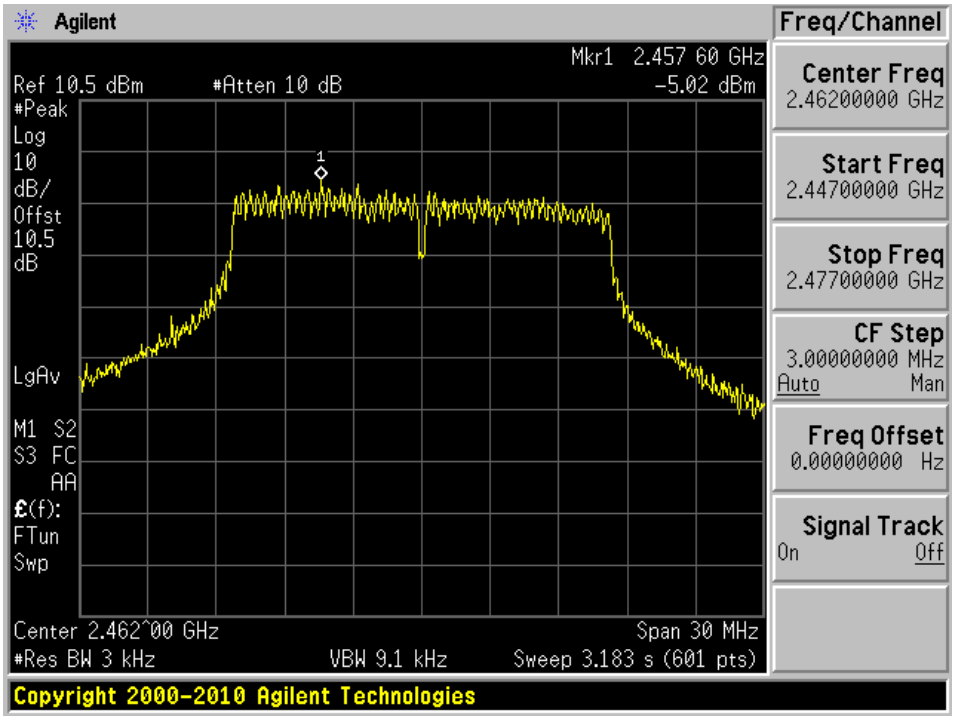
802.11g - 2412 MHz



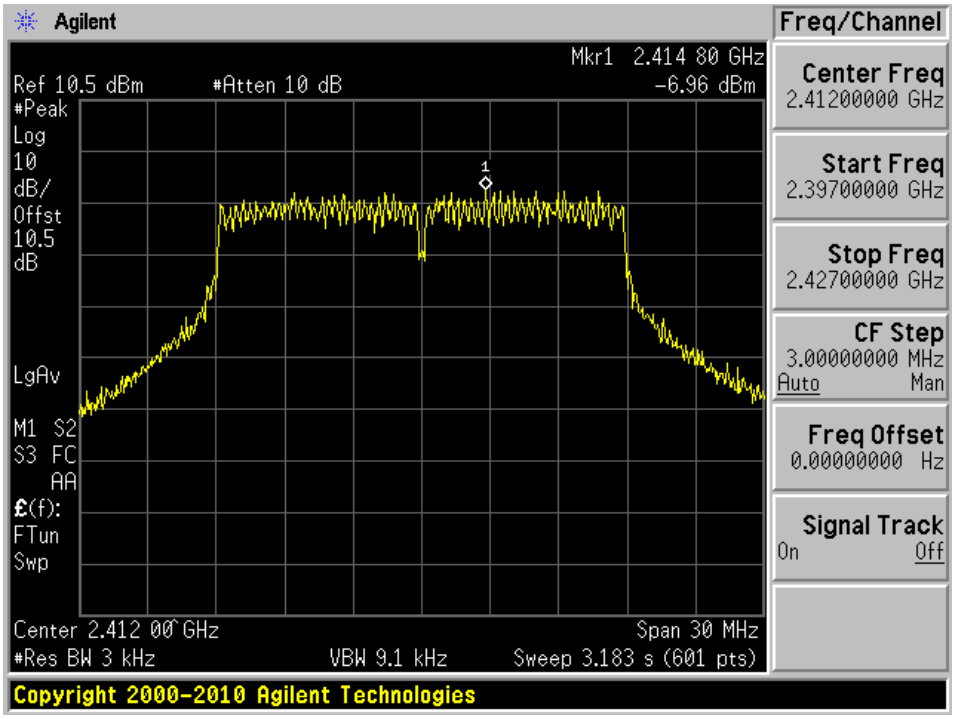
802.11g - 2437 MHz



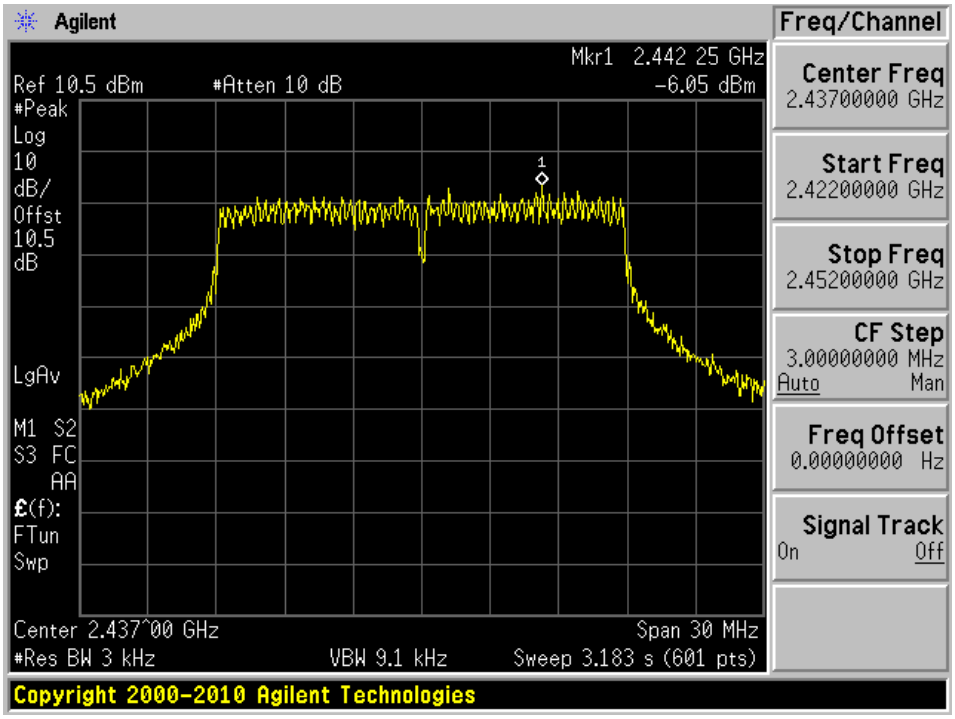
802.11g - 2462 MHz



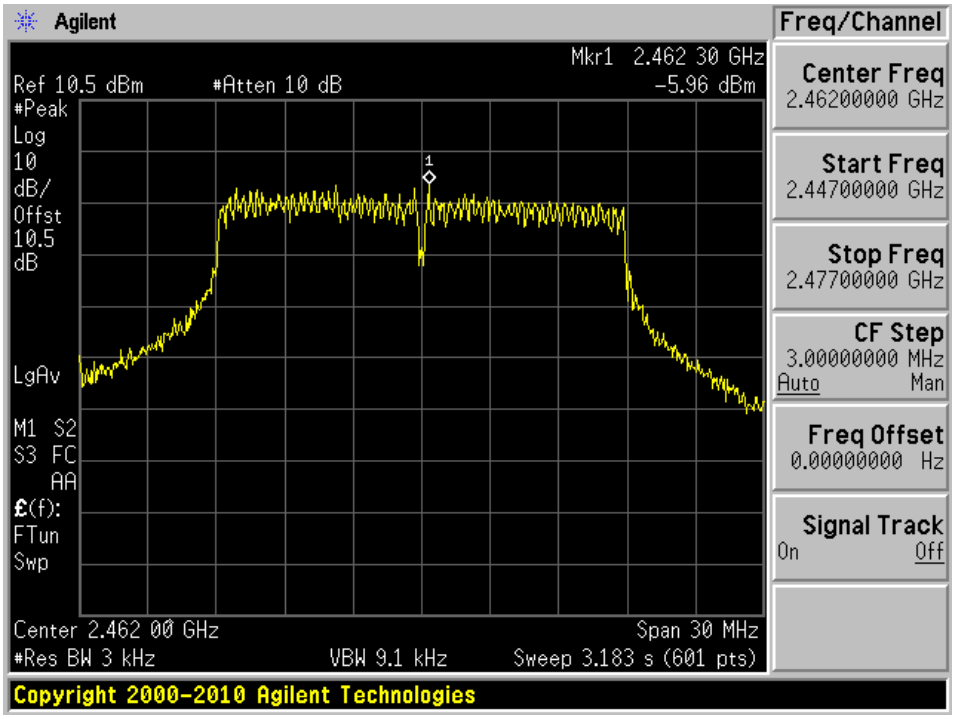
802.11n20 - 2412 MHz



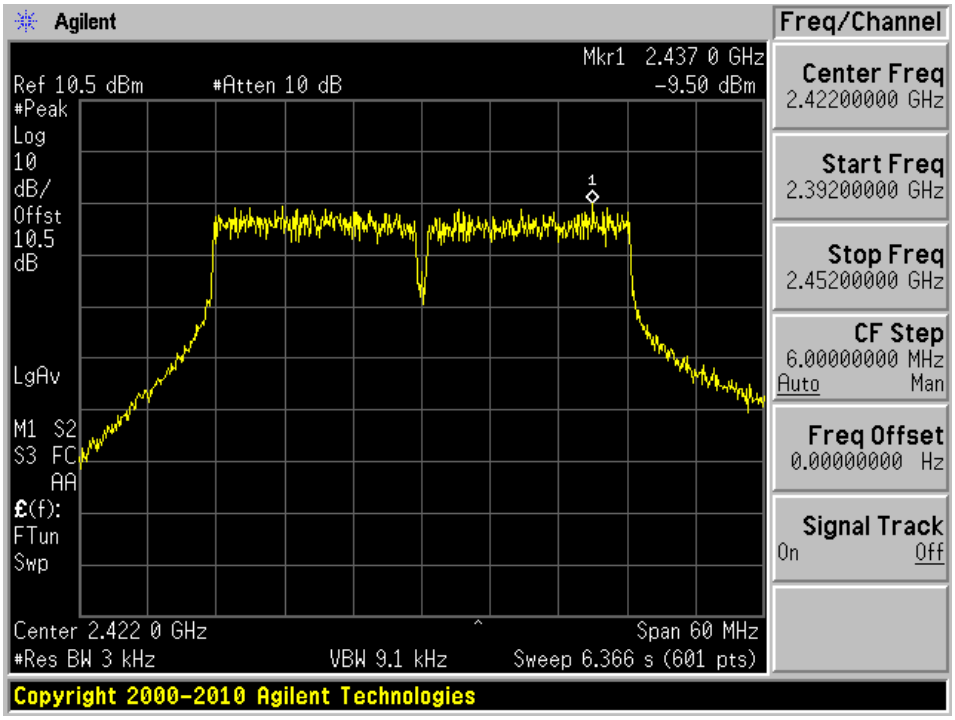
802.11n20 - 2437 MHz



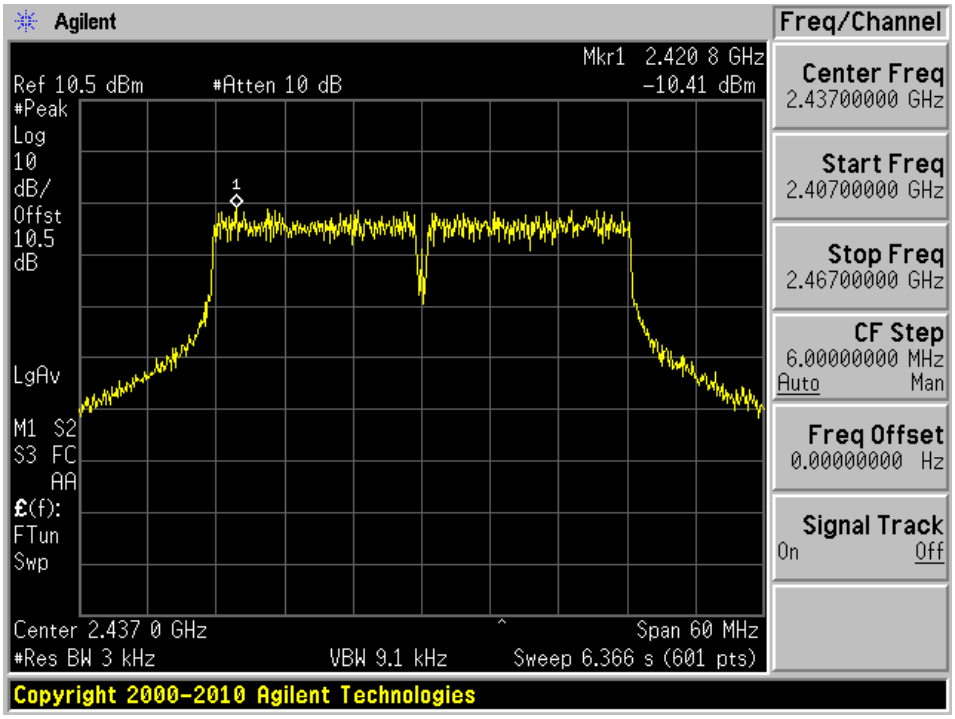
802.11n20 - 2462 MHz



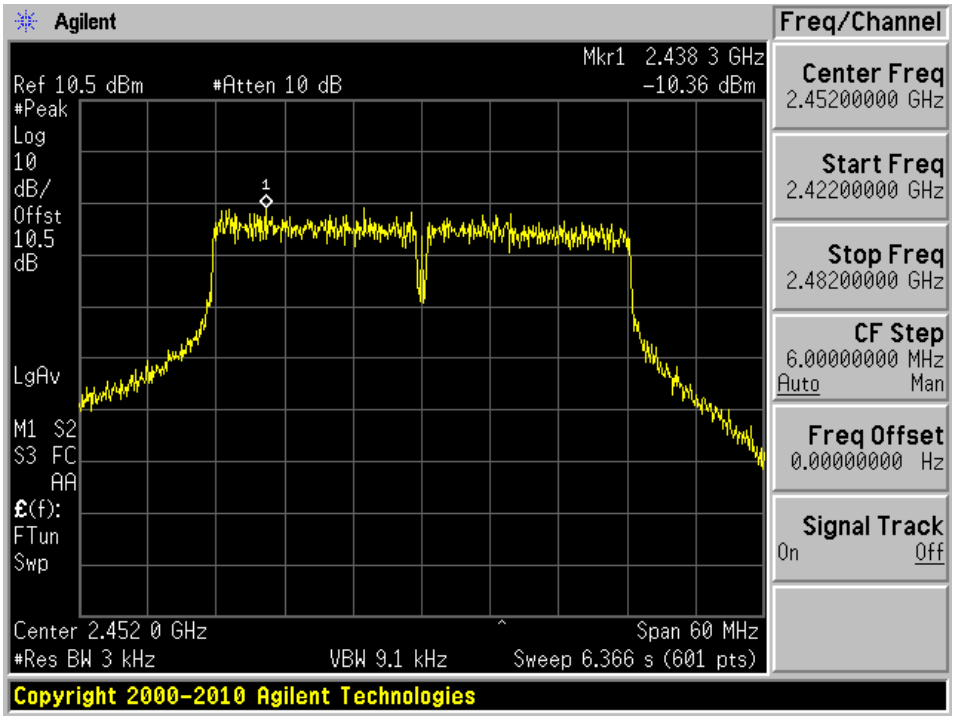
802.11n40 - 2422 MHz



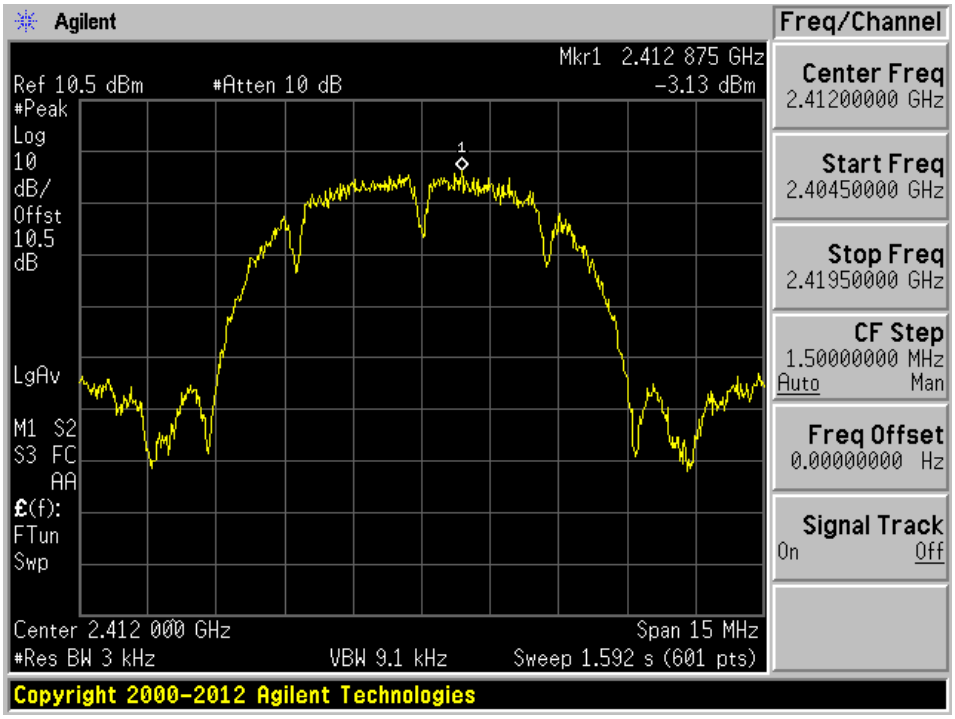
802.11n40 - 2437 MHz



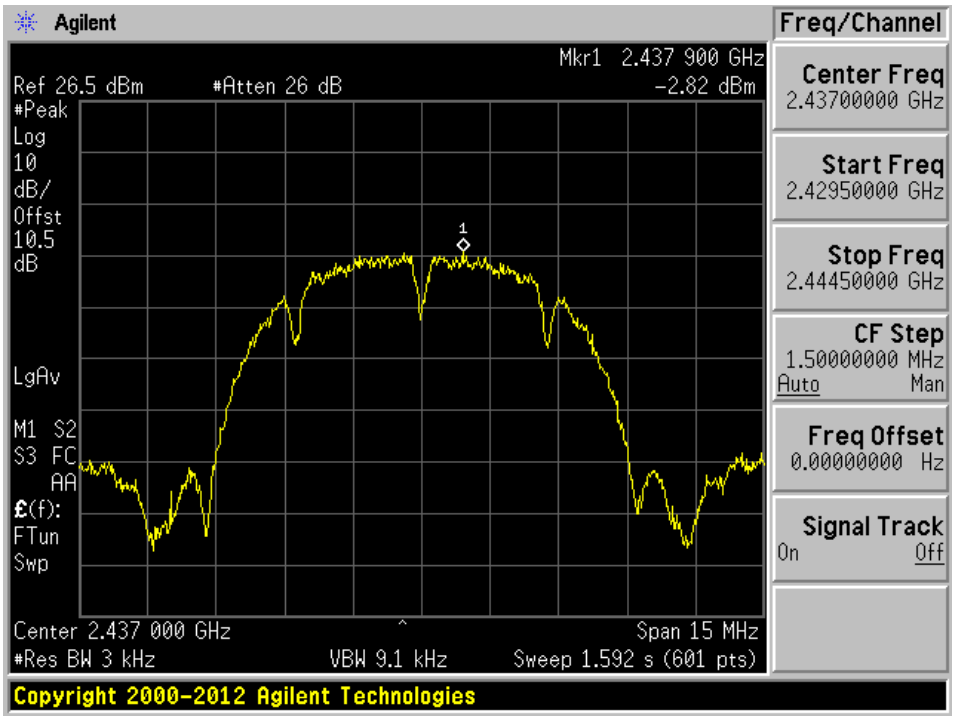
802.11n40 - 2452 MHz



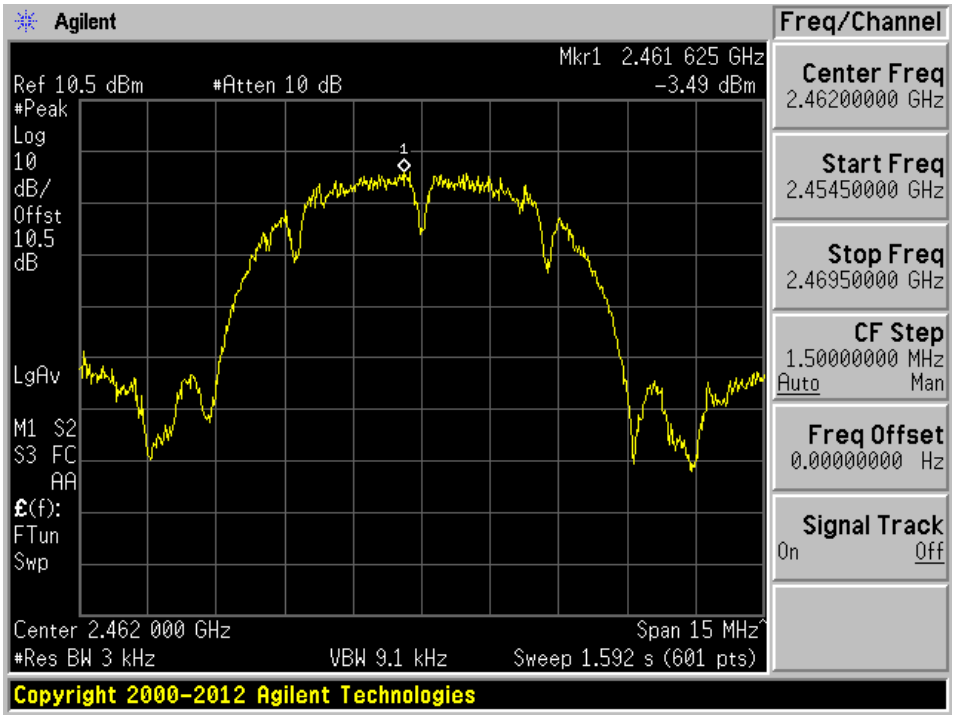
802.11b 10MHz - 2412 MHz



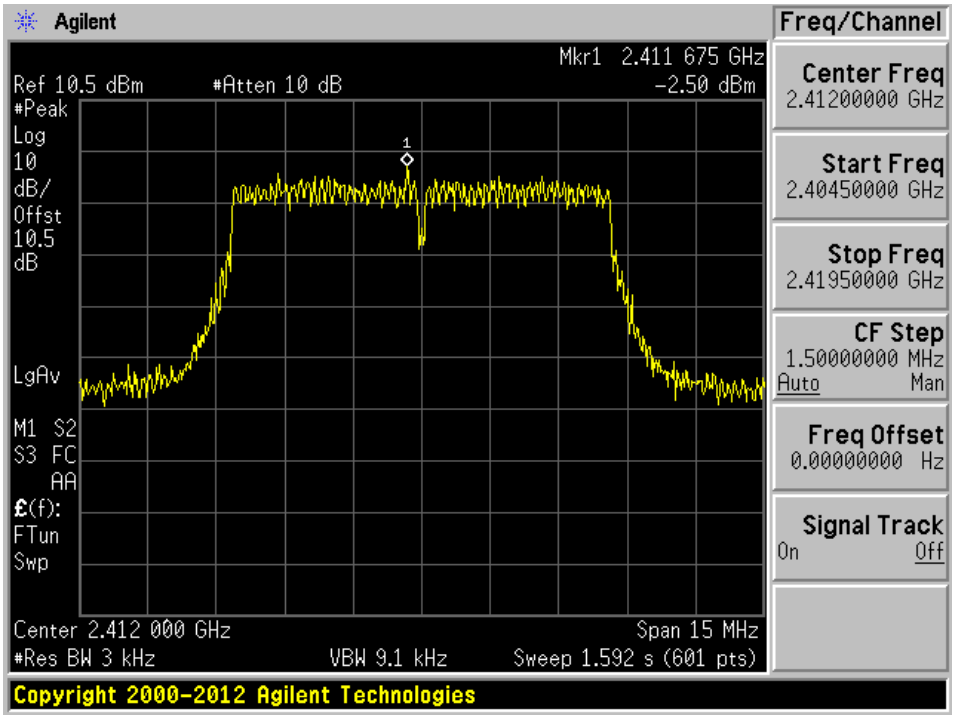
802.11b 10MHz - 2437 MHz



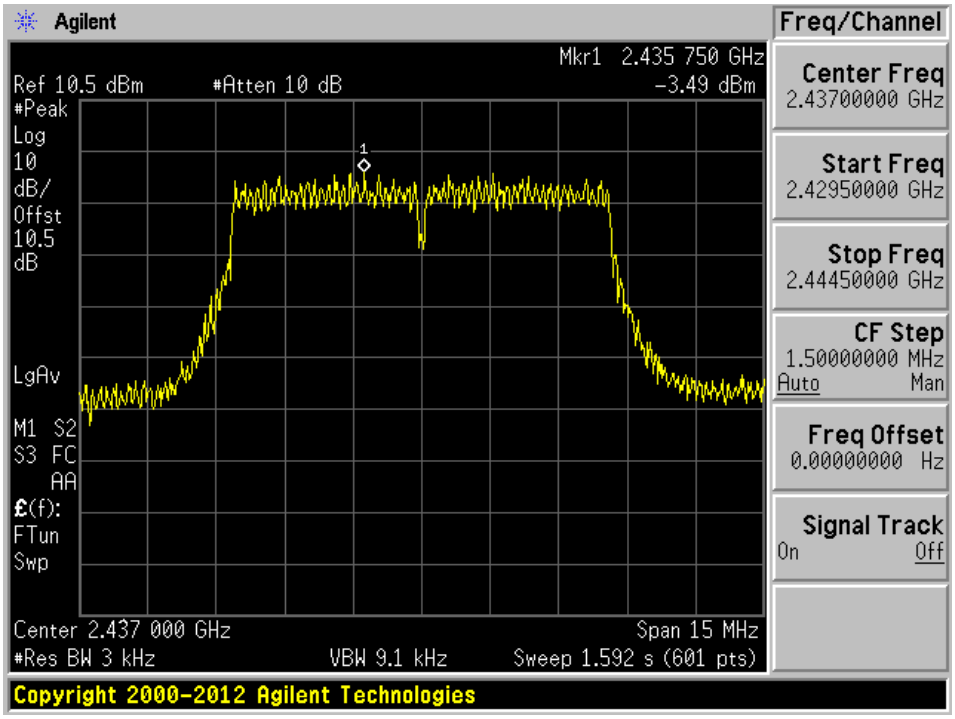
802.11b 10MHz - 2462 MHz



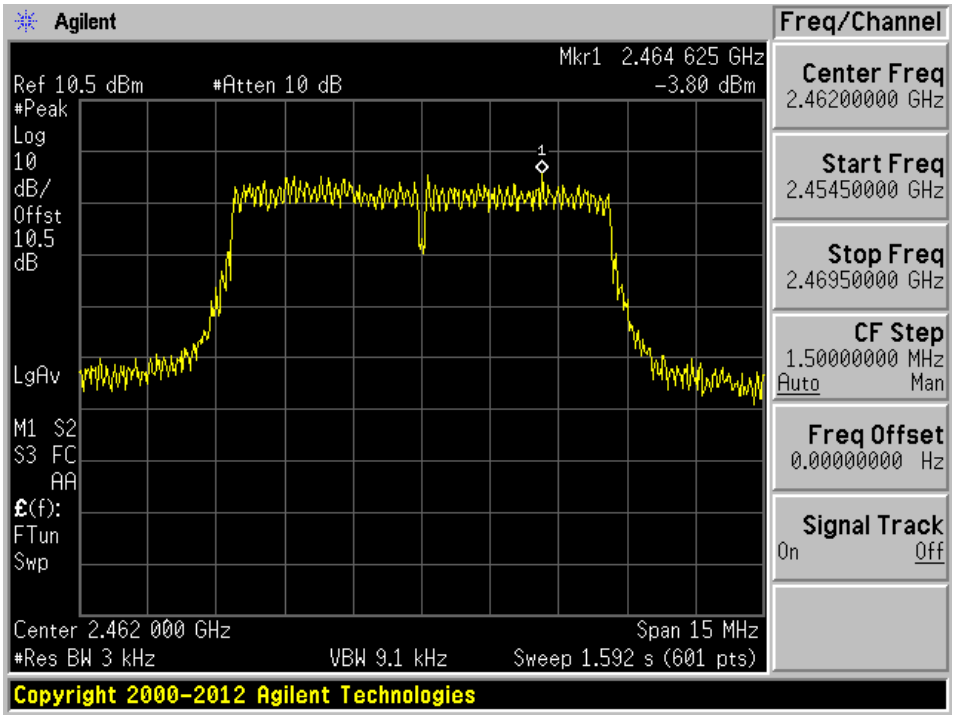
802.11g 10MHz - 2412 MHz



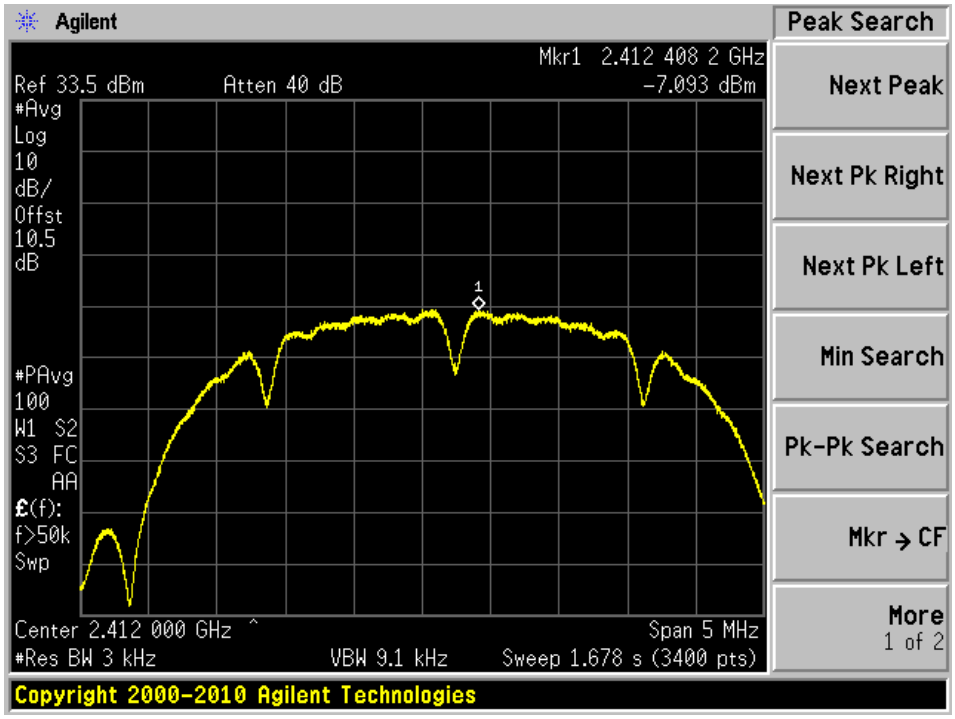
802.11g 10MHz - 2437 MHz



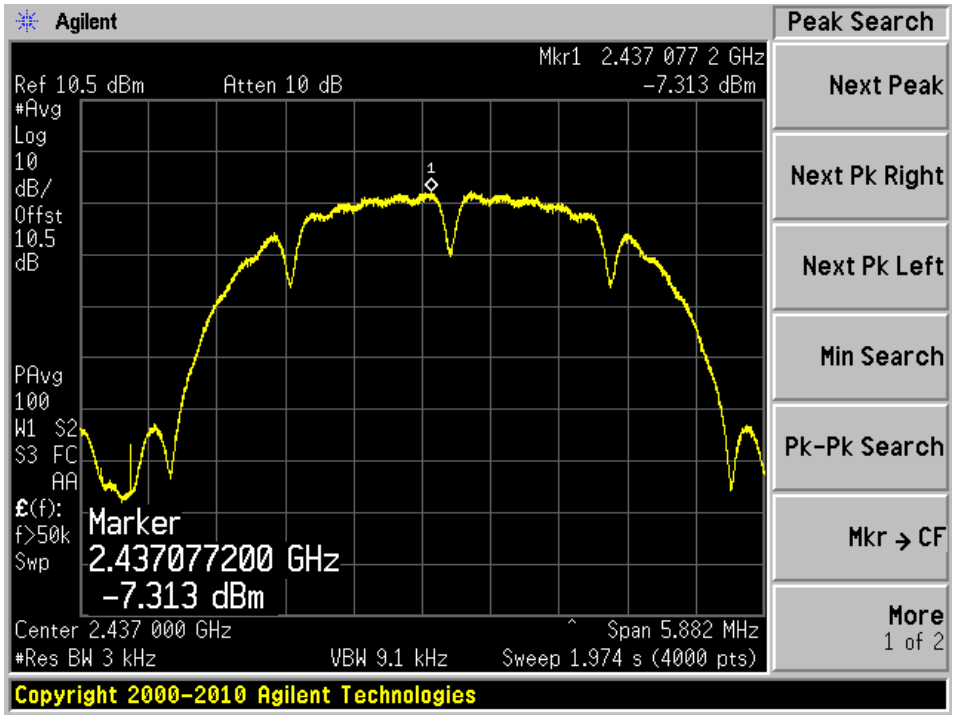
802.11g 10MHz - 2462 MHz



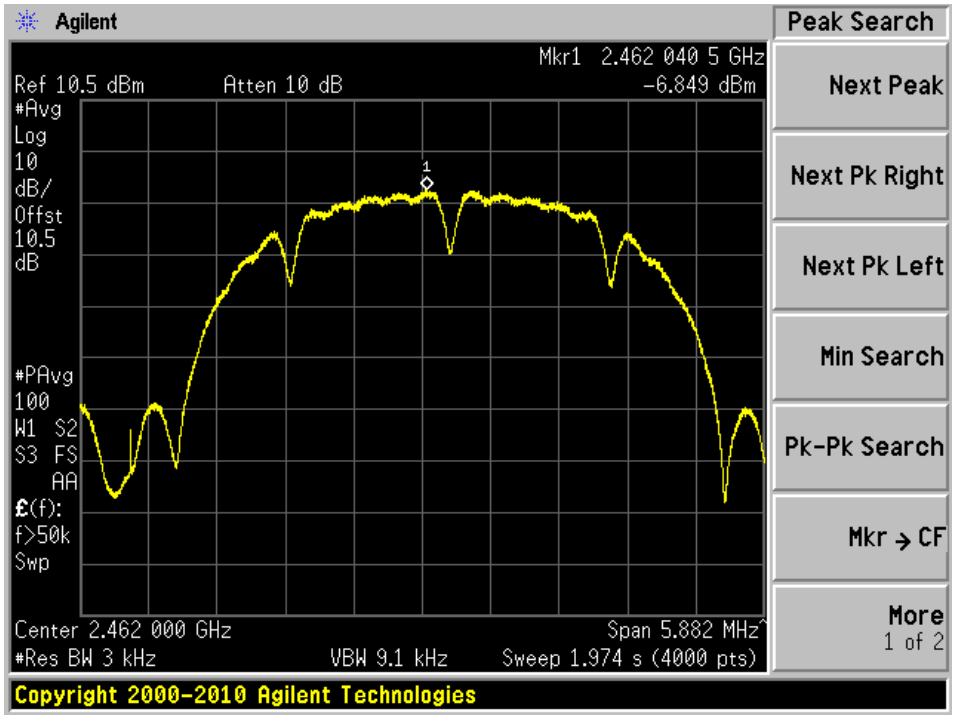
802.11b 5MHz - 2412 MHz



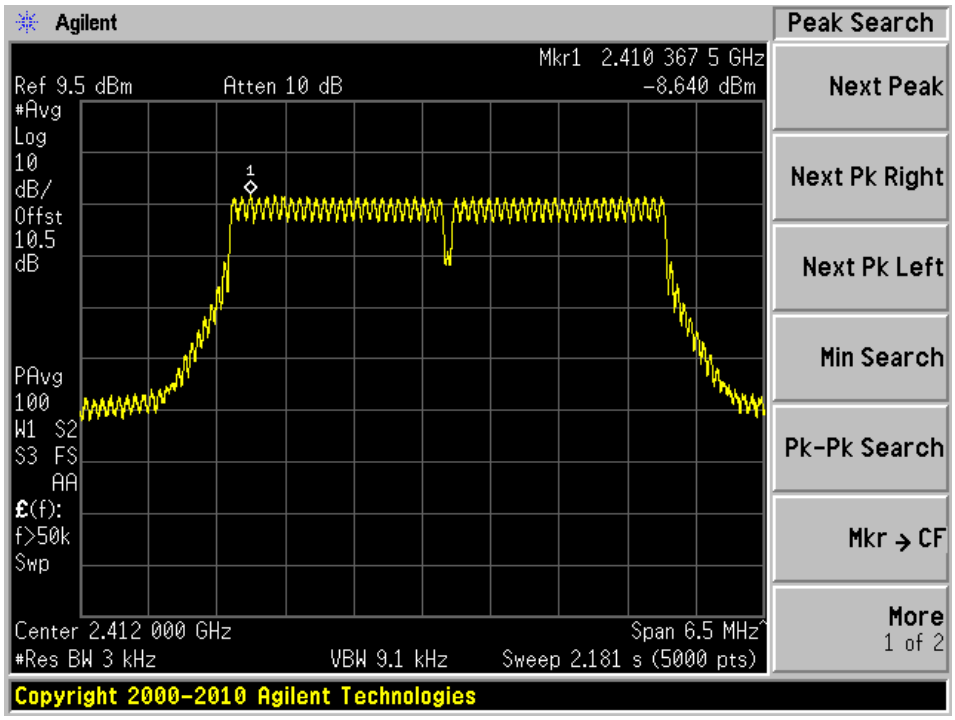
802.11b 5MHz - 2437 MHz



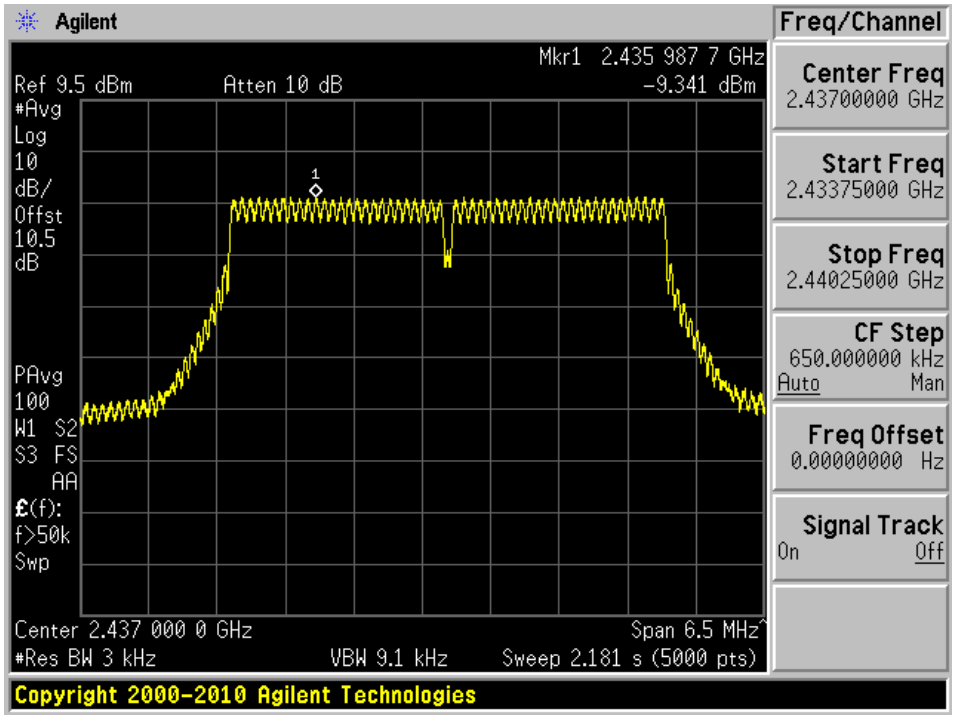
802.11b 5MHz - 2462 MHz



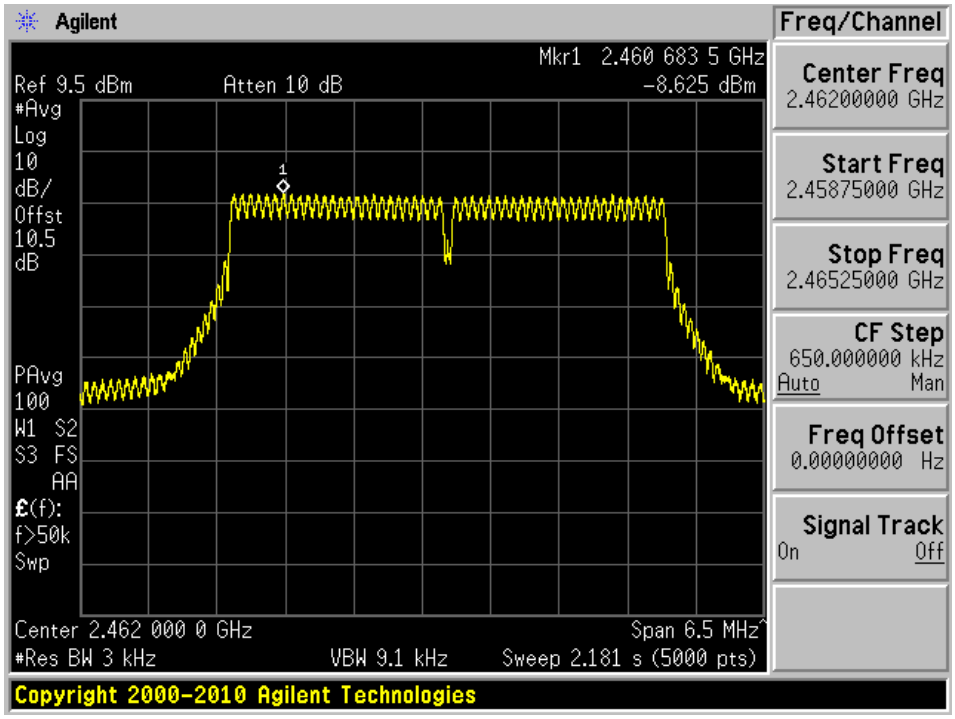
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz

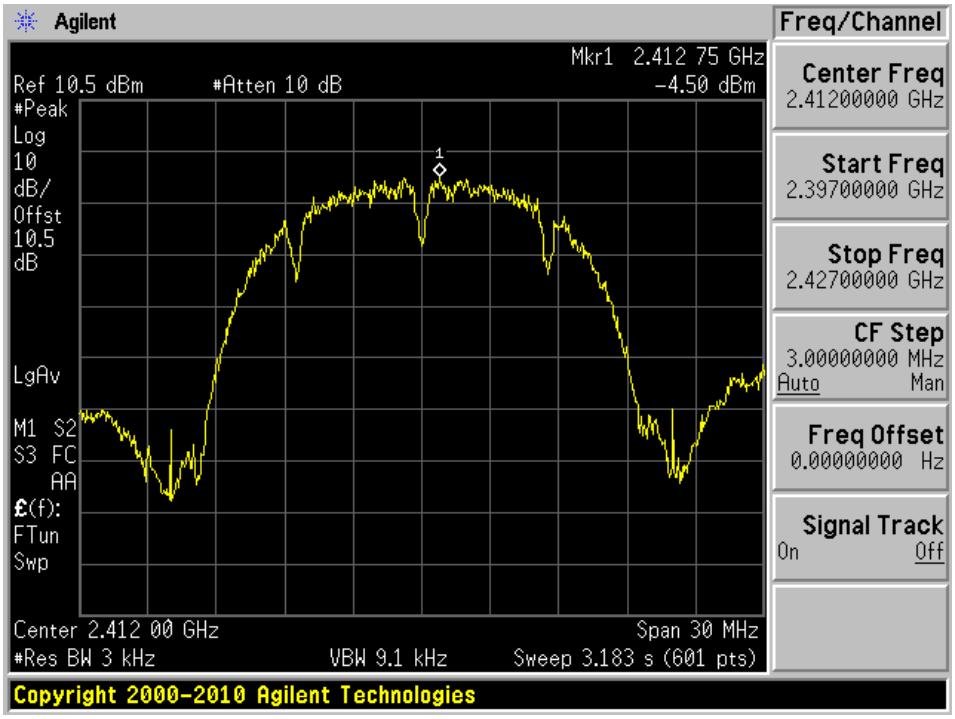


802.11g 5MHz - 2462 MHz

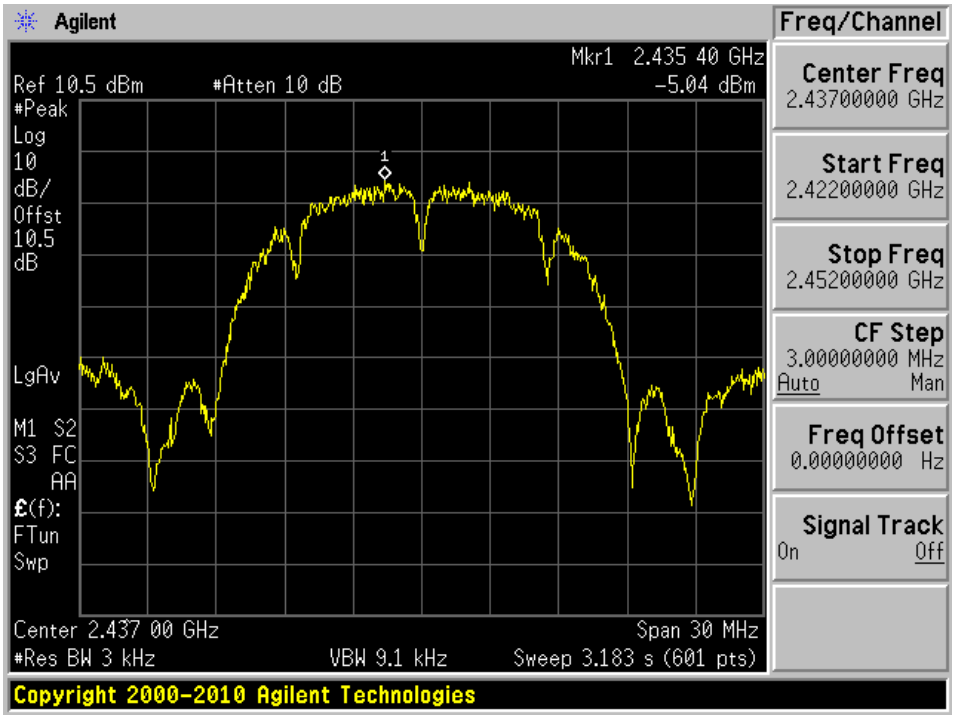


Chain 1

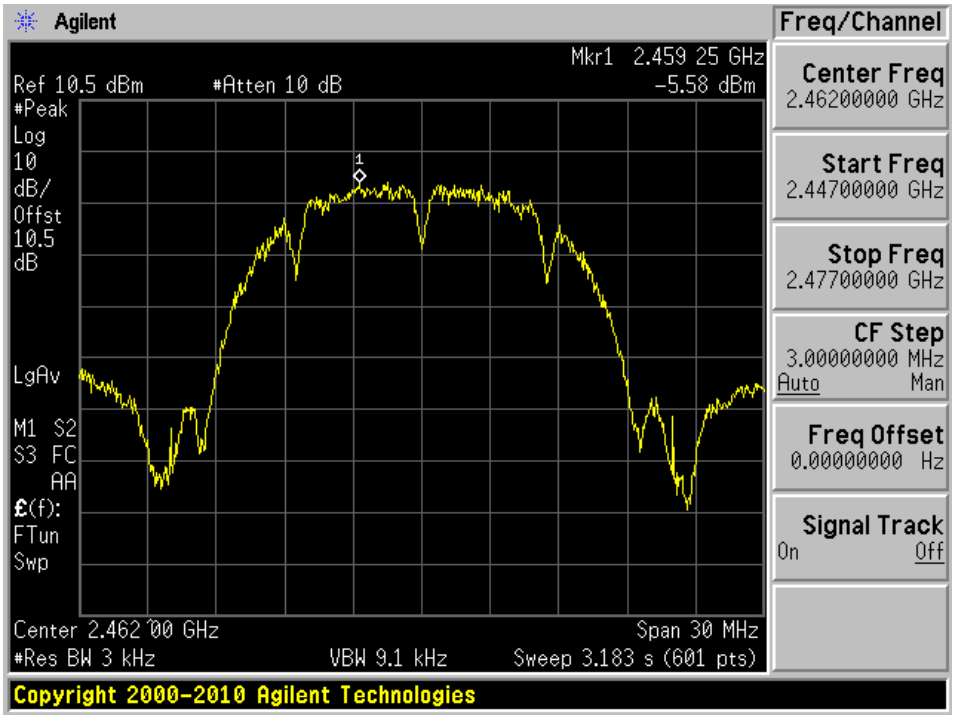
802.11b - 2412 MHz



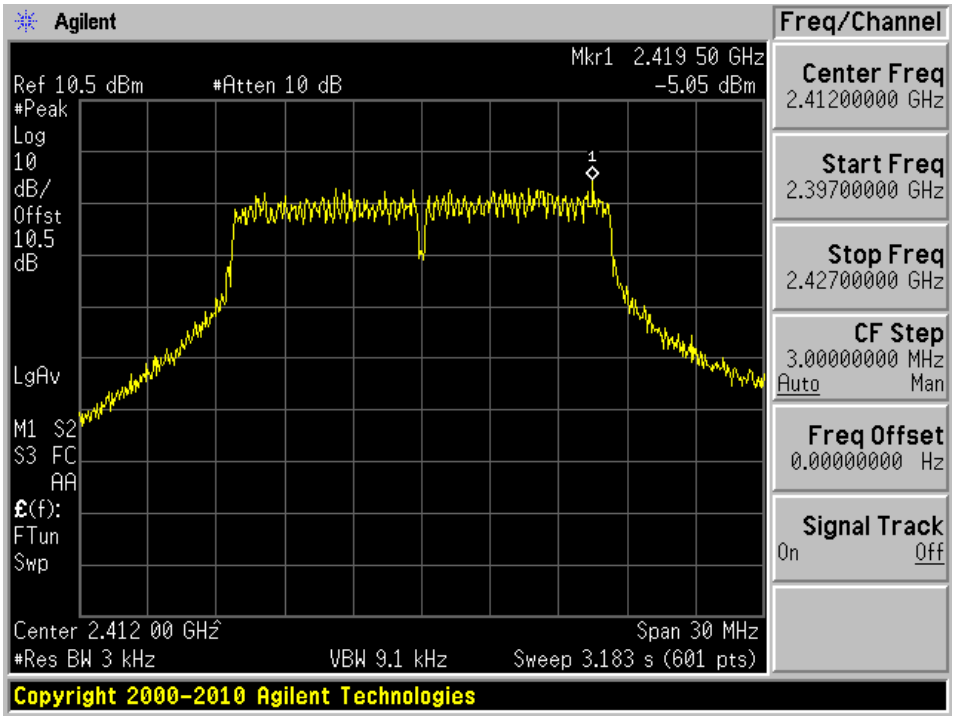
802.11b - 2437 MHz



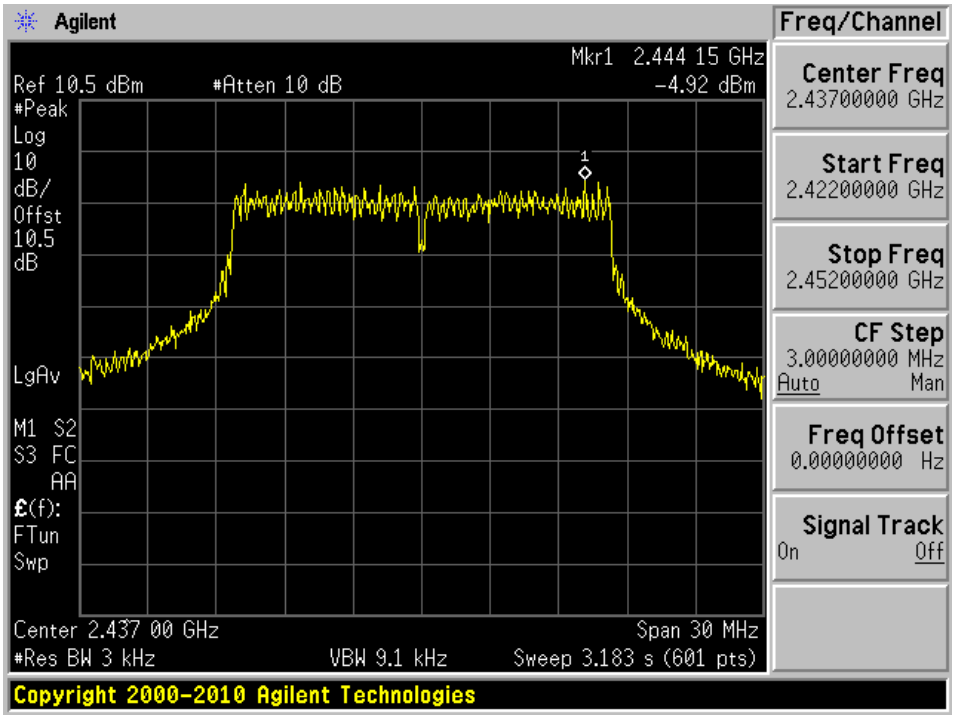
802.11b - 2462 MHz



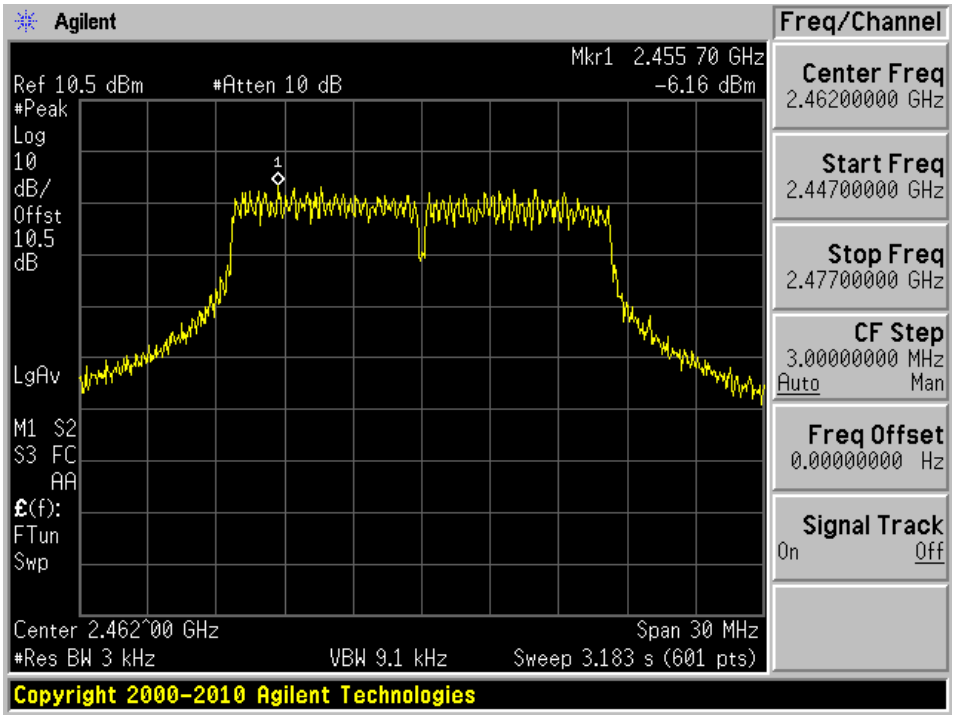
802.11g - 2412 MHz



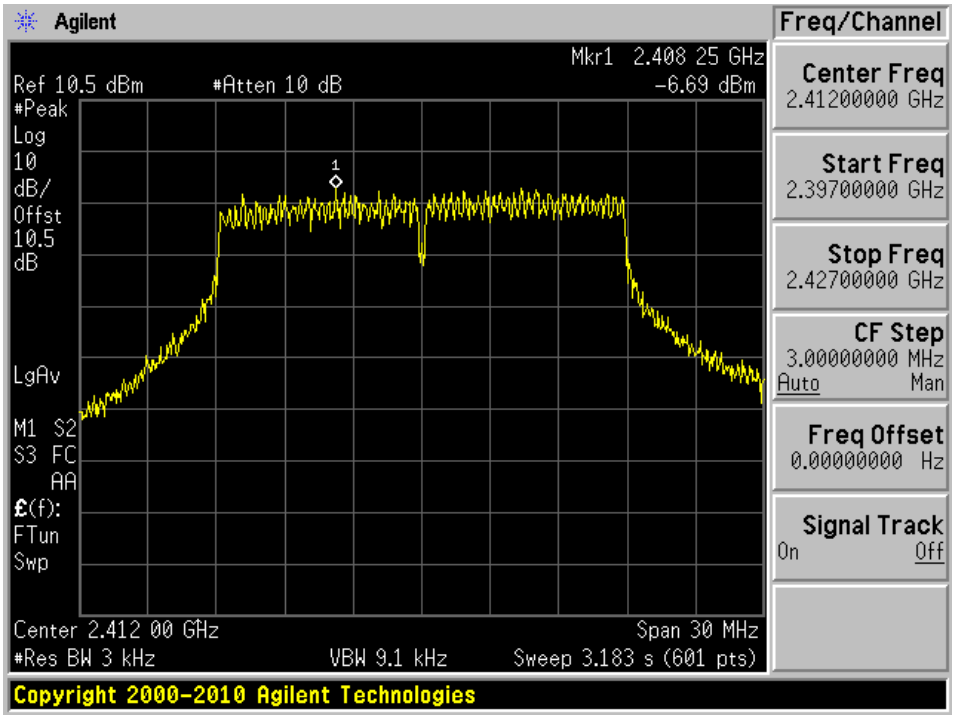
802.11g - 2437 MHz



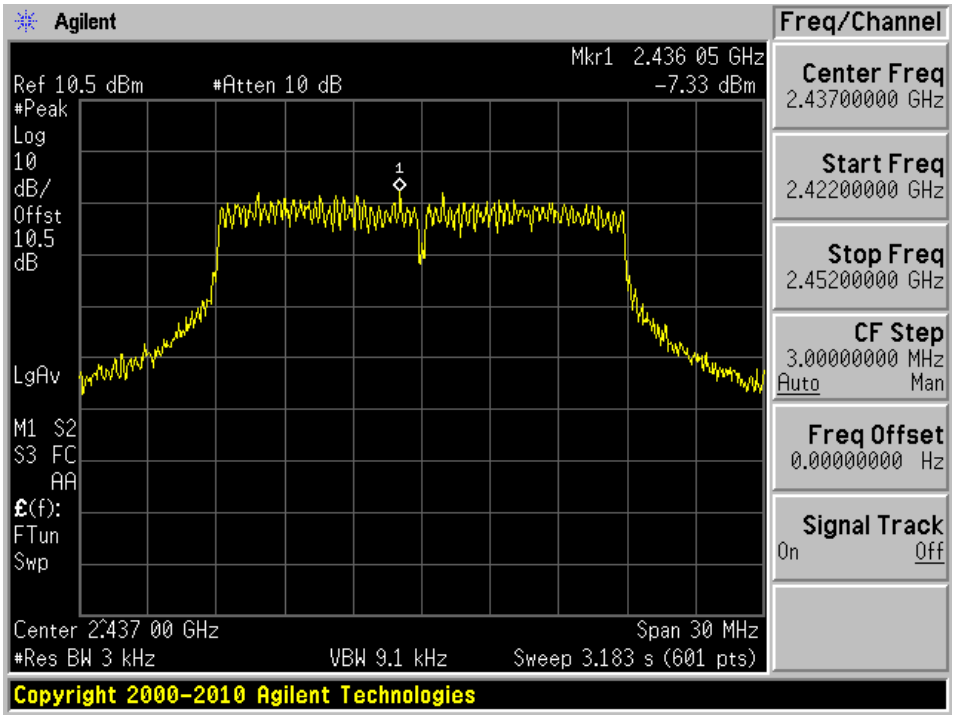
802.11g - 2462 MHz



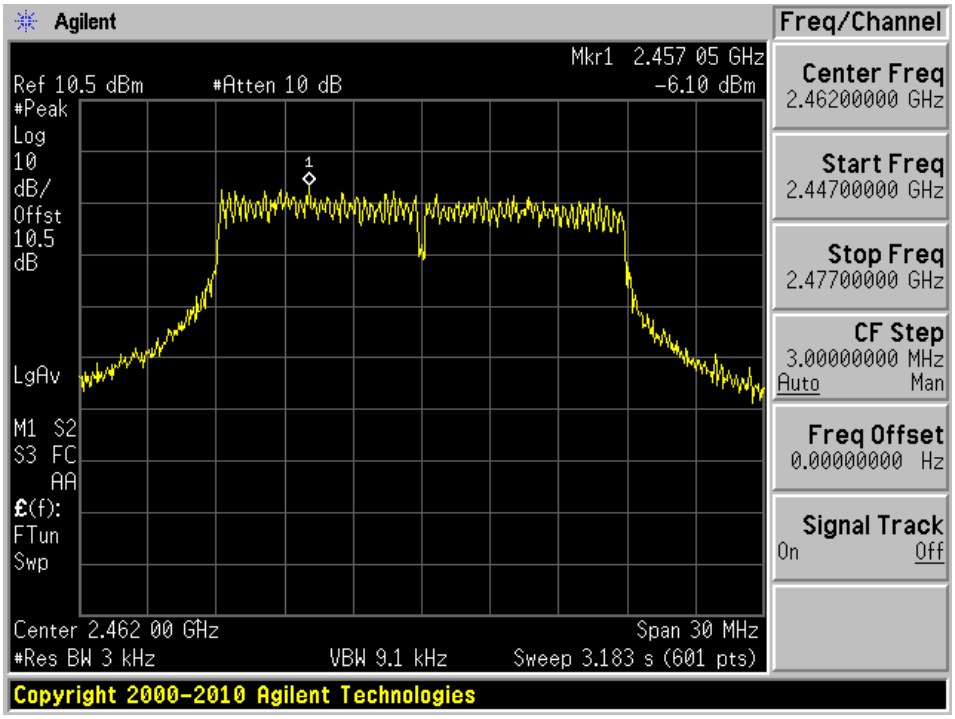
802.11n20 - 2412 MHz



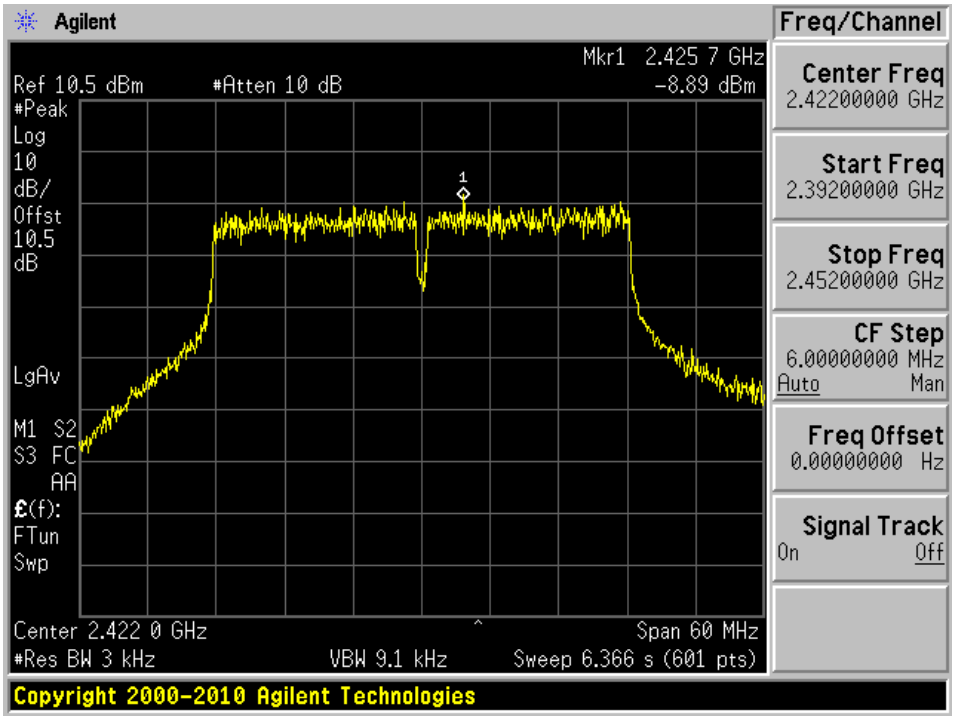
802.11n20 - 2437 MHz



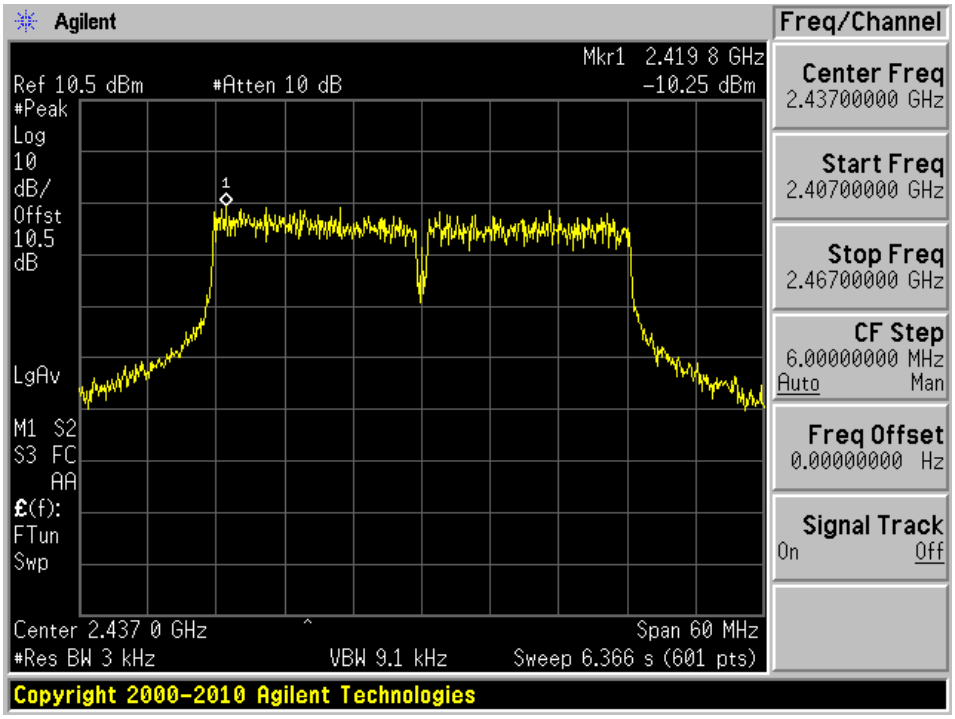
802.11n20 - 2462 MHz



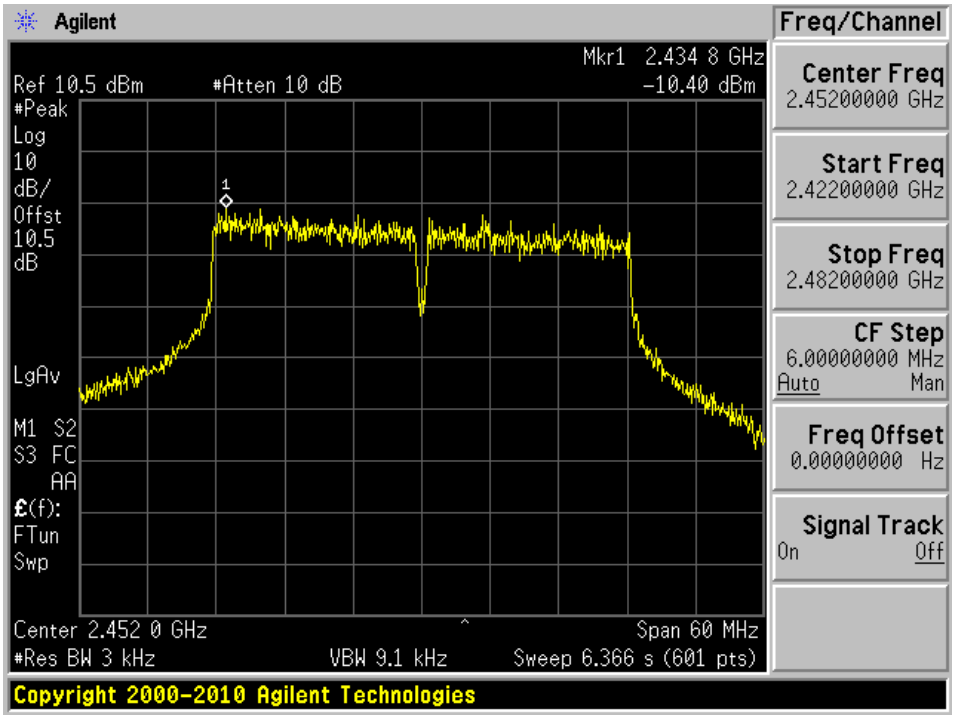
802.11n40 - 2422 MHz



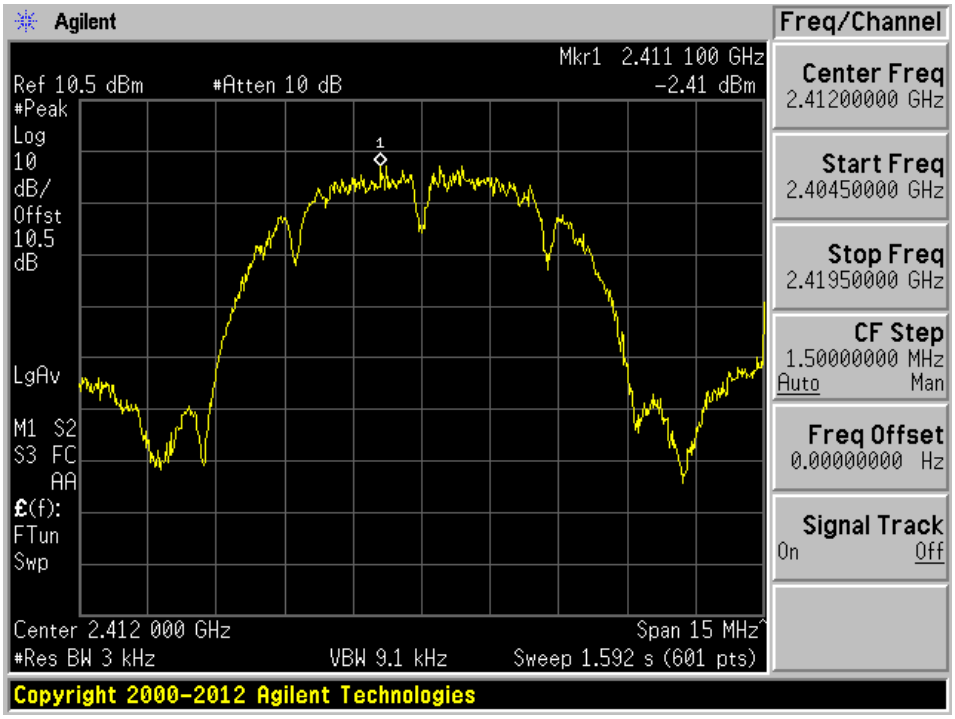
802.11n40 - 2437 MHz



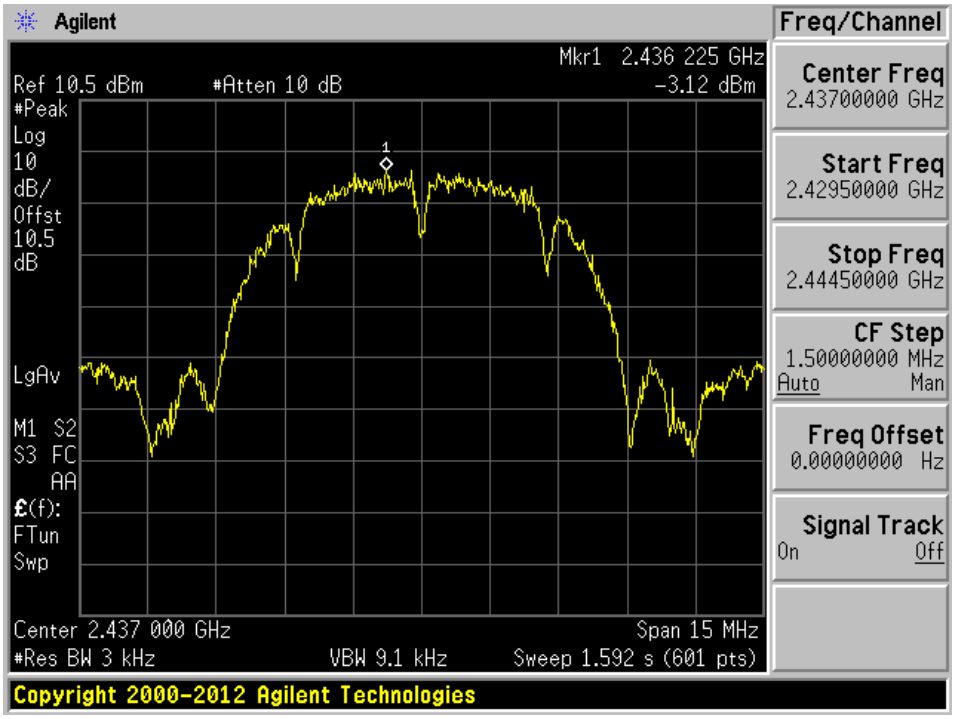
802.11n40 - 2452 MHz



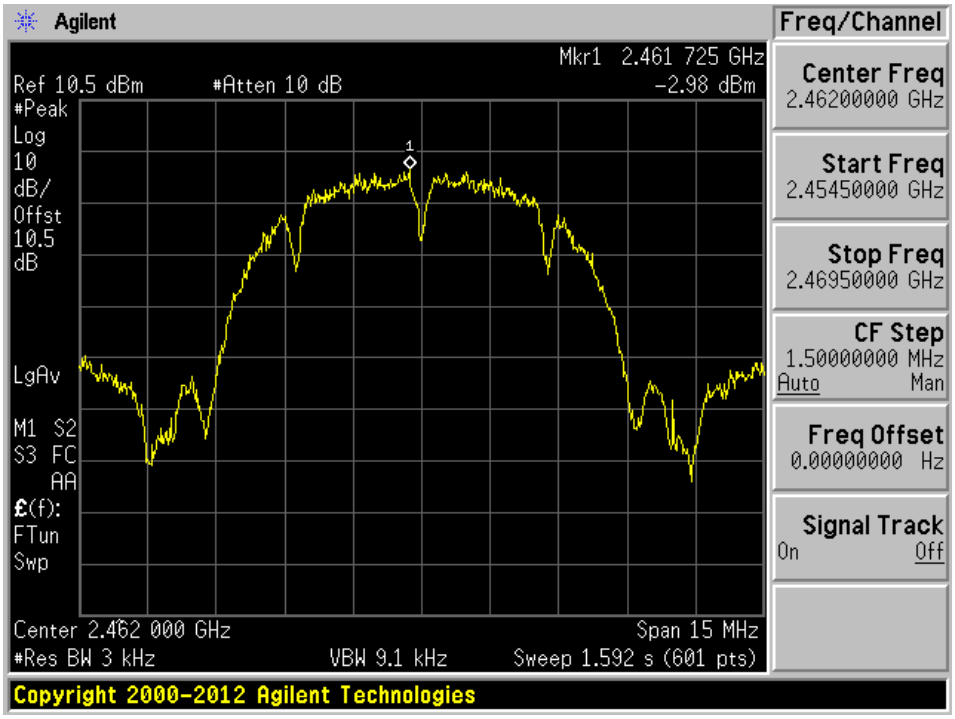
802.11b 10MHz - 2412 MHz



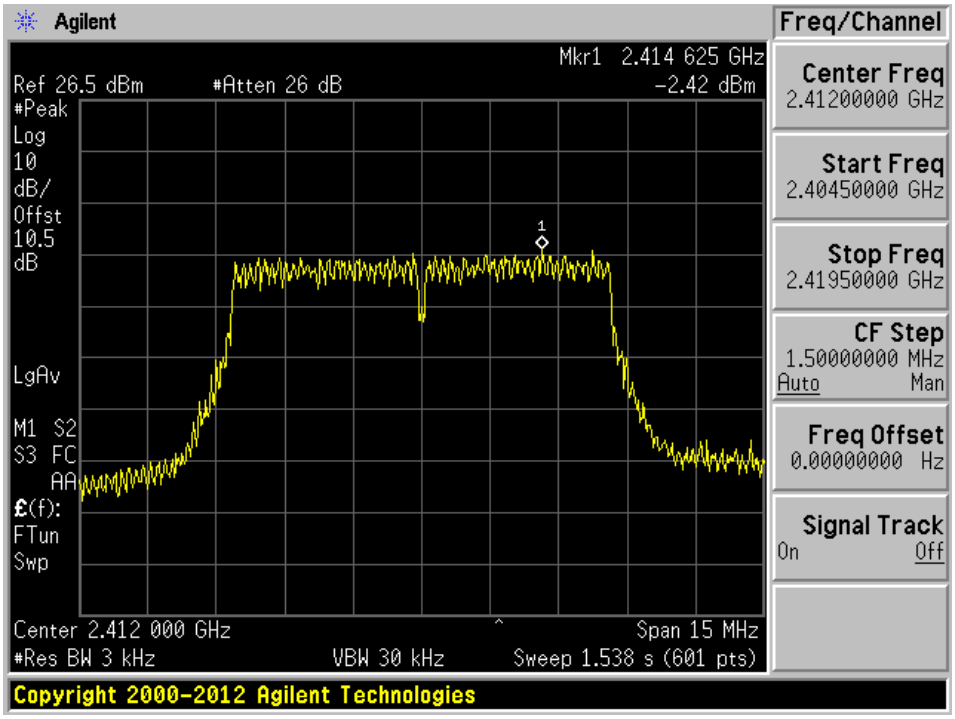
802.11b 10MHz - 2437 MHz



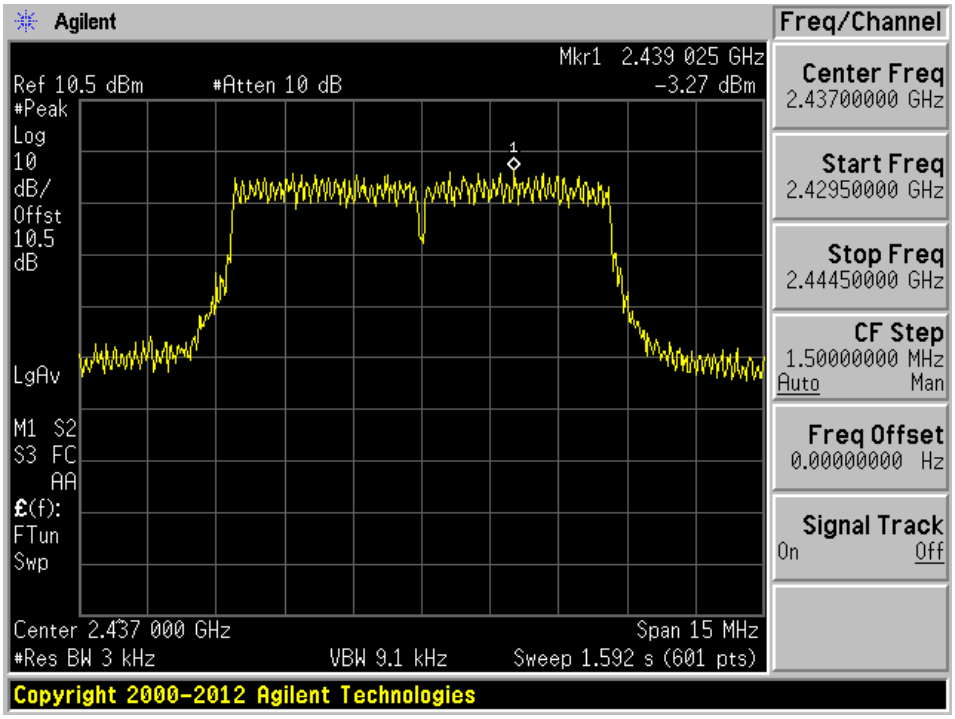
802.11b 10MHz - 2462 MHz



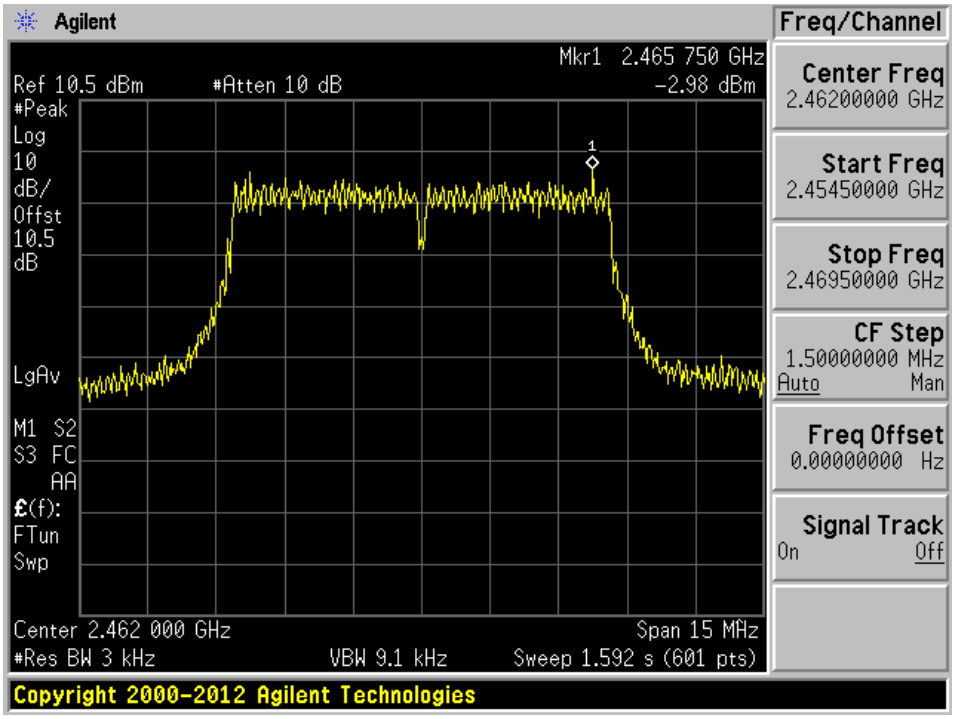
802.11g 10MHz - 2412 MHz



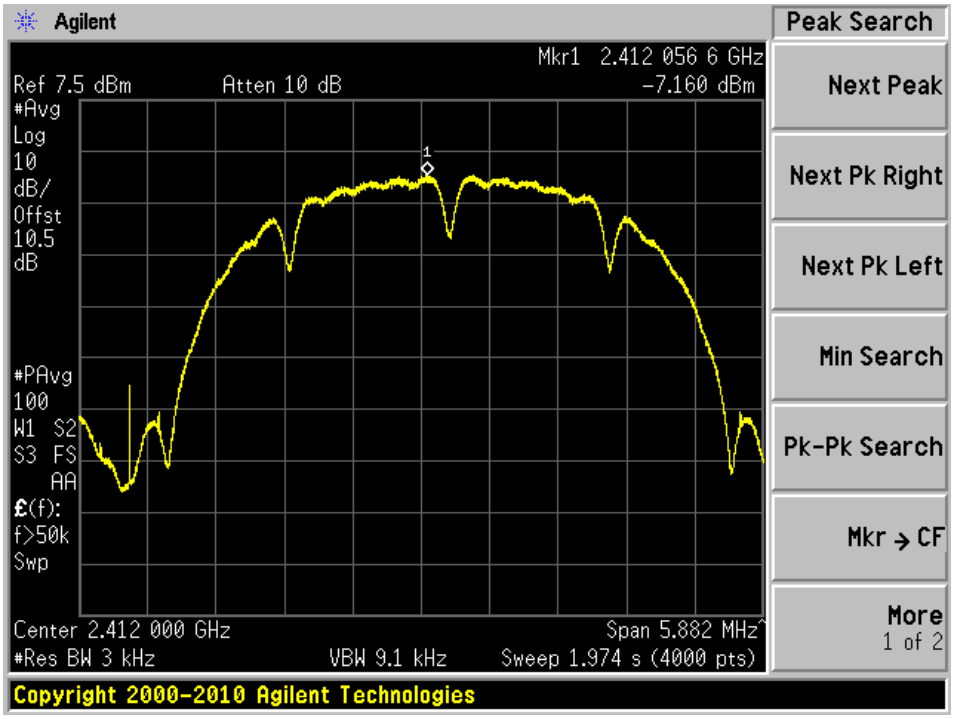
802.11g 10MHz - 2437 MHz



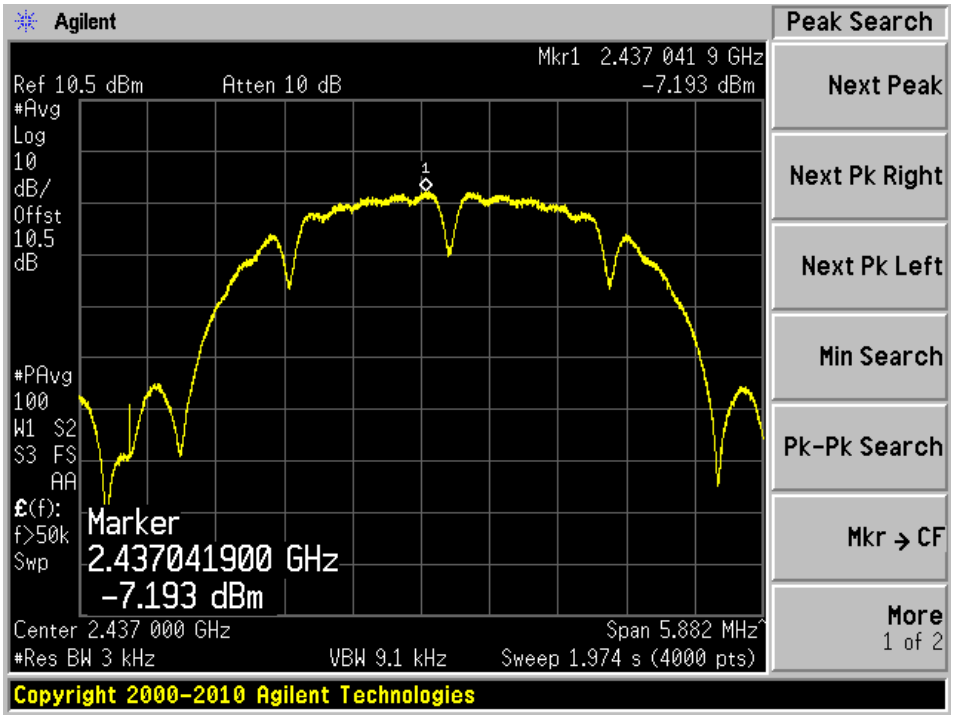
802.11g 10MHz - 2462 MHz



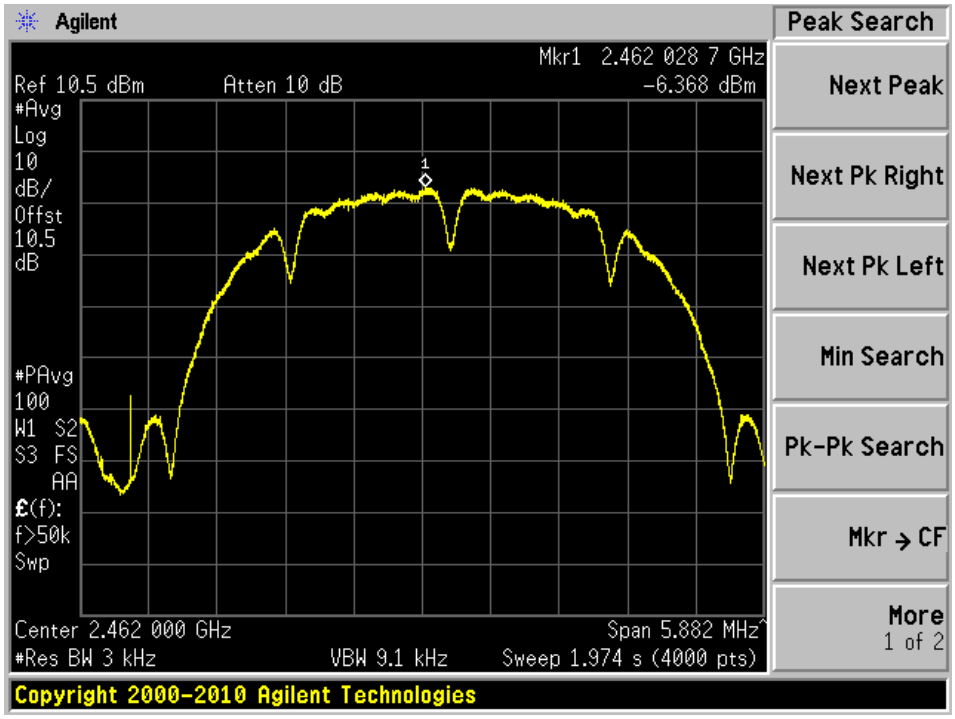
802.11b 5MHz - 2412 MHz



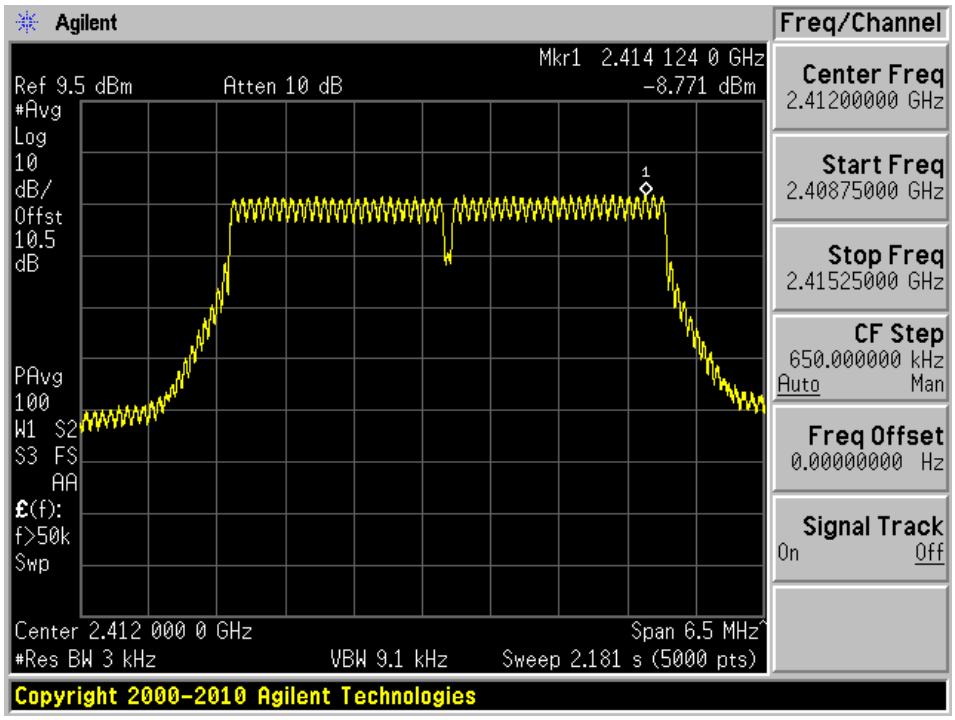
802.11b 5MHz - 2437 MHz



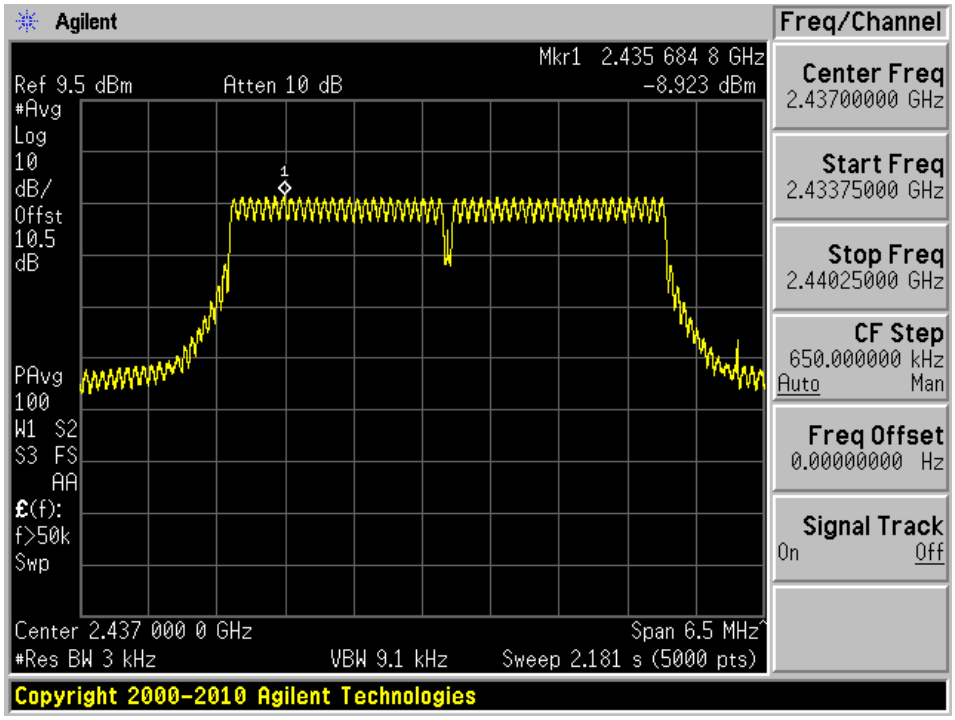
802.11b 5MHz - 2462 MHz



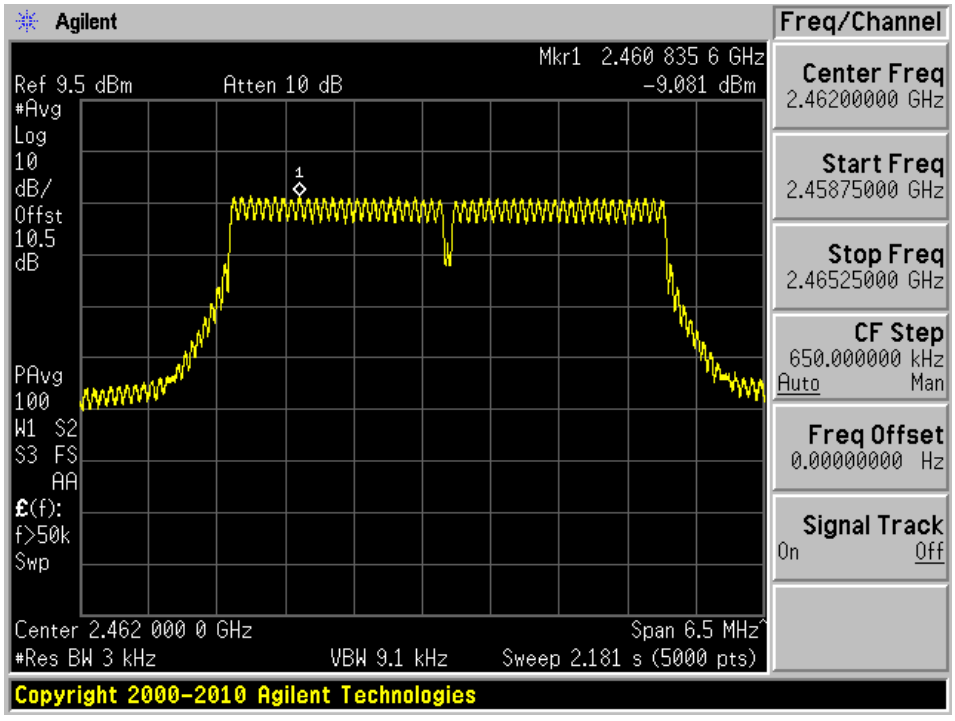
802.11g 5MHz - 2412 MHz



802.11g 5MHz - 2437 MHz



802.11g 5MHz - 2462 MHz



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