FCC PART 15, SUBPART C
IC RSS-210, ISSUE 8, DECEMBER 2010

TEST AND MEASUREMENT REPORT

For

Ruckus Wireless, Inc.

350 West Java Drive,

Sunnyvale, CA 94089, USA

FCC ID: S9GT300
IC: 5912A-T300

Report Type:	**Product Type:**
Original Report	802.11 a/b/g/n/ac Wireless Access Point

Prepared By:	Chen Ge
Report Number:	R1403261-247
Report Date:	2014-06-04
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1403261-247	Original Report	2014-06-04

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test and measurement report was prepared on behalf of *Ruckus Wireless, Inc*., and their product model: *T300, FCC ID: S9GT300, IC: 5912A-T300* or the "EUT" as referred to in this report. The EUT is a dual band 2x2 MIMO 802.11 a/b/g/n/ac RLAN Access Point.

1.2 Mechanical Description of EUT

The EUT measures approximately 18.1 cm (L) x 15.1 cm (W) x 8.0 cm (H) and weighs 400 g.
Note: The EUT was tested without enclosure.

The test data gathered are from typical production sample, serial number: 21406000005 *assigned by Client.*

1.3 Objective

This report is prepared on behalf of *Ruckus Wireless, Inc*. in accordance with Part 2, Subpart J, and Part 15, Subparts B and C of the Federal Communication Commissions rules and IC RSS-210 Issue 8, Dec 2010.

The objective is to determine compliance with FCC Part 15.247 and IC RSS-210 rules for Output Power, Antenna Requirements, 6 dB Bandwidth, and power spectral density, 100 kHz Bandwidth of Band Edges Measurement, Spurious Emissions, Conducted and Radiated Spurious Emissions.

1.4 Related Submittal(s)/Grant(s)

FCC Part 15.407, IC RSS-210 NII submission with FCC ID: S9GT300, IC: 5912A-T300.

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz and FCC KDB 558074 D01 DTS Meas Guidance v03r01: 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.

The following calculation follows the procedures as set forth in clause 7.2.3, ETSI TR 100 028-1 V1.4.1 (2001-12), the expression of Uncertainty in Radiated RF Testing is in accordance to ISO/IEC 17025 and TR 100 028-1 V1.4.1 (2001-12).

The expanded Measurement Uncertainty value having a confidence factor of 95%, is within a range of 5.48 dB. This means that the value of conducted RF carrier power test will be within +/- 2.74 dB of the measuring radiated emissions power versus the expected value.
The expected value is defined as the power at the antenna of the Transmitter under Test.

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 Guide 65: 1996** by **A2LA** to certify:
1- Unlicensed, Licensed radio frequency devices and Telephone Terminal Equipment for the FCC. Scope A1, A2, A3, A4, B1, B2, B3, B4 & C.
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 C63.4-2009, ANSI C63.4-2009, 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 C63.4-2009 and FCC KDB 558074 D01 DTS Meas Guidance v03r01.

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 test utility used was *T300 ART* was provided by Ruckus Wireless Inc., and was verified by *Chen Ge* to comply with the standard requirements being tested against.

2.3 Special Equipment

There were no special accessories were required, included, or intended for use with EUT during these tests.

2.4 Equipment Modifications

No modifications were made to the EUT.

2.5 Local Support Equipment

Manufacturer	Description	Model	Serial Number
Ruckus	DC Adaptor/POE	NPE-5818	740-64157-001
Ruckus	AC Adaptor	PA10244HUB	740-64125-010

2.6 EUT Internal Configuration Details

Manufacturer	Description	Model	Serial Number
Ruckus	Main Board (SANTORINI)	ASM 120-11257-001 rev. 3.1	RUK01946
Ruckus	RJ45 Port Board	ASM 120-11264-001 rev. 2.1	RUK01957
Ruckus	Ruckus Board	ASM 120-11229-002 rev. A	RUK01329
Ruckus	IZAR Board	ASM 120-11261-001 rev. 3	RUK00727
Ruckus	IZAR CROSS Board	ASM 120-11262-001 rev. 3	RUK00908

2.7 Interface Ports and Cables

Cable Description	Length (m)	From	To
RJ45	1m	DC Adaptor/POE	EUT
RJ45	1m	Laptop	DC Adaptor/POE

2.8 Power Supply List and Details

Manufacturer	Description	Model	Part Number
Ruckus	Power Supply cord	PA1024-4HU	-
Ruckus	POE Power Adapter	NPE-5818	740-64157-001

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & IC Rules	Description of Test	Results
FCC §15.247(i), §2.1091 IC RSS-102	RF Exposure	Compliant
FCC §15.203 IC RSS-Gen §7.1.2	Antenna Requirement	Compliant
FCC §15.207(a) IC RSS-Gen §7.2.4	AC Line Conducted Emissions	Compliant
FCC §15.247 (d) IC RSS-210 §A8.5	Spurious Emissions at Antenna Port	Compliant
FCC §15.205 IC RSS-210 §2.2	Restricted Bands	Compliant
FCC §15.209, §15.247 (d) IC RSS-210 §A8.5	Radiated Spurious Emissions	Compliant
FCC §15.247(a)(2) IC RSS-210 §A8.2	6 dB Emission Bandwidth	Compliant
FCC §15.247(b)(3) IC RSS-210 §A8.4	Maximum Peak Output Power	Compliant
FCC §15.247(d) IC RSS-210 §A8.5	100 kHz Bandwidth of Frequency Band Edge	Compliant
FCC §15.247(e) IC RSS-210 §A8.2(b)	Power Spectral Density	Compliant
IC RSS-210 §2.3 & RSS-Gen §4.10	Receiver Spurious Emission	Compliant

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

4.1 Applicable Standard

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

Before equipment certification is granted, the procedure of IC RSS-102 must be followed concerning the exposure of humans to RF fields.

According to IC RSS-102 Issue 2 section 4.1, RF limits used for general public will be applied to the EUT.

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Time Averaging (min)
0.003 - 1	280	2.19	-	6
1 - 10	280 / f	2.19 / f	-	6
10 - 30	28	2.19 / f	-	6
30 – 300	28	0.073	2*	6
300 – 1 500	$1.585\ f^{0.5}$	$0.0042\ f^{0.5}$	f / 150	6
1 500 – 15 000	61.4	0.163	10	6
15 000 – 150 000	61.4	0.163	10	$616000 / f^{1.2}$
150 000- 300 000	$0.158\ f^{0.5}$	$4.21 \times 10\ -4\ f^{0.5}$	$6.67 \times 10^{-5}\ f$	$616000 / f^{1.2}$

Note: f is frequency in MHz
* = Power density limit is applicable at frequencies greater than 100 MHz

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

2.4 GHz band:

Maximum peak output power at antenna input terminal (dBm):	23.77
Maximum peak output power at antenna input terminal (mW):	238.2319
Prediction distance (cm):	20
Prediction frequency (MHz):	2437
Maximum Antenna Gain, typical (dBi):	2.5
Maximum Antenna Gain (numeric):	1.7782
Power density of prediction frequency at 20.0 cm (mW/cm^2):	0.0842
Power density of prediction frequency at 20.0 cm (W/m^2):	0.842
MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2):	1.0
MPE limit for uncontrolled exposure at prediction frequency (W/m^2):	10

5.8 GH band:

Maximum peak output power at antenna input terminal (dBm):	24.99
Maximum peak output power at antenna input terminal (mW):	315.5
Prediction distance (cm):	20
Prediction frequency (MHz):	5745
Maximum Antenna Gain, typical (dBi):	3.5
Maximum Antenna Gain (numeric):	2.238
Power density of prediction frequency at 20.0 cm (mW/cm^2):	0.1405
Power density of prediction frequency at 20.0 cm (W/m^2):	1.405
MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2):	1.0
MPE limit for uncontrolled exposure at prediction frequency (W/m^2):	10

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 20 cm is 0.1405 mW/cm^2 (1.405 W/m^2). Limit is 1.0 mW/cm^2 (10 W/m^2).

5 FCC §15.203 & IC RSS-Gen §7.1.2 – Antenna Requirements

5.1 Applicable Standard

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 §7.1.2: Transmitter Antenna

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

When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on measurement or on data from the antenna manufacturer. Any antenna gain in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power before using the power limits specified in RSS-210 or RSS-310 for devices of RF output powers of 10 mW or less. For devices of output powers greater than 10 mW, except devices subject to RSS-210 Annex 8 (Frequency Hopping and Digital Modulation Systems Operating in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz Bands) or RSS-210 Annex 9 (Local Area Network Devices), the total antenna gain shall be added to the measured RF output power before using the specified power limits. For devices subject to RSS-210 Annex 8 or Annex 9, the antenna gain shall not be added.

5.2 Antenna List

Manufacturers	Antenna Type/Pattern	Antenna Gain (dBi) @ 2.4 GHz
Ruckus	Internal PCB	2.5

Manufacturers	Antenna Type/Pattern	Antenna Gain (dBi) @ 5 GHz
Ruckus	Internal PCB	3.5

Note: The power setting was controlled by manufacture with different antenna configuration. The power setting of the different antenna will be set with the corresponded value and no more than the level reported.

The antenna consists of non-standard (UFL) connectors with less 6 dBi gain; therefore, it complies with the antenna requirement. Please refer to the internal photos.

6 FCC §15.207 & IC RSS-Gen §7.2.4 – AC Line Conducted Emissions

6.1 Applicable Standards

As per FCC §15.207 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.

As per IC RSS-Gen §7.2.4 Conducted limits:

Except when the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply, either directly or indirectly (such as with abattery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table below. The more stringent limit applies at the frequency range boundaries. The conducted emissions shall be measured with a 50 ohm/50 microhenry line impedance stabilization network (LISN).

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

**Decreases with the logarithm of the frequency.*

6.2 Test Setup

The measurement was performed at shield room, using the setup per ANSI C63.4-2009 measurement procedure. The specification used was FCC §15.207 and IC RSS-Gen §7.2.4 limits.

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

The POE power adapter of the EUT was connected with LISN which provided 120 V / 60 Hz AC power.

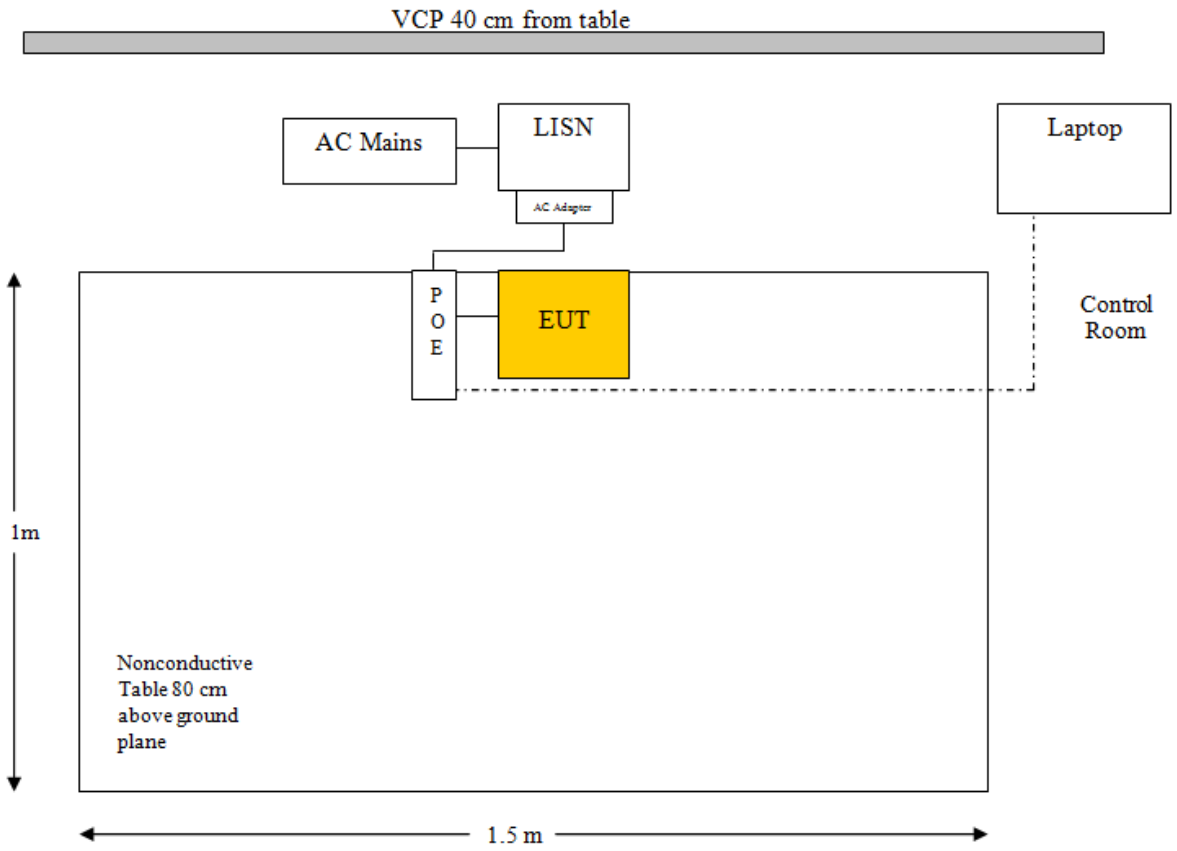
6.3 Test Procedure

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

POE



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	EMI Test Receiver	ESCI 1166.5950K03	100337	2014-03-28	1 year
Solar Electronics	LISN	9252-50-R-24-N	511205	2013-06-25	1 year
TTE	Filter, High Pass	H9962-150K-50-21378	K7133	2013-05-30	1 year

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:	22º C
Relative Humidity:	52 %
ATM Pressure:	101.89 kPa

The testing was performed by Chen Ge on 2014-04-17 in 5 m chamber 3.

6.8 Summary of Test Results

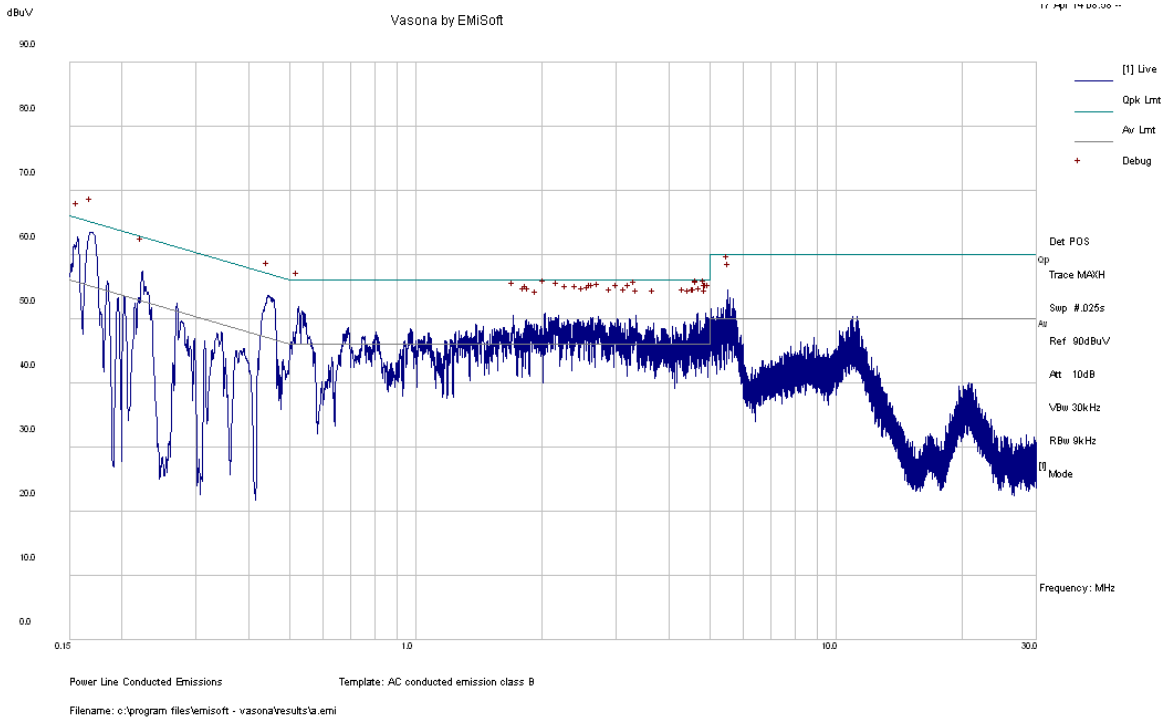
According to the recorded data in following table, the EUT complied with the FCC standard's conducted emissions limits, with the margin reading of:

Connection: AC/DC adapter connected to 120 V/60 Hz, AC			
Margin (dB)	**Frequency (MHz)**	**Conductor Mode (Line/Neutral)**	**Range (MHz)**
-3.4	0.457407	Line	0.15-30

6.9 Conducted Emissions Test Plots and Data

Worst case: 2.4 GHz and 5 GHz transmitting at same time.

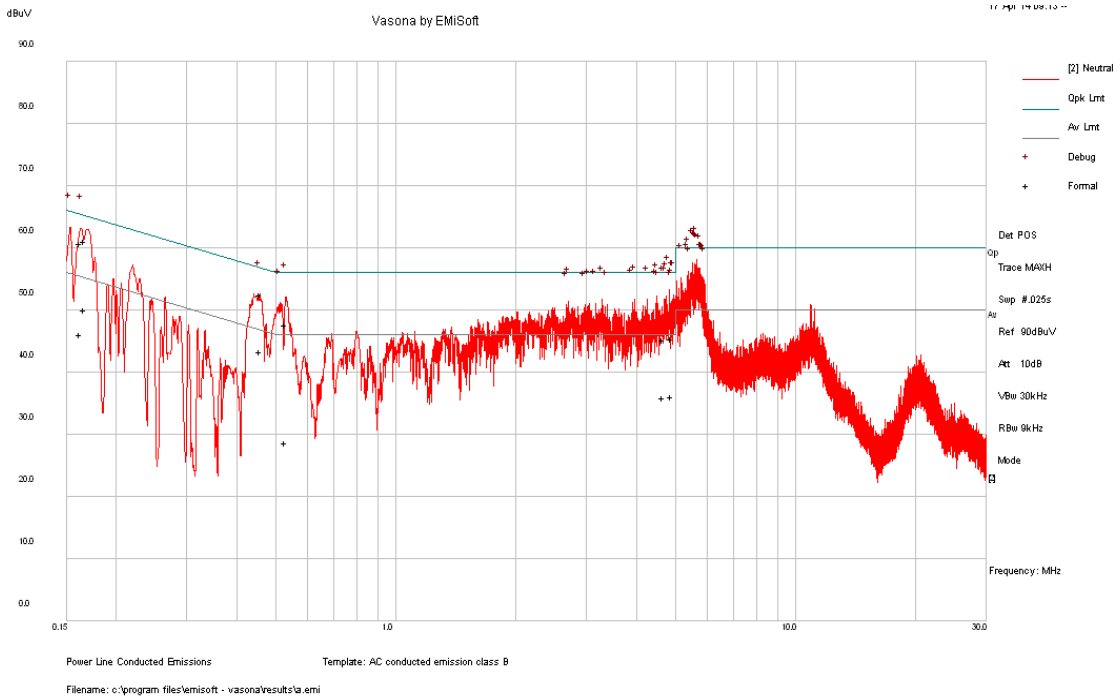
120 V, 60 Hz – Line, POE



Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.162575	60.86	Line	65.33	-4.47	QP
0.166539	61.21	Line	65.13	-3.92	QP
0.457407	52.45	Line	56.74	-4.29	QP
0.531258	47.76	Line	56	-8.24	QP
4.896091	45.43	Line	56	-10.57	QP
4.680886	45.19	Line	56	-10.81	QP

Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
0.162575	46.2	Line	55.33	-9.13	Ave.
0.166539	50.08	Line	55.13	-5.05	Ave.
0.457407	43.34	Line	46.74	-3.40	Ave.
0.531258	28.67	Line	46	-17.33	Ave.
4.896091	36.16	Line	46	-9.84	Ave.
4.680886	35.88	Line	46	-10.12	Ave.

120 V, 60 Hz – Neutral, POE



Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
5.623286	52.76	Neutral	60	-7.24	QP
0.162773	60.12	Neutral	65.32	-5.2	QP
5.525447	51.96	Neutral	60	-8.04	QP
0.1616	59.06	Neutral	65.38	-6.32	QP
5.579264	52.4	Neutral	60	-7.60	QP
4.823974	47.48	Neutral	56	-8.52	QP

Frequency (MHz)	Corrected Amplitude (dBµV)	Conductor (Line/Neutral)	Limit (dBµV)	Margin (dB)	Detector (QP/Ave.)
5.623286	45.63	Neutral	50	-4.37	Ave.
0.162773	45.5	Neutral	55.32	-9.82	Ave.
5.525447	44.37	Neutral	50	-5.63	Ave.
0.1616	43.64	Neutral	55.38	-11.74	Ave.
5.579264	45.18	Neutral	50	-4.82	Ave.
4.823974	38.63	Neutral	46	-7.37	Ave.

7 FCC §2.1051, §15.247(d) & IC RSS-210 §A8.5 – Spurious Emissions at Antenna Terminals

7.1 Applicable Standard

For FCC §15.247(d) and IC RSS-210 §A8.5 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 30 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.

7.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 11: Emissions in non-restricted frequency bands and section 12: Emissions in restricted frequency bands.

7.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year

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

7.4 Test Environmental Conditions

Temperature:	22-24° C
Relative Humidity:	42-45 %
ATM Pressure:	101-102 kPa

The testing was performed by Chen Ge from 2014-04-07 and 2014-04-10 at RF site.

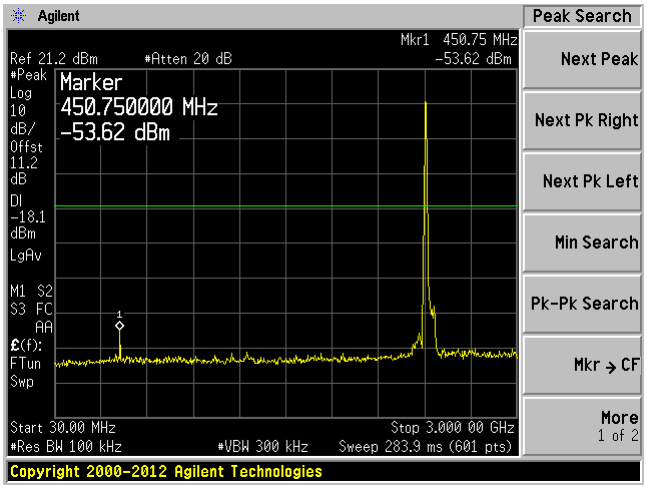
7.5 Test Results

Please refer to following plots of spurious emissions.

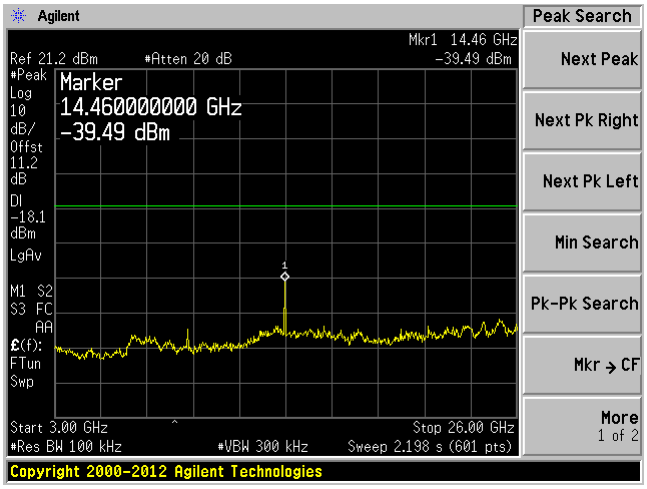
2400-2483.5 MHz

802.11b, Low Channel, 2412 MHz

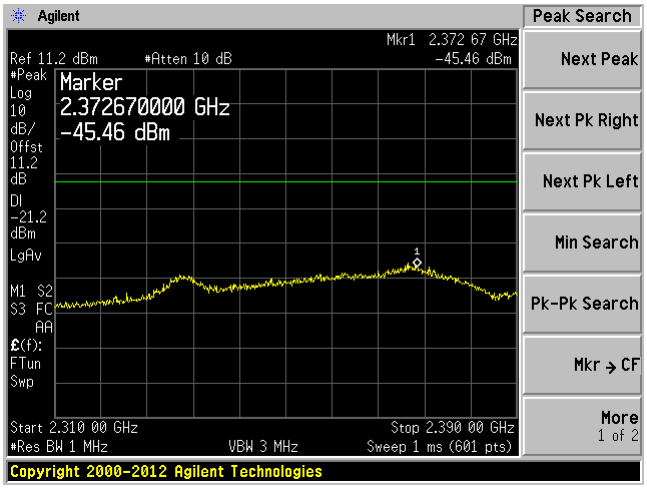
Chain J0, Plot: 30 MHz – 3 GHz



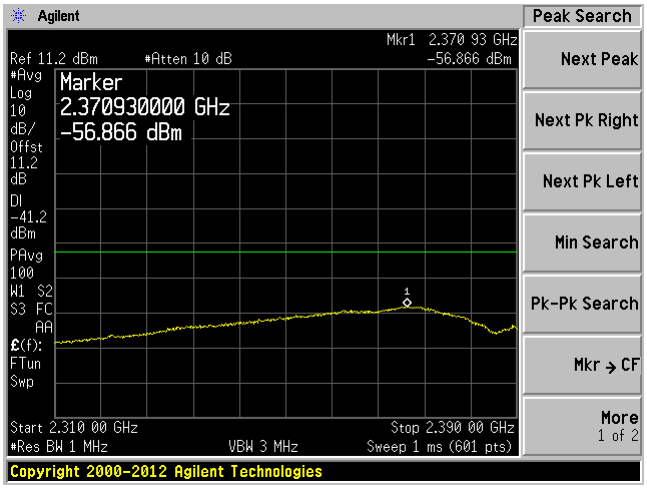
Chain J0, Plot: 3 GHz – 26 GHz



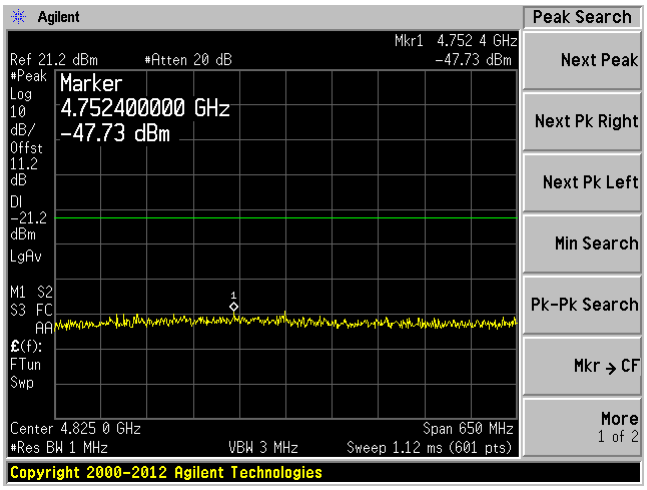
Chain J0, Plot: 2310 MHz – 2390 MHz Peak



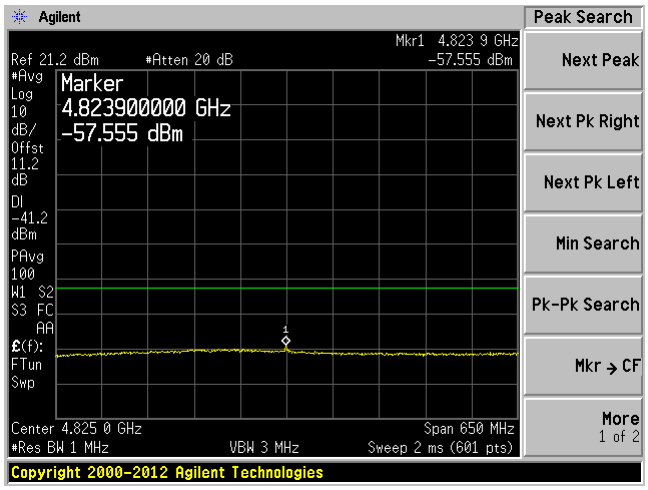
Chain J0, Plot: 2310 MHz – 2390 MHz Ave



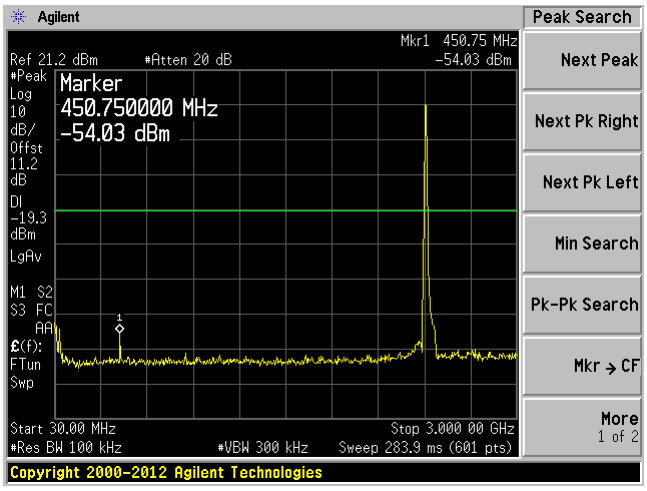
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



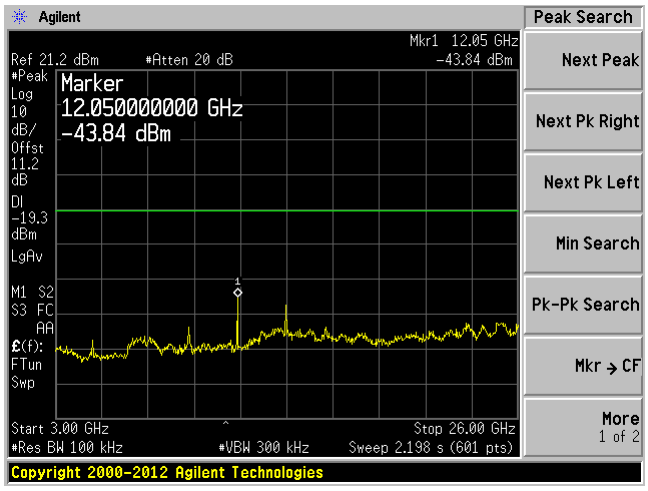
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



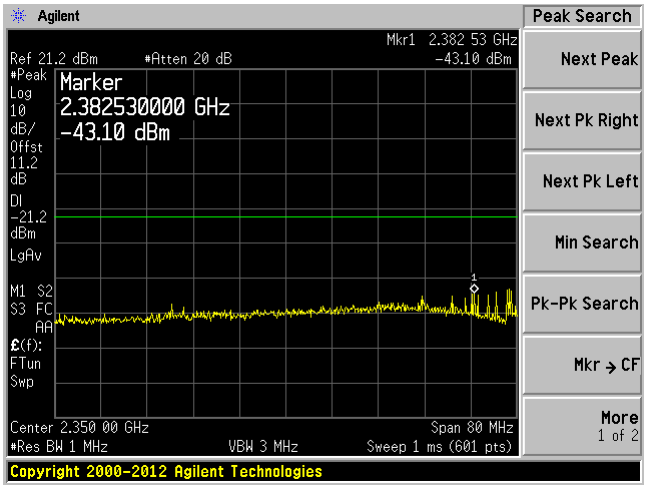
Chain J1, Plot: 30 MHz – 3 GHz



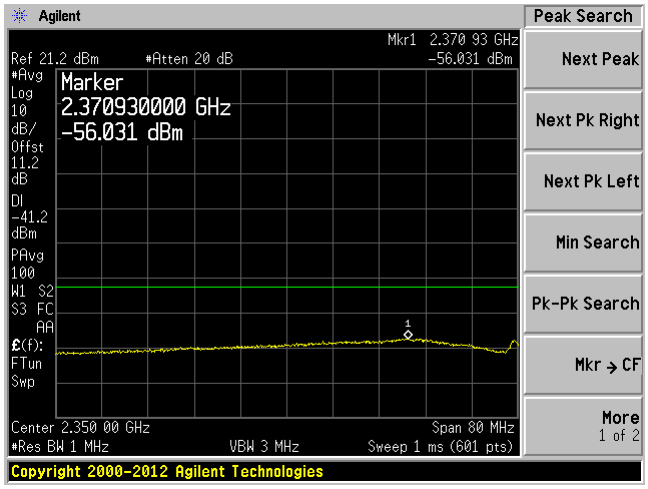
Chain J1, Plot: 3 GHz – 26 GHz



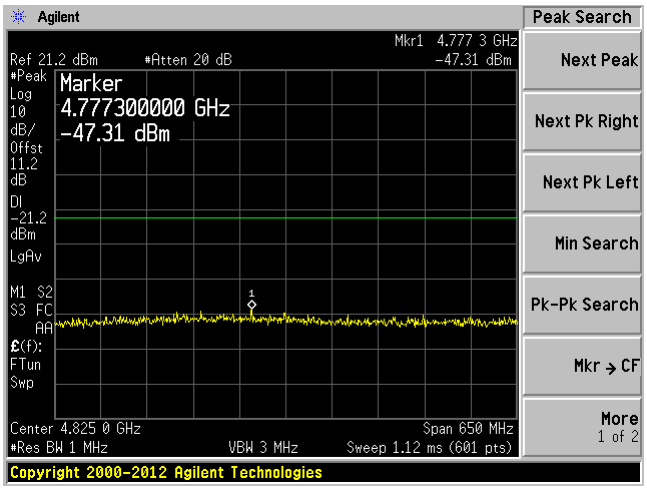
Chain J1, Plot: 2310 MHz – 2390 MHz Peak



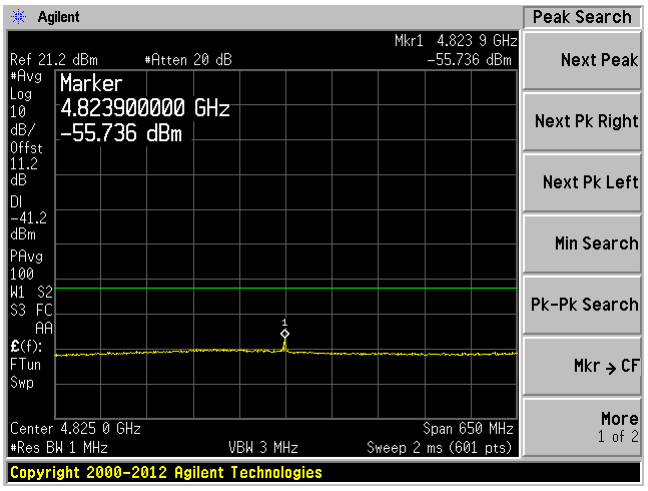
Chain J1, Plot: 2310 MHz – 2390 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

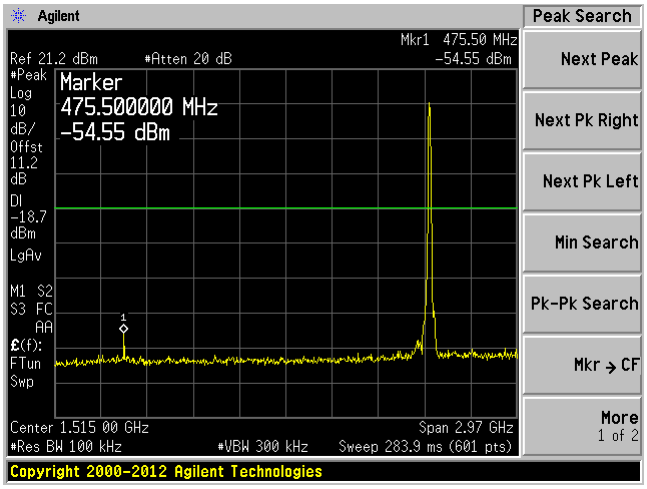


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

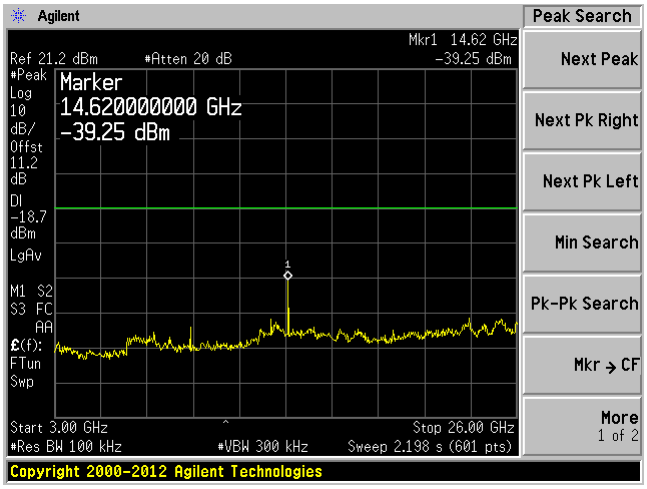


802.11b, Middle Channel, 2437 MHz

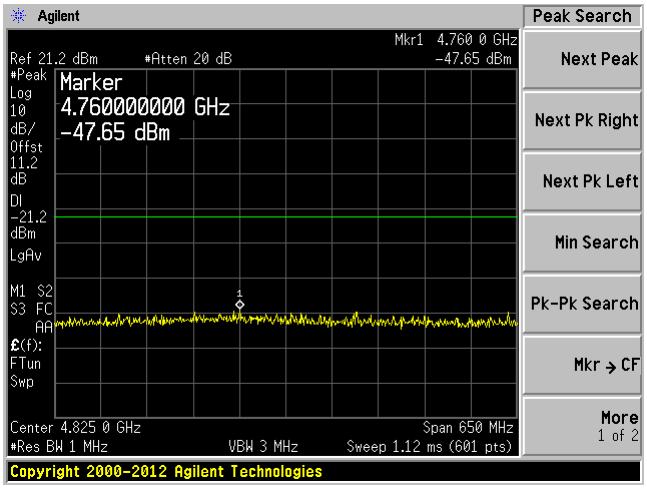
Chain J0, Plot: 30 MHz – 3 GHz



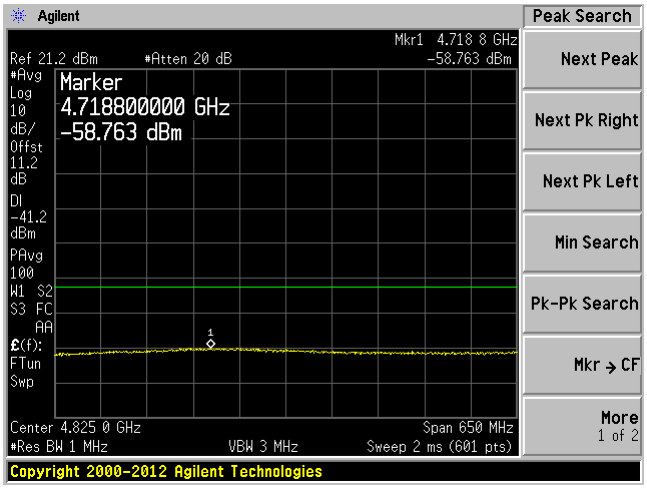
Chain J0, Plot: 3 GHz – 26 GHz



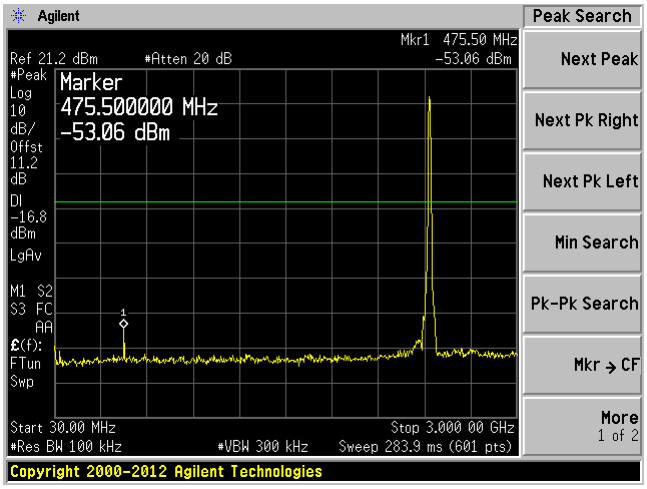
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



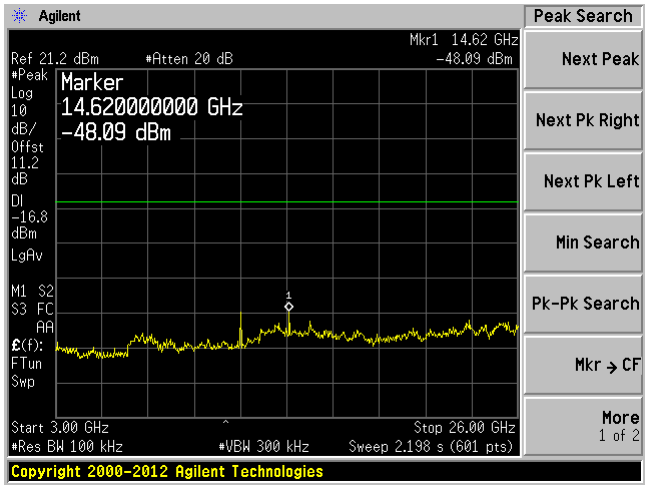
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



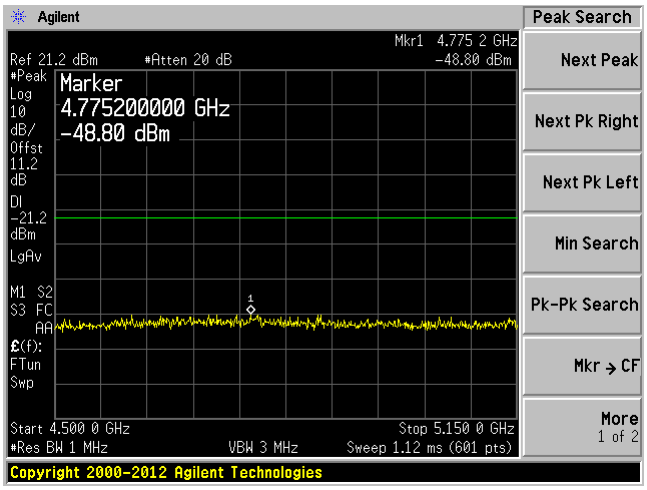
Chain J1, Plot: 30 MHz – 3 GHz



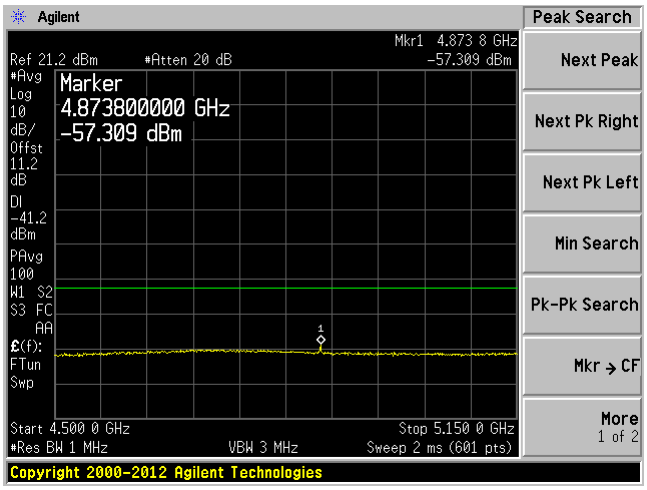
Chain J1, Plot: 3 GHz – 26 GHz



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

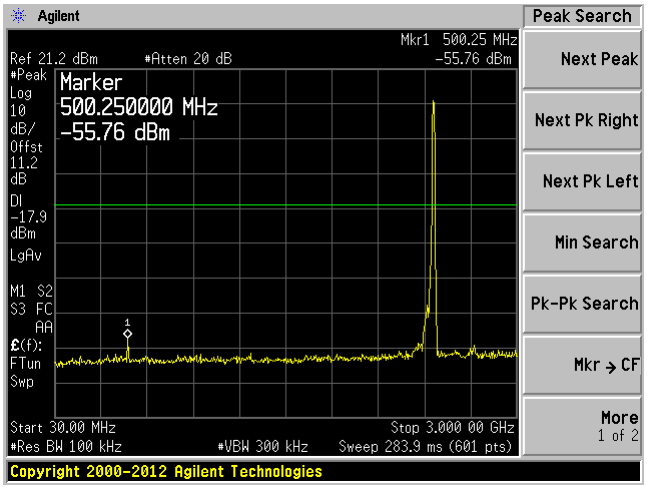


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

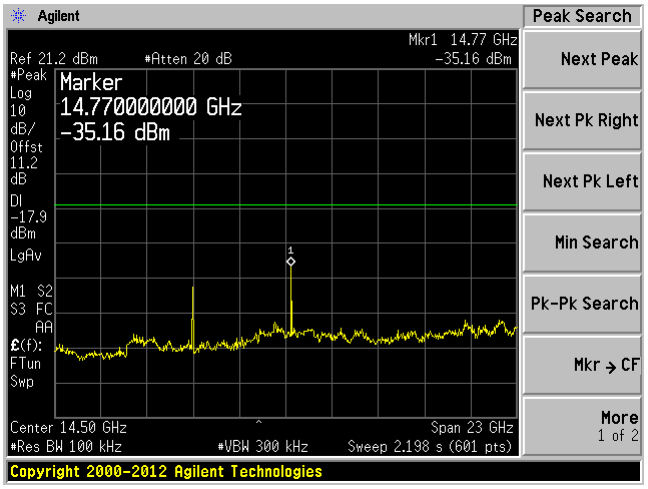


802.11b, High Channel, 2462 MHz

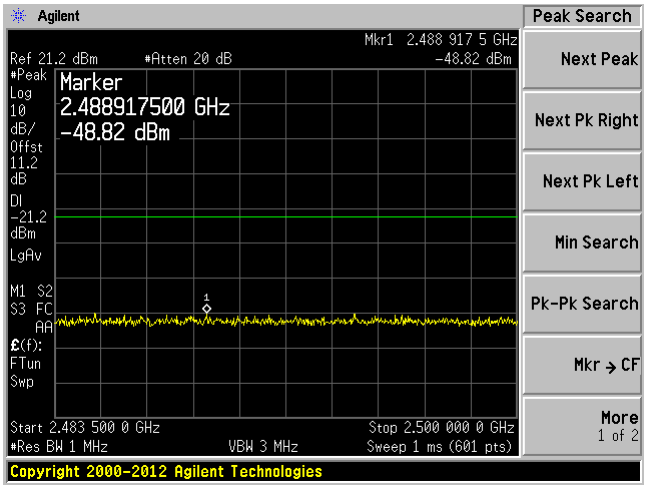
Chain J0, Plot: 30 MHz – 3 GHz



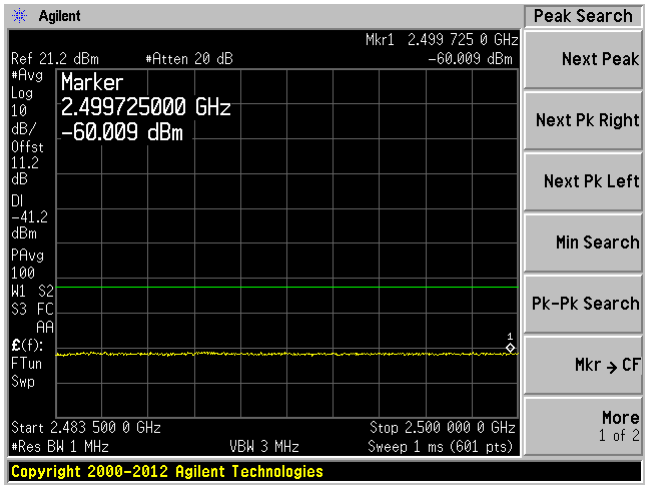
Chain J0, Plot: 3 GHz – 26 GHz



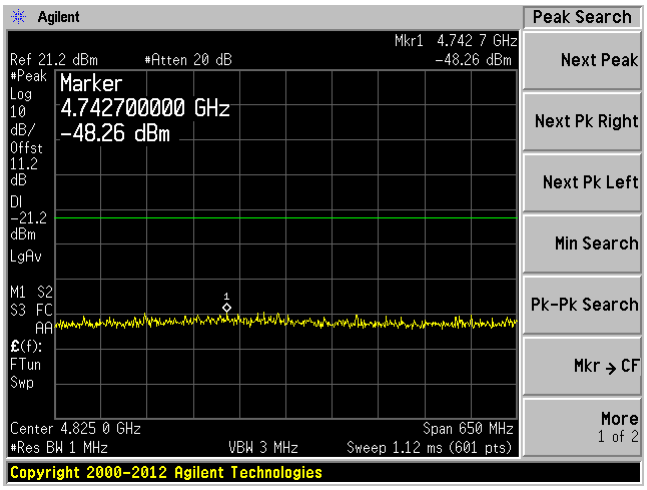
Chain J0, Plot: 2483.5 MHz – 2500 MHz Peak



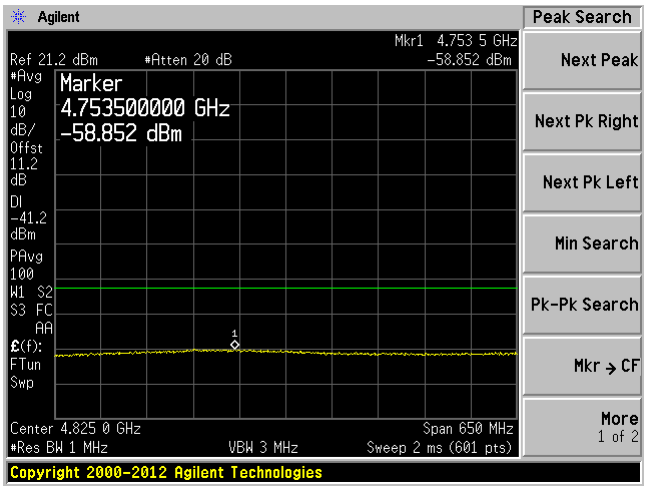
Chain J0, Plot: 2483.5 MHz – 2500 MHz Ave



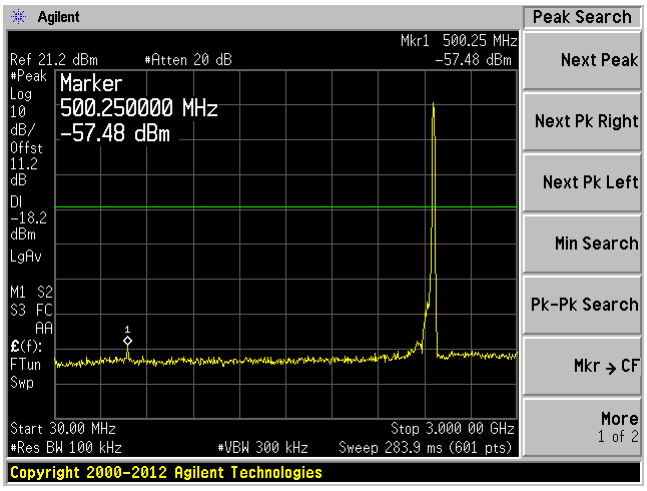
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



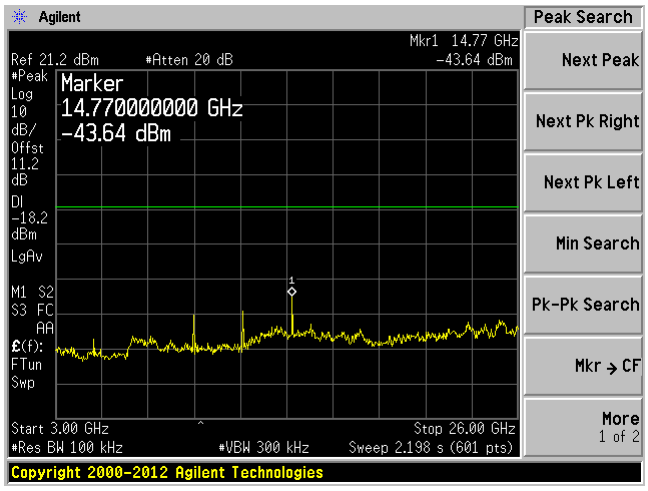
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



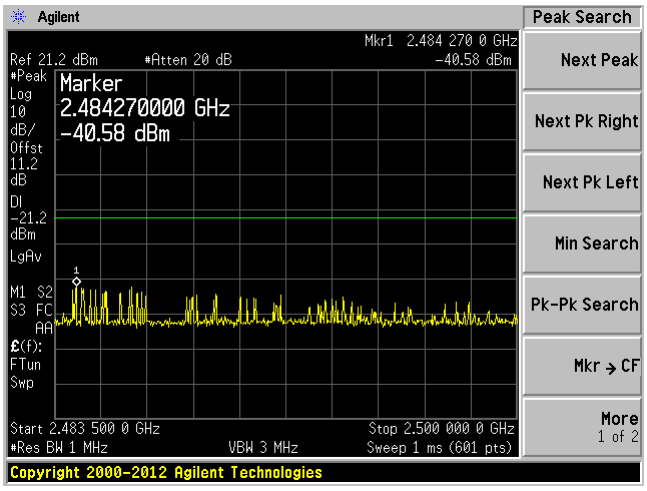
Chain J1, Plot: 30 MHz – 3 GHz



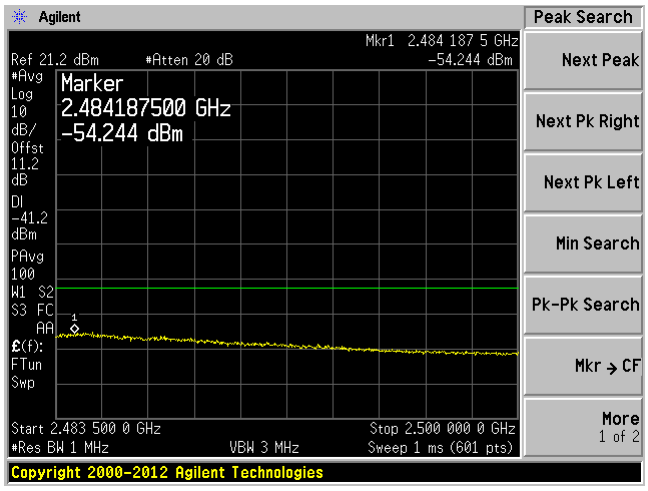
Chain J1, Plot: 3 GHz – 26 GHz



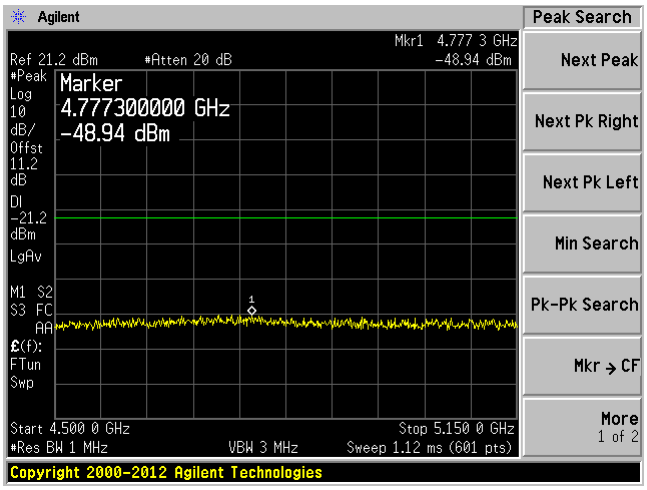
Chain J1, Plot: 2483.5 MHz – 2500 MHz Peak



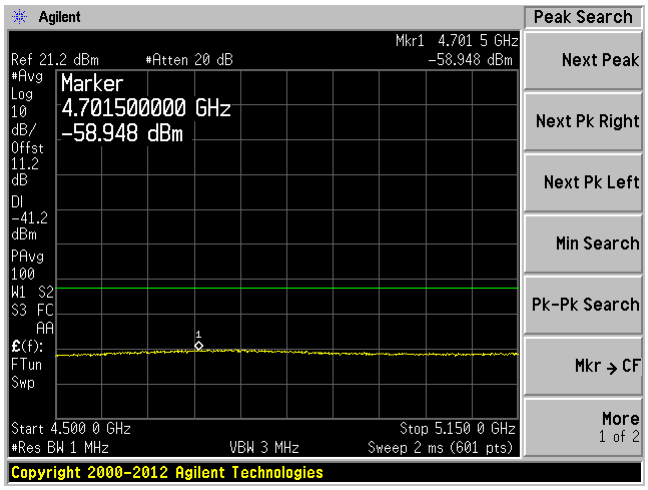
Chain J1, Plot: 2483.5 MHz – 2500 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

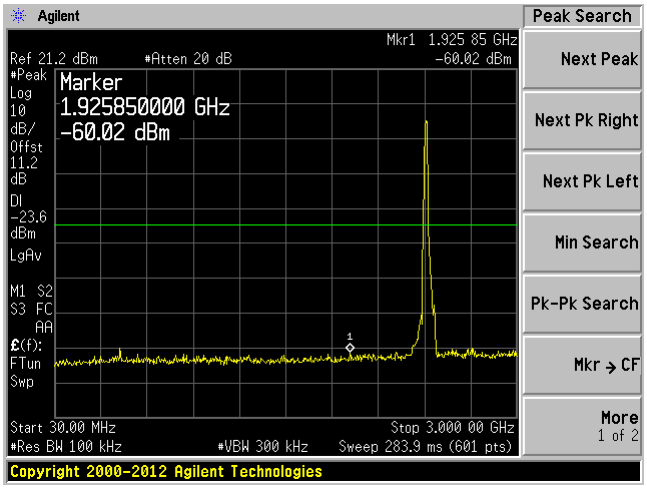


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

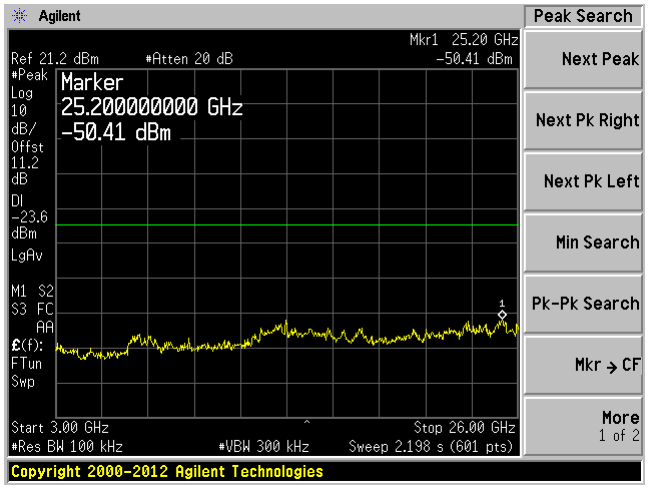


802.11g, Low Channel 2412 MHz

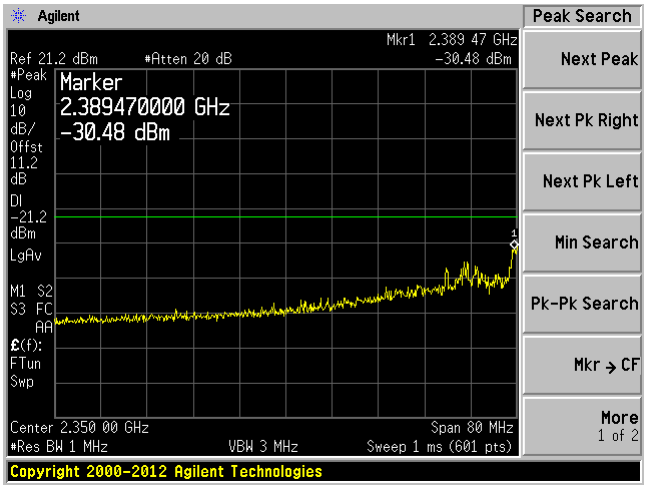
Chain J0, Plot: 30 MHz – 3 GHz



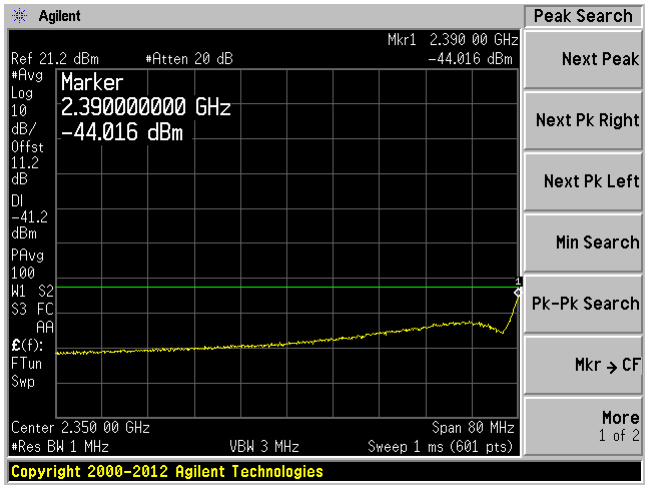
Chain J0, Plot: 3 GHz – 26 GHz



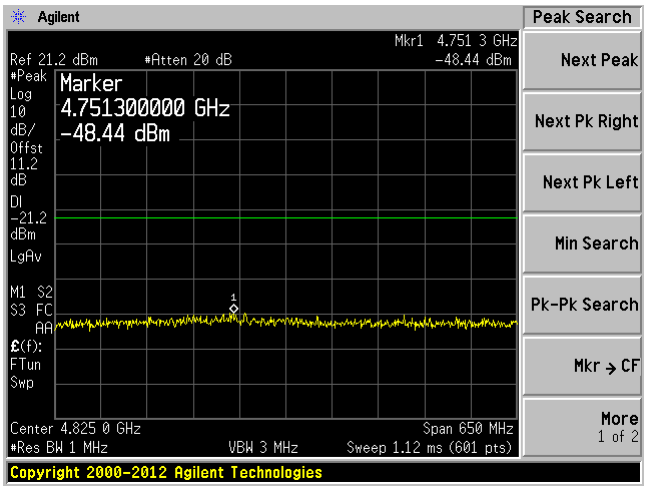
Chain J0, Plot: 2310 MHz – 2390 MHz Peak



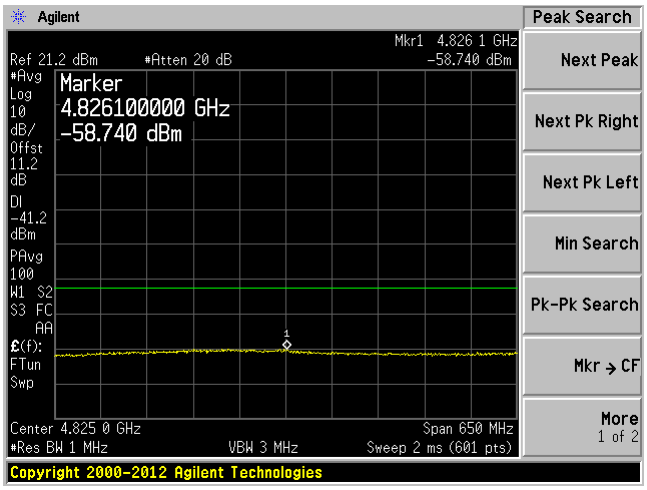
Chain J0, Plot: 2310 MHz – 2390 MHz Ave



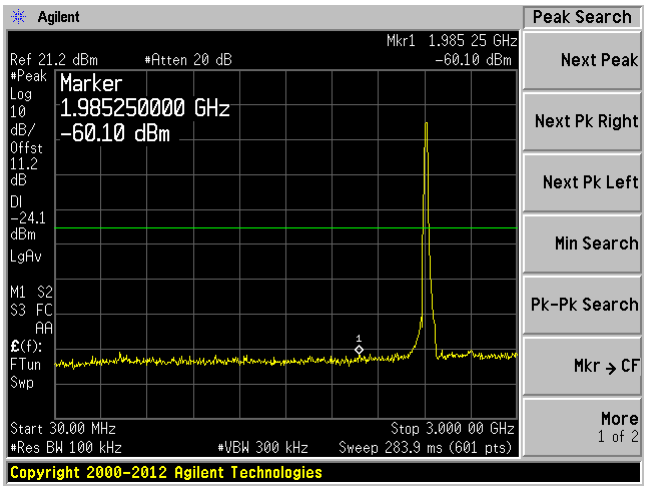
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



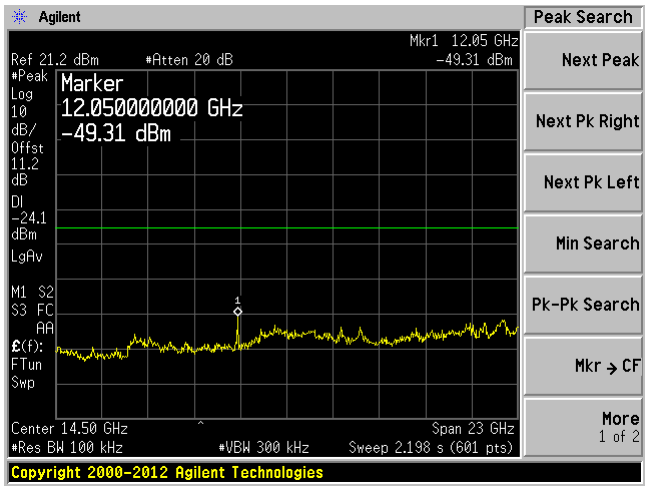
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



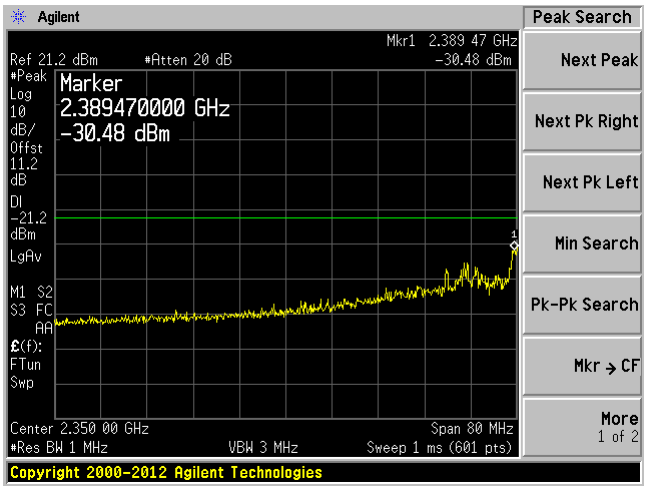
Chain J1, Plot: 30 MHz – 3 GHz



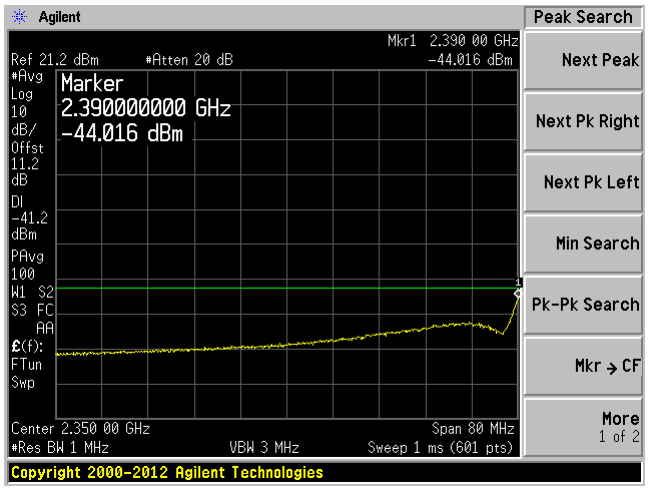
Chain J1, Plot: 3 GHz – 26 GHz



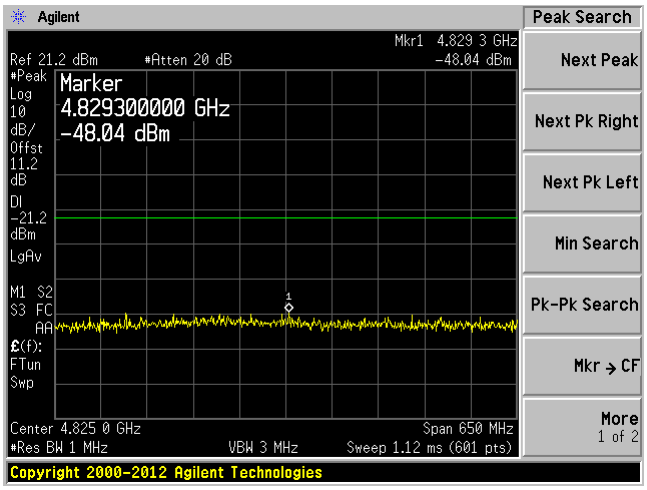
Chain J1, Plot: 2310 MHz – 2390 MHz Peak



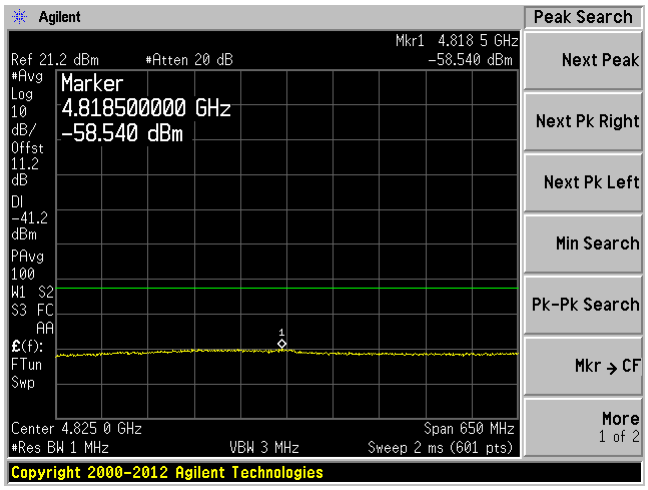
Chain J1, Plot: 2310 MHz – 2390 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

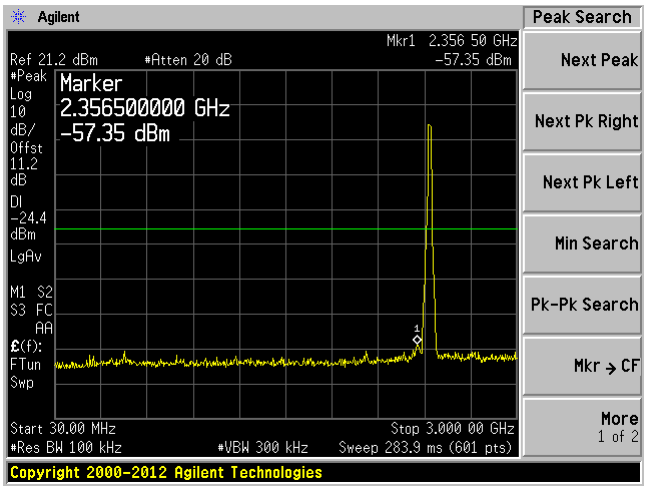


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

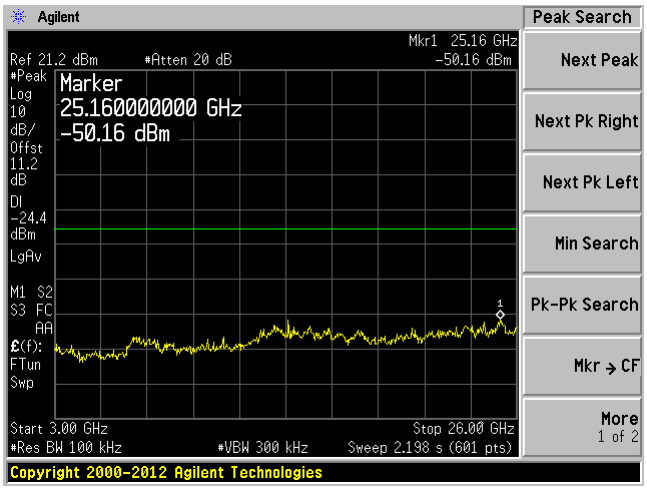


802.11g, Middle Channel 2437 MHz

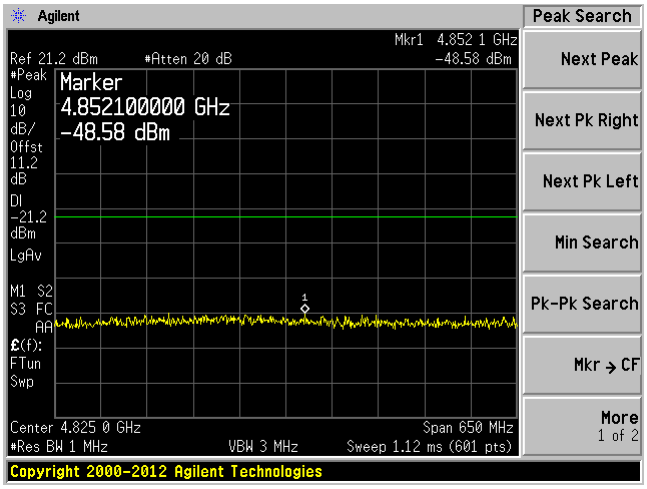
Chain J0, Plot: 30 MHz – 3 GHz



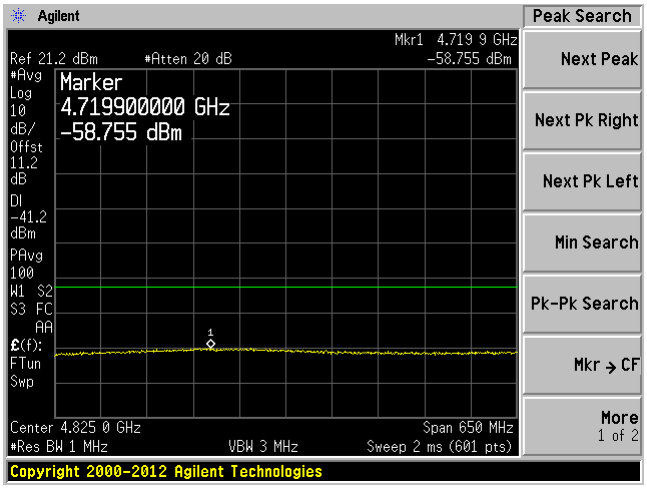
Chain J0, Plot: 3 GHz – 26 GHz



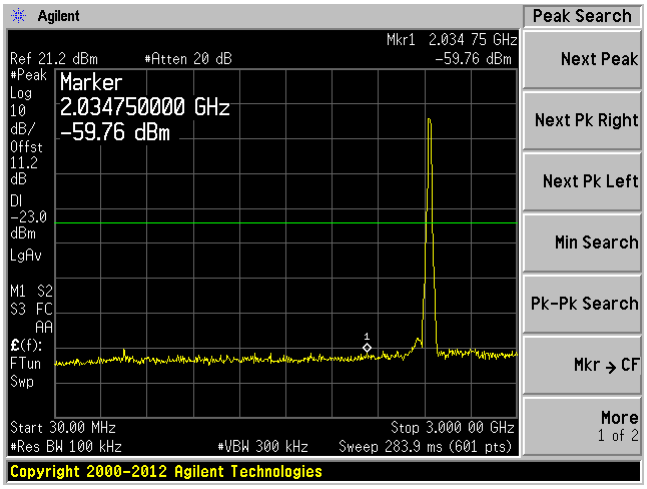
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



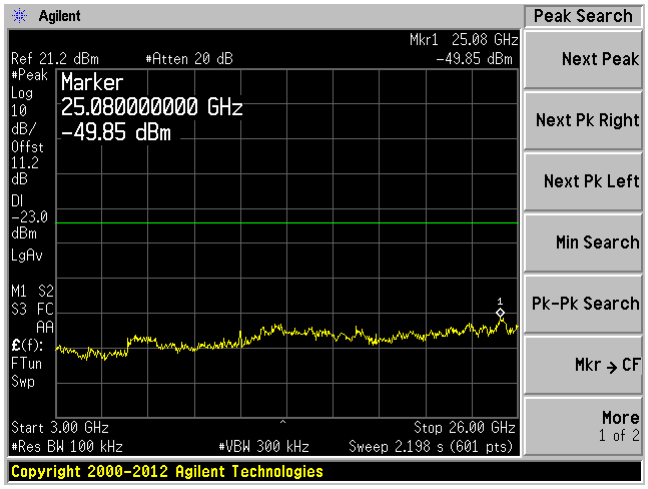
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



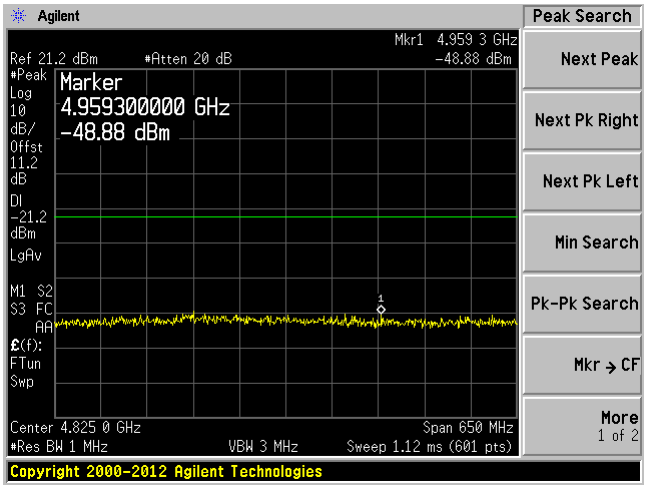
Chain J1, Plot: 30 MHz – 3 GHz



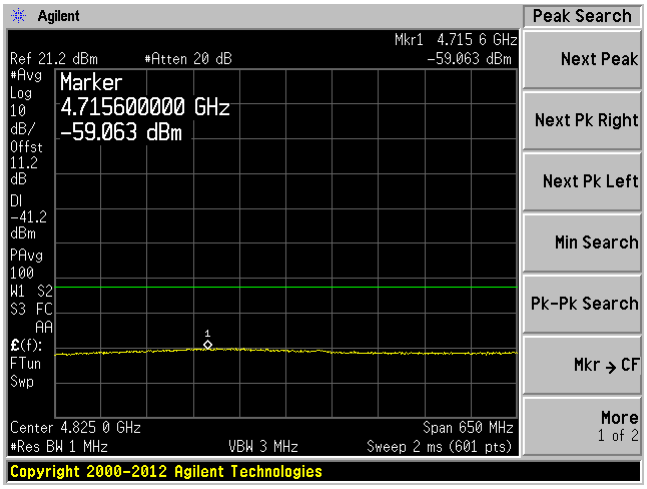
Chain J1, Plot: 3 GHz – 26 GHz



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

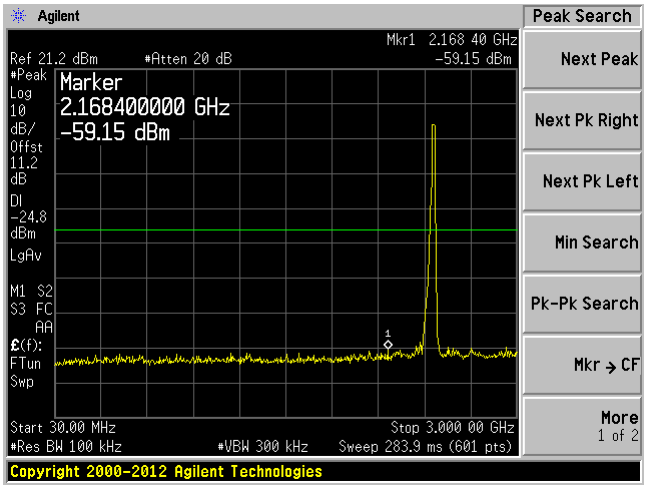


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

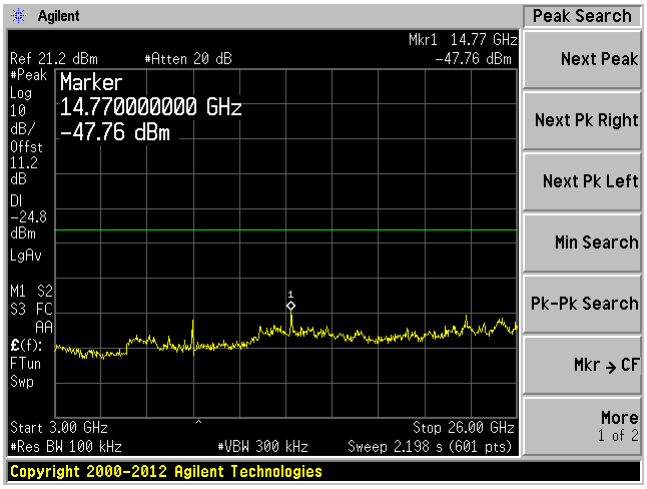


802.11g, High Channel 2462 MHz

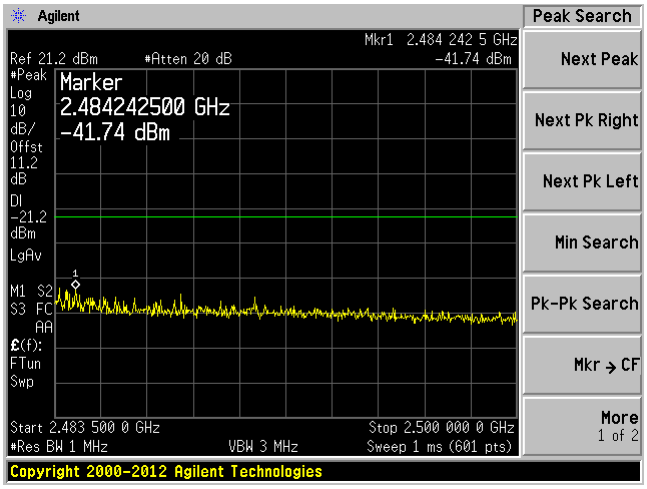
Chain J0, Plot: 30 MHz – 3 GHz



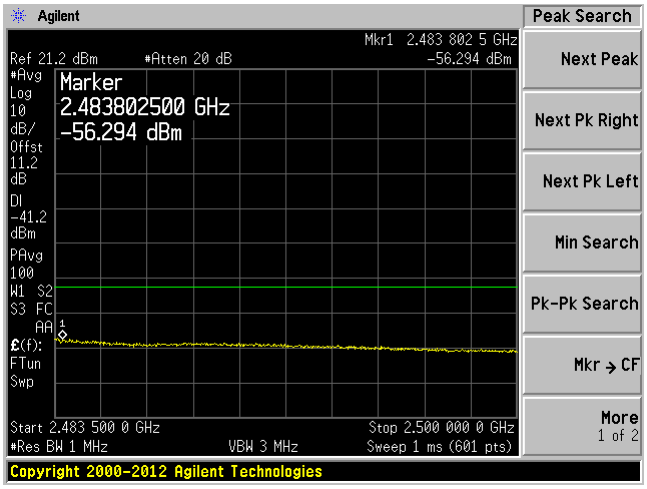
Chain J0, Plot: 3 GHz – 26 GHz



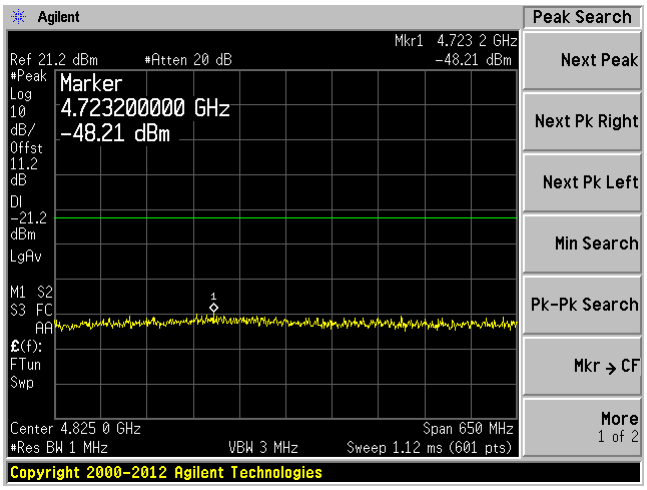
Chain J0, Plot: 2483.5 MHz – 2500 MHz Peak



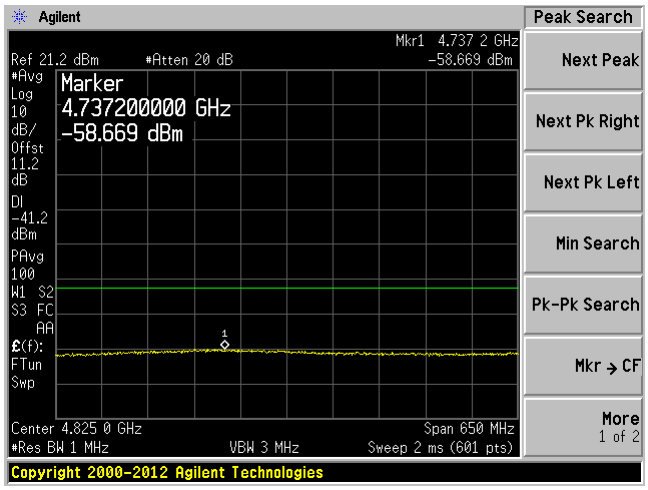
Chain J0, Plot: 2483.5 MHz – 2500 MHz Ave



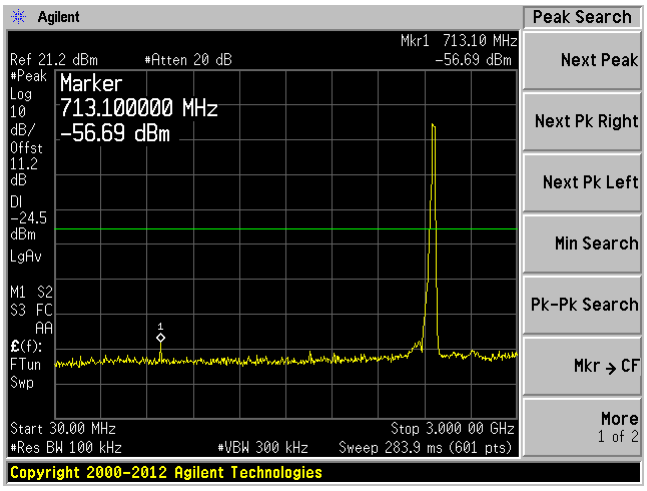
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



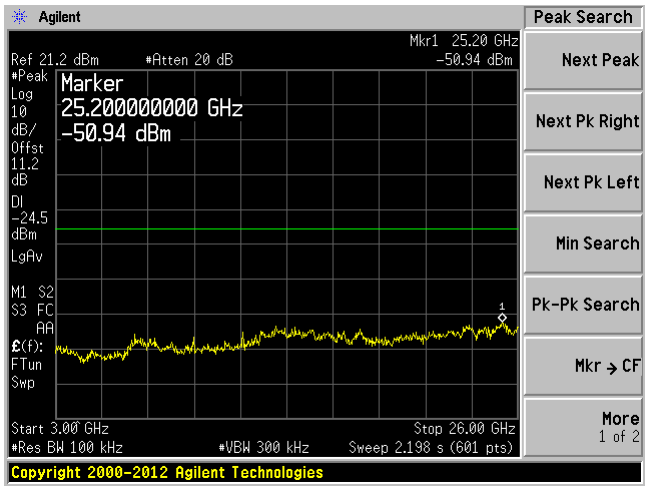
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



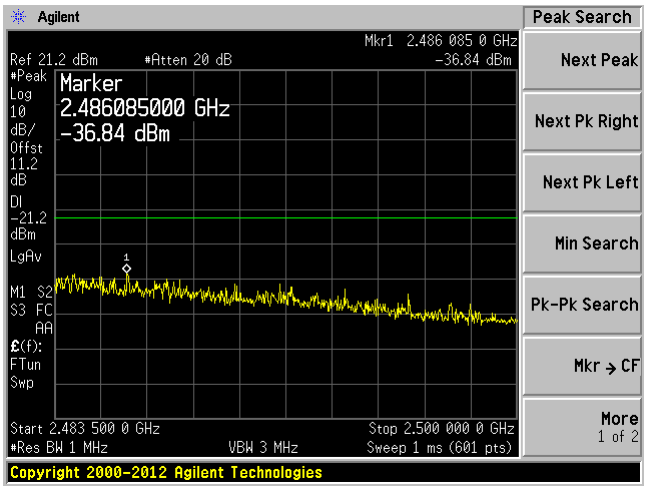
Chain J1, Plot: 30 MHz – 3 GHz



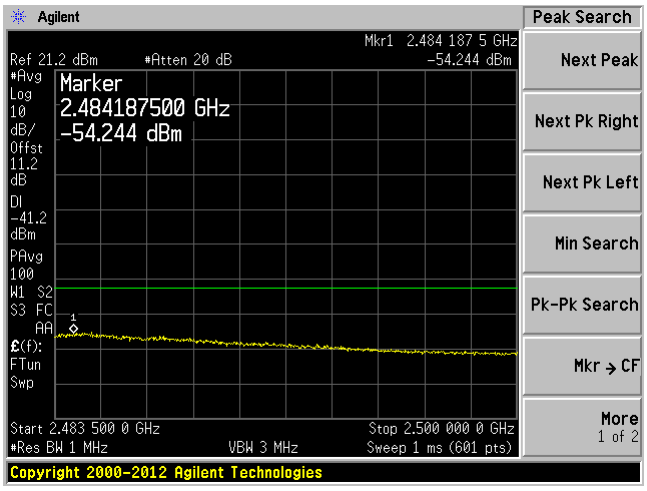
Chain J1, Plot: 3 GHz – 26 GHz



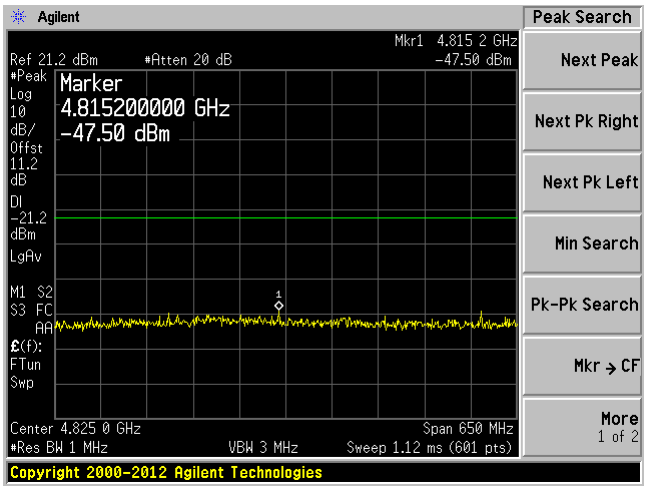
Chain J1, Plot: 2483.5 MHz – 2500 MHz Peak



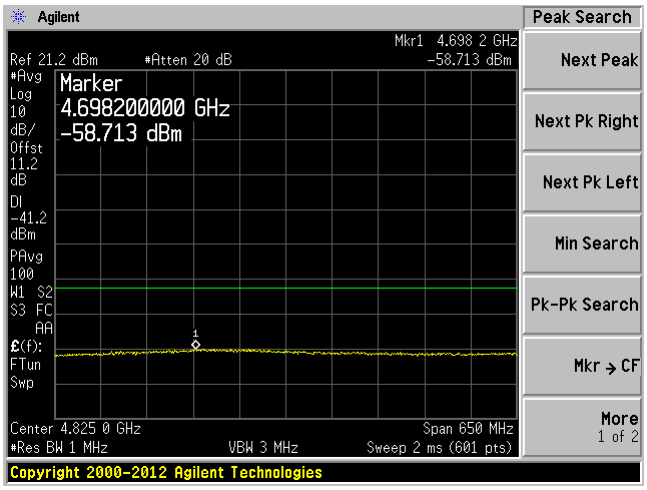
Chain J1, Plot: 2483.5 MHz – 2500 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

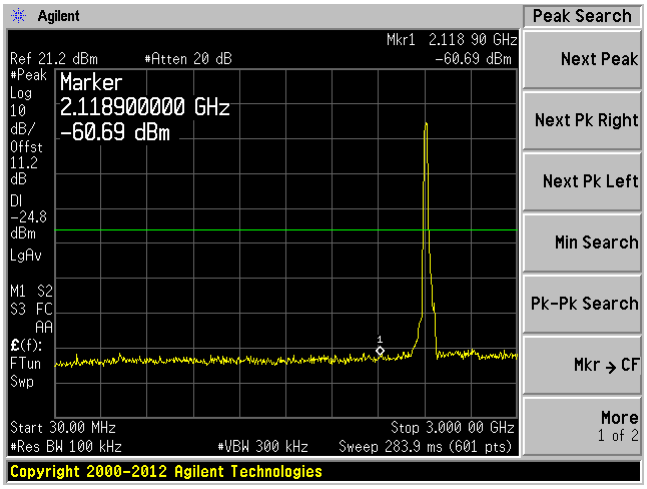


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

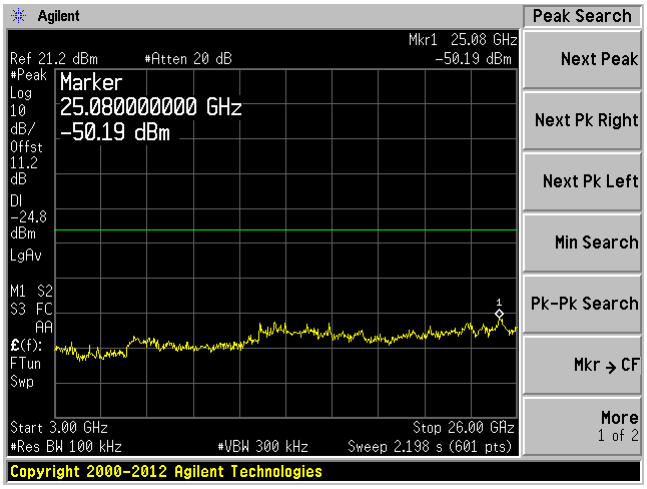


802.11n-HT20, Low Channel 2412 MHz

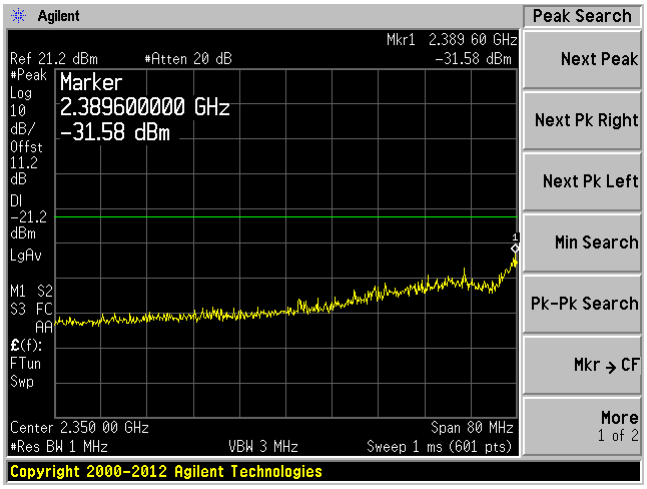
Chain J0, Plot: 30 MHz – 3 GHz



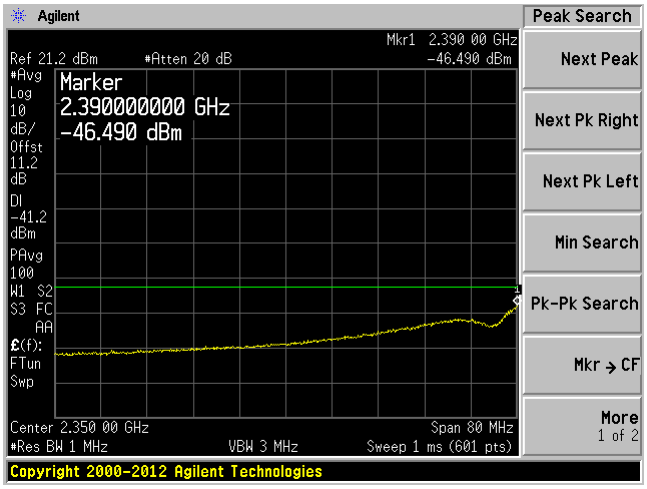
Chain J0, Plot: 3 GHz – 26 GHz



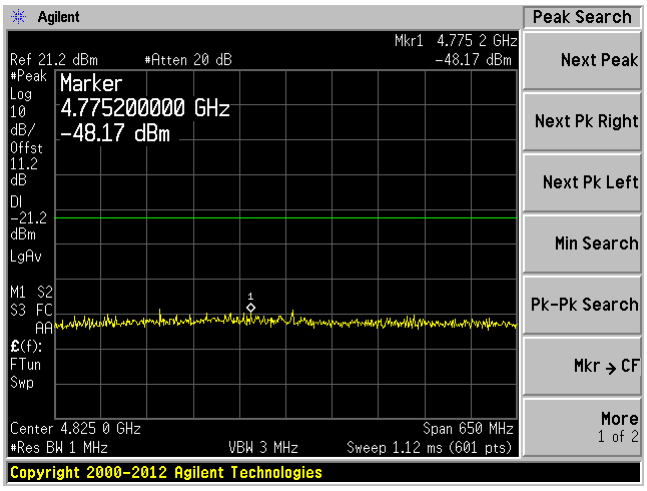
Chain J0, Plot: 2310 MHz – 2390 MHz Peak



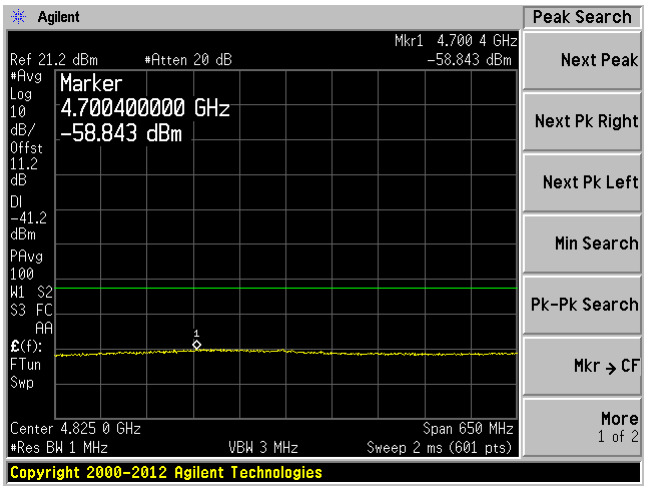
Chain J0, Plot: 2310 MHz – 2390 MHz Ave



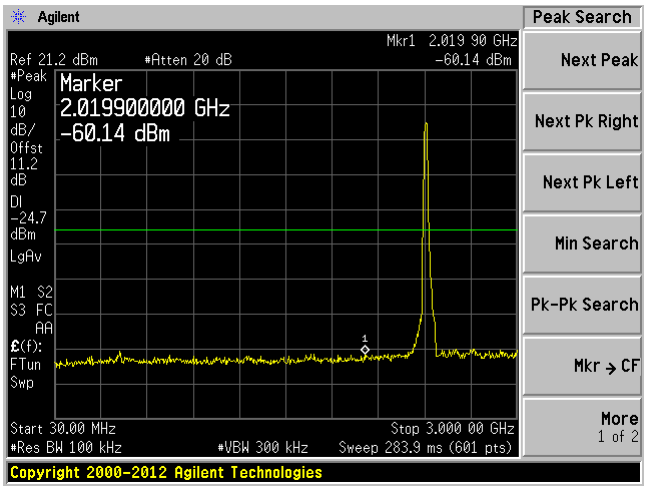
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



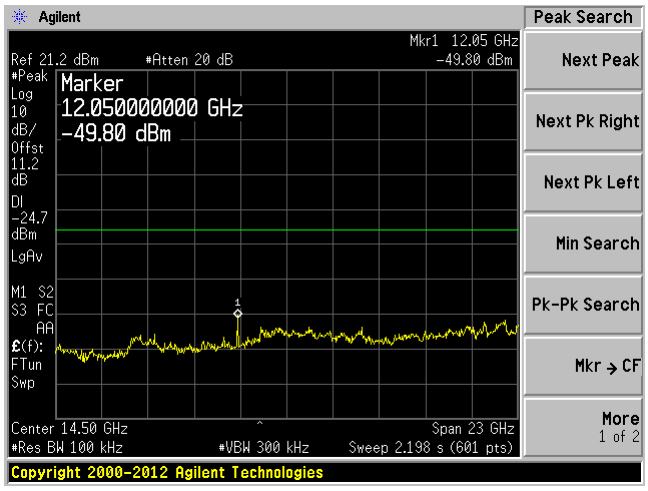
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



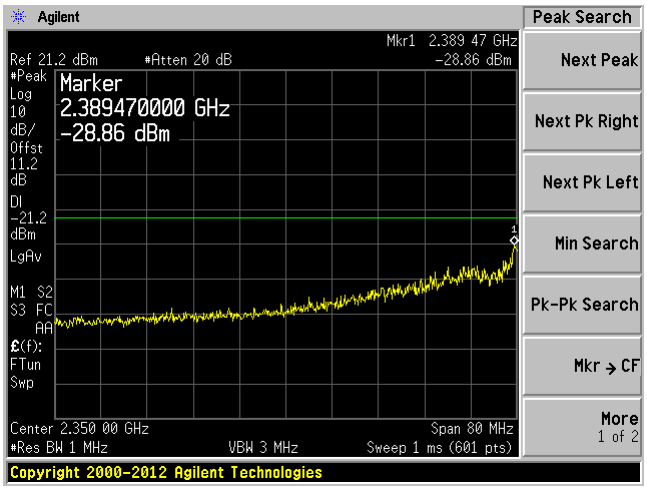
Chain J1, Plot: 30 MHz – 3 GHz



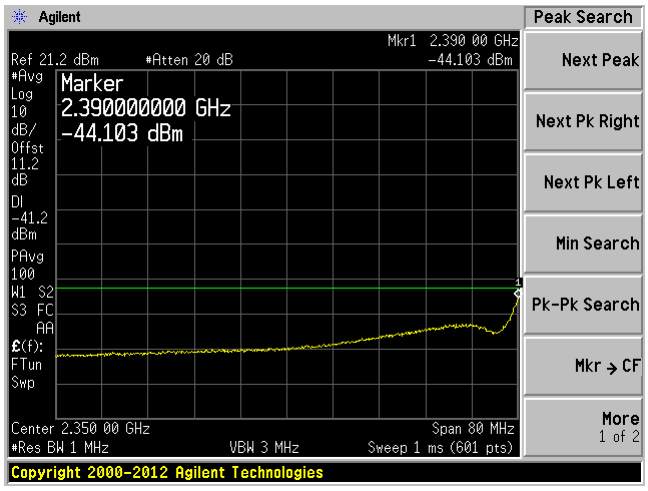
Chain J1, Plot: 3 GHz – 26 GHz



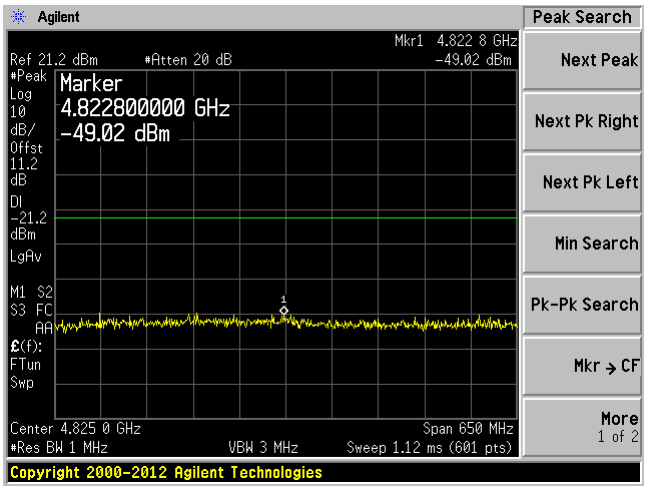
Chain J1, Plot: 2310 MHz – 2390 MHz Peak



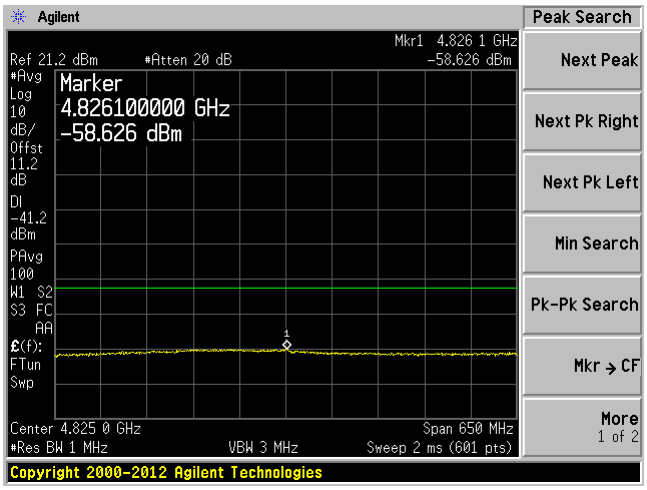
Chain J1, Plot: 2310 MHz – 2390 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

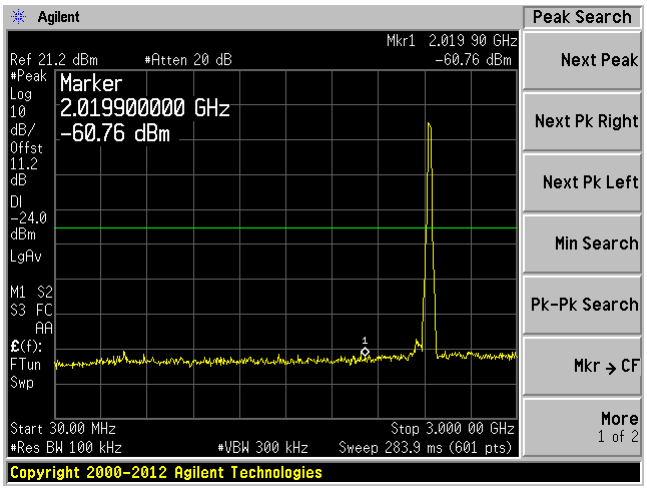


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

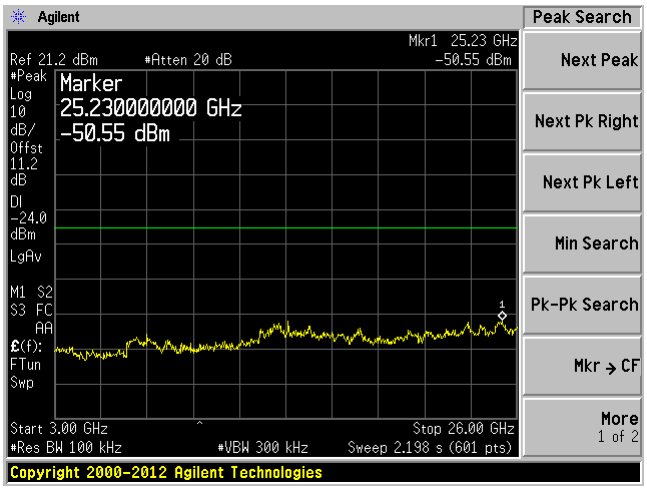


802.11n-HT20, Middle Channel 2437 MHz

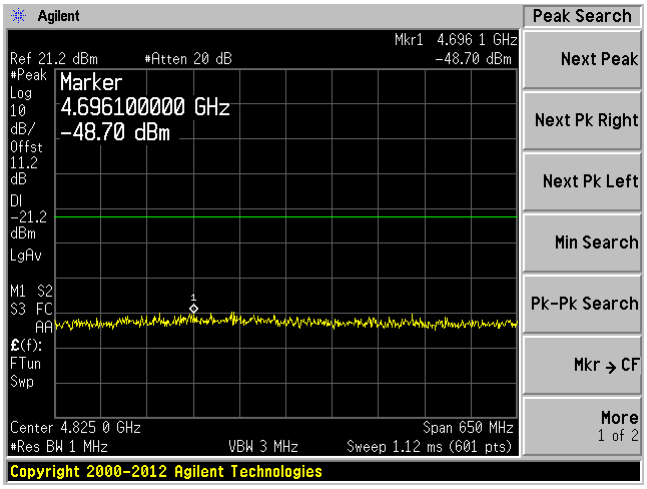
Chain J0, Plot: 30 MHz – 3 GHz



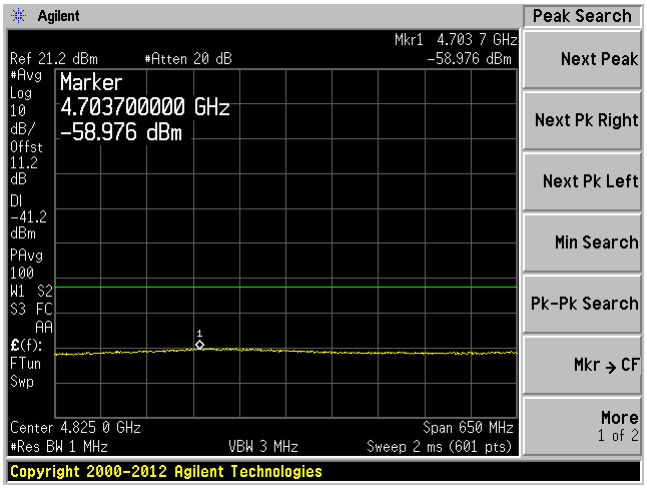
Chain J0, Plot: 3 GHz – 26 GHz



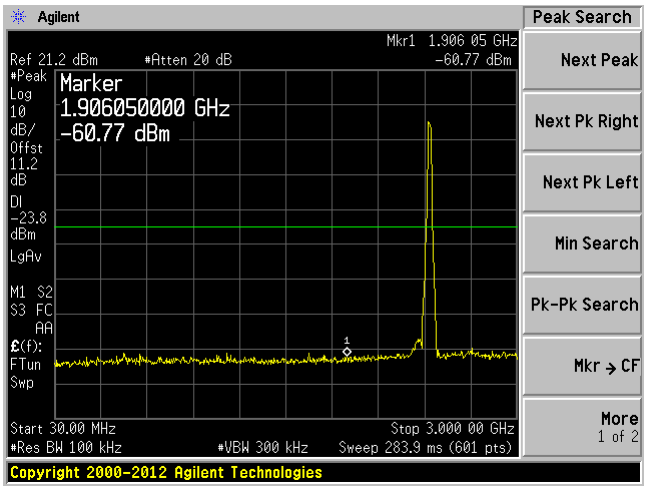
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



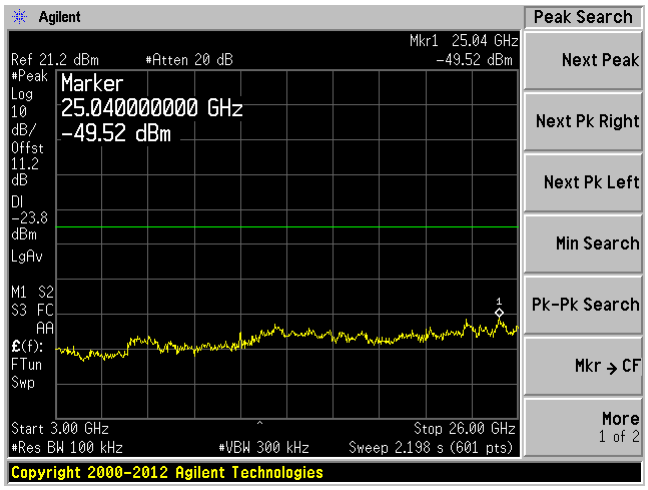
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



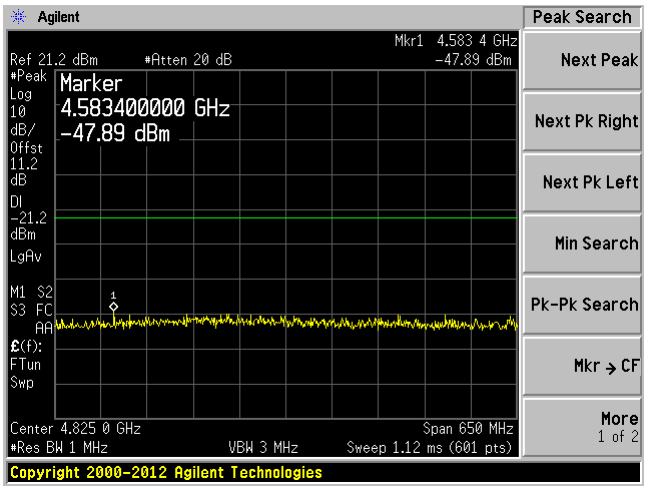
Chain J1, Plot: 30 MHz – 3 GHz



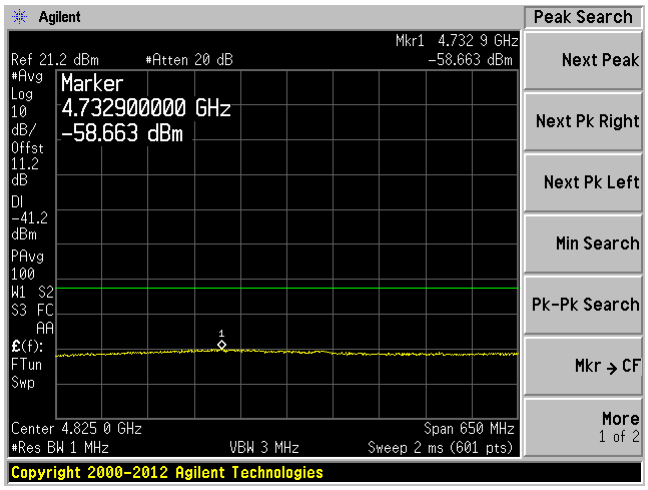
Chain J1, Plot: 3 GHz – 26 GHz



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

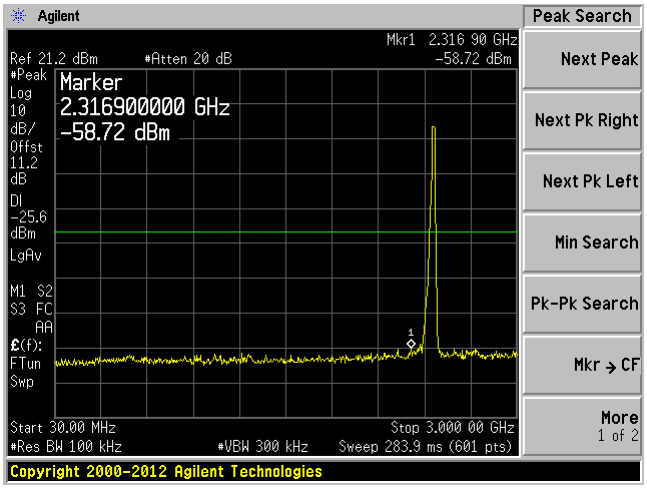


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

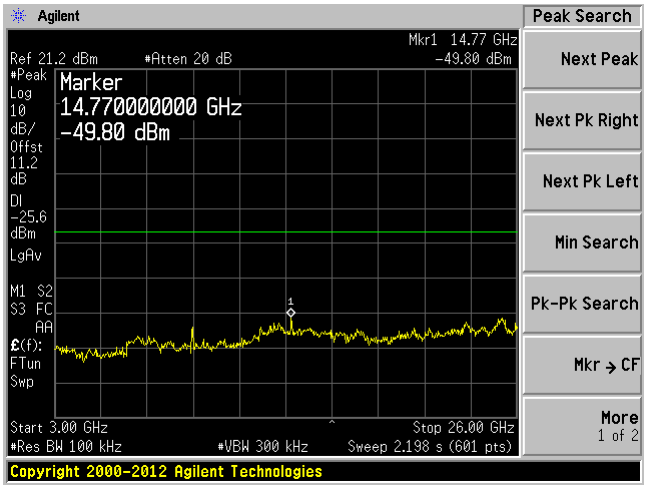


802.11n-HT20, High Channel 2462 MHz

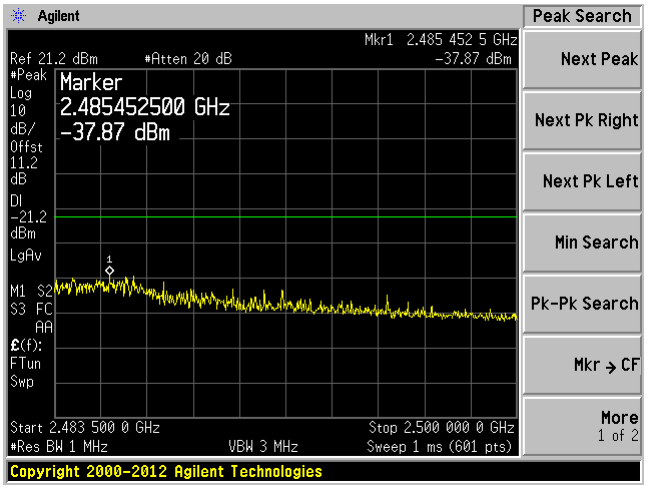
Chain J0, Plot: 30 MHz – 3 GHz



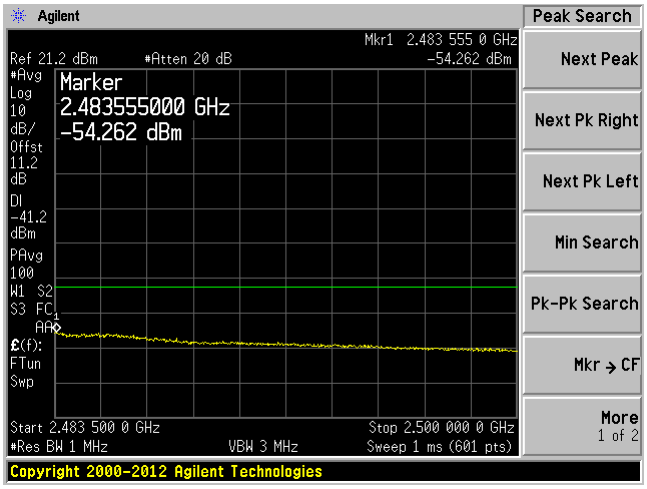
Chain J0, Plot: 3 GHz – 26 GHz



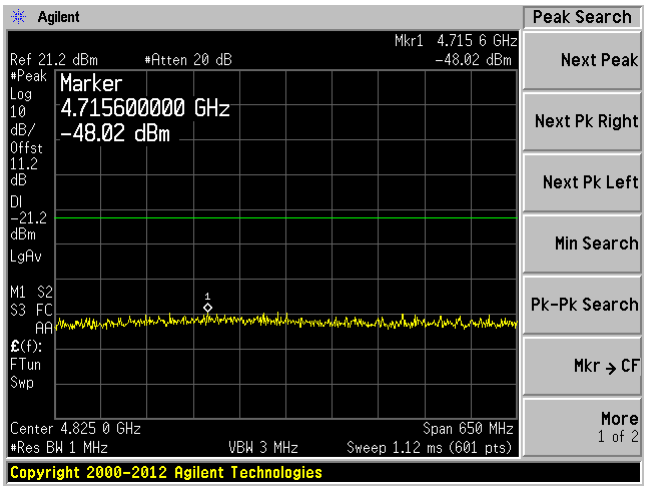
Chain J0, Plot: 2483.5 MHz – 2500 MHz Peak



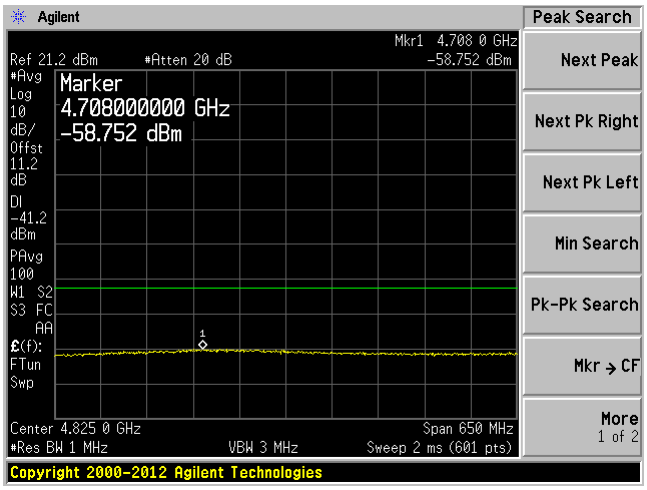
Chain J0, Plot: 2483.5 MHz – 2500 MHz Ave



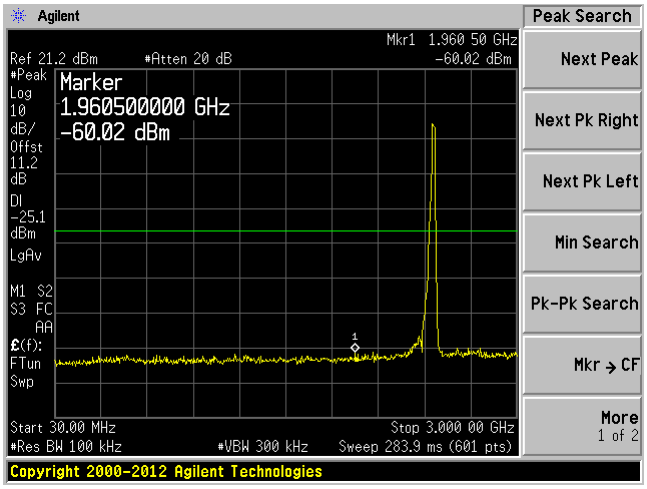
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



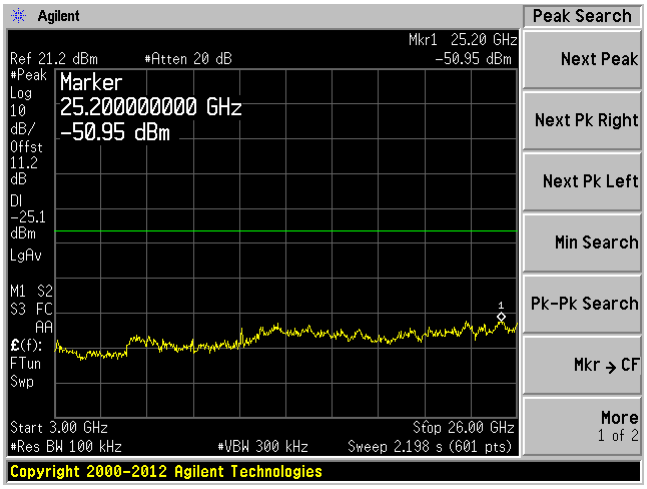
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



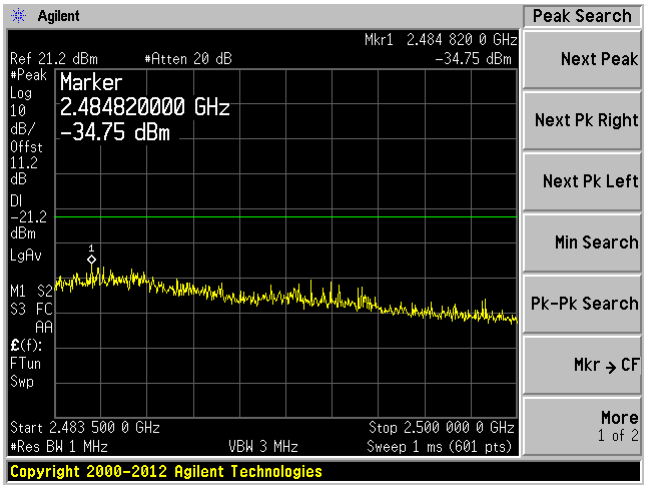
Chain J1, Plot: 30 MHz – 3 GHz



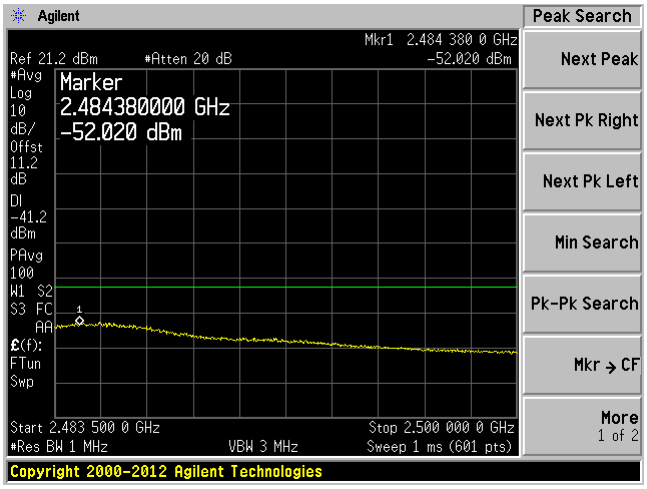
Chain J1, Plot: 3 GHz – 26 GHz



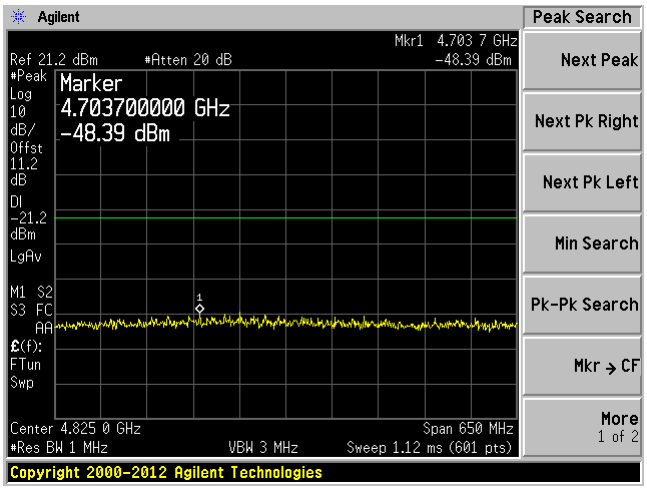
Chain J1, Plot: 2483.5 MHz – 2500 MHz Peak



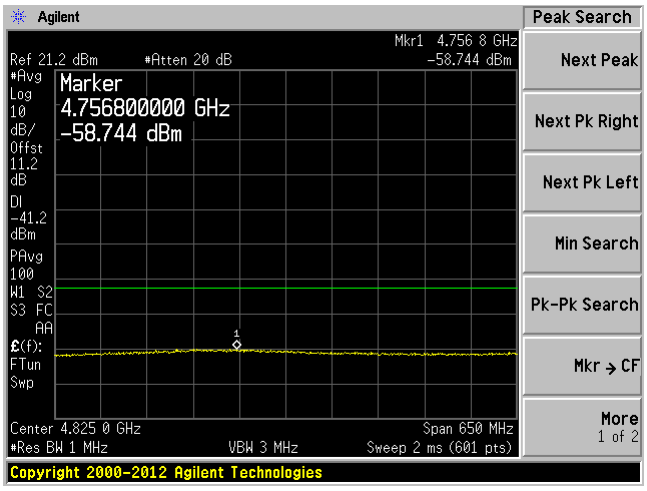
Chain J1, Plot: 2483.5 MHz – 2500 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

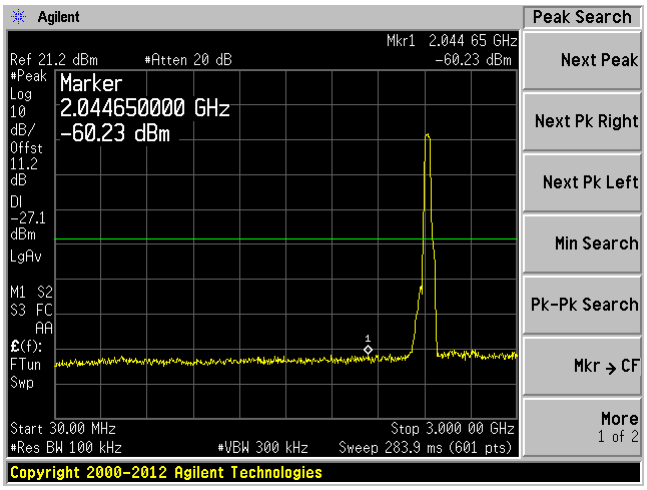


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

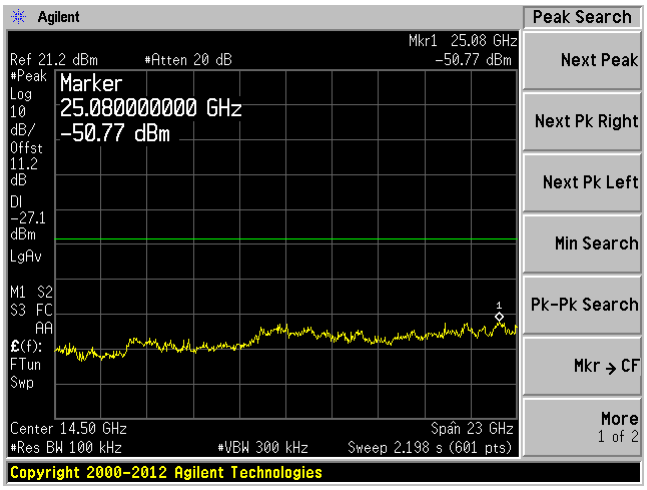


802.11n HT40, Low Channel 2422 MHz

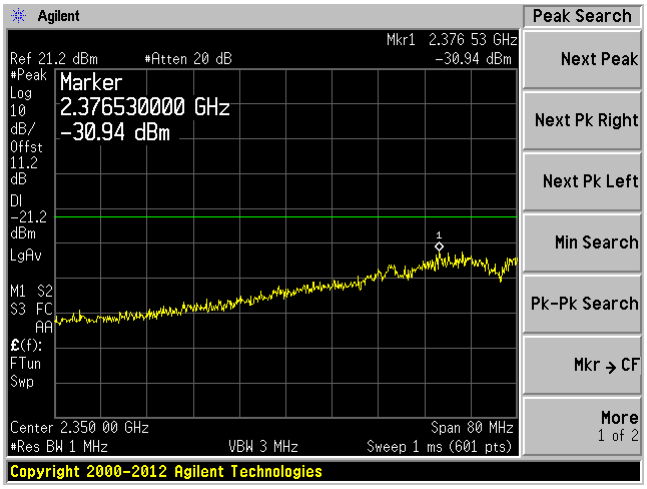
Chain J0, Plot: 30 MHz – 3 GHz



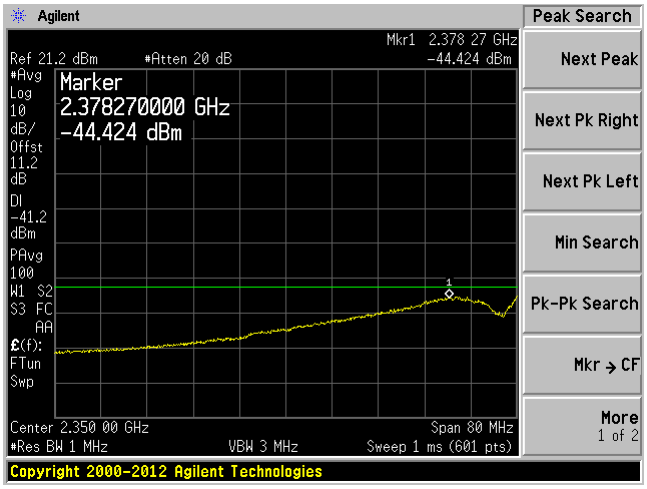
Chain J0, Plot: 3 GHz – 26 GHz



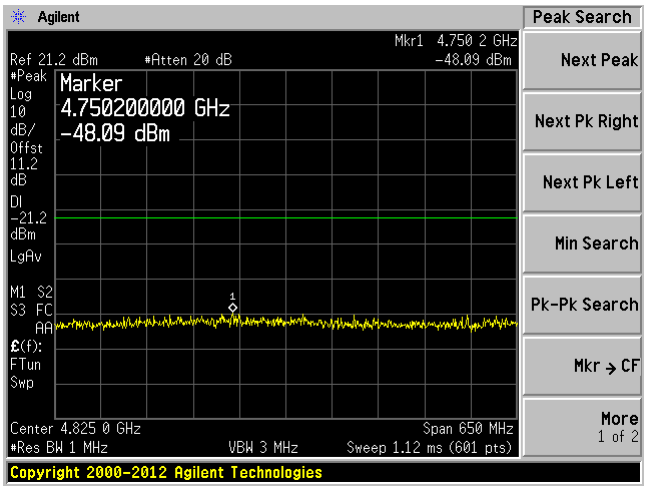
Chain J0, Plot: 2310 MHz – 2390 MHz Peak



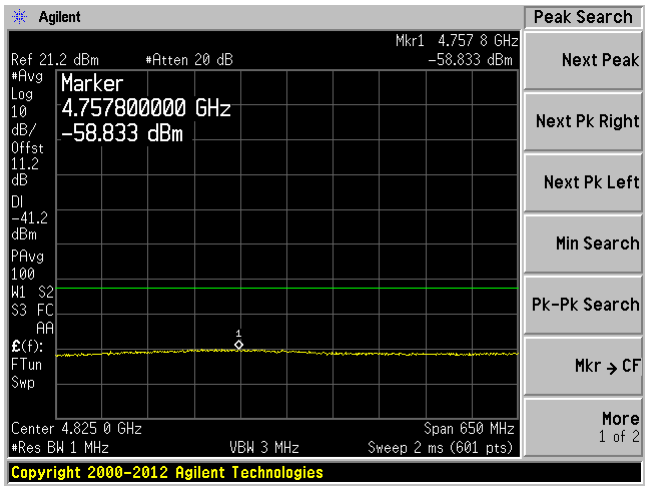
Chain J0, Plot: 2310 MHz – 2390 MHz Ave



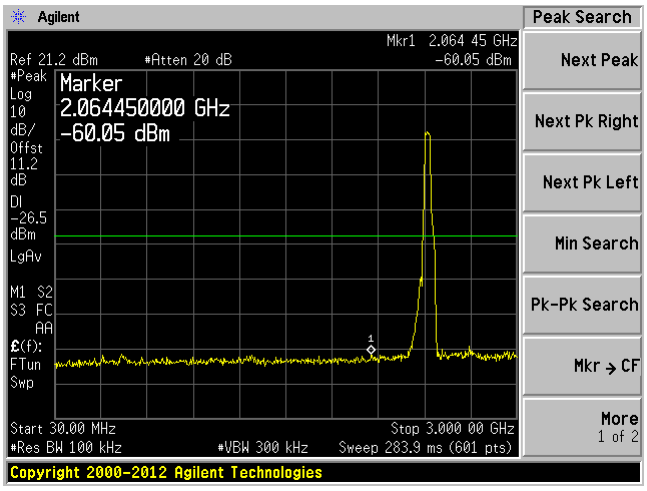
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



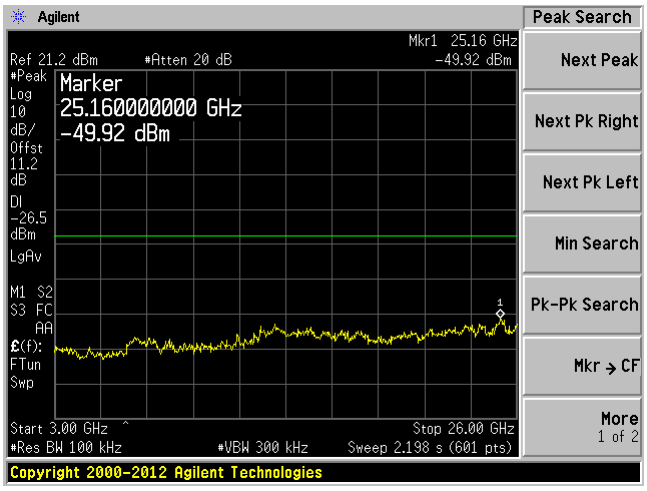
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



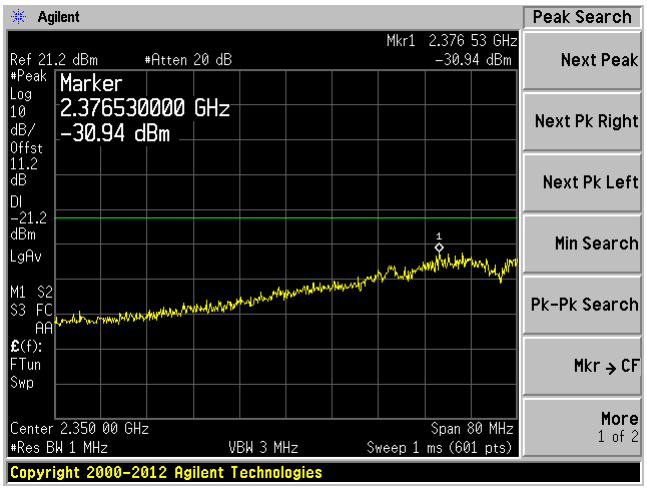
Chain J1, Plot: 30 MHz – 3 GHz



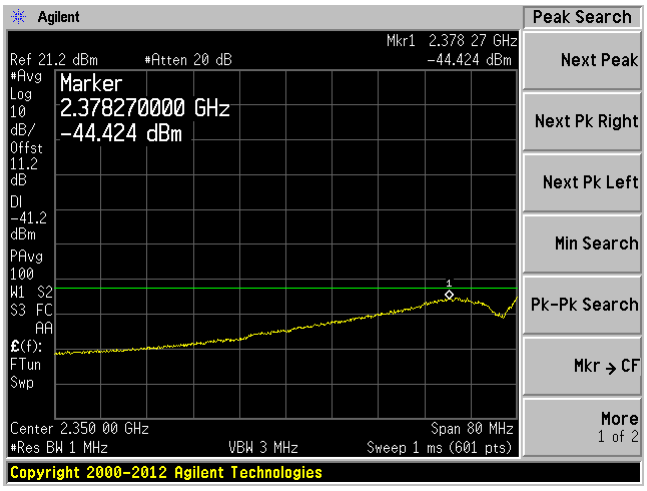
Chain J1, Plot: 3 GHz – 26 GHz



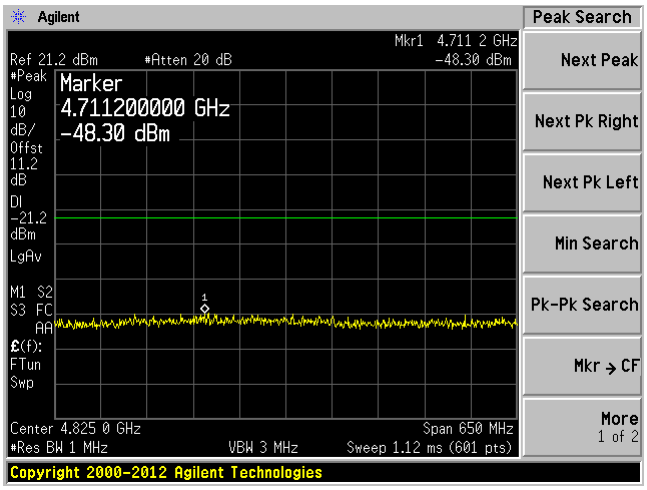
Chain J1, Plot: 2310 MHz – 2390 MHz Peak



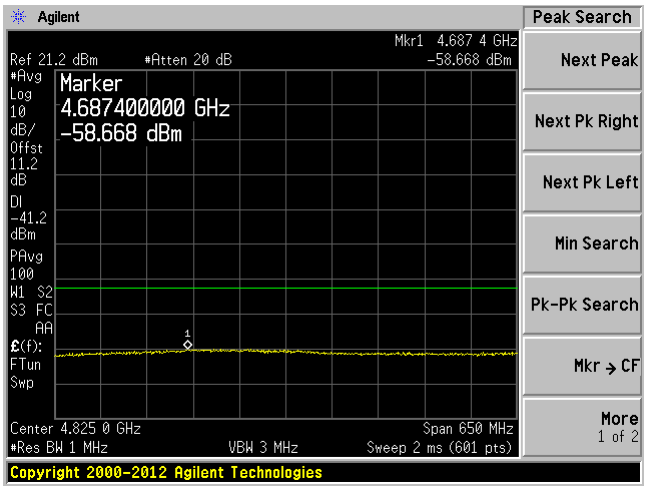
Chain J1, Plot: 2310 MHz – 2390 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

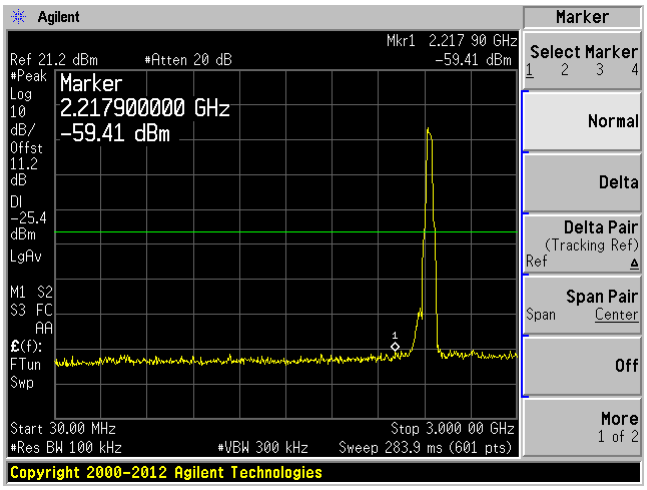


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

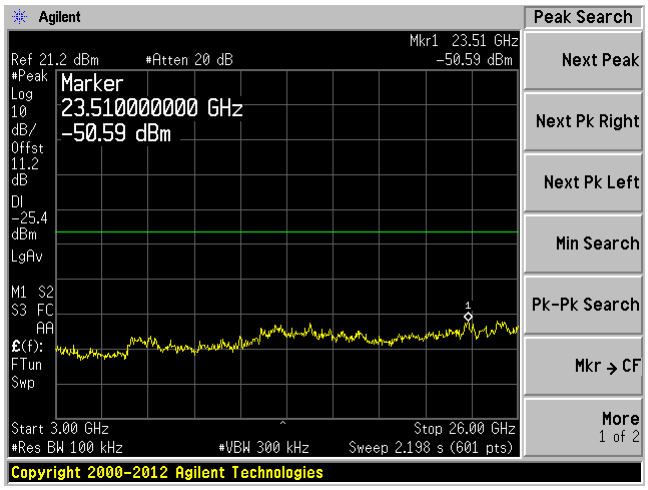


802.11n-HT40, Middle Channel 2437 MHz

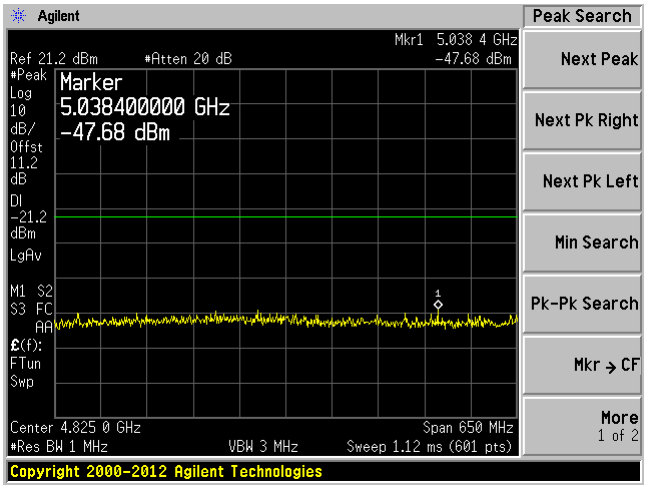
Chain J0, Plot: 30 MHz – 3 GHz



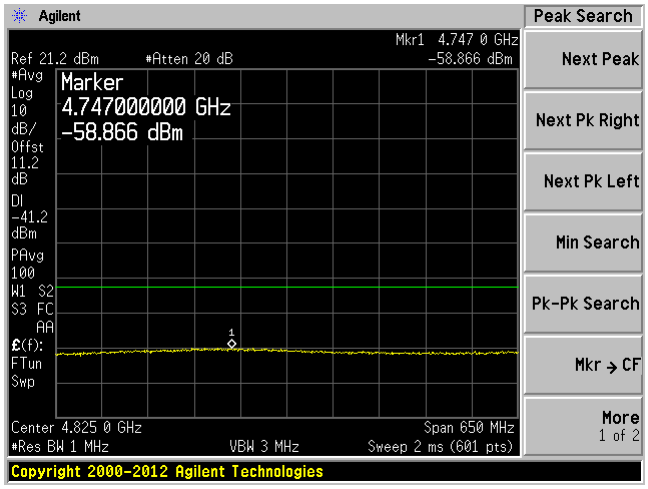
Chain J0, Plot: 3 GHz – 26 GHz



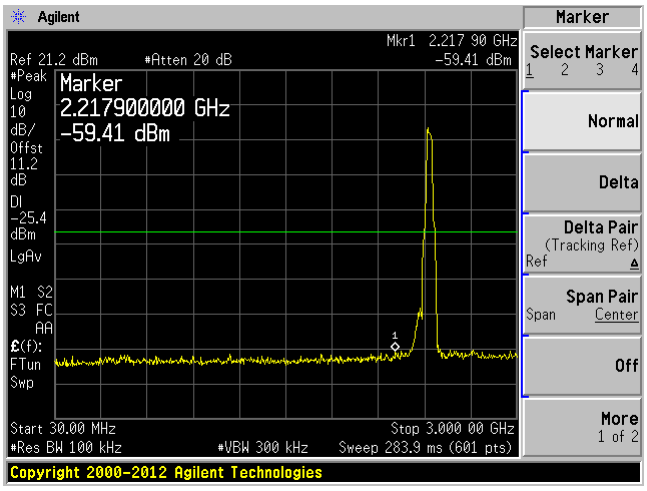
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



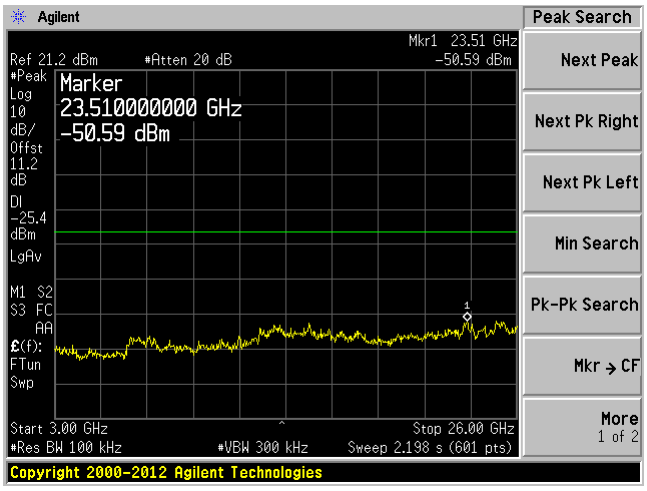
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



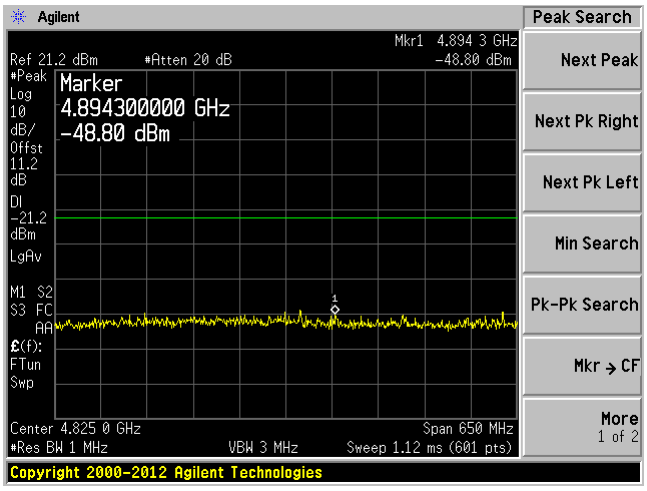
Chain J1, Plot: 30 MHz – 3 GHz



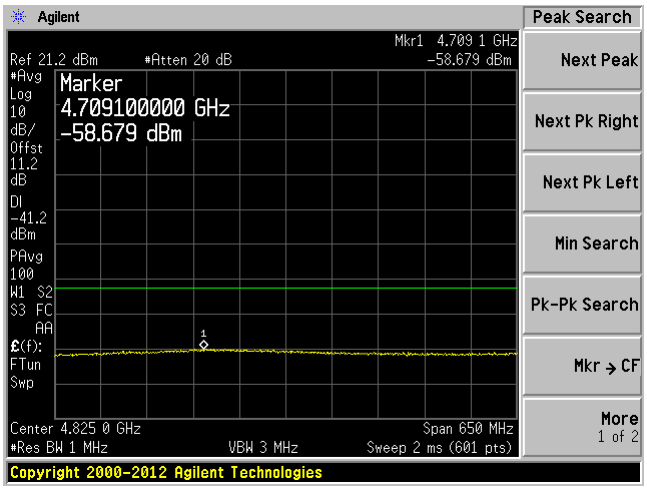
Chain J1, Plot: 3 GHz – 26 GHz



Chain J1, Plot: 4500 MHz – 5150 MHz Peak

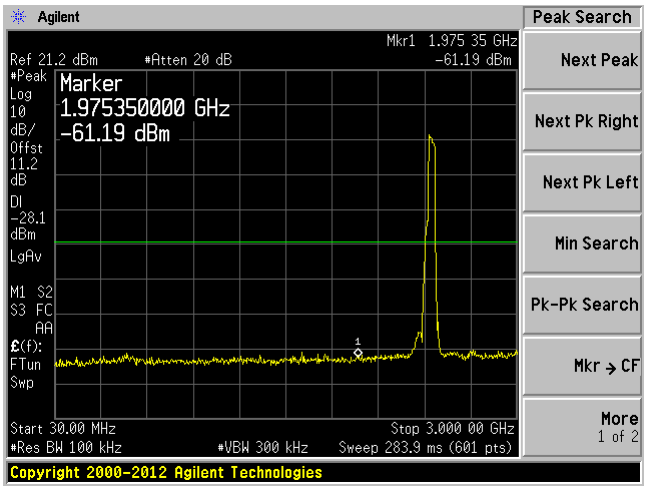


Chain J1, Plot: 4500 MHz – 5150 MHz Ave

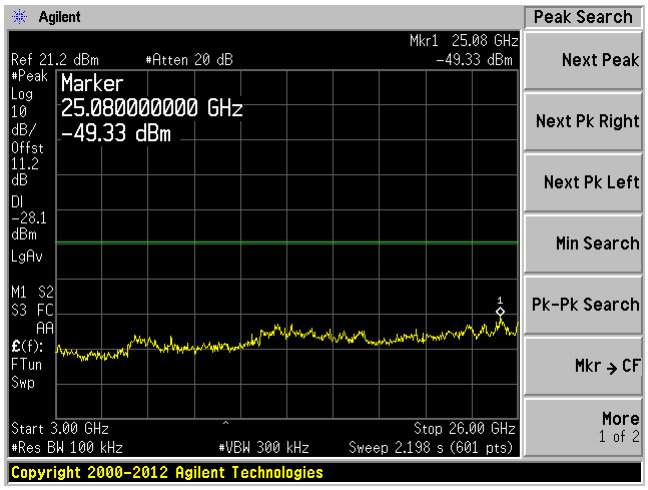


802.11n-HT40, High Channel 2452 MHz

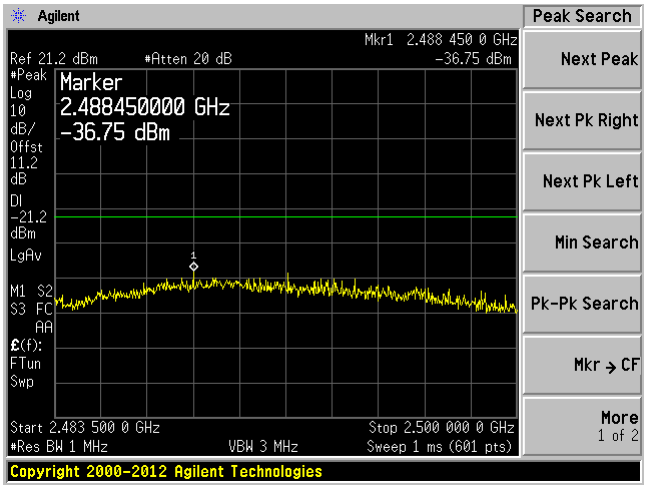
Chain J0, Plot: 30 MHz – 3 GHz



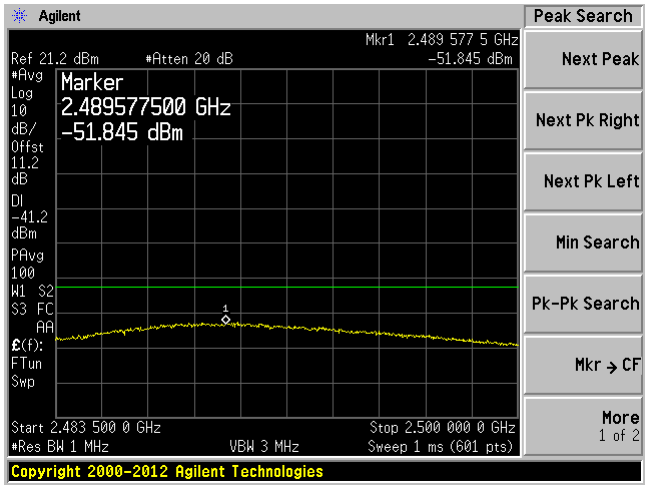
Chain J0, Plot: 3 GHz – 26 GHz



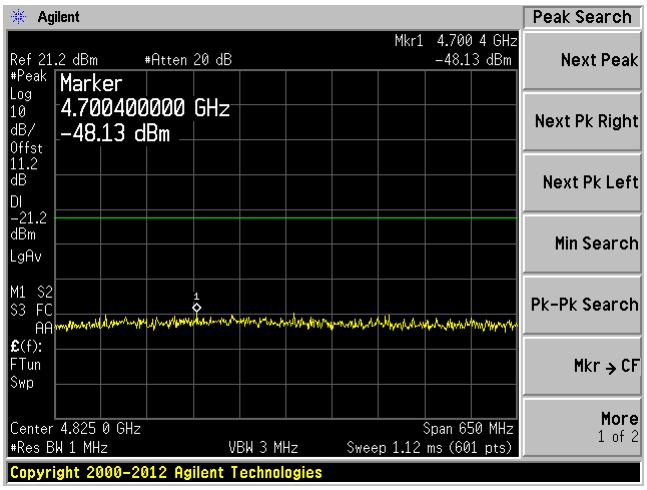
Chain J0, Plot: 2483.5 MHz – 2500 MHz Peak



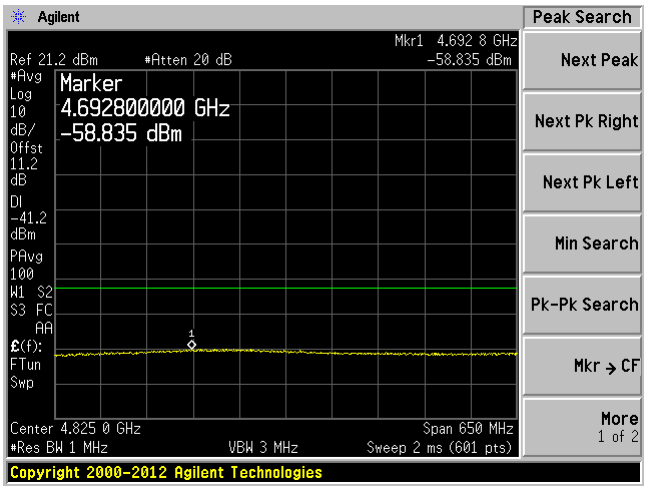
Chain J0, Plot: 2483.5 MHz – 2500 MHz Ave



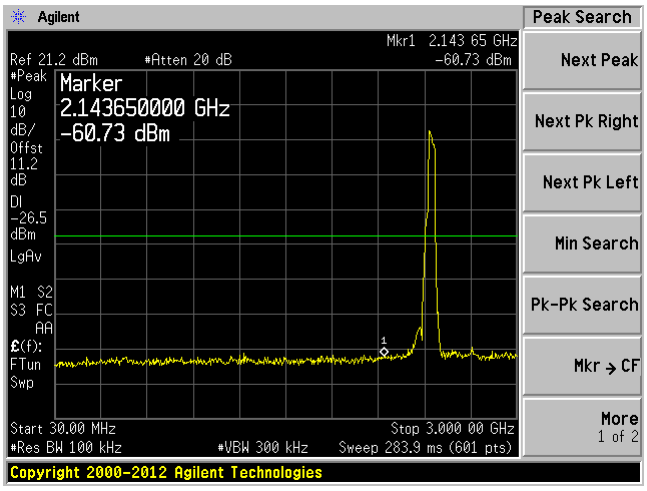
Chain J0, Plot: 4500 MHz – 5150 MHz Peak



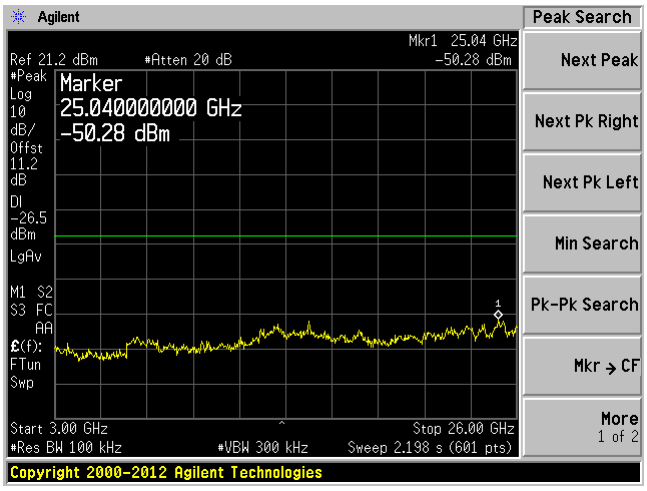
Chain J0, Plot: 4500 MHz – 5150 MHz Ave



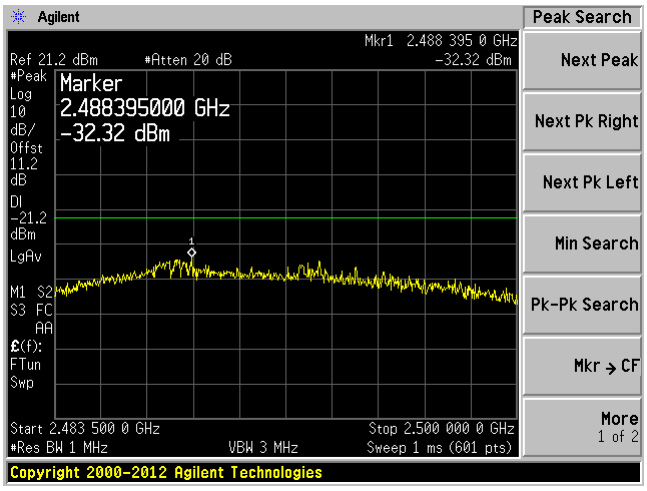
Chain J1, Plot: 30 MHz – 3 GHz



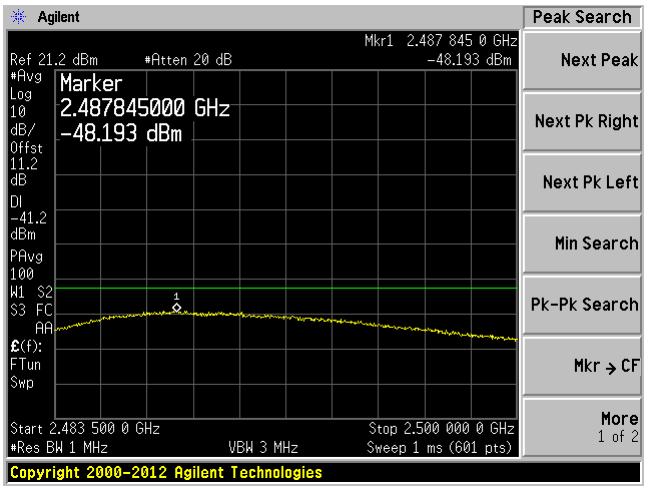
Chain J1, Plot: 3 GHz – 26 GHz



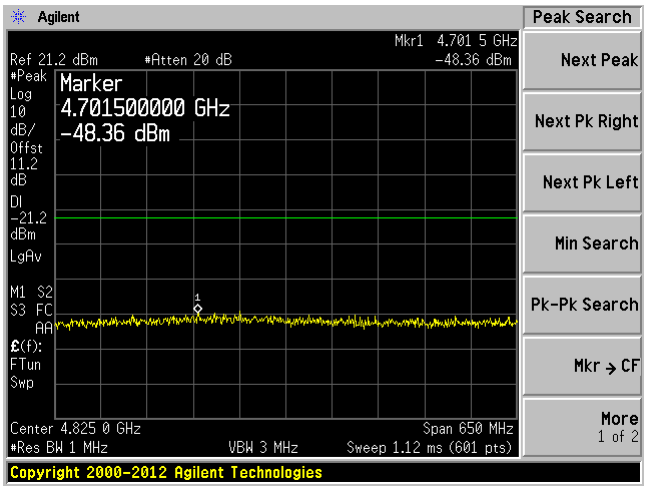
Chain J1, Plot: 2483.5 MHz – 2500 MHz Peak



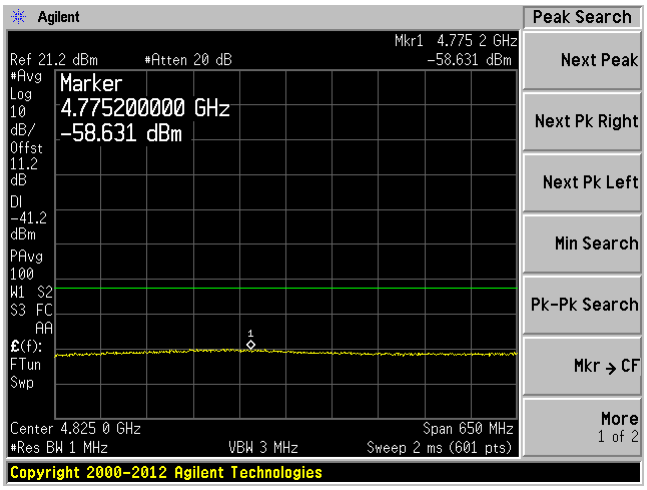
Chain J1, Plot: 2483.5 MHz – 2500 MHz Ave



Chain J1, Plot: 4500 MHz – 5150 MHz Peak



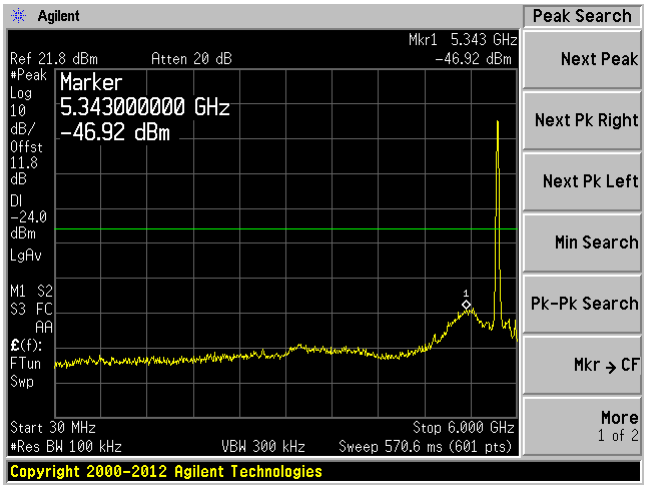
Chain J1, Plot: 4500 MHz – 5150 MHz Ave



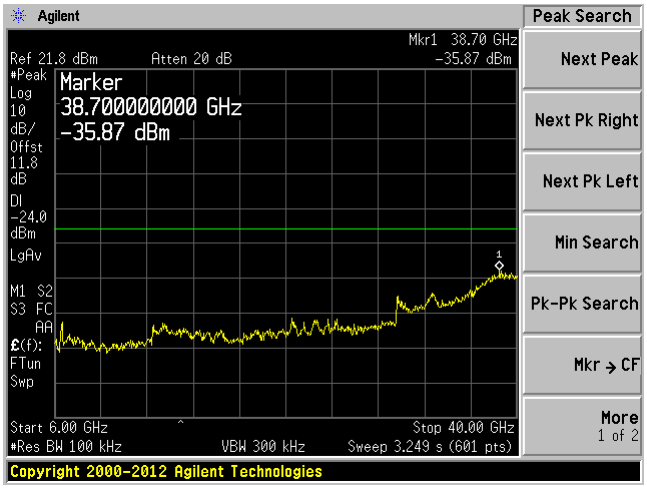
5725-5845 MHz

802.11a, Low Channel 5745 MHz

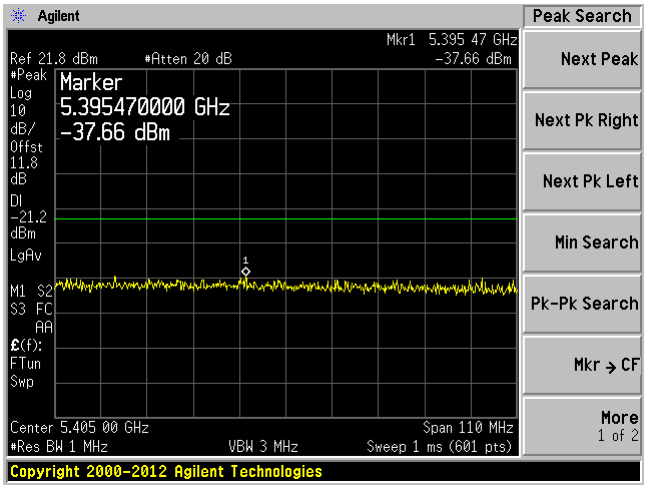
Chain J0, Plot: 30 MHz – 6 GHz



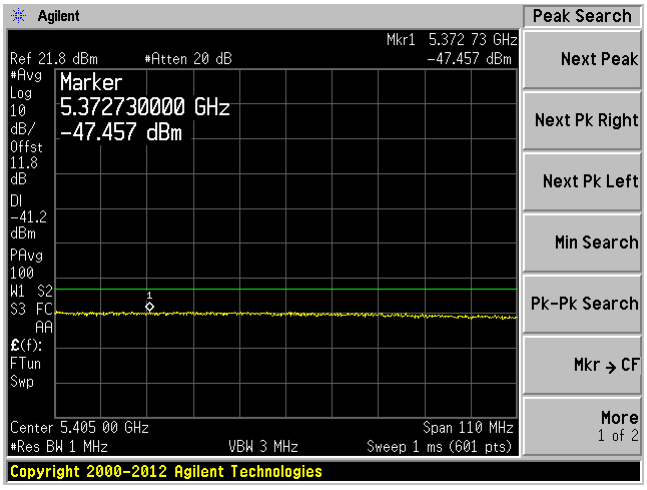
Chain J0, Plot: 6 GHz – 40 GHz



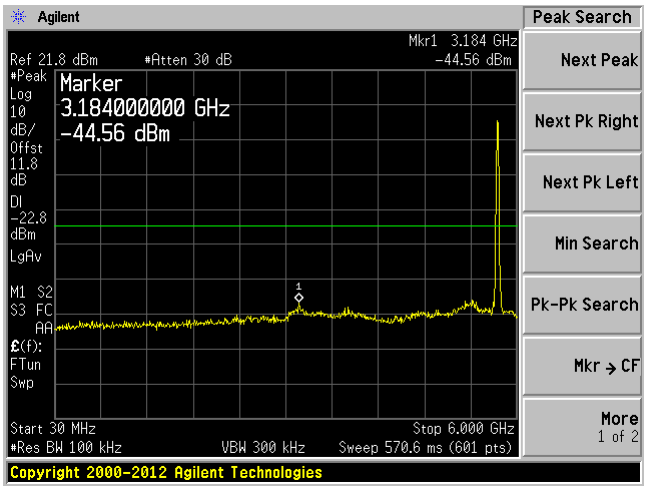
Chain J0, Plot: 5350 MHz – 5460 MHz Peak



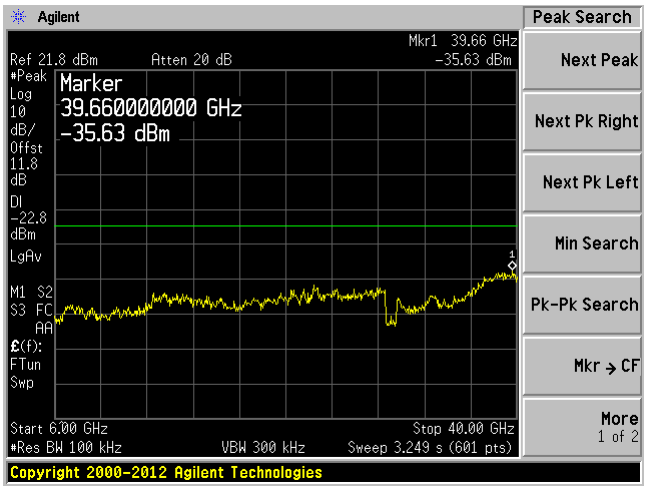
Chain J0, Plot: 5350 MHz – 5460 MHz Ave



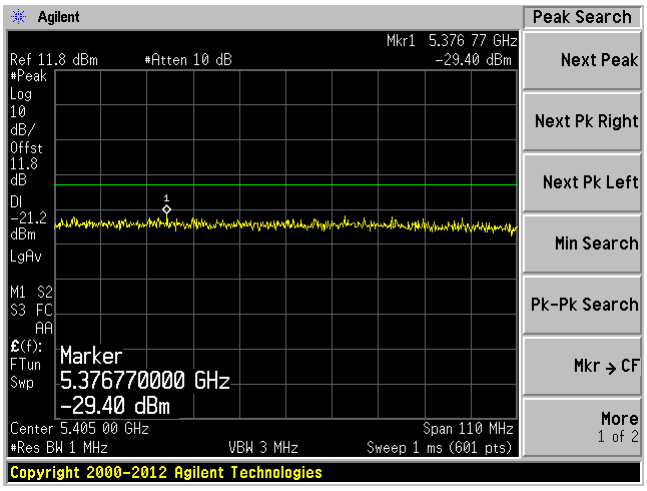
Chain J1, Plot: 30 MHz – 6 GHz



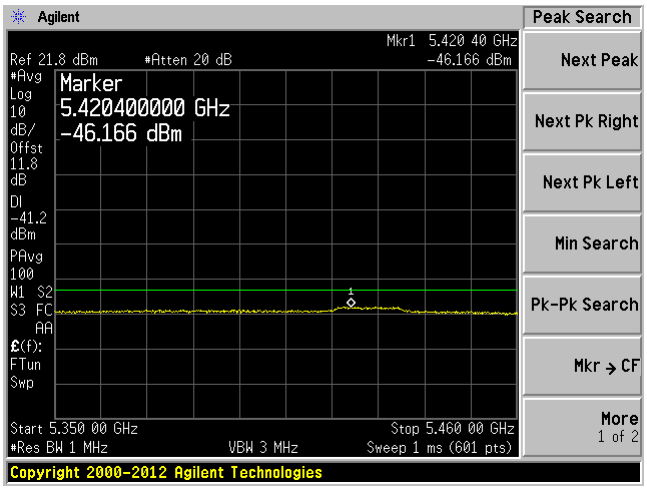
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 5350 MHz – 5460 MHz Peak

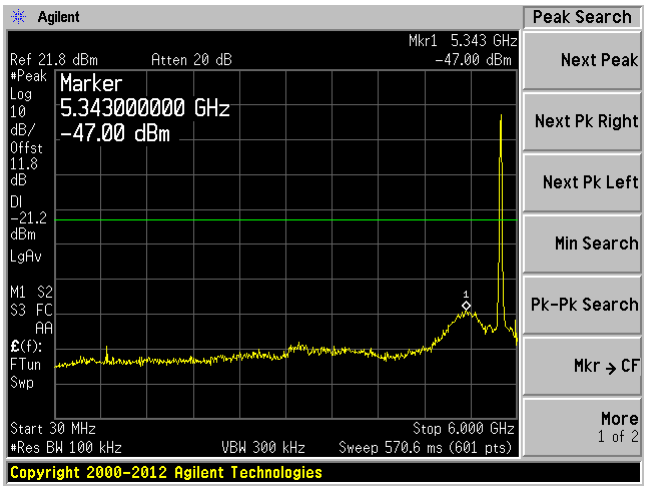


Chain J1, Plot: 5350 MHz – 5460 MHz Ave

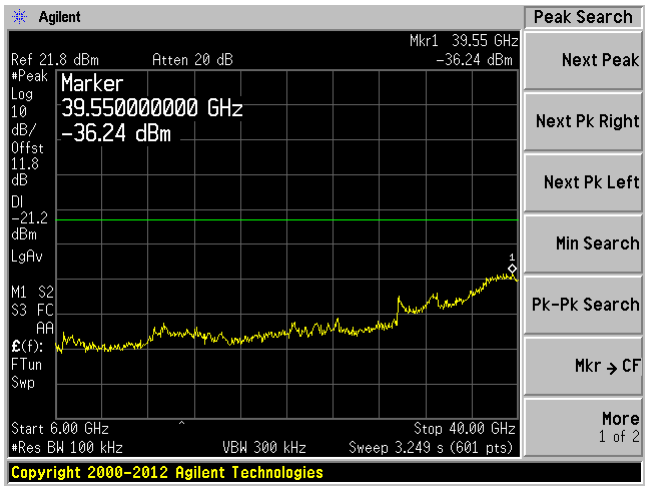


802.11a, Middle Channel 5785 MHz

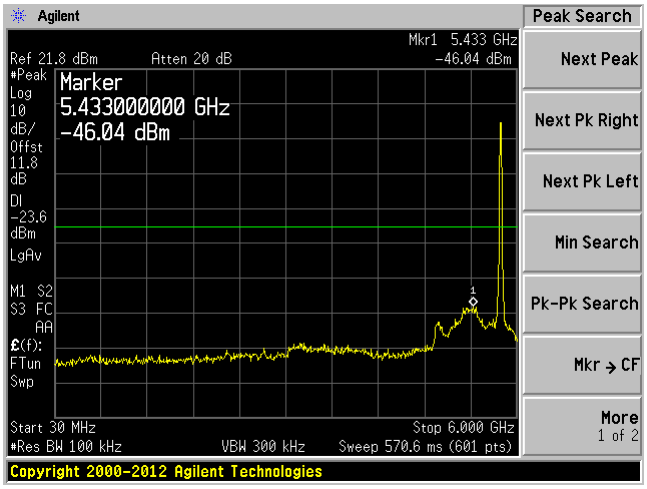
Chain J0, Plot: 30 MHz – 6 GHz



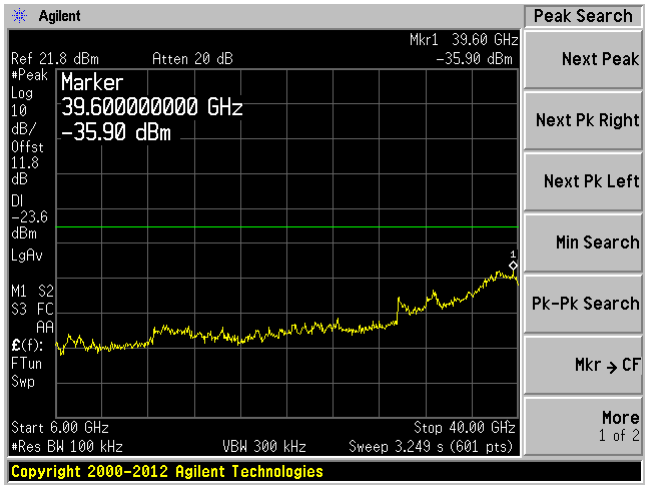
Chain J0, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 30 MHz – 6 GHz

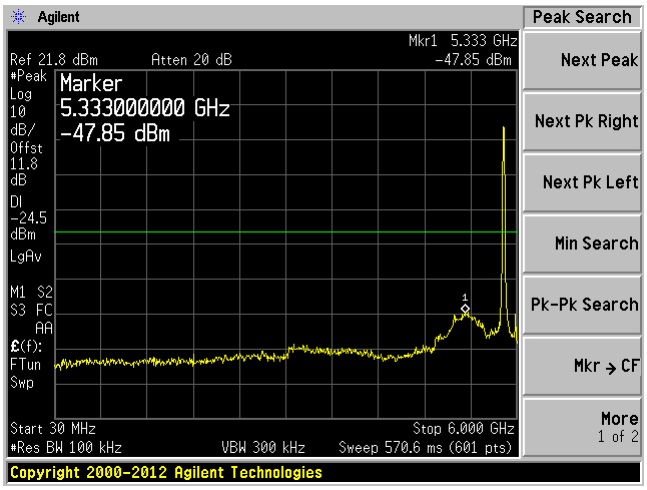


Chain J1, Plot: 6 GHz – 40 GHz

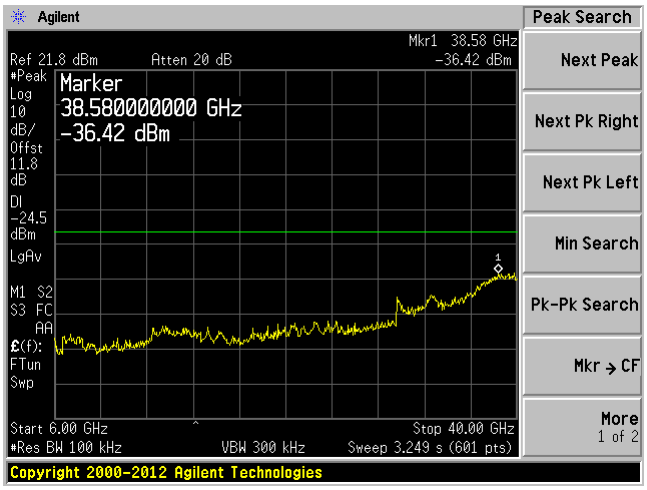


802.11a, High Channel 5825 MHz

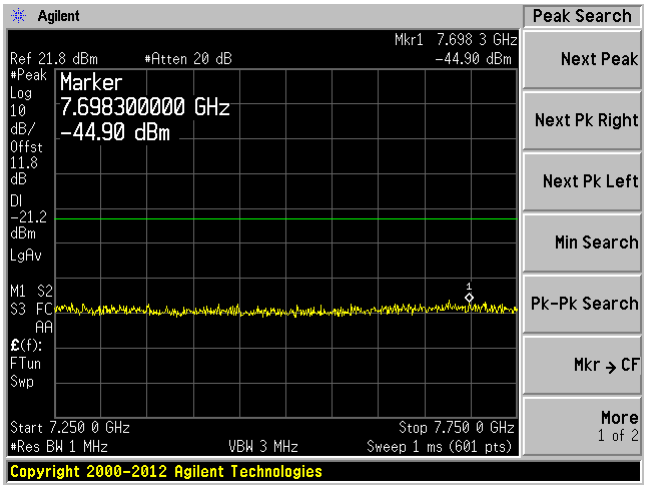
Chain J0, Plot: 30 MHz – 6 GHz



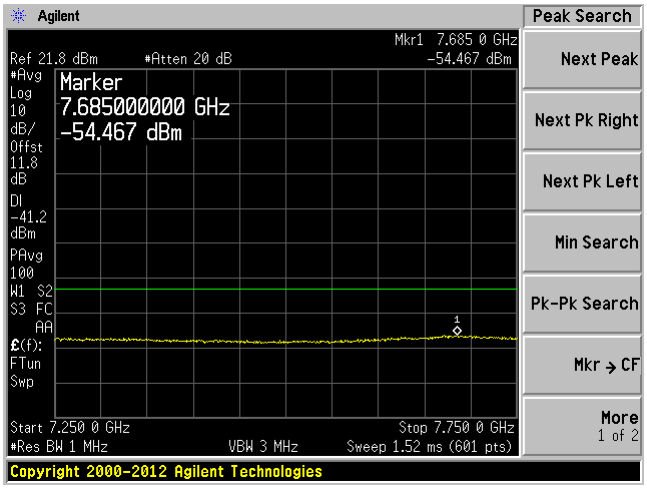
Chain J0, Plot: 6 GHz – 40 GHz



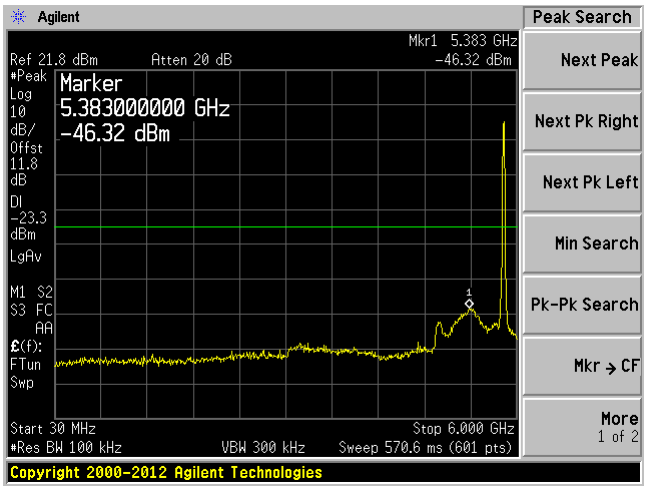
Chain J0, Plot: 7250 MHz – 7750 MHz Peak



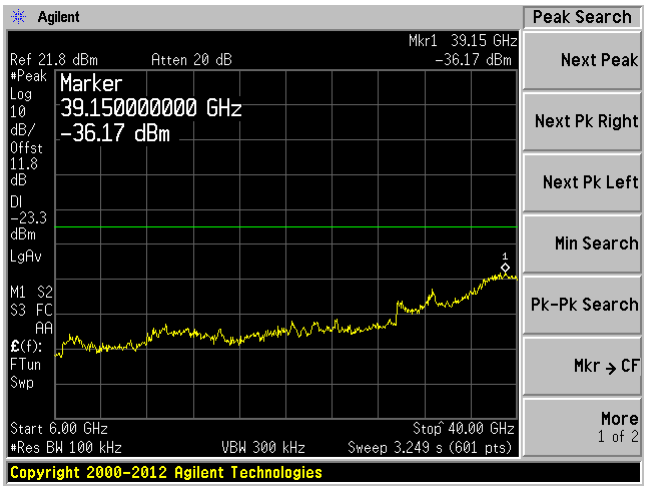
Chain J0, Plot: 7250 MHz – 7750 MHz Ave



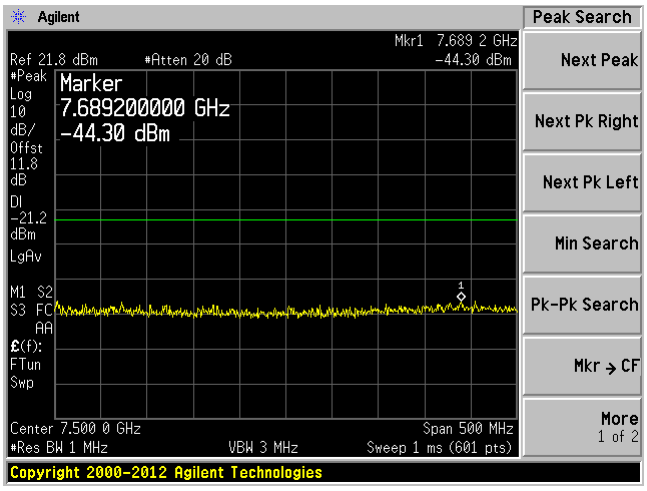
Chain J1, Plot: 30 MHz – 6 GHz



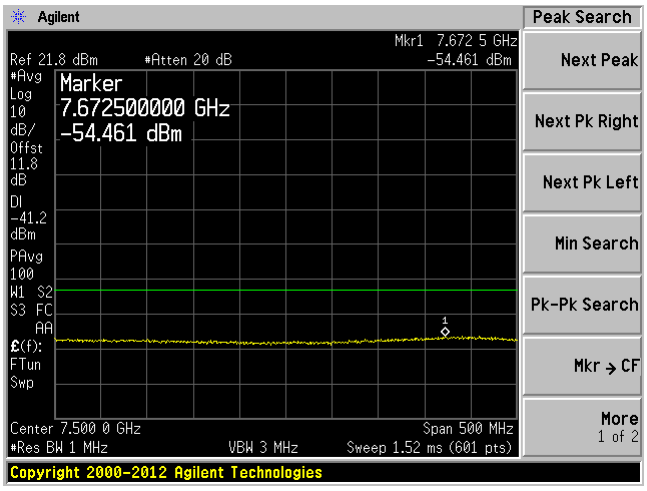
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 7250 MHz – 7750 MHz Peak

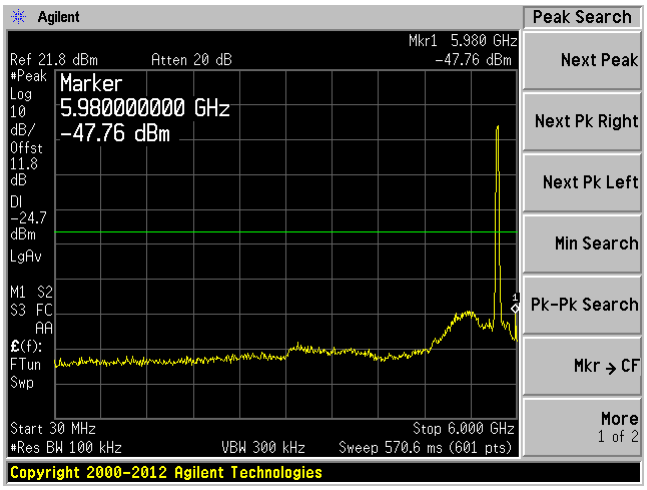


Chain J1, Plot: 7250 MHz – 7750 MHz Ave

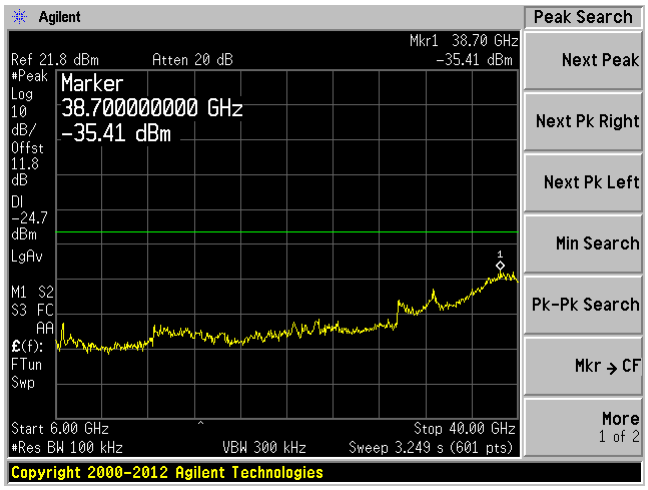


802.11n-HT20, Low Channel 5745 MHz

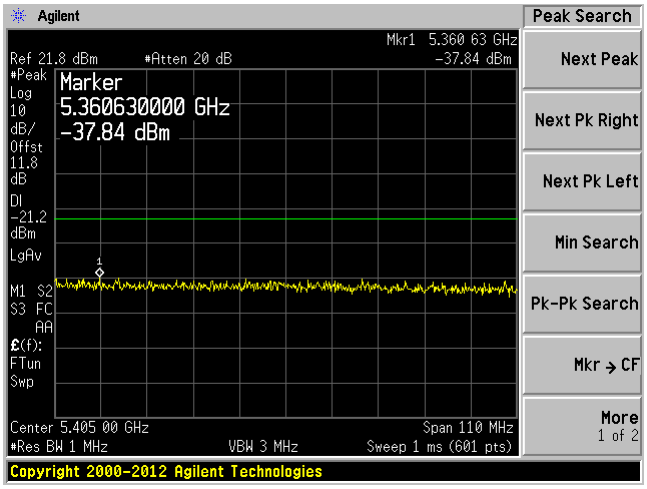
Chain J0, Plot: 30 MHz – 6 GHz



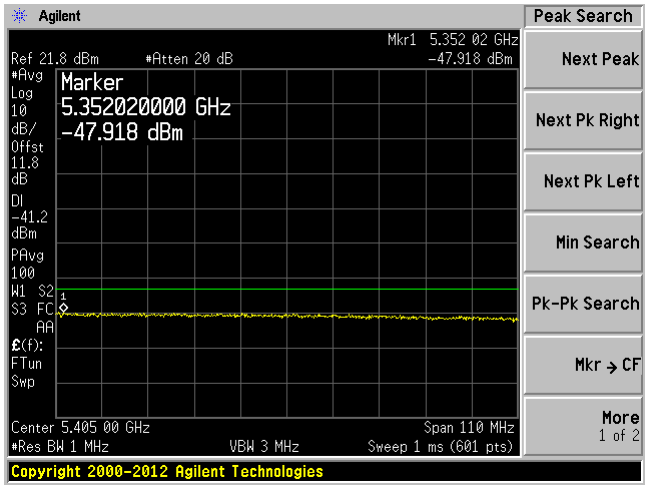
Chain J0, Plot: 6 GHz – 40 GHz



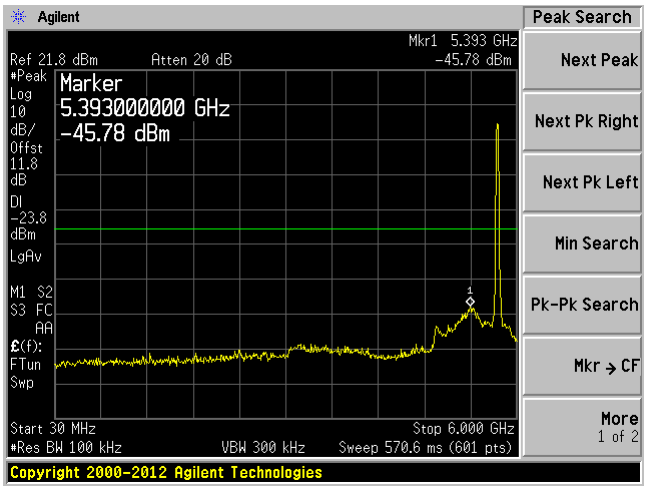
Chain J0, Plot: 5350 MHz – 5460 MHz Peak



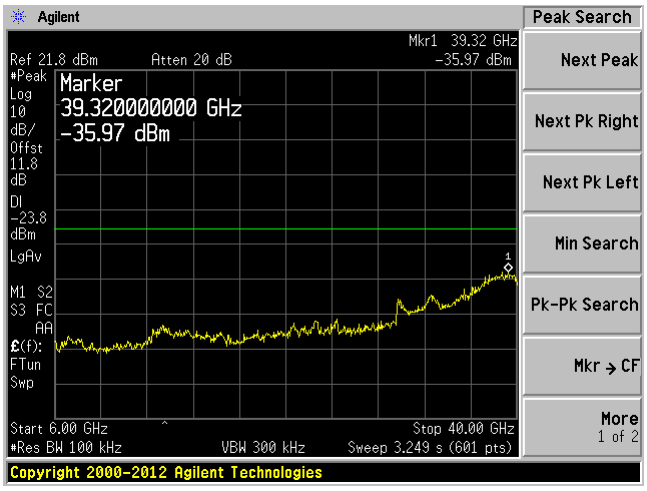
Chain J0, Plot: 5350 MHz – 5460 MHz Ave



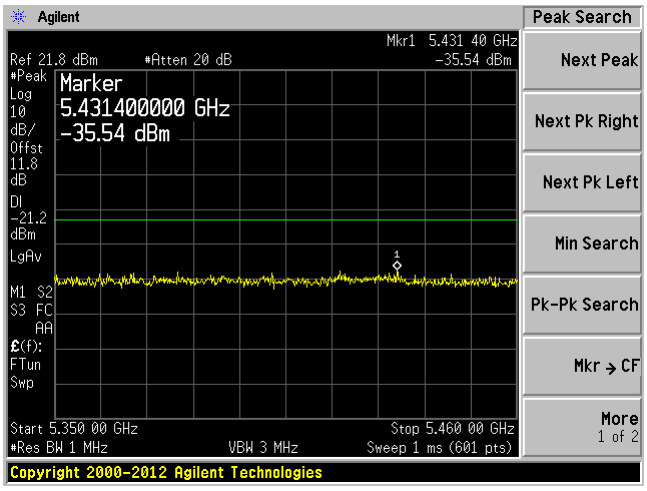
Chain J1, Plot: 30 MHz – 6 GHz



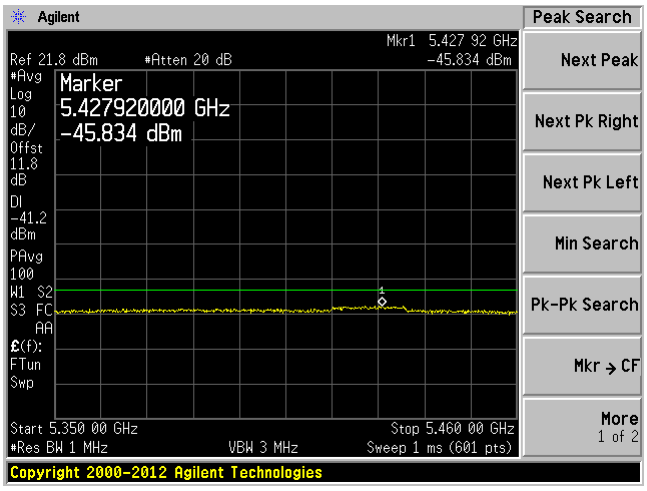
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 5350 MHz – 5460 MHz Peak

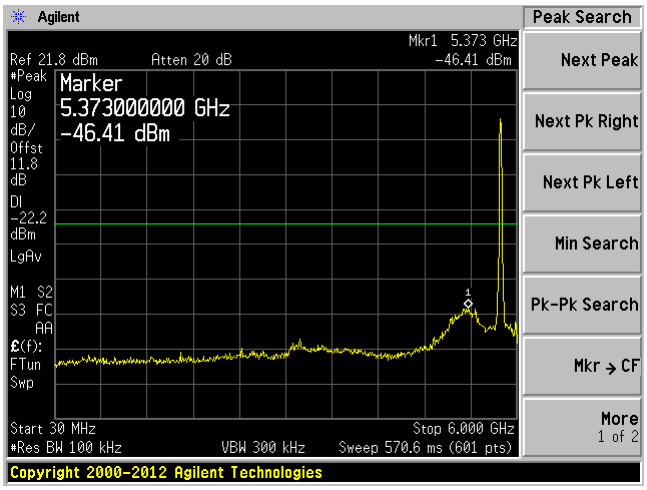


Chain J1, Plot: 5350 MHz – 5460 MHz Ave

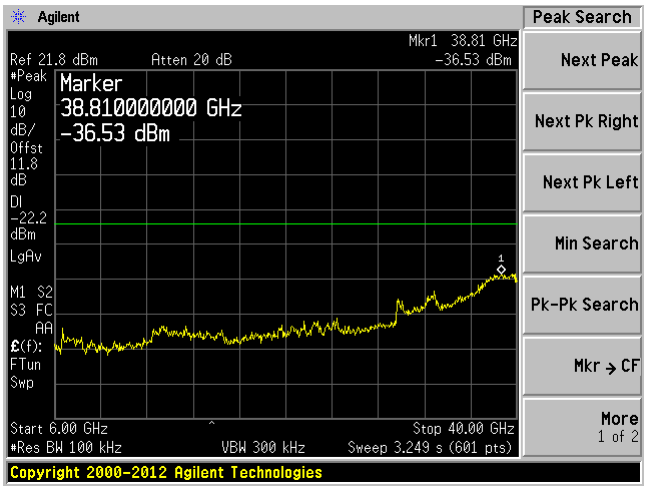


802.11n-HT20, Middle Channel 5785 MHz

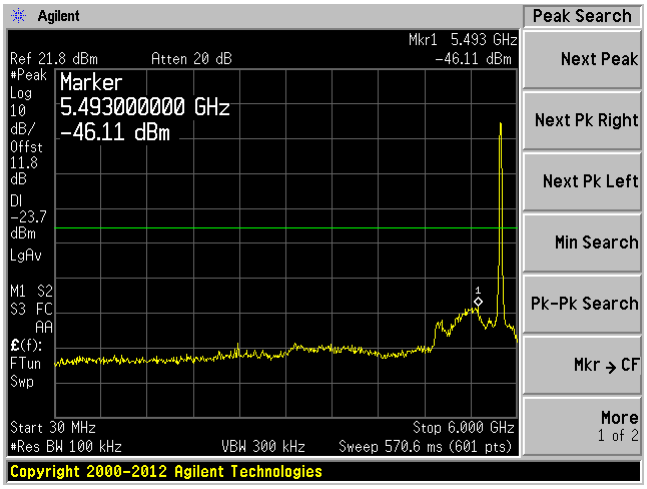
Chain J0, Plot: 30 MHz – 6 GHz



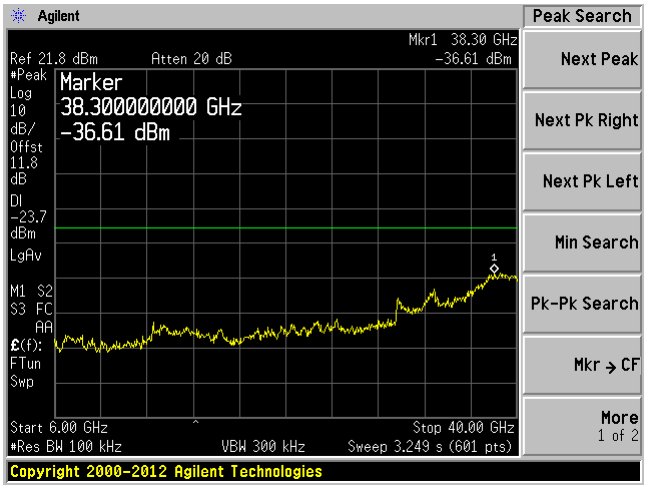
Chain J0, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 30 MHz – 6 GHz

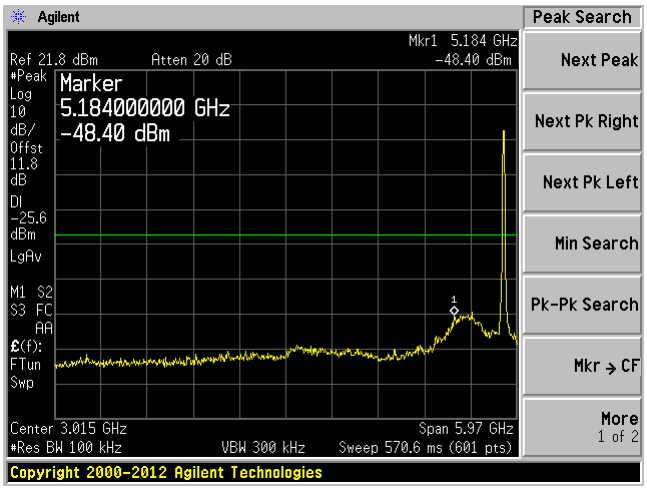


Chain J1, Plot: 6 GHz – 40 GHz

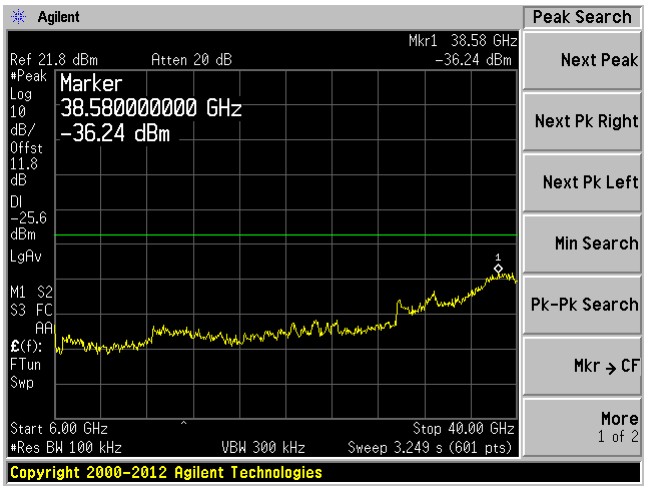


802.11n-HT20, High Channel 5825 MHz

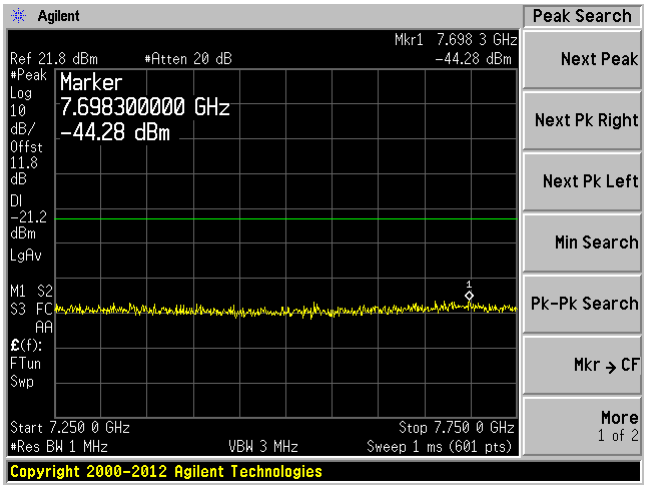
Chain J0, Plot: 30 MHz – 6 GHz



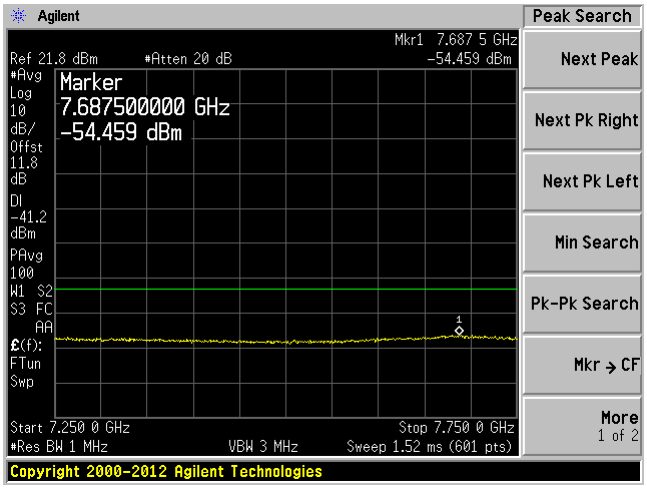
Chain J0, Plot: 6 GHz – 40 GHz



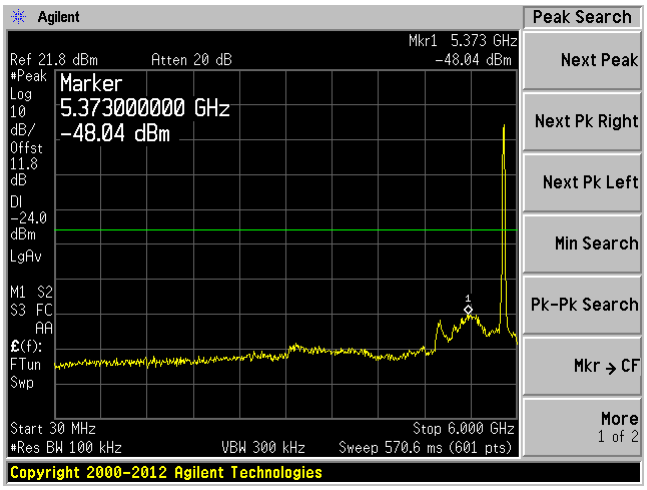
Chain J0, Plot: 7250 MHz – 7750 MHz Peak



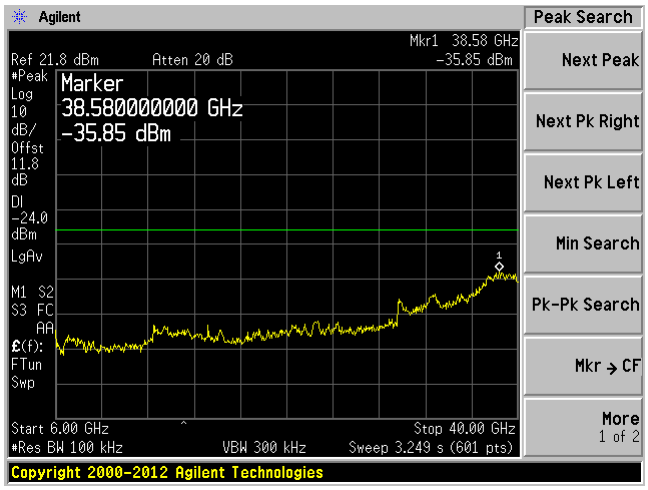
Chain J0, Plot: 7250 MHz – 7750 MHz Ave



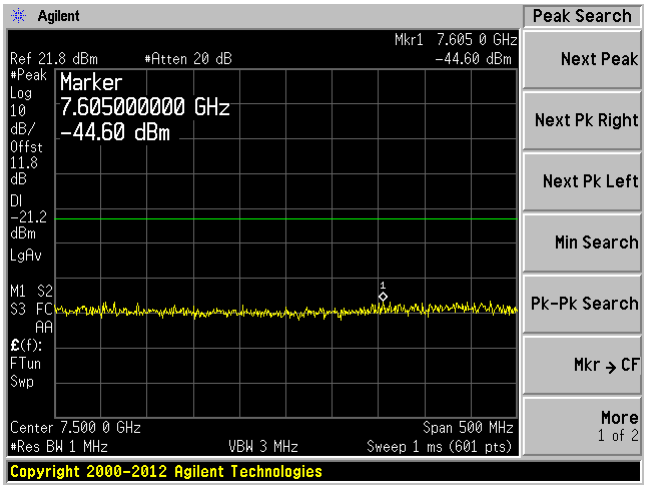
Chain J1, Plot: 30 MHz – 6 GHz



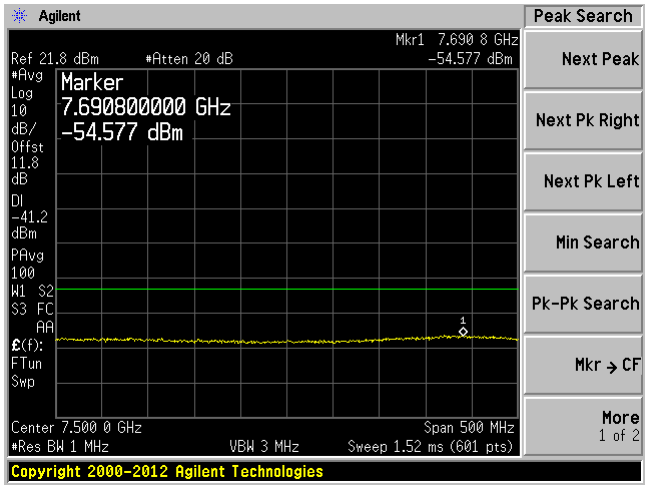
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 7250 MHz – 7750 MHz Peak

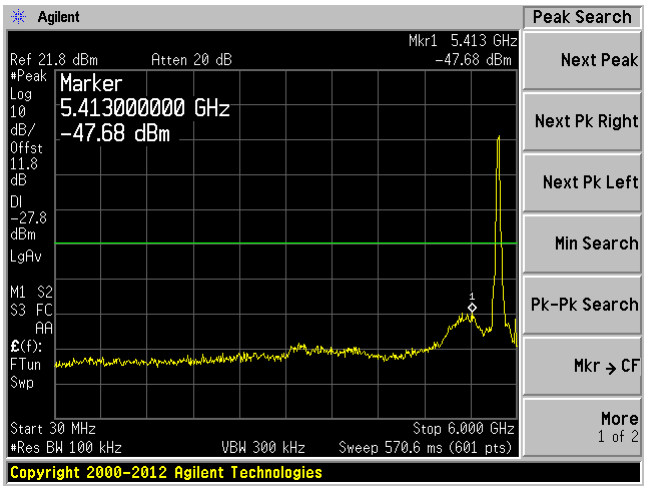


Chain J1, Plot: 7250 MHz – 7750 MHz Ave

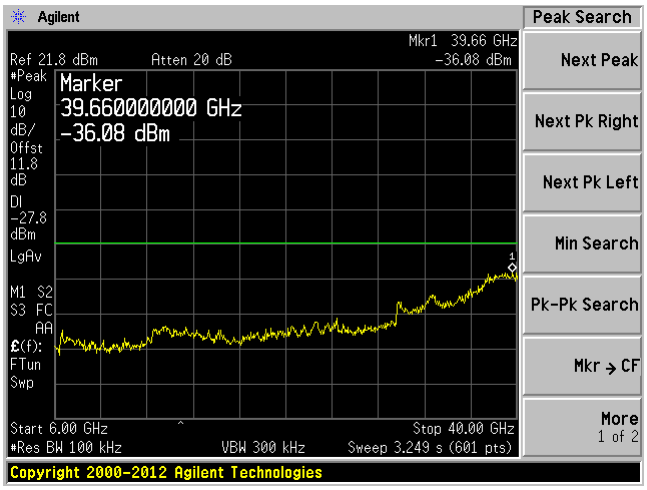


802.11n-HT40, Low Channel 5755 MHz

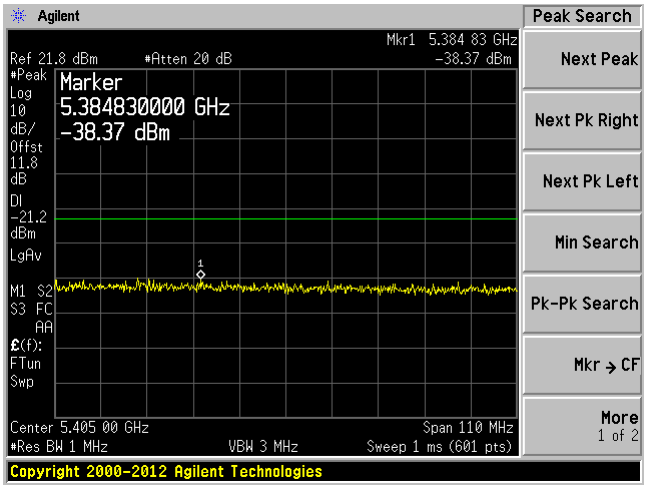
Chain J0, Plot: 30 MHz – 6 GHz



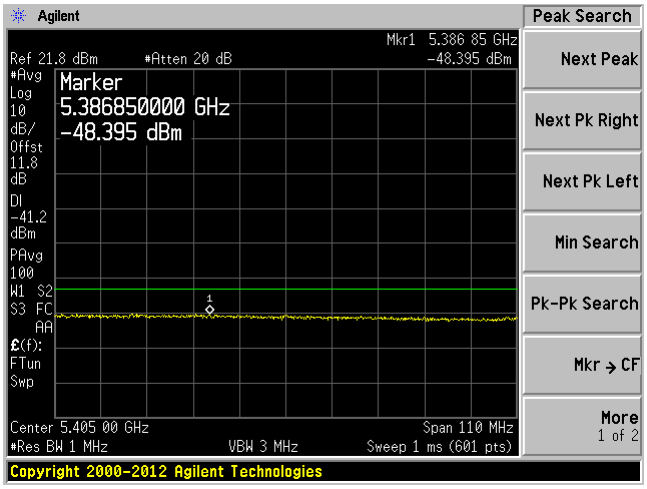
Chain J0, Plot: 6 GHz – 40 GHz



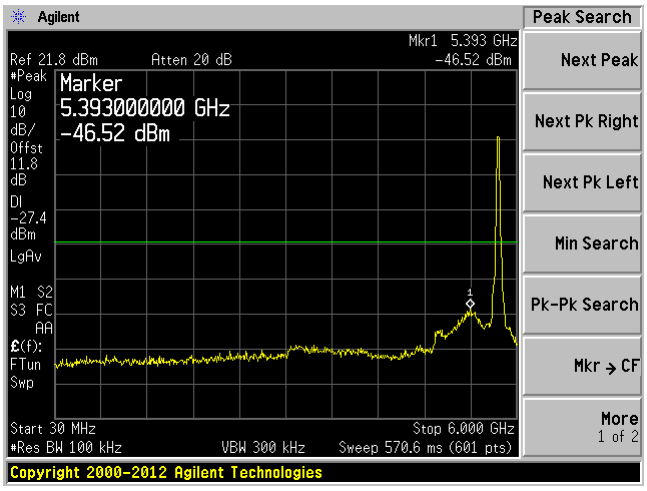
Chain J0, Plot: 5350 MHz – 5460 MHz Peak



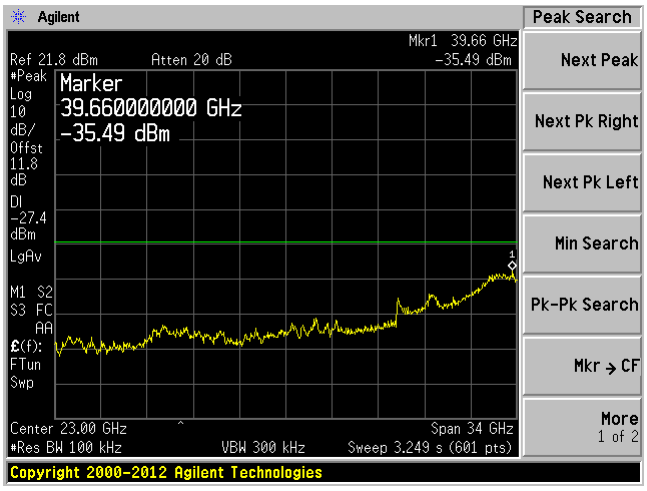
Chain J0, Plot: 5350 MHz – 5460 MHz Ave



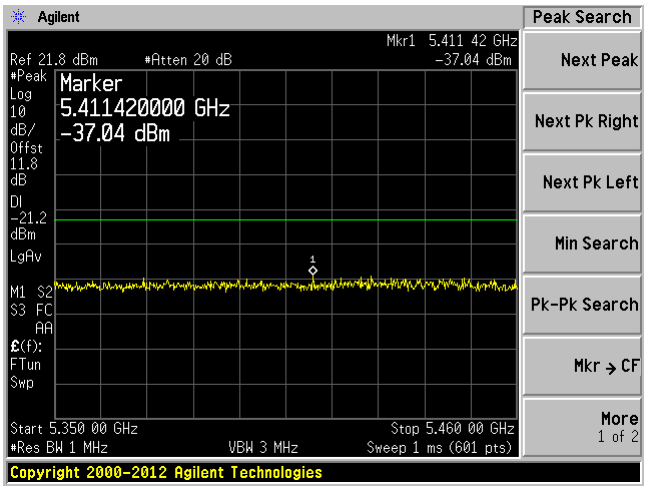
Chain J1, Plot: 30 MHz – 6 GHz



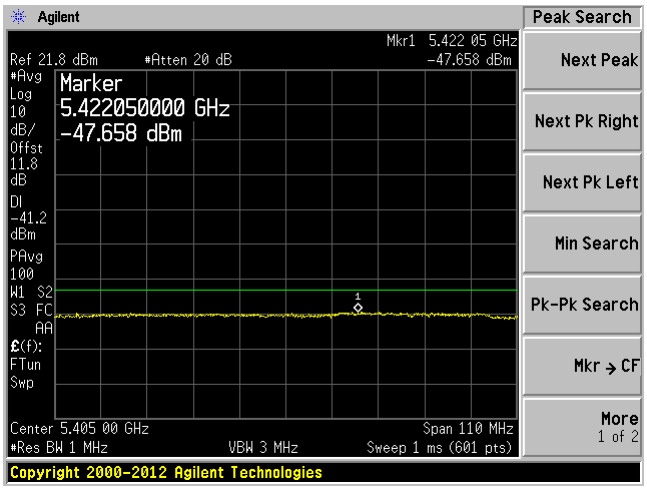
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 5350 MHz – 5460 MHz Peak

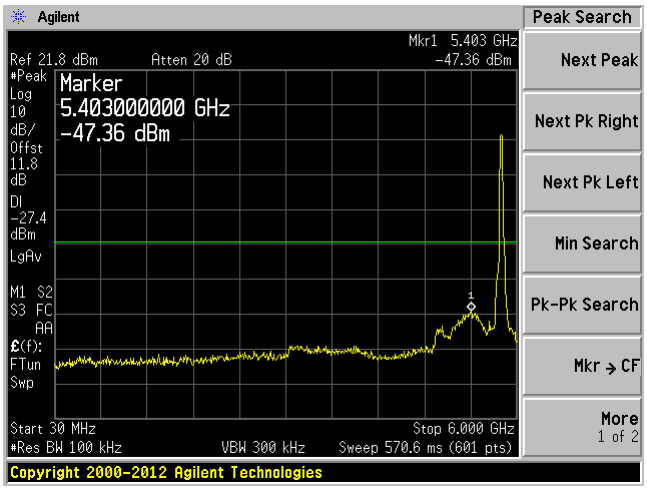


Chain J1, Plot: 5350 MHz – 5460 MHz Ave

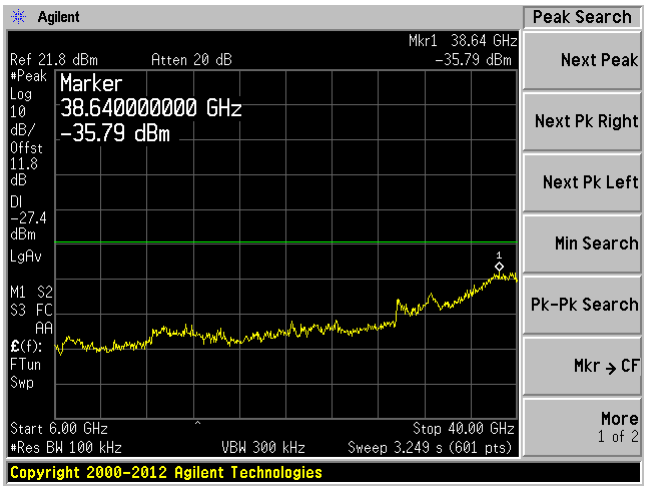


802.11n-HT40, High Channel 5795 MHz

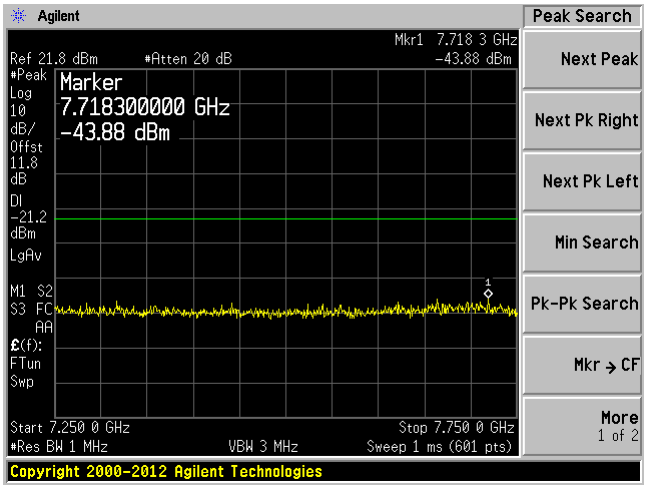
Chain J0, Plot: 30 MHz – 6 GHz



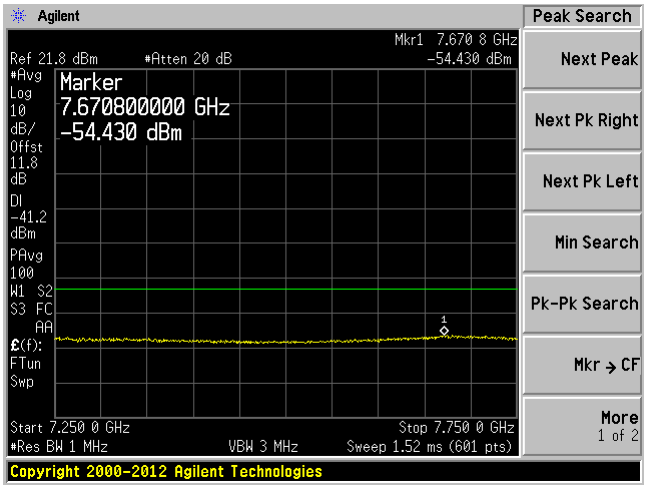
Chain J0, Plot: 6 GHz – 40 GHz



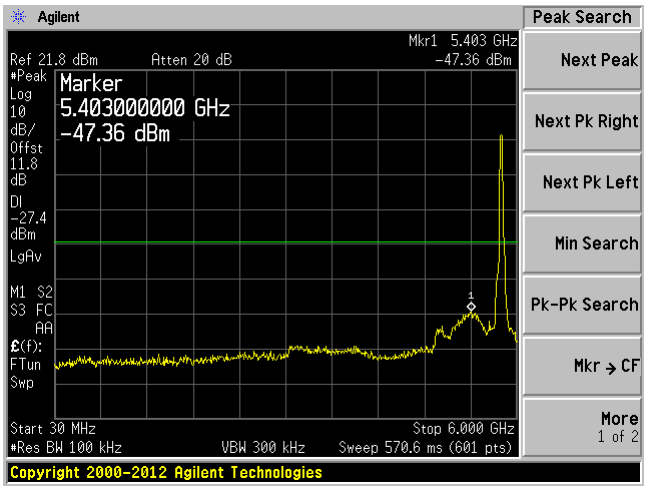
Chain J0, Plot: 7250 MHz – 7750 MHz Peak



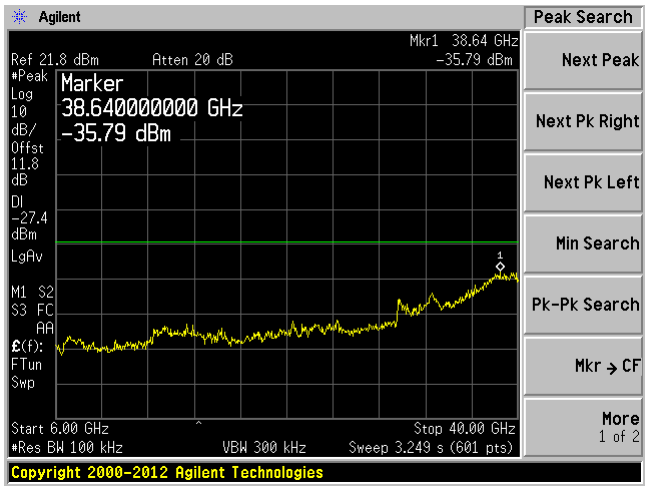
Chain J0, Plot: 7250 MHz – 7750 MHz Ave



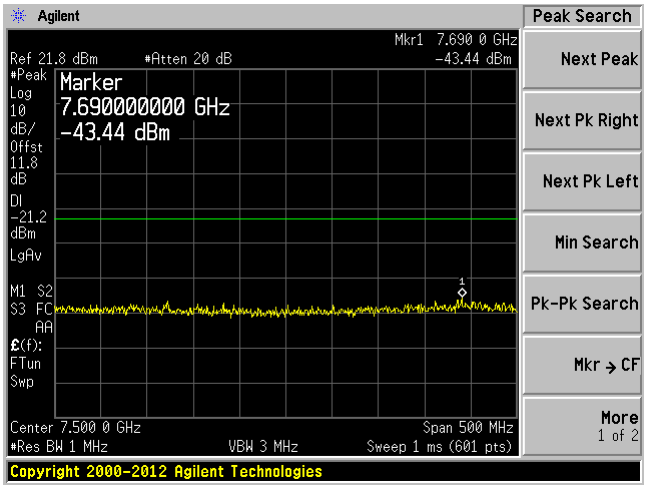
Chain J1, Plot: 30 MHz – 6 GHz



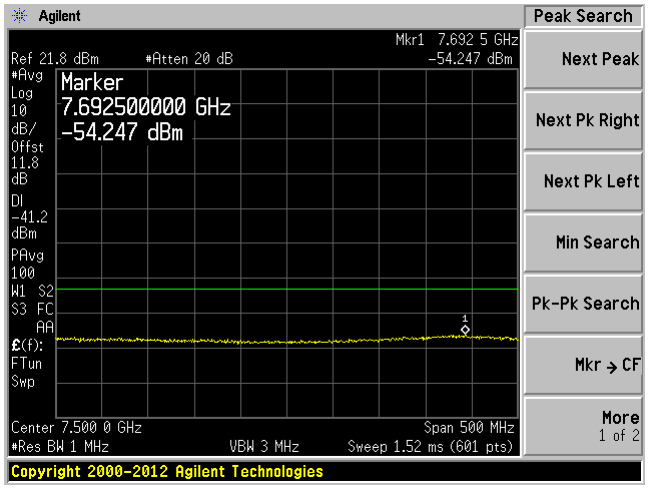
Chain J1, Plot: 6 GHz – 40 GHz



Chain J1, Plot: 7250 MHz – 7750 MHz Peak

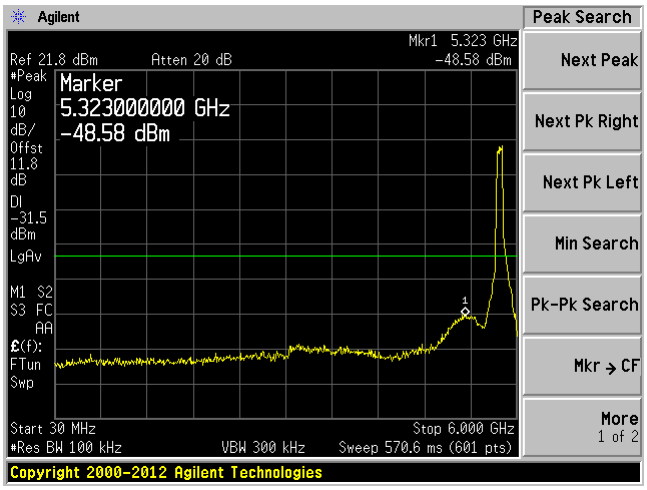


Chain J1, Plot: 7250 MHz – 7750 MHz Ave

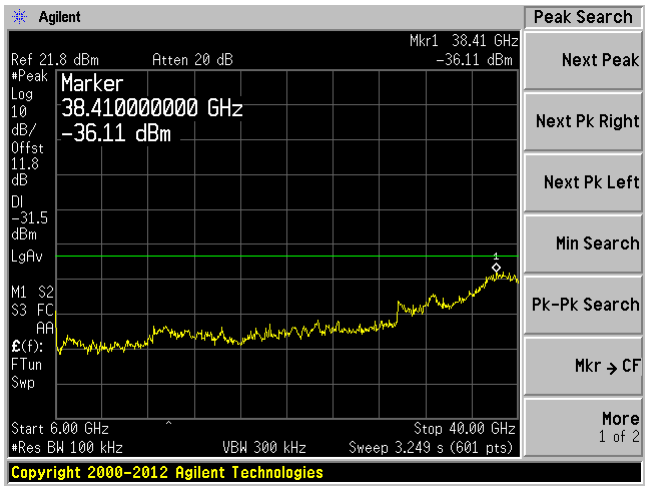


802.11ac-80, Channel 5775 MHz

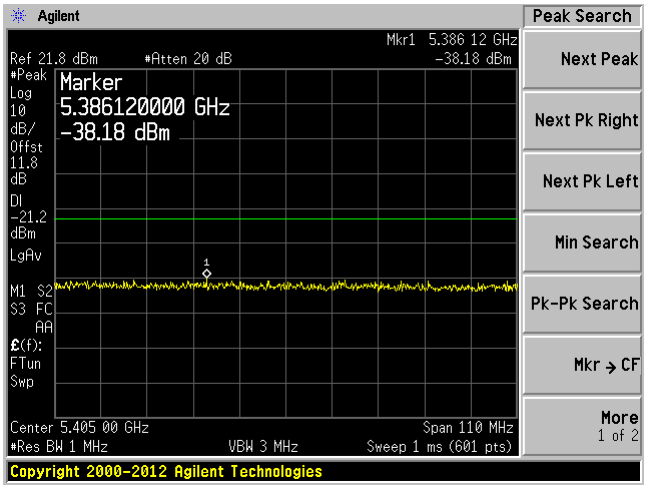
Chain J0, Plot: 30 MHz – 6 GHz



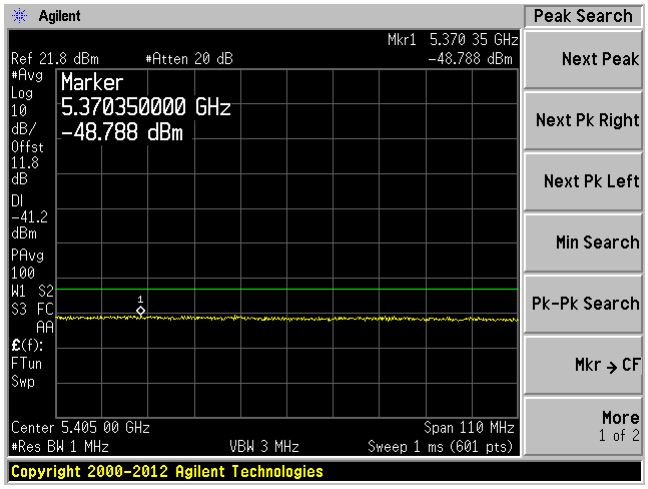
Chain J0, Plot: 6 GHz – 40 GHz



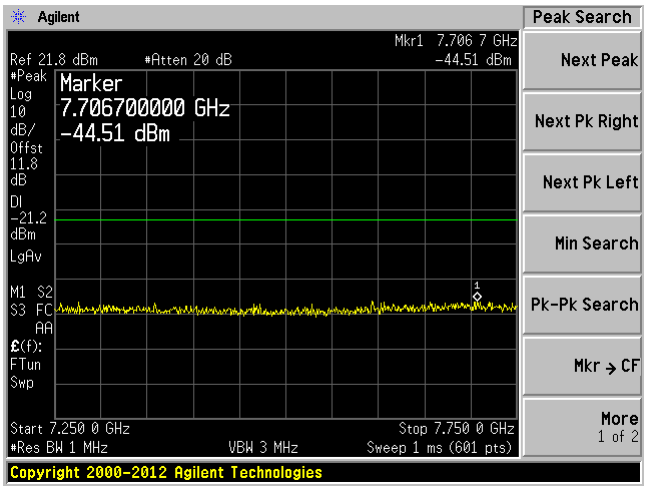
Chain J0, Plot: 5350 MHz – 5460 MHz Peak



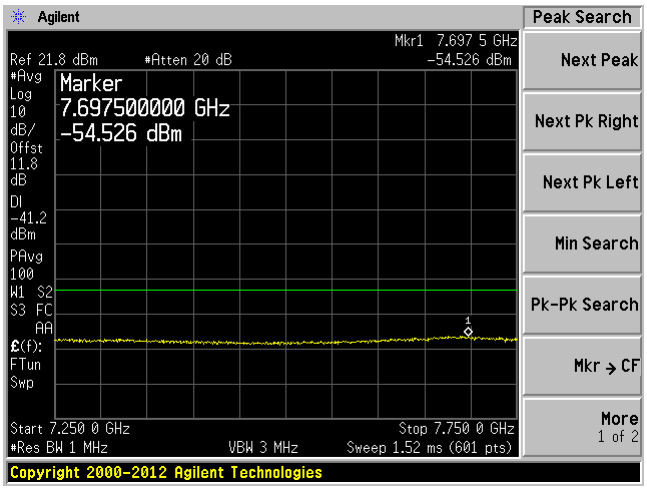
Chain J0, Plot: 5350 MHz – 5460 MHz Ave



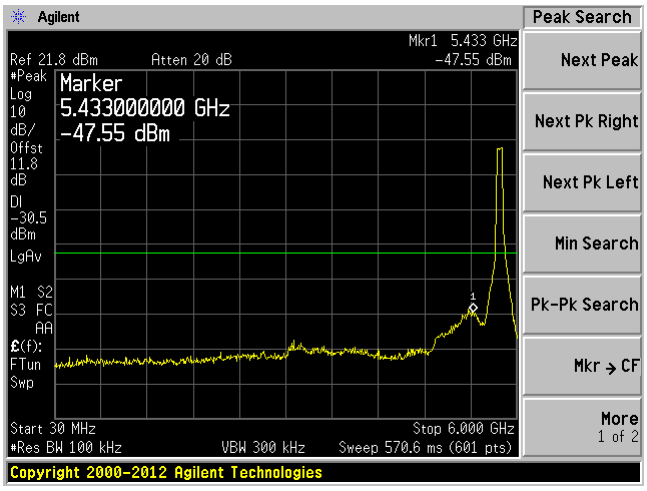
Chain J0, Plot: 7250 MHz – 7750 MHz Peak



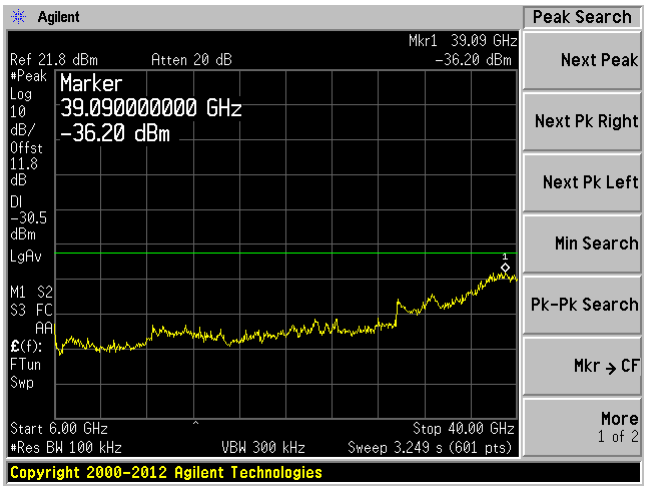
Chain J0, Plot: 7250 MHz – 7750 MHz Ave



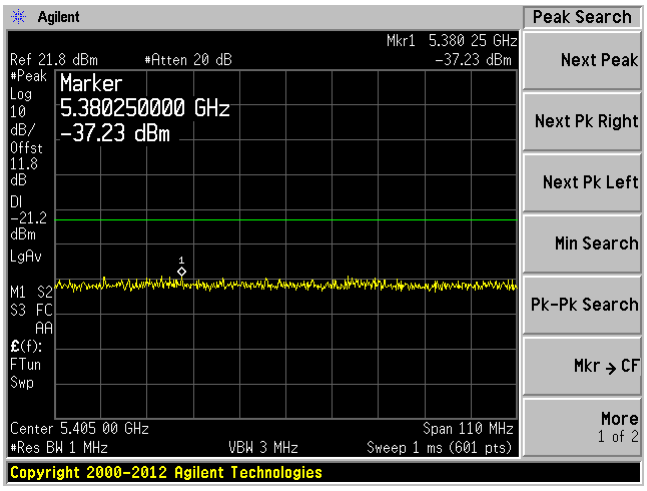
Chain J1, Plot: 30 MHz – 6 GHz



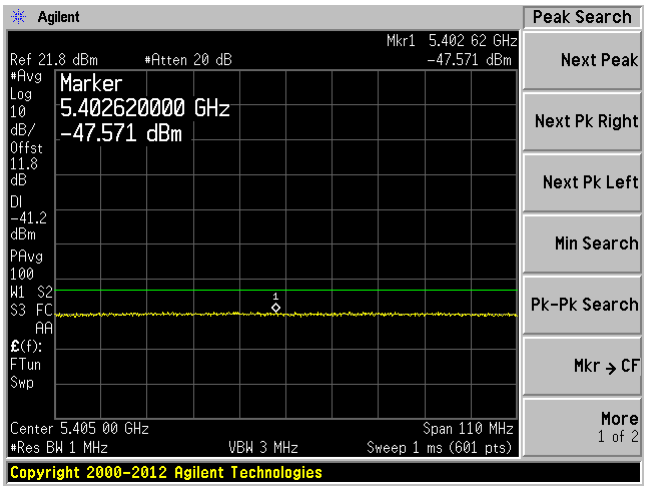
Chain J1, Plot: 6 GHz – 40 GHz



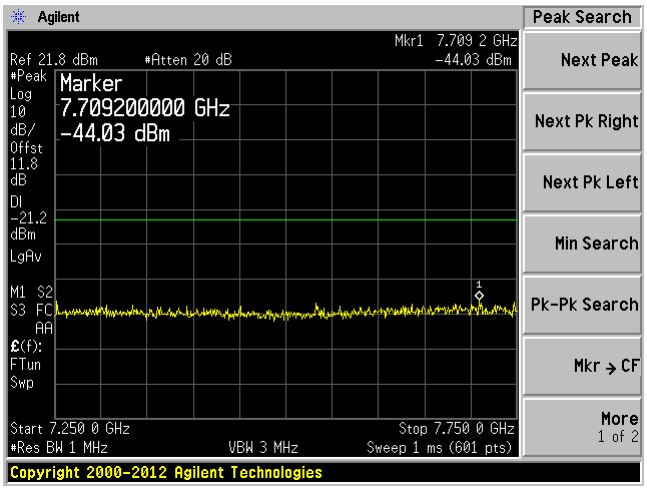
Chain J1, Plot: 5350 MHz – 5460 MHz Peak



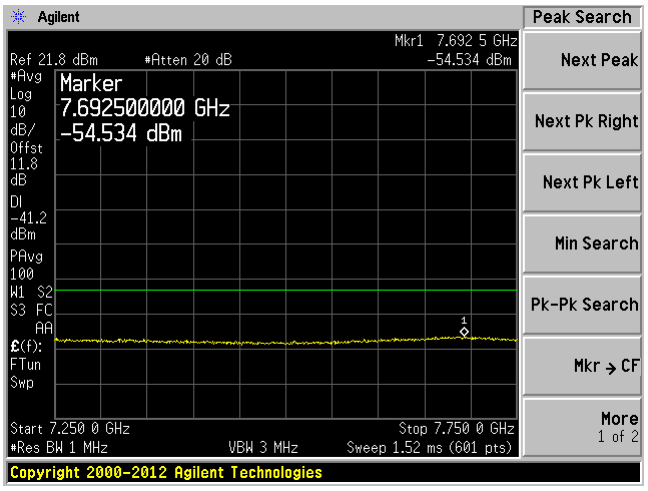
Chain J1, Plot: 5350 MHz – 5460 MHz Ave



Chain J1, Plot: 7250 MHz – 7750 MHz Peak



Chain J1, Plot: 7250 MHz – 7750 MHz Ave



8 FCC §15.205, §15.209 & §15.247(d) & IC RSS-210 §A8.5 – Spurious Radiated Emissions

8.1 Applicable Standard

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) and RSS-210: 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-210 A8.5 Out-of-band Emissions, 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 A8.4 (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.

8.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.4-2009. The specification used was the FCC 15 Subpart C and IC RSS-210 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.

8.3 Test Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 11: Emissions in non-restricted frequency bands and section 12: Emissions in restricted frequency bands. As well as ANSI C63.4: 2009 as described below:

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

8.4 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

8.5 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Sunol Science Corp	System Controller	SC99V	122303-1	N/R	N/R
Sunol Science Corp	Combination Antenna	JB3	A020106-3	2013-06-18	1 year
Hewlett Packard	Pre-amplifier	8447D	2944A06639	2013-06-09	1 year
Agilent	Pre-amplifier	8449B	3008A01978	2014-02-04	1 year
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year
EMCO	Horn Antenna	3315	9511-4627	2013-10-17	1 year
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.5950K03	100337	2014-03-28	1 year

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

8.6 Test Environmental Conditions

Temperature:	22º C
Relative Humidity:	52 %
ATM Pressure:	101.9 kPa

The testing was performed by Chen Ge on 2014-04-08 in 5 m chamber 3.

8.7 Summary of Test Results

According to the data hereinafter, the EUT complied with the FCC Title 47, Part 15C and IC RSS-210 standard's radiated emissions limits, and had the worst margin of:

30-1000 MHz:

2.4 GHz Band

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Mode, Channel**
-4.01	50.43025	Vertical	802.11b mode

5.8 GHz Band

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Mode, Channel**
-7.04	98.4675	Vertical	802.11a mode

1–26 GHz:

2.4 GHz Band

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Mode, Channel**
-0.183	9848	Vertical	802.11b mode High Channel

1-40 GHz:

5.8 GHz Band

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Mode, Channel**
-8.94	17325	Horizontal	802.11n-HT40 mode High Channel

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

8.8 Radiated Emissions Test Results

1) 30 MHz – 1 GHz, Measured at 3 meters, EUT antenna port was terminated

2.4 GHz Band, Quasi-Peak Measurements @ 3m, worst case

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
50.43025	35.99	100	V	255	40	-4.01
30.6325	30.92	136	V	112	40	-9.08
98.468	36.08	100	V	161	43.5	-7.42
92.409	34.28	109	V	188	43.5	-9.22
60.22775	33.04	110	V	206	40	-6.96
101.8893	31.12	100	V	224	43.5	-12.38

Note: All 30 MHz – 1 GHz spurious are digital, other emissions are on the noise floor level. The worst case result was reported.

5.8 GHz Band, Quasi-Peak Measurements @ 3m, worst case

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
802.11a mode						
35.333	29.95	133	V	133	40	-10.05
98.4675	36.46	100	V	98	43.5	-7.04
47.583	30.03	115	V	115	40	-9.97
60.21925	31.69	157	V	157	40	-8.31
101.9058	31.6	116	V	116	43.5	-11.9
143.271	29.59	109	V	109	43.5	-13.91

Note: All 30 MHz – 1 GHz spurious are digital, other emissions are on the noise floor level. The worst case result was reported.

2) 1–26 GHz, Measured at 3 meters, EUT antenna port was terminated

2.4 GHz Band

802.11b 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, measured at 3 meters											
2390	27.63	0	100	V	28.956	2.65	0	59.236	74	-14.764	Peak
2390	27.98	0	100	H	28.956	2.65	0	59.586	74	-14.414	Peak
2390	12.99	0	100	V	28.956	2.65	0	44.596	54	-9.404	Ave
2390	12.99	0	100	H	28.956	2.65	0	44.596	54	-9.404	Ave
4824	52.27	73	100	V	33.097	3.78	34.29	54.857	74	-19.143	Peak
4824	48.32	136	118	H	33.097	3.78	34.29	50.907	74	-23.093	Peak
4824	46.51	73	100	V	33.097	3.78	34.29	49.097	54	-4.903	Ave
4824	41.7	136	118	H	33.097	3.78	34.29	44.287	54	-9.713	Ave
7236	43.63	0	100	V	35.928	4.63	34.39	49.798	74	-24.202	Peak
7236	44.08	0	100	H	35.928	4.63	34.39	50.248	74	-23.752	Peak
7236	28.95	0	100	V	35.928	4.63	34.39	35.118	54	-18.882	Ave
7236	29.08	0	100	H	35.928	4.63	34.39	35.248	54	-18.752	Ave
9648	49.45	63	100	V	37.954	5.26	34.9	57.764	74	-16.236	Peak
9648	48.46	19	137	H	37.954	5.26	34.9	56.774	74	-17.226	Peak
9648	44.54	63	100	V	37.954	5.26	34.9	52.854	54	-1.146	Ave
9648	41.97	19	137	H	37.954	5.26	34.9	50.284	54	-3.716	Ave
Middle Channel 2437 MHz, measured at 3 meters											
4874	52.41	62	111	V	33.327	3.78	34.29	55.227	74	-18.773	Peak
4874	46.83	309	117	H	33.327	3.78	34.29	49.647	74	-24.353	Peak
4874	48.96	62	111	V	33.327	3.78	34.29	51.777	54	-2.223	Ave
4874	39.03	309	117	H	33.327	3.78	34.29	41.847	54	-12.153	Ave
7311	43.95	0	100	V	36.369	4.63	34.42	50.529	74	-23.471	Peak
7311	43.77	0	100	H	36.369	4.63	34.42	50.349	74	-23.651	Peak
7311	28.87	0	100	V	36.369	4.63	34.42	35.449	54	-18.551	Ave
7311	29.29	0	100	H	36.369	4.63	34.42	35.869	54	-18.131	Ave
9748	49.5	62	100	V	38.087	5.26	34.85	57.997	74	-16.003	Peak
9748	46.17	324	100	H	38.087	5.26	34.85	54.667	74	-19.333	Peak
9748	44.54	62	100	V	38.087	5.26	34.85	53.037	54	-0.963	Ave
9748	35.97	324	100	H	38.087	5.26	34.85	44.467	54	-9.533	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, measured at 3 meters											
2483.5	28.51	0	100	V	29.155	2.71	0	60.375	74	-13.625	Peak
2483.5	27.63	0	100	H	29.155	2.71	0	59.495	74	-14.505	Peak
2483.5	13.1	0	100	V	29.155	2.71	0	44.965	54	-9.035	Ave
2483.5	13.14	0	100	H	29.155	2.71	0	45.005	54	-8.995	Ave
4924	49.63	61	110	V	33.327	3.79	34.42	52.327	74	-21.673	Peak
4924	46.2	20	100	H	33.327	3.79	34.42	48.897	74	-25.103	Peak
4924	44.91	61	110	V	33.327	3.79	34.42	47.607	54	-6.393	Ave
4924	34.35	20	100	H	33.327	3.79	34.42	37.047	54	-16.953	Ave
7386	43.71	0	100	V	36.565	4.75	34.44	50.585	74	-23.415	Peak
7386	42.52	0	100	H	36.565	4.75	34.44	49.395	74	-24.605	Peak
7386	28.7	0	100	V	36.565	4.75	34.44	35.575	54	-18.425	Ave
7386	27.54	0	100	H	36.565	4.75	34.44	34.415	54	-19.585	Ave
9848	53.03	67	100	V	38.287	5.35	34.84	61.827	74	-12.173	Peak
9848	48.05	317	100	H	38.287	5.35	34.84	56.847	74	-17.153	Peak
9848	45.02	67	100	V	38.287	5.35	34.84	53.817	54	-0.183	Ave
9848	39.93	317	100	H	38.287	5.35	34.84	48.727	54	-5.273	Ave

802.11g 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, measured at 3 meters											
2390	27.69	0	100	V	28.956	2.65	0	59.296	74	-14.704	Peak
2390	27.76	0	100	H	28.956	2.65	0	59.366	74	-14.634	Peak
2390	13	0	100	V	28.956	2.65	0	44.606	54	-9.394	Ave
2390	12.99	0	100	H	28.956	2.65	0	44.596	54	-9.404	Ave
4824	52.6	60	100	V	33.097	3.78	34.29	55.187	74	-18.813	Peak
4824	44.52	0	100	H	33.097	3.78	34.29	47.107	74	-26.893	Peak
4824	36.93	60	100	V	33.097	3.78	34.29	39.517	54	-14.483	Ave
4824	29.45	0	100	H	33.097	3.78	34.29	32.037	54	-21.963	Ave
7236	43.42	0	100	V	35.928	4.63	34.39	49.588	74	-24.412	Peak
7236	44.41	0	100	H	35.928	4.63	34.39	50.578	74	-23.422	Peak
7236	29.12	0	100	V	35.928	4.63	34.39	35.288	54	-18.712	Ave
7236	29.22	0	100	H	35.928	4.63	34.39	35.388	54	-18.612	Ave
9648	51.04	117	100	V	37.954	5.26	34.9	59.354	74	-14.646	Peak
9648	46.25	73	100	H	37.954	5.26	34.9	54.564	74	-19.436	Peak
9648	35.14	117	100	V	37.954	5.26	34.9	43.454	54	-10.546	Ave
9648	30.44	73	100	H	37.954	5.26	34.9	38.754	54	-15.246	Ave
Middle Channel 2437 MHz, measured at 3 meters											
4874	50.79	60	112	V	33.327	3.78	34.29	53.607	74	-20.393	Peak
4874	43.95	0	100	H	33.327	3.78	34.29	46.767	74	-27.233	Peak
4874	35.55	60	112	V	33.327	3.78	34.29	38.367	54	-15.633	Ave
4874	29.09	0	100	H	33.327	3.78	34.29	31.907	54	-22.093	Ave
7311	43.42	0	100	V	36.369	4.63	34.42	49.999	74	-24.001	Peak
7311	44.21	0	100	H	36.369	4.63	34.42	50.789	74	-23.211	Peak
7311	28.06	0	100	V	36.369	4.63	34.42	34.639	54	-19.361	Ave
7311	28.54	0	100	H	36.369	4.63	34.42	35.119	54	-18.881	Ave
9748	45.43	0	100	V	38.087	5.26	34.85	53.927	74	-20.073	Peak
9748	44.87	0	100	H	38.087	5.26	34.85	53.367	74	-20.633	Peak
9748	29.24	0	100	V	38.087	5.26	34.85	37.737	54	-16.263	Ave
9748	29.76	0	100	H	38.087	5.26	34.85	38.257	54	-15.743	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, measured at 3 meters											
2483.5	27.9	0	100	V	29.155	2.71	0	59.765	74	-14.235	Peak
2483.5	28.2	0	100	H	29.155	2.71	0	60.065	74	-13.935	Peak
2483.5	13.12	0	100	V	29.155	2.71	0	44.985	54	-9.015	Ave
2483.5	13.16	0	100	H	29.155	2.71	0	45.025	54	-8.975	Ave
4924	46.94	75	100	V	33.327	3.79	34.42	49.637	74	-24.363	Peak
4924	43.75	0	100	H	33.327	3.79	34.42	46.447	74	-27.553	Peak
4924	32.25	75	100	V	33.327	3.79	34.42	34.947	54	-19.053	Ave
4924	29.59	0	100	H	33.327	3.79	34.42	32.287	54	-21.713	Ave
7386	44.29	0	100	V	36.565	4.75	34.44	51.165	74	-22.835	Peak
7386	44.59	0	100	H	36.565	4.75	34.44	51.465	74	-22.535	Peak
7386	29.54	0	100	V	36.565	4.75	34.44	36.415	54	-17.585	Ave
7386	29.28	0	100	H	36.565	4.75	34.44	36.155	54	-17.845	Ave
9848	54.21	65	100	V	38.287	5.35	34.84	63.007	74	-10.993	Peak
9848	47.9	52	100	H	38.287	5.35	34.84	56.697	74	-17.303	Peak
9848	37.46	65	100	V	38.287	5.35	34.84	46.257	54	-7.743	Ave
9848	33.02	52	100	H	38.287	5.35	34.84	41.817	54	-12.183	Ave

802.11n-HT20 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, measured at 3 meters											
2390	28.05	0	100	V	28.956	2.65	0	59.656	74	-14.344	Peak
2390	27.77	0	100	H	28.956	2.65	0	59.376	74	-14.624	Peak
2390	13.01	0	100	V	28.956	2.65	0	44.616	54	-9.384	Ave
2390	12.99	0	100	H	28.956	2.65	0	44.596	54	-9.404	Ave
4824	52.46	62	100	V	33.097	3.78	34.29	55.047	74	-18.953	Peak
4824	48.44	310	100	H	33.097	3.78	34.29	51.027	74	-22.973	Peak
4824	38.19	62	100	V	33.097	3.78	34.29	40.777	54	-13.223	Ave
4824	33.36	310	100	H	33.097	3.78	34.29	35.947	54	-18.053	Ave
7236	45	0	100	V	35.928	4.63	34.39	51.168	74	-22.832	Peak
7236	44.76	0	100	H	35.928	4.63	34.39	50.928	74	-23.072	Peak
7236	29.12	0	100	V	35.928	4.63	34.39	35.288	54	-18.712	Ave
7236	29.14	0	100	H	35.928	4.63	34.39	35.308	54	-18.692	Ave
9648	51.79	116	105	V	37.954	5.26	34.9	60.104	74	-13.896	Peak
9648	46.61	324	100	H	37.954	5.26	34.9	54.924	74	-19.076	Peak
9648	35.9	116	105	V	37.954	5.26	34.9	44.214	54	-9.786	Ave
9648	31.29	324	100	H	37.954	5.26	34.9	39.604	54	-14.396	Ave
Middle Channel 2437 MHz, measured at 3 meters											
4874	51.76	60	100	V	33.327	3.78	34.29	54.577	74	-19.423	Peak
4874	44.84	0	100	H	33.327	3.78	34.29	47.657	74	-26.343	Peak
4874	36.27	60	100	V	33.327	3.78	34.29	39.087	54	-14.913	Ave
4874	29.74	0	100	H	33.327	3.78	34.29	32.557	54	-21.443	Ave
7311	44.71	0	100	V	36.369	4.63	34.42	51.289	74	-22.711	Peak
7311	44.24	0	100	H	36.369	4.63	34.42	50.819	74	-23.181	Peak
7311	28.94	0	100	V	36.369	4.63	34.42	35.519	54	-18.481	Ave
7311	28.9	0	100	H	36.369	4.63	34.42	35.479	54	-18.521	Ave
9748	50.79	119	102	V	38.087	5.26	34.85	59.287	74	-14.713	Peak
9748	46.45	0	100	H	38.087	5.26	34.85	54.947	74	-19.053	Peak
9748	34.83	119	102	V	38.087	5.26	34.85	43.327	54	-10.673	Ave
9748	30.26	0	100	H	38.087	5.26	34.85	38.757	54	-15.243	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, measured at 3 meters											
2483.5	27.84	0	100	V	29.155	2.71	0	59.705	74	-14.295	Peak
2483.5	27.68	0	100	H	29.155	2.71	0	59.545	74	-14.455	Peak
2483.5	13.14	0	100	V	29.155	2.71	0	45.005	54	-8.995	Ave
2483.5	13.15	0	100	H	29.155	2.71	0	45.015	54	-8.985	Ave
4924	47.27	60	102	V	33.327	3.79	34.42	49.967	74	-24.033	Peak
4924	45.01	0	100	H	33.327	3.79	34.42	47.707	74	-26.293	Peak
4924	33.34	60	102	V	33.327	3.79	34.42	36.037	54	-17.963	Ave
4924	30.15	0	100	H	33.327	3.79	34.42	32.847	54	-21.153	Ave
7386	43.46	0	100	V	36.565	4.75	34.44	50.335	74	-23.665	Peak
7386	43.95	0	100	H	36.565	4.75	34.44	50.825	74	-23.175	Peak
7386	29.75	0	100	V	36.565	4.75	34.44	36.625	54	-17.375	Ave
7386	29.17	0	100	H	36.565	4.75	34.44	36.045	54	-17.955	Ave
9848	51.85	313	115	V	38.287	5.35	34.84	60.647	74	-13.353	Peak
9848	46.39	138	100	H	38.287	5.35	34.84	55.187	74	-18.813	Peak
9848	35.21	313	115	V	38.287	5.35	34.84	44.007	54	-9.993	Ave
9848	30.51	138	100	H	38.287	5.35	34.84	39.307	54	-14.693	Ave

802.11n-HT40 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, measured at 3 meters											
2390	27.62	0	100	V	28.956	2.65	0	59.226	74	-14.774	Peak
2390	27.65	0	100	H	28.956	2.65	0	59.256	74	-14.744	Peak
2390	12.99	0	100	V	28.956	2.65	0	44.596	54	-9.404	Ave
2390	12.97	0	100	H	28.956	2.65	0	44.576	54	-9.424	Ave
4844	50.38	61	100	V	33.097	3.78	34.33	52.927	74	-21.073	Peak
4844	45.81	0	100	H	33.097	3.78	34.33	48.357	74	-25.643	Peak
4844	35.52	61	100	V	33.097	3.78	34.33	38.067	54	-15.933	Ave
4844	30.25	0	100	H	33.097	3.78	34.33	32.797	54	-21.203	Ave
7266	44.16	0	100	V	35.928	4.63	34.39	50.328	74	-23.672	Peak
7266	44.02	0	100	H	35.928	4.63	34.39	50.188	74	-23.812	Peak
7266	29.22	0	100	V	35.928	4.63	34.39	35.388	54	-18.612	Ave
7266	29.27	0	100	H	35.928	4.63	34.39	35.438	54	-18.562	Ave
9688	49.21	65	103	V	37.954	5.26	34.87	57.554	74	-16.446	Peak
9688	45.72	0	100	H	37.954	5.26	34.87	54.064	74	-19.936	Peak
9688	33.74	65	103	V	37.954	5.26	34.87	42.084	54	-11.916	Ave
9688	30.68	0	100	H	37.954	5.26	34.87	39.024	54	-14.976	Ave
Middle Channel 2437 MHz, measured at 3 meters											
4874	47.5	81	100	V	33.327	3.78	34.33	50.277	74	-23.723	Peak
4874	44.89	0	100	H	33.327	3.78	34.33	47.667	74	-26.333	Peak
4874	32.48	81	100	V	33.327	3.78	34.33	35.257	54	-18.743	Ave
4874	29.76	0	100	H	33.327	3.78	34.33	32.537	54	-21.463	Ave
7311	44.06	0	100	V	36.369	4.63	34.42	50.639	74	-23.361	Peak
7311	43.87	0	100	H	36.369	4.63	34.42	50.449	74	-23.551	Peak
7311	28.96	0	100	V	36.369	4.63	34.42	35.539	54	-18.461	Ave
7311	28.91	0	100	H	36.369	4.63	34.42	35.489	54	-18.511	Ave
9748	48.38	33	101	V	38.087	5.26	34.85	56.877	74	-17.123	Peak
9748	44.88	0	100	H	38.087	5.26	34.85	53.377	74	-20.623	Peak
9748	32.66	33	101	V	38.087	5.26	34.85	41.157	54	-12.843	Ave
9748	29.05	0	100	H	38.087	5.26	34.85	37.547	54	-16.453	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)	
Middle Channel 2452 MHz, measured at 3 meters											
2483.5	28	0	100	V	29.155	2.71	0	59.865	74	-14.135	Peak
2483.5	28.25	0	100	H	29.155	2.71	0	60.115	74	-13.885	Peak
2483.5	13.13	0	100	V	29.155	2.71	0	44.995	54	-9.005	Ave
2483.5	13.14	0	100	H	29.155	2.71	0	45.005	54	-8.995	Ave
4904	47.29	58	113	V	33.327	3.79	34.42	49.987	74	-24.013	Peak
4904	44.54	0	100	H	33.327	3.79	34.42	47.237	74	-26.763	Peak
4904	33.14	58	113	V	33.327	3.79	34.42	35.837	54	-18.163	Ave
4904	29.75	0	100	H	33.327	3.79	34.42	32.447	54	-21.553	Ave
7356	43.91	0	100	V	36.565	4.75	34.43	50.795	74	-23.205	Peak
7356	43.86	0	100	H	36.565	4.75	34.43	50.745	74	-23.255	Peak
7356	29	0	100	V	36.565	4.75	34.43	35.885	54	-18.115	Ave
7356	28.99	0	100	H	36.565	4.75	34.43	35.875	54	-18.125	Ave
9808	48.8	72	102	V	38.287	5.35	34.85	57.587	74	-16.413	Peak
9808	45.48	0	100	H	38.287	5.35	34.85	54.267	74	-19.733	Peak
9808	33.15	72	102	V	38.287	5.35	34.85	41.937	54	-12.063	Ave
9808	30.45	0	100	H	38.287	5.35	34.85	39.237	54	-14.763	Ave

3) 1–40 GHz, Measured at 3 meters, EUT antenna port was terminated

5.8 GHz Band

802.11a 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 5745 MHz, measured at 3 meters											
5460	47.44	0	100	V	34.079	2.89	35.54	48.869	74	-25.131	Peak
5460	49.32	73	100	H	34.079	2.89	35.54	50.749	74	-23.251	Peak
5460	32.57	0	100	V	34.079	2.89	35.54	33.999	54	-20.001	Ave
5460	34.12	0	100	H	34.079	2.89	35.54	35.549	54	-18.451	Ave
11490	44.02	0	100	V	38.1	4.07	33.87	52.32	74	-21.68	Peak
11490	44.13	0	100	H	38.1	4.07	33.87	52.43	74	-21.57	Peak
11490	29.13	0	100	V	38.1	4.07	33.87	37.43	54	-16.57	Ave
11490	29.01	0	100	H	38.1	4.07	33.87	37.31	54	-16.69	Ave
17235	41.64	0	100	V	42.941	5.17	33.82	55.931	74	-18.069	Peak
17235	41.9	0	100	H	42.941	5.17	33.82	56.191	74	-17.809	Peak
17235	26.45	0	100	V	42.941	5.17	33.82	40.741	54	-13.259	Ave
17235	26.87	0	100	H	42.941	5.17	33.82	41.161	54	-12.839	Ave
22980	42.85	0	100	V	35.001	6.04	34.79	49.101	74	-24.899	Peak
22980	43.23	0	100	H	35.001	6.04	34.79	49.481	74	-24.519	Peak
22980	27.79	0	100	V	35.001	6.04	34.79	34.041	54	-19.959	Ave
22980	27.76	0	100	H	35.001	6.04	34.79	34.011	54	-19.989	Ave
Middle Channel 5785 MHz, measured at 3 meters											
11570	45.33	0	100	V	38.845	4.07	33.87	54.375	74	-19.625	Peak
11570	44.05	0	100	H	38.845	4.07	33.87	53.095	74	-20.905	Peak
11570	28.97	0	100	V	38.845	4.07	33.87	38.015	54	-15.985	Ave
11570	28.84	0	100	H	38.845	4.07	33.87	37.885	54	-16.115	Ave
17355	41.79	0	100	V	46.58	5.17	33.82	59.72	74	-14.28	Peak
17355	41.53	0	100	H	46.58	5.17	33.82	59.46	74	-14.54	Peak
17355	26.88	0	100	V	46.58	5.17	33.82	44.81	54	-9.19	Ave
17355	26.87	0	100	H	46.58	5.17	33.82	44.8	54	-9.2	Ave
23140	43.39	0	100	V	35.001	6.04	34.74	49.691	74	-24.309	Peak
23140	43.9	0	100	H	35.001	6.04	34.74	50.201	74	-23.799	Peak
23140	28.18	0	100	V	35.001	6.04	34.74	34.481	54	-19.519	Ave
23140	28.32	0	100	H	35.001	6.04	34.74	34.621	54	-19.379	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 5825 MHz, measured at 3 meters											
7250	43.49	0	100	V	35.703	3.25	34.43	48.013	74	-25.987	Peak
7250	44.57	0	100	H	35.703	3.25	34.43	49.093	74	-24.907	Peak
7250	29.67	0	100	V	35.703	3.25	34.43	34.193	54	-19.807	Ave
7250	30.11	0	100	H	35.703	3.25	34.43	34.633	54	-19.367	Ave
11650	43.86	0	100	V	39.015	4.07	34.27	52.675	74	-21.325	Peak
11650	44.32	0	100	H	39.015	4.07	34.27	53.135	74	-20.865	Peak
11650	28.54	0	100	V	39.015	4.07	34.27	37.355	54	-16.645	Ave
11650	28.7	0	100	H	39.015	4.07	34.27	37.515	54	-16.485	Ave
17475	41.72	0	100	V	45.021	5.17	33.78	58.131	74	-15.869	Peak
17475	41.61	0	100	H	45.021	5.17	33.78	58.021	74	-15.979	Peak
17475	26.3	0	100	V	45.021	5.17	33.78	42.711	54	-11.289	Ave
17475	26.72	0	100	H	45.021	5.17	33.78	43.131	54	-10.869	Ave
23300	44.02	0	100	V	34.854	6.04	34.71	50.204	74	-23.796	Peak
23300	43.35	0	100	H	34.854	6.04	34.71	49.534	74	-24.466	Peak
23300	29.31	0	100	V	34.854	6.04	34.71	35.494	54	-18.506	Ave
23300	28.1	0	100	H	34.854	6.04	34.71	34.284	54	-19.716	Ave

802.11n-HT20 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 5745 MHz, measured at 3 meters											
5460	48.23	325	100	V	34.079	2.89	34.54	50.659	74	-23.341	Peak
5460	48.75	282	100	H	34.079	2.89	34.54	51.179	74	-22.821	Peak
5460	34.22	325	100	V	34.079	2.89	34.54	36.649	54	-17.351	Ave
5460	24.83	282	100	H	34.079	2.89	34.54	27.259	54	-26.741	Ave
11490	45.16	0	100	V	38.1	4.07	33.87	53.46	74	-20.54	Peak
11490	43.77	0	100	H	38.1	4.07	33.87	52.07	74	-21.93	Peak
11490	31.2	0	100	V	38.1	4.07	33.87	39.5	54	-14.5	Ave
11490	29.09	0	100	H	38.1	4.07	33.87	37.39	54	-16.61	Ave
17235	41.62	0	100	V	42.941	5.17	33.82	55.911	74	-18.089	Peak
17235	41.51	0	100	H	42.941	5.17	33.82	55.801	74	-18.199	Peak
17235	27.21	0	100	V	42.941	5.17	33.82	41.501	54	-12.499	Ave
17235	26.24	0	100	H	42.941	5.17	33.82	40.531	54	-13.469	Ave
22980	43.18	0	100	V	35.001	6.04	34.79	49.431	74	-24.569	Peak
22980	43.38	0	100	H	35.001	6.04	34.79	49.631	74	-24.369	Peak
22980	27.58	0	100	V	35.001	6.04	34.79	33.831	54	-20.169	Ave
22980	27.84	0	100	H	35.001	6.04	34.79	34.091	54	-19.909	Ave
Middle Channel 5785 MHz, measured at 3 meters											
11570	44.06	0	100	V	38.845	4.07	33.87	53.105	74	-20.895	Peak
11570	43.74	0	100	H	38.845	4.07	33.87	52.785	74	-21.215	Peak
11570	28.9	0	100	V	38.845	4.07	33.87	37.945	54	-16.055	Ave
11570	29	0	100	H	38.845	4.07	33.87	38.045	54	-15.955	Ave
17355	41.99	0	100	V	46.58	5.17	33.82	59.92	74	-14.08	Peak
17355	41.49	0	100	H	46.58	5.17	33.82	59.42	74	-14.58	Peak
17355	26.93	0	100	V	46.58	5.17	33.82	44.86	54	-9.14	Ave
17355	26.89	0	100	H	46.58	5.17	33.82	44.82	54	-9.18	Ave
23140	44.14	0	100	V	35.001	6.04	34.74	50.441	74	-23.559	Peak
23140	43.21	0	100	H	35.001	6.04	34.74	49.511	74	-24.489	Peak
23140	28.38	0	100	V	35.001	6.04	34.74	34.681	54	-19.319	Ave
23140	28.27	0	100	H	35.001	6.04	34.74	34.571	54	-19.429	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 5825 MHz, measured at 3 meters											
7250	45.35	0	100	V	35.703	3.25	34.43	49.873	74	-24.127	Peak
7250	45.42	0	100	H	35.703	3.25	34.43	49.943	74	-24.057	Peak
7250	30.4	0	100	V	35.703	3.25	34.43	34.923	54	-19.077	Ave
7250	30.58	0	100	H	35.703	3.25	34.43	35.103	54	-18.897	Ave
11650	44.37	0	100	V	39.015	4.07	34.27	53.185	74	-20.815	Peak
11650	44.02	0	100	H	39.015	4.07	34.27	52.835	74	-21.165	Peak
11650	28.99	0	100	V	39.015	4.07	34.27	37.805	54	-16.195	Ave
11650	28.9	0	100	H	39.015	4.07	34.27	37.715	54	-16.285	Ave
17475	41.08	0	100	V	45.021	5.17	33.78	57.491	74	-16.509	Peak
17475	41.61	0	100	H	45.021	5.17	33.78	58.021	74	-15.979	Peak
17475	26.48	0	100	V	45.021	5.17	33.78	42.891	54	-11.109	Ave
17475	26.58	0	100	H	45.021	5.17	33.78	42.991	54	-11.009	Ave
23300	42.86	0	100	V	34.854	6.04	34.71	49.044	74	-24.956	Peak
23300	42.92	0	100	H	34.854	6.04	34.71	49.104	74	-24.896	Peak
23300	27.84	0	100	V	34.854	6.04	34.71	34.024	54	-19.976	Ave
23300	27.88	0	100	H	34.854	6.04	34.71	34.064	54	-19.936	Ave

802.11n-HT40 mode

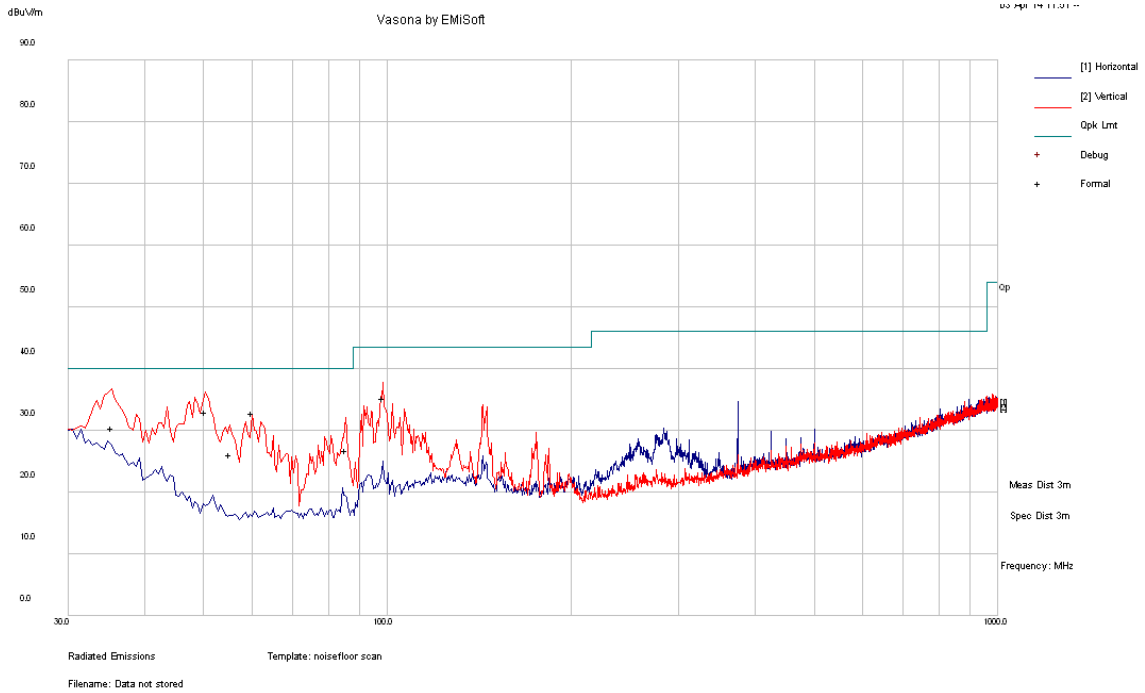
Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/IC		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel 5755 MHz, measured at 3 meters											
5460	47.96	325	105	V	34.079	2.89	34.54	50.389	74	-23.611	Peak
5460	49.09	82	100	H	34.079	2.89	34.54	51.519	74	-22.481	Peak
5460	34.11	325	105	V	34.079	2.89	34.54	36.539	54	-17.461	Ave
5460	37.54	82	100	H	34.079	2.89	34.54	39.969	54	-14.031	Ave
11510	44.65	0	100	V	38.1	4.07	33.87	52.95	74	-21.05	Peak
11510	44.09	0	100	H	38.1	4.07	33.87	52.39	74	-21.61	Peak
11510	28.65	0	100	V	38.1	4.07	33.87	36.95	54	-17.05	Ave
11510	28.97	0	100	H	38.1	4.07	33.87	37.27	54	-16.73	Ave
17265	41.99	0	100	V	42.941	5.17	33.82	56.281	74	-17.719	Peak
17265	42.05	0	100	H	42.941	5.17	33.82	56.341	74	-17.659	Peak
17265	26.93	0	100	V	42.941	5.17	33.82	41.221	54	-12.779	Ave
17265	27.02	0	100	H	42.941	5.17	33.82	41.311	54	-12.689	Ave
23020	43.27	0	100	V	35.001	6.04	34.79	49.521	74	-24.479	Peak
23020	43.16	0	100	H	35.001	6.04	34.79	49.411	74	-24.589	Peak
23020	27.92	0	100	V	35.001	6.04	34.79	34.171	54	-19.829	Ave
23020	27.82	0	100	H	35.001	6.04	34.79	34.071	54	-19.929	Ave
High Channel 5795 MHz, measured at 3 meters											
7250	45.42	0	100	V	35.703	3.25	34.43	49.943	74	-24.057	Peak
7250	45.65	0	100	H	35.703	3.25	34.43	50.173	74	-23.827	Peak
7250	30.36	0	100	V	35.703	3.25	34.43	34.883	54	-19.117	Ave
7250	30.32	0	100	H	35.703	3.25	34.43	34.843	54	-19.157	Ave
11590	44.25	0	100	V	38.845	4.07	33.87	53.295	74	-20.705	Peak
11590	44.84	0	100	H	38.845	4.07	33.87	53.885	74	-20.115	Peak
11590	29.05	0	100	V	38.845	4.07	33.87	38.095	54	-15.905	Ave
11590	29.05	0	100	H	38.845	4.07	33.87	38.095	54	-15.905	Ave
17385	42.3	0	100	V	46.58	5.17	33.82	60.23	74	-13.77	Peak
17385	43.51	0	100	H	46.58	5.17	33.82	61.44	74	-12.56	Peak
17385	26.53	0	100	V	46.58	5.17	33.82	44.46	54	-9.54	Ave
17385	27.11	0	100	H	46.58	5.17	33.82	45.04	54	-8.96	Ave
23180	43.05	0	100	V	35.001	6.04	34.74	49.351	74	-24.649	Peak
23180	43.21	0	100	H	35.001	6.04	34.74	49.511	74	-24.489	Peak
23180	27.62	0	100	V	35.001	6.04	34.74	33.921	54	-20.079	Ave
23180	27.71	0	100	H	35.001	6.04	34.74	34.011	54	-19.989	Ave

802.11ac-80 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)	
Channel 5775 MHz, measured at 3 meters											
5460	45.35	0	100	V	34.079	2.89	34.54	47.779	74	-26.221	Peak
5460	51.27	340	100	H	34.079	2.89	34.54	53.699	74	-20.301	Peak
5460	31.3	0	100	V	34.079	2.89	34.54	33.729	54	-20.271	Ave
5460	34.74	340	100	H	34.079	2.89	34.54	37.169	54	-16.831	Ave
7250	45.63	0	100	V	35.703	3.25	34.43	50.153	74	-23.847	Peak
7250	45.5	0	100	H	35.703	3.25	34.43	50.023	74	-23.977	Peak
7250	29.92	0	100	V	35.703	3.25	34.43	34.443	54	-19.557	Ave
7250	29.85	0	100	H	35.703	3.25	34.43	34.373	54	-19.627	Ave
11550	44.86	0	100	V	38.845	4.07	33.87	53.905	74	-20.095	Peak
11550	44.41	0	100	H	38.845	4.07	33.87	53.455	74	-20.545	Peak
11550	29.24	0	100	V	38.845	4.07	33.87	38.285	54	-15.715	Ave
11550	29.26	0	100	H	38.845	4.07	33.87	38.305	54	-15.695	Ave
17325	42.07	0	100	V	46.58	5.17	33.82	60	74	-14	Peak
17325	42.44	0	100	H	46.58	5.17	33.82	60.37	74	-13.63	Peak
17325	27.02	0	100	V	46.58	5.17	33.82	44.95	54	-9.05	Ave
17325	27.13	0	100	H	46.58	5.17	33.82	45.06	54	-8.94	Ave
23100	43.62	0	100	V	35.001	6.04	34.74	49.921	74	-24.079	Peak
23100	43.34	0	100	H	35.001	6.04	34.74	49.641	74	-24.359	Peak
23100	28.37	0	100	V	35.001	6.04	34.74	34.671	54	-19.329	Ave
23100	28.45	0	100	H	35.001	6.04	34.74	34.751	54	-19.249	Ave

4) Co-Location

a) 30-1000 MHz:



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)
35.361	30.38	131	V	290	40	-9.62
50.4415	32.98	124	V	93	40	-7.02
98.4275	35.28	128	V	117	43.5	-8.22
60.22175	32.91	129	V	212	40	-7.09
85.52475	26.86	118	V	250	40	-13.14
55.29675	26.15	223	V	150	40	-13.85
35.361	30.38	131	V	290	40	-9.62

b) 1 to 40 GHz:

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)	
4874.6	53.61	76	105	V	33.2	2.72	34.33	55.2	74	-18.8	Peak
4874.6	50.72	46	109	H	33.2	2.72	34.33	52.31	74	-21.69	Peak
4874.6	39.69	76	105	V	33.2	2.72	34.33	41.28	54	-12.72	Ave
4874.6	36.24	46	109	H	33.2	2.72	34.33	37.83	54	-16.17	Ave
8187	45.28	0	100	V	36.74	3.52	34.57	50.97	74	-23.03	Peak
8187	45.77	0	100	H	36.74	3.52	34.57	51.46	74	-22.54	Peak
8187	31.99	0	100	V	36.74	3.52	34.57	37.68	54	-16.32	Ave
8187	32.58	0	100	H	36.74	3.52	34.57	38.27	54	-15.73	Ave
11488.17	47.63	47	100	V	38.1	4.07	33.85	55.95	74	-18.05	Peak
11488.17	52.58	52	100	H	38.1	4.07	33.85	60.9	74	-13.1	Peak
11488.17	33.91	47	100	V	38.1	4.07	33.85	42.23	54	-11.77	Ave
11488.17	37.27	52	100	H	38.1	4.07	33.85	45.59	54	-8.41	Ave
16085	42.33	0	100	V	37.73	4.84	34.83	50.07	74	-23.93	Peak
16085	43.44	0	100	H	37.73	4.84	34.83	51.18	74	-22.82	Peak
16085	28.72	0	100	V	37.73	4.84	34.83	36.46	54	-17.54	Ave
16085	29.54	0	100	H	37.73	4.84	34.83	37.28	54	-16.72	Ave

9 FCC§15.247(a)(2) & IC RSS-210 §A8.2 – 6 dB & 99% Emission Bandwidth

9.1 Applicable Standard

According to FCC §15.247(a)(2) and IC RSS-210 A8.2 (a), 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

9.2 Measurement Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 8: DTS bandwidth

9.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year

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:	22-24° C
Relative Humidity:	42-45 %
ATM Pressure:	101-102 kPa

The testing was performed by Chen Ge from 2014-04-07 and 2014-04-11 at RF site.

9.5 Test Results and Plots

2.4 GHz Band:

Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz) J0	6 dB Emission Bandwidth (MHz) J1	99% Emission Bandwidth (MHz) J0	99% Emission Bandwidth (MHz) J1	Limit (MHz)	Results
802.11b mode							
Low	2412	6.565	6.062	11.2104	11.3876	> 0.5	Compliant
Middle	2437	5.624	6.074	10.6769	11.1296	> 0.5	Compliant
High	2462	6.073	5.646	12.4978	13.144	> 0.5	Compliant
802.11g mode							
Low	2412	16.506	16.477	16.5566	17.3155	> 0.5	Compliant
Middle	2437	16.59	16.539	16.5909	16.6904	> 0.5	Compliant
High	2462	16.55	16.55	17.1997	18.4372	> 0.5	Compliant
802.11n-HT20 mode							
Low	2412	17.78	17.717	17.7298	17.9704	> 0.5	Compliant
Middle	2437	17.81	17.747	17.7573	17.8391	> 0.5	Compliant
High	2462	17.796	17.834	18.207	19.1434	> 0.5	Compliant
802.11n-HT40 mode							
Low	2422	36.556	36.491	36.1391	36.1387	> 0.5	Compliant
Middle	2437	36.48	36.116	36.169	36.0853	> 0.5	Compliant
High	2452	36.47	34.864	36.2324	36.427	> 0.5	Compliant

5.8 GHz Band:

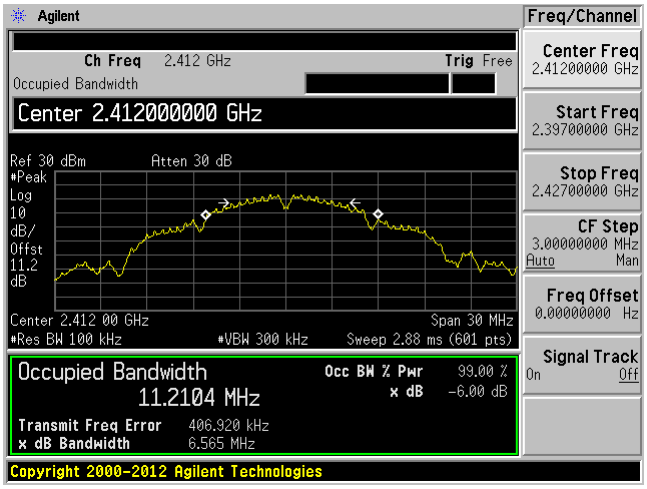
Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz) J0	6 dB Emission Bandwidth (MHz) J1	99% Emission Bandwidth (MHz) J0	99% Emission Bandwidth (MHz) J1	Limit (MHz)	Results
802.11a mode							
Low	5745	16.576	16.51	16.5109	16.4537	> 0.5	Compliant
Middle	5785	16.581	16.442	16.5156	16.4537	> 0.5	Compliant
High	5825	16.565	16.424	16.447	16.4629	> 0.5	Compliant
802.11n-HT20 mode							
Low	5745	17.804	17.639	17.6764	17.6729	> 0.5	Compliant
Middle	5785	17.807	17.73	17.6829	17.6549	> 0.5	Compliant
High	5825	17.73	17.767	17.6775	17.6676	> 0.5	Compliant
802.11n-HT40 mode							
Low	5755	36.598	36.57	36.2339	36.1685	> 0.5	Compliant
High	5795	36.629	36.55	36.2391	36.2183	> 0.5	Compliant
802.11ac 80 mode							
Middle	5775	76.726	76.661	75.8932	75.7204	> 0.5	Compliant

Please refer to the following plots for detailed test results

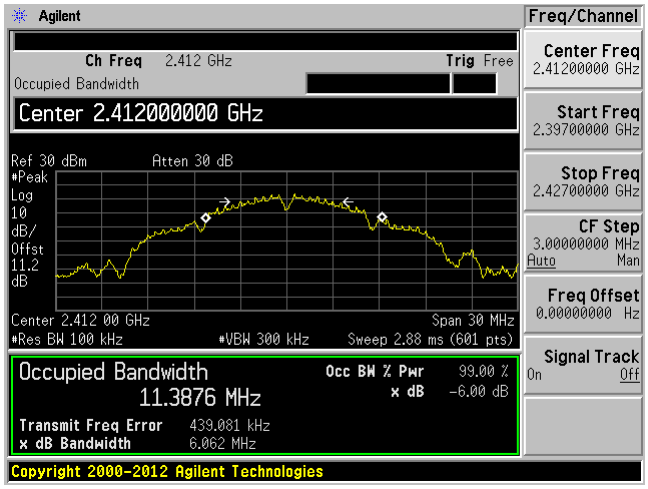
2.4 GHz Band

802.11 b mode

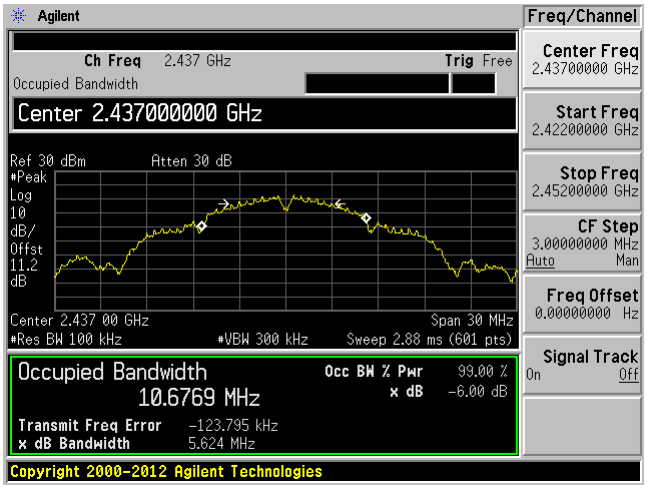
Low channel: 2412 MHz Chain J0



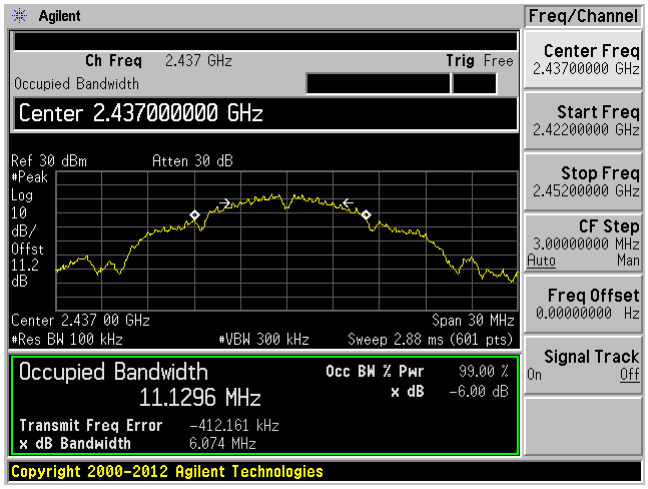
Low channel: 2412 MHz Chain J1



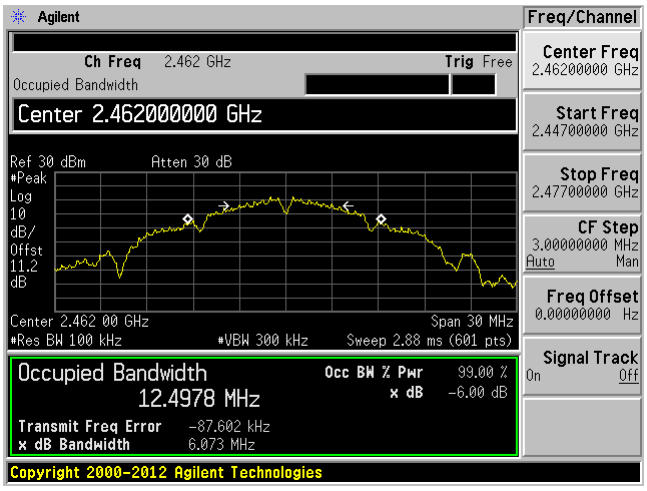
Middle channel: 2437 MHz Chain J0



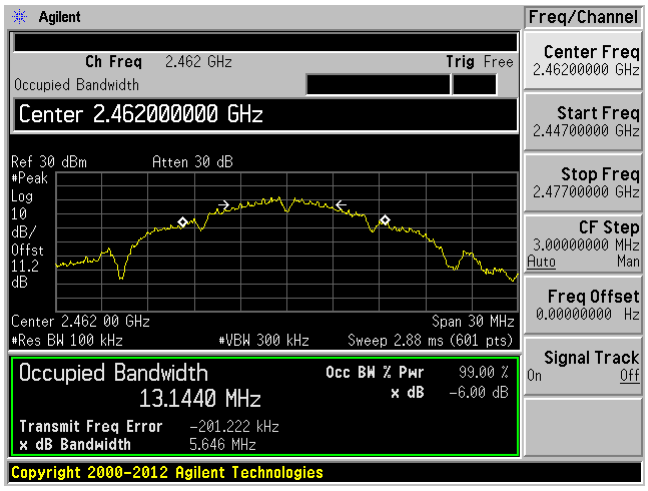
Middle channel: 2437 MHz Chain J1



High channel: 2462 MHz Chain J0

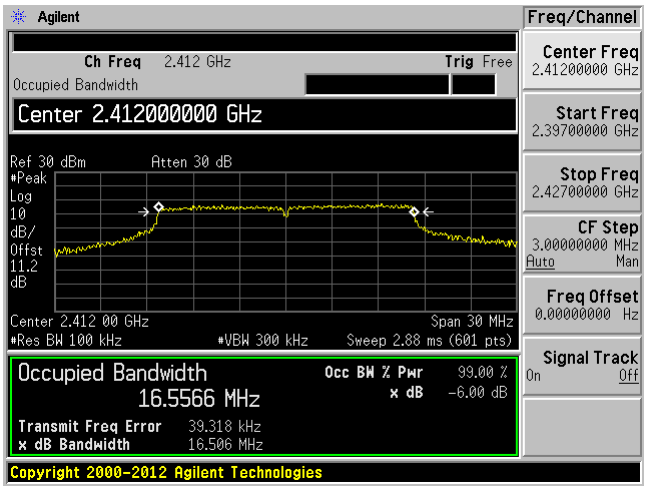


High channel: 2462 MHz Chain J1

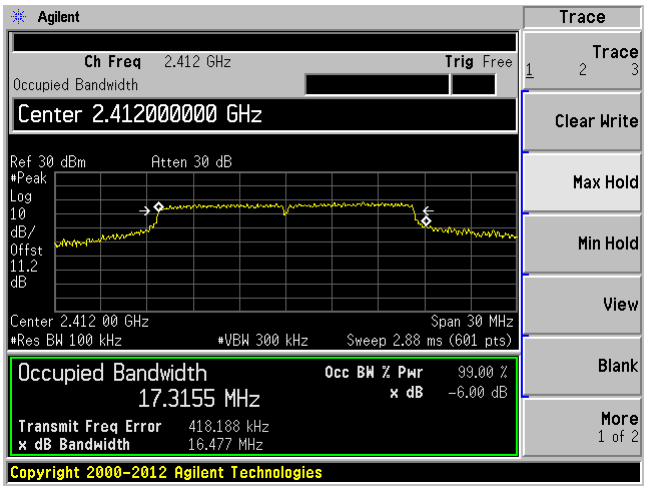


802.11 g mode

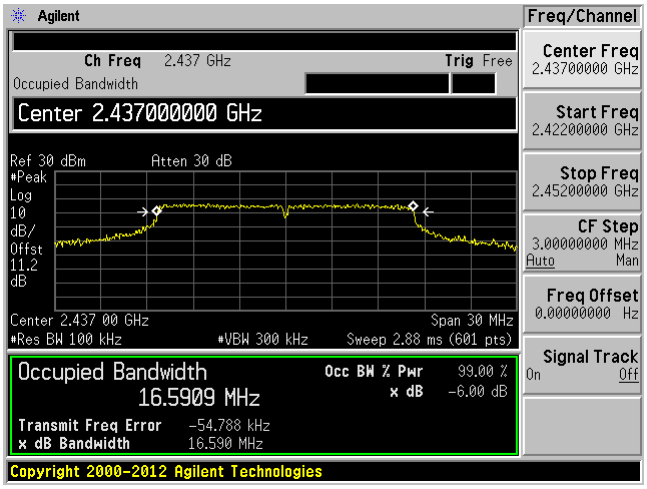
Low channel: 2412 MHz Chain J0



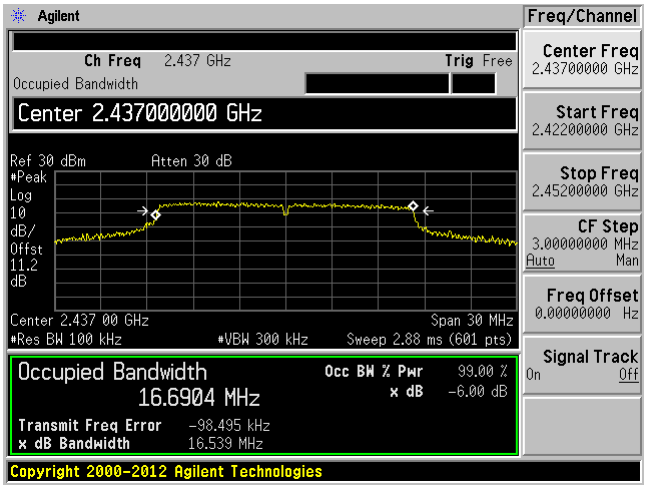
Low channel: 2412 MHz Chain J1



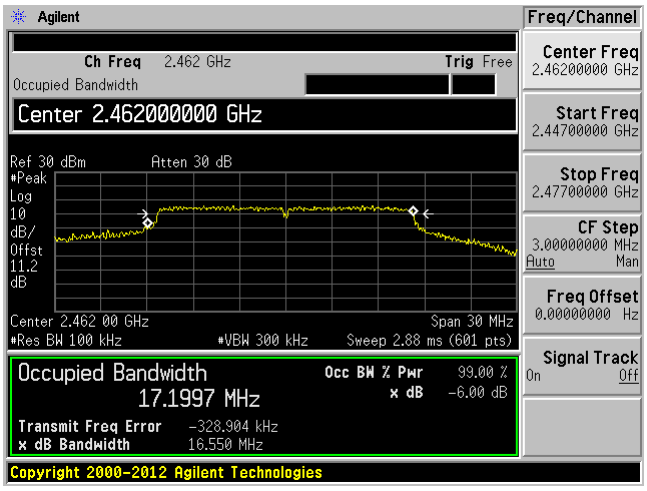
Middle channel: 2437 MHz Chain J0



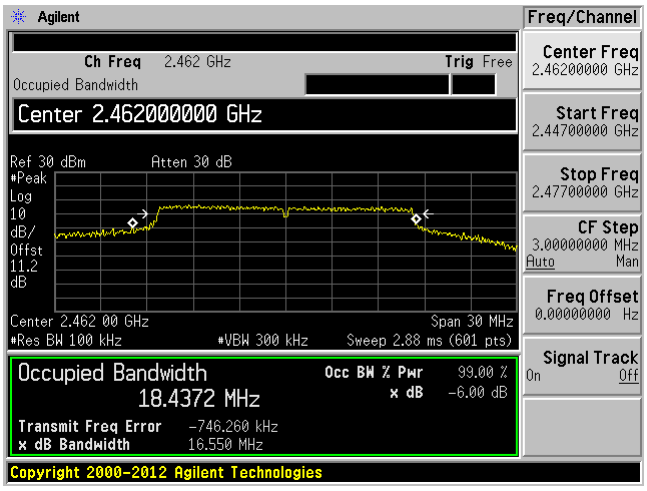
Middle channel: 2437 MHz Chain J1



High channel: 2462 MHz Chain J0

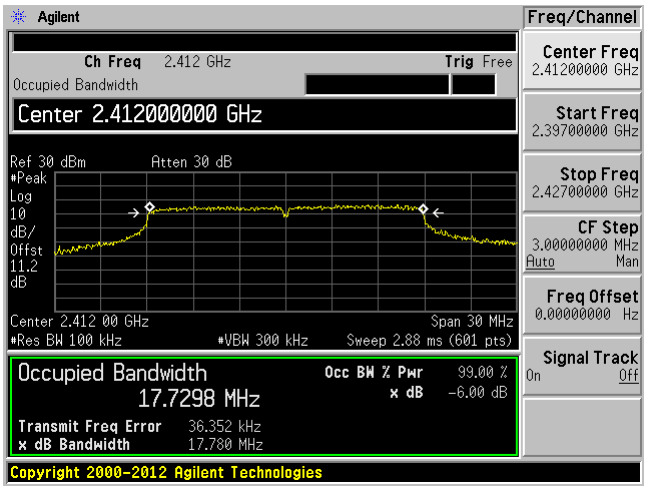


High channel: 2462 MHz Chain J1

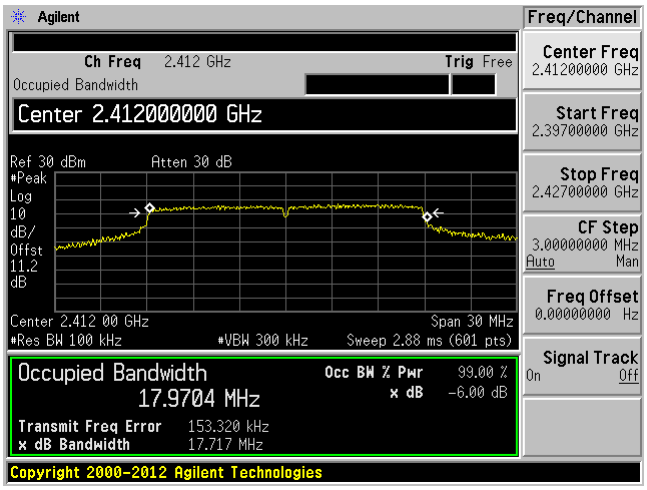


802.11n-HT20 mode

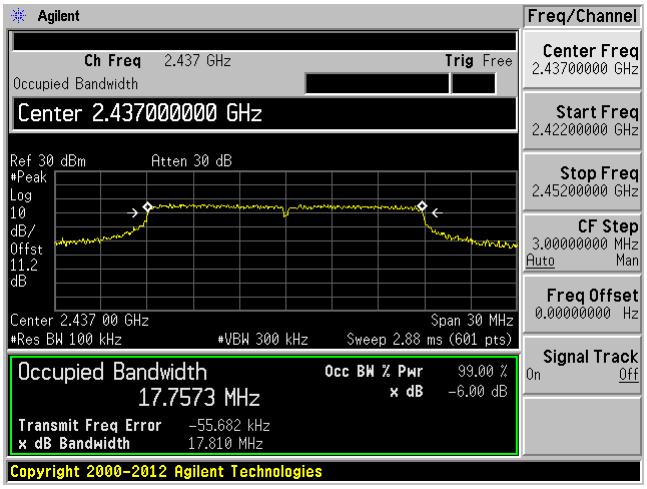
Low channel: 2412 MHz Chain J0



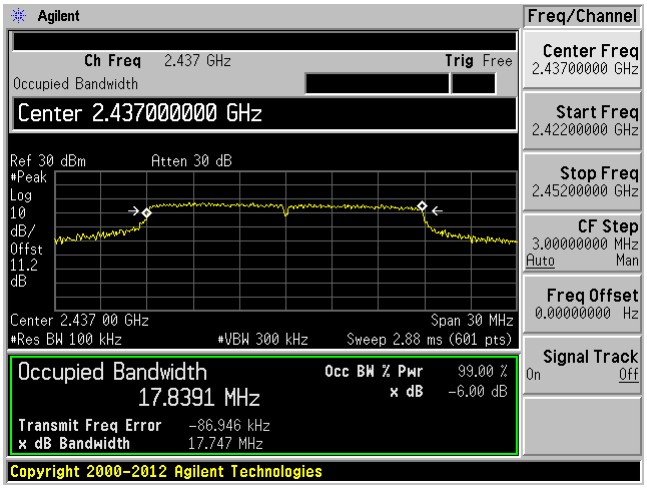
Low channel: 2412 MHz Chain J1



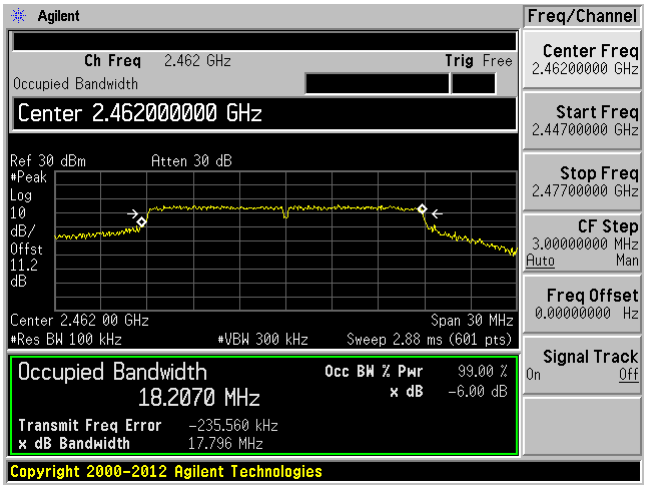
Middle channel: 2437 MHz Chain J0



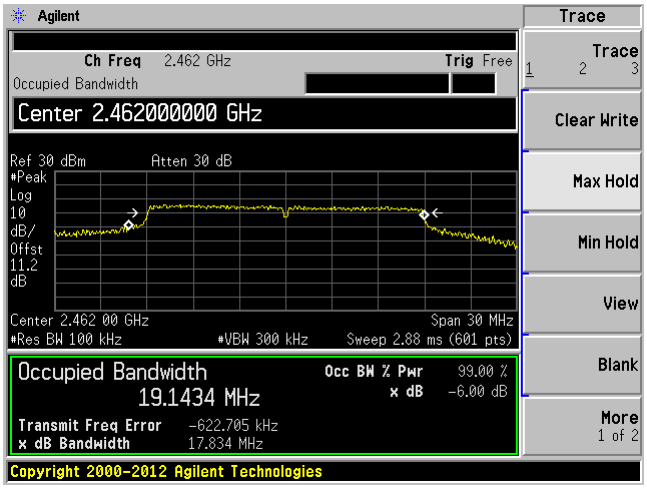
Middle channel: 2437 MHz Chain J1



High channel: 2462 MHz Chain J0

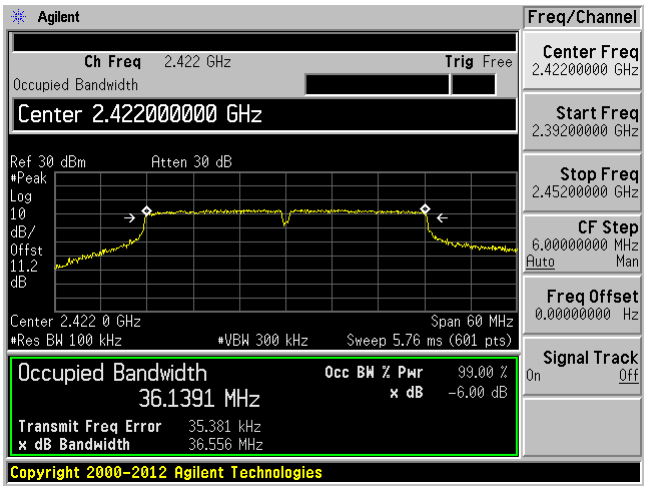


High channel: 2462 MHz Chain J1

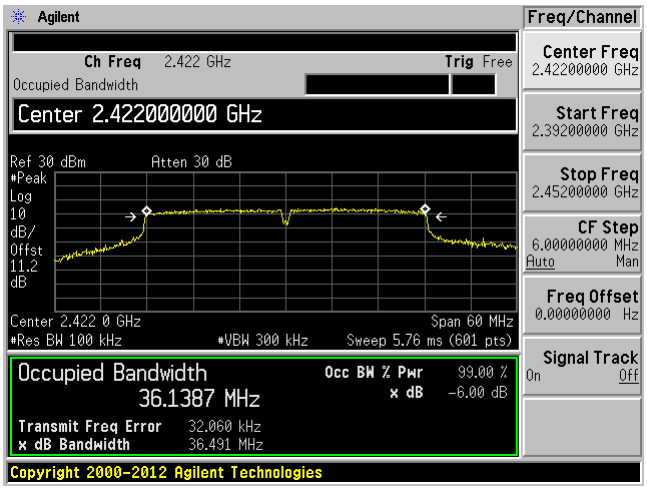


802.11n-HT40 mode

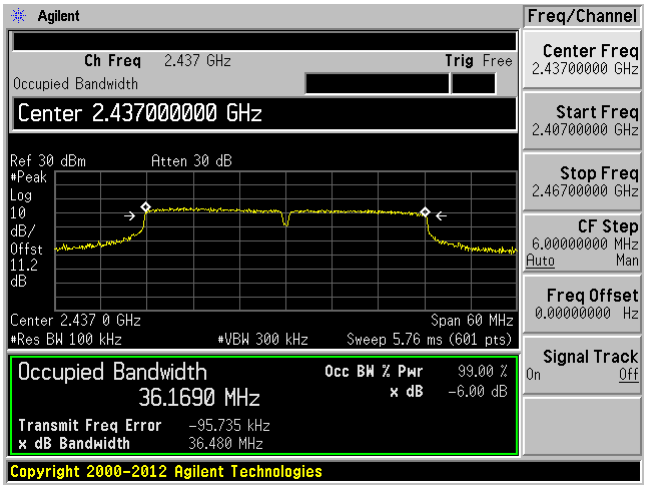
Low channel: 2422 MHz Chain J0



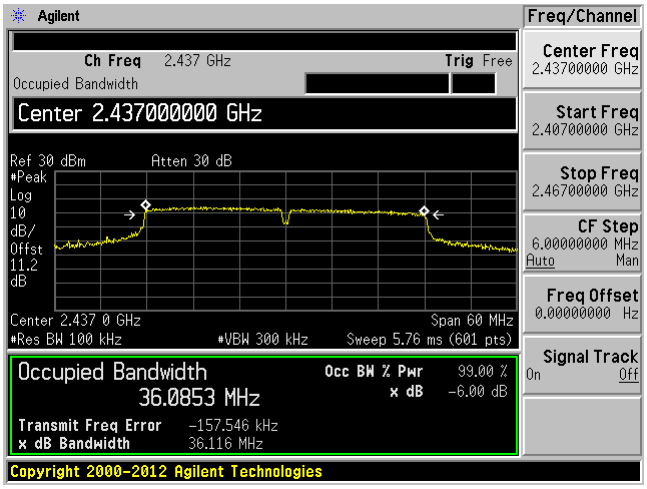
Low channel: 2422 MHz Chain J1



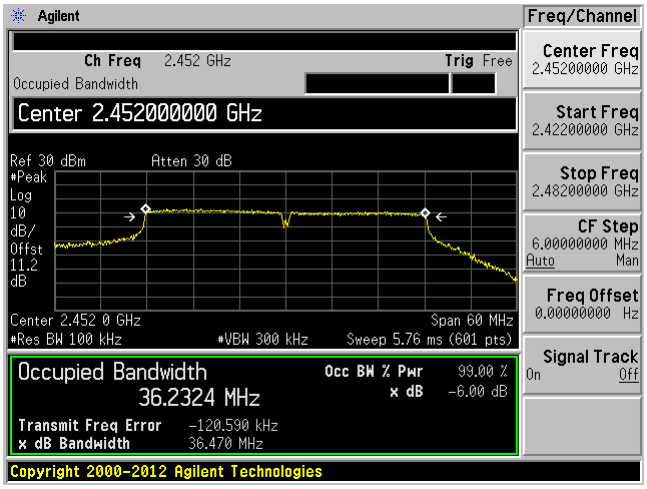
Middle channel: 2437 MHz Chain J0



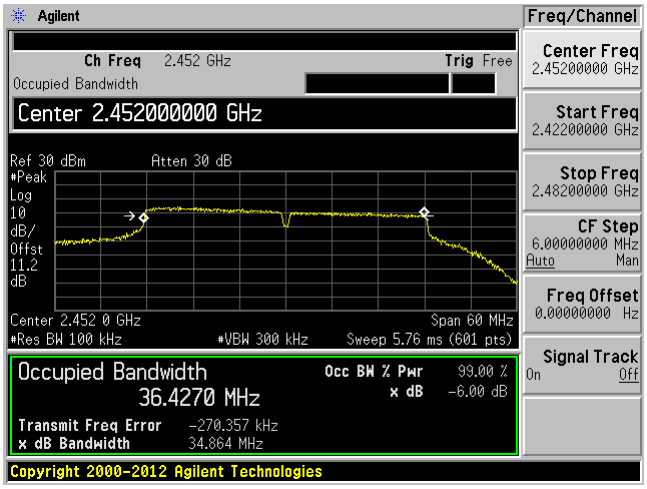
Middle channel: 2437 MHz Chain J1



High channel: 2452 MHz Chain J0



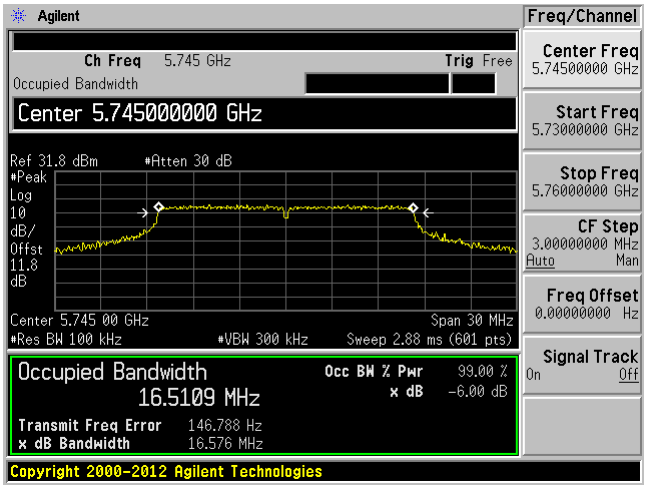
High channel: 2452 MHz Chain J1



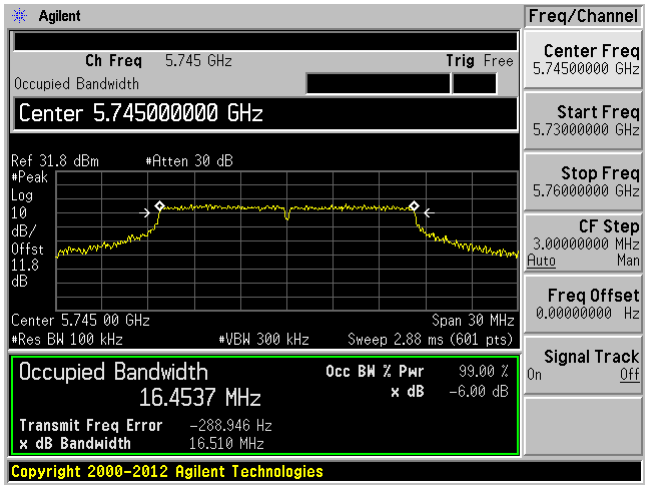
5.8 GHz Band

802.11a mode

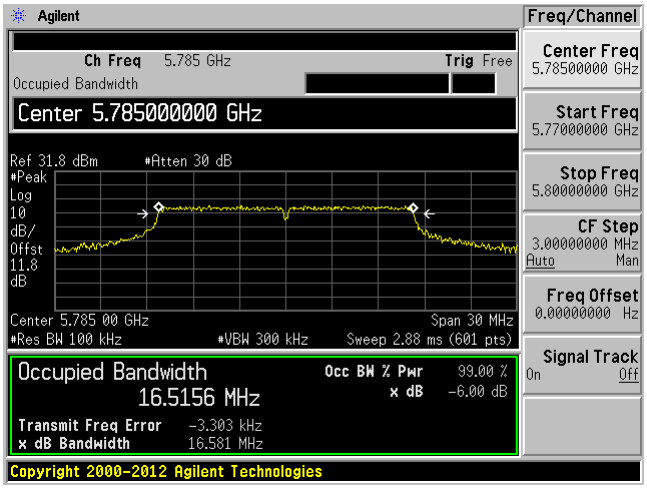
Low channel: 5745 MHz Chain J0



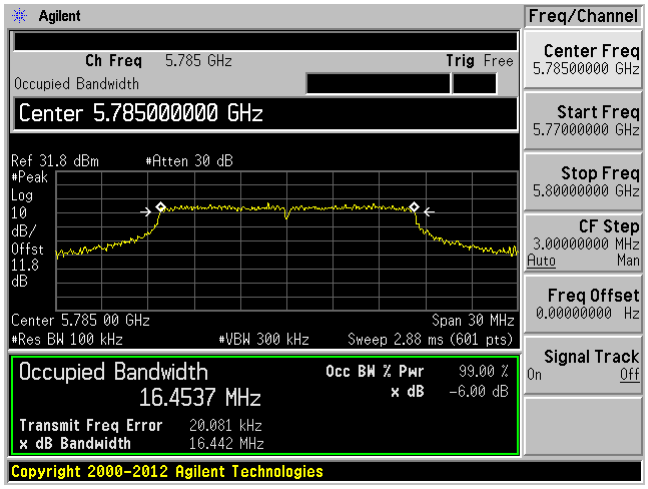
Low channel: 5745 MHz Chain J1



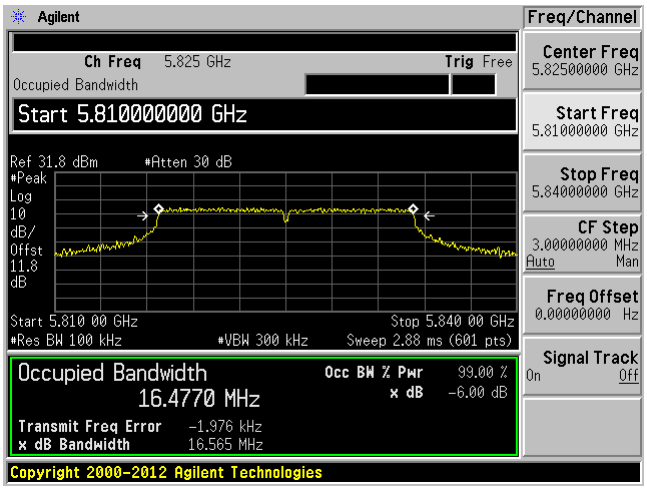
Middle channel: 5785 MHz Chain J0



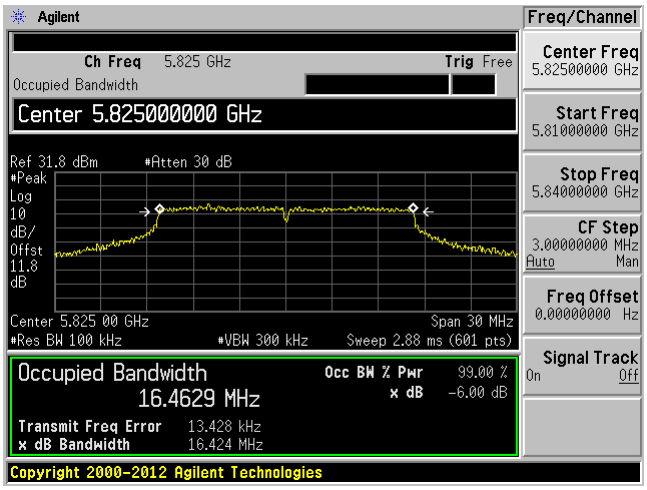
Middle channel: 5785 MHz Chain J1



High channel: 5825 MHz Chain J0

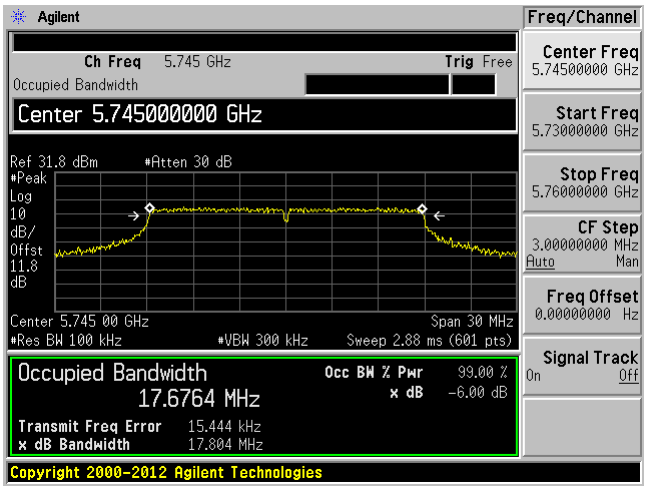


High channel: 5825 MHz Chain J1

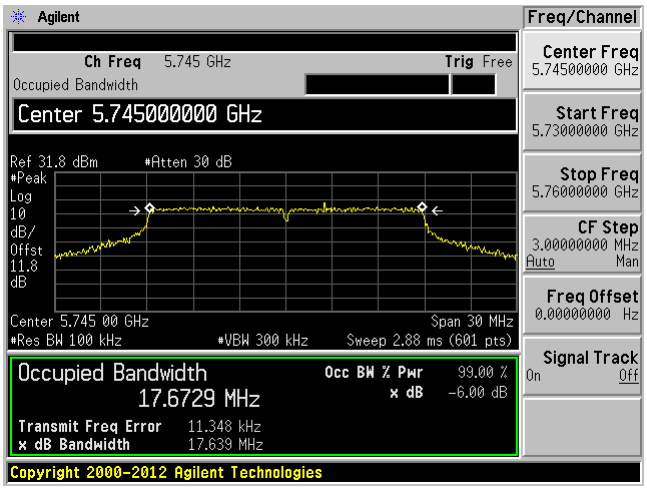


802.11n-HT20 mode

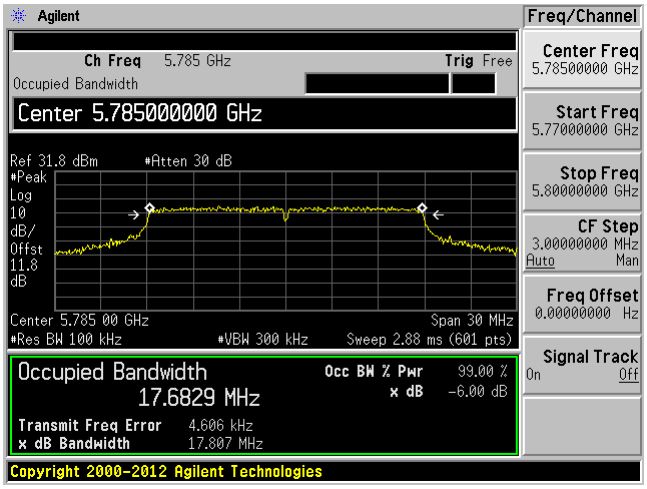
Low channel: 5745 MHz Chain J0



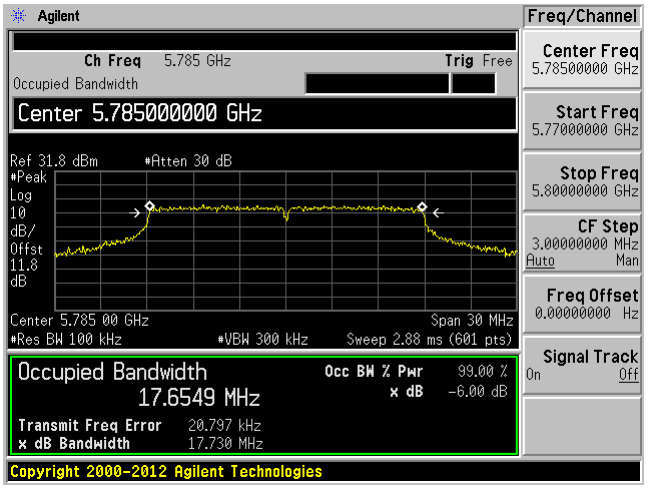
Low channel: 5745 MHz Chain J1



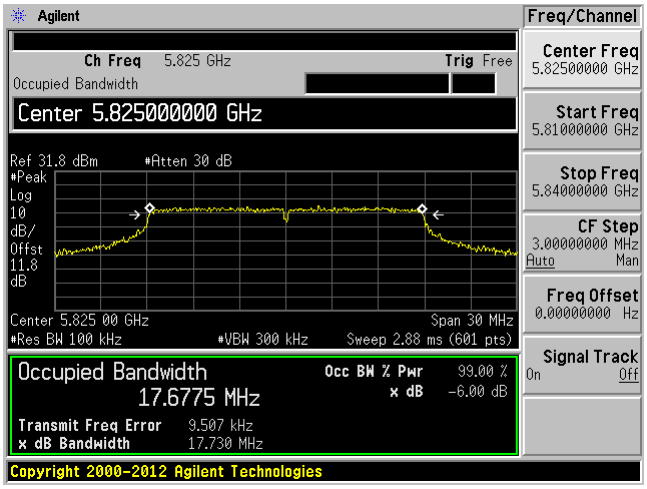
Middle channel: 5785 MHz Chain J0



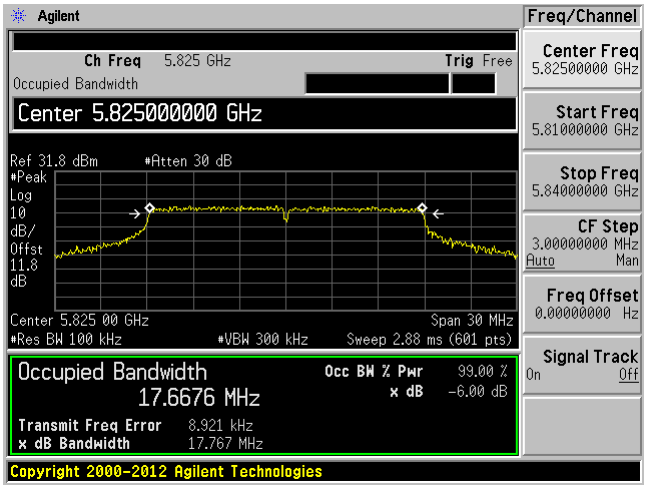
Middle channel: 5785 MHz Chain J1



High channel: 5825 MHz Chain J0

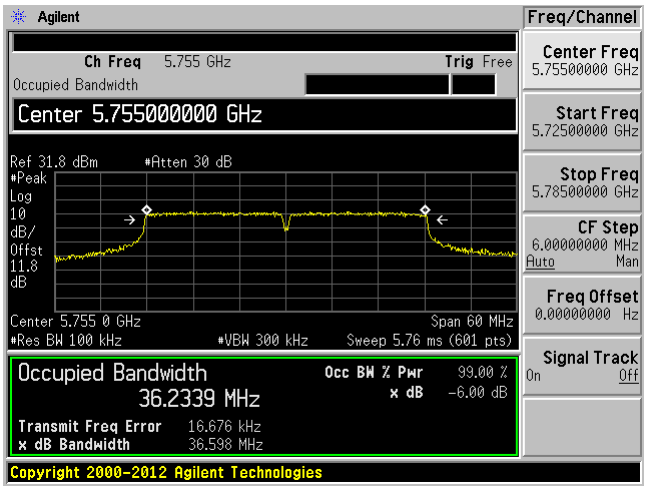


High channel: 5825 MHz Chain J1

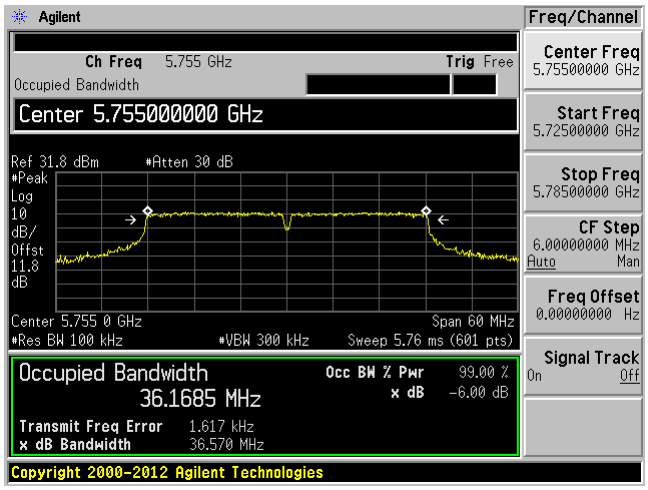


802.11n-HT40 mode

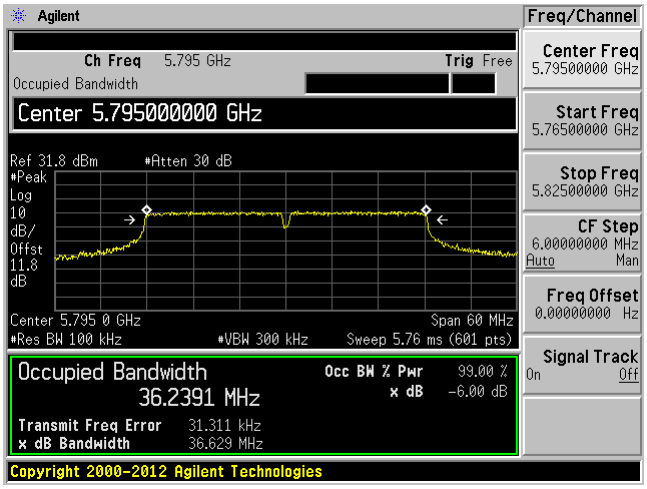
Low channel: 5755 MHz Chain J0



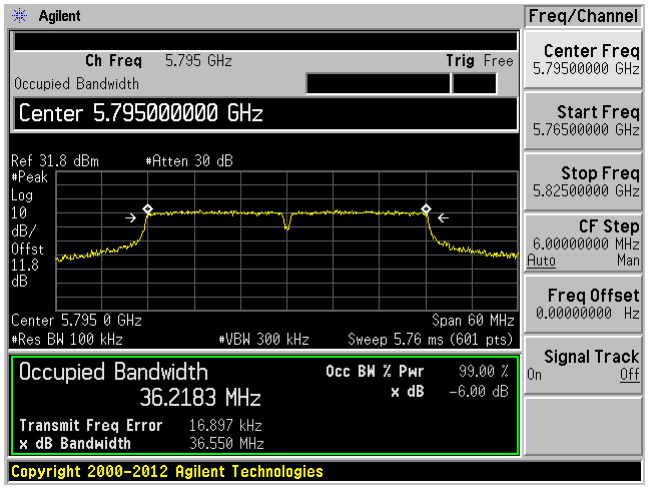
Low channel: 5755 MHz Chain J1



High channel: 5795 MHz Chain J0

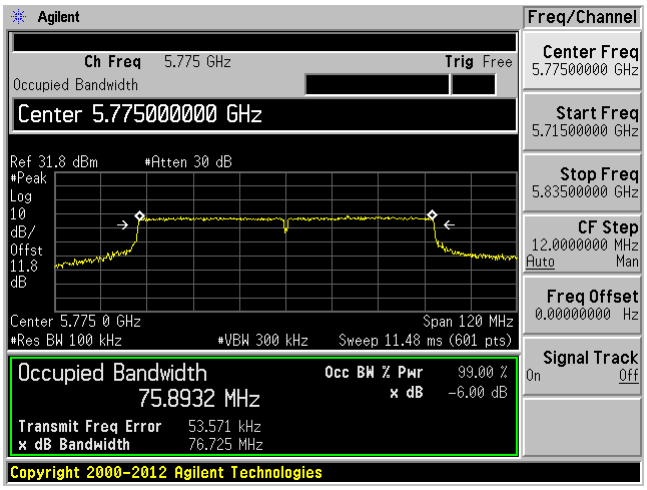


High channel: 5795 MHz Chain J1

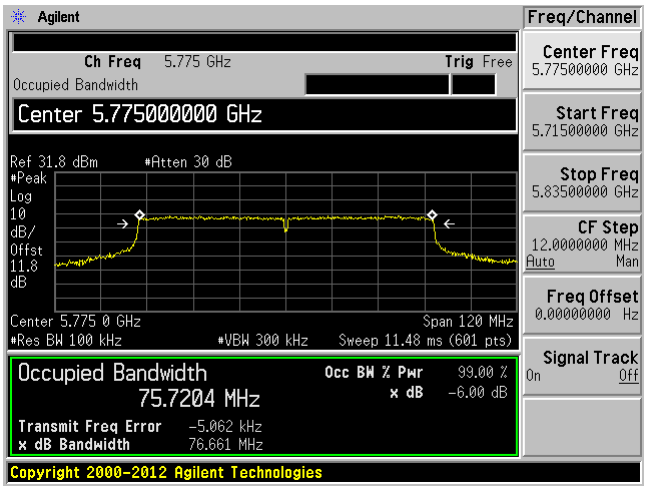


802.11ac-80 mode

Low channel: 5775 MHz Chain J0



Low channel: 5775 MHz Chain J1



10 FCC §15.247(b) & IC RSS-210 §A8.4 – Peak Output Power Measurement

10.1 Applicable Standard

According to FCC §15.247(b) and IC RSS-210 §A8.4 (4) for systems using digital modulation in the 902~928 MHz, 2400~2483.5 MHz, and 5725~5850 MHz bands: 1 Watt.

10.2 Measurement Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 9: Fundamental emission output power

10.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year

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:	22-24 °C
Relative Humidity:	42-45 %
ATM Pressure:	101-102 kPa

The testing was performed by Chen Ge from 2014-04-08 and 2014-04-11 at RF site.

10.5 Test Results

2.4 GHz Band:

Channel	Frequency (MHz)	Conducted Output Power (dBm)		Total Output Power (dBm)	Limit (dBm)	Margin (dB)
		Chain J0	Chain J1			
802.11b mode						
Low	2412	20.31	20.15	23.24	30	-6.76
Middle	2437	19.75	20.62	23.22	30	-6.78
High	2462	19.54	19.04	22.31	30	-7.69
802.11g mode						
Low	2412	20.05	20.96	23.54	30	-6.46
Middle	2437	20.48	21.02	23.77	30	-6.23
High	2462	19.92	19.65	22.80	30	-7.20
802.11n-HT20 mode						
Low	2412	19.93	20.6	23.29	30	-6.71
Middle	2437	20.46	20.97	23.73	30	-6.27
High	2462	19.91	19.54	22.74	30	-7.26
802.11n-HT40 mode						
Low	2422	18.09	18.95	21.55	30	-8.45
Middle	2437	20.59	20.75	23.68	30	-6.32
High	2452	19.25	19.84	22.57	30	-7.43

5.8 GHz Band:

Channel	Frequency (MHz)	Conducted Output Power (dBm)		Total Output Power (dBm)	Limit (dBm)	Margin (dB)
		Chain J0	Chain J1			
802.11a mode						
Low	5745	21.89	22.07	24.99	30	-5.01
Middle	5785	21.79	22.14	24.98	30	-5.02
High	5825	21.09	21.84	24.49	30	-5.51
802.11n-HT20 mode						
Low	5745	20.96	21.26	24.12	30	-5.88
Middle	5785	20.84	21.11	23.99	30	-6.01
High	5825	20.18	20.69	23.45	30	-6.55
802.11n-HT40 mode						
Low	5755	20.67	20.81	23.75	30	-6.25
High	5795	20.42	20.66	23.55	30	-6.45
802.11ac-80 mode						
Middle	5775	20.36	20.55	23.47	30	-6.53

11 FCC §15.247(d) & IC RSS-210 §A8.5 – 100 kHz Bandwidth of Band Edges

11.1 Applicable Standard

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).

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

11.2 Measurement Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 13: Band-edge measurements

11.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year

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:	22-24° C
Relative Humidity:	42-45 %
ATM Pressure:	101-102 kPa

The testing was performed by Chen Ge from 2014-04-07 and 2014-04-11 at RF site.

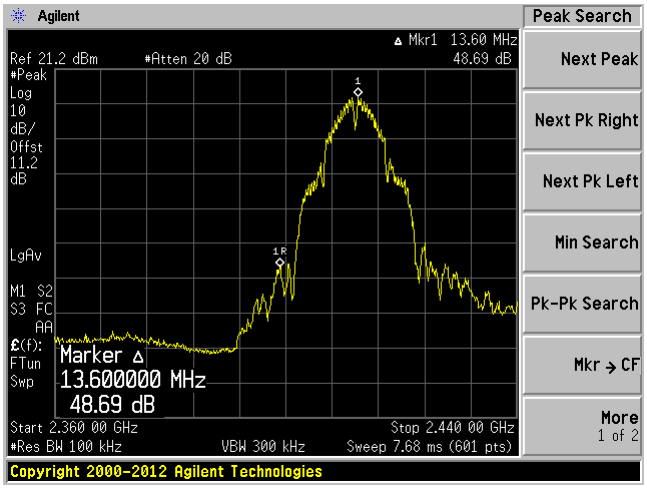
11.5 Test Results

Please refer to following pages for plots of band edge.

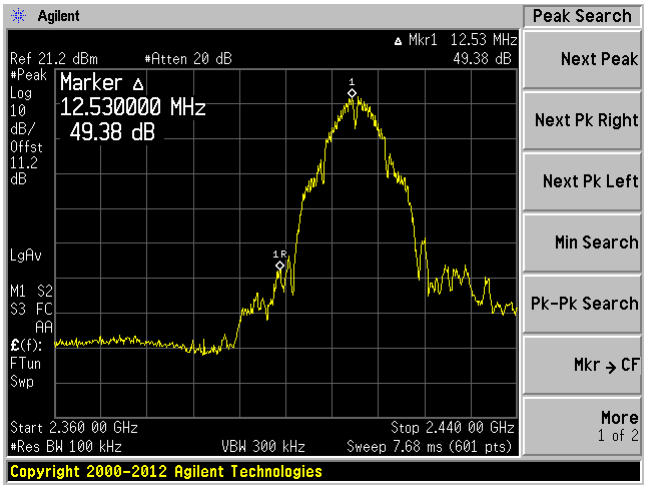
2.4 GHz Band

802.11b mode

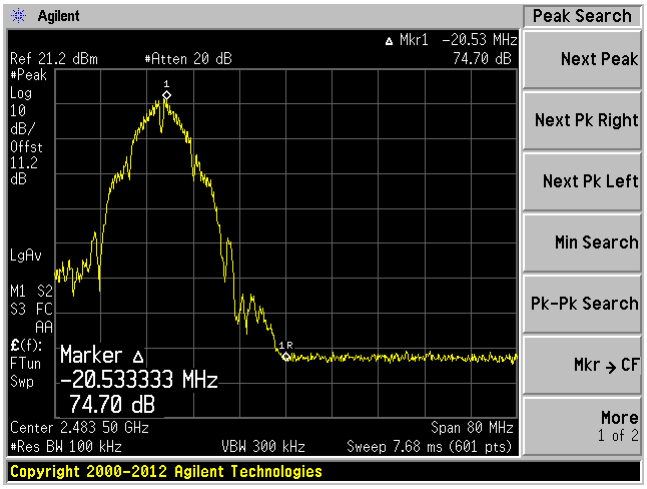
802.11b, Chain J0 Low Band Edge



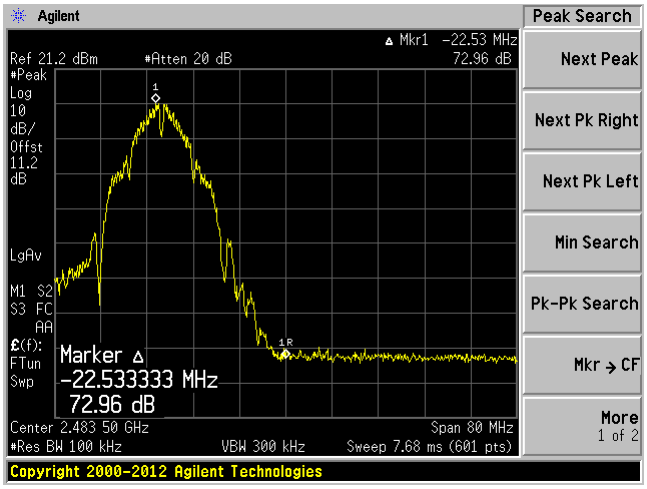
802.11b, Chain J1 Low Band Edge



802.11b, Chain J0 High Band Edge

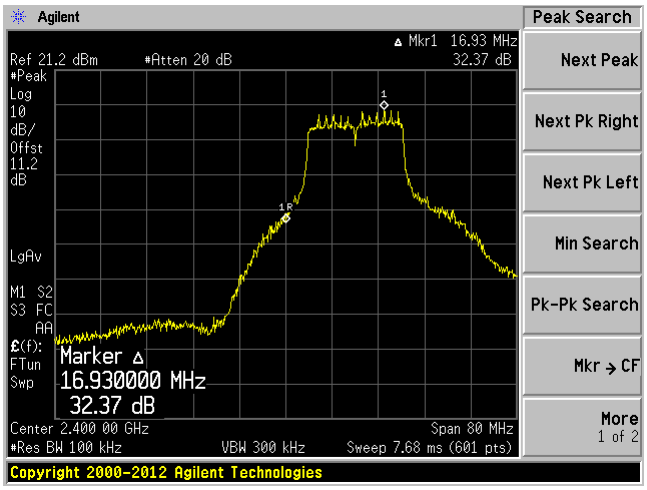


802.11b, Chain J1 High Band Edge

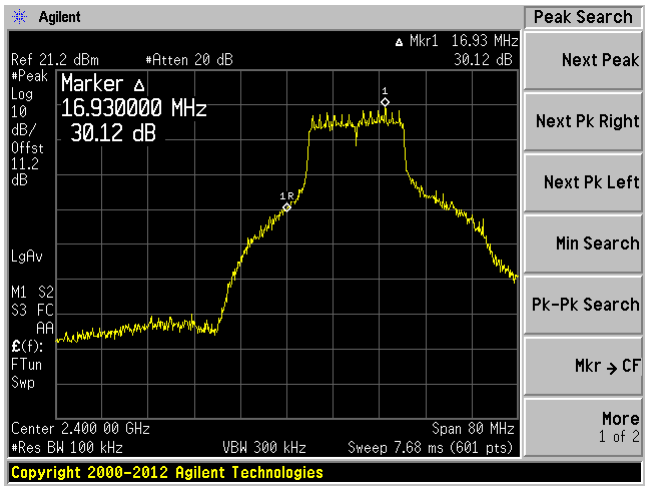


802.11g mode

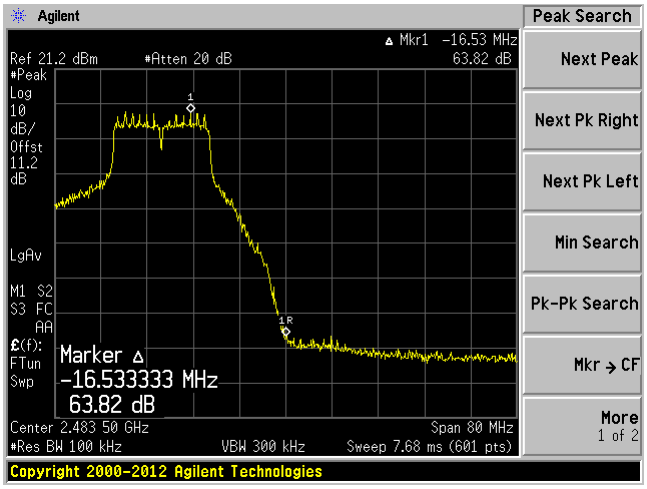
802.11g, Chain J0 Low Band Edge



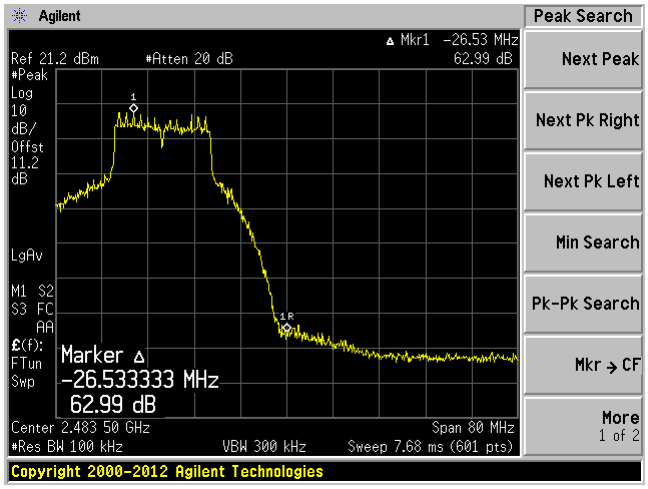
802.11g, Chain J1 Low Band Edge



802.11g, Chain J0 High Band Edge

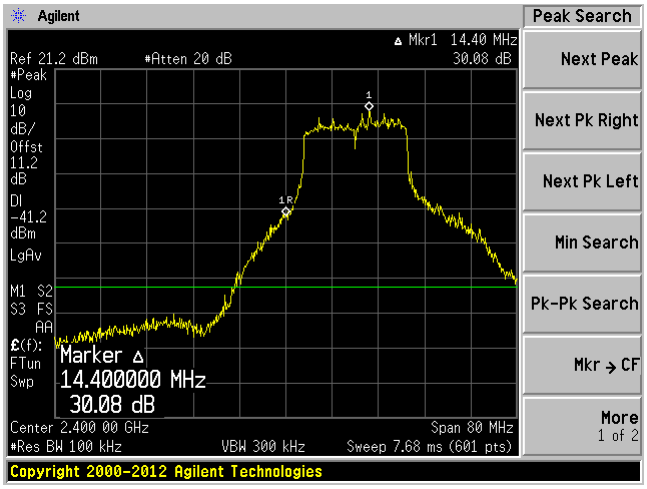


802.11g, Chain J1 High Band Edge

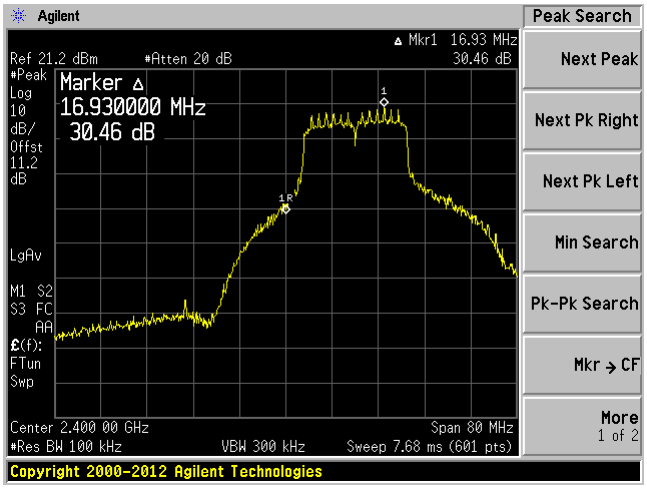


802.11n-HT20 mode

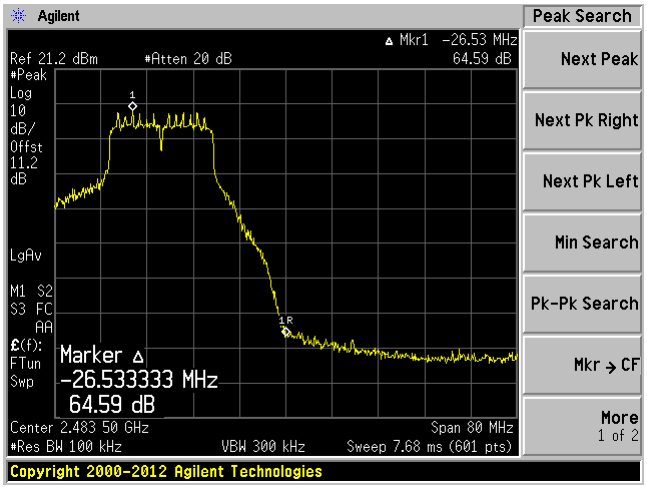
802.11n-HT20, Chain J0 Low Band Edge



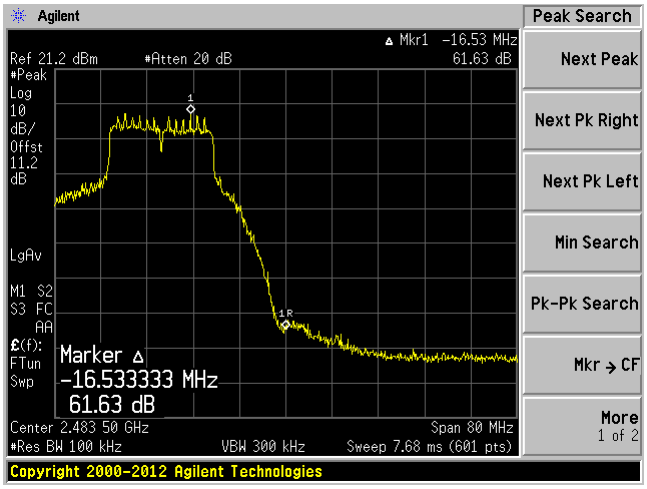
802.11n-HT20, Chain J1 Low Band Edge



802.11n-HT20, Chain J0 High Band Edge

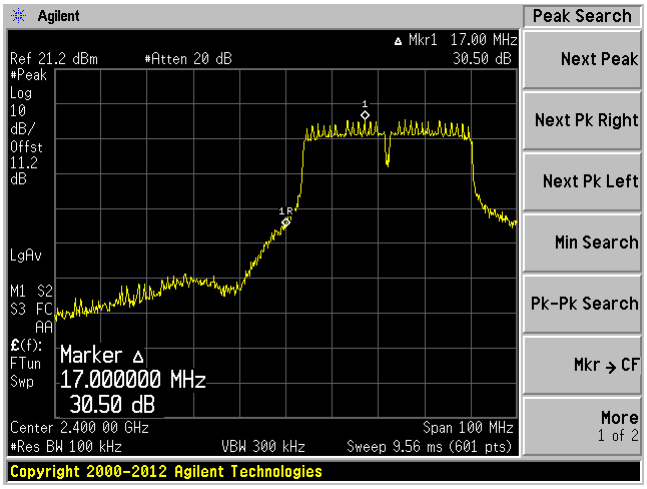


802.11n-HT20, Chain J1 High Band Edge

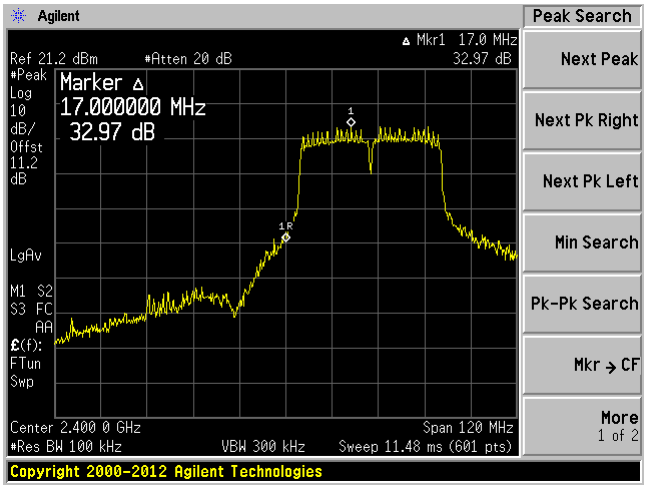


802.11n-HT40 mode

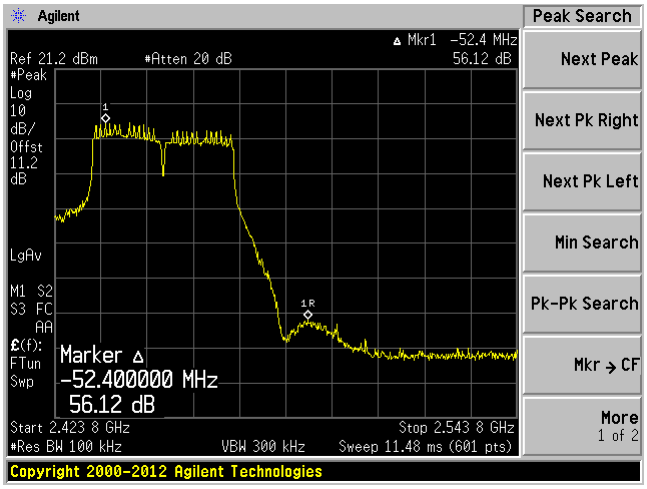
802.11n-HT40, Chain J0 Low Band Edge



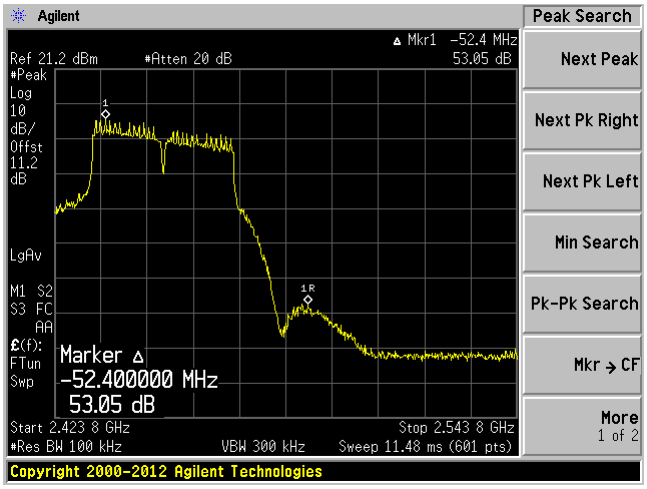
802.11n-HT40, Chain J1 Low Band Edge



802.11n-HT40, Chain J0 High Band Edge



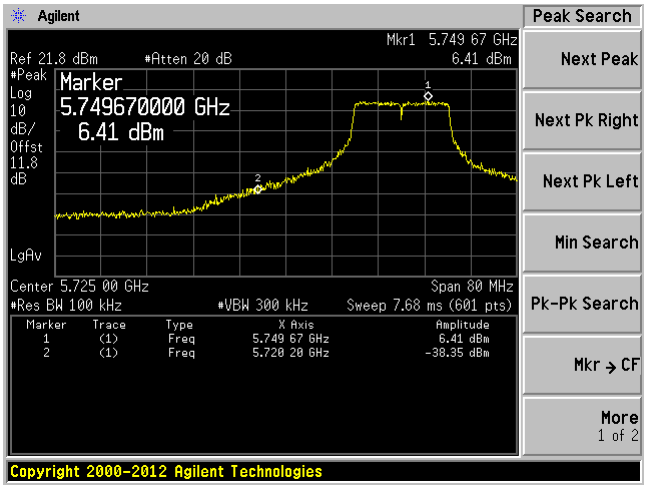
802.11n-HT40, Chain J1 High Band Edge



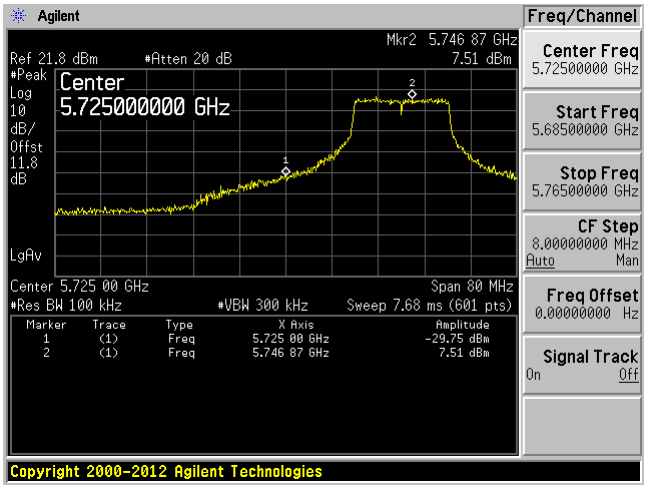
5.8 GHz Band

802.11a mode

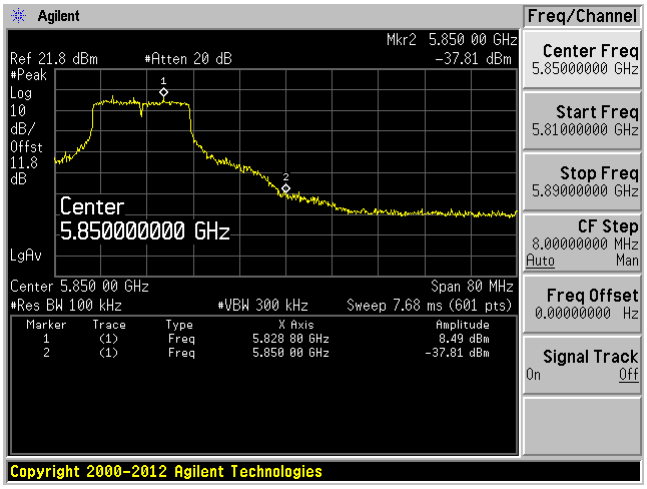
802.11a, Chain J0 Low Band Edge



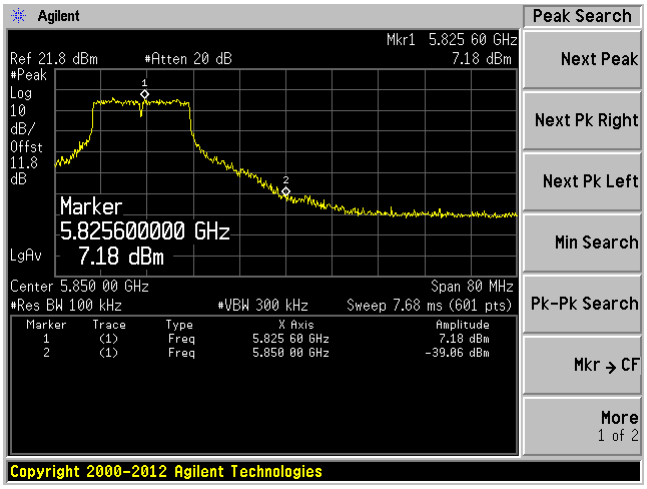
802.11a, Chain J1 Low Band Edge



802.11a, Chain J0 High Band Edge

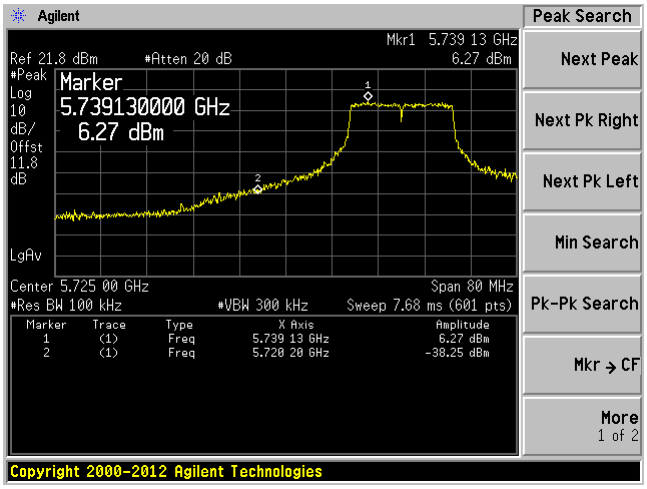


802.11a, Chain J1 High Band Edge

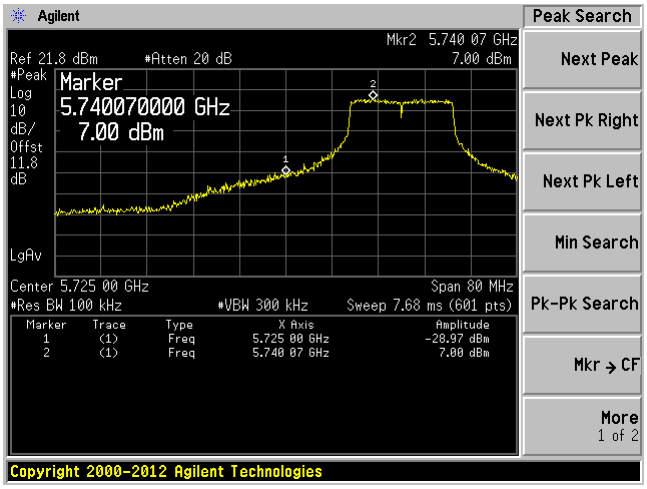


802.11n -HT20 mode

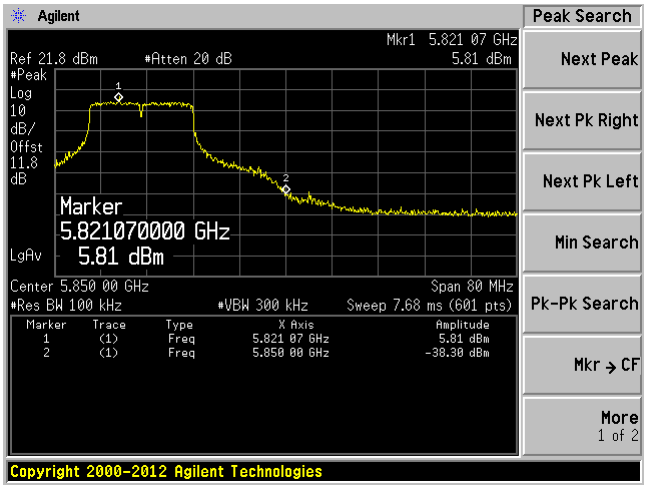
802.11n-HT20, Chain J0 Low Band Edge



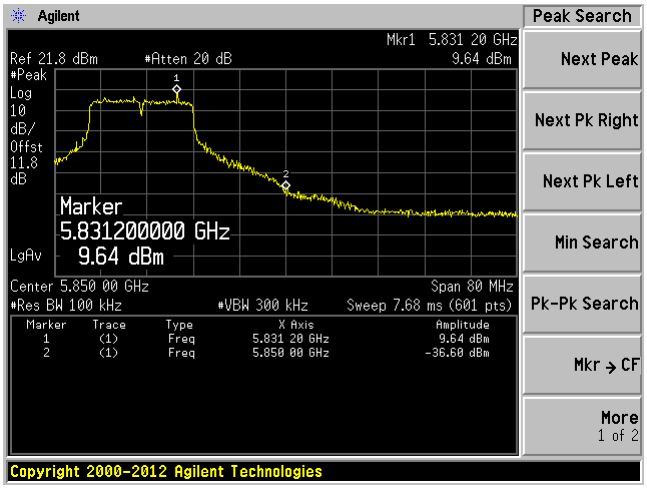
802.11n-HT20, Chain J1 Low Band Edge



802.11n-HT20, Chain J0 High Band Edge

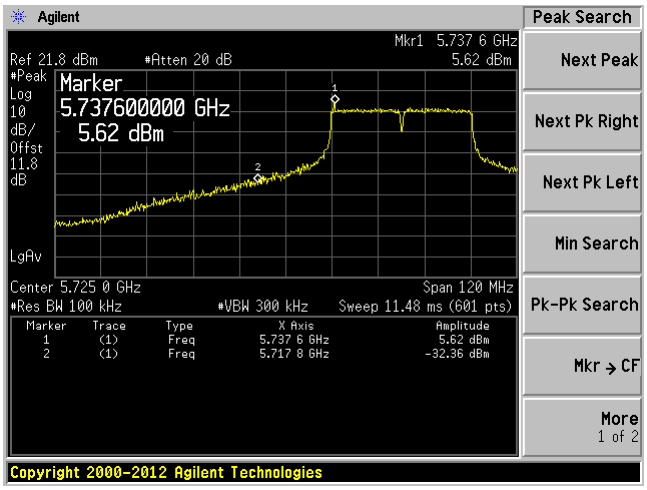


802.11n-HT20, Chain J1 High Band Edge

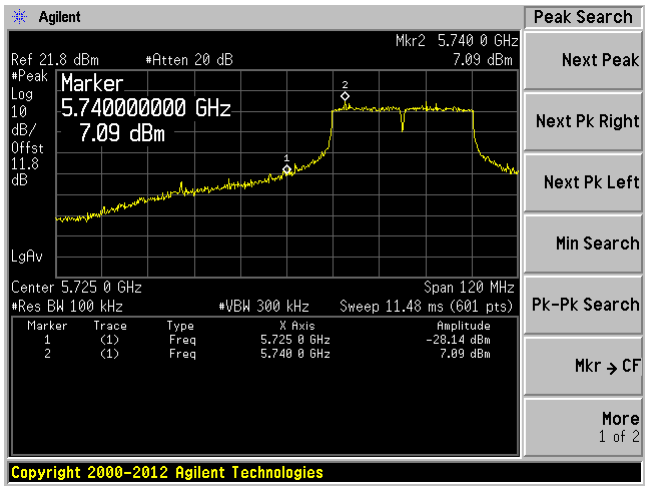


802.11n-HT40 mode

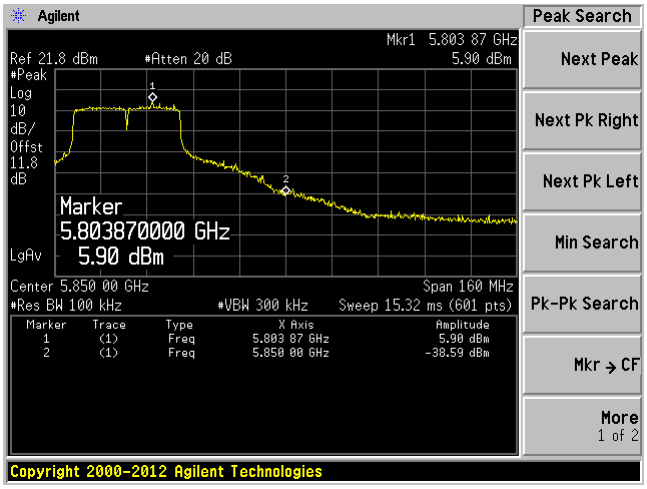
802.11n-HT40, Chain J0 Low Band Edge



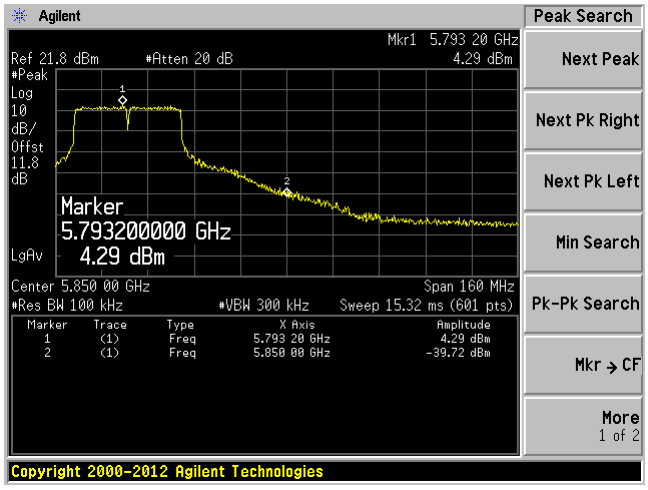
802.11n-HT40, Chain J1 Low Band Edge



802.11n-HT40, Chain J0 High Band Edge

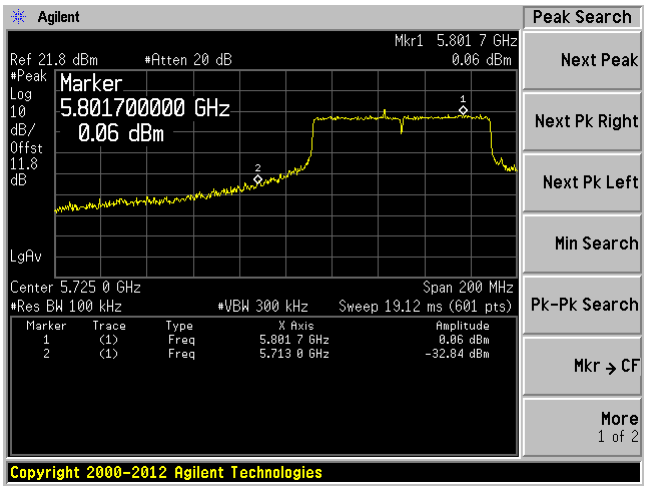


802.11n-HT40, Chain J1 High Band Edge

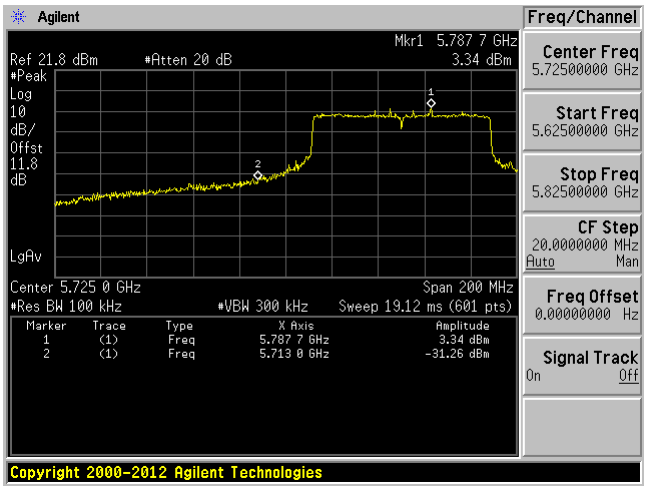


802.11ac-80 mode

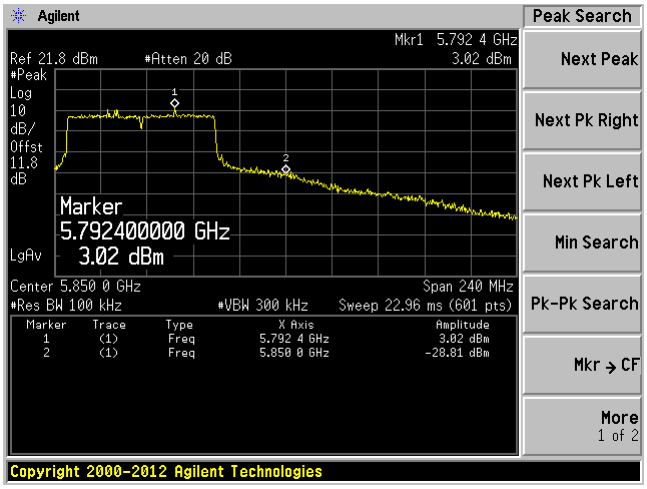
802.11ac-80, Chain J0 Low Band Edge



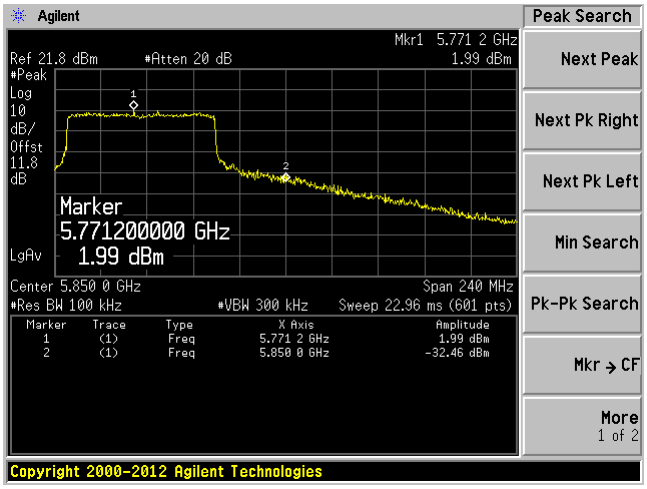
802.11ac-80, Chain J1 Low Band Edge



802.11ac-80, Chain J0 High Band Edge



802.11ac-80, Chain J1 High Band Edge



12 FCC §15.247(e) & IC RSS-210 §A8.2 (b) – Power Spectral Density

12.1 Applicable Standard

According to FCC §15.247(e) and RSS-210 §A8.2 (b) , 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.

12.2 Measurement Procedure

The measurements are base on FCC KDB 558074 D01 DTS Meas Guidance v03r01: 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

12.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year

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

12.4 Test Environmental Conditions

Temperature:	22-24 °C
Relative Humidity:	42-45 %
ATM Pressure:	101-102 kPa

The testing was performed by Chen Ge from 2014-04-08 and 2014-04-11 at RF site.

12.5 Test Results

2.4 GHz Band:

Channel	Frequency (MHz)	PSD (dBm)		Total PSD (dBm)	Limit (dBm)	Margin (dB)
		Chain J0	Chain J1			
802.11b mode						
Low	2412	-2.13	-1.18	1.38	8	-6.62
Middle	2437	-2.73	-1.52	0.93	8	-7.07
High	2462	-3.34	-3.87	-0.59	8	-8.59
802.11g mode						
Low	2412	-5.11	-5.07	-2.08	8	-10.08
Middle	2437	-5.32	-4.58	-1.92	8	-9.92
High	2462	-5.54	-6.31	-2.90	8	-10.90
802.11n-HT20 mode						
Low	2412	-5.99	-5.92	-2.94	8	-10.94
Middle	2437	-5.48	-4.59	-2.00	8	-10.00
High	2462	-6.03	-7.08	-3.51	8	-11.51
802.11n-HT40 mode						
Low	2422	-10.57	-10.77	-7.66	8	-15.66
Middle	2437	-7.71	-7.52	-4.60	8	-12.60
High	2452	-8.53	-7.42	-4.93	8	-12.93

5.8 GHz Band:

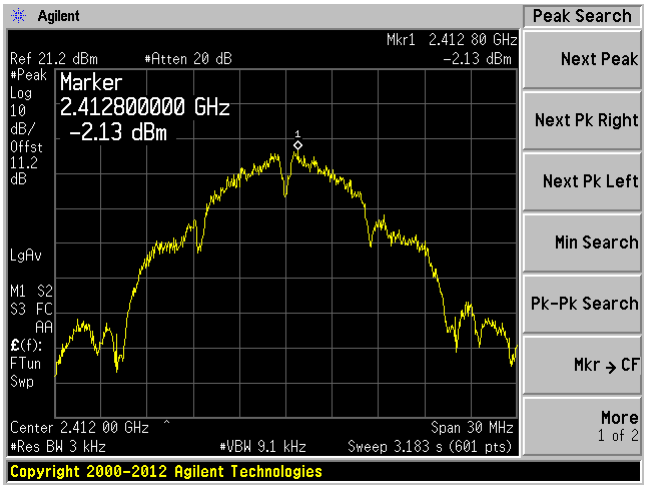
Channel	Frequency (MHz)	PSD (dBm)		Total PSD (dBm)	Limit (dBm)	Margin (dB)
		Chain J0	Chain J1			
802.11a mode						
Low	5745	-3.99	-4.07	-1.02	8	-9.02
Middle	5785	-4.13	-4.6	-1.35	8	-9.35
High	5825	-5.72	-7.7	-3.59	8	-11.59
802.11n-HT20 mode						
Low	5745	-4.78	-4.29	-1.52	8	-9.52
Middle	5785	-4.7	-3.3	-0.93	8	-8.93
High	5825	-5.86	-5.61	-2.72	8	-10.72
802.11n-HT40 mode						
Low	5755	-7.23	-8.05	-4.61	8	-12.61
High	5795	-6.88	-8.2	-4.48	8	-12.48
802.11ac-80 mode						
Middle	5775	-11.34	-9.68	-7.42	8	-15.42

Please refer to the following plots for detailed test results:

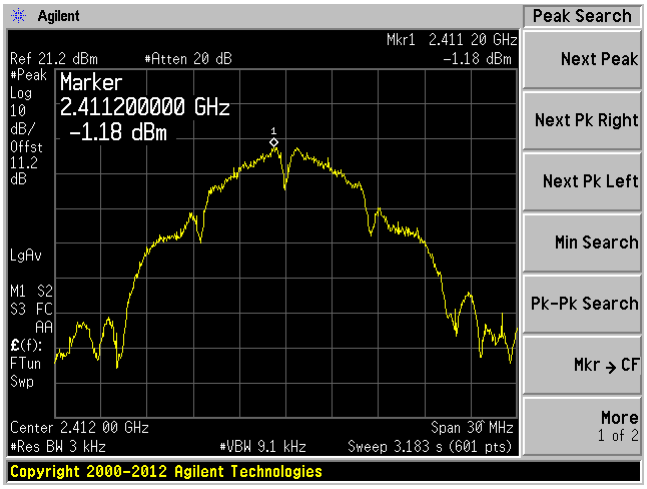
2.4 GHz Band

802.11b mode

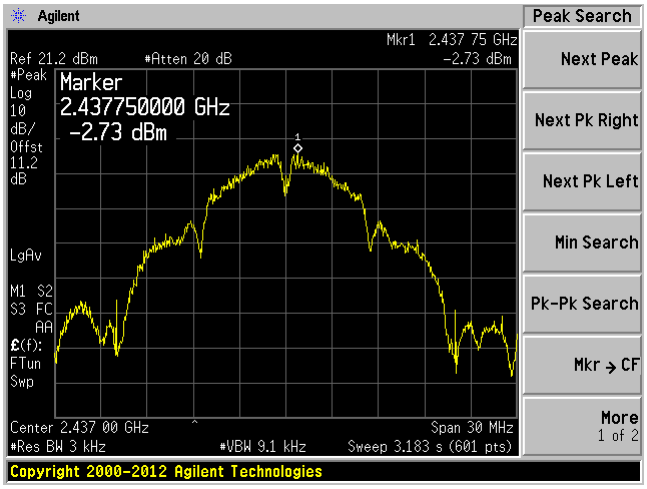
Low channel J0: 2412 MHz



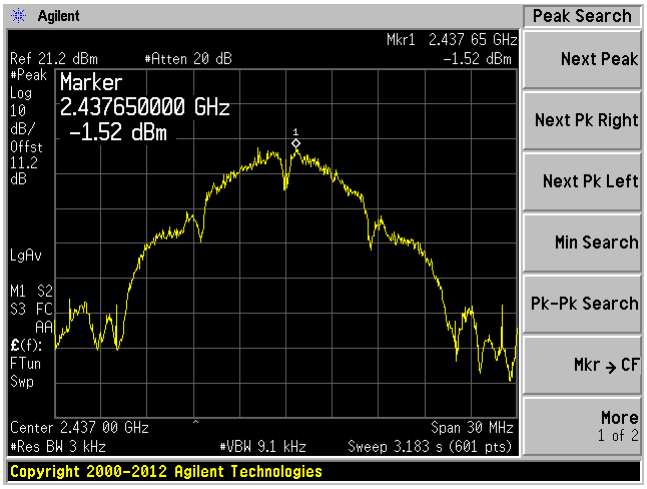
Low channel J1: 2412 MHz



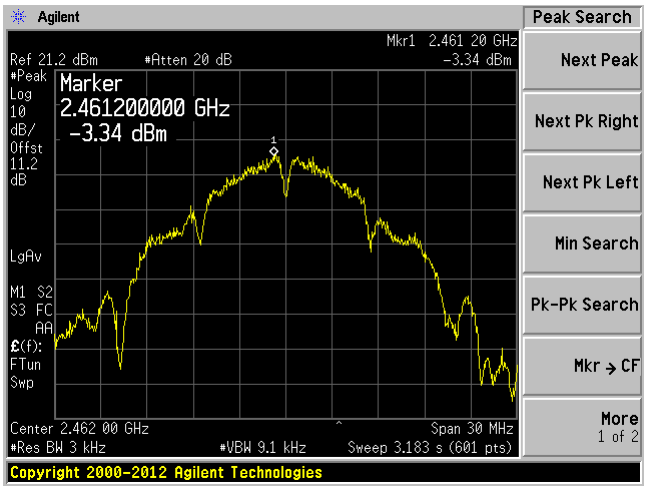
Middle channel J0: 2437 MHz



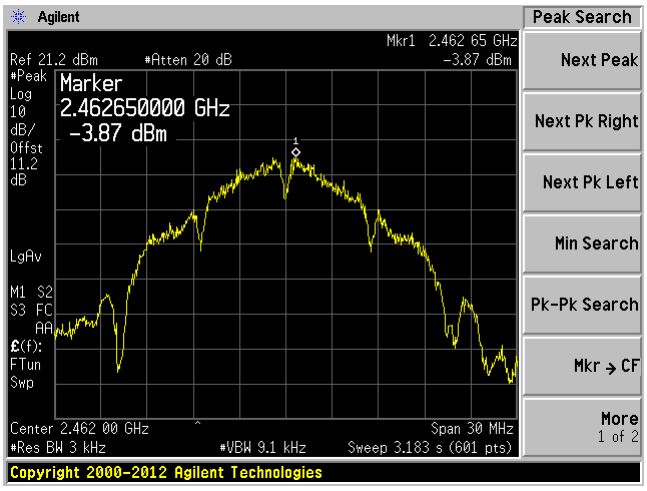
Middle channel J1: 2437 MHz



High channel J0: 2462 MHz

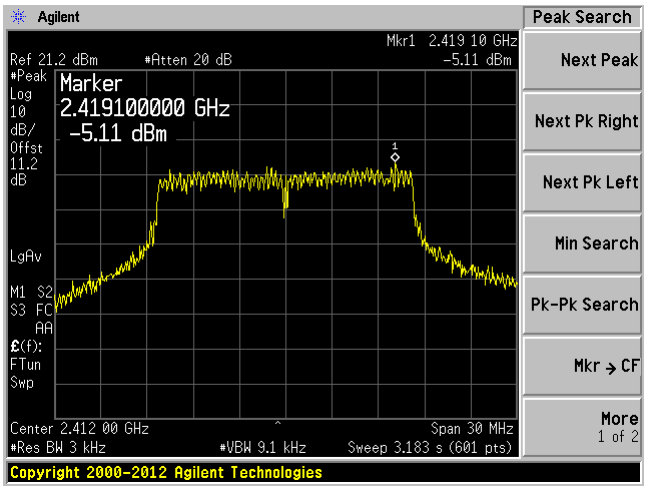


High channel J1: 2462 MHz

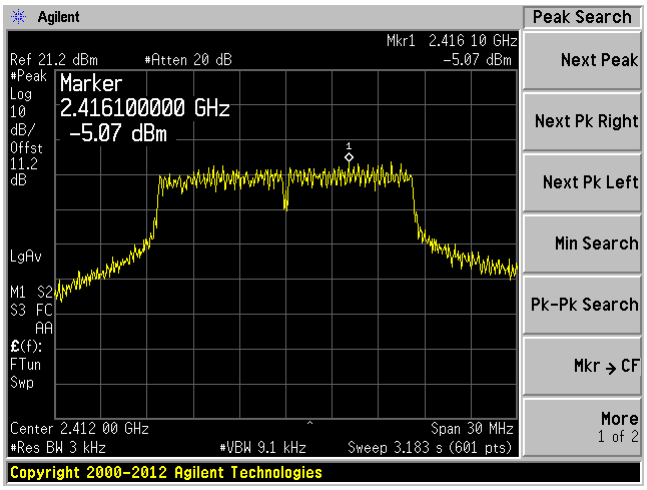


802.11g mode

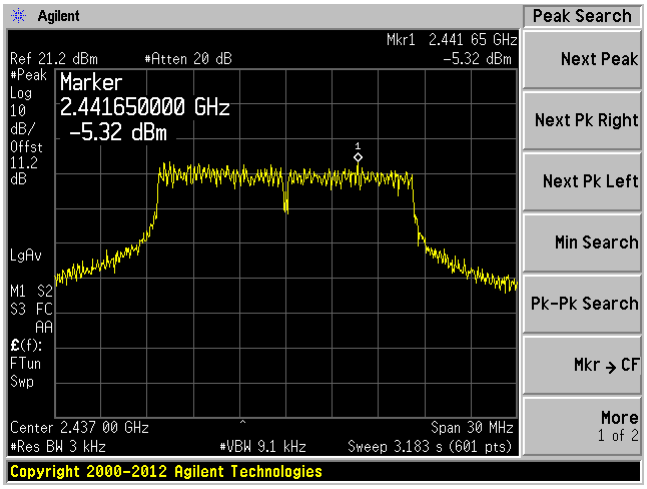
Low channel J0: 2412 MHz



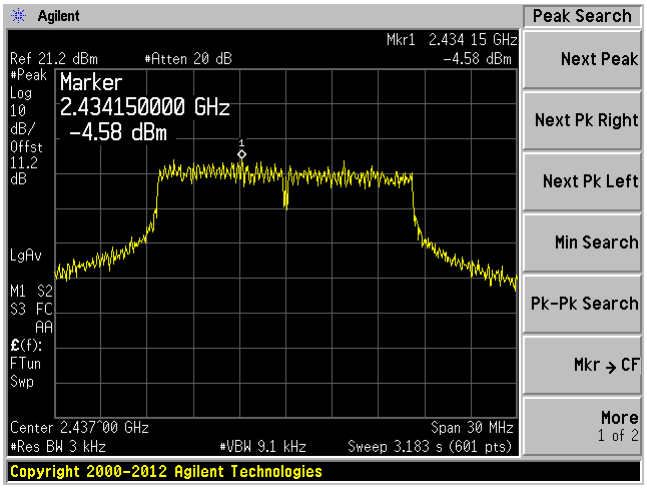
Low channel J1: 2412 MHz



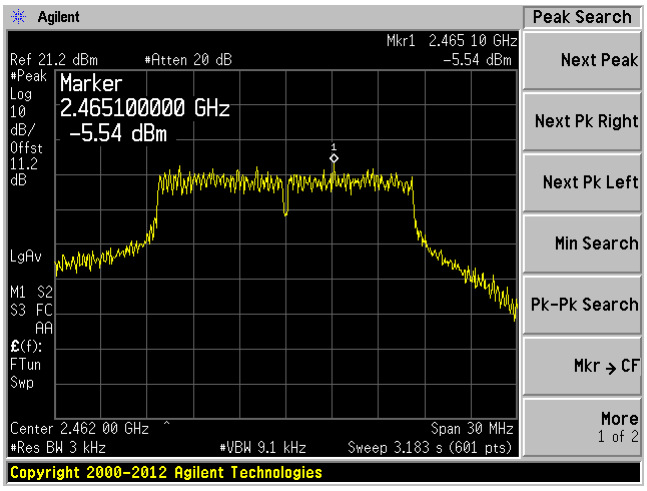
Middle channel J0: 2437 MHz



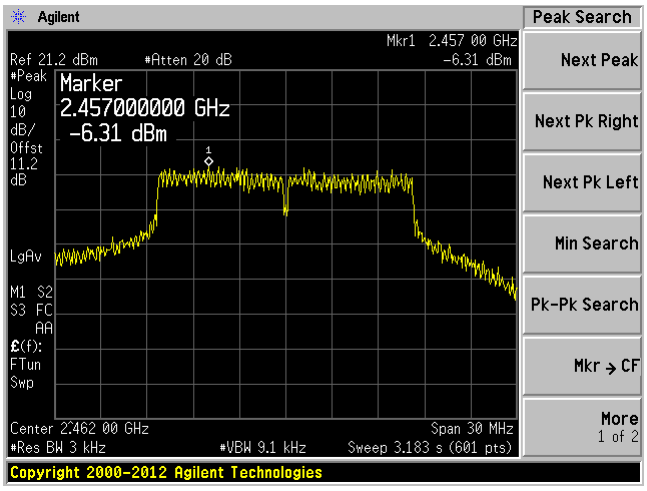
Middle channel J1: 2437 MHz



High channel J0: 2462 MHz

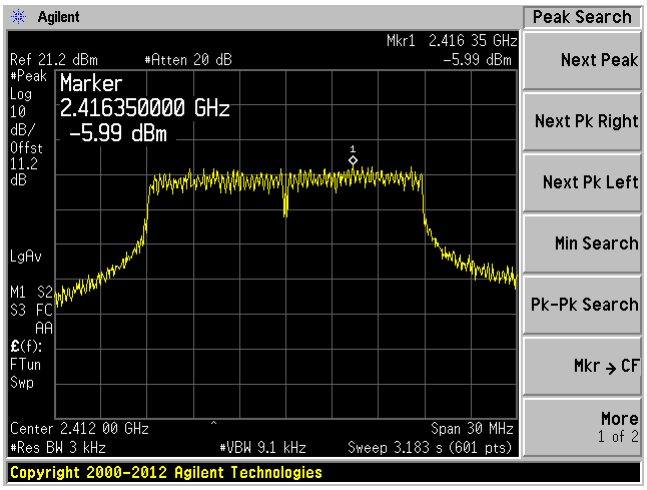


High channel J1: 2462 MHz

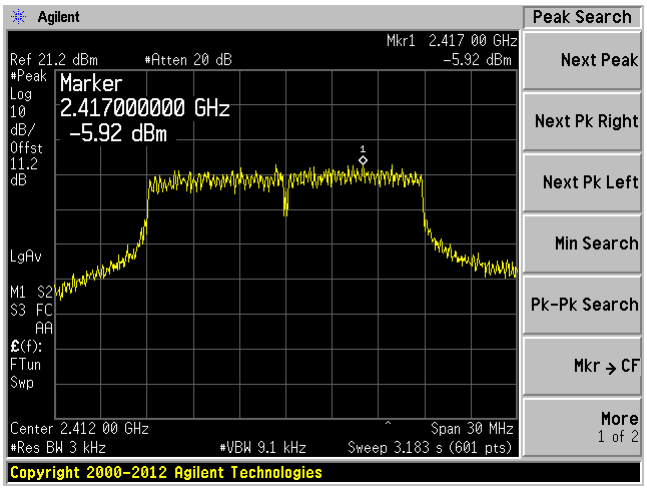


802.11n-HT20 mode

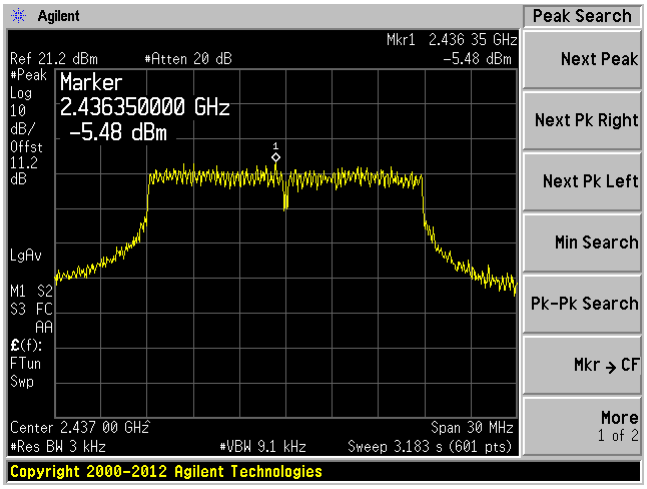
Low channel J0: 2412 MHz



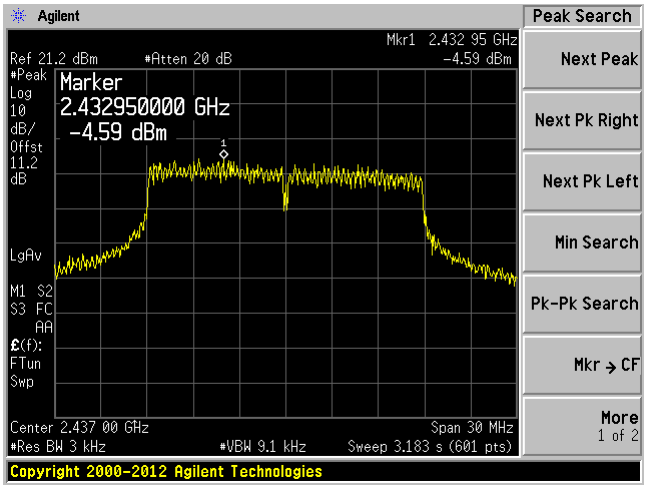
Low channel J1: 2412 MHz



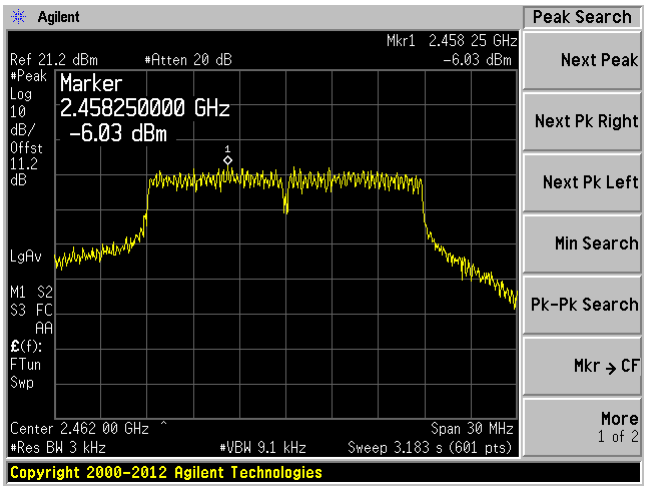
Middle channel J0: 2437 MHz



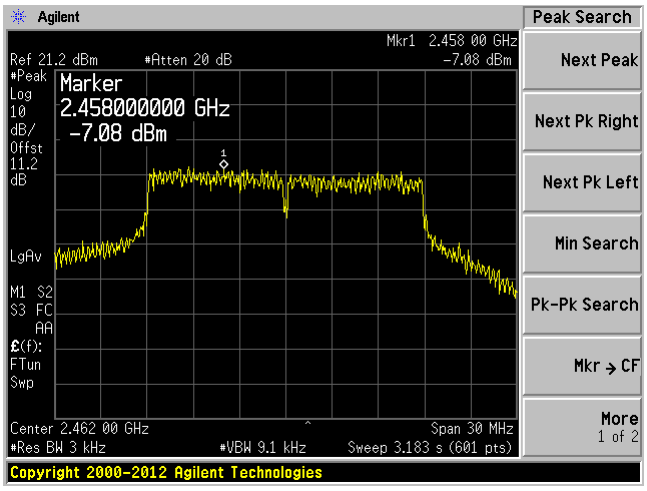
Middle channel J1: 2437 MHz



High channel J0: 2462 MHz

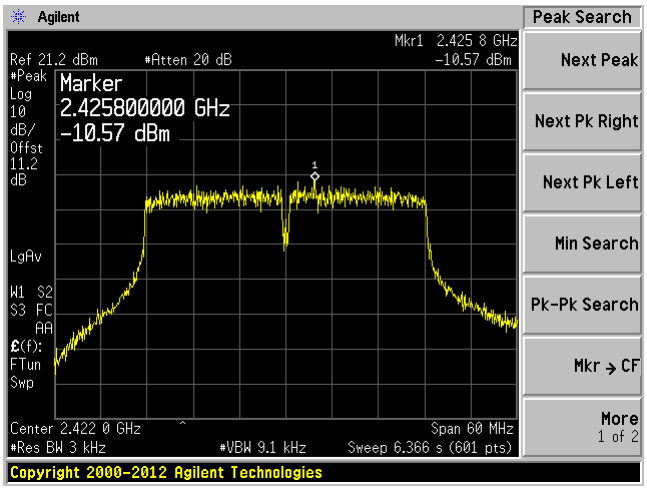


High channel J1: 2462 MHz

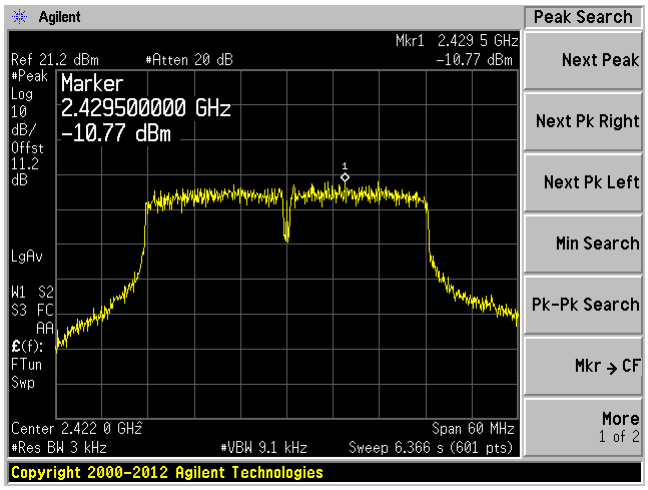


802.11n-HT40 mode

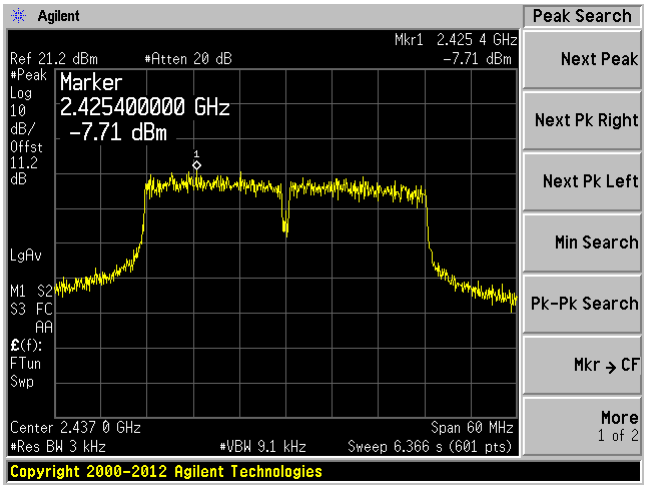
Low channel J0: 2422 MHz



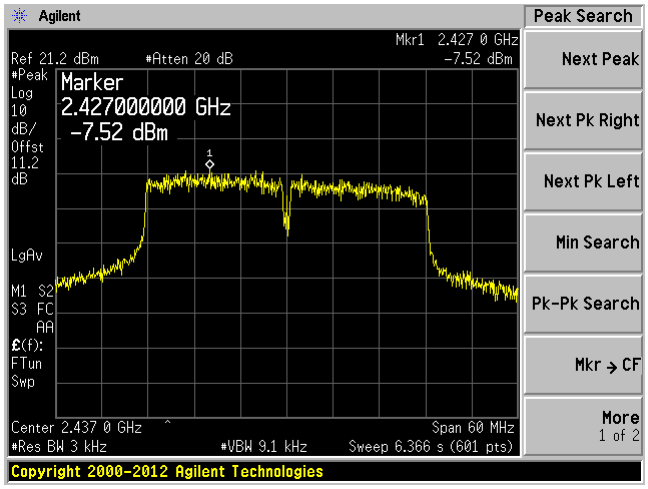
Low channel J1: 2422 MHz



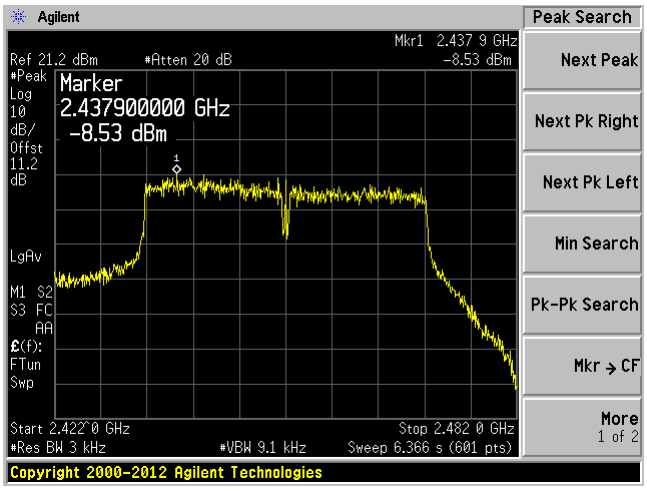
Middle channel J0: 2437 MHz



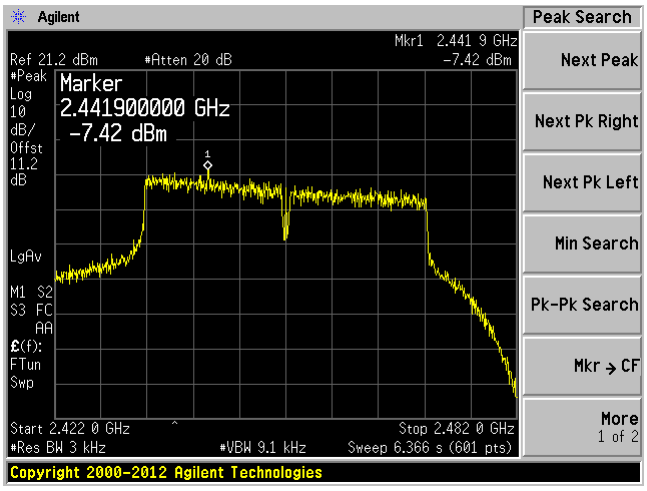
Middle channel J1: 2437 MHz



High channel J0: 2452 MHz



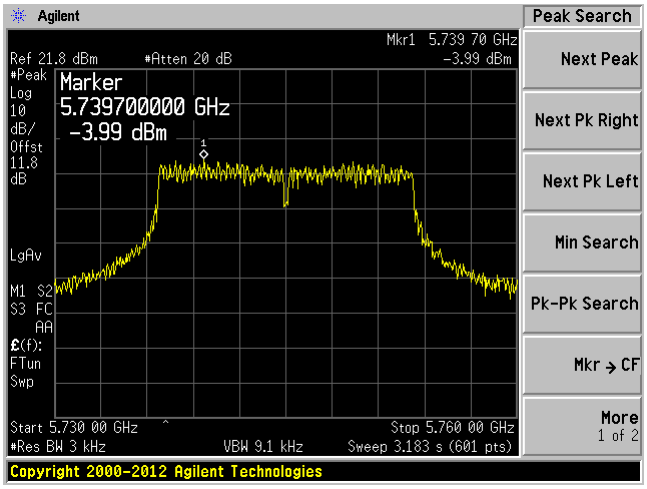
High channel J1: 2452 MHz



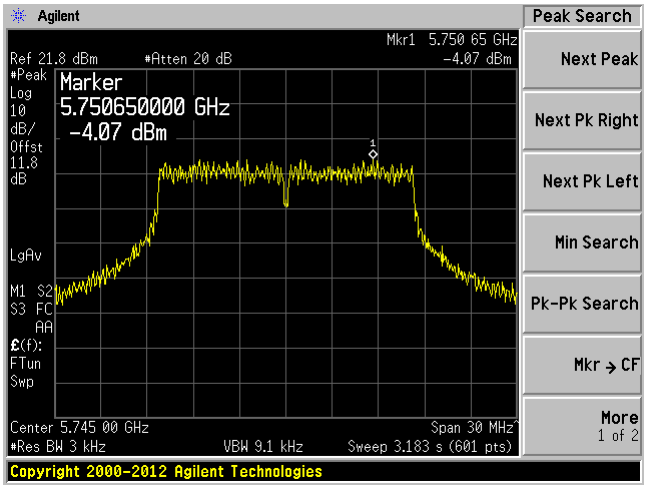
5.8 GHz Band

802.11a mode

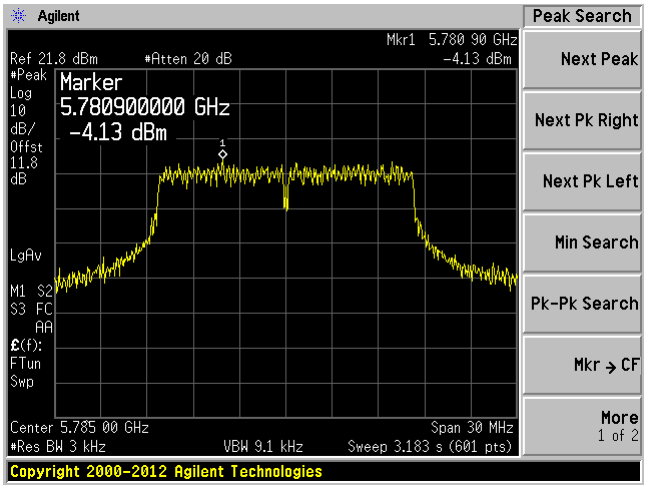
Low channel J0: 5745 MHz



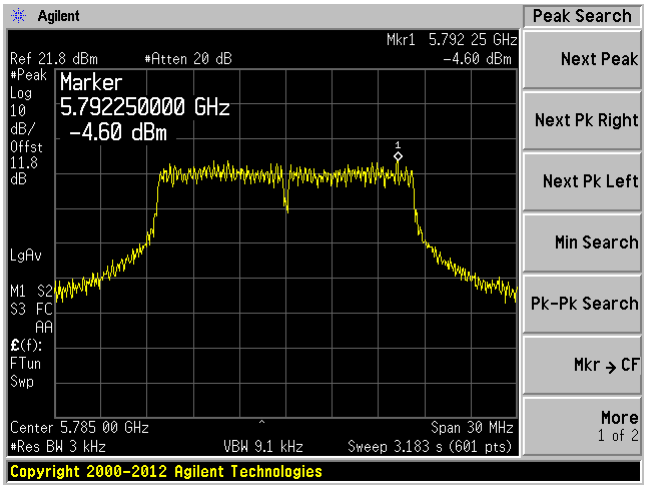
Low channel J1: 5745 MHz



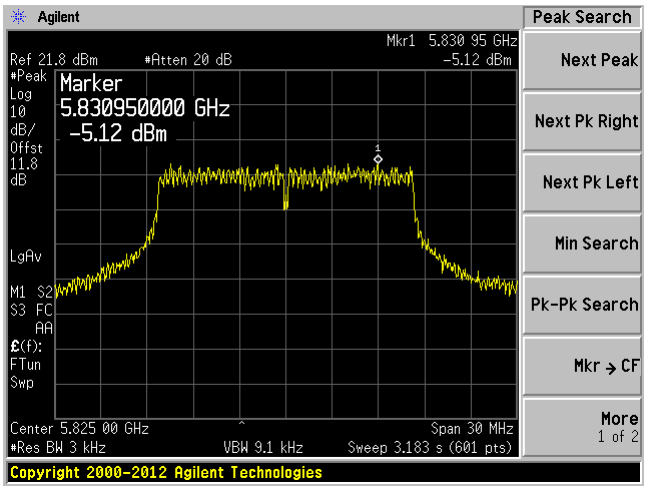
Middle channel J0: 5785 MHz



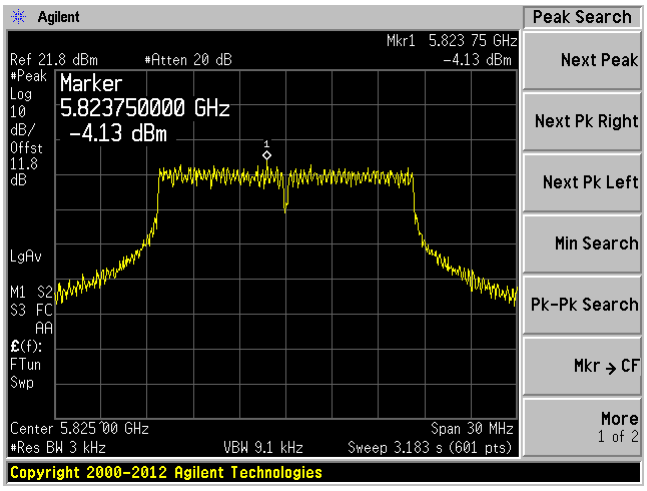
Middle channel J1: 5785 MHz



High channel J0: 5825 MHz

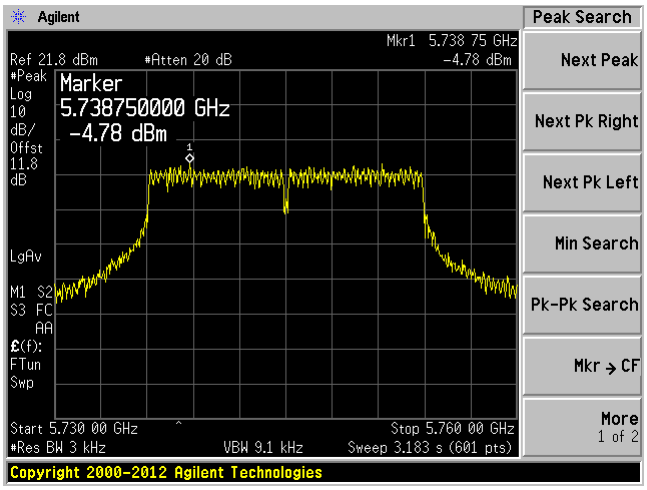


High channel J1: 5825 MHz

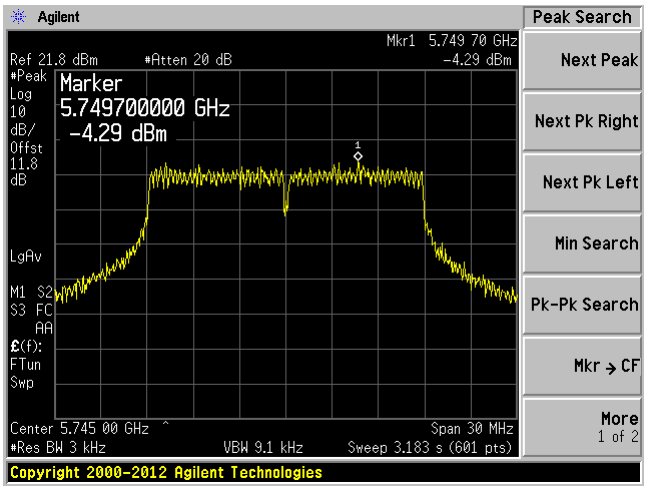


802.11n-HT20 mode

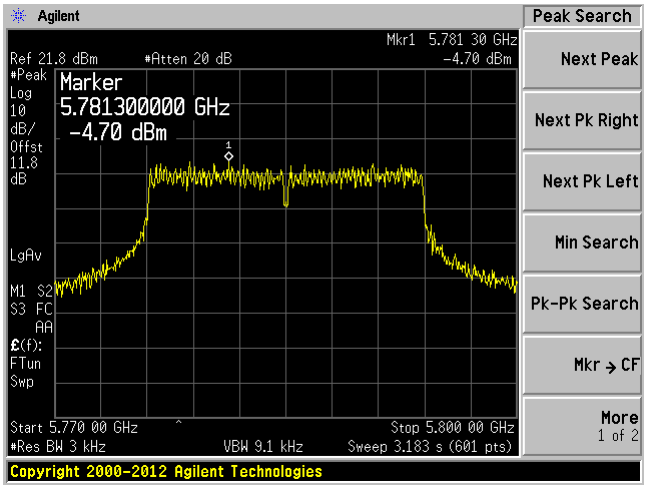
Low channel J0: 5745 MHz



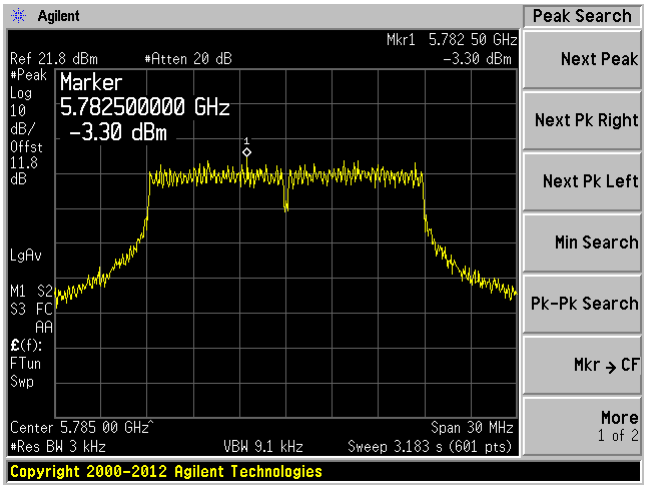
Low channel J1: 5745 MHz



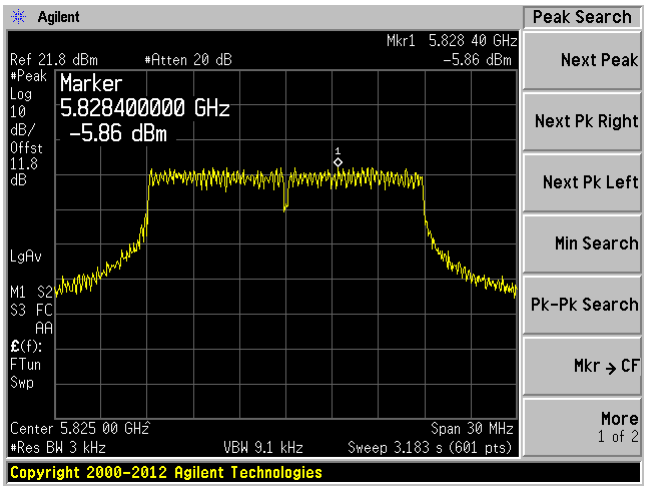
Middle channel J0: 5785 MHz



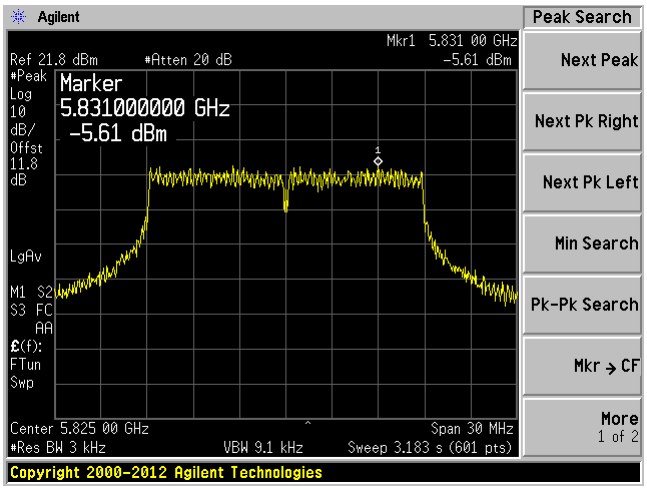
Middle channel J1: 5785 MHz



High channel J0: 5825 MHz

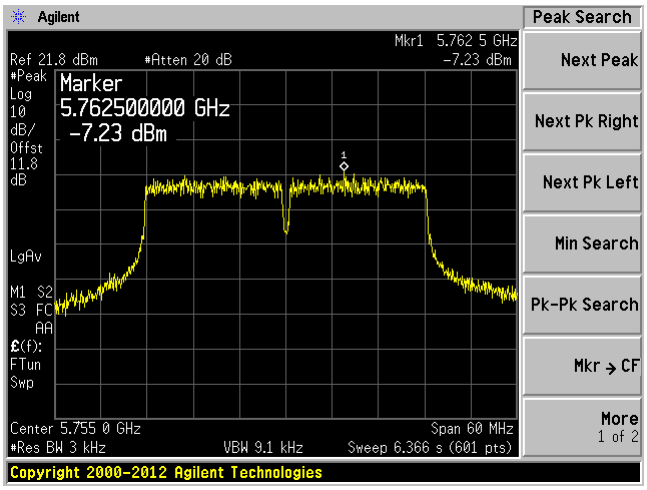


High channel J1: 5825 MHz

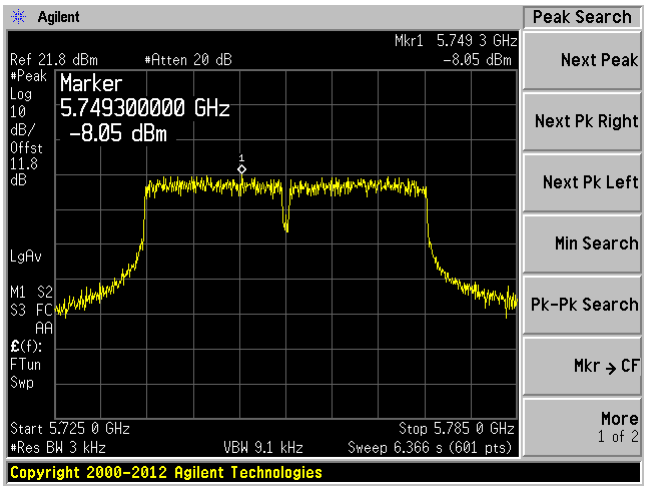


802.11n-HT40 mode

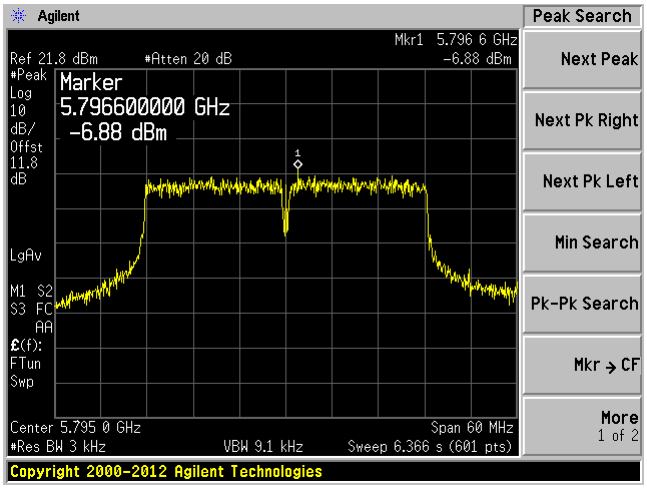
Low channel J0: 5755 MHz



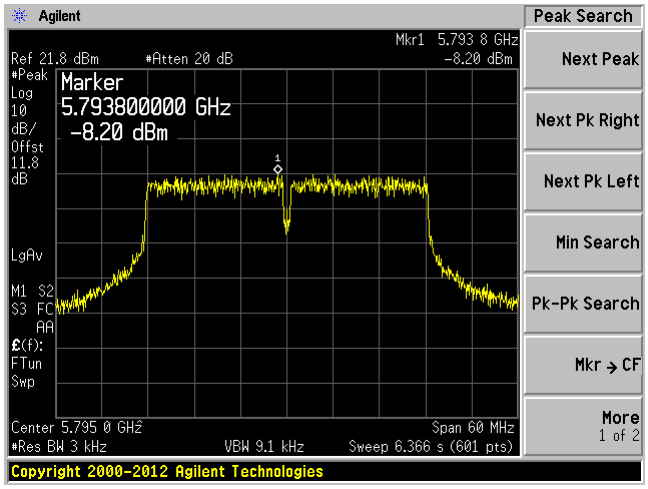
Low channel J1: 5755 MHz



High channel J0: 5795 MHz

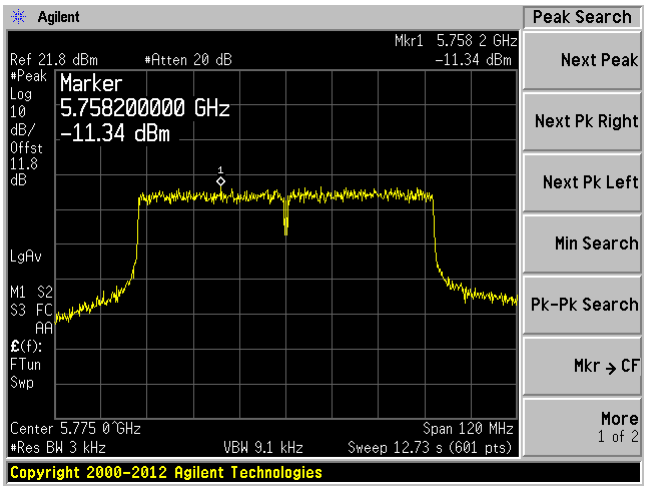


High channel J1: 5795 MHz

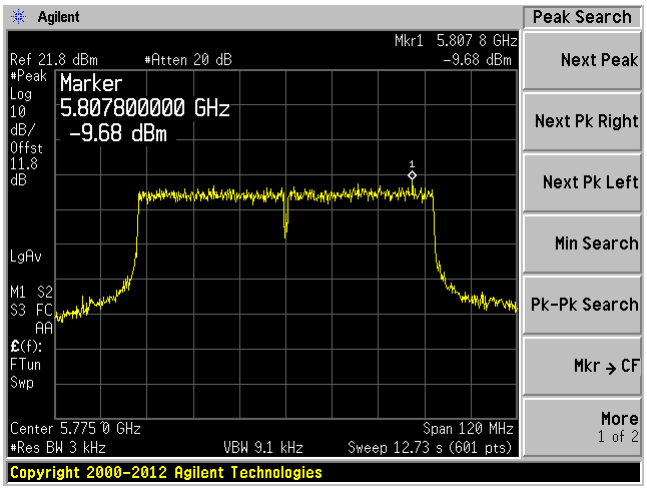


802.11ac-80 mode

Middle channel J0: 5775 MHz



Middle channel J1: 5775 MHz



13 IC RSS-210 §2.3 & RSS-Gen §4.10 – Receiver Spurious Radiated Emissions

13.1 Applicable Standard

According to IC RSS-Gen §4.10, the receiver shall be operated in the normal receive mode near the mid-point of the band over which the receiver is designed to operate.

Unless otherwise specified in the applicable RSS, the radiated emission measurement is the standard measurement method (with the device's antenna in place) to measure receiver spurious emissions.

Radiated emission measurements are to be performed using a calibrated open-area test site.

For either method, the search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is the higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever is the higher, without exceeding 40 GHz.

For emissions below 1 GHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. As an alternative to CISPR quasi-peak measurement, compliance with the emission limit can be demonstrated using measuring equipment employing a peak detector with the same measurement bandwidth as that for CISPR quasi-peak measurements. Above 1 GHz, measurements shall be performed using an average detector and a resolution bandwidth of 300 kHz to 1 MHz.

According to RSS-Gen §6.1, Tables 2 show the general field strength limits of receiver spurious emissions

Table 2: Radiated Limits of Receiver Spurious Emissions

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

13.2 EUT Setup

The radiated emissions tests were performed in the 3 meter chamber, using the setup in accordance with ANSI C63.4-2009.

13.3 Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations.

All data were recorded in the peak detection mode. Quasi-peak readings was performed only when an emissions was found to be marginal (within -4 dB of specification limits), and are distinguished with a "**QP**" in the data table.

13.4 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

13.5 Test Equipment Lists and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Sunol Science Corp	System Controller	SC99V	122303-1	N/R	N/R
Sunol Science Corp	Combination Antenna	JB3	A020106-3	2013-06-18	1 year
Hewlett Packard	Pre-amplifier	8447D	2944A06639	2013-06-09	1 year
Agilent	Pre-amplifier	8449B	3008A01978	2014-02-04	1 year
Agilent	Spectrum Analyzer	E4446A	US44300386	2013-09-29	1 year
EMCO	Horn Antenna	3315	9511-4627	2013-10-17	1 year
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.5950K03	100337	2014-03-28	1 year

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

13.6 Test Environmental Conditions

Temperature:	22° C
Relative Humidity:	47 %
ATM Pressure:	102.1 kPa

The testing was performed by Chen Ge from 2014-04-17 at 5 meter 3.

13.7 Summary of Test Results

According to the test data, the EUT complied with the RSS-210/RSS-Gen, with the closest margins from the limit listed below:

30 MHz – 1 GHz

2.4 GHz Band:

Mode: Receiving			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Range (MHz)**
-6.87	98.43825	Vertical	30-1000

5.8 GHz Band:

Mode: Receiving			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Range (MHz)**
-11.2	45.223	Vertical	30-1000

1–12.75 GHz

2.4 GHz Band

Mode: Receiving			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Range (MHz)**
-11.892	15806.8	Vertical	1000-12750

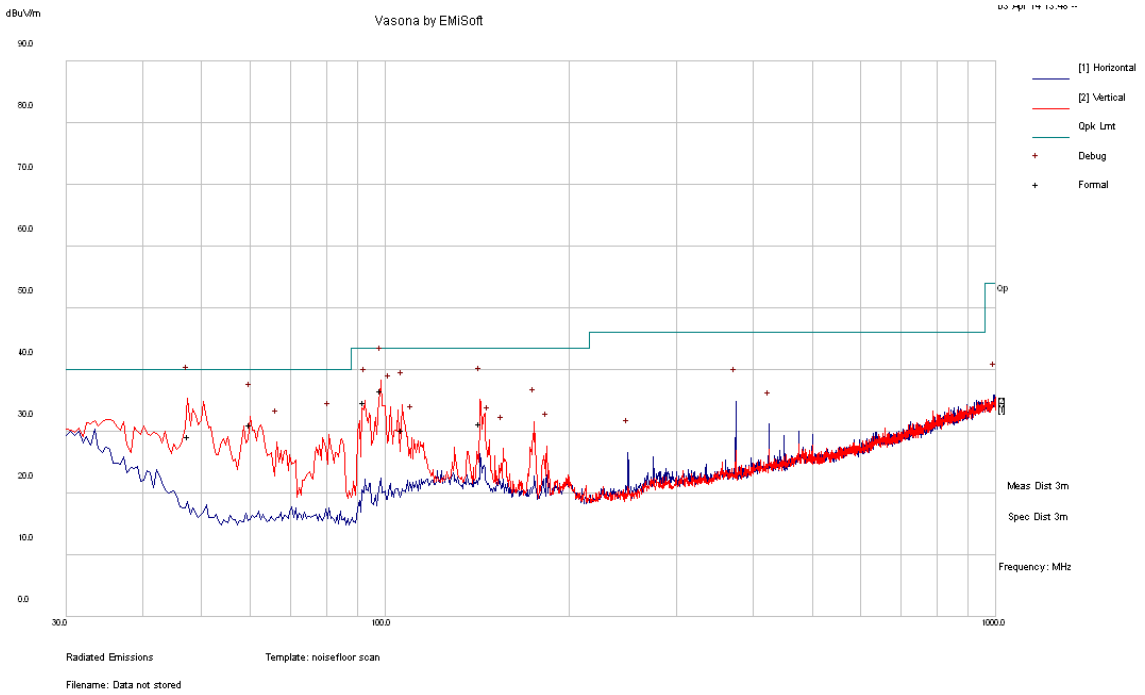
5.8 GHz Band:

Mode: Receiving			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Range (MHz)**
-15.443	8743.5	Horizontal	1000-12750

13.8 Test Results and Plots

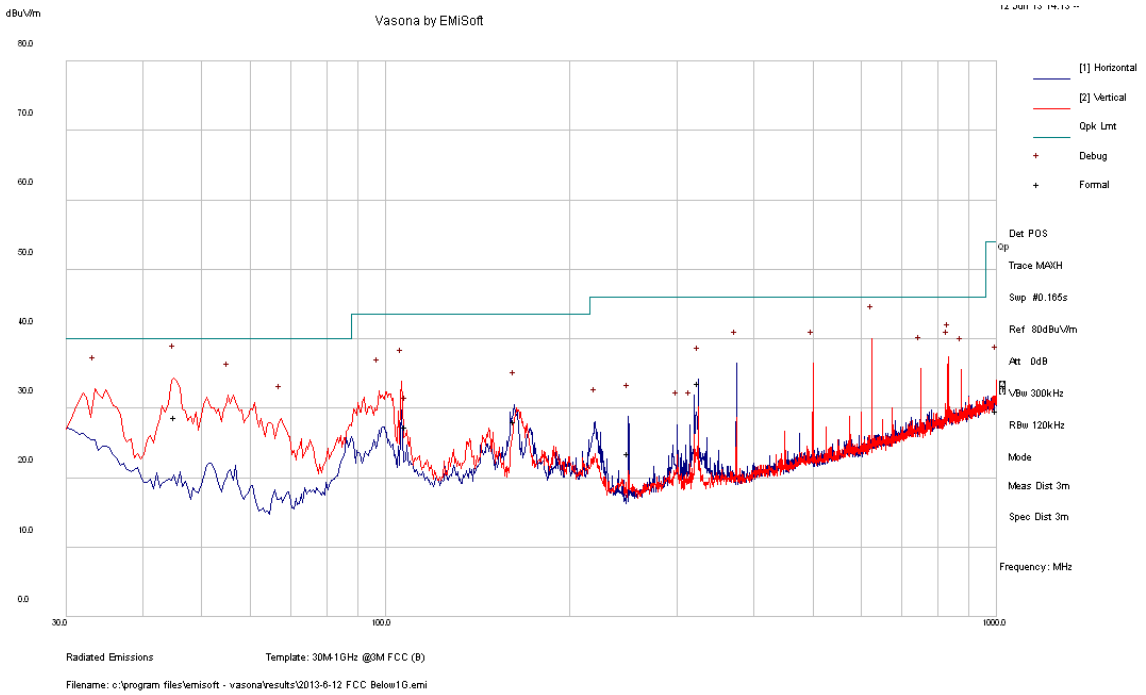
1) 30-1000 MHz, Measured at 3 meters

2.4 GHz Band



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector (QP/Ave.)
47.5615	29.17	129	V	0	40	-10.83	QP
98.43825	36.63	101	V	264	43.5	-6.87	QP
60.208	31.18	109	V	67	40	-8.82	QP
143.2545	31.37	104	V	168	43.5	-12.13	QP
92.3895	34.82	103	V	187	43.5	-8.68	QP

5.8 GHz Band



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Detector (QP/Ave.)
45.223	28.8	113	V	76	40	-11.2	QP
325.0035	33.69	110	H	41	46	-12.31	QP
162.52275	28.09	168	H	106	43.5	-15.41	QP
108.01225	27.38	100	V	260	43.5	-16.12	QP
249.95175	23.58	102	H	305	46	-22.42	QP
999.954	29.72	104	V	0	54	-24.28	QP

2) Above 1 GHz Measured at 3 meters

2.4 GHz Band

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
1187.6	39.101	100	V	0	74	-34.899	Peak
1187.6	38.505	100	H	0	74	-35.495	Peak
1187.6	24.081	100	V	0	54	-29.919	Ave
1187.6	24.145	100	H	0	54	-29.855	Ave
9241.2	53.797	100	V	0	74	-20.203	Peak
9241.2	54.897	100	H	0	74	-19.103	Peak
9241.2	38.857	100	V	0	54	-15.143	Ave
9241.2	39.737	100	H	0	54	-14.263	Ave
15806.8	56.938	100	V	0	74	-17.062	Peak
15806.8	56.853	100	H	0	74	-17.147	Peak
15806.8	42.108	100	V	0	54	-11.892	Ave
15806.8	41.723	100	H	0	54	-12.277	Ave

5.8 GHz Band

Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
1293.6	38.331	100	V	0	74	-35.669	Peak
1293.6	37.955	100	H	0	74	-36.045	Peak
1293.6	22.521	100	V	0	54	-31.479	Ave
1293.6	21.675	100	H	0	54	-32.325	Ave
8743.5	52.167	100	V	0	74	-21.833	Peak
8743.5	53.297	100	H	0	74	-20.703	Peak
8743.5	37.927	100	V	0	54	-16.073	Ave
8743.5	38.557	100	H	0	54	-15.443	Ave