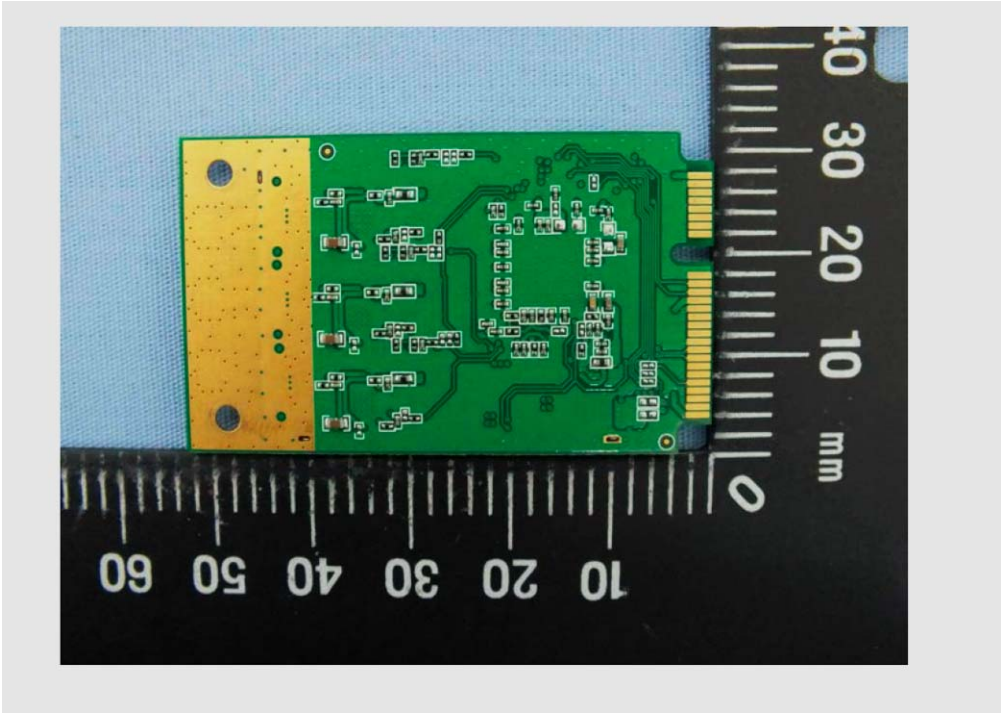
15 Exhibit B - EUT Photos

15.1 EUT - Front View

15.2 EUT – Bottom View

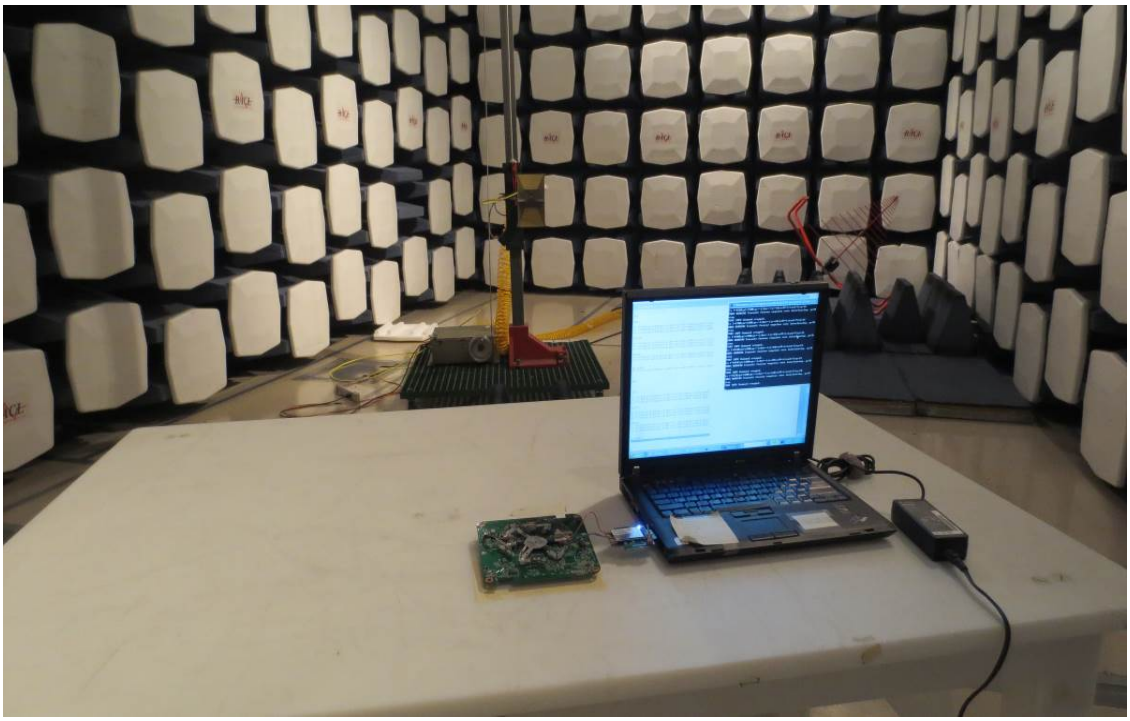


14.5 AC Line Conducted Emission Front View

14.6 AC Line Conducted Emission Side View

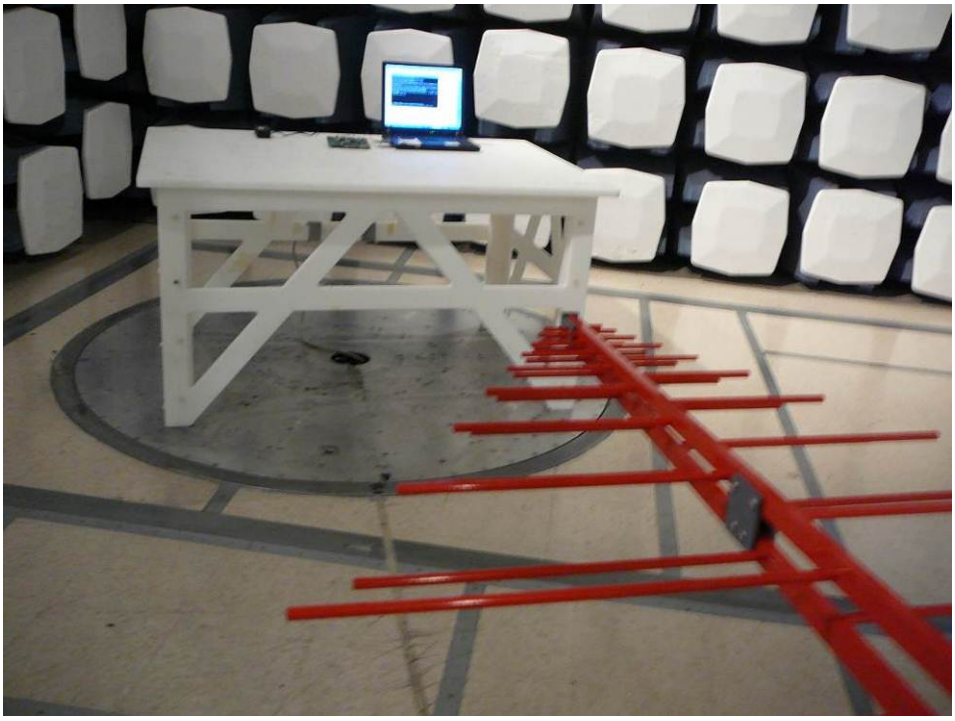
14.3 Radiated Emission above 1 GHz Front View at 3 Meters

14.4 Radiated Emission above 1 GHz Rear View at 3 Meters

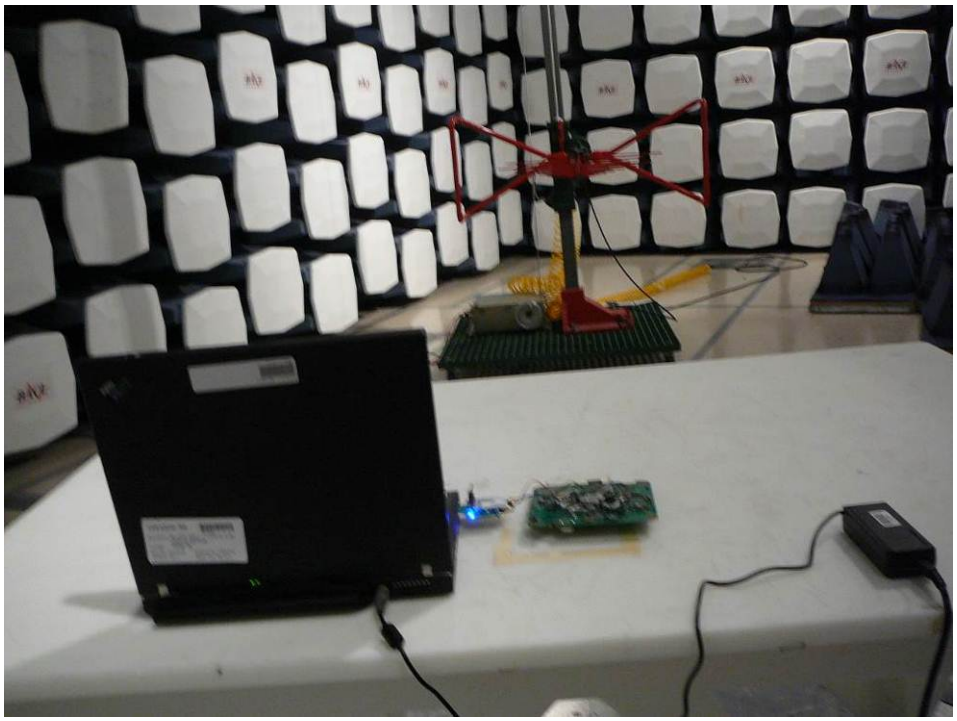


14 Exhibit A - EUT Setup Photographs

14.1 Radiated Emission below 1 GHz Front View at 3 Meters

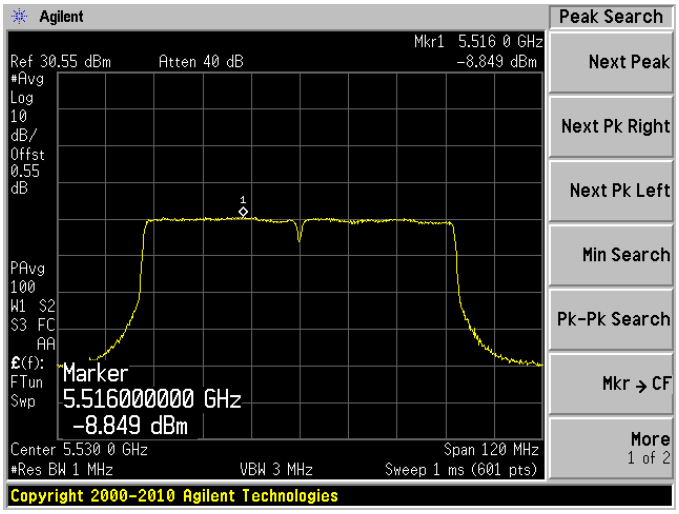


14.2 Radiated Emission below 1 GHz Rear View at 3 Meters

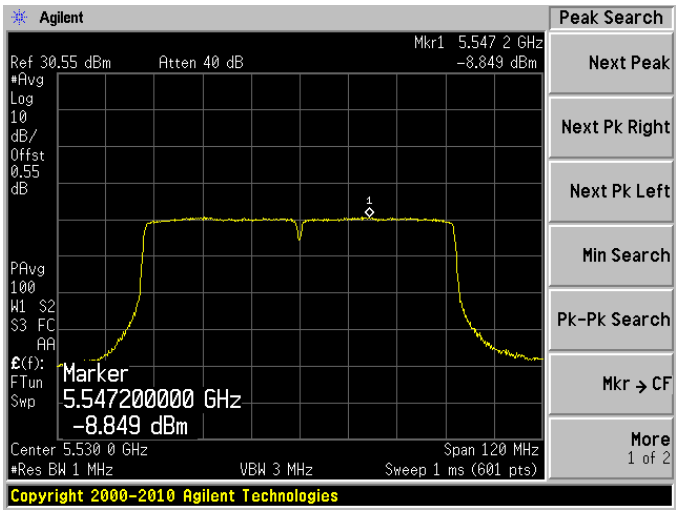


802.11ac-VHT80, 5530 MHz

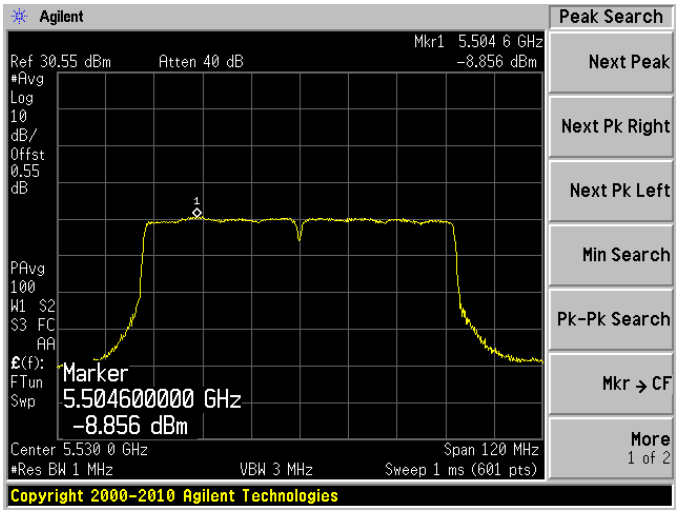
Chain 0



Chain 1

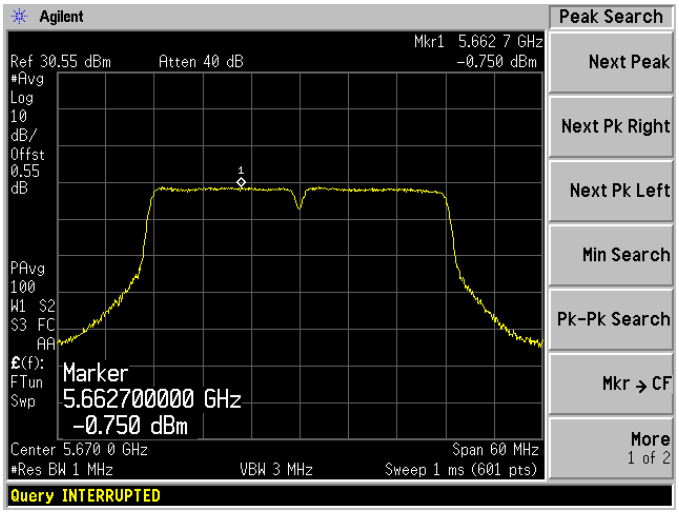


Chain 2

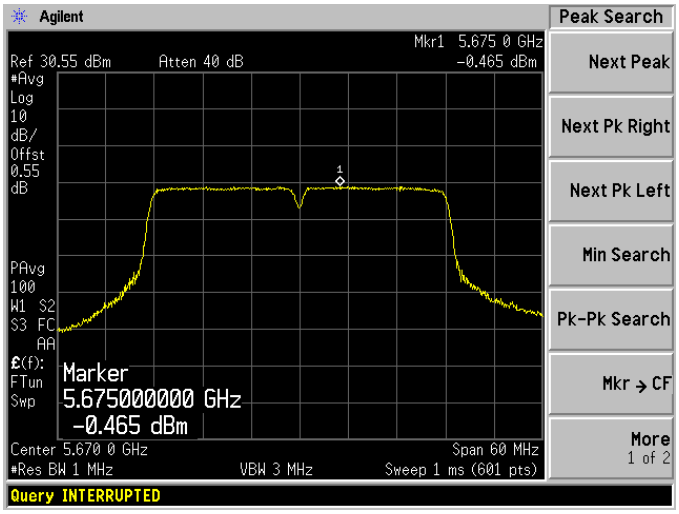


802.11n-HT40, High Channel 5670 MHz

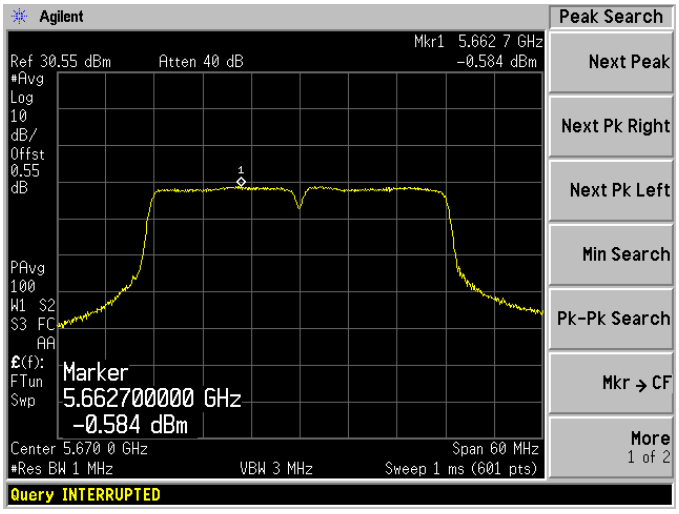
Chain 0



Chain 1

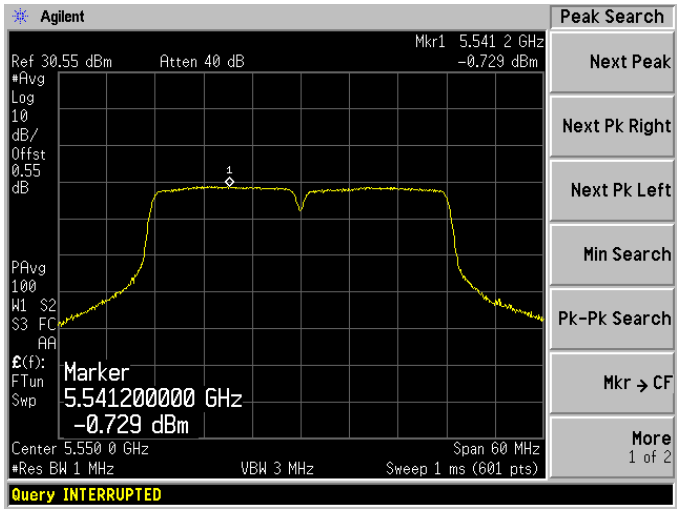


Chain 2

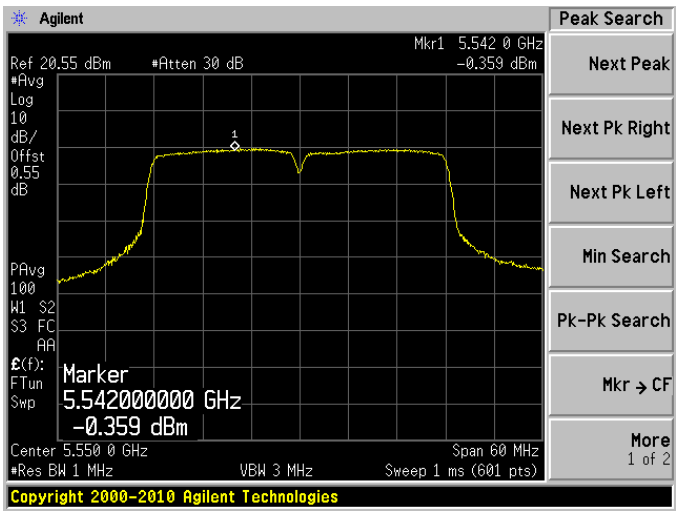


802.11n-HT40, Middle Channel 5550 MHz

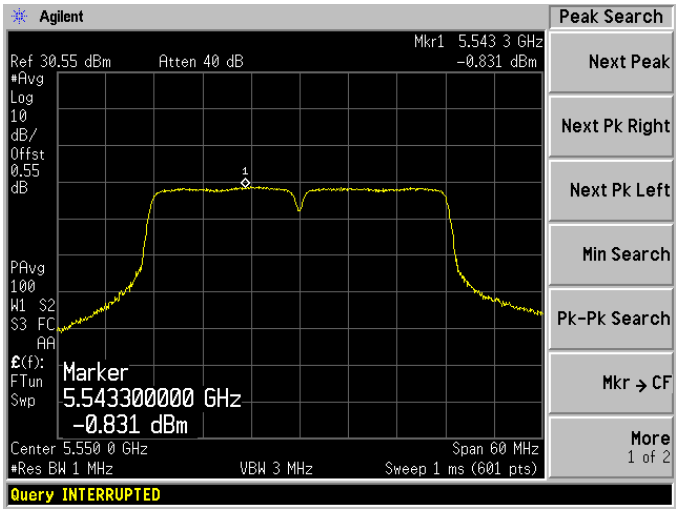
Chain 0



Chain 1

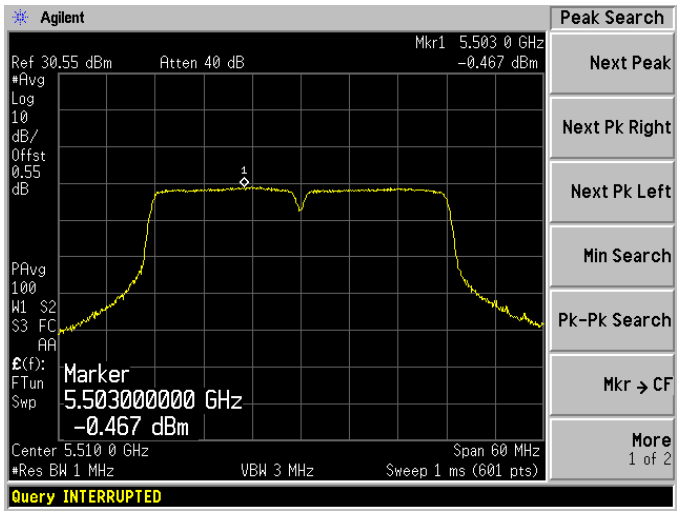


Chain 2

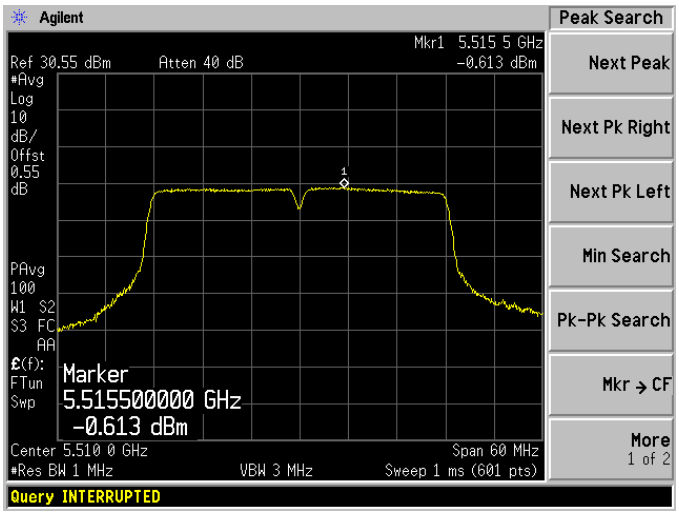


802.11n-HT40, Low Channel 5510 MHz

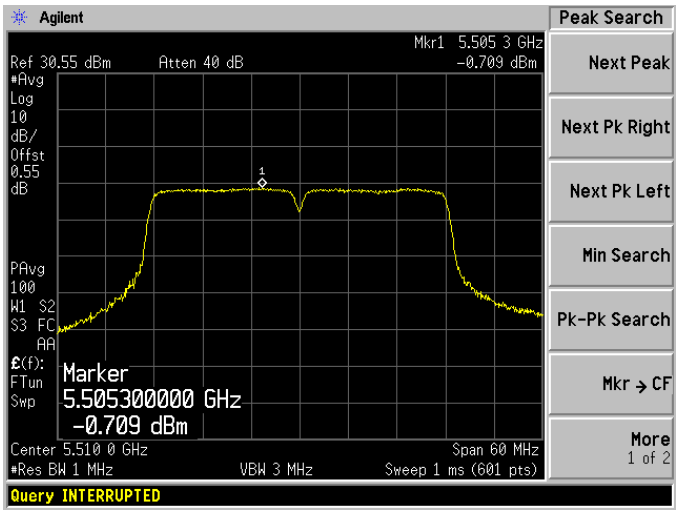
Chain 0



Chain 1

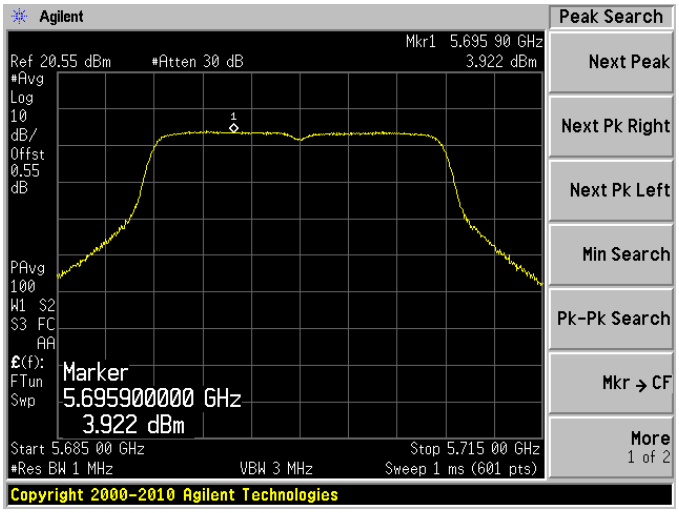


Chain 2

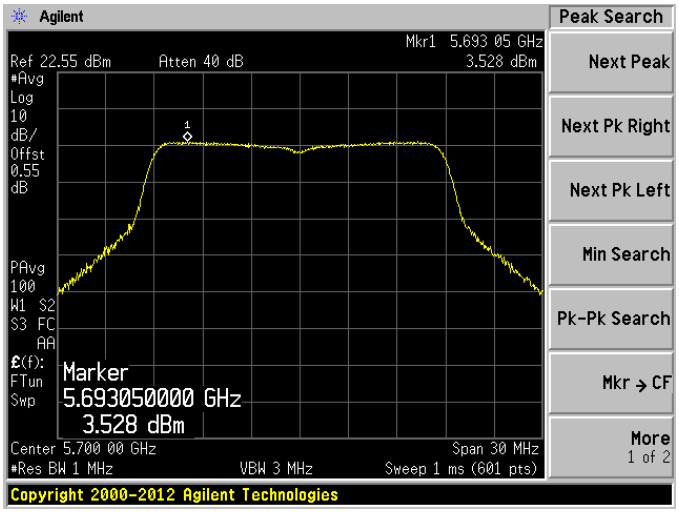


802.11n-HT20, High Channel 5700 MHz

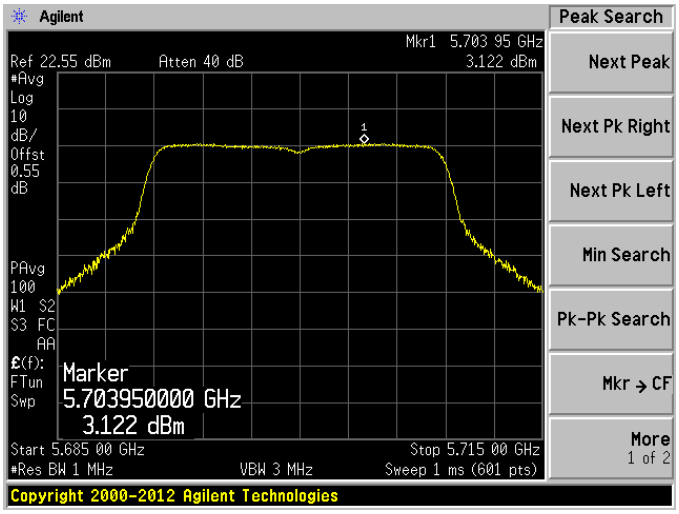
Chain 0



Chain 1

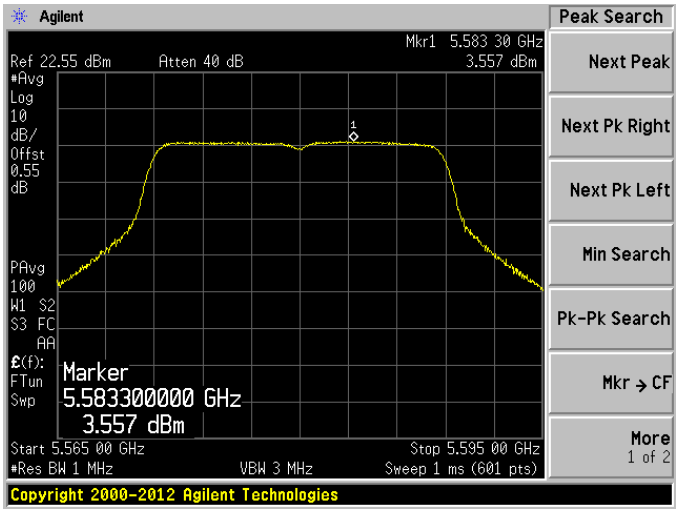


Chain 2

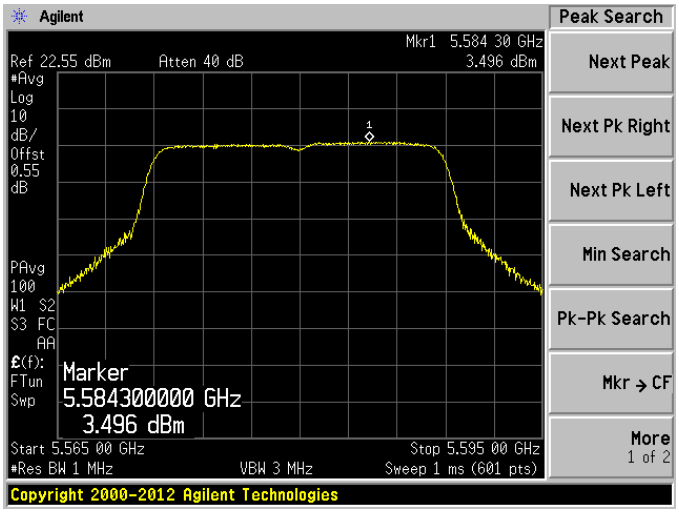


802.11n-HT20, Middle Channel 5580 MHz

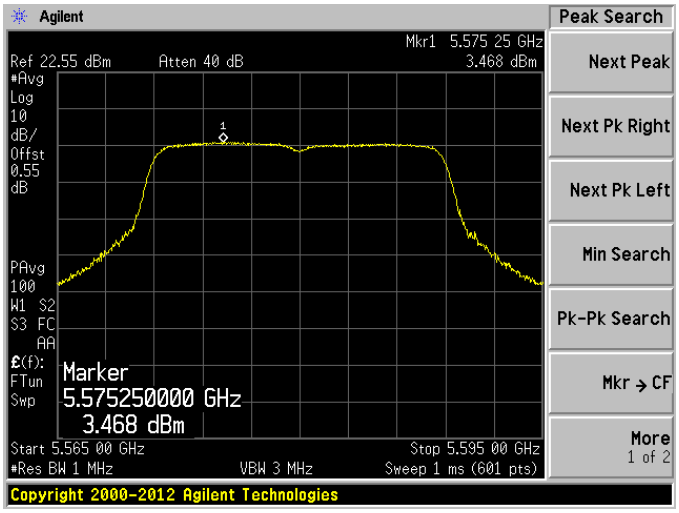
Chain 0



Chain 1

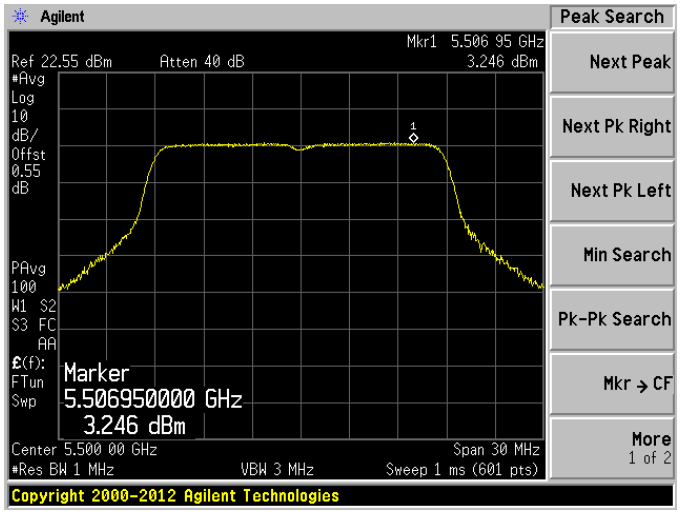


Chain 2

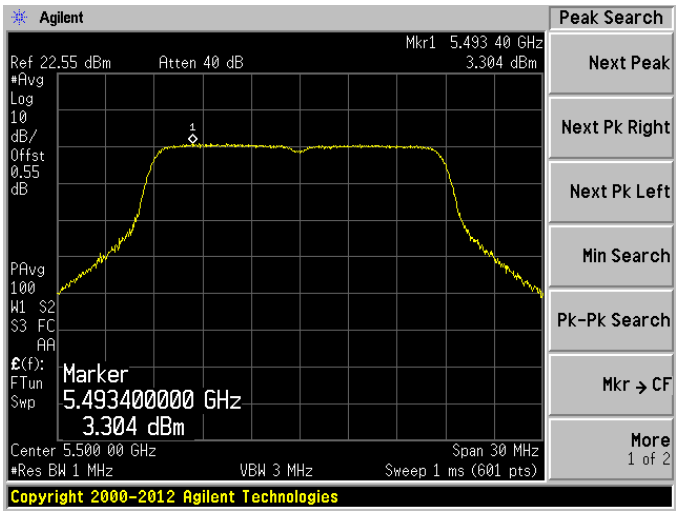


802.11n-HT 20, Low Channel 5500 MHz

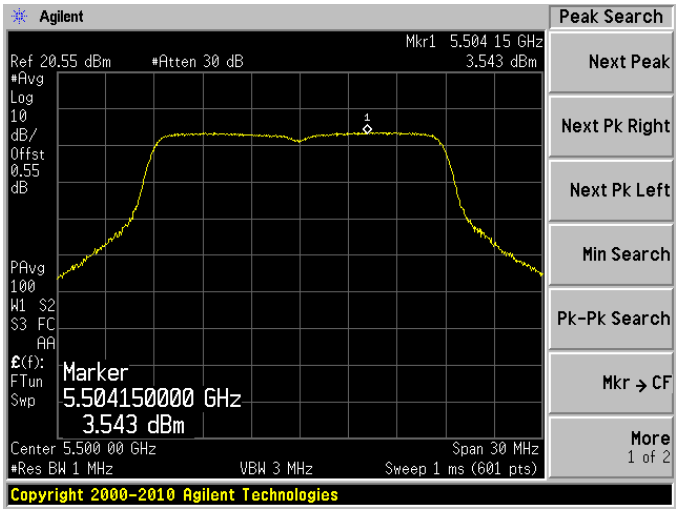
Chain 0



Chain 1

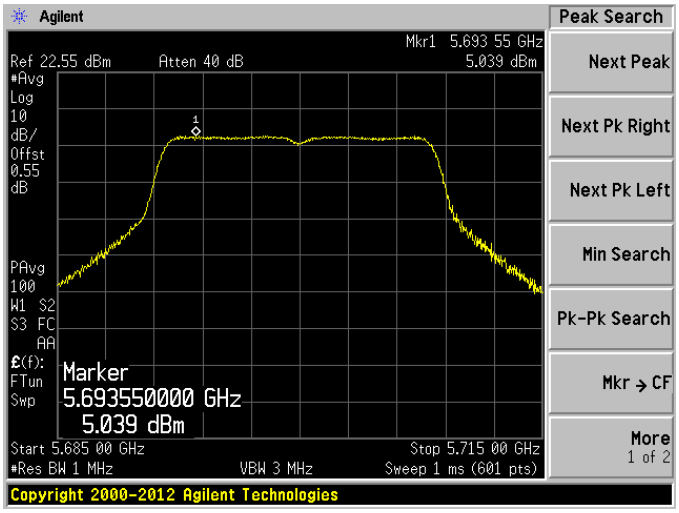


Chain 2

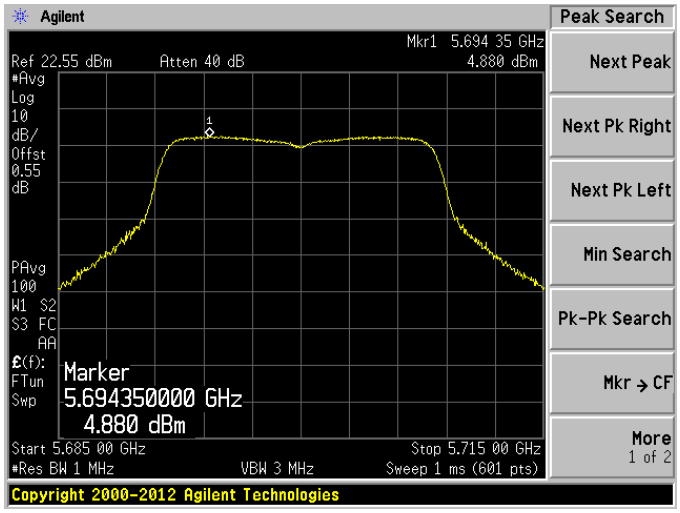


802.11a, High Channel, 5700 MHz

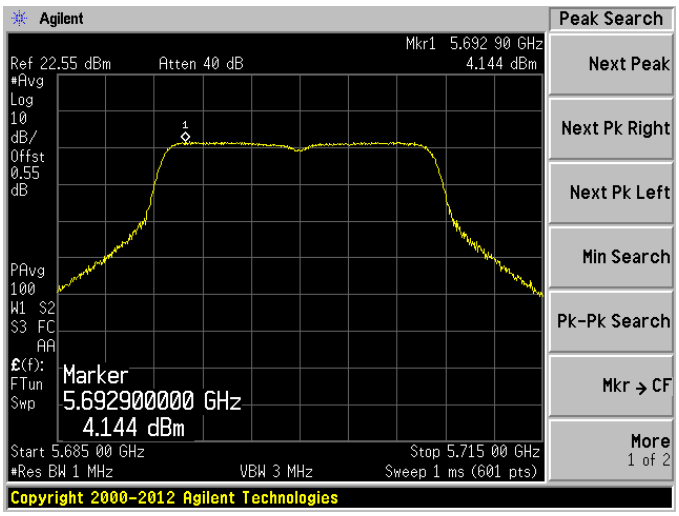
Chain 0



Chain 1

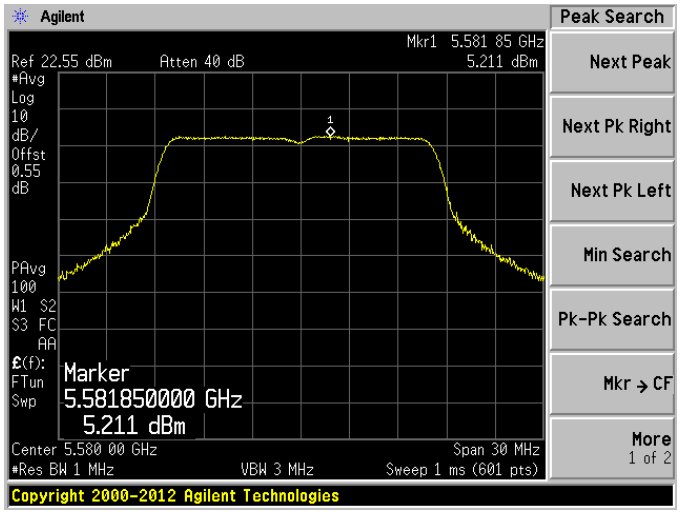


Chain 2

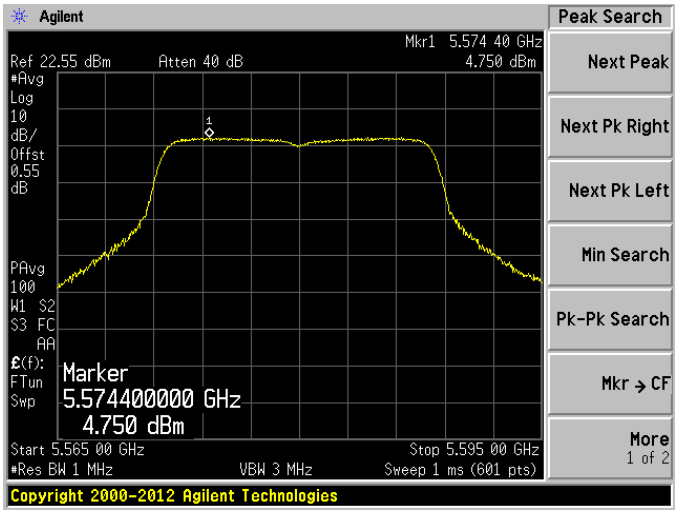


802.11a, Middle Channel, 5580 MHz

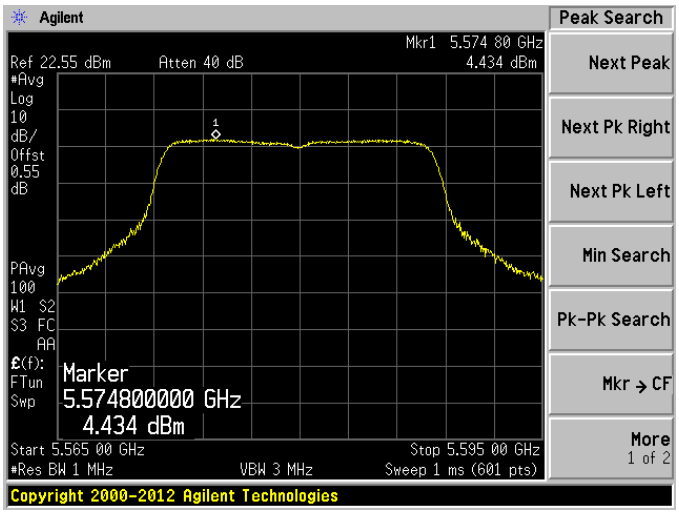
Chain 0



Chain 1



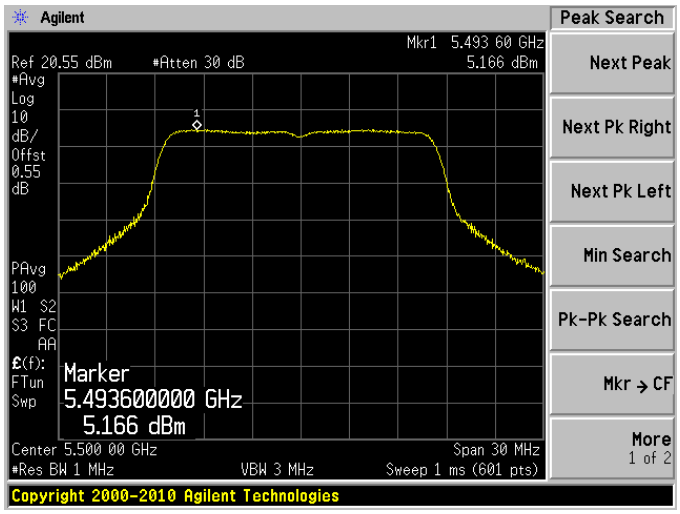
Chain 2



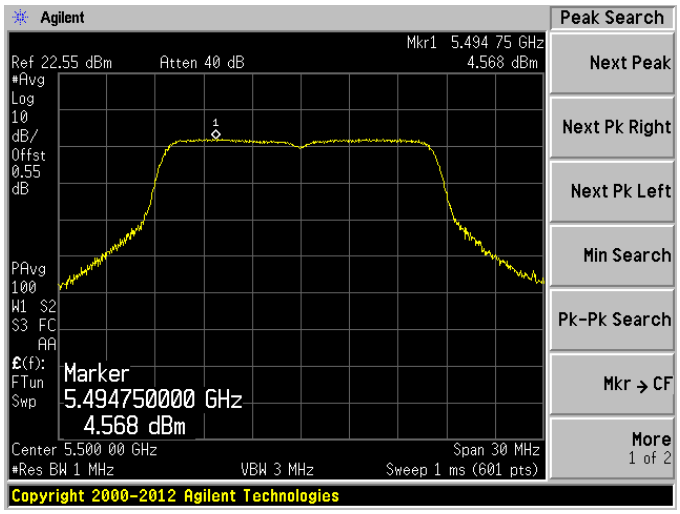
5.6 GHz Band

802.11a, Low Channel, 5500 MHz

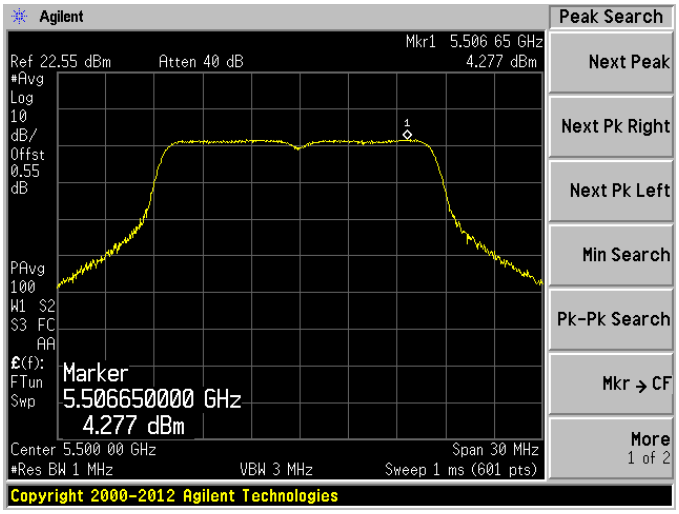
Chain 0



Chain 1

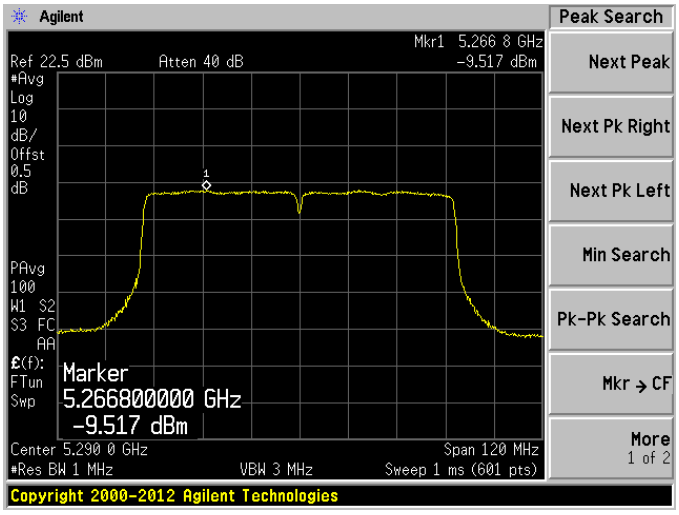


Chain 2

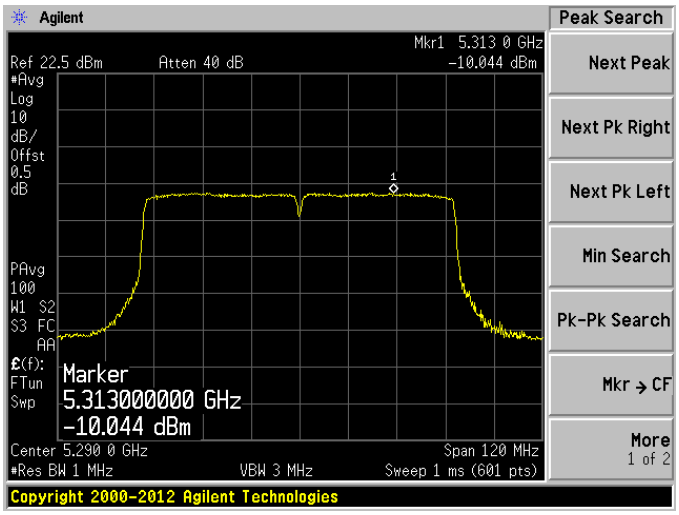


802.11ac-VHT80, High Channel 5290 MHz

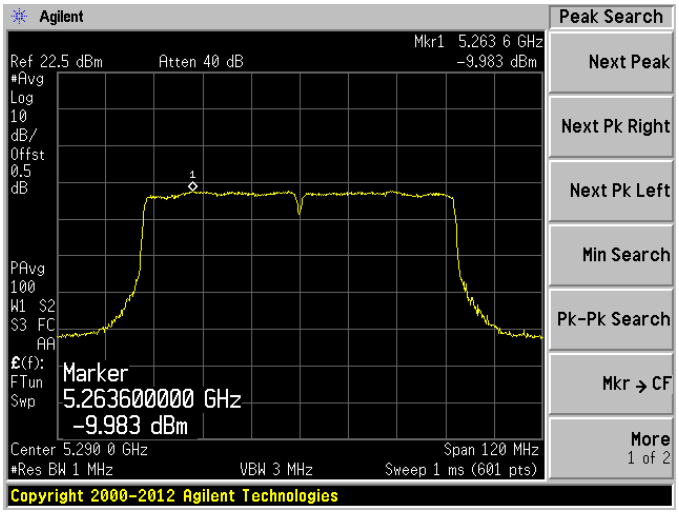
Chain 0



Chain 1

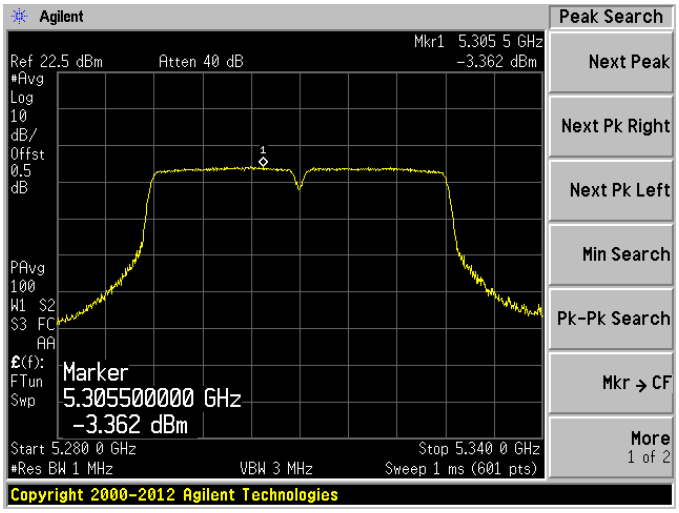


Chain 2

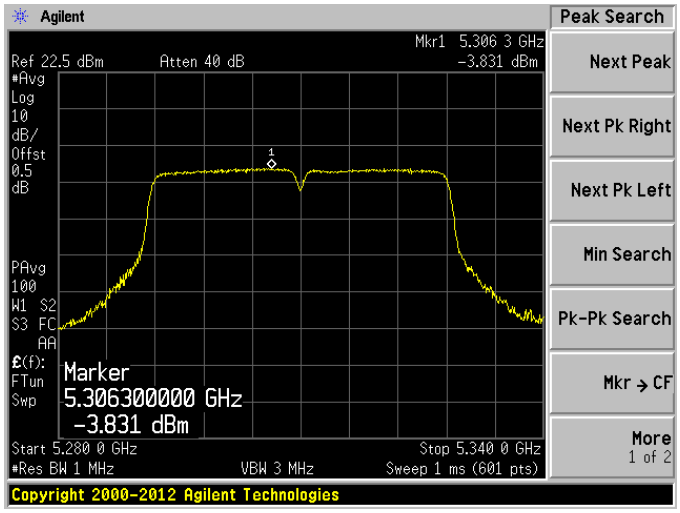


802.11n-HT40, High Channel 5310 MHz

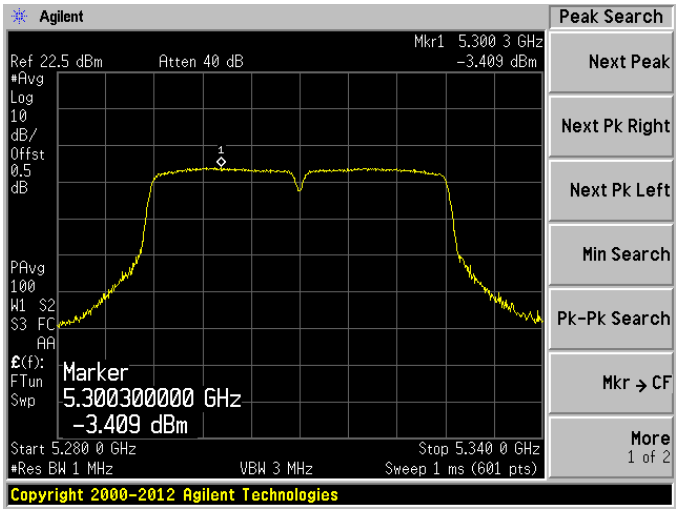
Chain 0



Chain 1

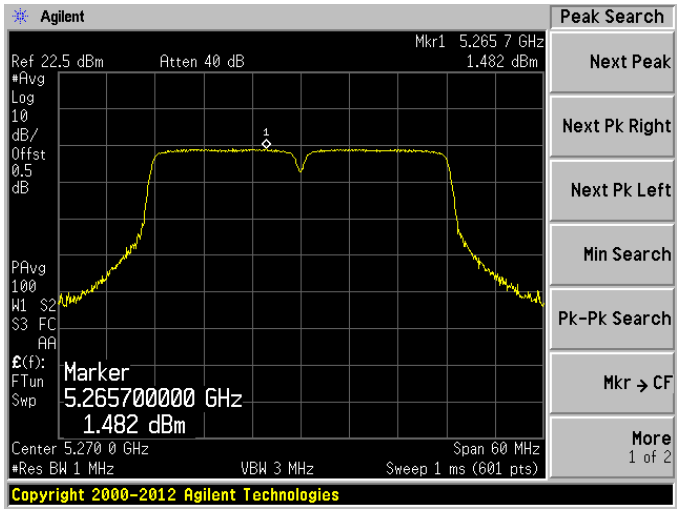


Chain 2

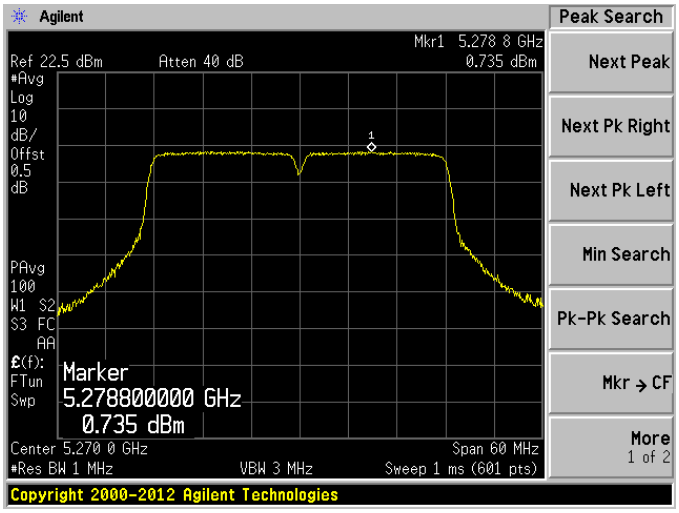


802.11n-HT40, Low Channel 5270 MHz

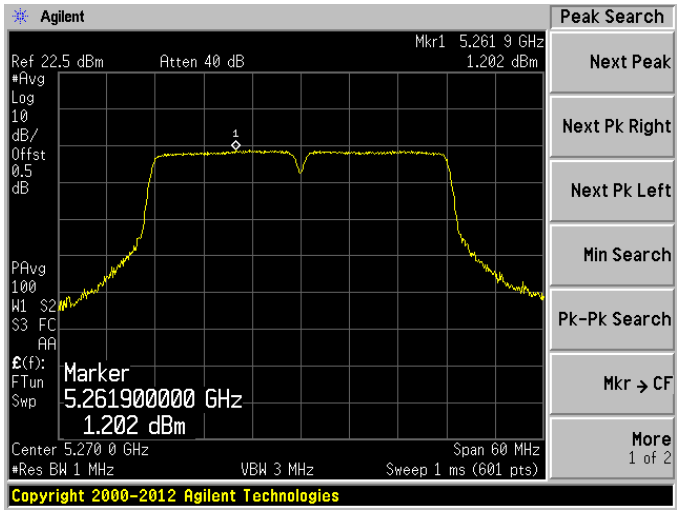
Chain 0



Chain 1

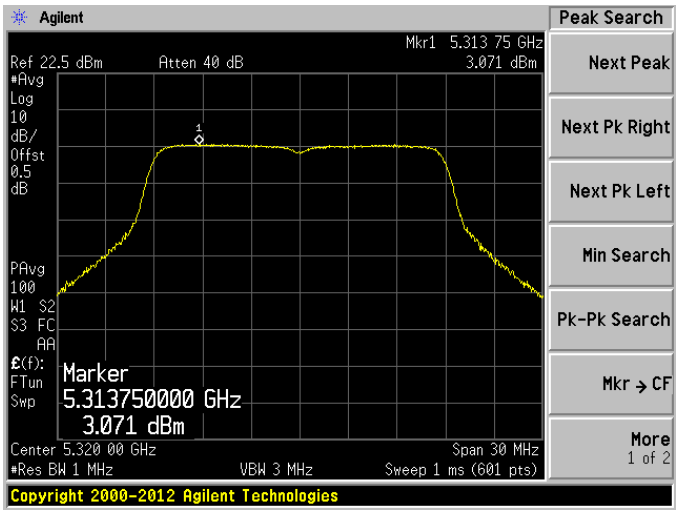


Chain 2

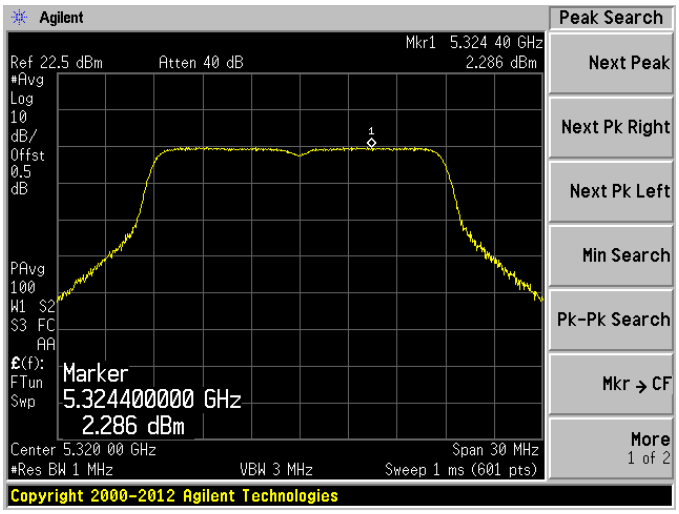


802.11n-HT20, High Channel, 5320 MHz

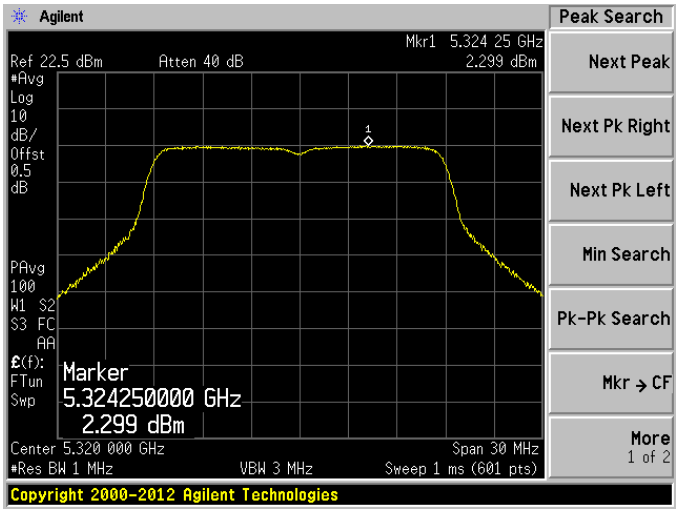
Chain 0



Chain 1

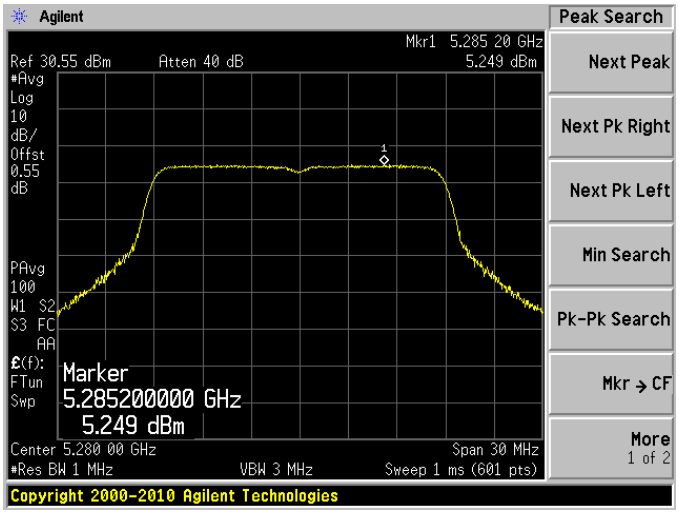


Chain 2

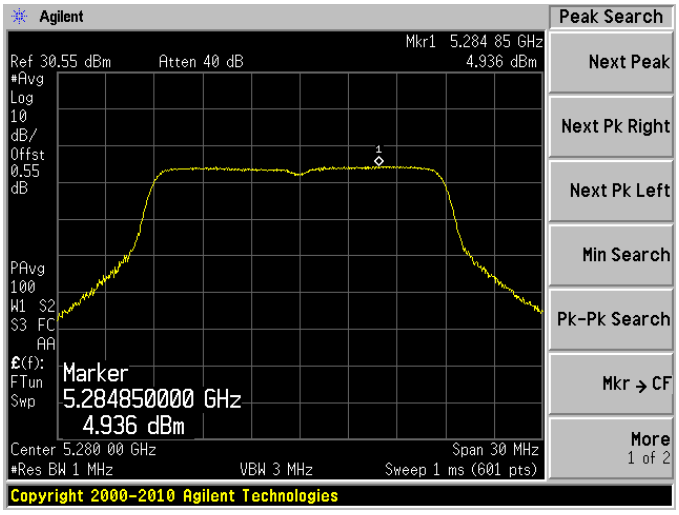


802.11n-HT20, Middle Channel 5280 MHz

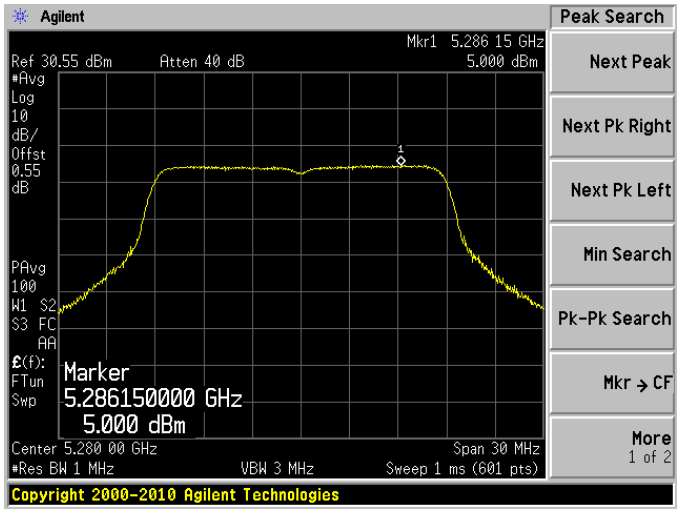
Chain 0



Chain 1

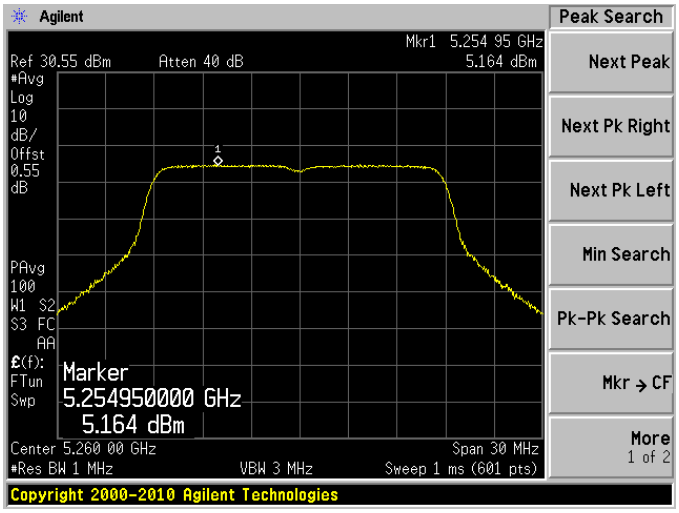


Chain 2

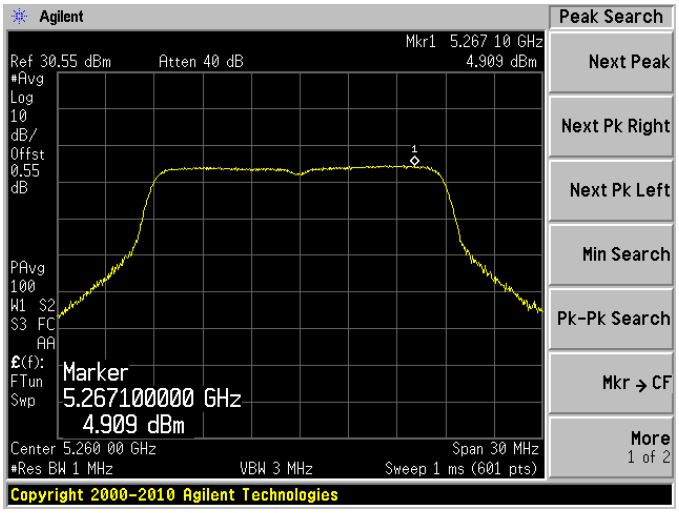


802.11n-HT20, Low Channel 5260 MHz

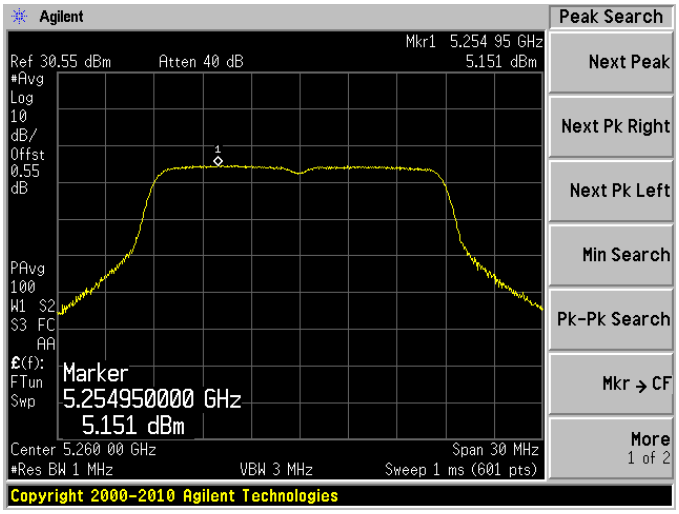
Chain 0



Chain 1

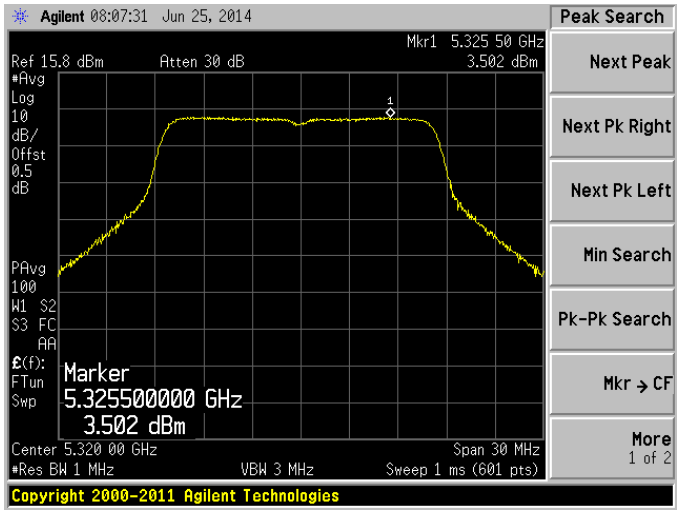


Chain 2

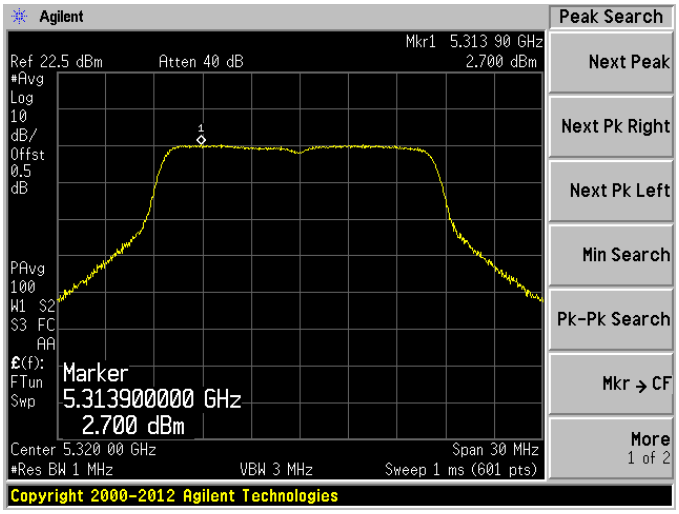


802.11a, High Channel, 5320 MHz

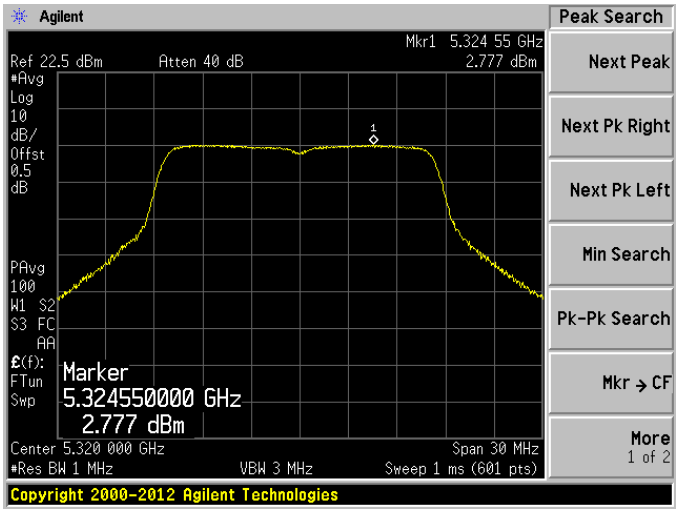
Chain 0



Chain 1

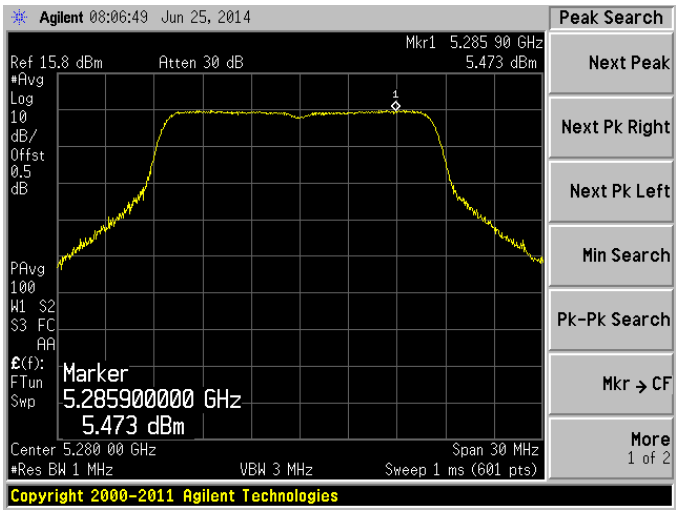


Chain 2

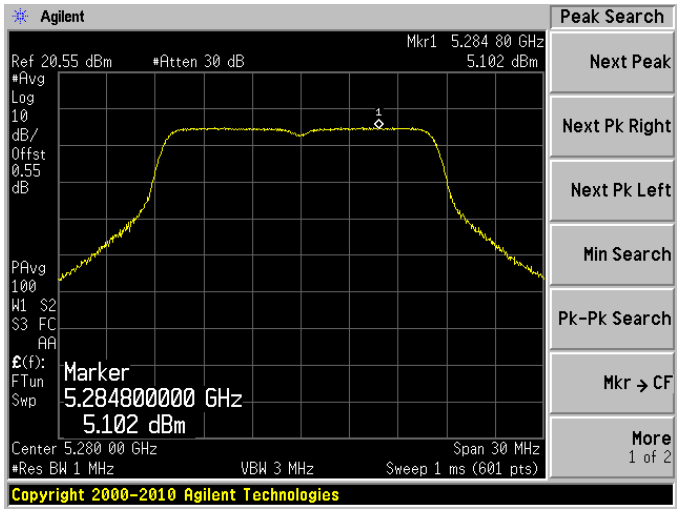


802.11a, Middle Channel, 5280 MHz

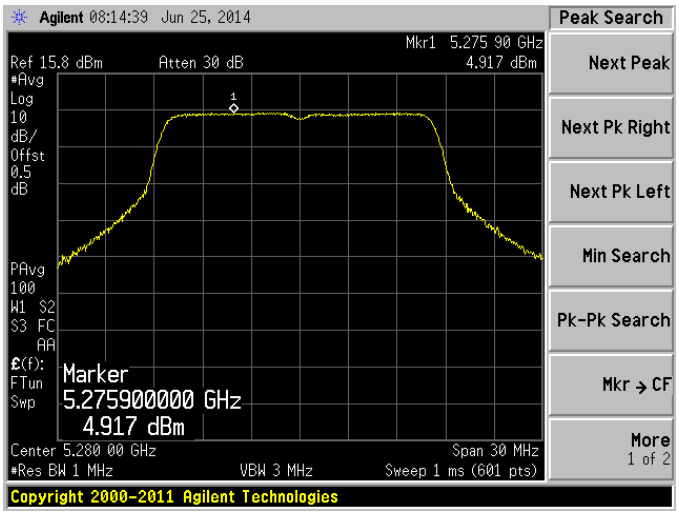
Chain 0



Chain 1



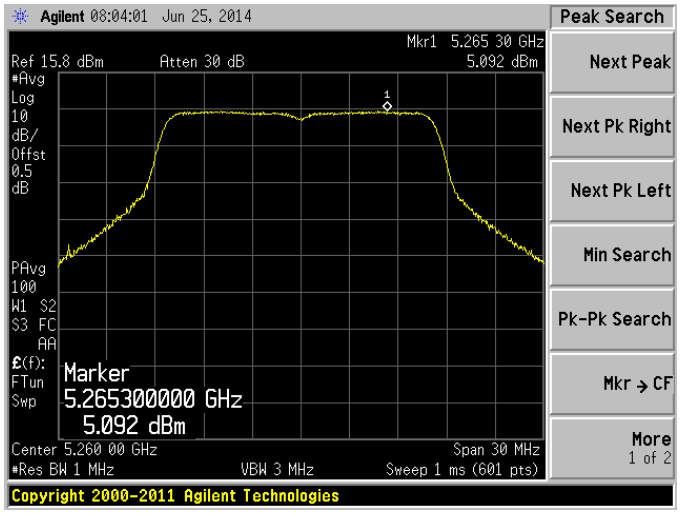
Chain 2



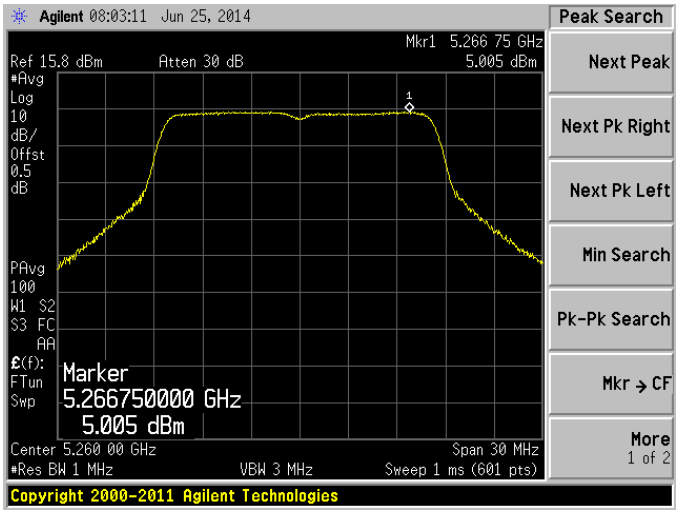
5.3 GHz Band

802.11a, Low Channel, 5260 MHz

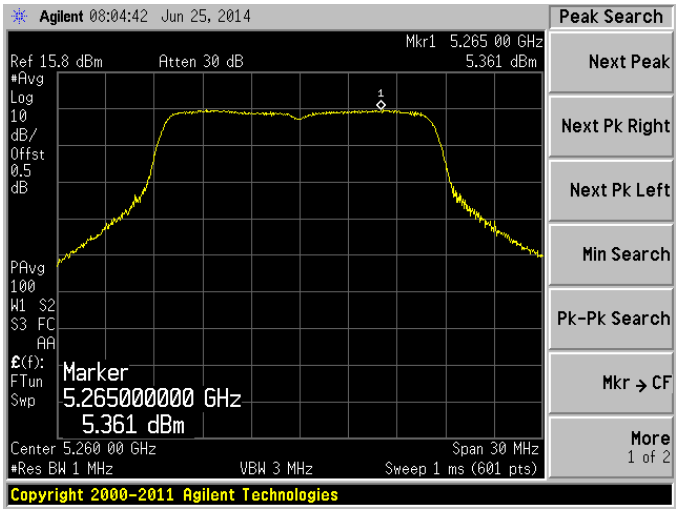
Chain 0



Chain 1



Chain 2



5.6 GHz Band

802.11a mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5550	5.166	4.568	4.277	9.46	11
Middle	5580	5.211	4.75	4.434	9.58	11
High	5700	5.038	4.88	4.144	9.48	11

802.11n-HT20 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5500	3.246	3.304	3.543	8.14	11
Middle	5580	3.557	3.496	3.468	8.28	11
High	5700	3.922	3.528	3.122	8.31	11

802.11n-HT40 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5510	-0.467	-0.613	-0.709	4.18	11
Middle	5550	-0.729	-0.359	-0.831	4.14	11
High	5670	-0.75	-0.465	-0.584	4.17	11

802.11ac-VHT80 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
-	5530	-8.849	-8.849	-8.856	-4.08	11

Please refer to the following plots.

13.5 Test Results

Note: Duty Cycle is 99%, no duty factor should be added

5.3 GHz Band

802.11a mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5260	5.092	5.005	5.361	9.93	11
Middle	5280	5.473	5.102	4.917	9.94	11
High	5320	3.502	2.7	2.777	7.78	11

802.11n-HT20 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5260	5.164	4.909	5.151	9.85	11
Middle	5280	5.249	4.936	5.000	9.83	11
High	5320	3.071	2.286	2.299	7.34	11

802.11n-HT40 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
Low	5270	1.482	0.735	1.202	5.92	11
High	5310	-3.362	-3.831	-3.409	1.24	11

802.11ac-VHT80 mode

Channel	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Chain 2 PSD (dBm)	Total PSD (dBm)	Limit (dBm)
-	5290	-9.517	-10.044	-9.983	-5.07	11

13 FCC §15.407(a) - Power Spectral Density

13.1 Applicable Standards

FCC §15.407(a)

13.2 Measurement Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a spectrum analyzer.
3. Add a correction factor to the display.

The measurements are base on FCC KDB 789033 D01 General UNII Test Procedures v01r04

13.3 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

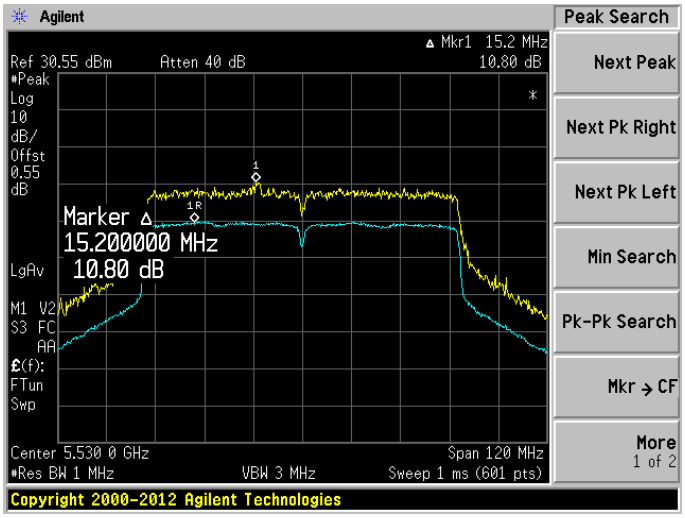
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.*

13.4 Test Environmental Conditions

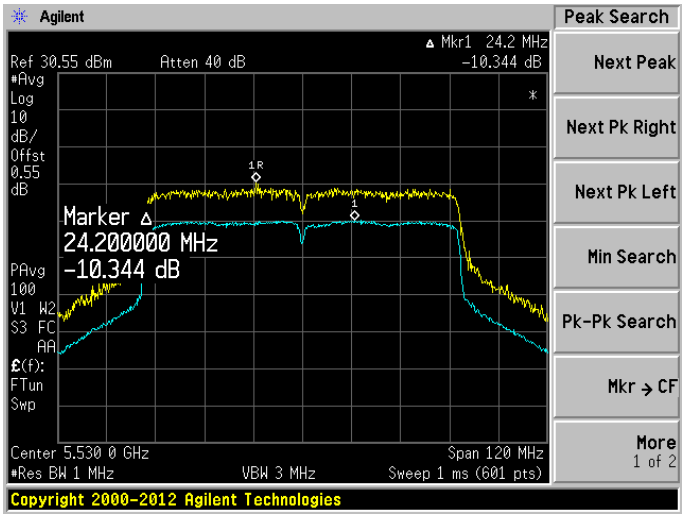
Temperature:	22-24º C
Relative Humidity:	40-41 %
ATM Pressure:	103.1-104.1 KPa

The testing was performed by Rui Zhou on 2014-07-07 to 2014-07-14 at RF site.

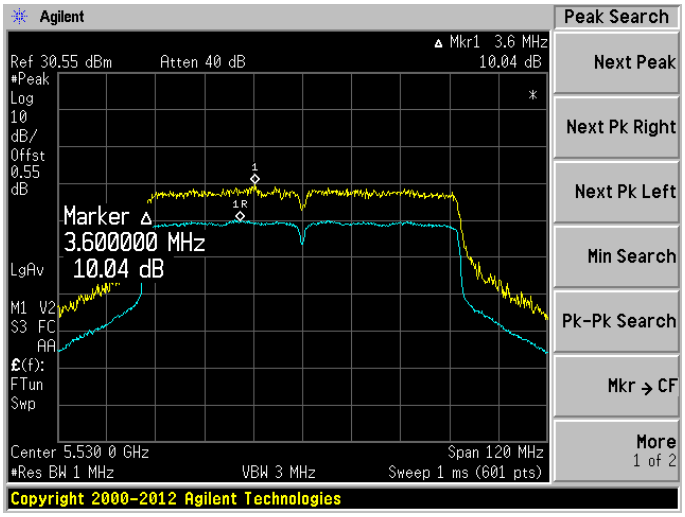
802.11a-80 mode, 5530 MHz, Chain 1



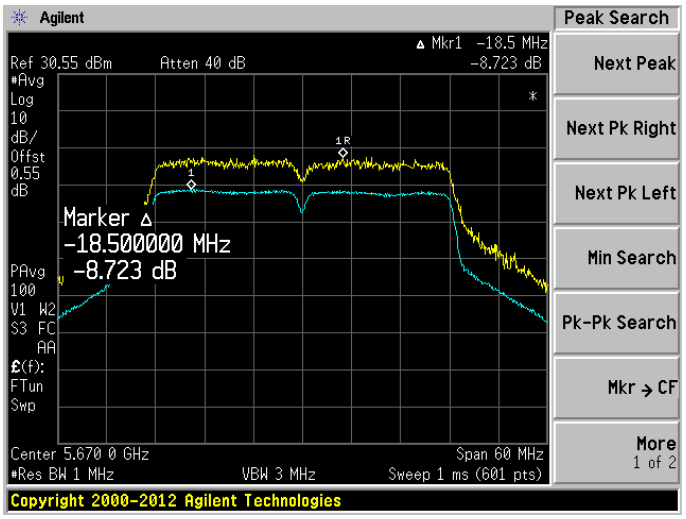
802.11a-80 mode, 5530 MHz, Chain 2



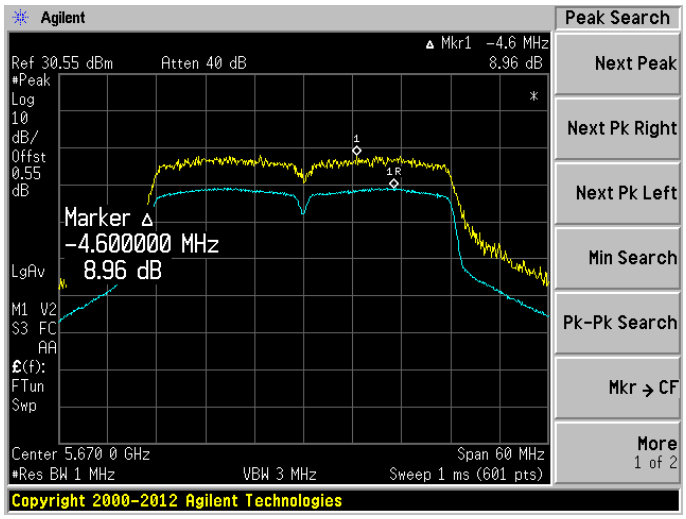
802.11a-80 mode, 5530 MHz, Chain 3



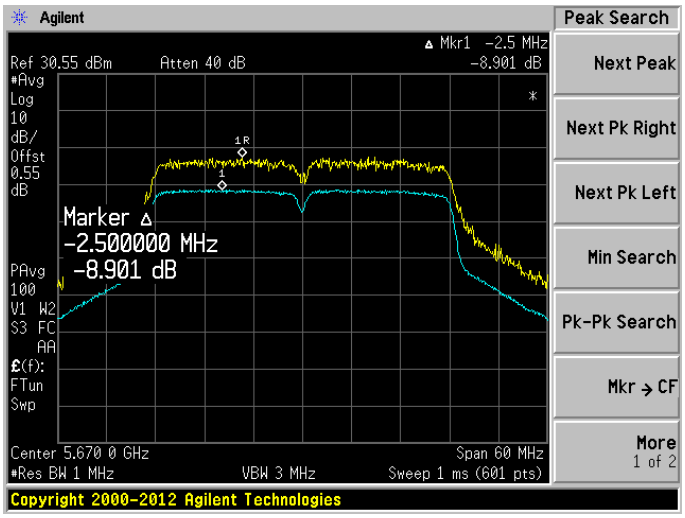
802.11n-HT40 mode, 5670 MHz, Chain 1



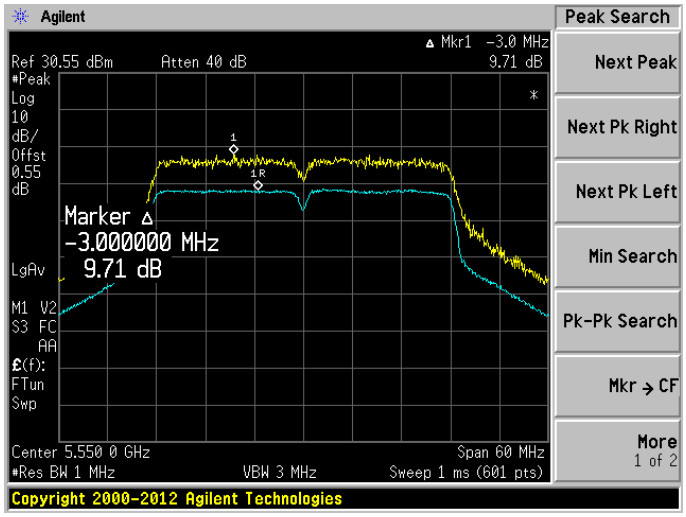
802.11n-HT40 mode, 5670 MHz, Chain 2



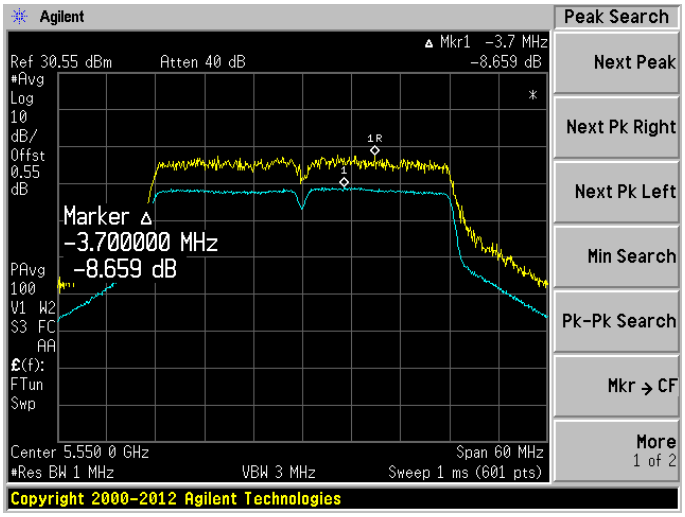
802.11n-HT40 mode, 5670 MHz, Chain 3



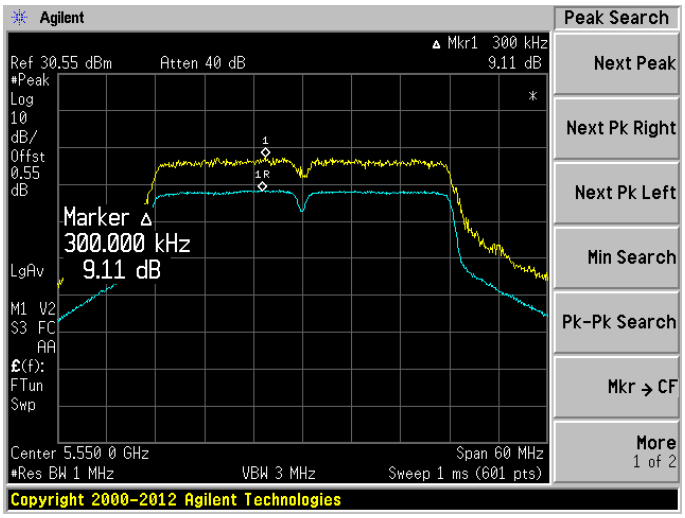
802.11n-HT40 mode, 5550 MHz, Chain 1



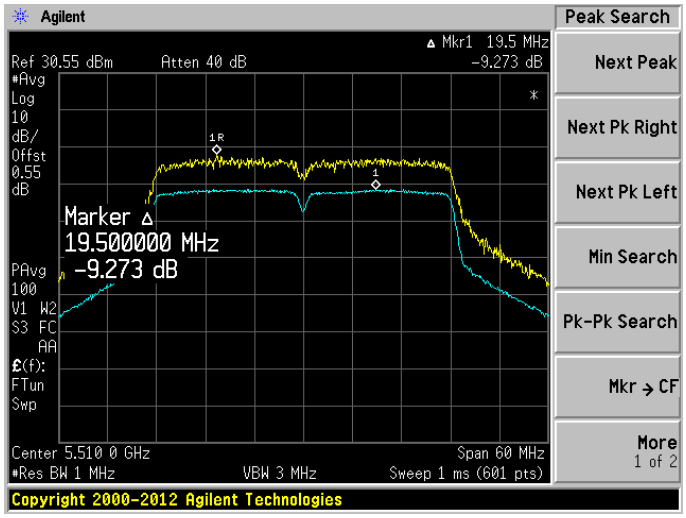
802.11n-HT40 mode, 5550 MHz, Chain 2



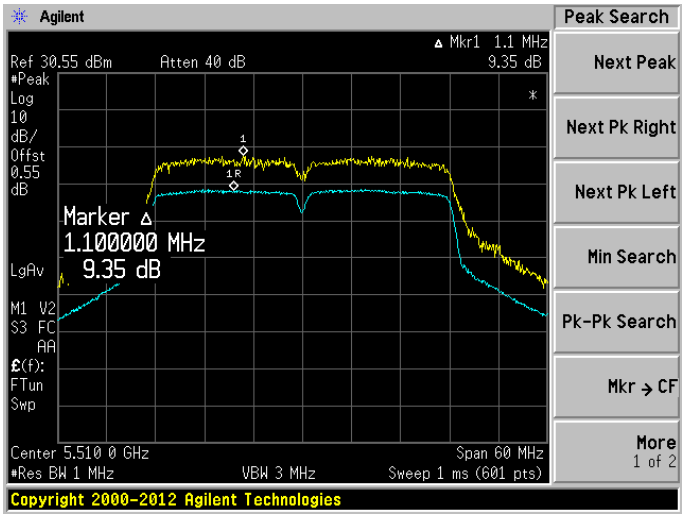
802.11n-HT40 mode, 5550 MHz, Chain 3



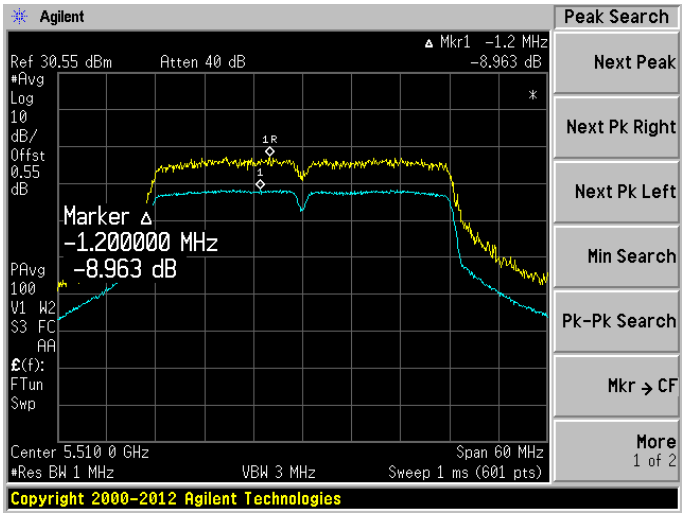
802.11n-HT40 mode, 5510 MHz, Chain 1



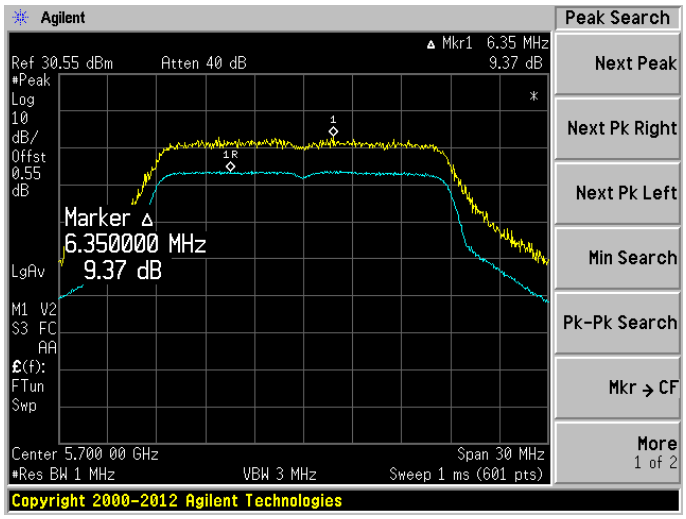
802.11n-HT40 mode, 5510 MHz, Chain 2



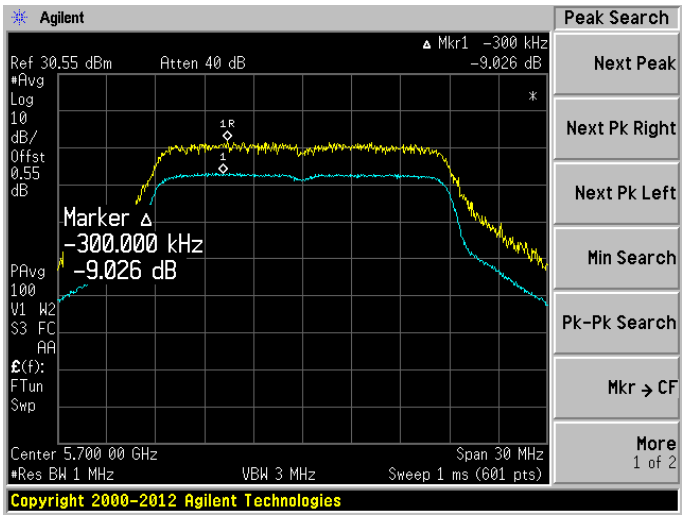
802.11n-HT40 mode, 5510 MHz, Chain 3



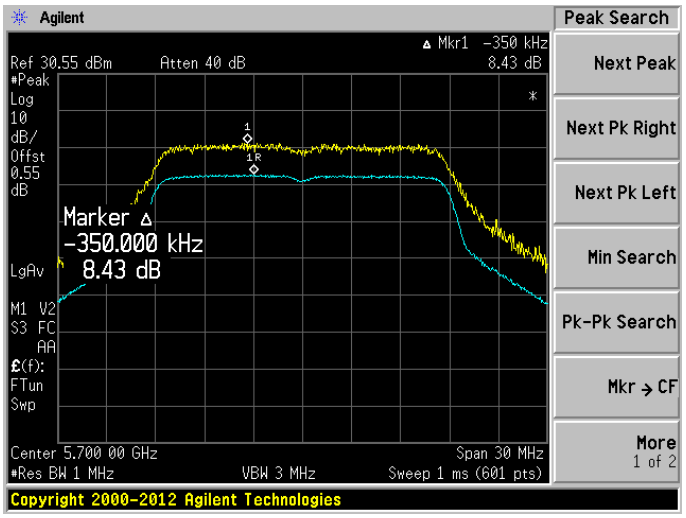
802.11n-HT20 mode, 5700 MHz, Chain 1



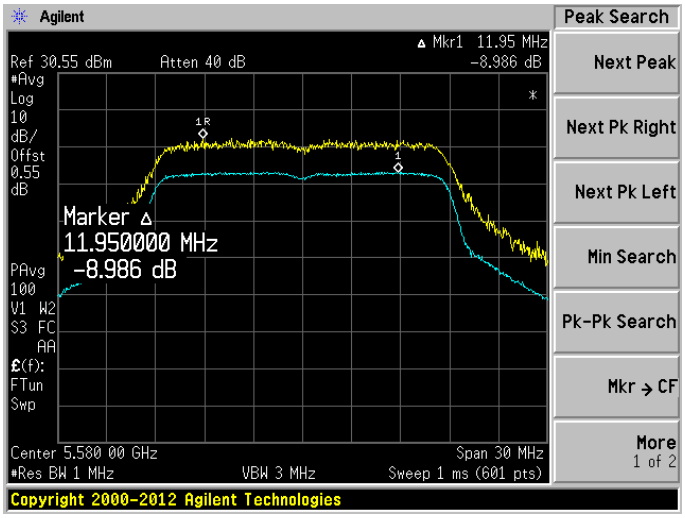
802.11n-HT20 mode, 5700 MHz, Chain 2



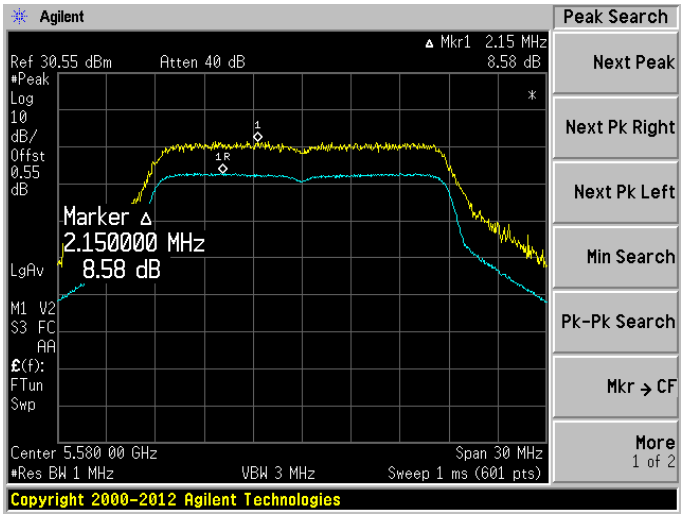
802.11n-HT20 mode, 5700 MHz, Chain 3



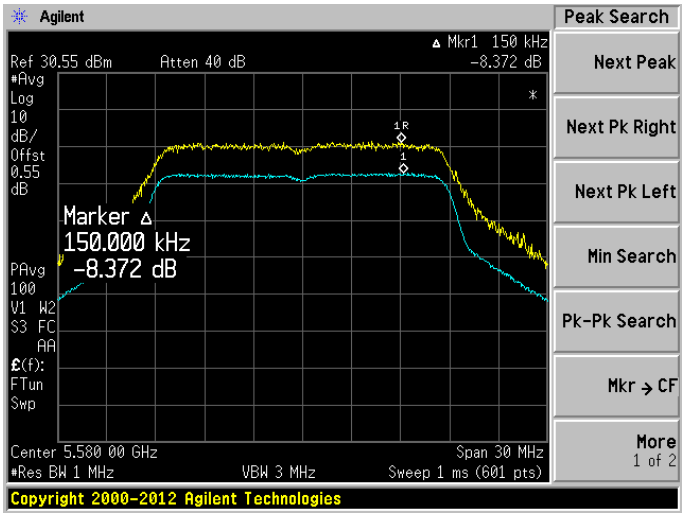
802.11n-HT20 mode, 5580 MHz, Chain 1



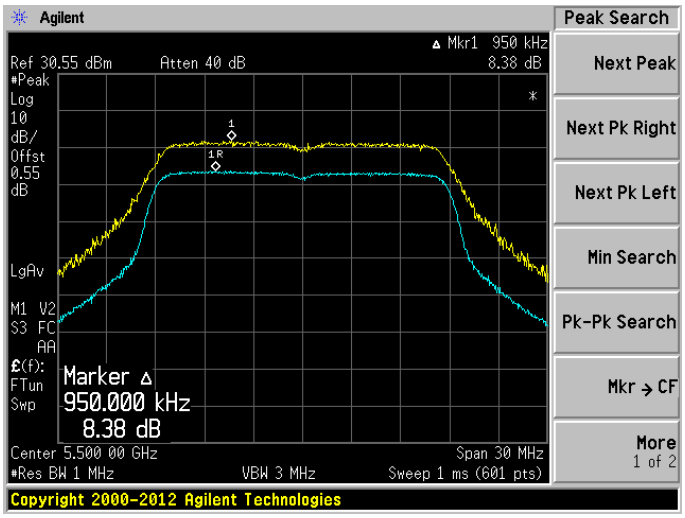
802.11n-HT20 mode, 5580 MHz, Chain 2



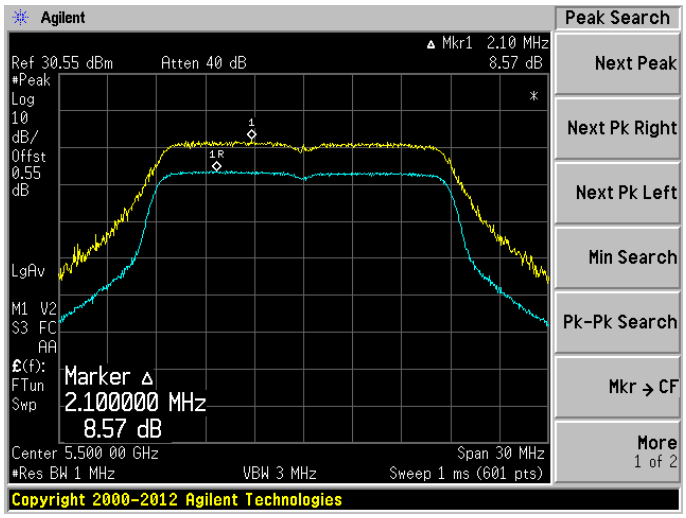
802.11n-HT20 mode, 5580 MHz, Chain 3



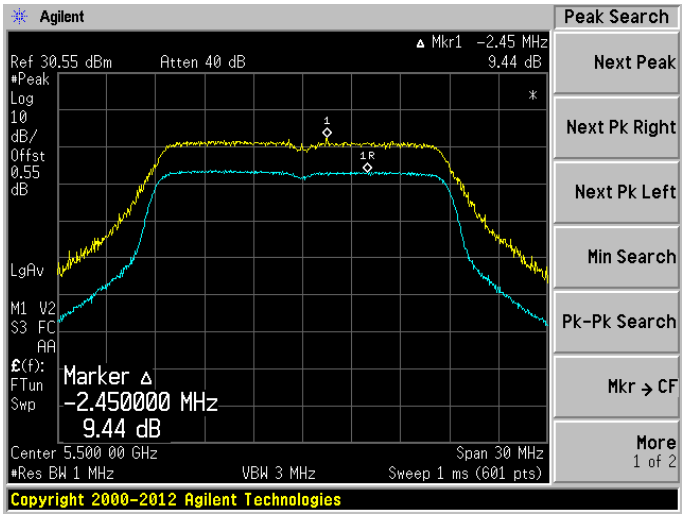
802.11n-HT20 mode, 5500 MHz, Chain 1



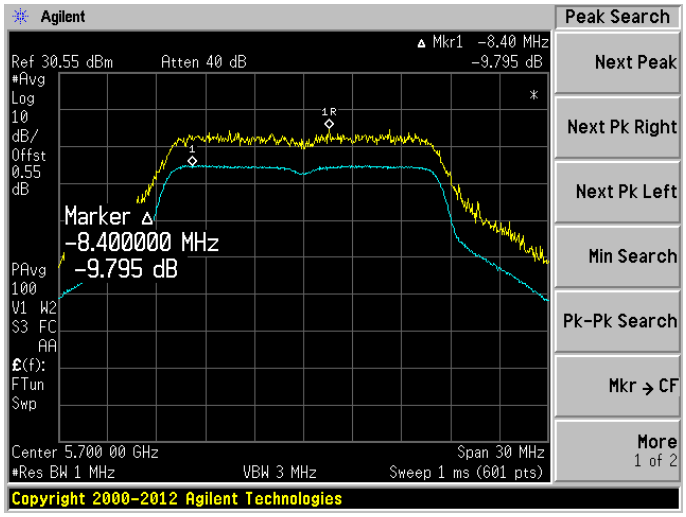
802.11n-HT20 mode, 5500 MHz, Chain 2



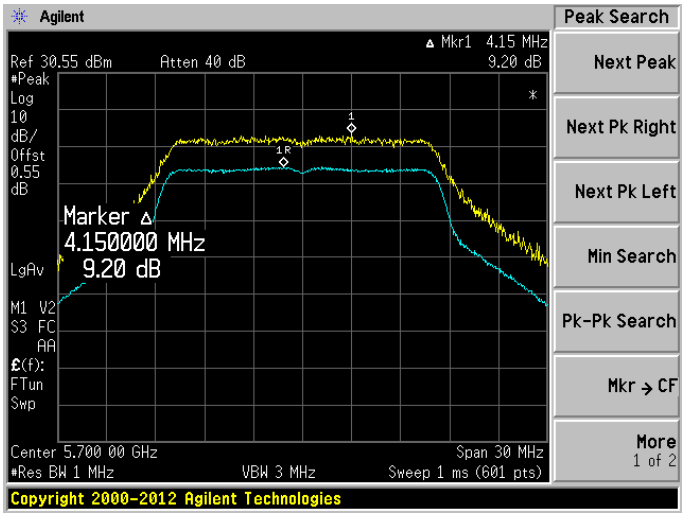
802.11n-HT20 mode, 5500 MHz, Chain 3



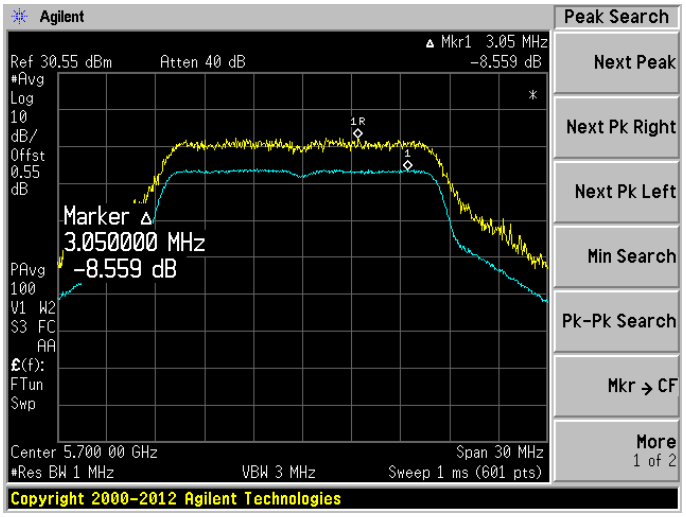
802.11a mode, 5700 MHz, Chain 1



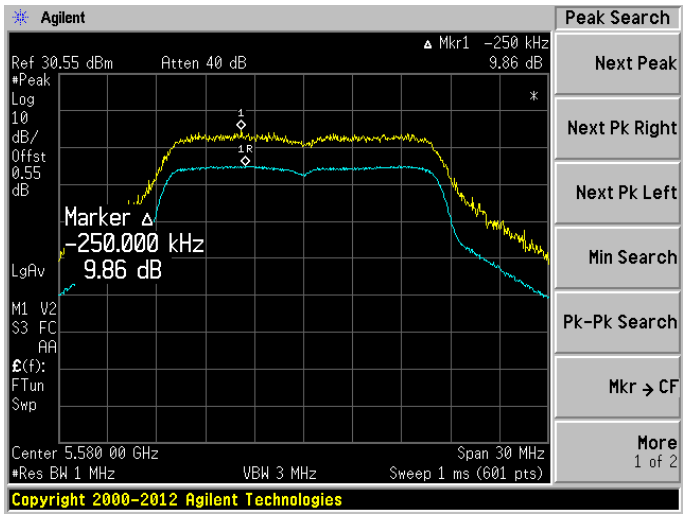
802.11a mode, 5700 MHz, Chain 2



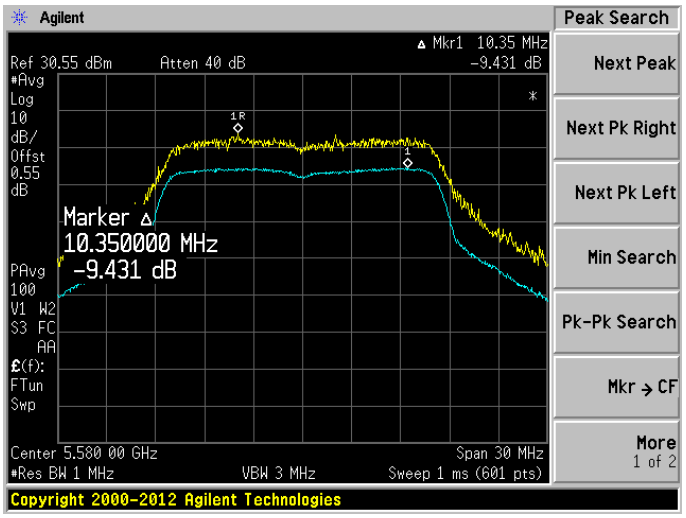
802.11a mode, 5700 MHz, Chain 3



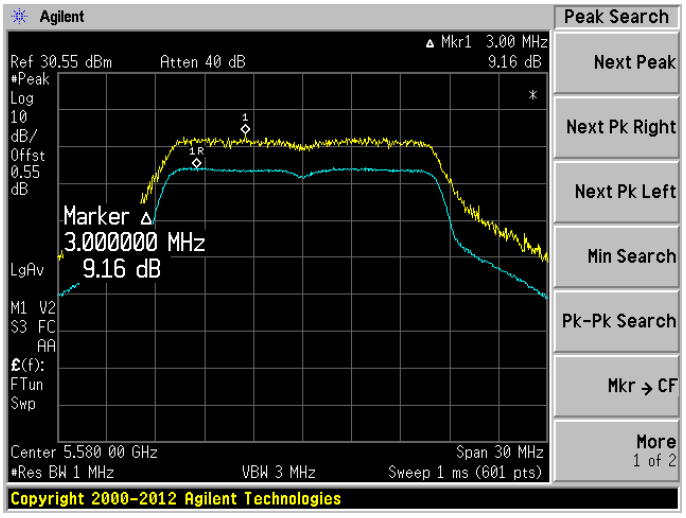
802.11a mode, 5580 MHz, Chain 1



802.11a mode, 5580 MHz, Chain 2

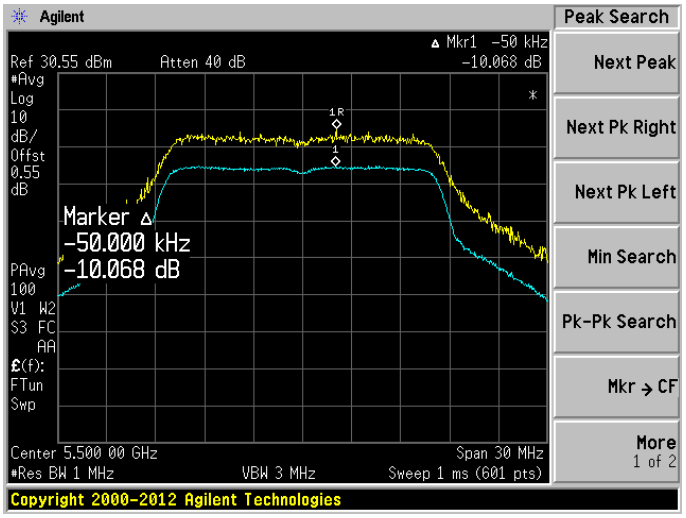


802.11a mode, 5580 MHz, Chain 3

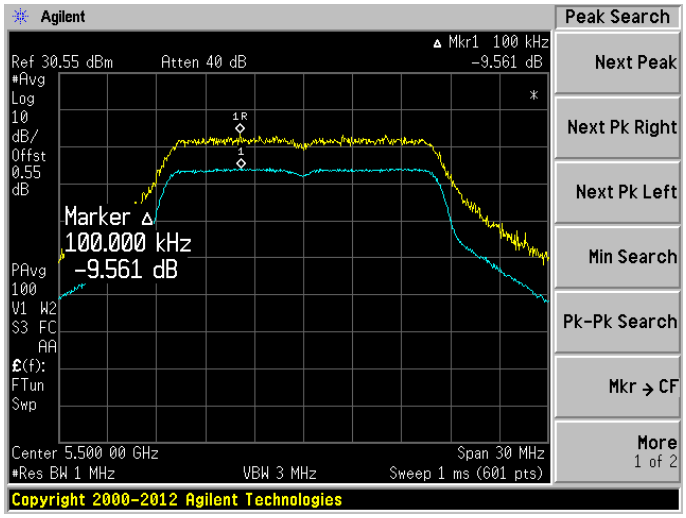


5470-5725 MHz Band

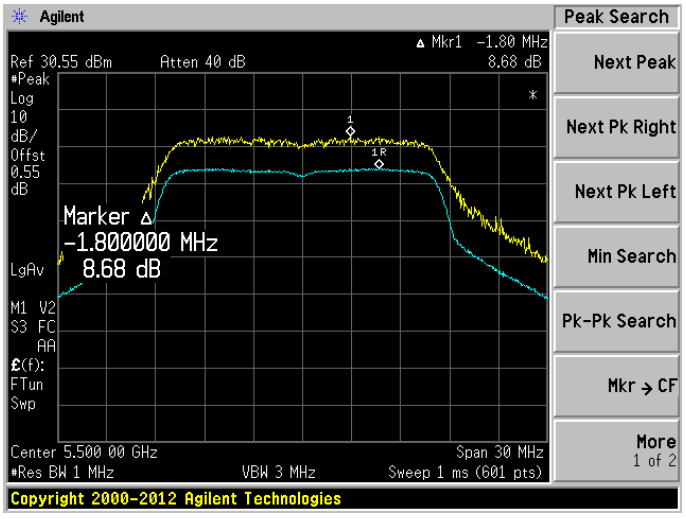
802.11a mode, 5500 MHz, Chain 1



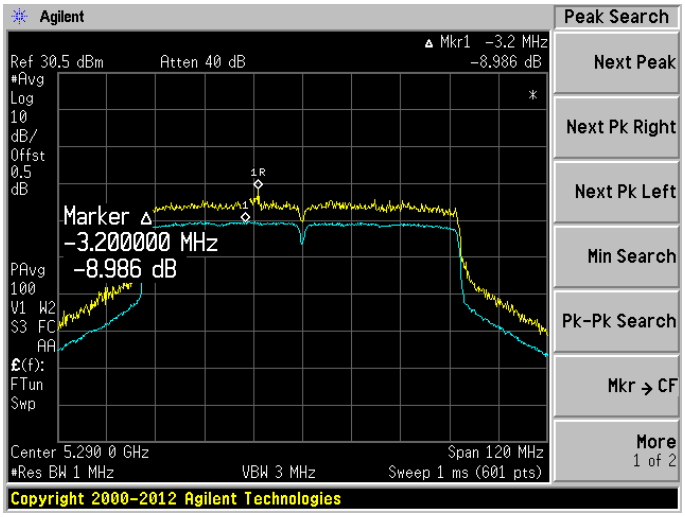
802.11a mode, 5500 MHz, Chain 2



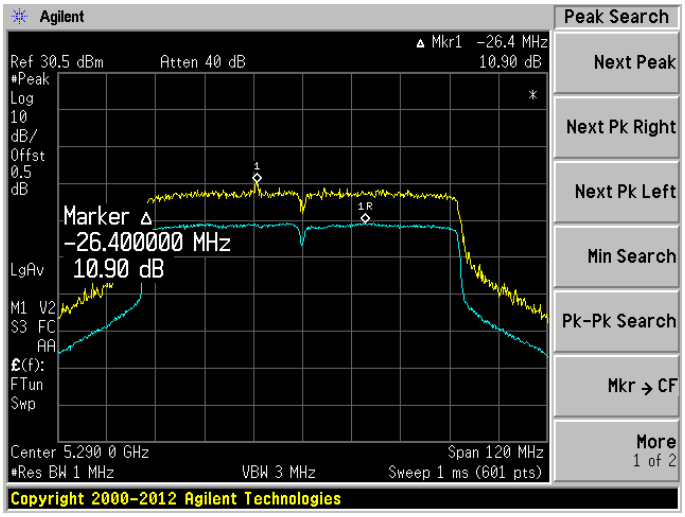
802.11a mode, 5500 MHz, Chain 3



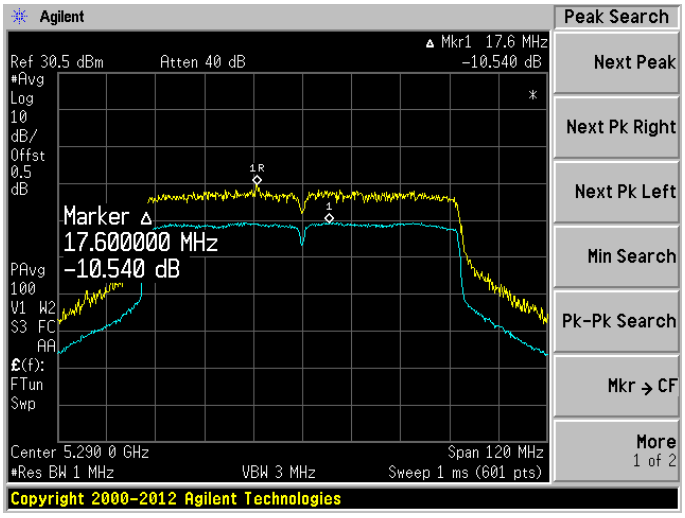
802.11ac-VHT80 mode, 5290 MHz, Chain 1



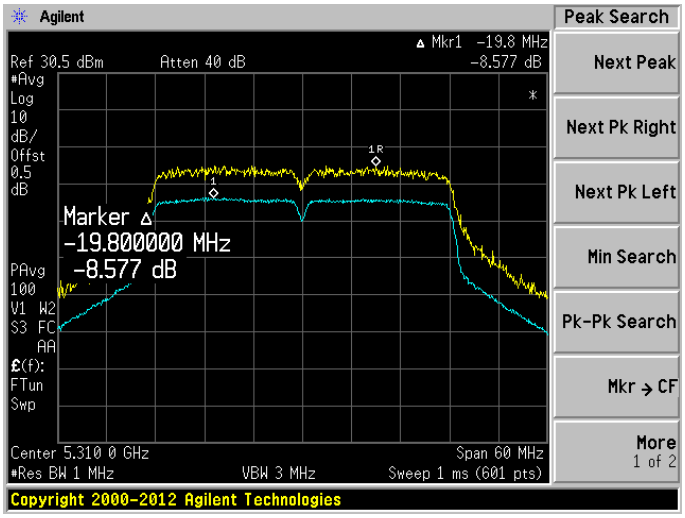
802.11ac-VHT80 mode, 5290 MHz, Chain 2



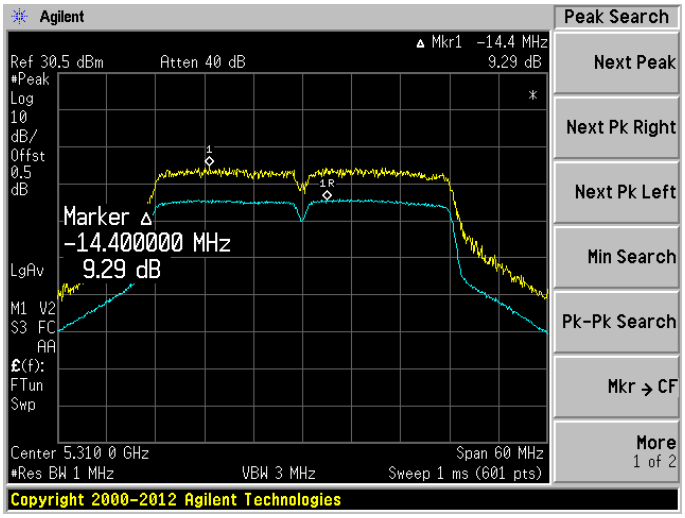
802.11ac-VHT80 mode, 5290 MHz, Chain 3



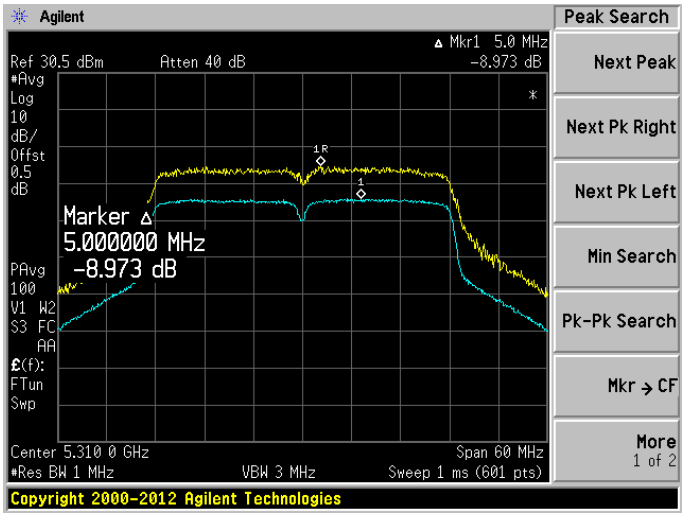
802.11n-HT40 mode, 5310 MHz, Chain 1



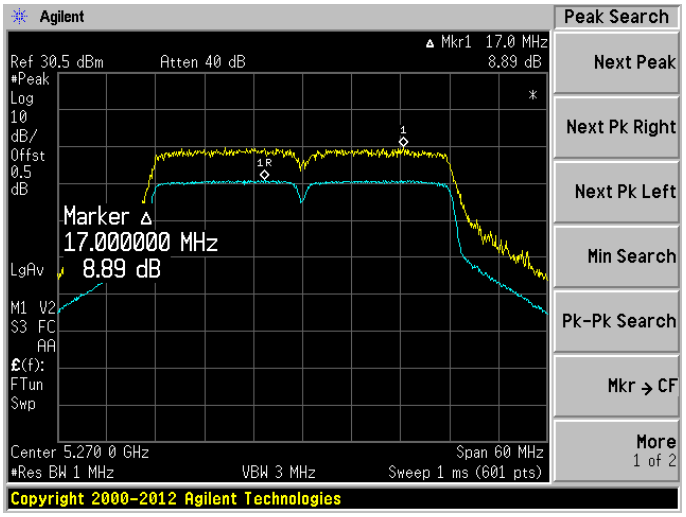
802.11n-HT40 mode, 5310 MHz, Chain 2



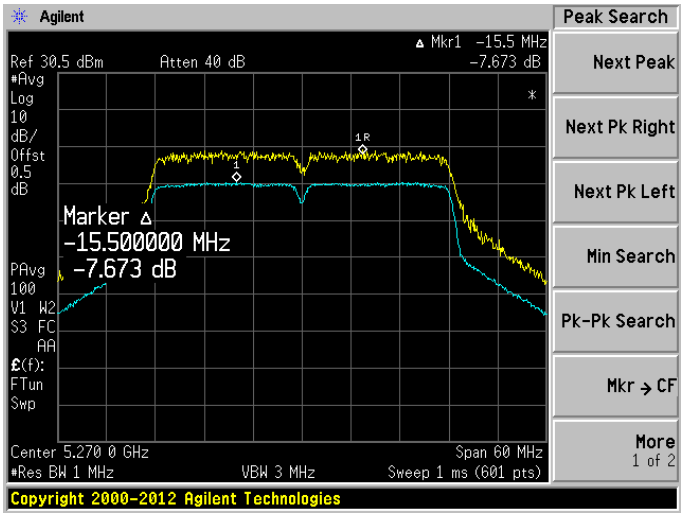
802.11n-HT40 mode, 5310 MHz, Chain 3



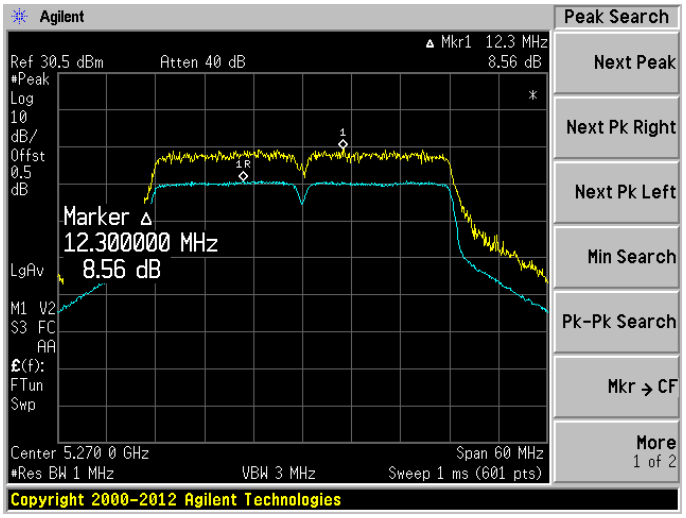
802.11n-HT40 mode, 5270 MHz, Chain 1



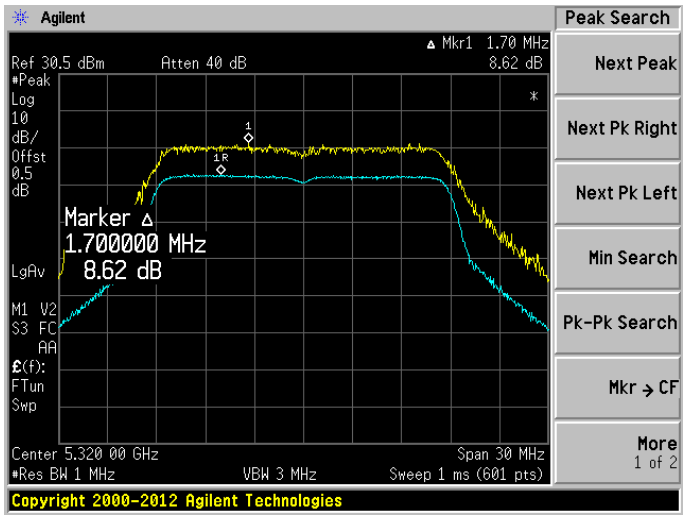
802.11n-HT40 mode, 5270 MHz, Chain 2



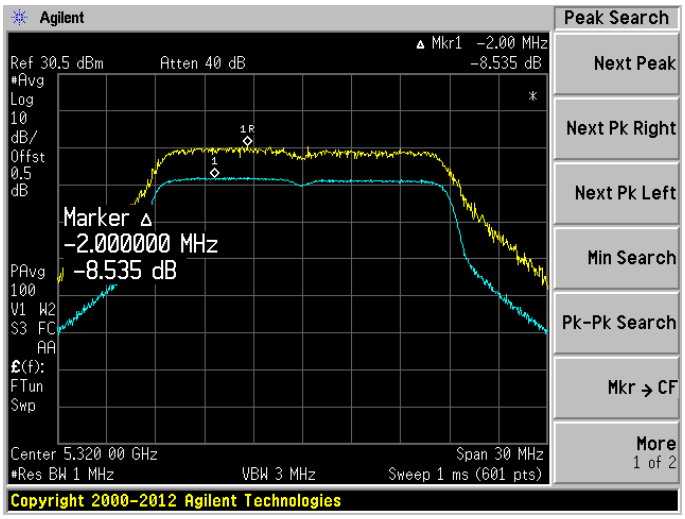
802.11n-HT40 mode, 5270 MHz, Chain 3



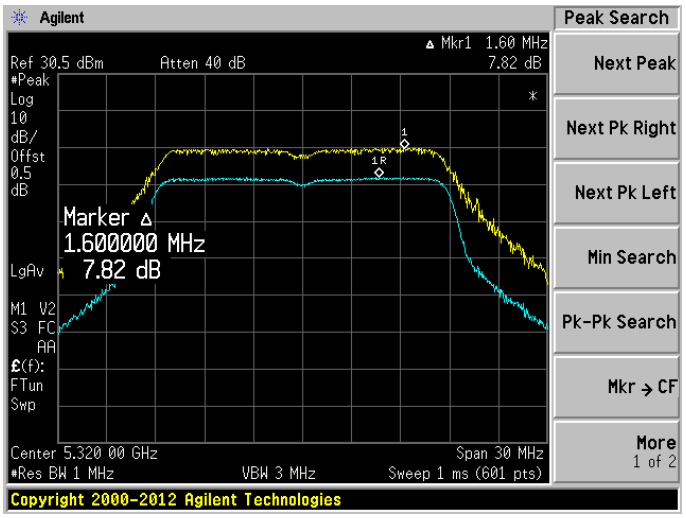
802.11n-HT20 mode, 5320 MHz, Chain 1



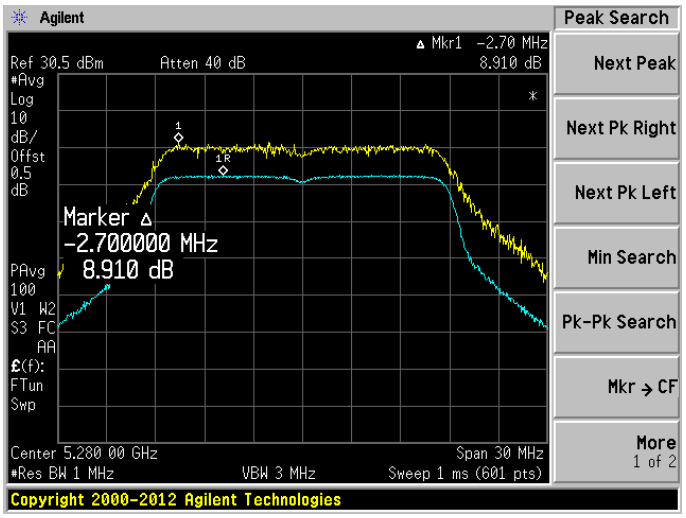
802.11n-HT20 mode, 5320 MHz, Chain 2



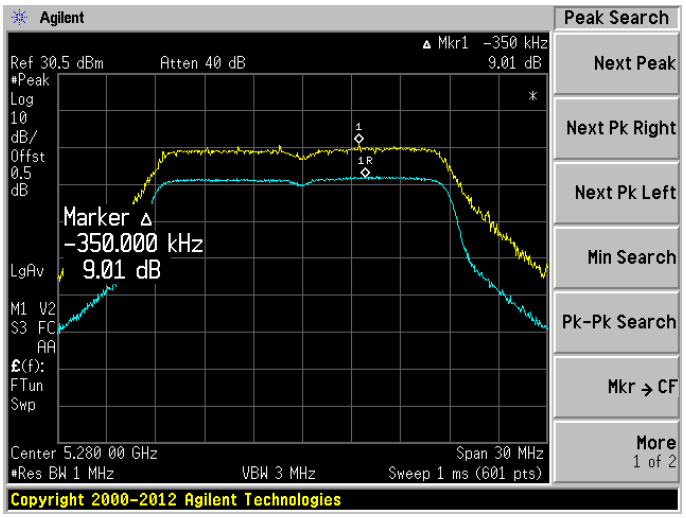
802.11n-HT20 mode, 5320 MHz, Chain 2



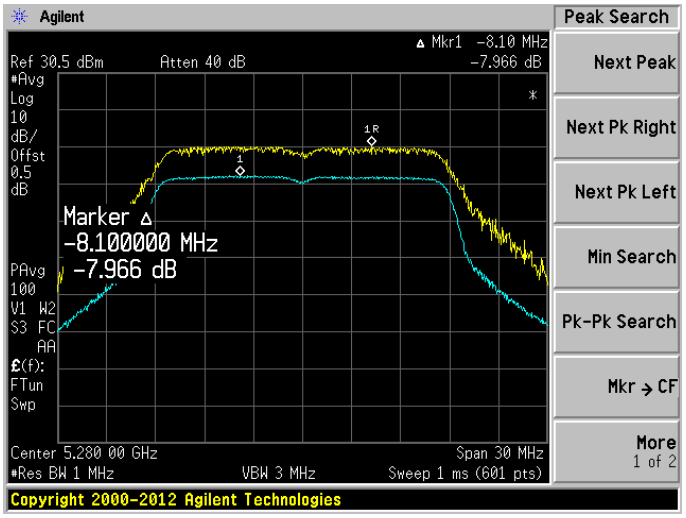
802.11n-HT20 mode, 5280 MHz, Chain 1



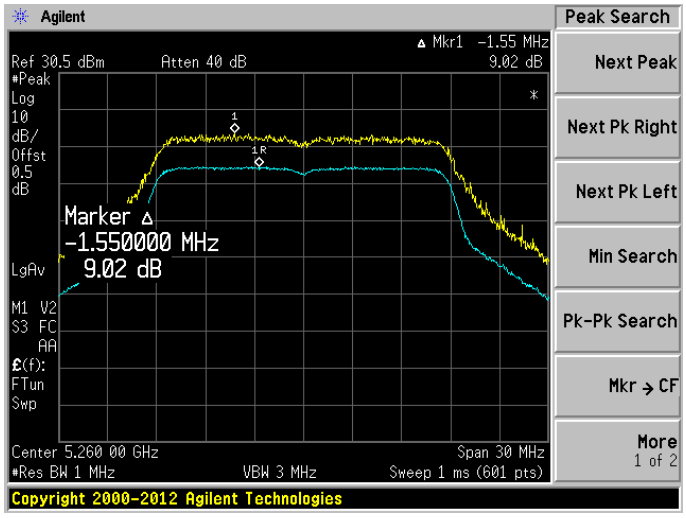
802.11n-HT20 mode, 5280 MHz, Chain 2



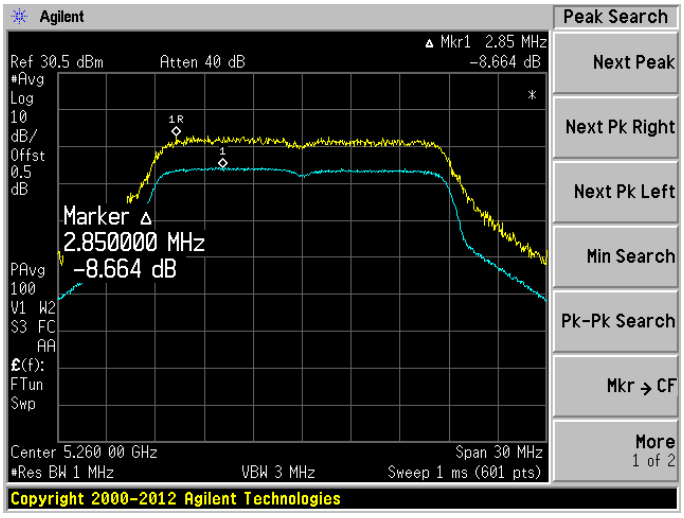
802.11n-HT20 mode, 5280 MHz, Chain 3



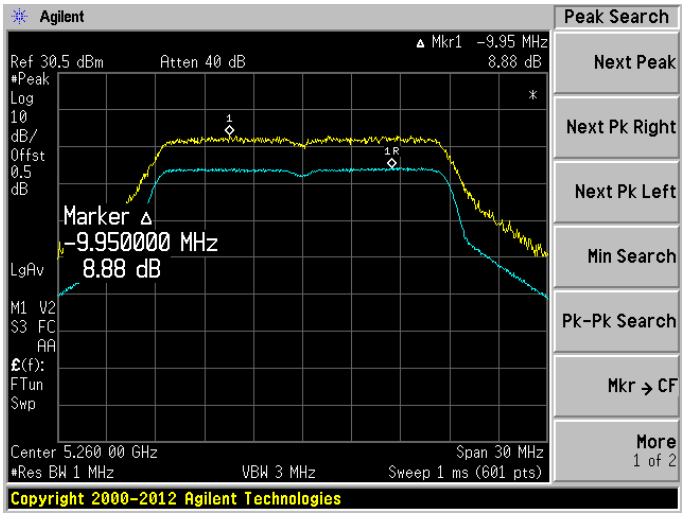
802.11n-HT20 mode, 5260 MHz, Chain 1



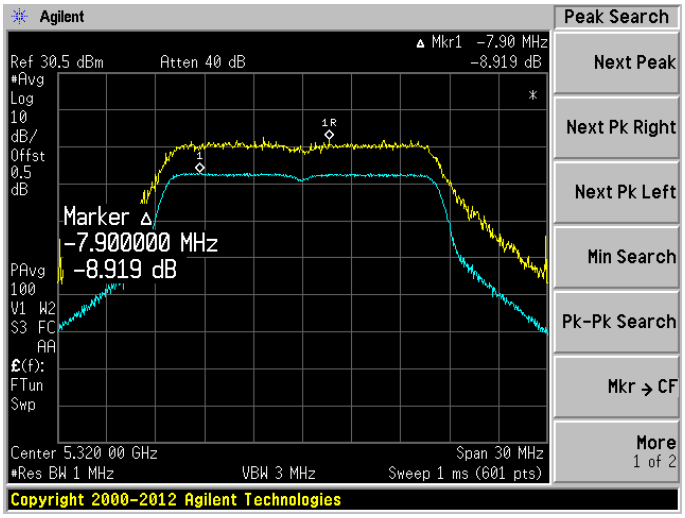
802.11n-HT20 mode, 5260 MHz, Chain 2



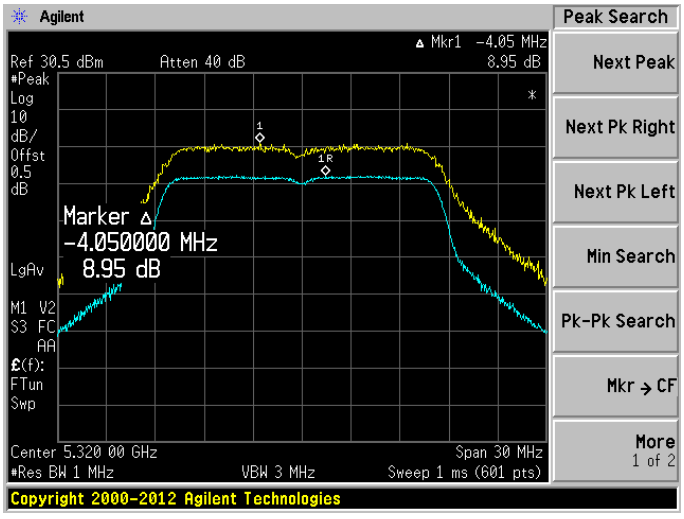
802.11n-HT20 mode, 5260 MHz, Chai 3



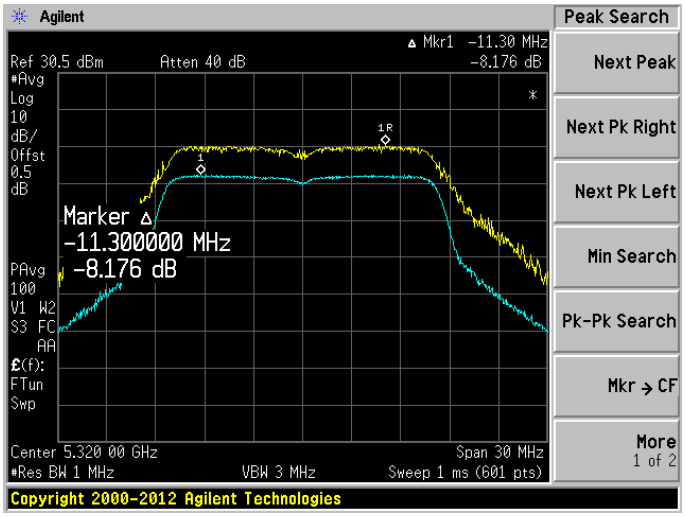
802.11a mode, 5320 MHz, Chain 1



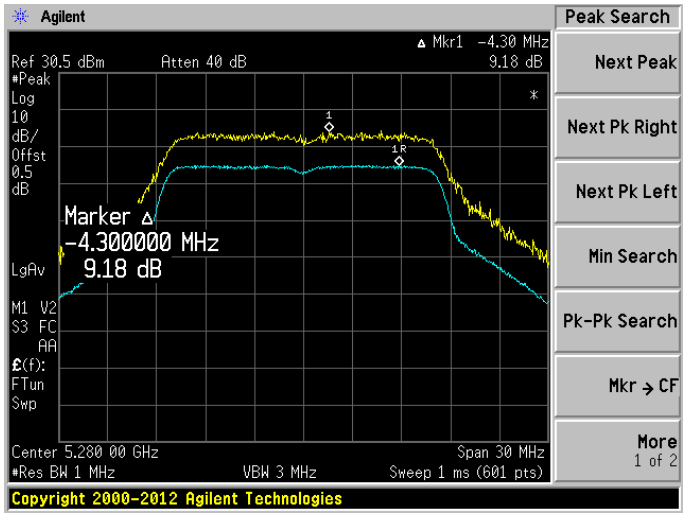
802.11a mode, 5320 MHz, Chain2



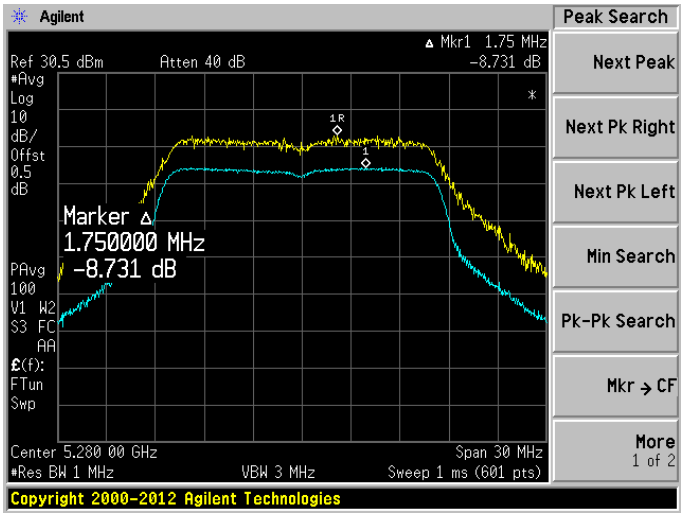
802.11a mode, 5320 MHz, Chain 3



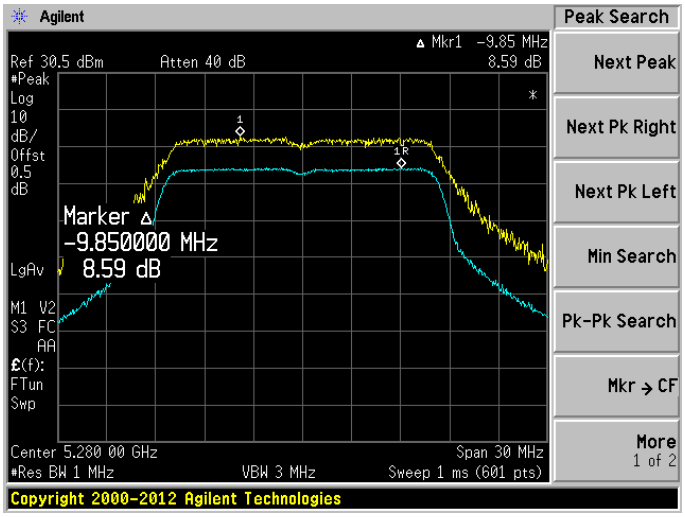
802.11a mode, 5280 MHz, Chain 1



802.11a mode, 5280 MHz, Chain 2

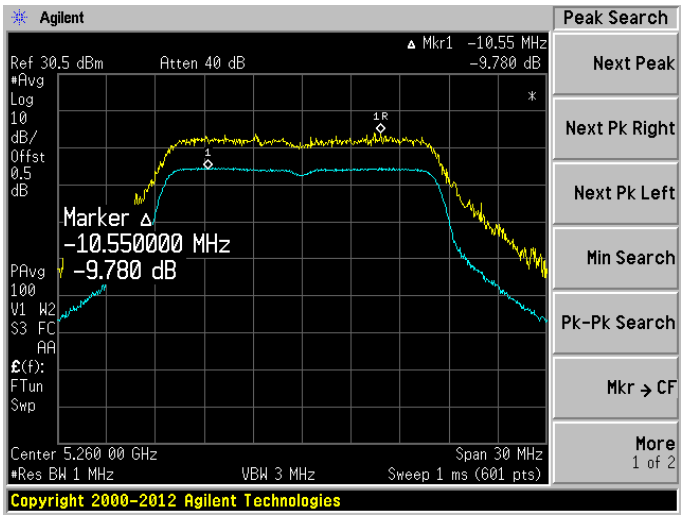


802.11a mode, 5280 MHz, Chain 3

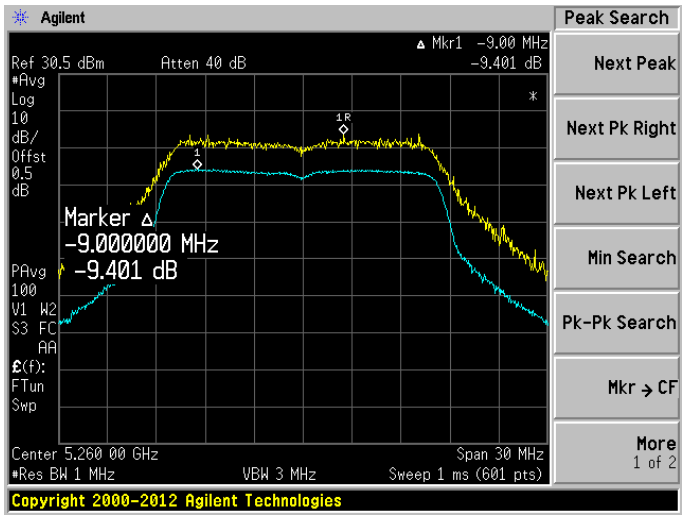


5250-5350 MHz Band

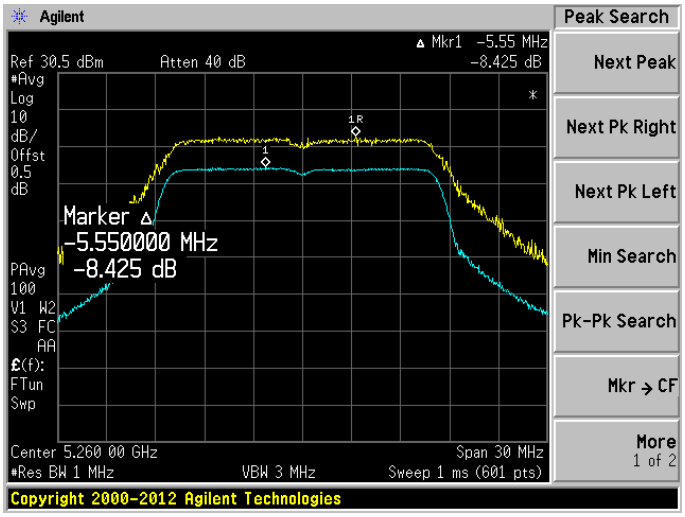
802.11a mode, 5260 MHz, Chain 1



802.11a mode, 5260 MHz, Chain 2



802.11a mode, 5260 MHz, Chain 3



5.6 GHz Band

802.11a mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5550	10.068	9.561	8.68	13
Middle	5580	9.86	9.431	9.16	13
High	5700	9.795	9.2	8.559	13

802.11n-HT20 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5500	8.38	8.57	9.44	13
Middle	5580	8.986	8.58	8.372	13
High	5700	9.37	9.026	8.43	13

802.11n-HT40 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5510	9.273	9.35	8.963	13
Middle	5550	9.71	8.659	9.11	13
High	5670	8.723	8.96	8.901	13

802.11ac-VHT80 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
-	5530	10.8	10.344	10.04	13

Please refer to the following plots.

12.5 Test Results

5.3 GHz Band

8
02.11a mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5260	9.78	9.401	8.425	13
Middle	5280	9.18	8.731	8.59	13
High	5320	8.919	8.95	8.176	13

802.11n-HT20 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5260	9.02	8.664	8.88	13
Middle	5280	8.91	9.01	7.966	13
High	5320	8.62	8.535	7.82	13

802.11n-HT40 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
Low	5270	8.89	7.673	8.56	13
High	5310	8.577	9.29	8.973	13

802.11ac-VHT80 mode

Channel	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Limit (dBm)
-	5290	8.986	10.9	10.54	13

12 FCC §15.407(a)(6) – Peak Excursion Ratio

12.1 Applicable Standard

According to FCC §15.407(a) (6), the ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

12.2 Test Procedure

The measurements are base on FCC KDB 789033 D01 General UNII Test Procedures v01r04

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 according to A2LA requirements, traceable to the NIST.*

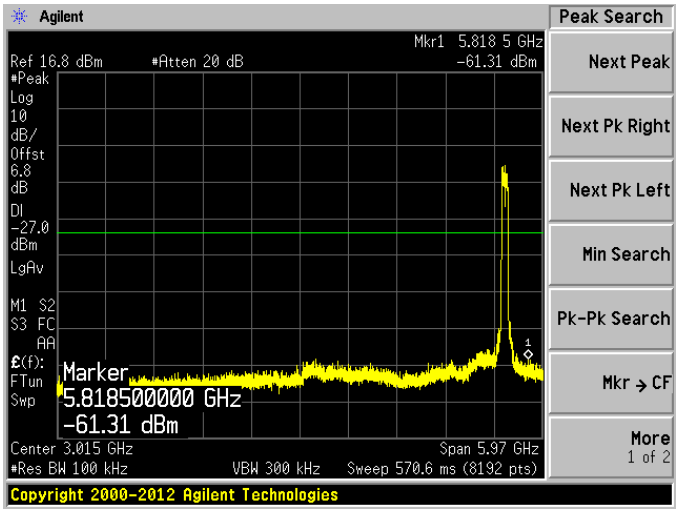
12.4 Test Environmental Conditions

Temperature:	21 °C
Relative Humidity:	43 %
ATM Pressure:	101-102 kPa

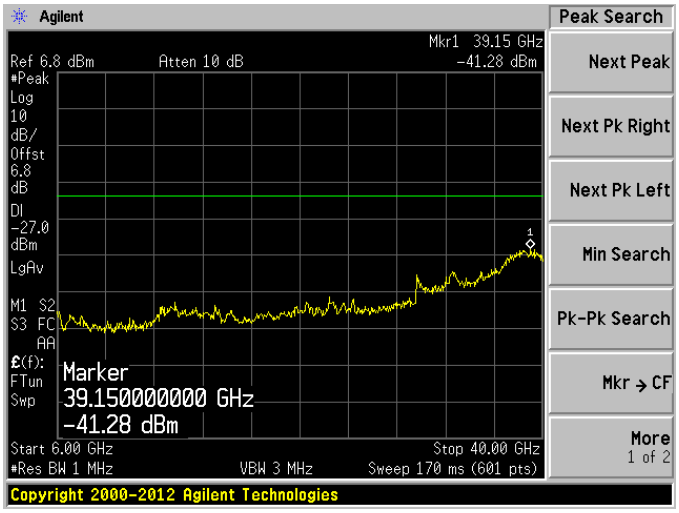
The testing was performed by Rui Zhou on 2014-07-07 to 2014-07-14 at RF site.

802.11ac-VHT80, High Channel 5530 MHz

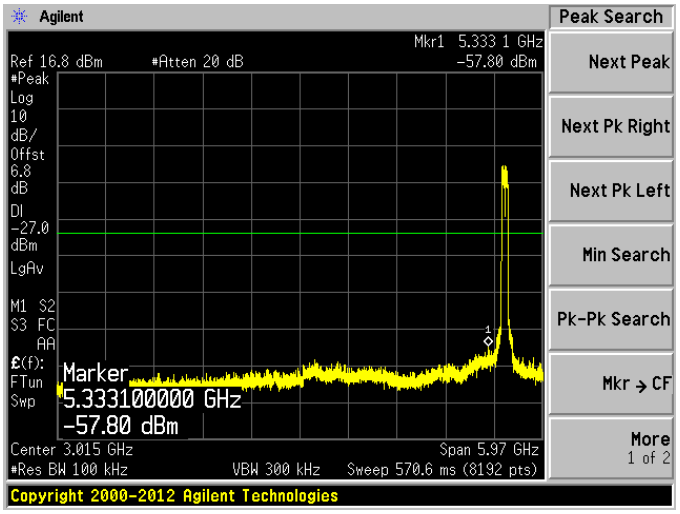
Chain 0, Plot: 30 MHz – 6 GHz



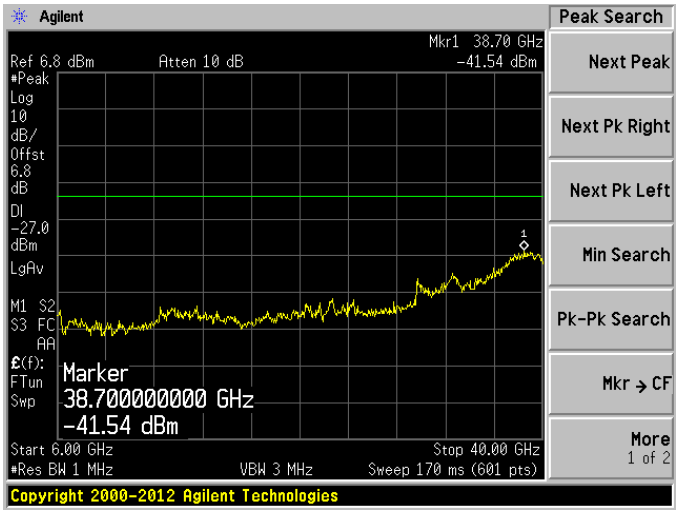
Chain 0, Plot: 6 GHz – 40 GHz



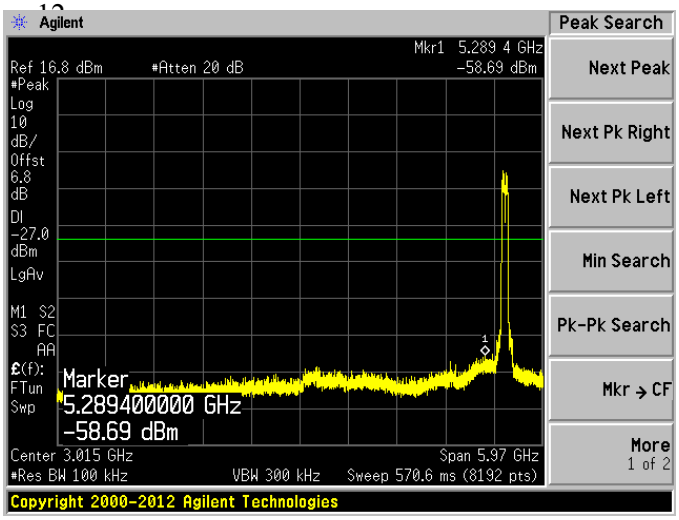
Chain 1, Plot: 30 MHz – 6 GHz



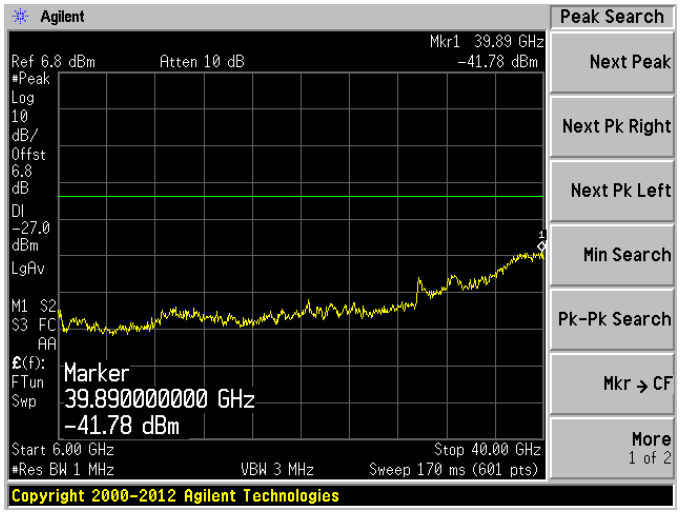
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

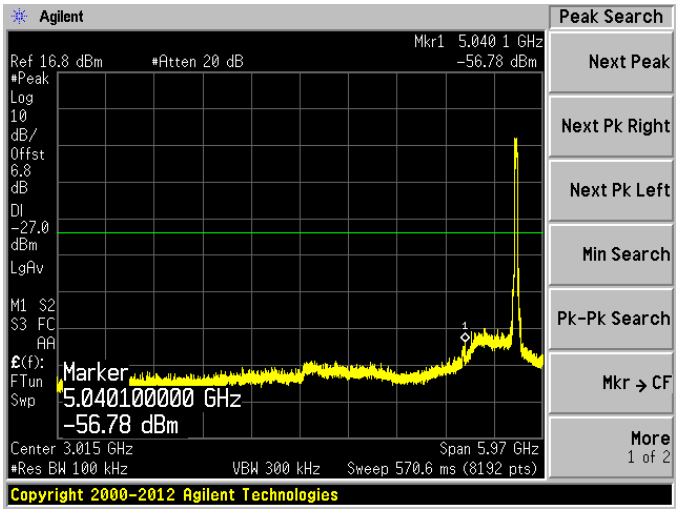


Chain 2, Plot: 6 GHz – 40 GHz

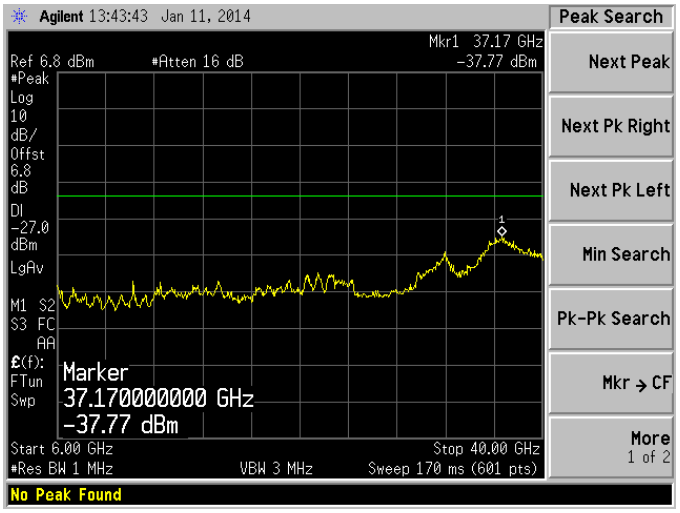


802.11n-HT40, High Channel 5670 MHz

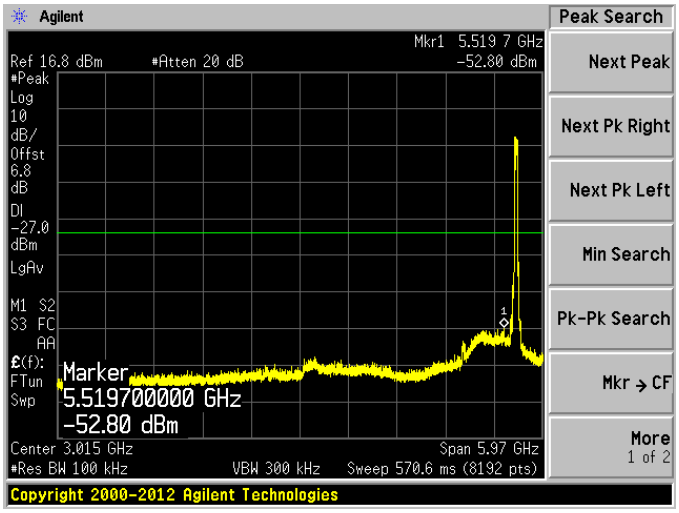
Chain 0, Plot: 30 MHz – 6 GHz



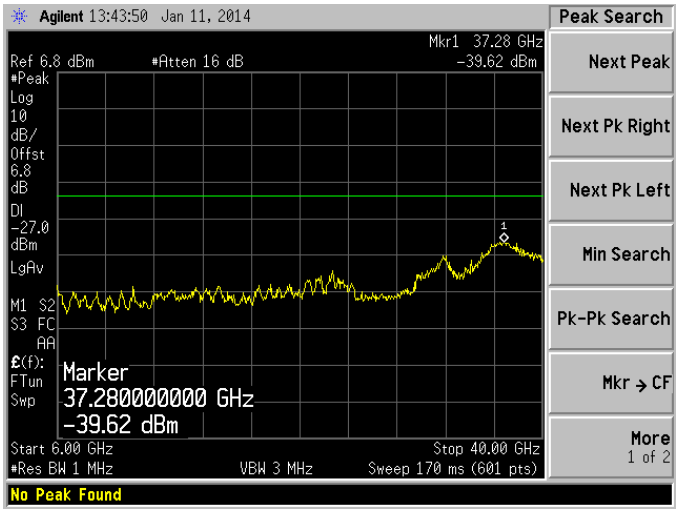
Chain 0, Plot: 6 GHz – 40 GHz



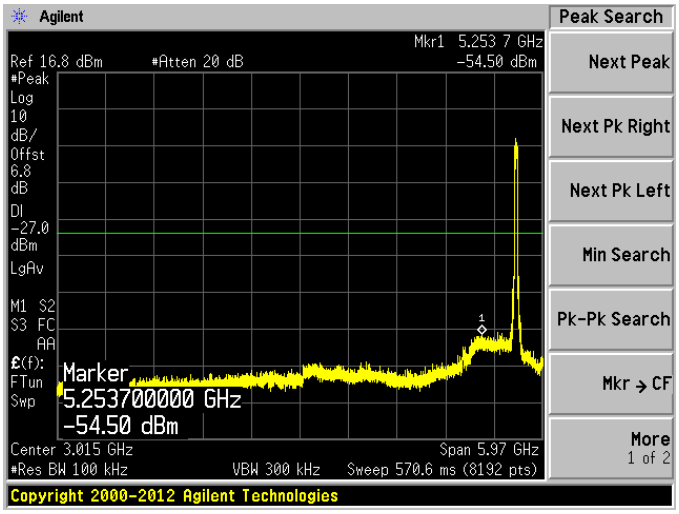
Chain 1, Plot: 30 MHz – 6 GHz



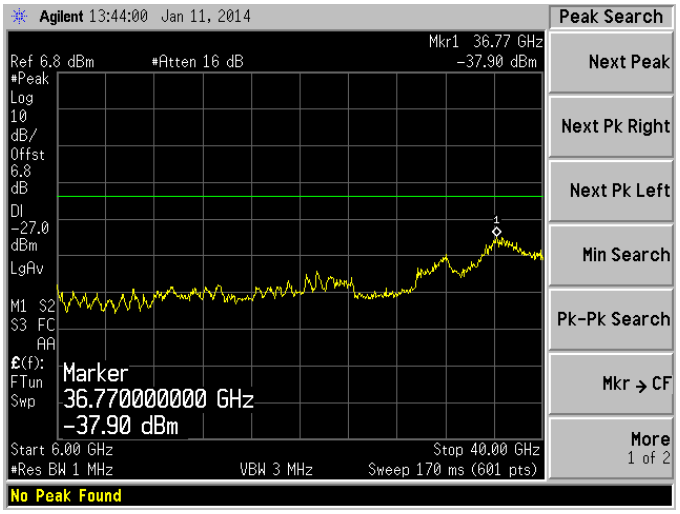
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

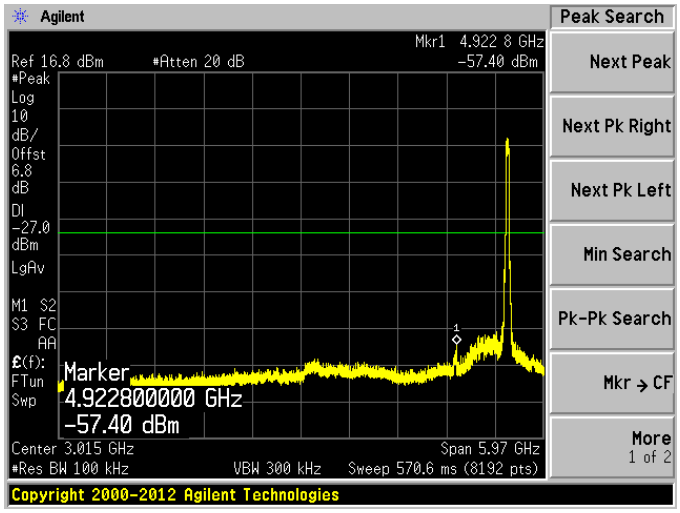


Chain 2, Plot: 6 GHz – 40 GHz

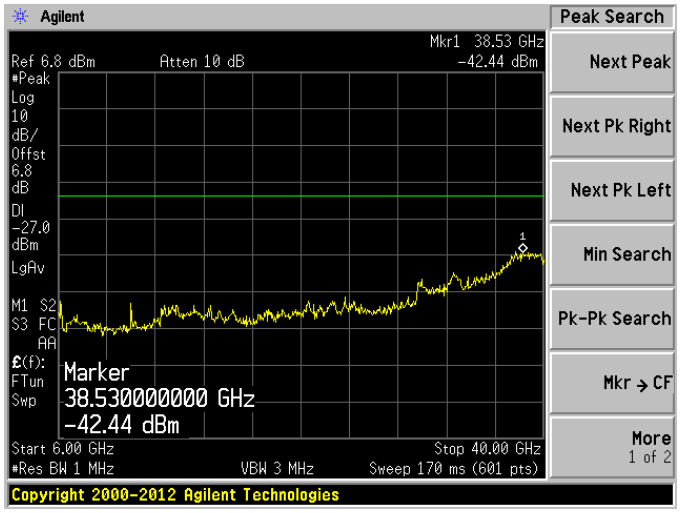


802.11n-HT40, Middle Channel 5550 MHz

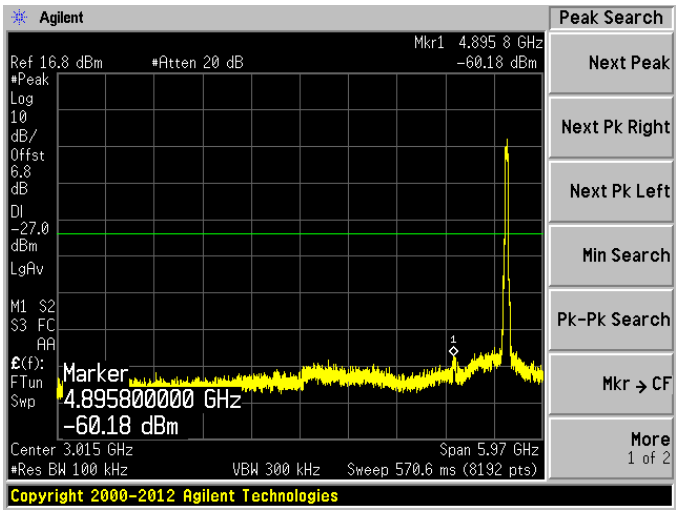
Chain 0, Plot: 30 MHz – 6 GHz



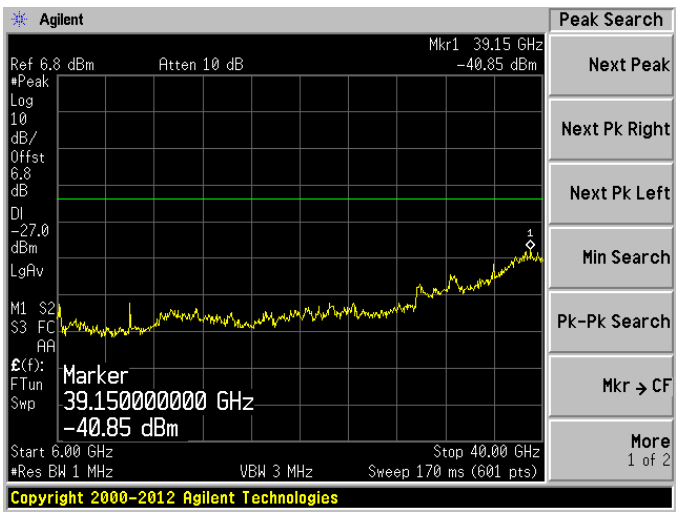
Chain 0, Plot: 6 GHz – 40 GHz



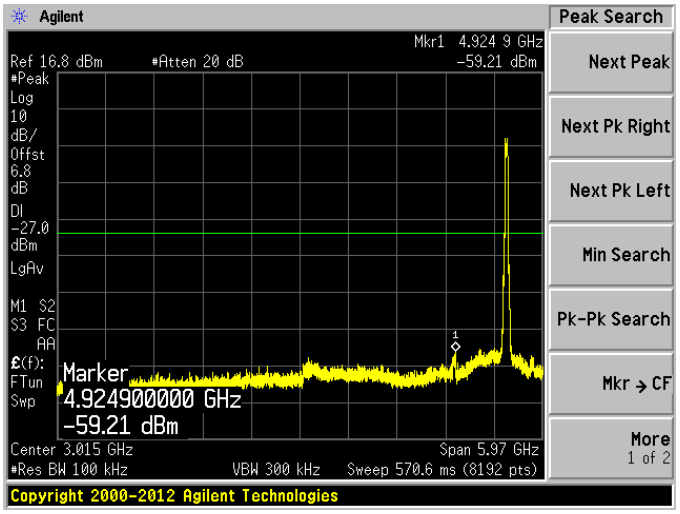
Chain 1, Plot: 30 MHz – 6 GHz



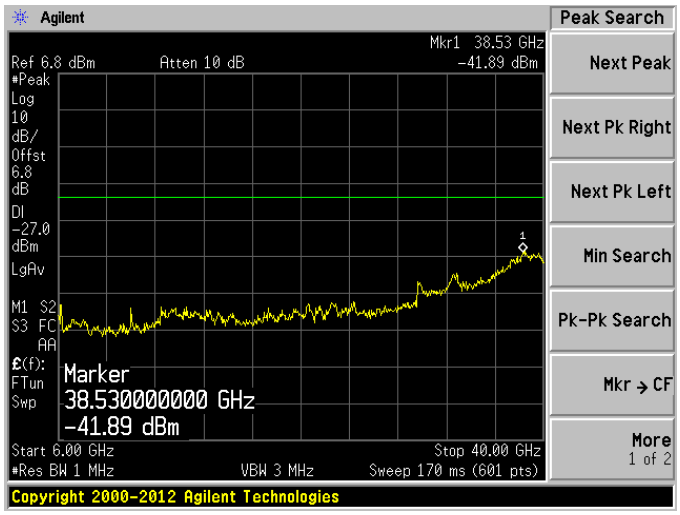
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

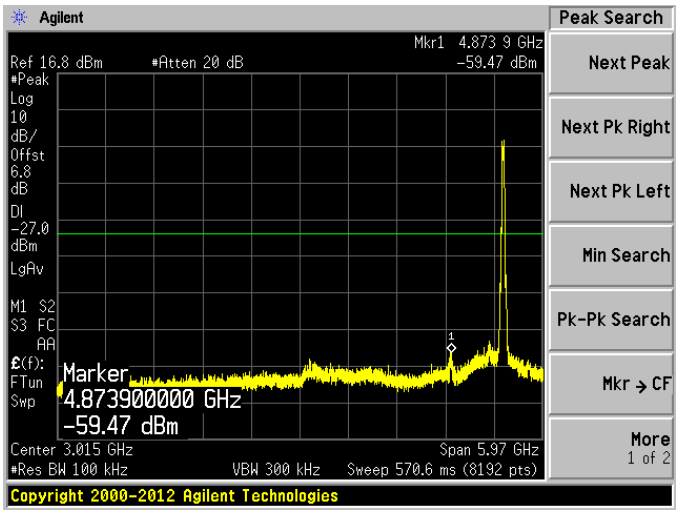


Chain 2, Plot: 6 GHz – 40 GHz

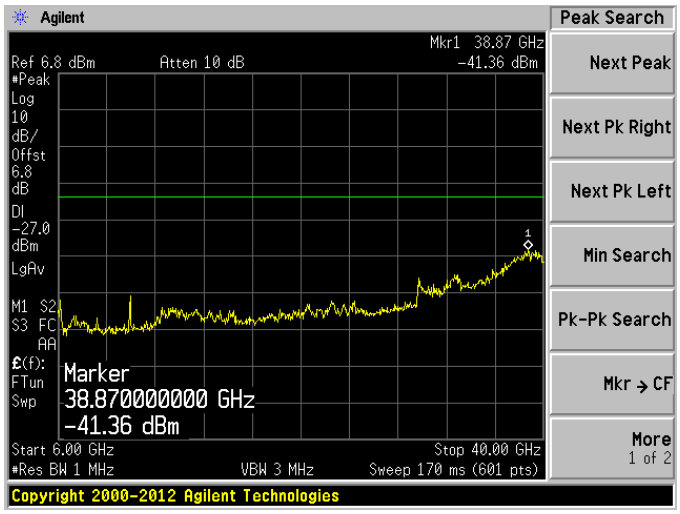


802.11n-HT40, Low Channel 5510 MHz

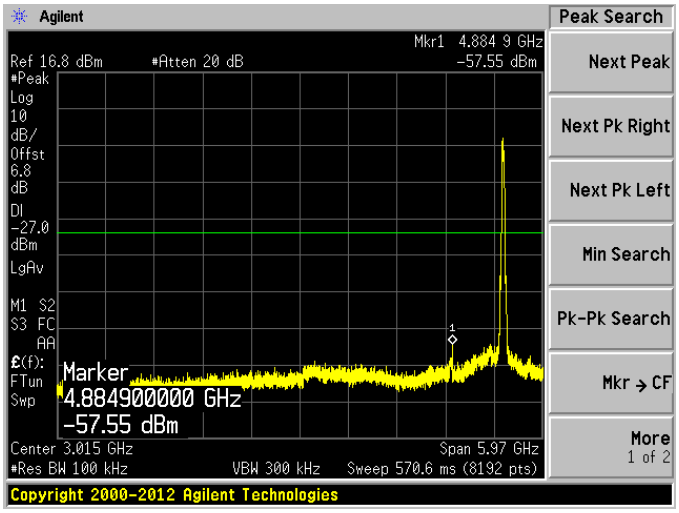
Chain 0, Plot: 30 MHz – 6 GHz



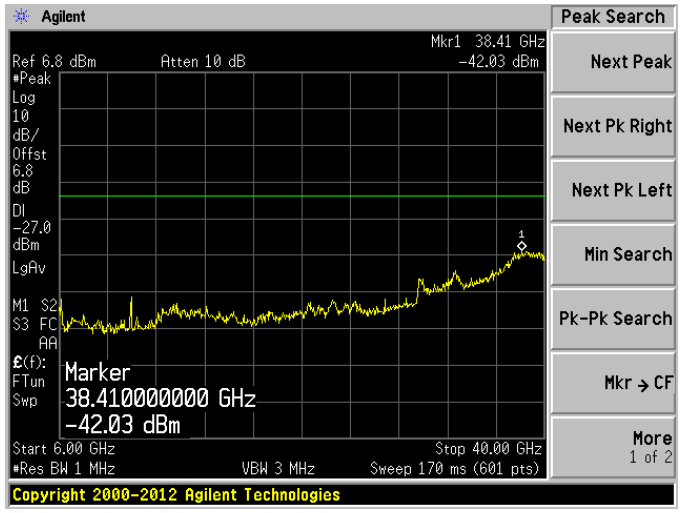
Chain 0, Plot: 6 GHz – 40 GHz



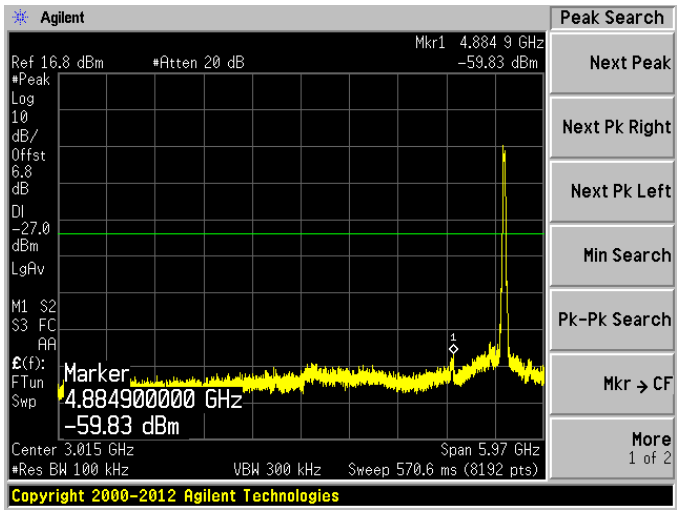
Chain 1, Plot: 30 MHz – 6 GHz



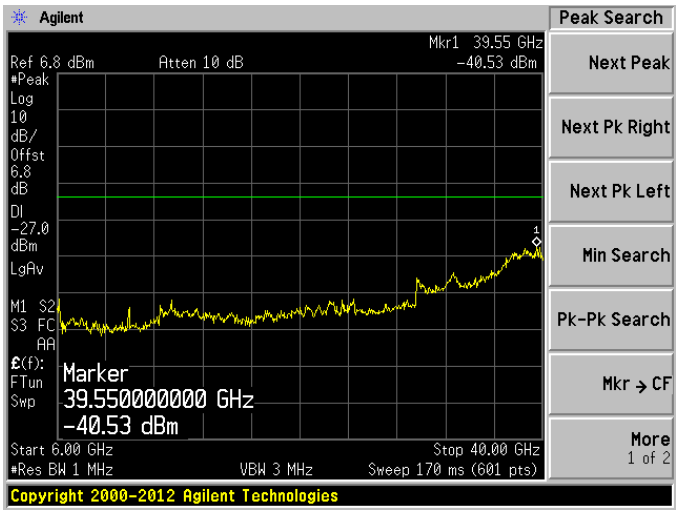
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

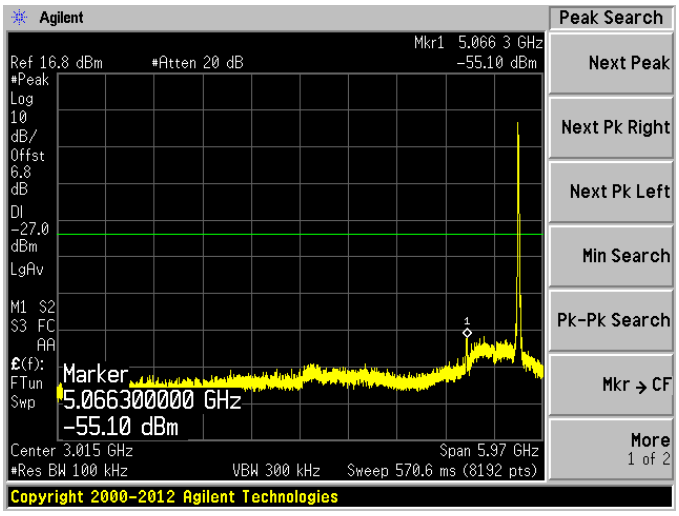


Chain 2, Plot: 6 GHz – 40 GHz

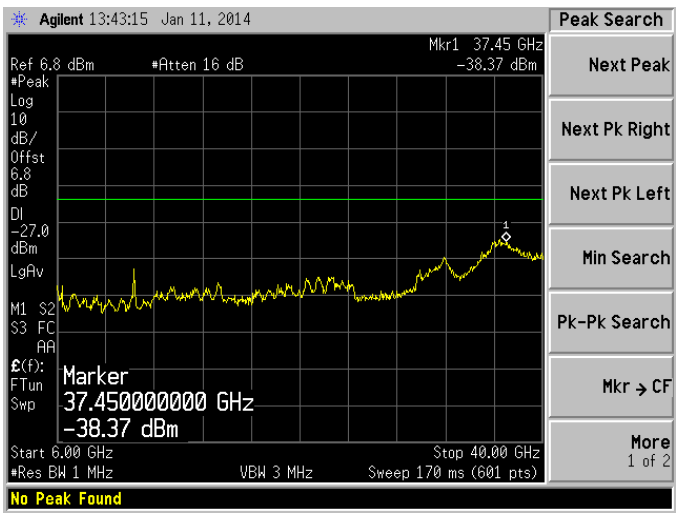


802.11n-HT20, High Channel 5700 MHz

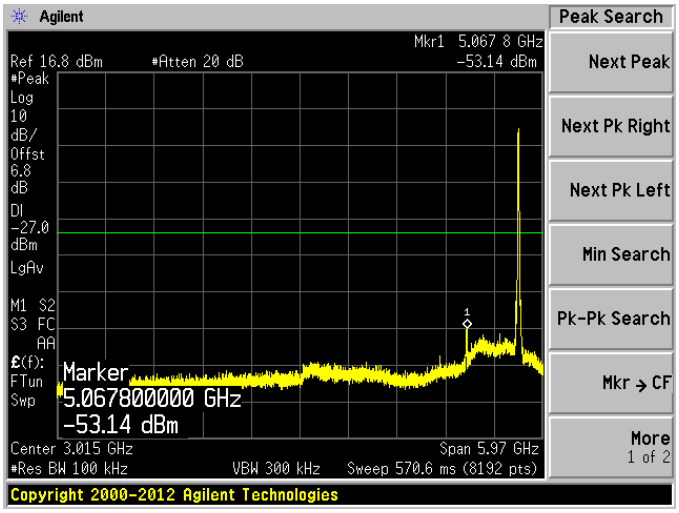
Chain 0, Plot: 30 MHz – 6 GHz



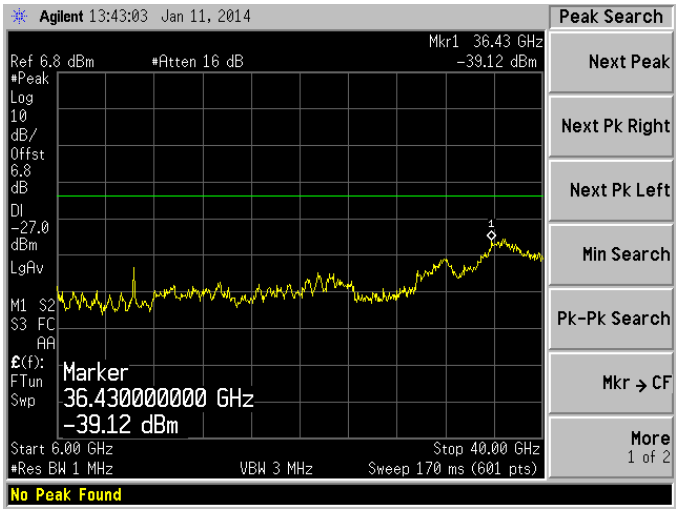
Chain 0, Plot: 6 GHz – 40 GHz



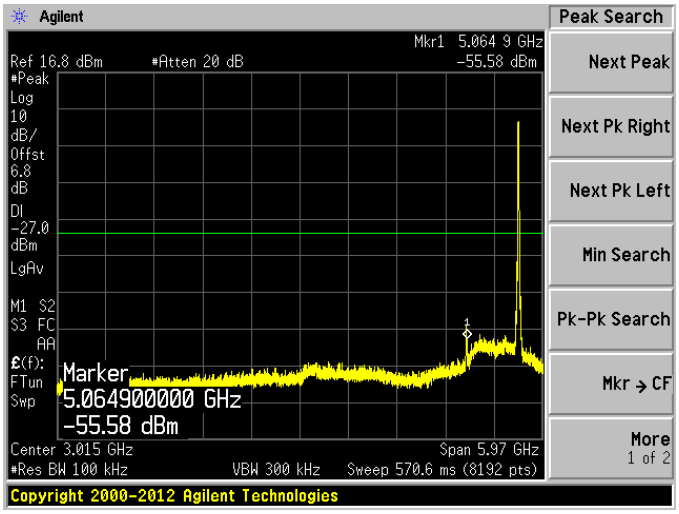
Chain 1, Plot: 30 MHz – 6 GHz



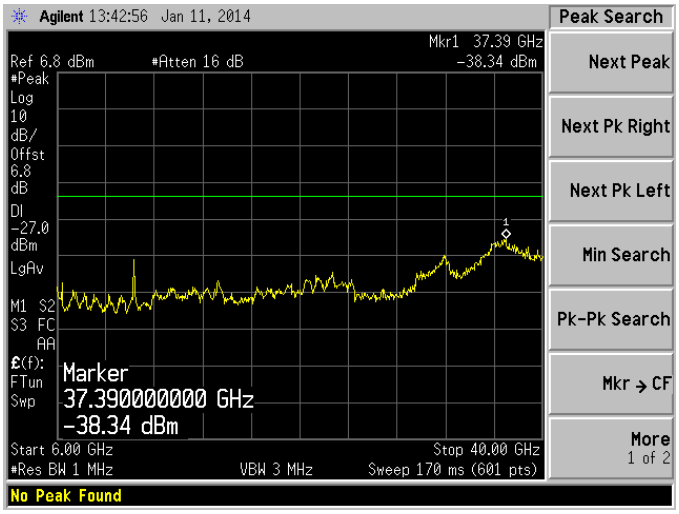
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

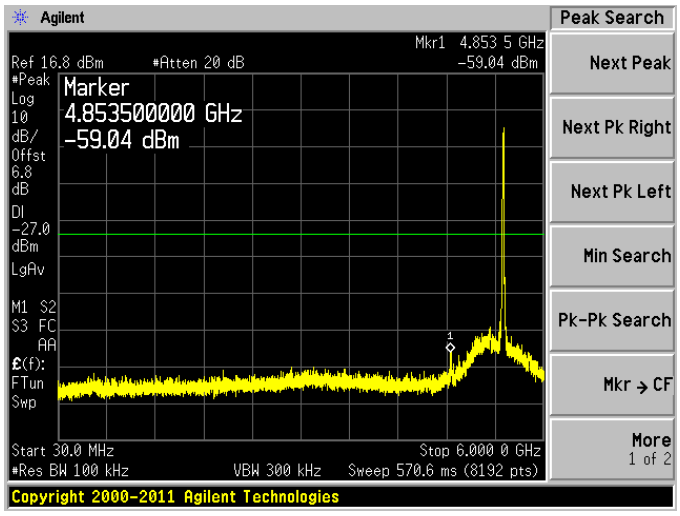


Chain 2, Plot: 6 GHz – 40 GHz

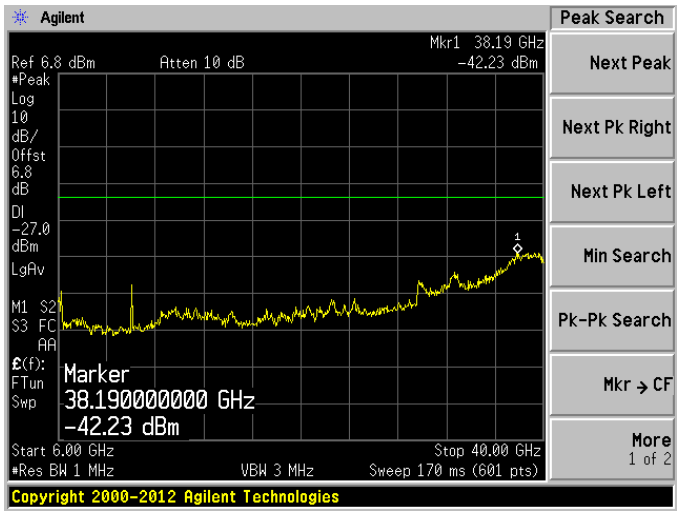


802.11n-HT20, Middle Channel 5580 MHz

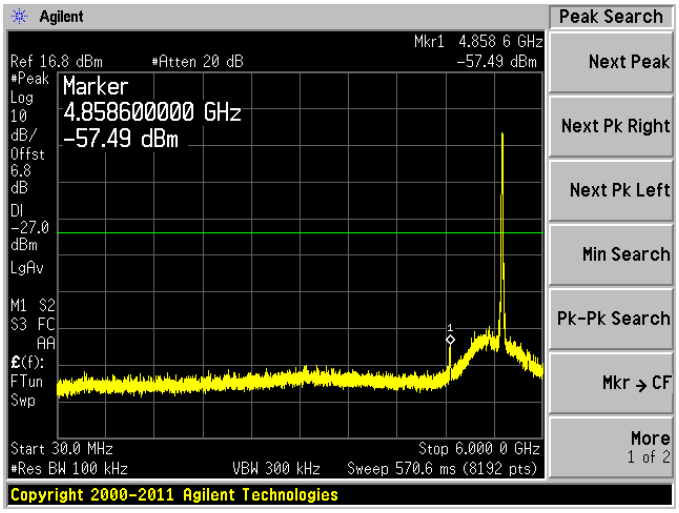
Chain 0, Plot: 30 MHz – 6 GHz



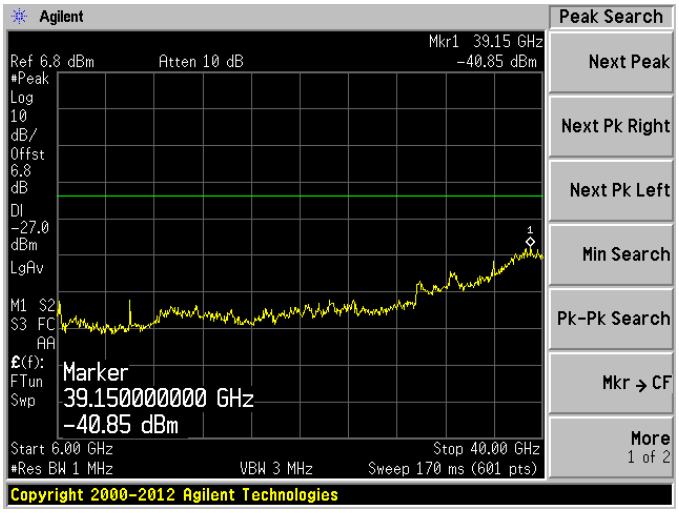
Chain 0, Plot: 6 GHz – 40 GHz



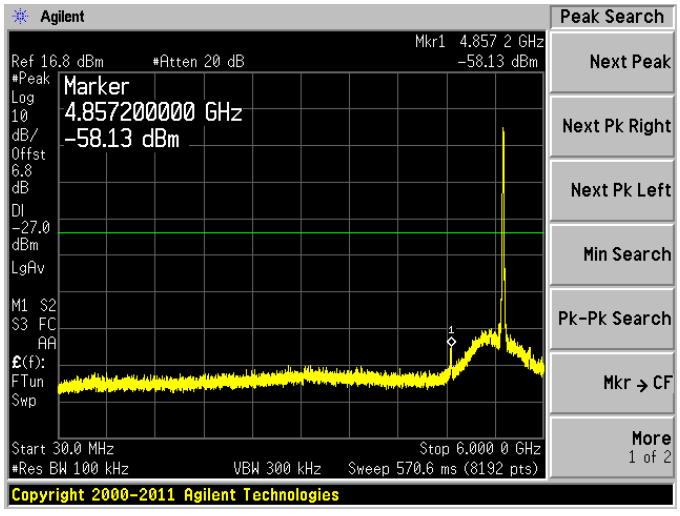
Chain 1, Plot: 30 MHz – 6 GHz



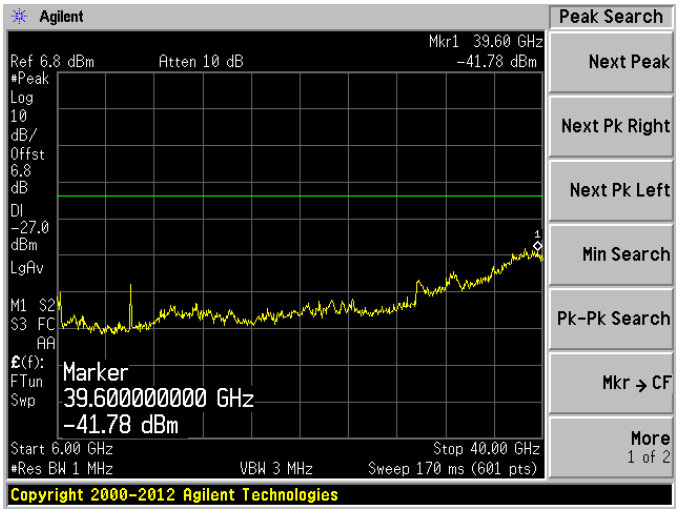
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

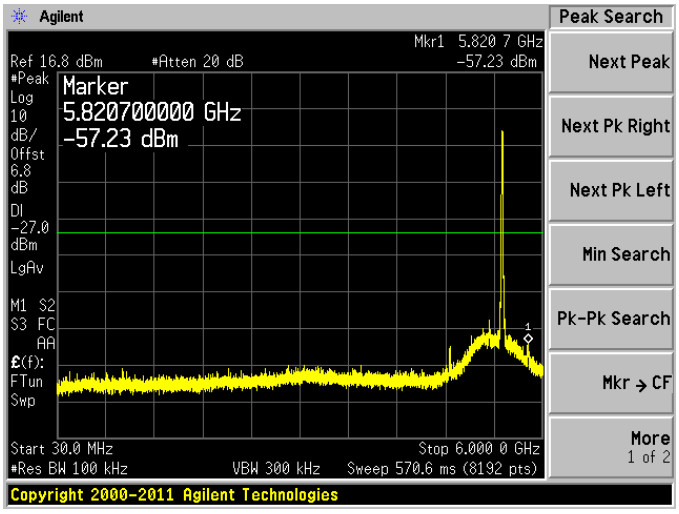


Chain 2, Plot: 6 GHz – 40 GHz

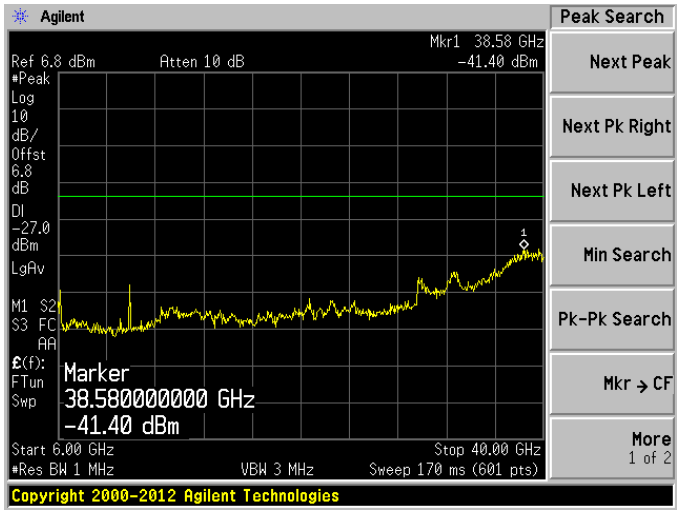


802.11n-HT 20, Low Channel 5500 MHz

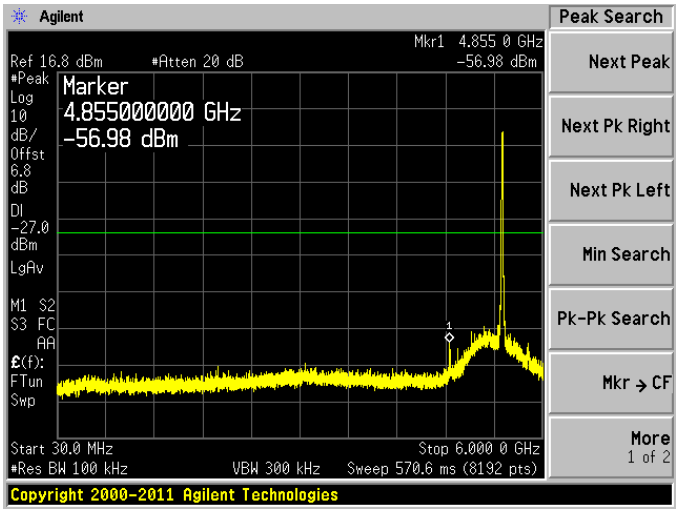
Chain 0, Plot: 30 MHz – 6 GHz



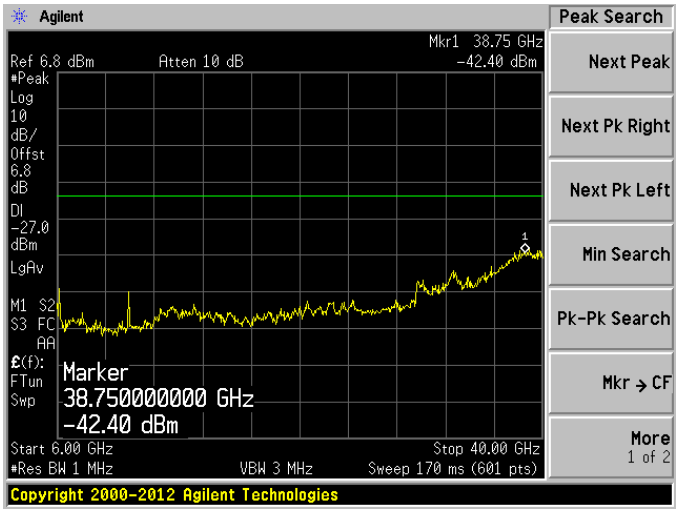
Chain 0, Plot: 6 GHz – 40 GHz



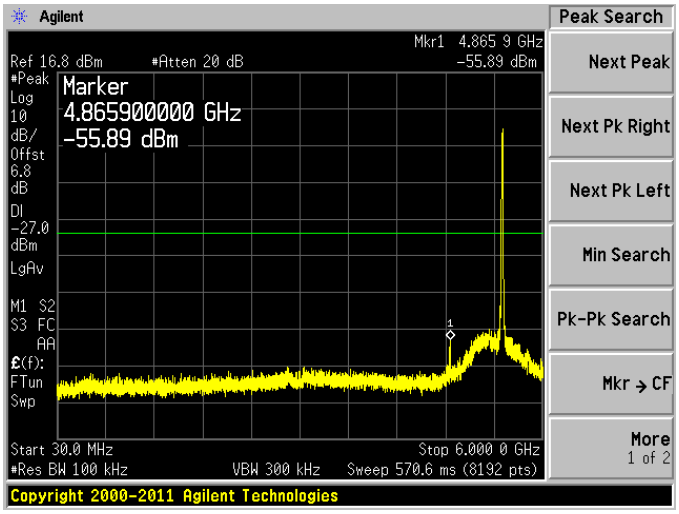
Chain 1, Plot: 30 MHz – 6 GHz



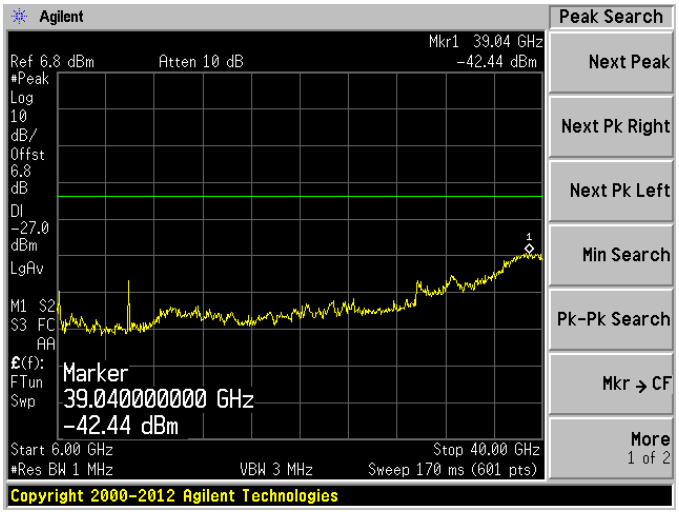
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

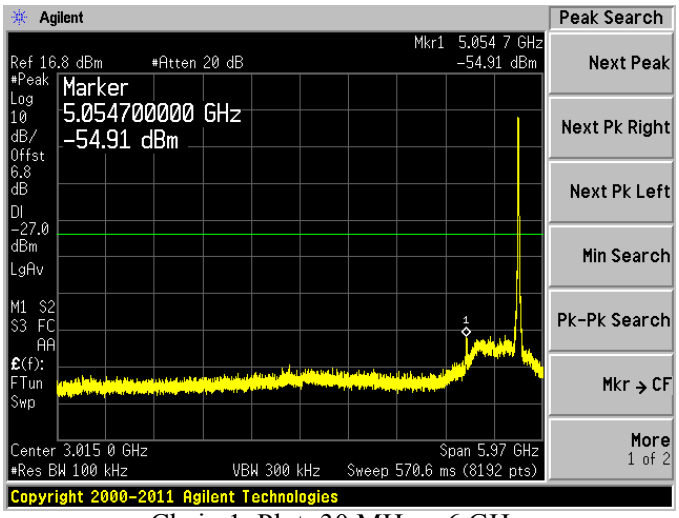


Chain 2, Plot: 6 GHz – 40 GHz

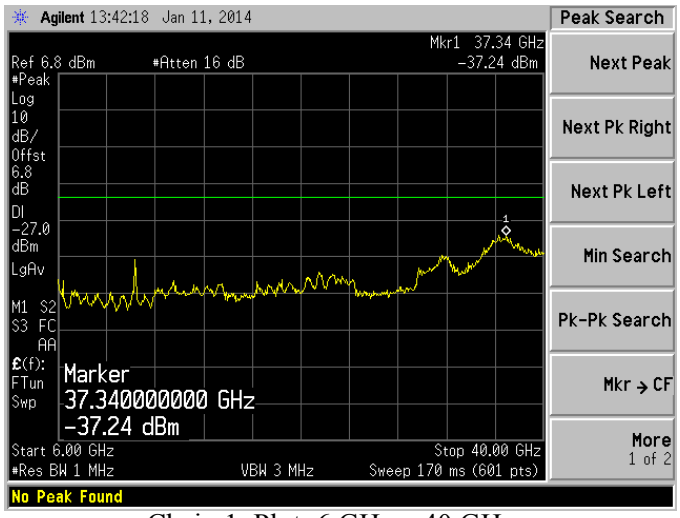


802.11a, High Channel, 5700 MHz

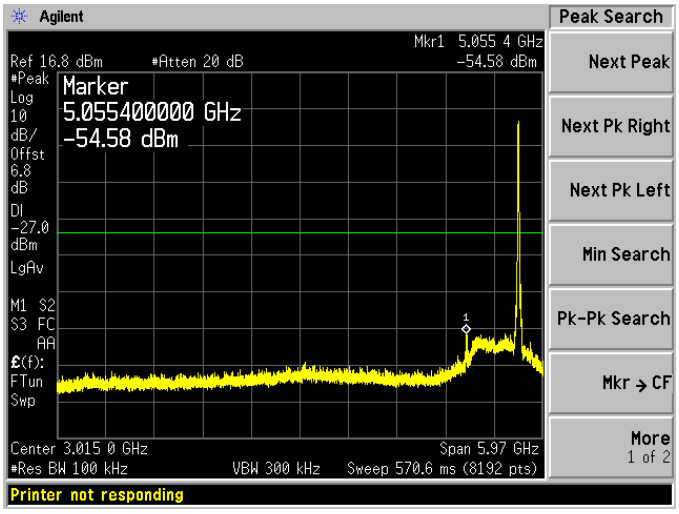
Chain 0, Plot: 30 MHz – 6 GHz



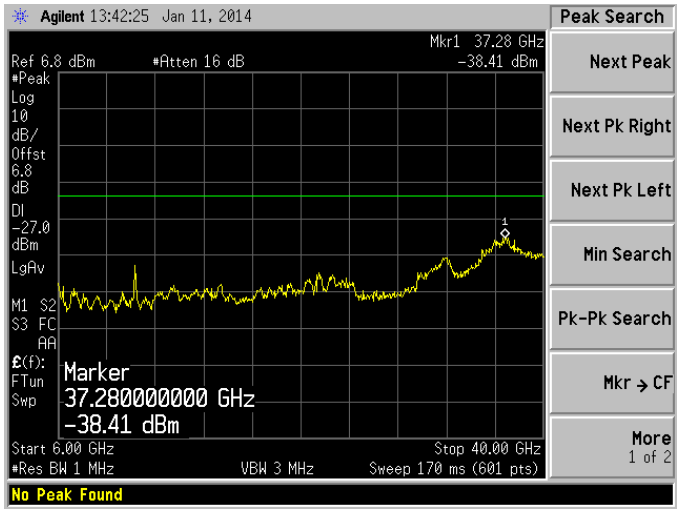
Chain 0, Plot: 6 GHz – 40 GHz



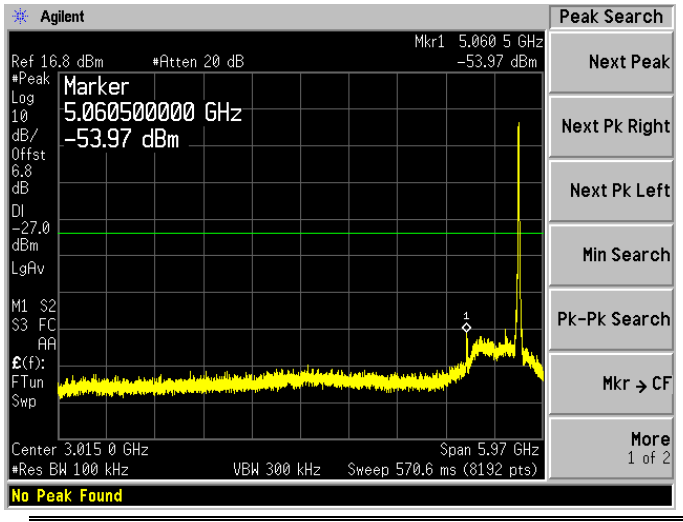
Chain 1, Plot: 30 MHz – 6 GHz



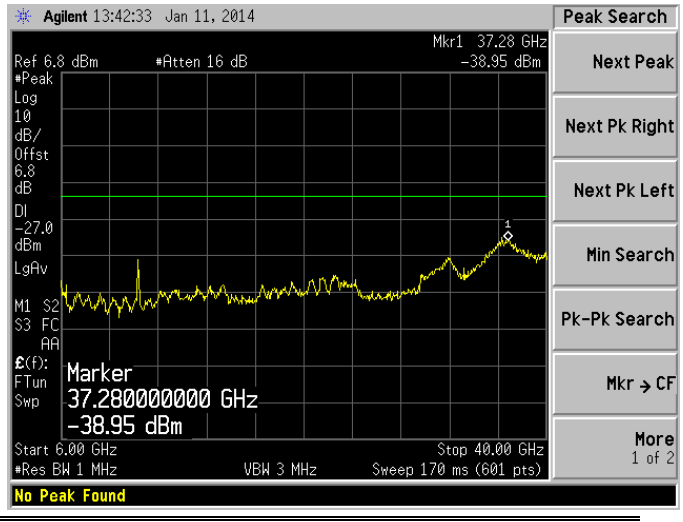
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

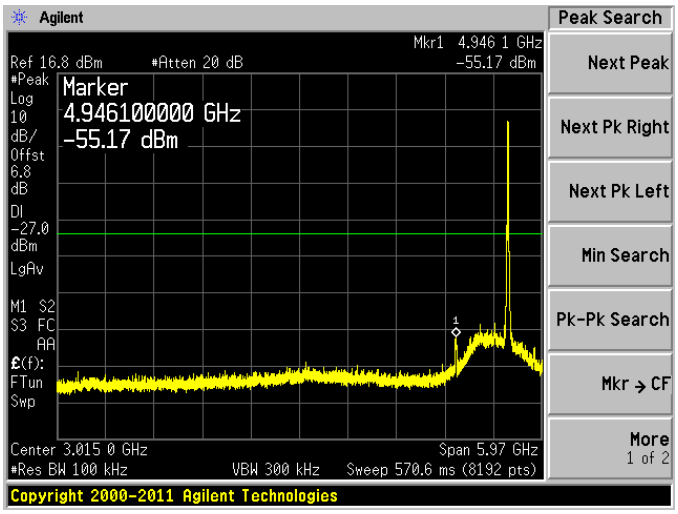


Chain 2, Plot: 6 GHz – 40 GHz

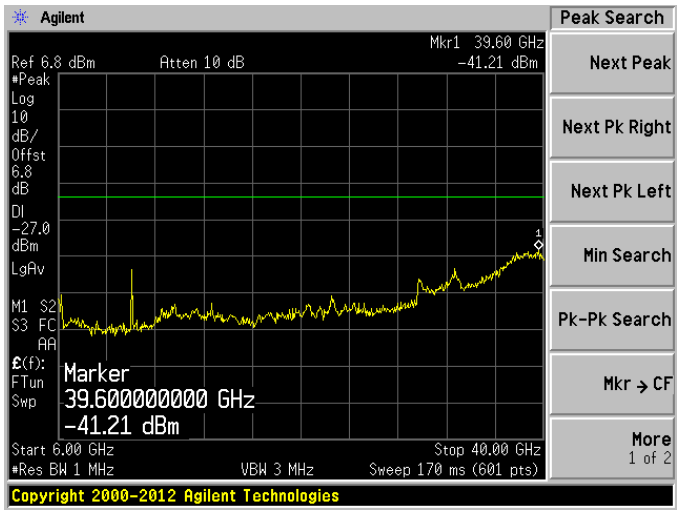


802.11a, Middle Channel, 5580 MHz

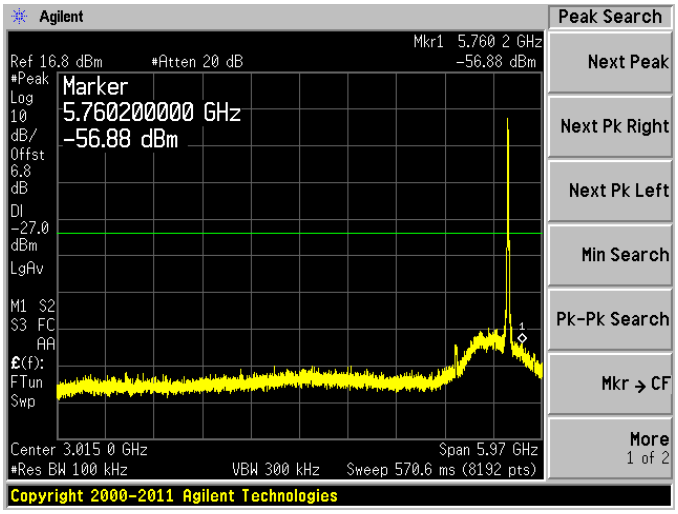
Chain 0, Plot: 30 MHz – 6 GHz



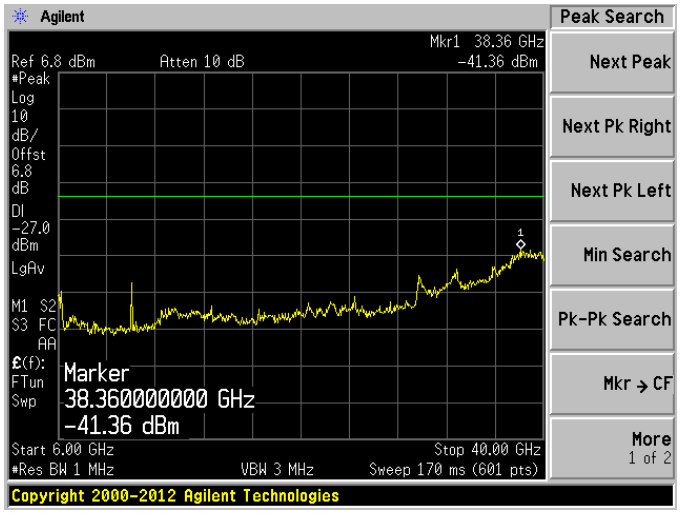
Chain 0, Plot: 6 GHz – 40 GHz



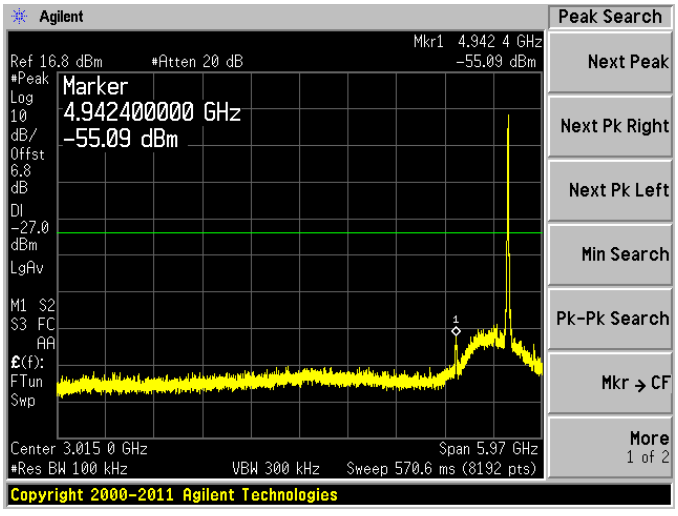
Chain 1, Plot: 30 MHz – 6 GHz



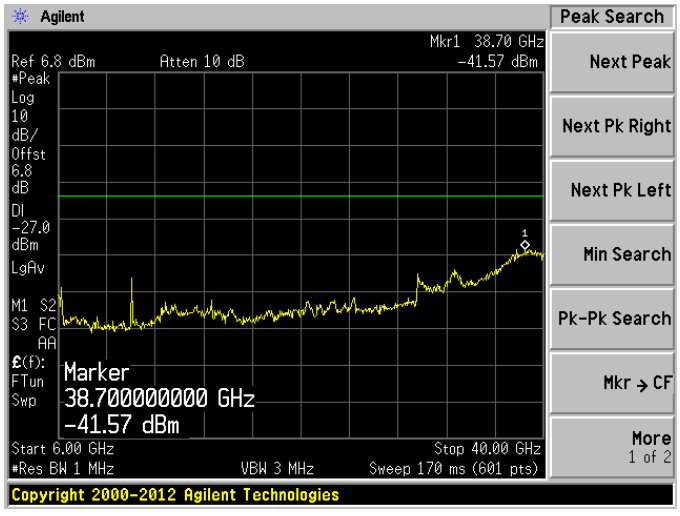
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz



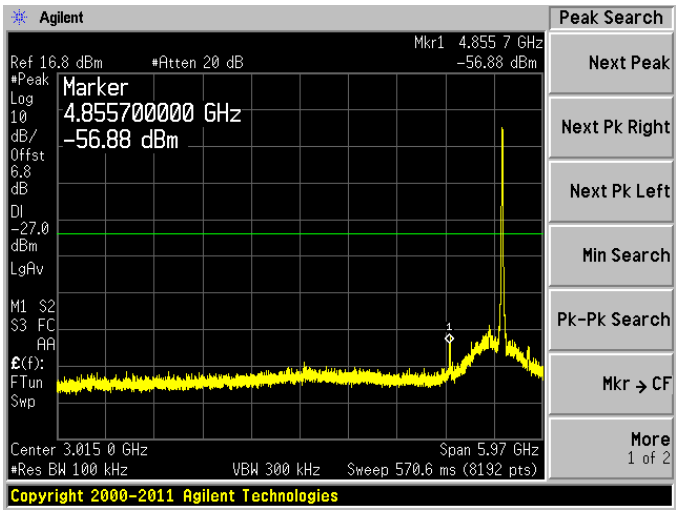
Chain 2, Plot: 6 GHz – 40 GHz



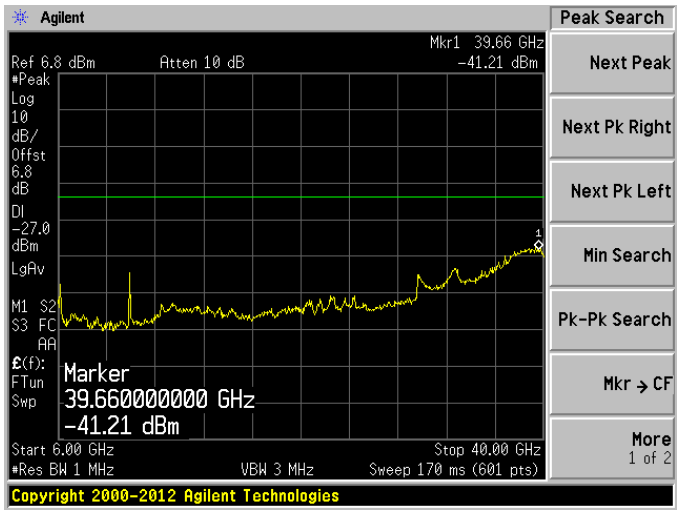
5.6 GHz Band

802.11a, Low Channel, 5500 MHz

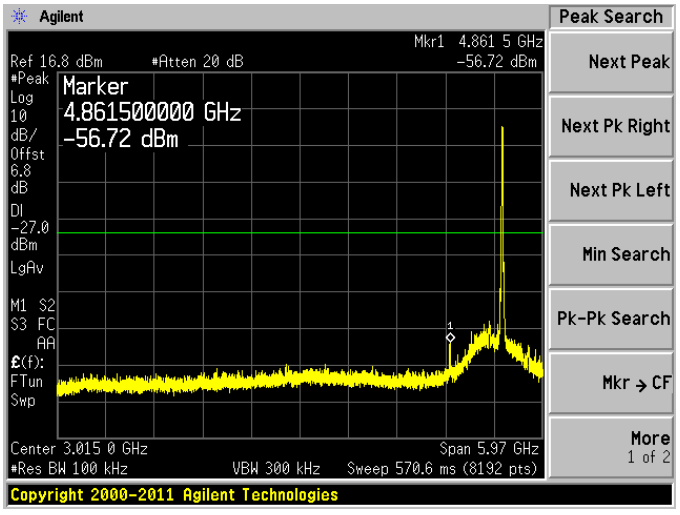
Chain 0, Plot: 30 MHz – 6 GHz



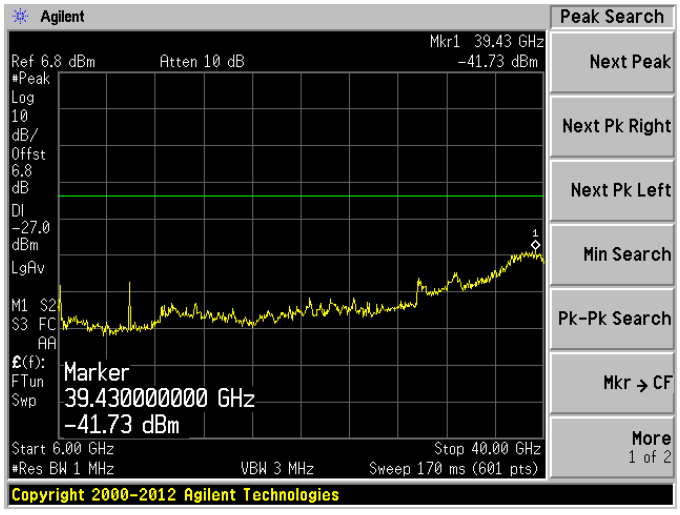
Chain 0, Plot: 6 GHz – 40 GHz



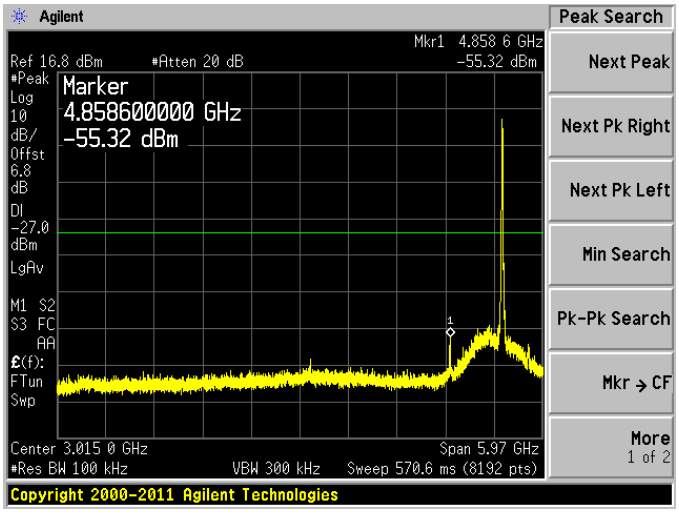
Chain 1, Plot: 30 MHz – 6 GHz



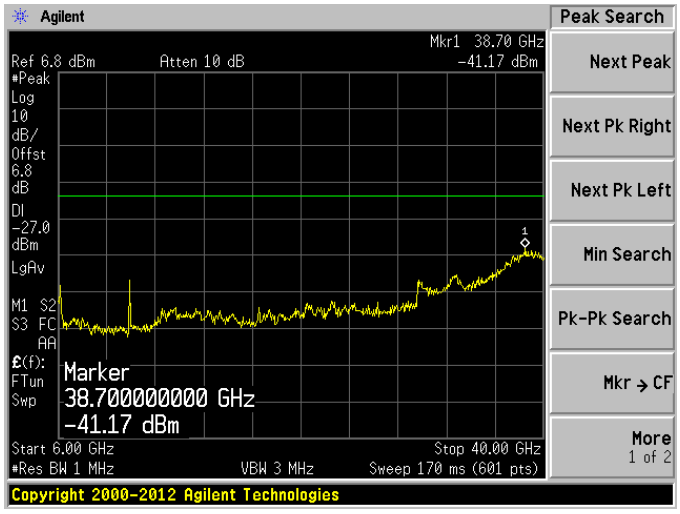
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

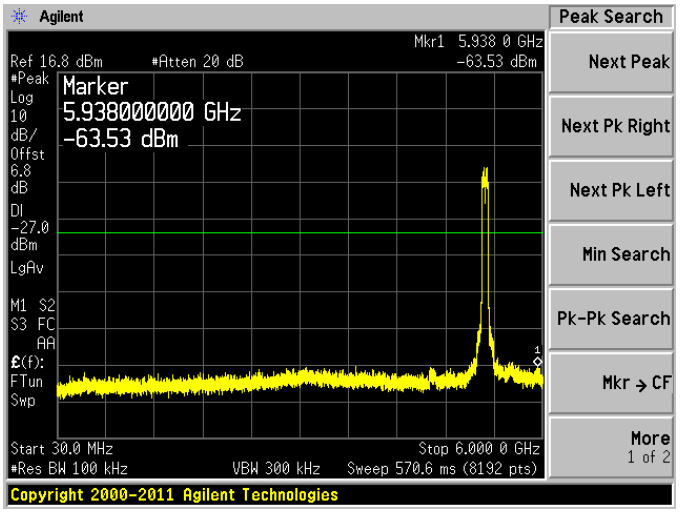


Chain 2, Plot: 6 GHz – 40 GHz

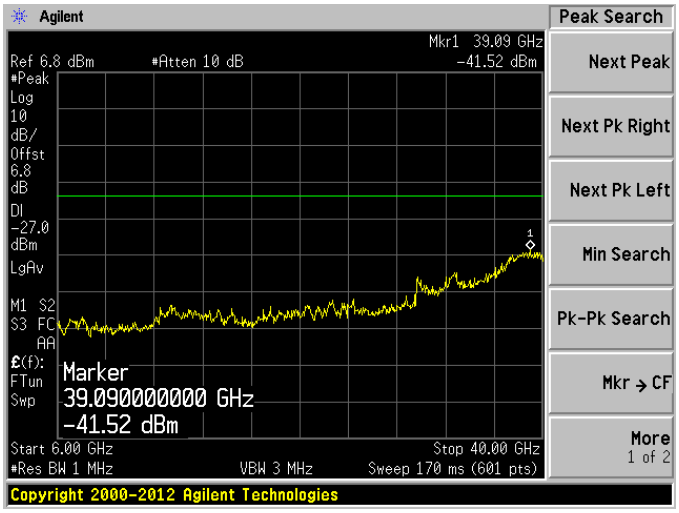


802.11ac-VHT80, High Channel 5290 MHz

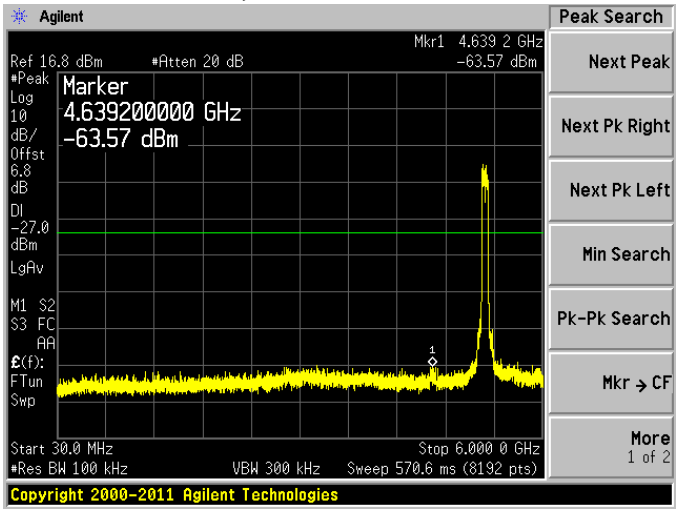
Chain 0, Plot: 30 MHz – 6 GHz



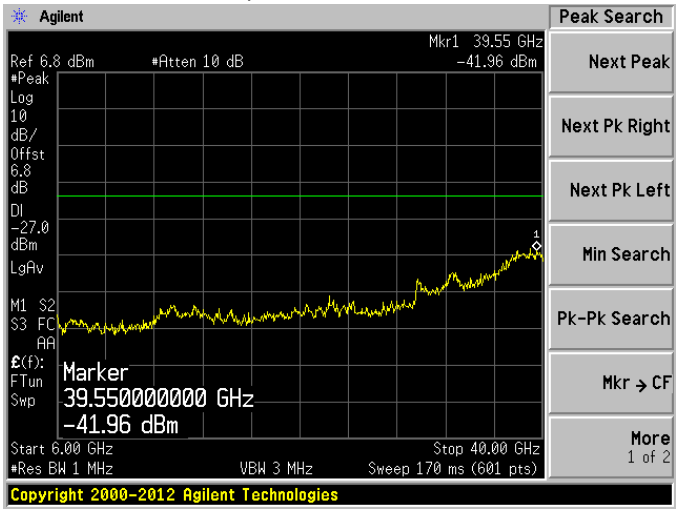
Chain 0, Plot: 6 GHz – 40 GHz



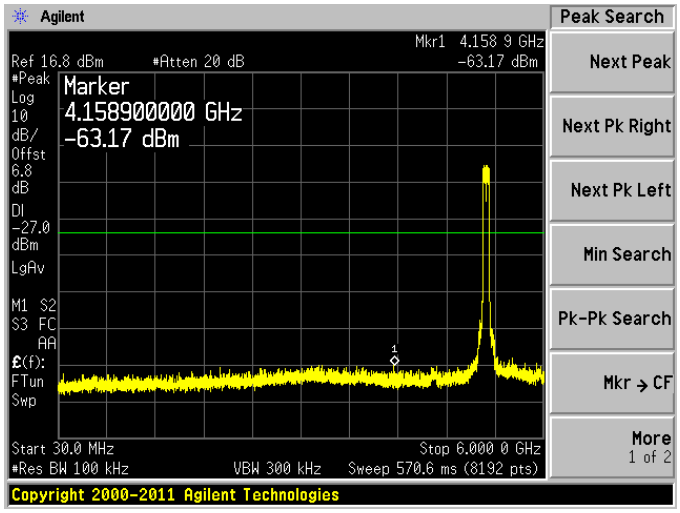
Chain 1, Plot: 30 MHz – 6 GHz



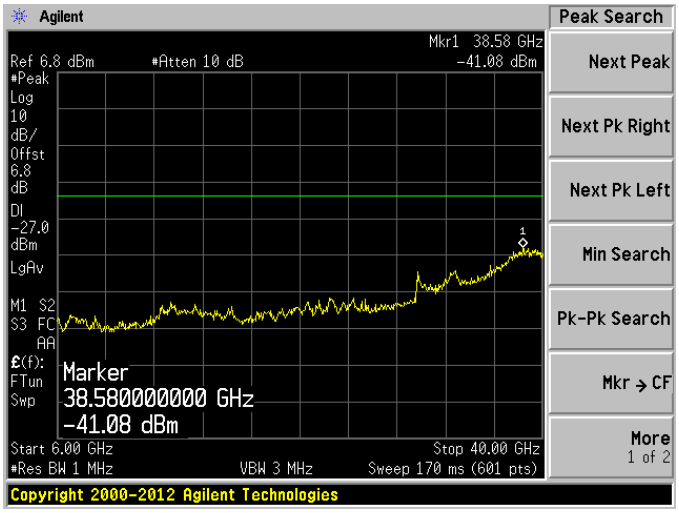
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

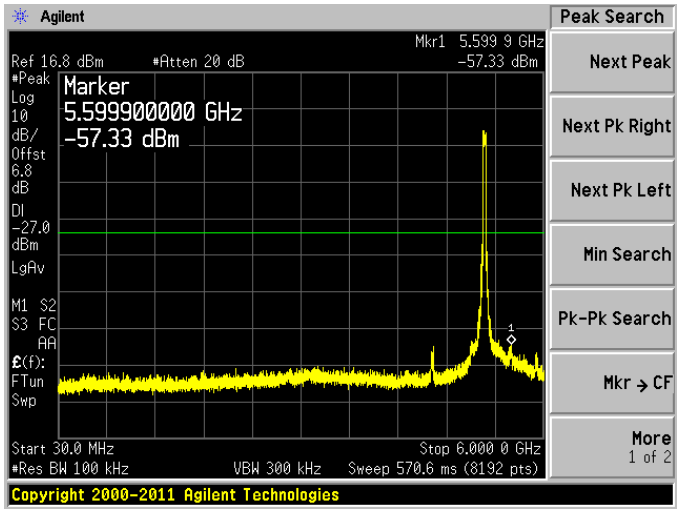


Chain 2, Plot: 6 GHz – 40 GHz

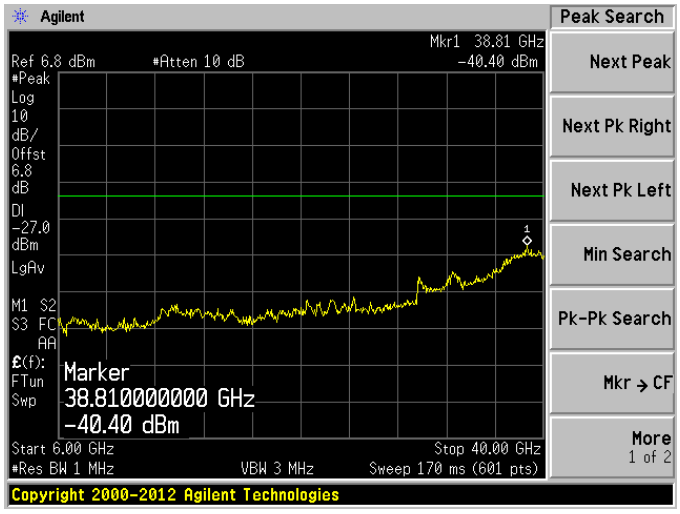


802.11n-HT40, High Channel 5310 MHz

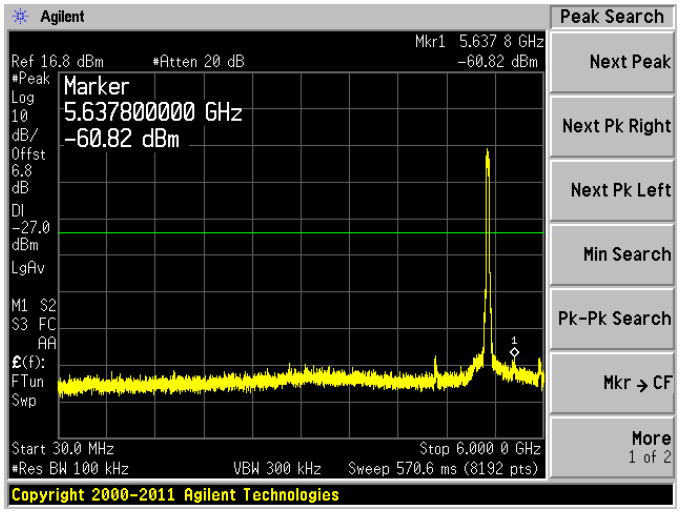
Chain 0, Plot: 30 MHz – 6 GHz



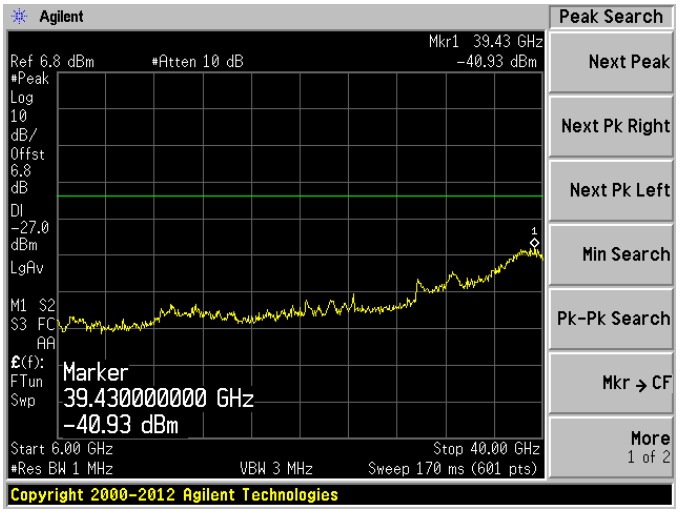
Chain 0, Plot: 6 GHz – 40 GHz



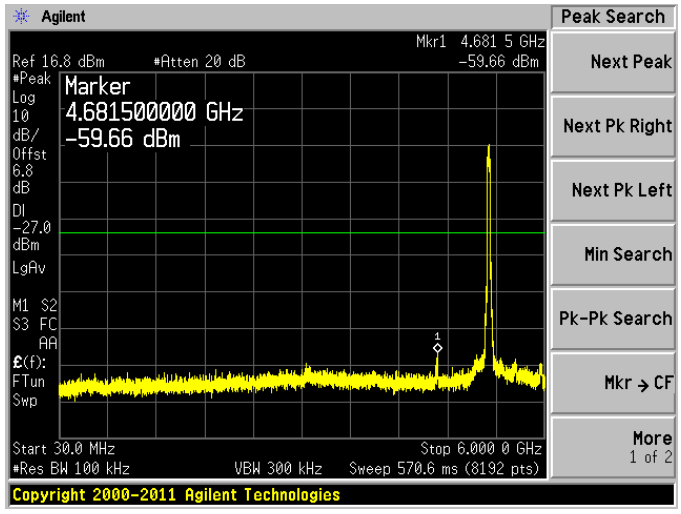
Chain 1, Plot: 30 MHz – 6 GHz



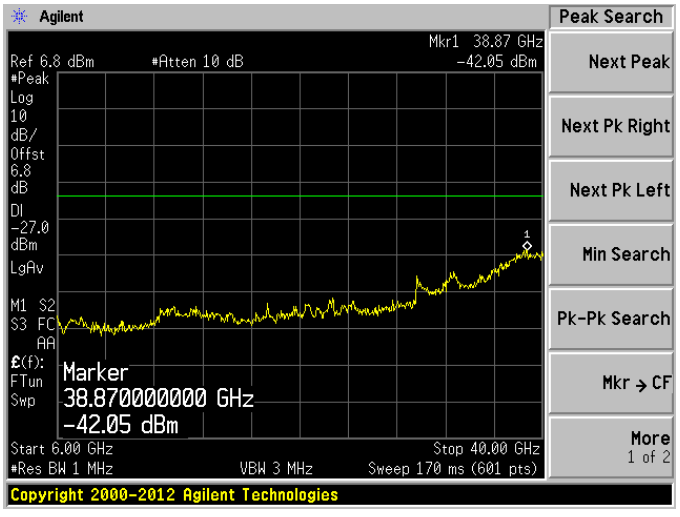
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

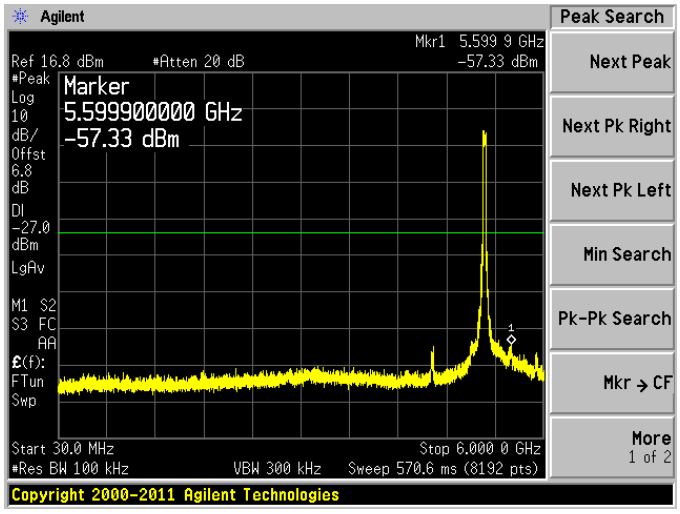


Chain 2, Plot: 6 GHz – 40 GHz

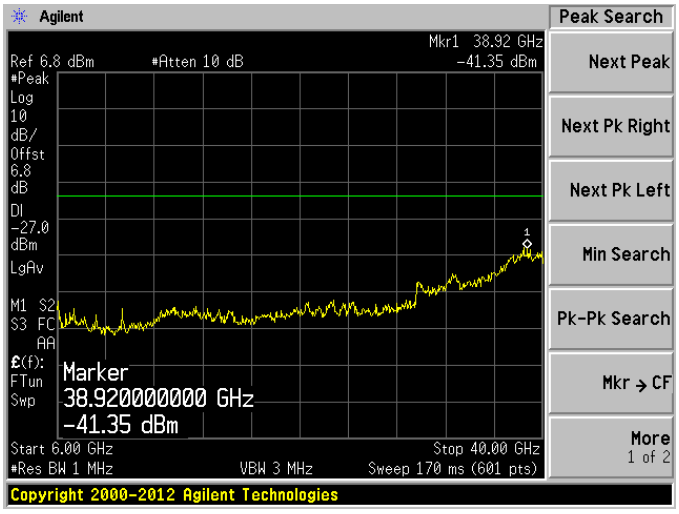


802.11n-HT40, Low Channel 5270 MHz

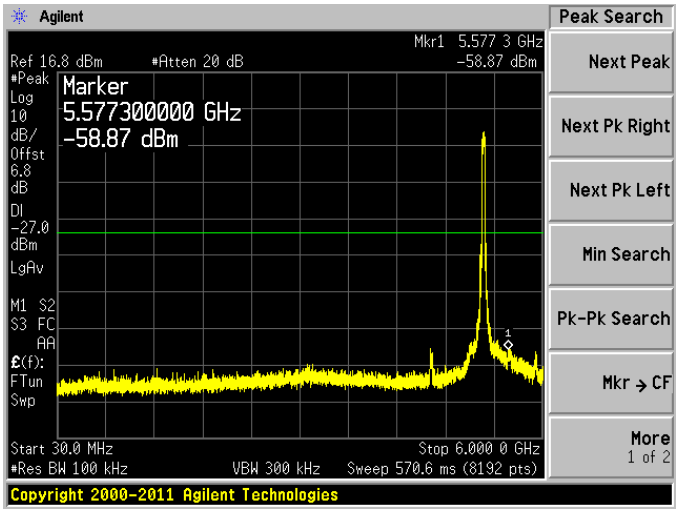
Chain 0, Plot: 30 MHz – 6 GHz



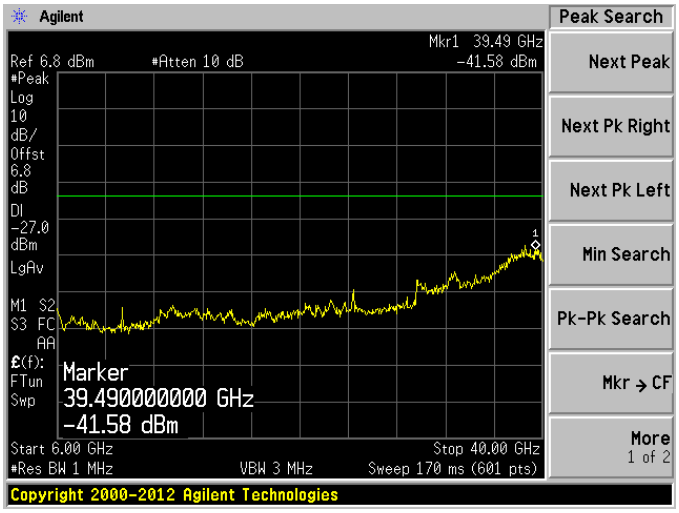
Chain 0, Plot: 6 GHz – 40 GHz



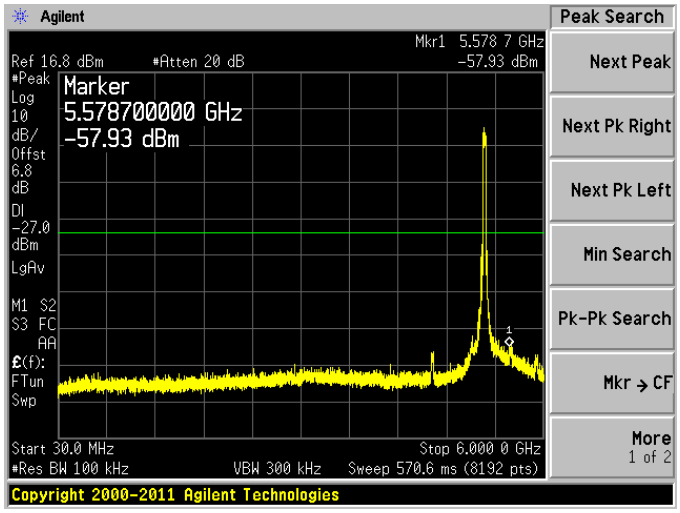
Chain 1, Plot: 30 MHz – 6 GHz



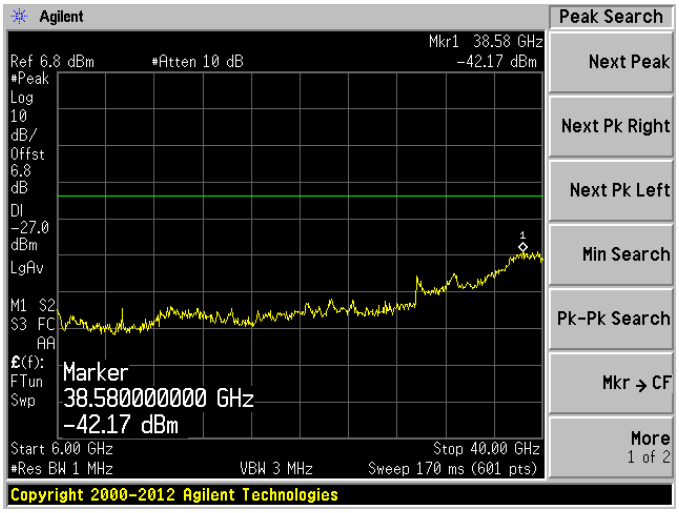
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

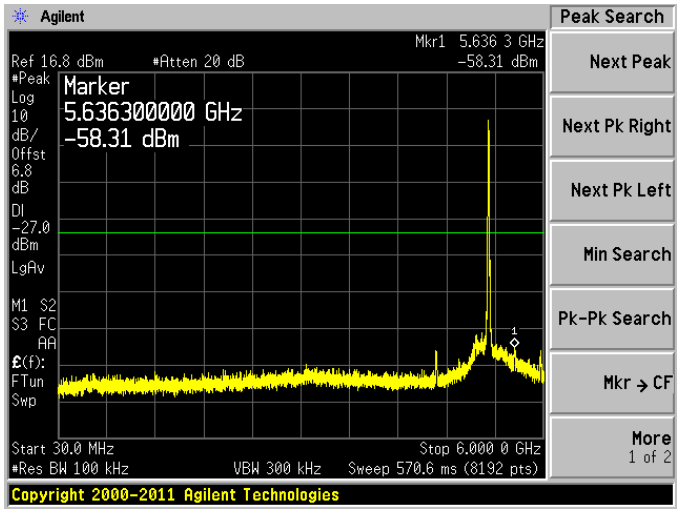


Chain 2, Plot: 6 GHz – 40 GHz

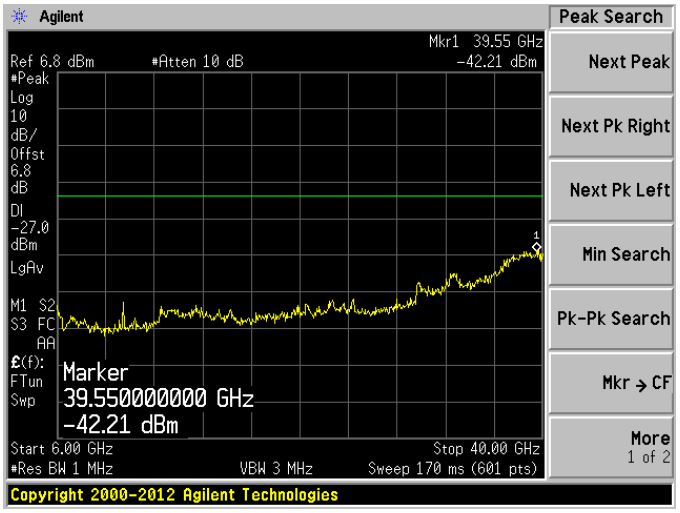


802.11n-HT20, High Channel, 5320 MHz

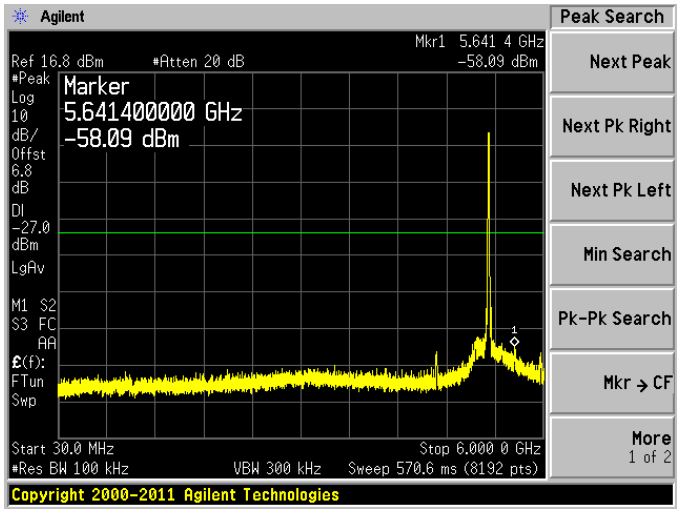
Chain 0, Plot: 30 MHz – 6 GHz



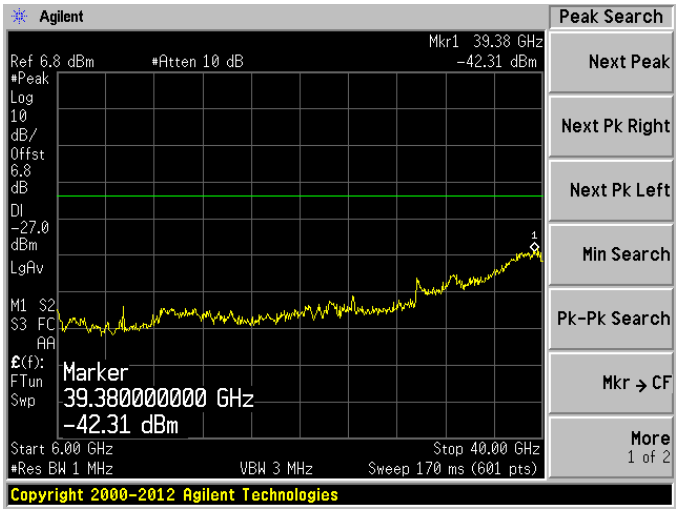
Chain 0, Plot: 6 GHz – 40 GHz



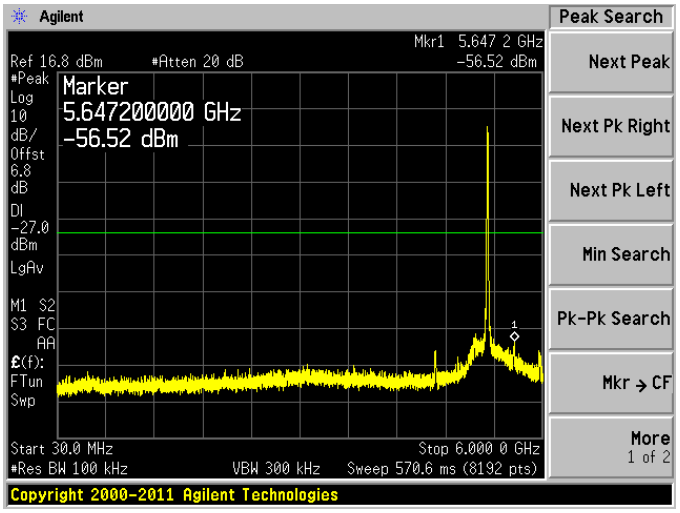
Chain 1, Plot: 30 MHz – 6 GHz



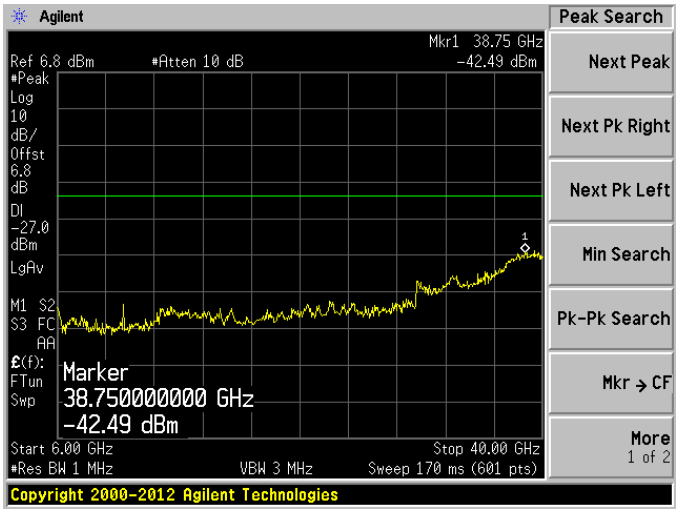
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

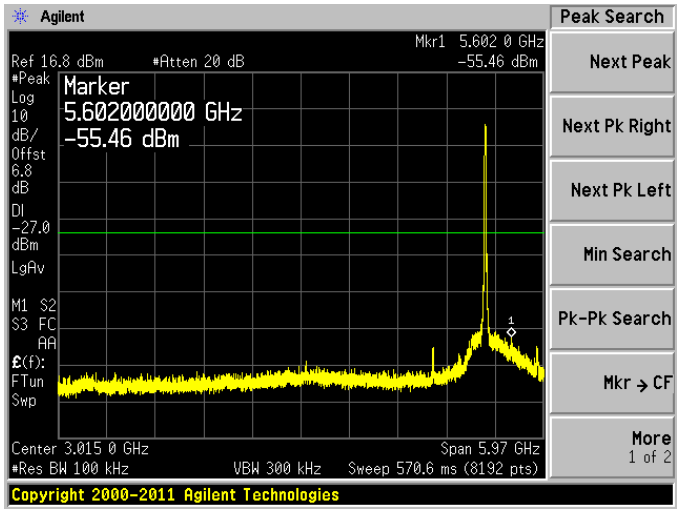


Chain 2, Plot: 6 GHz – 40 GHz

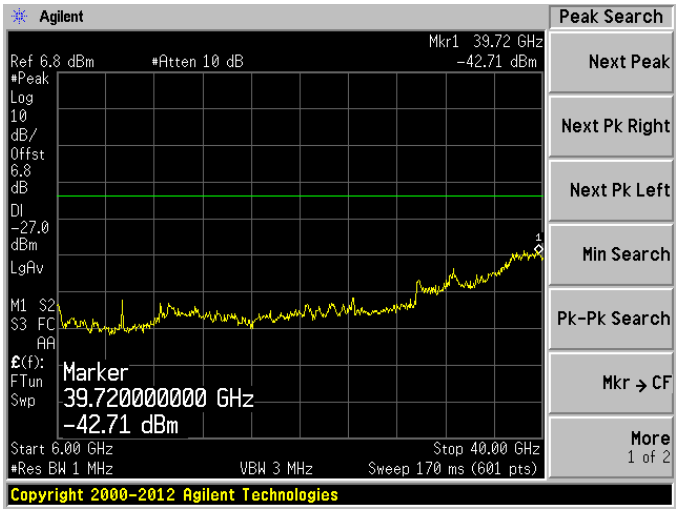


802.11n-HT20, Middle Channel 5280 MHz

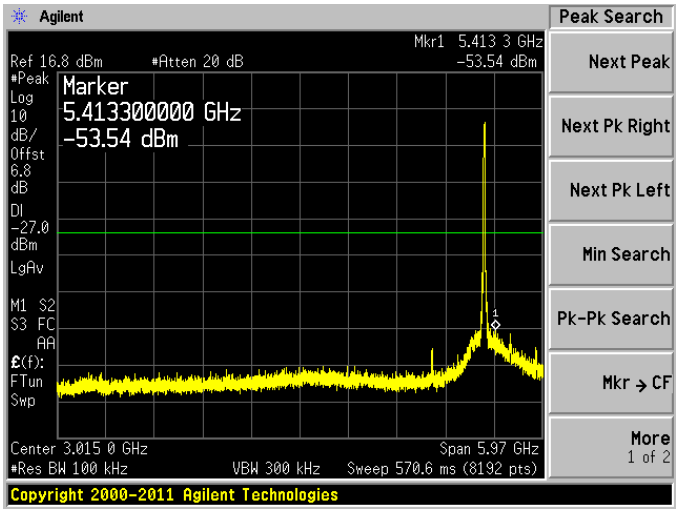
Chain 0, Plot: 30 MHz – 6 GHz



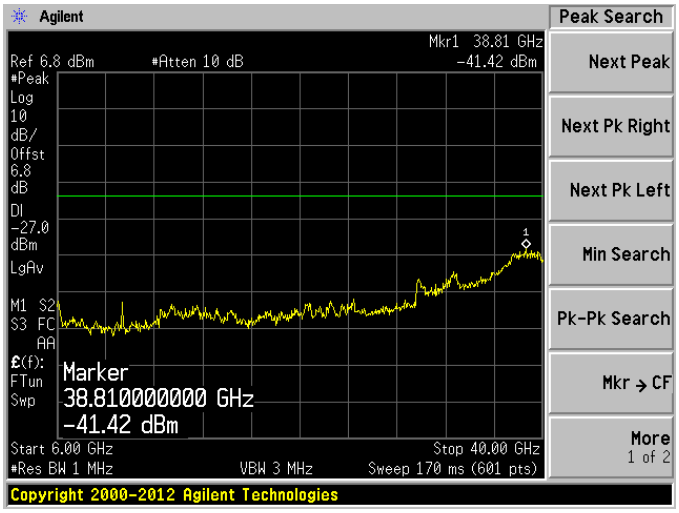
Chain 0, Plot: 6 GHz – 40 GHz



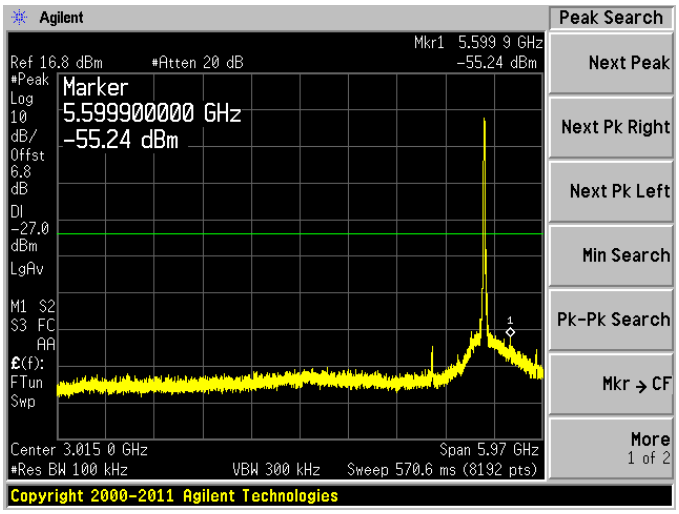
Chain 1, Plot: 30 MHz – 6 GHz



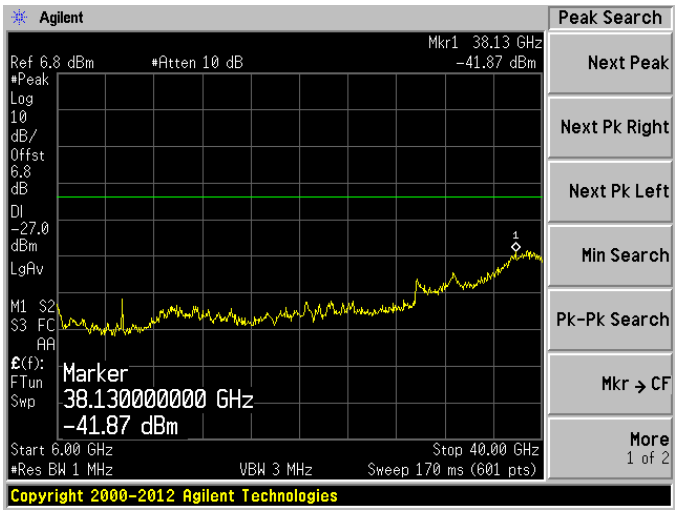
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

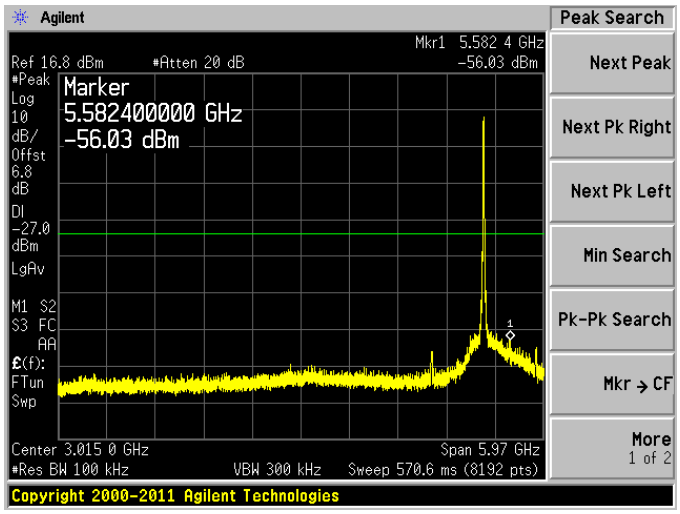


Chain 2, Plot: 6 GHz – 40 GHz

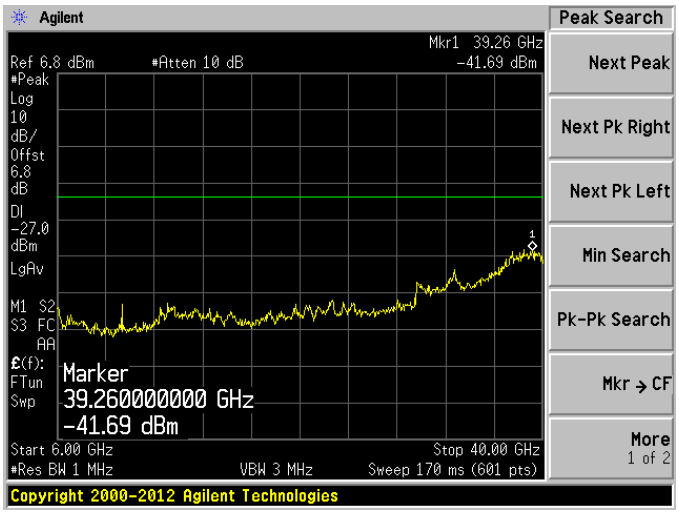


802.11n-HT20, Low Channel 5260 MHz

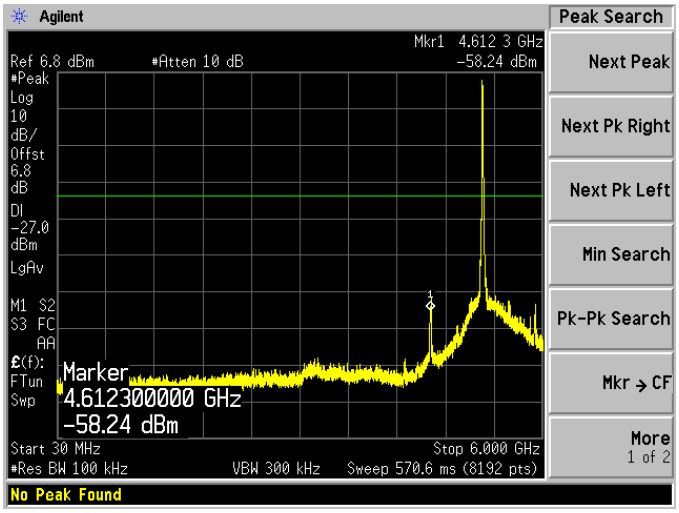
Chain 0, Plot: 30 MHz – 6 GHz



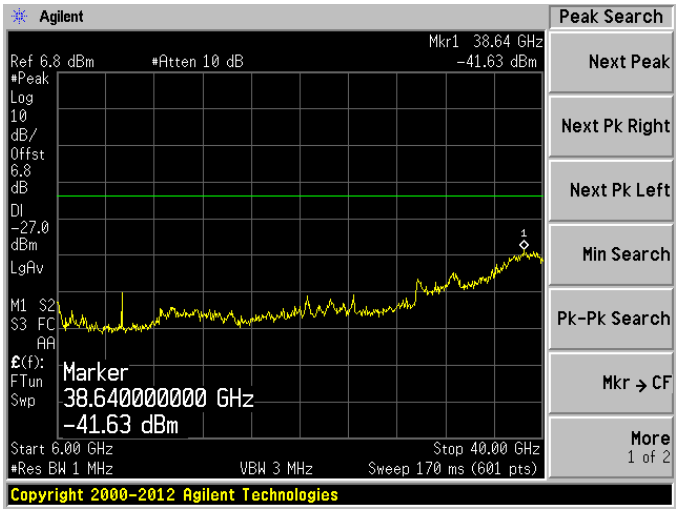
Chain 0, Plot: 6 GHz – 40 GHz



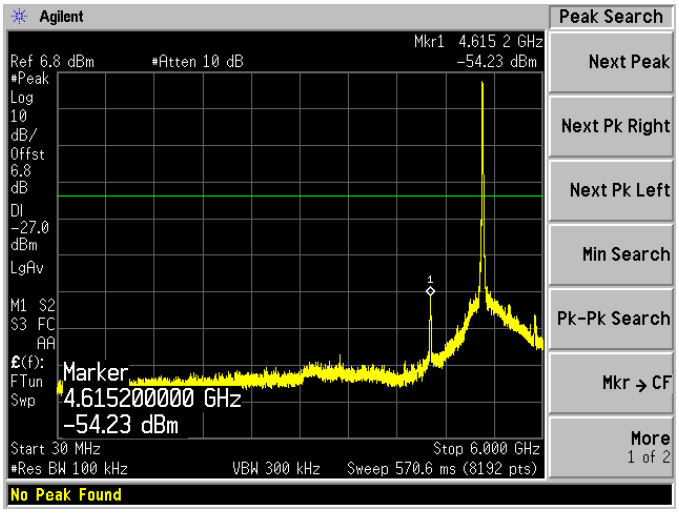
Chain 1, Plot: 30 MHz – 6 GHz



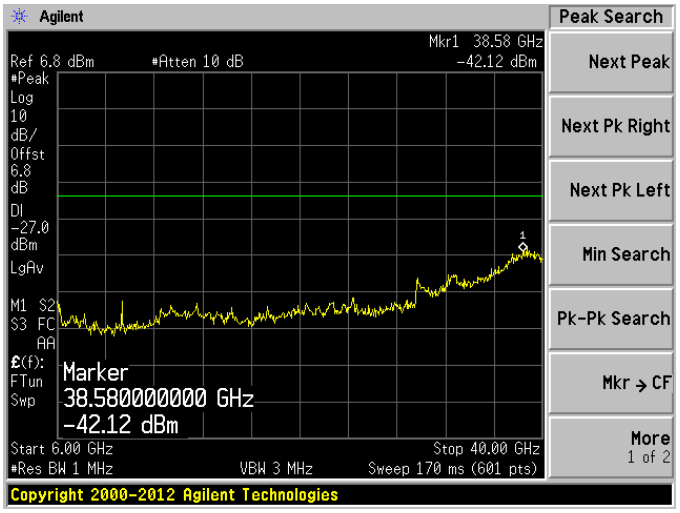
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

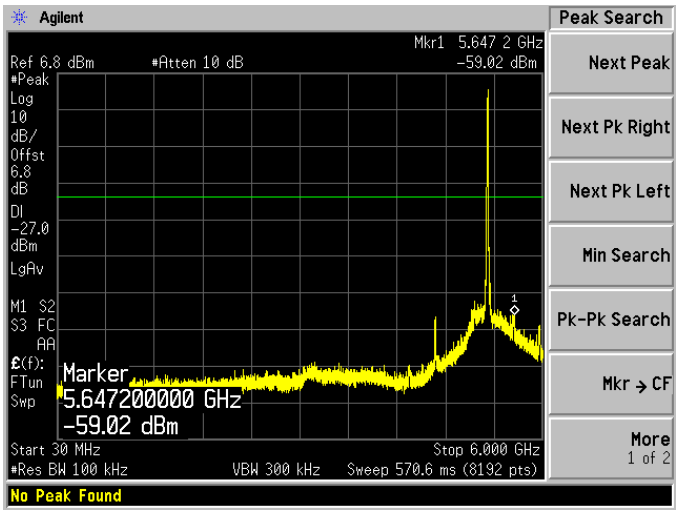


Chain 2, Plot: 6 GHz – 40 GHz

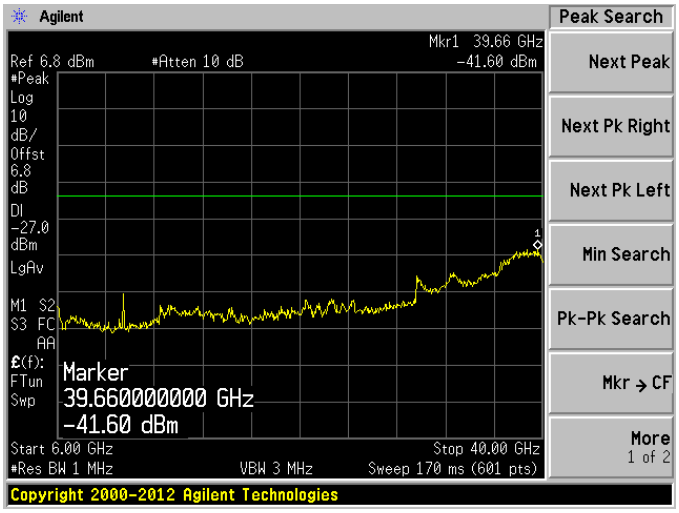


802.11a, High Channel, 5320 MHz

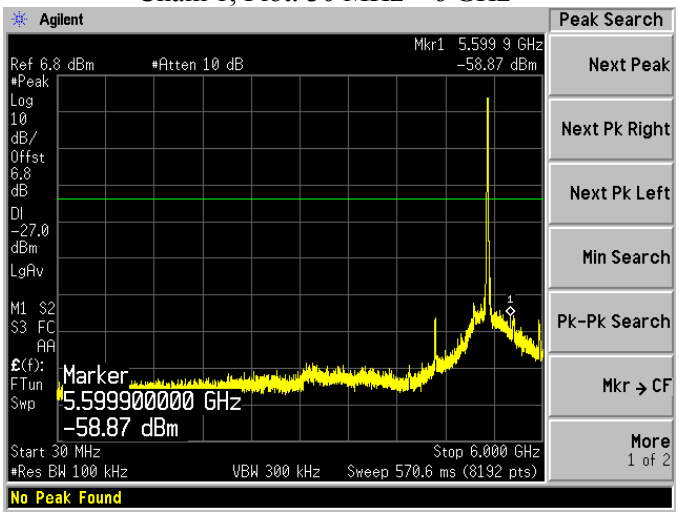
Chain 0, Plot: 30 MHz – 6 GHz



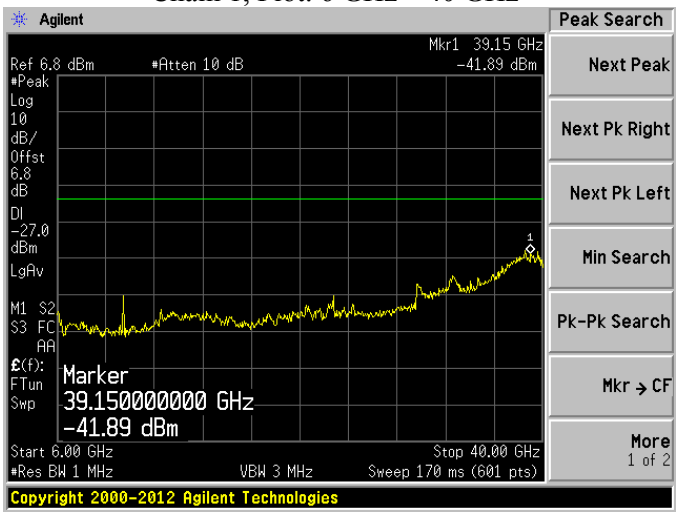
Chain 0, Plot: 6 GHz – 40 GHz



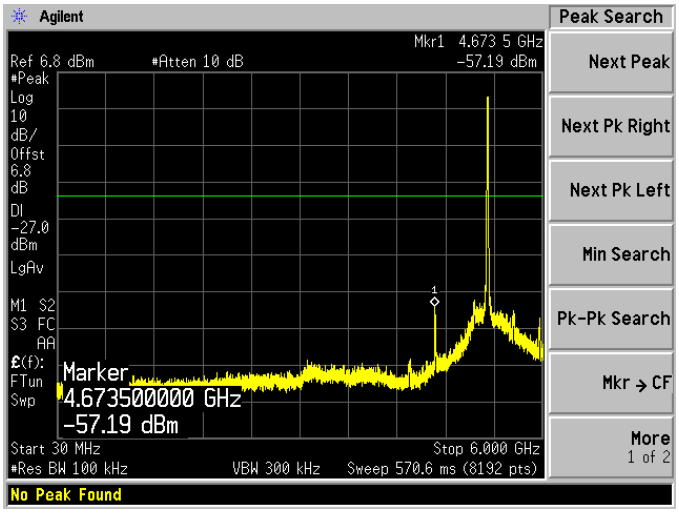
Chain 1, Plot: 30 MHz – 6 GHz



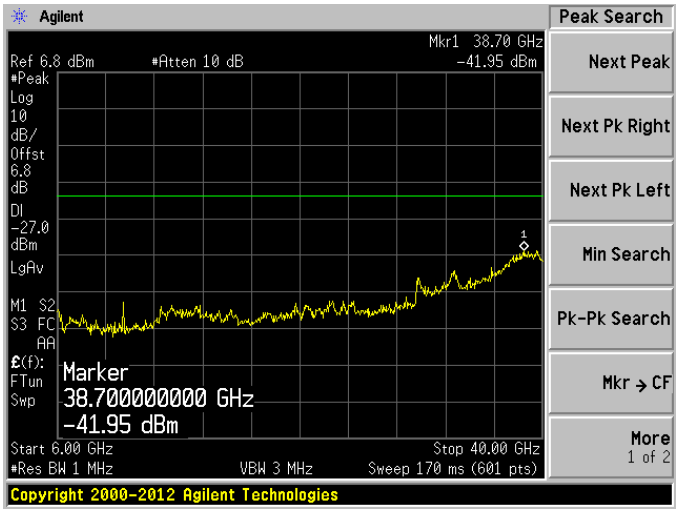
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz

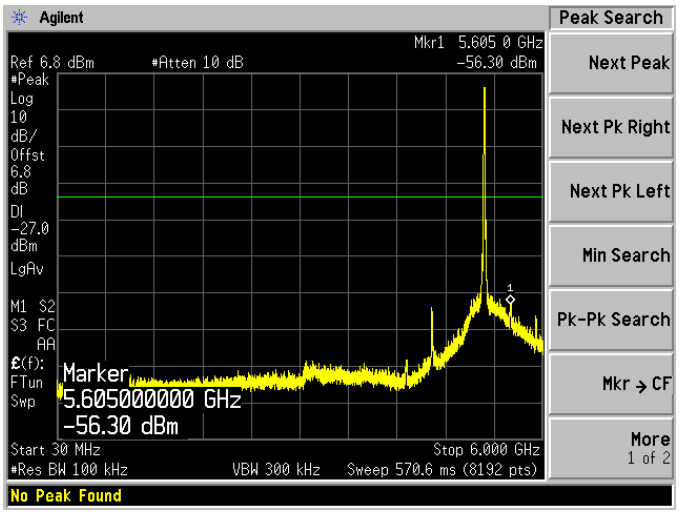


Chain 2, Plot: 6 GHz – 40 GHz

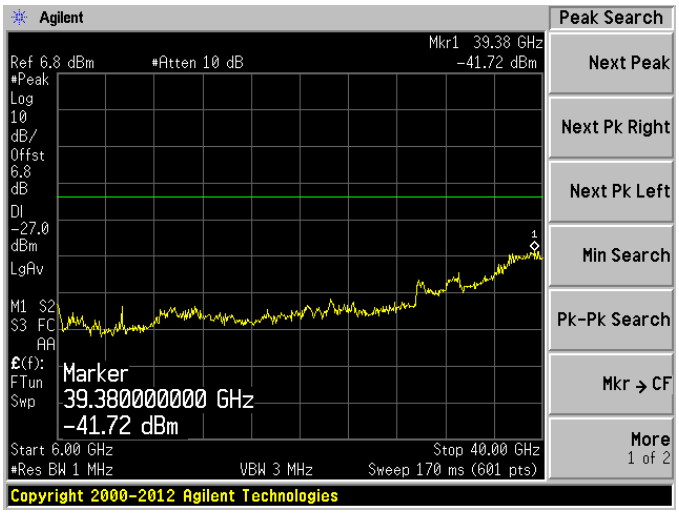


802.11a, Middle Channel, 5280 MHz

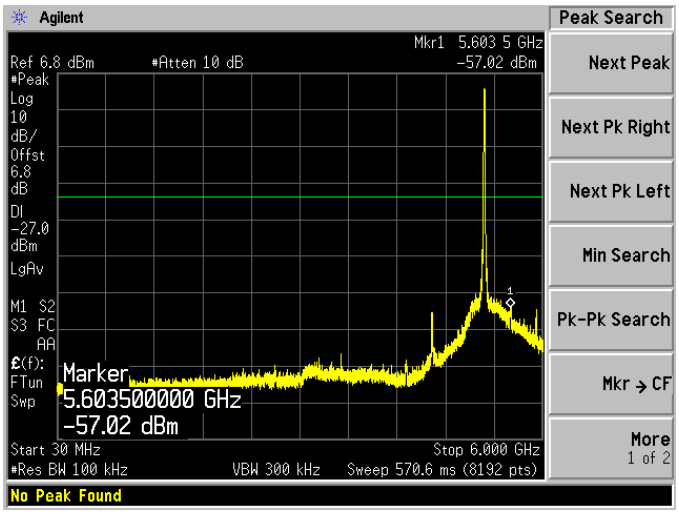
Chain 0, Plot: 30 MHz – 6 GHz



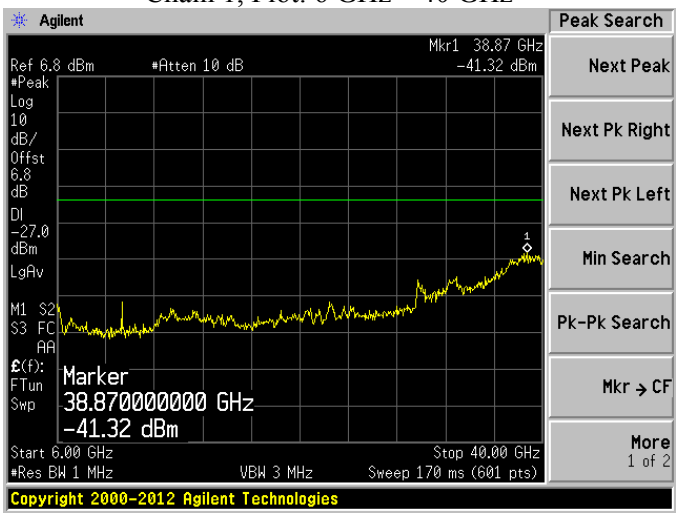
Chain 0, Plot: 6 GHz – 40 GHz



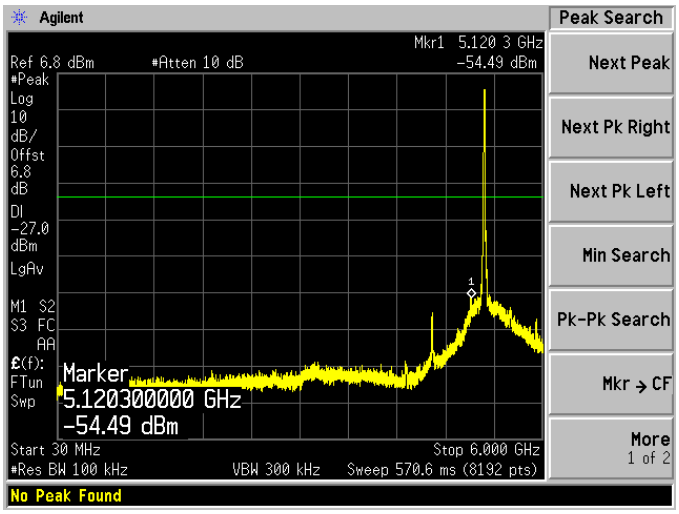
Chain 1, Plot: 30 MHz – 6 GHz



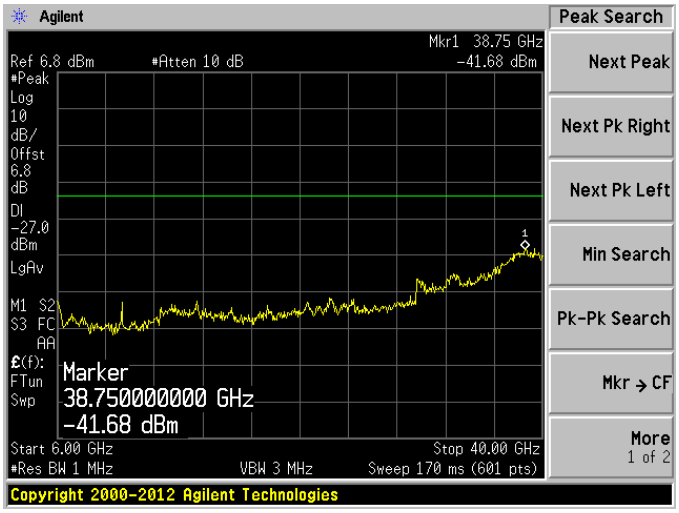
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz



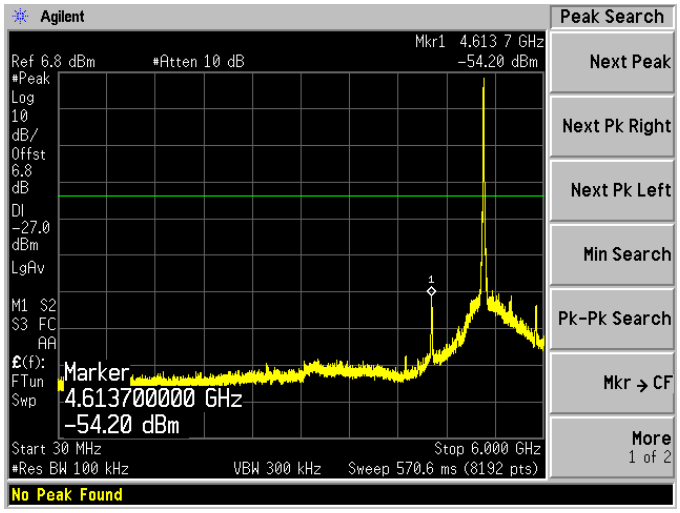
Chain 2, Plot: 6 GHz – 40 GHz



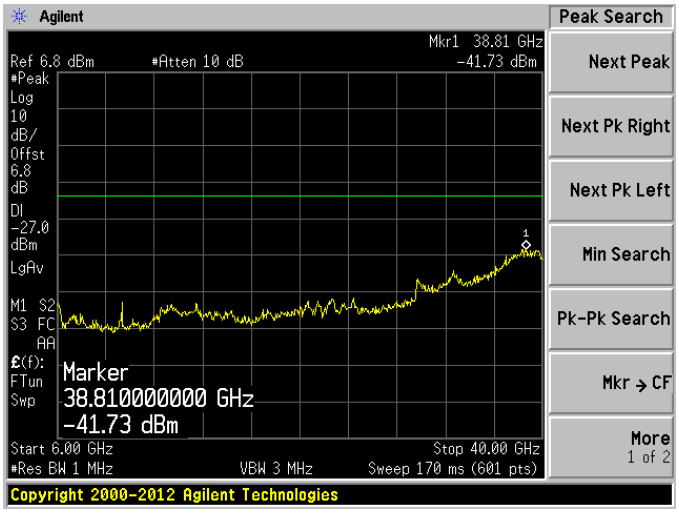
5.3 GHz Band

802.11a, Low Channel, 5260 MHz

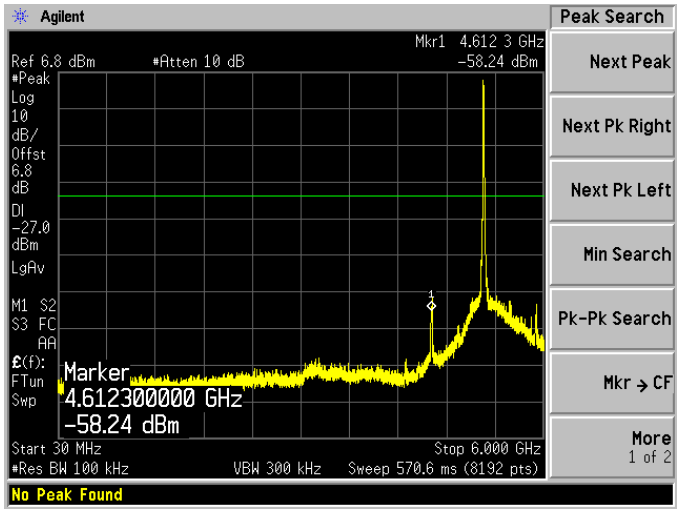
Chain 0, Plot: 30 MHz – 6 GHz



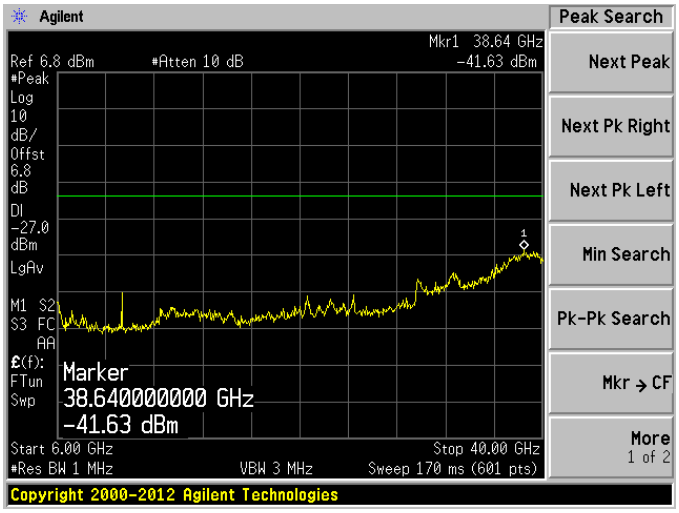
Chain 0, Plot: 6 GHz – 40 GHz



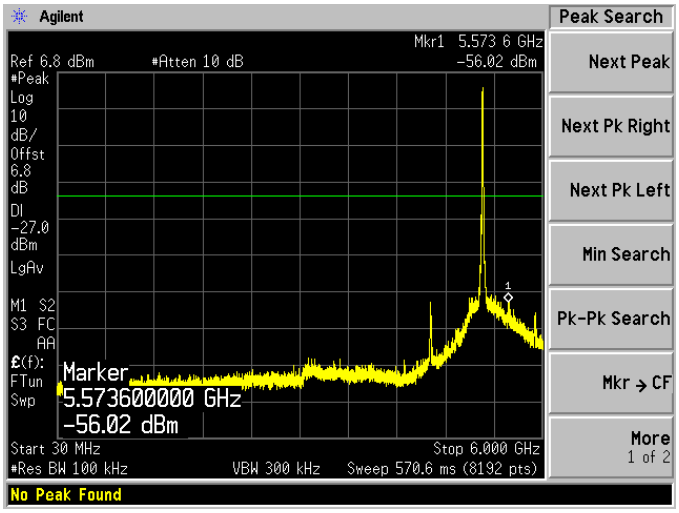
Chain 1, Plot: 30 MHz – 6 GHz



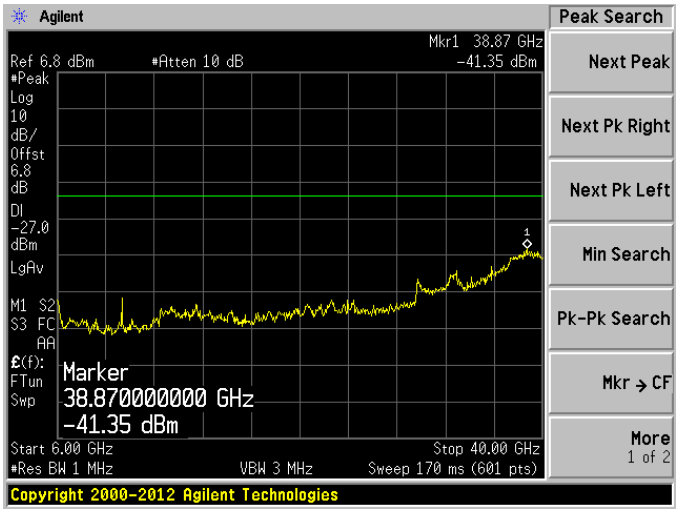
Chain 1, Plot: 6 GHz – 40 GHz



Chain 2, Plot: 30 MHz – 6 GHz



Chain 2, Plot: 6 GHz – 40 GHz



11.4 Test Environmental Conditions

Temperature:	22-24º C
Relative Humidity:	40-41 %
ATM Pressure:	103.1-104.1 KPa

The testing was performed by Rui Zhou 2014-07-07 on 2014-07-14 at RF site.

11.5 Test Results

Please refer to following plots of spurious emissions.

Note: The offset include the attenuation, cable loss and 6 dBi antenna gain. And the magin between limit line and the emission covers other requirements in the KDB 789033. There should be at least 4.77dB gap between the limit and the highest emission as 3 antennas.

11 FCC §15.407(b) - Spurious Emissions at Antenna Ports

11.1 Applicable Standards

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

11.2 Measurement Procedure

Procedure for Unwanted Emissions Measurements below 1000 MHz.
a) Follow the requirements in section G)3), "General Requirements for Unwanted Emissions Measurements".
b) Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
a) Follow the requirements in section II.G.3., "General Requirements for Unwanted Emissions Measurements".
b) Maximum emission levels are measured by setting the analyzer as follows:
(i) RBW = 1 MHz.
(ii) VBW ⩾ 3 MHz.
(iii) Detector = Peak.
(iv) Sweep time = auto.
(v) Trace mode = max hold.
(vi) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

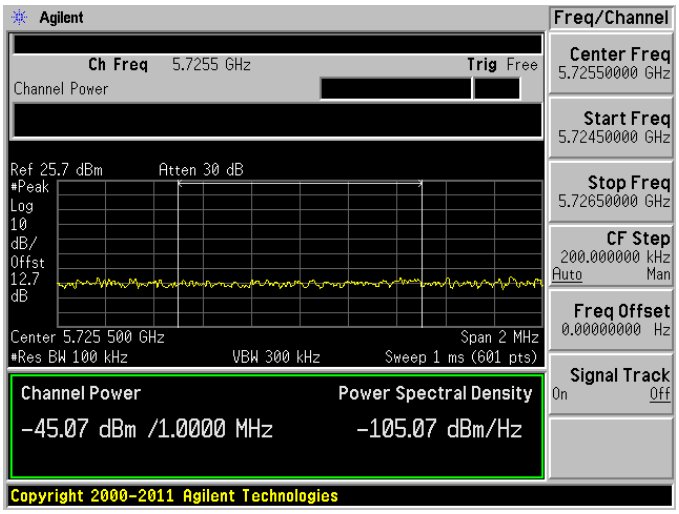
11.3 Test Equipment List and Details

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

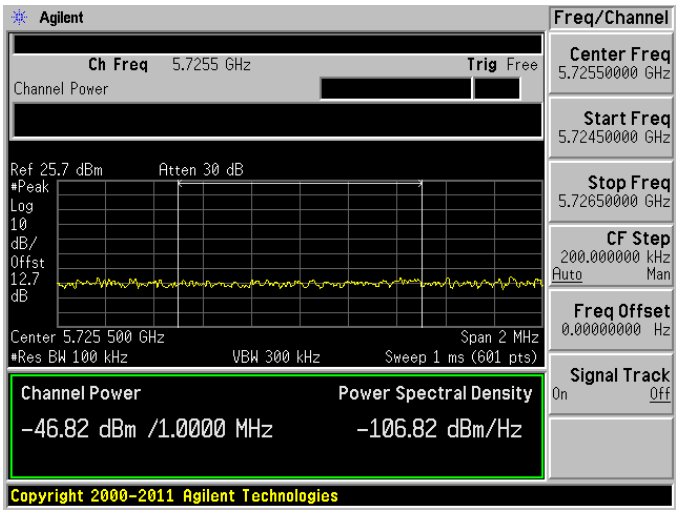
Statement of Traceability: BACL Corp. *attests that all calibrations have been performed according to A2LA requirements, traceable to the NIST.*

802.11ac-VHT80, 5530 MHz Higher Band Edge at 5725MHz

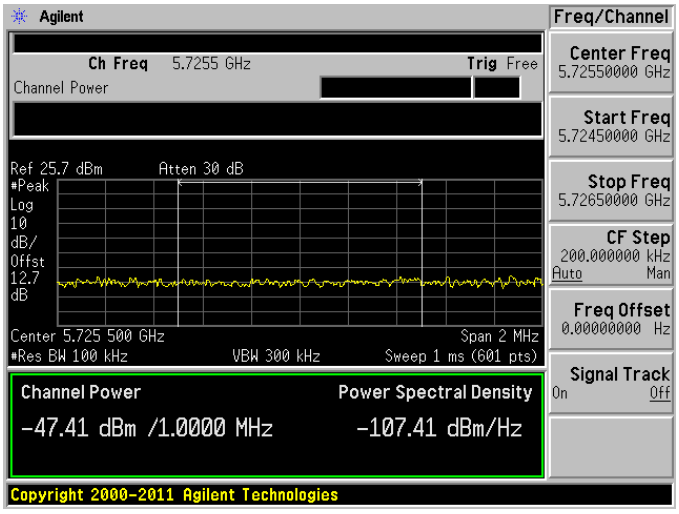
Chain 0



Chain 1

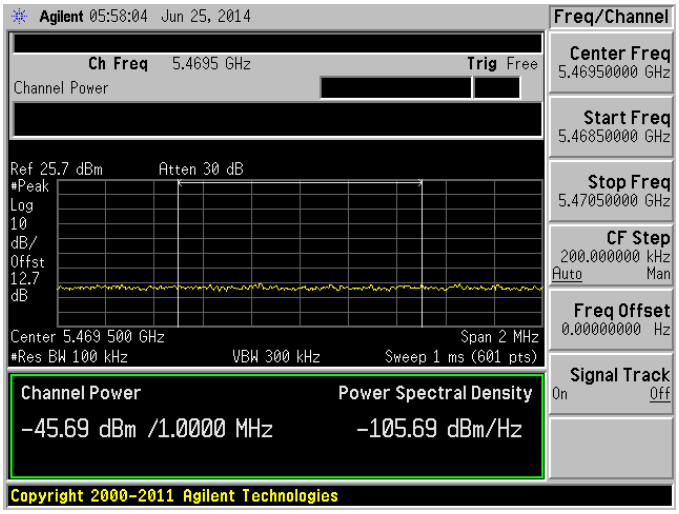


Chain 2

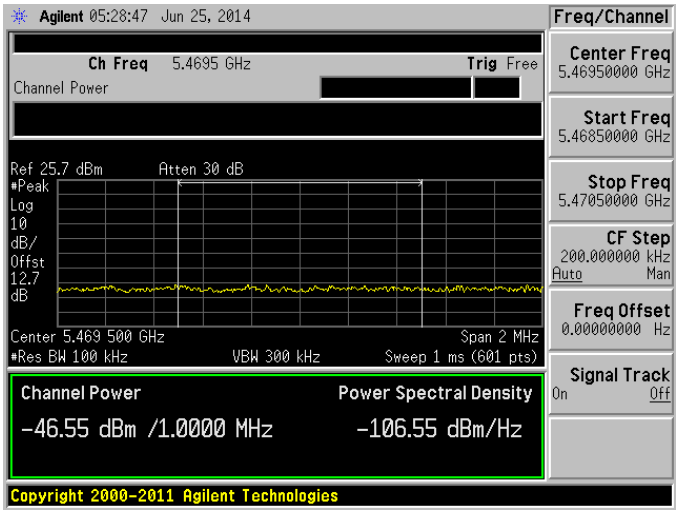


802.11ac-VHT80, 5530 MHz Lower Band Edge at 5470MHz

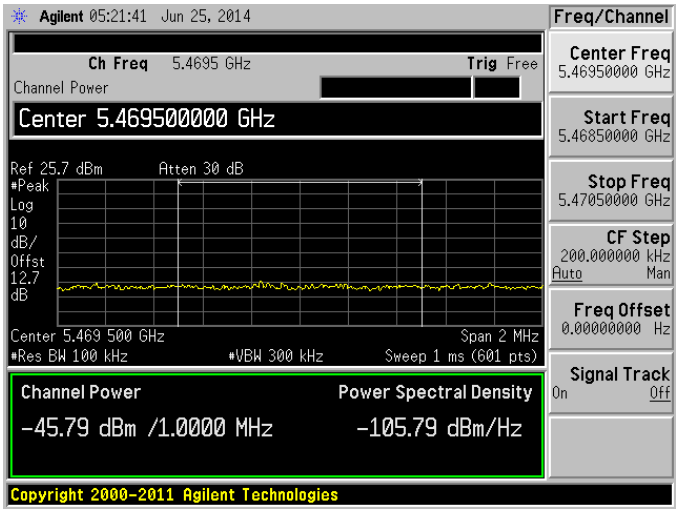
Chain 0



Chain 1

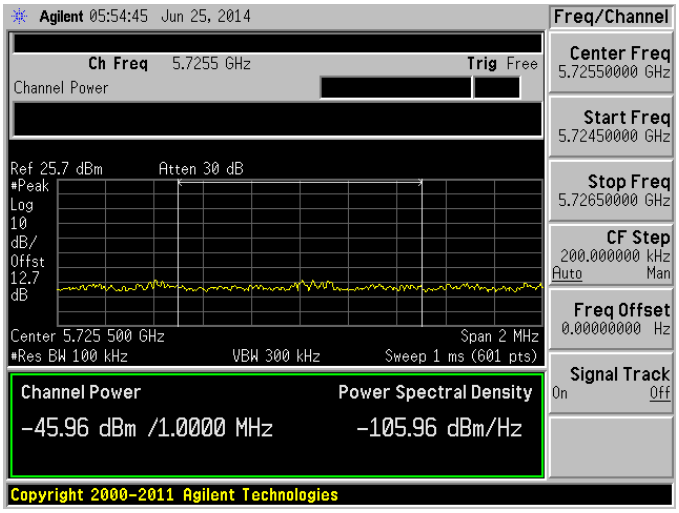


Chain 2

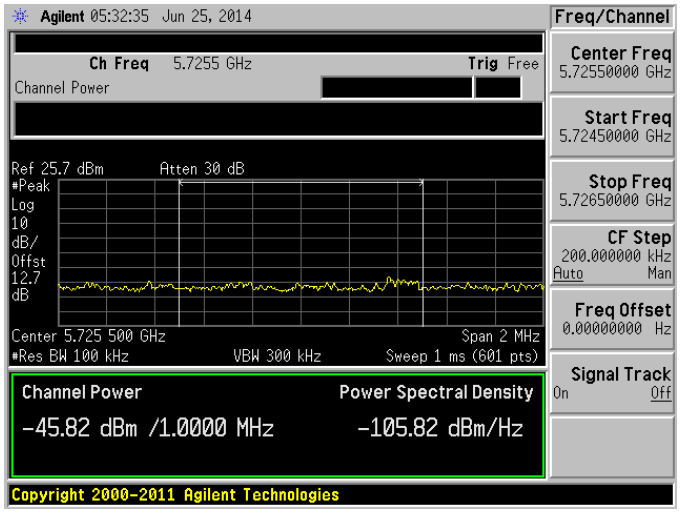


802.11n-HT40, High Channel 5670 MHz

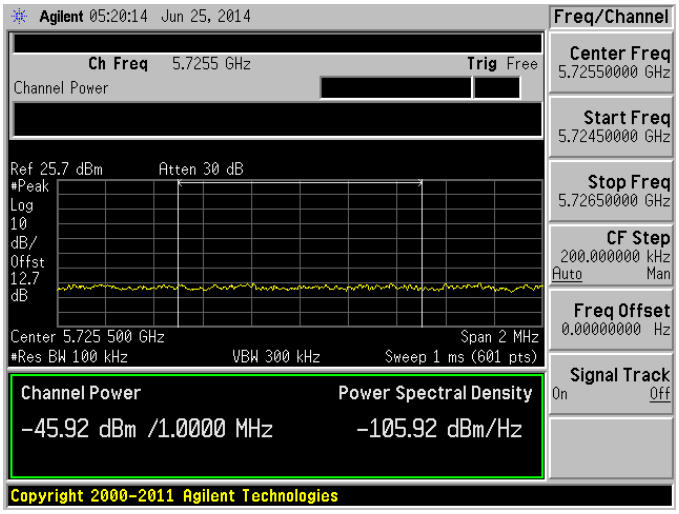
Chain 0



Chain 1

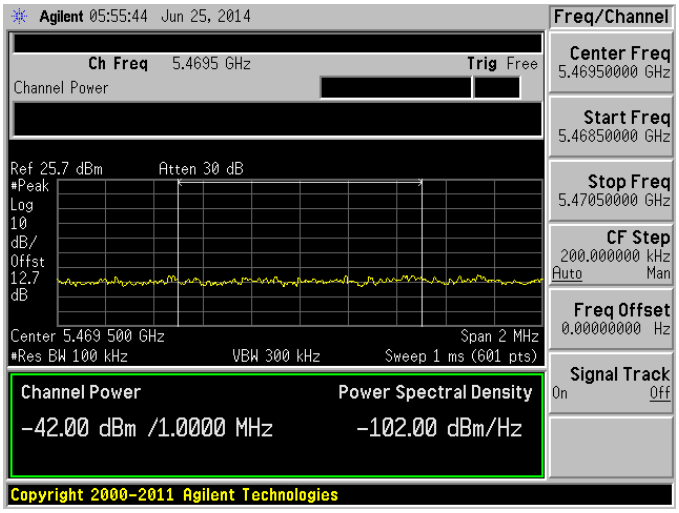


Chain 2

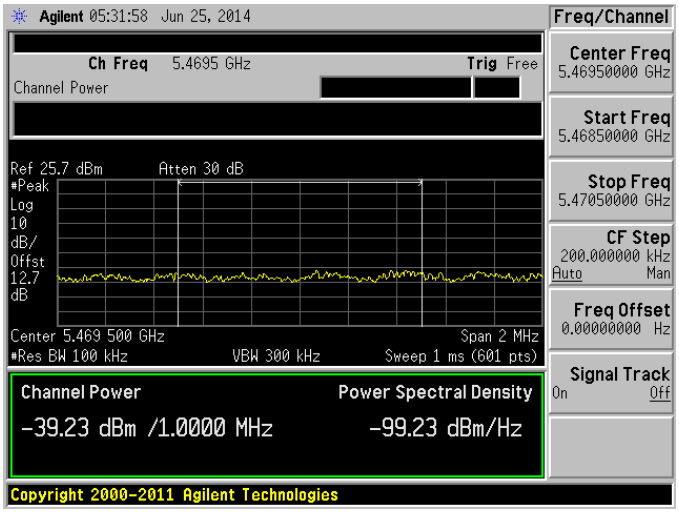


802.11n-HT40, Low Channel 5510 MHz

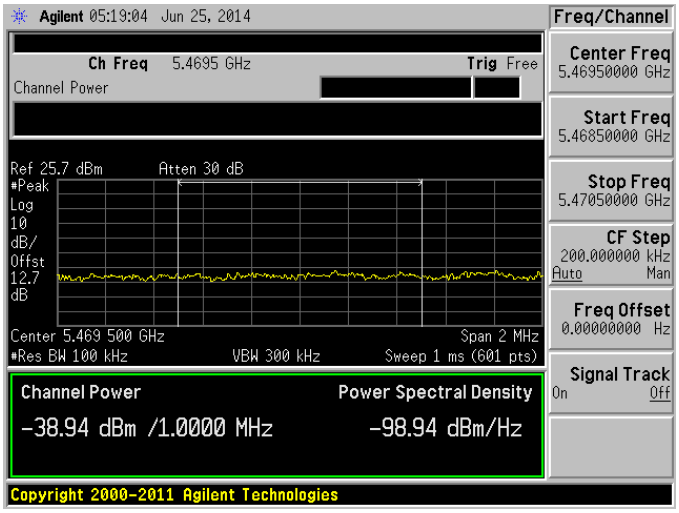
Chain 0



Chain 1

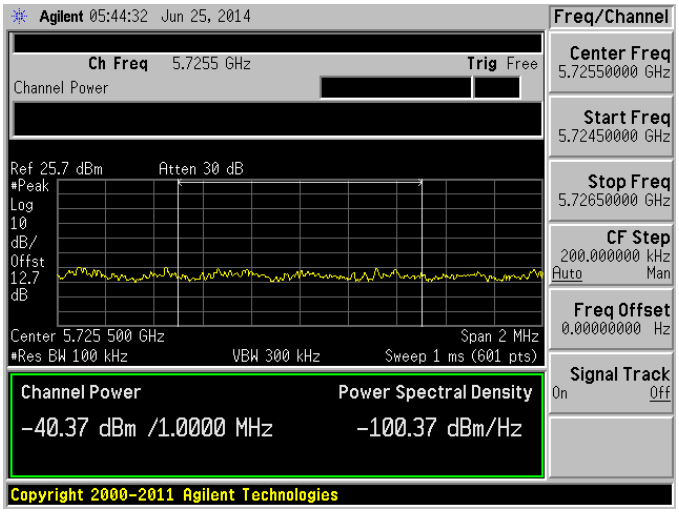


Chain 2

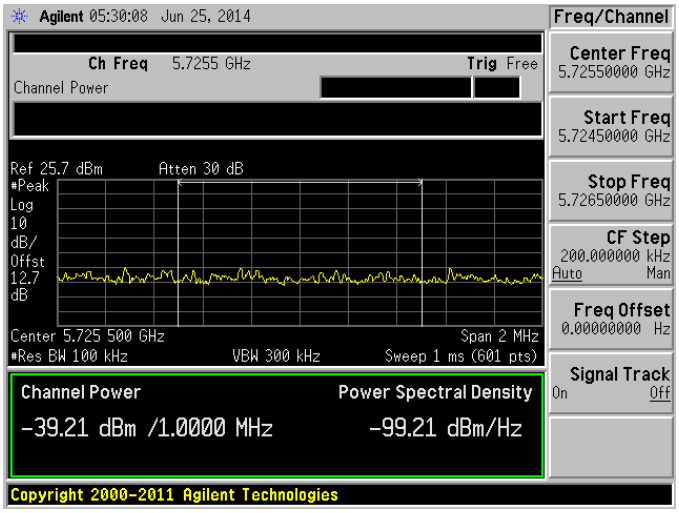


802.11n-HT20, High Channel 5700 MHz

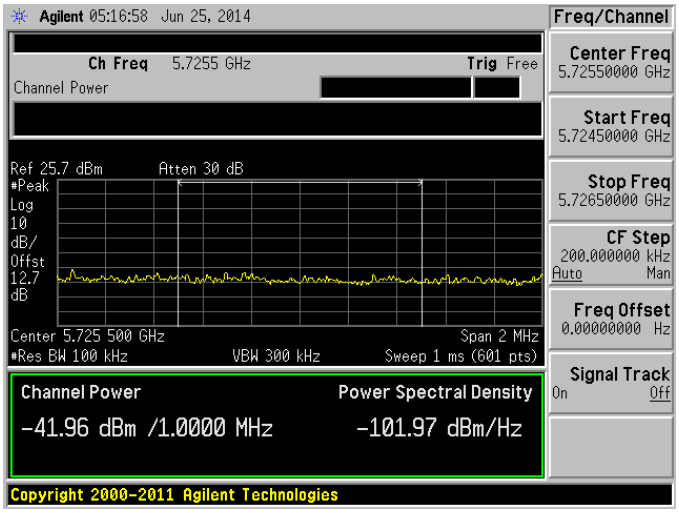
Chain 0



Chain 1

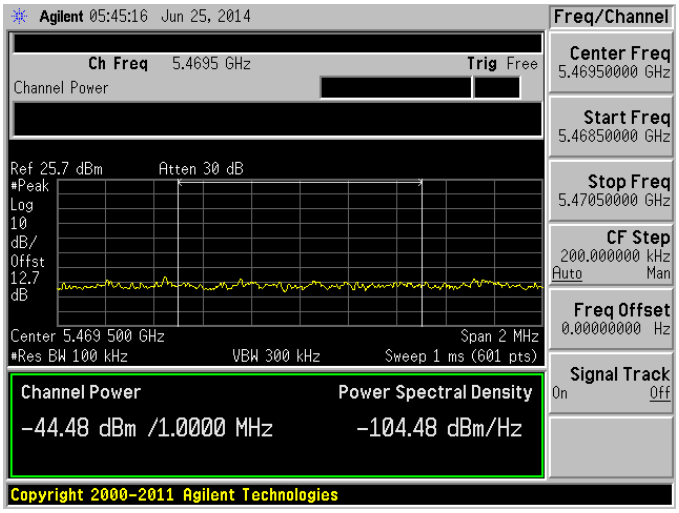


Chain 2

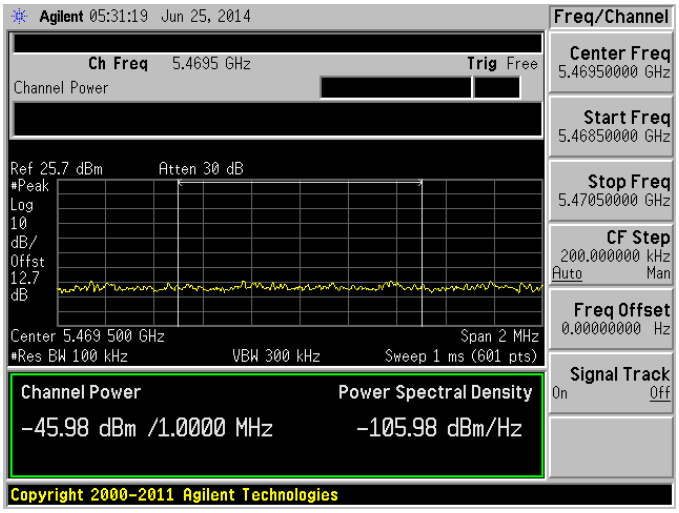


802.11n-HT 20, Low Channel 5500 MHz

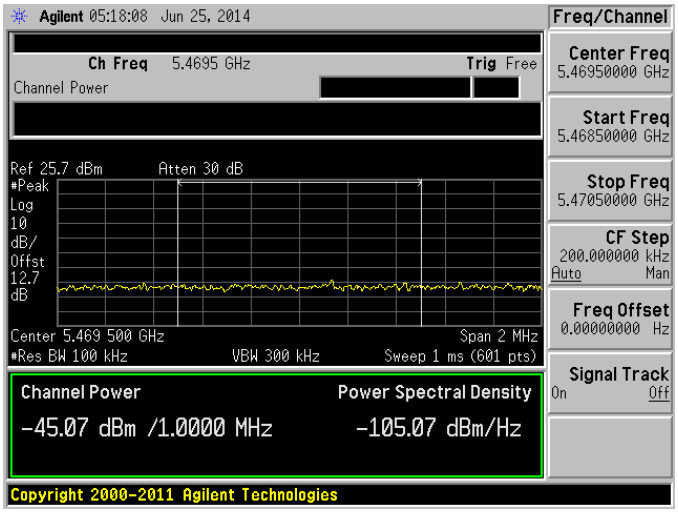
Chain 0



Chain 1

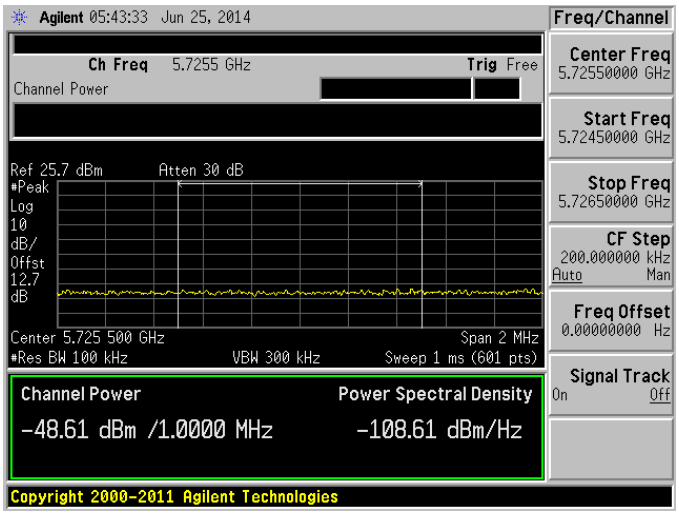


Chain 2

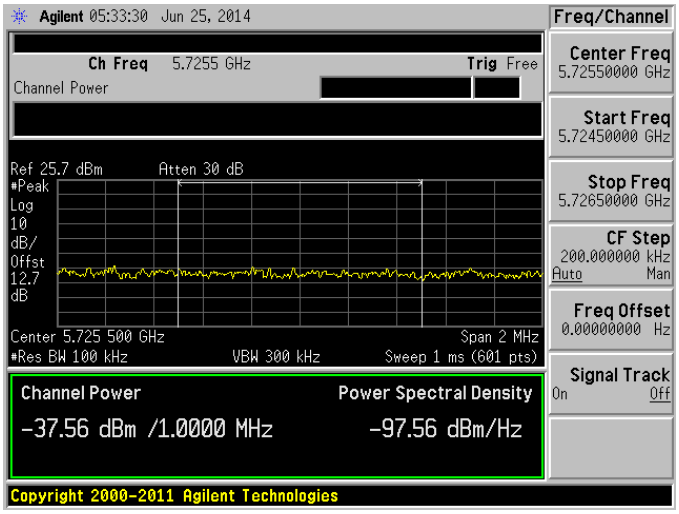


802.11a, High Channel, 5700 MHz

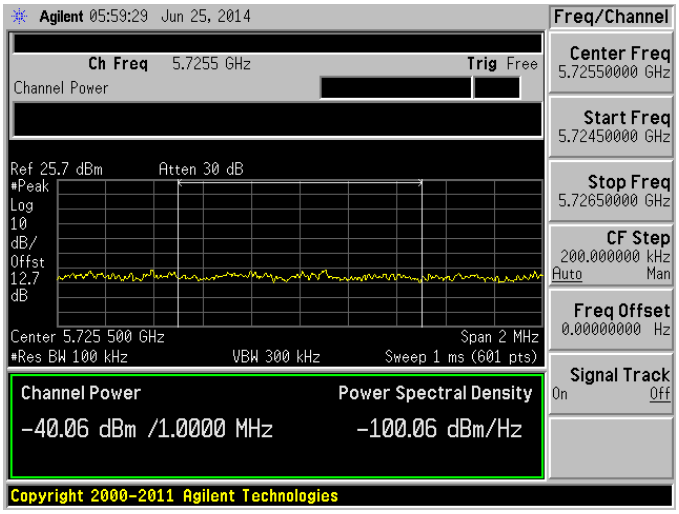
Chain 0



Chain 1



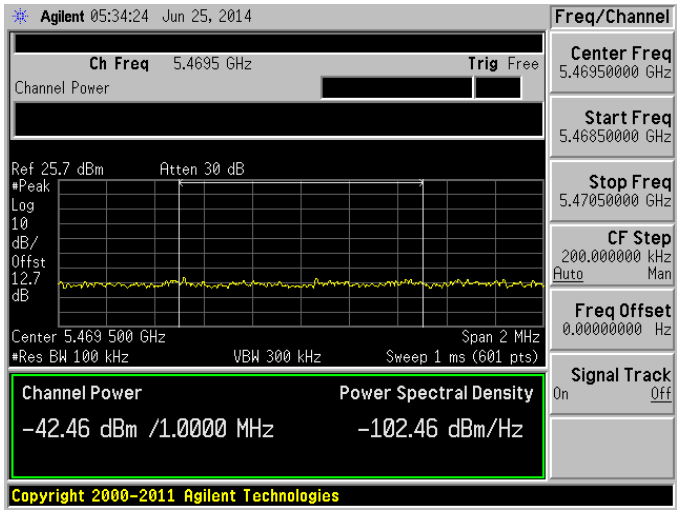
Chain 2



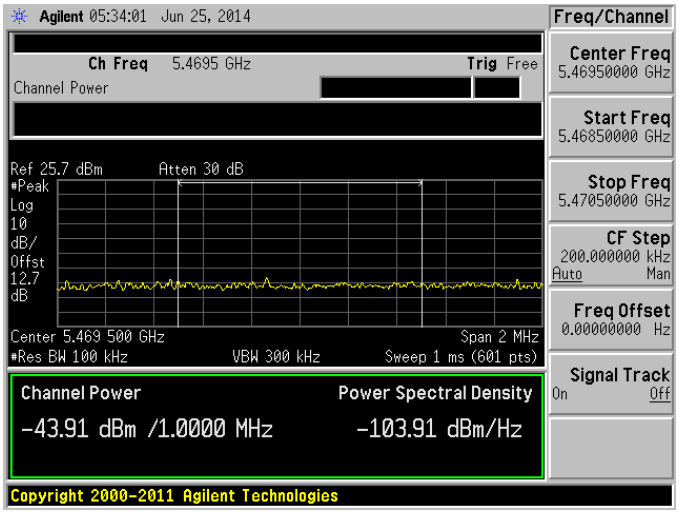
5.6 GHz Band

802.11a, Low Channel, 5500 MHz

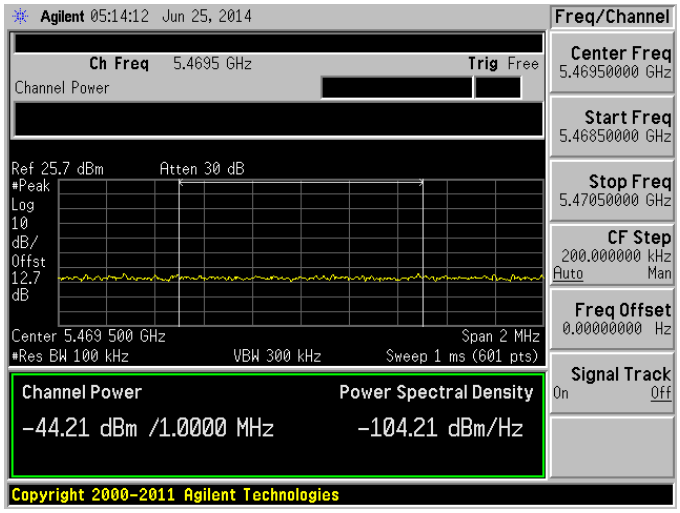
Chain 0



Chain 1

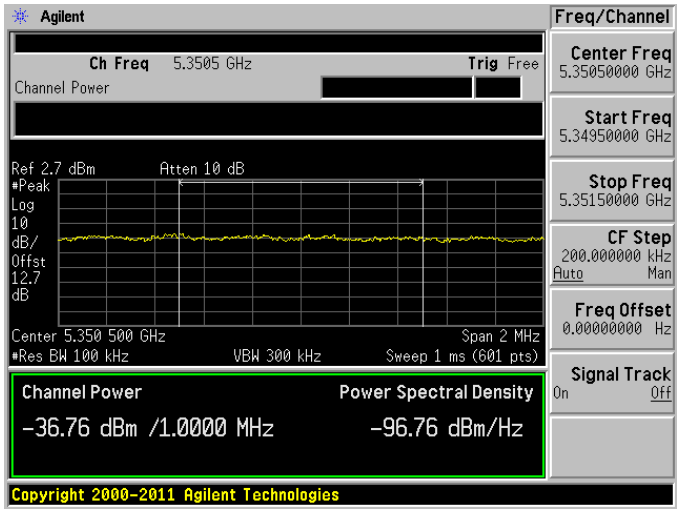


Chain 2

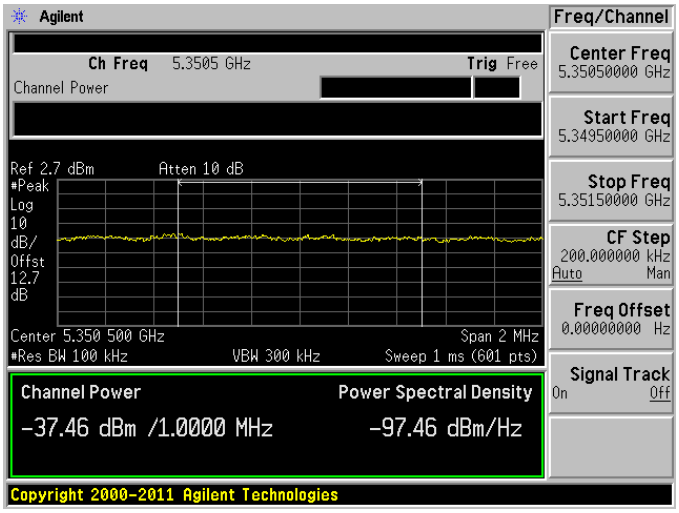


802.11ac-VHT80, Channel 5290 MHz Higher Band Edge at 5350MHz

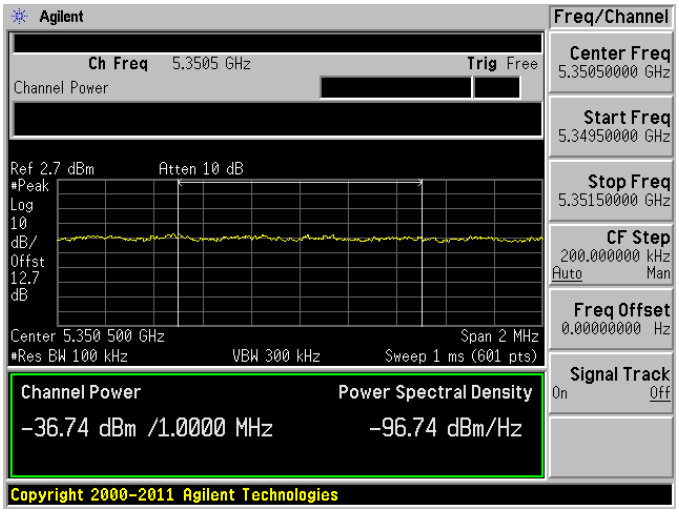
Chain 0



Chain 1

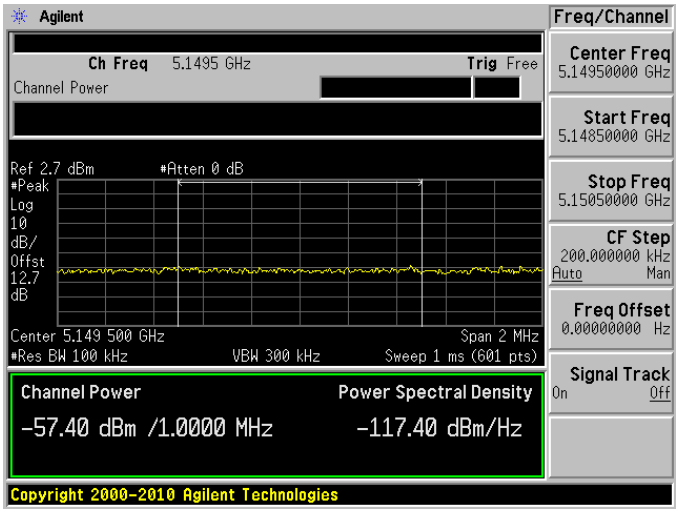


Chain 2

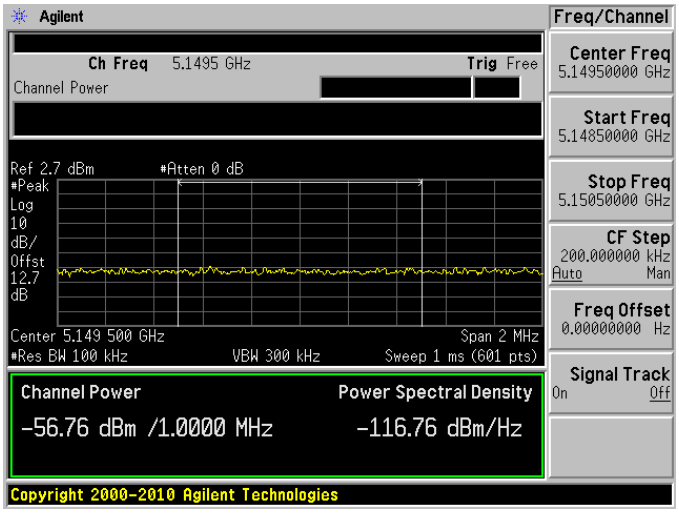


802.11ac-VHT80, Channel 5290 MHz Lower Band Edge at 5150MHz

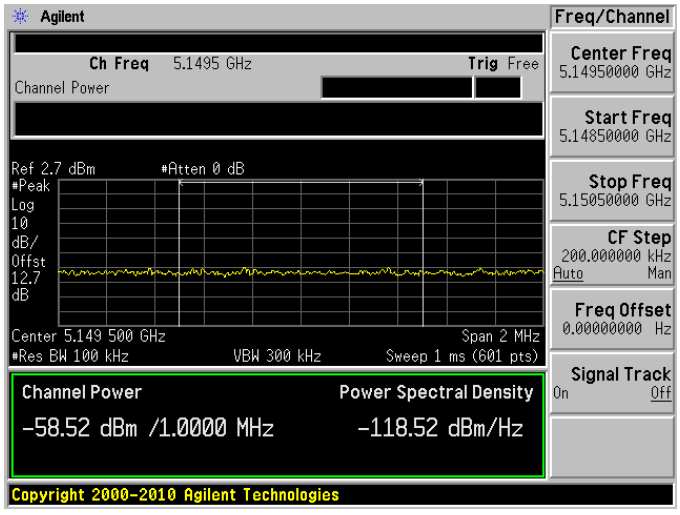
Chain 0



Chain 1

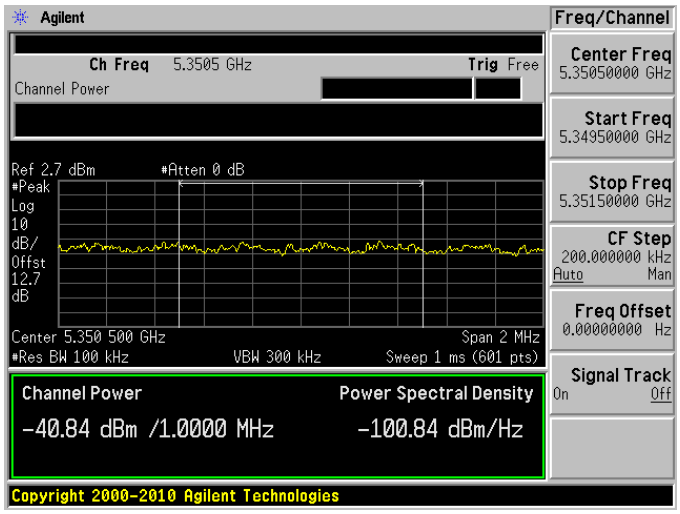


Chain 2

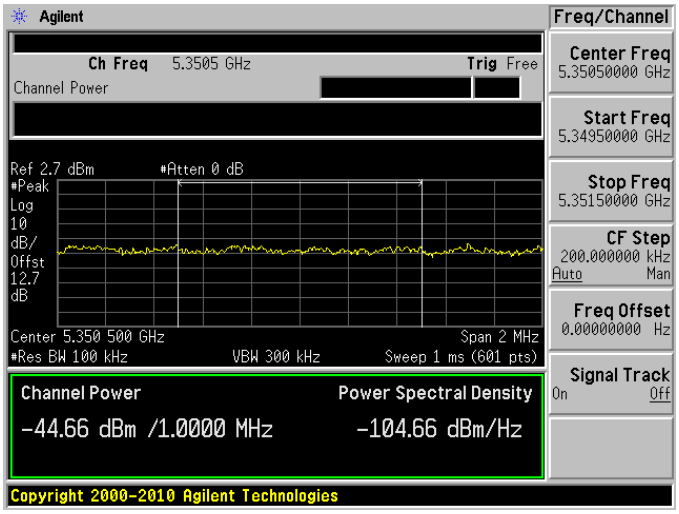


802.11n-HT40, High Channel 5310 MHz

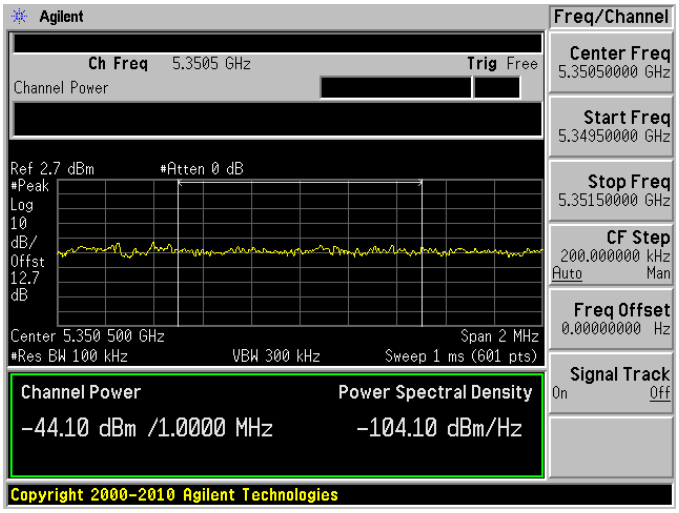
Chain 0



Chain 1

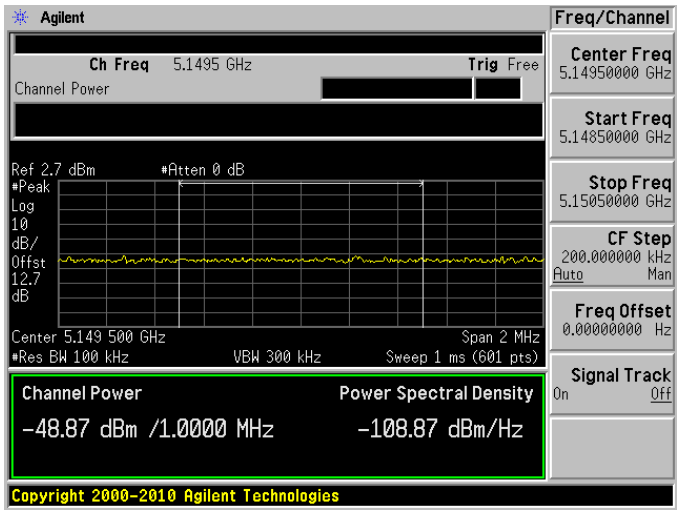


Chain 2

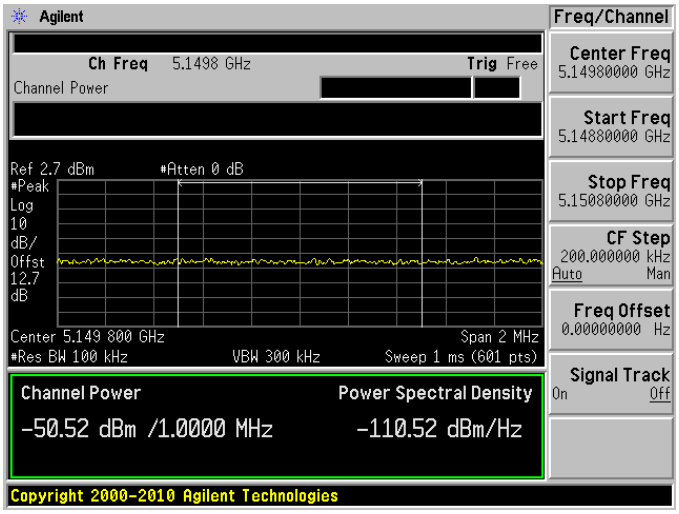


802.11n-HT40, Low Channel 5270 MHz

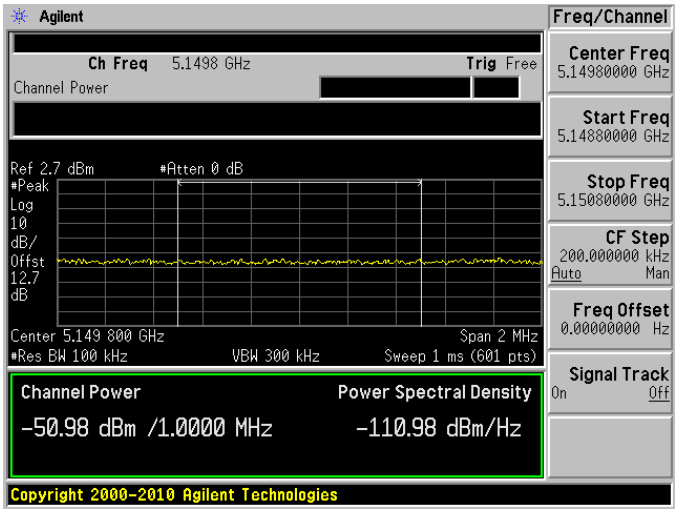
Chain 0



Chain 1

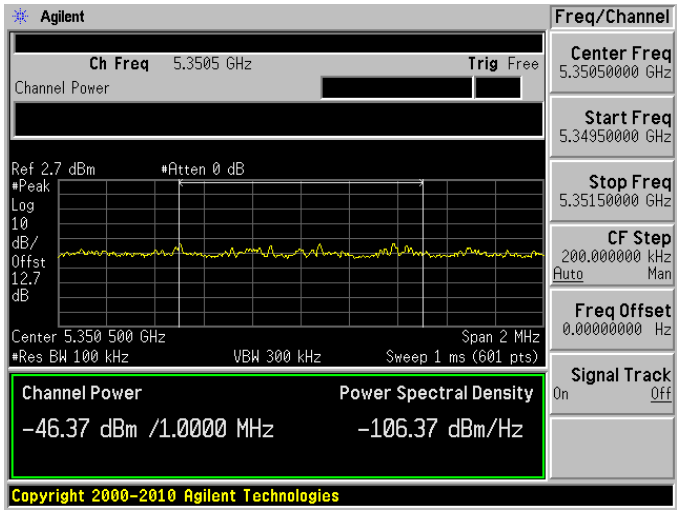


Chain 2

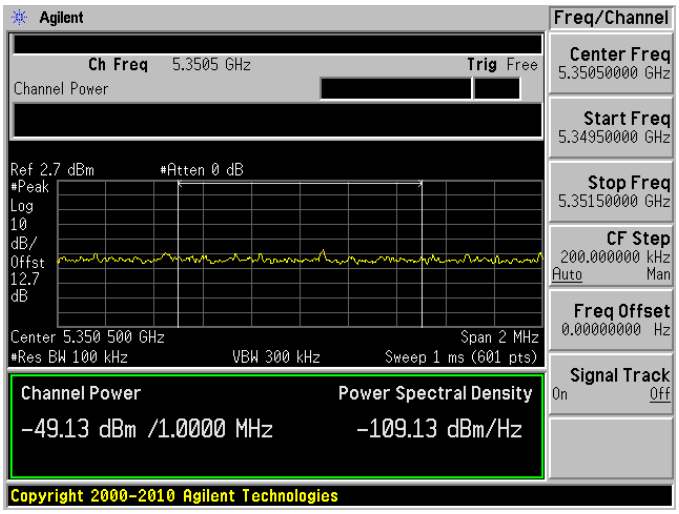


802.11n-HT20, High Channel, 5320 MHz

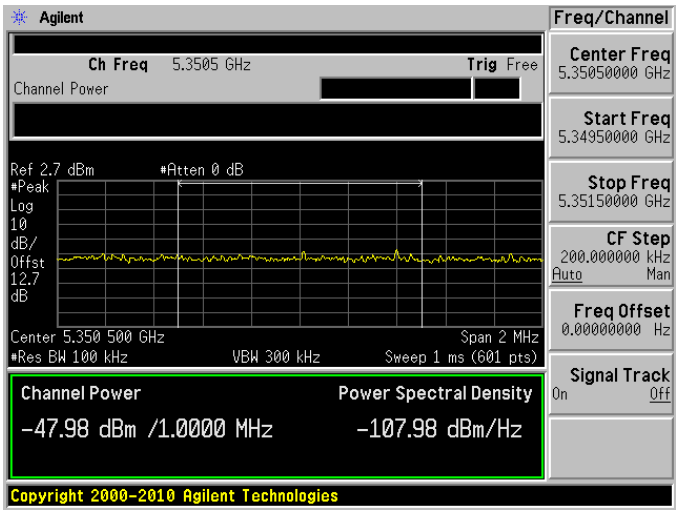
Chain 0



Chain 1

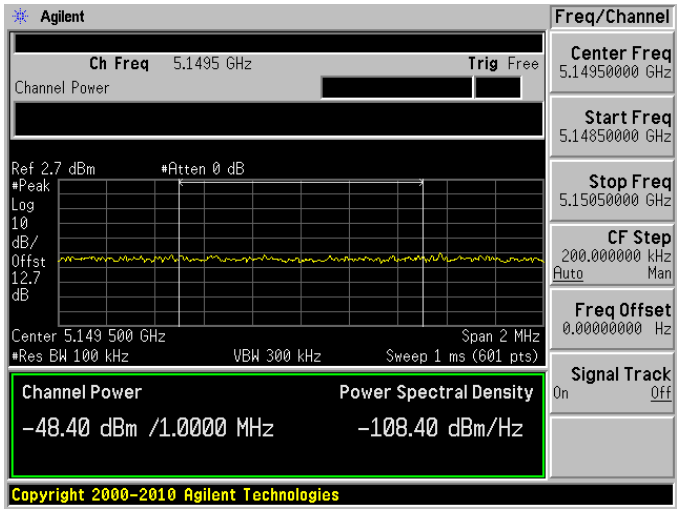


Chain 2

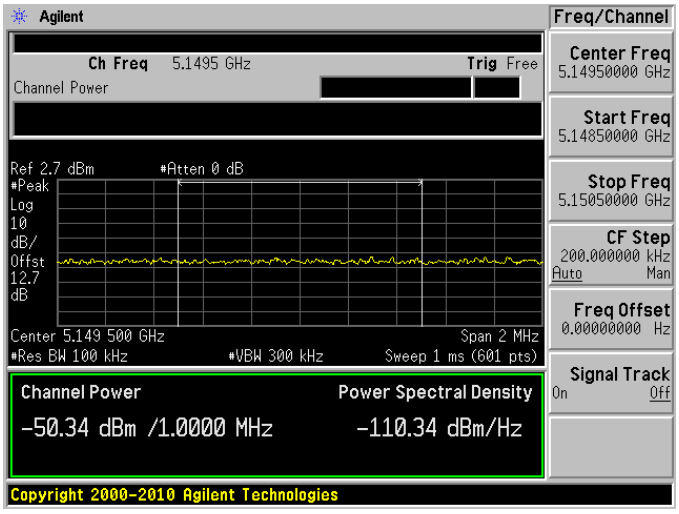


802.11n-HT 20, Low Channel 5260 MHz

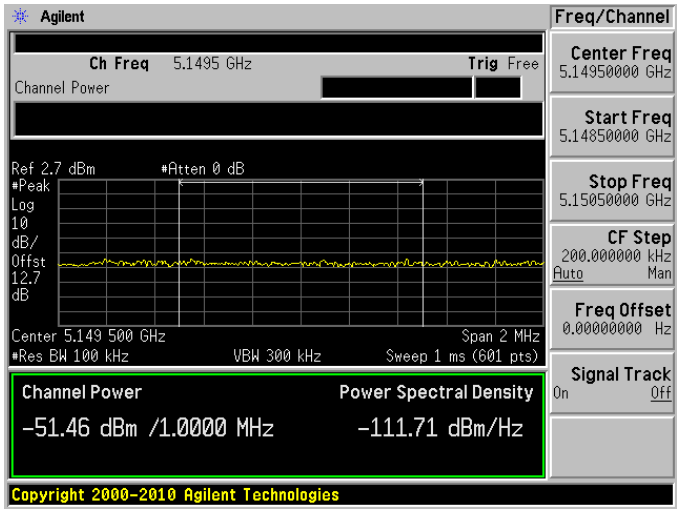
Chain 0



Chain 1

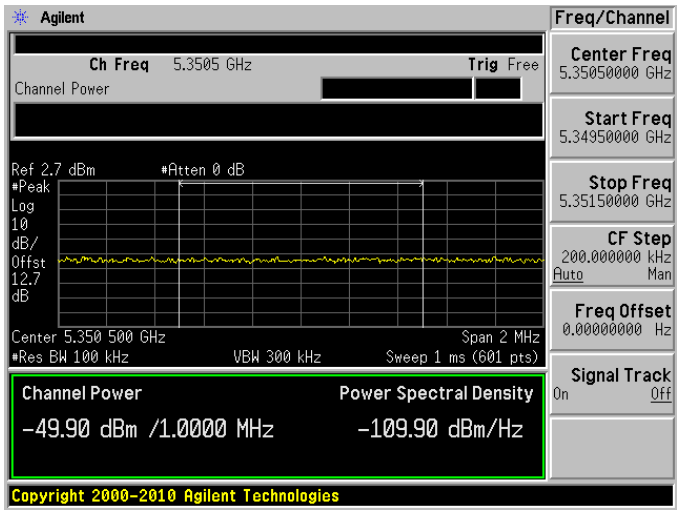


Chain 2

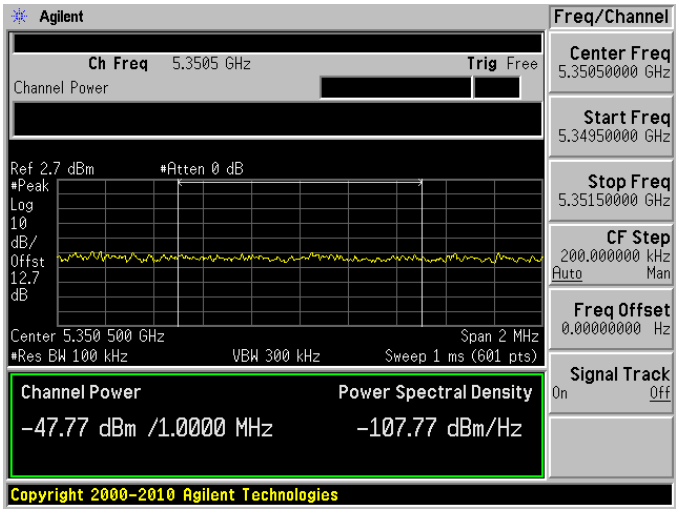


802.11a, High Channel, 5320 MHz

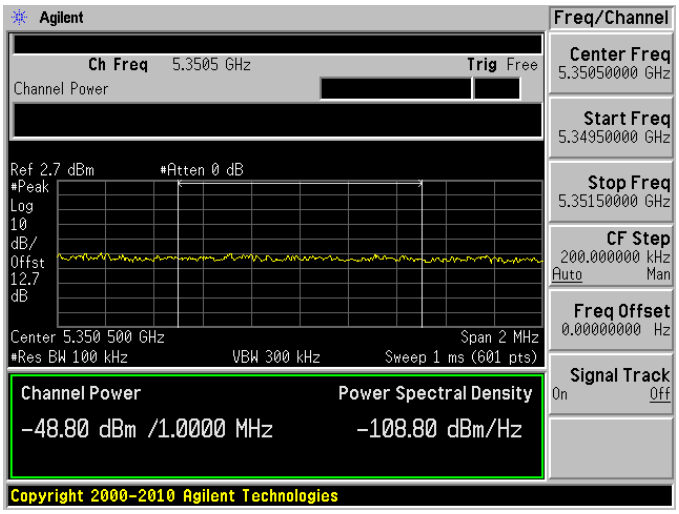
Chain 0



Chain 1



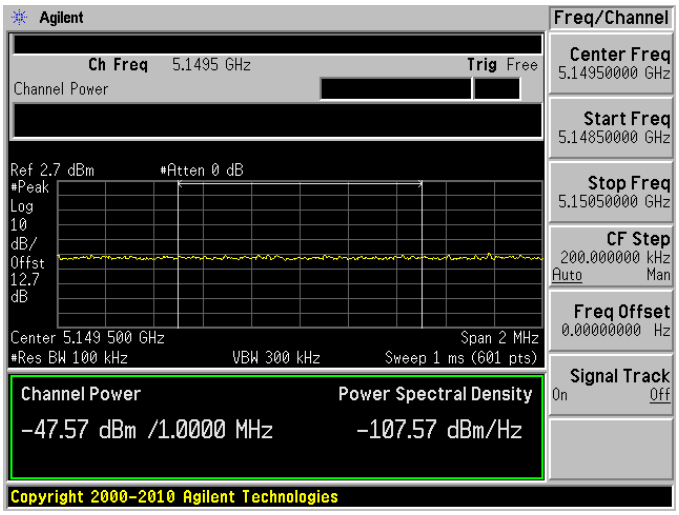
Chain 2



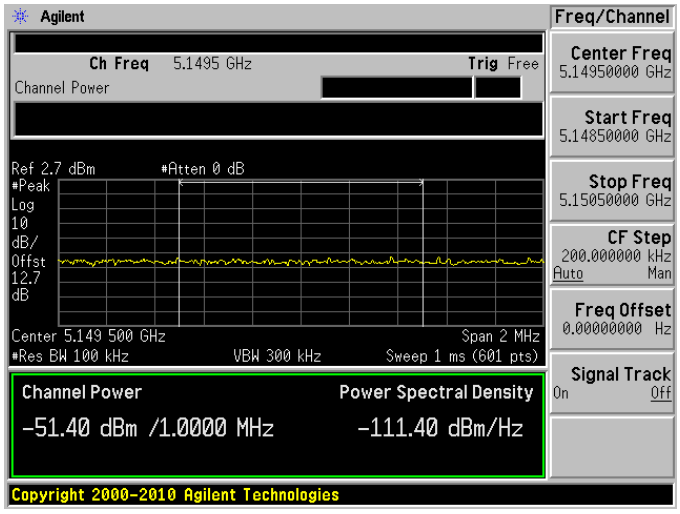
5.3 GHz Band

802.11a, Low Channel, 5260 MHz

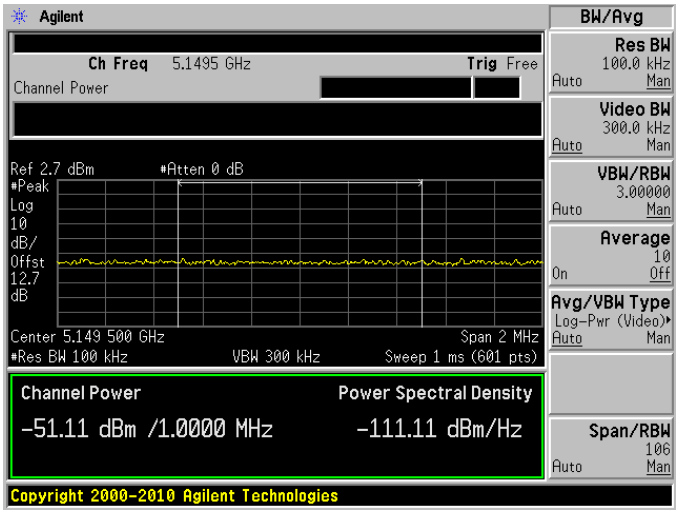
Chain 0



Chain 1



Chain 2



5.6 GHz Band

802.11a mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5470	5550	-42.46	-43.91	-44.21	-38.69	-27
High	5725	5700	-48.61	-37.56	-40.06	-35.41	-27

802.11n-HT20 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5470	5500	-44.48	-45.98	-45.07	-40.36	-27
High	5725	5700	-40.37	-39.21	-41.96	-35.60	-27

802.11n-HT40 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5470	5510	-42	-39.23	-38.94	-35.08	-27
High	5725	5670	-45.96	-45.82	-45.92	-41.13	-27

802.11ac-VHT80 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
-	5470	5530	-45.69	-46.55	-45.79	-41.22	-27
	5725	5530	-45.07	-46.82	-47.41	-41.22	-27

Note: the offset include the attenuation, cable loss and antenna gain. And the magin between limit line and the emission covers other requirements in the KDB 789033.

Please refer to the following plots.

10.5 Test Results

5.3 GHz Band

802.11a mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5150	5260	-47.57	-51.4	-51.11	-44.88	-27
High	5350	5320	-49.9	-47.77	-48.8	-43.97	-27

802.11n-HT20 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5150	5260	-48.4	-50.34	-51.46	-45.11	-27
High	5350	5320	-46.37	-49.13	-47.98	-42.91	-27

802.11n-HT40 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
Low	5150	5270	-48.87	-50.52	-50.98	-45.25	-27
High	5350	5310	-40.84	-44.66	-44.1	-38.08	-27

802.11ac-VHT80 mode

Channel	Band Edge (MHz)	Frequency (MHz)	Chain 0 (dBm)	Chain 1 (dBm)	Chain 2 (dBm)	Total (dBm)	Limit (dBm)
-	5150	5290	-57.4	-56.76	-58.52	-52.73	-27
	5350	5290	-36.76	-37.46	-36.74	-32.20	-27

10 FCC §15.407(b) - Out of Band Emissions

10.1 Applicable Standard

According to FCC §15.407(b)

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

10.2 Measurement Procedure

The measurements are base on FCC KDB 789033 D01 General UNII Test Procedures v01r04

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 according to A2LA requirements, traceable to the NIST.*

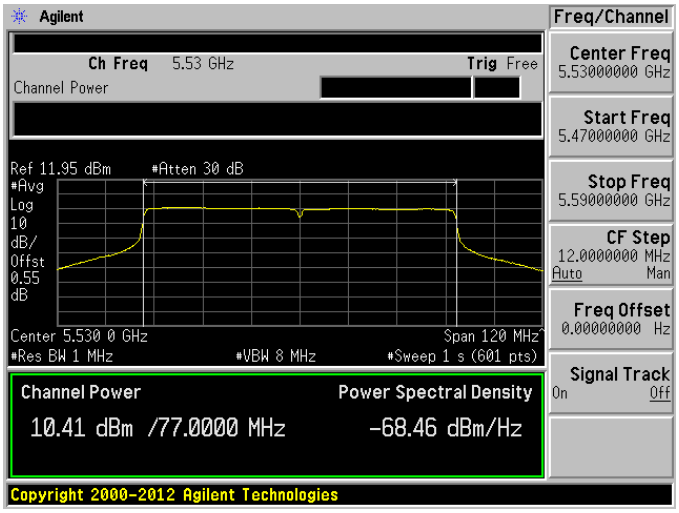
10.4 Test Environmental Conditions

Temperature:	21° C
Relative Humidity:	43 %
ATM Pressure:	101-102 kPa

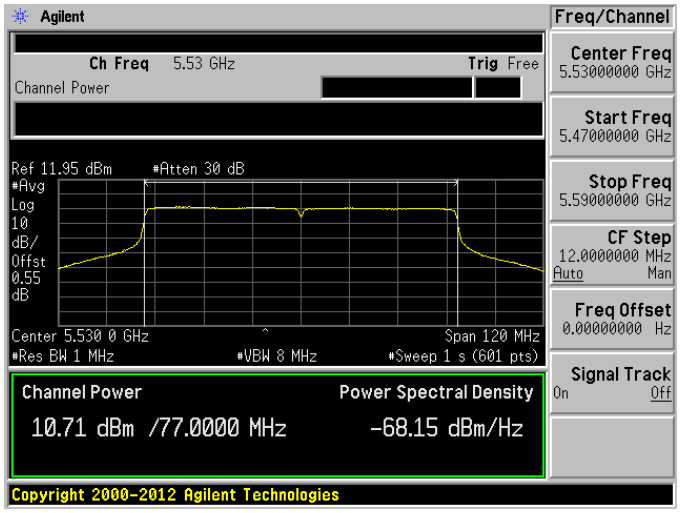
The testing was performed by Rui Zhou from 2014-07-07 to 2014-07-14 at RF site.

802.11ac-VHT80, 5530 MHz

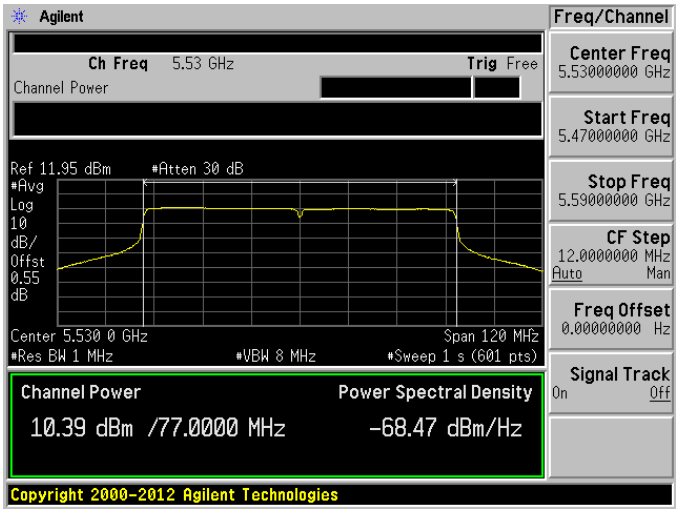
Chain 0



Chain 1

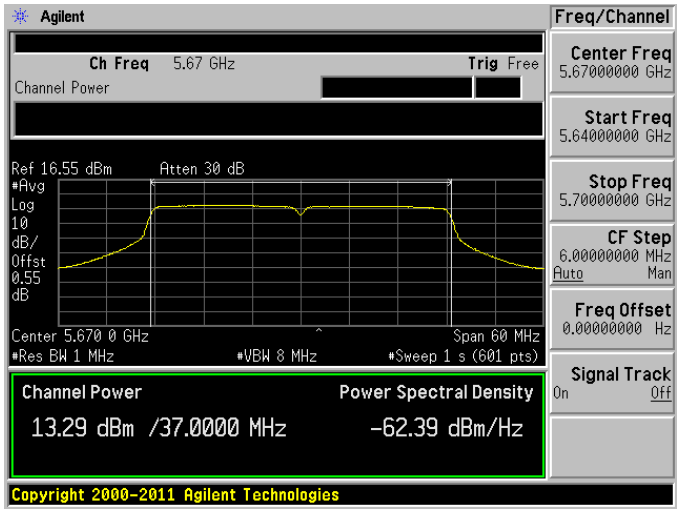


Chain 2

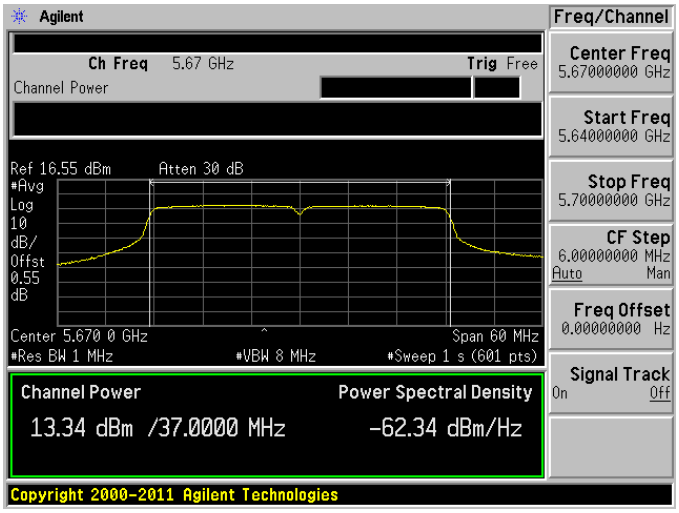


802.11n-HT40, High Channel 5670 MHz

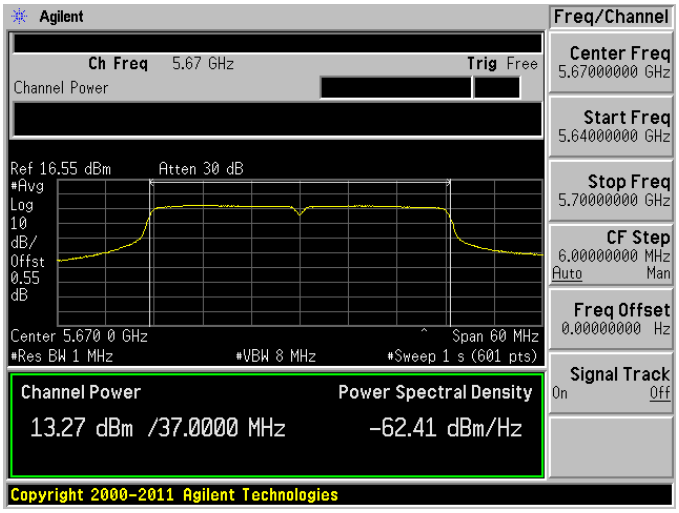
Chain 0



Chain 1

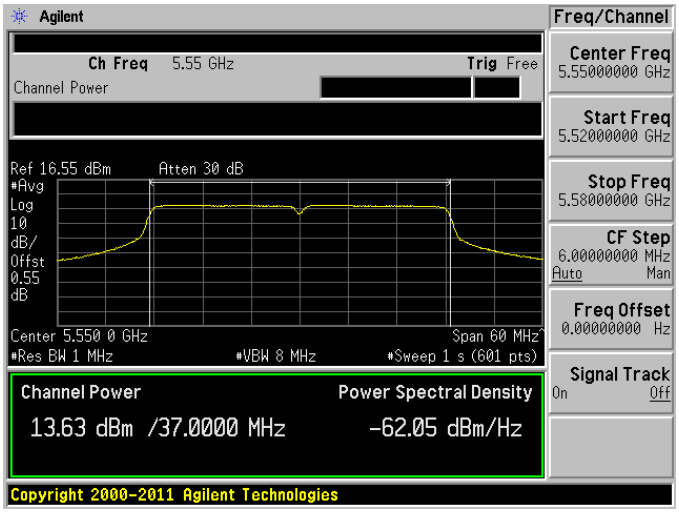


Chain 2

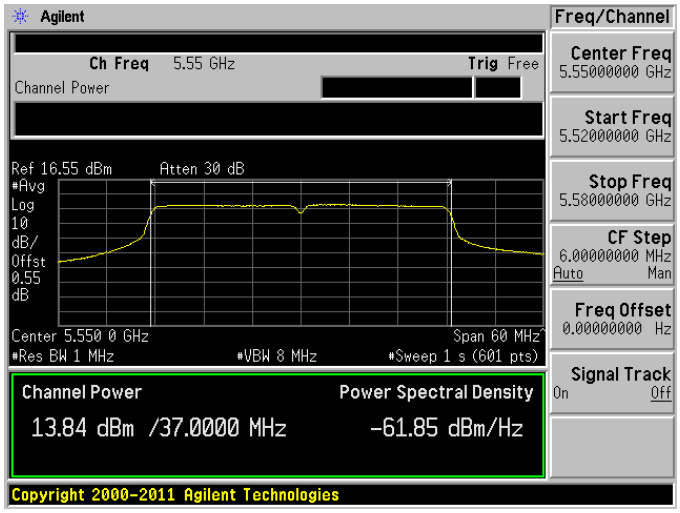


802.11n-HT40, Middle Channel 5550 MHz

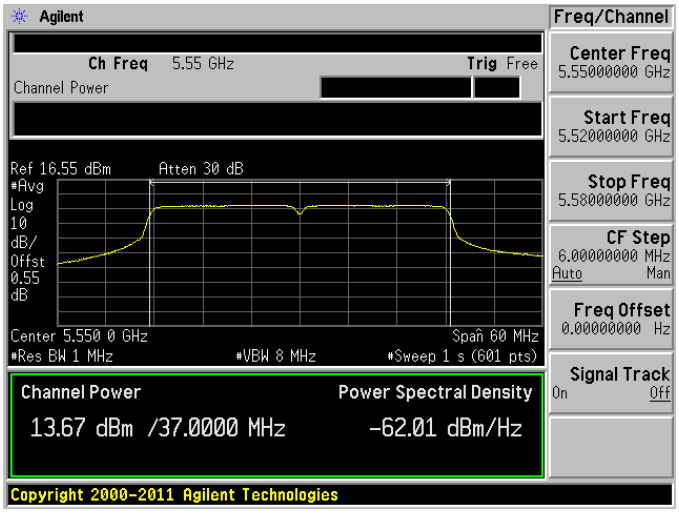
Chain 0



Chain 1

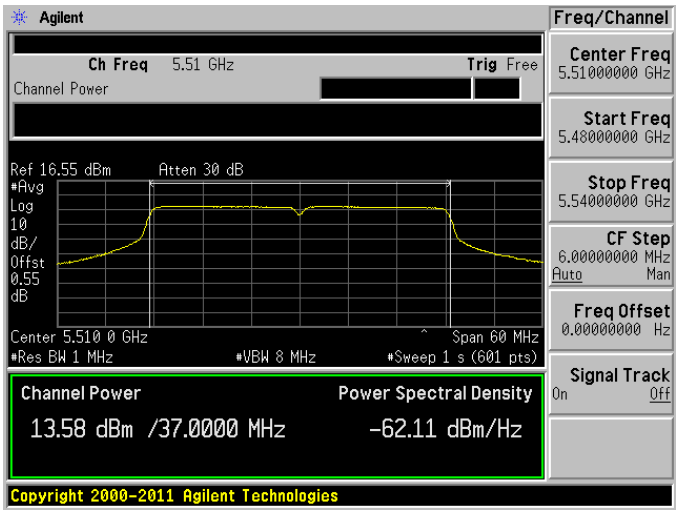


Chain 2

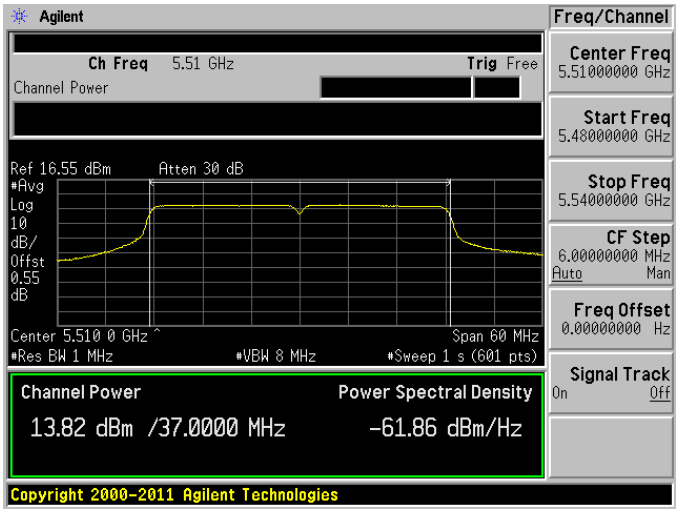


802.11n-HT40, Low Channel 5510 MHz

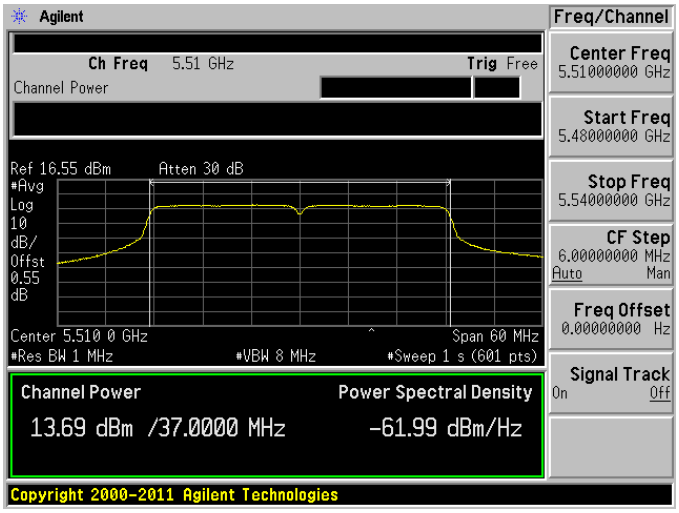
Chain 0



Chain 1

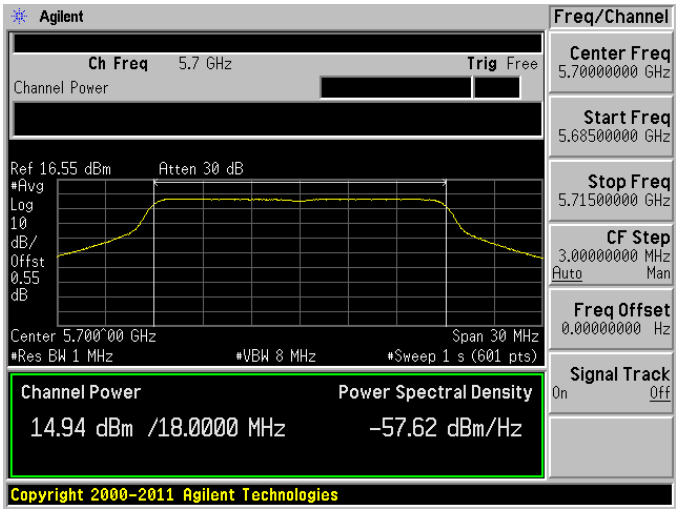


Chain 2

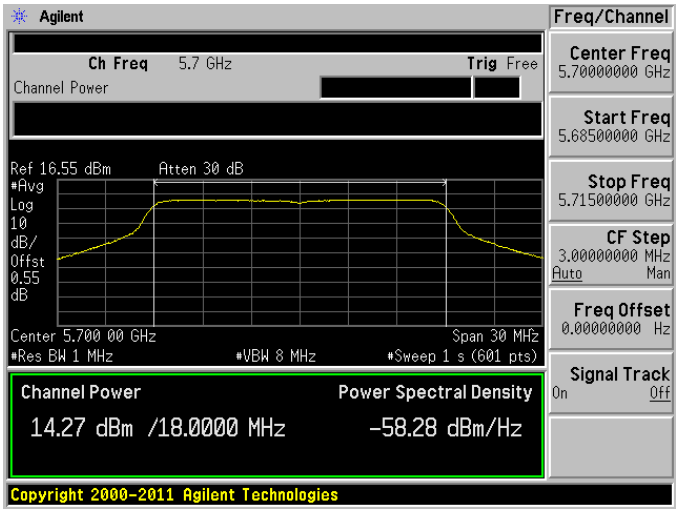


802.11n-HT20, High Channel 5700 MHz

Chain 0



Chain 1



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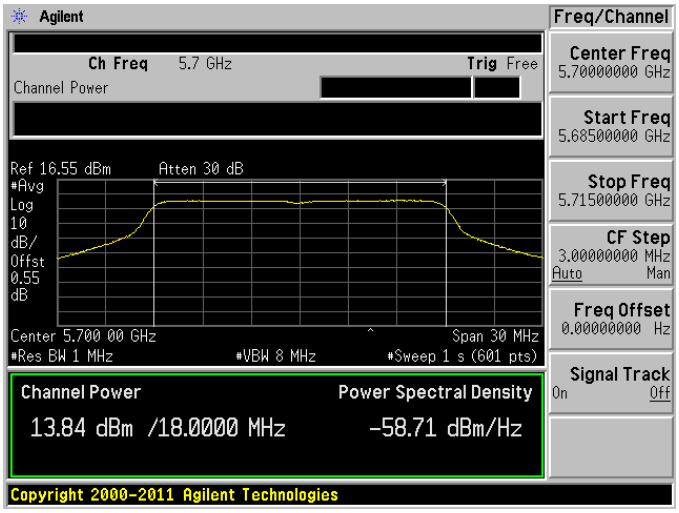
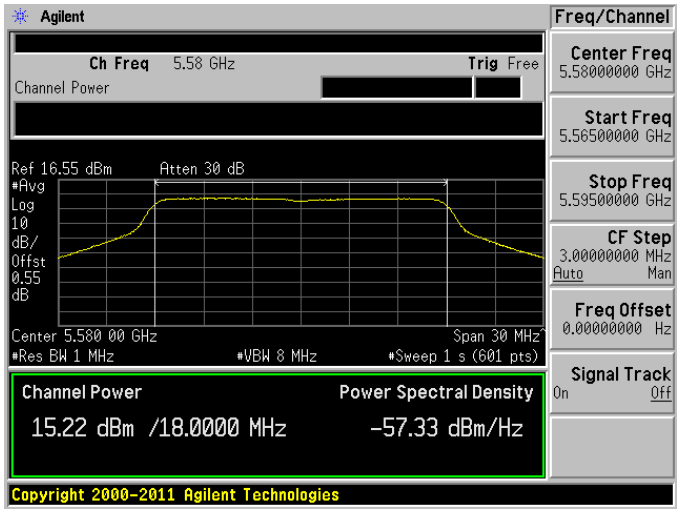
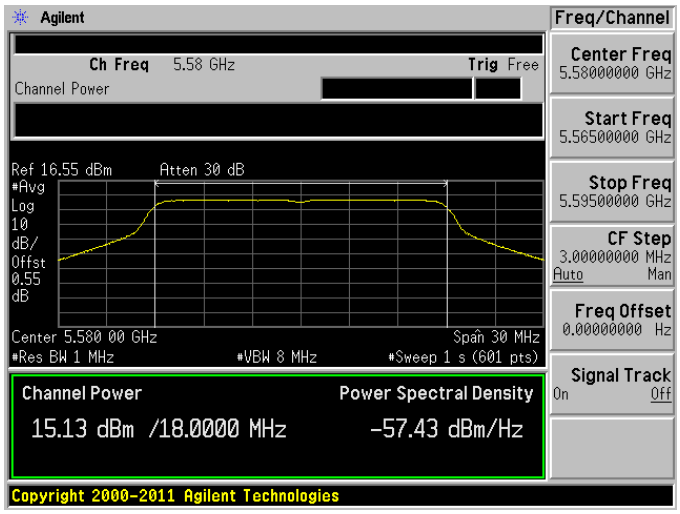


802.11n-HT20, Middle Channel 5580 MHz

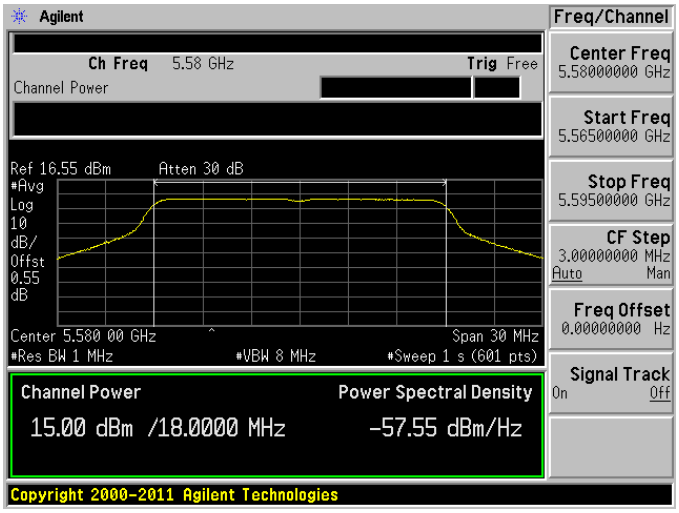
Chain 0



Chain 1

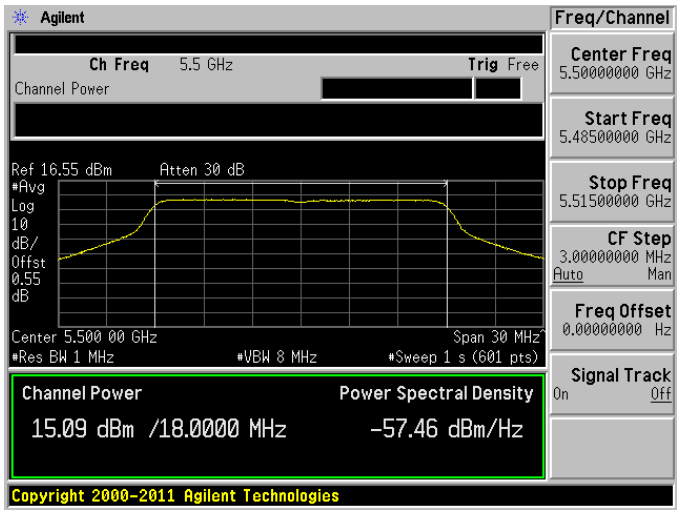


Chain 2

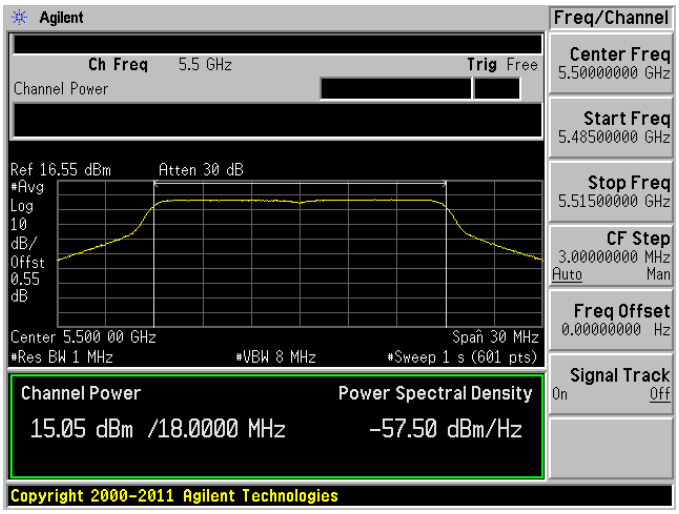


802.11n-HT 20, Low Channel 5500 MHz

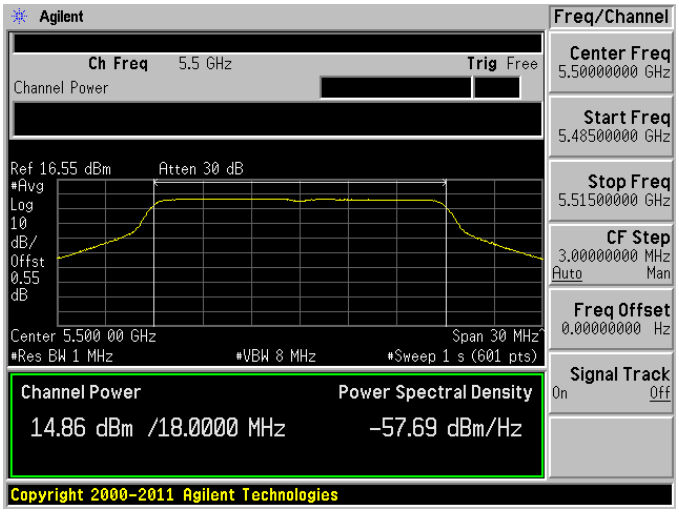
Chain 0



Chain 1

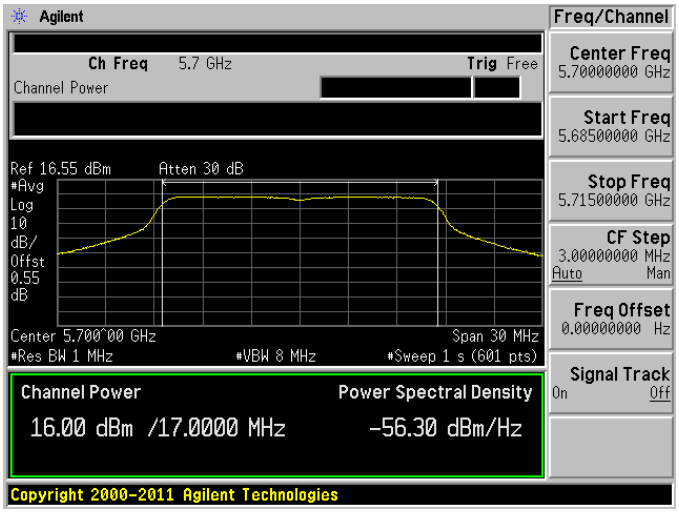


Chain 2

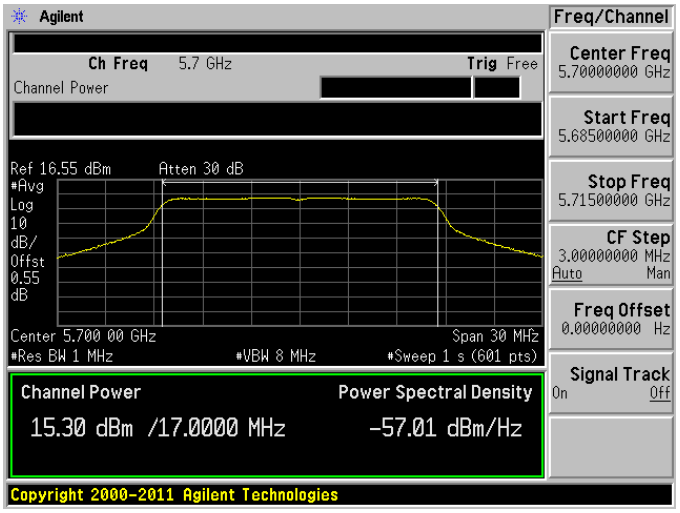


802.11a, High Channel, 5700 MHz

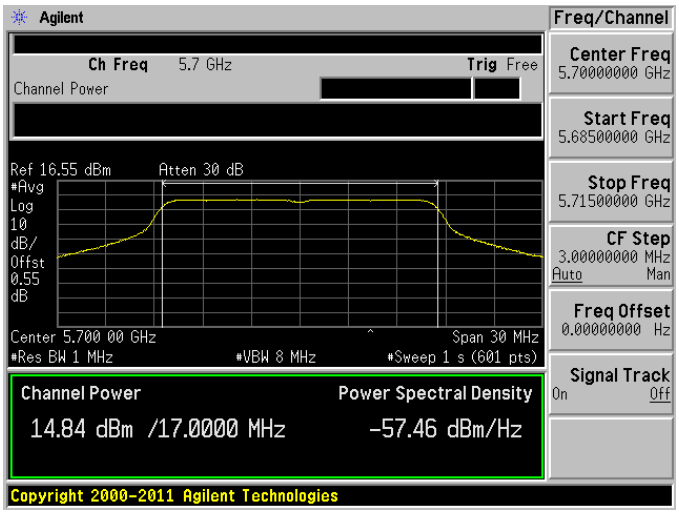
Chain 0



Chain 1

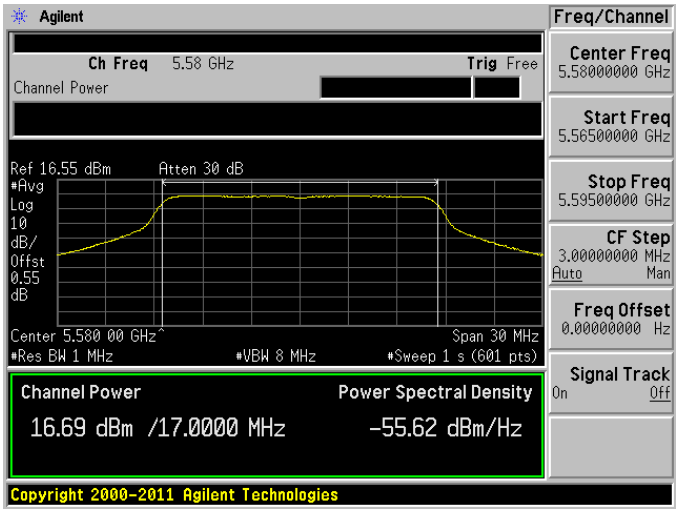


Chain 2

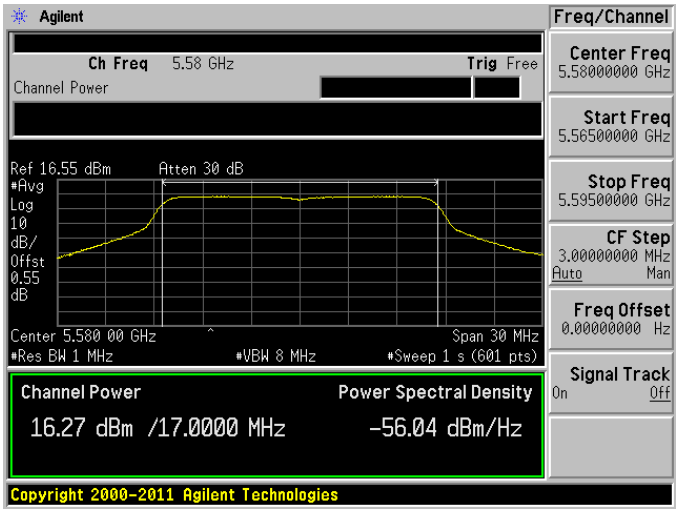


802.11a, Middle Channel, 5580 MHz

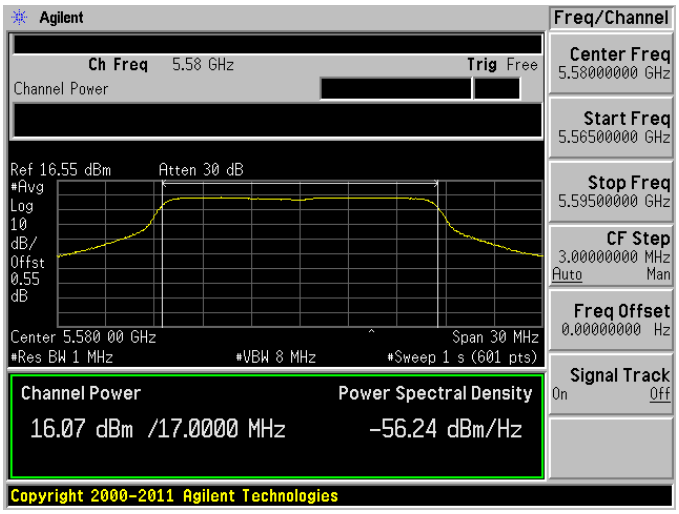
Chain 0



Chain 1



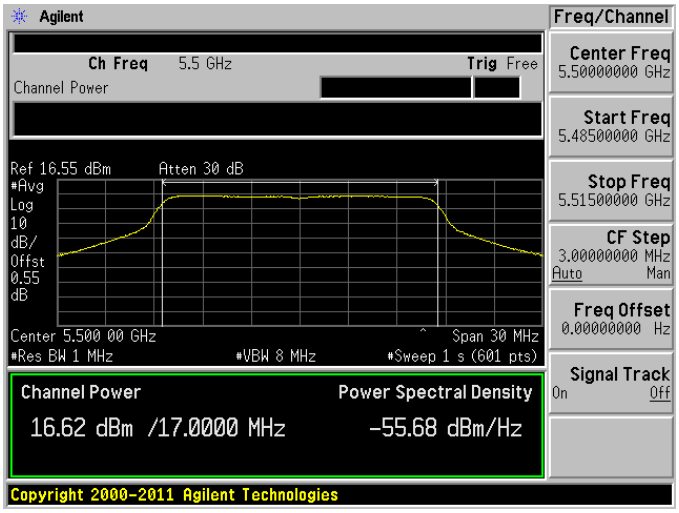
Chain 2



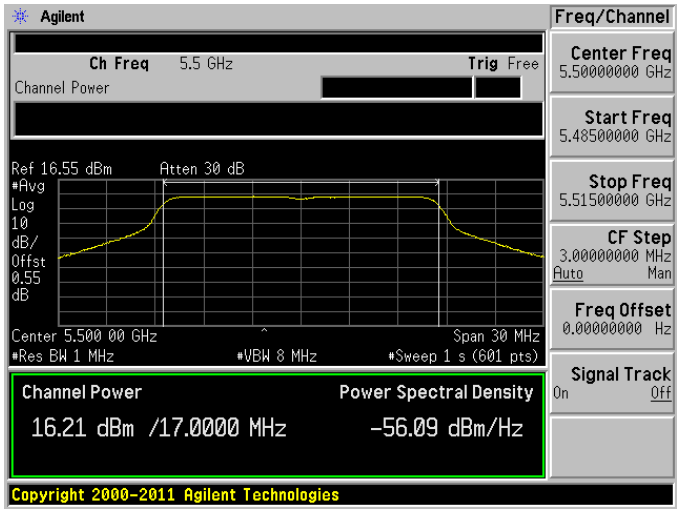
5.6 GHz Band

802.11a, Low Channel, 5500 MHz

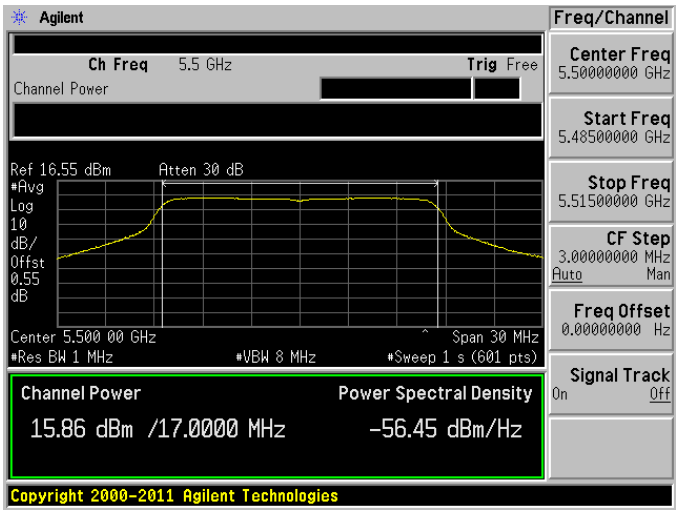
Chain 0



Chain 1

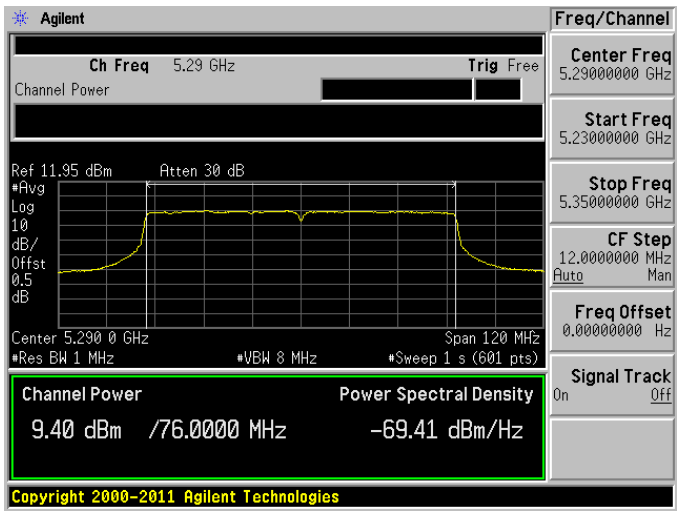


Chain 2

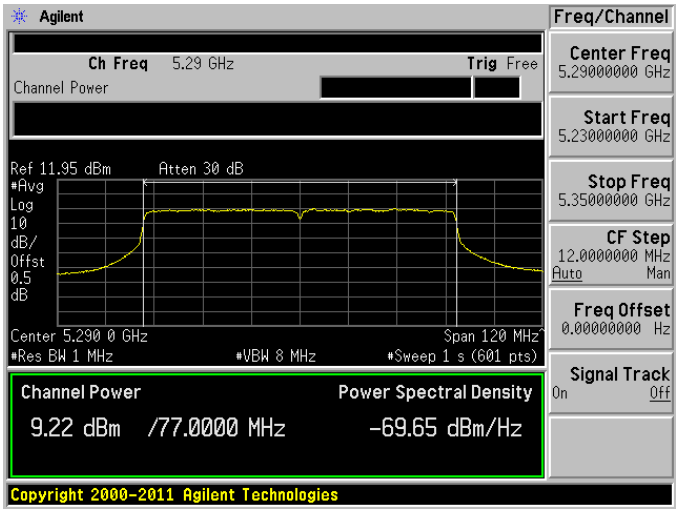


802.11ac-VHT80, High Channel 5290 MHz

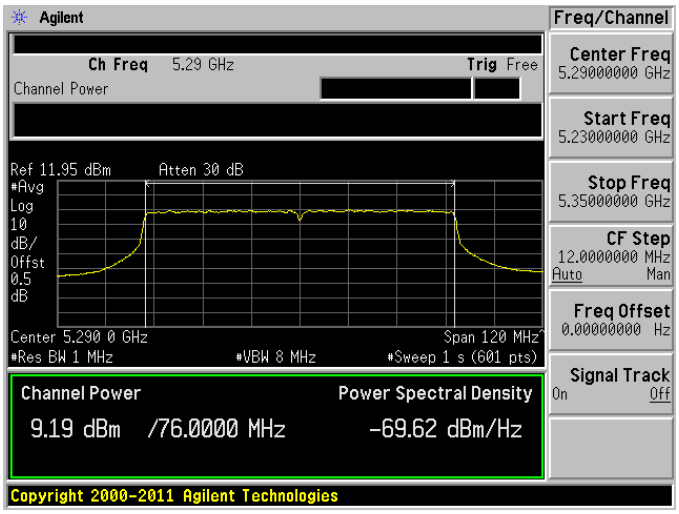
Chain 0



Chain 1

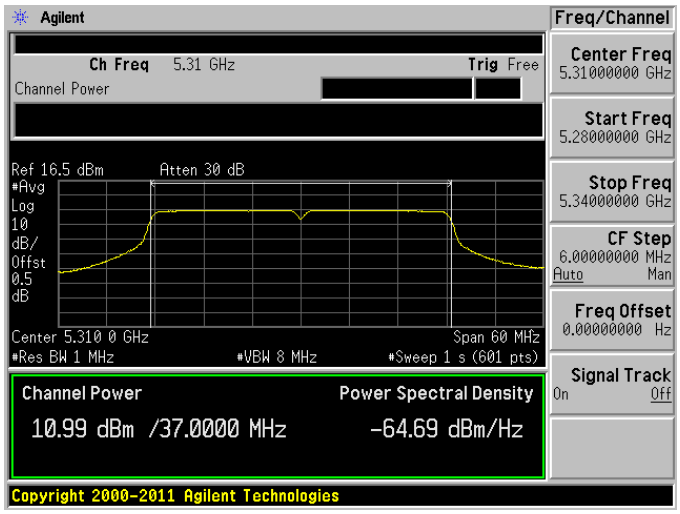


Chain 2

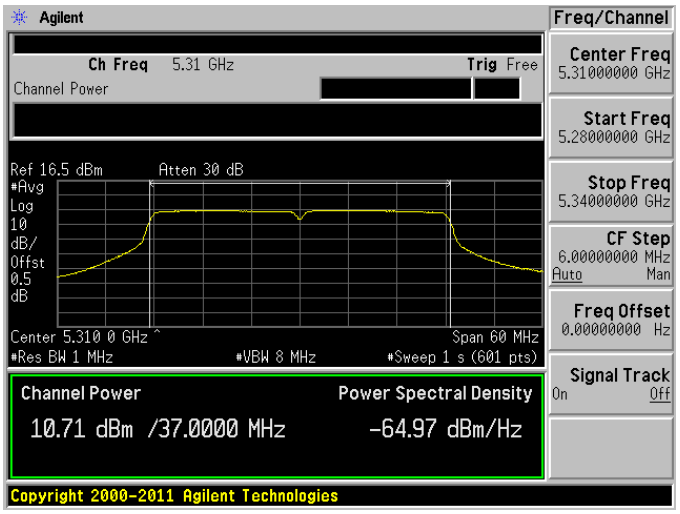


802.11n-HT40, High Channel 5310 MHz

Chain 0



Chain 1



Chain 2