
10 FCC §15.407(a) & ISEDC RSS-247 §6.2 - Power Spectral Density

10.1 Applicable Standards

According to FCC §15.407(a):

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

According to ISEDC RSS-247 §6.2.1 for frequency band 5150-5250 MHz:

The maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log_{10} B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

According to ISEDC RSS-247 §6.2.2 for frequency band 5250-5350 MHz:

The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

According to ISEDC RSS-247 §6.2.3 for frequency band 5470-5600 MHz and 5650-5725 MHz:

The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10} B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10} B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

According to ISERC RSS-247 §6.2.4 for frequency band 5725-5850 MHz:

The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

10.2 Measurement Procedure

- (i) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW $\geq$ 3 MHz.
- (iv) Number of points in sweep $\geq$ 2 Span / RBW. (This ensures that bin-to-bin spacing is $\leq$ RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq$ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the 26 dB EBW of the signal using the spectrum analyzer’s band power measurement function with band limits set equal to the EBW band edges. If the spectrum analyzer does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW of the spectrum.

10.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	MY48250238	2019-06-26	2 years
-	RF cable	-	-	Each time ¹	N/A
-	20 dB attenuator	-	-	Each time ¹	N/A

Note¹: cable and attenuator included in the test set-up will be checked each time before testing.

Statement of Traceability: *BACL Corp.* attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 “A2LA Policy on Metrological Traceability”.

10.4 Test Environmental Conditions

Temperature:	22-24 °C
Relative Humidity:	50-55 %
ATM Pressure:	102.1-102.7 kPa

The testing was performed by Zhao Zhao and Allen Huang from 2021-01-07 to 2021-01-14 in RF site.

10.5 Test Results

5150 - 5250 MHz**FCC:**

Channel	Frequency (MHz)	PSD (dBm/MHz)		DCCF (dB)	Corrected PSD (dBm/MHz)		FCC Limit (dBm/MHz)
		ANT J12	ANT J15		ANT J12	ANT J15	
802.11a mode							
36	5180	7.843	8.159	0.31	8.15	8.47	17
44	5220	8.554	8.317	0.31	8.86	8.63	17
48	5240	8.607	8.095	0.31	8.92	8.41	17
802.11n/ac20 mode							
36	5180	7.270	7.740	0.24	10.762		17
44	5220	7.460	7.451	0.24	10.706		17
48	5240	8.039	7.598	0.24	11.074		17
802.11ax20 mode							
36	5180	7.239	7.628	0.18	10.628		17
44	5220	7.776	7.395	0.18	10.780		17
48	5240	7.736	7.625	0.18	10.871		17
802.11n/ac40 mode							
38	5190	4.457	3.723	0.20	7.316		17
46	5230	5.534	4.772	0.20	8.380		17
802.11ax40 mode							
38	5190	3.791	3.044	0.32	6.764		17
46	5230	5.180	4.293	0.32	8.089		17
802.11ac20 mode							
42	5210	-0.416	-1.145	0.61	2.855		17
802.11ax80 mode							
42	5210	-0.121	-1.061	0.24	2.685		17

IC:

Channel	Frequency (MHz)	PSD (dBm/MHz)		DCCF (dB)	Corrected PSD EIRP(dBm/MHz)		IC Limit EIRP (dBm/MHz)
		ANT J12	ANT J15		ANT J12	ANT J15	
802.11a mode							
36	5180	7.843	8.159	0.31	9.15	9.47	10.00
44	5220	8.554	8.317	0.31	9.86	9.63	10.00
48	5240	8.607	8.095	0.31	9.92	9.41	10.00
802.11n/ac20 mode							
36	5180	7.270	7.740	0.24	8.51	8.98	10.00
44	5220	7.460	7.451	0.24	8.70	8.69	10.00
48	5240	8.039	7.598	0.24	9.28	8.84	10.00
802.11ax20 mode							
36	5180	7.239	7.628	0.18	8.42	8.81	10.00
44	5220	7.776	7.395	0.18	8.96	8.58	10.00
48	5240	7.736	7.625	0.18	8.92	8.81	10.00
802.11n/ac40 mode							
38	5190	4.457	3.723	0.20	5.66	4.92	10.00
46	5230	5.534	4.772	0.20	6.73	5.97	10.00
802.11ax40 mode							
38	5190	3.791	3.044	0.32	5.11	4.36	10.00
46	5230	5.180	4.293	0.32	6.50	5.61	10.00
802.11ac20 mode							
42	5210	-0.416	-1.145	0.61	1.19	0.47	10.00
802.11ax80 mode							
42	5210	-0.121	-1.061	0.24	1.12	0.18	10.00

Note: Corrected PSD EIRP = PSD (dBm/MHz) + DCCF (dB) + antenna gain (dB)

Note: The antenna gain was 1 dBi declared by the manufacturer.

Note: According to MIMO FCC KDB 662911 D02 MIMO with Cross Polarized Antenna v01, Where an FCC rule specifies limits in radiated terms such as EIRP or ERP, the limits apply to the maximum emission that would be observed by a linearly polarized measurement antenna. For radiated measurements, the maximum need be performed only over two polarizations for the receive antenna— horizontal and vertical.

5250 - 5350 MHz

Channel	Frequency (MHz)	PSD (dBm/MHz)		DCCF (dB)	Corrected Total PSD (dBm/MHz)		FCC/IC Limit (dBm/MHz)
		ANT J12	ANT J15		ANT J12	ANT J15	
802.11a mode							
52	5260	8.737	8.171	0.31	9.05	8.48	11
60	5300	9.202	8.118	0.31	9.51	8.43	11
64	5320	9.107	7.921	0.31	9.42	8.23	11
802.11n/ac20 mode							
52	5260	7.995	7.404	0.24	10.960		11
60	5300	6.556	6.230	0.24	9.646		11
64	5320	7.020	6.363	0.24	9.954		11
802.11ax20 mode							
52	5260	5.983	6.039	0.18	9.201		11
60	5300	6.292	6.122	0.18	9.398		11
64	5320	8.195	6.987	0.18	10.823		11
802.11n/ac40 mode							
54	5270	5.849	5.558	0.20	8.916		11
62	5310	6.320	5.511	0.20	9.145		11
802.11ax40 mode							
54	5270	6.228	5.276	0.32	9.108		11
62	5310	6.188	5.020	0.32	8.973		11
802.11ac80 mode							
58	5290	-0.224	-0.246	0.61	3.385		11
802.11ax80 mode							
58	5290	0.335	-0.400	0.24	3.233		11

5470 MHz – 5725 MHz

Channel	Frequency (MHz)	PSD (dBm/MHz)		DCCF (dB)	Corrected Total PSD (dBm/MHz)		FCC/IC Limit (dBm/MHz)
		ANT J12	ANT J15		ANT J12	ANT J15	
802.11a mode							
100	5500	9.392	9.052	0.31	9.70	9.36	11
116	5580	9.061	8.980	0.31	9.37	9.29	11
140	5700	9.124	8.752	0.31	9.43	9.06	11
144	5720	8.734	8.152	0.31	9.04	8.46	11
802.11n/ac20 mode							
100	5500	7.333	7.067	0.24	10.452		11
116	5580	7.736	7.392	0.24	10.818		11
140	5700	7.299	6.773	0.24	10.294		11
144	5720	7.922	7.428	0.24	10.932		11
802.11ax20 mode							
100	5500	6.878	7.426	0.18	10.351		11
116	5580	7.319	7.789	0.18	10.751		11
140	5700	6.801	7.163	0.18	10.176		11
144	5720	7.814	7.803	0.18	10.999		11
802.11n/ac40 mode							
102	5510	5.844	5.428	0.20	8.851		11
110	5550	6.049	6.133	0.20	9.302		11
134	5670	5.683	5.445	0.20	8.776		11
142	5710	6.518	6.251	0.20	9.597		11
802.11ax40 mode							
102	5510	4.881	4.698	0.32	8.121		11
110	5550	5.703	5.941	0.32	9.154		11
134	5670	5.403	4.993	0.32	8.533		11
142	5710	6.137	6.114	0.32	9.456		11
802.11ac80 mode							
106	5530	1.315	1.034	0.61	4.797		11
122	5610	3.075	2.692	0.61	6.508		11
138	5690	2.746	2.492	0.61	6.241		11
802.11ax80 mode							
106	5530	0.938	0.903	0.24	4.171		11
122	5610	3.260	2.778	0.24	6.276		11
138	5690	3.096	2.762	0.24	6.183		11

Corrected Total PSD (dBm/MHz) = PSD (dBm/MHz) + Duty Cycle Correction (dB)

5725MHz – 5850MHz

Channel	Frequency (MHz)	PSD (dBm/100kHz)		DCCF (dB)	Corrected Total PSD (dBm/500kHz)		FCC/IC Limit (dBm/500kHz)
		ANT J12	ANT J15		ANT J12	ANT J15	
802.11a mode							
149	5745	-0.470	-0.706	0.31	6.83	6.59	30
157	5785	-0.516	-0.776	0.31	6.78	6.52	30
165	5825	-1.482	-1.395	0.31	5.82	5.91	30
802.11n/ac20 mode							
149	5745	-1.184	-1.492	0.24	8.905		30
157	5785	-0.640	-1.391	0.24	9.241		30
165	5825	-1.155	-1.556	0.24	8.889		30
802.11ax20 mode							
149	5745	-2.292	-2.684	0.18	7.696		30
157	5785	-2.663	-2.453	0.18	7.623		30
165	5825	-2.706	-2.919	0.18	7.369		30
802.11n/ac40 mode							
151	5755	-3.535	-4.556	0.2	6.184		30
159	5795	-3.721	-3.713	0.2	6.483		30
802.11ax40 mode							
151	5755	-5.077	-6.066	0.32	4.777		30
159	5795	-5.168	-6.247	0.32	4.646		30
802.11ac20 mode							
155	5775	-9.723	-9.963	0.61	0.769		30
802.11ax80 mode							
155	5775	-10.016	-10.398	0.24	0.037		30

Note: Corrected Total PSD (dBm/500kHz) = PSD (dBm/100kHz) + RBW Correction (dB) + Duty Cycle Correction (dB)

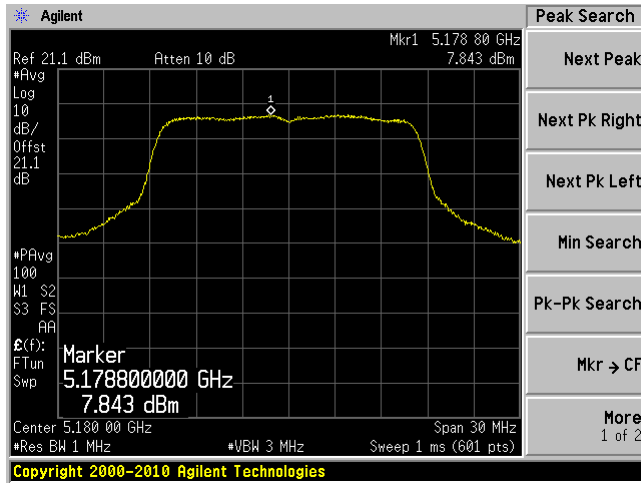
Note: The RBW Correction from 100 kHz to 500kHz is $10 \cdot \log(500\text{kHz}/100\text{kHz}) = 6.990$

Please refer to the following plots.

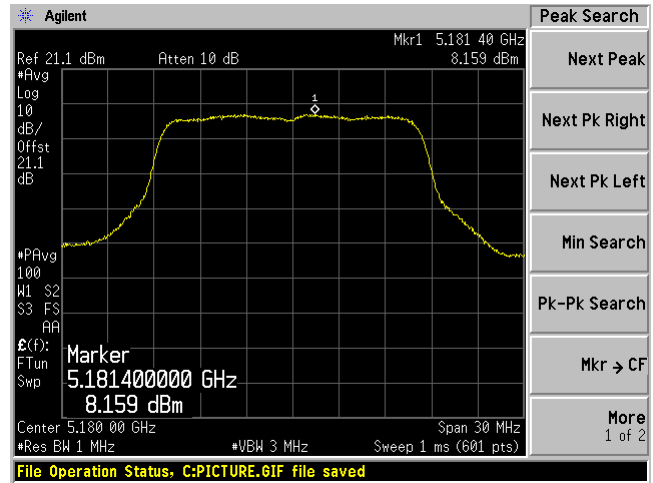
5150 - 5250 MHz

802.11a Mode

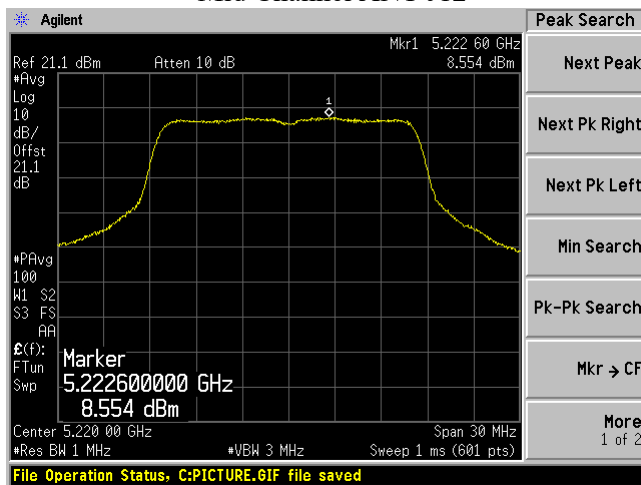
Low Channel ANT J12



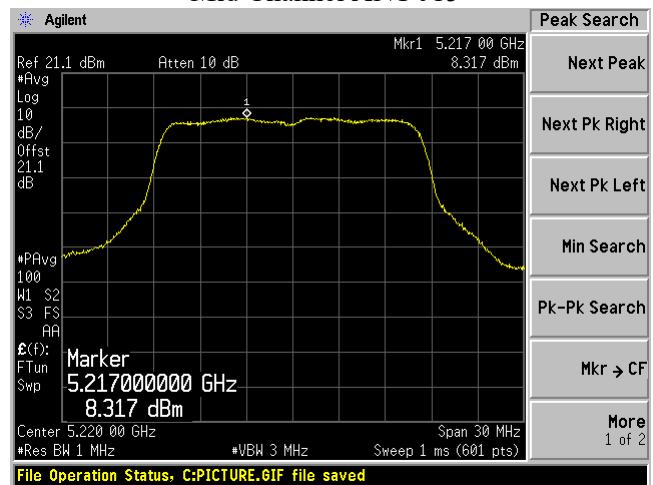
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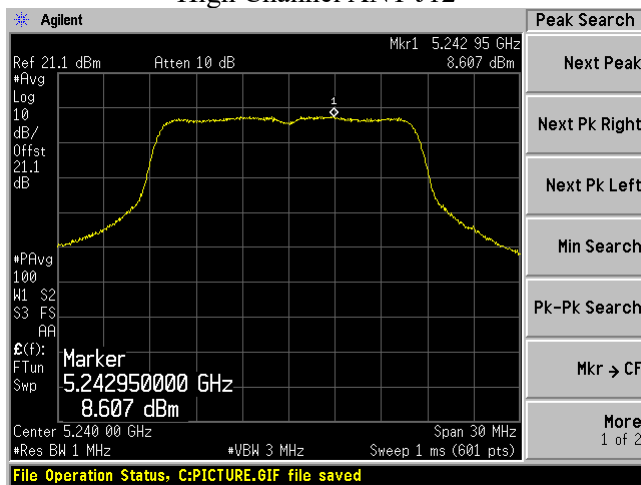
Mid Channel ANT J12



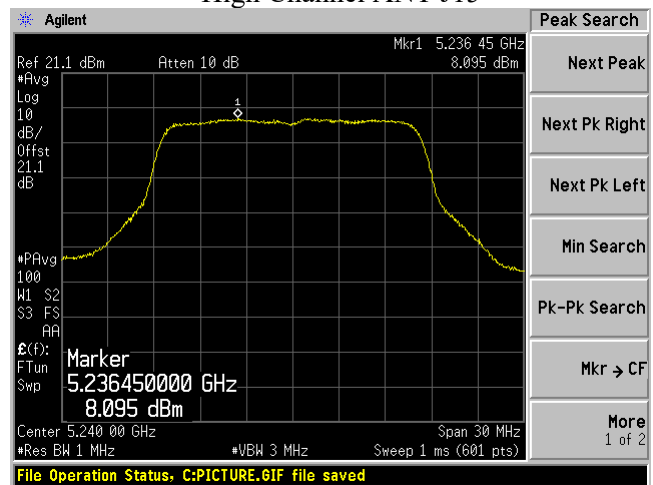
Mid Channel ANT J15



High Channel ANT J12

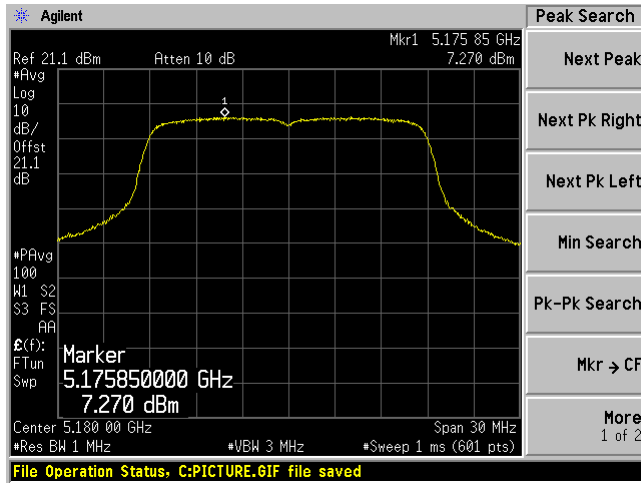


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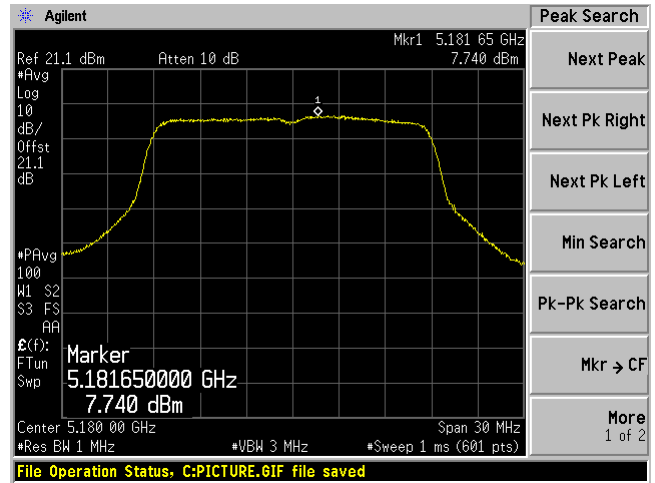


802.11ac20 Mode

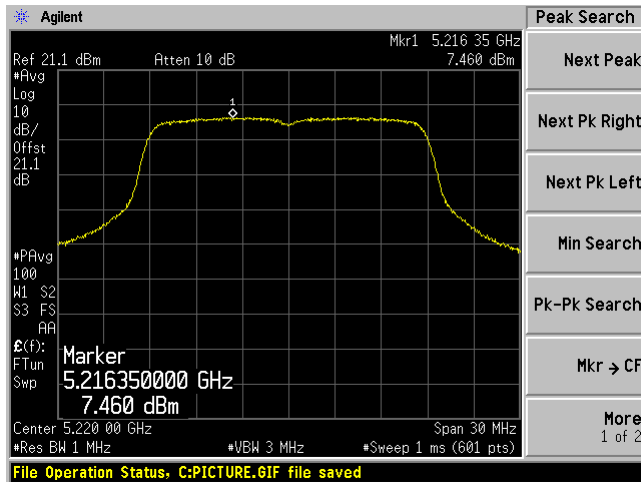
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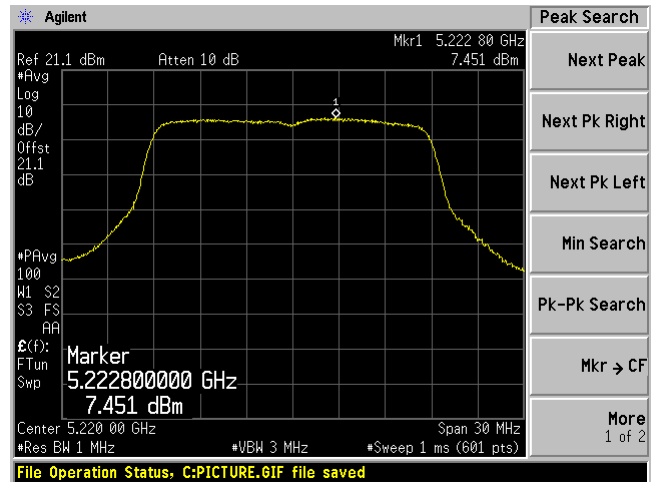
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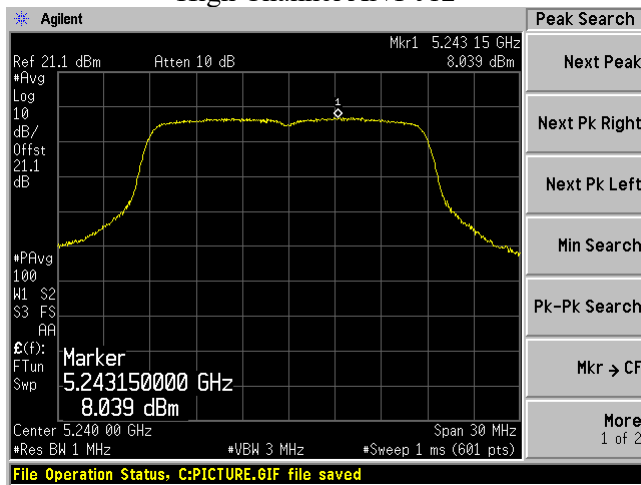
Mid Channel ANT J12



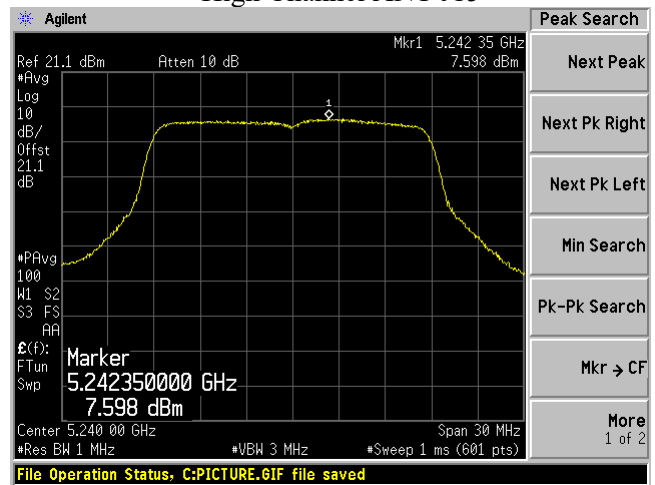
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High Channel ANT J12

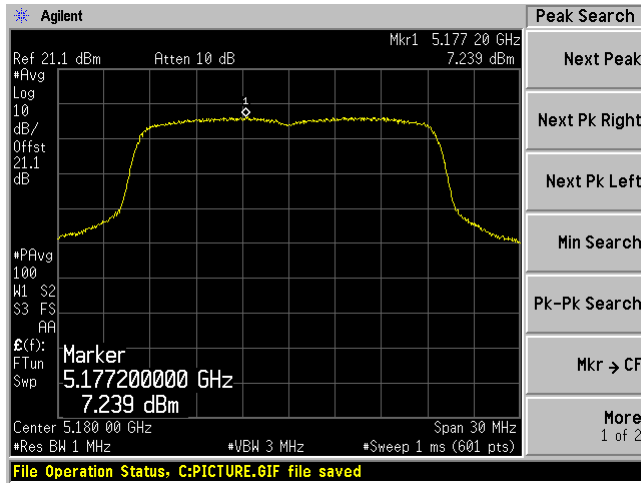


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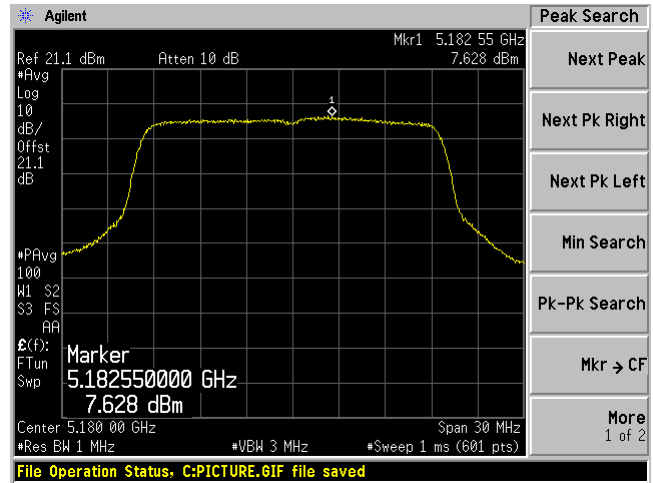


802.11ax20 Mode

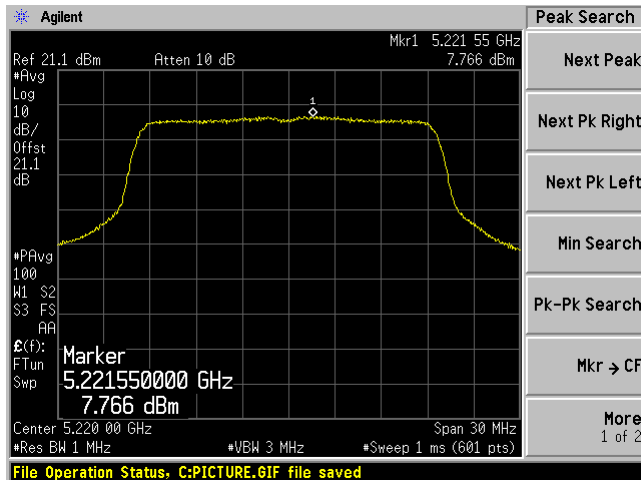
Low Channel ANTJ12



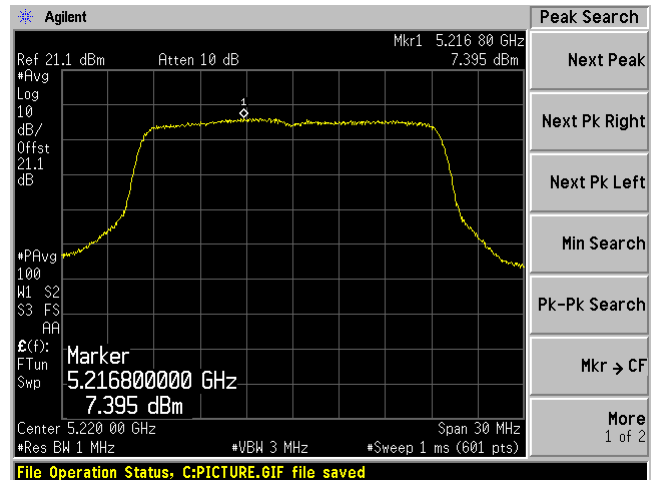
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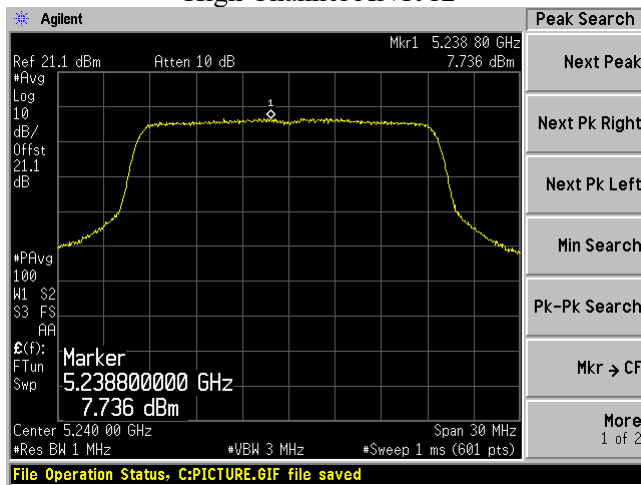
Mid Channel ANTJ12



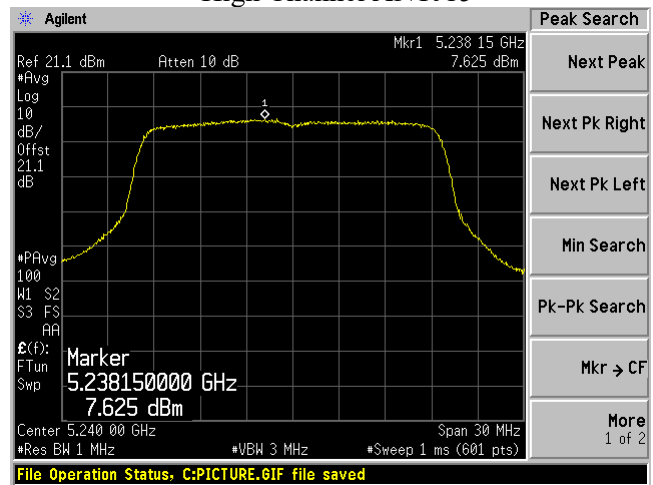
Mid Channel ANTJ15



High Channel ANTJ12

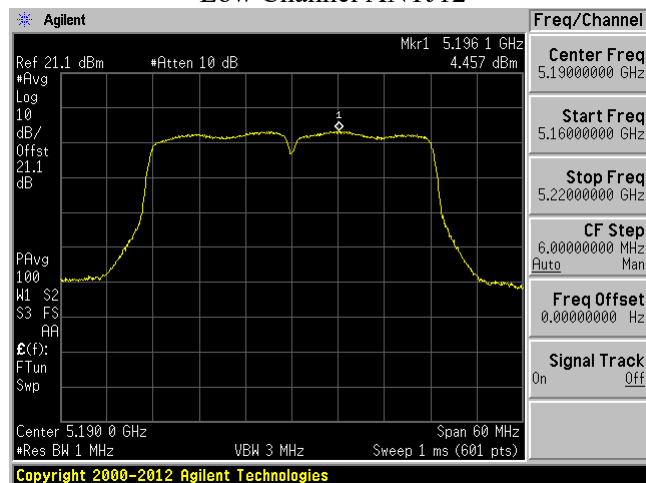


High Channel ANTJ15

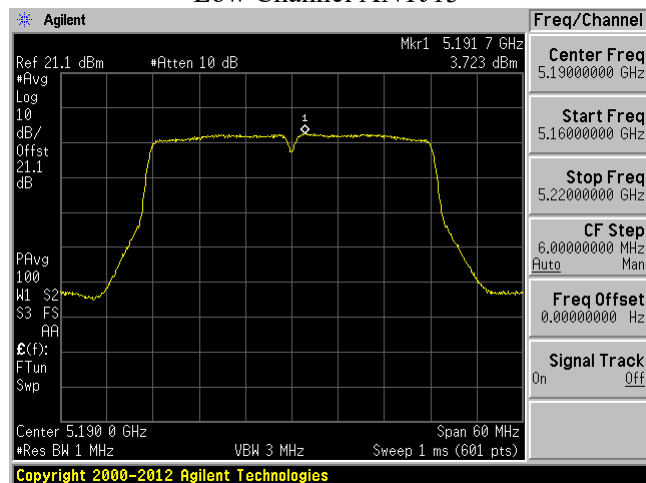


802.11ac40 Mode

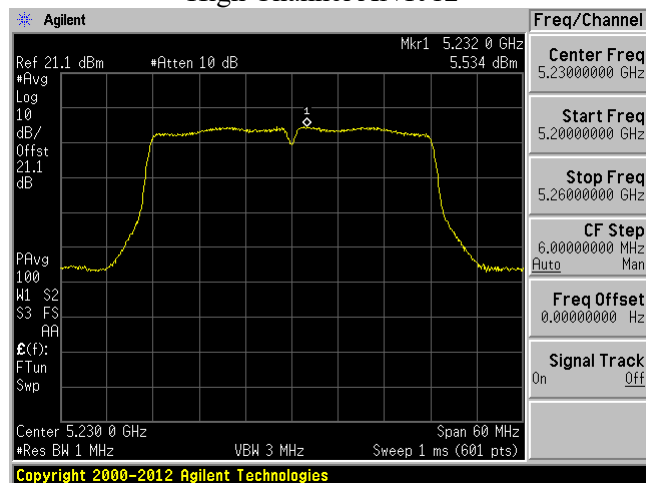
Low Channel ANTJ12



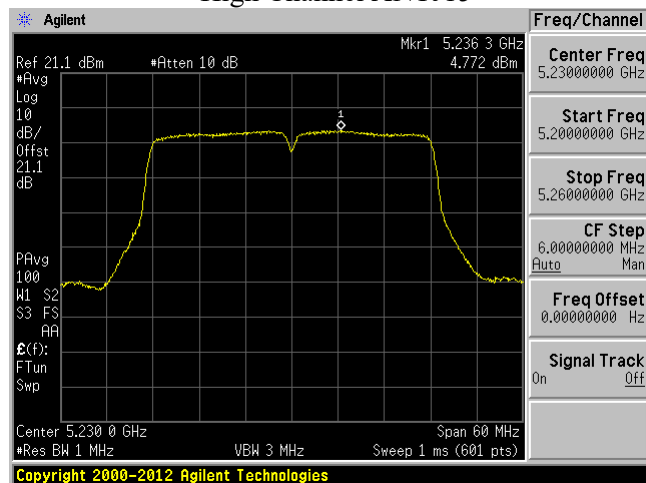
Low Channel ANTJ15



High Channel ANTJ12

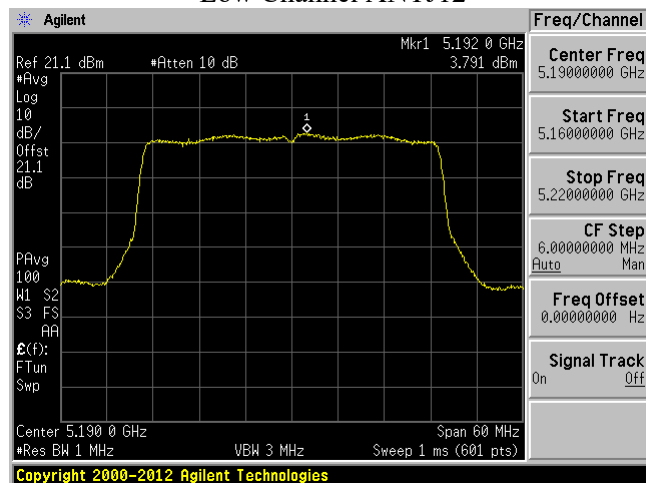


High Channel ANTJ15

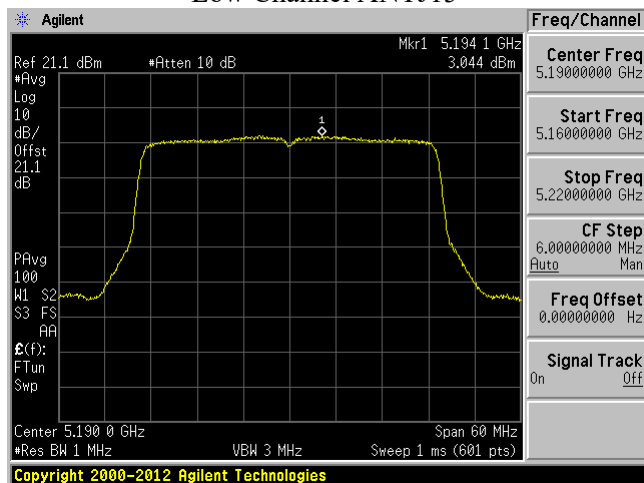


802.11ax40 Mode

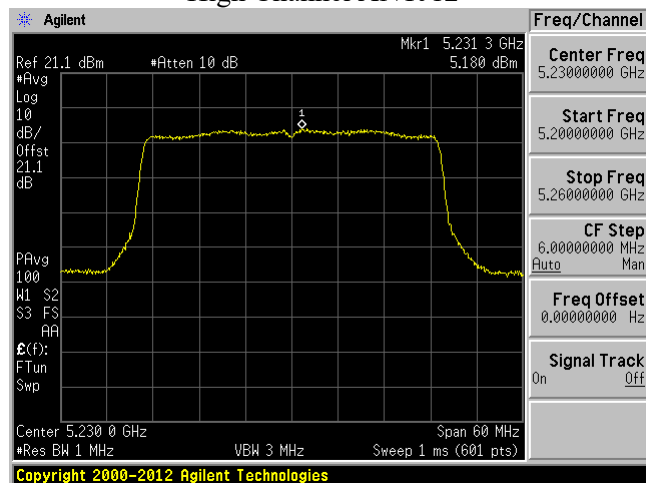
Low Channel ANTJ12



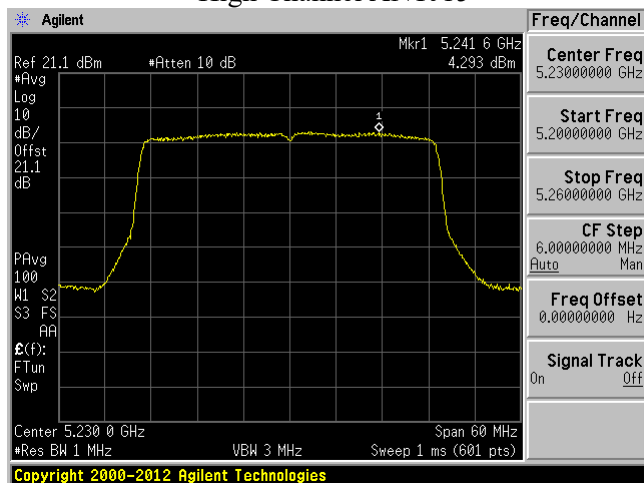
Low Channel ANTJ15



High Channel ANTJ12

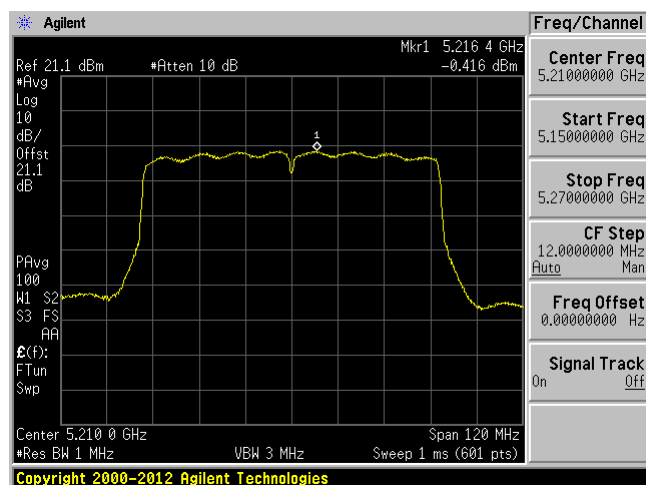


High Channel ANTJ15

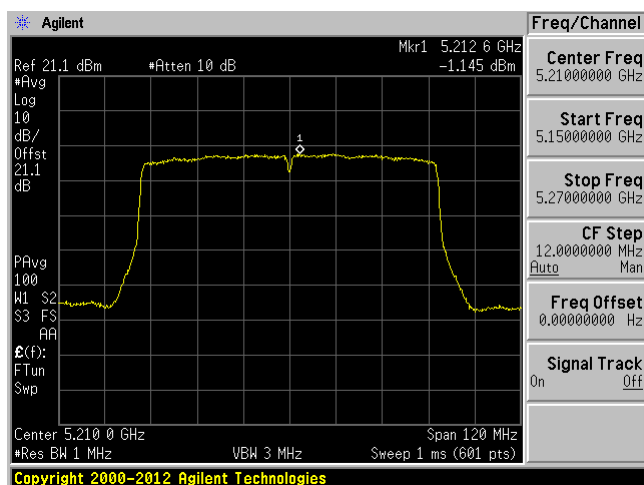


802.11ac80 Mode

ANTJ12

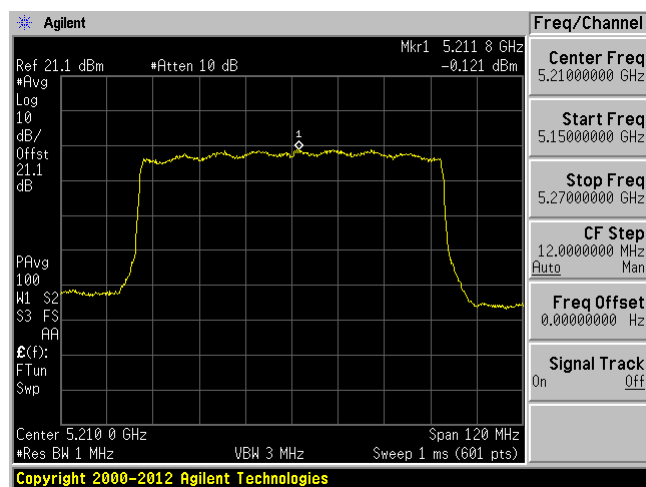


ANTJ15

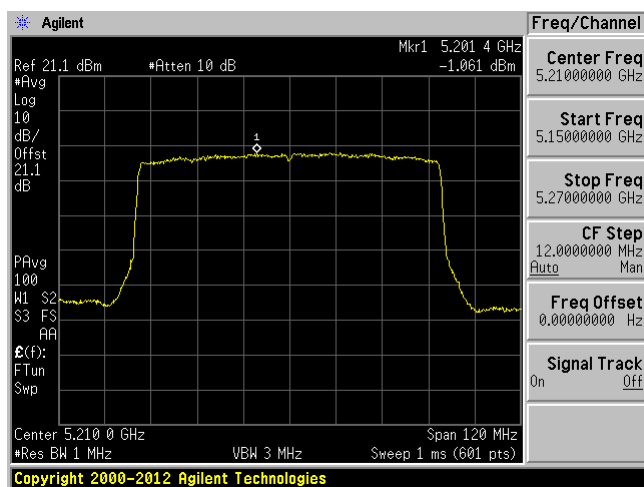


802.11ax80 Mode

ANTJ12



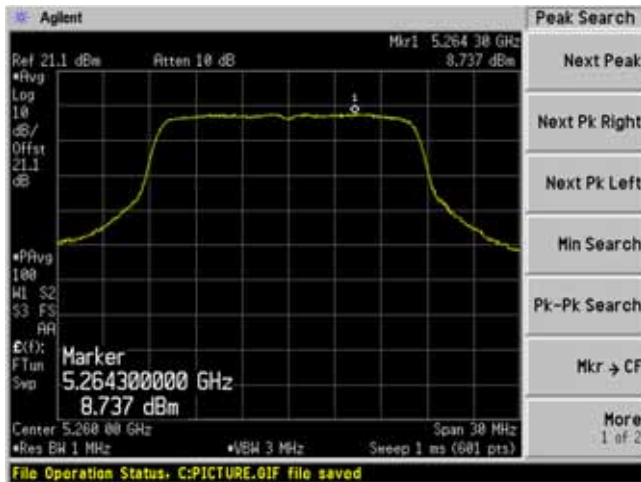
ANTJ15



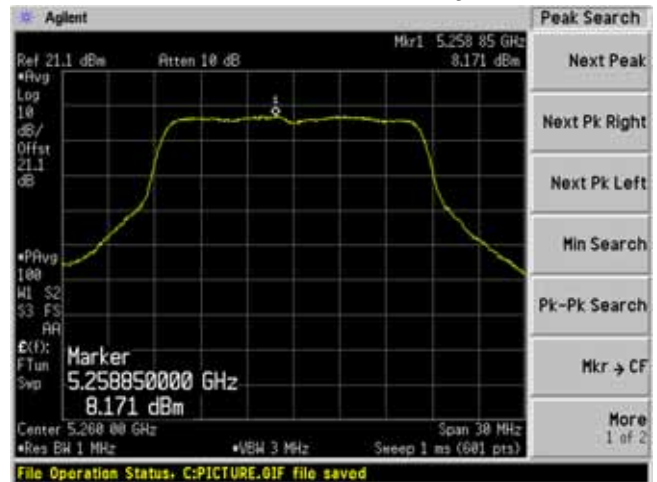
5250 - 5350 MHz

802.11a Mode

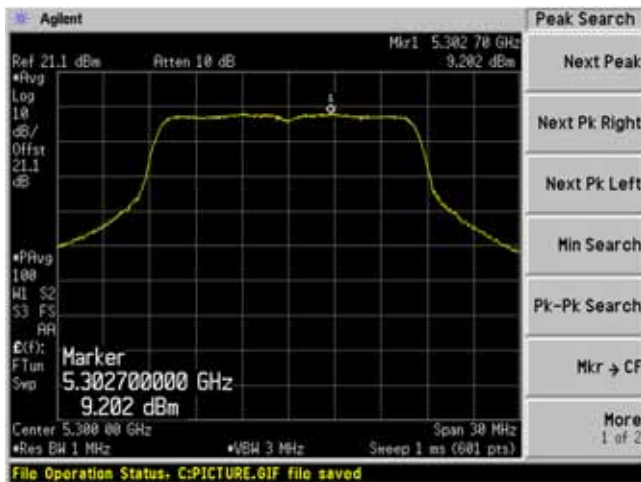
Low Channel ANT J12



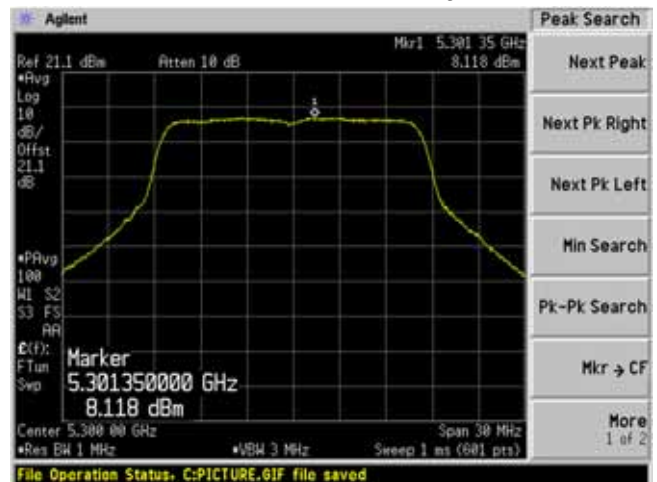
Low Channel ANT J15



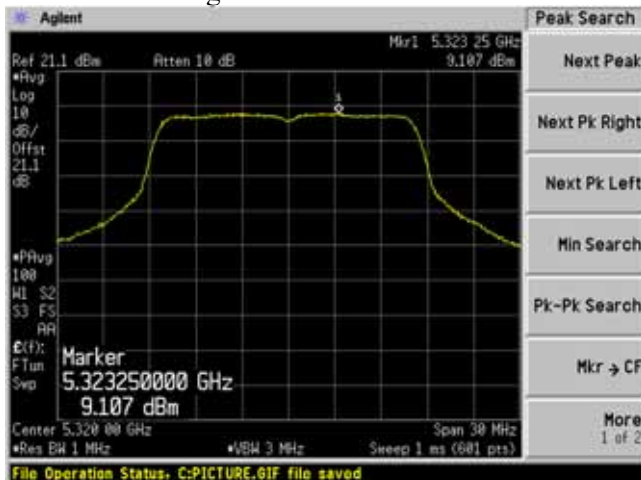
Mid Channel ANT J12



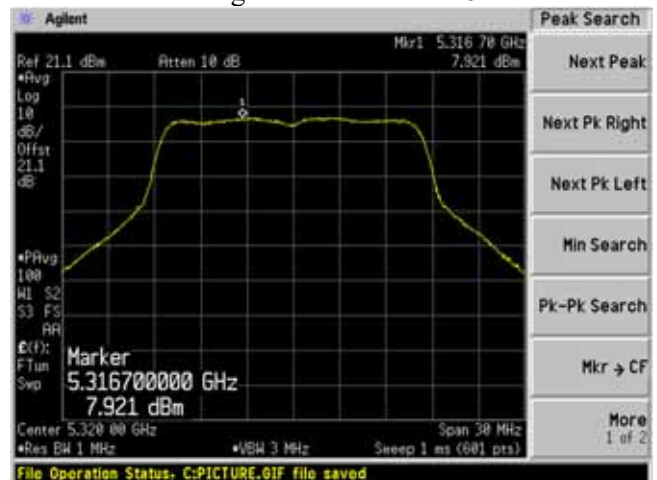
Mid Channel ANT J15



High Channel ANT J12

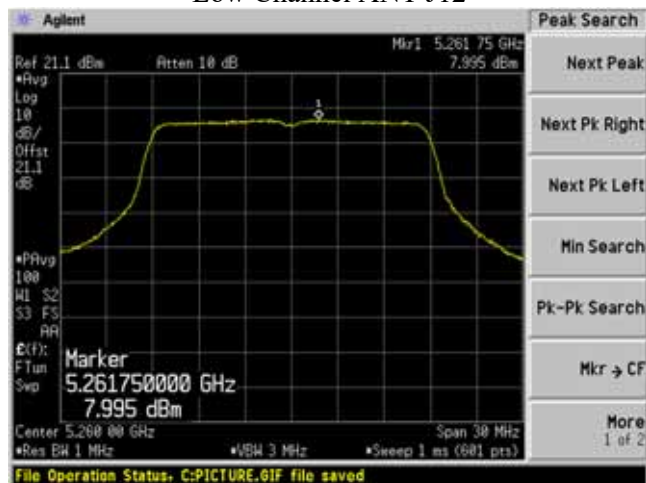


High Channel ANT J15

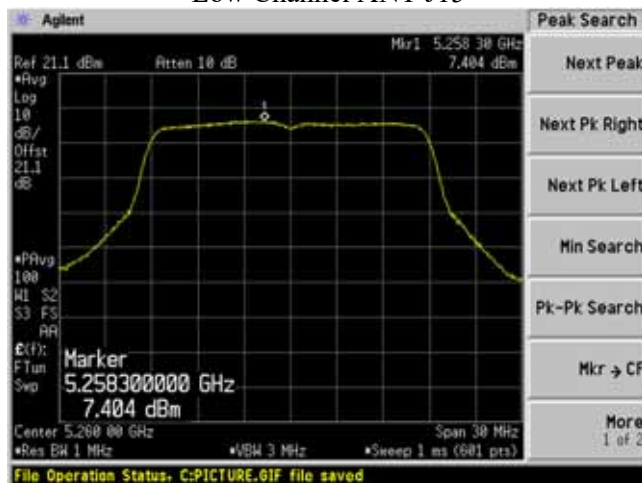


802.11ac20 Mode

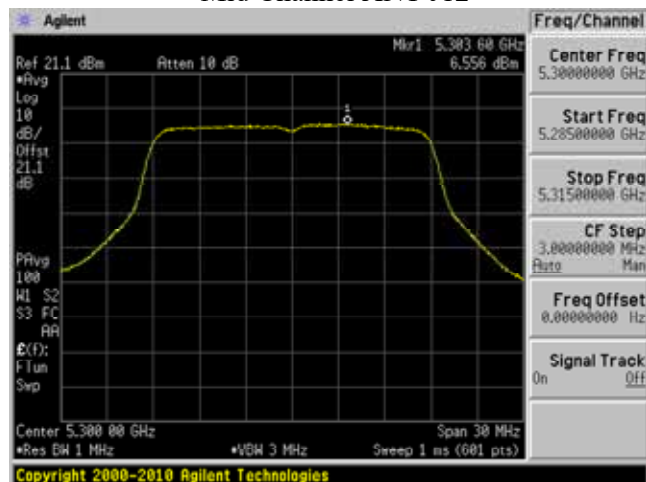
Low Channel ANT J12



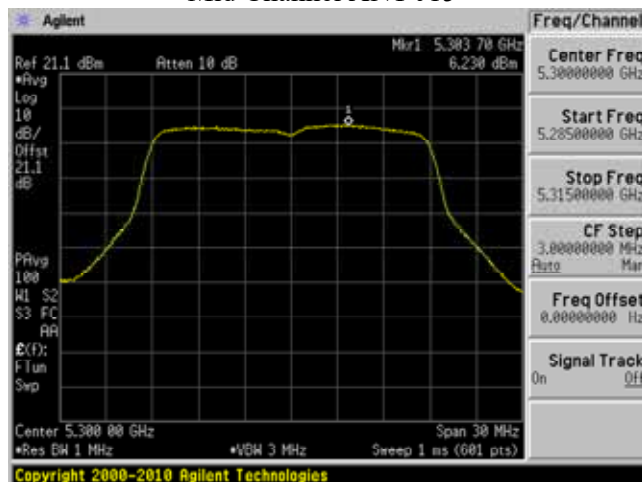
Low Channel ANT J15



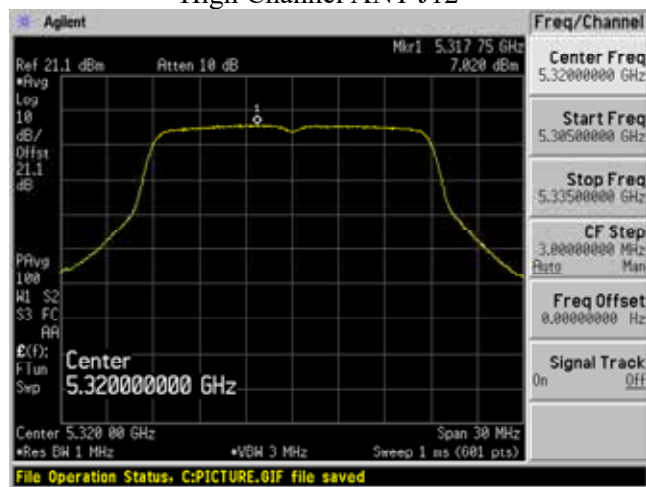
Mid Channel ANT J12



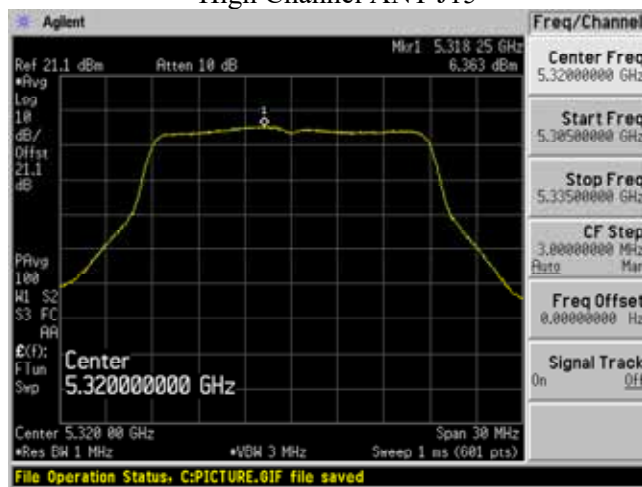
Mid Channel ANT J15



High Channel ANT J12

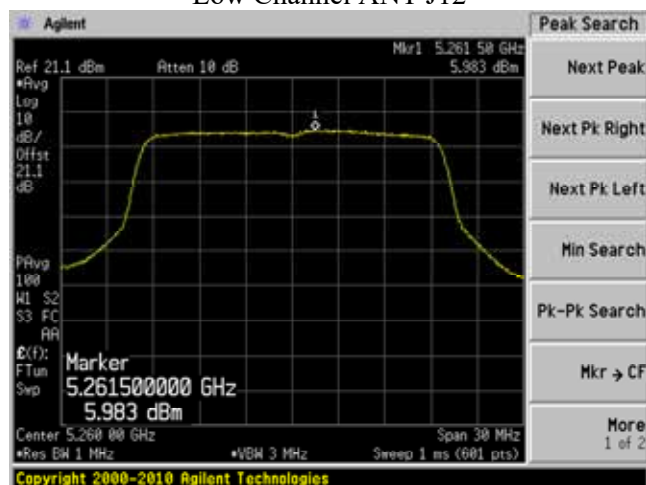


High Channel ANT J15

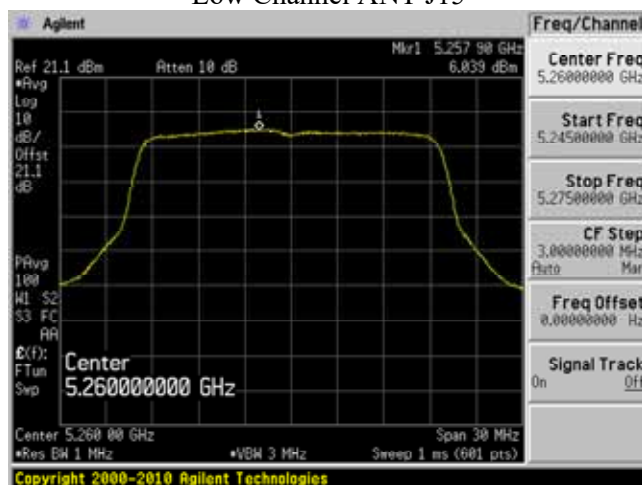


802.11ax20 Mode

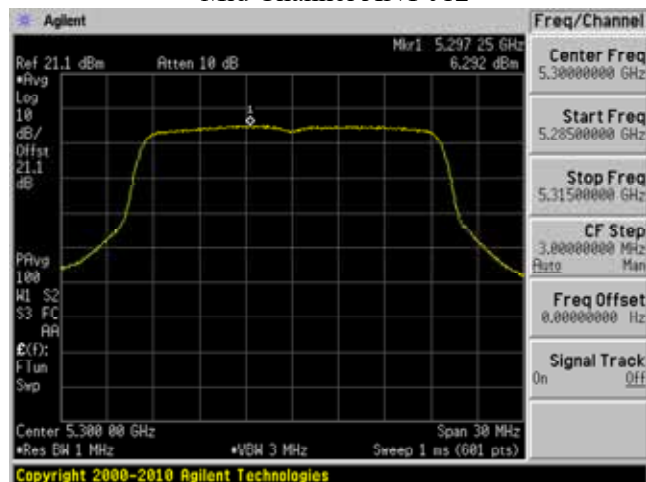
Low Channel ANT J12



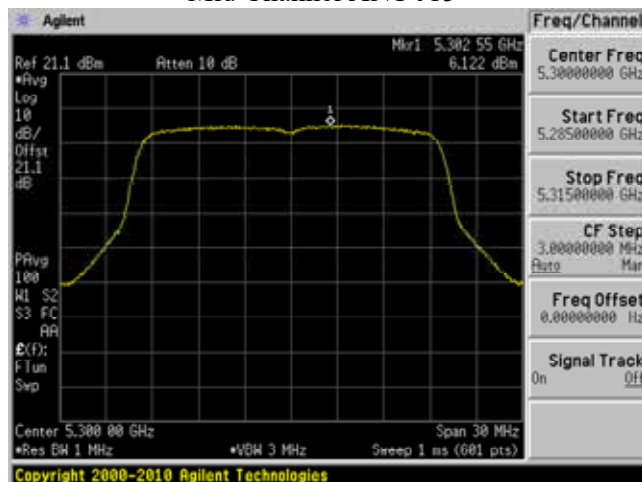
Low Channel ANT J15



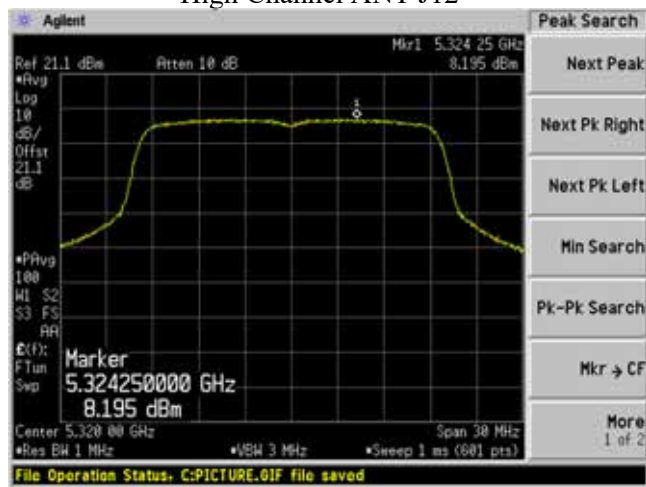
Mid Channel ANT J12



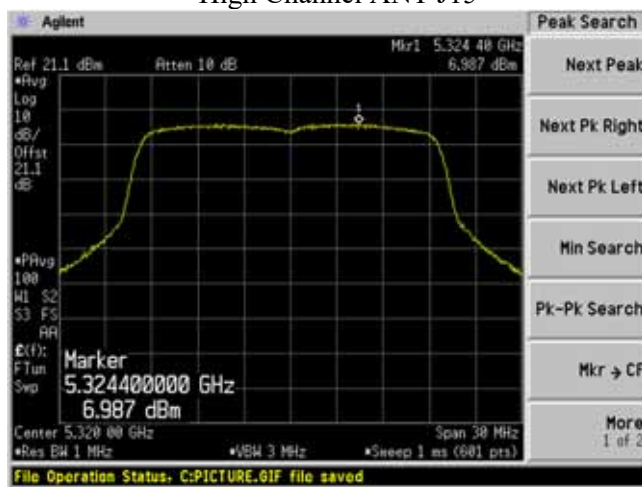
Mid Channel ANT J15



High Channel ANT J12

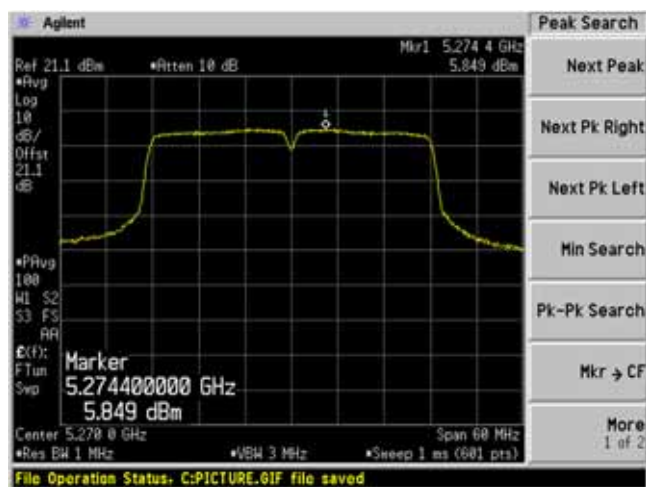


High Channel ANT J15

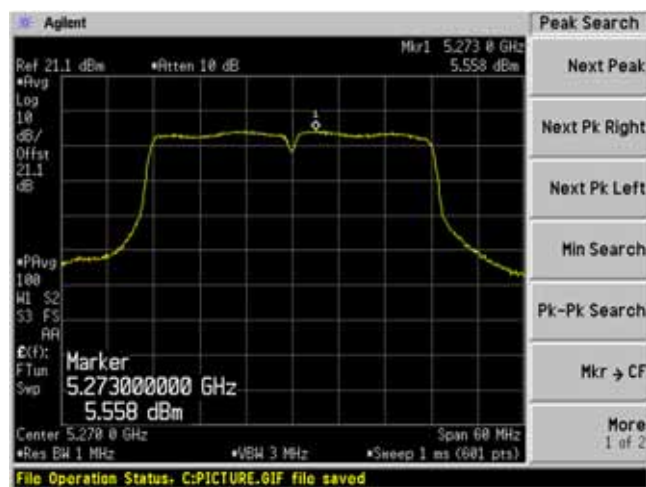


802.11ac40 Mode

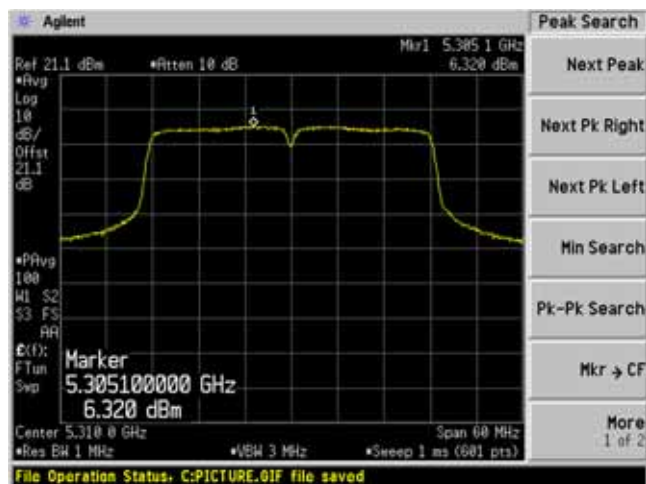
Low Channel ANT J12



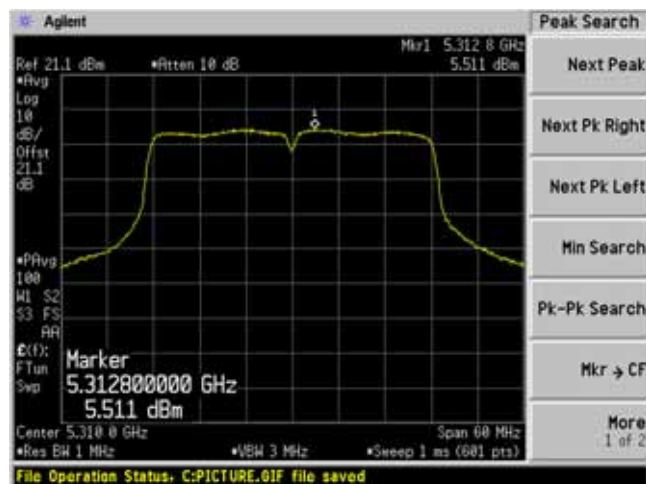
Low Channel ANT J15



High Channel ANT J12

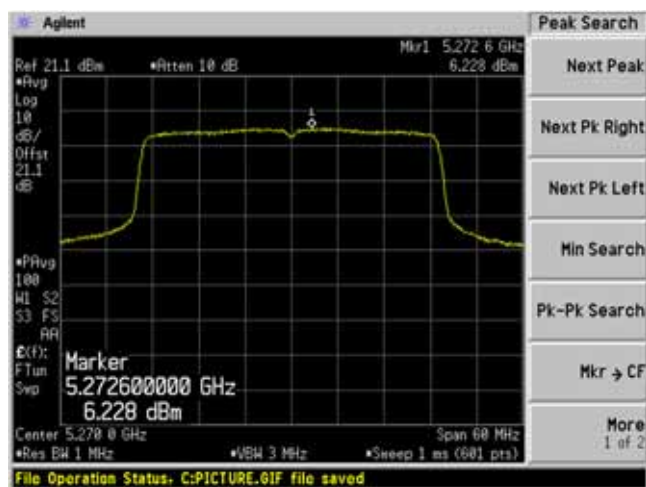


High Channel ANT J15

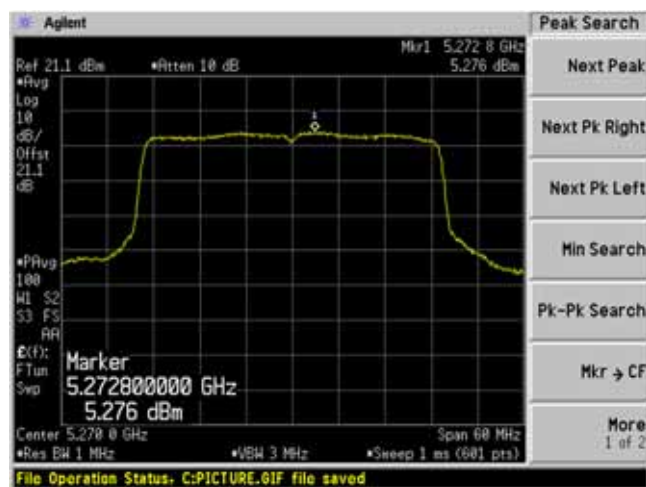


802.11ax40 Mode

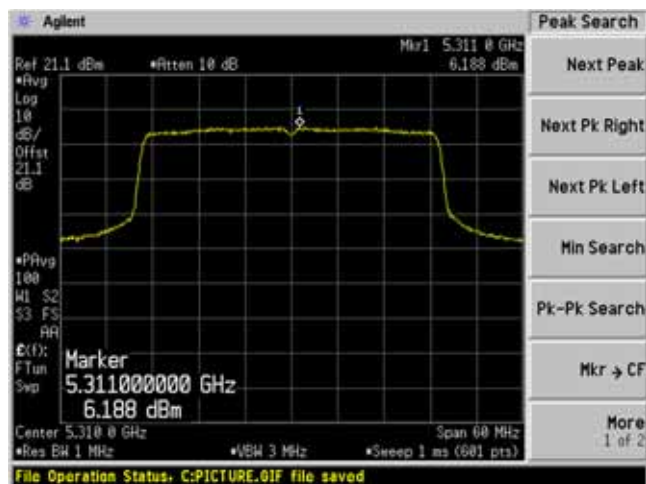
Low Channel ANT J12



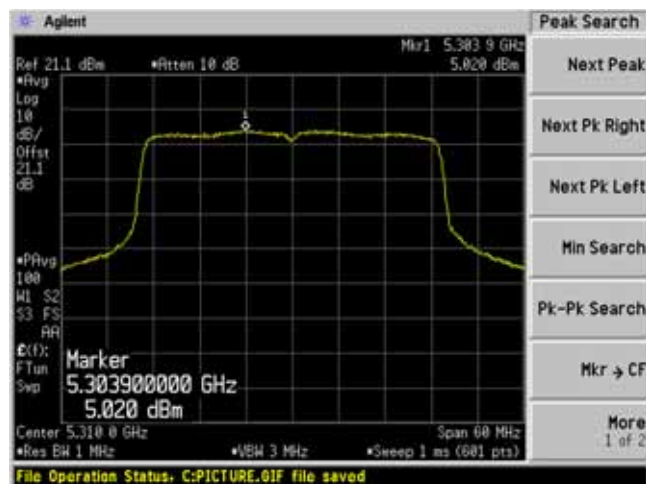
Low Channel ANT J15



High Channel ANT J12

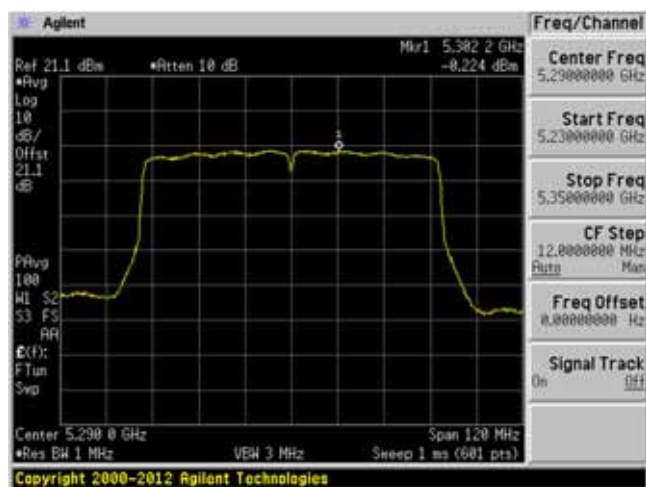


High Channel ANT J15

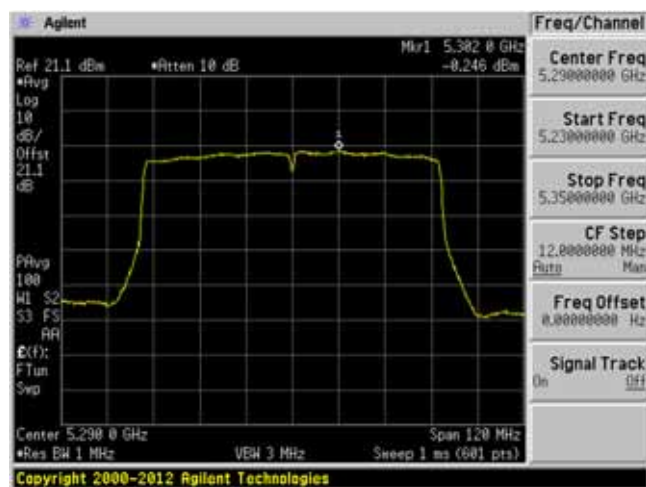


802.11ac80 Mode

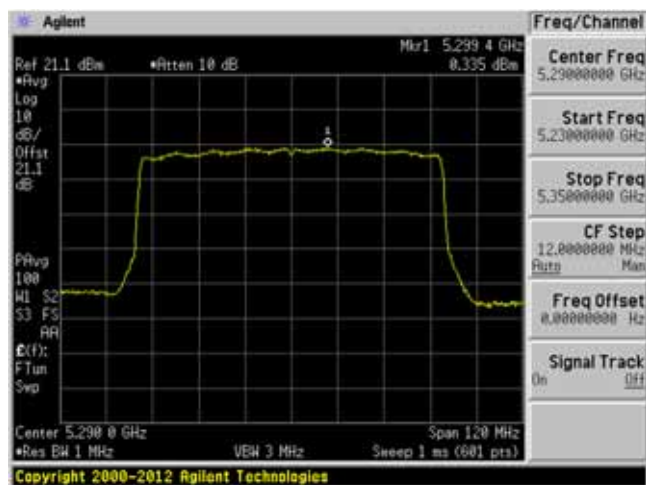
ANT J12



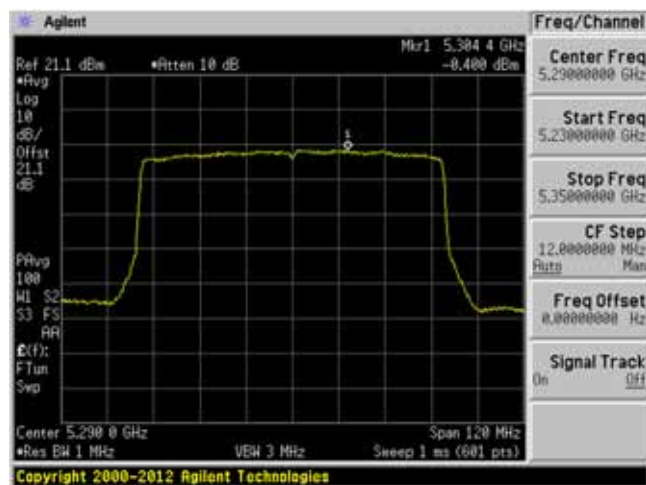
ANT J15

**802.11ax80 Mode**

ANT J12



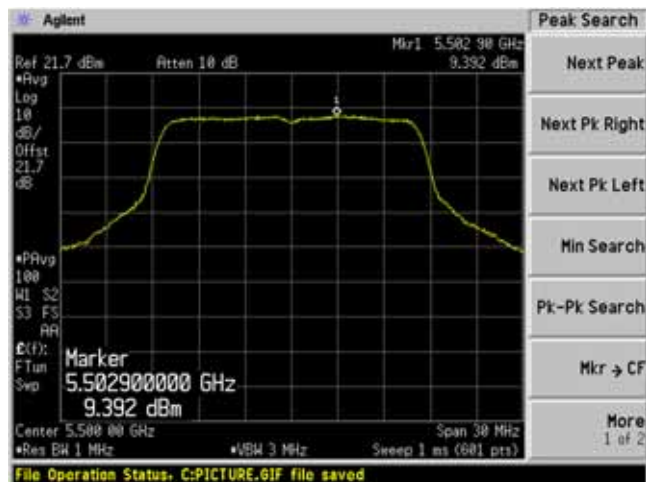
ANT J15



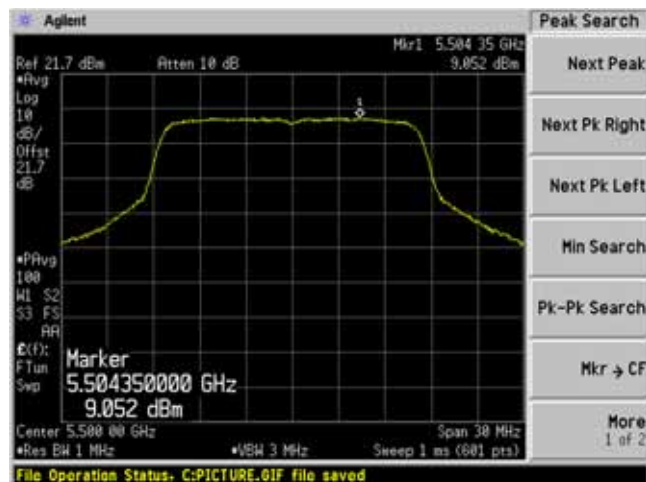
5470 - 5725 MHz

802.11a Mode

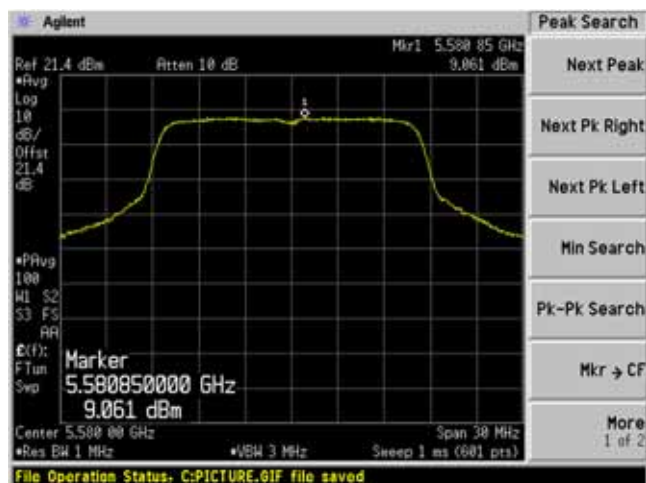
Low Channel ANT J12



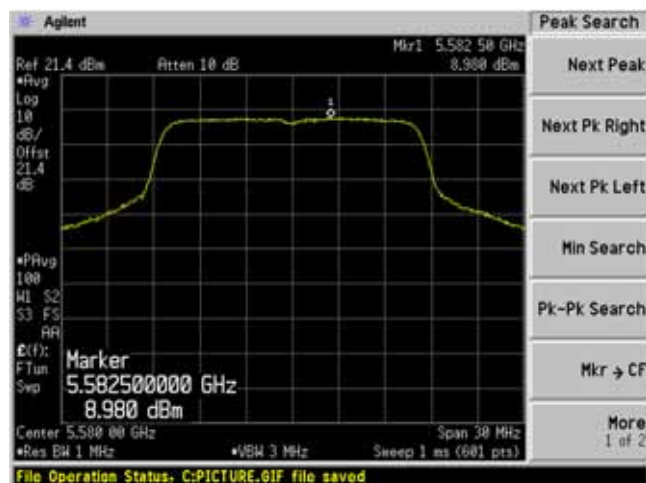
Low Channel ANT J15



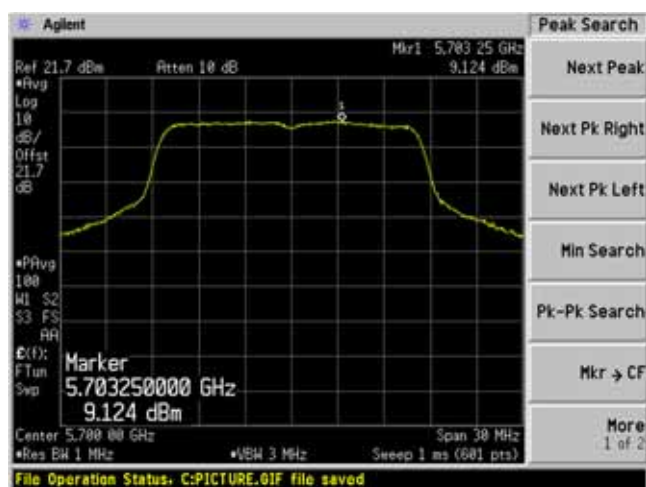
Mid Channel ANT J12



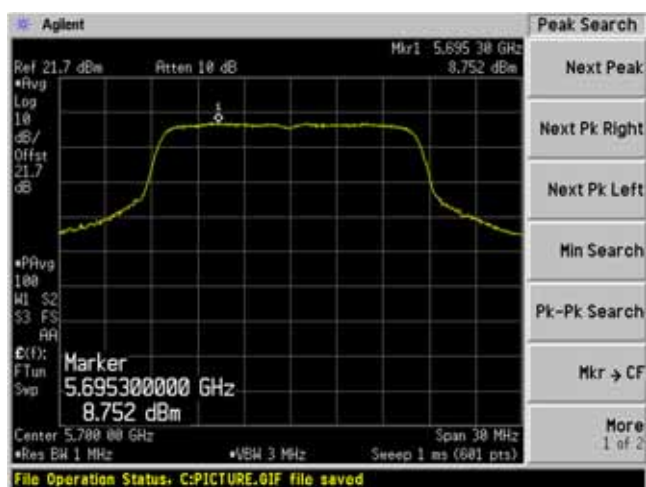
Mid Channel ANT J15



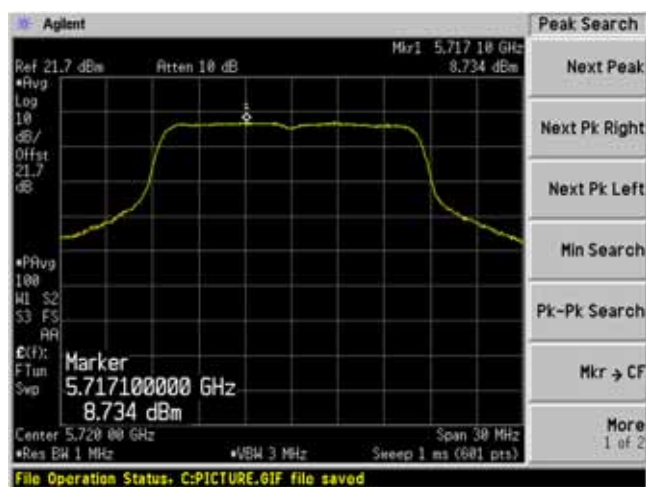
Second High Channel ANT J12



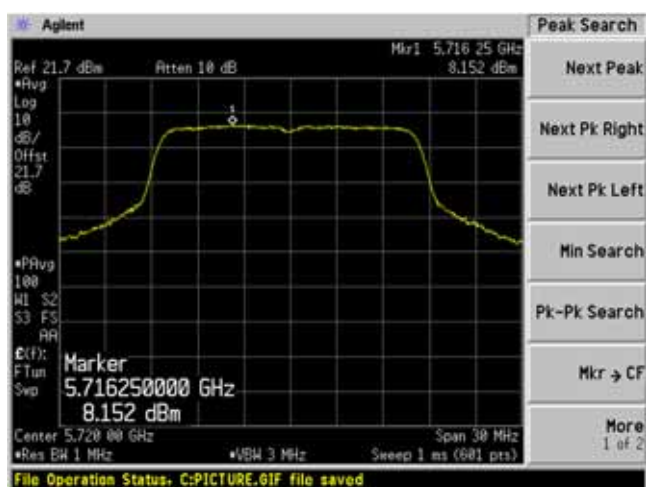
Second High Channel ANT J15



High Channel ANT J12

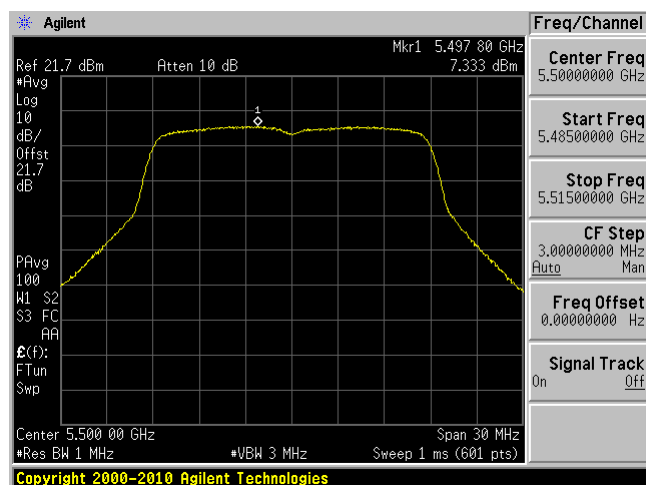


High Channel ANT J15

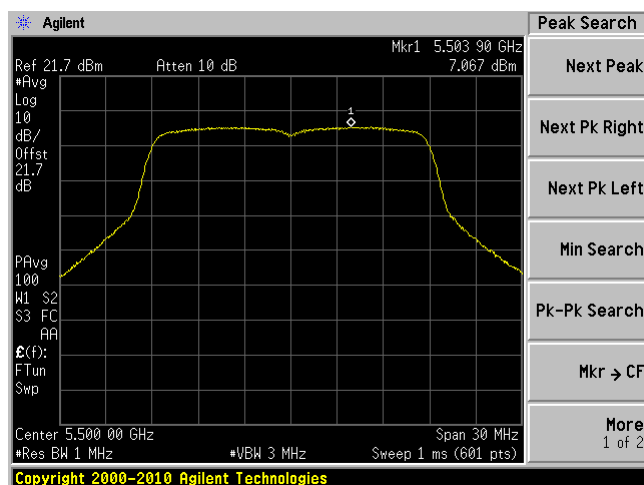


802.11ac20 Mode

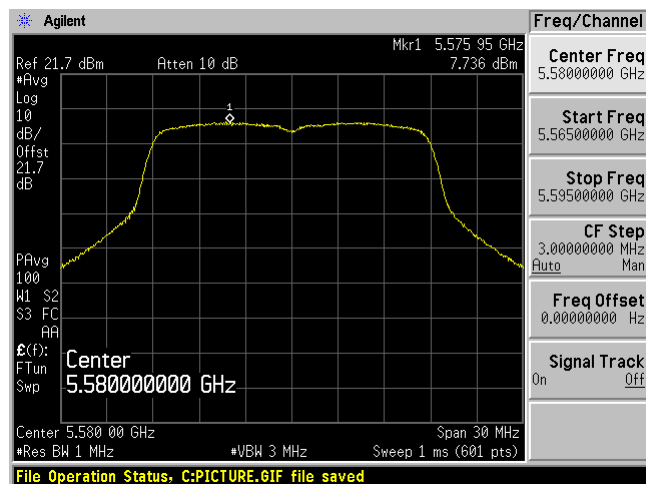
Low Channel ANT J12



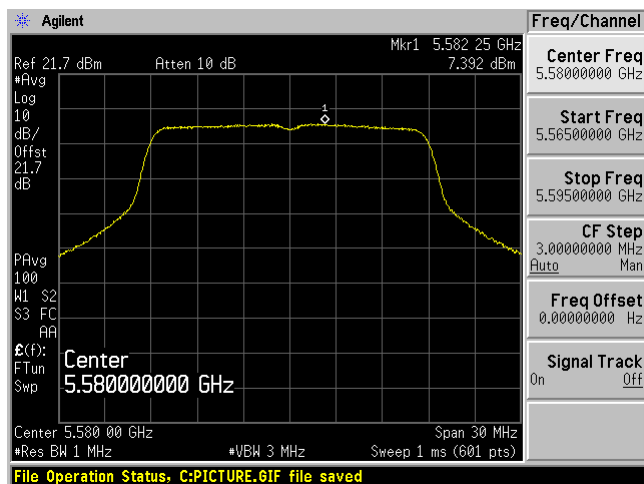
Low Channel ANT J15



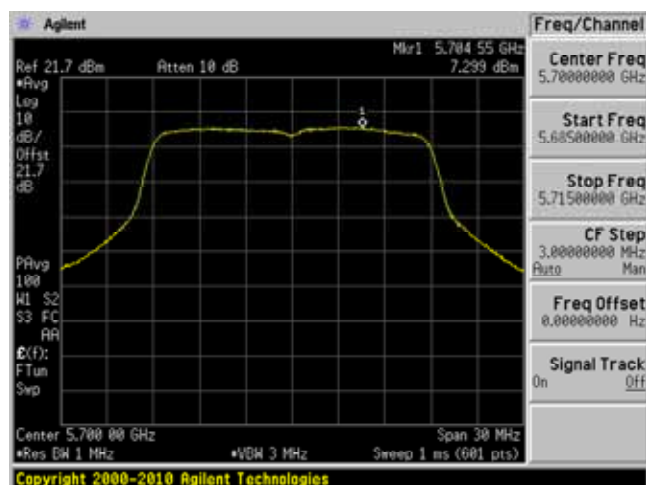
Mid Channel ANT J12



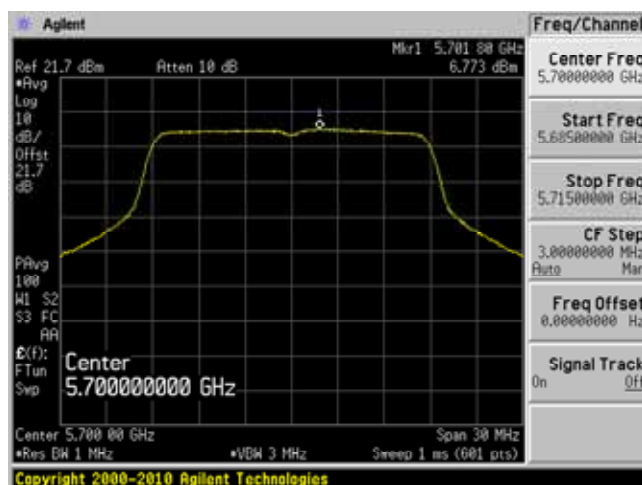
Mid Channel ANT J15



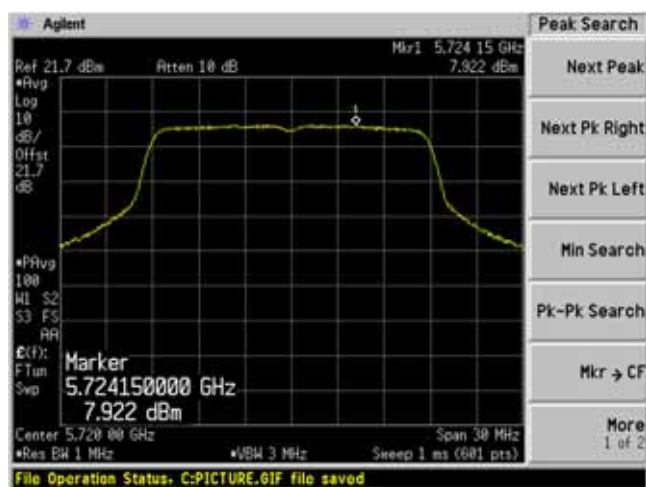
Second High Channel ANT J12



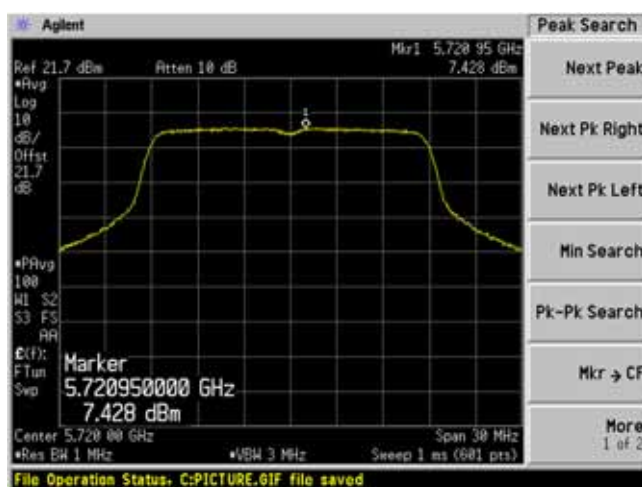
Second High Channel ANT J15



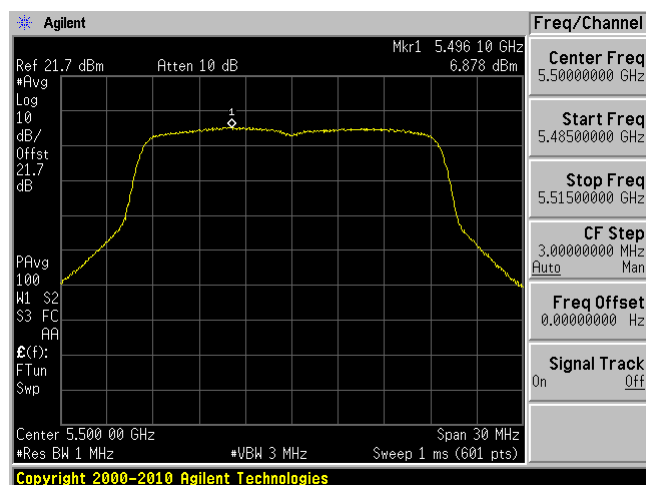
High Channel ANT J12



High Channel ANT J15



Low Channel ANT J12



Agilent

Ref 21.7 dBm Atten 10 dB Mkr1 5.502 70 GHz 7.426 dBm

Center Freq 5.5000000 GHz

Start Freq 5.4850000 GHz

Stop Freq 5.5150000 GHz

CF Step 3.0000000 MHz Auto Man

Freq Offset 0.0000000 Hz

Signal Track On Off

PAvg 100 W1 S2 S3 FC AA

Center 5.500 00 GHz Span 30 MHz

Res BW 1 MHz VBW 3 MHz Sweep 1 ms (601 pts)

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Agilent

Ref 21.7 dBm Atten 10 dB Mkr1 5.581 05 GHz 7.319 dBm

#Avg
Log
10
dB/
Offset
21.7
dB

PAvg
100
W1 S2
S3 FC
AA
Z(f):
FTun
Swp

Center 5.580 00 GHz Span 30 MHz
*Res BW 1 MHz *VBW 3 MHz Sweep 1 ms (601 pts)

Center Freq
5.5800000 GHz

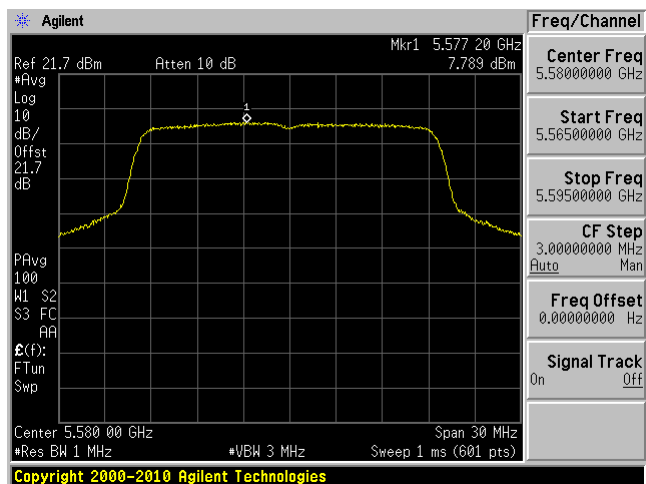
Start Freq
5.5650000 GHz

Stop Freq
5.5950000 GHz

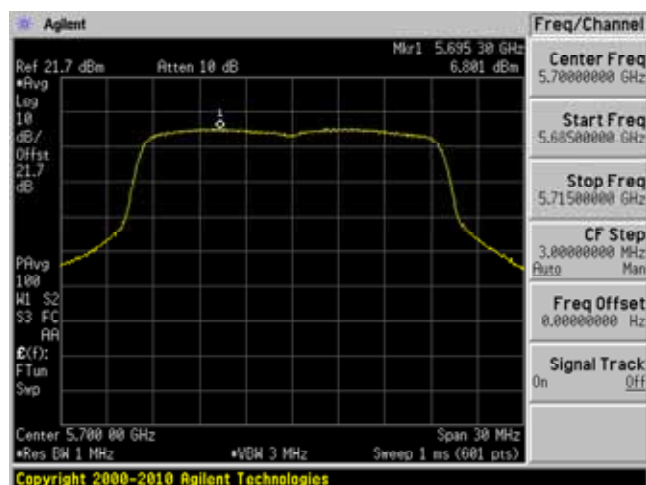
CF Step
3.0000000 MHz
Auto Man

Freq Offset
0.0000000 Hz

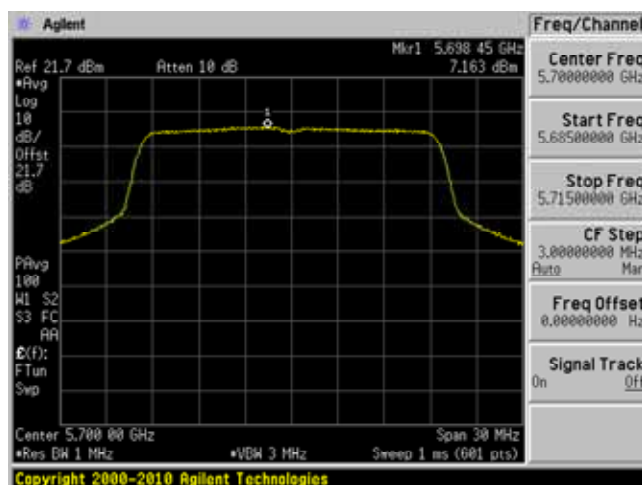
Signal Track
On Off



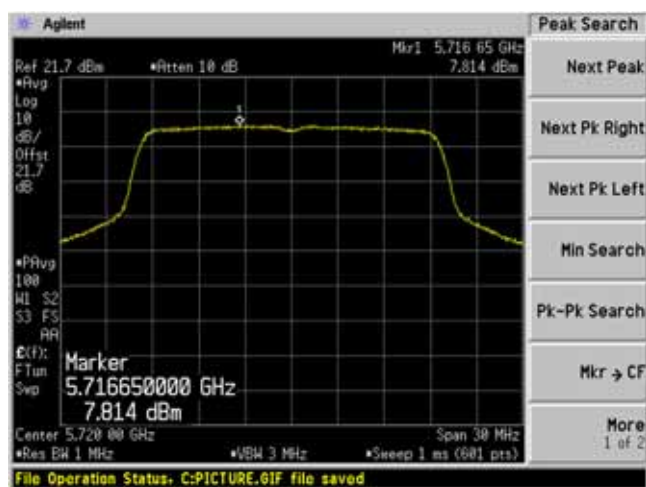
Second High Channel ANT J12



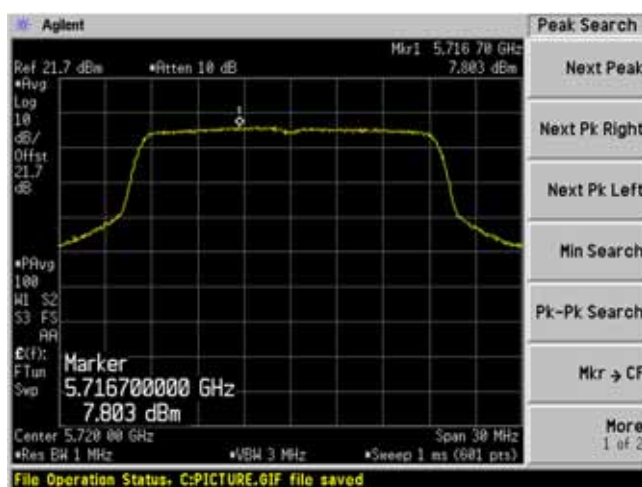
Second High Channel ANT J15



High Channel ANT J12

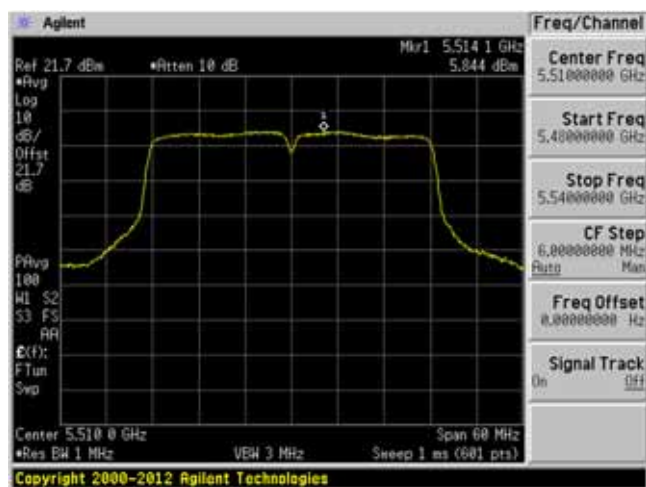


High Channel ANT J15

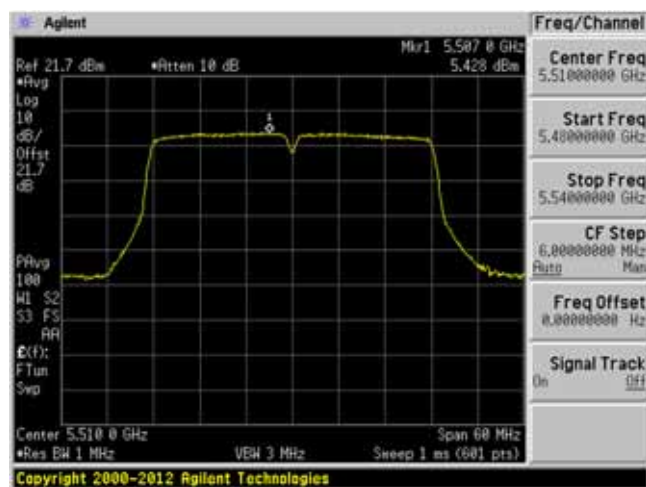


802.11ac40 Mode

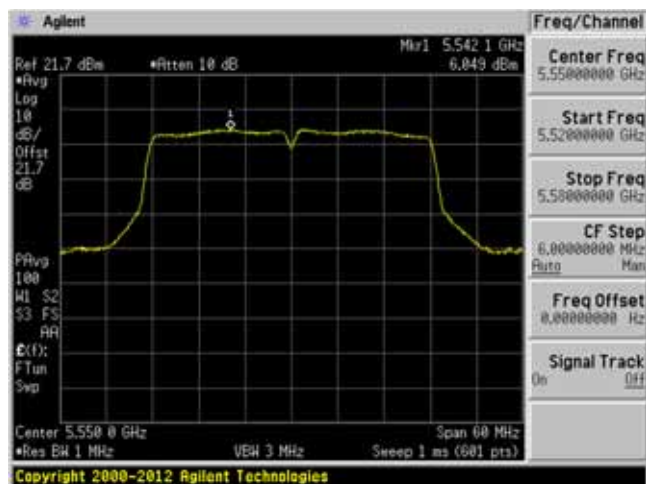
Low Channel ANT J12



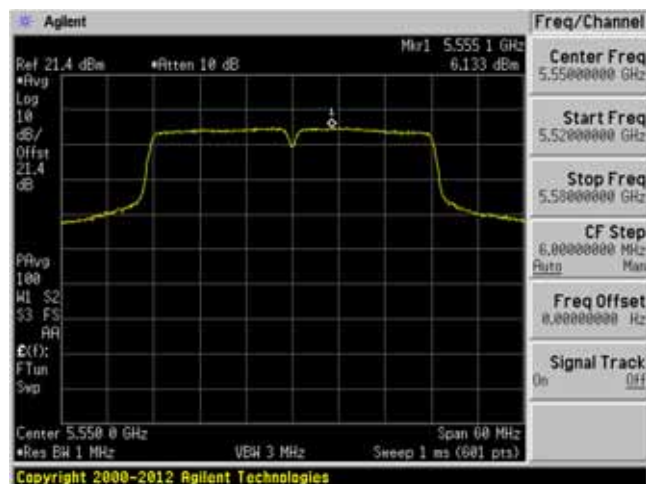
Low Channel ANT J15



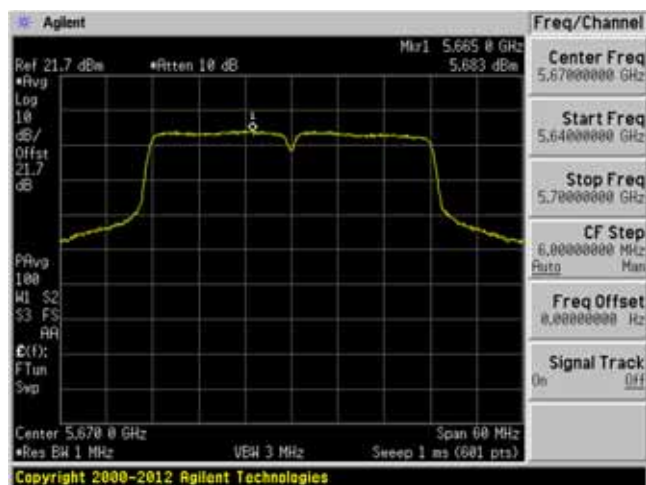
Mid Channel ANT J12



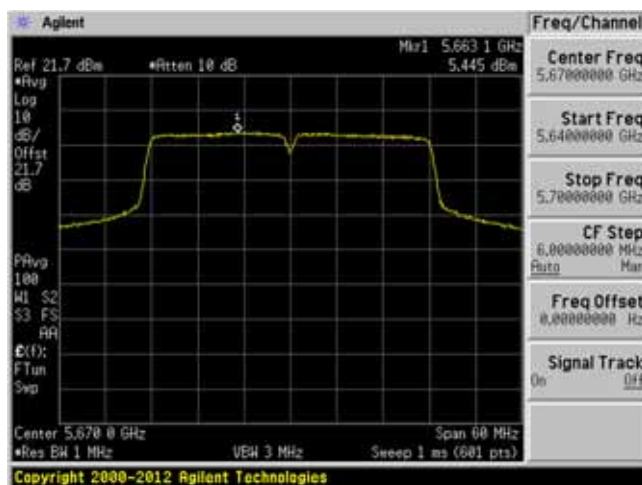
Mid Channel ANT J15



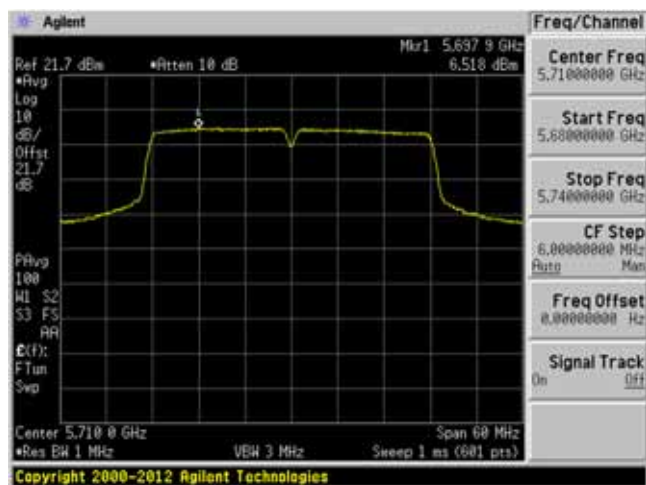
Second High Channel ANT J12



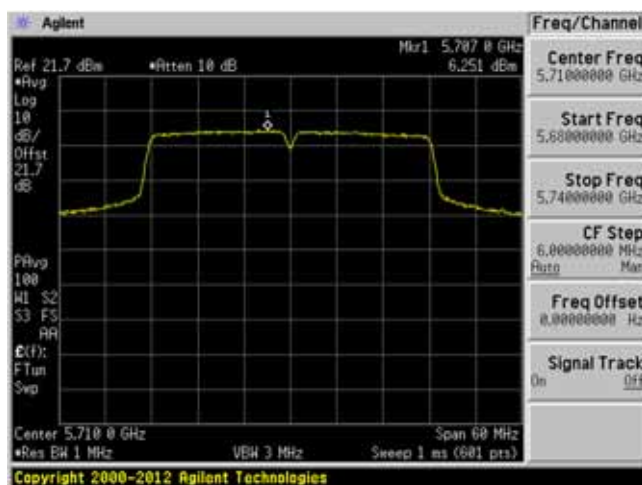
Second High Channel ANT J15



High Channel ANT J12

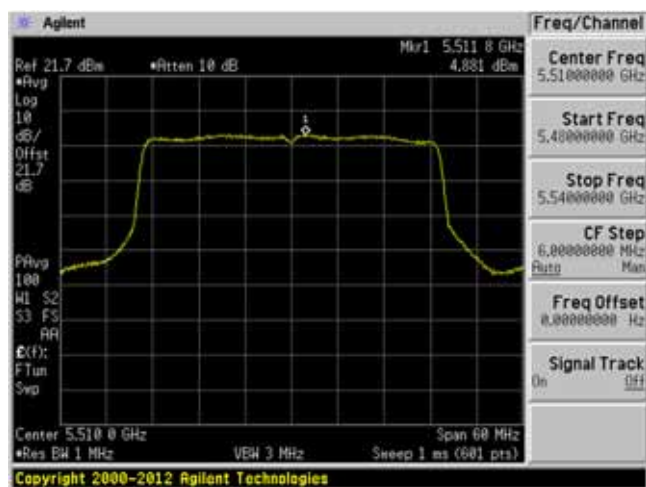


High Channel ANT J15

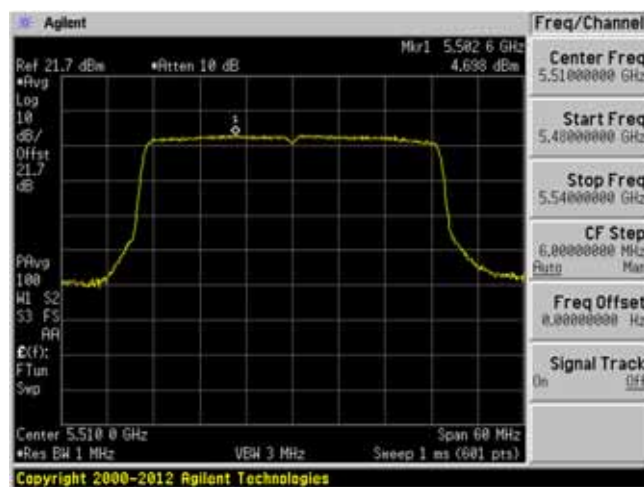


802.11ax40 Mode

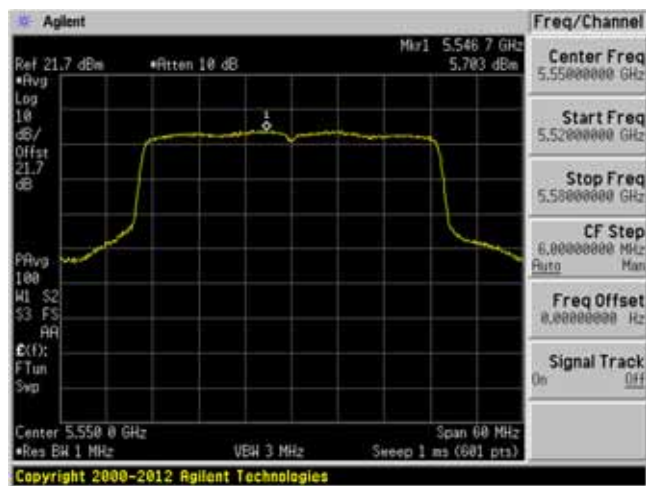
Low Channel ANT J12



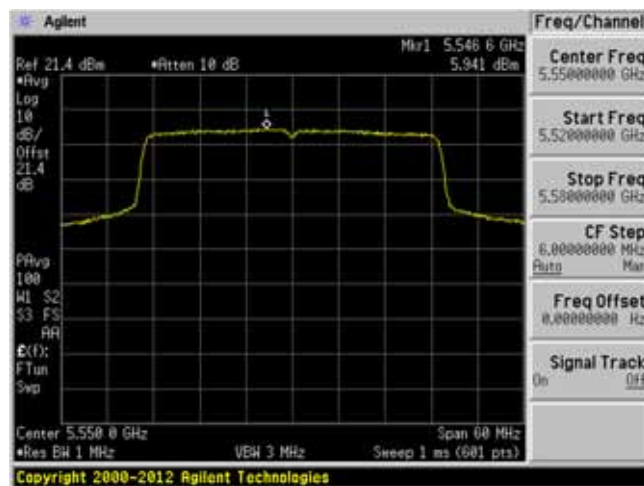
Low Channel ANT J15



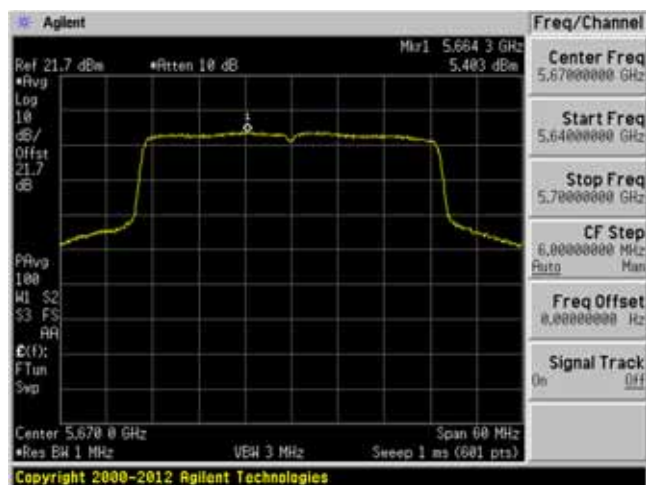
Mid Channel ANT J12



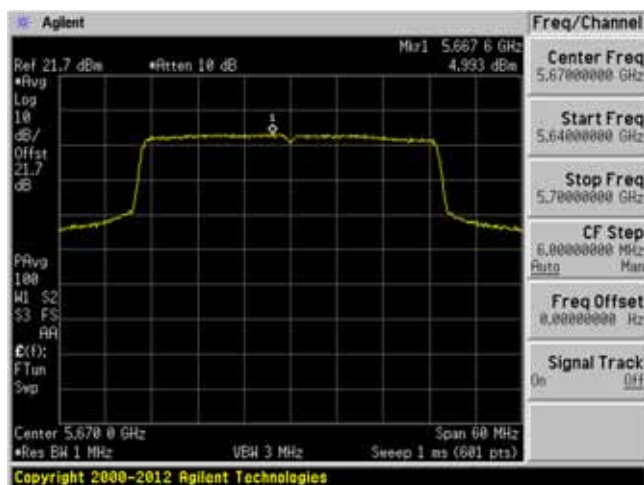
Mid Channel ANT J15



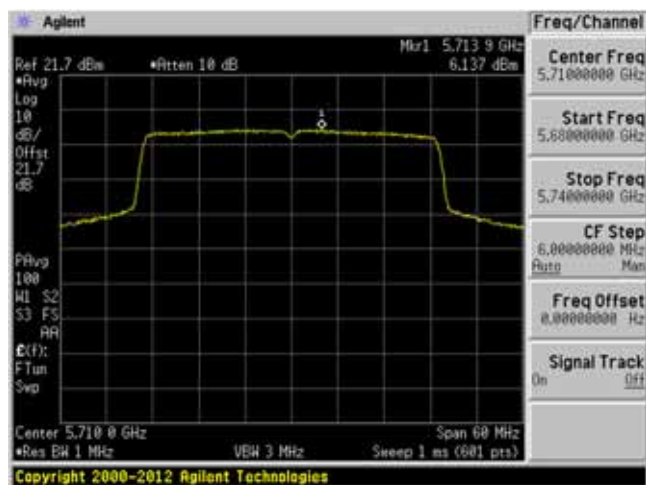
Second High Channel ANT J12



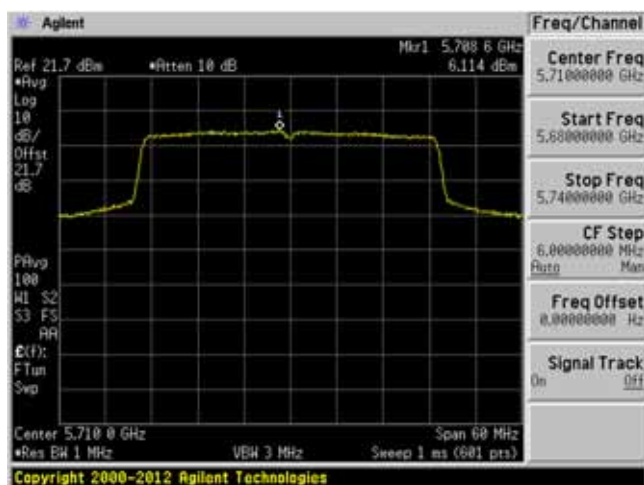
Second High Channel ANT J15



High Channel ANT J12

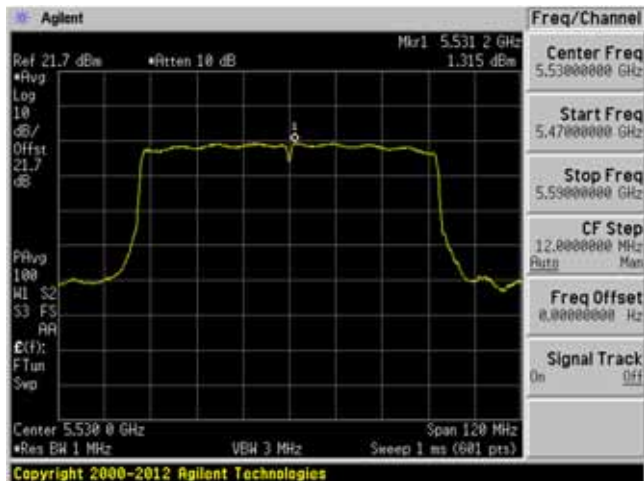


High Channel ANT J15

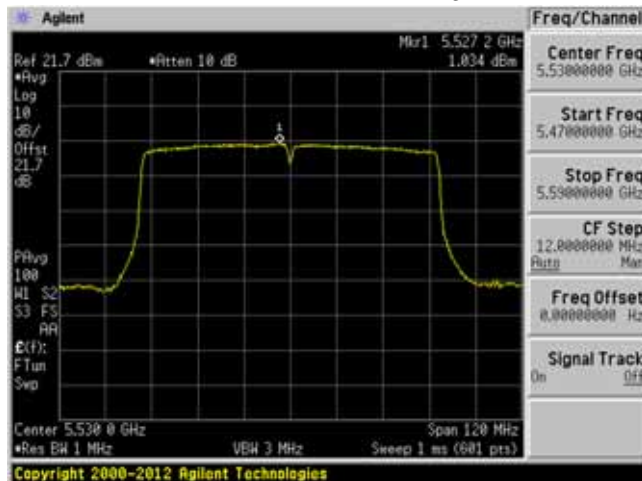


802.11ac80 Mode

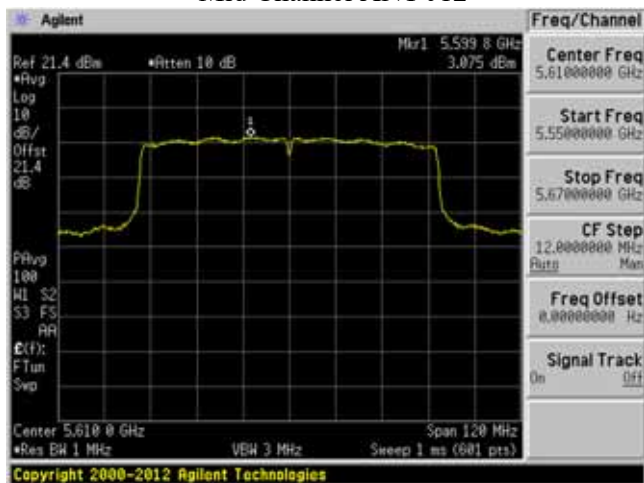
Low Channel ANT J12



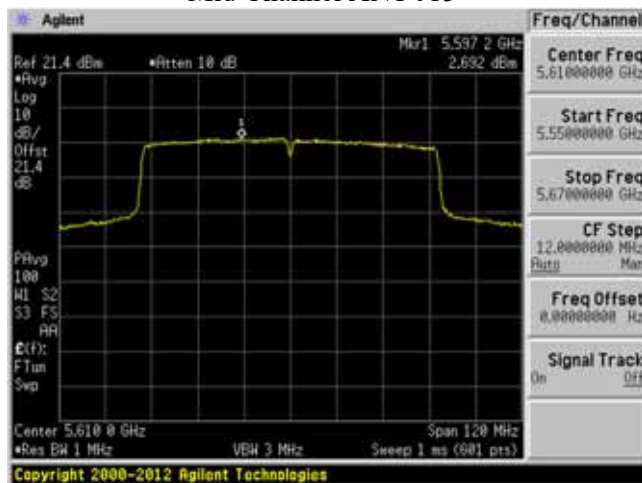
Low Channel ANT J15



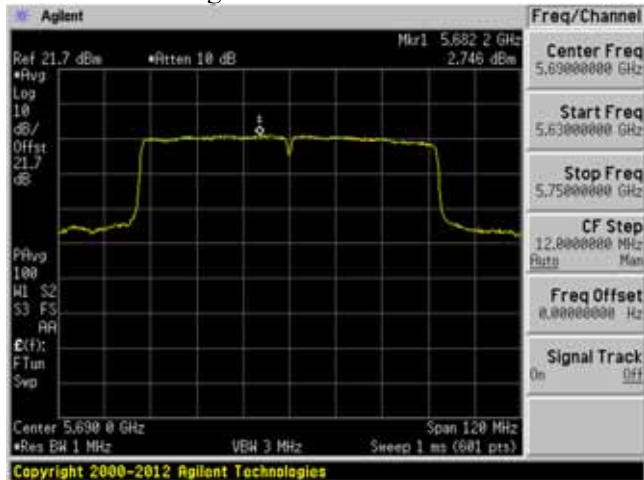
Mid Channel ANT J12



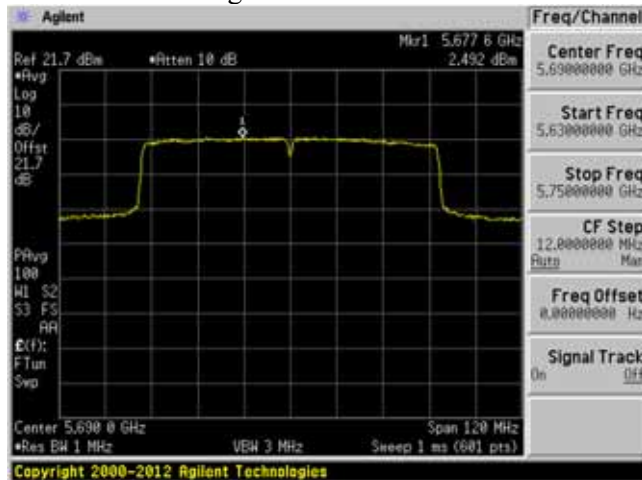
Mid Channel ANT J15



High Channel ANT J12

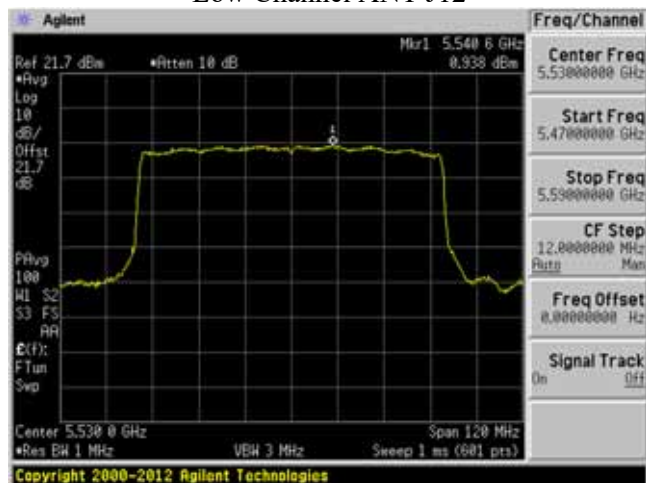


High Channel ANT J15

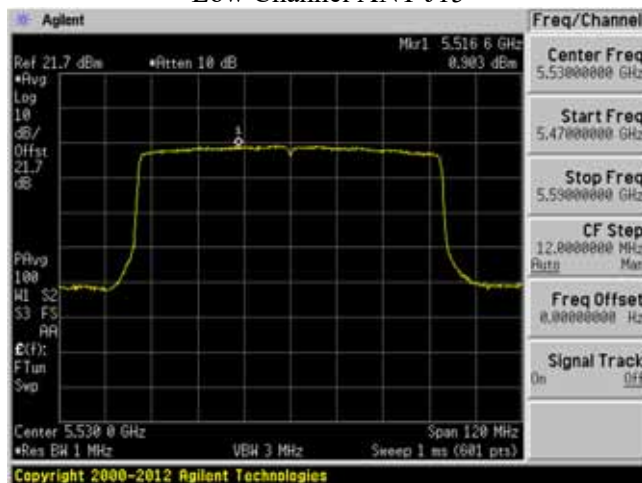


802.11ax80 Mode

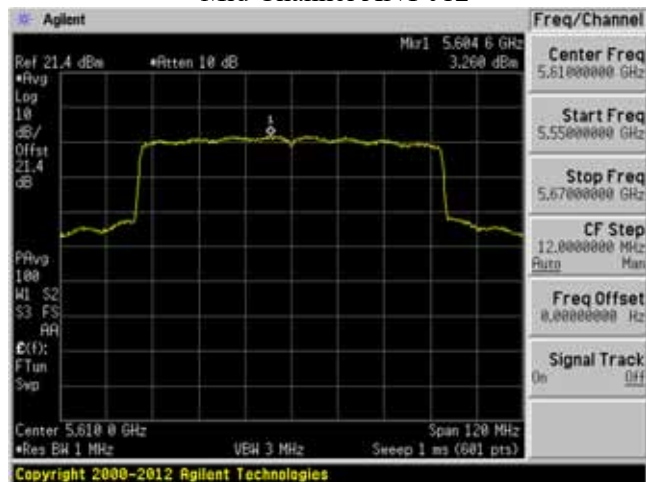
Low Channel ANT J12



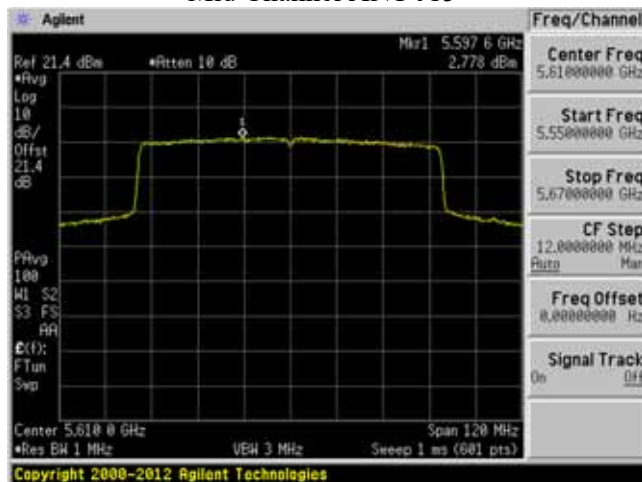
Low Channel ANT J15



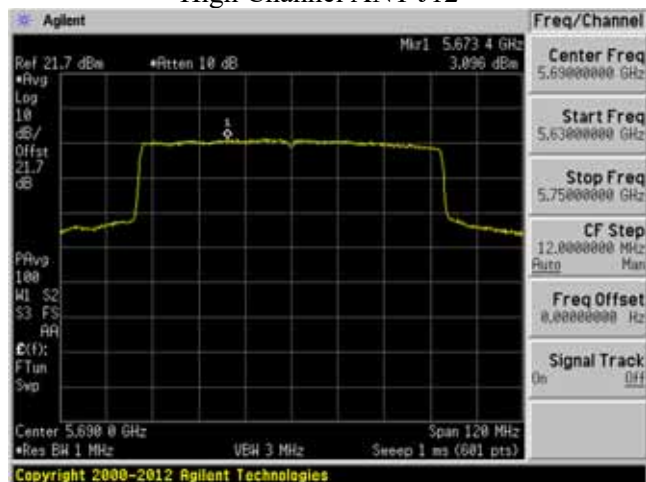
Mid Channel ANT J12



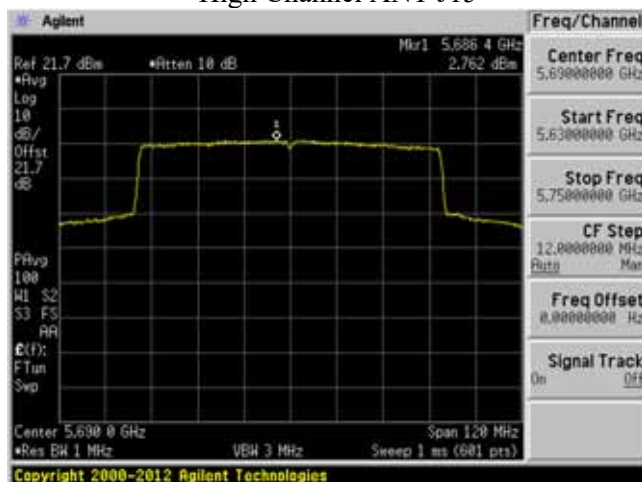
Mid Channel ANT J15



High Channel ANT J12



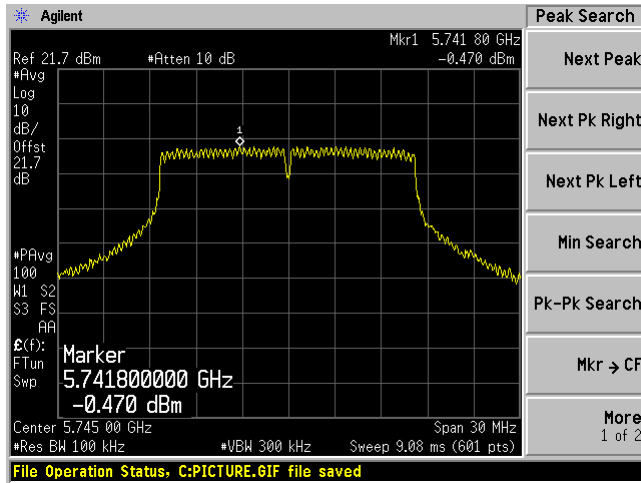
High Channel ANT J15



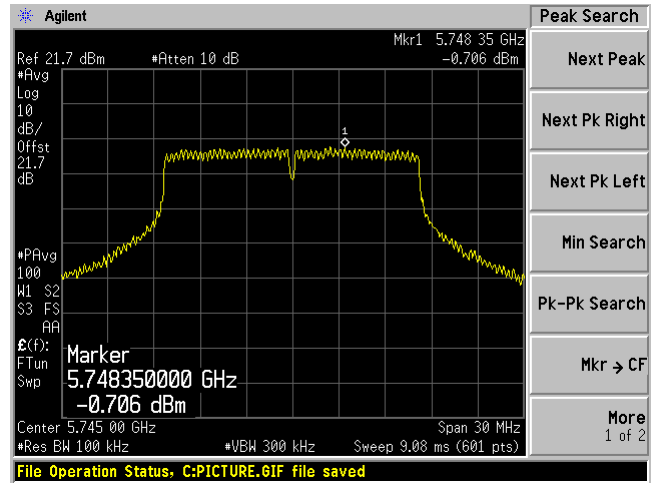
5725 - 5850 MHz

802.11a Mode

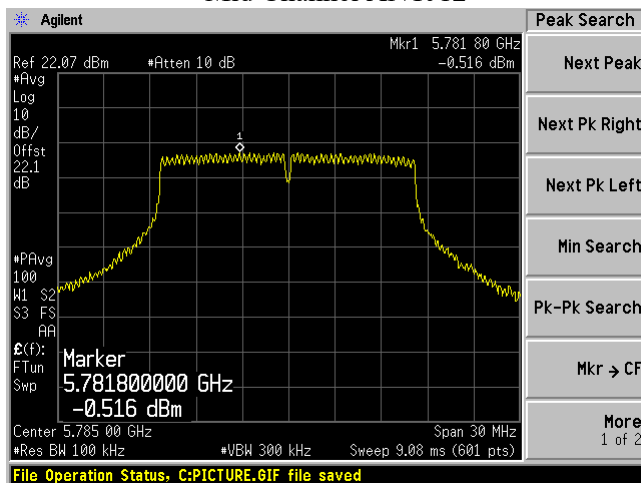
Low Channel ANT J12



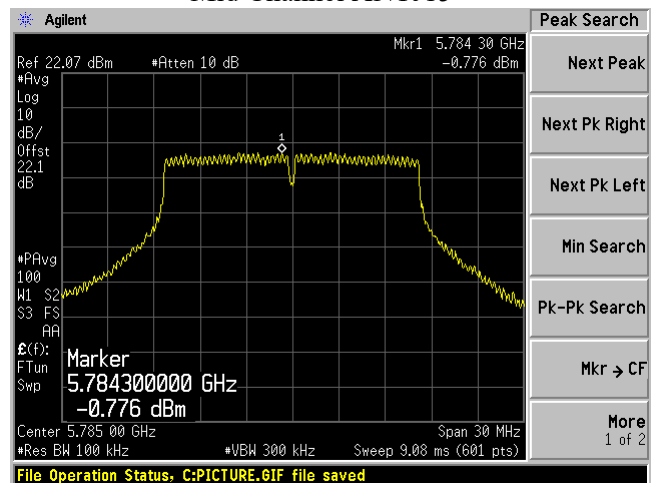
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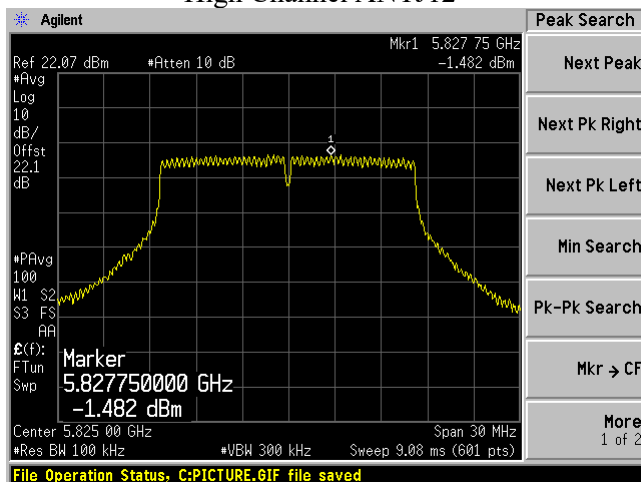
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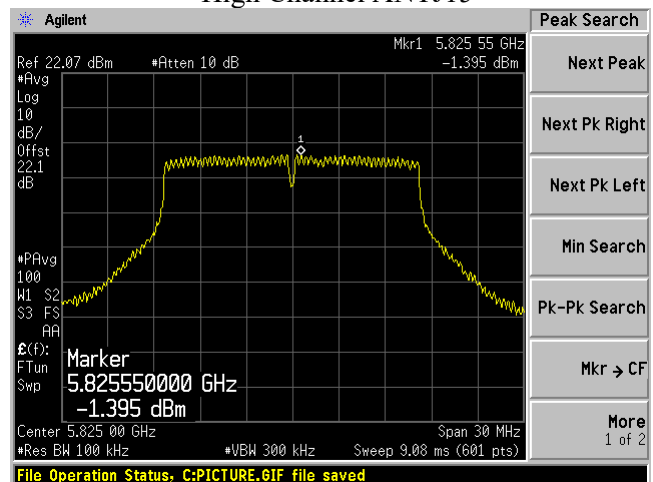
Mid Channel ANTJ15



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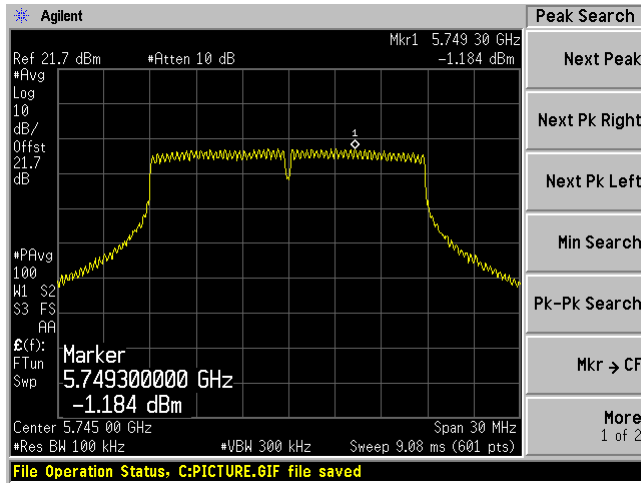


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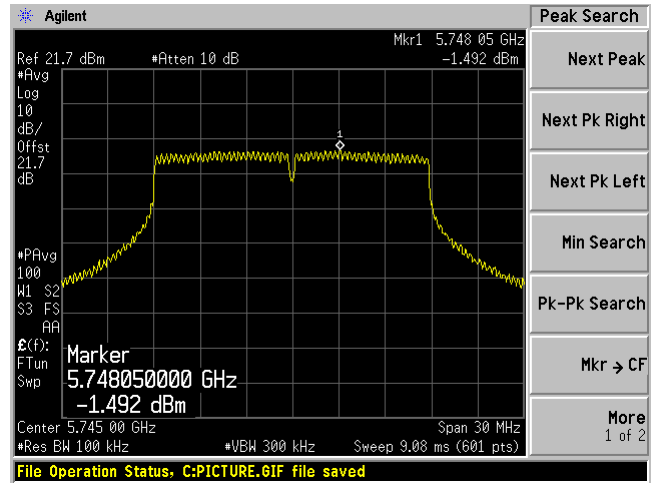


802.11ac20 Mode

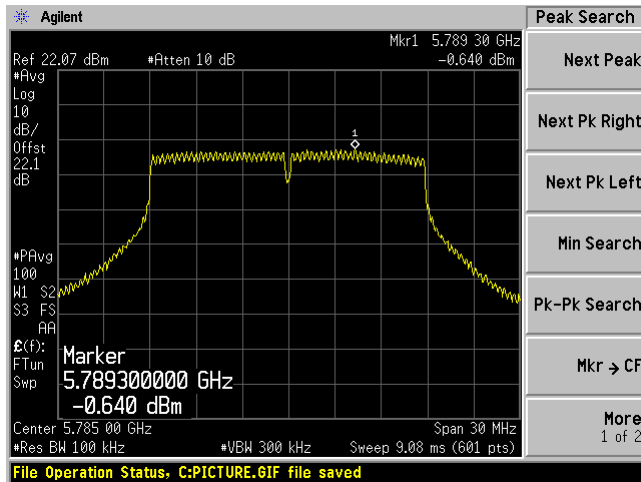
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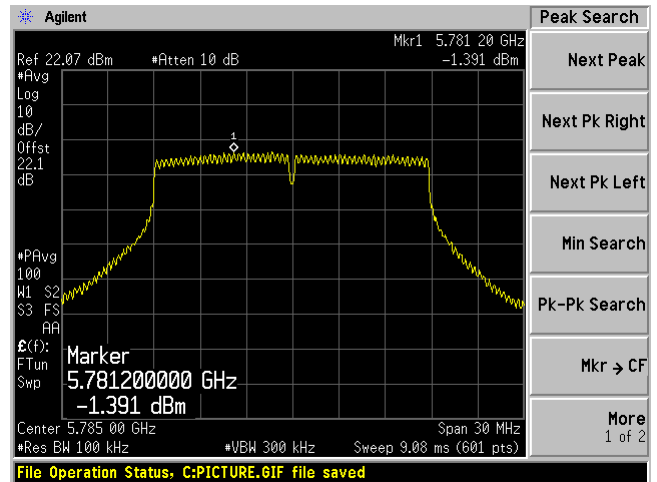
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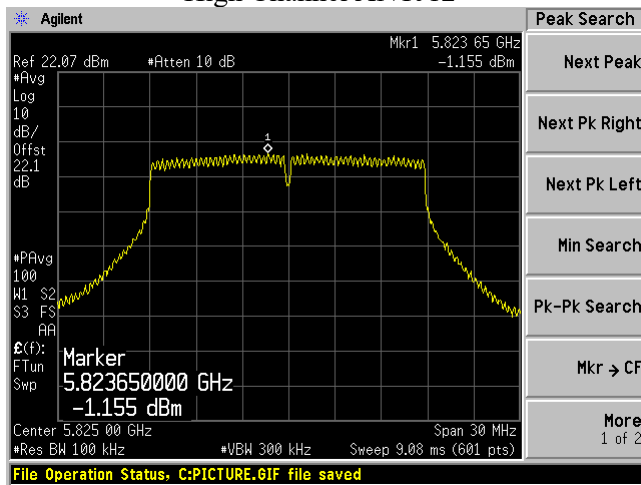
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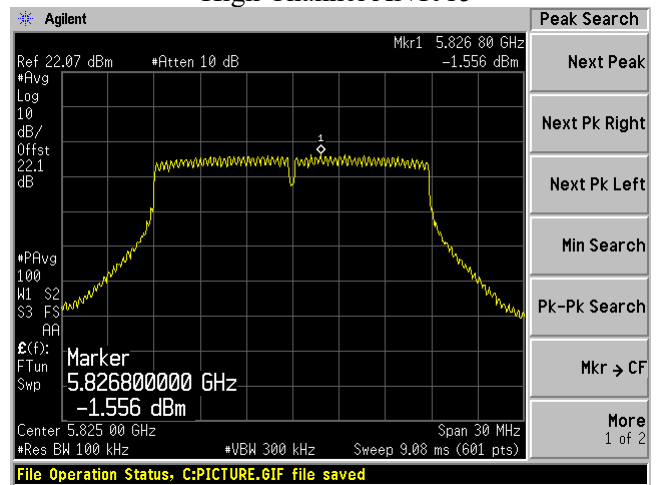
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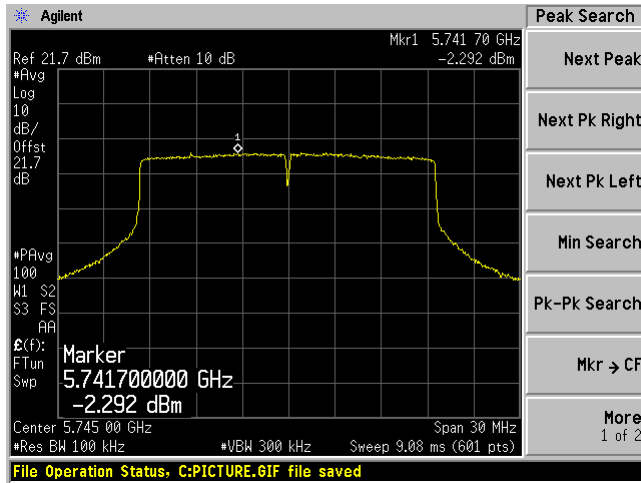


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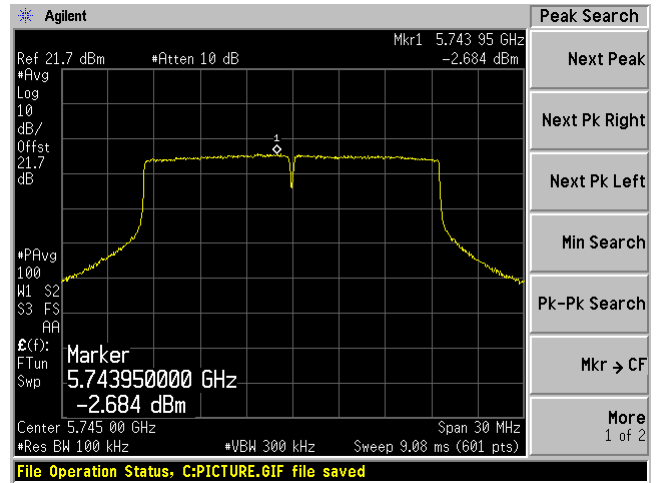


802.11ax20 Mode

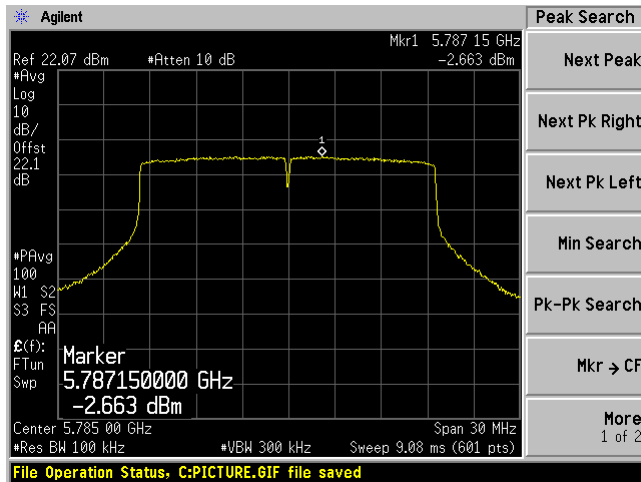
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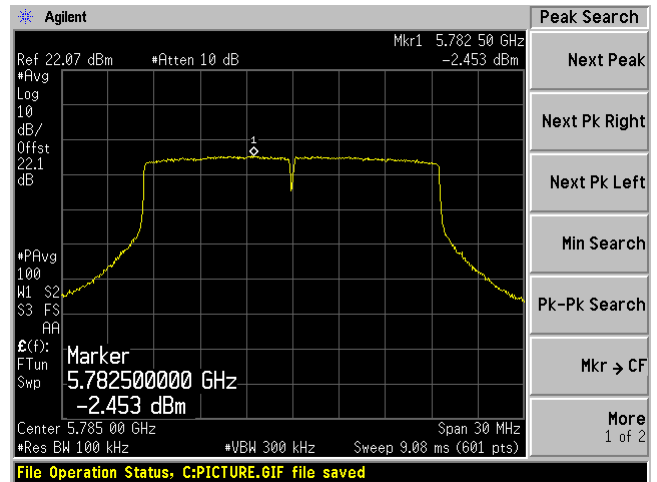
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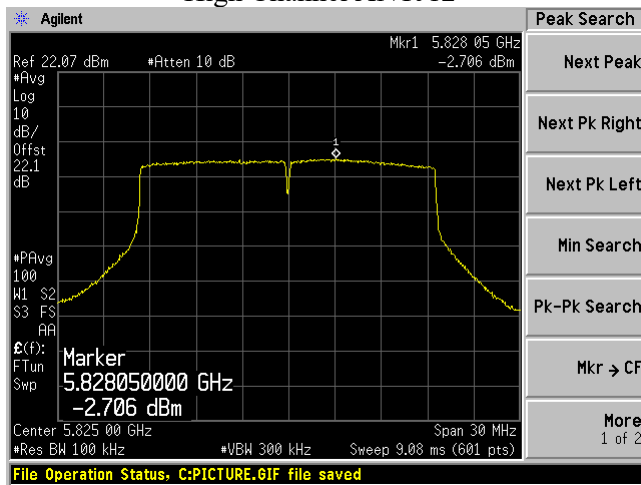
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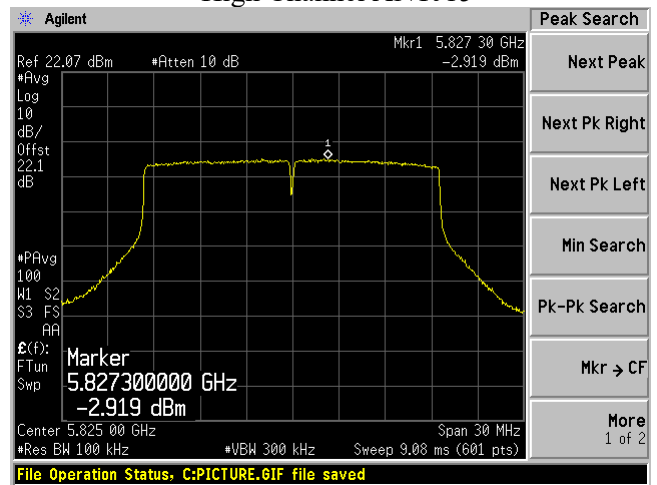
Mid Channel ANTJ15



High Channel ANTJ12

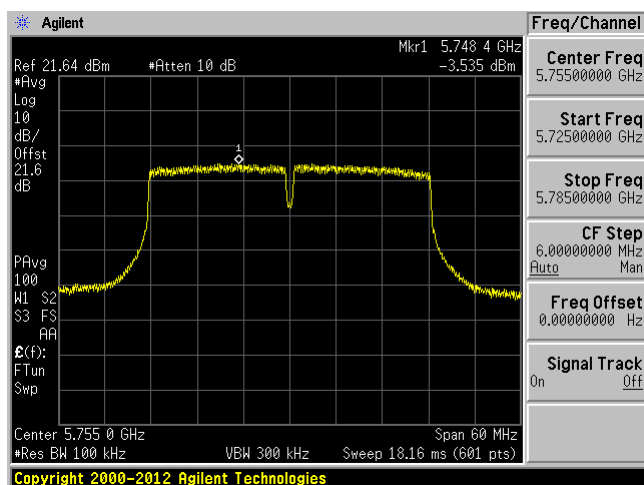


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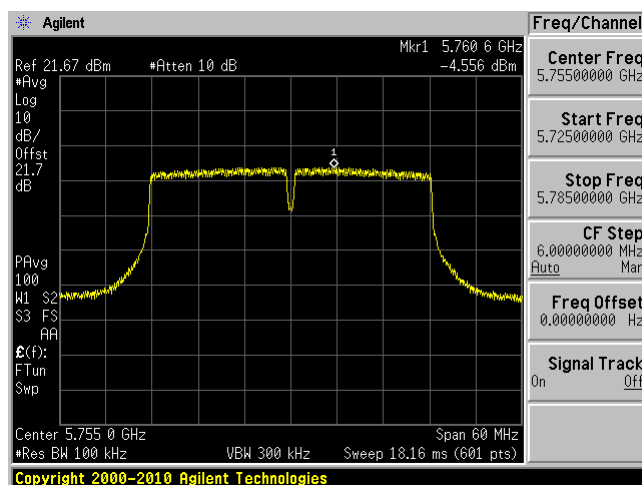


802.11ac40 Mode

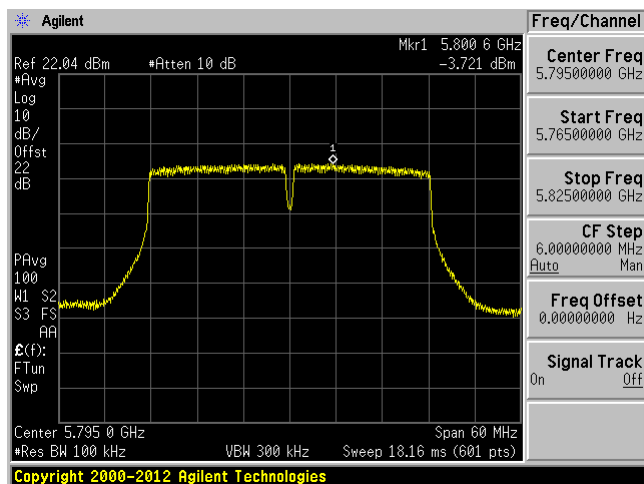
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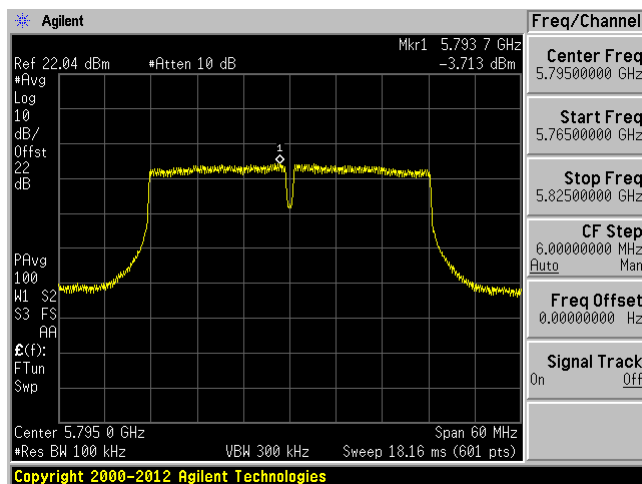
Low Channel ANTJ15



High Channel ANTJ12

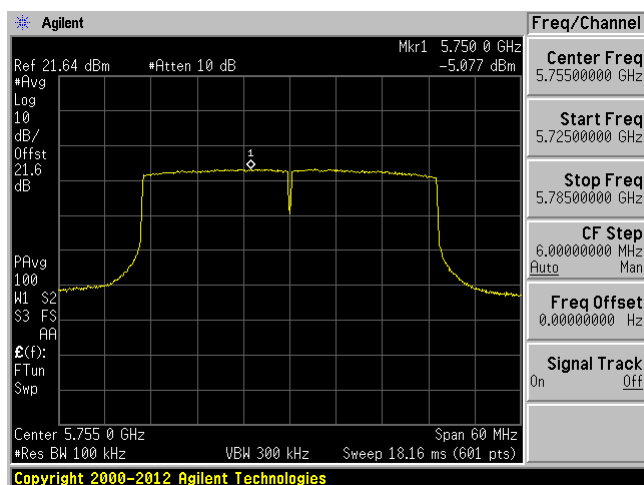


High Channel ANTJ15

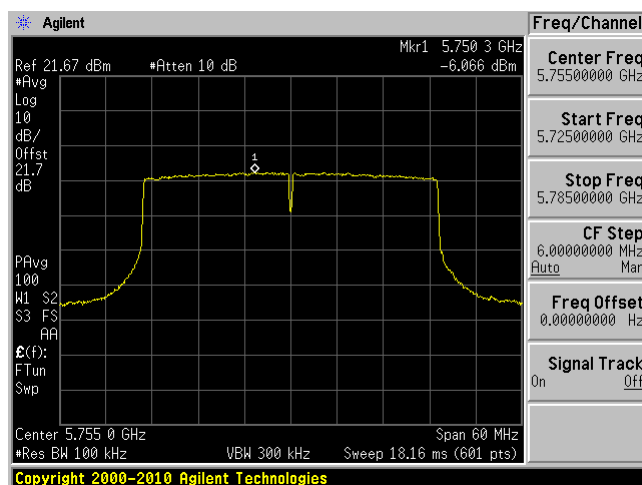


802.11ax40 Mode

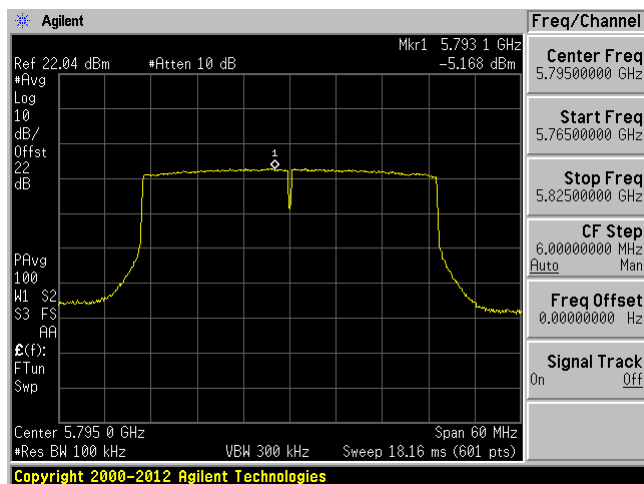
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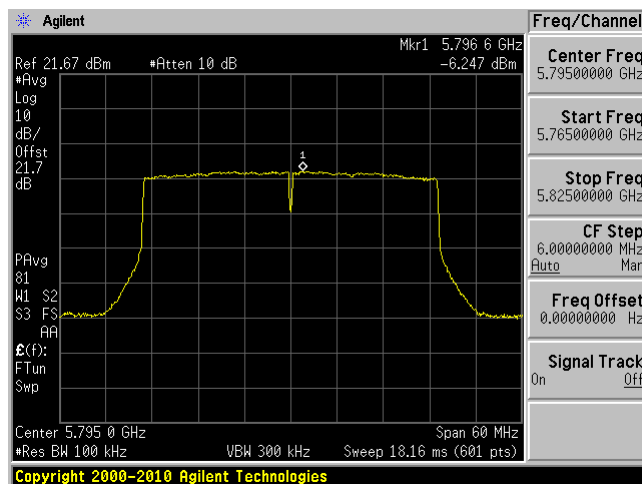
Low Channel ANTJ15



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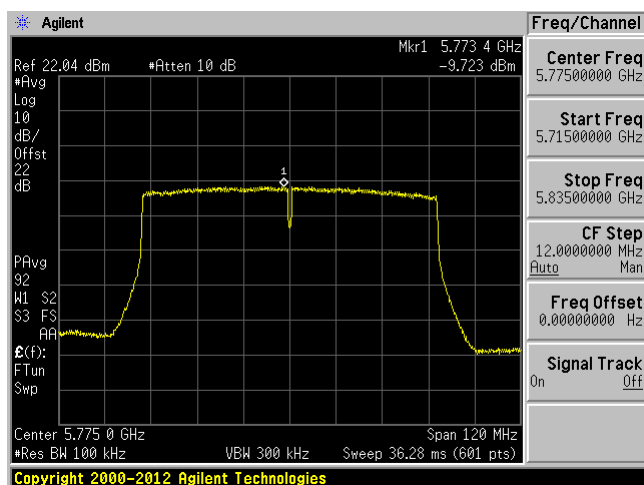


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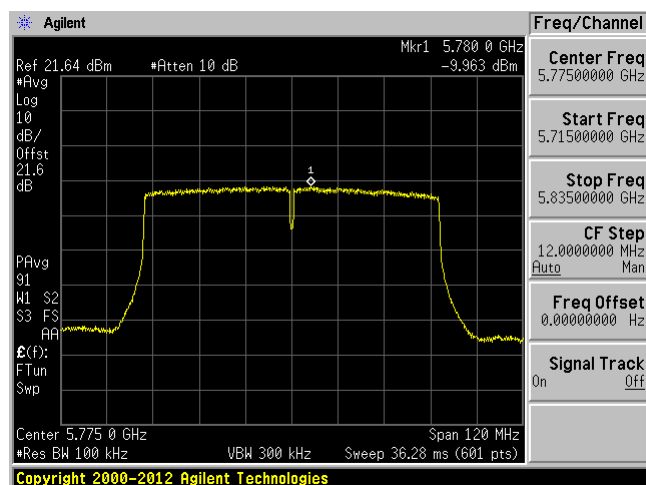


802.11ac80 Mode

ANTJ12

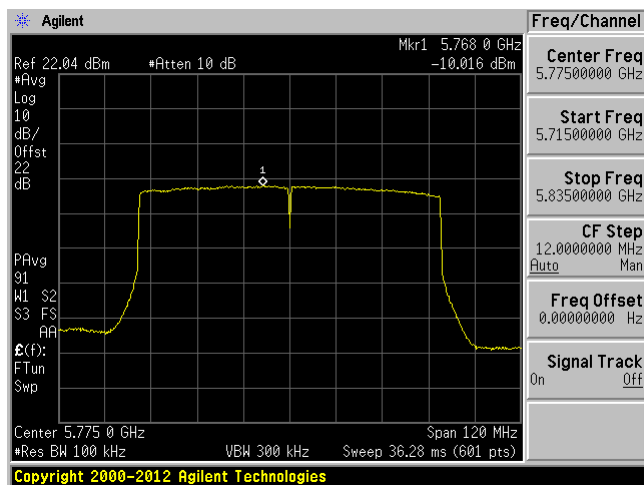


ANTJ15

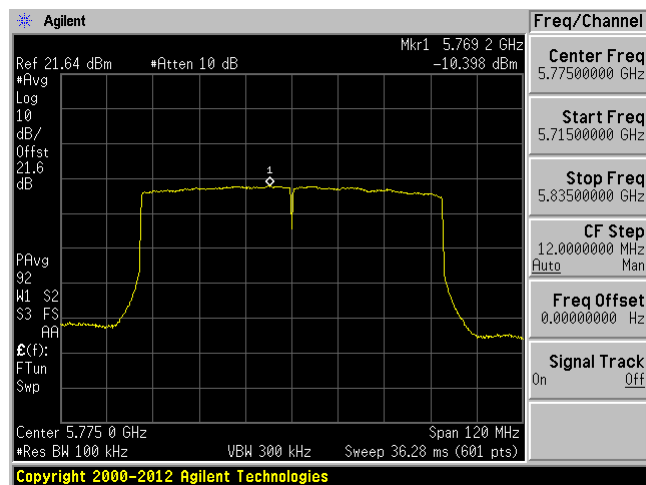


802.11ax80 Mode

ANTJ12



ANTJ15



11 FCC §15.407(b) & ISEDC RSS-247 §6.2 - Out of Band Emissions

11.1 Applicable Standards

According to FCC §15.407(b):

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.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

The provisions of §15.205 apply to intentional radiators operating under this section.

According to ISEDC RSS-247 §6.2.1 for devices operating in the frequency band 5150-5250 MHz:

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. Otherwise, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz.

According to ISEDC RSS-247 §6.2.2 for devices operating in the frequency band 5250-5350 MHz:

For devices with both operating frequencies and channel bandwidths contained within the band 5250-5350 MHz, the device shall comply with the following:

1. All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. if the equipment is intended for outdoor use; or
2. All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and any emissions within the band 5150-5250 MHz shall meet the power spectral density limits of Section 6.2.1. The device shall be labelled "for indoor use only."

For devices with operating frequencies in the band 5250-5350 MHz but having a channel bandwidth that overlaps the band 5150-5250 MHz, the devices' unwanted emission shall not exceed -27 dBm/MHz e.i.r.p. outside the band 5150-5350 MHz and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device shall be labelled "for indoor use only."

According to ISEDC RSS-247 §6.2.3 for devices operating in the frequency band 5470-5600 MHz and 5650-5725 MHz. Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

According to ISEDC RSS-247 §6.2.4 for devices operating in the frequency band 5725-5850 MHz:

For the band 5725-5850 MHz, emissions at frequencies from the band edges to 10 MHz above or below the band edges shall not exceed -17 dBm/MHz e.i.r.p.

For emissions at frequencies more than 10 MHz above or below the band edges, the emissions power shall not exceed -27 dBm/MHz.

11.2 Measurement Procedure

Add a correction factor (antenna gain+ Attenuator loss+cable loss) to the offset of the spectrum analyzer.

Unwanted Emission Measurement:

Maximum emission levels are measured by setting the analyzer as follows:

- i. RBW = 1 MHz
- ii. VBW $\geq$ 3 MHz
- iii. Detector = Peak
- iv. Sweep time = auto
- v. Trace mode = max hold

Integration Method:

1. For peak emissions measurements, follow the procedures described in section H)5), “Procedures for Peak Unwanted Emissions Measurements above 1000 MHz”, except for the following changes:
 - Set RBW = 100 kHz
 - Set VBW = 3RBW
 - Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured. CAUTION: You must ensure that the spectrum analyzer or EMI receiver is set for peak-detection and max-hold for this measurement.
2. For average emissions measurements, follow the procedures described in section H)6), “Procedures for Average Unwanted Emissions Measurements above 1000 MHz”, except for the following changes:
 - Set RBW = 100 kHz
 - Set VBW = 3RBW
 - Perform a band-power integration across the 1 MHz bandwidth in which the band-edge emission level is to be measured.

11.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Spectrum Analyzer	E4446A	MY48250238	2019-06-26	2 years
-	RF cable	-	-	Each time ¹	N/A
-	10 dB attenuator	-	-	Each time ¹	N/A

Note¹: cable and attenuator included in the test set-up will be checked each time before testing.

Statement of Traceability: *BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 “A2LA Policy on Metrological Traceability”.*

11.4 Test Environmental Conditions

Temperature:	22-24 °C
Relative Humidity:	50-55 %
ATM Pressure:	102.1-102.7 kPa

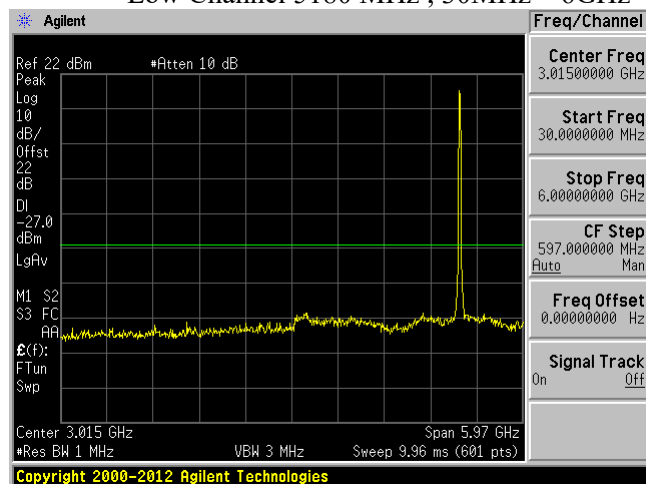
The testing was performed by Zhao Zhao from 2021-01-05 to 2021-01-14 in RF site.

11.5 Test Results

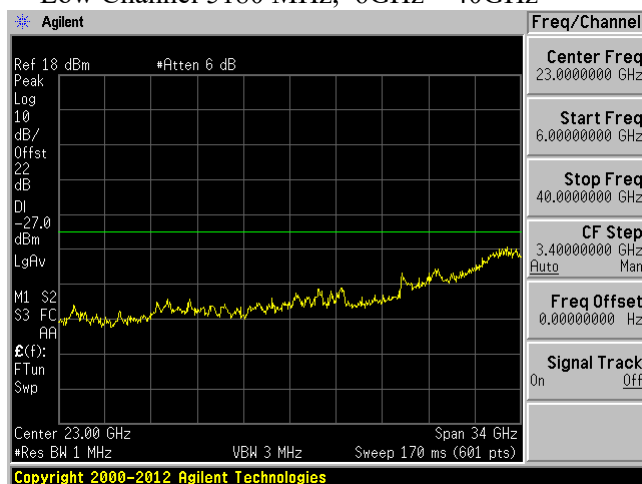
Spurious Emissions

5150 - 5250 MHz, 802.11a Mode, ANTENNA J12

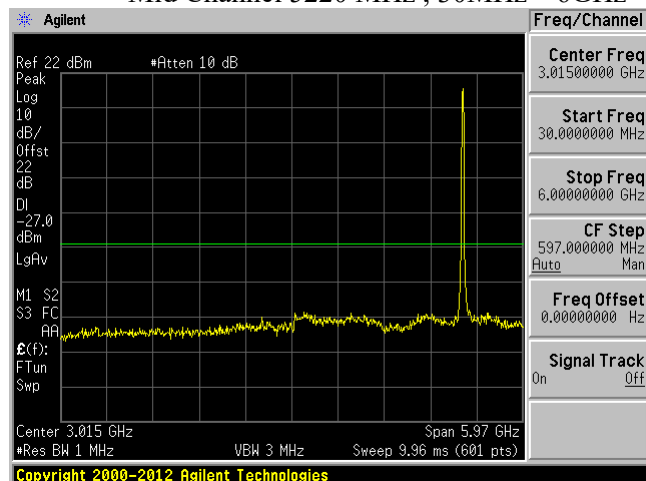
Low Channel 5180 MHz , 30MHz – 6GHz



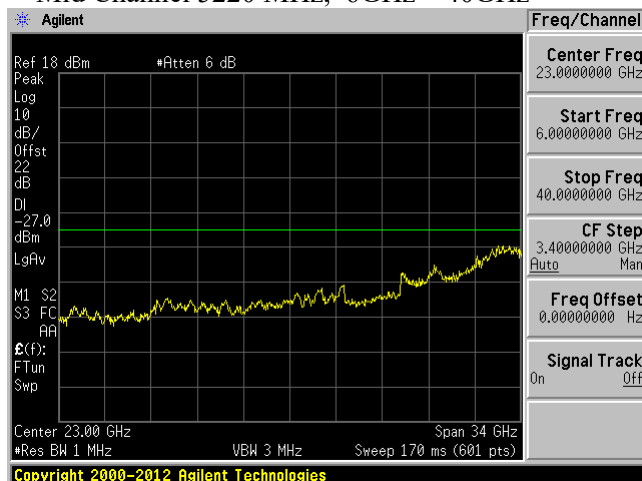
Low Channel 5180 MHz, 6GHz – 40GHz



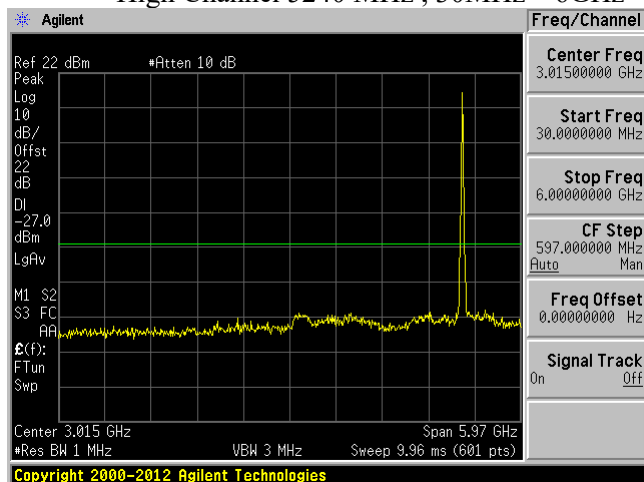
Mid Channel 5220 MHz , 30MHz – 6GHz



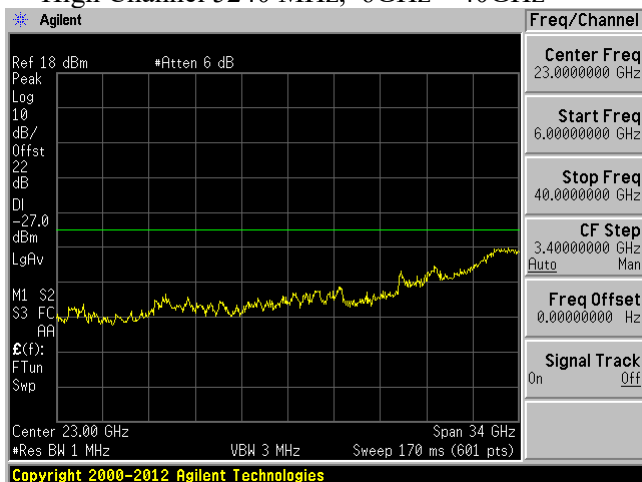
Mid Channel 5220 MHz, 6GHz – 40GHz

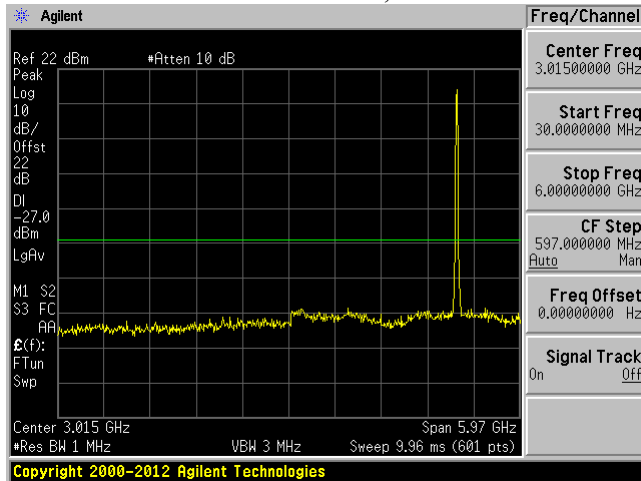
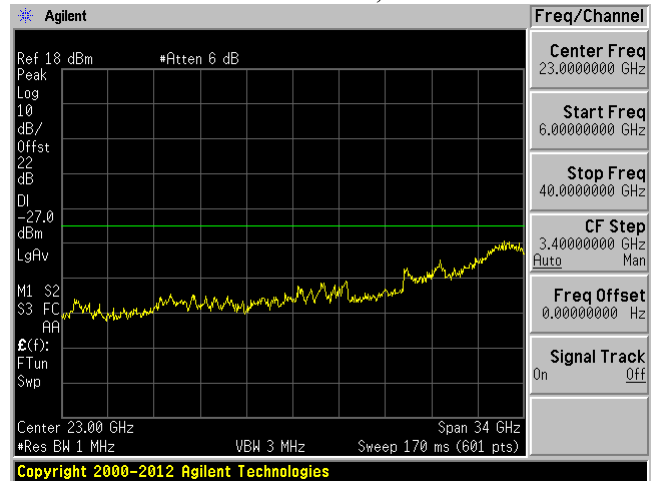
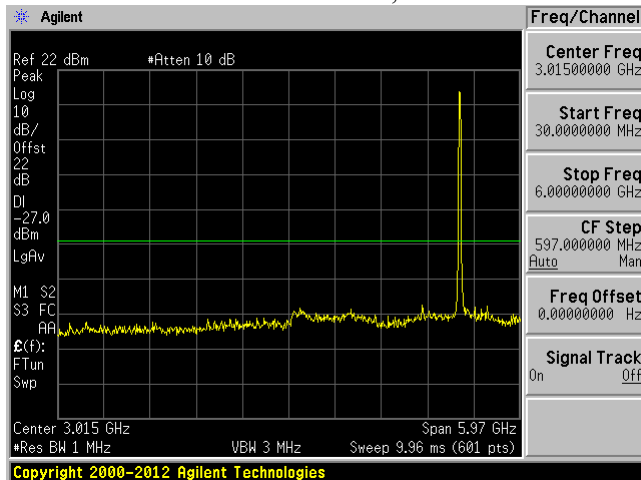
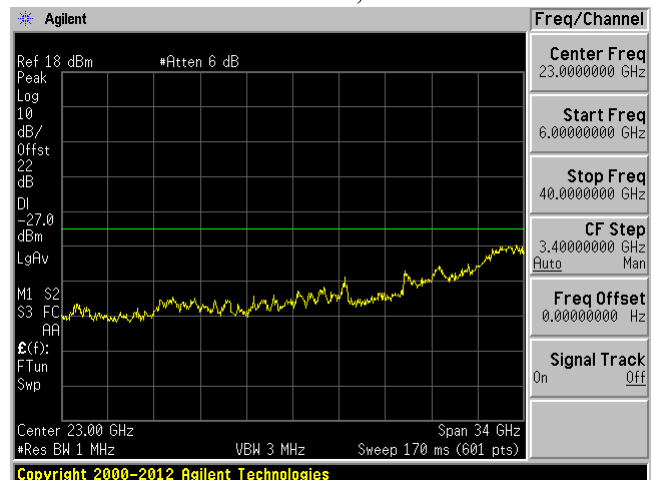
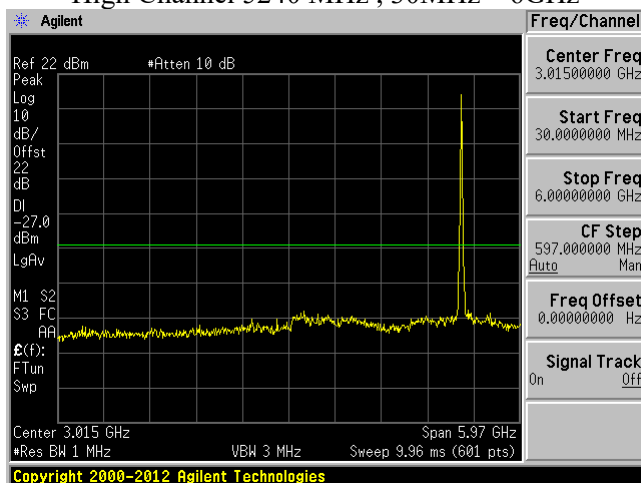
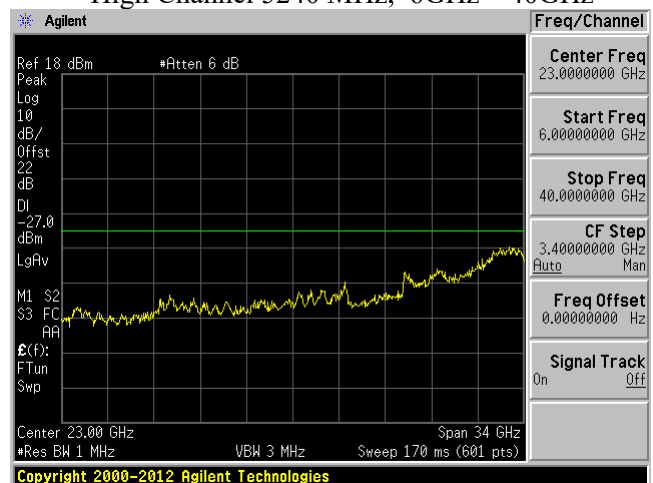


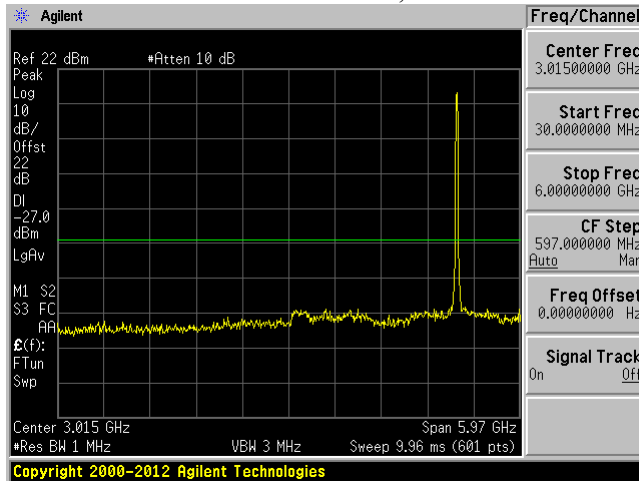
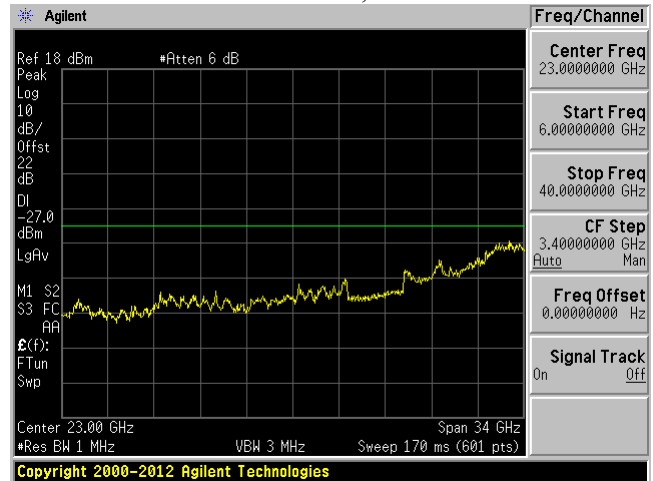
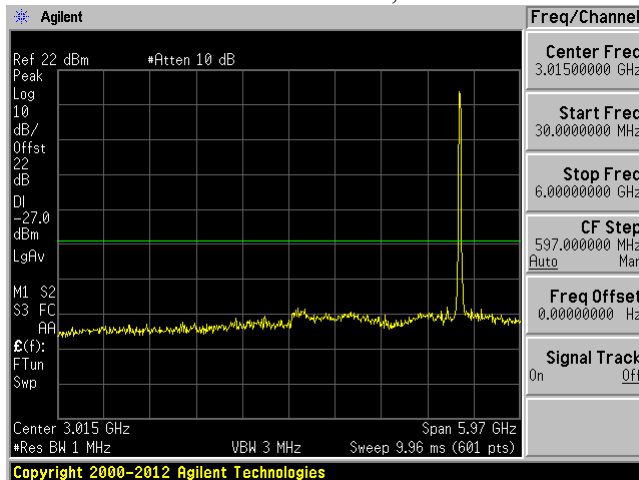
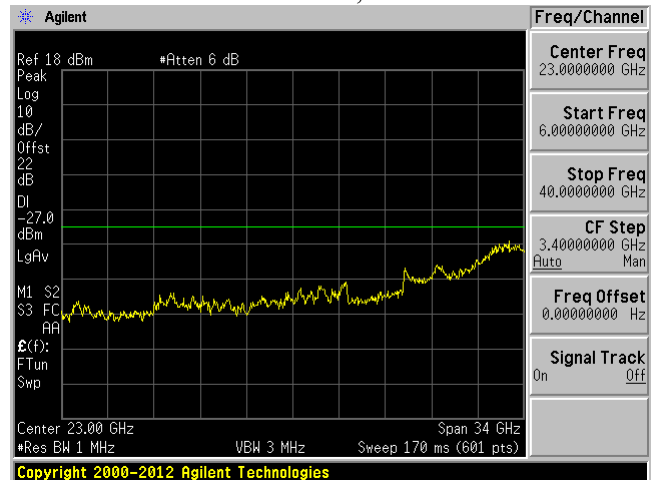
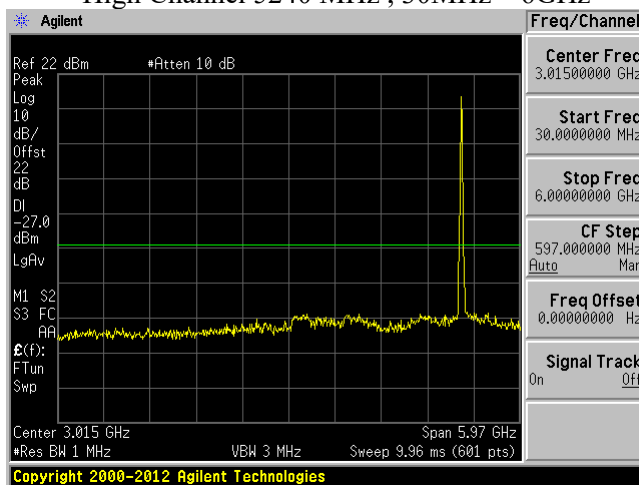
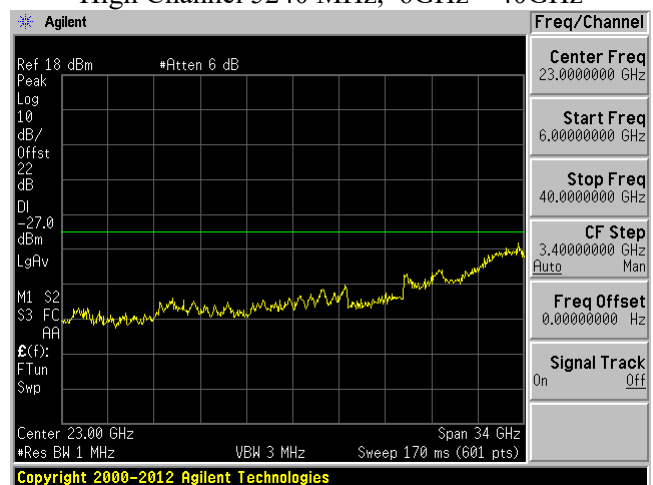
High Channel 5240 MHz , 30MHz – 6GHz

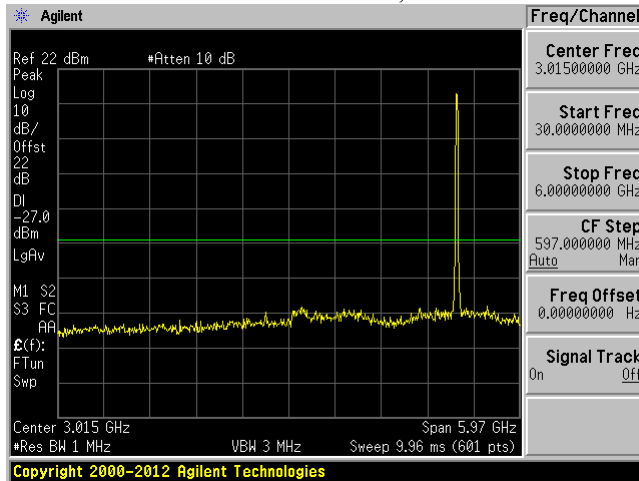
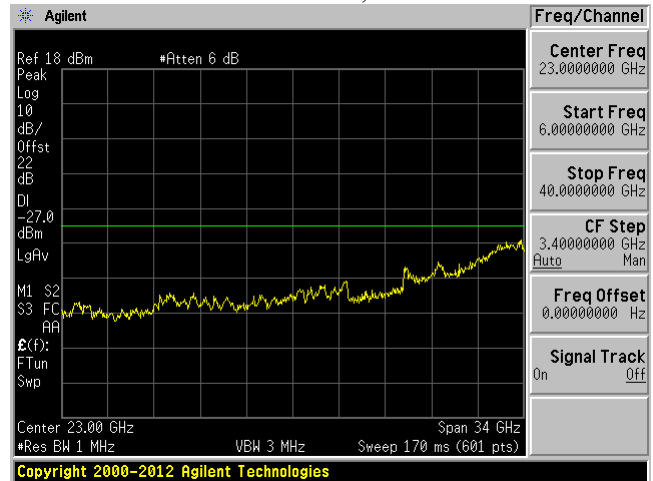
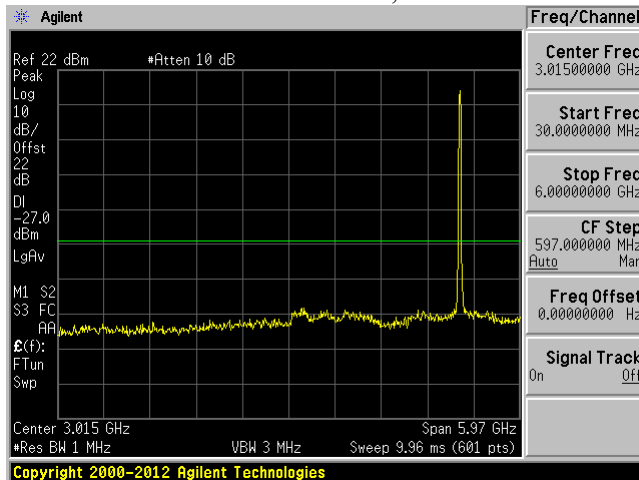
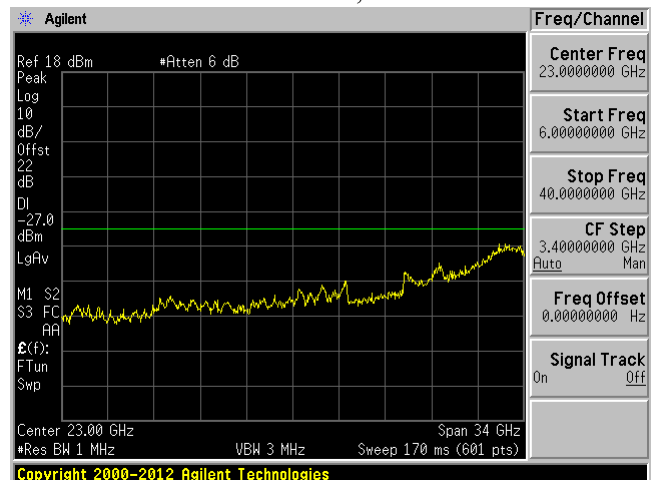
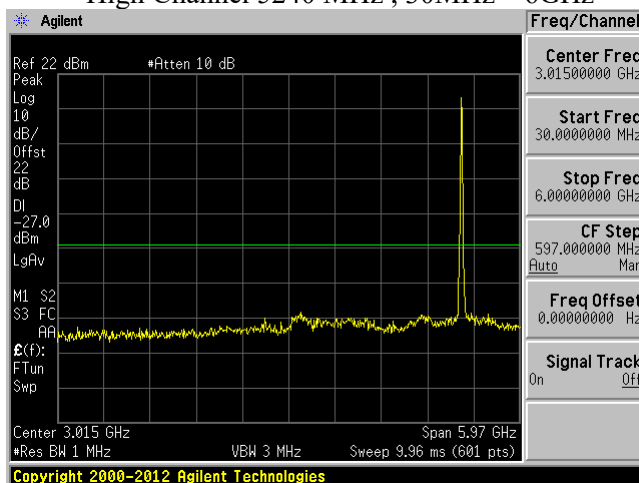
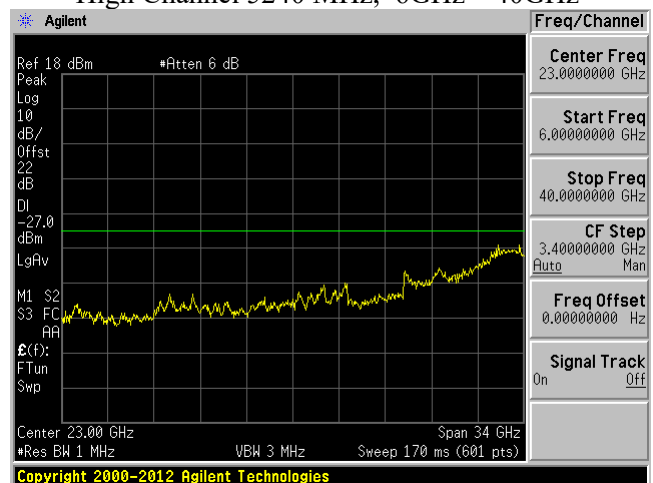


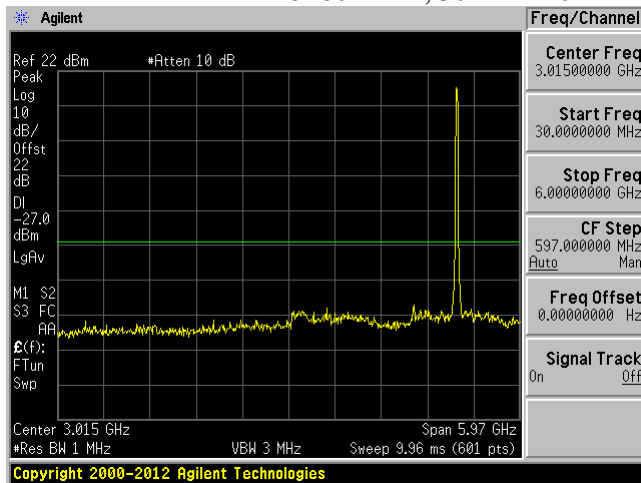
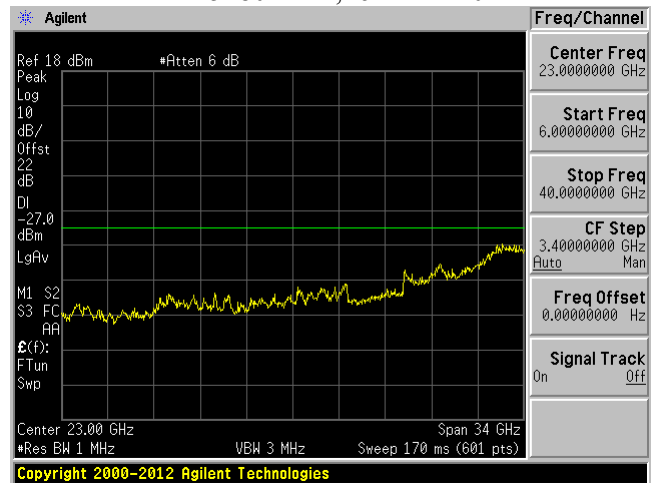
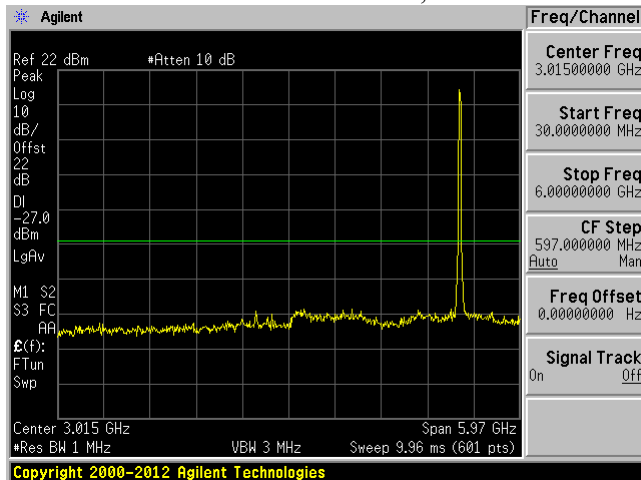
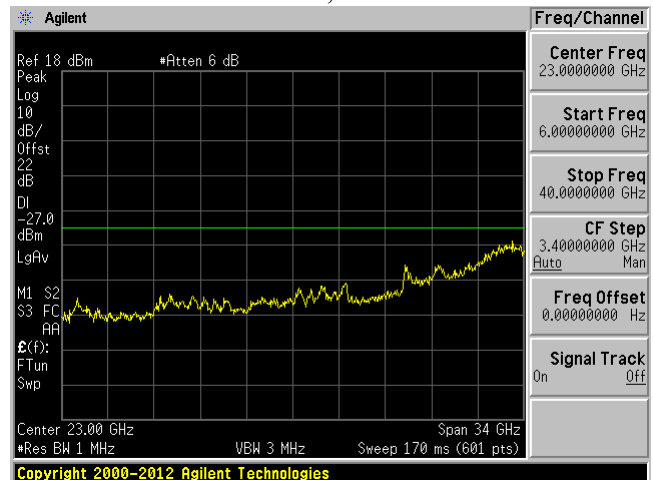
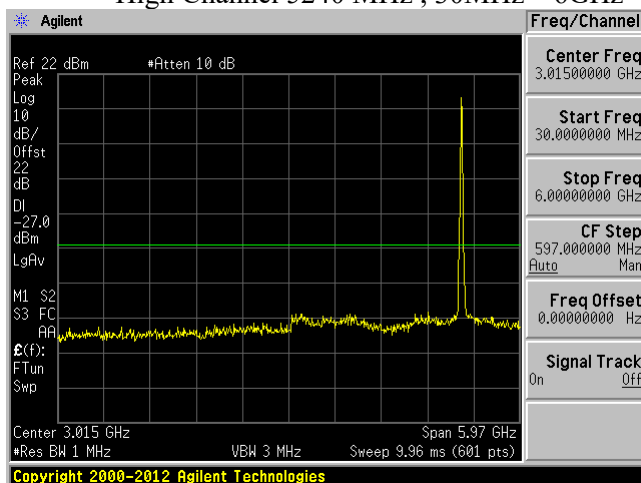
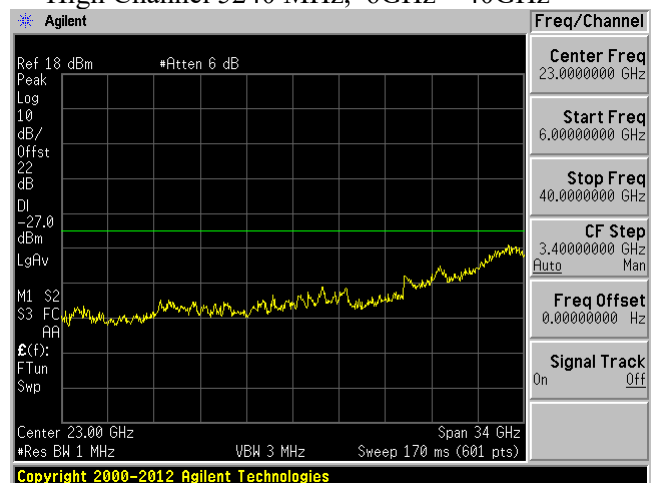
High Channel 5240 MHz, 6GHz – 40GHz

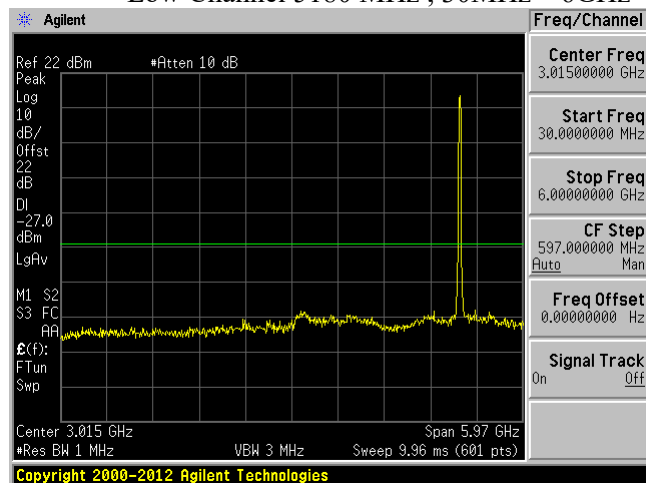
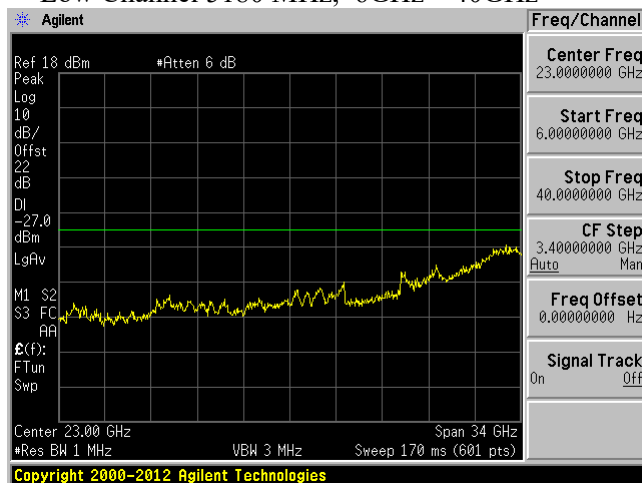
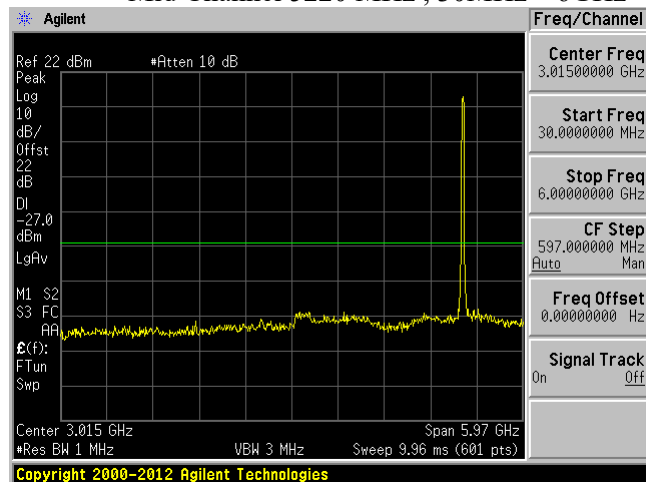
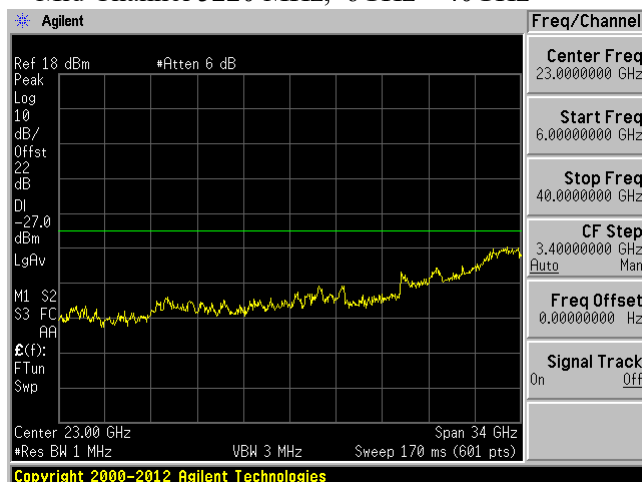
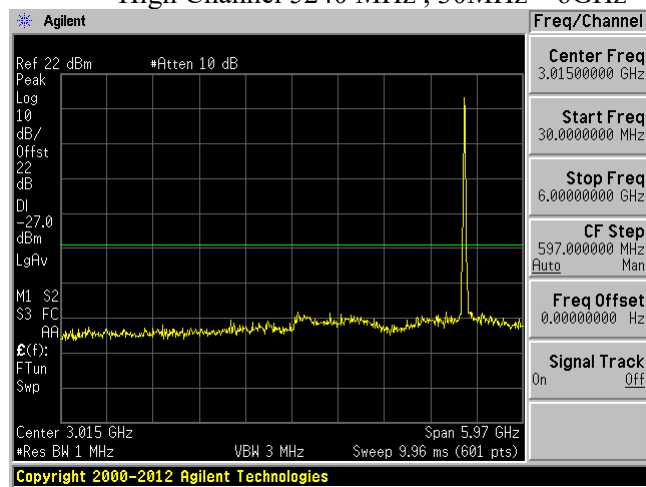


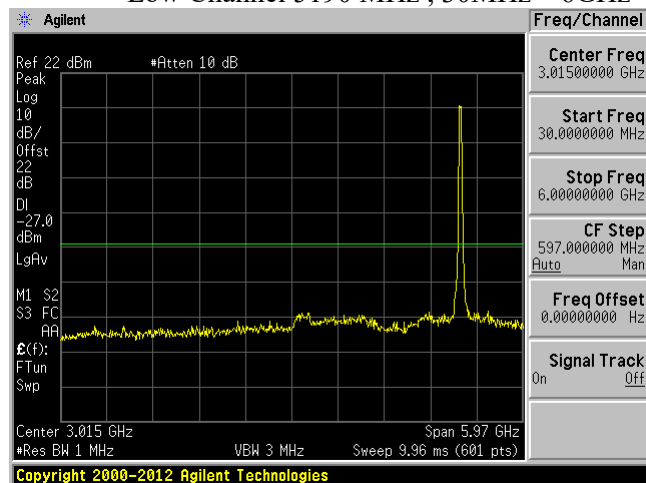
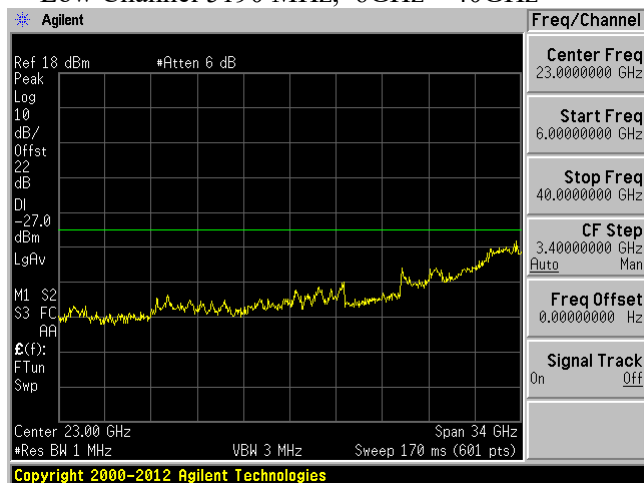
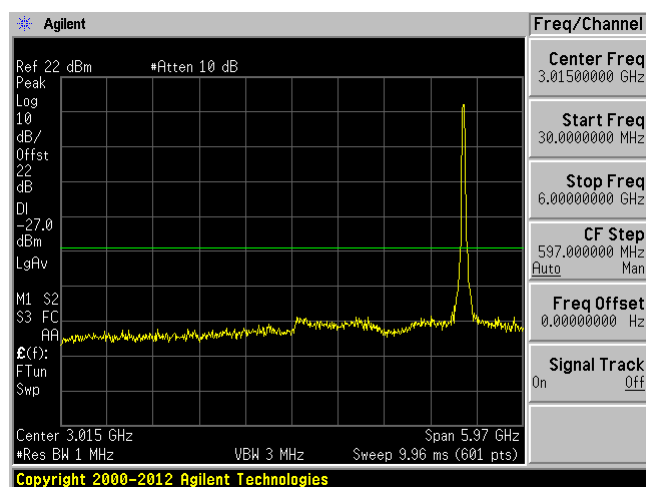
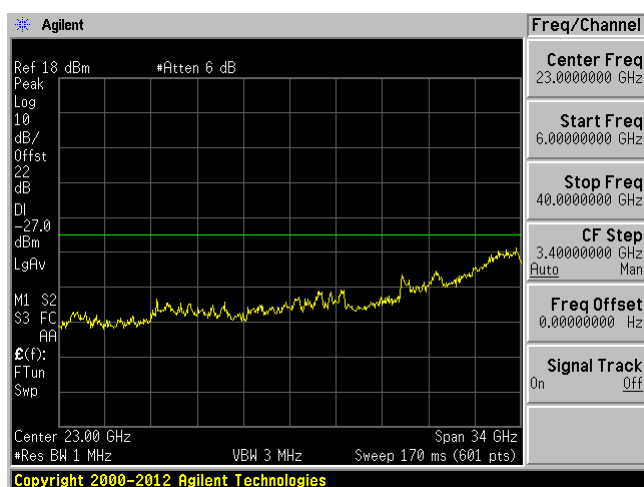
5150 - 5250 MHz, 802.11a Mode, ANTENNA J15**Low Channel 5180 MHz , 30MHz – 6GHz****Low Channel 5180 MHz, 6GHz – 40GHz****Mid Channel 5220 MHz , 30MHz – 6GHz****Mid Channel 5220 MHz, 6GHz – 40GHz****High Channel 5240 MHz , 30MHz – 6GHz****High Channel 5240 MHz, 6GHz – 40GHz**

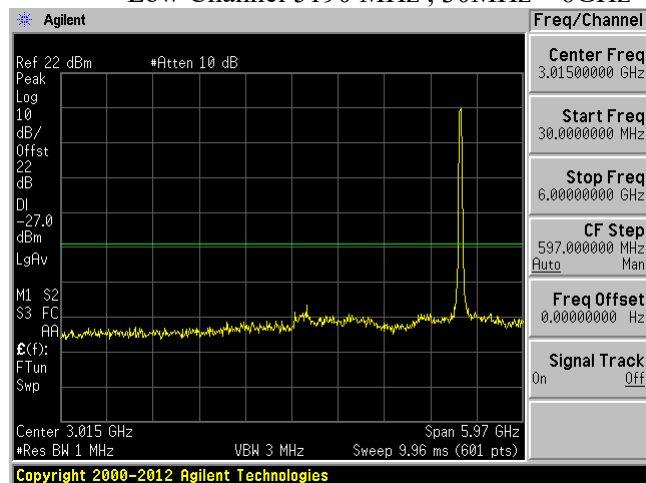
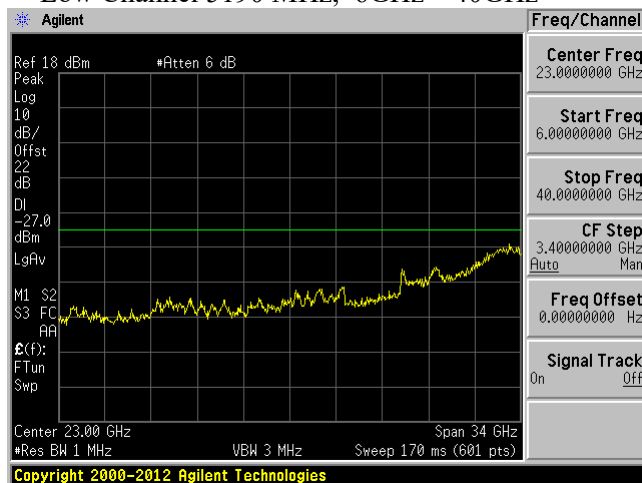
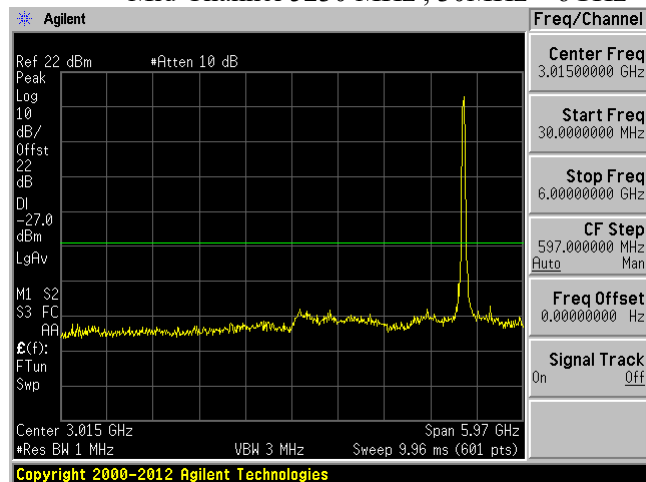
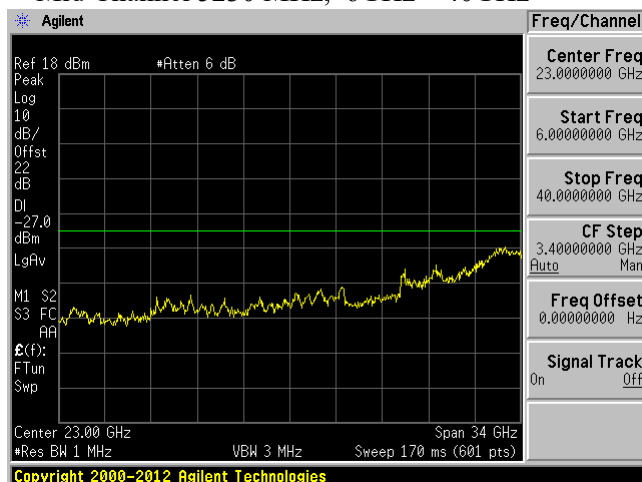
5150 - 5250 MHz, 802.11ac20 Mode, ANTENNA J12**Low Channel 5180 MHz , 30MHz – 6GHz****Low Channel 5180 MHz, 6GHz – 40GHz****Mid Channel 5220 MHz , 30MHz – 6GHz****Mid Channel 5220 MHz, 6GHz – 40GHz****High Channel 5240 MHz , 30MHz – 6GHz****High Channel 5240 MHz, 6GHz – 40GHz**

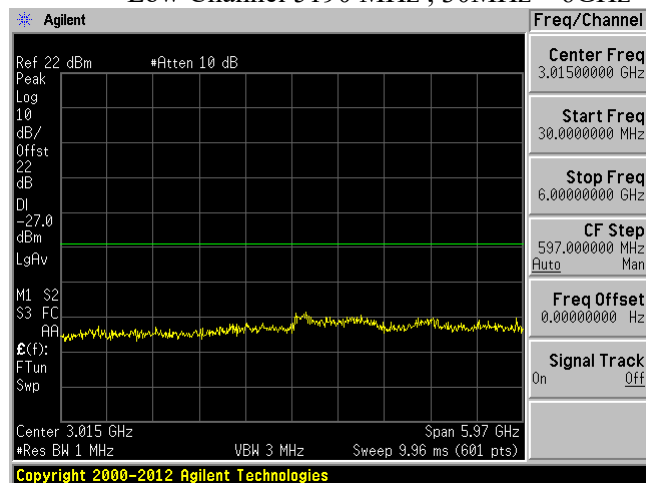
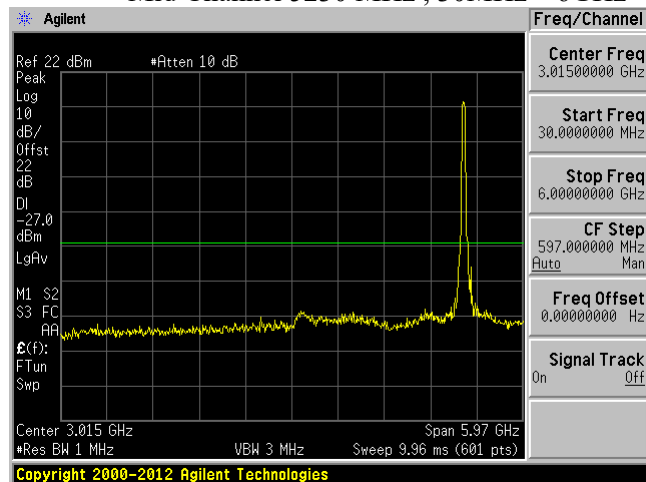
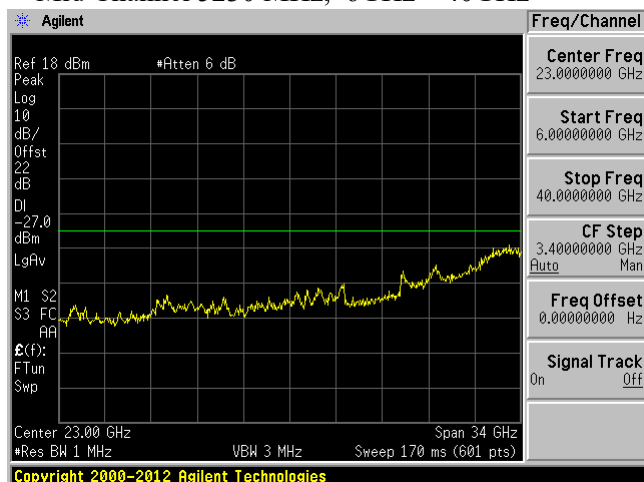
5150 - 5250 MHz, 802.11ac20 Mode, ANTENNA J15**Low Channel 5180 MHz , 30MHz – 6GHz****Low Channel 5180 MHz, 6GHz – 40GHz****Mid Channel 5220 MHz , 30MHz – 6GHz****Mid Channel 5220 MHz, 6GHz – 40GHz****High Channel 5240 MHz , 30MHz – 6GHz****High Channel 5240 MHz, 6GHz – 40GHz**

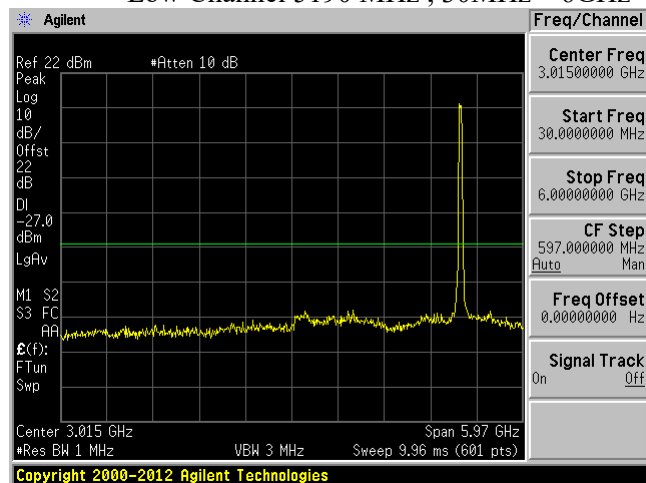
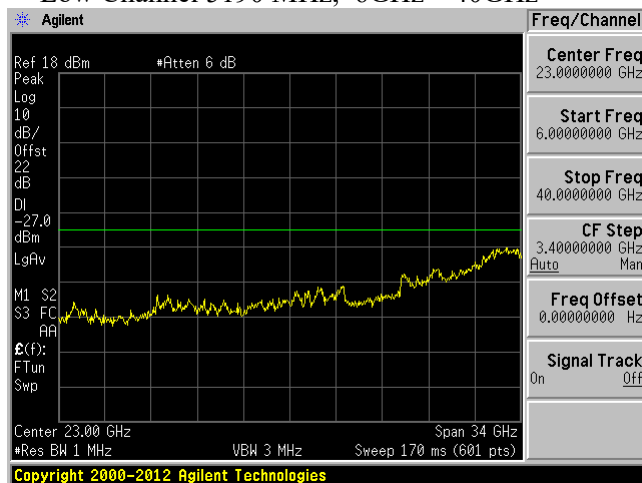
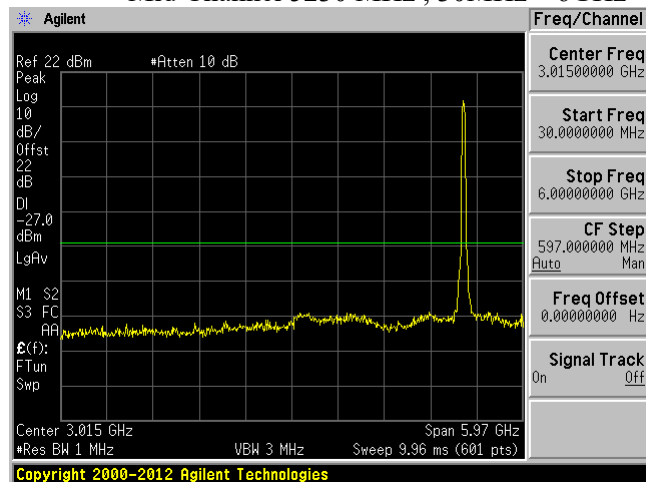
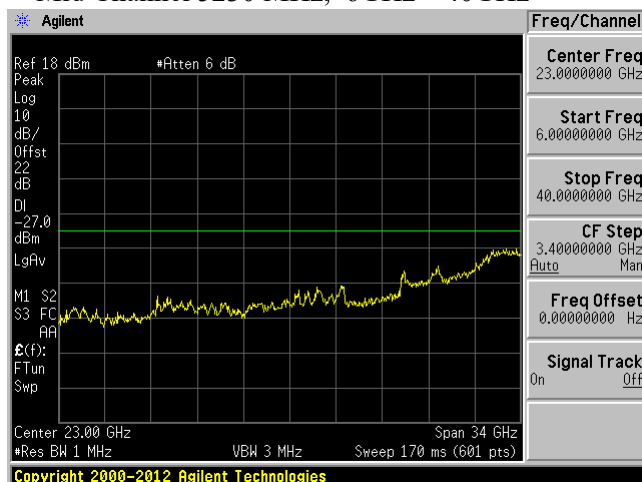
5150 - 5250 MHz, 802.11ax20 Mode, ANTENNA J12**Low Channel 5180 MHz , 30MHz – 6GHz****Low Channel 5180 MHz, 6GHz – 40GHz****Mid Channel 5220 MHz , 30MHz – 6GHz****Mid Channel 5220 MHz, 6GHz – 40GHz****High Channel 5240 MHz , 30MHz – 6GHz****High Channel 5240 MHz, 6GHz – 40GHz**

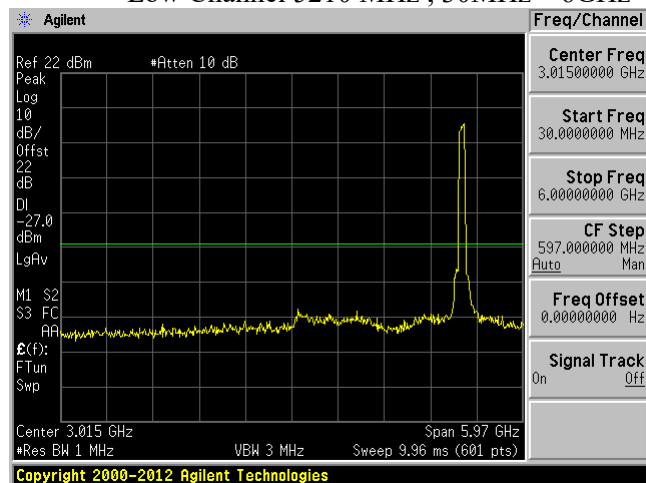
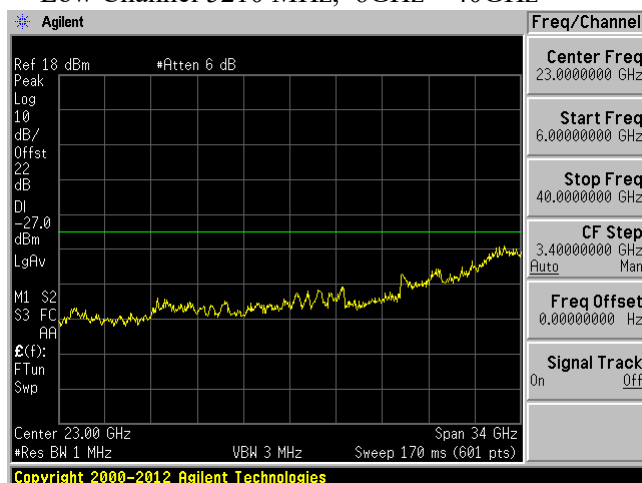
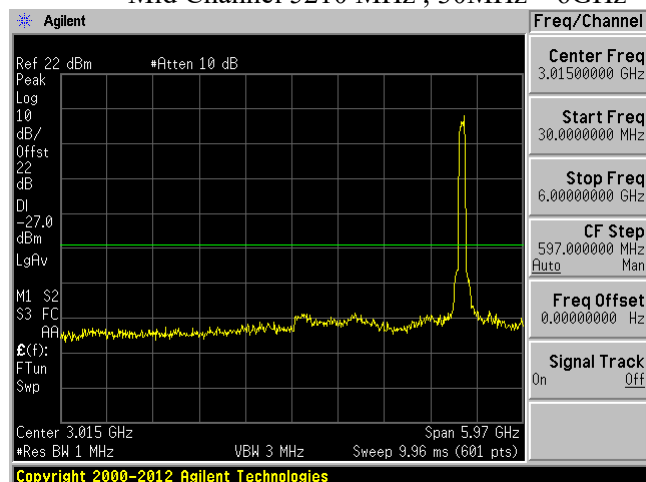
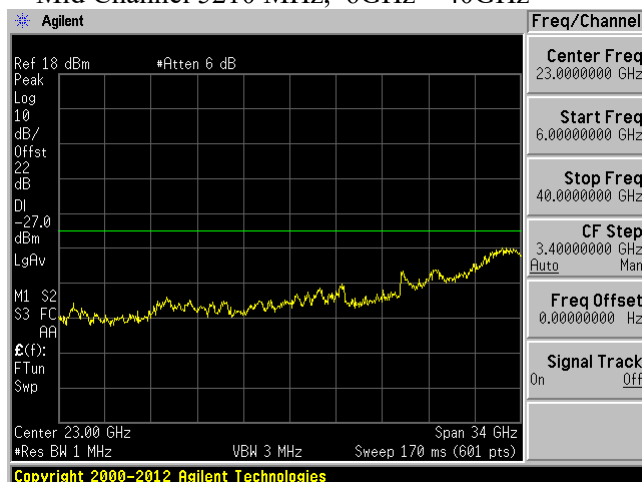
5150 - 5250 MHz, 802.11ax20 Mode, ANTENNA J15**Low Channel 5180 MHz , 30MHz – 6GHz****Low Channel 5180 MHz, 6GHz – 40GHz****Mid Channel 5220 MHz , 30MHz – 6GHz****Mid Channel 5220 MHz, 6GHz – 40GHz****High Channel 5240 MHz , 30MHz – 6GHz****High Channel 5240 MHz, 6GHz – 40GHz**

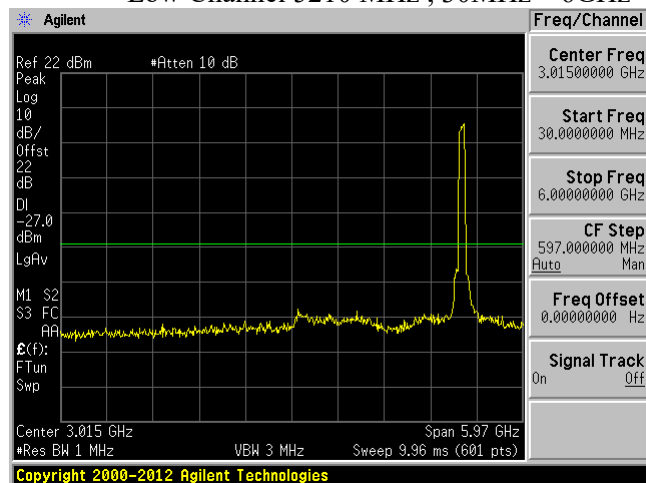
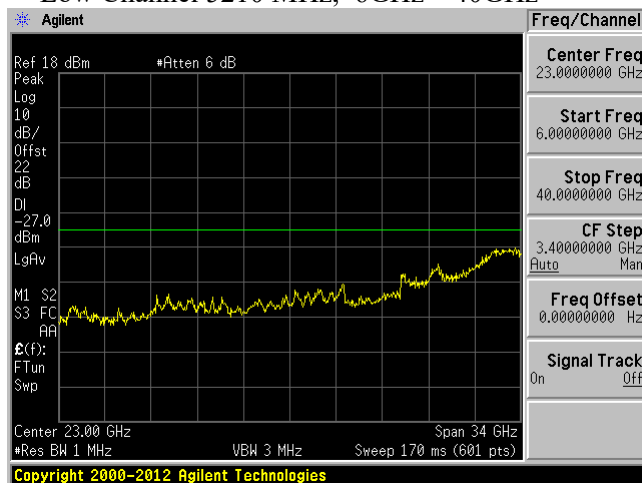
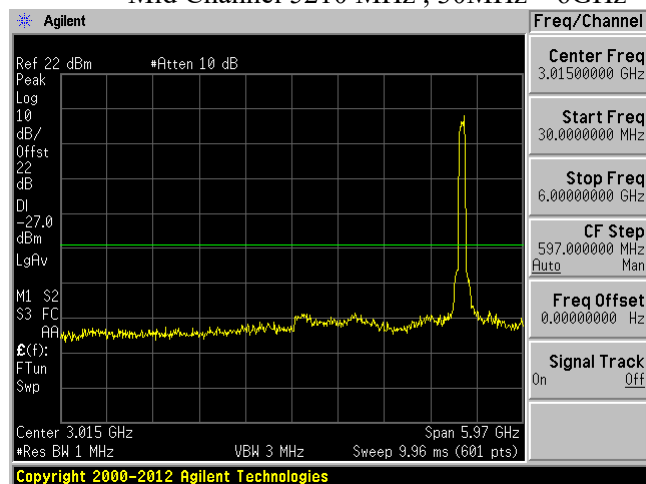
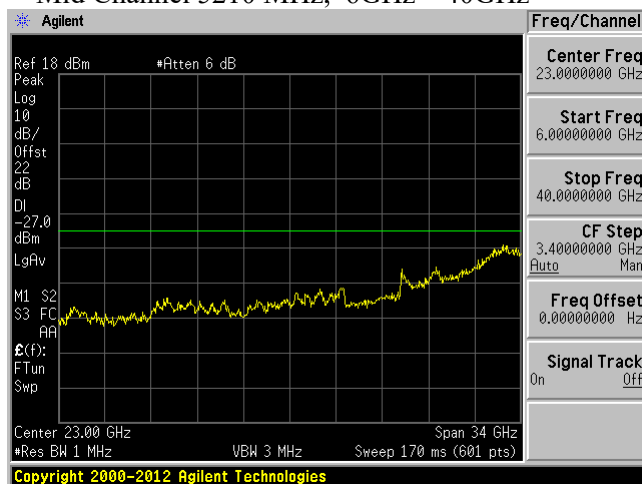
5150 - 5250 MHz, 802.11ac40 Mode, ANTENNA J12**Low Channel 5190 MHz , 30MHz – 6GHz****Low Channel 5190 MHz, 6GHz – 40GHz****Mid Channel 5230 MHz , 30MHz – 6GHz****Mid Channel 5230 MHz, 6GHz – 40GHz**

5150 - 5250 MHz, 802.11ac40 Mode, ANTENNA J15**Low Channel 5190 MHz , 30MHz – 6GHz****Low Channel 5190 MHz, 6GHz – 40GHz****Mid Channel 5230 MHz , 30MHz – 6GHz****Mid Channel 5230 MHz, 6GHz – 40GHz**

5150 - 5250 MHz, 802.11ax40 Mode, ANTENNA J12**Low Channel 5190 MHz , 30MHz – 6GHz****Low Channel 5190 MHz, 6GHz – 40GHz****Mid Channel 5230 MHz , 30MHz – 6GHz****Mid Channel 5230 MHz, 6GHz – 40GHz**

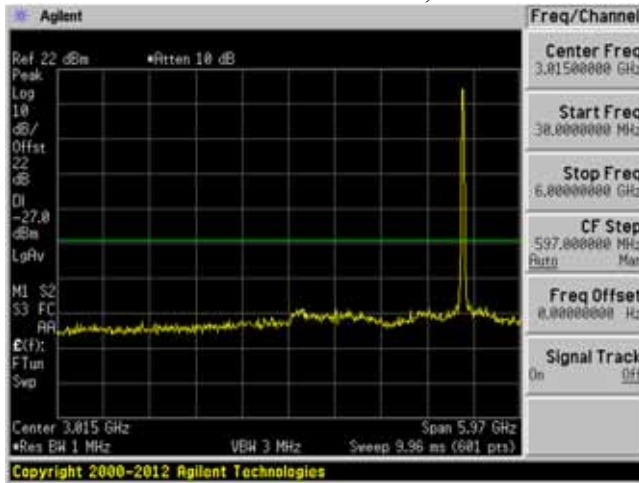
5150 - 5250 MHz, 802.11ac40 Mode, ANTENNA J15**Low Channel 5190 MHz , 30MHz – 6GHz****Low Channel 5190 MHz, 6GHz – 40GHz****Mid Channel 5230 MHz , 30MHz – 6GHz****Mid Channel 5230 MHz, 6GHz – 40GHz**

5150 - 5250 MHz, 802.11ac80 Mode, ANTENNA J12**Low Channel 5210 MHz , 30MHz – 6GHz****Low Channel 5210 MHz, 6GHz – 40GHz****5150 - 5250 MHz, 802.11ax80 Mode, ANTENNA J12****Mid Channel 5210 MHz , 30MHz – 6GHz****Mid Channel 5210 MHz, 6GHz – 40GHz**

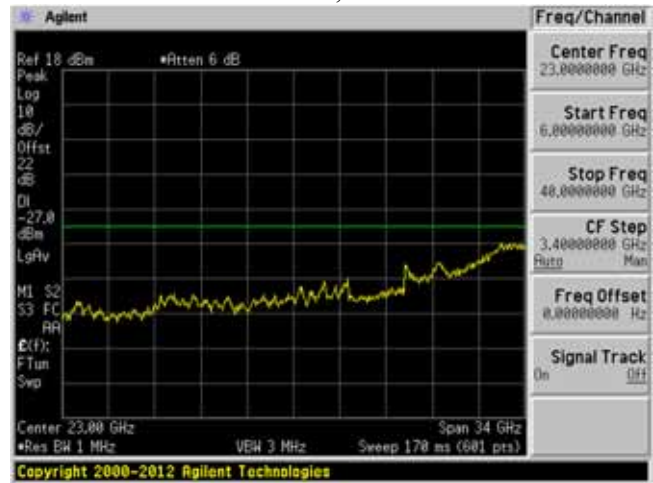
5150 - 5250 MHz, 802.11ac80 Mode, ANTENNA J15**Low Channel 5210 MHz , 30MHz – 6GHz****Low Channel 5210 MHz, 6GHz – 40GHz****5150 - 5250 MHz, 802.11ax80 Mode, ANTENNA J15****Mid Channel 5210 MHz , 30MHz – 6GHz****Mid Channel 5210 MHz, 6GHz – 40GHz**

5250 - 5350 MHz, 802.11a Mode, ANT J12

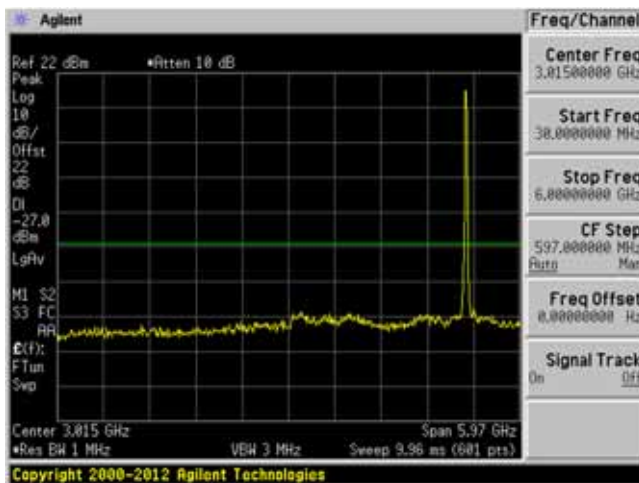
Low Channel 5260 MHz , 30MHz – 6GHz



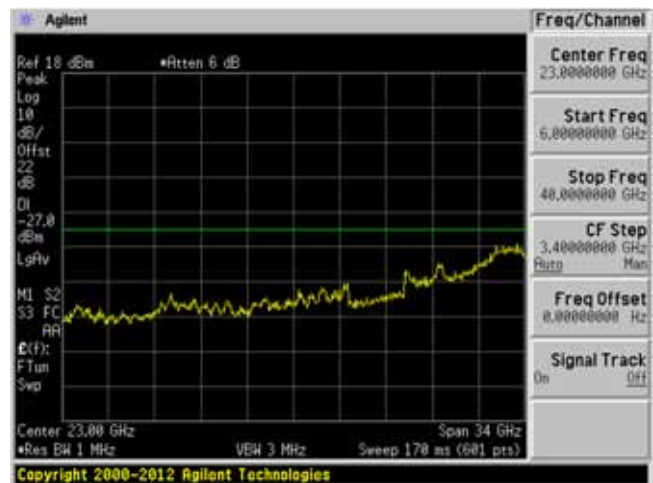
Low Channel 5260 MHz, 6GHz – 40GHz



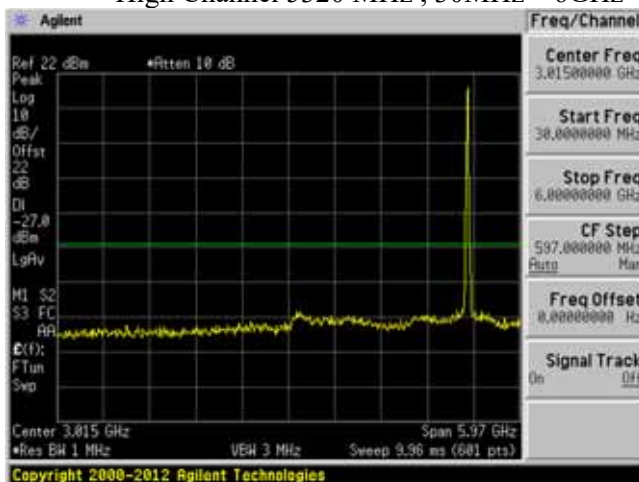
Mid Channel 5300 MHz , 30MHz – 6GHz



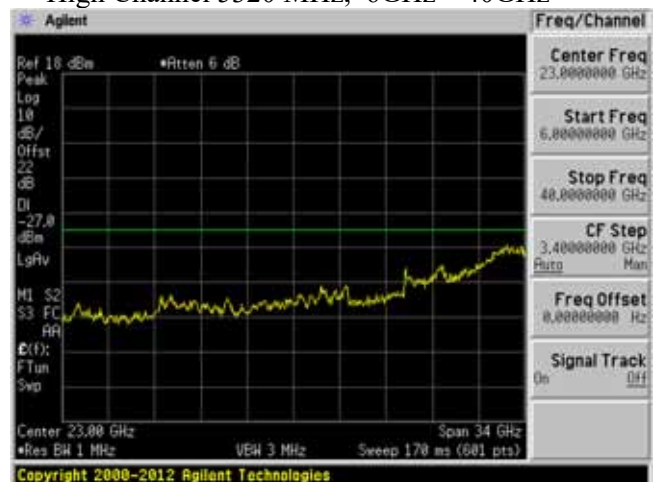
Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

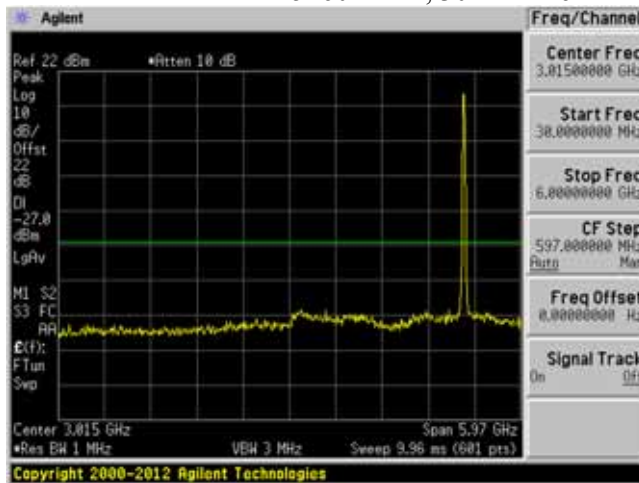


High Channel 5320 MHz, 6GHz – 40GHz

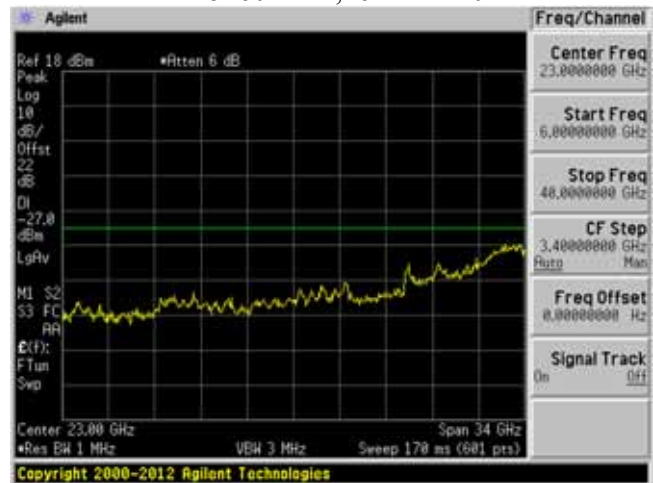


5250 - 5350 MHz, 802.11a Mode, ANTJ15

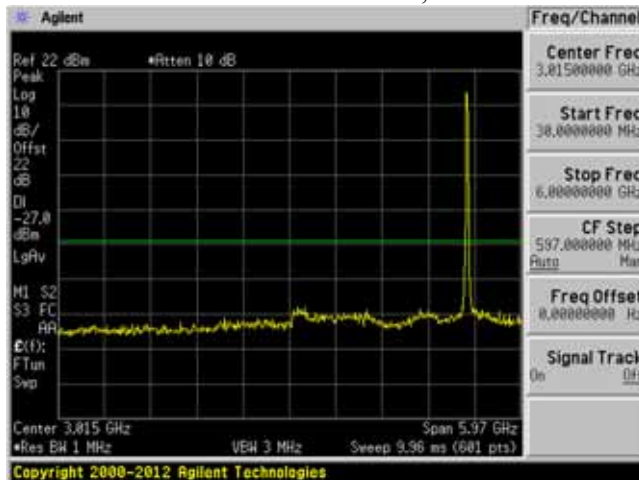
Low Channel 5260 MHz , 30MHz – 6GHz



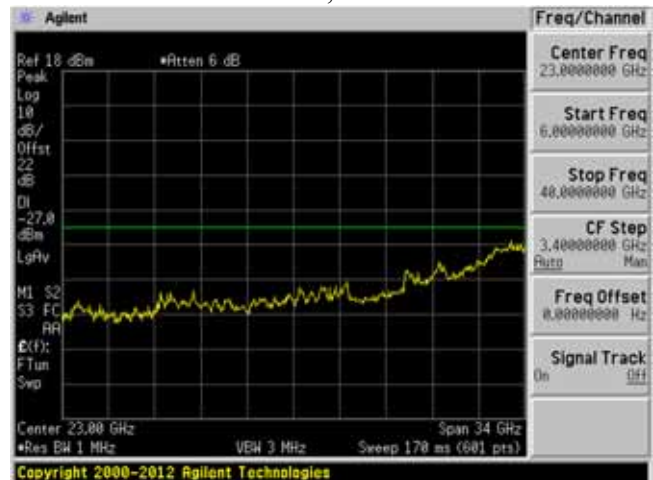
Low Channel 5260 MHz, 6GHz – 40GHz



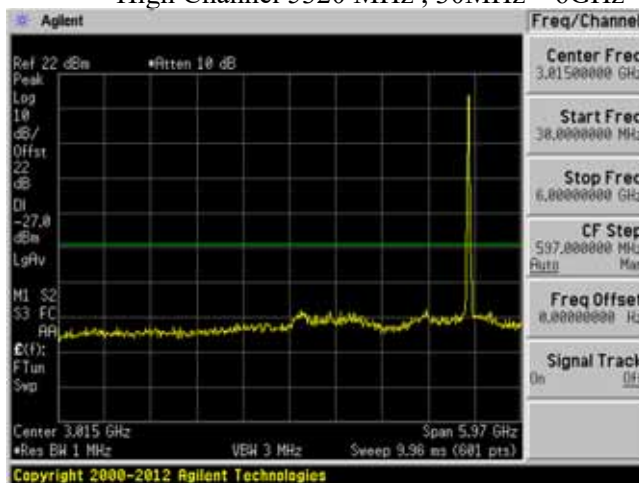
Mid Channel 5300 MHz , 30MHz – 6GHz



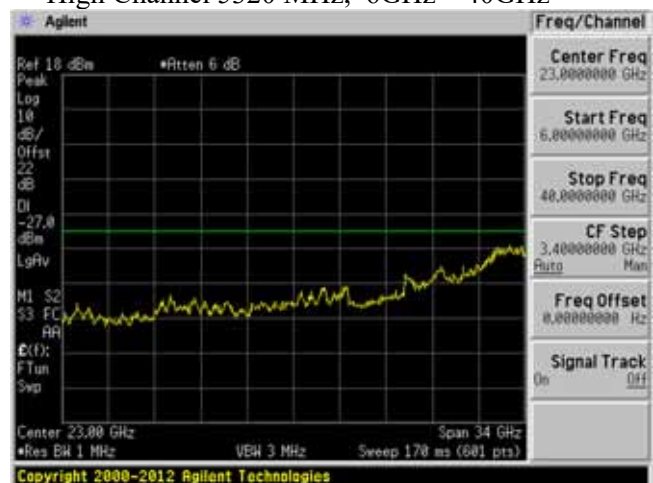
Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

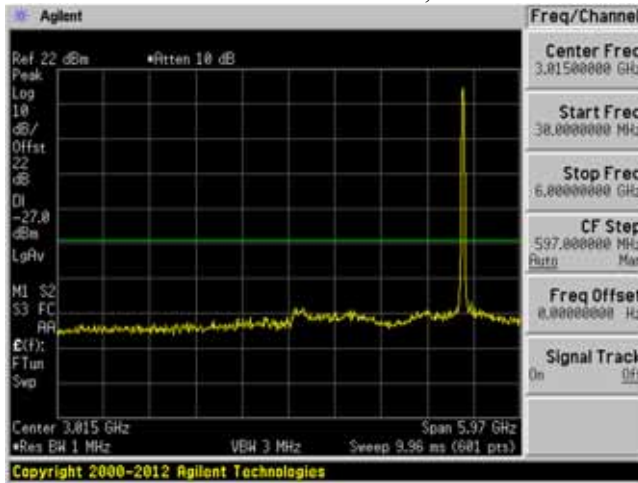


High Channel 5320 MHz, 6GHz – 40GHz

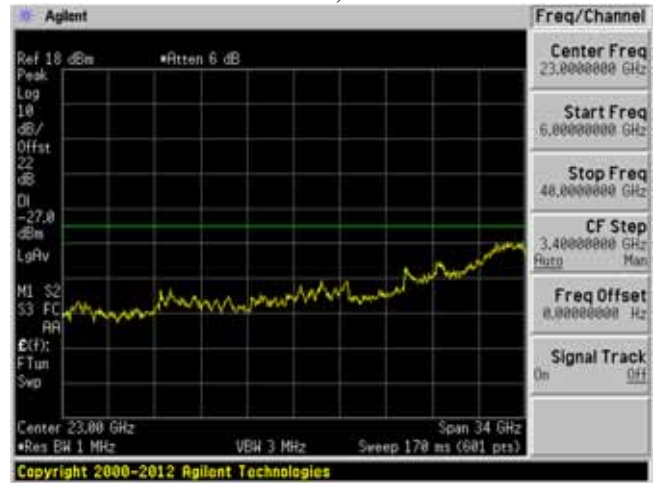


5250 - 5350 MHz, 802.11ac20 Mode, ANTJ12

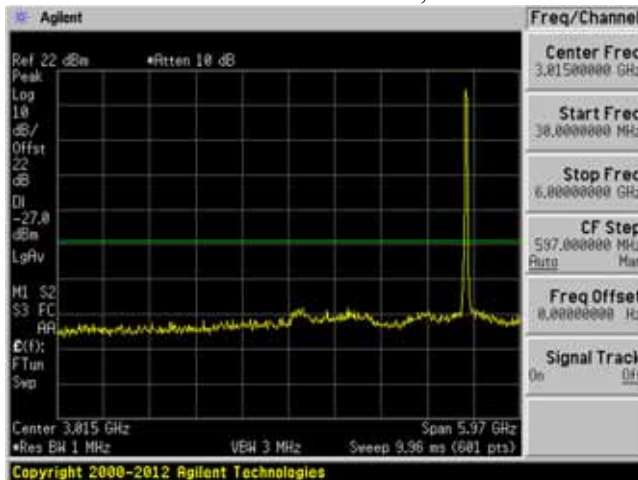
Low Channel 5260 MHz , 30MHz – 6GHz



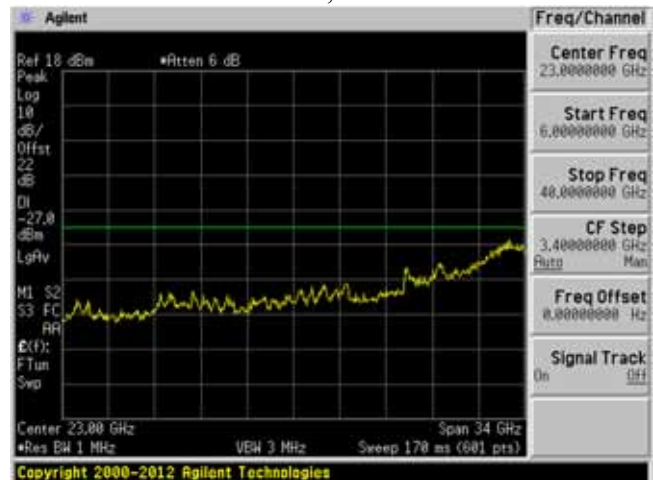
Low Channel 5260 MHz, 6GHz – 40GHz



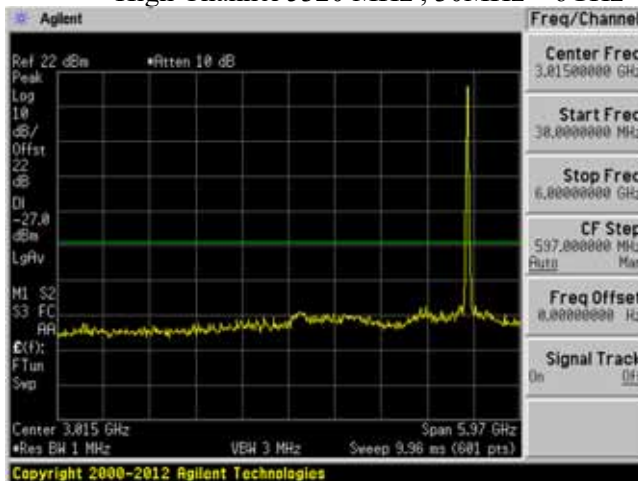
Mid Channel 5300 MHz , 30MHz – 6GHz



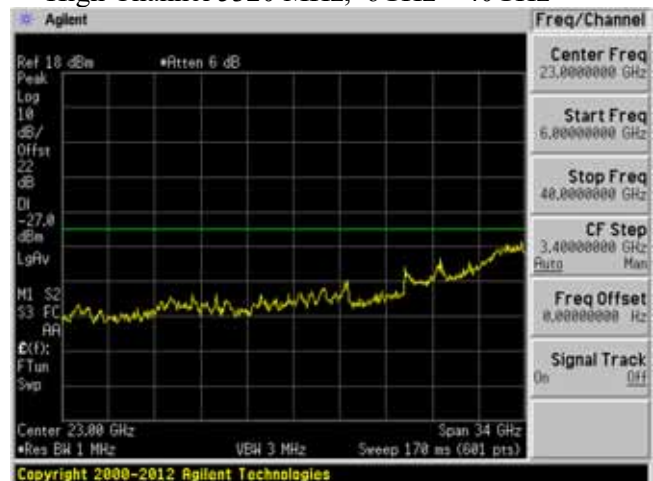
Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

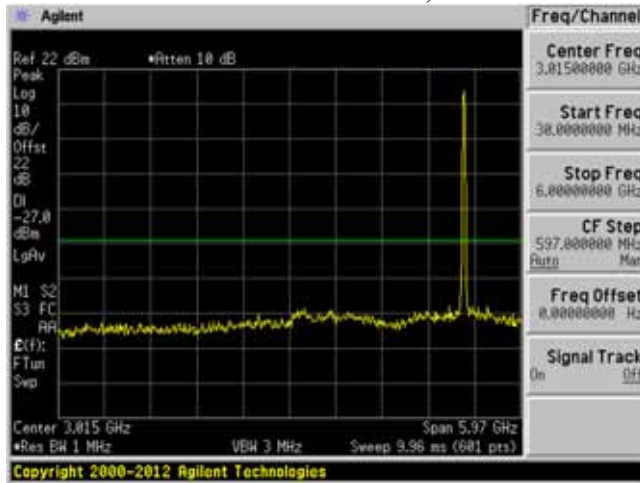


High Channel 5320 MHz, 6GHz – 40GHz

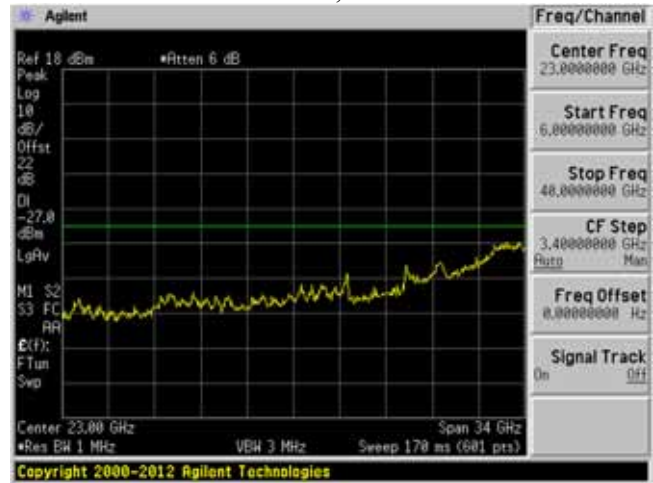


5250 - 5350 MHz, 802.11ac20 Mode, ANTJ15

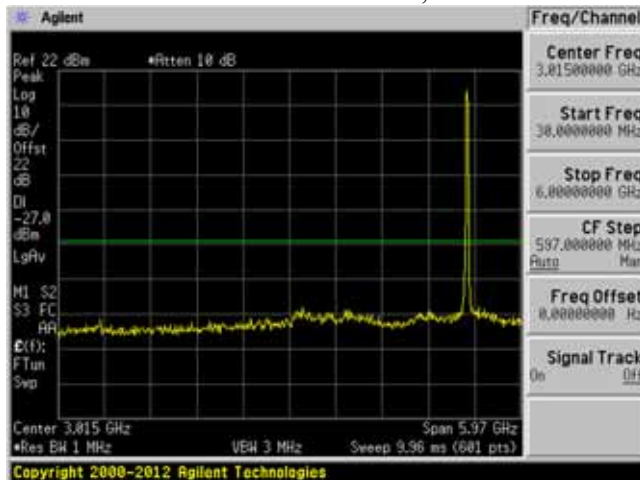
Low Channel 5260 MHz , 30MHz – 6GHz



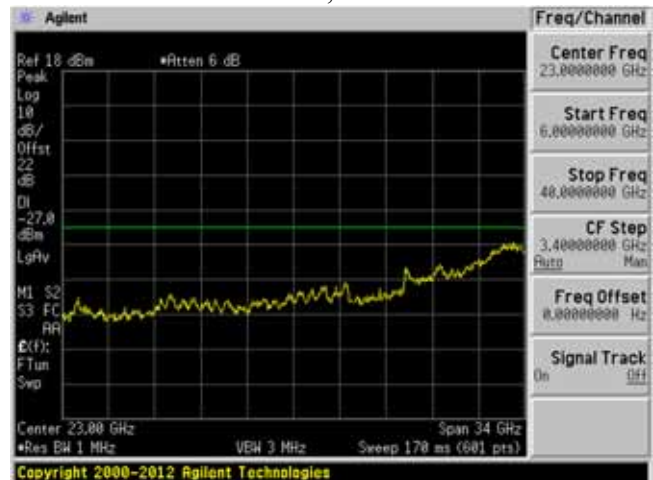
Low Channel 5260 MHz, 6GHz – 40GHz



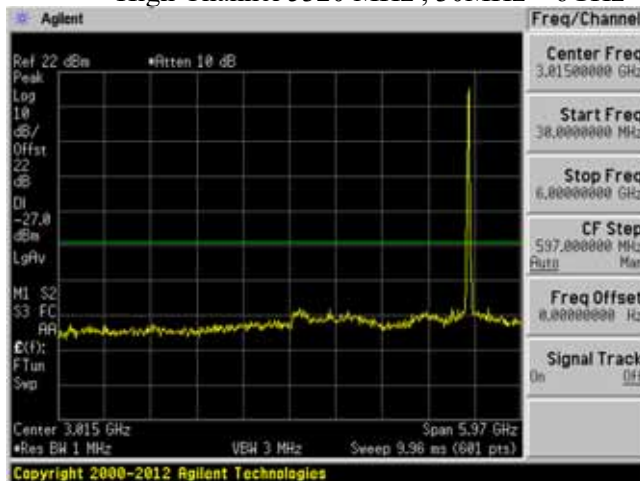
Mid Channel 5300 MHz , 30MHz – 6GHz



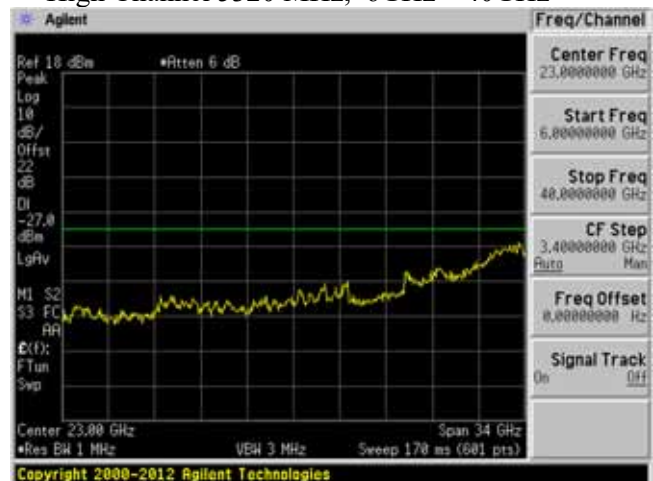
Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

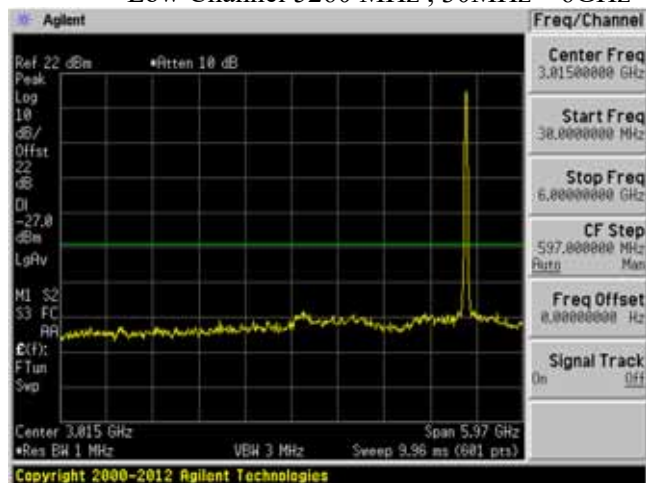


High Channel 5320 MHz, 6GHz – 40GHz

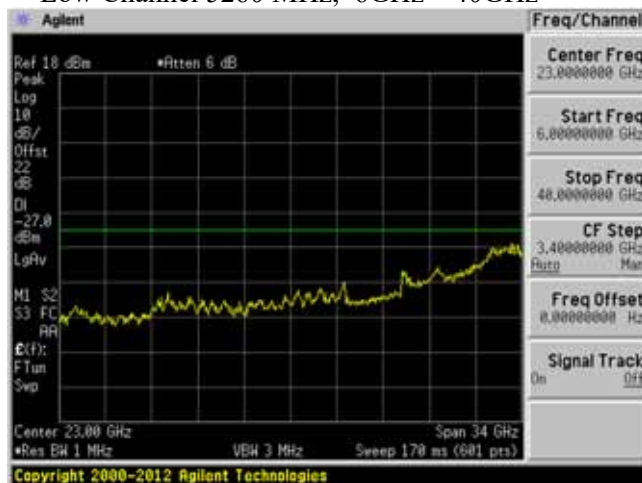


5250 - 5350 MHz, 802.11ax20 Mode, ANTJ12

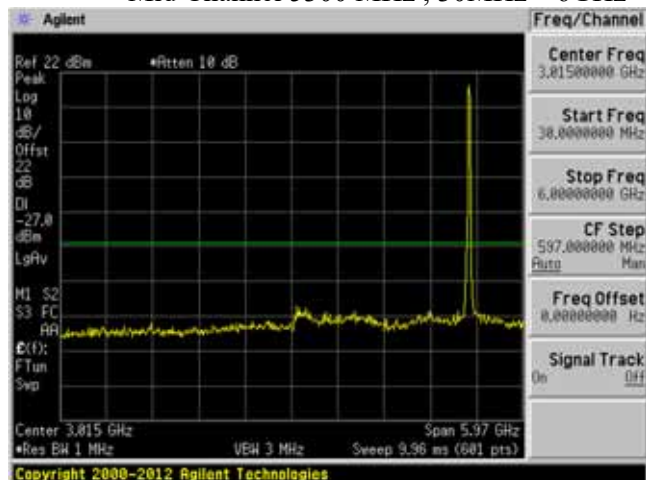
Low Channel 5260 MHz , 30MHz – 6GHz



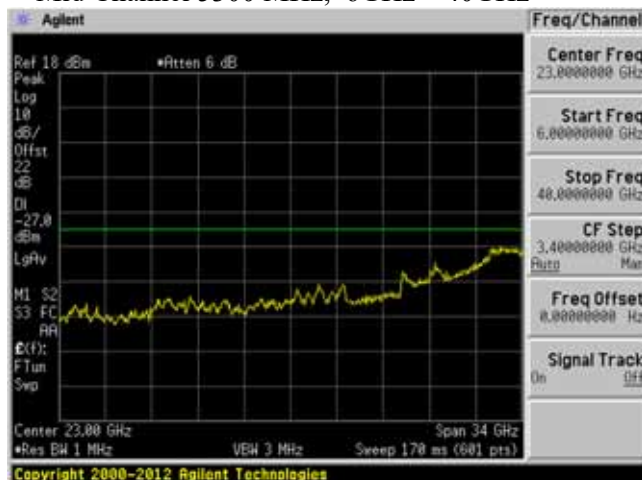
Low Channel 5260 MHz, 6GHz – 40GHz



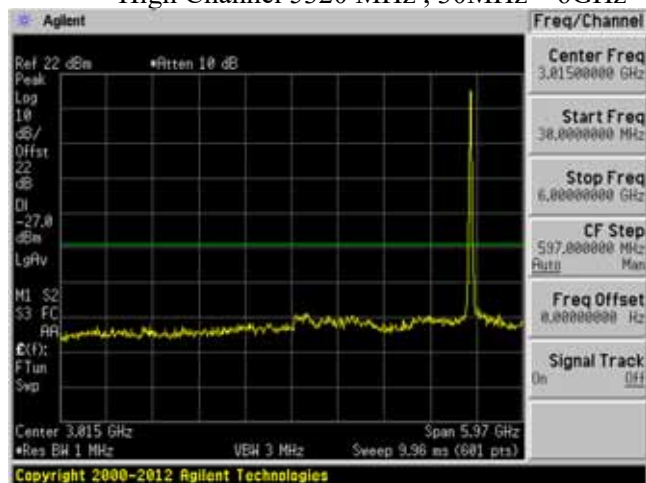
Mid Channel 5300 MHz , 30MHz – 6GHz



Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

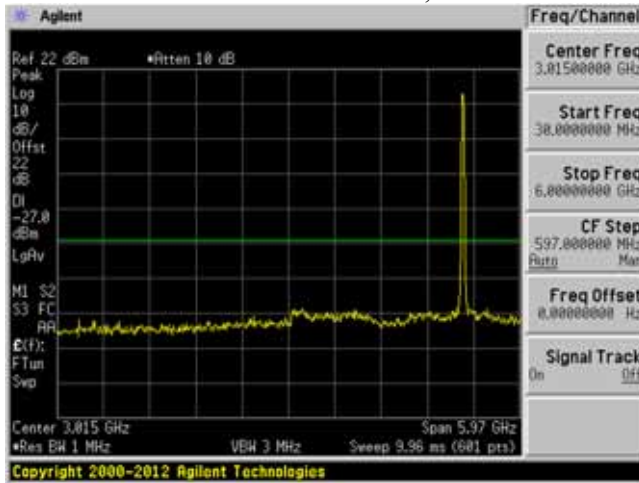


High Channel 5320 MHz, 6GHz – 40GHz

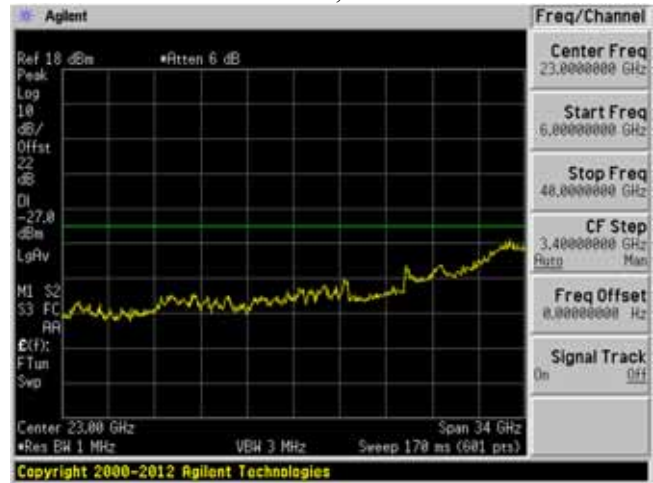


5250 - 5350 MHz, 802.11ax20 Mode, ANTJ15

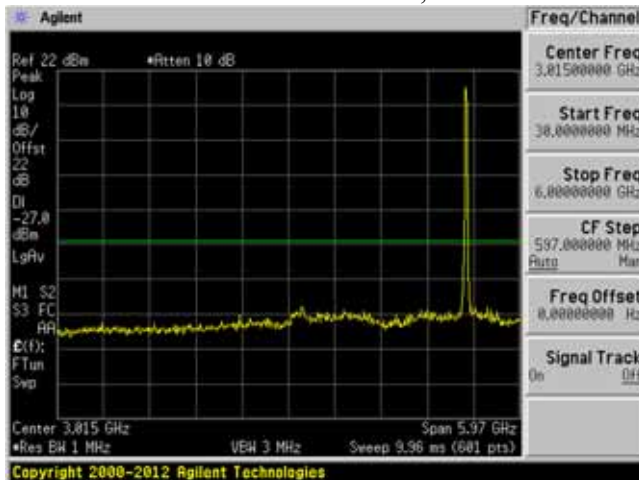
Low Channel 5260 MHz , 30MHz – 6GHz



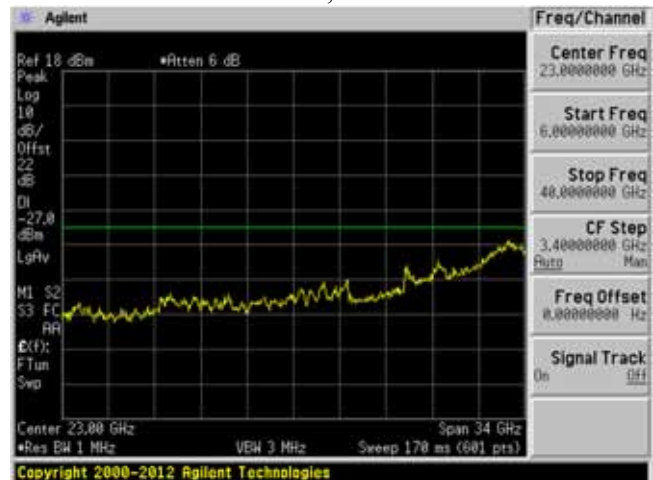
Low Channel 5260 MHz, 6GHz – 40GHz



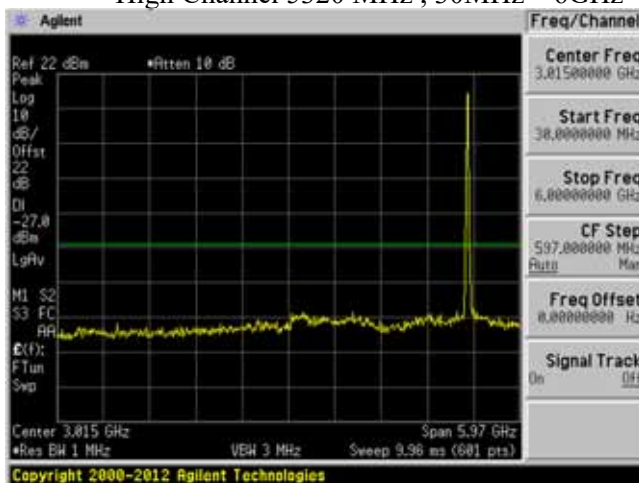
Mid Channel 5300 MHz , 30MHz – 6GHz



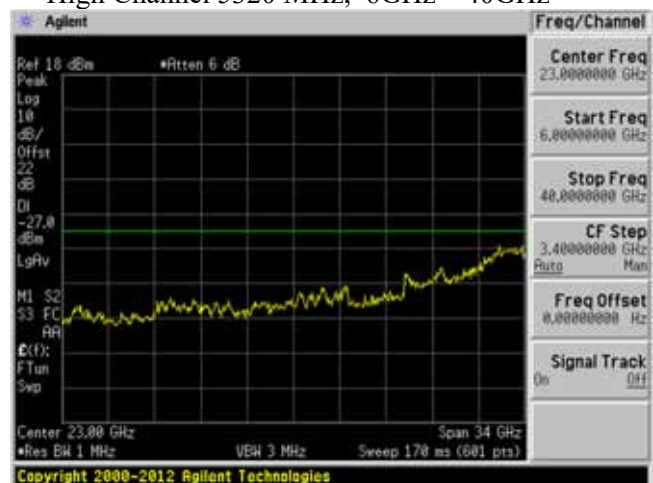
Mid Channel 5300 MHz, 6GHz – 40GHz



High Channel 5320 MHz , 30MHz – 6GHz

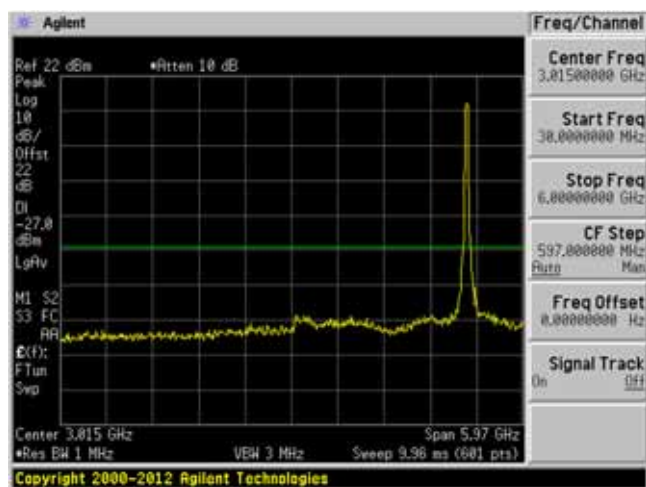


High Channel 5320 MHz, 6GHz – 40GHz

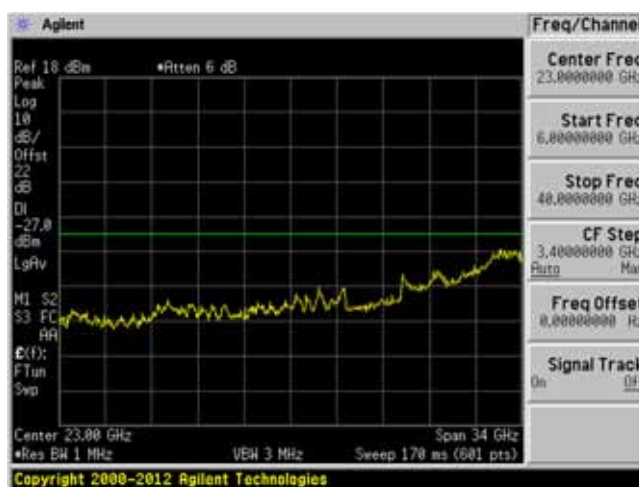


5250 - 5350 MHz, 802.11ac40 Mode, ANTJ12

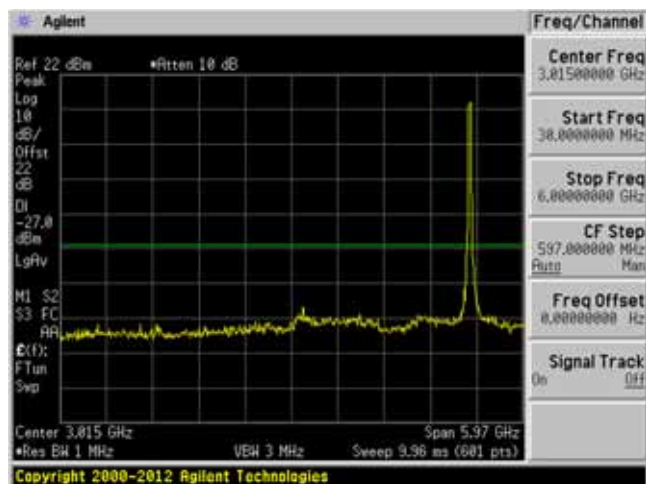
Low Channel 5270 MHz , 30MHz – 6GHz



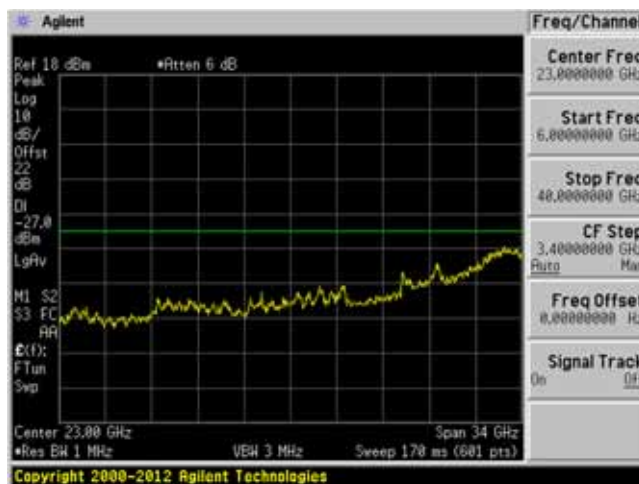
Low Channel 5270 MHz, 6GHz – 40GHz



High Channel 5310 MHz , 30MHz – 6GHz

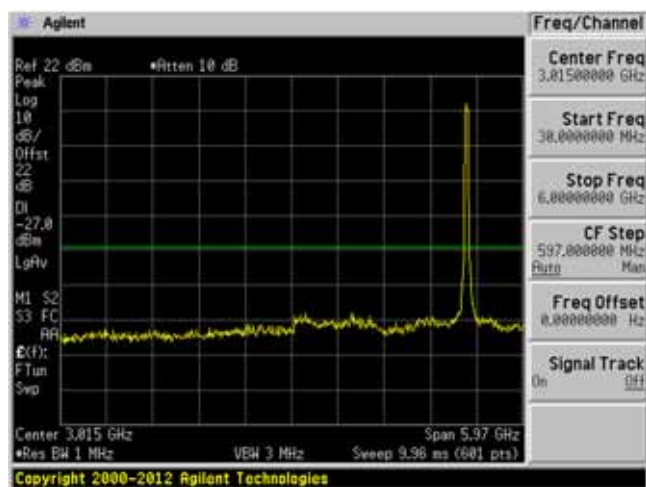


High Channel 5310 MHz, 6GHz – 40GHz

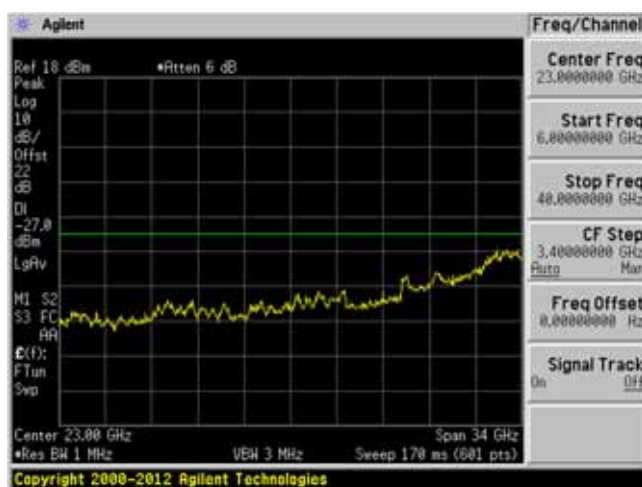


5250 - 5350 MHz, 802.11ac40 Mode, ANTJ15

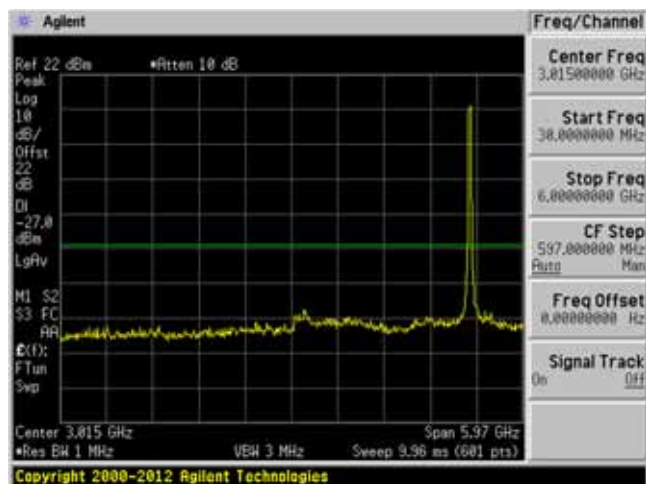
Low Channel 5270 MHz , 30MHz – 6GHz



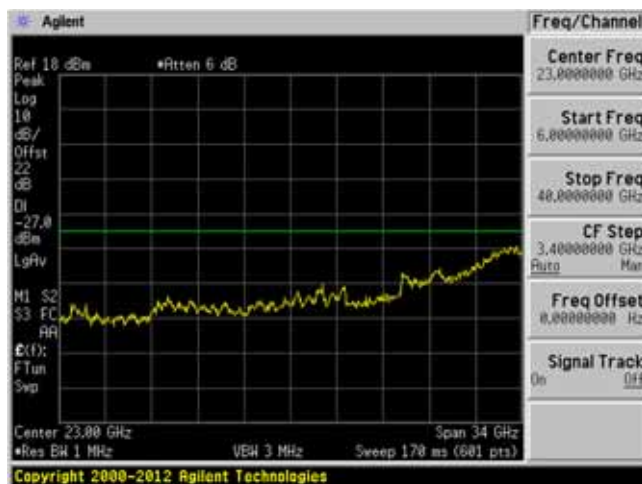
Low Channel 5270 MHz, 6GHz – 40GHz



High Channel 5310 MHz , 30MHz – 6GHz

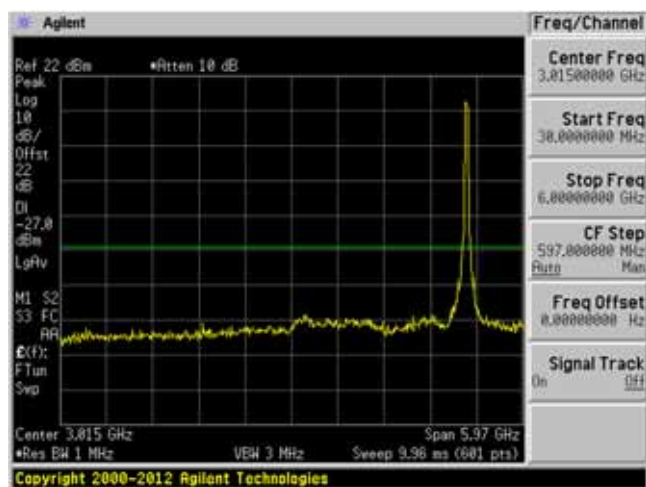


High Channel 5310 MHz, 6GHz – 40GHz

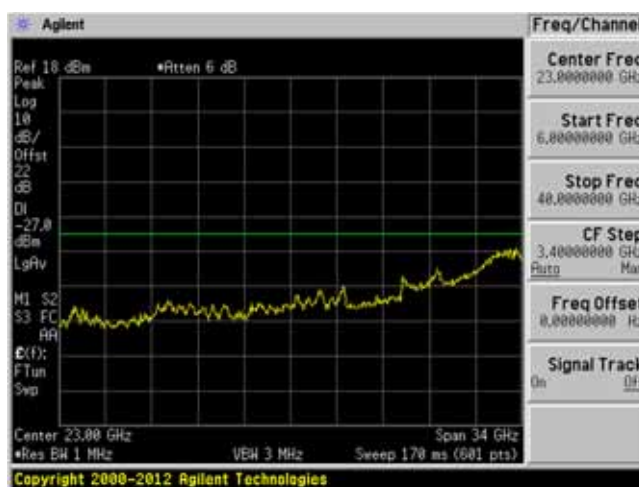


5250 - 5350 MHz, 802.11ax40 Mode, ANTJ12

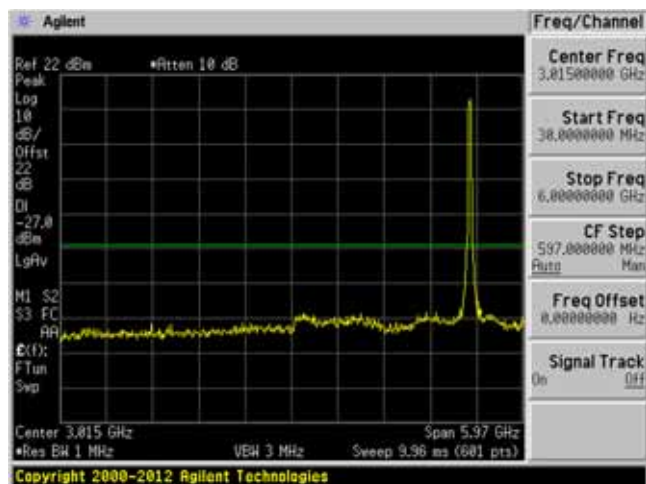
Low Channel 5270 MHz , 30MHz – 6GHz



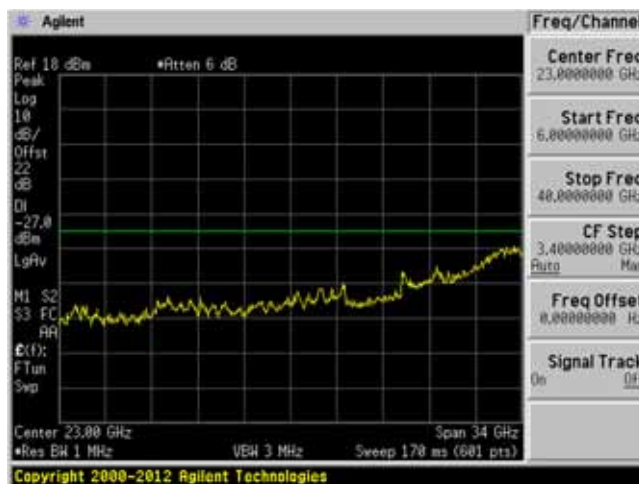
Low Channel 5270 MHz, 6GHz – 40GHz



High Channel 5310 MHz , 30MHz – 6GHz

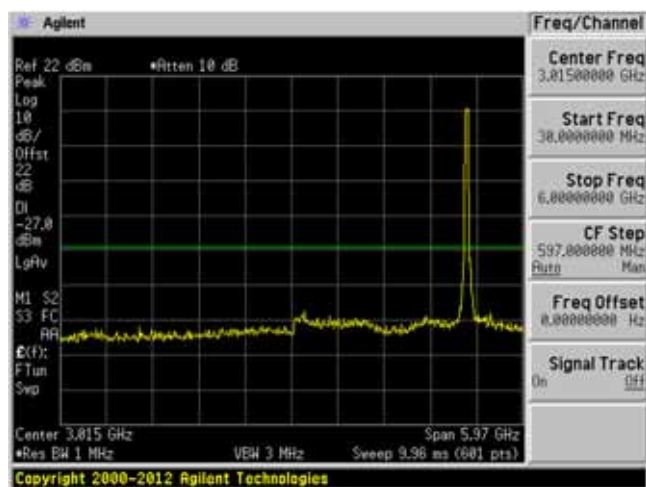


High Channel 5310 MHz, 6GHz – 40GHz

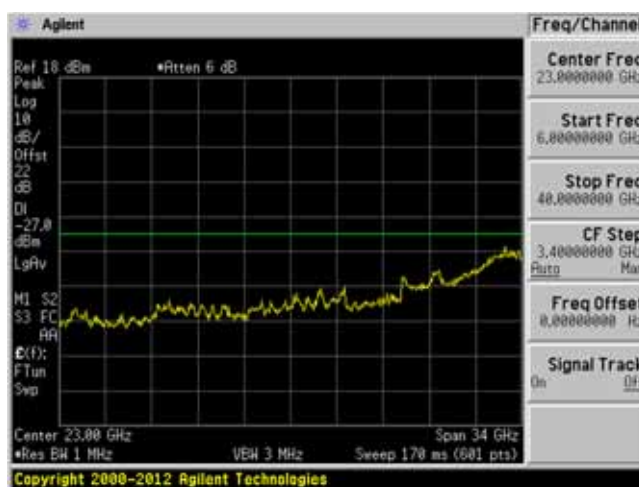


5250 - 5350 MHz, 802.11ax40 Mode, ANTJ15

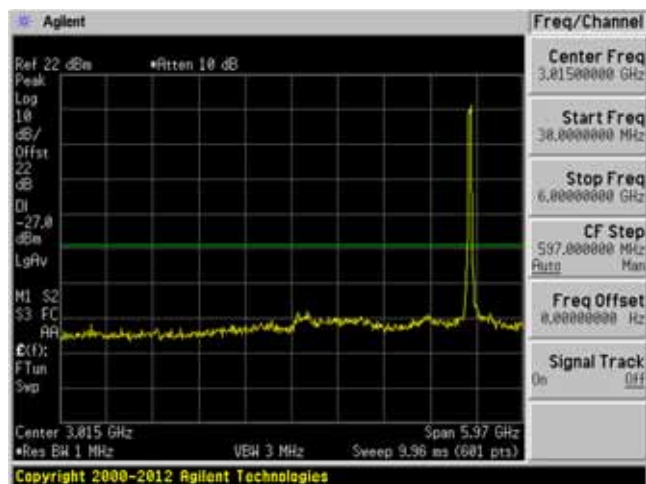
Low Channel 5270 MHz , 30MHz – 6GHz



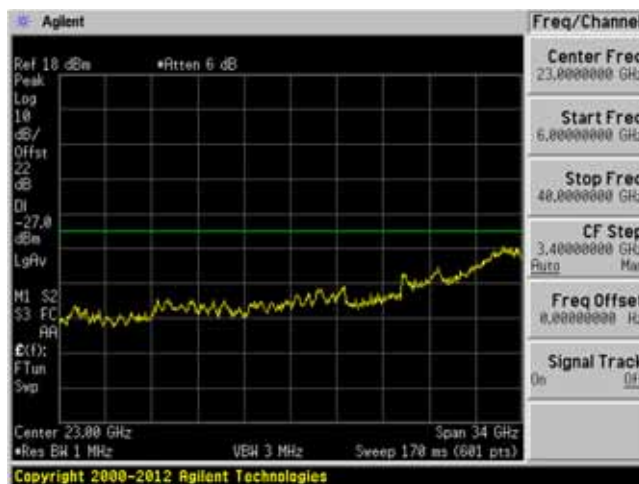
Low Channel 5270 MHz, 6GHz – 40GHz



High Channel 5310 MHz , 30MHz – 6GHz

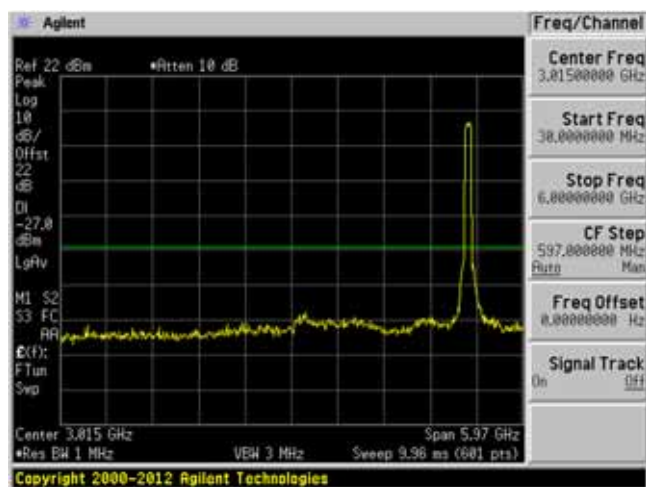


High Channel 5310 MHz, 6GHz – 40GHz

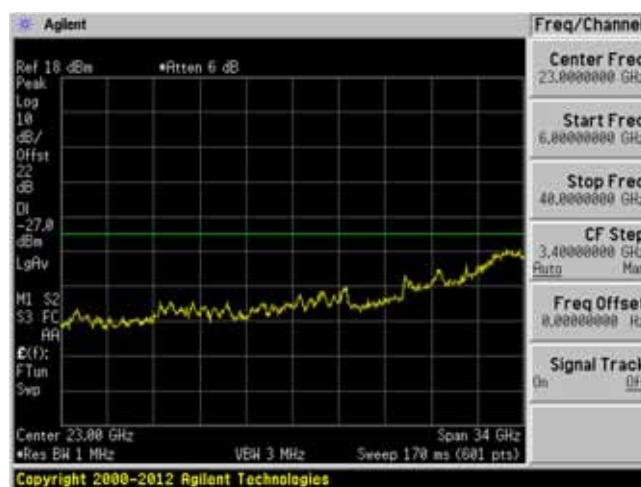


5250 - 5350 MHz, 802.11ac80 Mode, ANTJ12

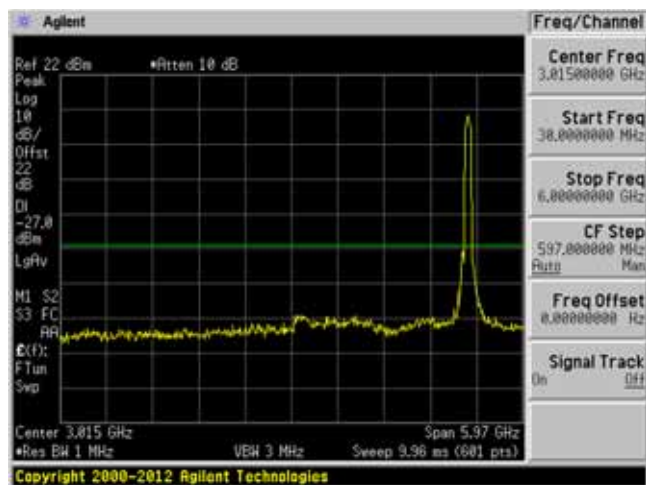
5290 MHz , 30MHz – 6GHz



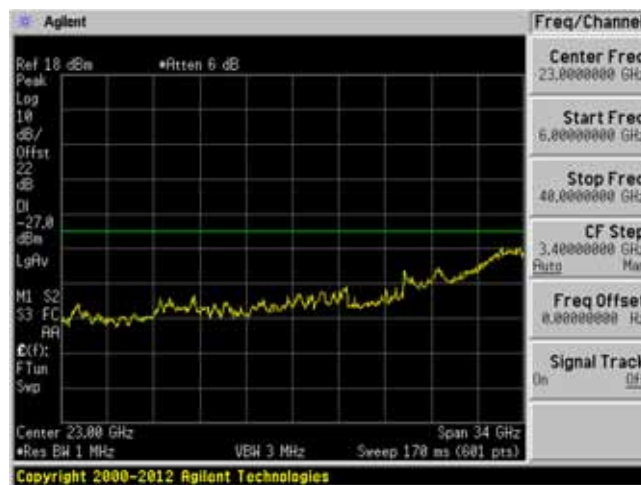
5290 MHz, 6GHz – 40GHz

**5250 - 5350 MHz, 802.11ax80 Mode, ANTJ12**

5290 MHz , 30MHz – 6GHz

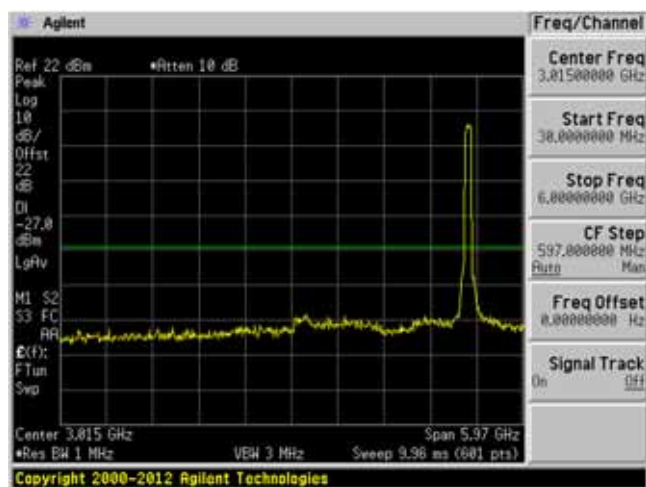


5290 MHz, 6GHz – 40GHz

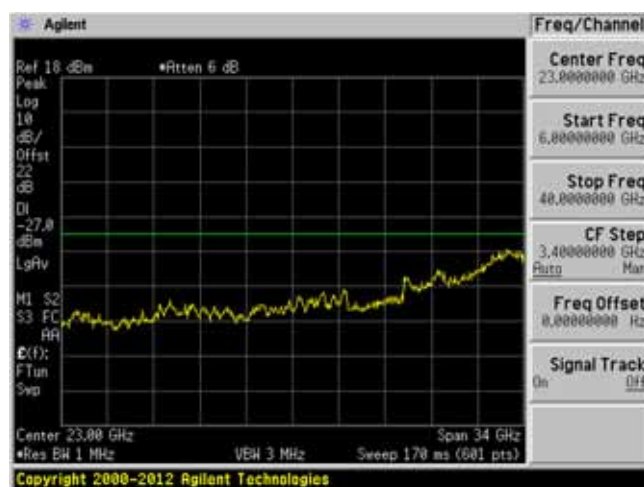


5250 - 5350 MHz, 802.11ac80 Mode, ANTJ15

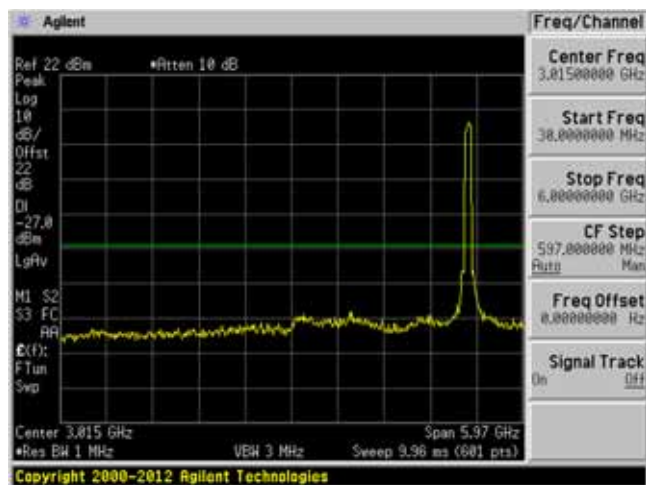
5290 MHz, 30MHz – 6GHz



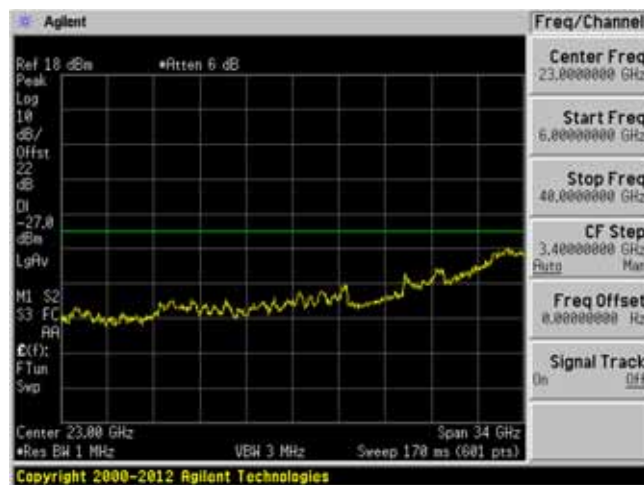
5290 MHz, 6GHz – 40GHz

**5250 - 5350 MHz, 802.11ax80 Mode, ANTJ15**

5290 MHz, 30MHz – 6GHz

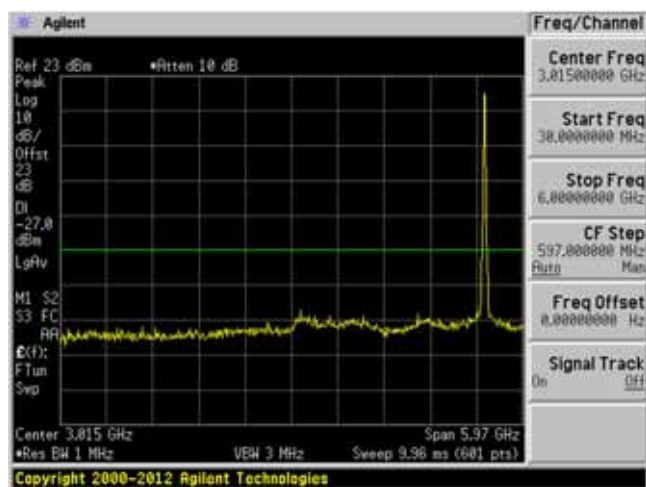


5290 MHz, 6GHz – 40GHz

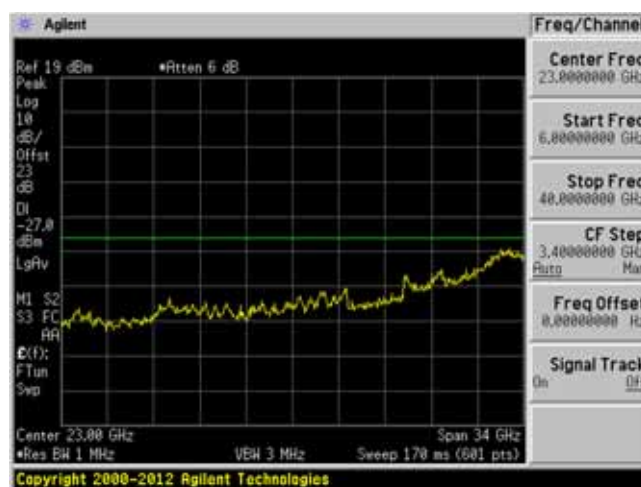


5470 - 5725 MHz, 802.11a Mode, ANTJ12

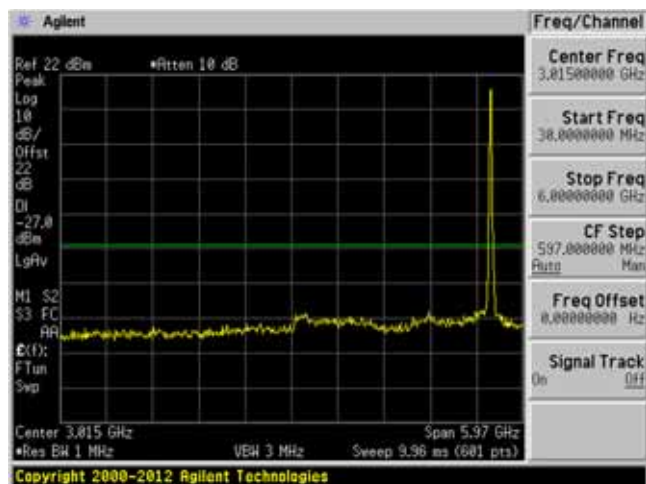
Low Channel 5500 MHz , 30MHz – 6GHz



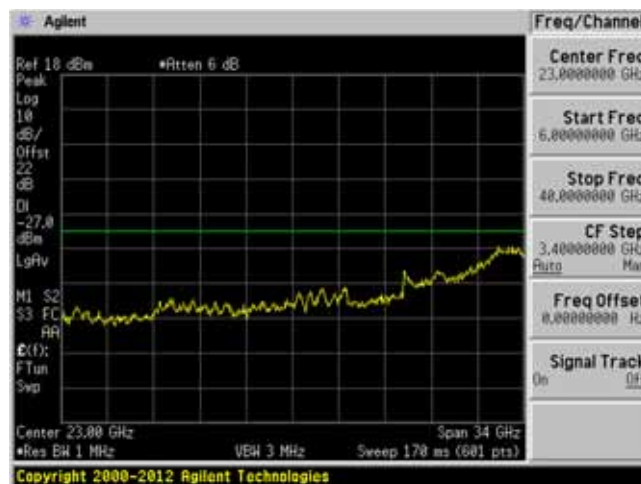
Low Channel 5500 MHz, 6GHz – 40GHz

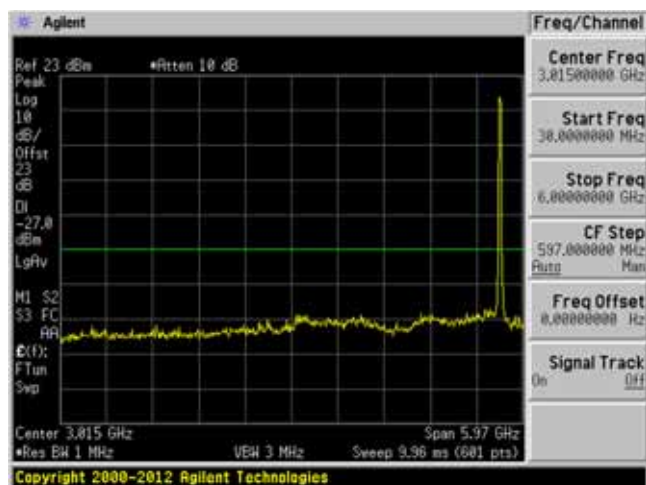
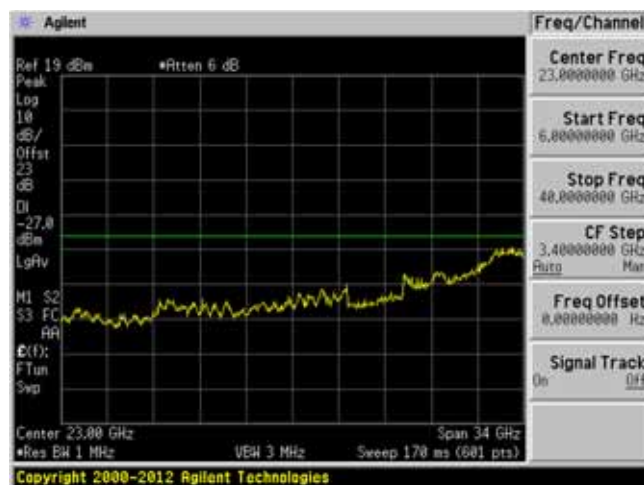


Mid Channel 5580 MHz , 30MHz – 6GHz

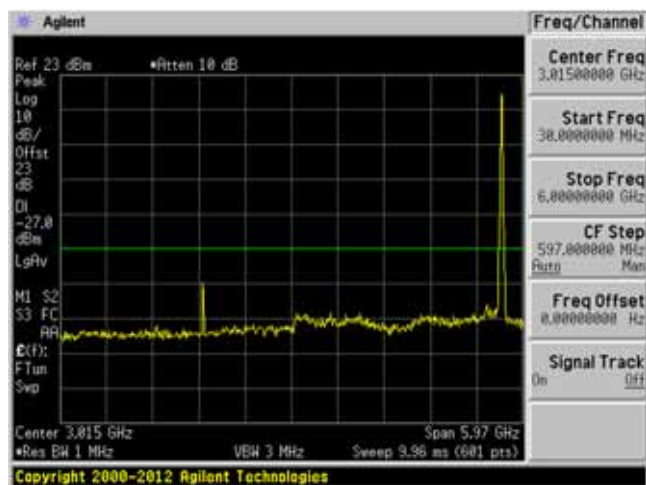


Mid Channel 5580 MHz, 6GHz – 40GHz

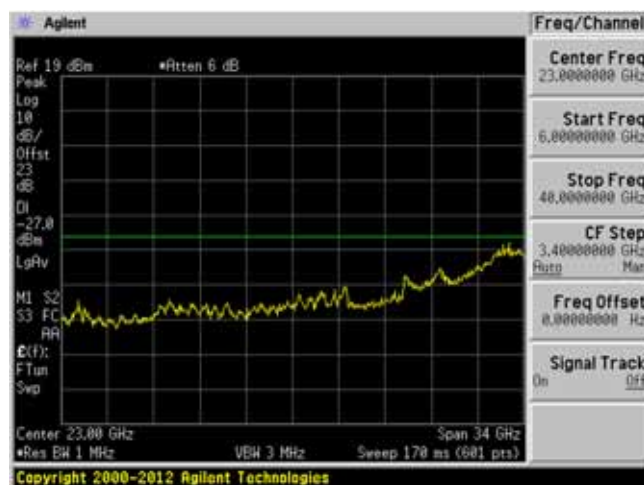


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

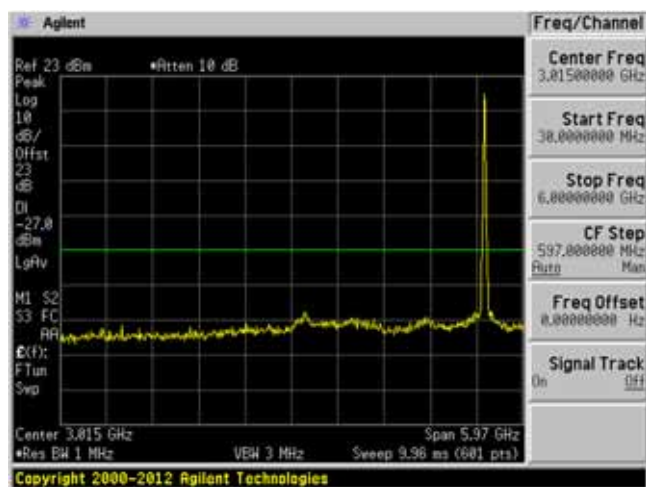


High Channel 5720 MHz, 6GHz – 40GHz

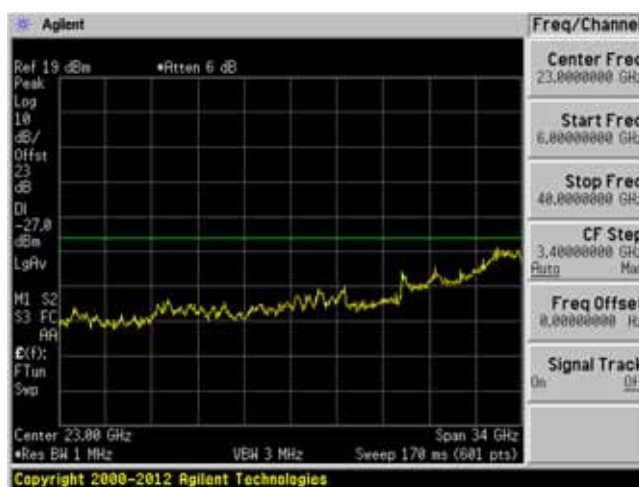


5470 - 5725 MHz, 802.11a Mode, ANTJ15

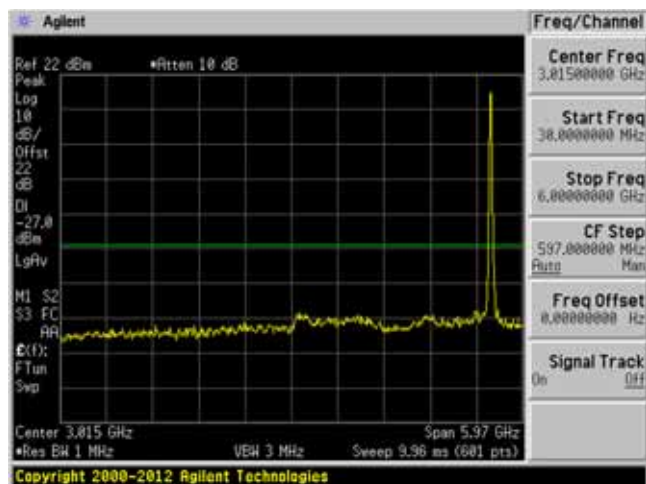
Low Channel 5500 MHz , 30MHz – 6GHz



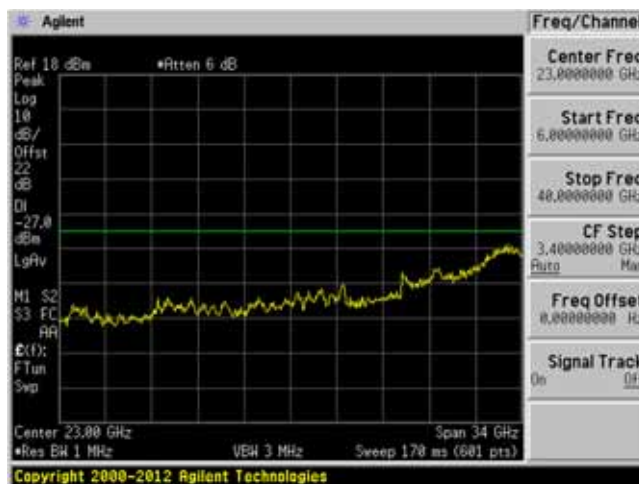
Low Channel 5500 MHz, 6GHz – 40GHz

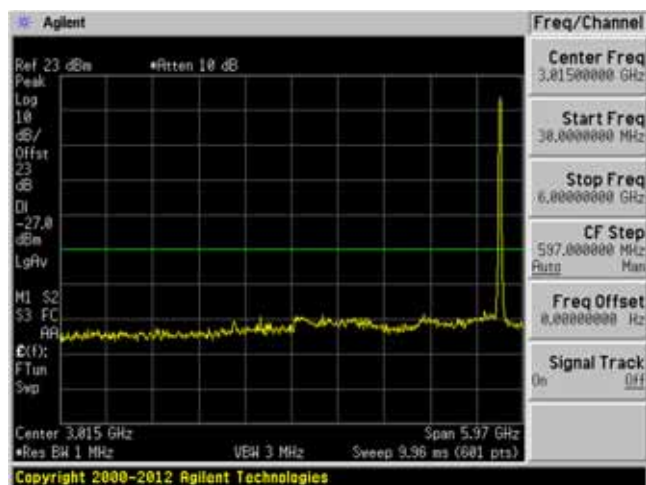
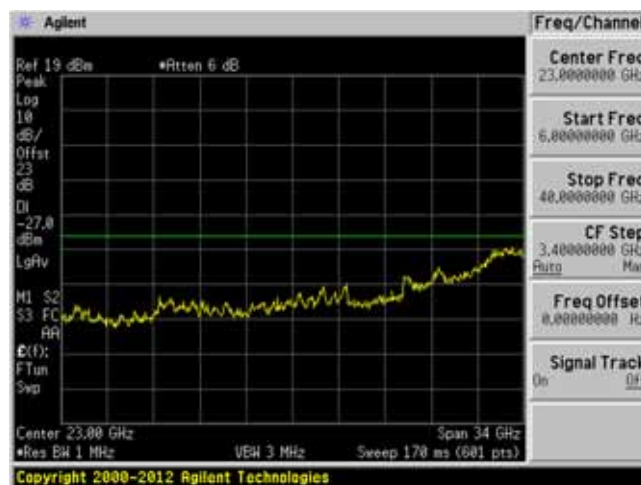


Mid Channel 5580 MHz , 30MHz – 6GHz

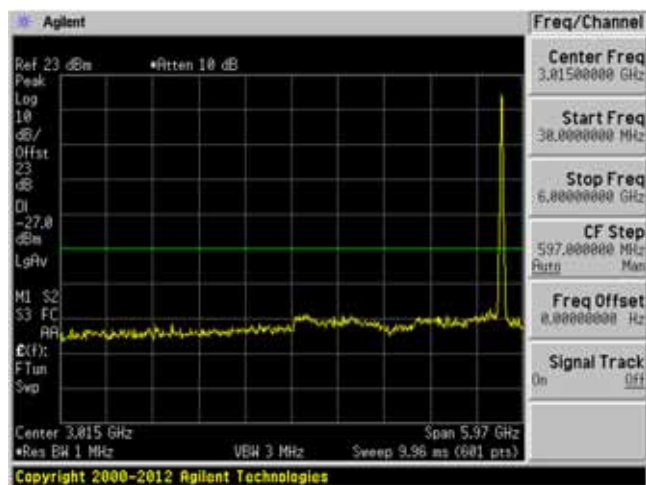


Mid Channel 5580 MHz, 6GHz – 40GHz

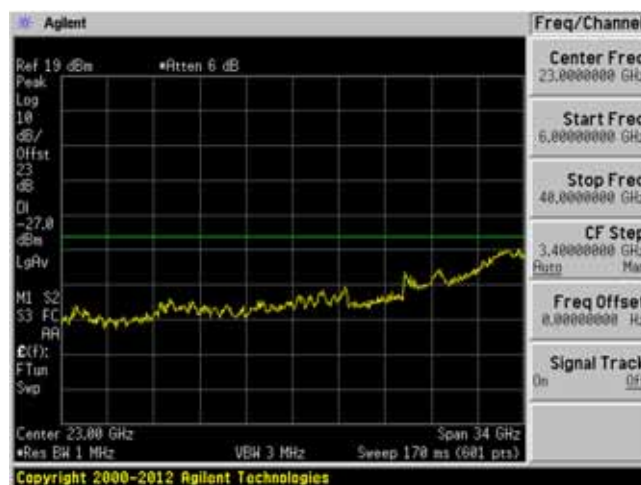


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

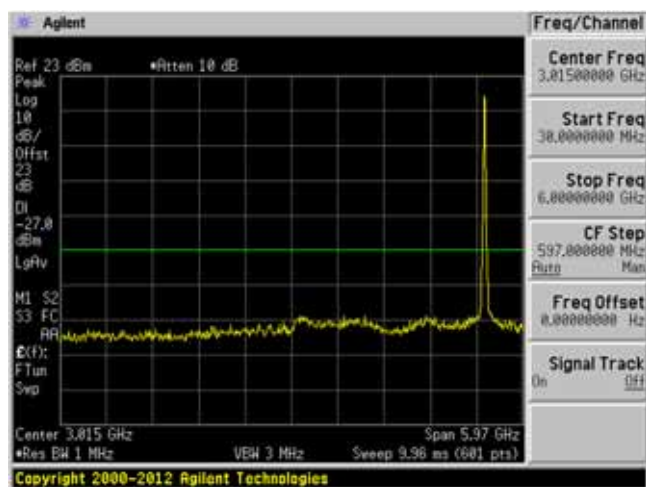


High Channel 5720 MHz, 6GHz – 40GHz

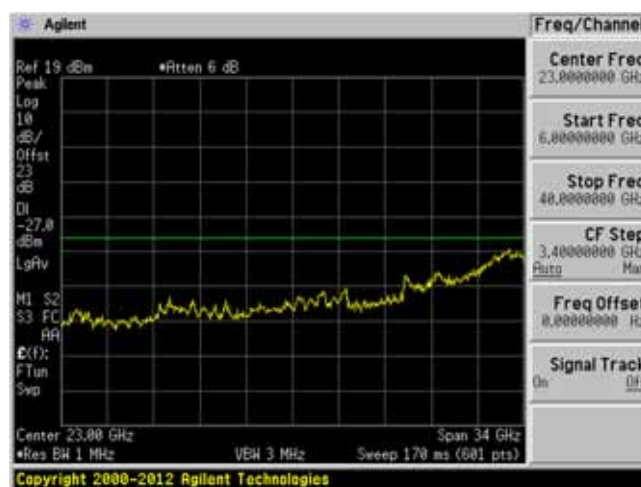


5470 - 5725 MHz, 802.11ac20 Mode, ANTJ12

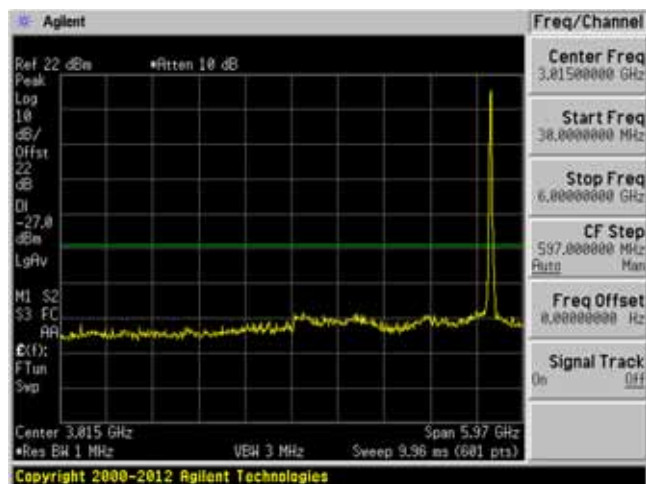
Low Channel 5500 MHz , 30MHz – 6GHz



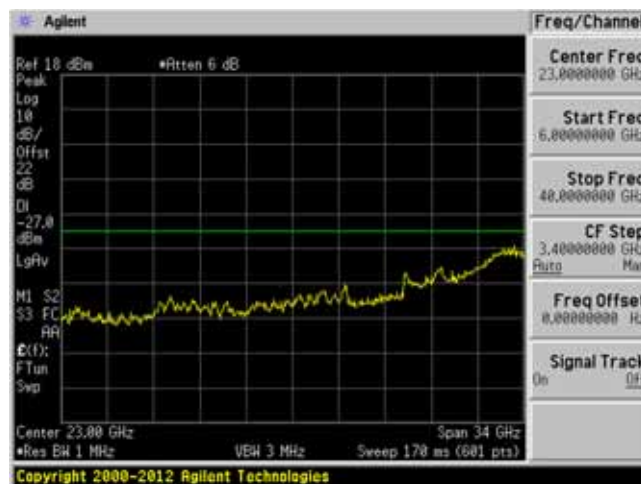
Low Channel 5500 MHz, 6GHz – 40GHz

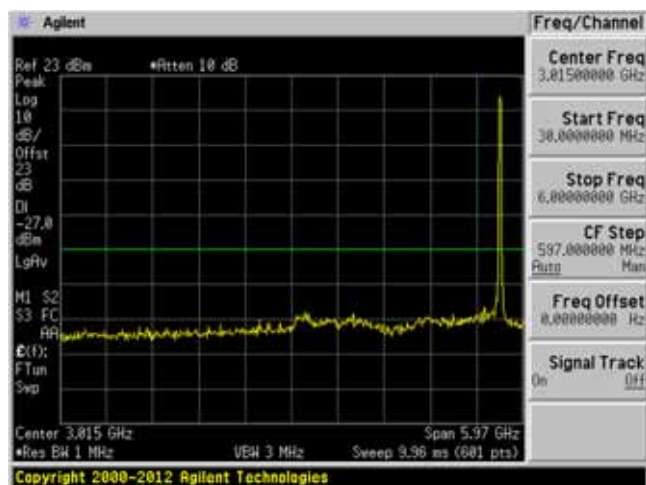
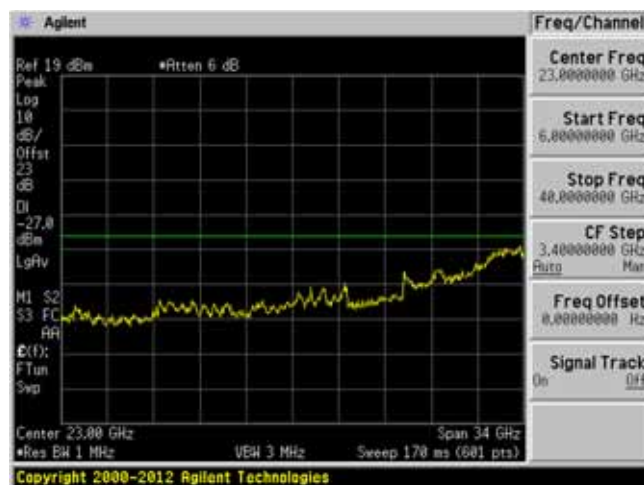


Mid Channel 5580 MHz , 30MHz – 6GHz

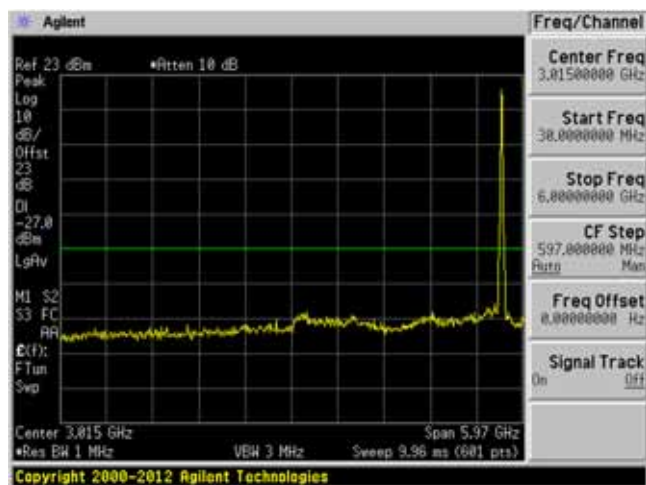


Mid Channel 5580 MHz, 6GHz – 40GHz

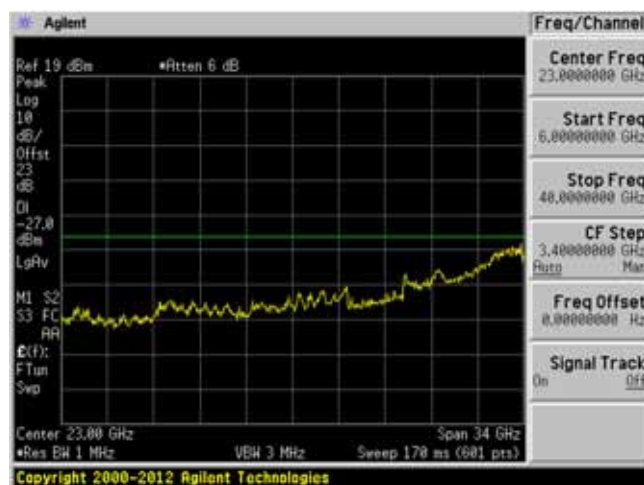


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

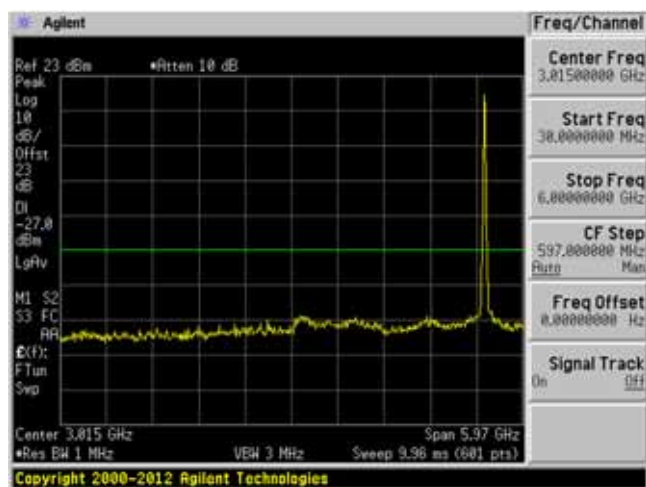


High Channel 5720 MHz, 6GHz – 40GHz

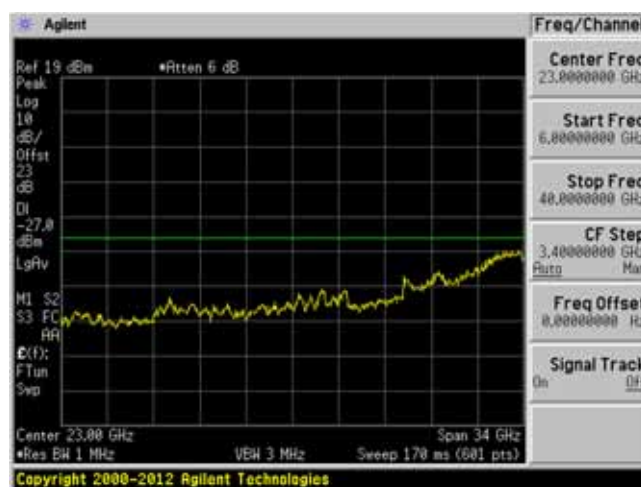


5470 - 5725 MHz, 802.11ac20 Mode, ANTJ15

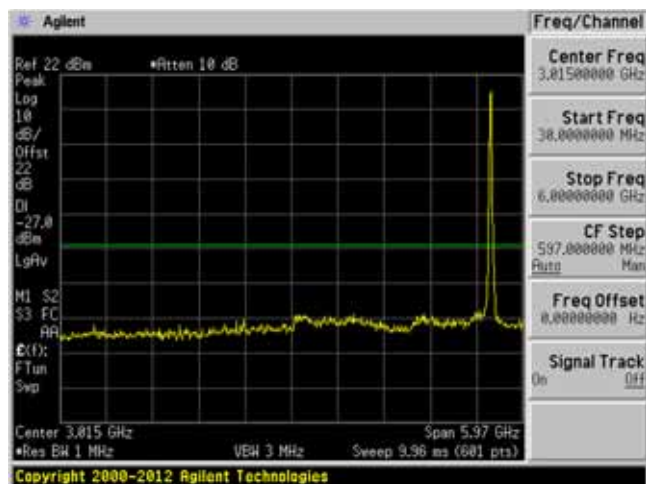
Low Channel 5500 MHz , 30MHz – 6GHz



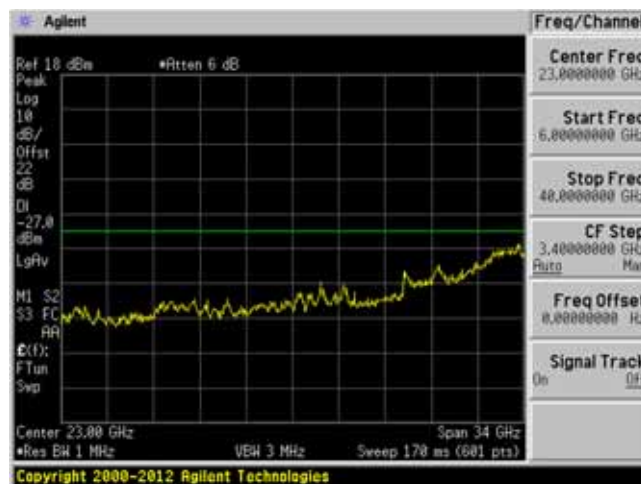
Low Channel 5500 MHz, 6GHz – 40GHz

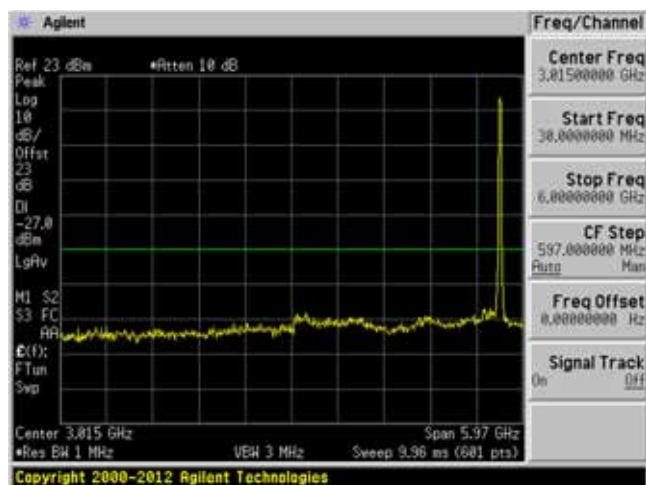
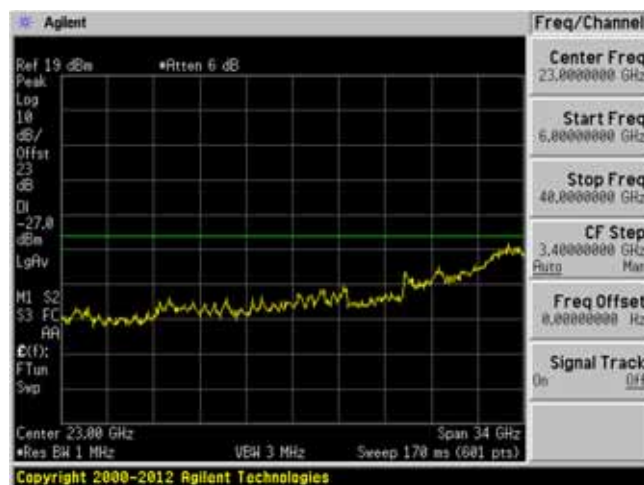


Mid Channel 5580 MHz , 30MHz – 6GHz

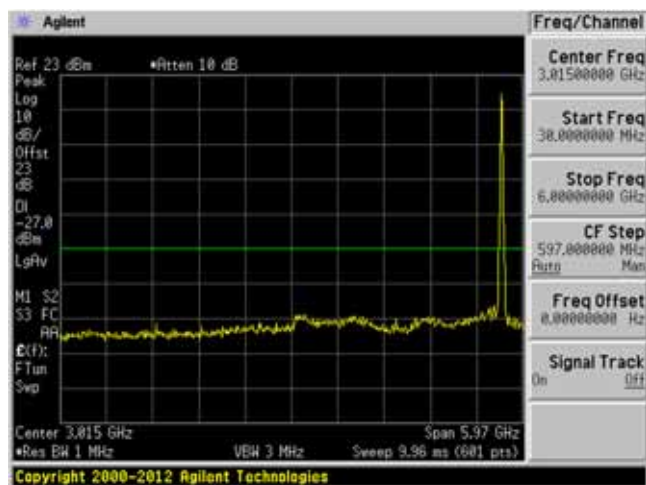


Mid Channel 5580 MHz, 6GHz – 40GHz

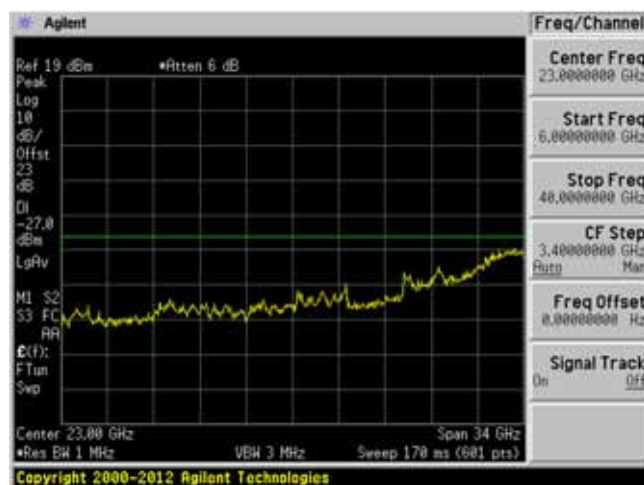


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

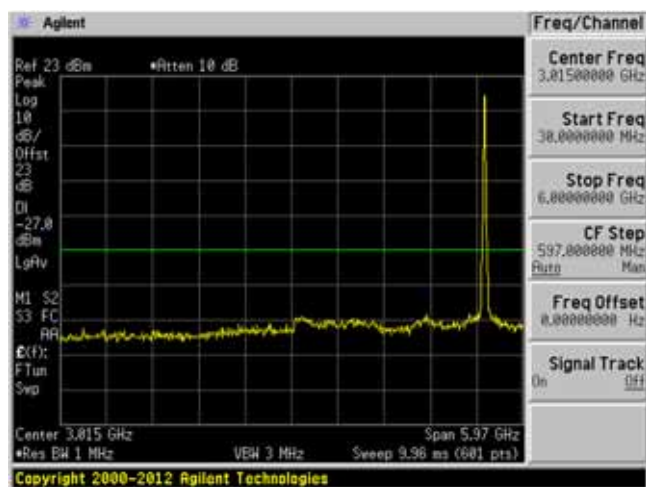


High Channel 5720 MHz, 6GHz – 40GHz

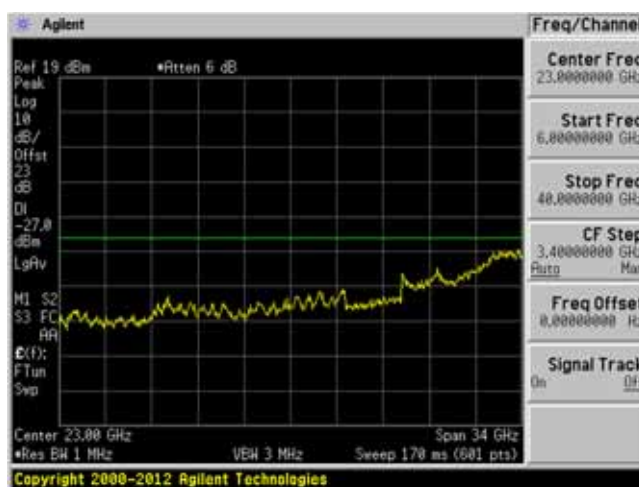


5470 - 5725 MHz, 802.11ax20 Mode, ANTJ12

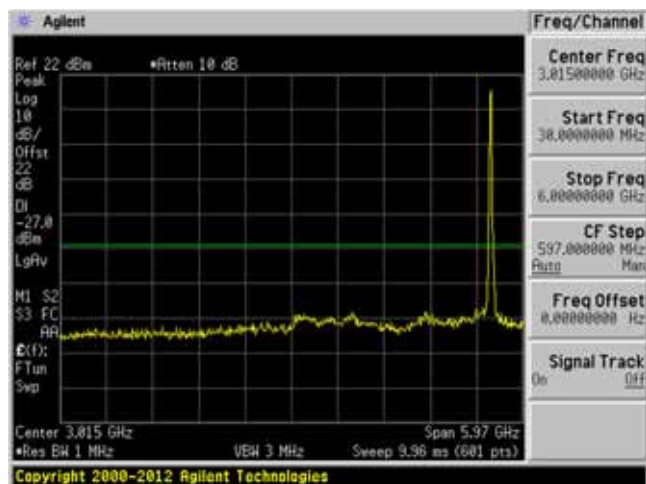
Low Channel 5500 MHz , 30MHz – 6GHz



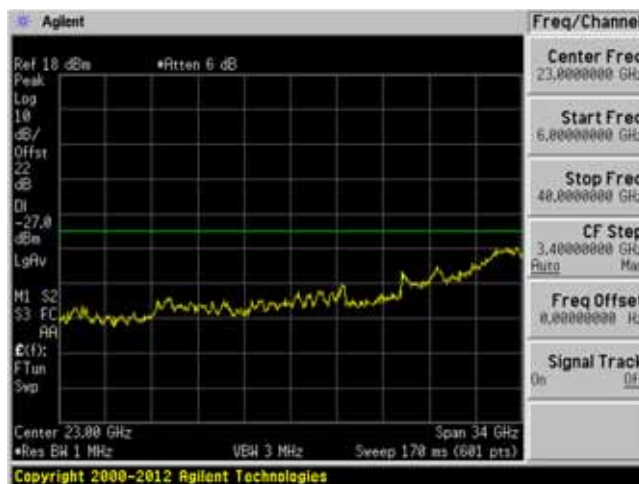
Low Channel 5500 MHz, 6GHz – 40GHz

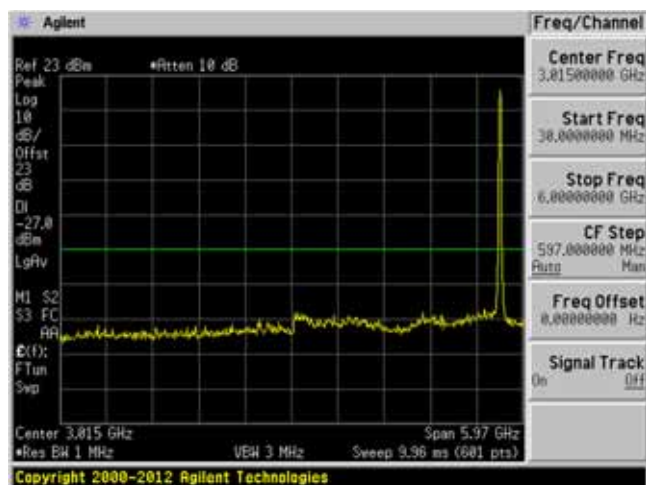
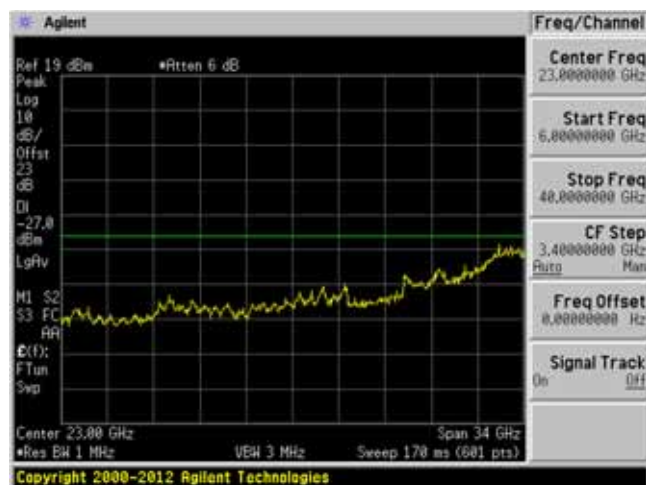


Mid Channel 5580 MHz , 30MHz – 6GHz

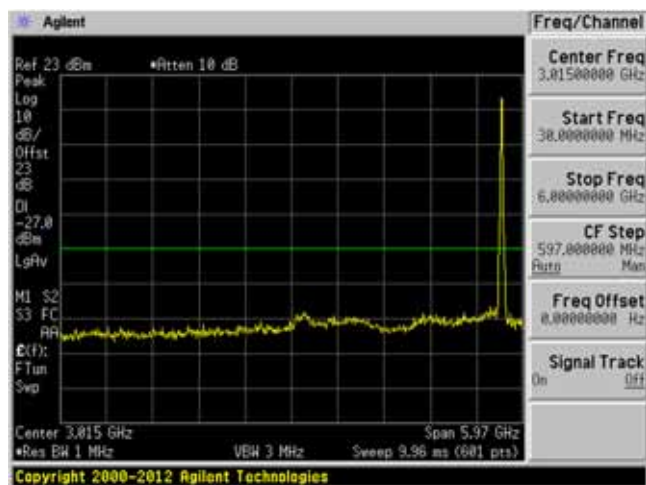


Mid Channel 5580 MHz, 6GHz – 40GHz

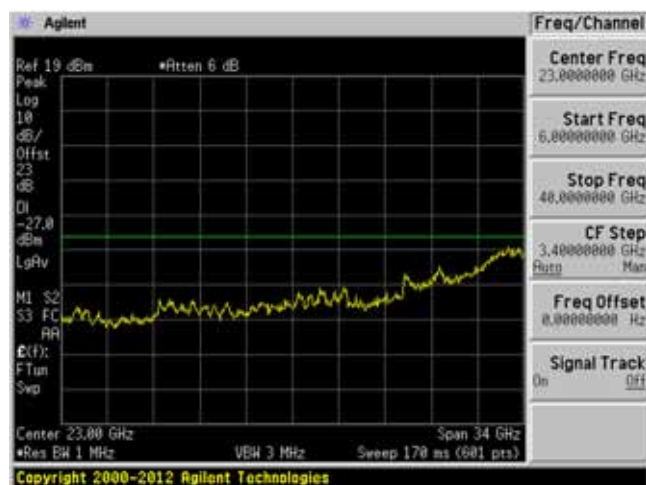


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

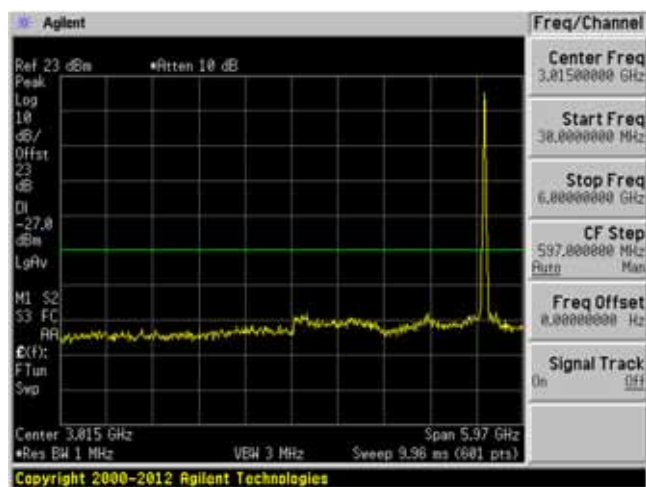


High Channel 5720 MHz, 6GHz – 40GHz

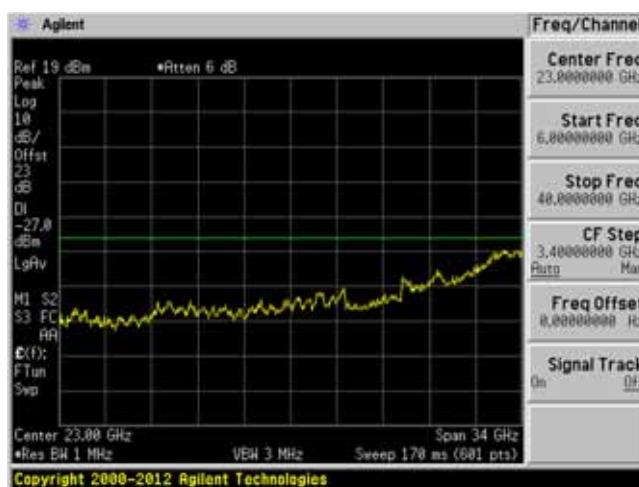


5470 - 5725 MHz, 802.11ax20 Mode, ANTJ15

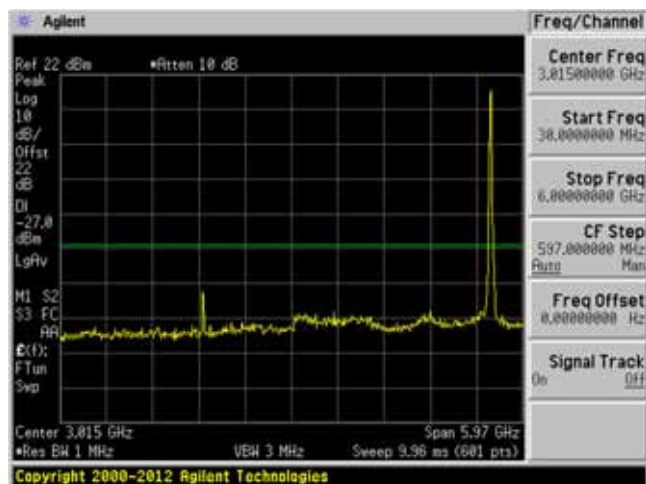
Low Channel 5500 MHz , 30MHz – 6GHz



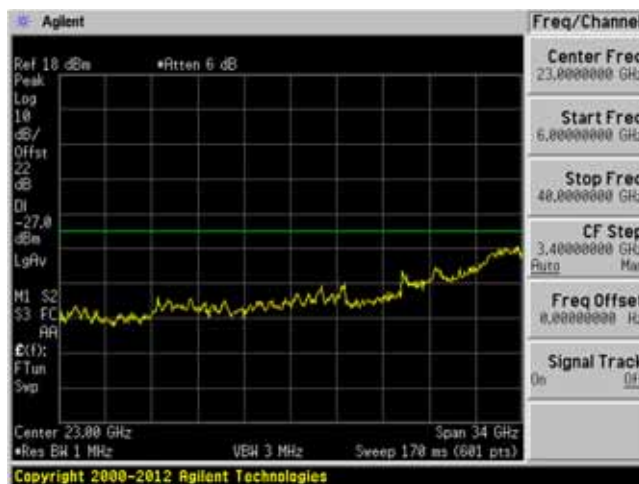
Low Channel 5500 MHz, 6GHz – 40GHz

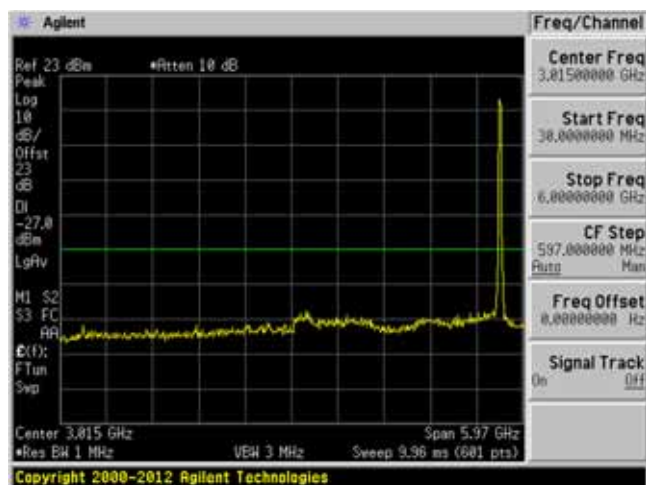
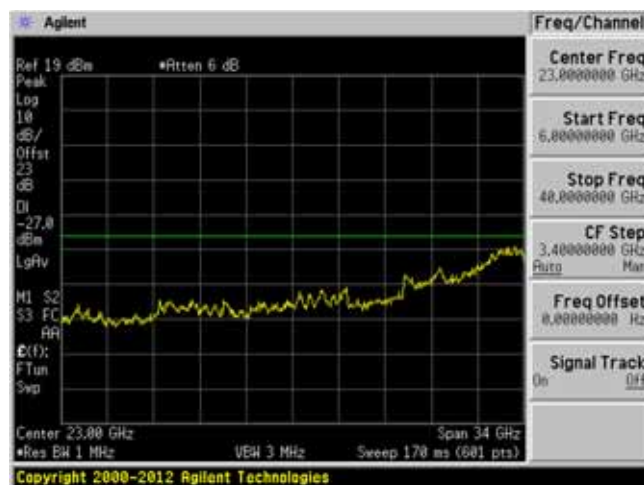


Mid Channel 5580 MHz , 30MHz – 6GHz

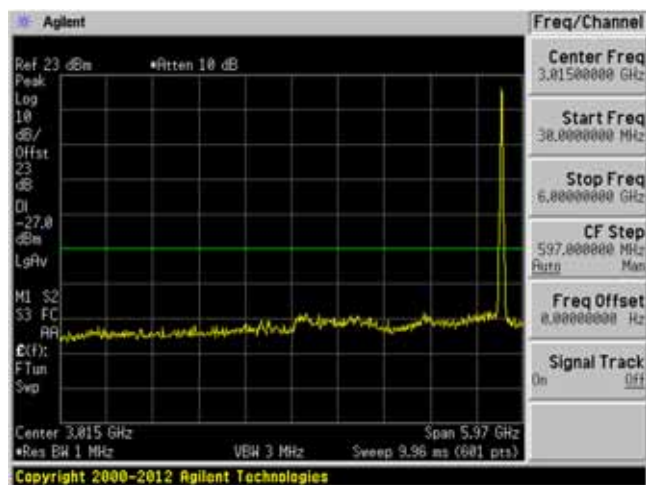


Mid Channel 5580 MHz, 6GHz – 40GHz

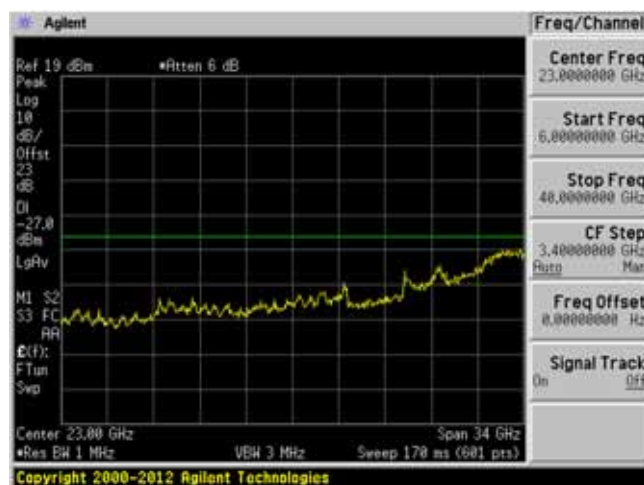


2nd High Channel 5700 MHz , 30MHz – 6GHz2nd High Channel 5700 MHz, 6GHz – 40GHz

High Channel 5720 MHz , 30MHz – 6GHz

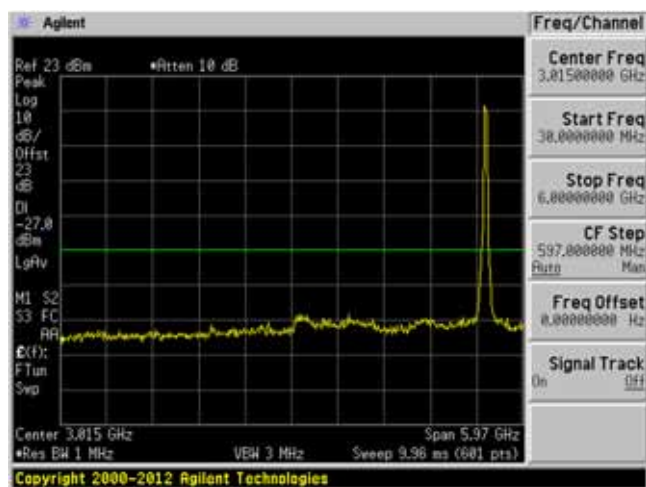


High Channel 5720 MHz, 6GHz – 40GHz

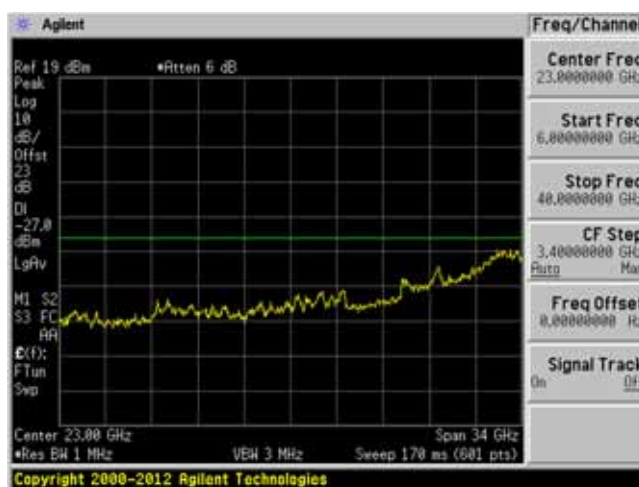


5470 - 5725 MHz, 802.11ac40 Mode, ANTJ12

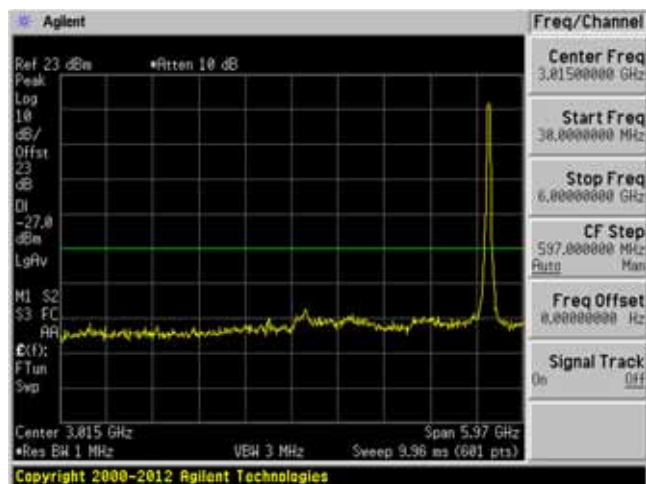
Low Channel 5510 MHz , 30MHz – 6GHz



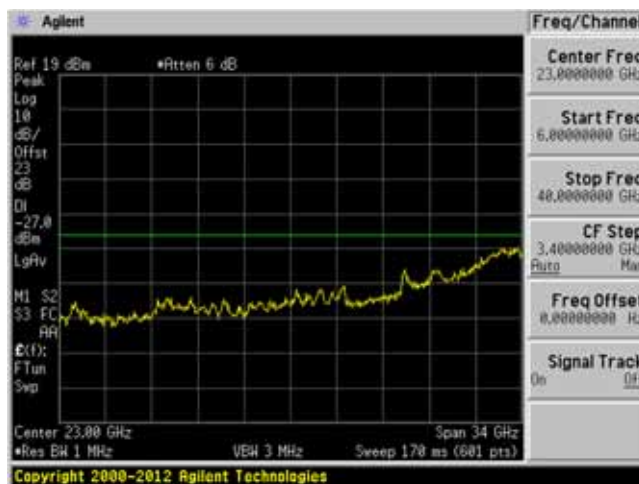
Low Channel 5510 MHz, 6GHz – 40GHz

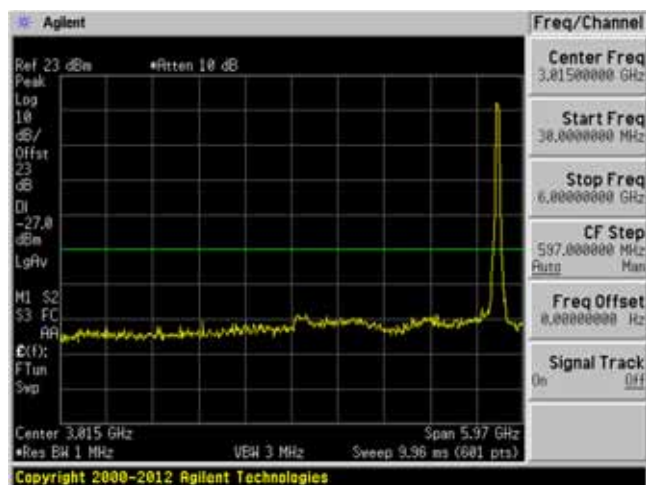
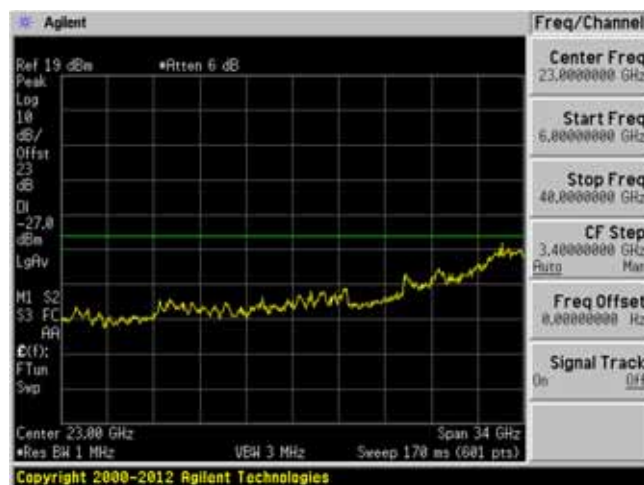


Mid Channel 5550 MHz , 30MHz – 6GHz

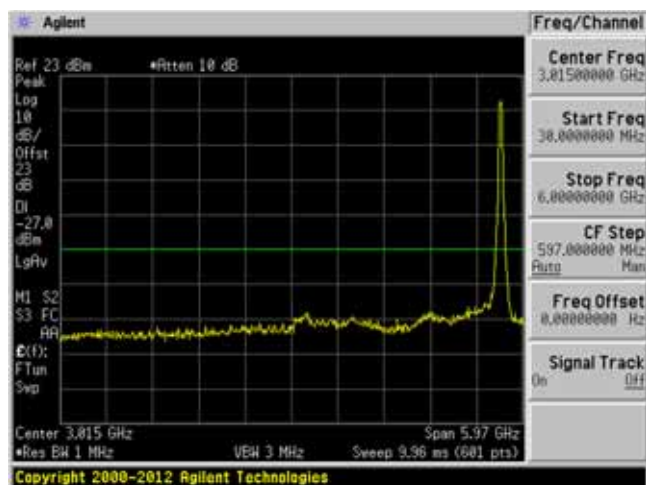


Mid Channel 5550 MHz, 6GHz – 40GHz

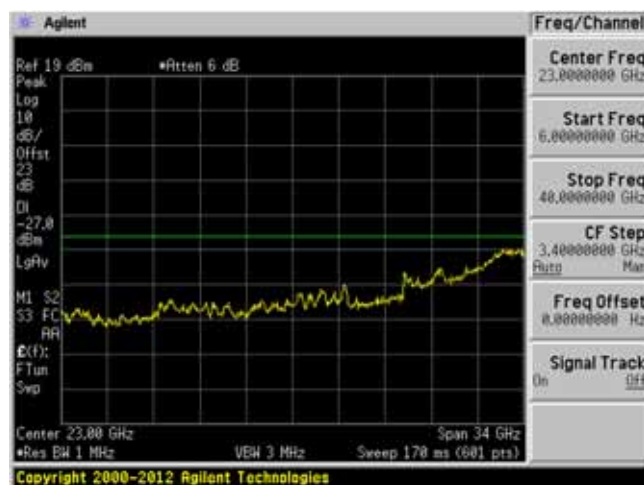


2nd High Channel 5670 MHz , 30MHz – 6GHz2nd High Channel 5670 MHz, 6GHz – 40GHz

High Channel 5710 MHz , 30MHz – 6GHz

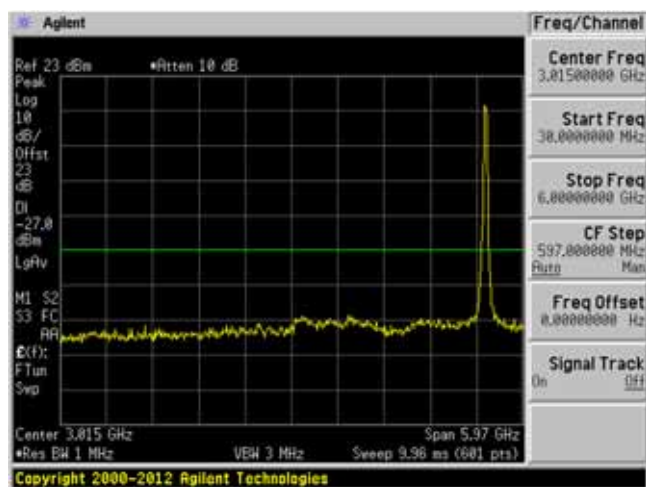


High Channel 5710 MHz, 6GHz – 40GHz

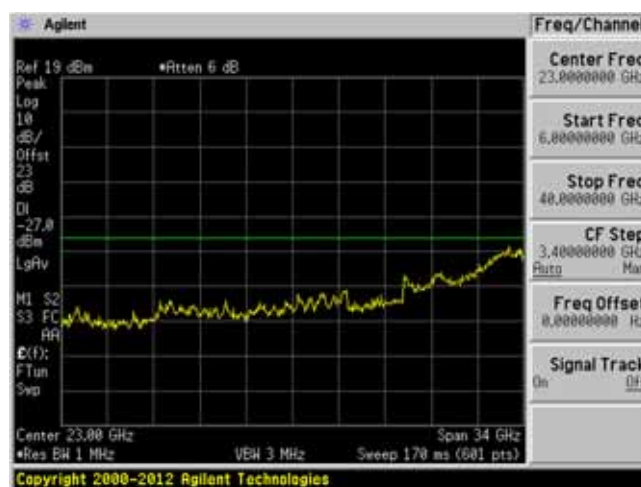


5470 - 5725 MHz, 802.11ac40 Mode, ANTJ15

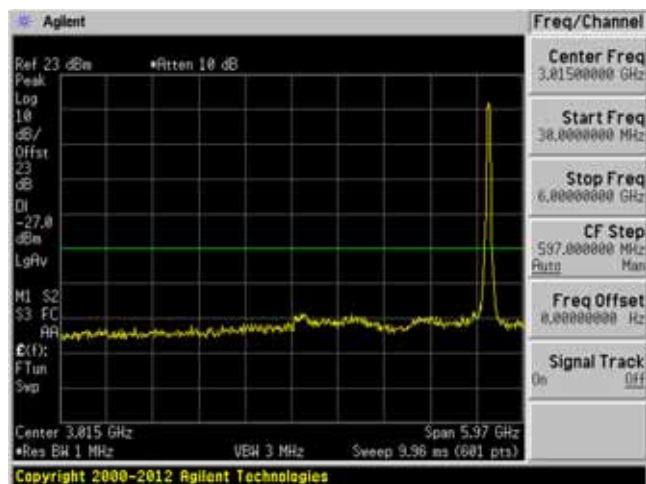
Low Channel 5510 MHz , 30MHz – 6GHz



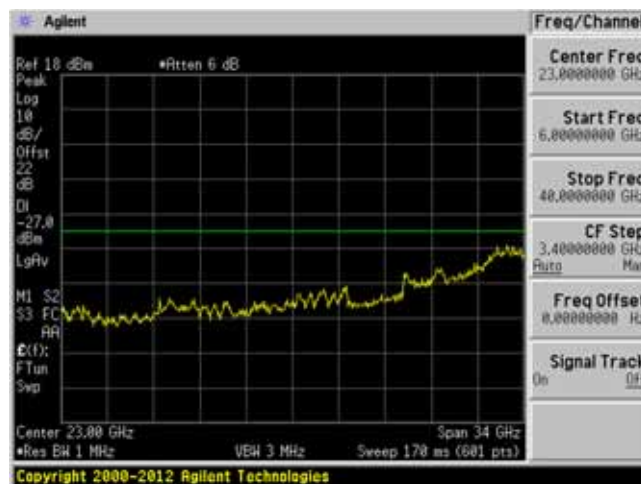
Low Channel 5510 MHz, 6GHz – 40GHz

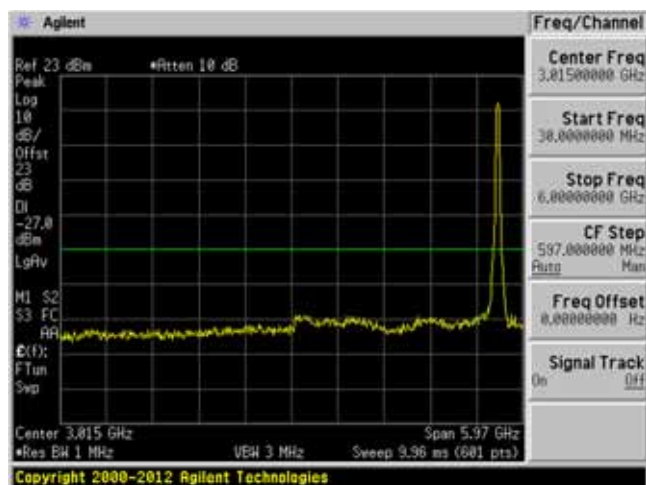
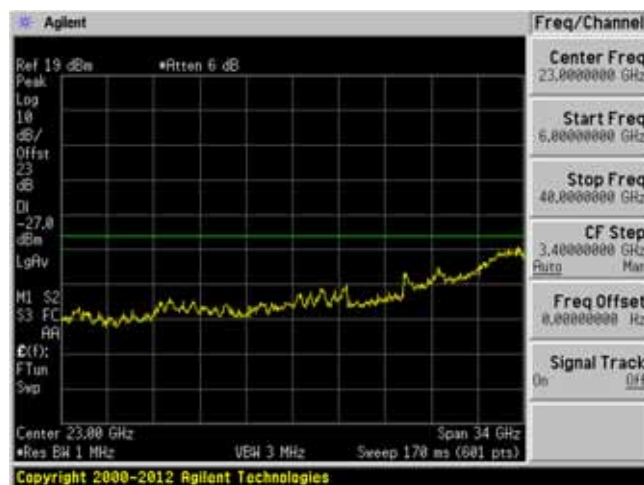


Mid Channel 5550 MHz , 30MHz – 6GHz

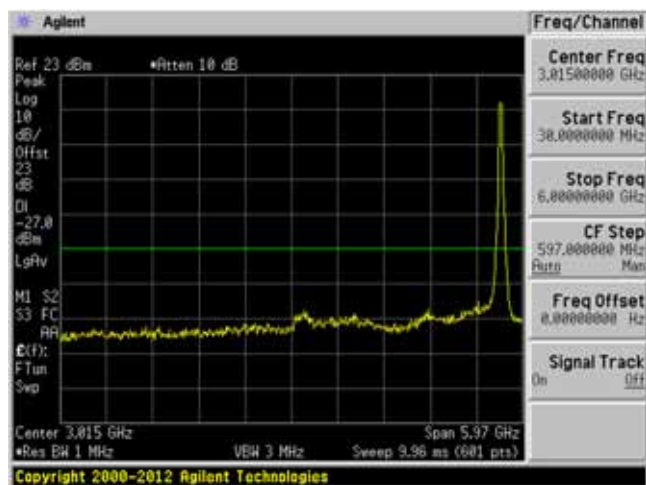


Mid Channel 5550 MHz, 6GHz – 40GHz

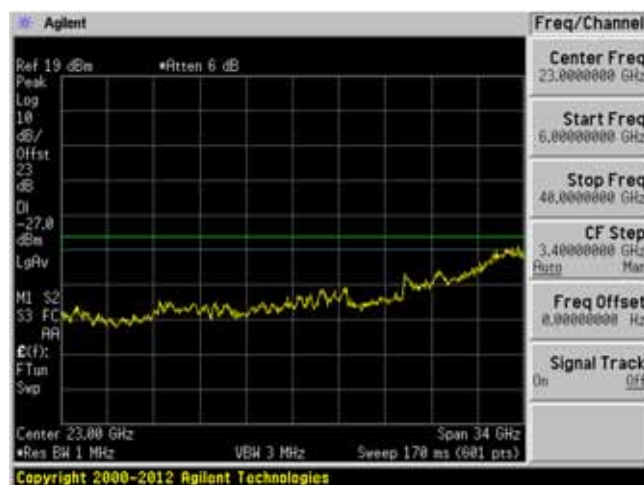


2nd High Channel 5670 MHz , 30MHz – 6GHz2nd High Channel 5670 MHz, 6GHz – 40GHz

High Channel 5710 MHz , 30MHz – 6GHz

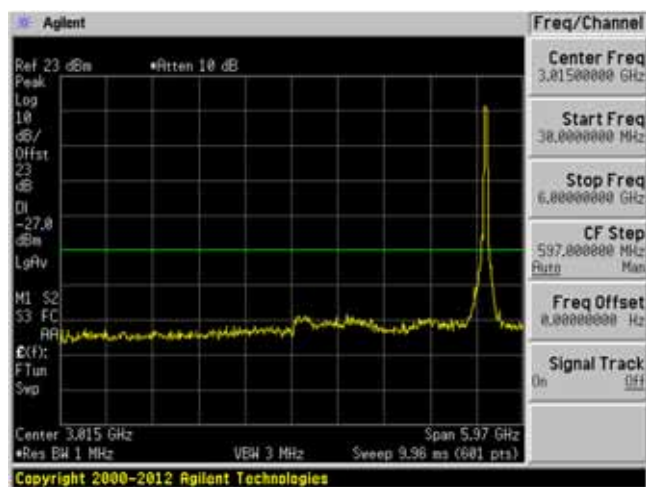


High Channel 5710 MHz, 6GHz – 40GHz

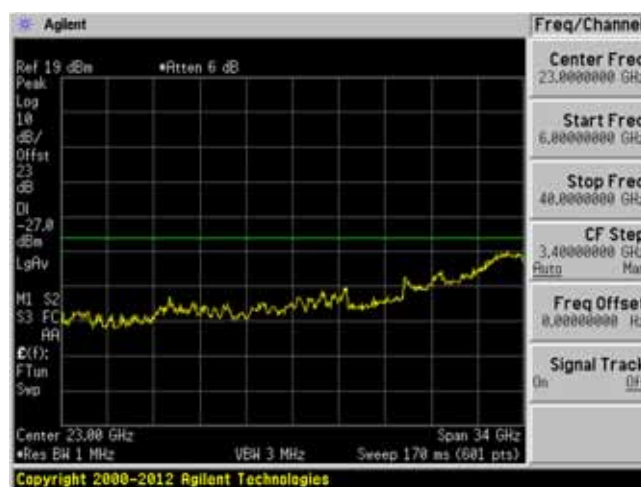


5470 - 5725 MHz, 802.11ax40 Mode, ANTJ12

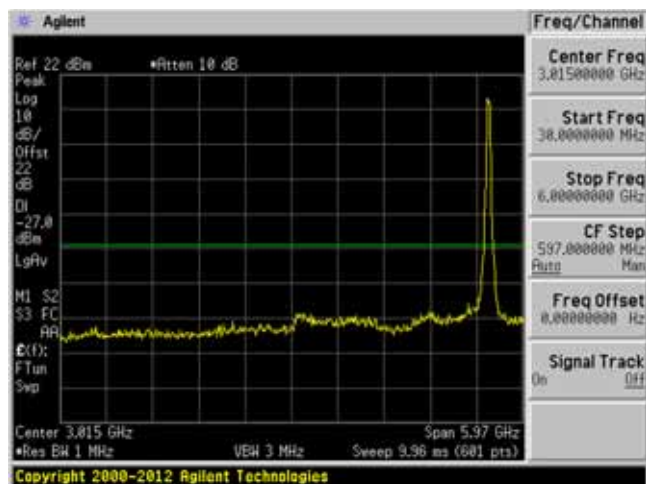
Low Channel 5510 MHz , 30MHz – 6GHz



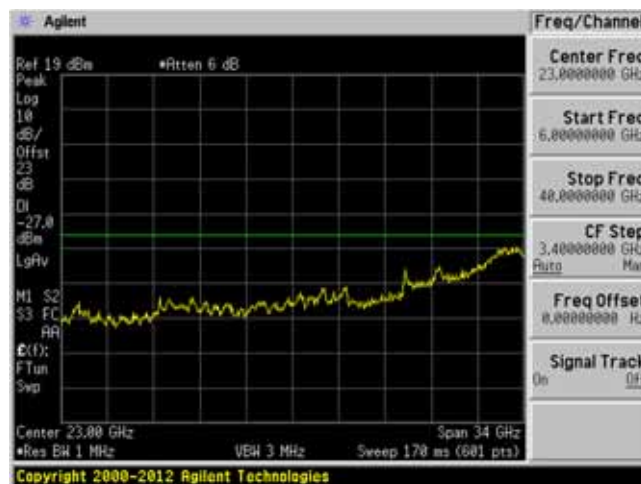
Low Channel 5510 MHz, 6GHz – 40GHz

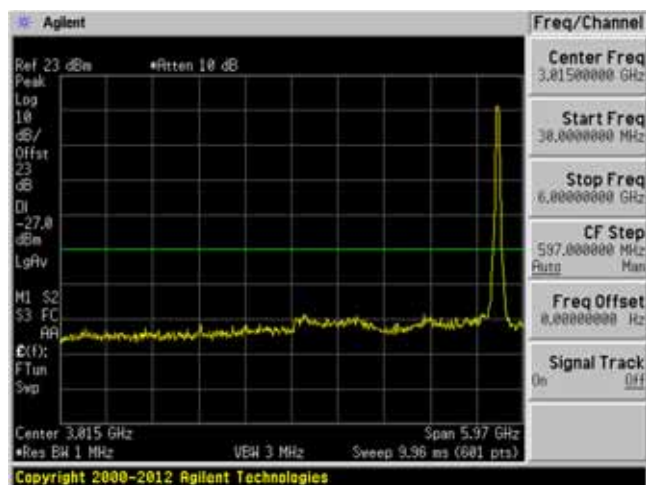
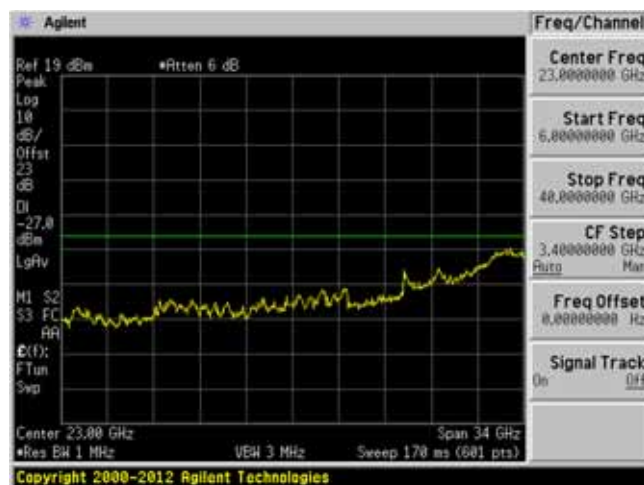


Mid Channel 5550 MHz , 30MHz – 6GHz

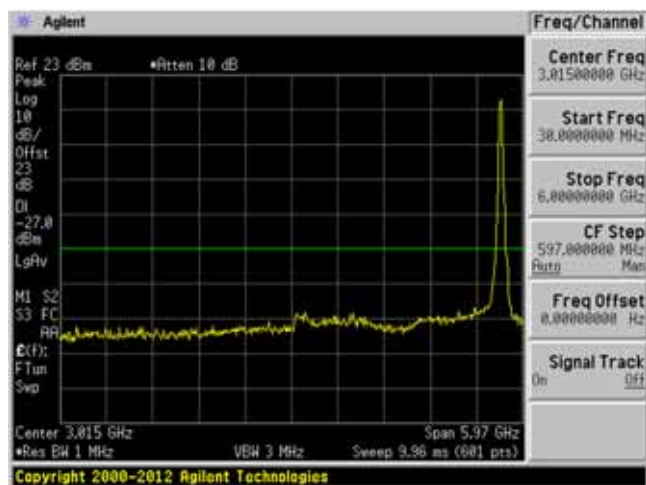


Mid Channel 5550 MHz, 6GHz – 40GHz

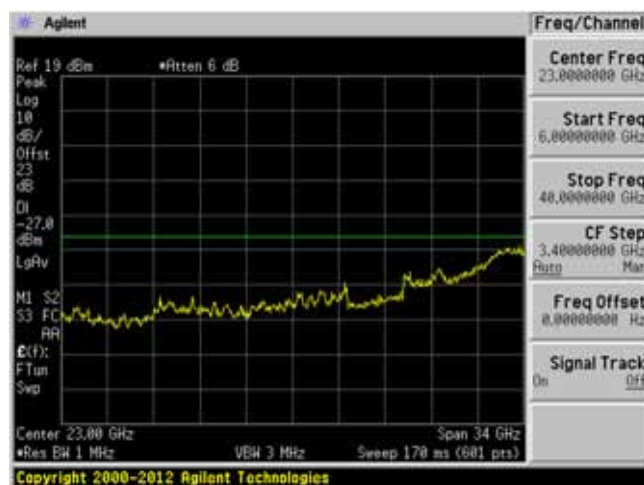


2nd High Channel 5670 MHz , 30MHz – 6GHz2nd High Channel 5670 MHz, 6GHz – 40GHz

High Channel 5710 MHz , 30MHz – 6GHz

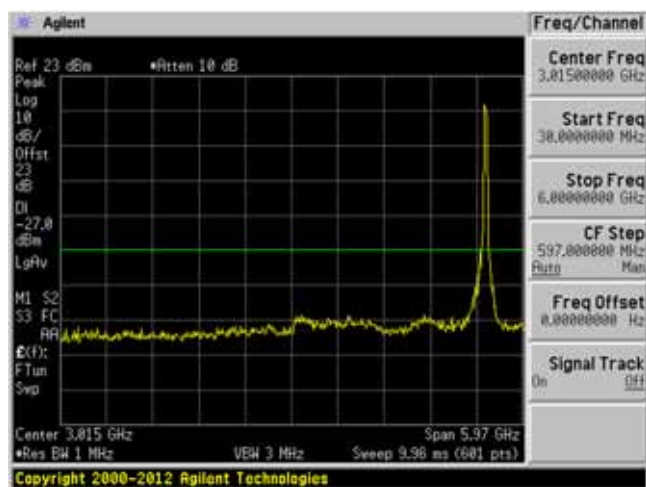


High Channel 5710 MHz, 6GHz – 40GHz

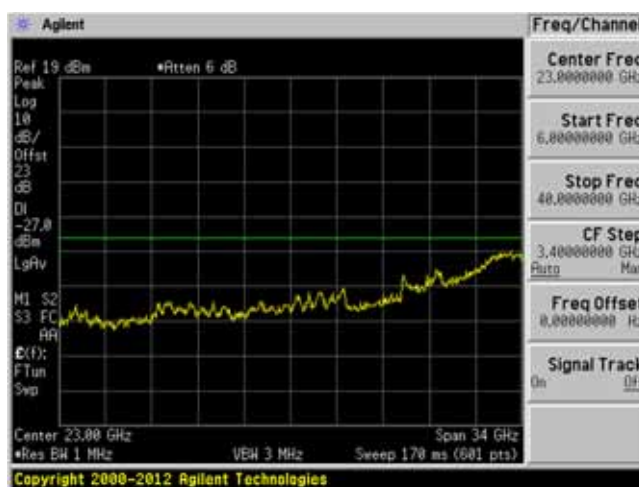


5470 - 5725 MHz, 802.11ax40 Mode, ANTJ15

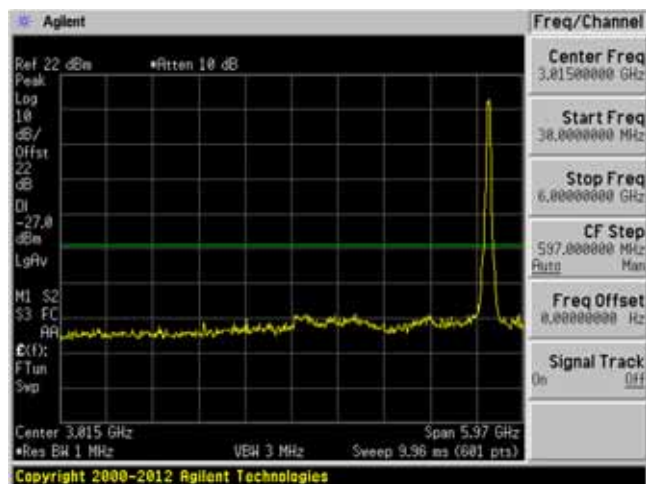
Low Channel 5510 MHz , 30MHz – 6GHz



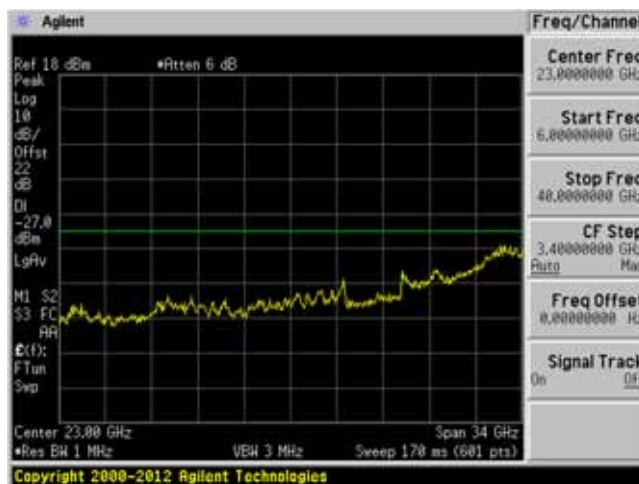
Low Channel 5510 MHz, 6GHz – 40GHz

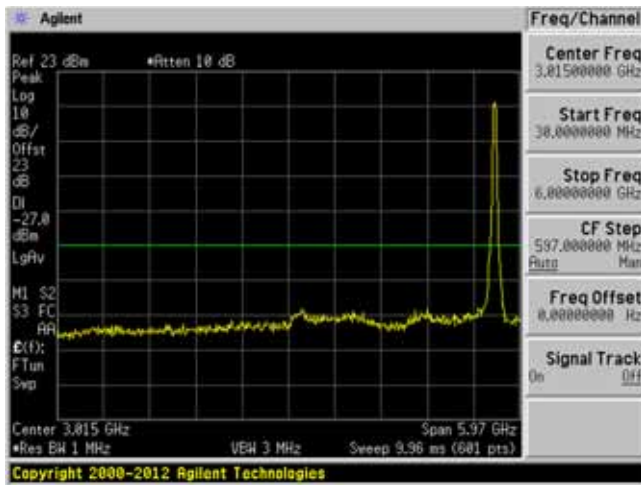
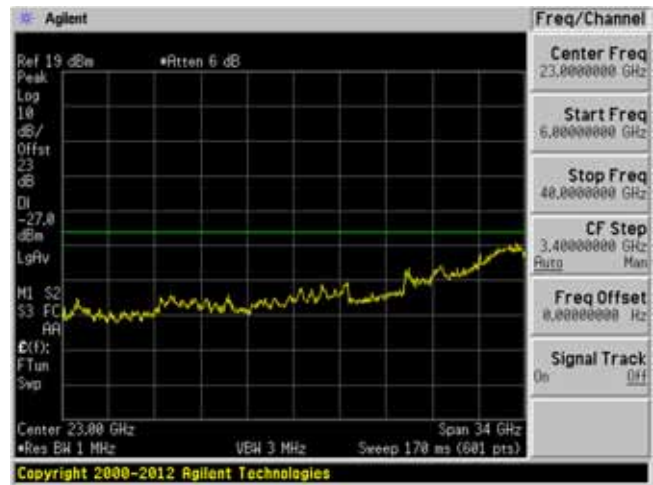


Mid Channel 5550 MHz , 30MHz – 6GHz

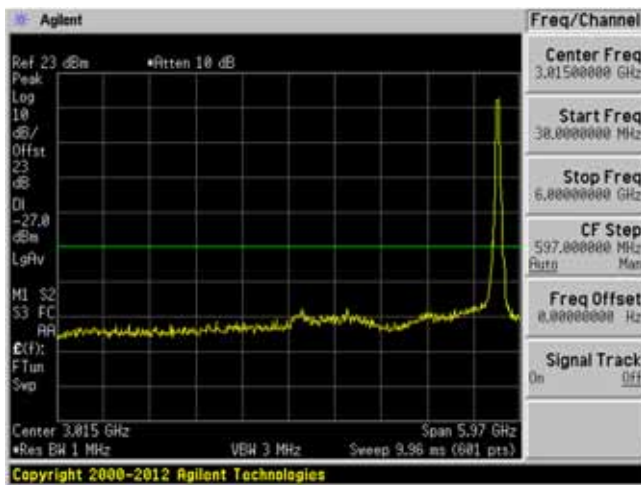


Mid Channel 5550 MHz, 6GHz – 40GHz

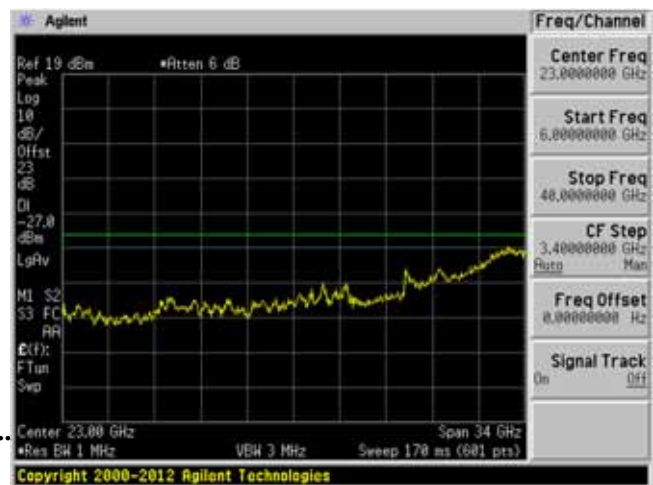


2nd High Channel 5670 MHz , 30MHz – 6GHz2nd High Channel 5670 MHz, 6GHz – 40GHz

High Channel 5710 MHz , 30MHz – 6GHz

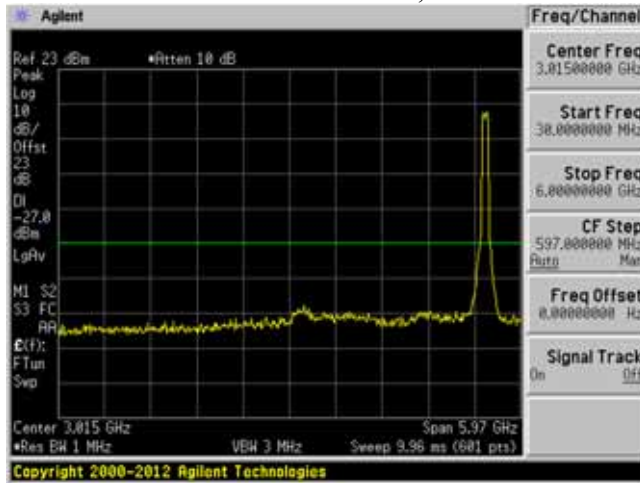


High Channel 5710 MHz, 6GHz – 40GHz

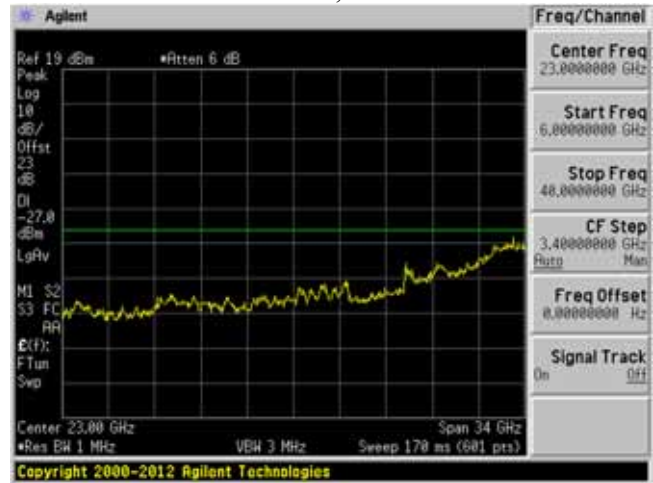


5470 - 5725 MHz, 802.11ac80 Mode, ANTJ12

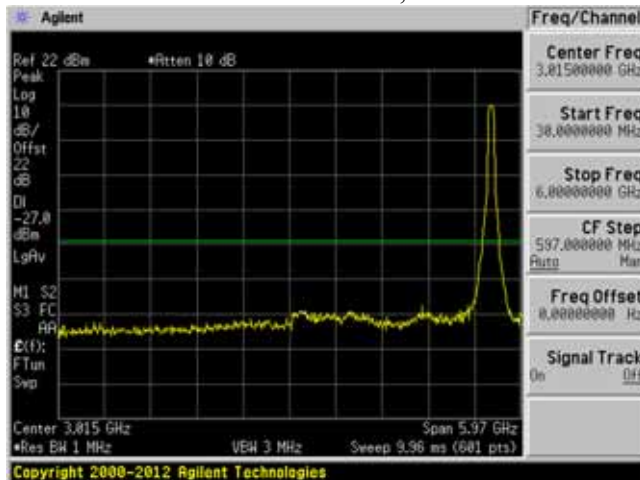
Low Channel 5530 MHz , 30MHz – 6GHz



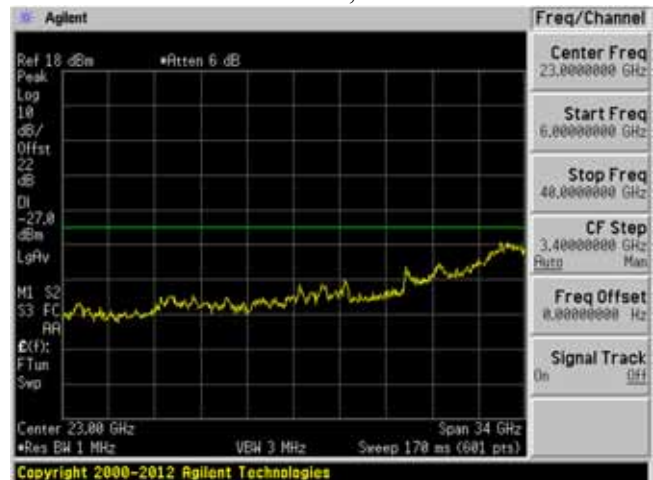
Low Channel 5530 MHz, 6GHz – 40GHz



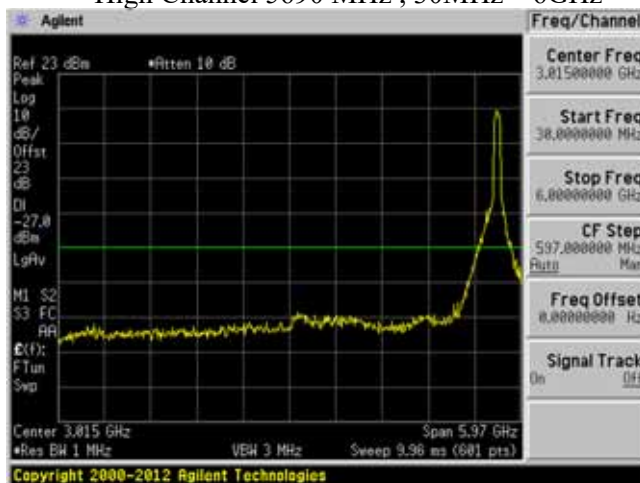
Mid Channel 5610 MHz , 30MHz – 6GHz



Mid Channel 5610 MHz, 6GHz – 40GHz



High Channel 5690 MHz , 30MHz – 6GHz

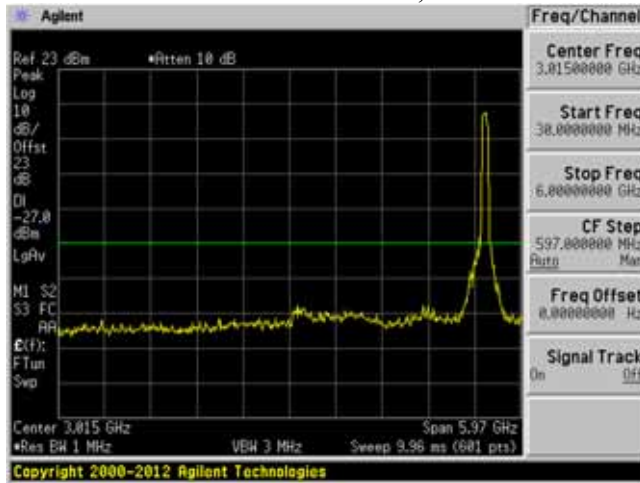


High Channel 5690 MHz, 6GHz – 40GHz

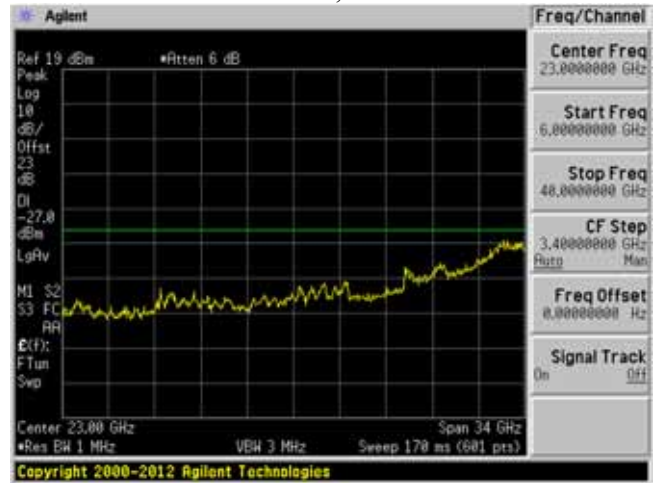


5470 - 5725 MHz, 802.11ac80 Mode, ANTJ15

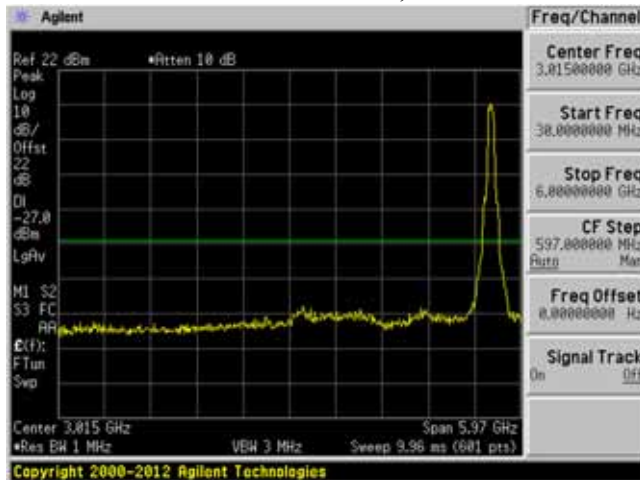
Low Channel 5530 MHz , 30MHz – 6GHz



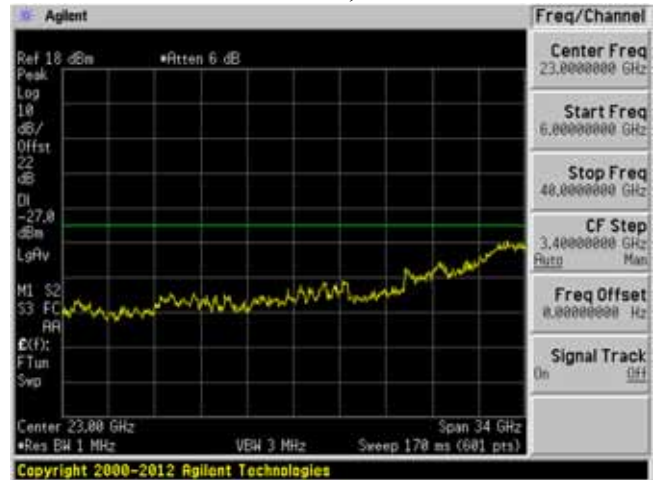
Low Channel 5530 MHz, 6GHz – 40GHz



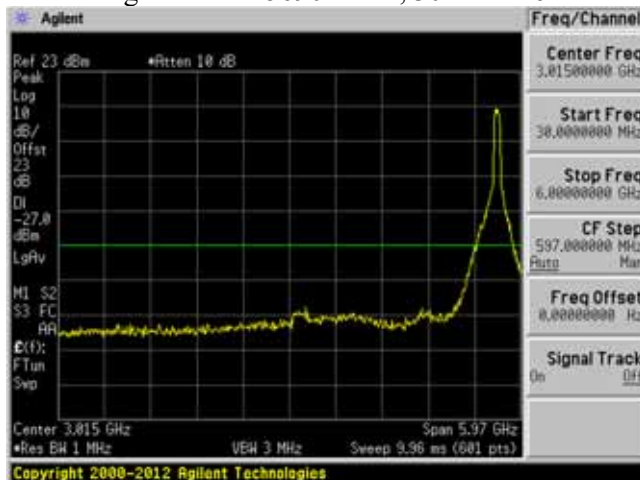
Mid Channel 5610 MHz , 30MHz – 6GHz



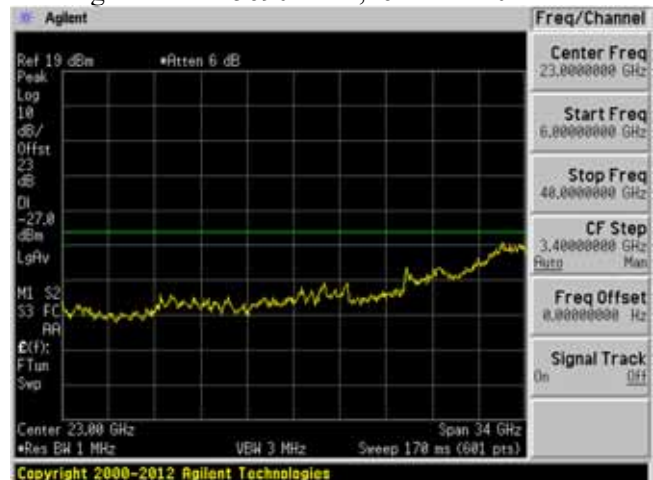
Mid Channel 5610 MHz, 6GHz – 40GHz



High Channel 5690 MHz , 30MHz – 6GHz

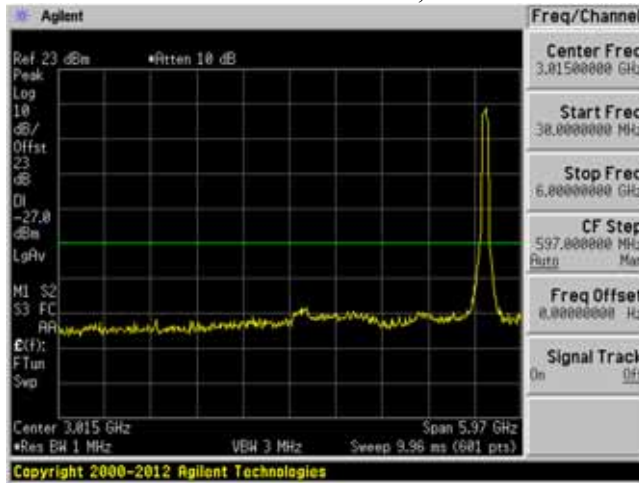


High Channel 5690 MHz, 6GHz – 40GHz

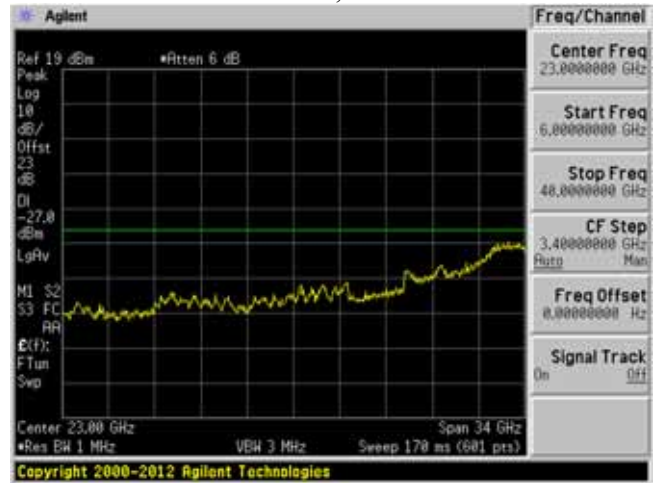


5470 - 5725 MHz, 802.11ax80 Mode, ANTJ12

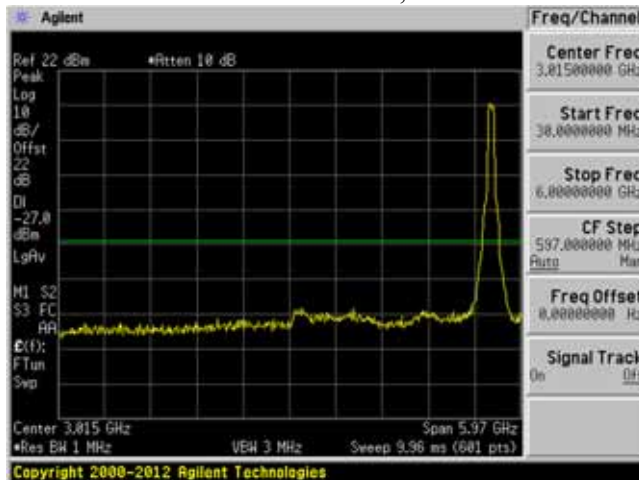
Low Channel 5530 MHz , 30MHz – 6GHz



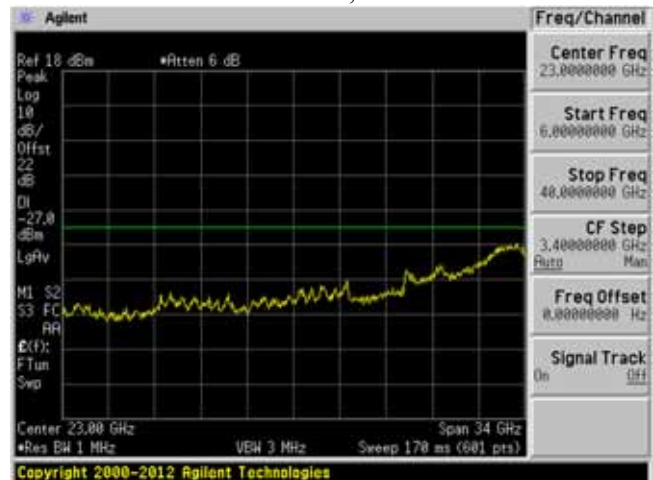
Low Channel 5530 MHz, 6GHz – 40GHz



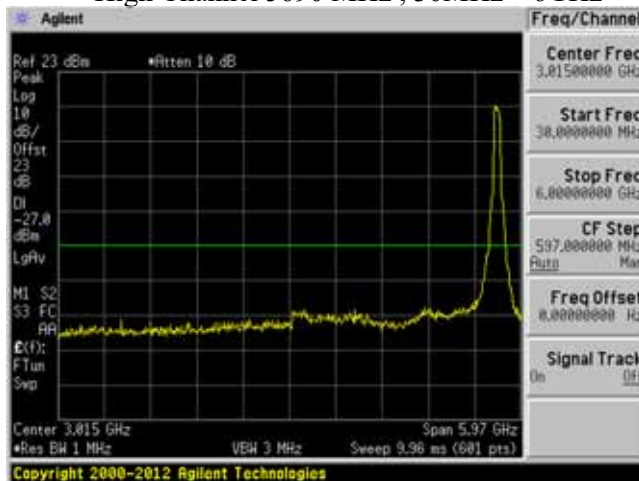
Mid Channel 5610 MHz , 30MHz – 6GHz



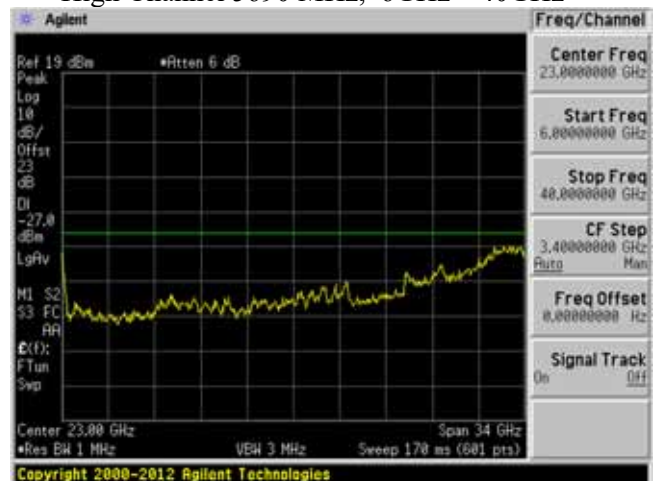
Mid Channel 5610 MHz, 6GHz – 40GHz



High Channel 5690 MHz , 30MHz – 6GHz

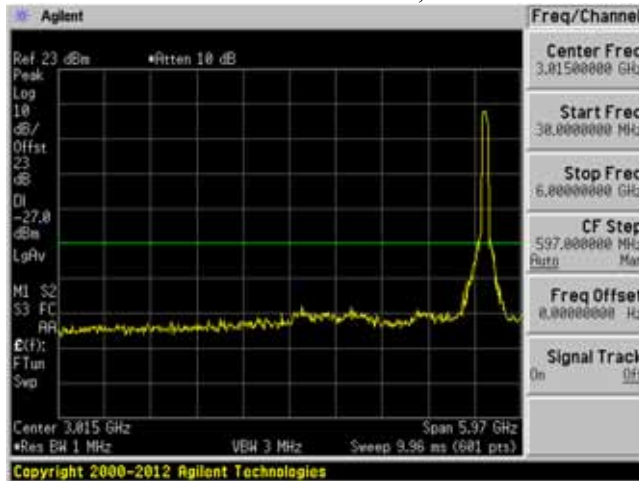


High Channel 5690 MHz, 6GHz – 40GHz

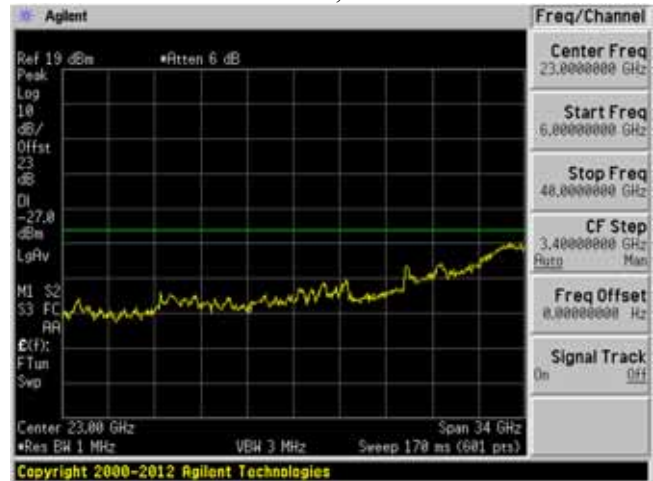


5470 - 5725 MHz, 802.11ax80 Mode, ANTJ15

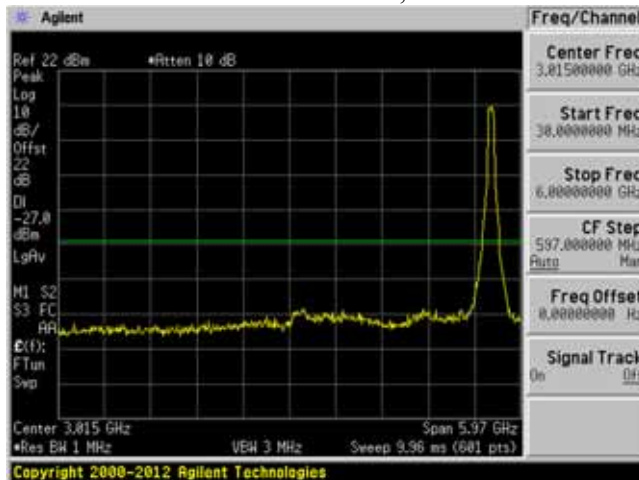
Low Channel 5530 MHz , 30MHz – 6GHz



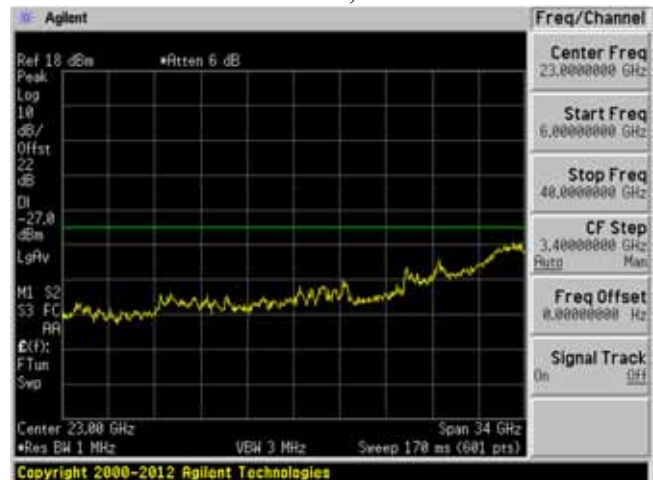
Low Channel 5530 MHz, 6GHz – 40GHz



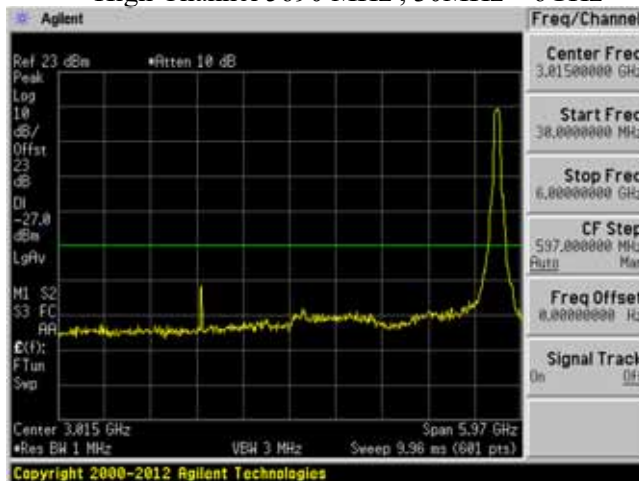
Mid Channel 5610 MHz , 30MHz – 6GHz



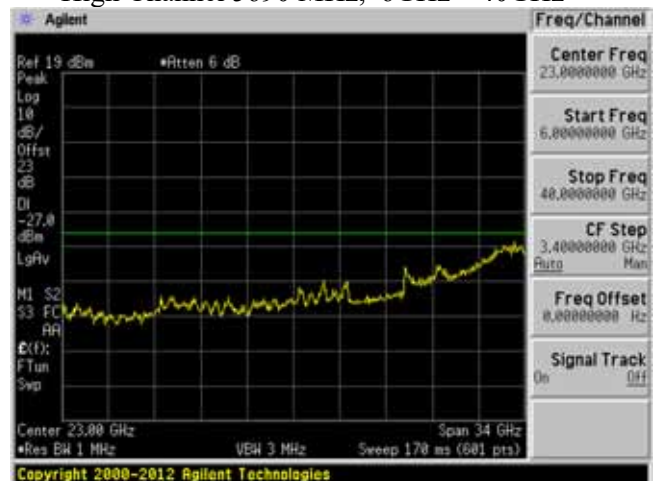
Mid Channel 5610 MHz, 6GHz – 40GHz



High Channel 5690 MHz , 30MHz – 6GHz

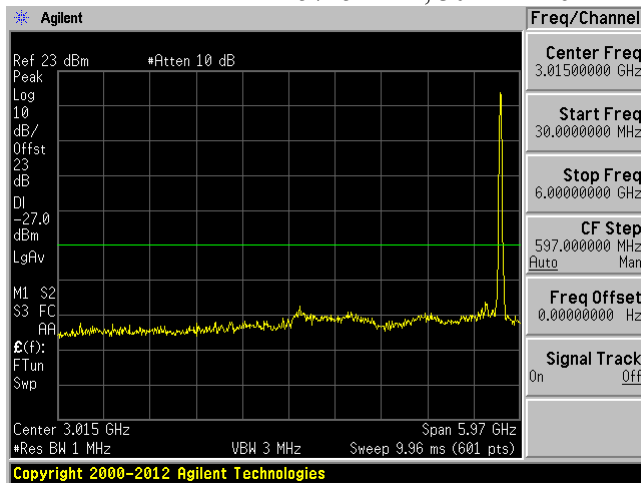


High Channel 5690 MHz, 6GHz – 40GHz

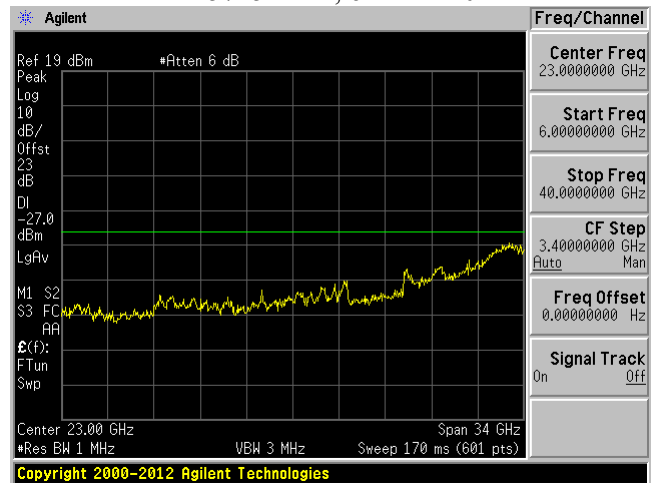


5745 - 5825 MHz, 802.11a Mode J12

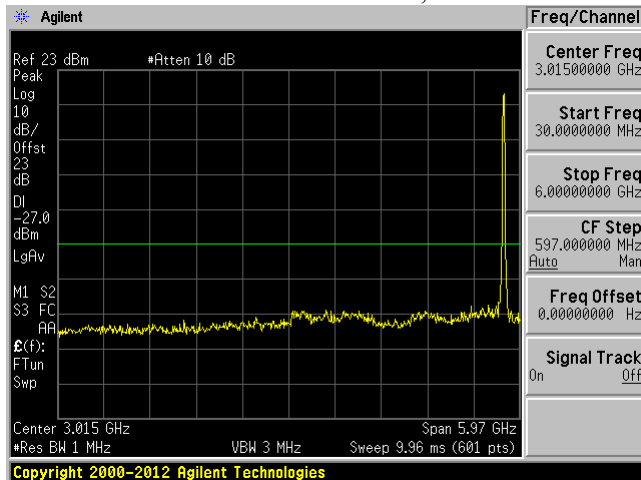
Low Channel 5745 MHz, 30MHz – 6GHz



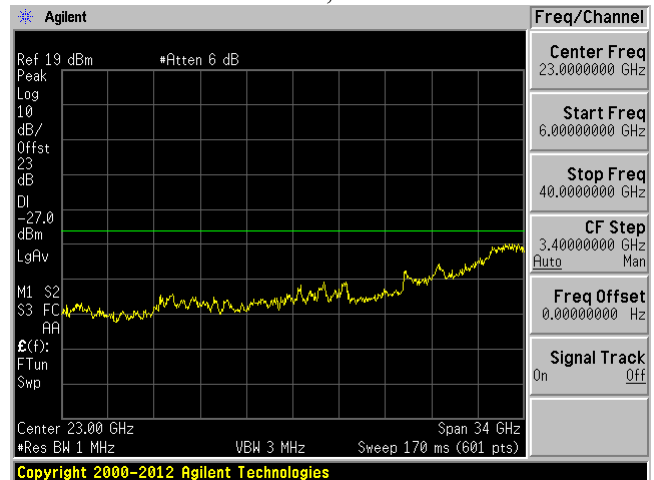
Low Channel 5745 MHz, 6GHz – 40GHz



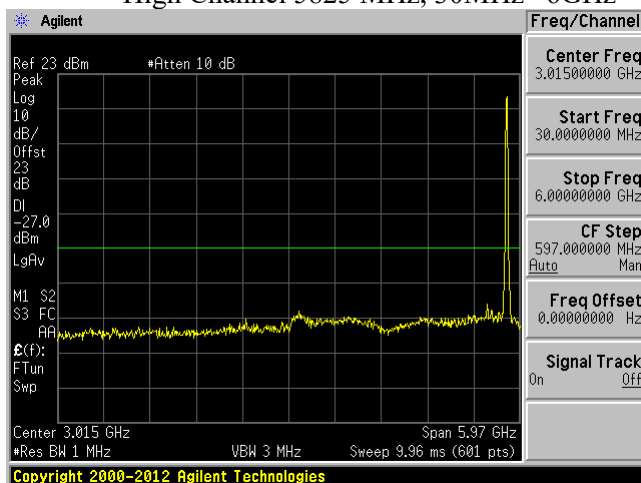
Mid Channel 5785 MHz, 30MHz – 6GHz



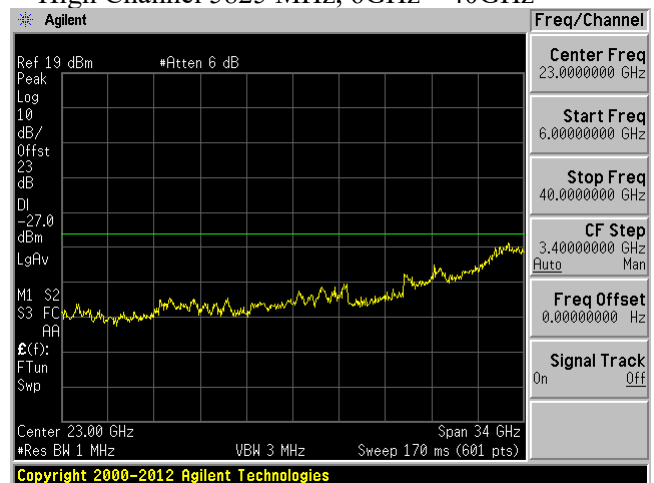
Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

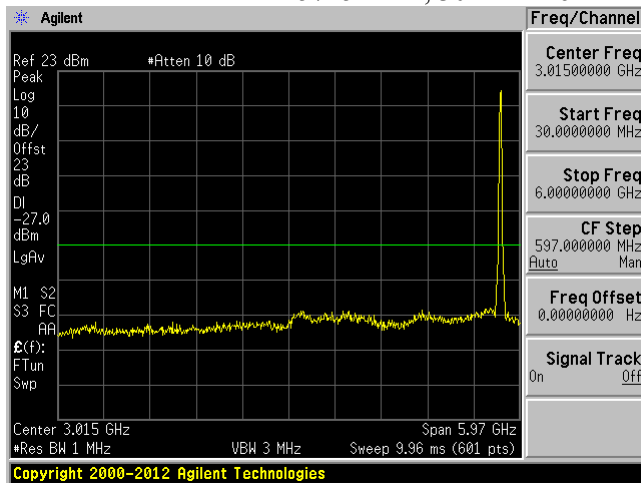


High Channel 5825 MHz, 6GHz – 40GHz

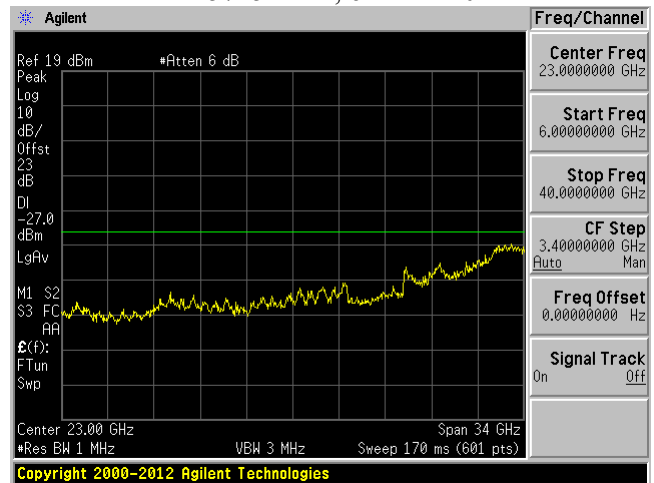


5745 - 5825 MHz, 802.11a Mode J15

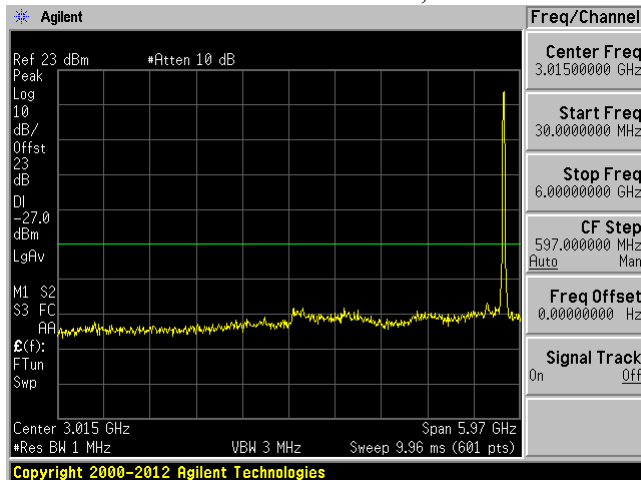
Low Channel 5745 MHz, 30MHz – 6GHz



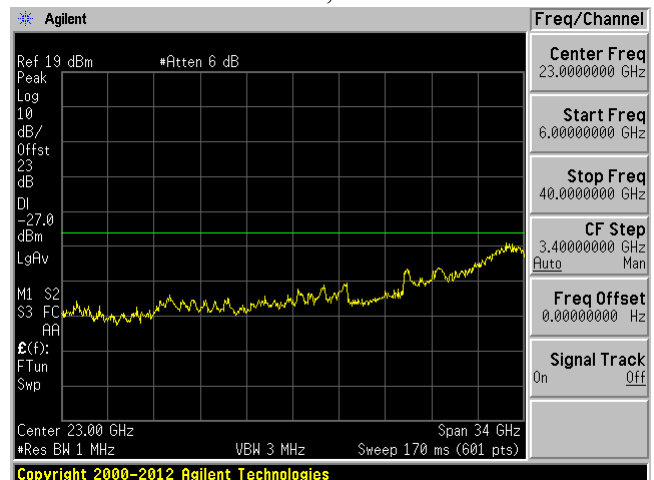
Low Channel 5745 MHz, 6GHz – 40GHz



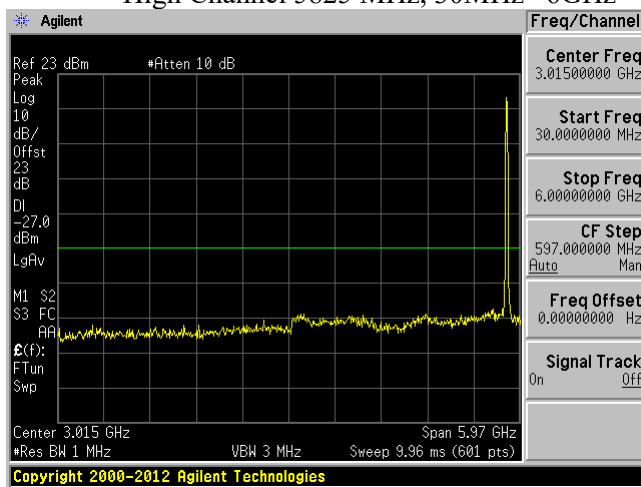
Mid Channel 5785 MHz, 30MHz – 6GHz



Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

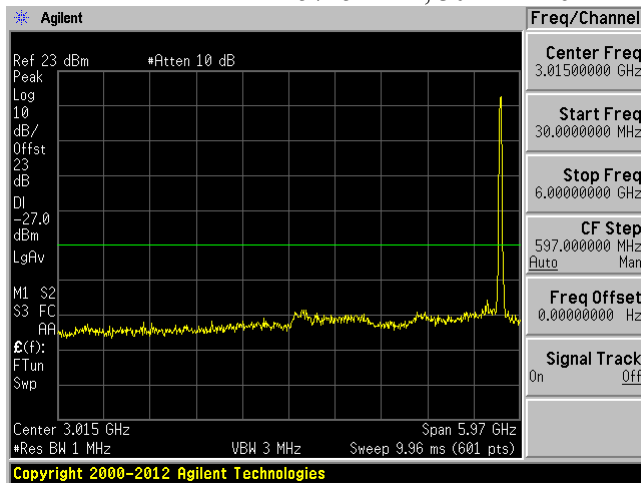


High Channel 5825 MHz, 6GHz – 40GHz

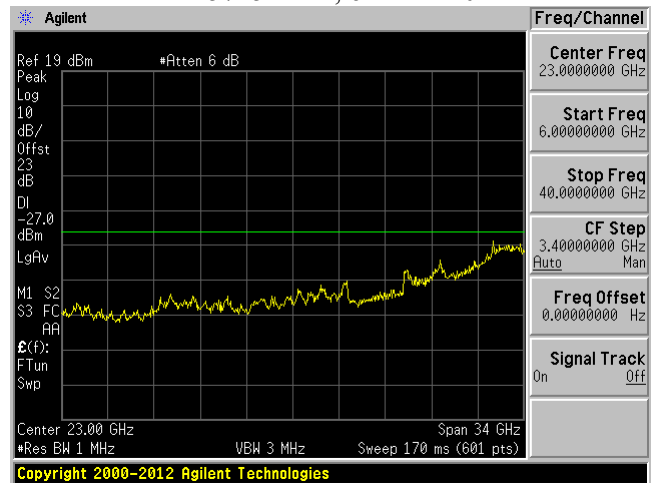


5745 - 5825 MHz, 802.11ac20 Mode J12

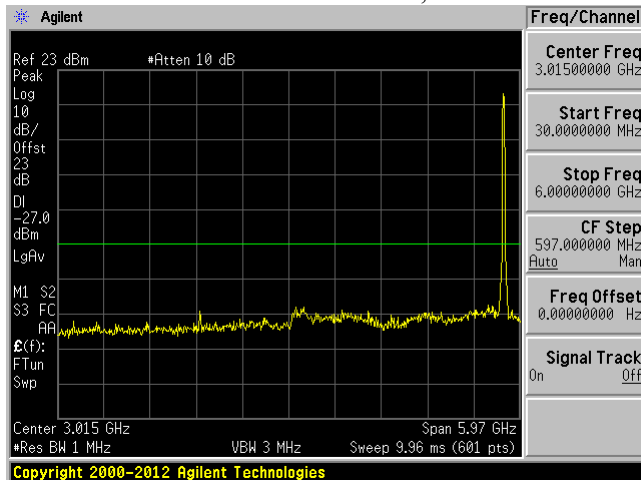
Low Channel 5745 MHz, 30MHz – 6GHz



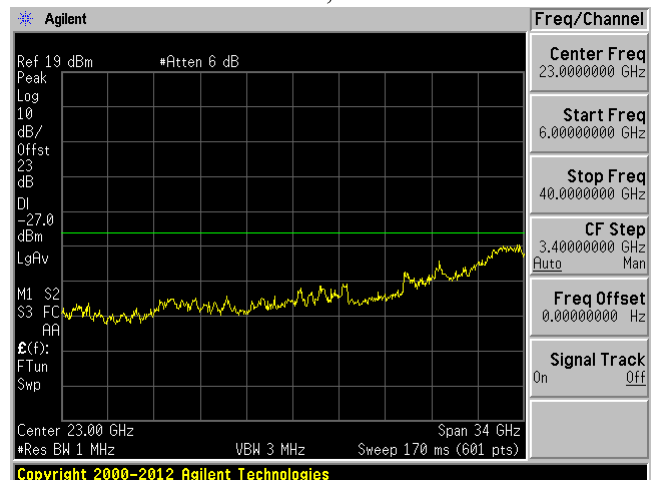
Low Channel 5745 MHz, 6GHz – 40GHz



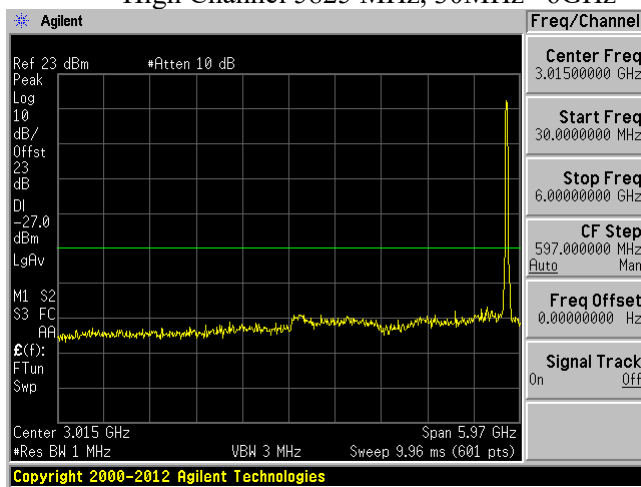
Mid Channel 5785 MHz, 30MHz – 6GHz



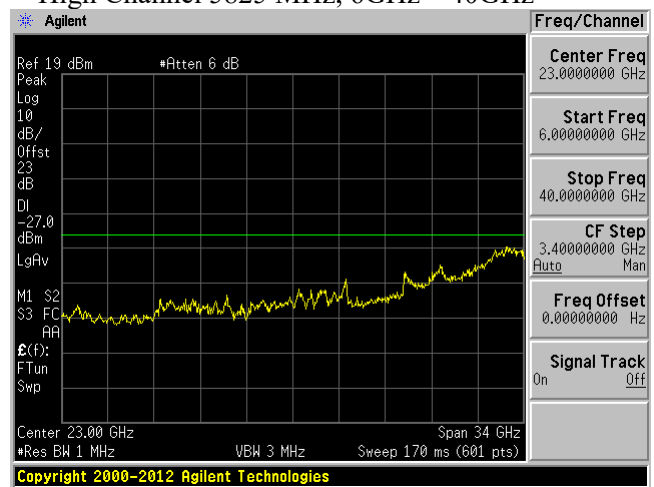
Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

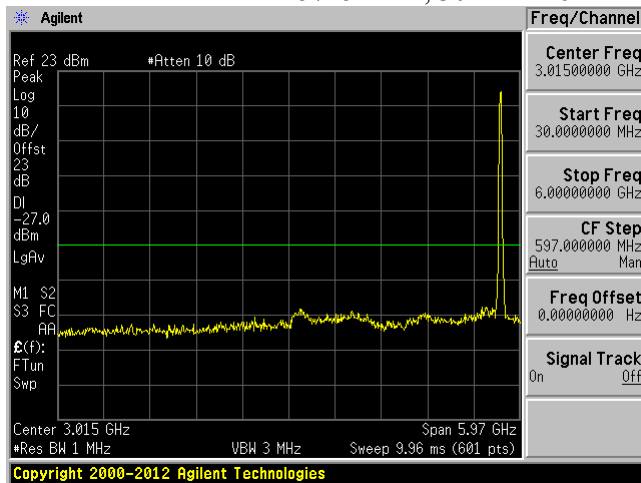


High Channel 5825 MHz, 6GHz – 40GHz

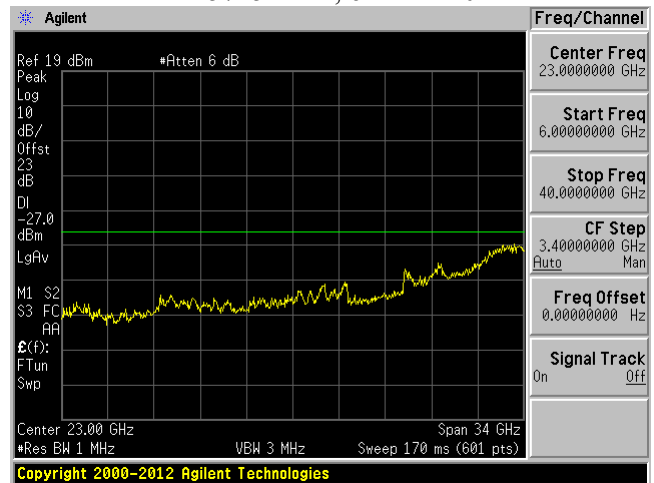


5745 - 5825 MHz, 802.11ac20 Mode J15

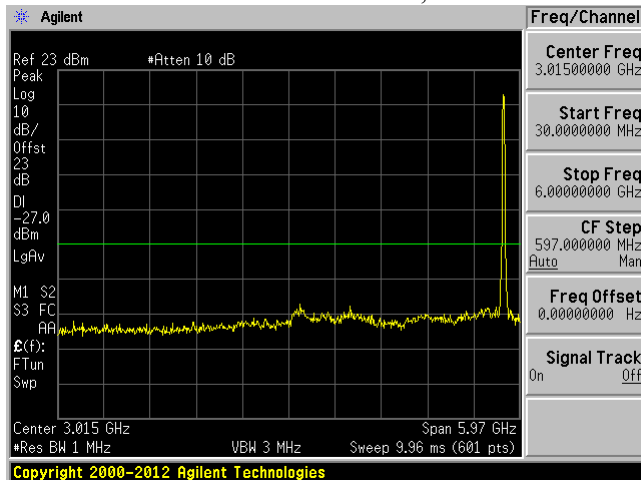
Low Channel 5745 MHz, 30MHz – 6GHz



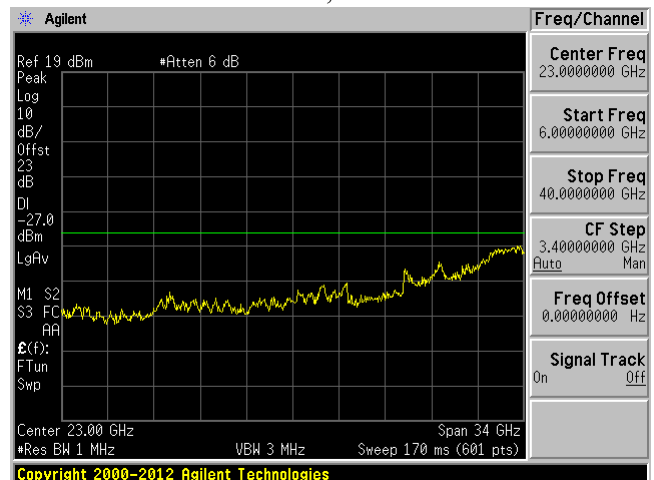
Low Channel 5745 MHz, 6GHz – 40GHz



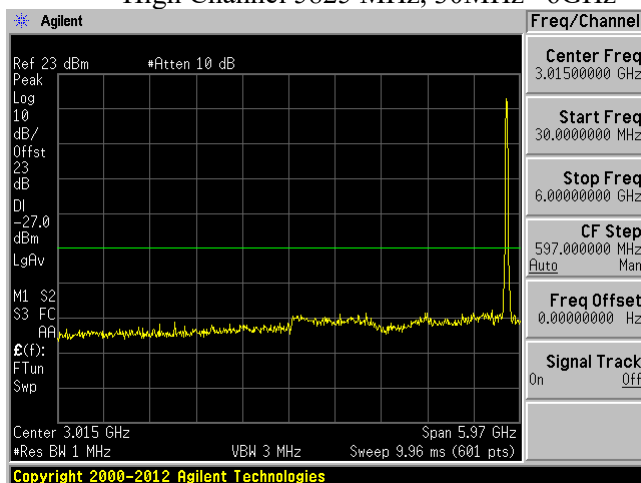
Mid Channel 5785 MHz, 30MHz – 6GHz



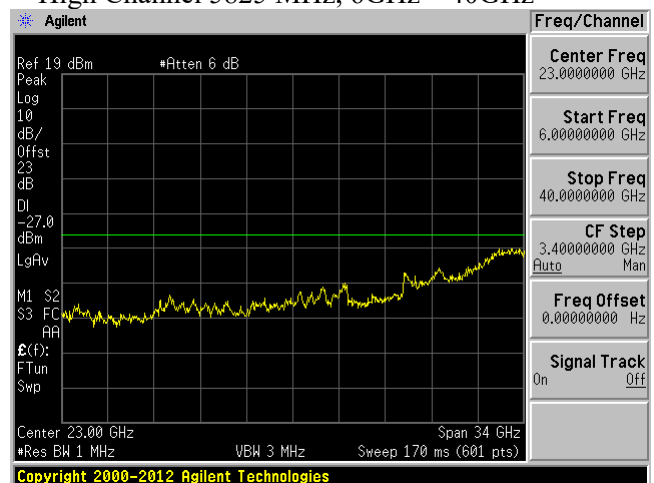
Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

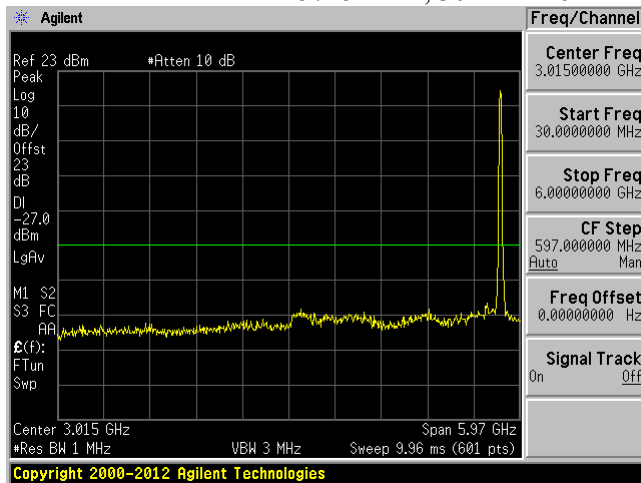


High Channel 5825 MHz, 6GHz – 40GHz

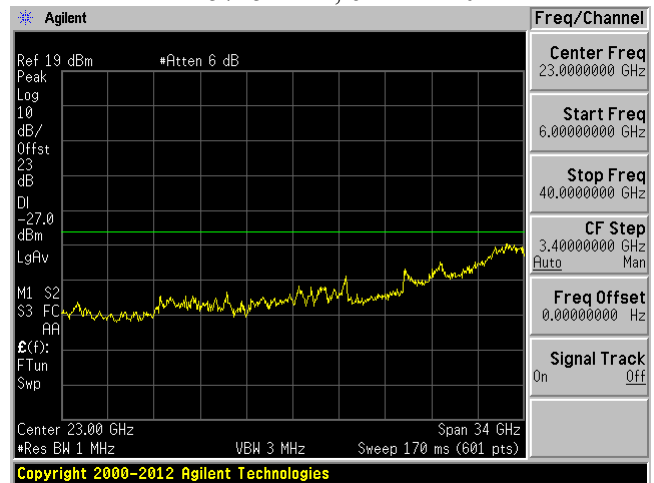


5745 - 5825 MHz, 802.11ax20 Mode J12

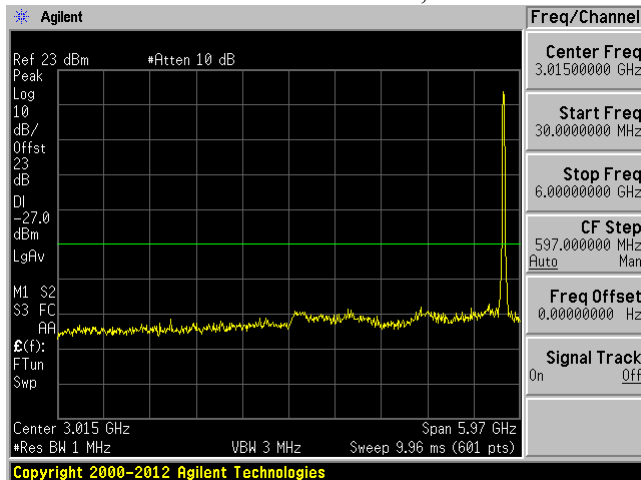
Low Channel 5745 MHz, 30MHz – 6GHz



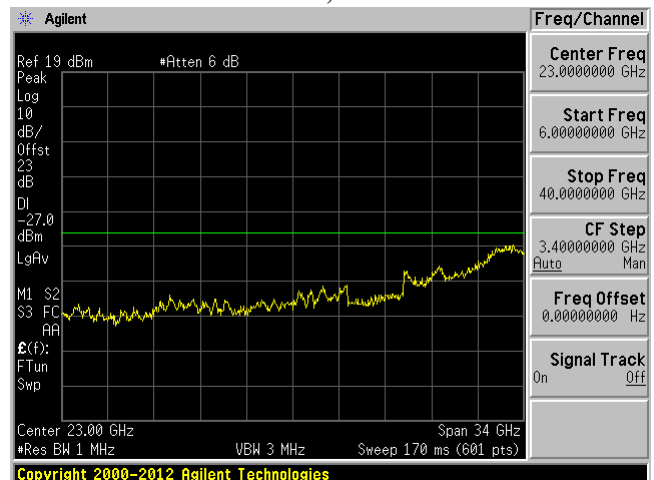
Low Channel 5745 MHz, 6GHz – 40GHz



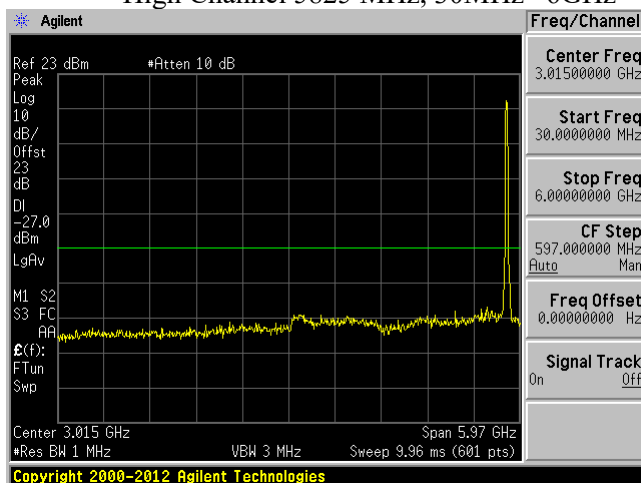
Mid Channel 5785 MHz, 30MHz – 6GHz



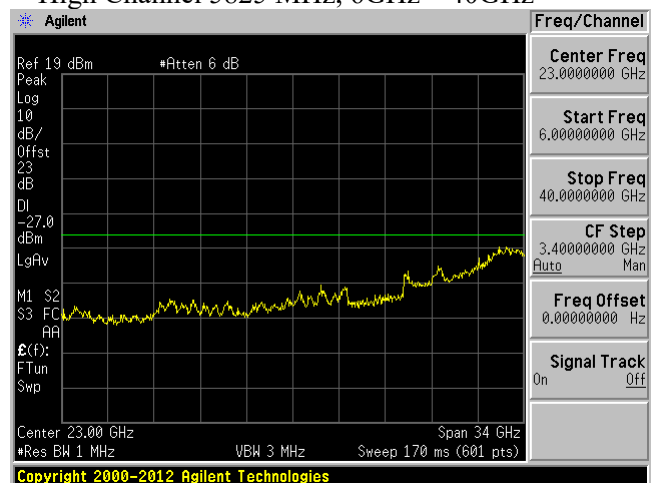
Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

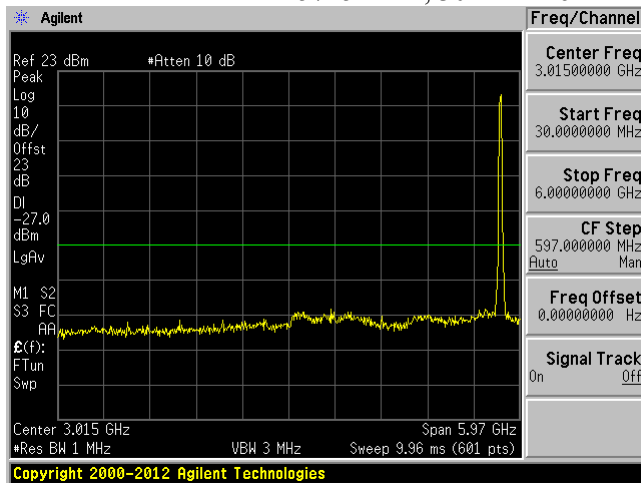


High Channel 5825 MHz, 6GHz – 40GHz

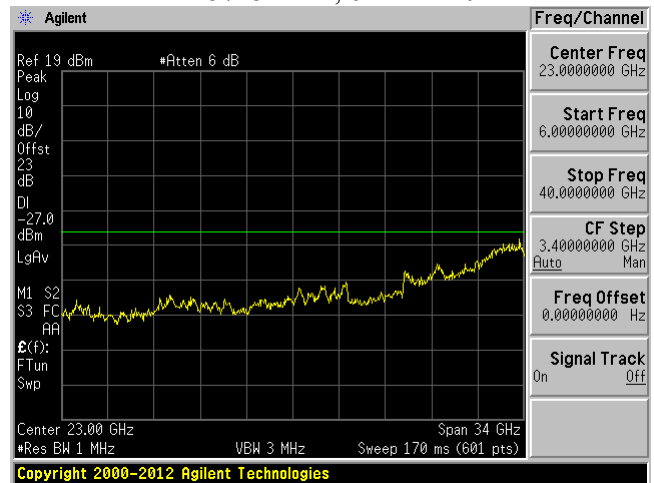


5745 - 5825 MHz, 802.11ax20 Mode J15

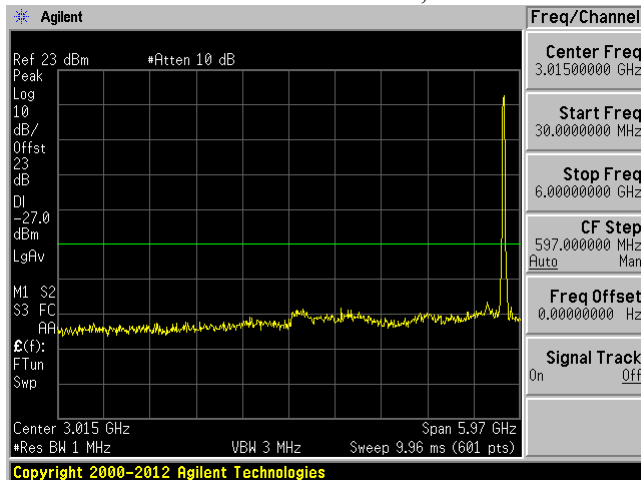
Low Channel 5745 MHz, 30MHz – 6GHz



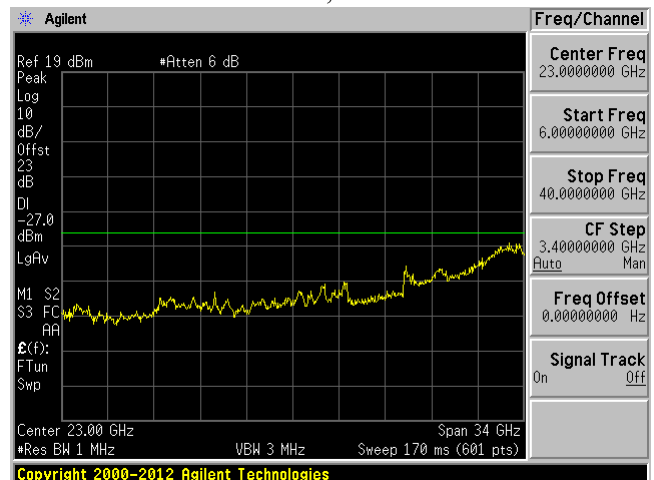
Low Channel 5745 MHz, 6GHz – 40GHz



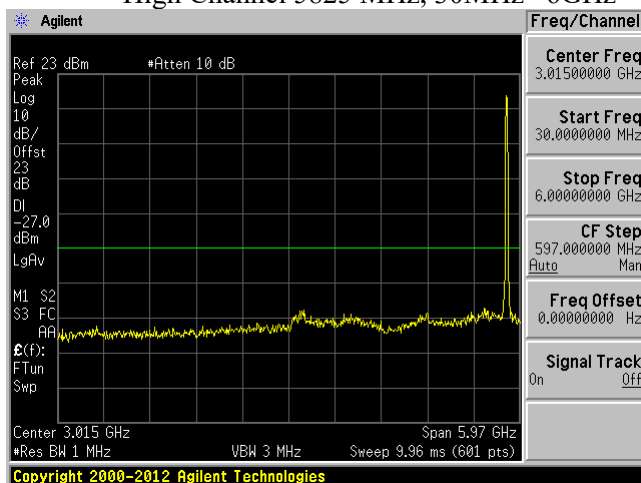
Mid Channel 5785 MHz, 30MHz – 6GHz



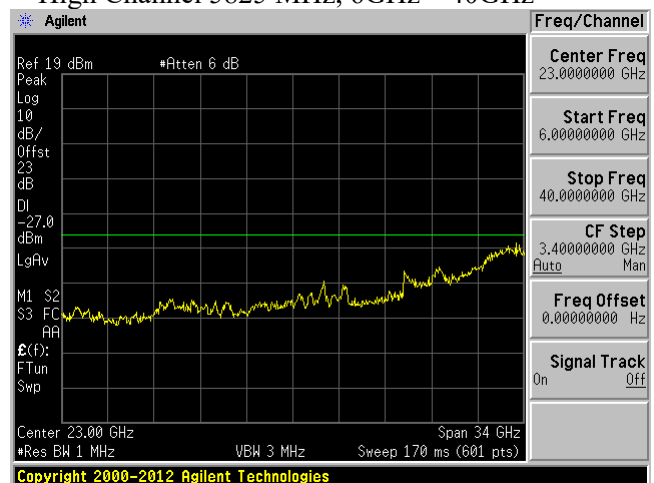
Mid Channel 5785 MHz, 6GHz – 40GHz



High Channel 5825 MHz, 30MHz – 6GHz

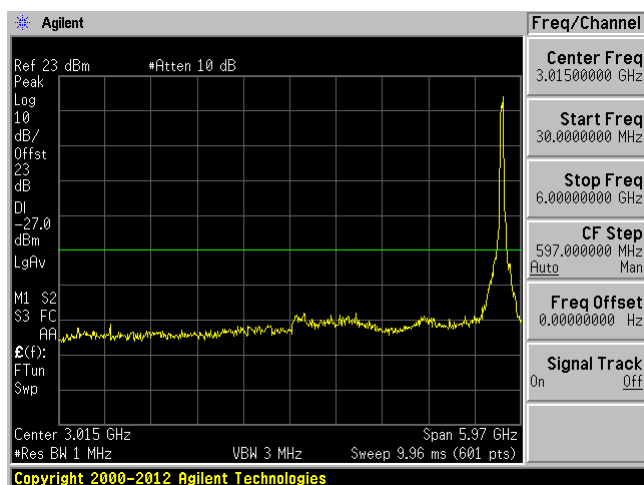


High Channel 5825 MHz, 6GHz – 40GHz

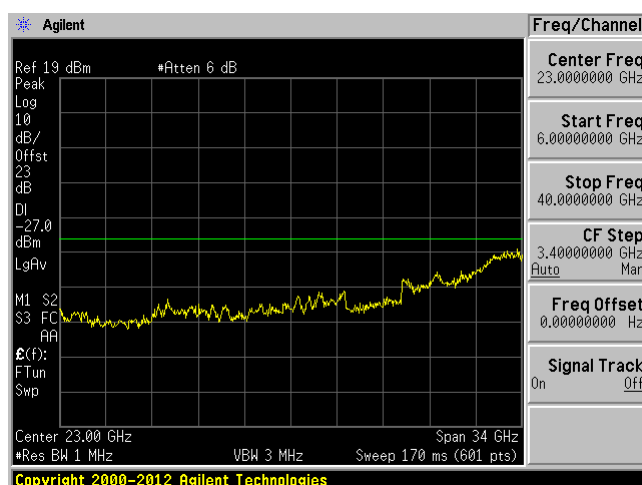


5745 - 5825 MHz, 802.11ac40 Mode J12

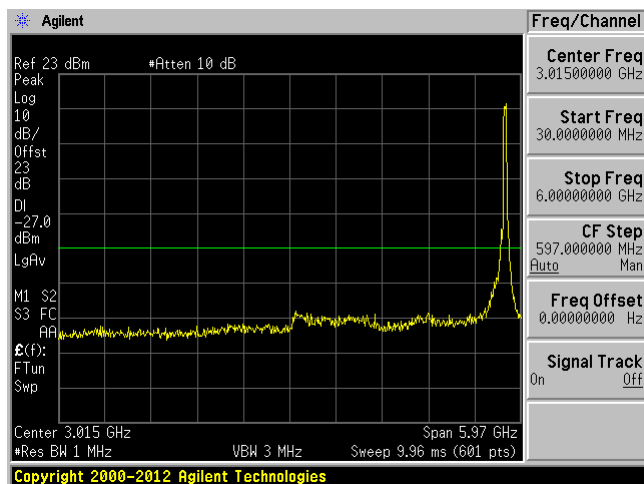
Low Channel 5755 MHz, 30MHz – 6GHz



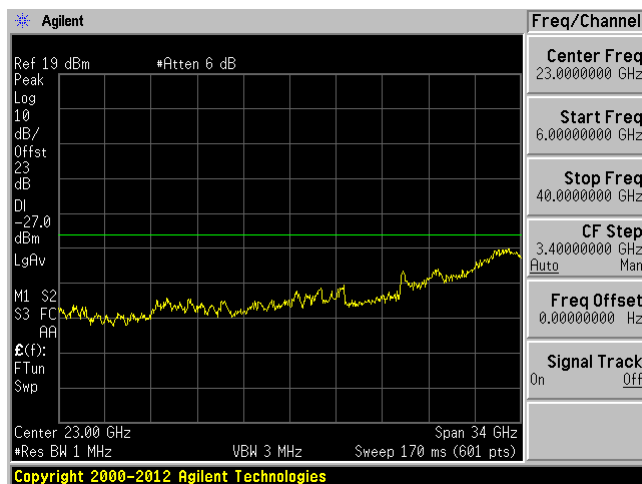
Low Channel 5755 MHz, 6GHz – 40GHz



High Channel 5795 MHz, 30MHz – 6GHz

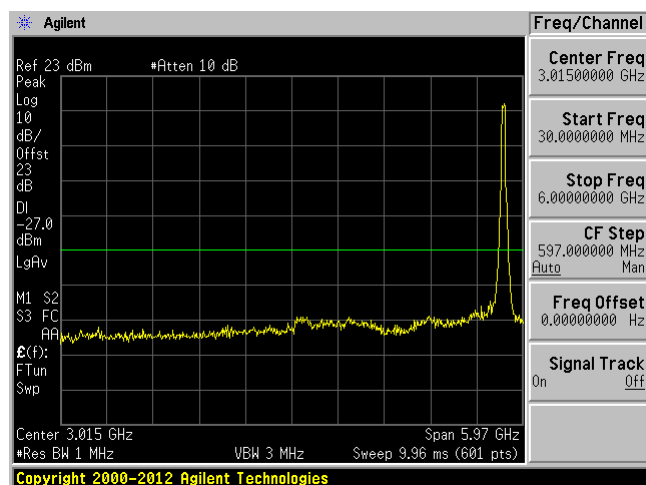


High Channel 5795 MHz, 6GHz – 40GHz

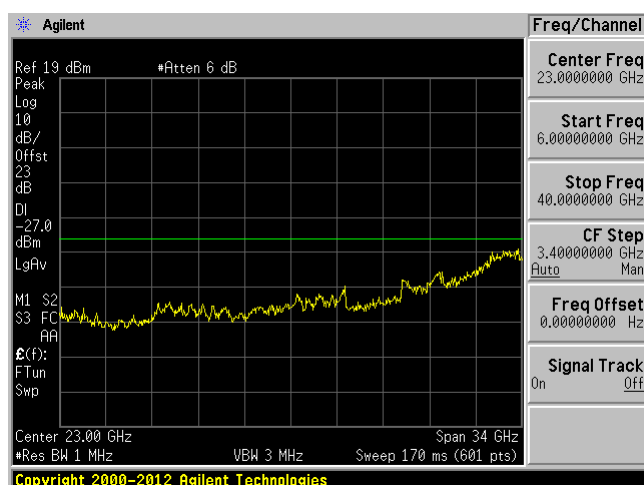


5745 - 5825 MHz, 802.11ac40 Mode J15

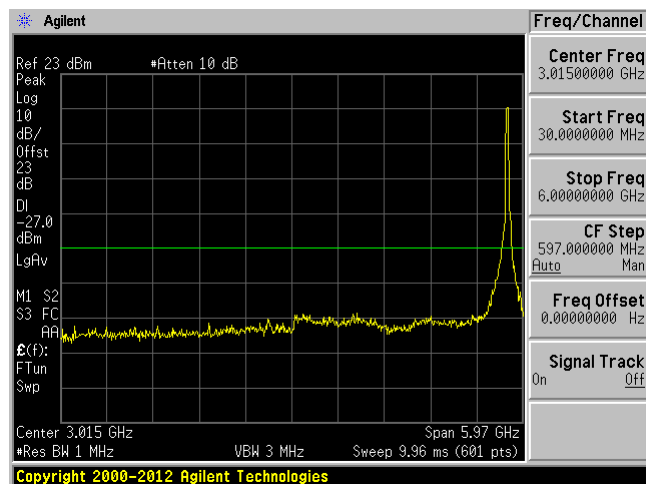
Low Channel 5755 MHz, 30MHz – 6GHz



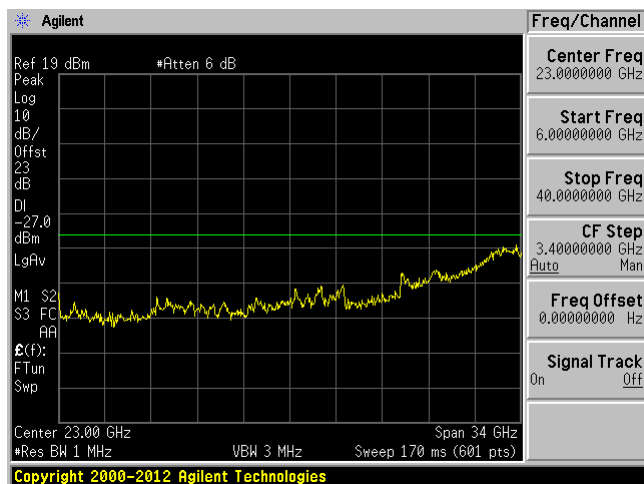
Low Channel 5755 MHz, 6GHz – 40GHz



High Channel 5795 MHz, 30MHz – 6GHz

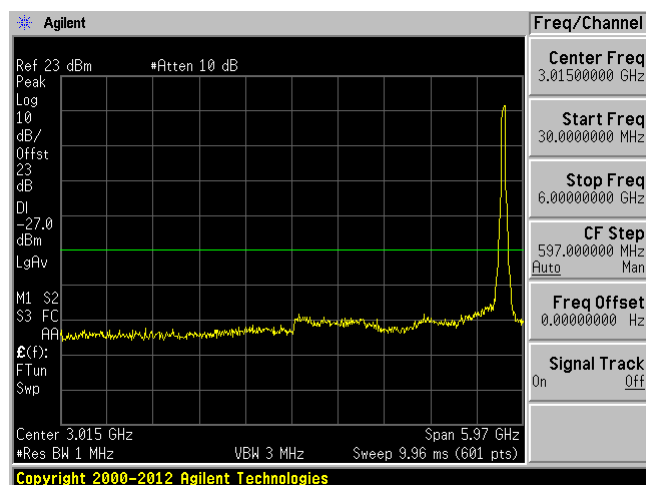


High Channel 5795 MHz, 6GHz – 40GHz

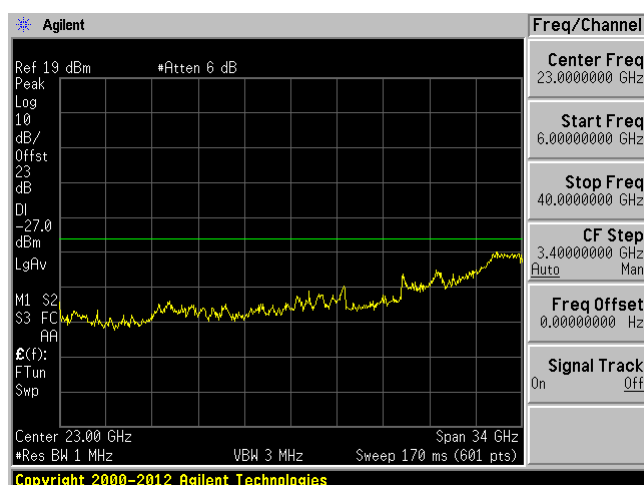


5745 - 5825 MHz, 802.11ax40 Mode J12

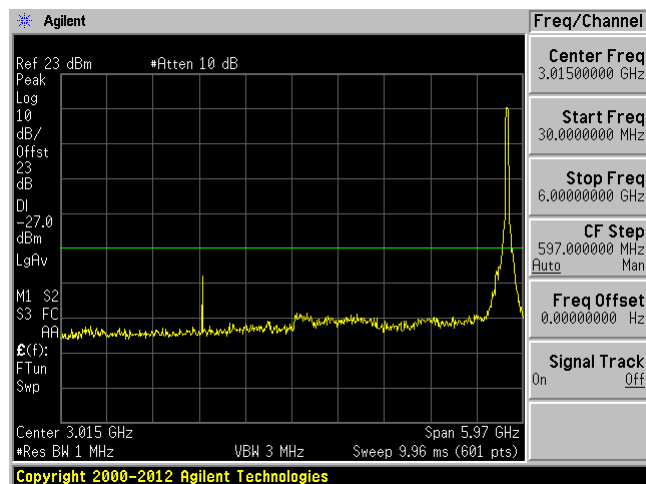
Low Channel 5755 MHz, 30MHz – 6GHz



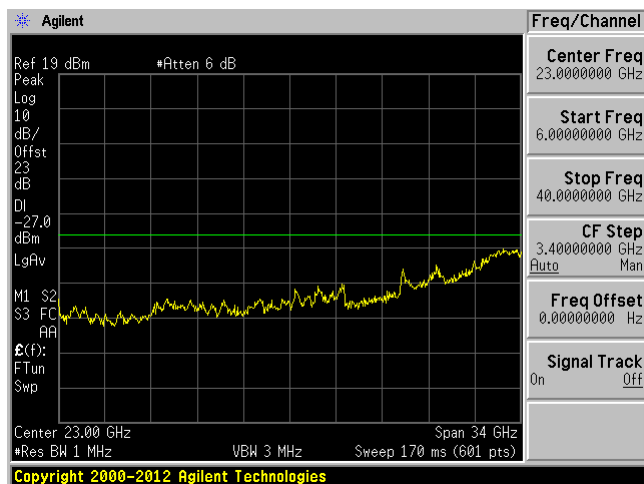
Low Channel 5755 MHz, 6GHz – 40GHz



High Channel 5795 MHz, 30MHz – 6GHz

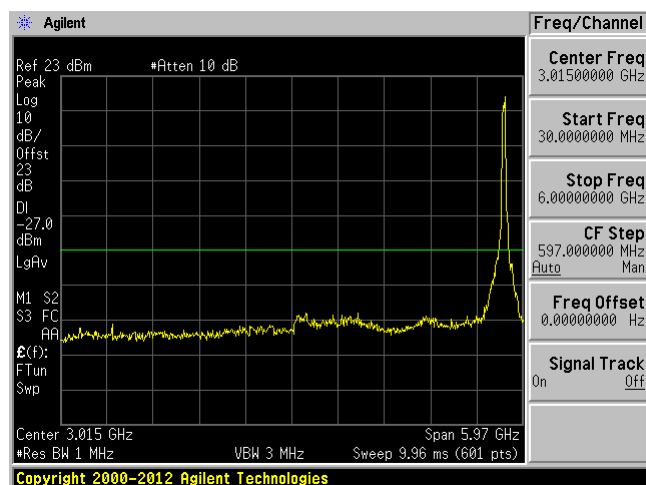


High Channel 5795 MHz, 6GHz – 40GHz

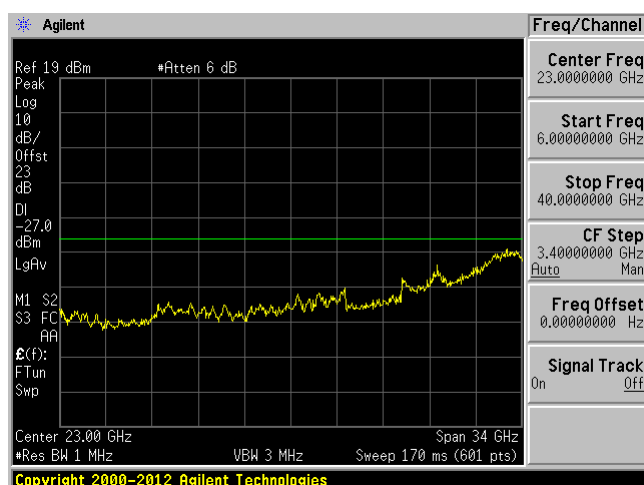


5745 - 5825 MHz, 802.11ax40 Mode J15

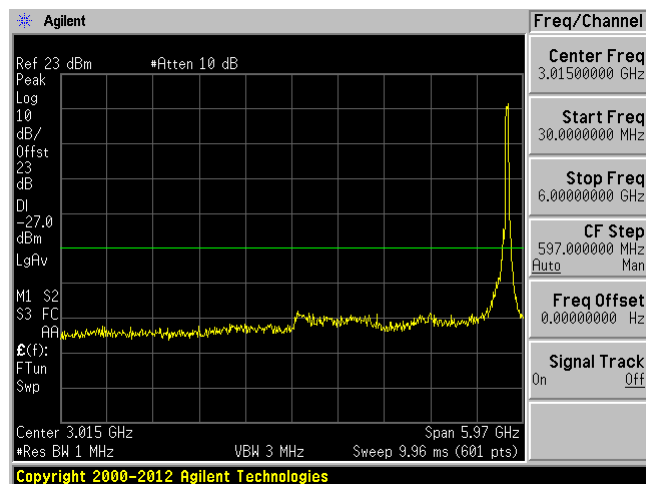
Low Channel 5755 MHz, 30MHz – 6GHz



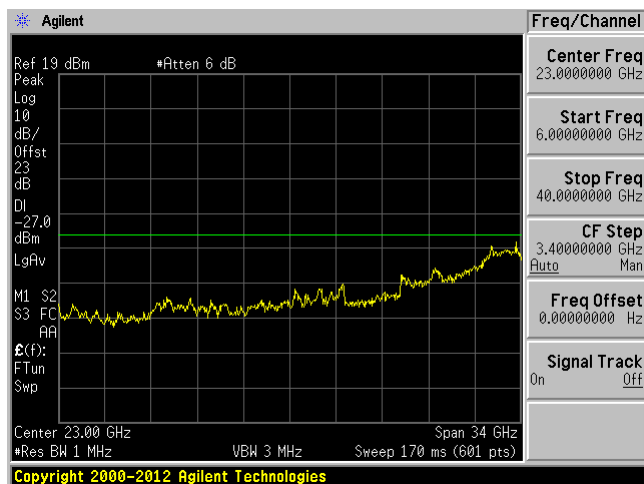
Low Channel 5755 MHz, 6GHz – 40GHz



High Channel 5795 MHz, 30MHz – 6GHz

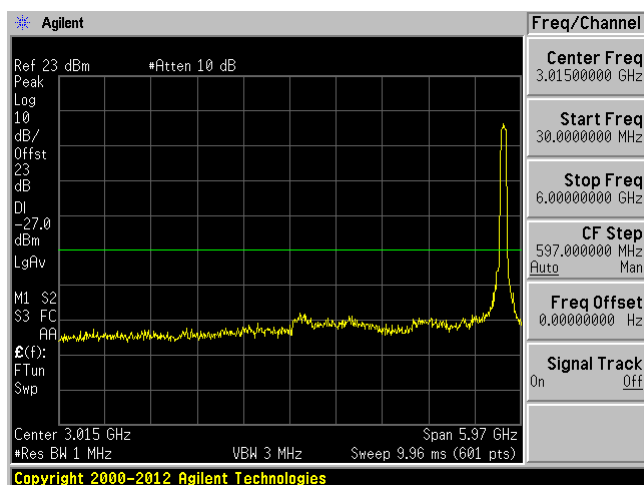


High Channel 5795 MHz, 6GHz – 40GHz

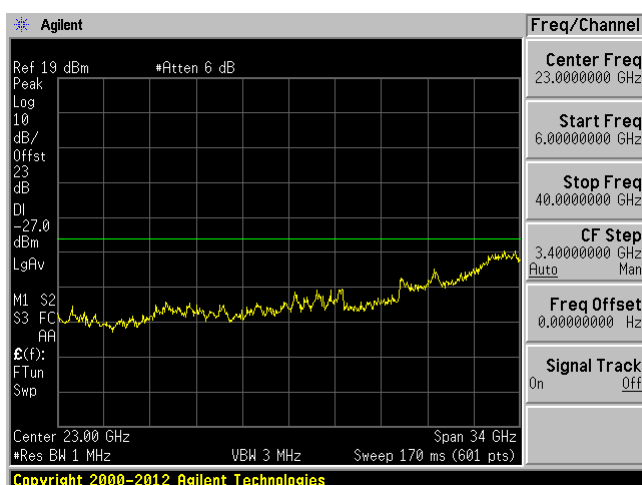


5745 - 5825 MHz, 802.11ac80 Mode J12

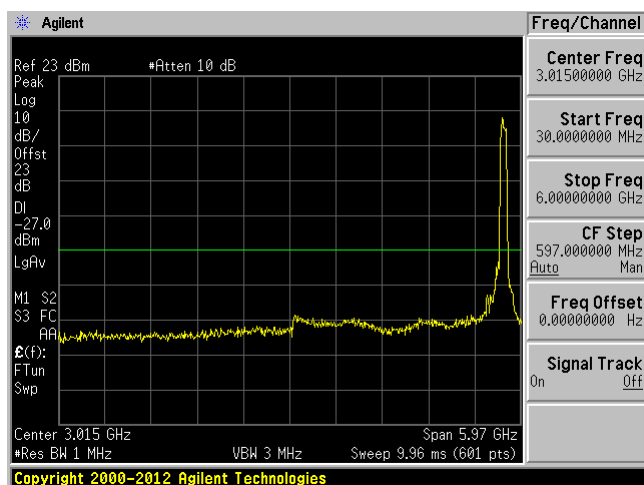
5775 MHz, 30MHz – 6GHz



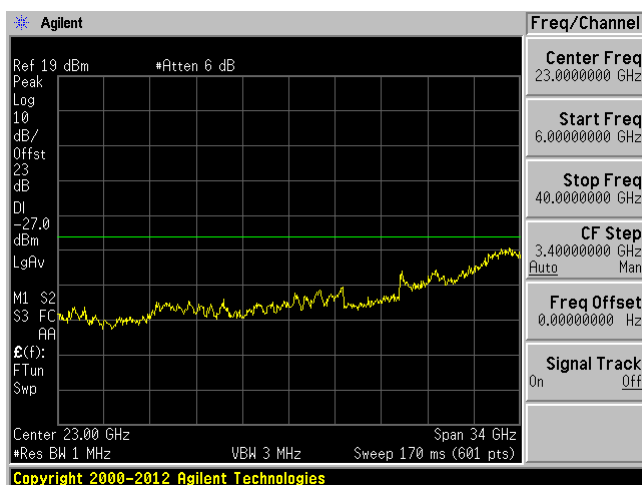
5755 MHz, 6GHz – 40GHz

**5745 - 5825 MHz, 802.11ac80 Mode J15**

5775 MHz, 30MHz – 6GHz

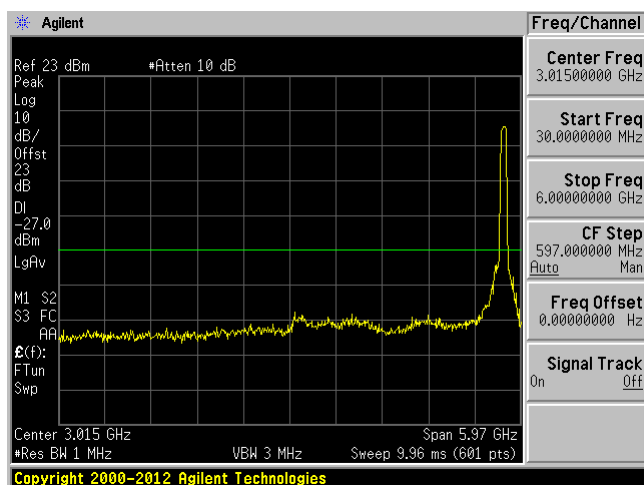


5755 MHz, 6GHz – 40GHz

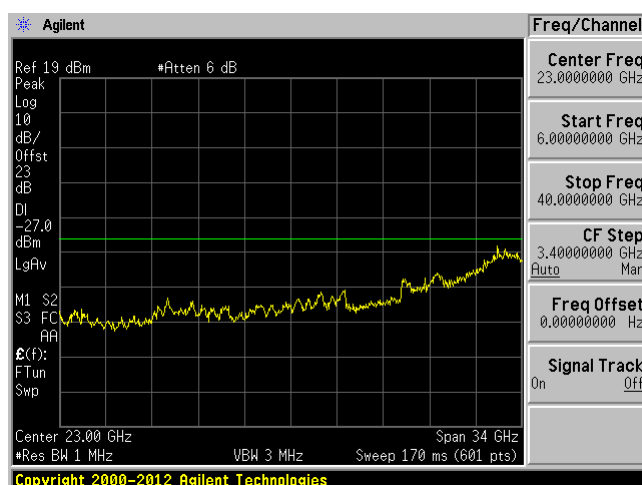


5745 - 5825 MHz, 802.11ax80 Mode J12

5775 MHz, 30MHz – 6GHz

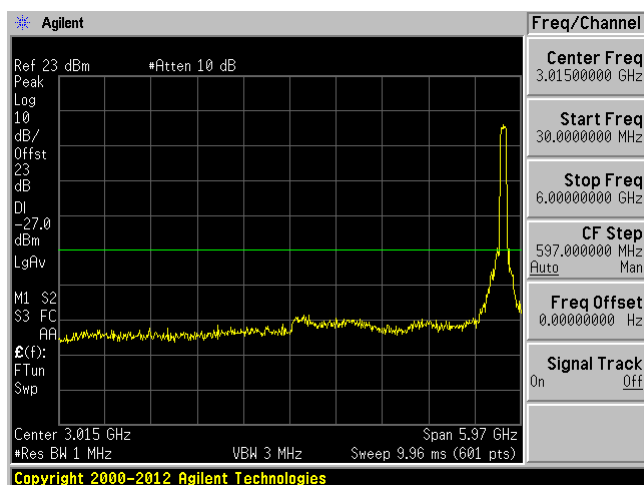


5755 MHz, 6GHz – 40GHz



5745 - 5825 MHz, 802.11ax80 Mode J15

5775 MHz, 30MHz – 6GHz



5755 MHz, 6GHz – 40GHz

