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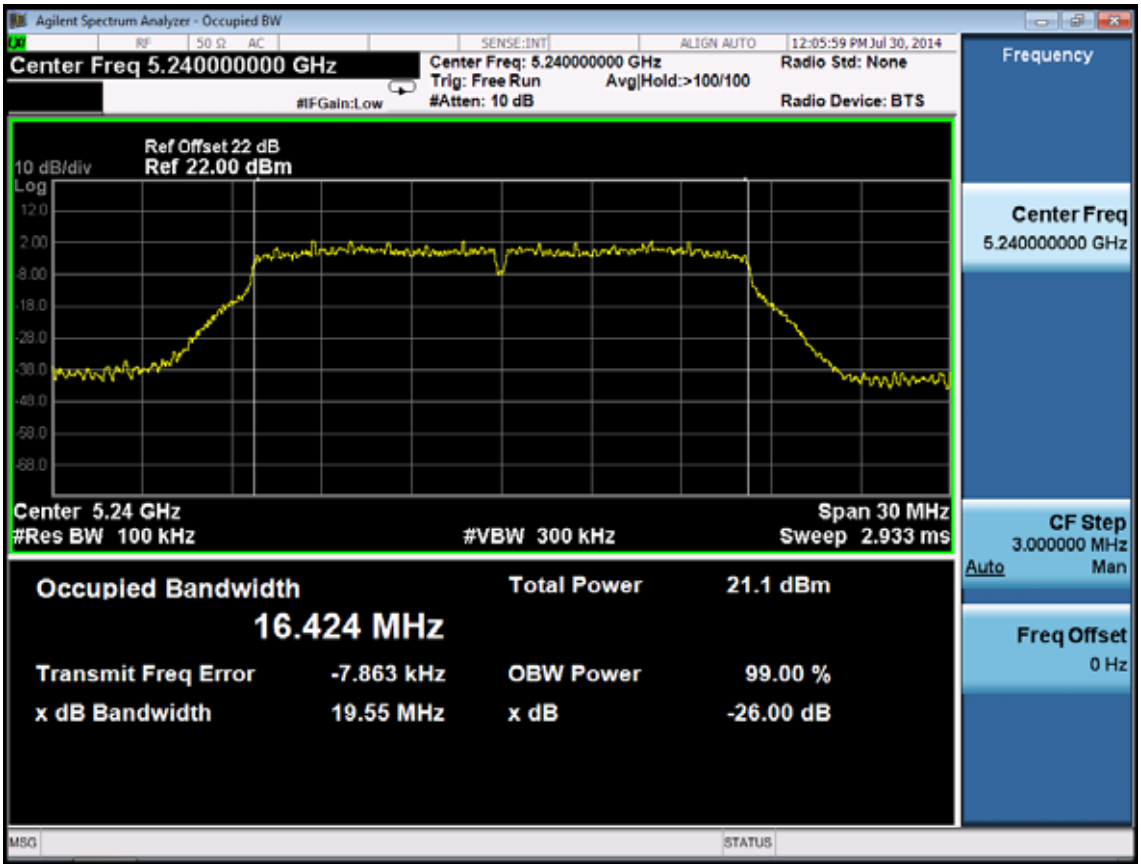
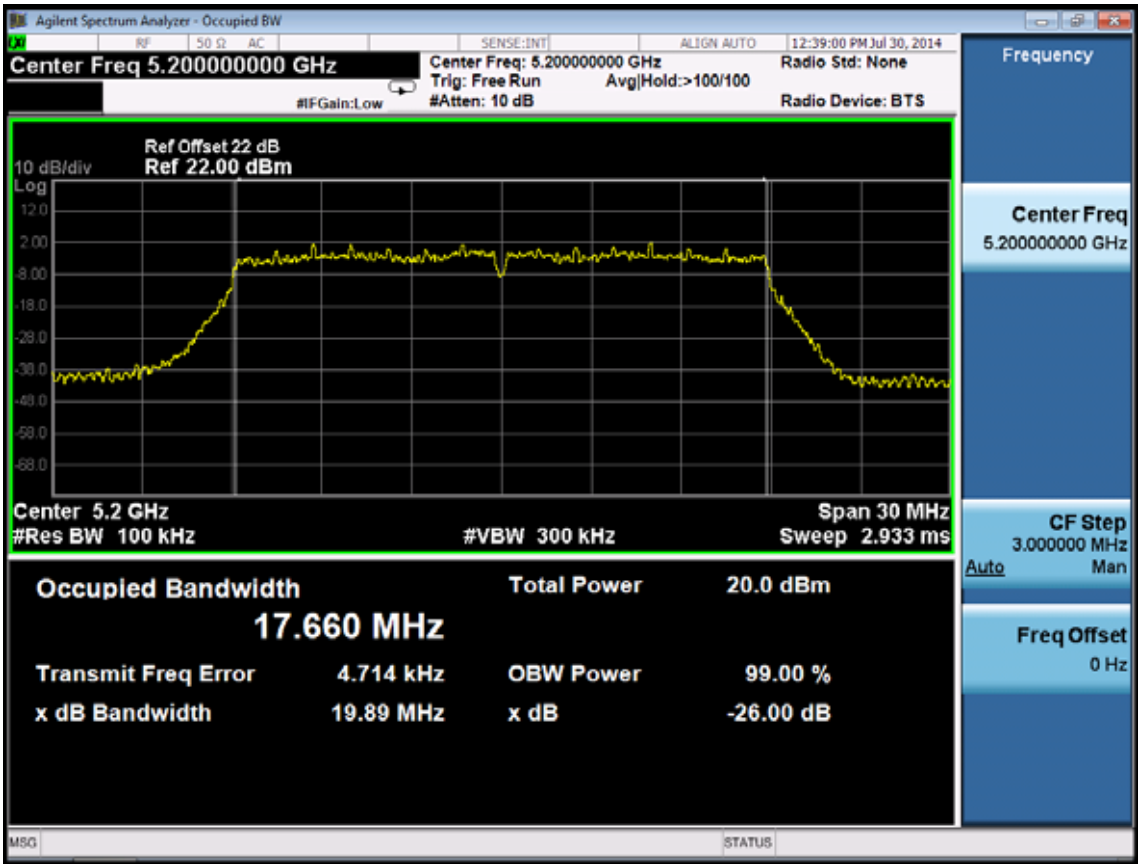


11n HT20

5180MHz

5200MHz



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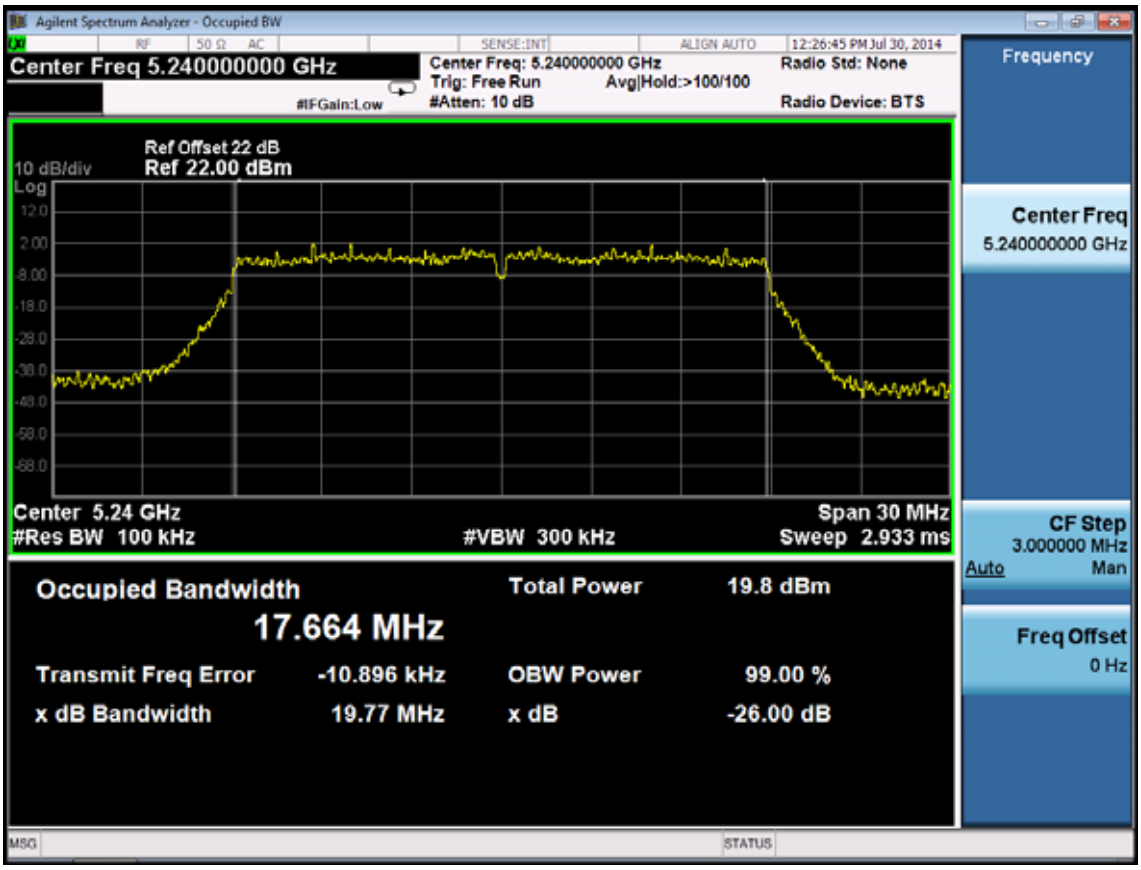
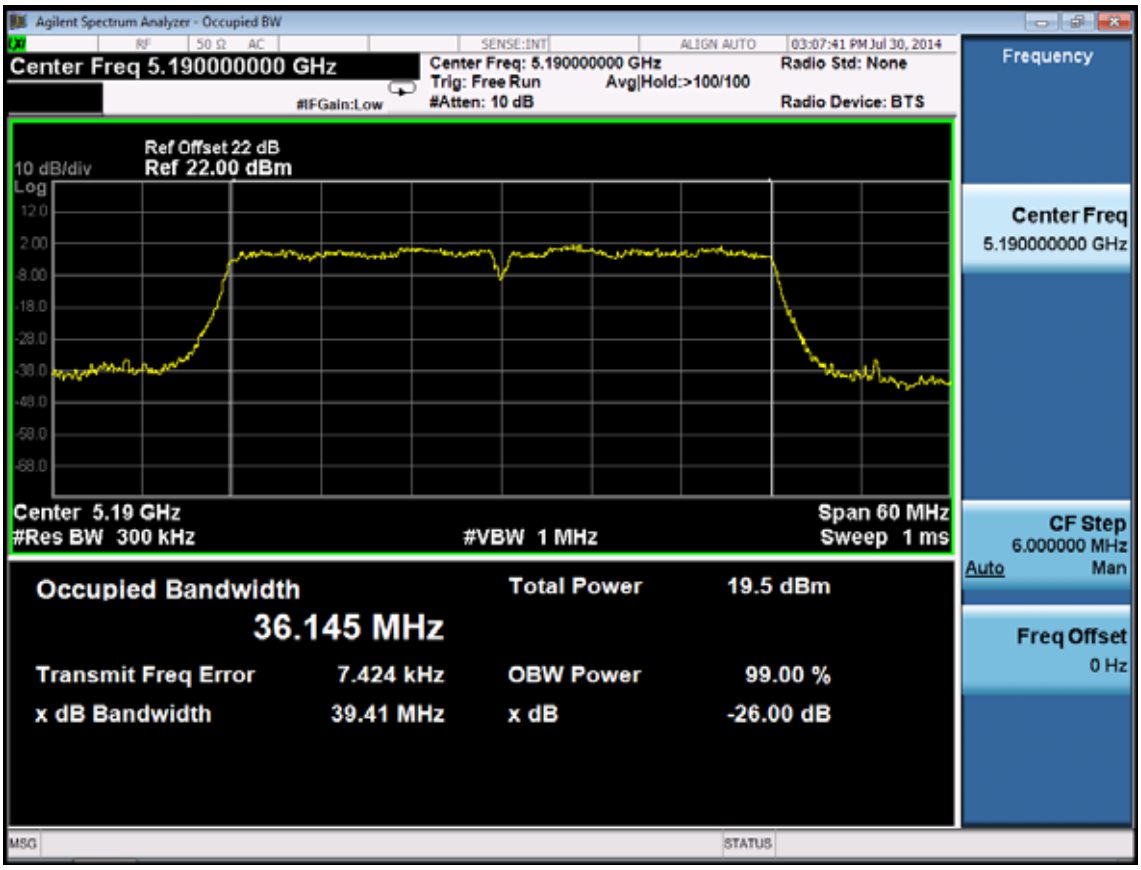
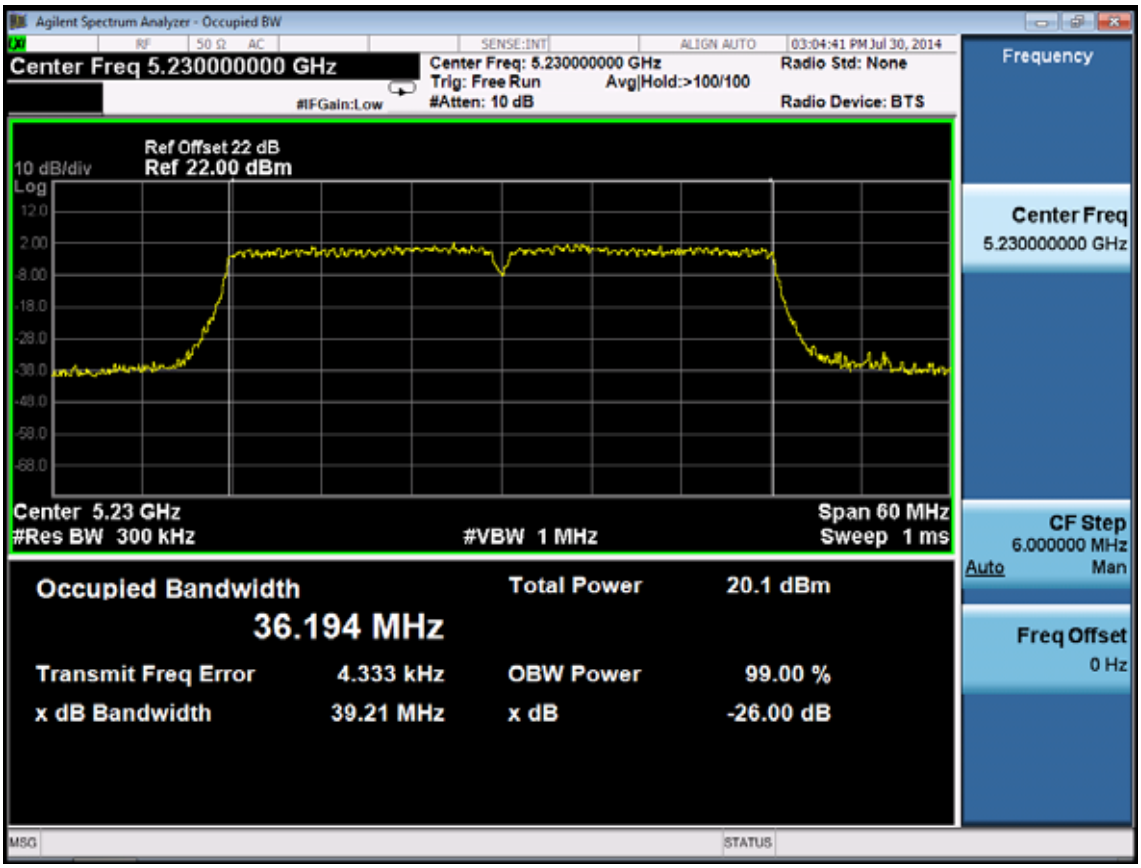


11n HT40

5190MHz

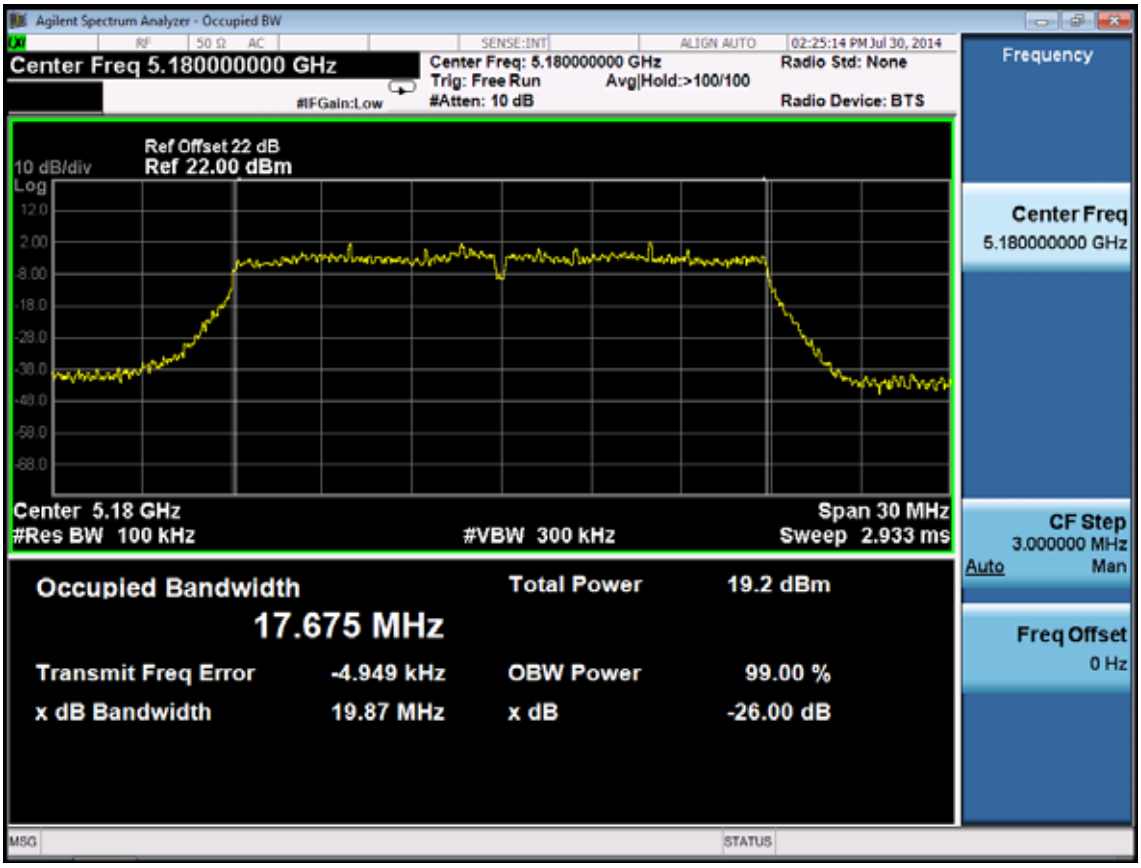


5230MHz



11ac VHT20

5180MHz



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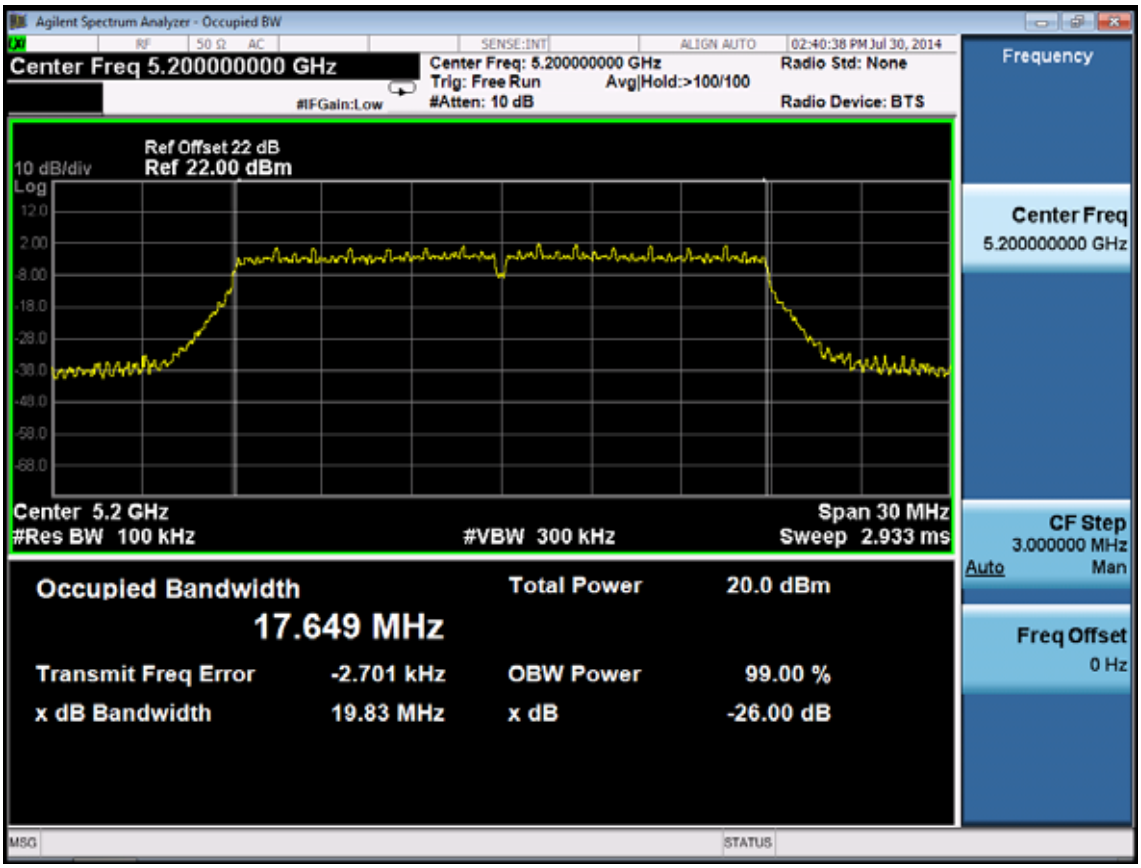

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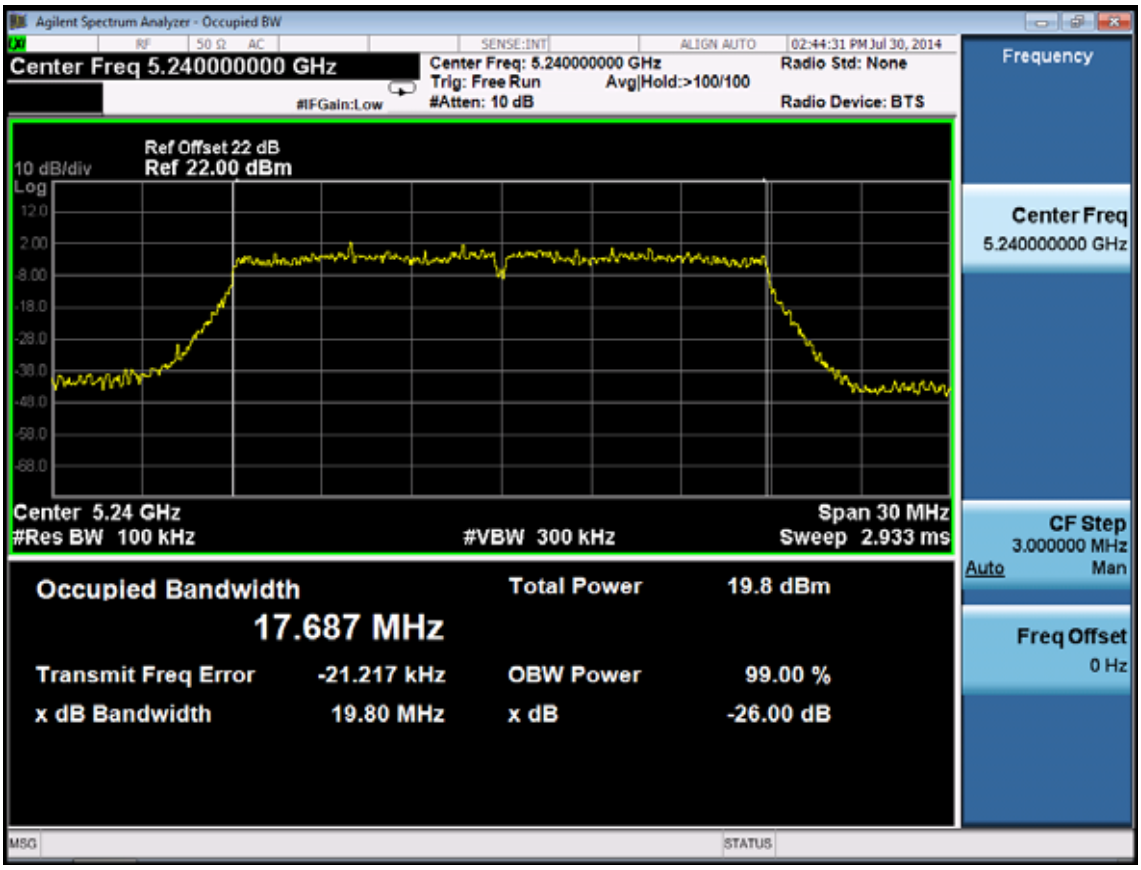

11ac VHT40

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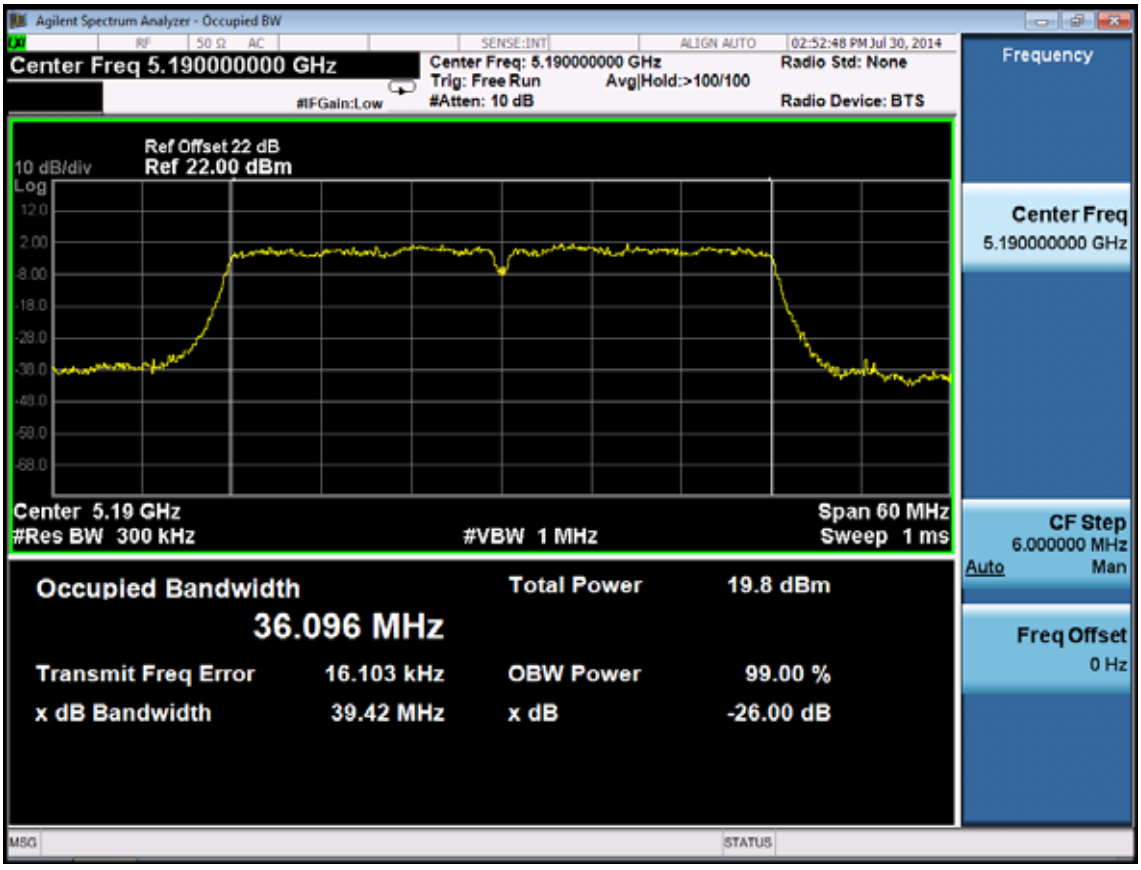

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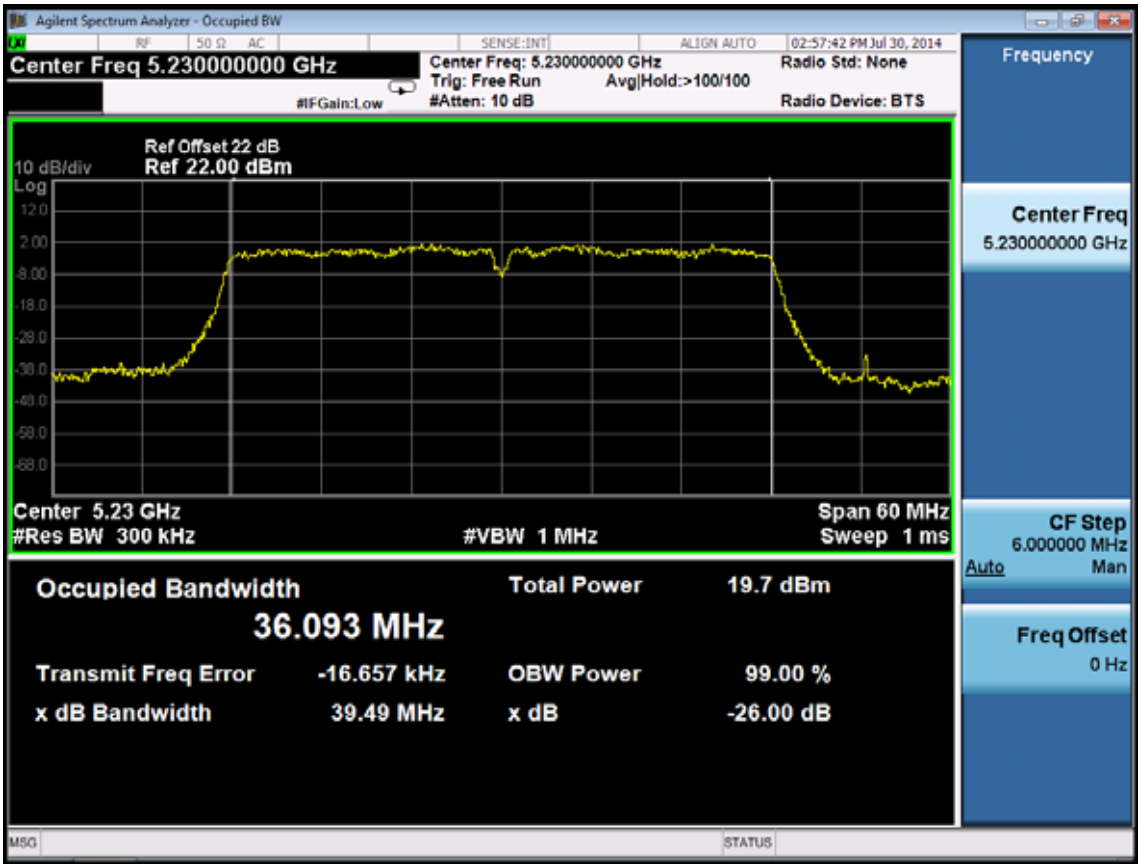
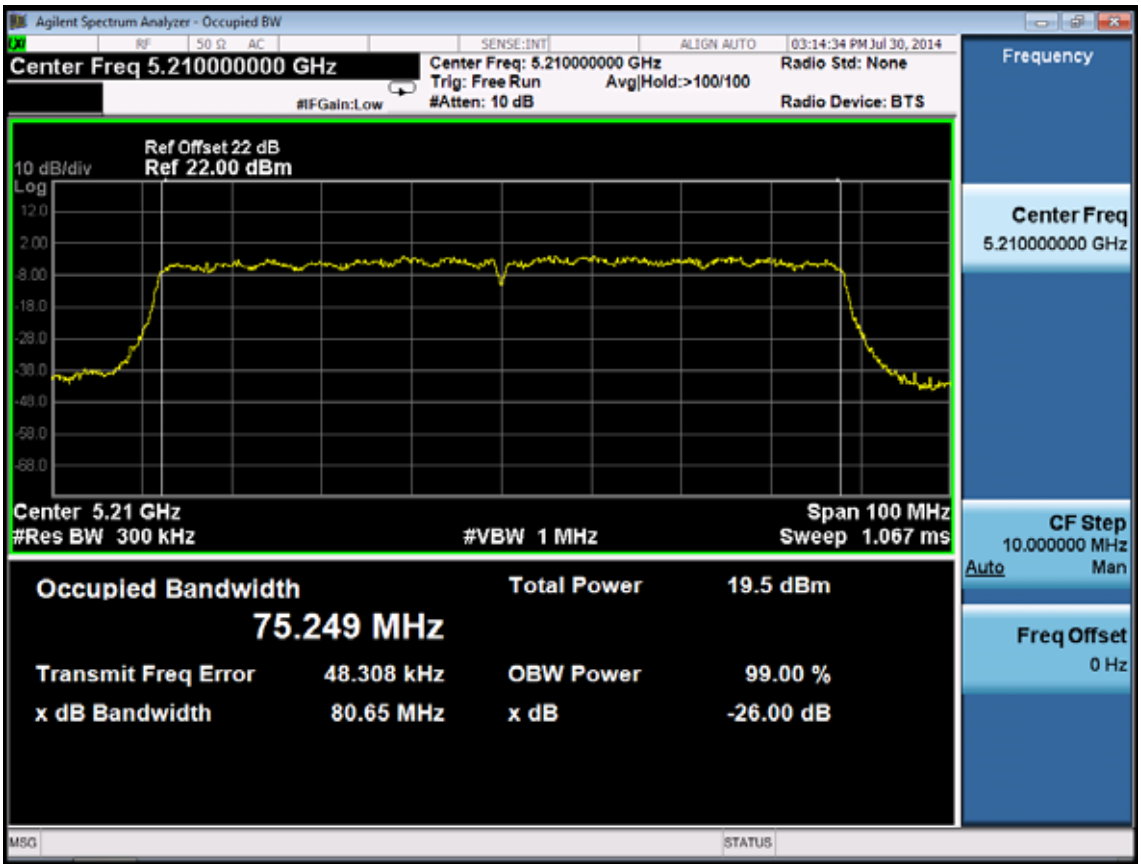


11ac VHT80

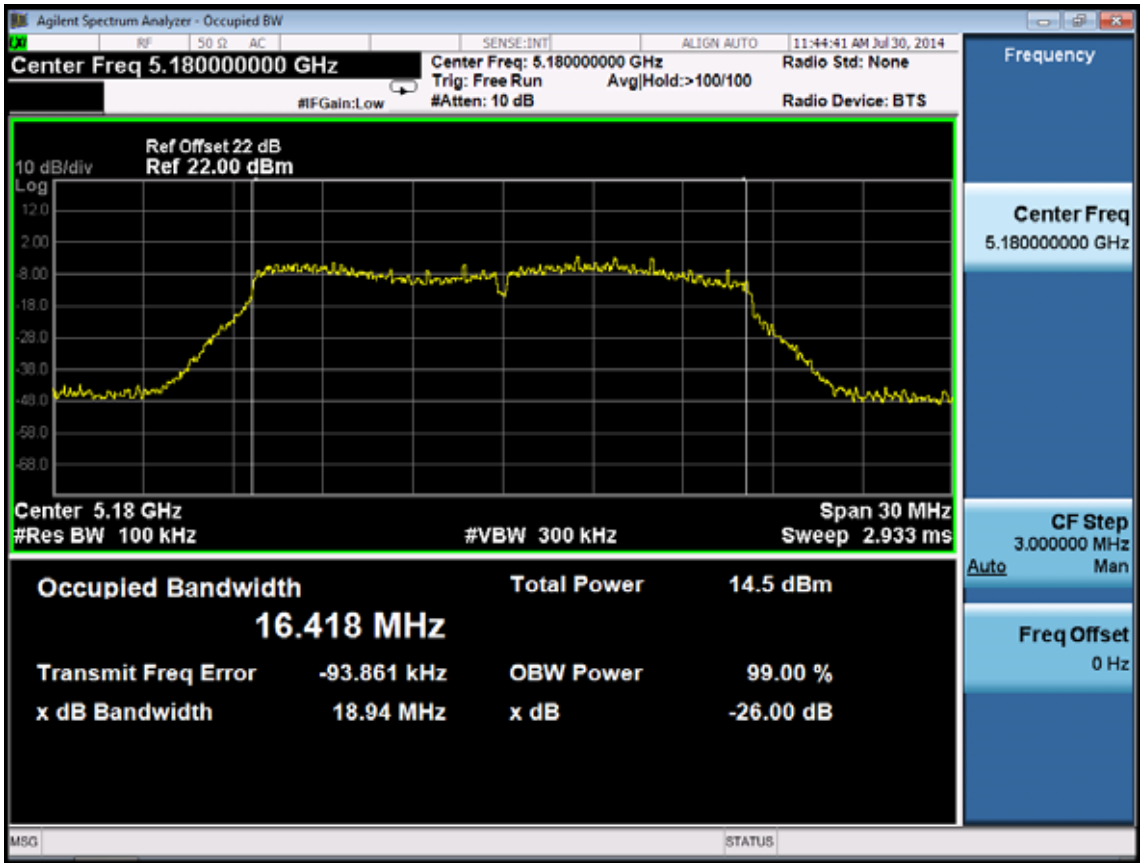
5210MHz



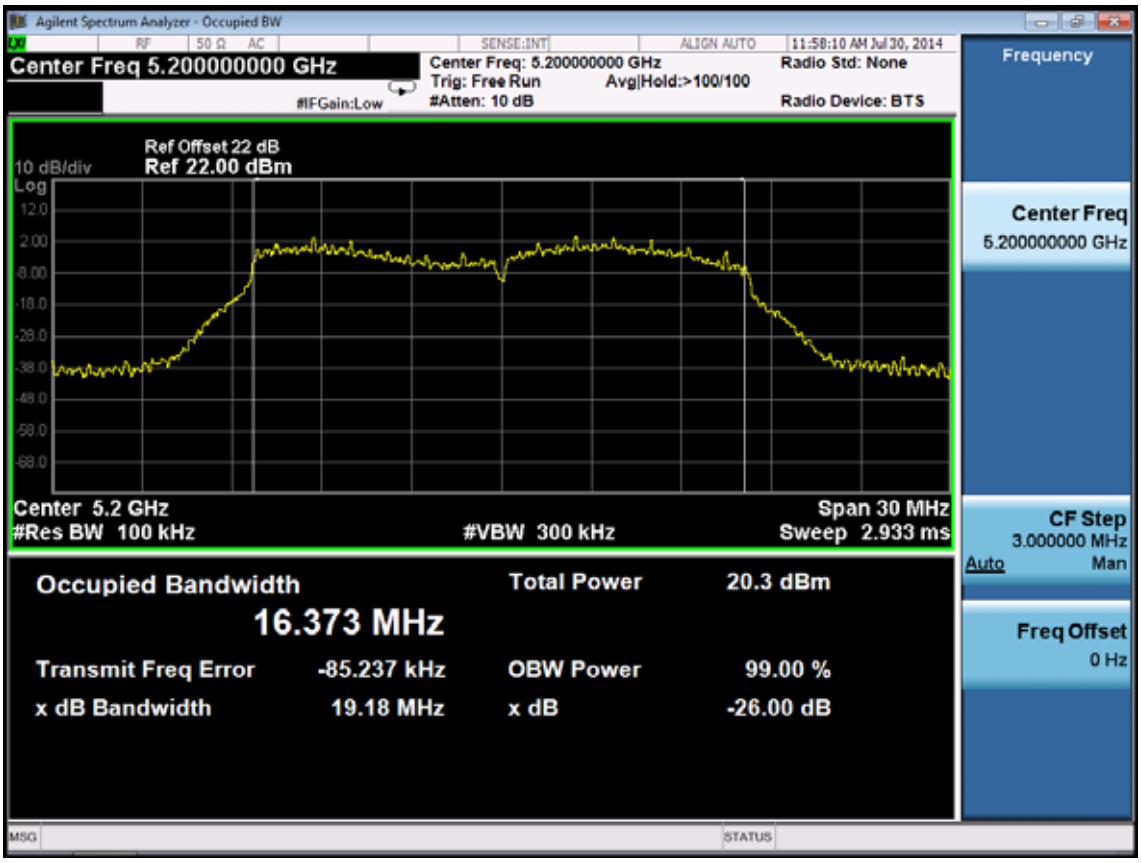
ANT1

11a

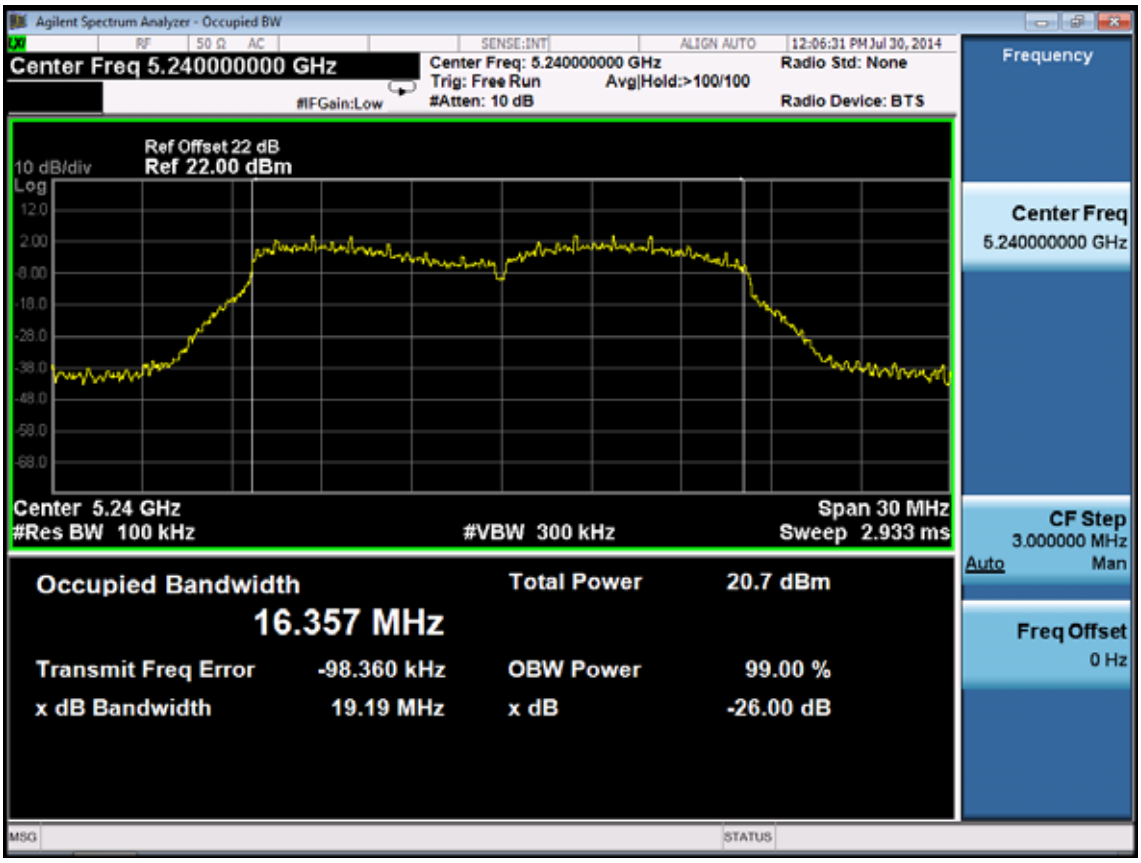
5180MHz



5200MHz

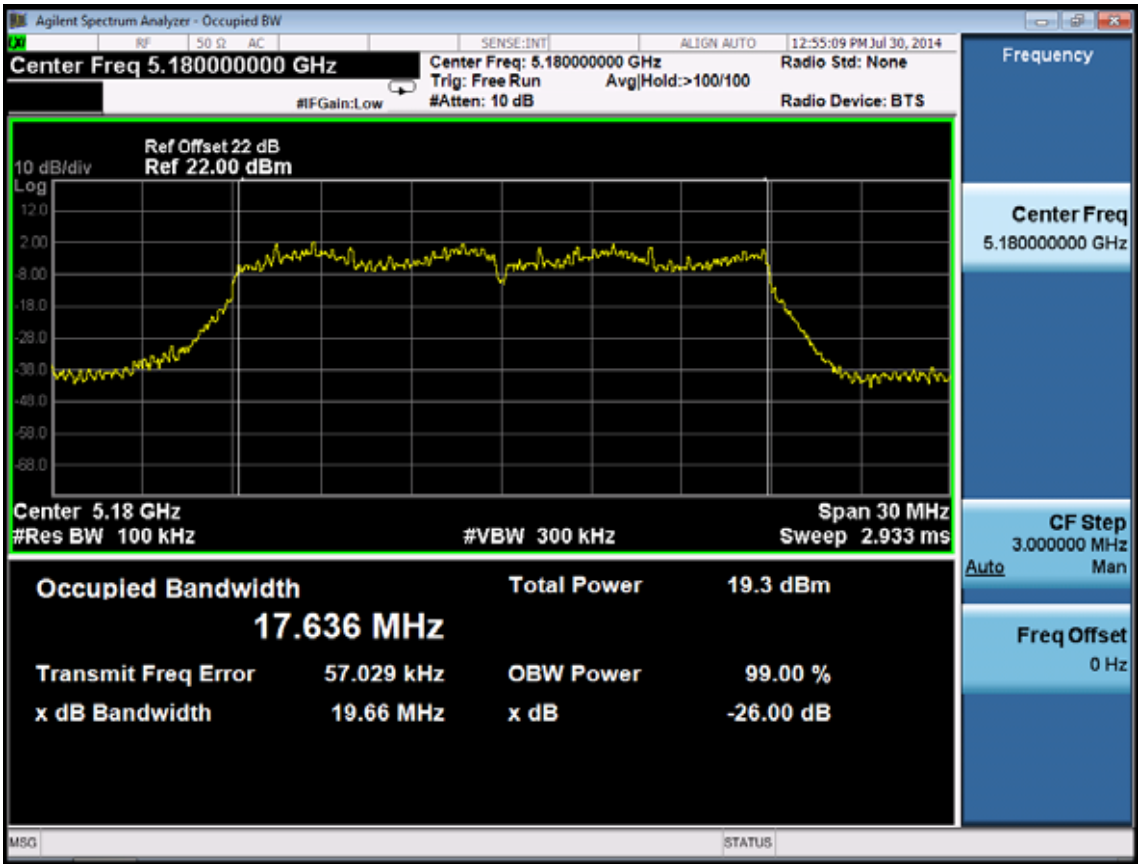


5240MHz



11n HT20

5180MHz



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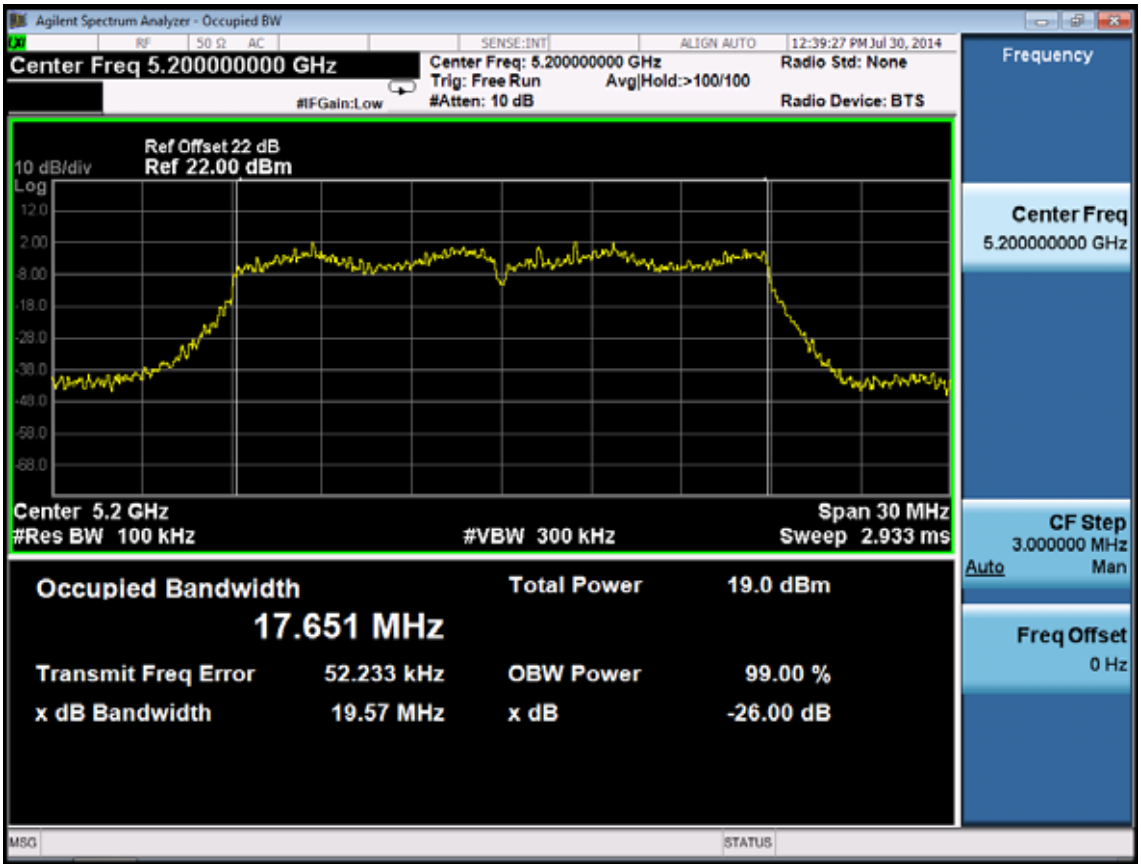

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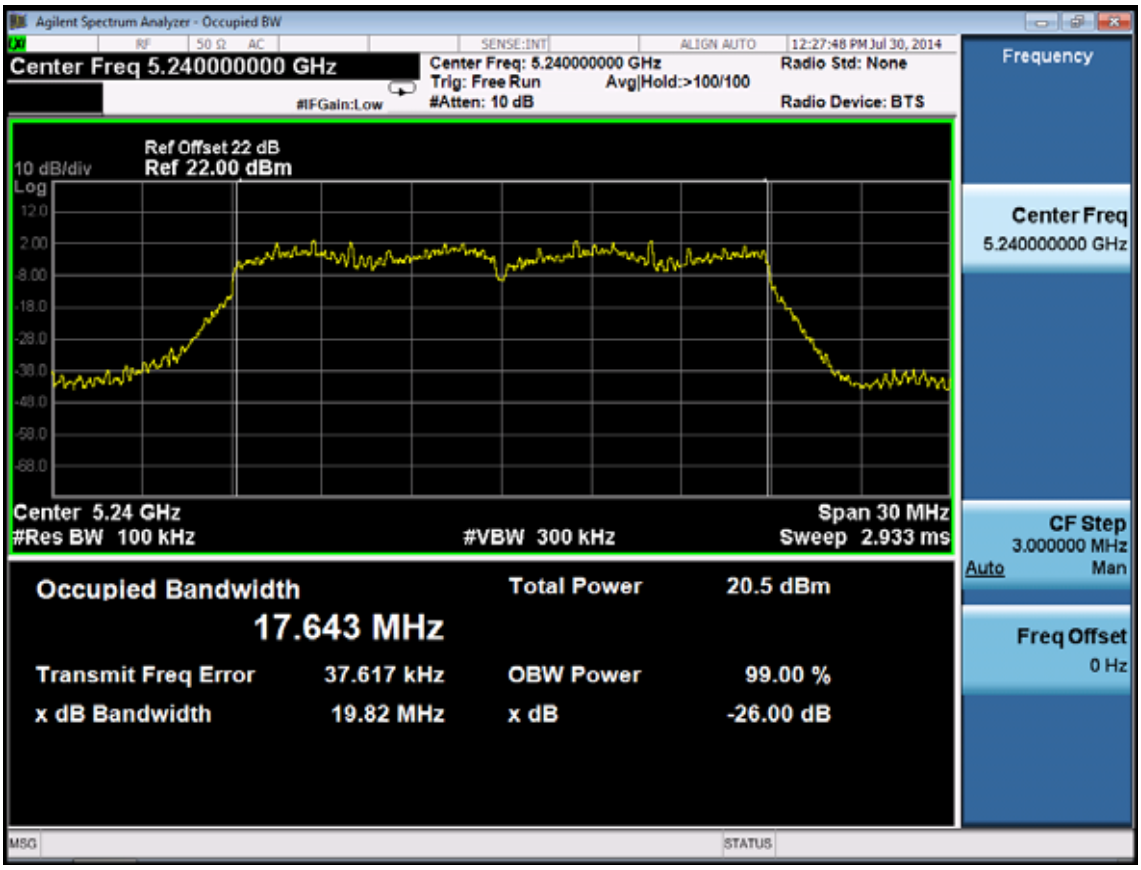
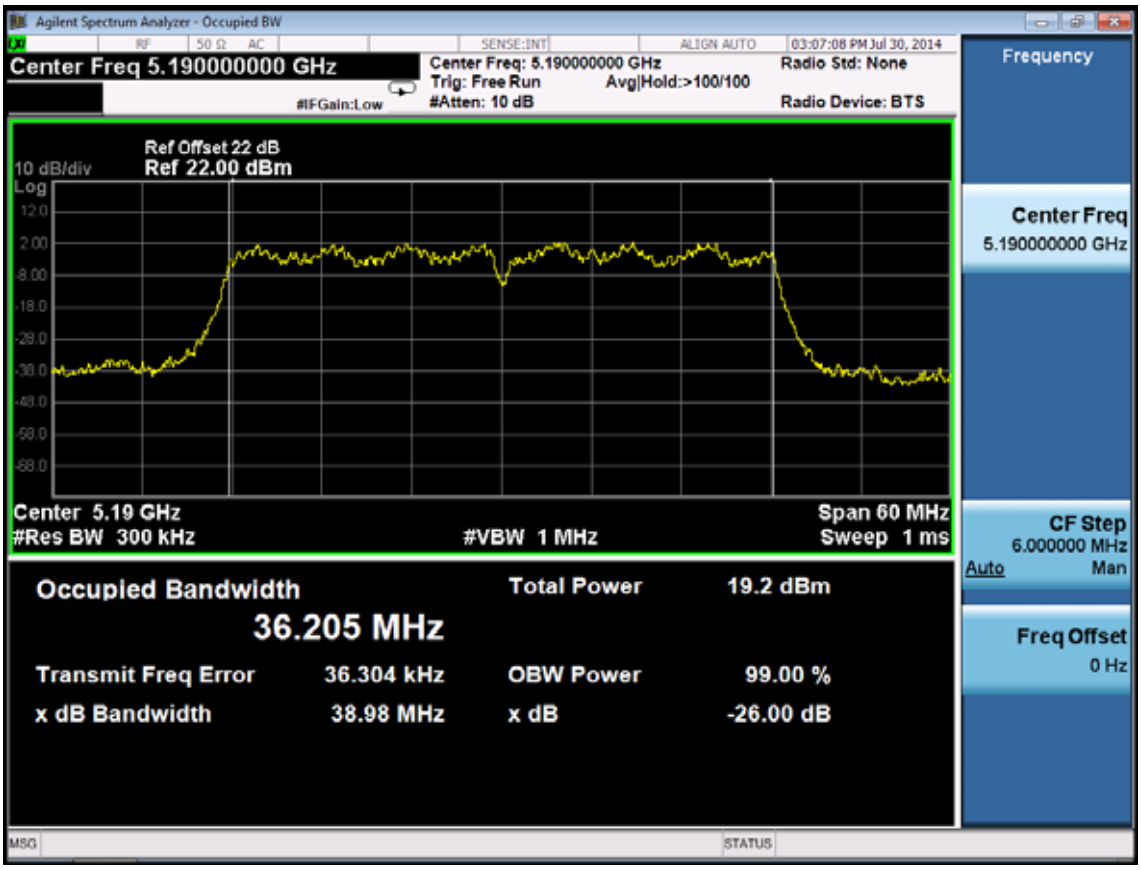
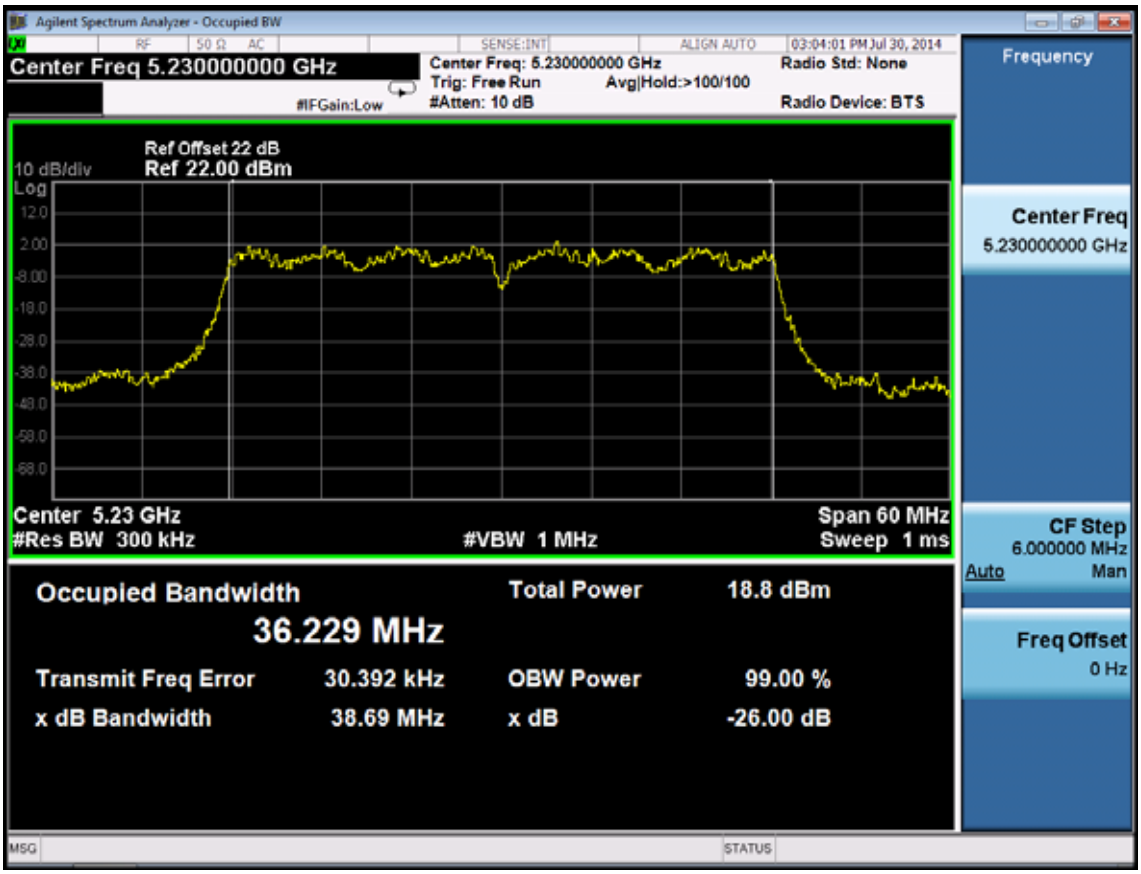


11n HT40

5190MHz

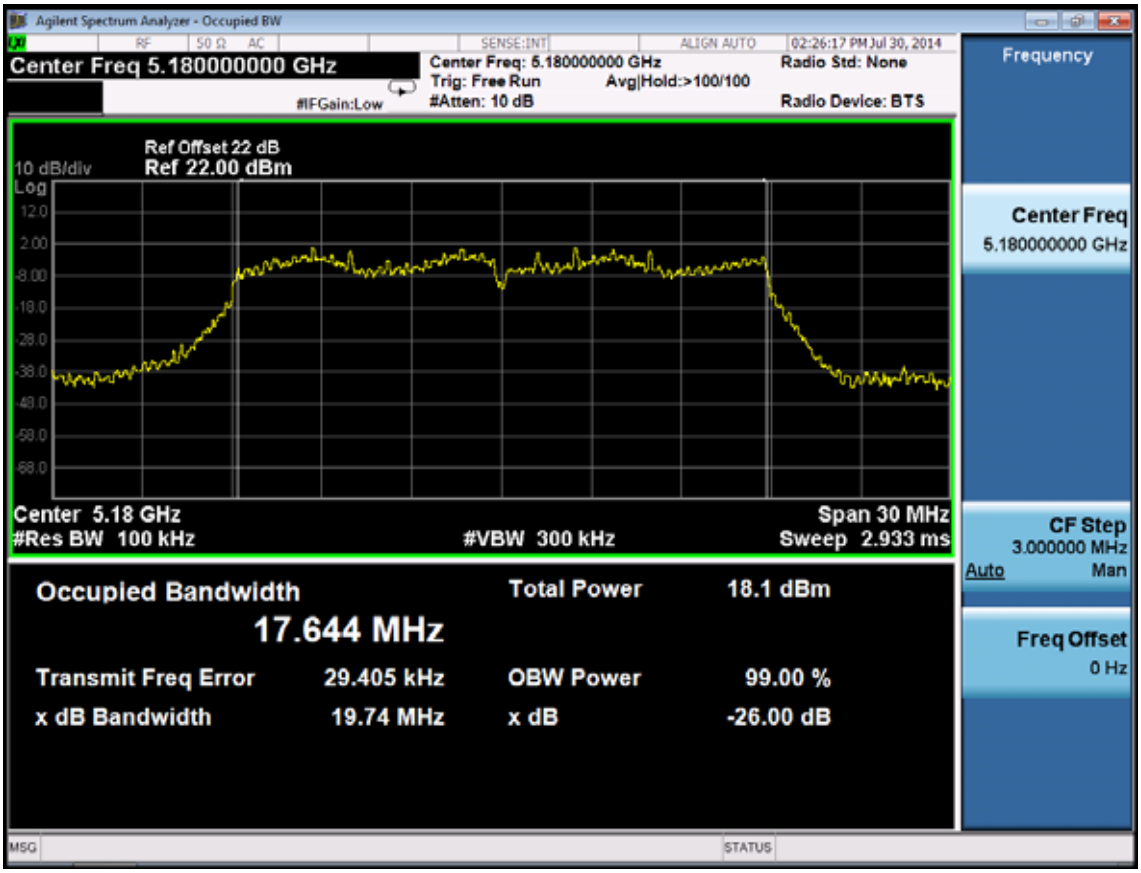


5230MHz



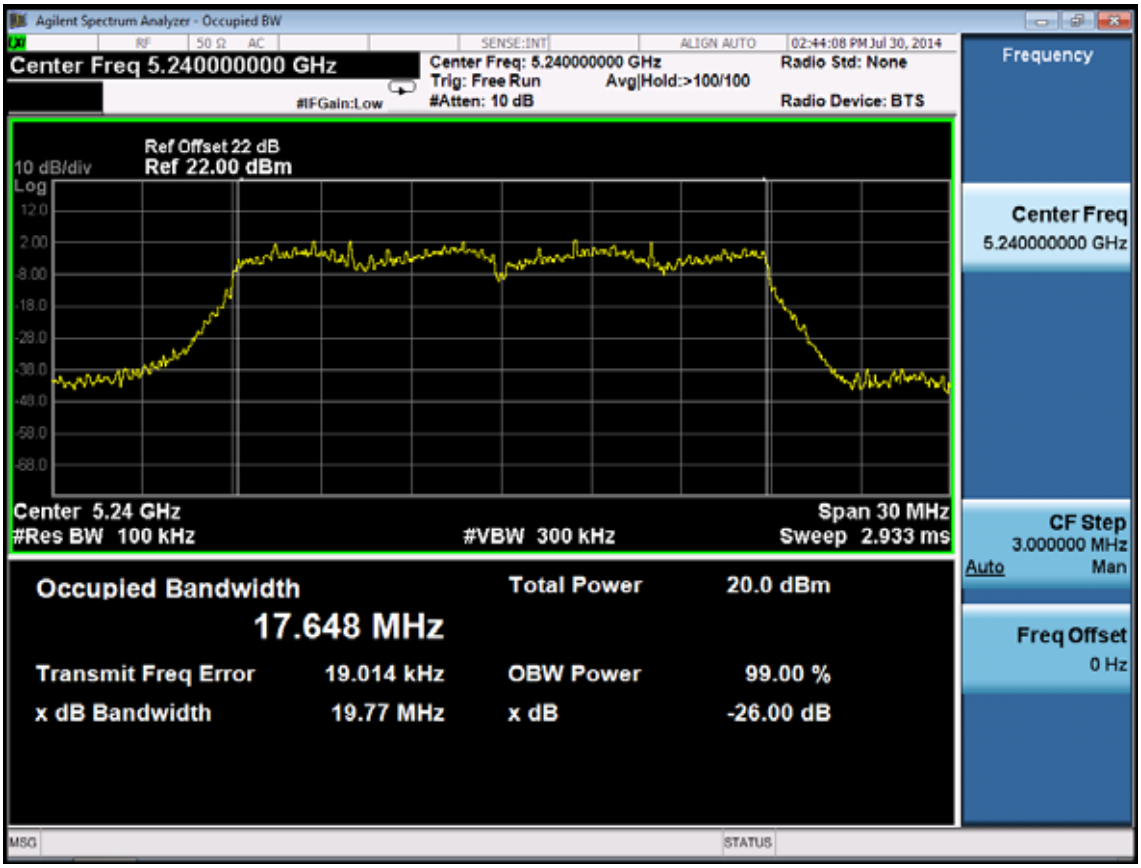
11ac VHT20

5180MHz



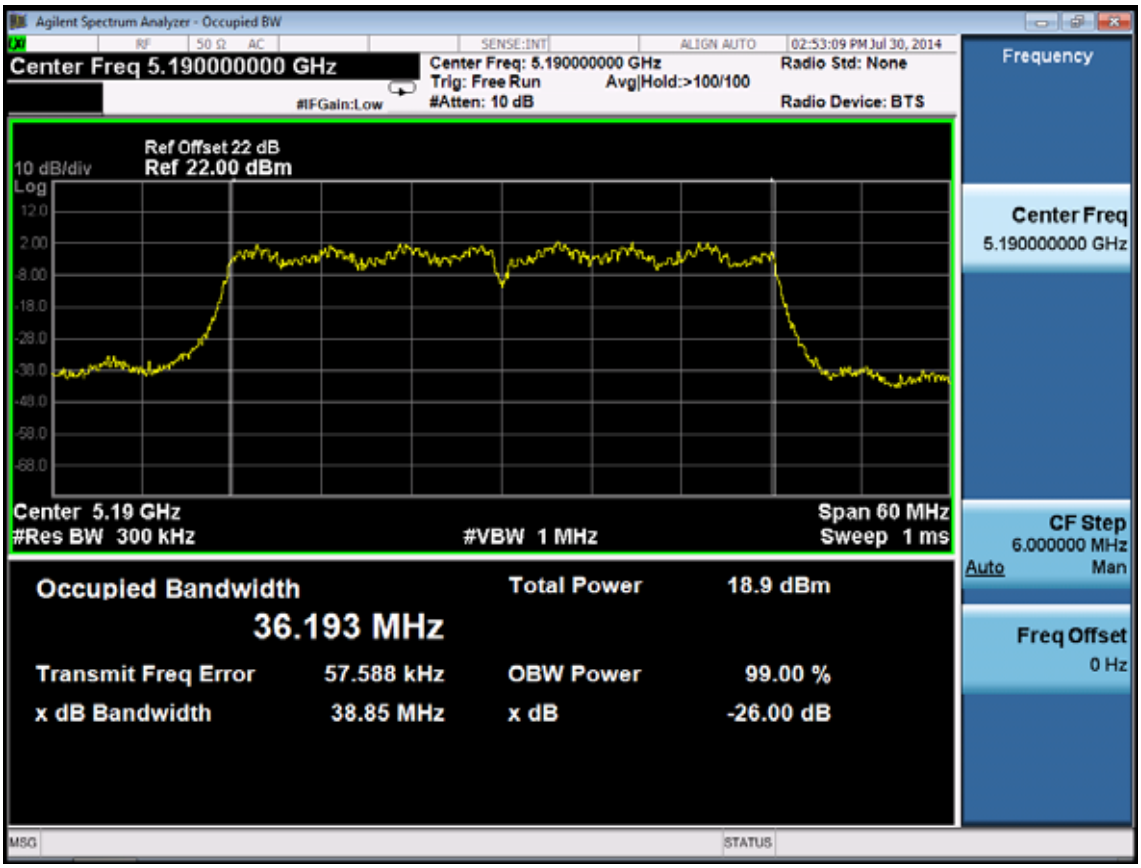
5200MHz

5240MHz

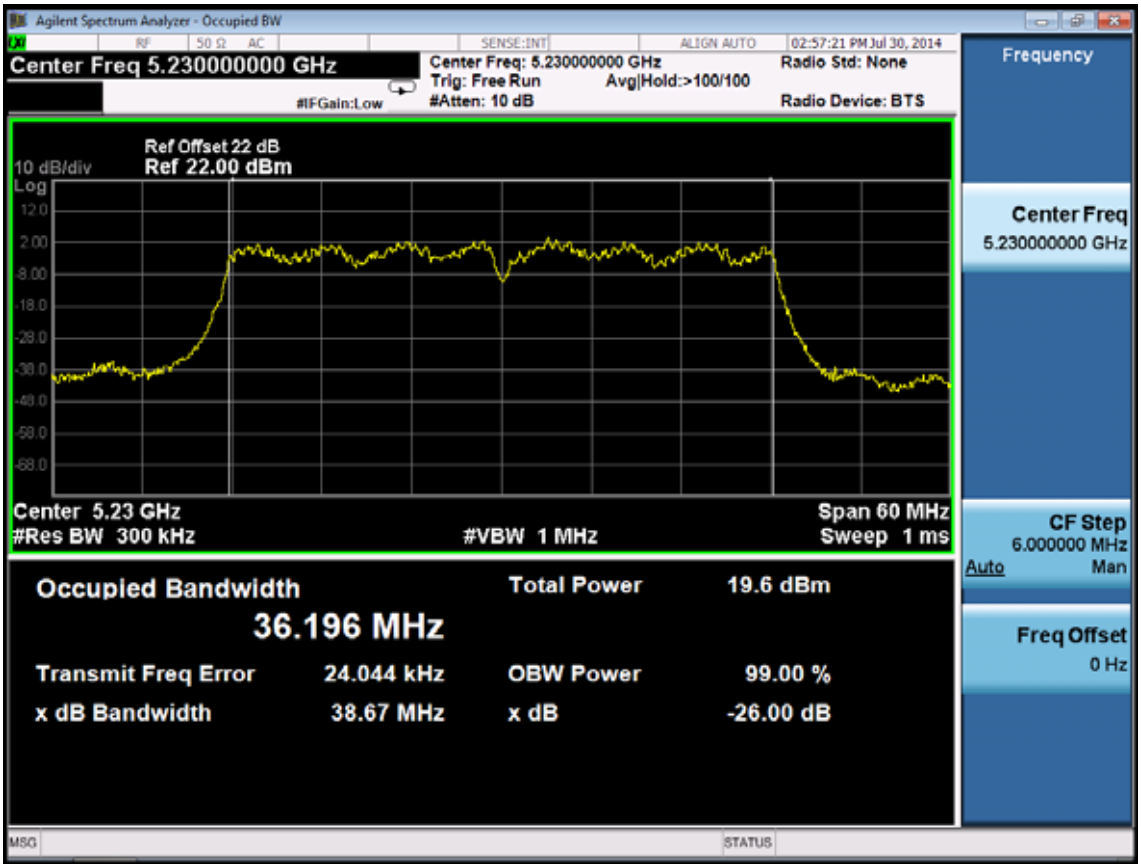


11ac VHT40

5190MHz

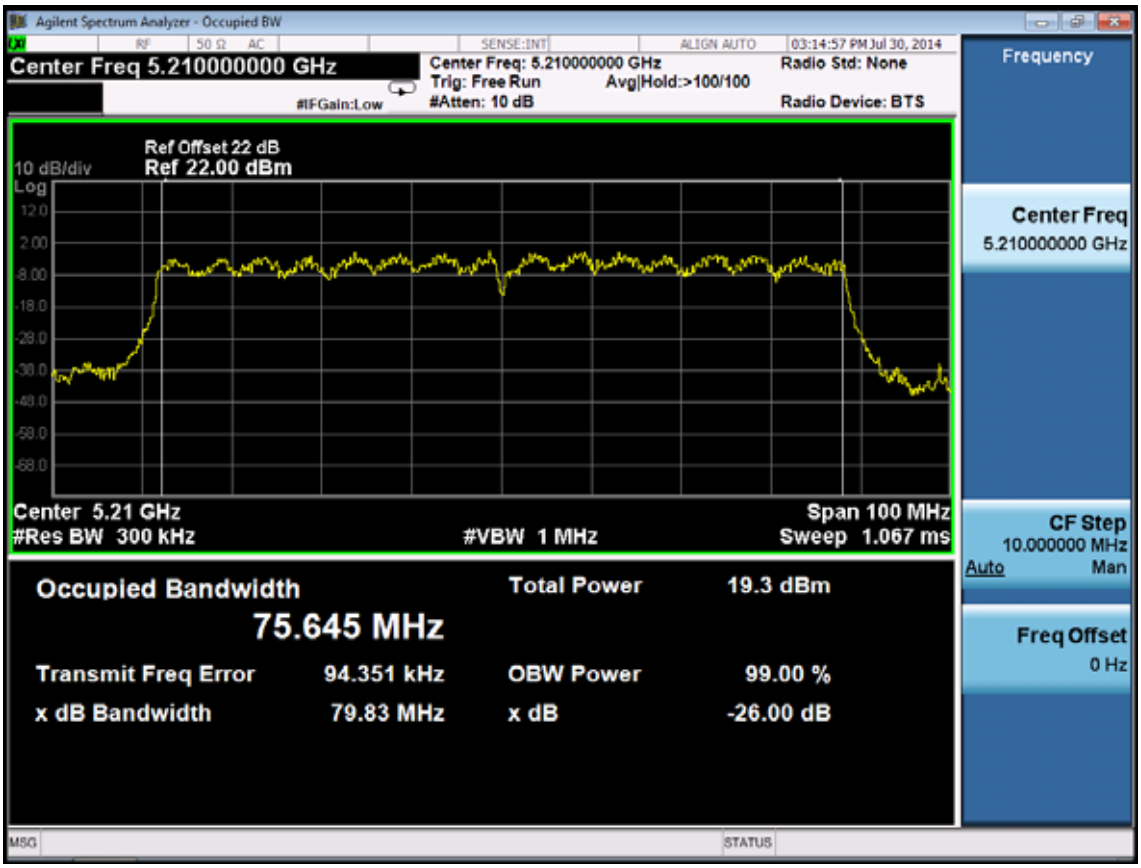


5230MHz



11ac VHT80

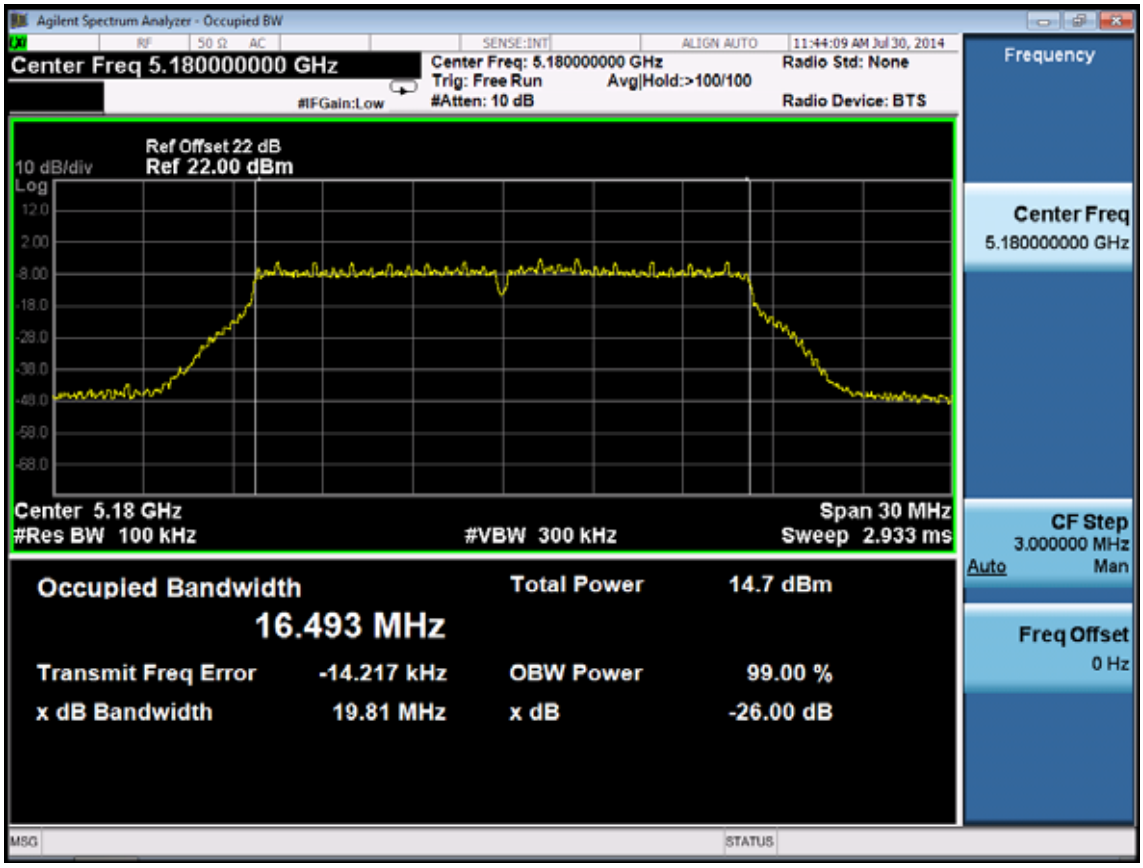
5210MHz



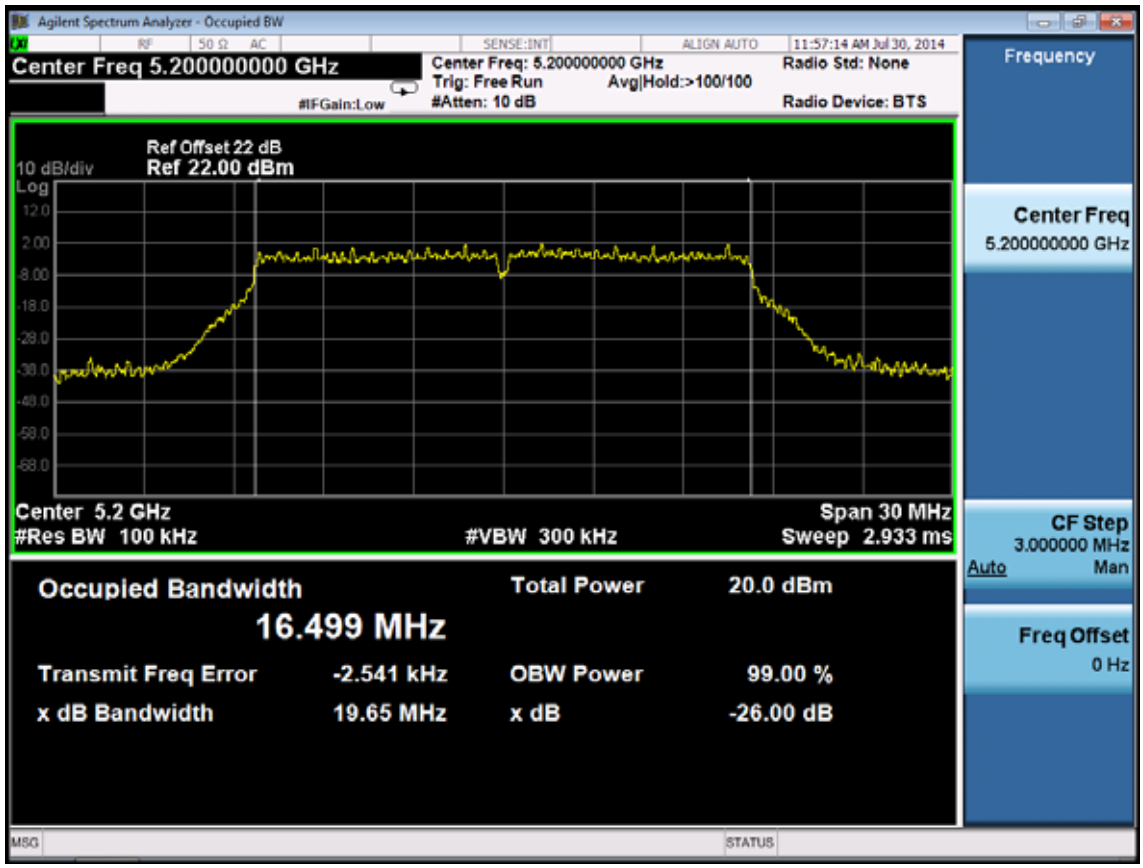
ANT2

11a

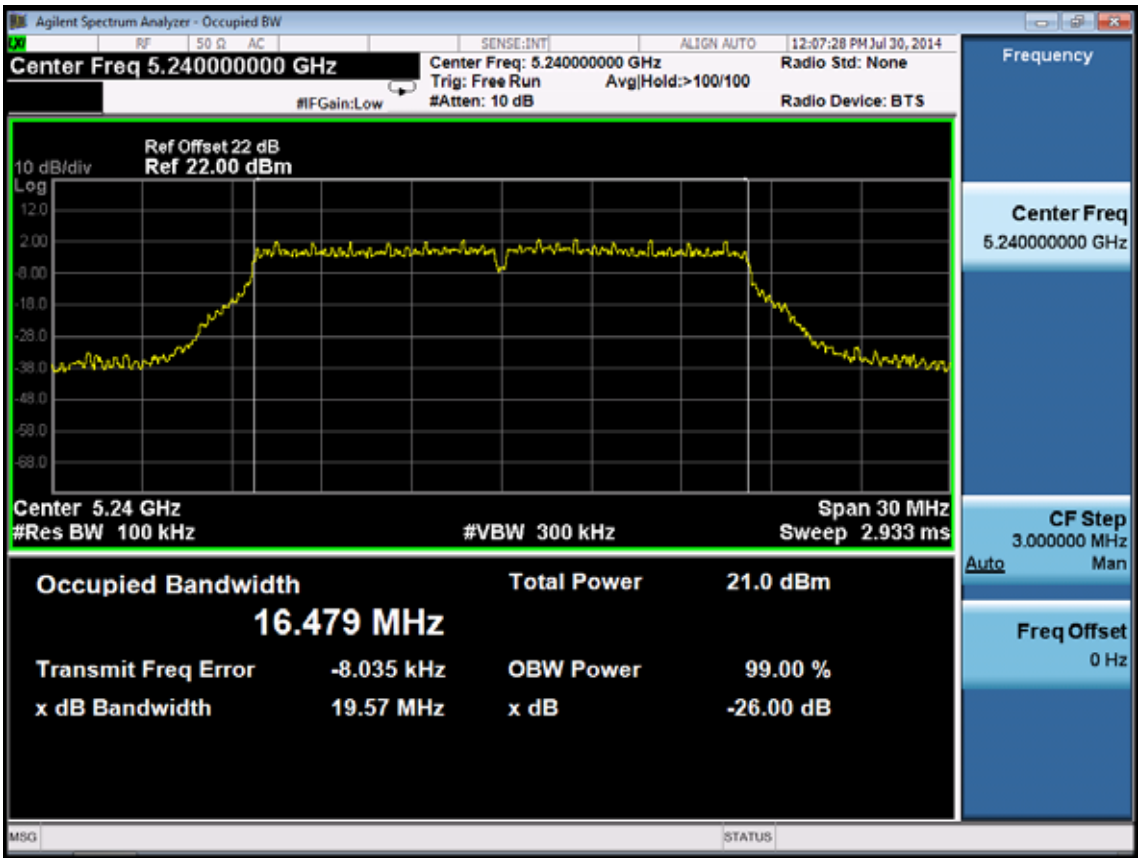
5180MHz



5200MHz

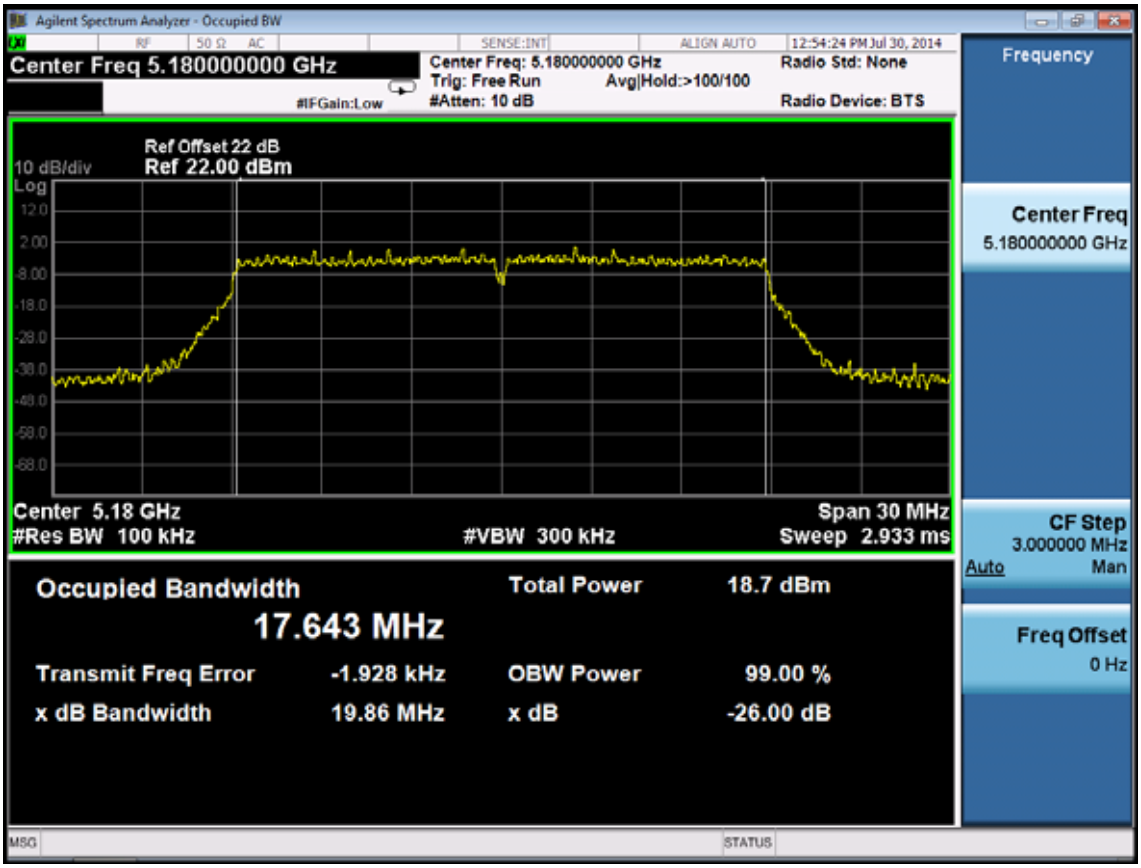


5240MHz



11n HT20

5180MHz



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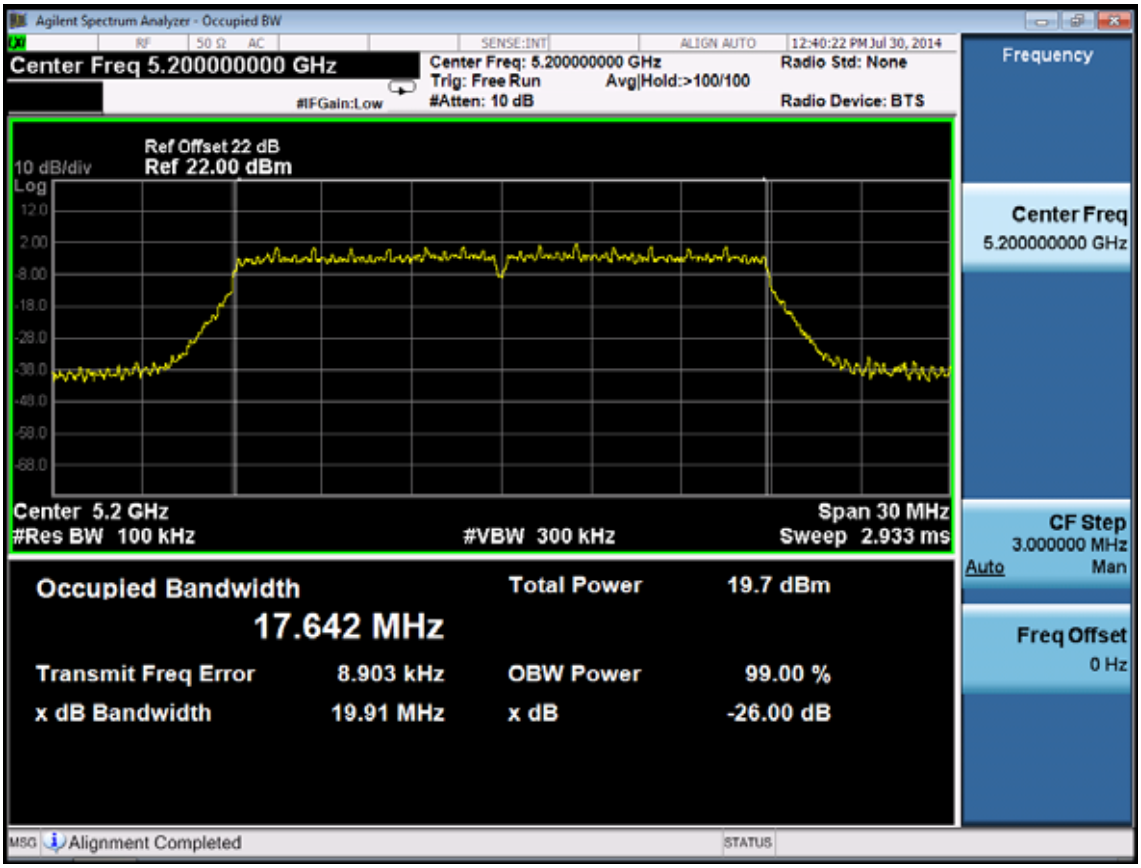

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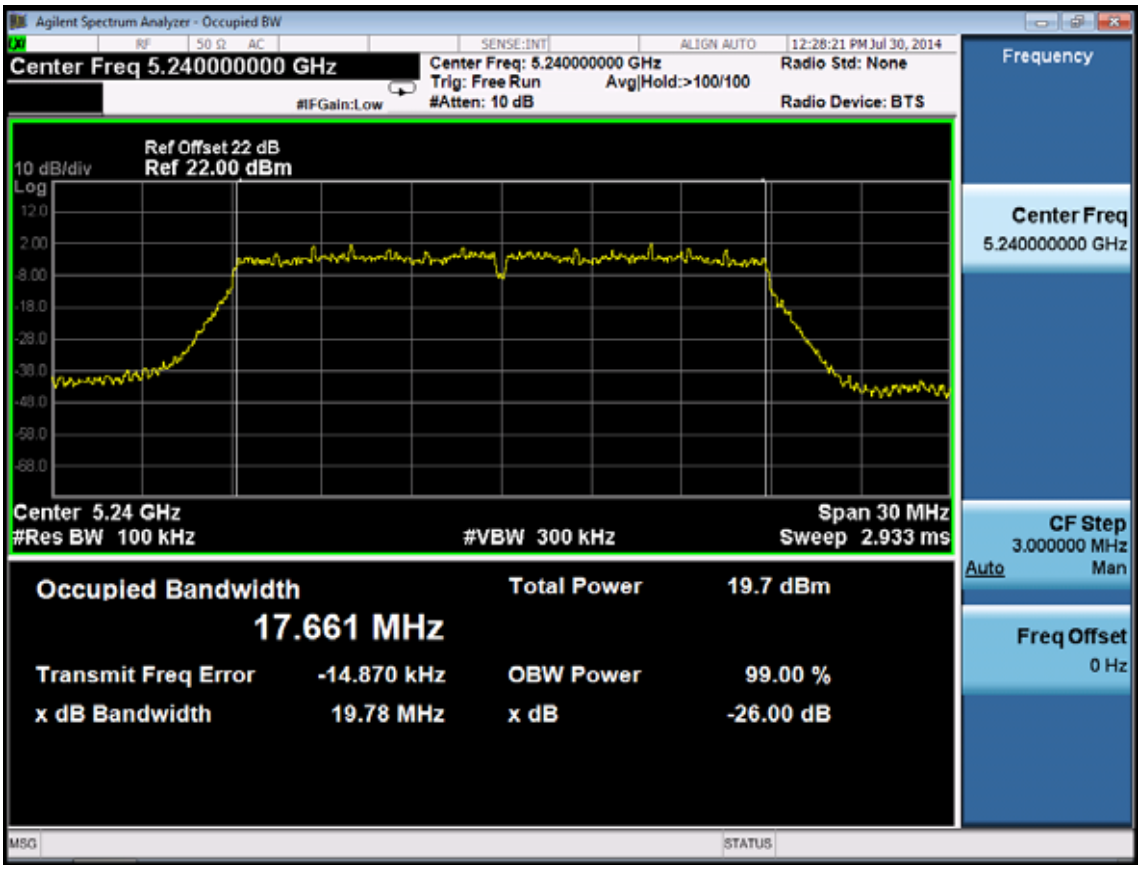
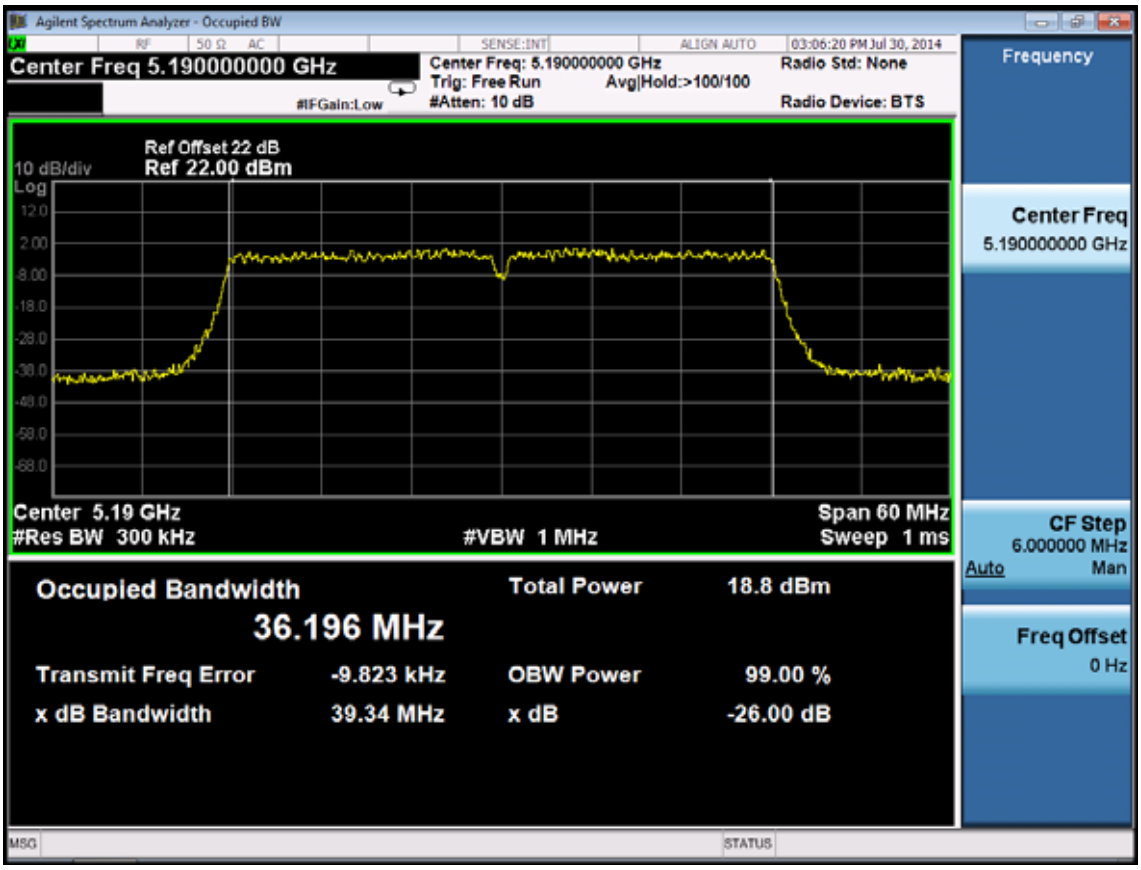
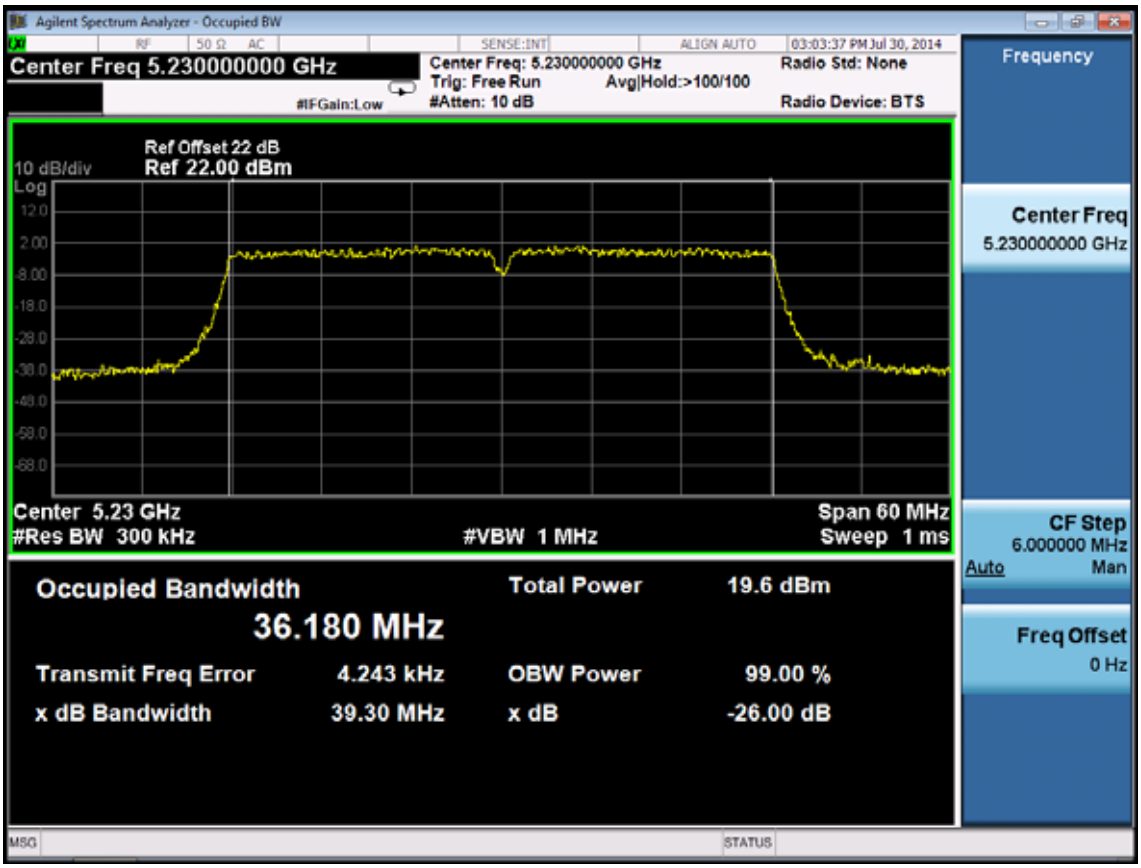


11n HT40

5190MHz

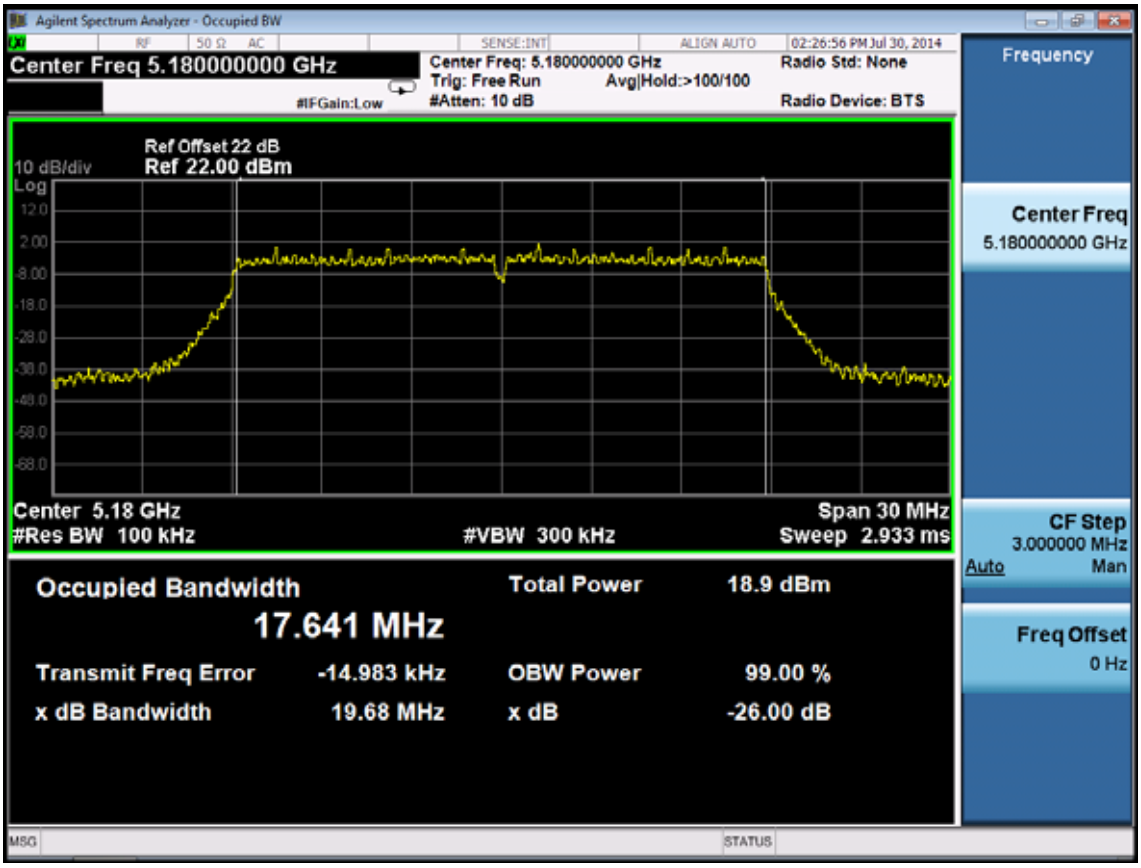


5230MHz

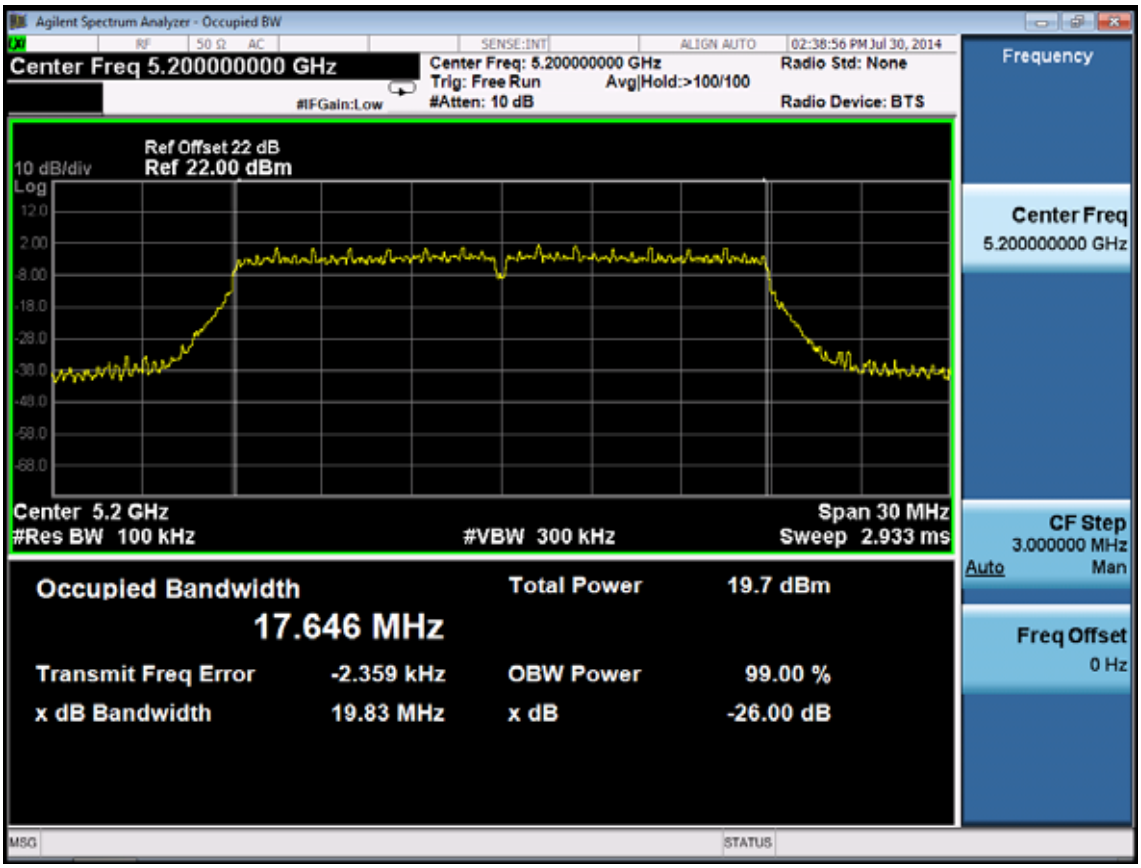


11ac VHT20

5180MHz



5200MHz



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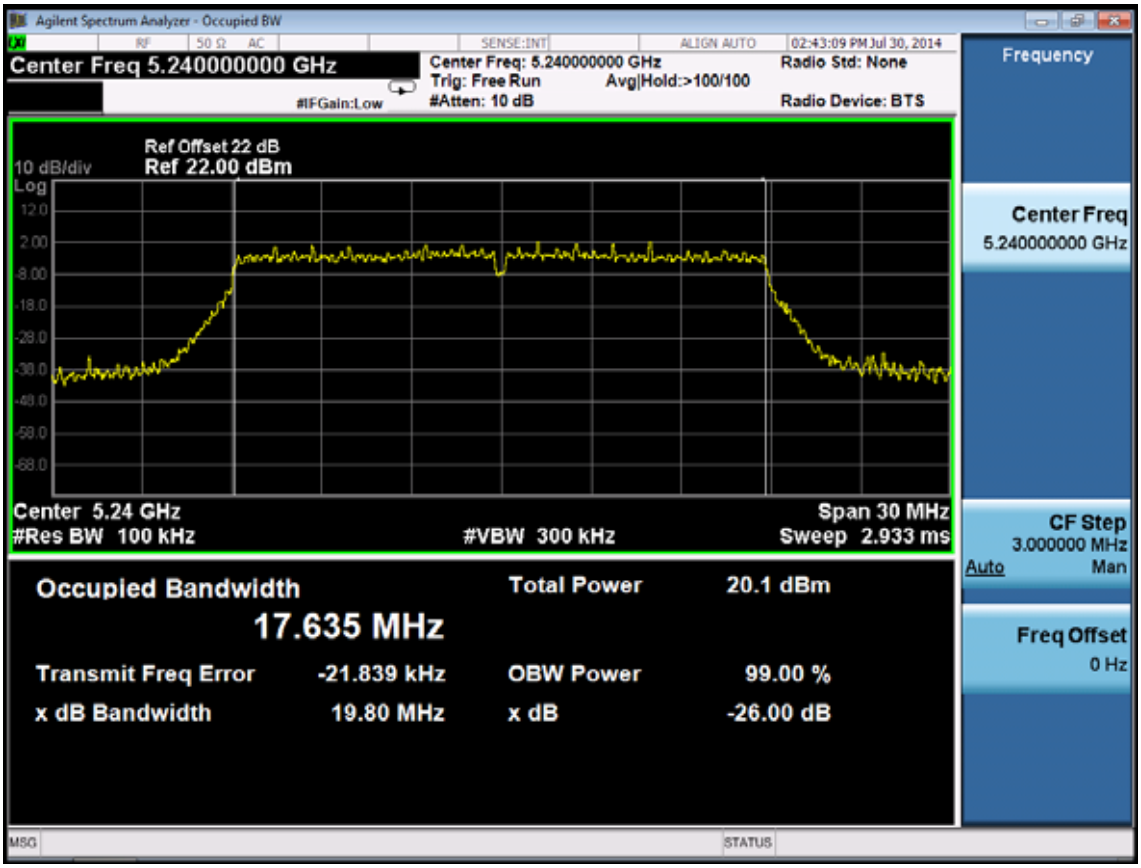
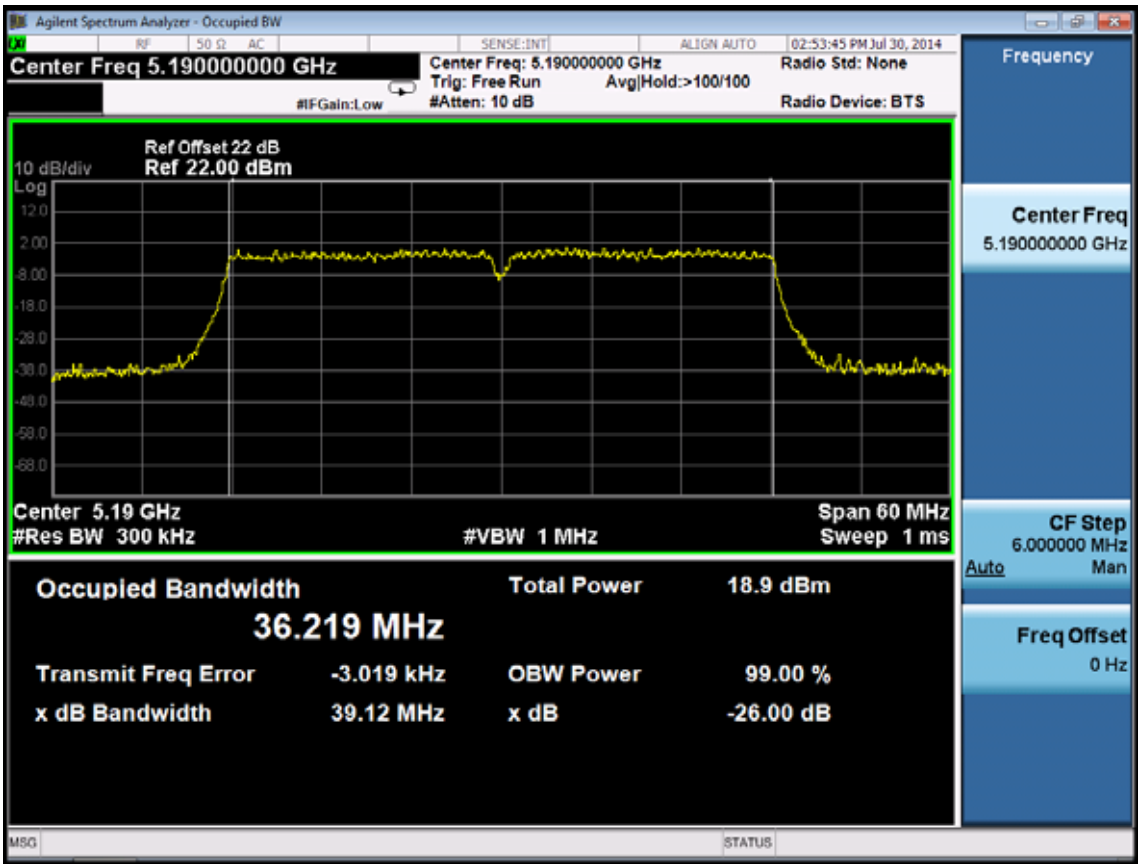
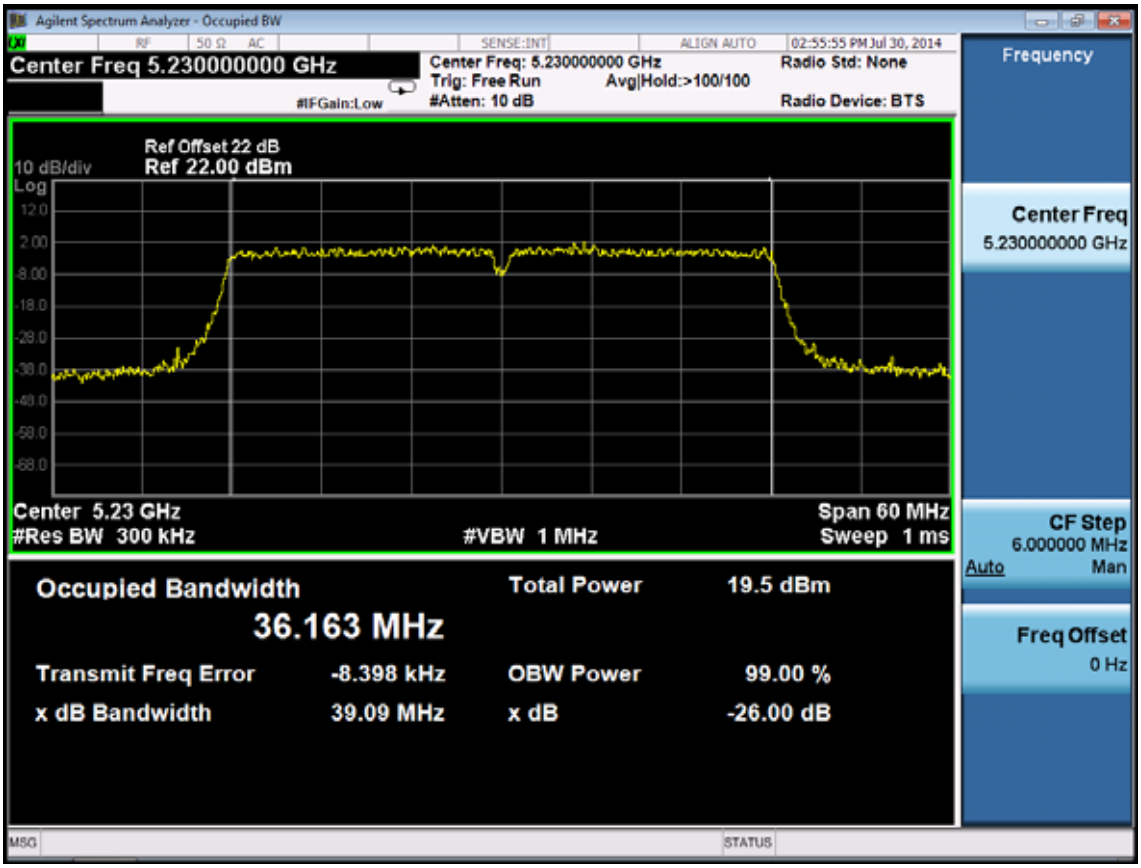


11ac VHT40

5190MHz

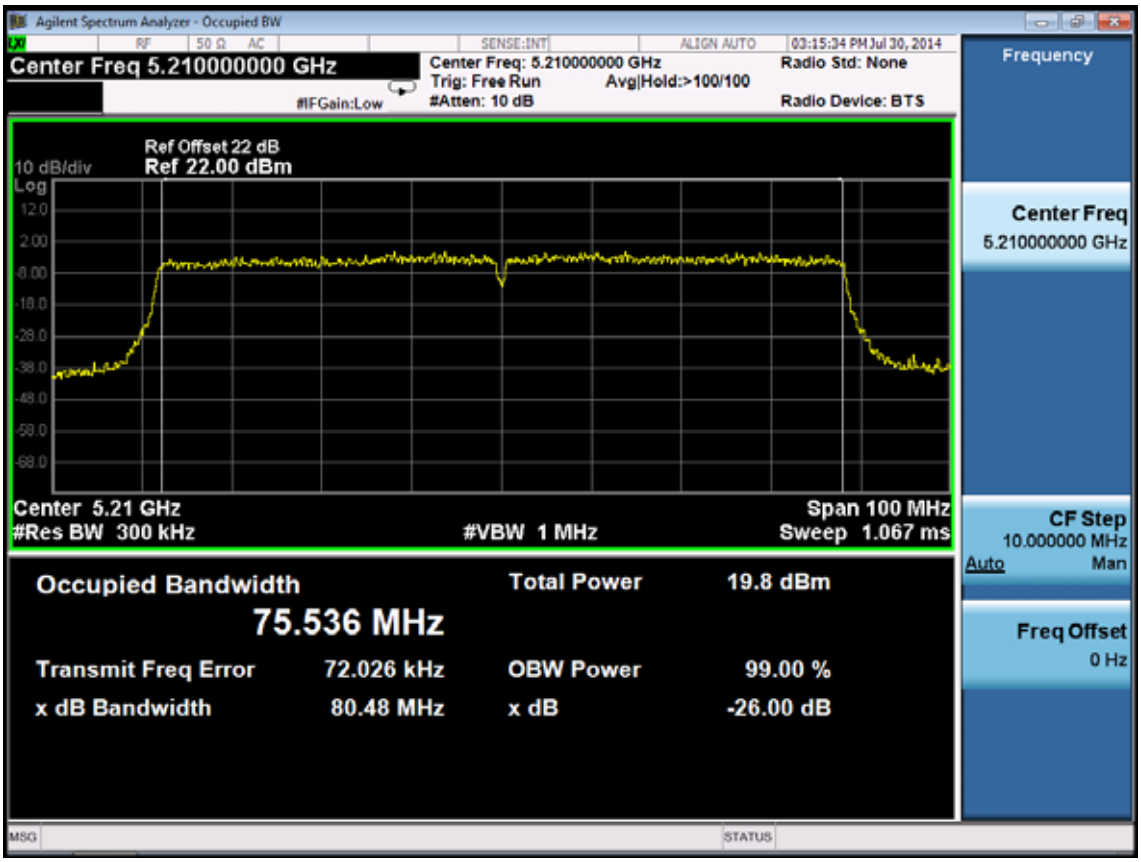


5230MHz



11ac VHT80

5210MHz



7. OUTPUT POWER TEST

7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	N9030A	MY51380221	Oct.31, 13	1Year
2.	Power meter	Anritsu	ML2487A	6K00002472	April 28,14	1Year
3.	Power sensor	Anritsu	MA2491A	0033005	April 28,14	1Year
4.	Attenuator (20dB)	Agilent	8491B	MY39262165	April 28,14	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	April 28,14	1 Year

7.2.Limit

For an 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.

7.3.Test Procedure

1. Connected the EUT's antenna port to measure device by 26dB attenuator.
2. For IEEE 802.11a and IEEE802.11n HT20 and 802.11ac VHT20 mode, use a PK power meter which's bandwidth is 20MHz and above 26dB bandwidth of signal to measure out each test modes' PK output power.
3. For IEEE802.11n HT40 and 802.11ac VHT40 & 80 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So use the test method described in KBD789033 clause E Method SA-1
   1) Connect the antenna port to the spectrum analyzer and Set span of the spectrum to encompass the entire 26-dB emission bandwidth (EBW) of the signal.
   2) Set the RBW=1MHz and VBW =3MHz
   3) Number of points in sweep ≥ 2 Span / RBW
   4) Detector = RMS
   5) Sweep time = auto couple
   6) Allow the sweep to "free run" and set the Trace average at least 100 traces in power averaging (i.e., RMS) mode.
   7) Compute power by integrating the spectrum across the 26 dB EBW of the signal using the instrument's band power measurement function with band limits set equal to the EBW band edges.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

7.4.Test Results

EUT: AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router						
M/N: Archer CR700						
Test date: 2014-09-04		Pressure: 101.1±1.0kpa			Humidity: 52.1±3.0%	
Tested by: Kevin_Hu		Test site: RF site			Temperature:22.5±0.6℃	
Cable loss: 2 dB		Attenuator loss: 20 dB				
Test Mode	Frequency (MHz)	Maximum Conducted Output Power (dBm)				Limit (dBm)
		ANT0	ANT1	ANT2	Total	
11a	5180	16.23	15.67	15.21	20.49	30
	5200	20.54	20.12	20.23	25.07	30
	5240	20.34	20.18	20.65	25.17	30
11n HT20	5180	16.11	15.54	16.07	20.69	30
	5200	17.32	17.13	17.64	22.14	30
	5240	17.04	17.29	17.01	21.89	30
11n HT40	5190	15.14	14.16	14.23	19.30	30
	5230	15.23	15.58	15.48	20.20	30
11ac VHT20	5180	16.01	15.31	15.06	20.25	30
	5200	18.17	18.29	18.17	22.98	30
	5240	18.03	18.38	18.48	23.07	30
11ac VHT40	5190	13.72	13.09	13.12	18.09	30
	5230	15.64	15.29	15.07	20.11	30
11ac VHT80	5210	12.22	11.64	12.13	16.78	30
Conclusion: PASS						

Note:

1. Correlated signal type for 11a,11n and 11ac mode are CDD.
2. 11a/n/ac working at CDD mode which described in KDB662911.
   Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

8. SPECTRAL DENSITY TEST

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	Apr. 28,14	1 Year
2.	Spectrum	Agilent	N9030A	MY51380221	Oct.31, 13	1Year
3.	Attenuator (20dB)	Agilent	8491B	MY39262165	Apr. 28,14	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	Apr. 28,14	1 Year

8.2.Limit

For an outside and indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17dBm in any 1 megahertz band.

8.3.Test Procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW,RMS Detector.
So use the test method described in KDB789033 clause E

1) Set span of the spectrum to encompass the entire 26-dB emission bandwidth (EBW) of the signal.
2) Set the RBW=1MHz and VBW =3MHz
3) Number of points in sweep ≥ 2 Span / RBW
4) Detector = RMS
5) Sweep time = auto couple
6) Allow the sweep to “free run” and set the Trace average at least 100 traces in power averaging (i.e., RMS) mode.
7) Use the peak search function find the max value as the power density in 1MHz.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.4.Test Results

EUT: AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router		
M/N: Archer CR700		
Test date: 2014-07-26	Pressure: 101.2±1.0kpa	Humidity:51.2±3.0%
Tested by: Kevin_Hu	Test site: RF site	Temperature:22.3±0.6℃

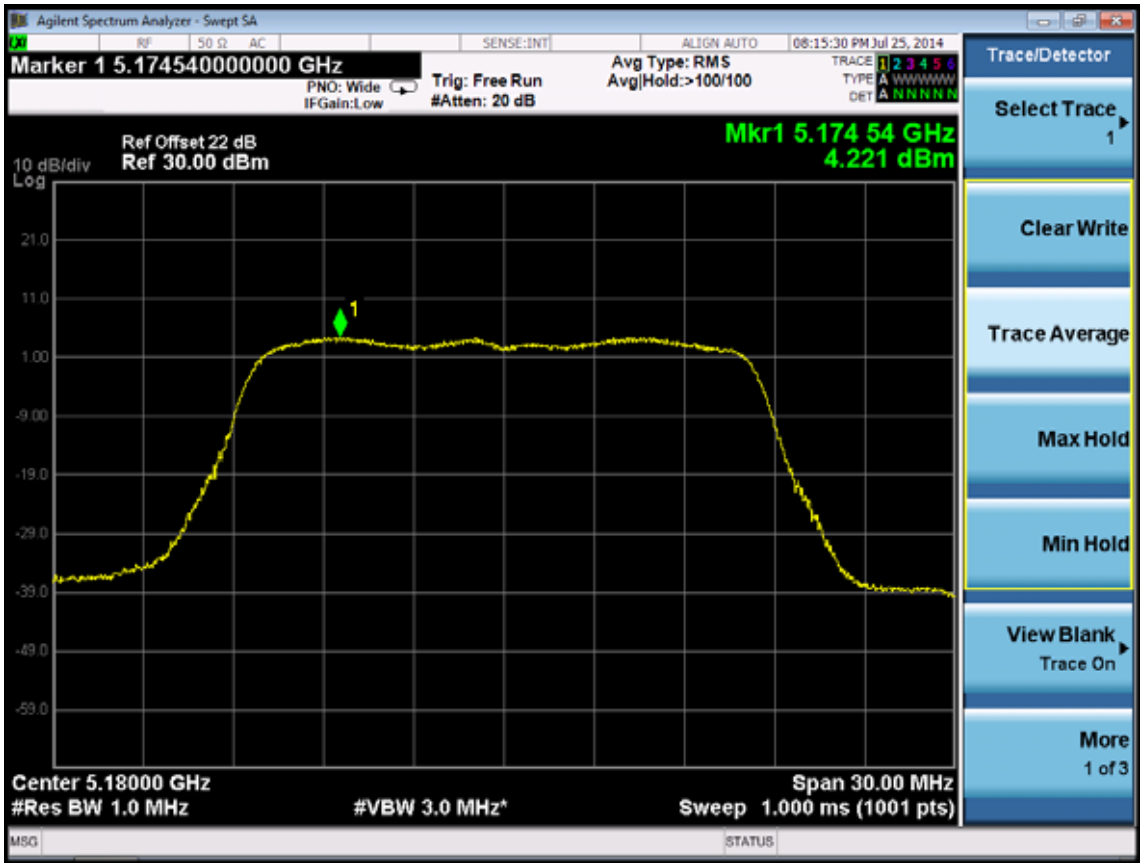
Cable loss: 2 dB		Attenuator loss: 20 dB				
Test Mode	Frequency（MHz）	Power density (dBm/MHz)				Limit（dBm/MHz）
		ANT0	ANT1	ANT2	Total	
11a	5180	4.221	5.144	2.682	8.90	17
	5200	6.242	7.332	6.229	11.40	17
	5240	6.601	6.798	6.462	11.39	17
11n HT20	5180	4.686	5.470	4.557	9.69	17
	5200	6.007	5.253	4.926	10.19	17
	5240	5.865	6.306	5.606	10.71	17
11n HT40	5190	-0.274	-0.866	-1.730	3.86	17
	5230	1.808	2.013	0.872	6.36	17
11ac VHT20	5180	1.977	2.371	-0.433	6.24	17
	5200	5.341	6.894	4.742	10.53	17
	5240	5.380	6.331	5.170	10.43	17
11ac VHT40	5190	-2.073	-1.851	-3.450	2.37	17
	5230	1.962	2.653	1.289	6.77	17
11ac VHT80	5210	-6.327	-5.506	-6.640	-1.36	17

Conclusion: PASS
NOTE: 11a/n/ac working at CDD mode which described in KDB662911.
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

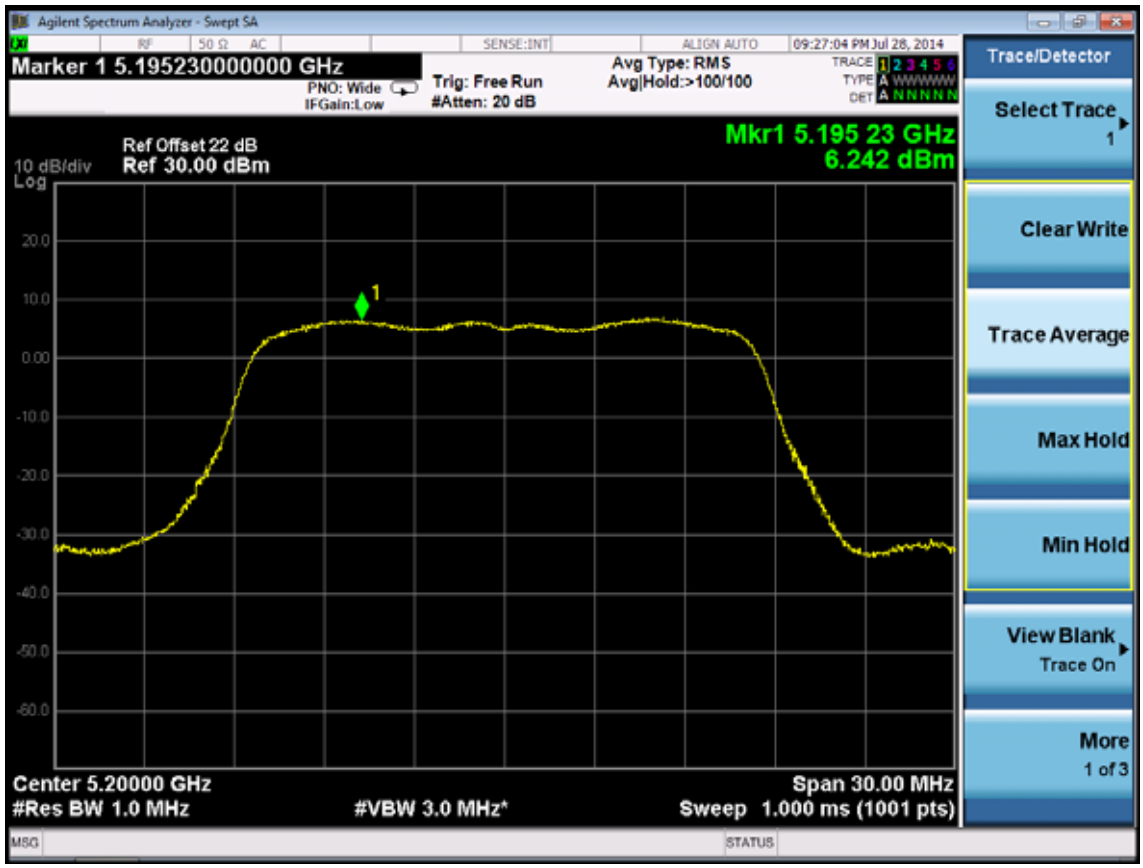
ANT0

11a

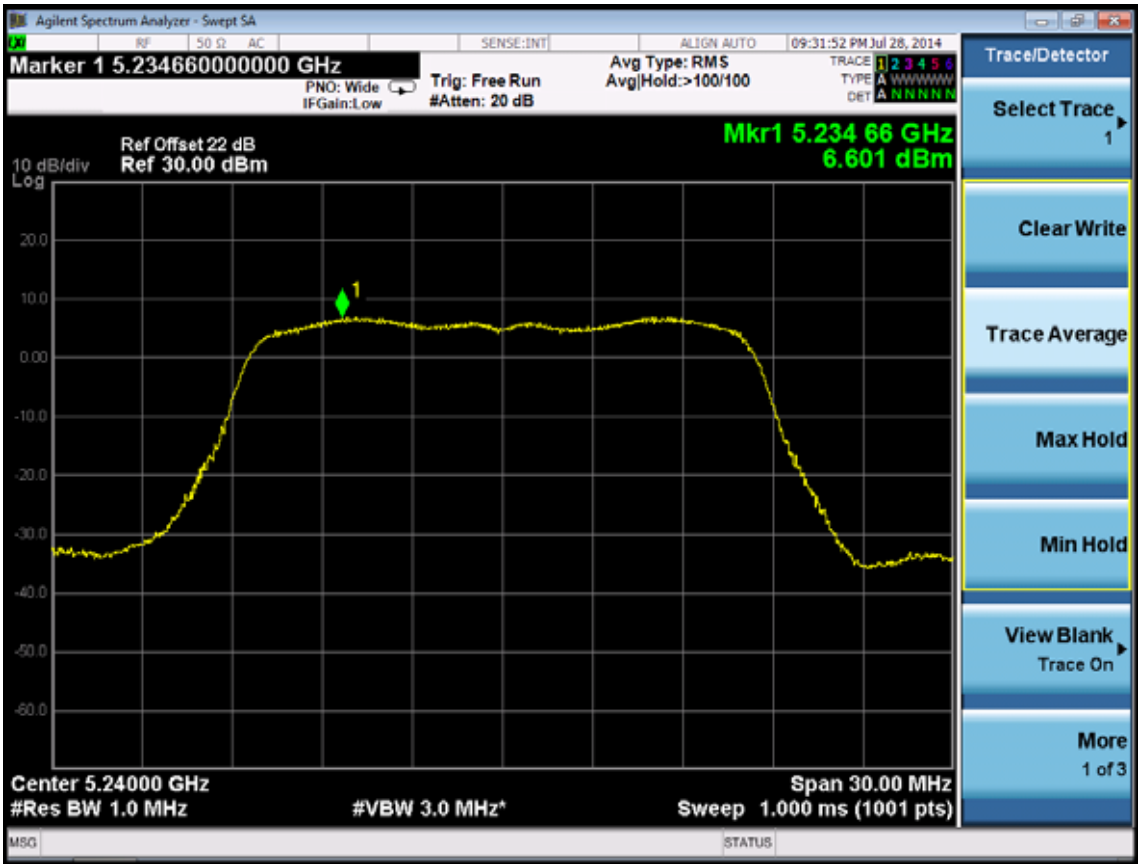
5180MHz



5210MHz

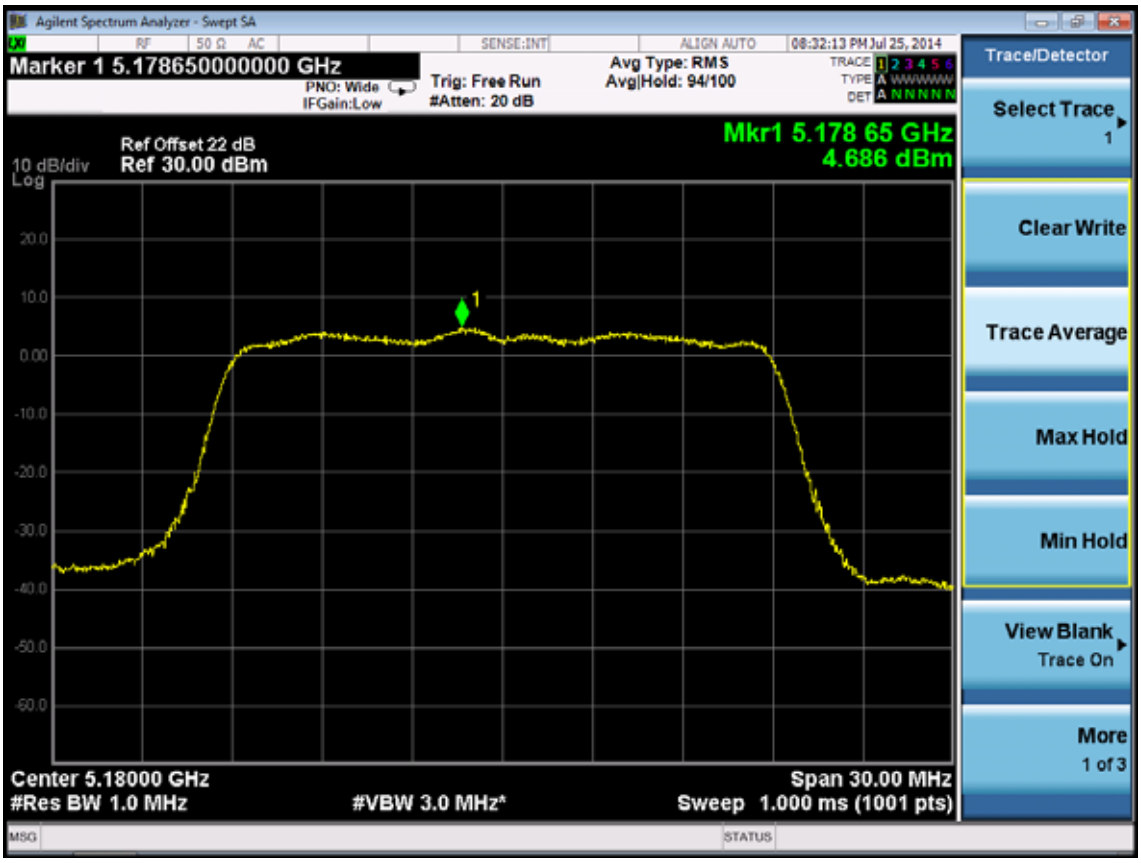


5240MHz



11nHT20

5180MHz



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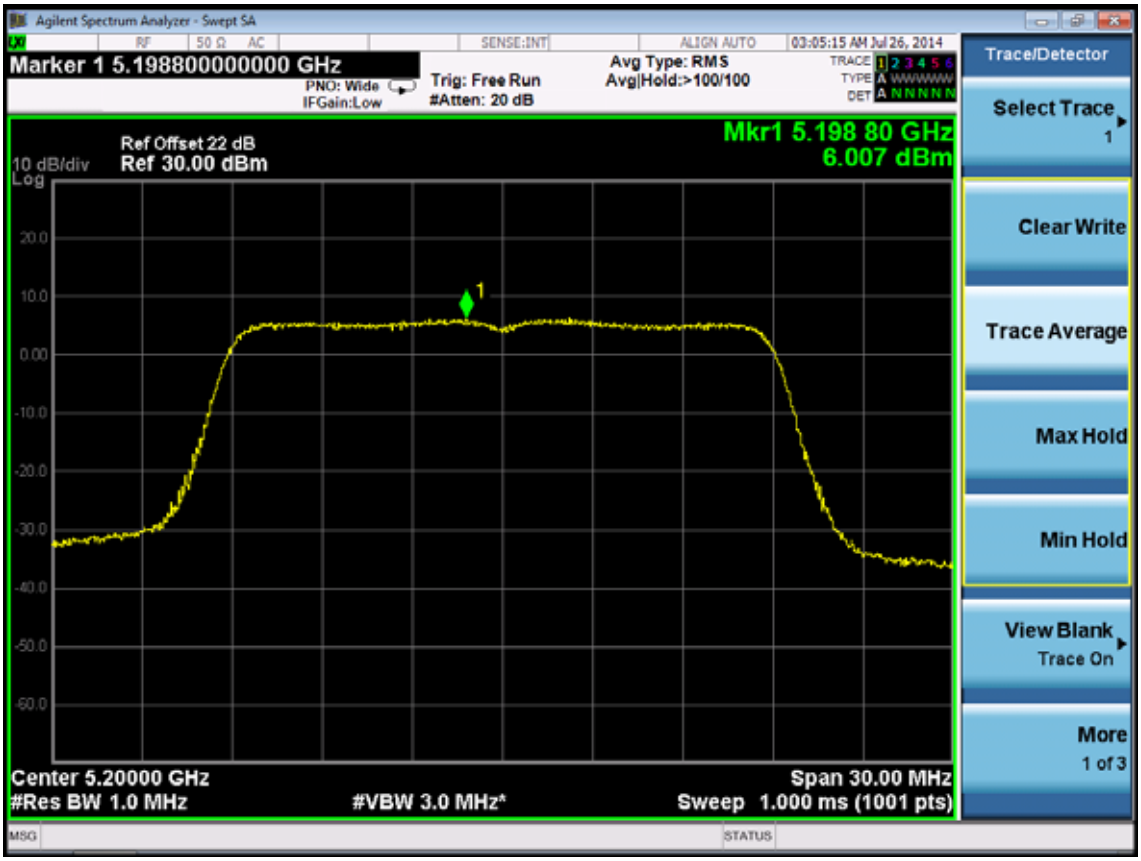
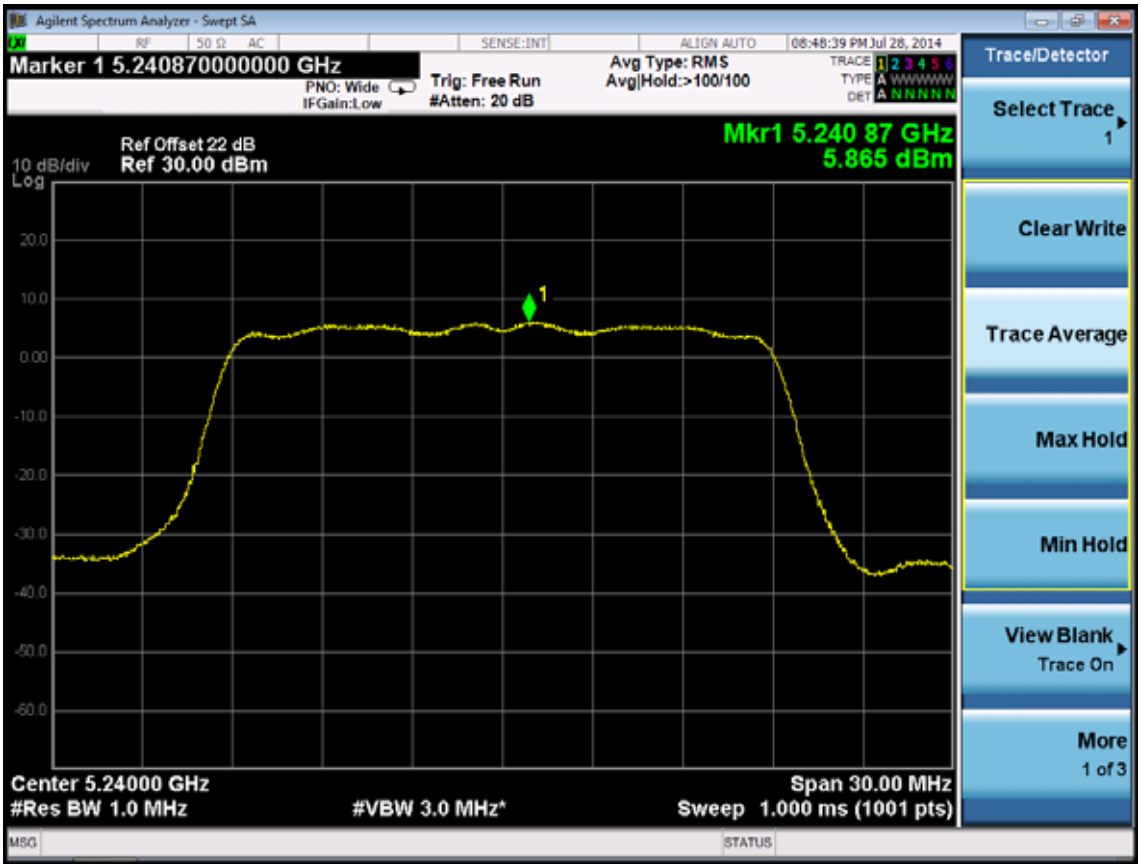
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