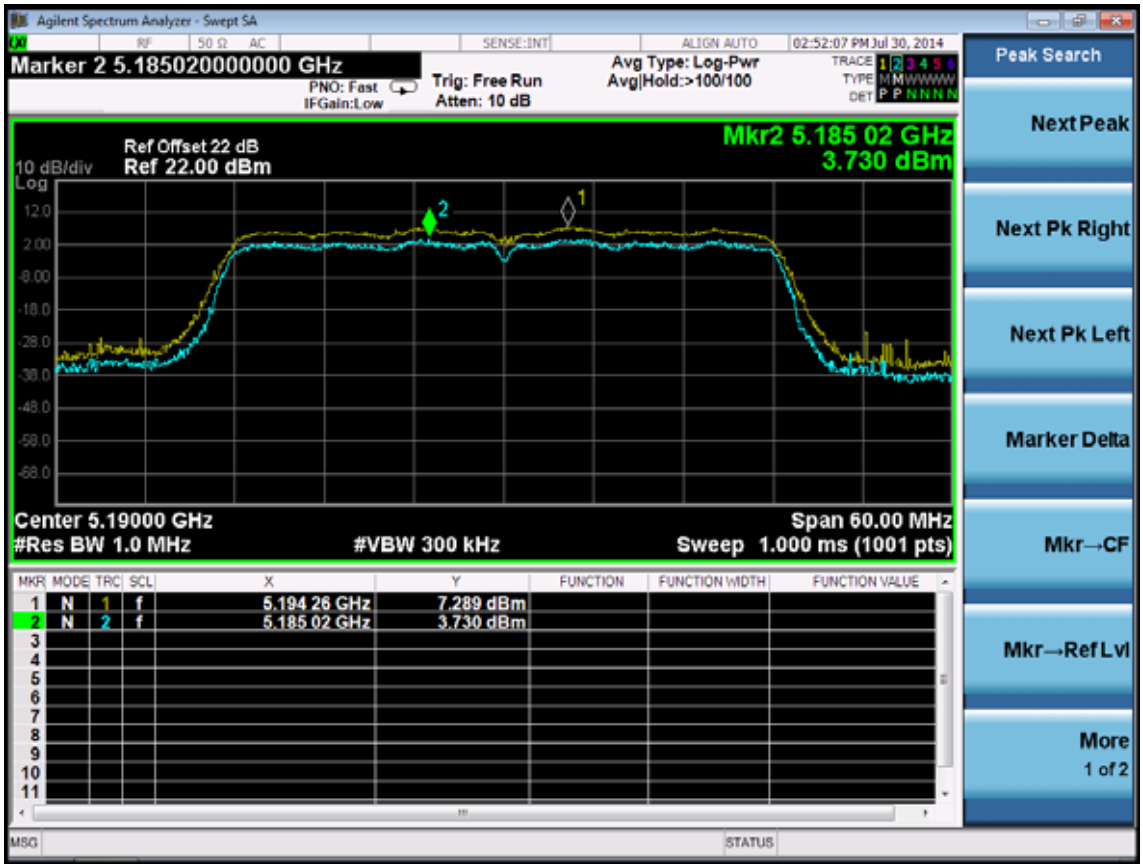
5240MHz

11ac VHT40

5190MHz



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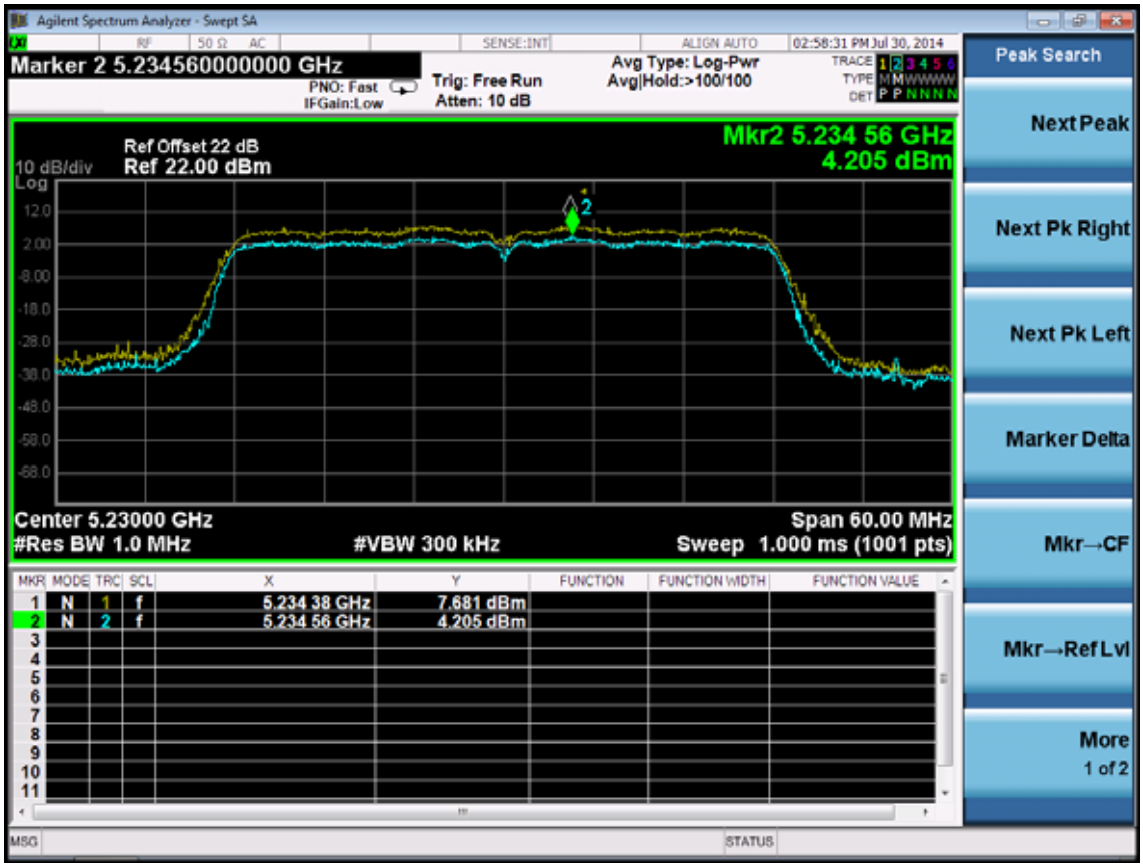

11ac VHT80

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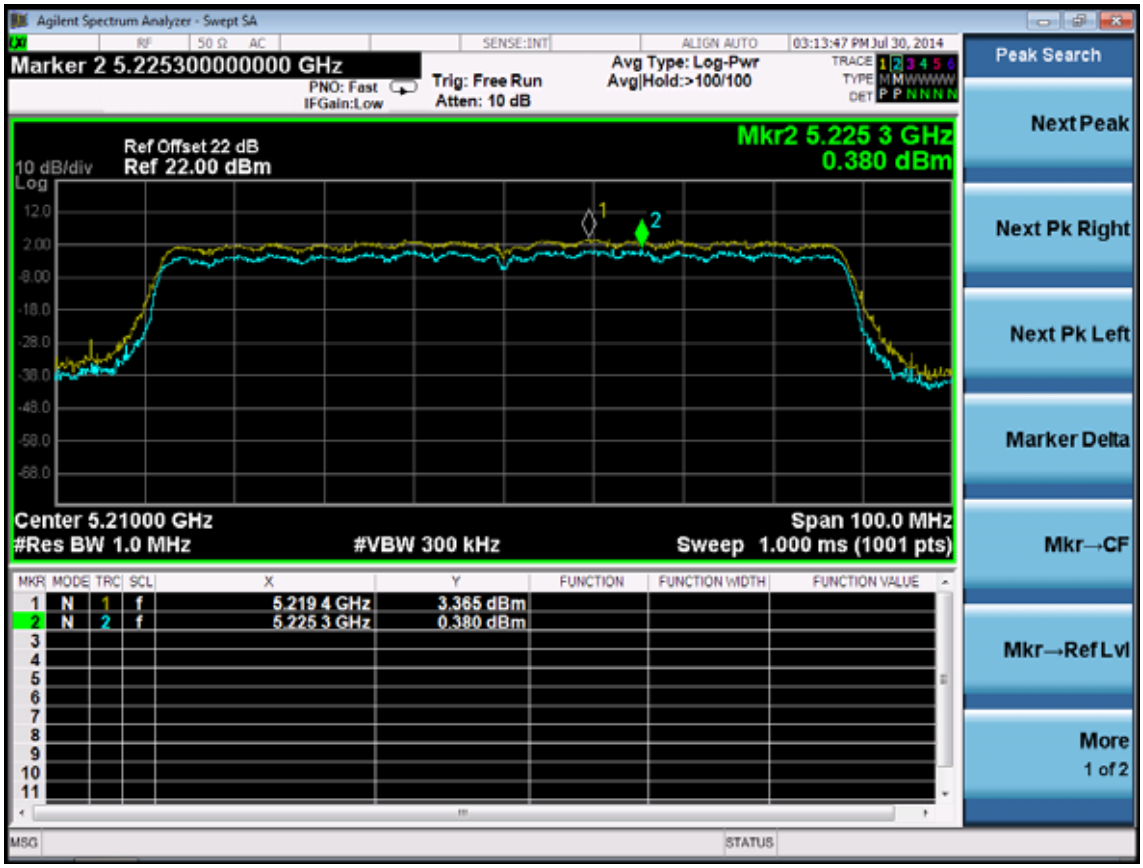

ANT1

11a

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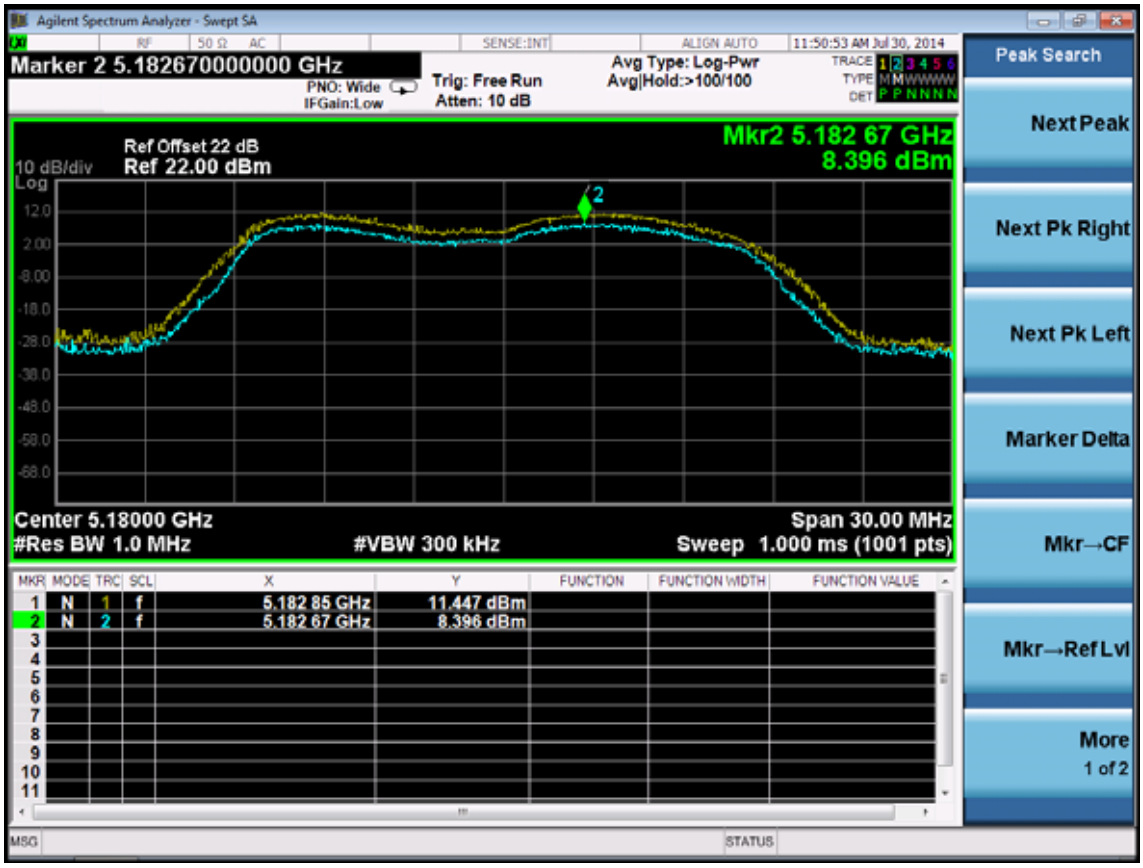
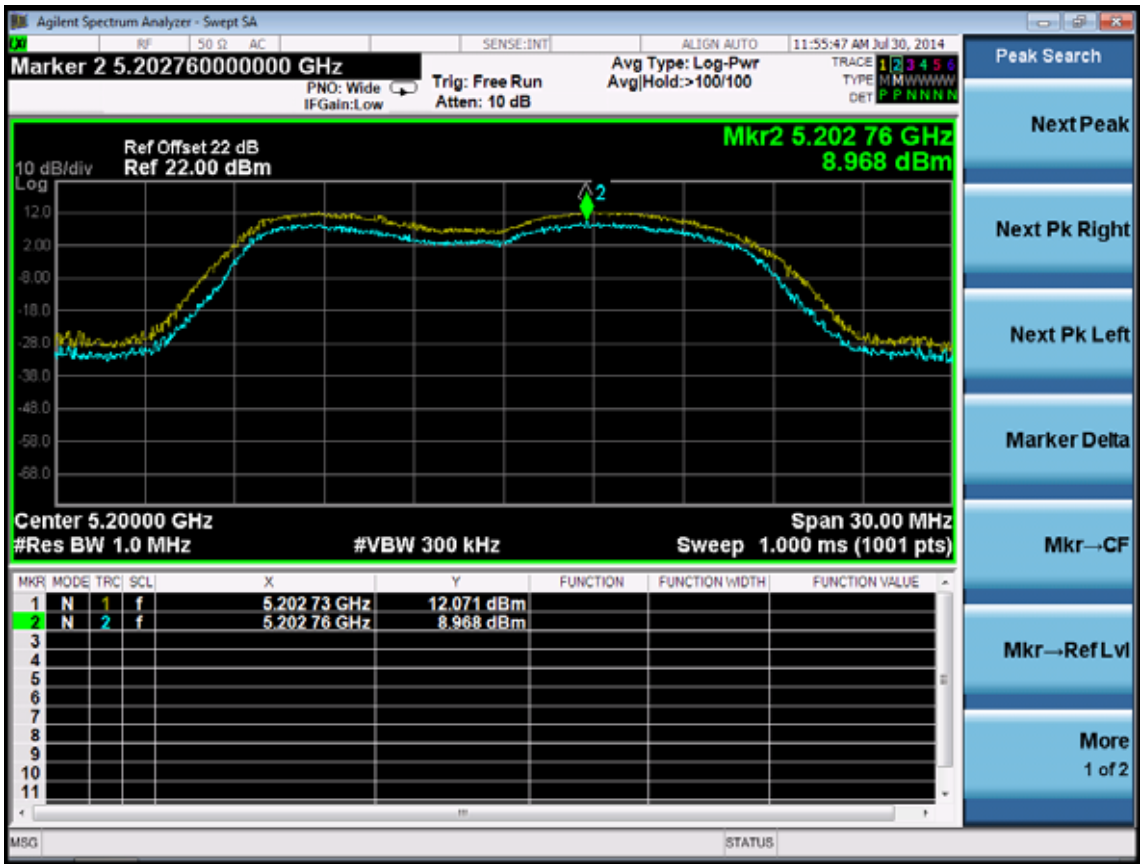


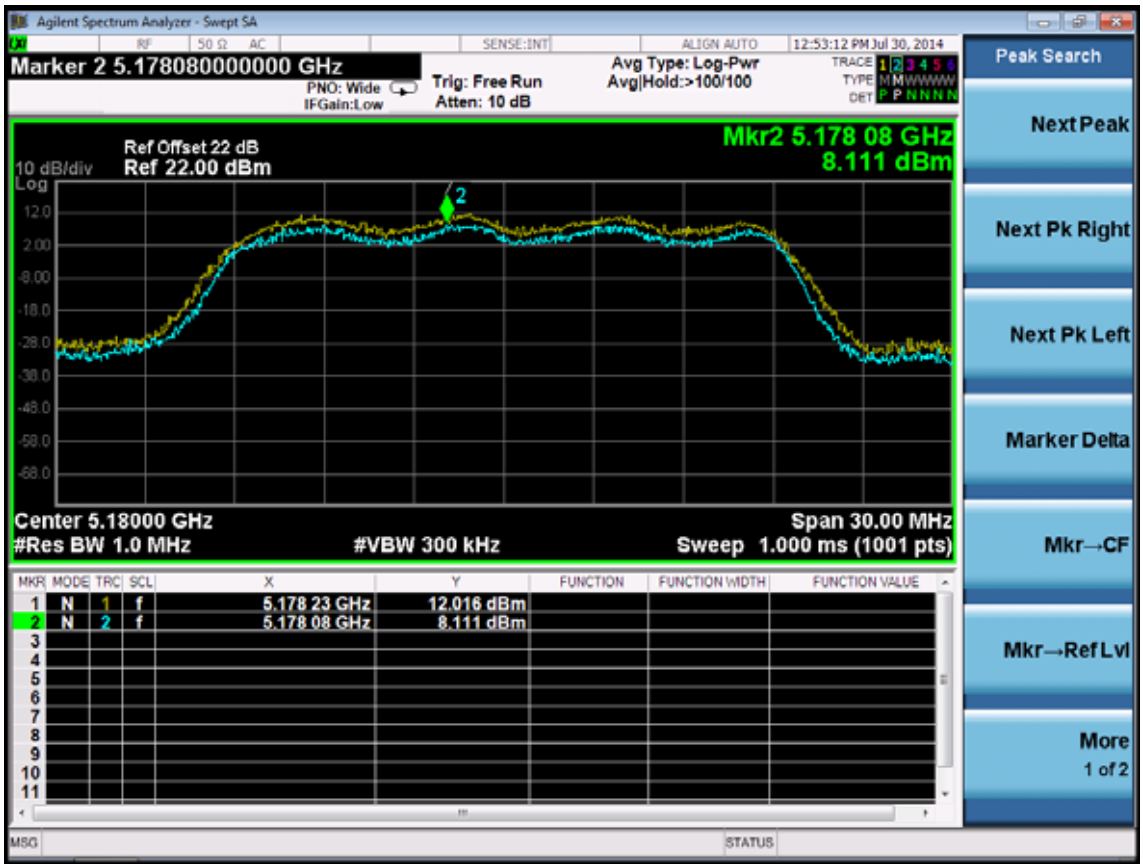
5200MHz



5240MHz

11nHT20

5180MHz



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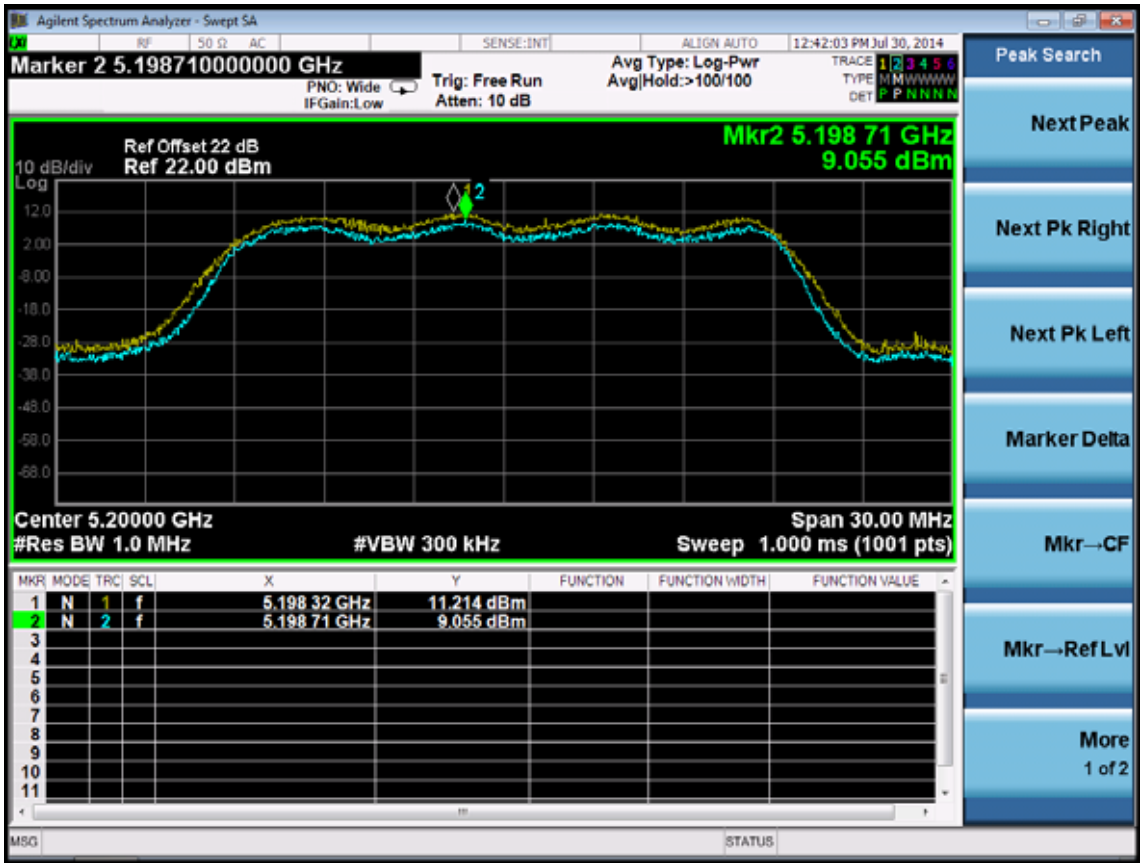

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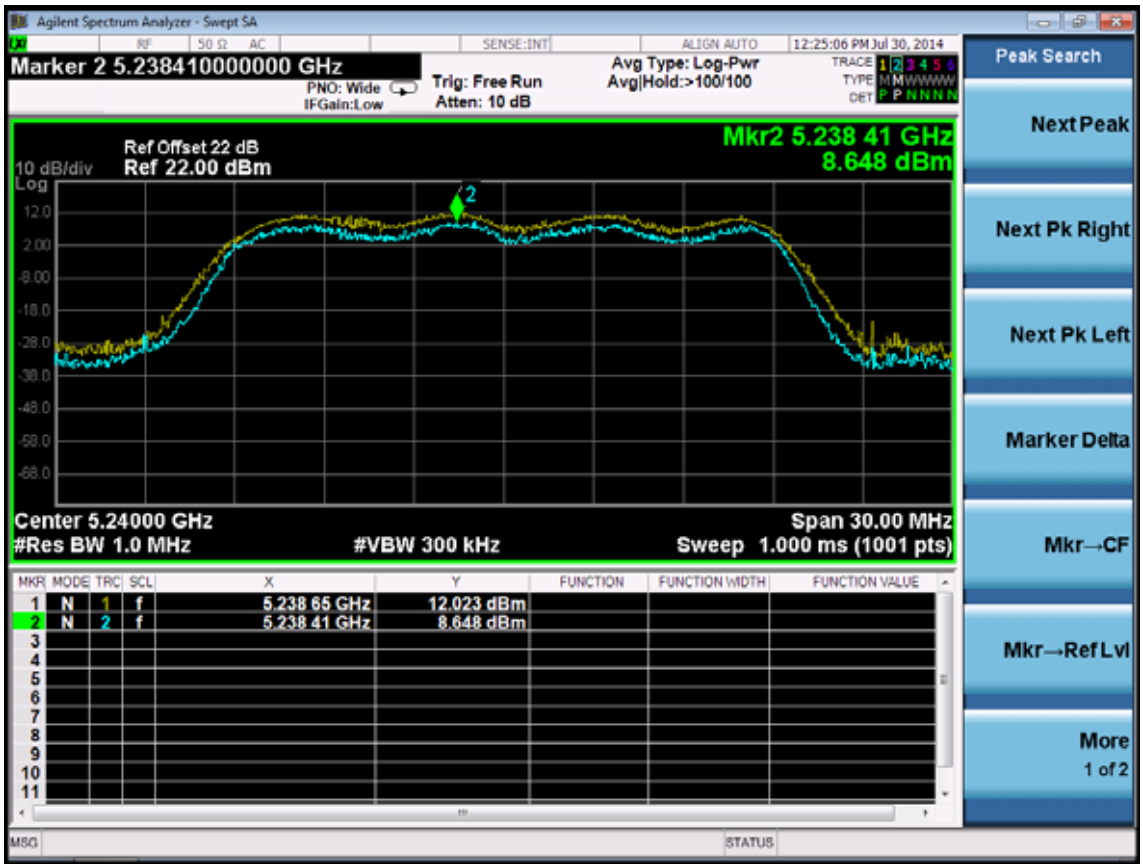
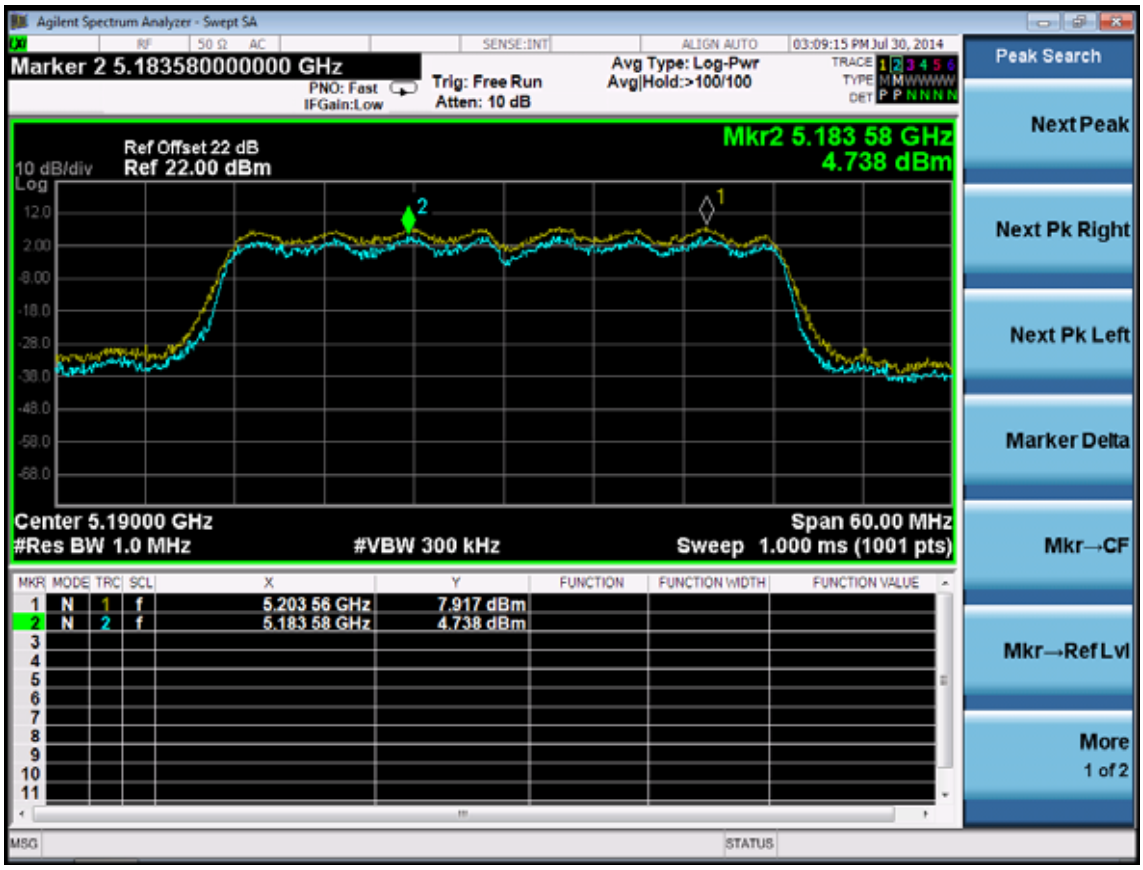


11nHT40

5190MHz



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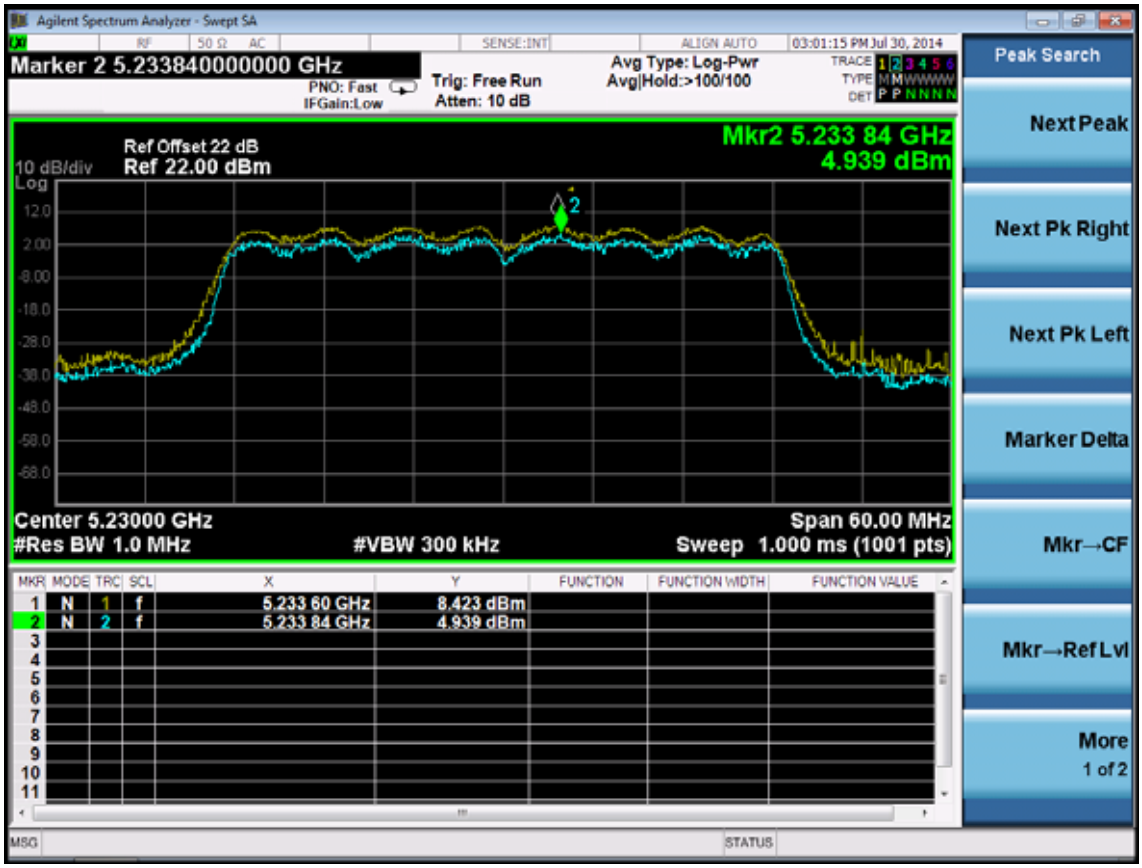

11ac VHT20

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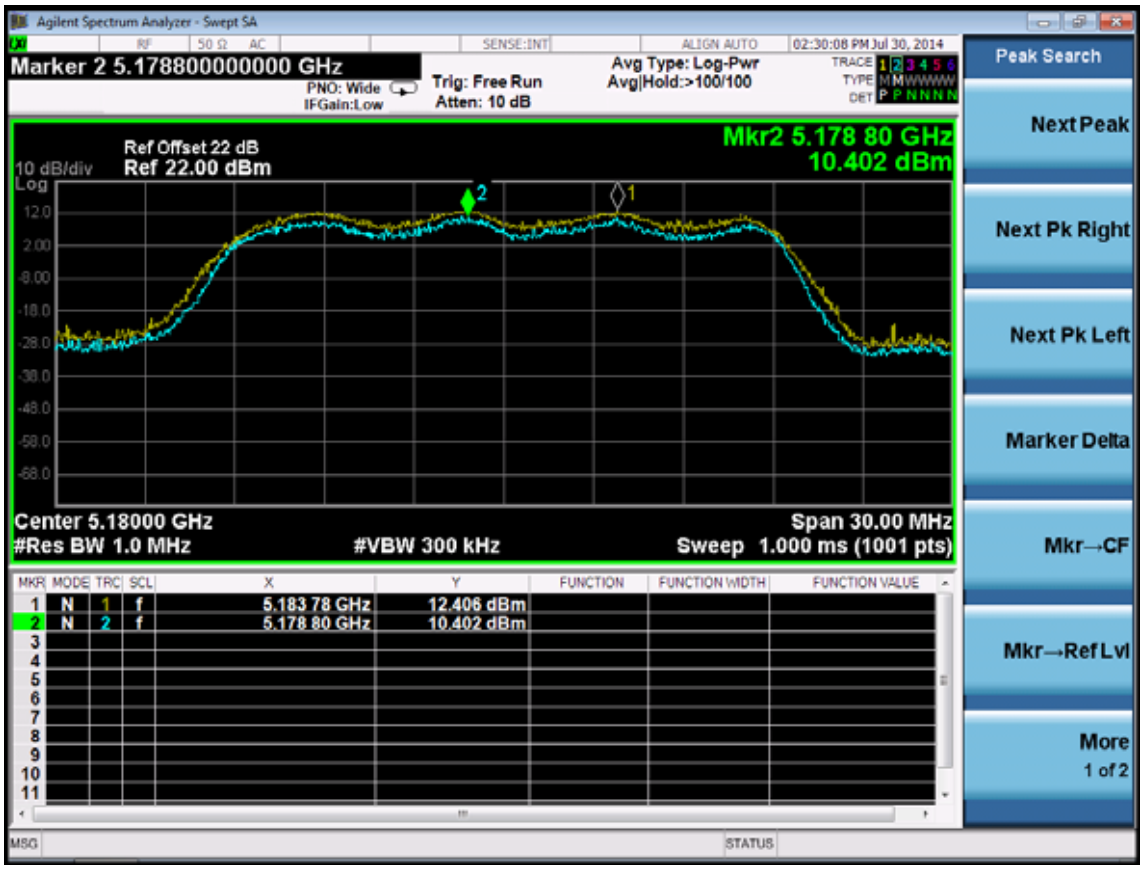

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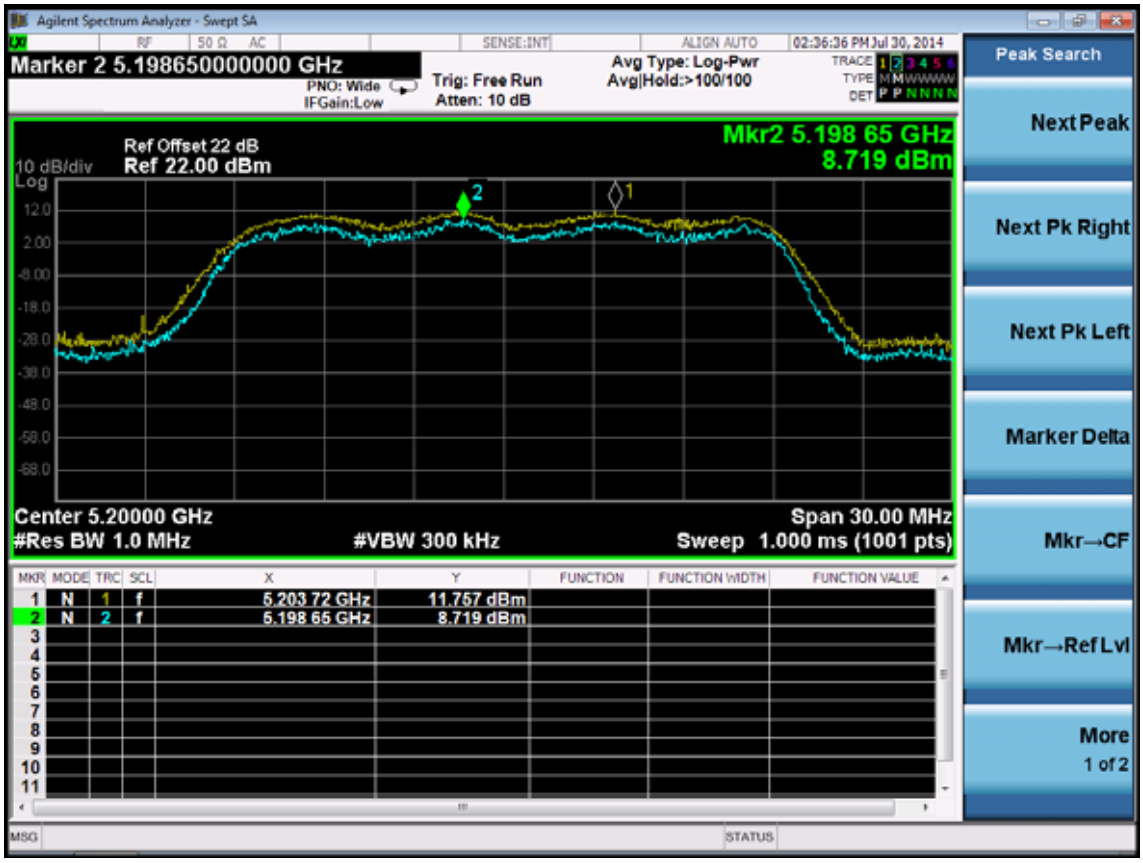
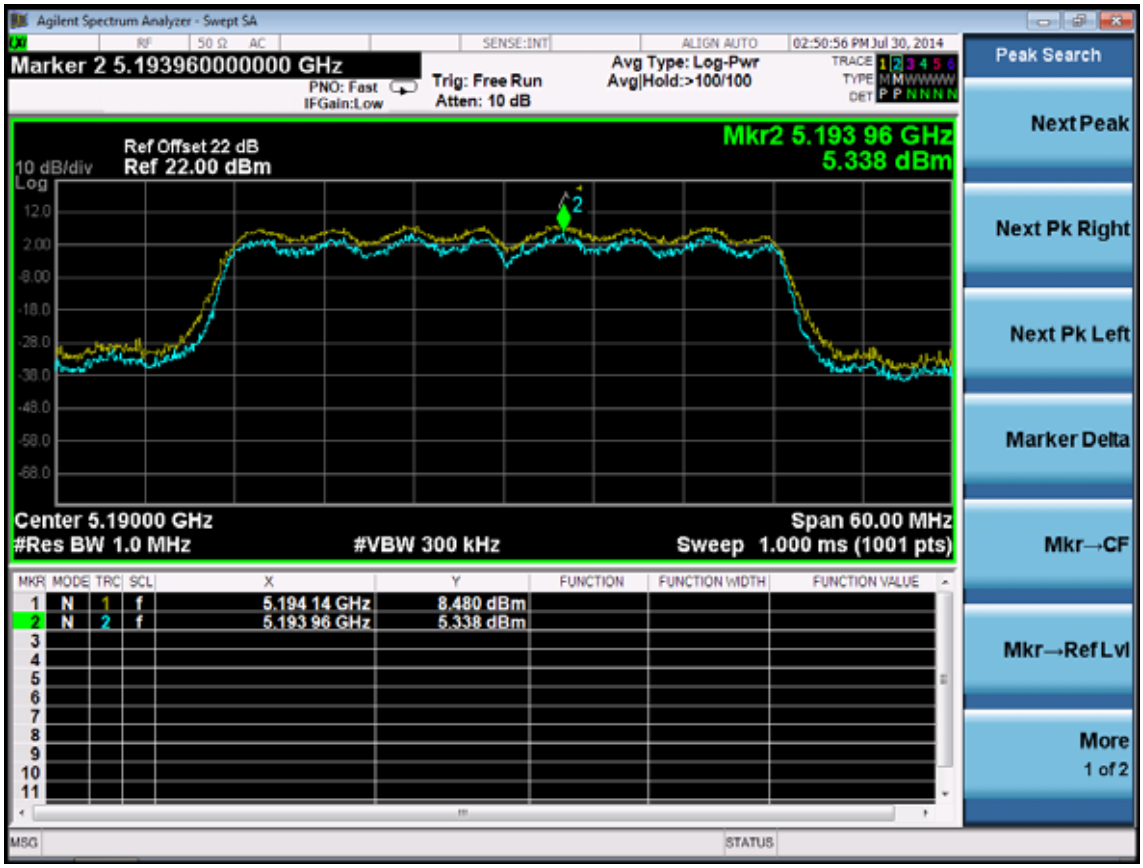


5240MHz

11ac VHT40

5190MHz



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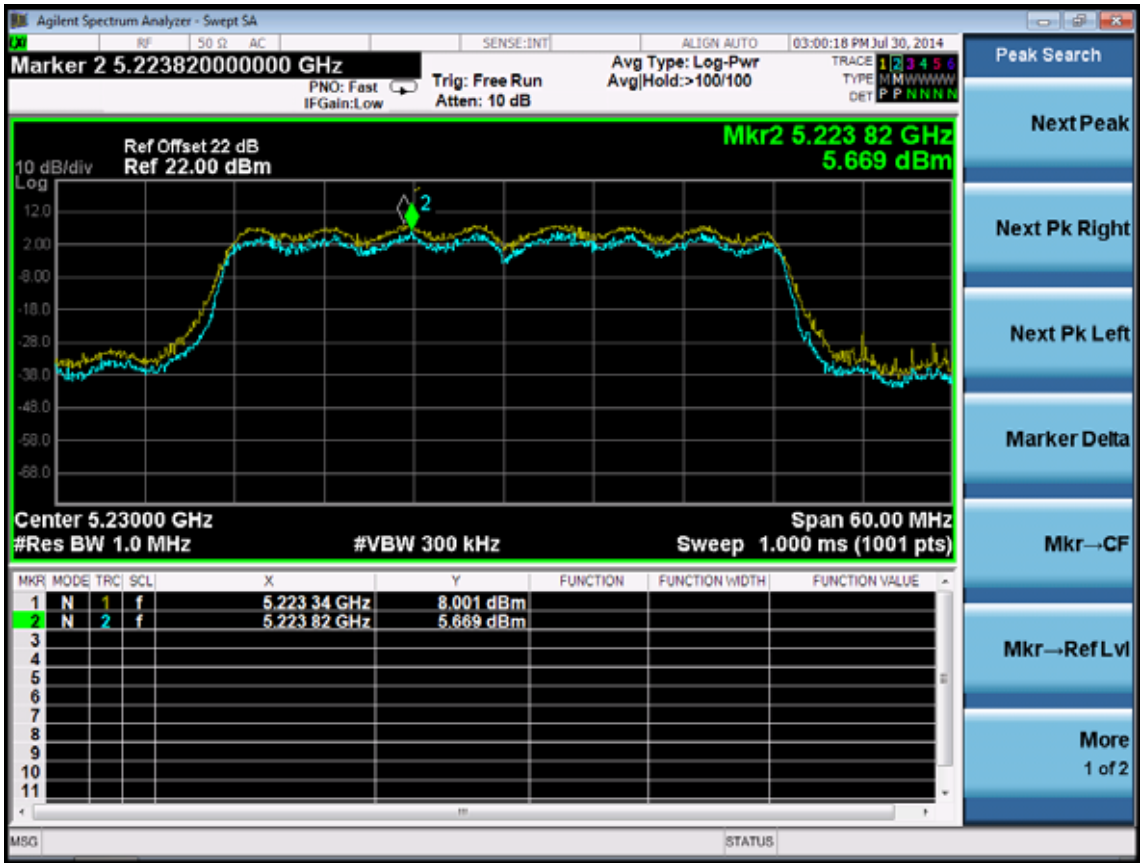
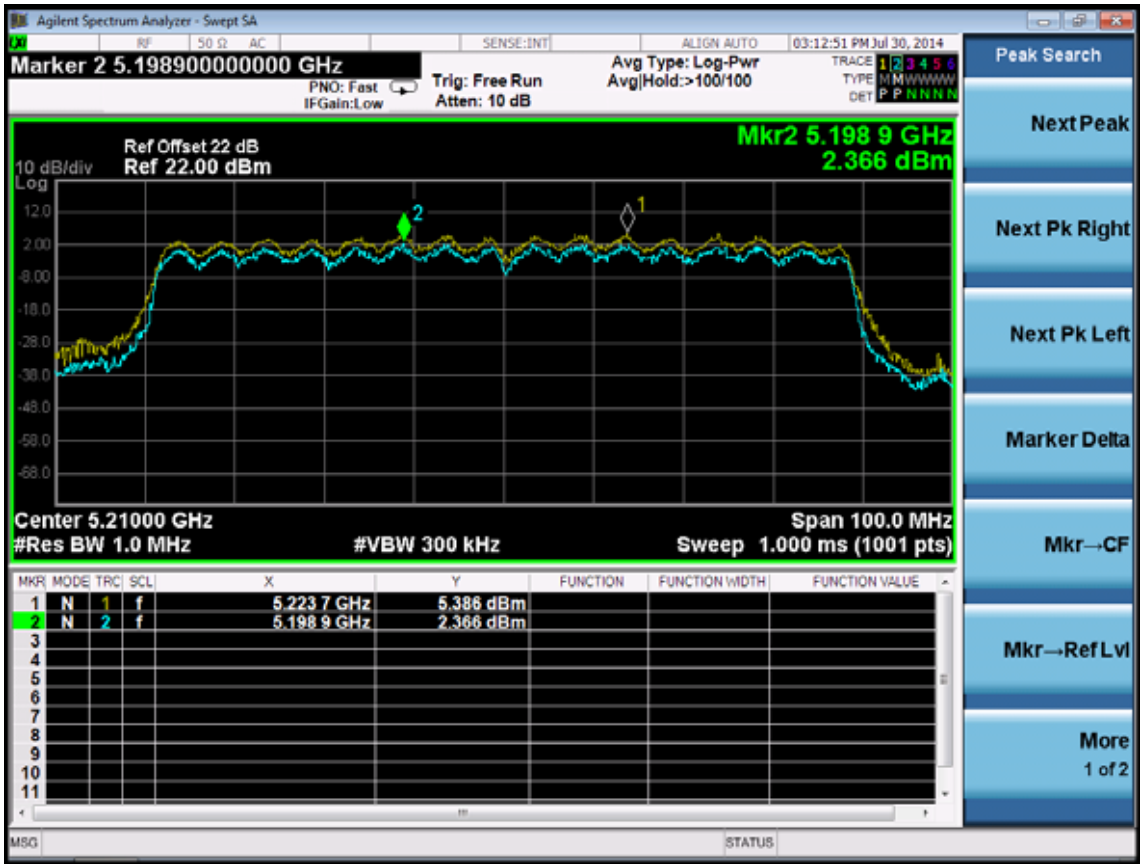


11ac VHT80

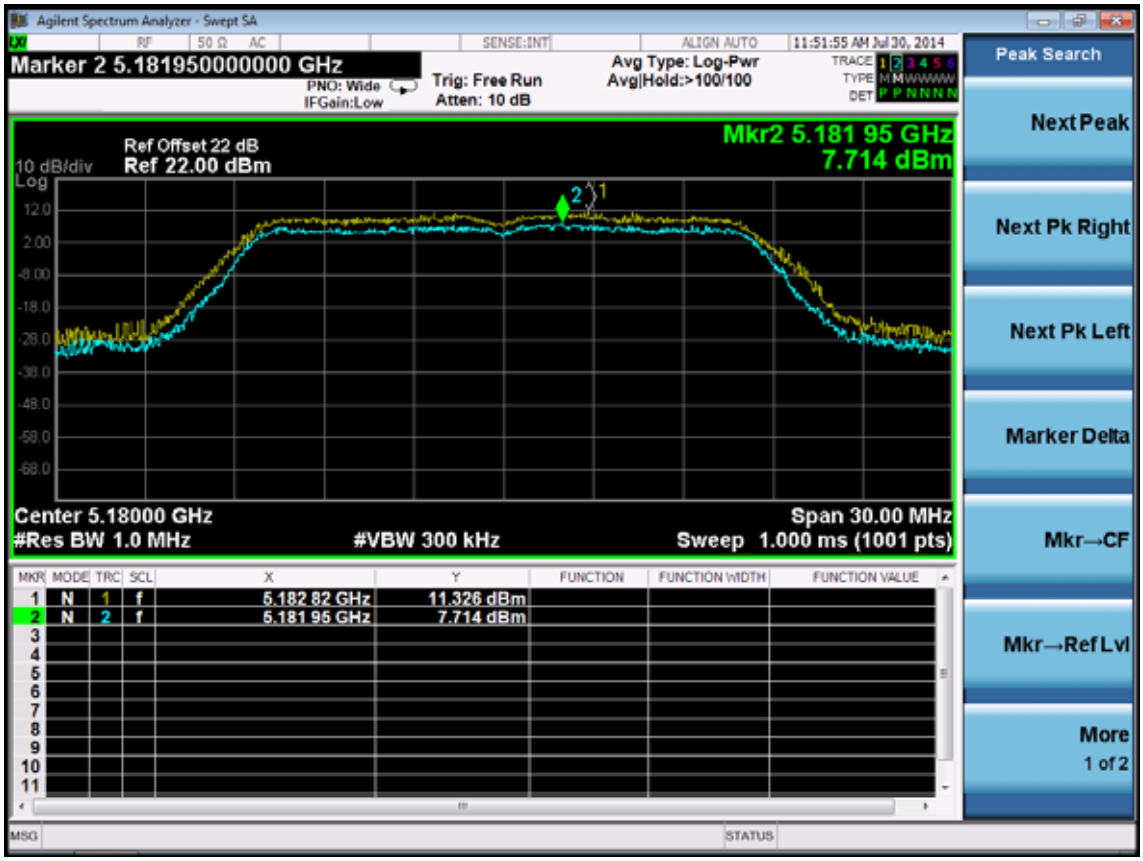
5210MHz



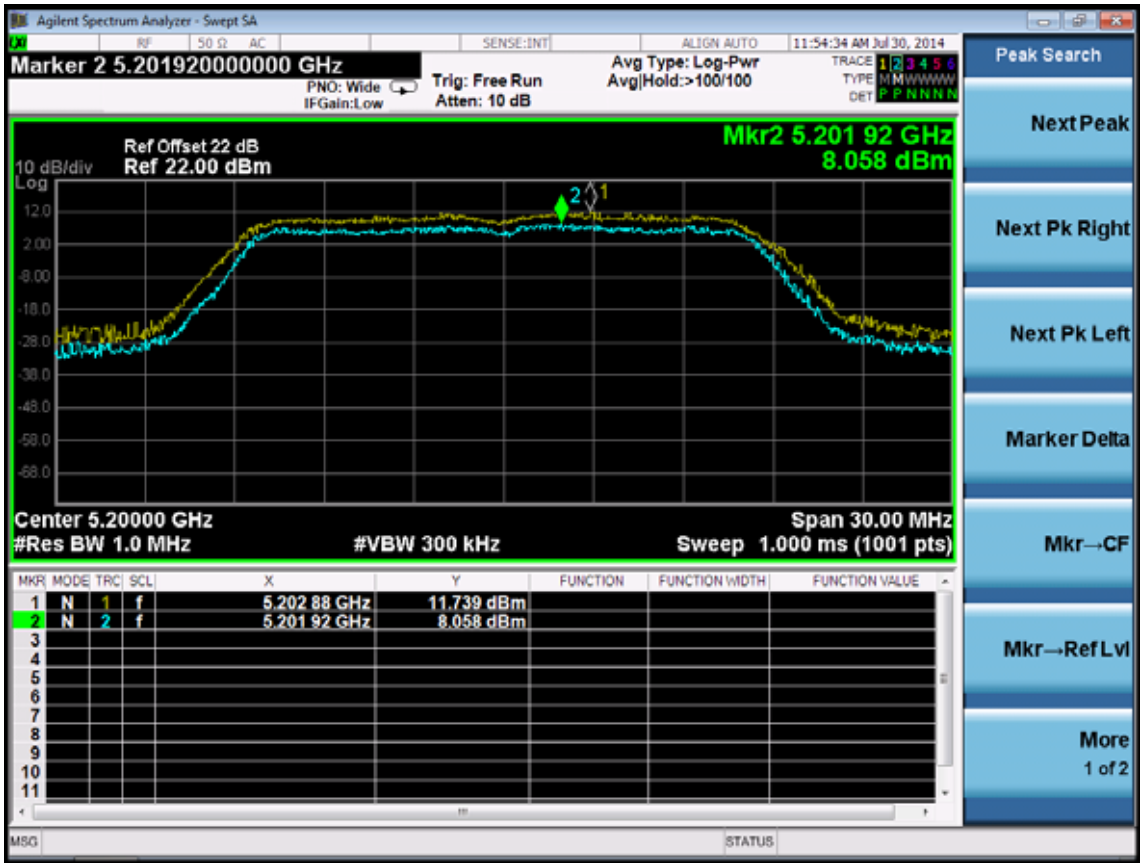
ANT2

11a

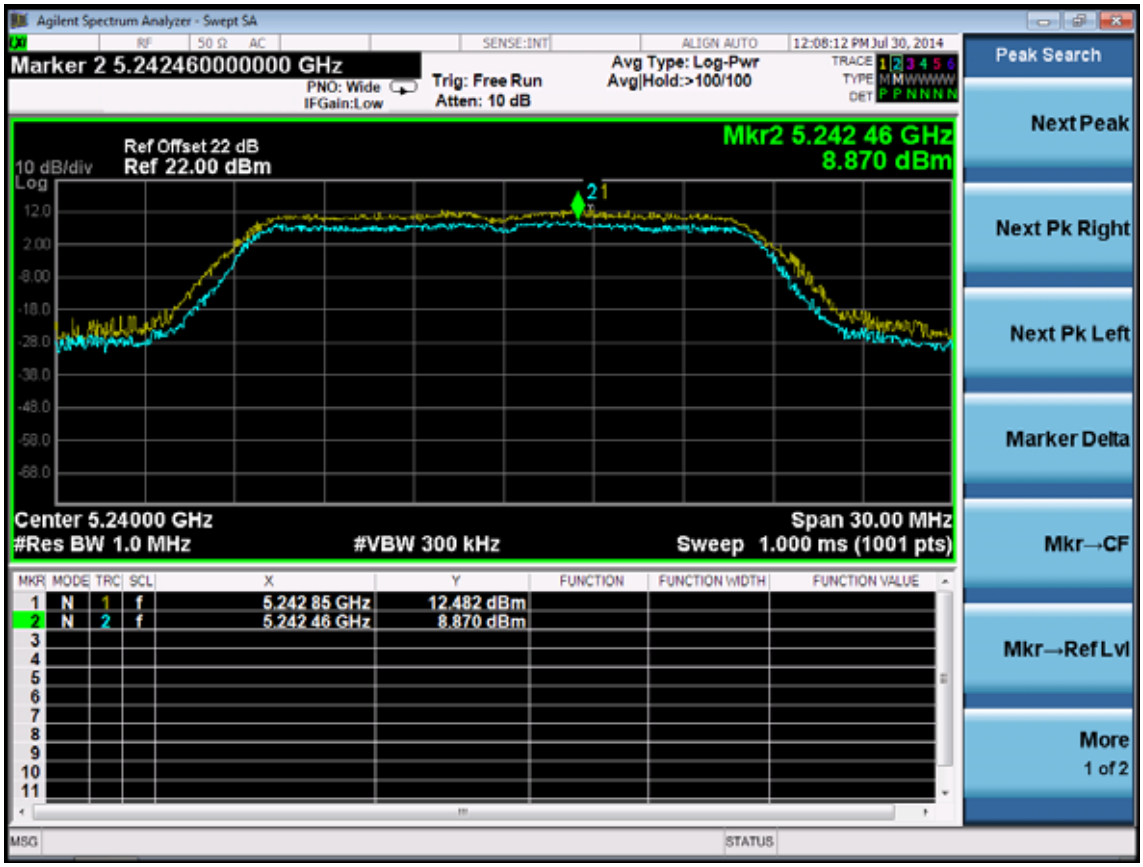
5180MHz



5200MHz

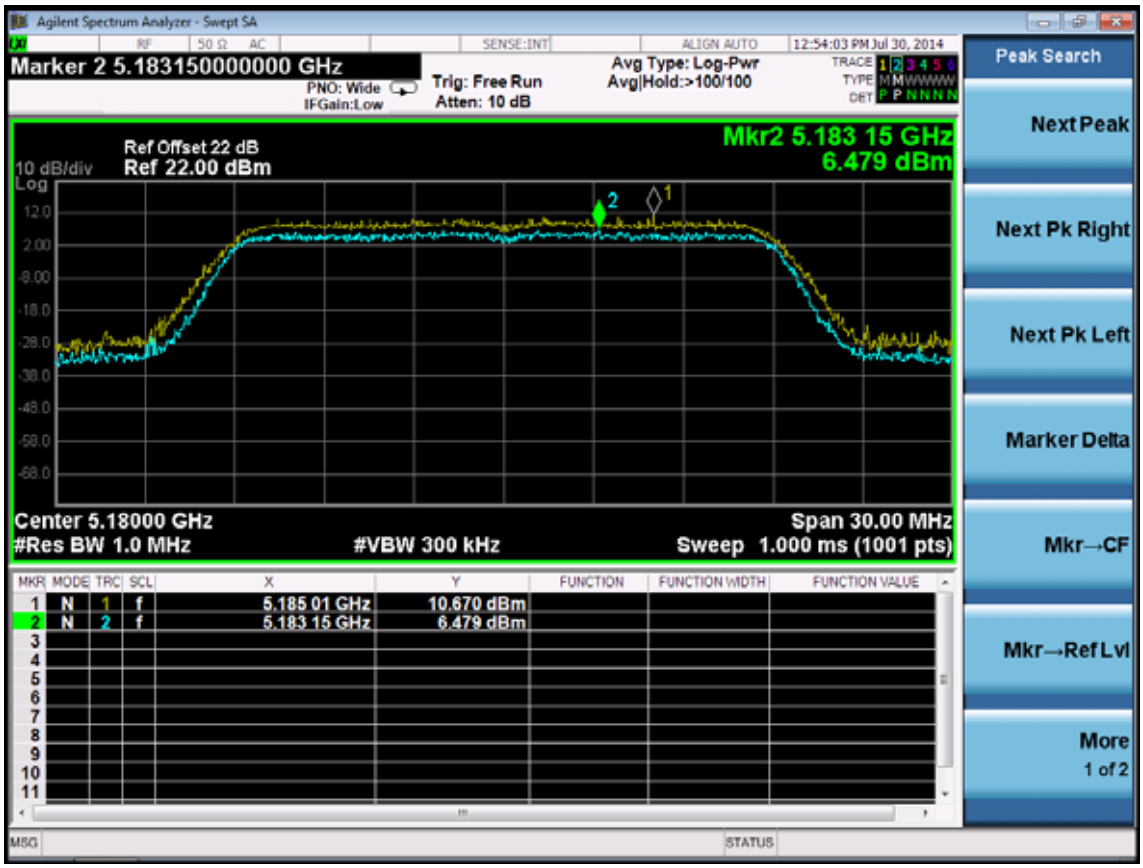


5240MHz



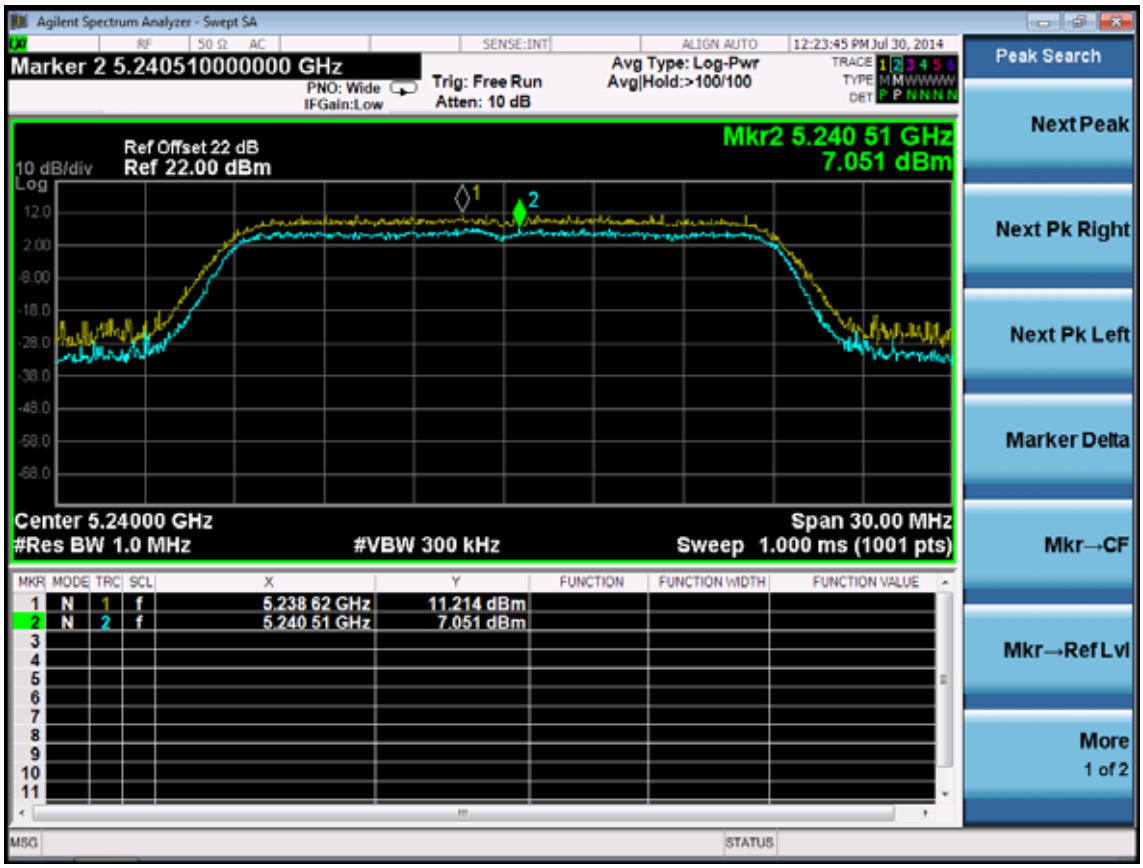
11nHT20

5180MHz



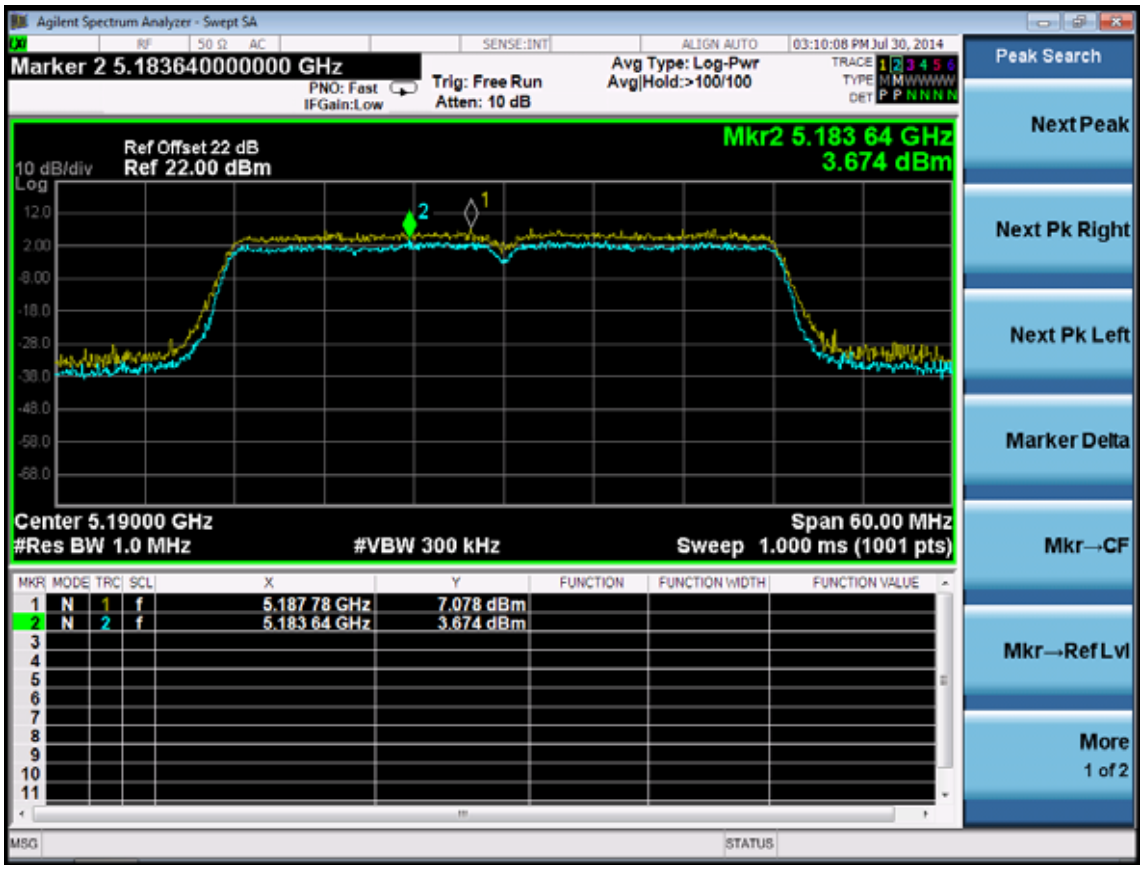
5200MHz

5240MHz



11nHT40

5190MHz



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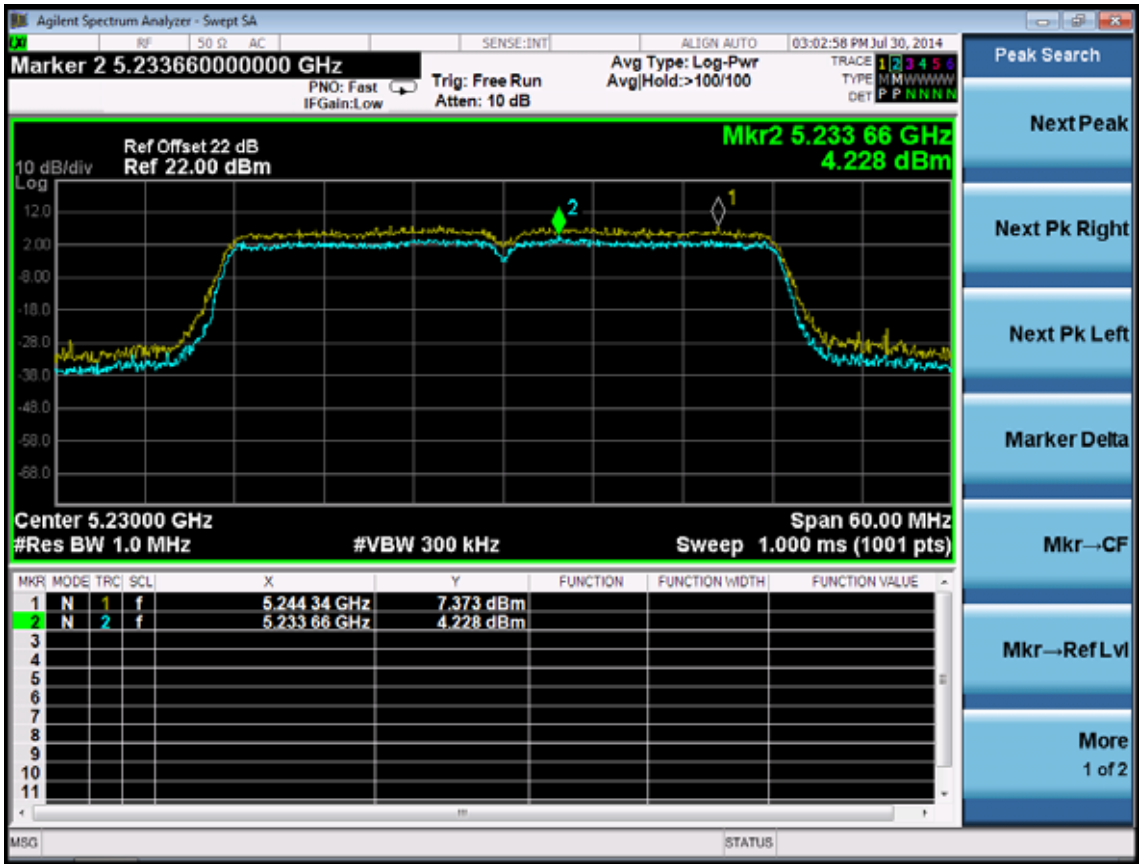
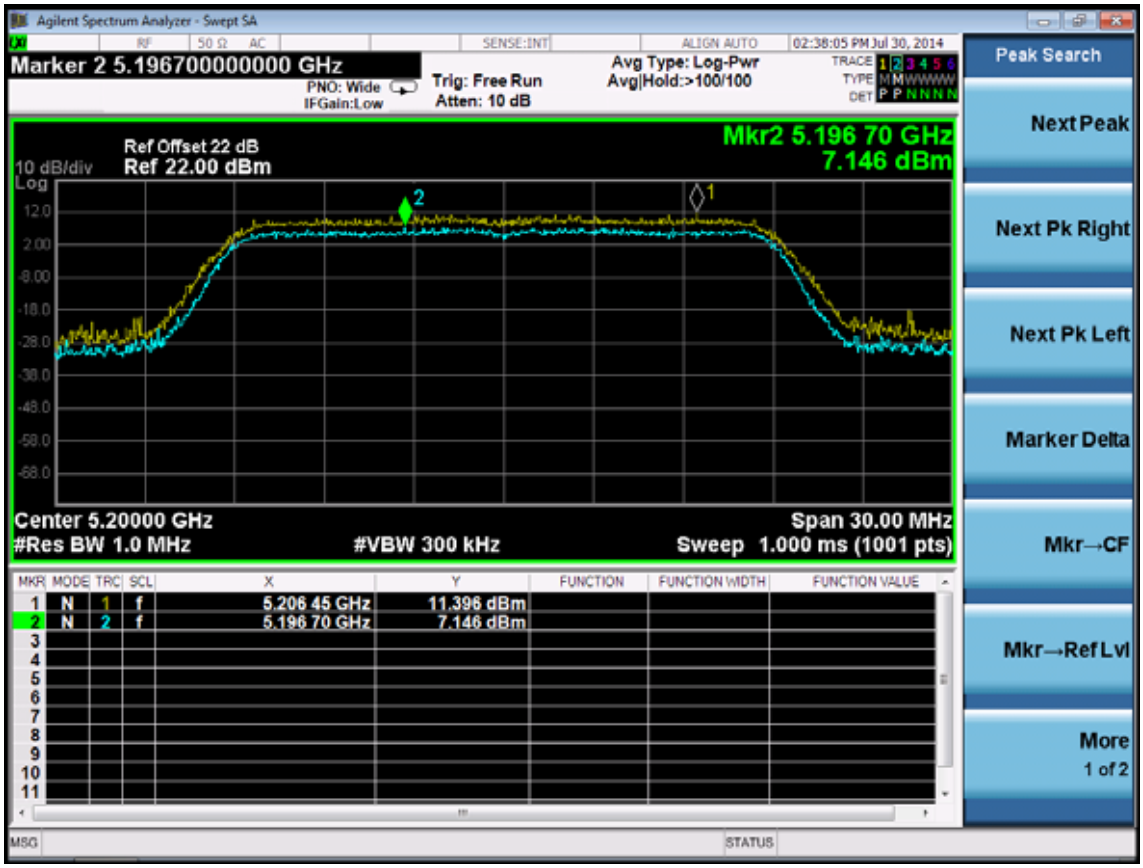


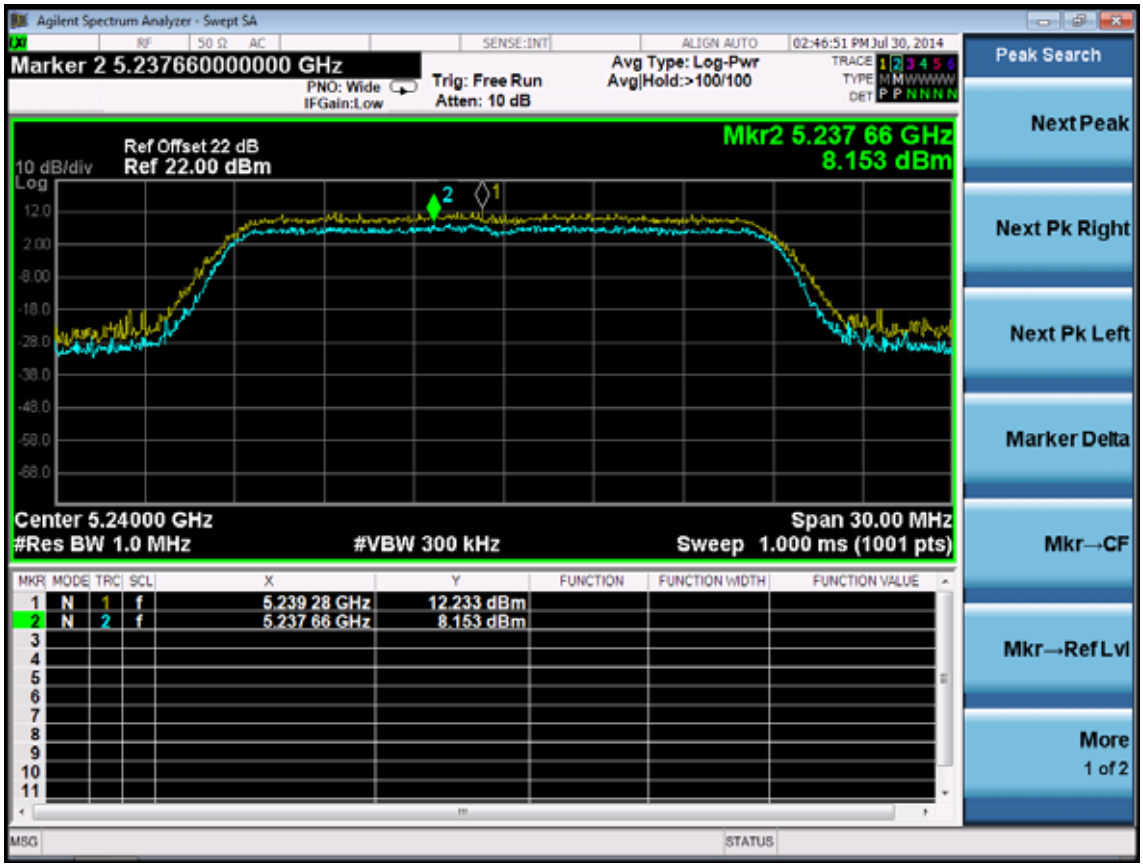
11ac VHT20

5180MHz

5200MHz

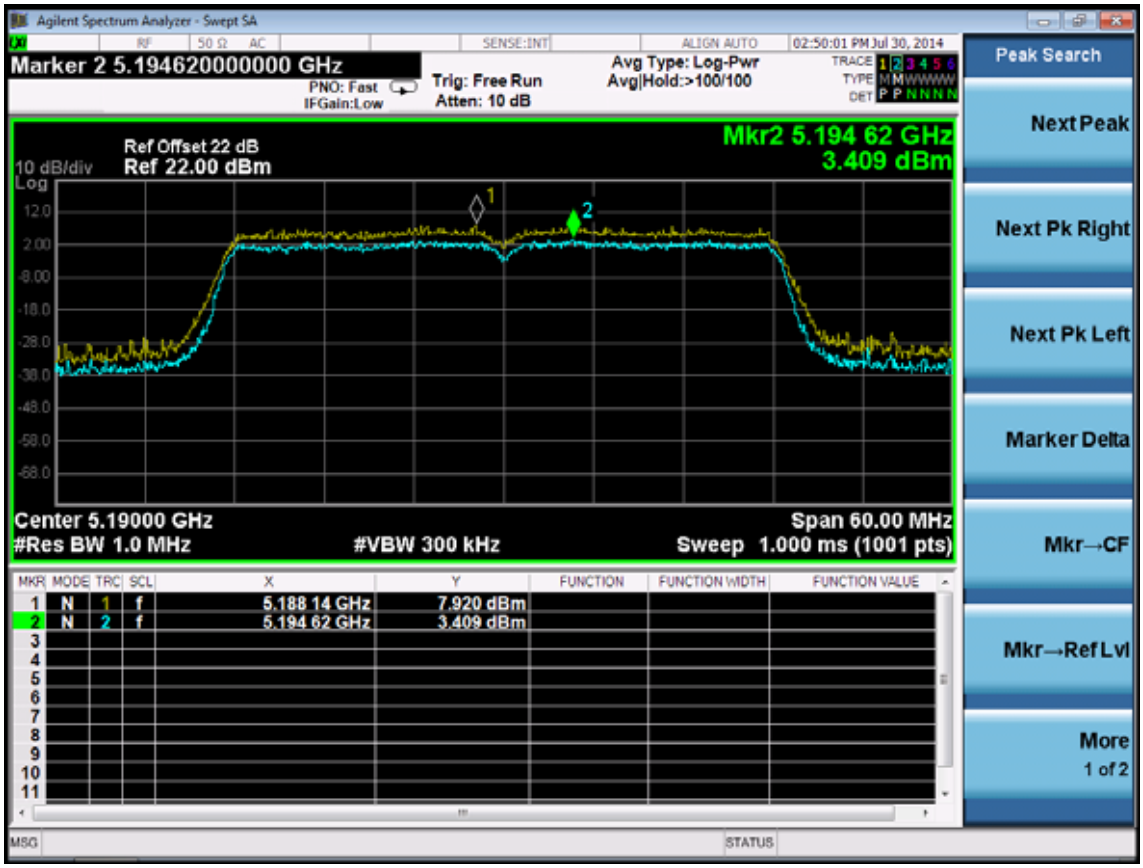


5240MHz

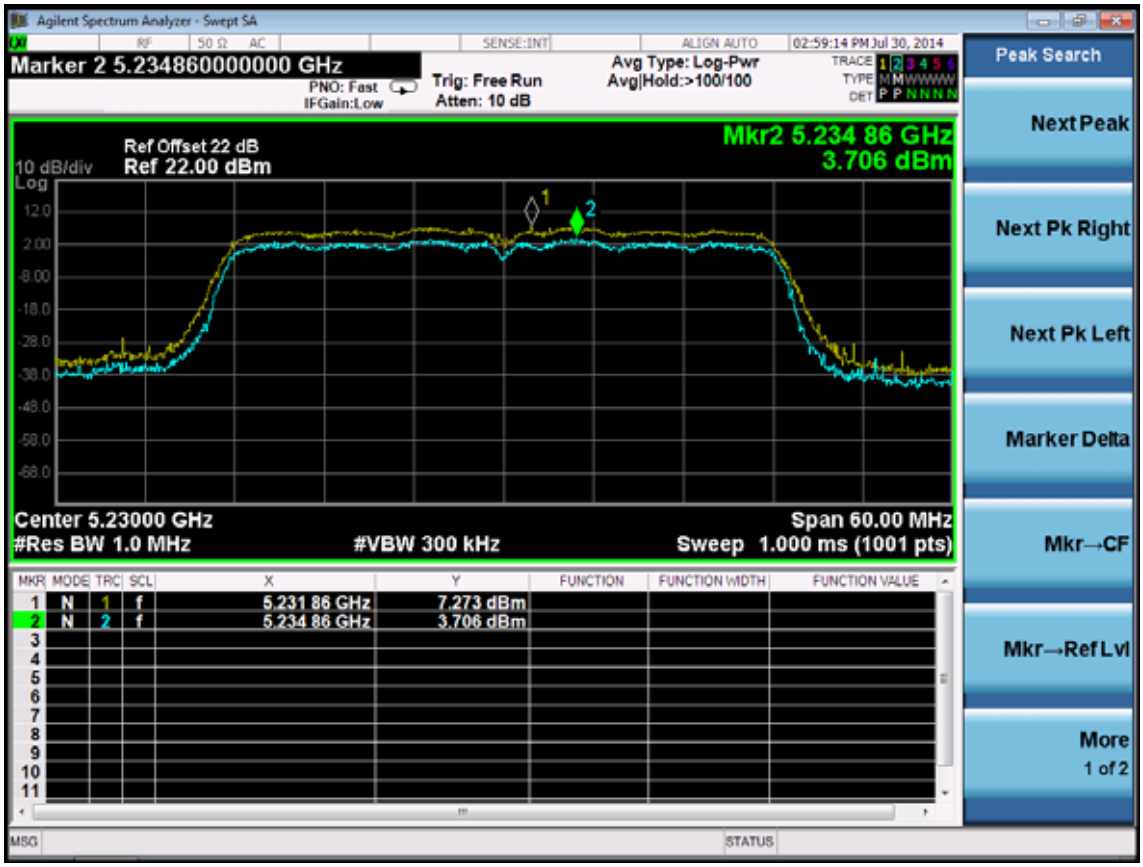


11ac VHT40

5190MHz

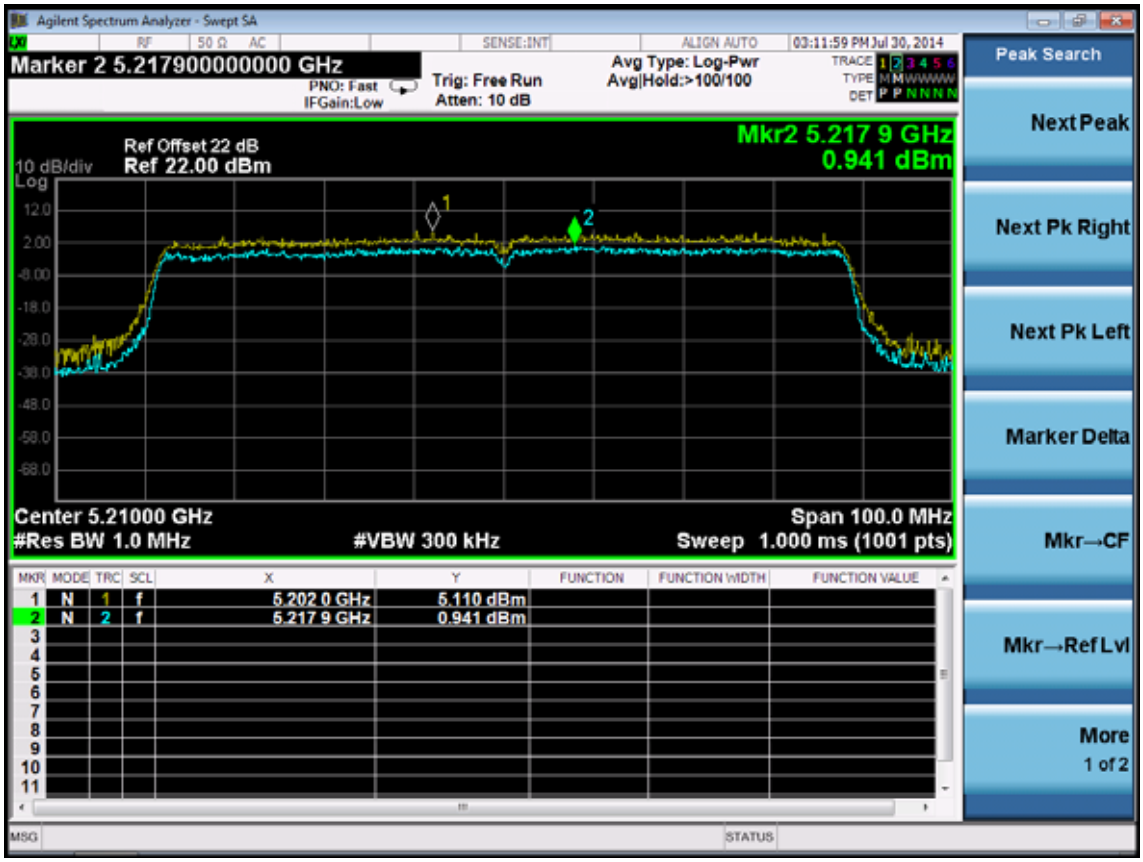


5230MHz



11ac VHT80

5210MHz



10. FREQUENCY STABILITY MEASUREMENT

10.1.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

10.2.Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ±20ppm

10.3.Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyser. EUT have transmitted absence of modulation signal and fixed channelize. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and the limit is less than ±20ppm The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
2. Extreme temperature rule is 0°C~50°C.

10.4.Test Result

EUT: AC1750 Wireless Dual Band DOCSIS 3.0 Cable Modem Router		
M/N: Archer CR700		
Power: DC 12V From Adapter Input AC 120V/60Hz		
Test Date: 2014-07-28	Test site: RF Chamber	Tested by: Kevin_Hu
Ambient Temperature: 22.5±1.0℃	Relative Humidity: 52.3±1.0%	Pressure: 101.3±1.0kpa

Frequency stability VS Voltage (Temperature:20℃)

Supply Voltage (V)	Test frequency (MHz)	Test result (MHz) ANT0	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
102V	5180	5179.9730	0.0270	-5.21	+/-20	PASS
120V	5180	5179.9735				
138V	5180	5179.9745				
102V	5200	5199.9710	0.0290	-5.58	+/-20	
120V	5200	5199.9715				
138V	5200	5199.9720				
102V	5240	5239.9700	0.0300	-5.73	+/-20	
120V	5240	5239.9710				
138V	5240	5239.9720				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)

Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT0	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5180	5179.9710	0.0290	-5.60	+/-20	PASS
-20℃	5180	5179.9715				
-10℃	5180	5179.9725				
0℃	5180	5179.9730				
10℃	5180	5179.9730				
20℃	5180	5179.9735				
30℃	5180	5179.9745				
40℃	5180	5179.9750				
50℃	5180	5179.9755				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)						
Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT0	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5200	5199.9690	0.0310	-5.96	+/-20	PASS
-20℃	5200	5199.9695				
-10℃	5200	5199.9700				
0℃	5200	5199.9705				
10℃	5200	5199.9710				
20℃	5200	5199.9715				
30℃	5200	5199.9720				
40℃	5200	5199.9725				
50℃	5200	5199.9730				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)						
Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT0	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5240	5239.9680	0.0320	-6.11	+/-20	PASS
-20℃	5240	5239.9685				
-10℃	5240	5239.9695				
0℃	5240	5239.9700				
10℃	5240	5239.9705				
20℃	5240	5239.9710				
30℃	5240	5239.9715				
40℃	5240	5239.9720				
50℃	5240	5239.9730				
Supply Voltage (V)	Test frequency (MHz)	Test result (MHz) ANT1	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
102V	5180	5179.9745	0.0255	-4.92	+/-20	PASS
120V	5180	5179.9750				
138V	5180	5179.9755				
102V	5200	5199.9750	0.0250	-4.81	+/-20	
120V	5200	5199.9755				

138V	5200	5199.9765				
102V	5240	5239.9750	0.0250	-4.77	+/-20	
120V	5240	5239.9760				
138V	5240	5239.9775				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)

Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT1	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5180	5179.9715	0.0285	-5.50	+/-20	PASS
-20℃	5180	5179.9725				
-10℃	5180	5179.9730				
0℃	5180	5179.9735				
10℃	5180	5179.9745				
20℃	5180	5179.9750				
30℃	5180	5179.9755				
40℃	5180	5179.9765				
50℃	5180	5179.9770				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)

Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT1	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5200	5199.9725	0.0275	-5.29	+/-20	PASS
-20℃	5200	5199.9730				
-10℃	5200	5199.9735				
0℃	5200	5199.9745				
10℃	5200	5199.9750				
20℃	5200	5199.9755				
30℃	5200	5199.9765				
40℃	5200	5199.9760				
50℃	5200	5199.9765				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)						
Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT1	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5240	5239.9730	0.0270	-5.15	+/-20	PASS
-20℃	5240	5239.9735				
-10℃	5240	5239.9740				
0℃	5240	5239.9745				
10℃	5240	5239.9755				
20℃	5240	5239.9760				
30℃	5240	5239.9765				
40℃	5240	5239.9770				
50℃	5240	5239.9775				

Frequency stability VS Voltage (Temperature:20℃)						
Supply Voltage (V)	Test frequency (MHz)	Test result (MHz) ANT2	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
102V	5180	5179.9740	0.0260	-5.02	+/-20	PASS
120V	5180	5179.9745				
138V	5180	5179.9755				
102V	5200	5199.9725	0.0275	-5.29	+/-20	
120V	5200	5199.9735				
138V	5200	5199.9740				
102V	5240	5239.9715	0.0285	-5.44	+/-20	
120V	5240	5239.9720				
138V	5240	5239.9730				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)						
Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT2	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5180	5179.9715	0.0285	-5.50	+/-20	PASS
-20℃	5180	5179.9725				
-10℃	5180	5179.9730				
0℃	5180	5179.9735				
10℃	5180	5179.9740				

20℃	5180	5179.9745				
30℃	5180	5179.9755				
40℃	5180	5179.9760				
50℃	5180	5179.9765				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)

Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT2	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5200	5199.9705	0.0295	-5.67	+/-20	PASS
-20℃	5200	5199.9710				
-10℃	5200	5199.9715				
0℃	5200	5199.9720				
10℃	5200	5199.9730				
20℃	5200	5199.9735				
30℃	5200	5199.9745				
40℃	5200	5199.9750				
50℃	5200	5199.9755				

Frequency stability VS Temperature (supply voltage AC 120V/60Hz)

Temperature (℃)	Test frequency (MHz)	Test result (MHz) ANT2	Max Deviation (MHz)	Max Deviation (ppm)	Limit (ppm)	Conclusion
-30℃	5240	5239.9695	0.0305	-5.82	+/-20	PASS
-20℃	5240	5239.9700				
-10℃	5240	5239.9705				
0℃	5240	5239.9710				
10℃	5240	5239.9715				
20℃	5240	5239.9720				
30℃	5240	5239.9730				
40℃	5240	5239.9735				
50℃	5240	5239.9745				