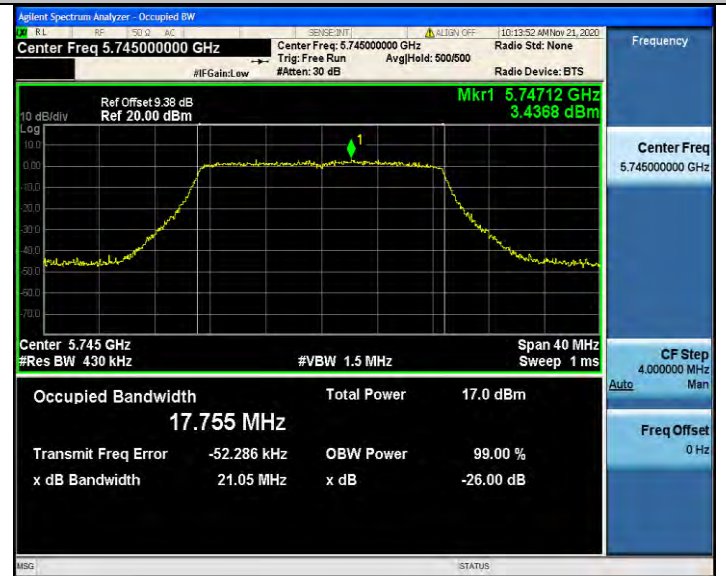


Antenna 3:

99%Bandwidth

802.11a

802.11n HT20



CH149

CH149



CH157

CH157

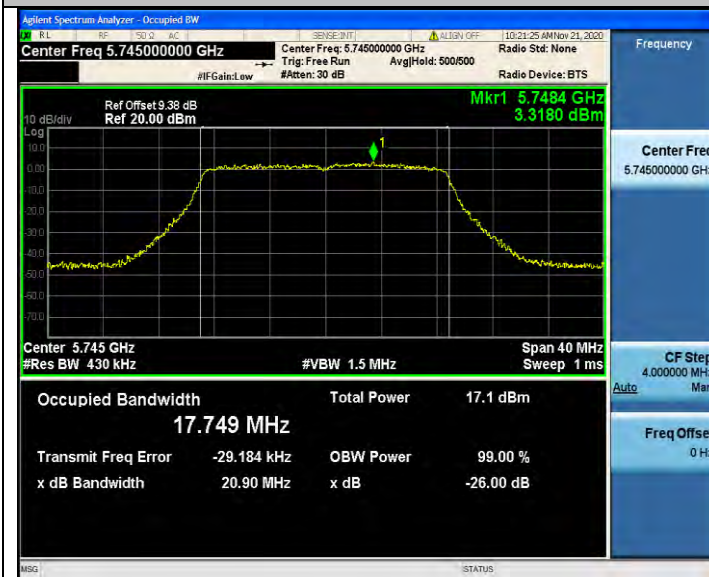


CH165

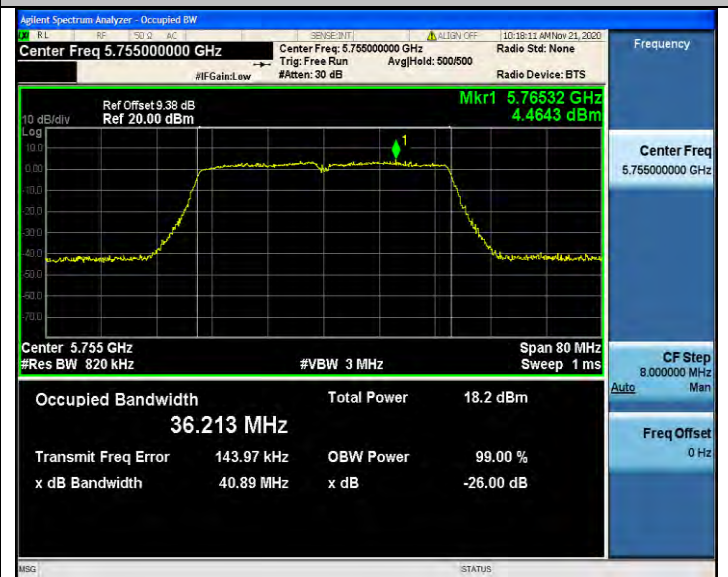
CH165

99%Bandwidth

802.11ac20



802.11n HT40



CH149



CH151



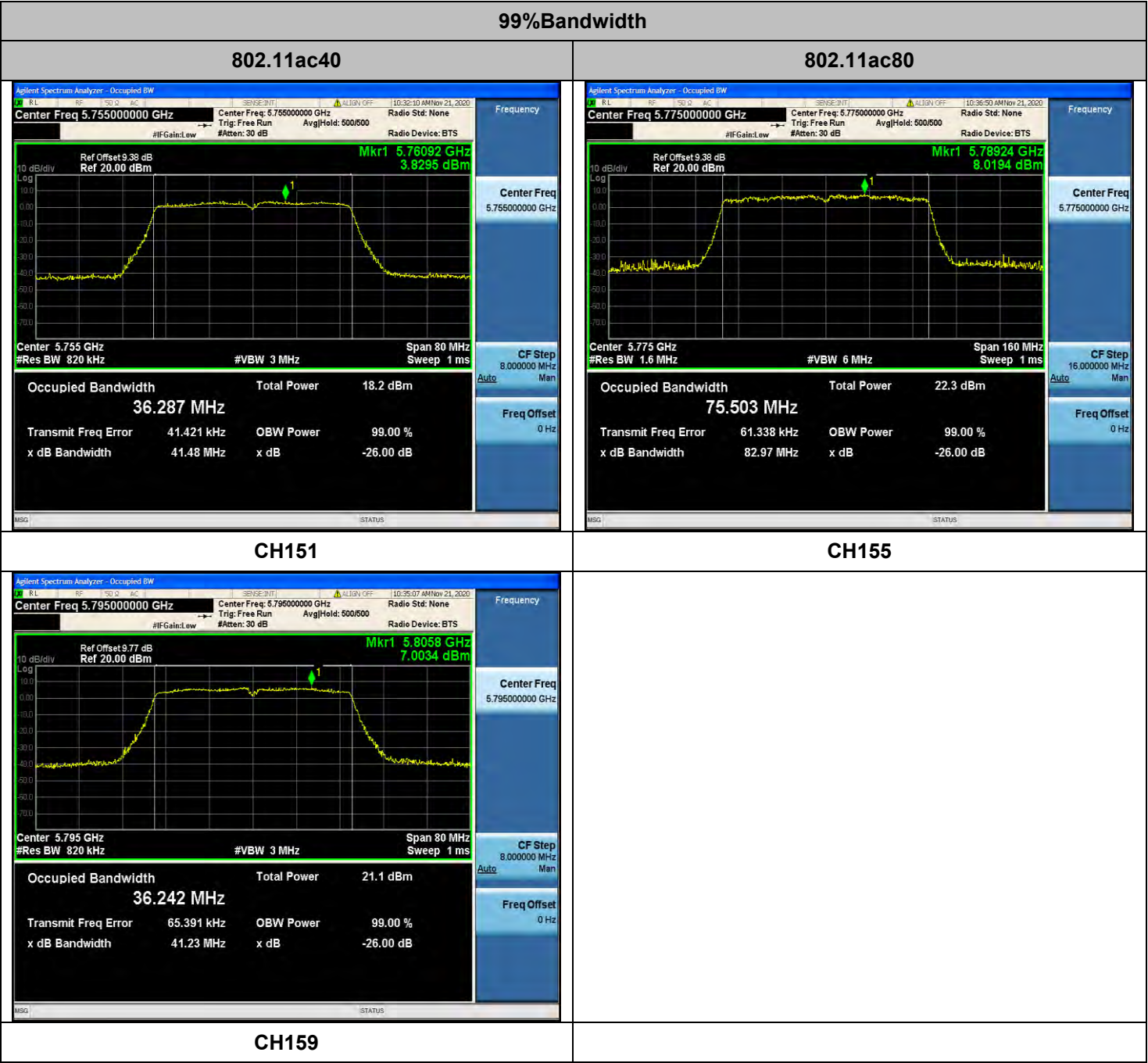
CH157



CH159



CH165



99%Bandwidth

802.11ax20



802.11ax HT40



CH149



CH151



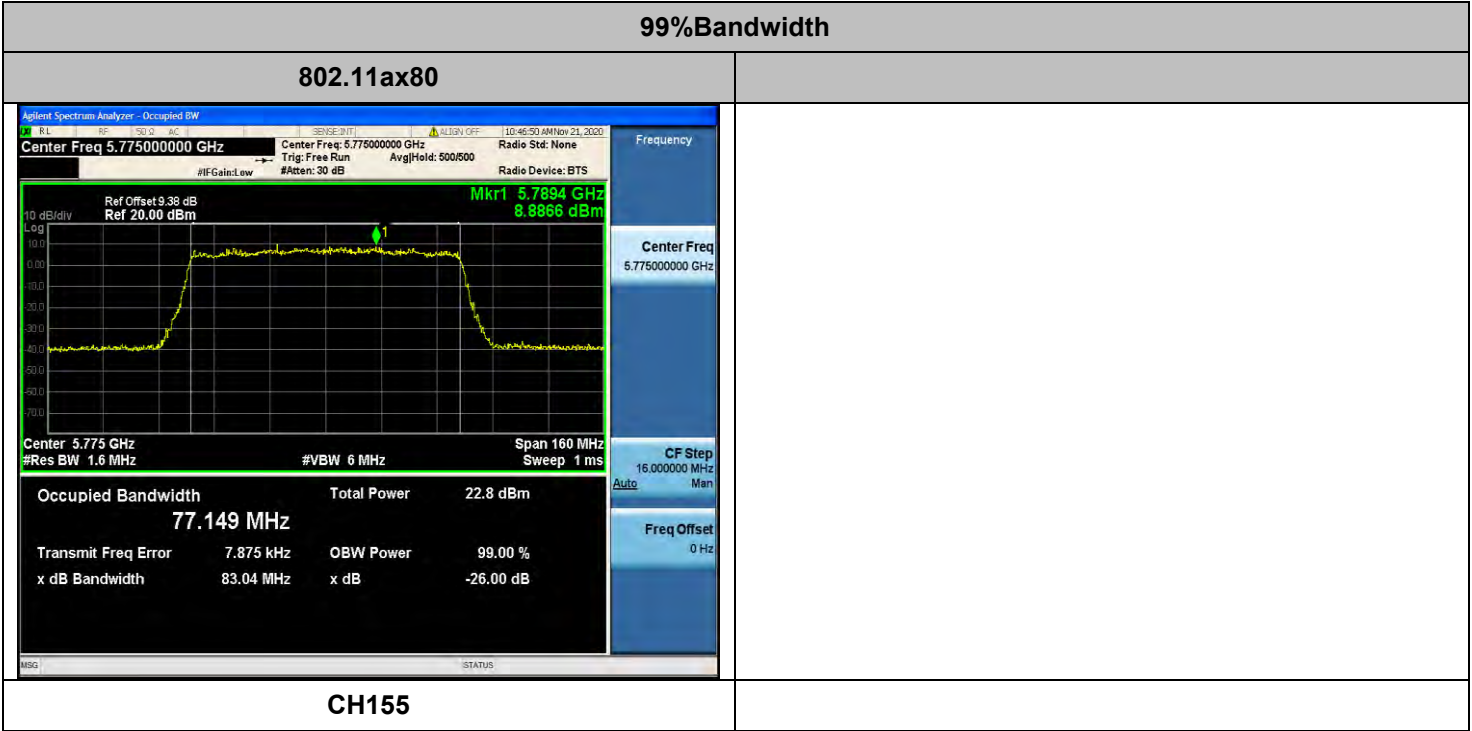
CH157



CH159



CH165

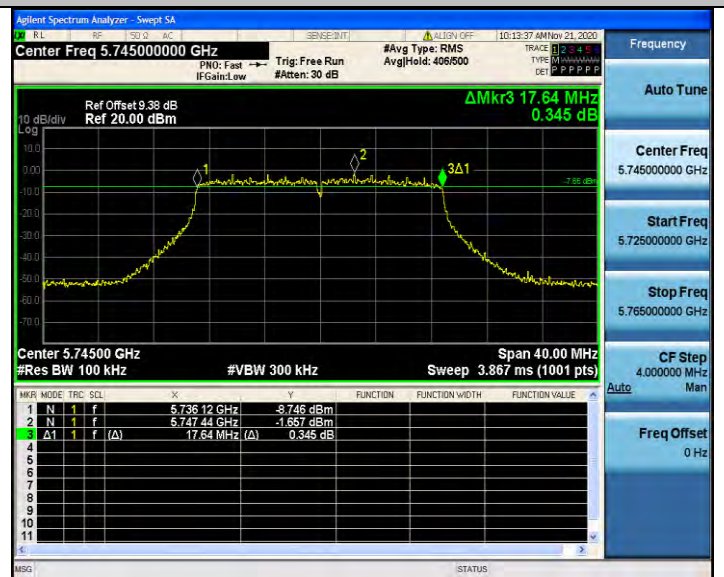


6dB Bandwidth

802.11a



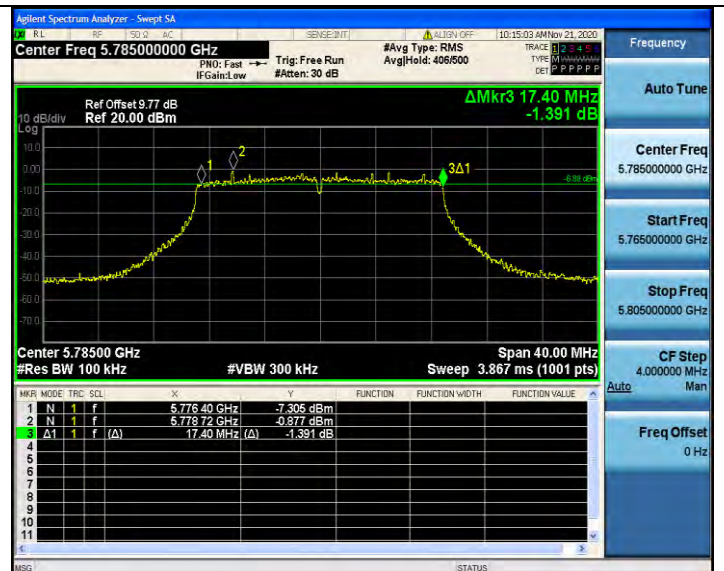
802.11n HT20



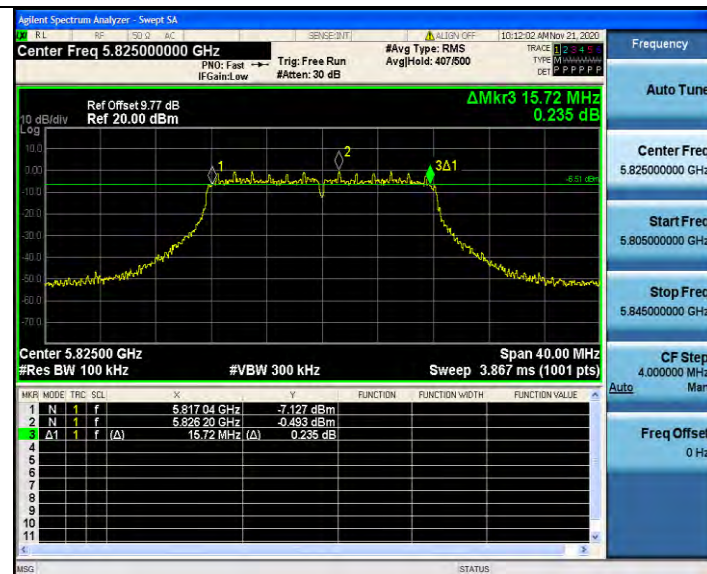
CH149



CH149



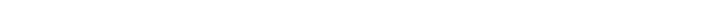
CH157



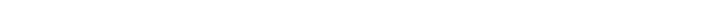
CH157



CH165



CH165



6dB Bandwidth

802.11ac20



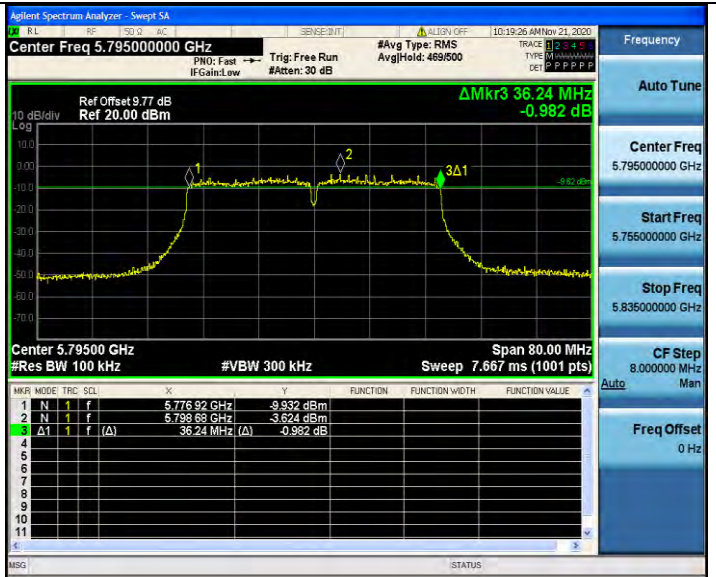
802.11n HT40



CH149



CH151



CH157

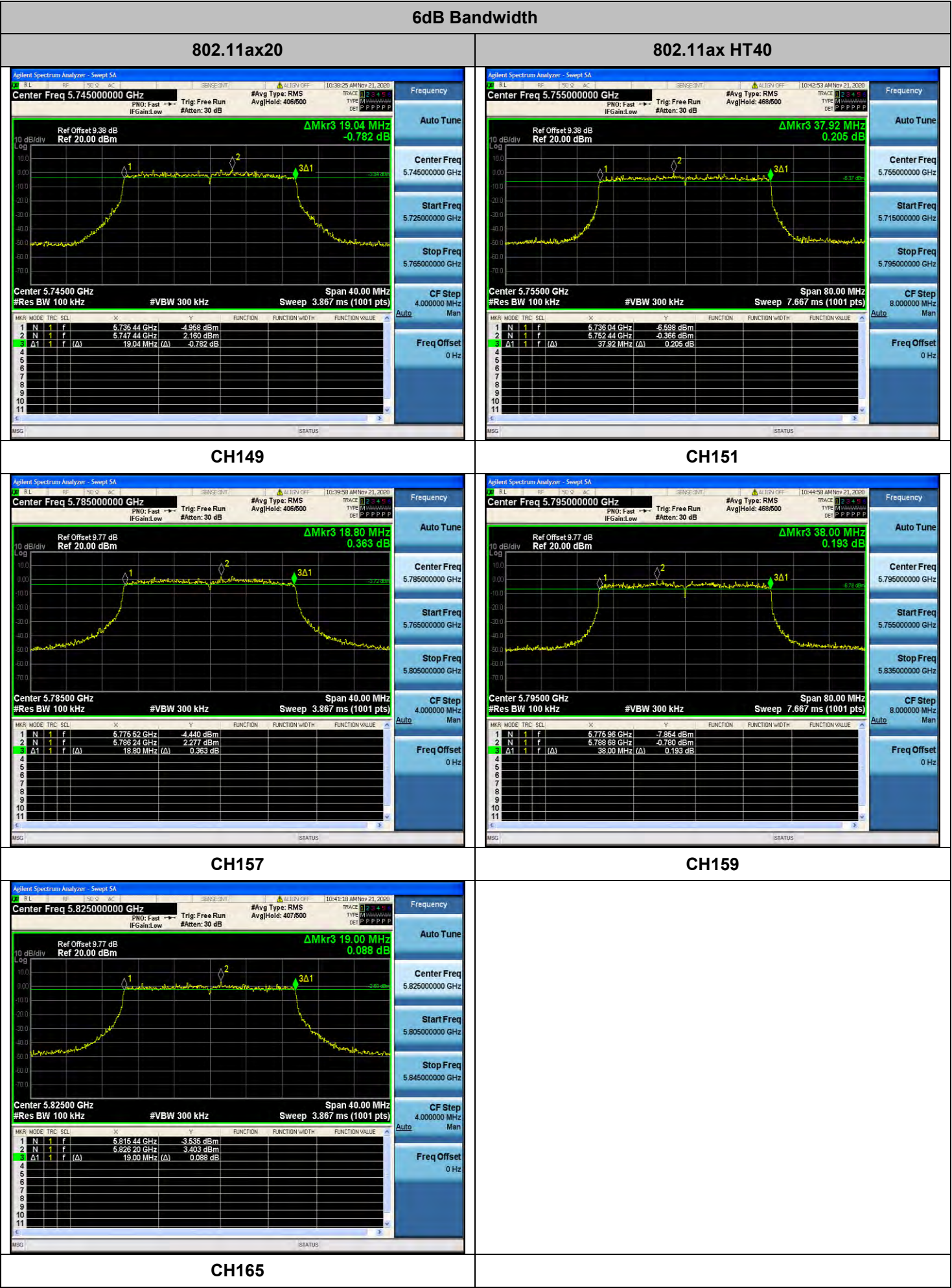


CH159



CH165





CH157

Agilent Spectrum Analyzer - Sweep SA

Center Freq 5.825000000 GHz

Ref Offset 9.77 dB
Ref 20.00 dBm

ΔMkr3 19.00 MHz
0.088 dB

Auto Tune

Center Freq 5.825000000 GHz

Start Freq 5.805000000 GHz

Stop Freq 5.845000000 GHz

CF Step 4.0000000 MHz

Freq Offset 0 Hz

Center 5.82500 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 3.867 ms (1001 pts)

Table

MSG

STATUS

CH159

Agilent Spectrum Analyzer - Sweep SA

Center Freq 5.825000000 GHz

Ref Offset 9.77 dB
Ref 20.00 dBm

ΔMkr3 19.00 MHz
0.088 dB

Auto Tune

Center Freq 5.825000000 GHz

Start Freq 5.805000000 GHz

Stop Freq 5.845000000 GHz

CF Step 4.0000000 MHz

Freq Offset 0 Hz

Center 5.82500 GHz

#Res BW 100 kHz

#VBW 300 kHz

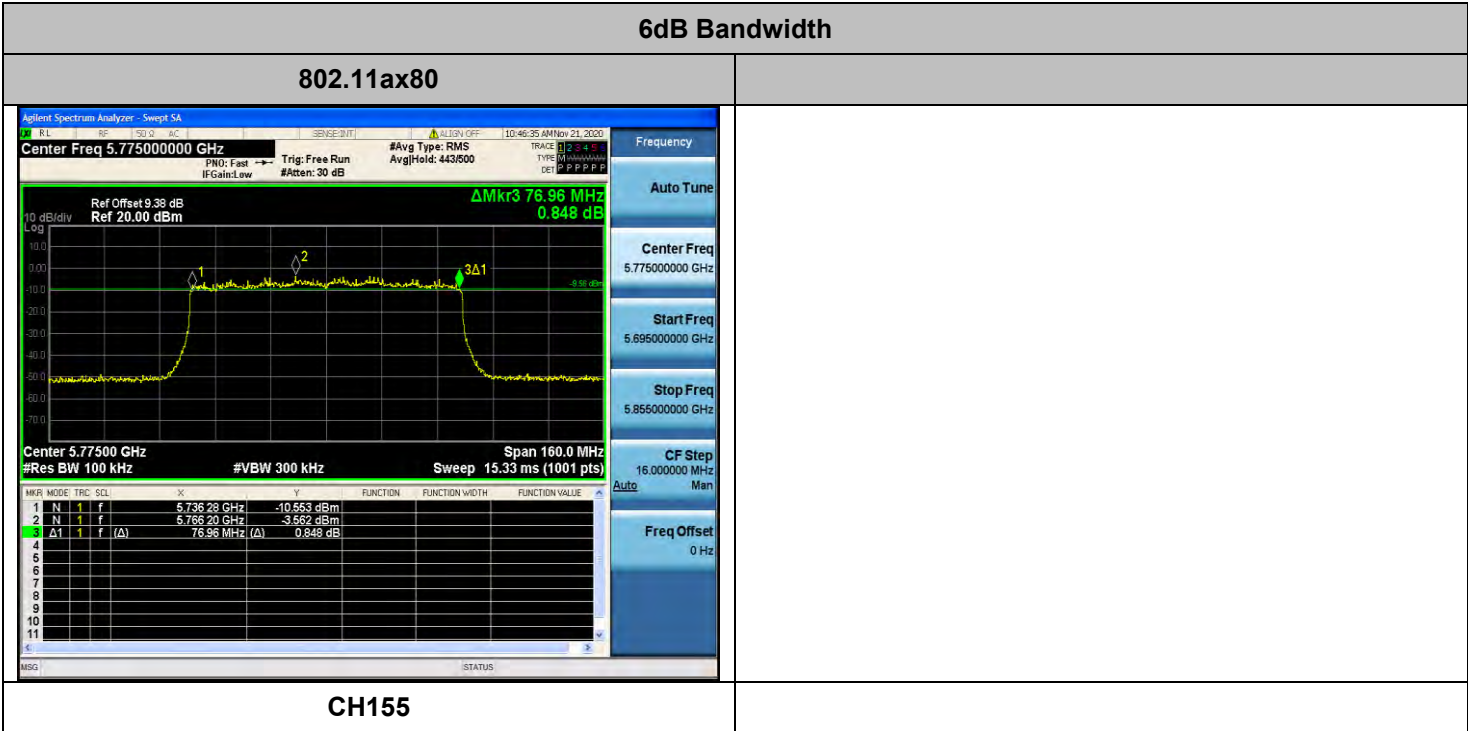
Sweep 3.867 ms (1001 pts)

Table

MSG

STATUS

CH165



Antenna 4:

99%Bandwidth

802.11a

802.11n HT20



CH149

CH149



CH157

CH157

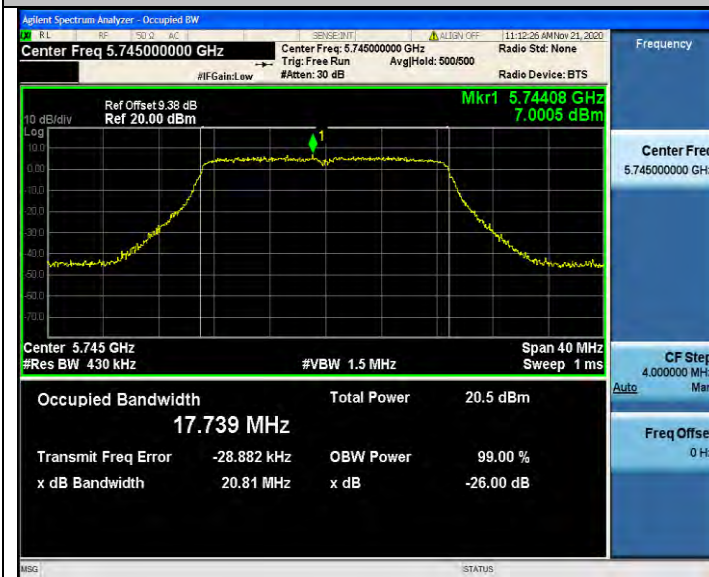


CH165

CH165

99%Bandwidth

802.11ac20



802.11n HT40



CH149



CH151



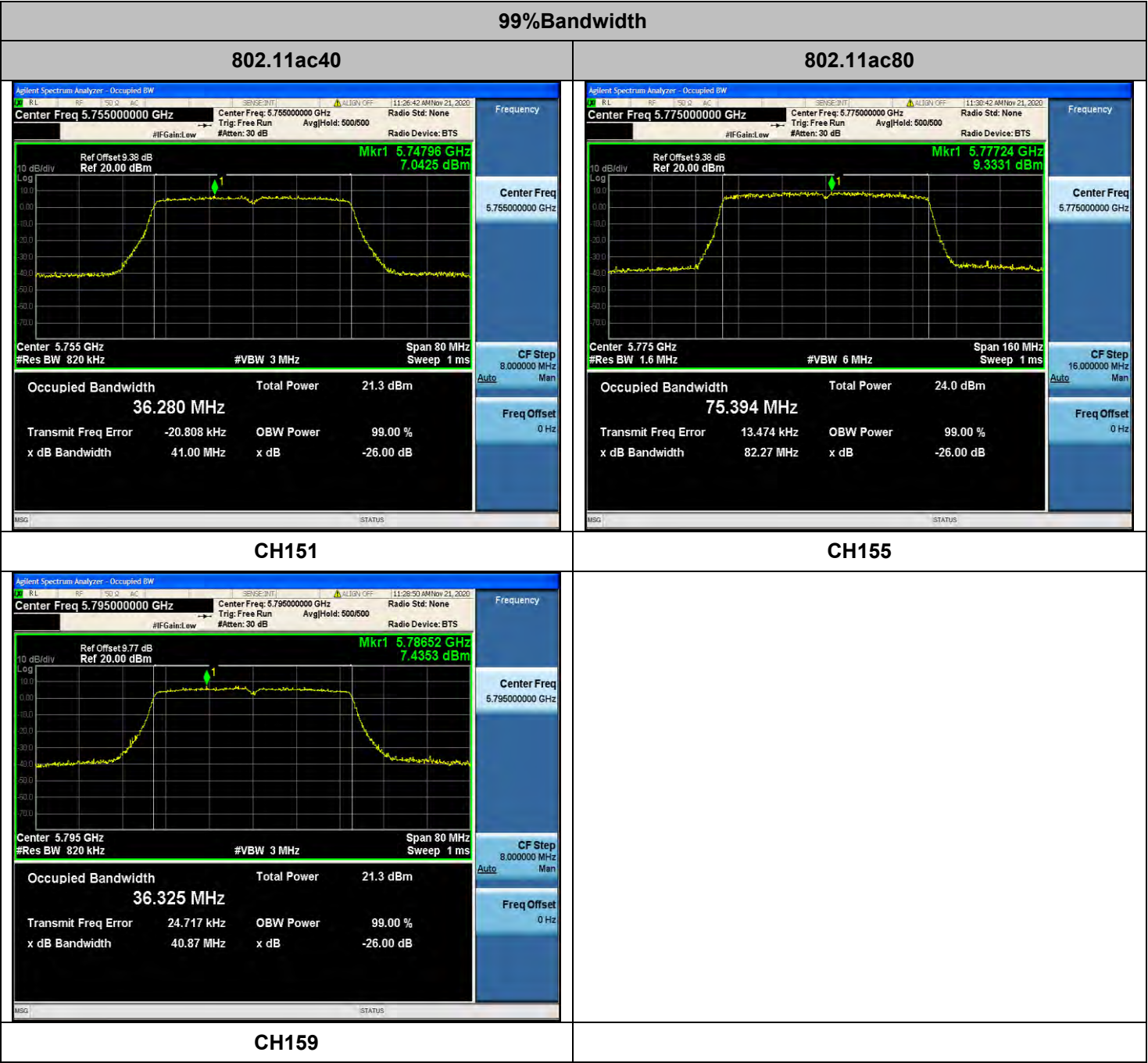
CH157



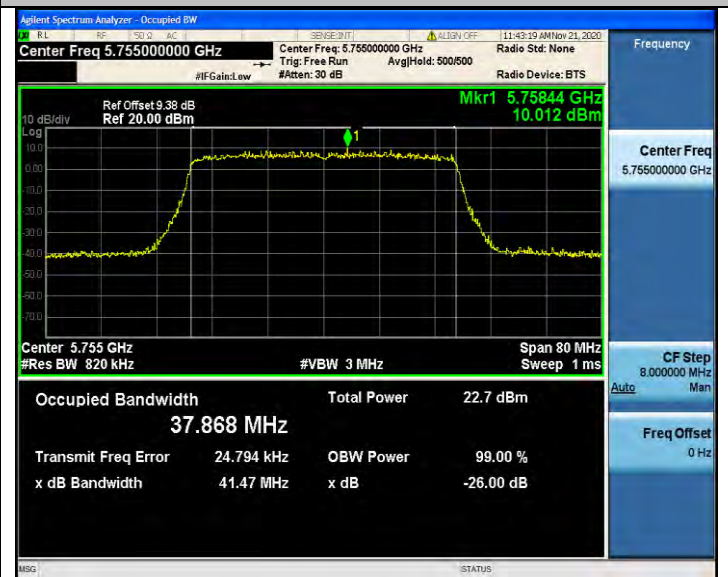
CH159



CH165



802.11ax HT40



CH151



CH159



CH165

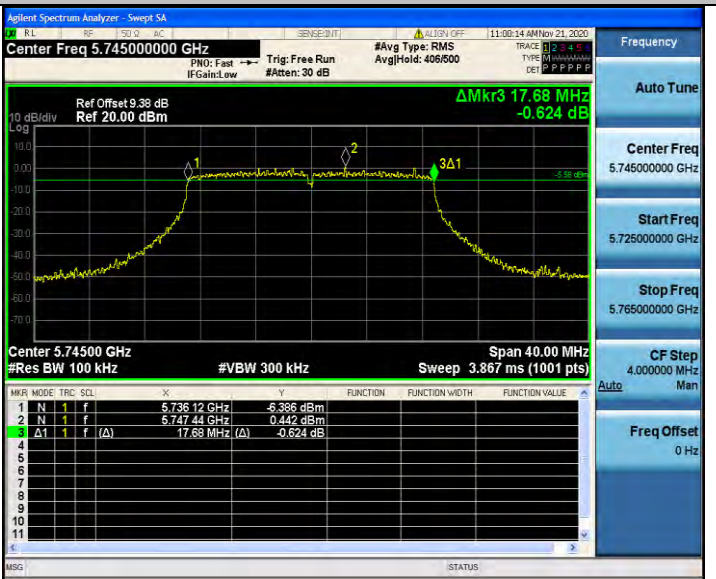
99%Bandwidth	
802.11ax80	
Agilent Spectrum Analyzer - Occupied BW RL RF 50.0 AC SENSE: DUT ALLEN OFF 11:46:54 AM Nov 21, 2020 Center Freq 5.775000000 GHz Center Freq: 5.775000000 GHz Trig: Free Run Avg/Hold: 500/500 Radio Std: None #IF Gate: Low #Atten: 30 dB Radio Device: BTS Ref Offset: 9.38 dB Ref 20.00 dBm Mkr1 5.79996 GHz 8.6257 dBm Center Freq 5.775000000 GHz CF Step 16.000000 MHz Auto Man Freq Offset 0 Hz Center 5.775 GHz #Res BW 1.6 MHz #VBW 6 MHz Span 160 MHz Sweep 1 ms Occupied Bandwidth 77.170 MHz Total Power 23.0 dBm Transmit Freq Error 3.640 kHz OBW Power 99.00 % x dB Bandwidth 83.24 MHz x dB -26.00 dB WSC STATUS	
CH155	

6dB Bandwidth

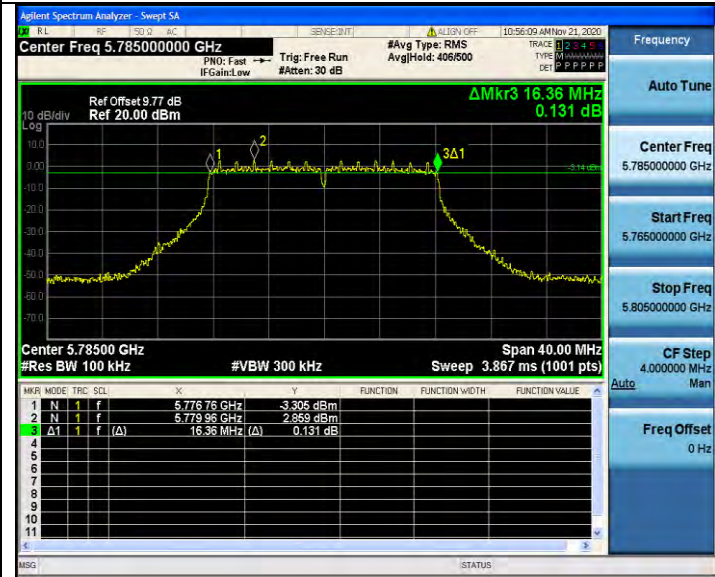
802.11a



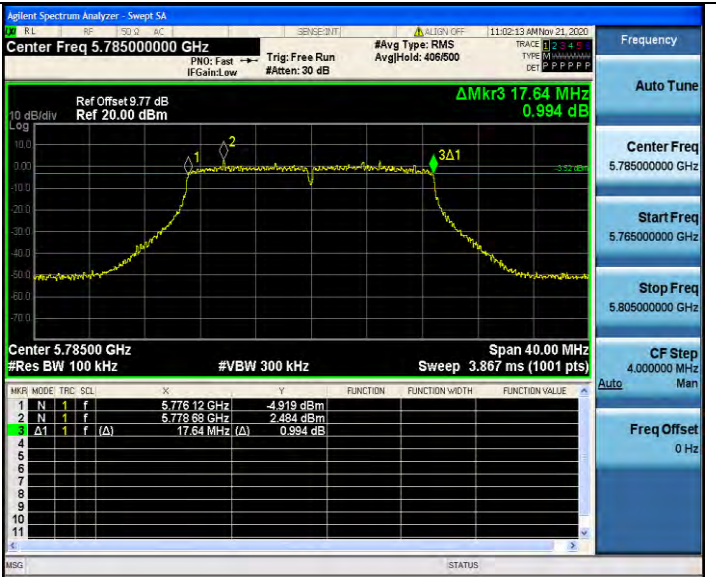
802.11n HT20



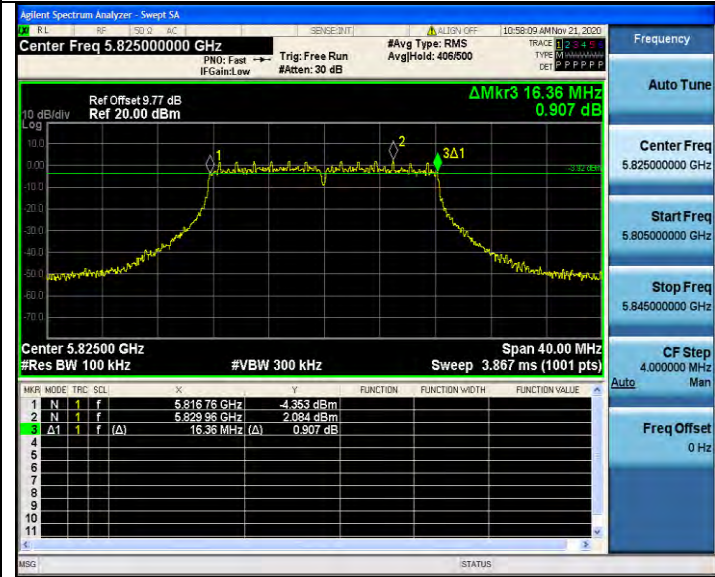
CH149



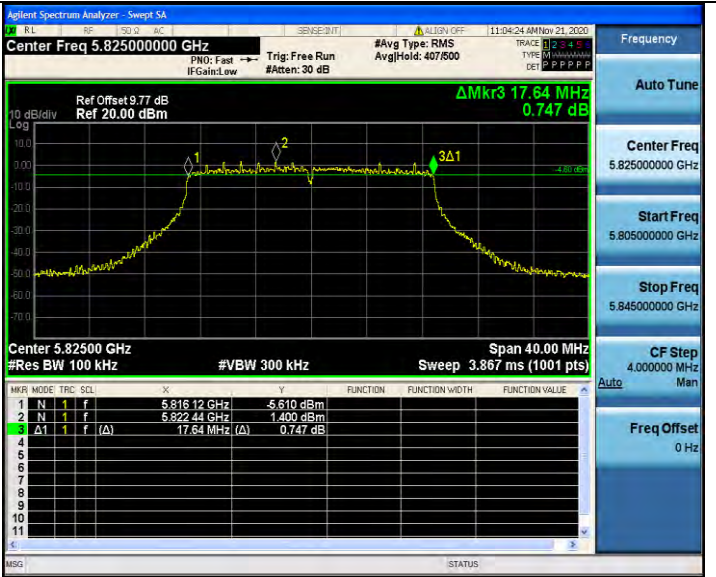
CH149



CH157



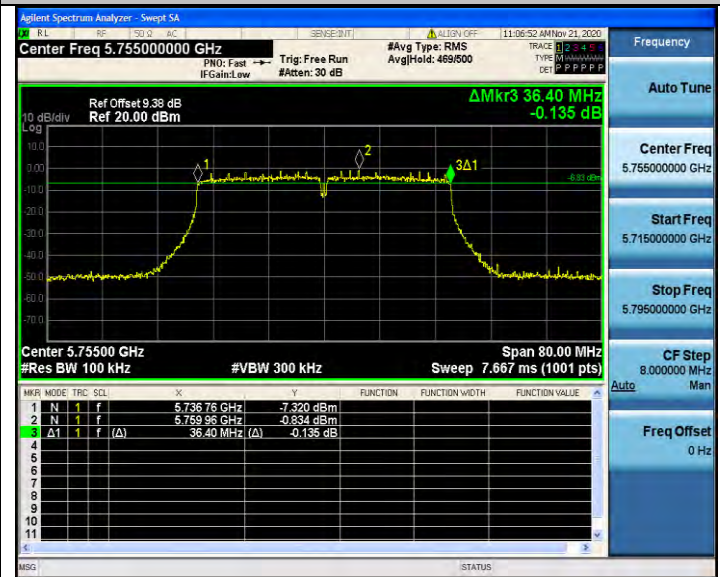
CH157



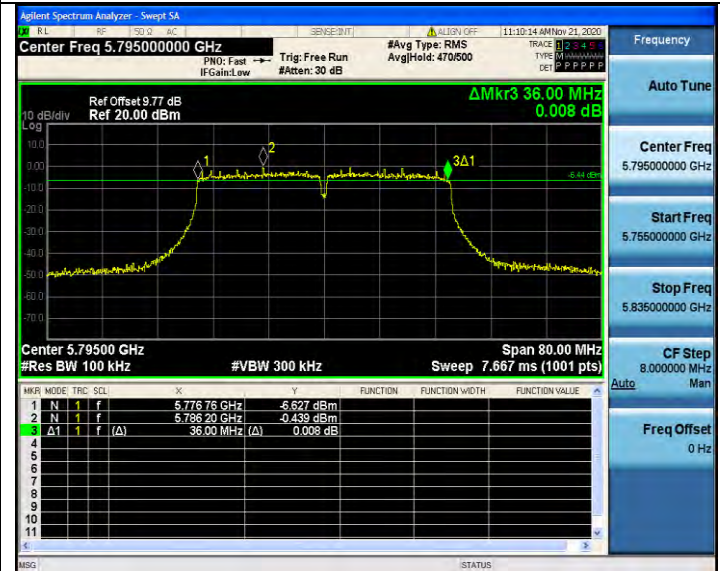
CH165

CH165

802.11n HT40



CH151

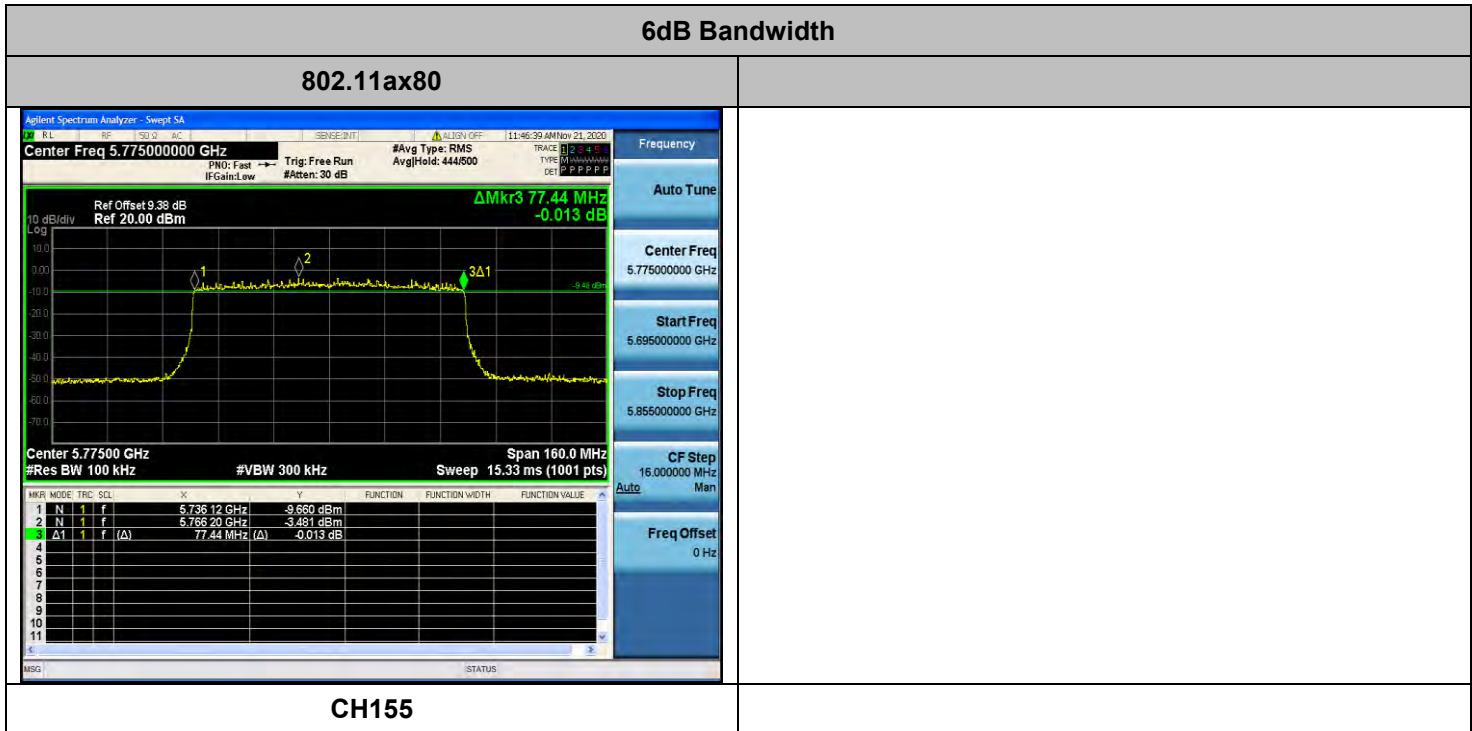


CH159

CH165

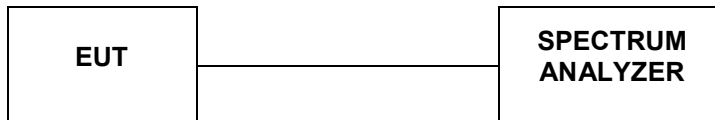






4.7. 26dBc Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

According to KDB789033 D02 General UNII Test Procedures New Rules v01 for one of the following procedures may be used for Emission Bandwidth (EBW) measurement:

- Set RBW = 300 kHz (approximately 1% of the emission bandwidth).
- Set the video bandwidth (VBW) = 1000 KHz (VBW > RBW)
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize
- Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

LIMIT

No Limits for 26dBc Bandwidth

TEST RESULTS

Temperature	23.6°C	Humidity	55.7%
Test Engineer	Moon Tan	Configurations	IEEE 802.11a/n/ac

Antenna 5:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.610	19.080	-	Pass
	40	16.559	19.120		
	48	16.585	19.160		
802.11nHT20	36	17.736	20.200	-	Pass
	40	17.697	20.440		
	48	17.725	20.320		
802.11ac20	36	17.739	20.360	-	Pass
	40	17.678	20.880		
	48	17.707	20.280		
802.11n40	38	36.306	39.840	-	Pass
	46	36.233	39.680		
802.11ac40	38	36.267	40.080	-	Pass
	46	36.248	39.760		
802.11ac80	42	75.282	80.480	-	Pass
802.11ax20	36	18.956	21.000	-	Pass
	40	18.970	20.720		
	48	18.917	20.880		
802.11ax40	38	37.819	40.400	-	Pass
	46	37.722	40.240		
802.11ax80	42	77.17	81.600	-	Pass

Antenna 6:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.611	19.040	-	Pass
	40	16.561	19.320		
	48	16.511	19.080		
802.11nHT20	36	17.693	20.200	-	Pass
	40	17.684	20.280		
	48	17.741	20.480		
802.11ac20	36	17.697	20.320	-	Pass
	40	17.698	20.040		
	48	17.734	20.240		
802.11n40	38	36.300	40.160	-	Pass
	46	36.183	40.000		
802.11ac40	38	36.288	39.920	-	Pass
	46	36.310	40.000		
802.11ac80	42	75.314	81.120	-	Pass
802.11ax20	36	18.916	20.600	-	Pass
	40	19.027	21.200		
	48	18.975	20.800		
802.11ax40	38	37.755	40.400	-	Pass
	46	37.832	40.560		
802.11ax80	42	77.102	81.760	-	Pass

Antenna 7:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.626	19.320	-	Pass
	40	16.559	18.680		
	48	16.536	18.760		
802.11nHT20	36	17.729	20.280	-	Pass
	40	17.711	19.920		
	48	17.756	20.280		
802.11ac20	36	17.767	20.520	-	Pass
	40	17.716	20.320		
	48	17.740	20.320		
802.11n40	38	36.223	40.000	-	Pass
	46	36.238	40.000		
802.11ac40	38	36.165	39.920	-	Pass
	46	36.263	40.240		
802.11ac80	42	75.528	81.600	-	Pass
802.11ax20	36	19.047	20.840	-	Pass
	40	19.005	21.200		
	48	19.044	21.240		
802.11ax40	38	37.918	40.880	-	Pass
	46	37.936	40.800		
802.11ax80	42	77.192	81.760	-	Pass

Antenna 8:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.543	18.880	-	Pass
	40	16.577	19.080		
	48	16.557	19.200		
802.11nHT20	36	17.732	20.400	-	Pass
	40	17.725	20.360		
	48	17.677	20.320		
802.11ac20	36	17.738	21.000	-	Pass
	40	17.682	20.320		
	48	17.695	20.400		
802.11n40	38	36.232	39.600	-	Pass
	46	36.238	39.840		
802.11ac40	38	36.210	39.600	-	Pass
	46	36.194	40.160		
802.11ac80	42	75.208	80.640	-	Pass
802.11ax20	36	19.016	21.040	-	Pass
	40	19.016	20.840		
	48	18.974	20.960		
802.11ax40	38	37.796	40.720	-	Pass
	46	37.855	40.480		
802.11ax80	42	76.977	81.600	-	Pass

Antenna 5:

99%Bandwidth

802.11a

802.11n HT20



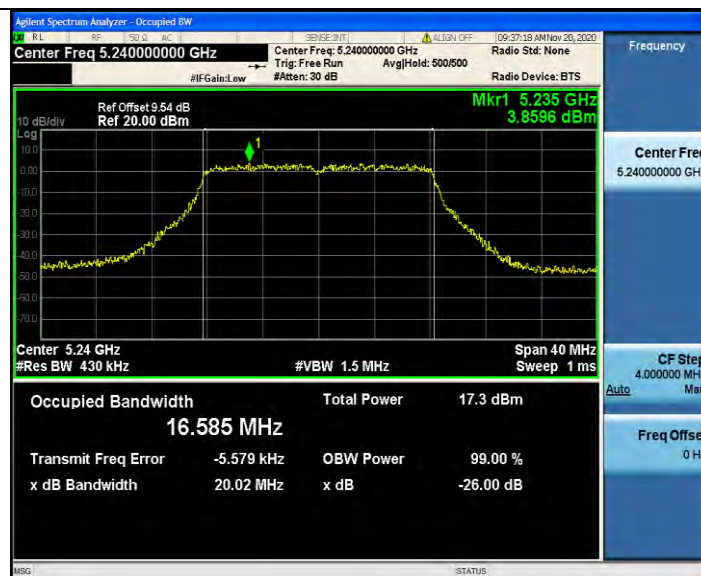
CH36

CH36



CH40

CH40

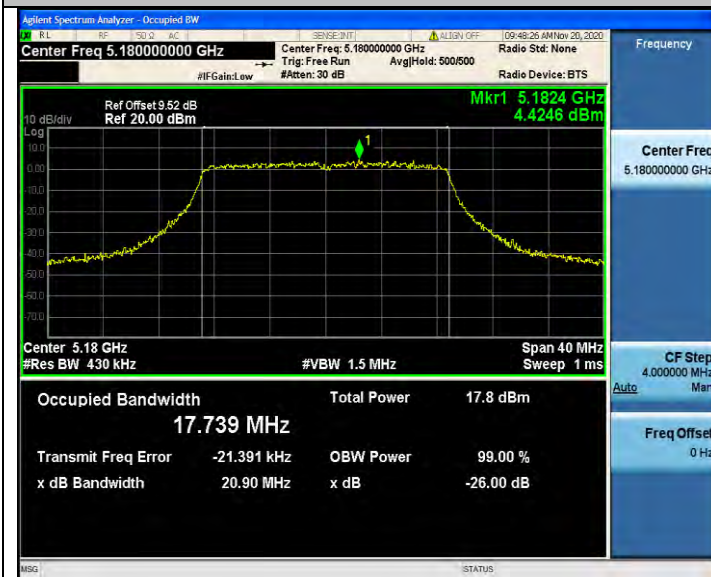


CH48

CH48

99%Bandwidth

802.11ac20



802.11n HT40



CH36



CH38



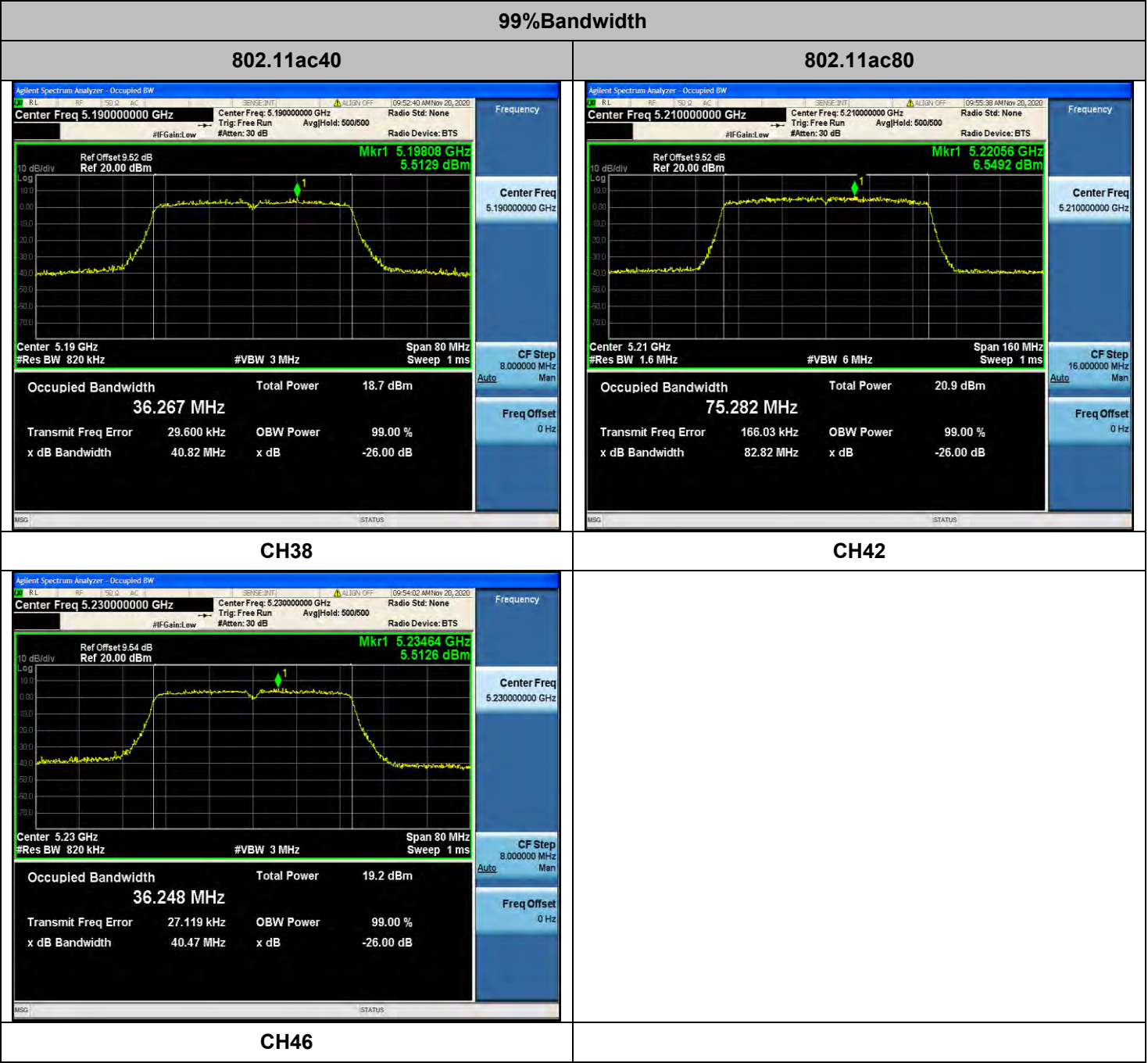
CH40



CH46



CH48



99%Bandwidth

802.11ax20



802.11ax HT40



CH36



CH38



CH40



CH46



CH48

99%Bandwidth

802.11ax80

Agilent Spectrum Analyzer - Occupied BW

Center Freq 5.210000000 GHz

Ref Offset 9.52 dB
Ref 20.00 dBm

Span 160 MHz
Sweep 1 ms

Occupied Bandwidth
77.172 MHz

Total Power
20.5 dBm

Transmit Freq Error
119.11 kHz

OBW Power
99.00 %

x dB Bandwidth
83.11 MHz

x dB
-26.00 dB

Frequency

Center Freq
5.210000000 GHz

CF Step
16.000000 MHz

Freq Offset
0 Hz

CH42

26dB Bandwidth

802.11a



802.11n HT20



CH36



CH36



CH40



CH40



CH48

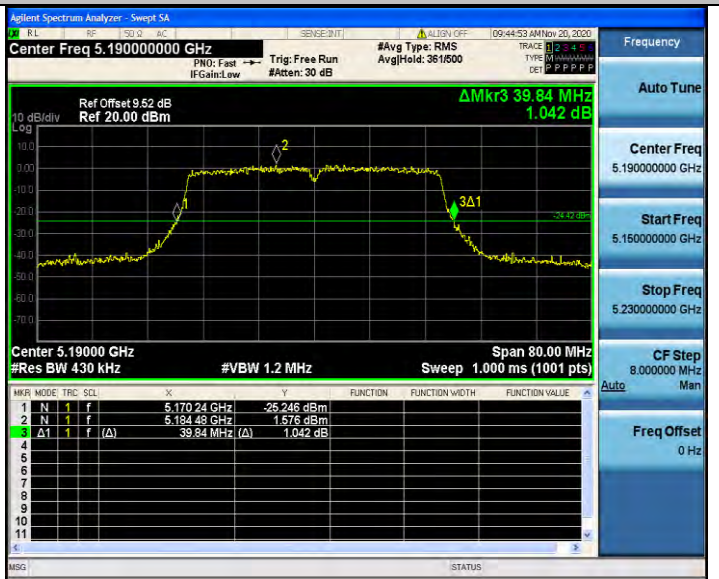
CH48

26dB Bandwidth

802.11ac20



802.11n HT40



CH36



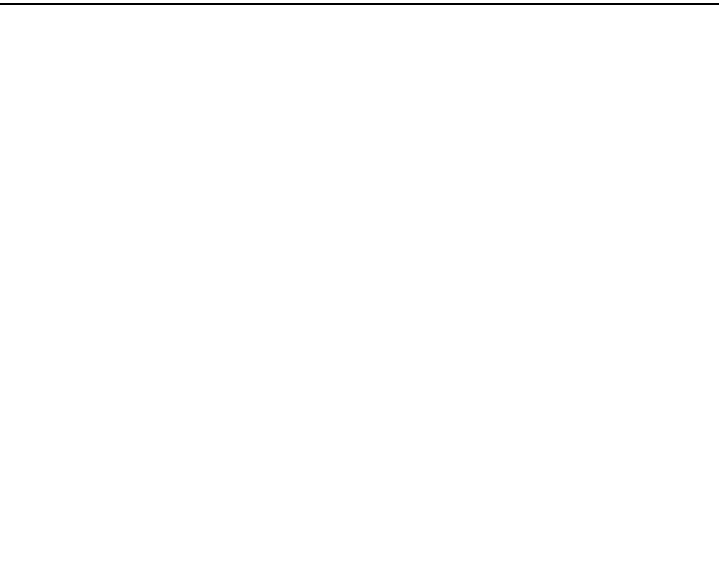
CH38



CH40



CH46



CH48



26dB Bandwidth

802.11ax20



802.11ax HT40



CH36



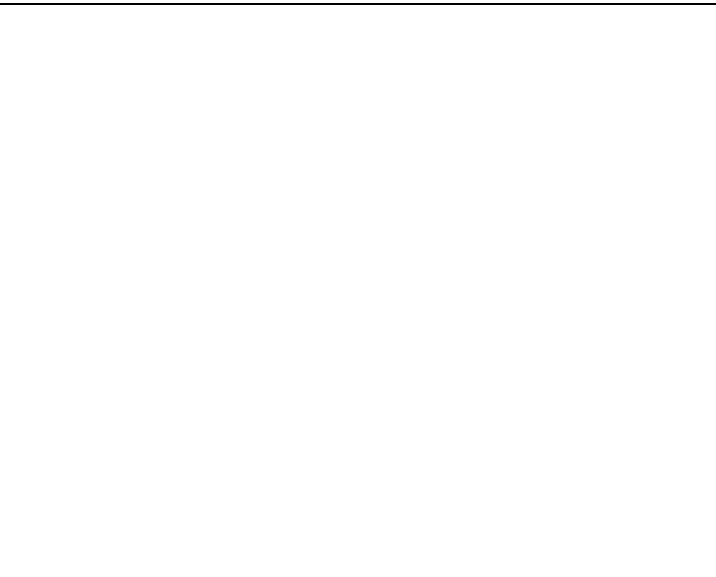
CH38



CH40



CH46



CH48

