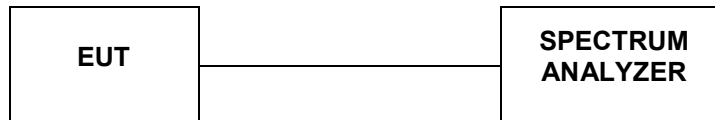


4.7. 26dBc Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

According to KDB789033 D02 General U-NII Test Procedures New Rules v02r01 for one of the following procedures may be used for Emission Bandwidth (EBW) measurement:

- Set RBW = 220 kHz/430 kHz /820 kHz (approximately 1% of the emission bandwidth).
- Set the video bandwidth (VBW) = 3* 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

RTL8822CU:

Antenna 0:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.524	18.600	-	Pass
	40	16.490	18.520		
	48	16.521	18.600		
802.11nHT20	36	17.642	19.560	-	Pass
	40	17.628	19.520		
	48	17.642	19.560		
802.11ac20	36	17.643	41.280	-	Pass
	40	17.626	41.280		
	48	17.637	19.600		
802.11n40	38	36.406	19.520	-	Pass
	46	36.448	19.560		
802.11ac40	38	36.457	41.440	-	Pass
	46	36.427	41.200		
802.11ac80	42	74.951	81.120	-	Pass

Antenna 1:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.552	18.520	-	Pass
	40	16.530	18.440		
	48	16.547	18.560		
802.11nHT20	36	17.645	19.520	-	Pass
	40	17.634	19.480		
	48	17.645	19.560		
802.11ac20	36	17.658	41.440	-	Pass
	40	17.643	40.960		
	48	17.651	19.520		
802.11n40	38	36.437	19.560	-	Pass
	46	36.490	19.480		
802.11ac40	38	36.494	41.200	-	Pass
	46	36.806	41.600		
802.11ac80	42	75.013	81.280	-	Pass

MT7668BU:**Antenna 0:**

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	17.104	20.120	-	Pass
	40	17.060	20.480		
	48	17.161	24.560		
802.11nHT20	36	18.036	20.800	-	Pass
	40	18.018	22.120		
	48	18.077	21.480		
802.11ac20	36	17.886	50.720	-	Pass
	40	17.886	62.240		
	48	17.932	20.200		
802.11n40	38	36.794	20.160	-	Pass
	46	36.880	20.320		
802.11ac40	38	36.783	46.560	-	Pass
	46	36.858	47.280		
802.11ac80	42	76.684	120.320	-	Pass

Antenna 1:

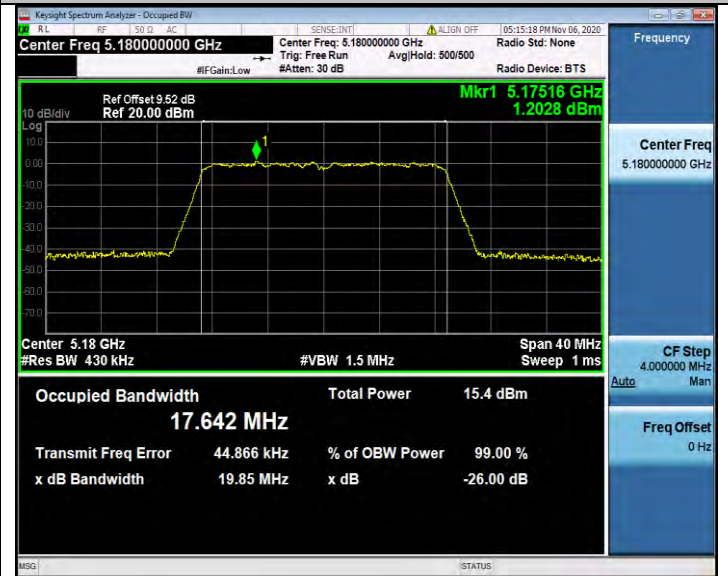
Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.597	19.760	-	Pass
	40	16.621	19.640		
	48	16.608	19.600		
802.11nHT20	36	17.636	20.360	-	Pass
	40	17.628	20.360		
	48	17.644	20.680		
802.11ac20	36	17.700	40.160	-	Pass
	40	17.700	40.000		
	48	17.704	20.040		
802.11n40	38	36.631	20.160	-	Pass
	46	36.591	20.200		
802.11ac40	38	36.367	40.160	-	Pass
	46	36.494	40.320		
802.11ac80	42	76.233	106.080	-	Pass

RTL8822CU: Antenna 0:

99%Bandwidth

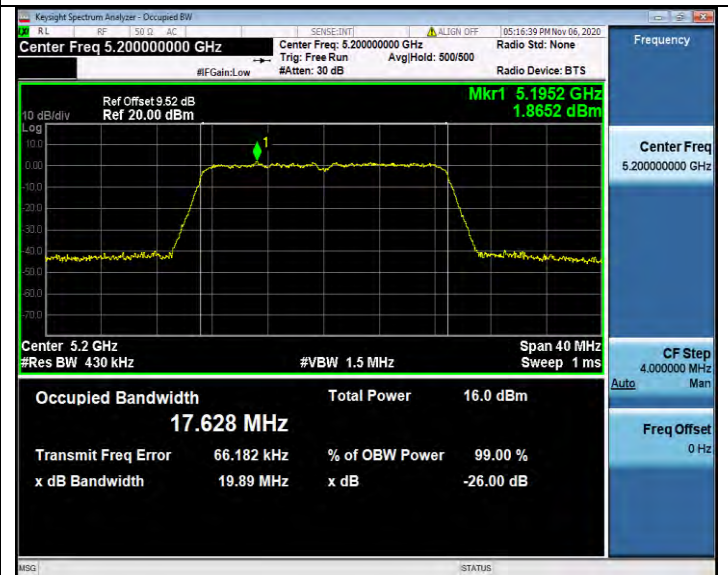
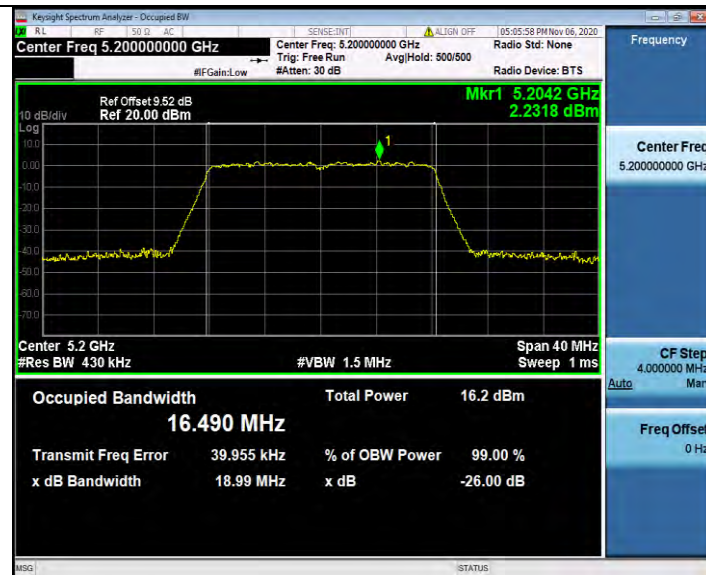
802.11a

802.11n HT20



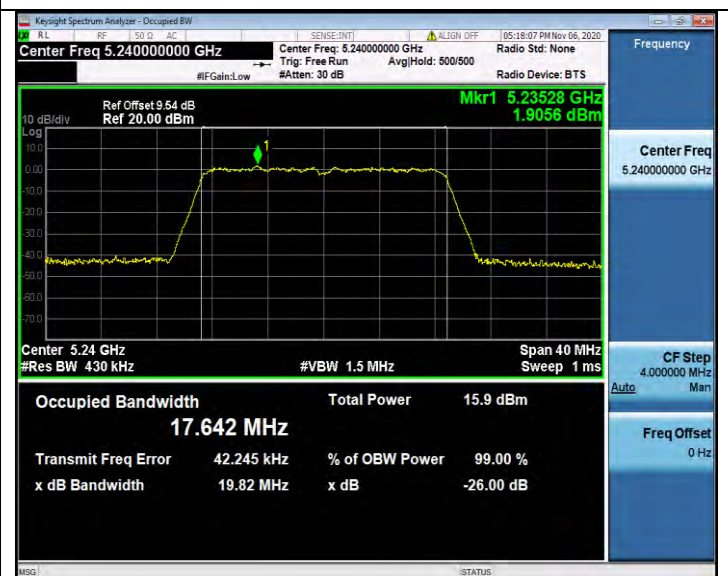
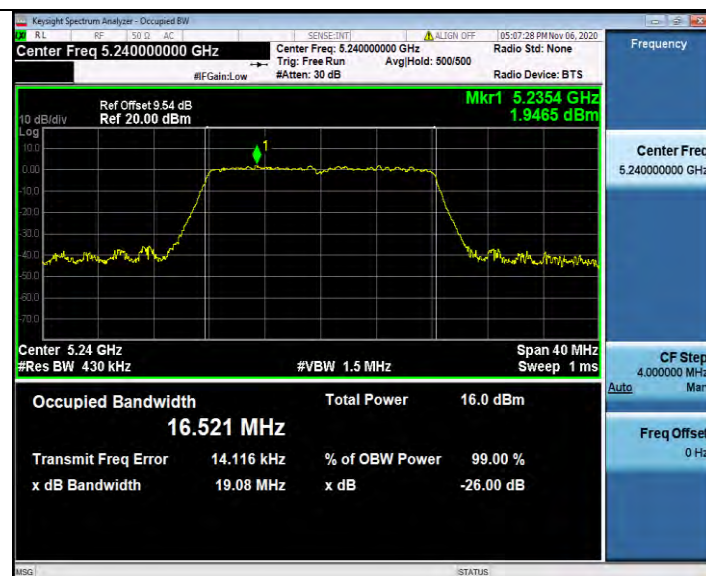
CH36

CH36



CH40

CH40

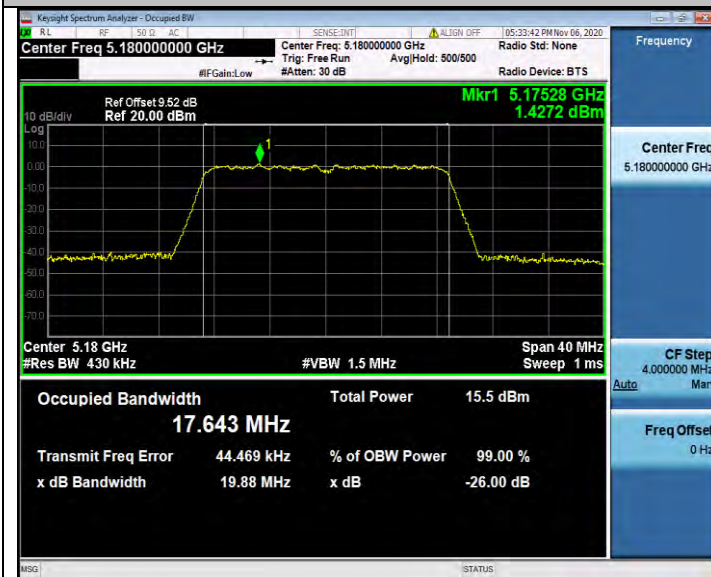


CH48

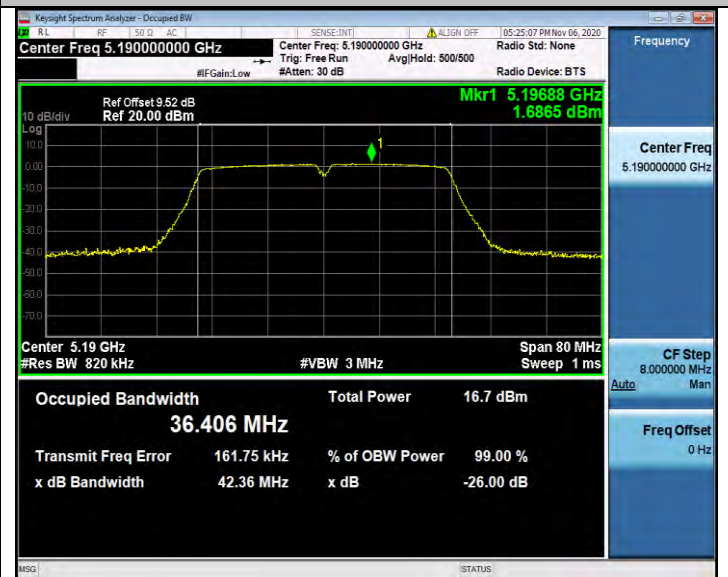
CH48

99%Bandwidth

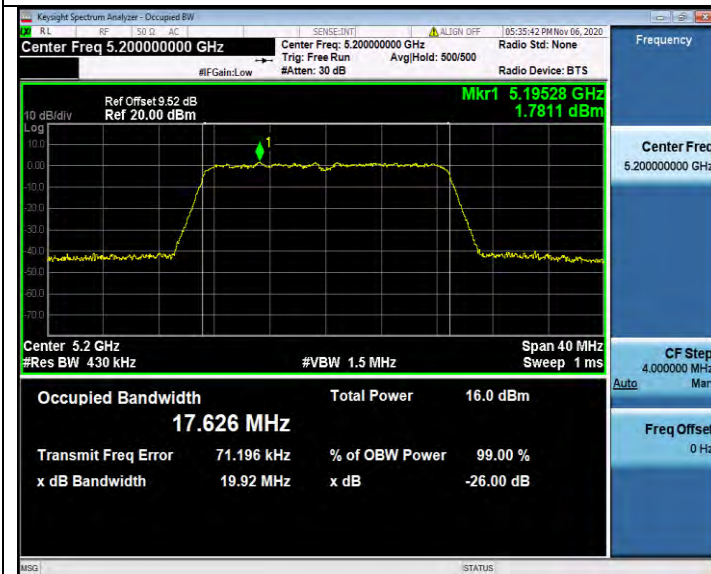
802.11ac20



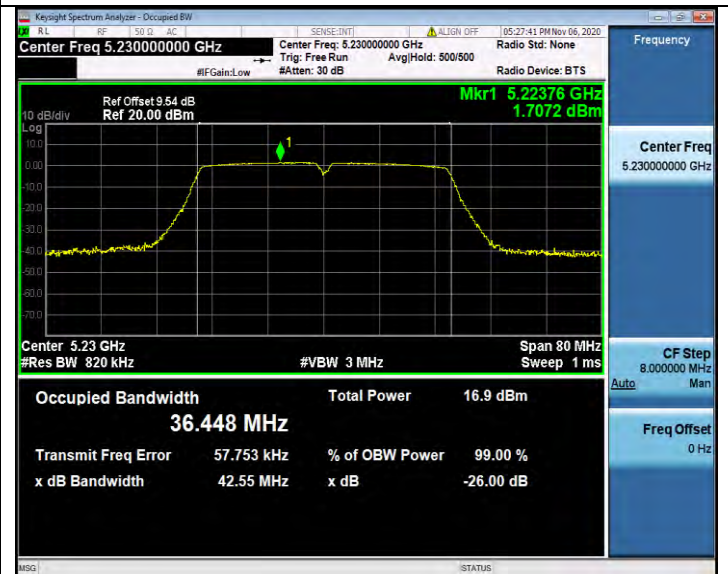
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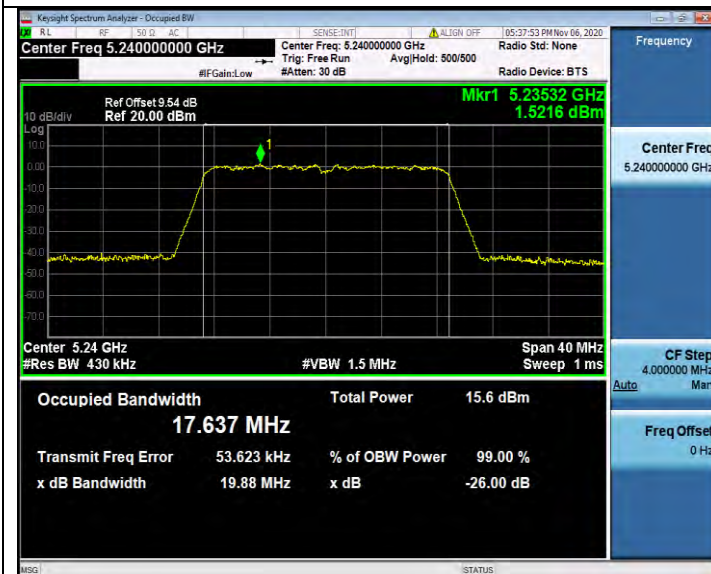
CH36



CH38



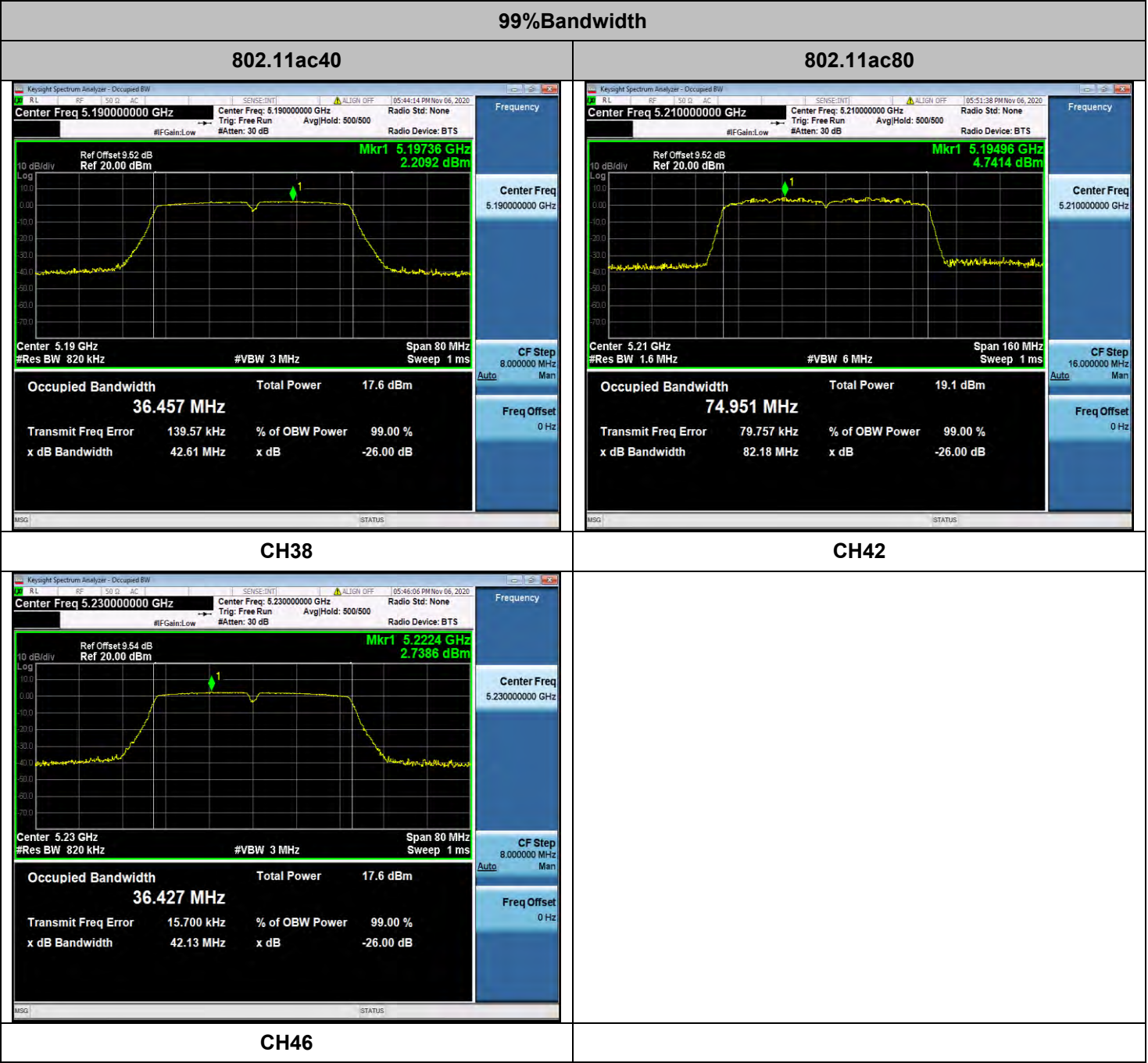
CH40



CH46



CH48



CH46

KeySight Spectrum Analyzer - Occupied BW

Center Freq 5.230000000 GHz

Center Freq: 5.230000000 GHz

Trig: Free Run

Avg/Hold: 500/500

Radio Std: None

Radio Device: BTS

Ref Offset 9.54 dB

Ref 20.00 dBm

Mkr1 5.2224 GHz

2.7386 dBm

10 dB/div

Log

Center Freq 5.23 GHz

#Res BW 820 kHz

#VBW 3 MHz

Span 80 MHz

Sweep 1 ms

CF Step 8.000000 MHz

Auto

Man

Frequency

Center Freq 5.230000000 GHz

Occupied Bandwidth 36.427 MHz

Total Power 17.6 dBm

Transmit Freq Error 15.700 kHz

% of OBW Power 99.00 %

x dB Bandwidth 42.13 MHz

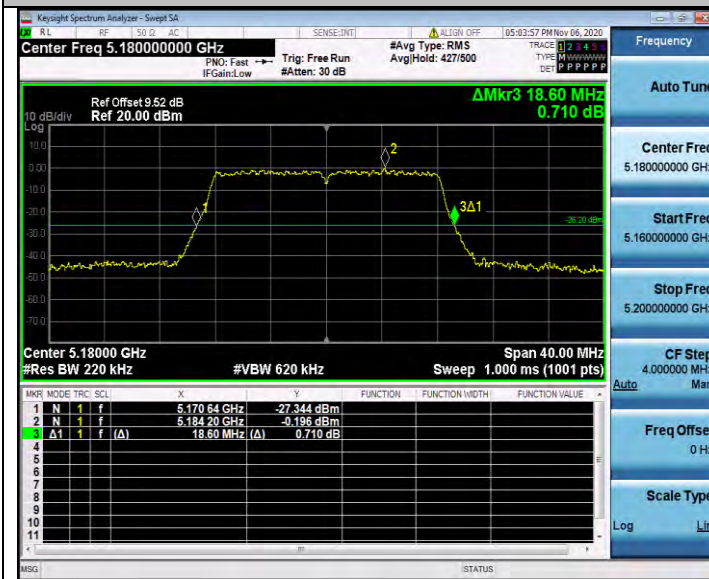
x dB -26.00 dB

Msg

STATUS

26dB Bandwidth

802.11a



802.11n HT20



CH36



CH36



CH40



CH40



CH48



CH48





CH40

Keysight Spectrum Analyzer - Swept SA

Center Freq 5.240000000 GHz

Ref Offset 9.54 dB
Ref 20.00 dBm

ΔMkr3 19.56 MHz
-0.007 dB

10 dB/div
Log

Center 5.24000 GHz
#Res BW 220 kHz
#VBW 620 kHz
Sweep 1.000 ms (1001 pts)

1 N 1 f 5.230 28 GHz -28.437 dBm
2 N 1 f 5.243 40 GHz -1.941 dBm
3 A1 1 f (A) 19.56 MHz (A) -0.007 dB

Frequency

Auto Tune

Center Freq
5.240000000 GHz

Start Freq
5.220000000 GHz

Stop Freq
5.260000000 GHz

CF Step
4.000000 MHz
Auto

Freq Offset
0 Hz

Scale Type
Log Lin

CH46

Keysight Spectrum Analyzer - Swept SA

Center Freq 5.240000000 GHz

Ref Offset 9.54 dB
Ref 20.00 dBm

ΔMkr3 19.56 MHz
-0.007 dB

10 dB/div
Log

Center 5.24000 GHz
#Res BW 220 kHz
#VBW 620 kHz
Sweep 1.000 ms (1001 pts)

1 N 1 f 5.230 28 GHz -28.437 dBm
2 N 1 f 5.243 40 GHz -1.941 dBm
3 A1 1 f (A) 19.56 MHz (A) -0.007 dB

Frequency

Auto Tune

Center Freq
5.240000000 GHz

Start Freq
5.220000000 GHz

Stop Freq
5.260000000 GHz

CF Step
4.000000 MHz
Auto

Freq Offset
0 Hz

Scale Type
Log Lin

CH48

Keysight Spectrum Analyzer - Swept SA

Center Freq 5.240000000 GHz

Ref Offset 9.54 dB
Ref 20.00 dBm

ΔMkr3 19.56 MHz
-0.007 dB

10 dB/div
Log

Center 5.24000 GHz
#Res BW 220 kHz
#VBW 620 kHz
Sweep 1.000 ms (1001 pts)

1 N 1 f 5.230 28 GHz -28.437 dBm
2 N 1 f 5.243 40 GHz -1.941 dBm
3 A1 1 f (A) 19.56 MHz (A) -0.007 dB

Frequency

Auto Tune

Center Freq
5.240000000 GHz

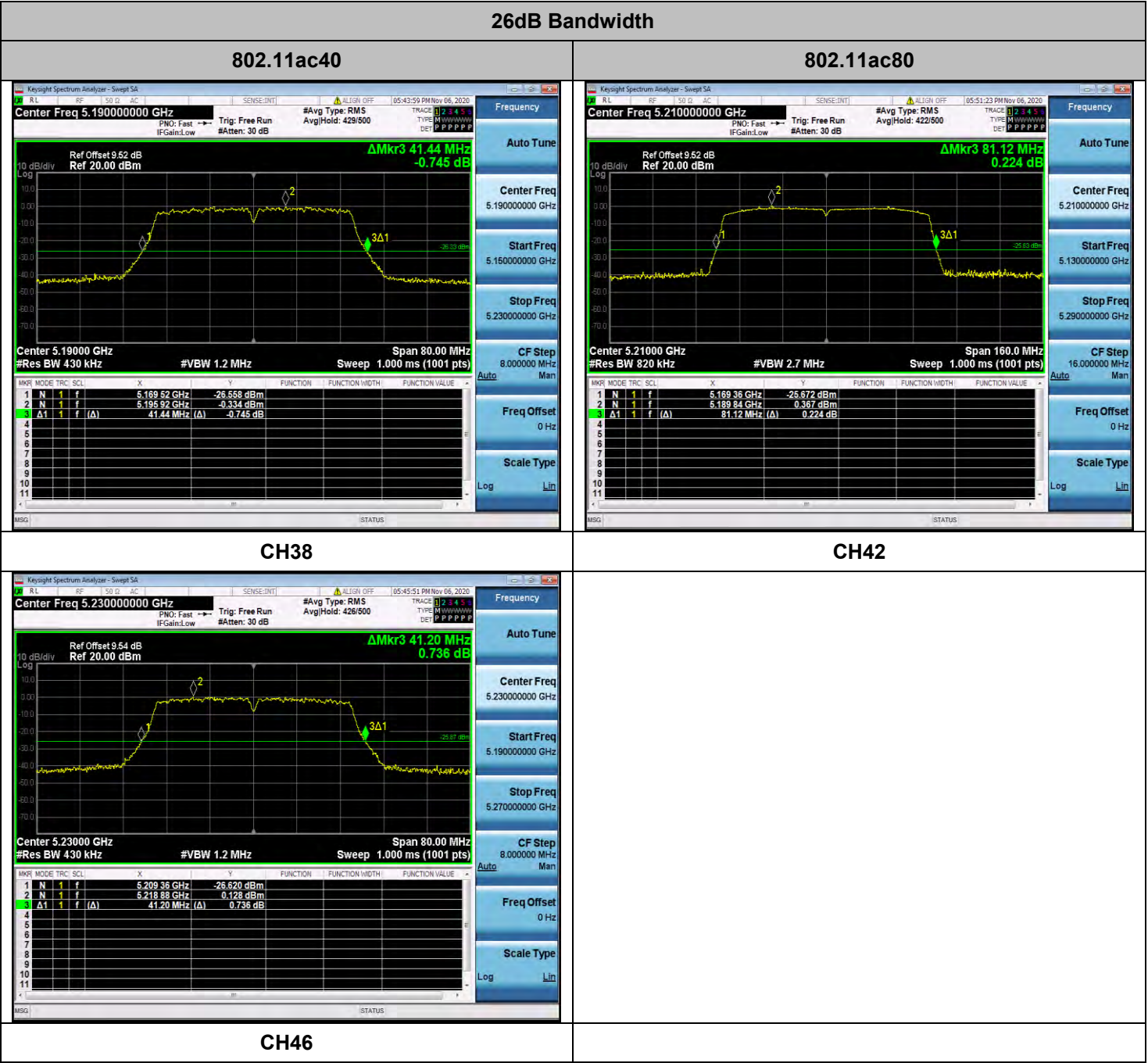
Start Freq
5.220000000 GHz

Stop Freq
5.260000000 GHz

CF Step
4.000000 MHz
Auto

Freq Offset
0 Hz

Scale Type
Log Lin

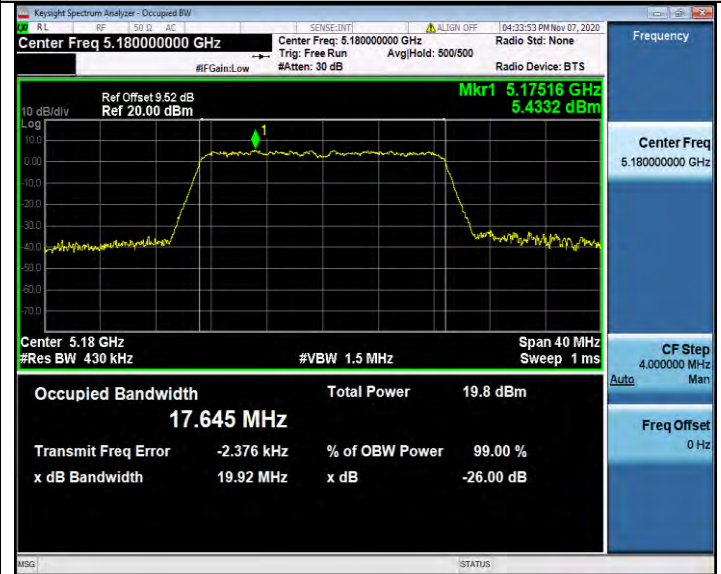


Antenna 1:

99%Bandwidth

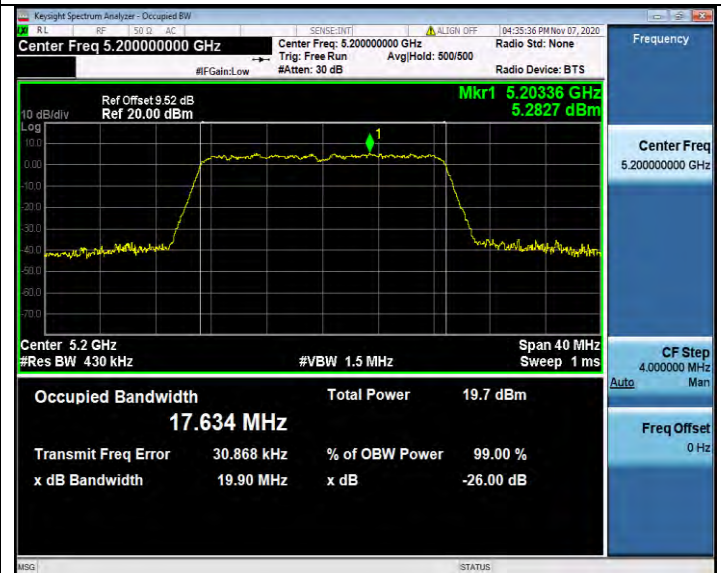
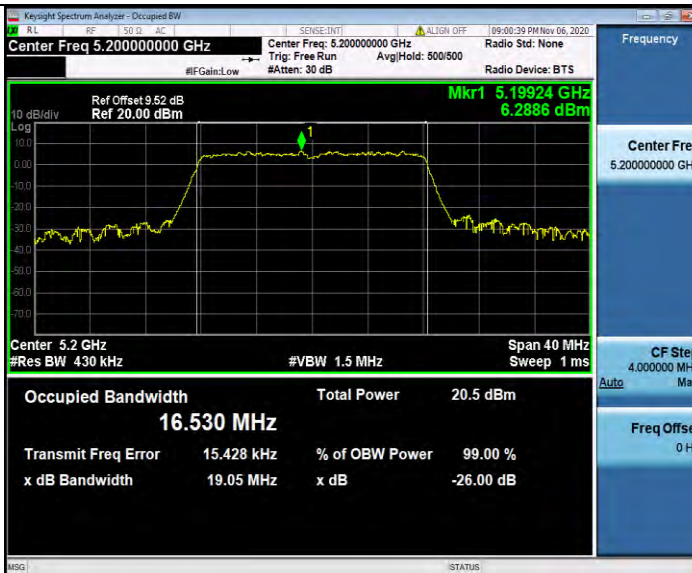
802.11a

802.11n HT20



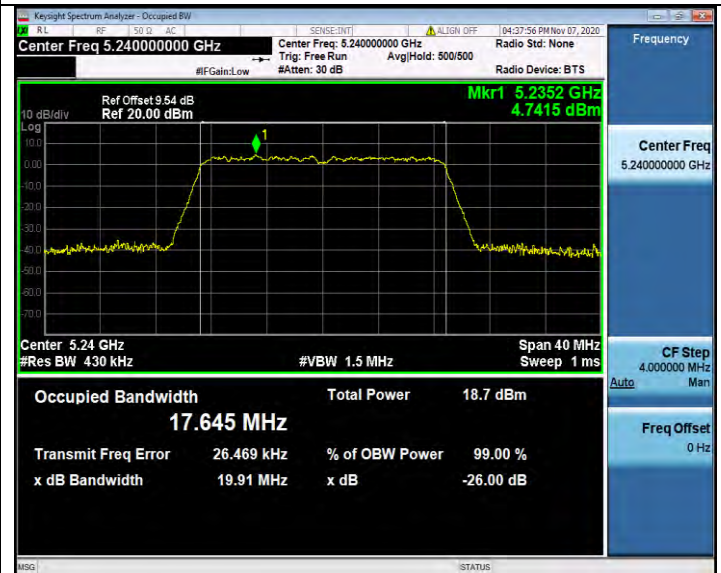
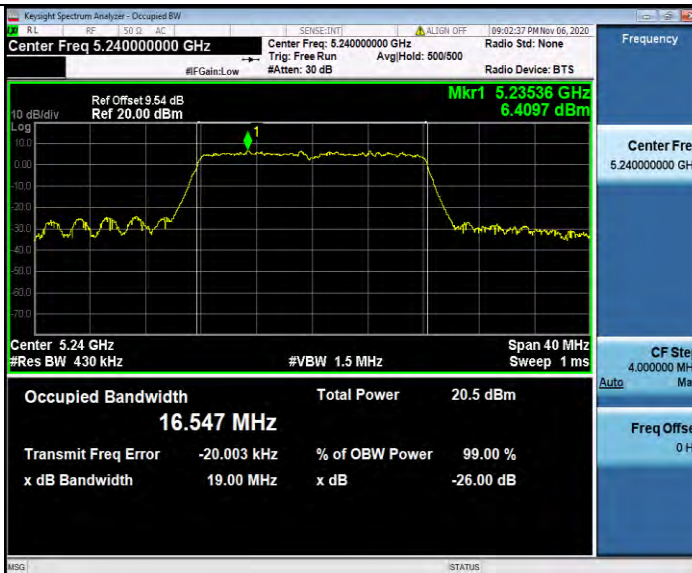
CH36

CH36



CH40

CH40

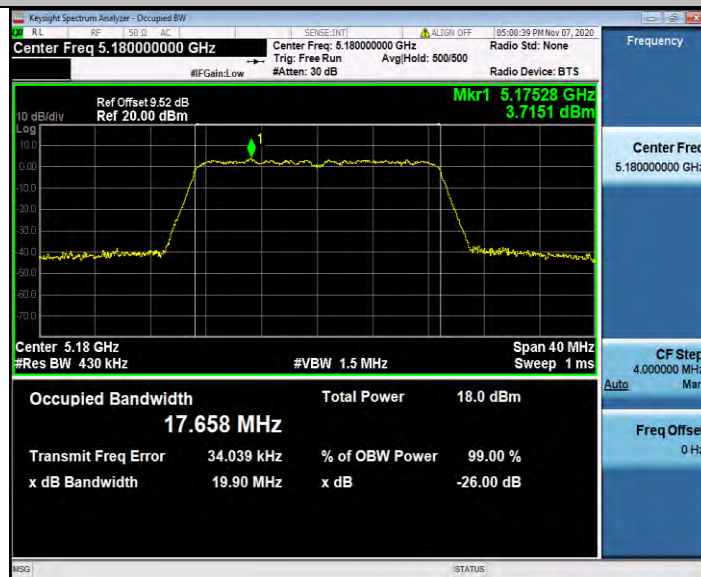


CH48

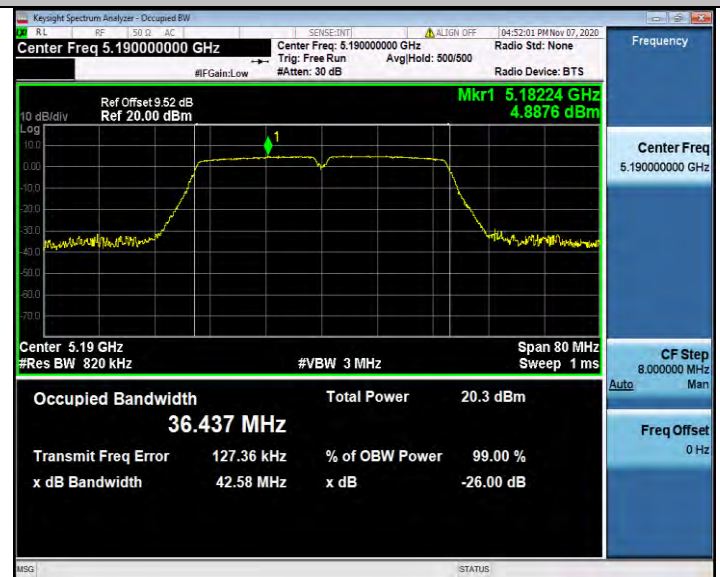
CH48

99%Bandwidth

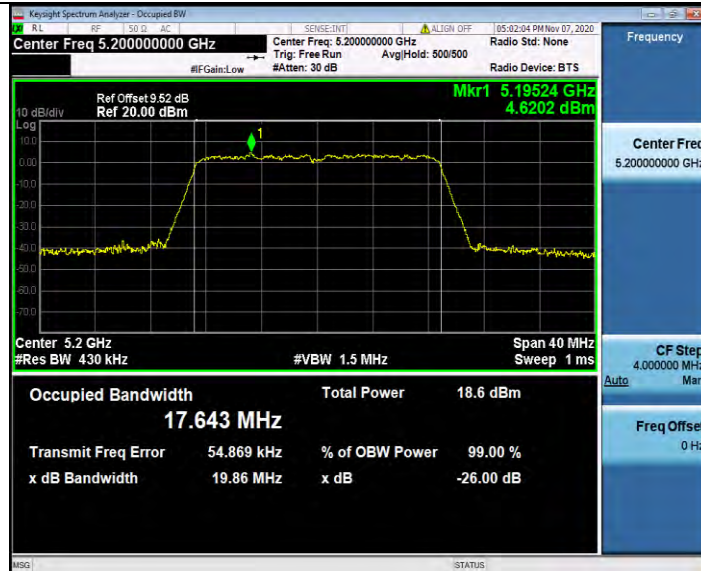
802.11ac20



802.11n HT40



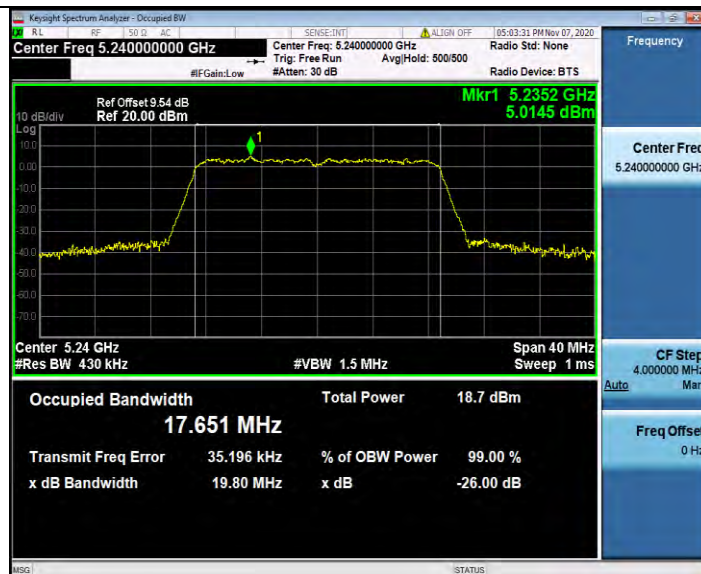
CH36



CH38



CH40



CH46



CH48



26dB Bandwidth

802.11a



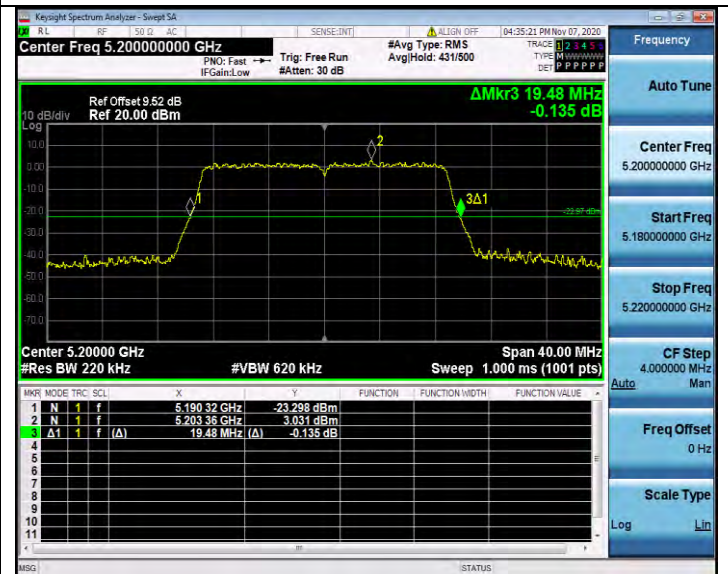
802.11n HT20



CH36



CH36



CH40



CH40



CH48



CH48



26dB Bandwidth

802.11ac20



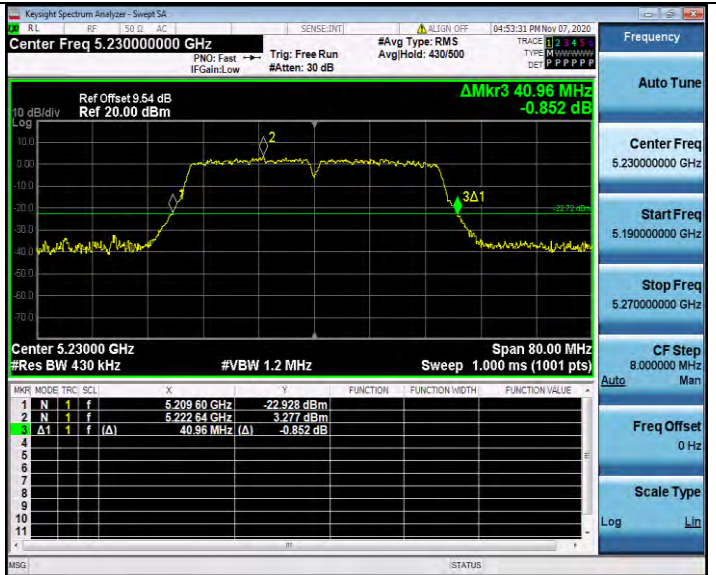
802.11n HT40



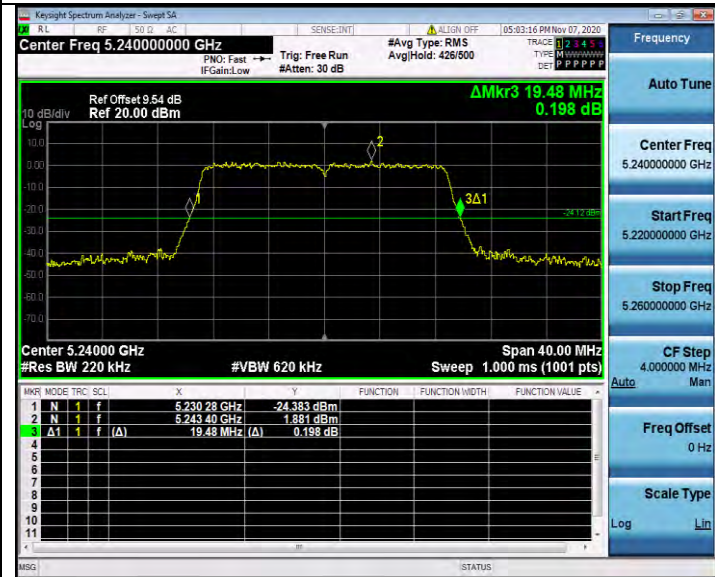
CH36



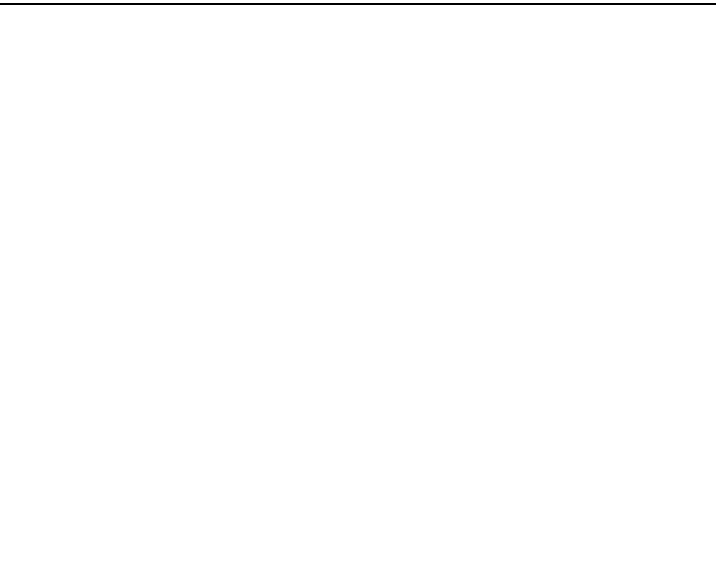
CH38



CH40



CH46



CH48

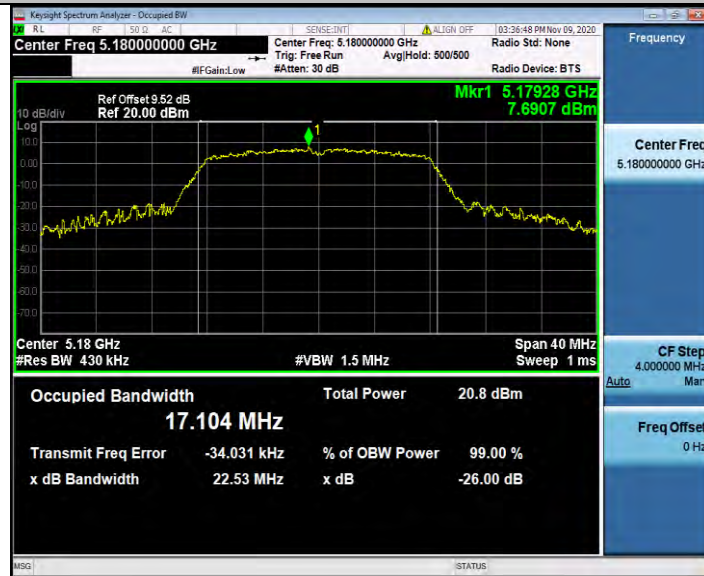


MT7668BU: Antenna 0:

99%Bandwidth

802.11a

802.11n HT20



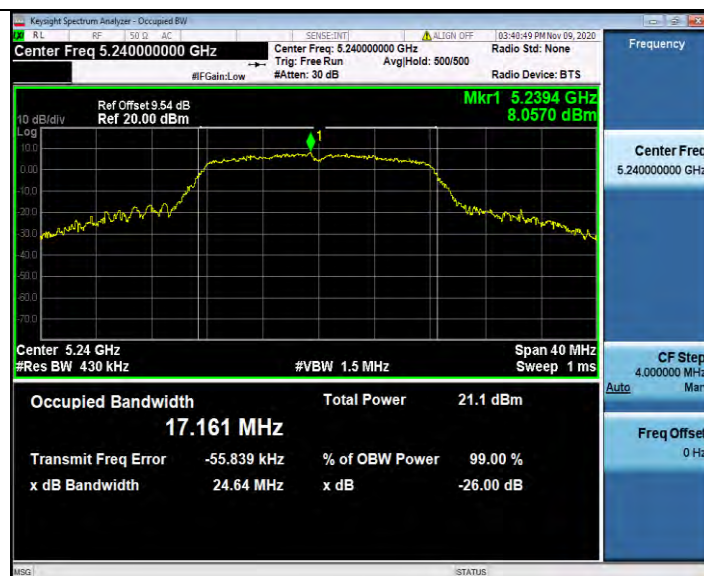
CH36

CH36



CH40

CH40

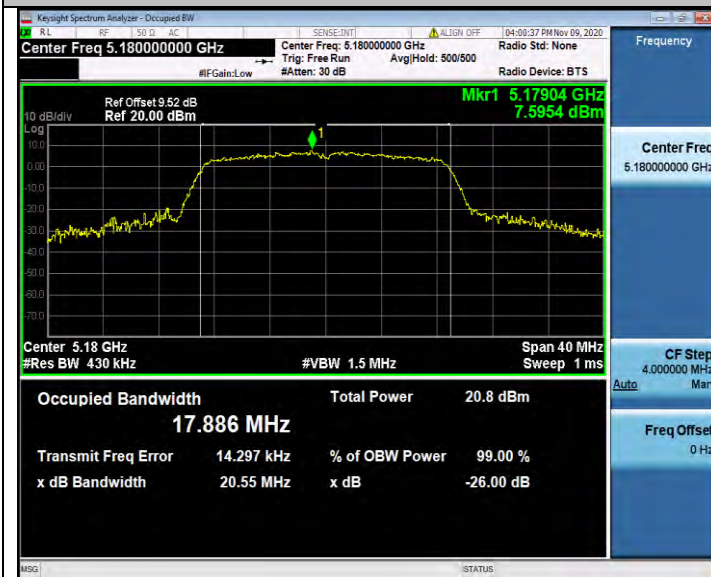


CH48

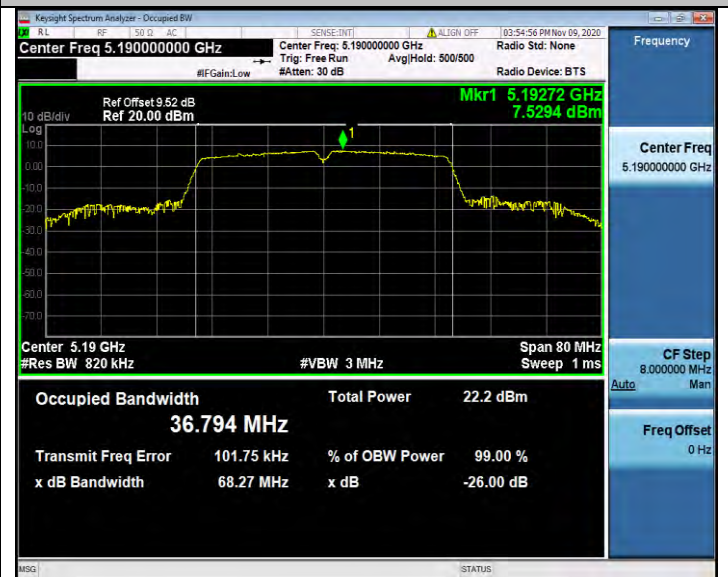
CH48

99%Bandwidth

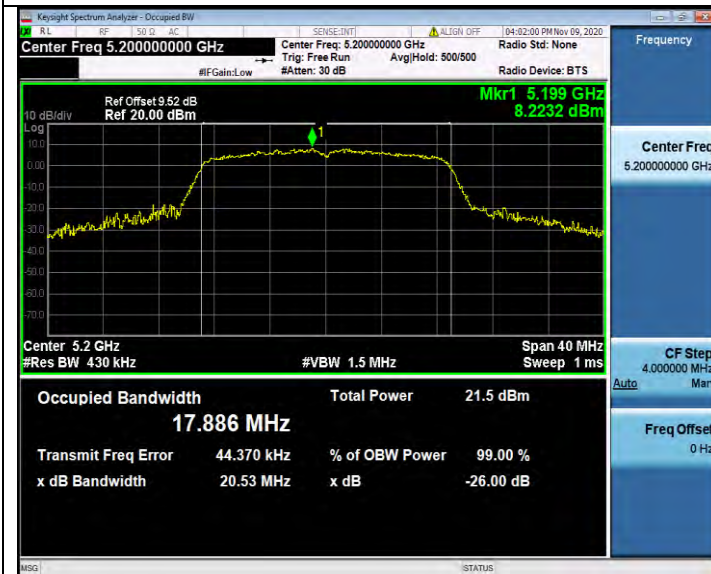
802.11ac20



802.11n HT40



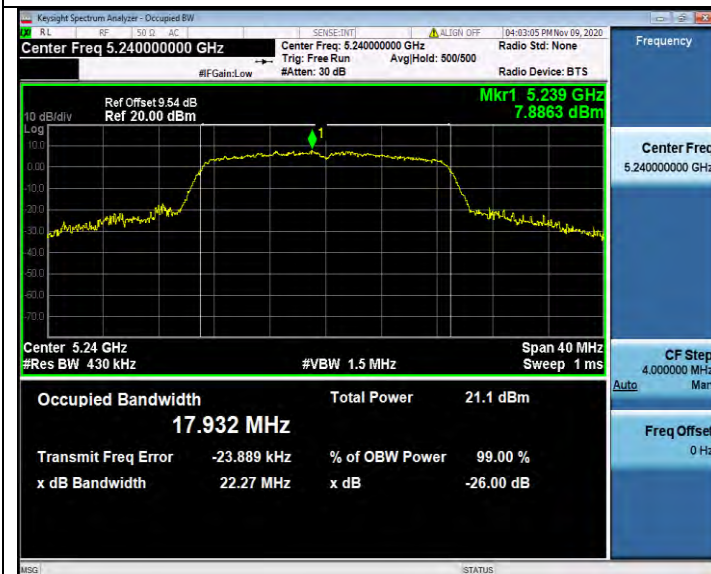
CH36



CH38



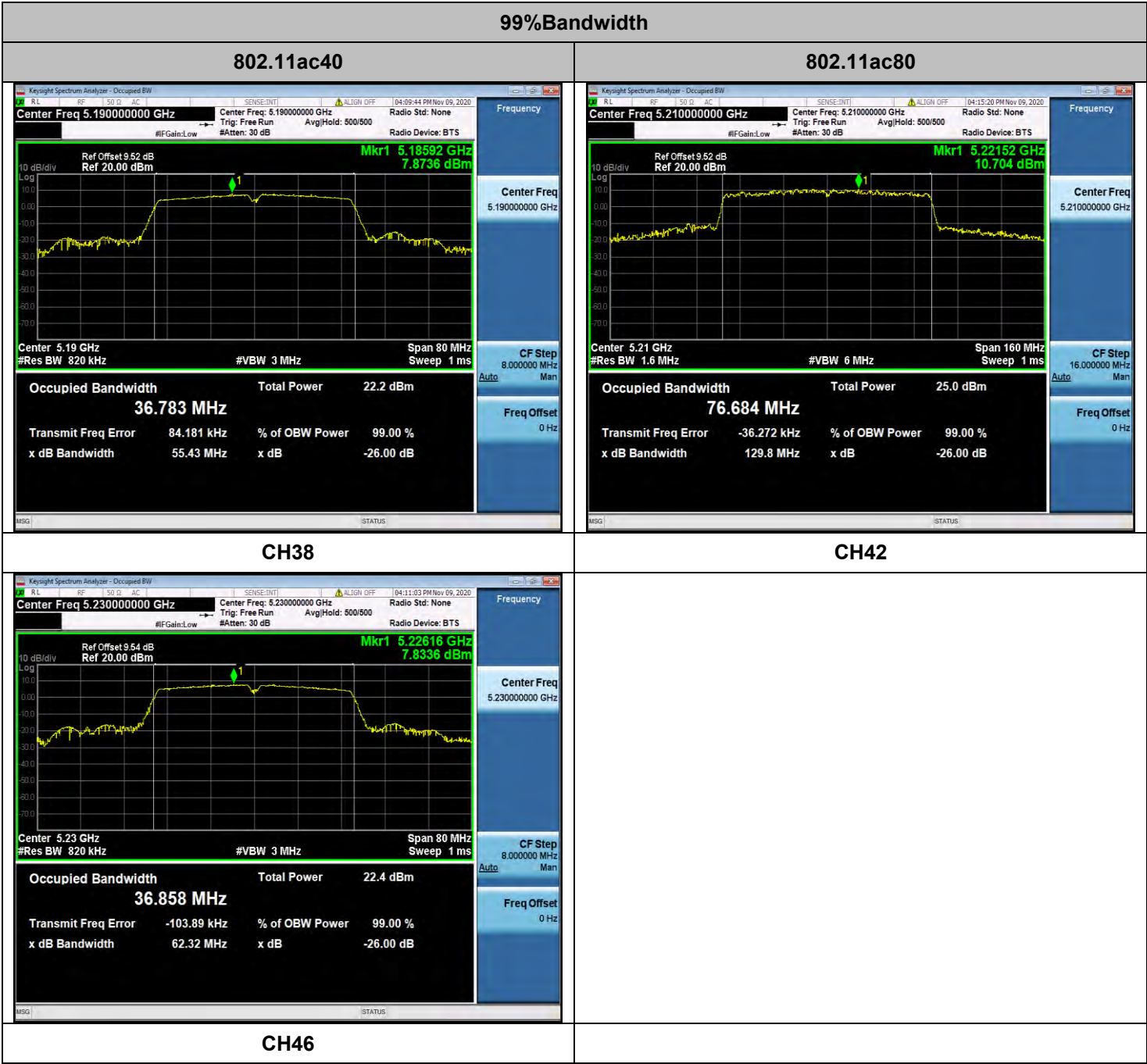
CH40



CH46



CH48



26dB Bandwidth

802.11a



802.11n HT20



CH36



CH36



CH40



CH40



CH48

CH48

802.11n HT40



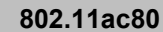
CH38



CH46

CH48

802.11ac40



Antenna 1:

99%Bandwidth

802.11a

802.11n HT20



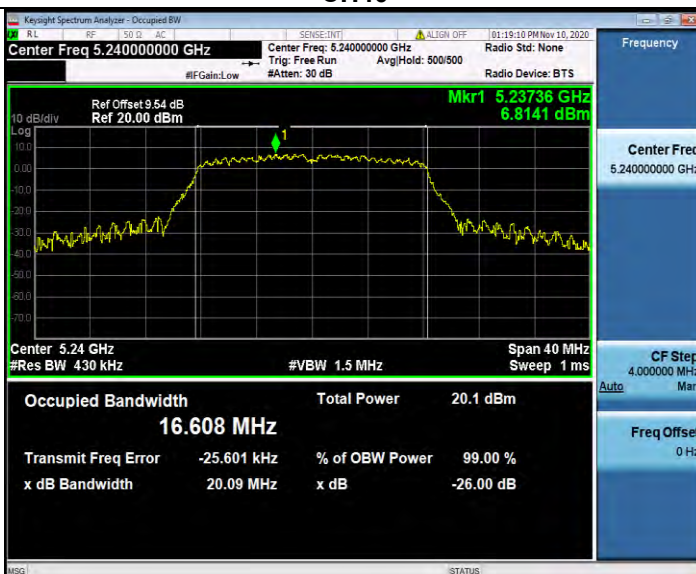
CH36

CH36



CH40

CH40



CH48

CH48

99%Bandwidth

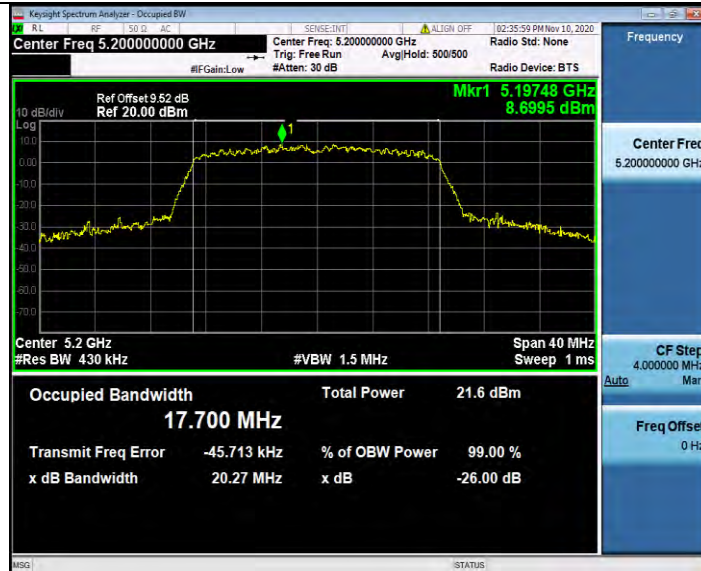
802.11ac20



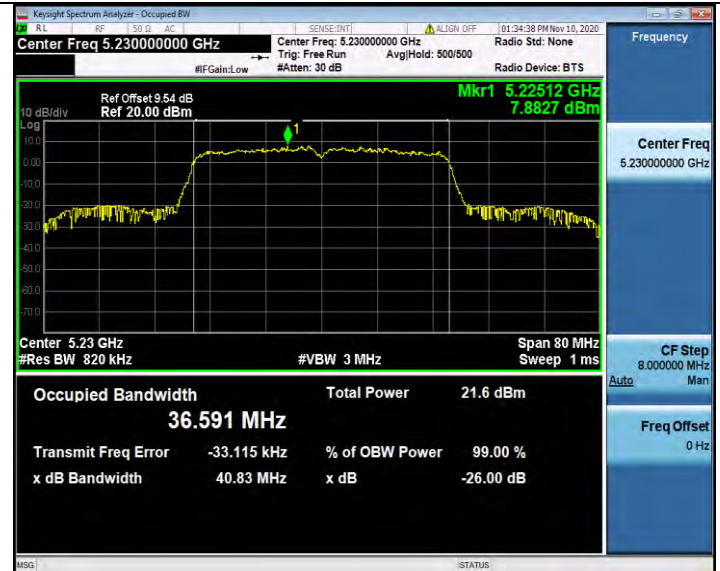
802.11n HT40



CH36



CH38



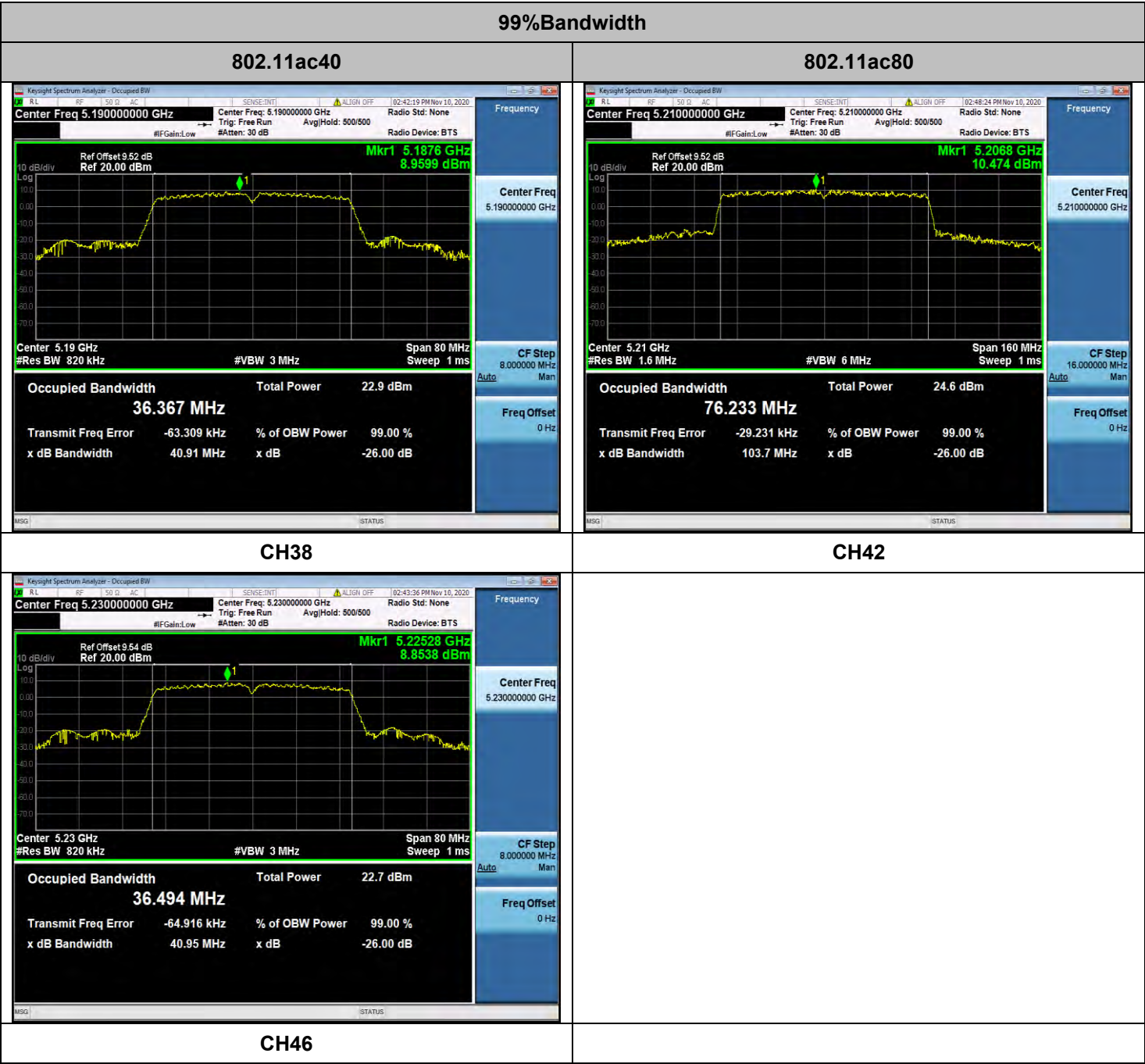
CH40



CH46



CH48



26dB Bandwidth

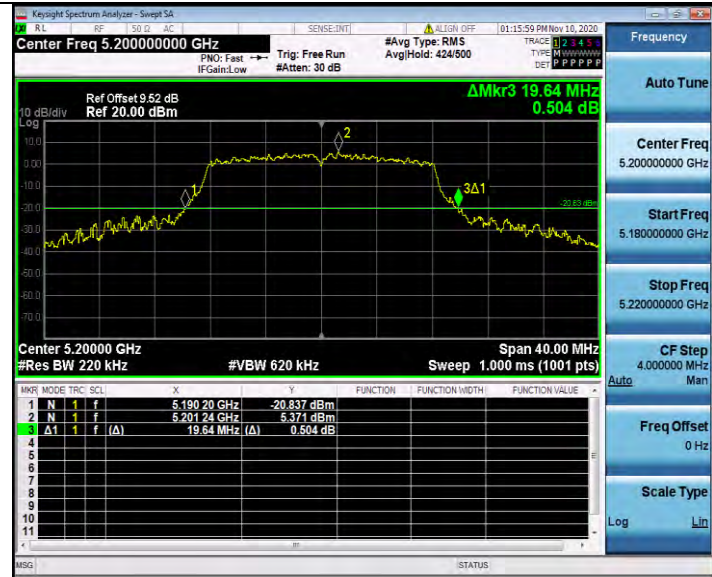
802.11a



802.11n HT20



CH36



CH36



CH40



CH40



CH48

CH48



