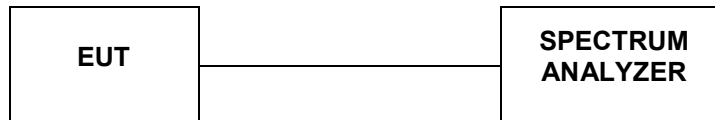


4.6. 6dB Bandwidth

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 section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a. Set RBW = 100 kHz.
- b. Set the video bandwidth (VBW) $\geq 3 \times$ RBW
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Sweep = auto couple.
- f. Allow the trace to stabilize
- g. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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

LIMIT

For Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz

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)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	16.526	16.560	≥500	Pass
	157	16.508	16.560		
	165	16.523	16.600		
802.11nHT20	149	17.646	17.720	≥500	Pass
	157	17.625	17.760		
	165	17.650	17.760		
802.11ac20	149	17.648	36.560	≥500	Pass
	157	17.634	36.560		
	165	17.651	17.760		
802.11n40	151	36.511	17.720	≥500	Pass
	159	36.317	17.760		
802.11ac40	151	36.448	36.640	≥500	Pass
	159	36.378	36.560		
802.11ac80	155	75.329	76.800	≥500	Pass

Antenna 1:

Type	Channel	99%Bandwidth (MHz)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	16.525	16.600	≥500	Pass
	157	16.523	16.560		
	165	16.532	16.640		
802.11nHT20	149	17.650	17.760	≥500	Pass
	157	17.628	17.760		
	165	17.638	17.760		
802.11ac20	149	17.640	36.640	≥500	Pass
	157	17.640	36.560		
	165	17.648	17.720		
802.11n40	151	36.497	17.760	≥500	Pass
	159	36.389	17.760		
802.11ac40	151	36.436	36.560	≥500	Pass
	159	36.329	36.480		
802.11ac80	155	75.313	76.640	≥500	Pass

MT7668BU:**Antenna 0:**

Type	Channel	99%Bandwidth (MHz)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	17.125	15.200	≥500	Pass
	157	17.090	15.200		
	165	17.152	13.960		
802.11nHT20	149	18.076	15.200	≥500	Pass
	157	18.028	15.160		
	165	18.091	15.200		
802.11ac20	149	17.917	35.360	≥500	Pass
	157	17.884	35.280		
	165	17.883	15.160		
802.11n40	151	37.039	15.160	≥500	Pass
	159	36.818	15.240		
802.11ac40	151	37.135	35.360	≥500	Pass
	159	37.423	35.280		
802.11ac80	155	80.305	75.520	≥500	Pass

Antenna 1:

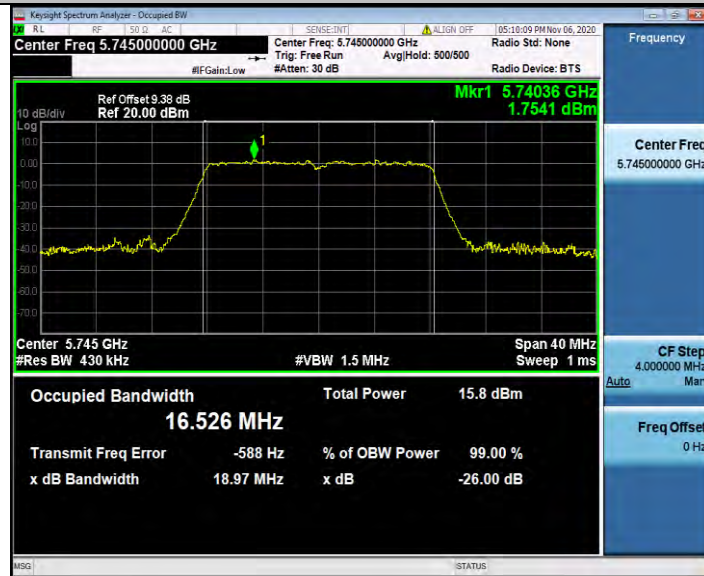
Type	Channel	99%Bandwidth (MHz)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	16.736	15.080	≥500	Pass
	157	16.806	15.160		
	165	16.798	15.200		
802.11nHT20	149	17.677	15.760	≥500	Pass
	157	17.704	15.160		
	165	17.676	15.720		
802.11ac20	149	17.705	35.440	≥500	Pass
	157	17.823	35.280		
	165	17.823	15.200		
802.11n40	151	36.627	15.200	≥500	Pass
	159	36.813	15.200		
802.11ac40	151	36.568	35.280	≥500	Pass
	159	36.711	35.280		
802.11ac80	155	77.022	75.680	≥500	Pass

RTL8822CU: Antenna 0:

99%Bandwidth

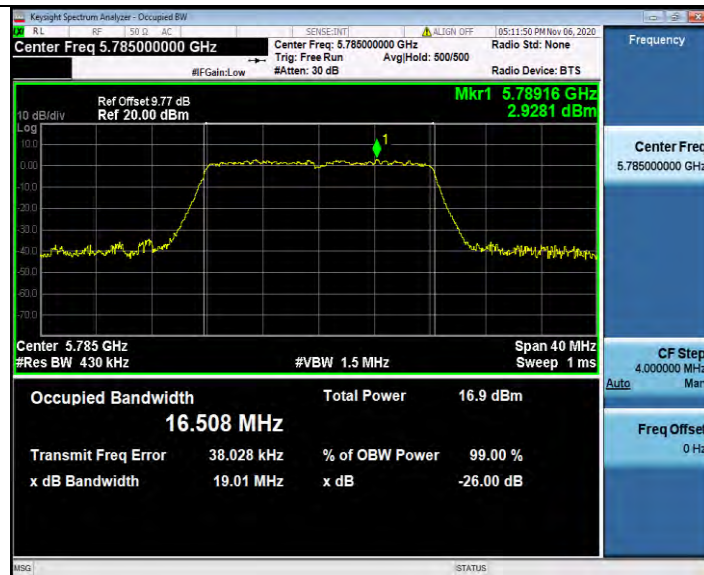
802.11a

802.11n HT20



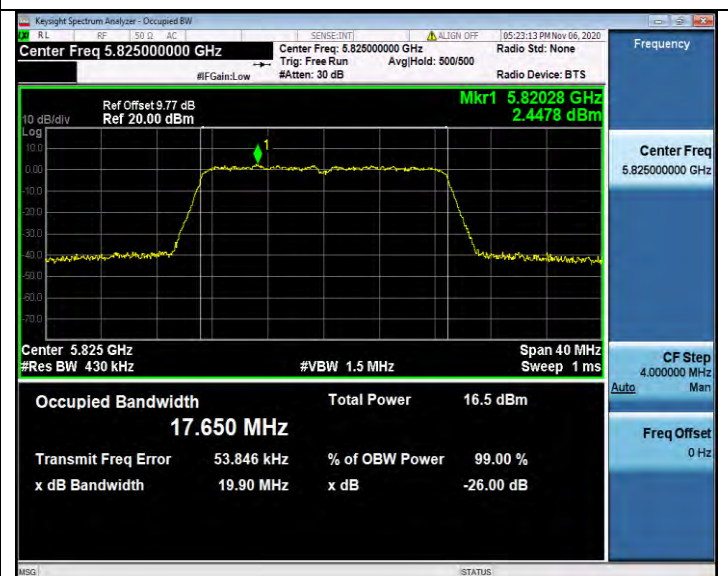
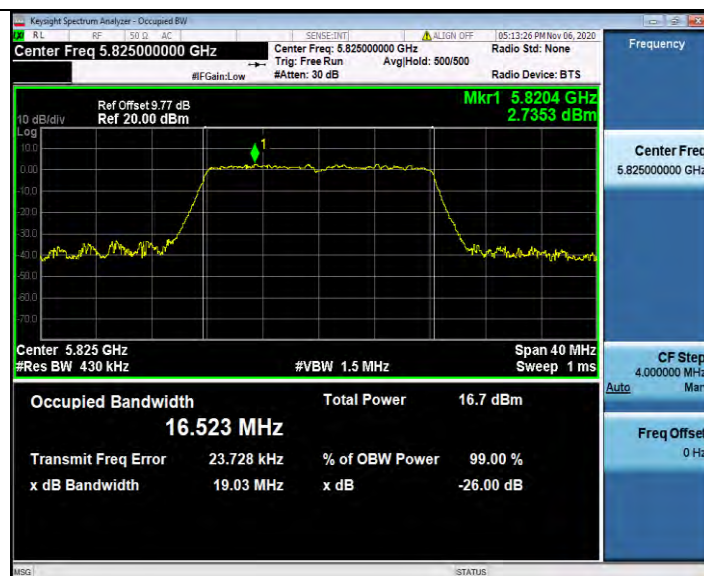
CH149

CH149



CH157

CH157

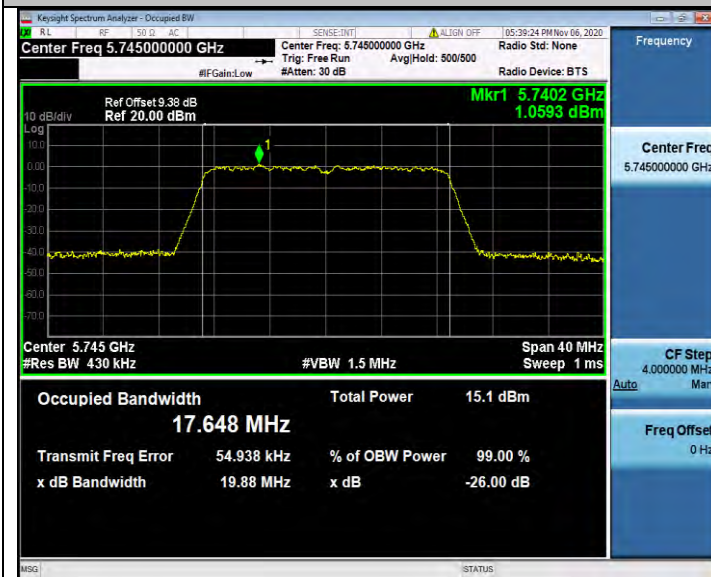


CH165

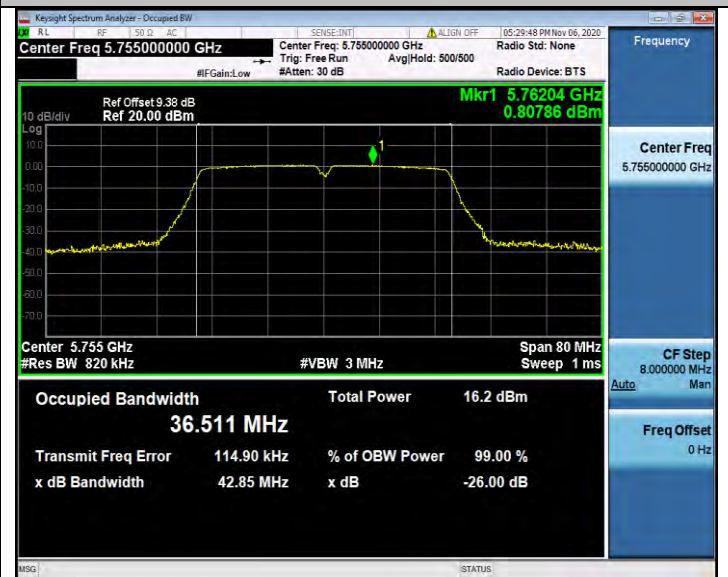
CH165

99%Bandwidth

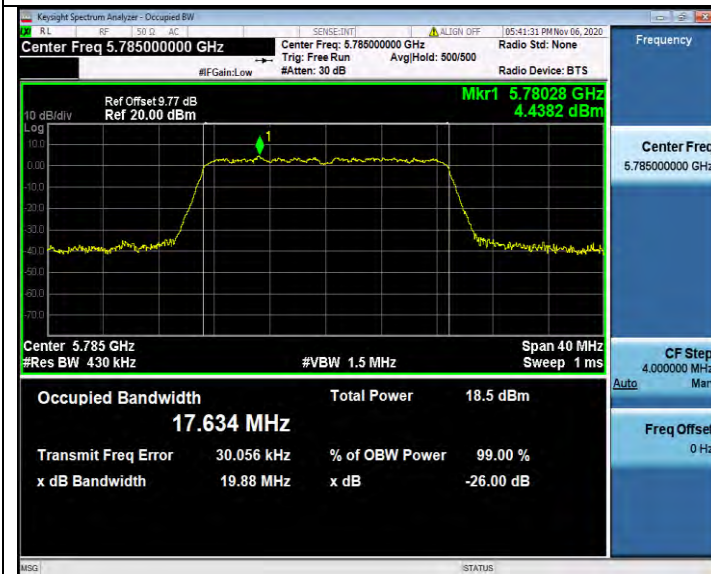
802.11ac20



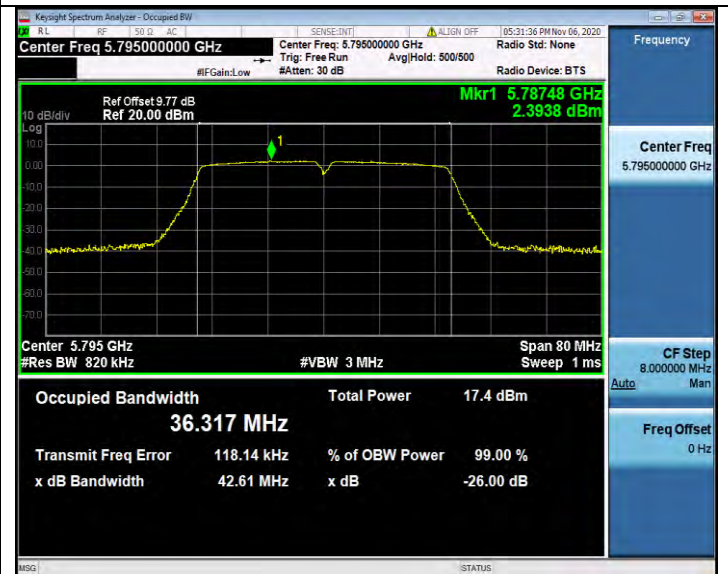
802.11n HT40



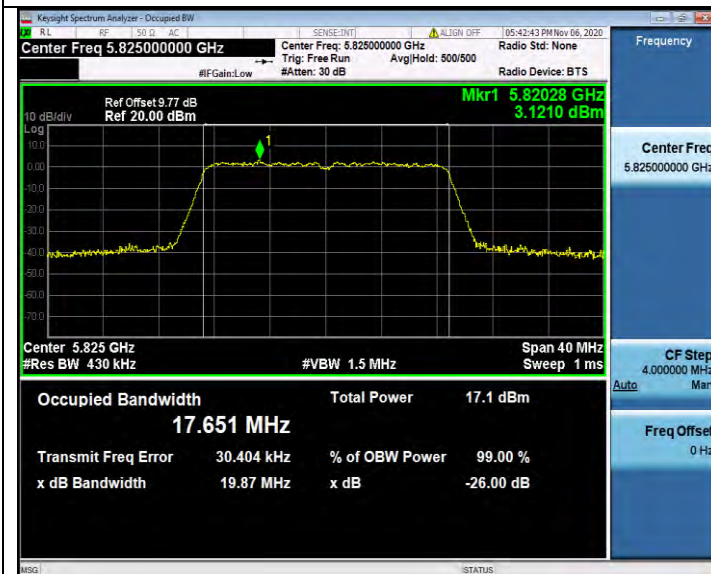
CH149



CH151



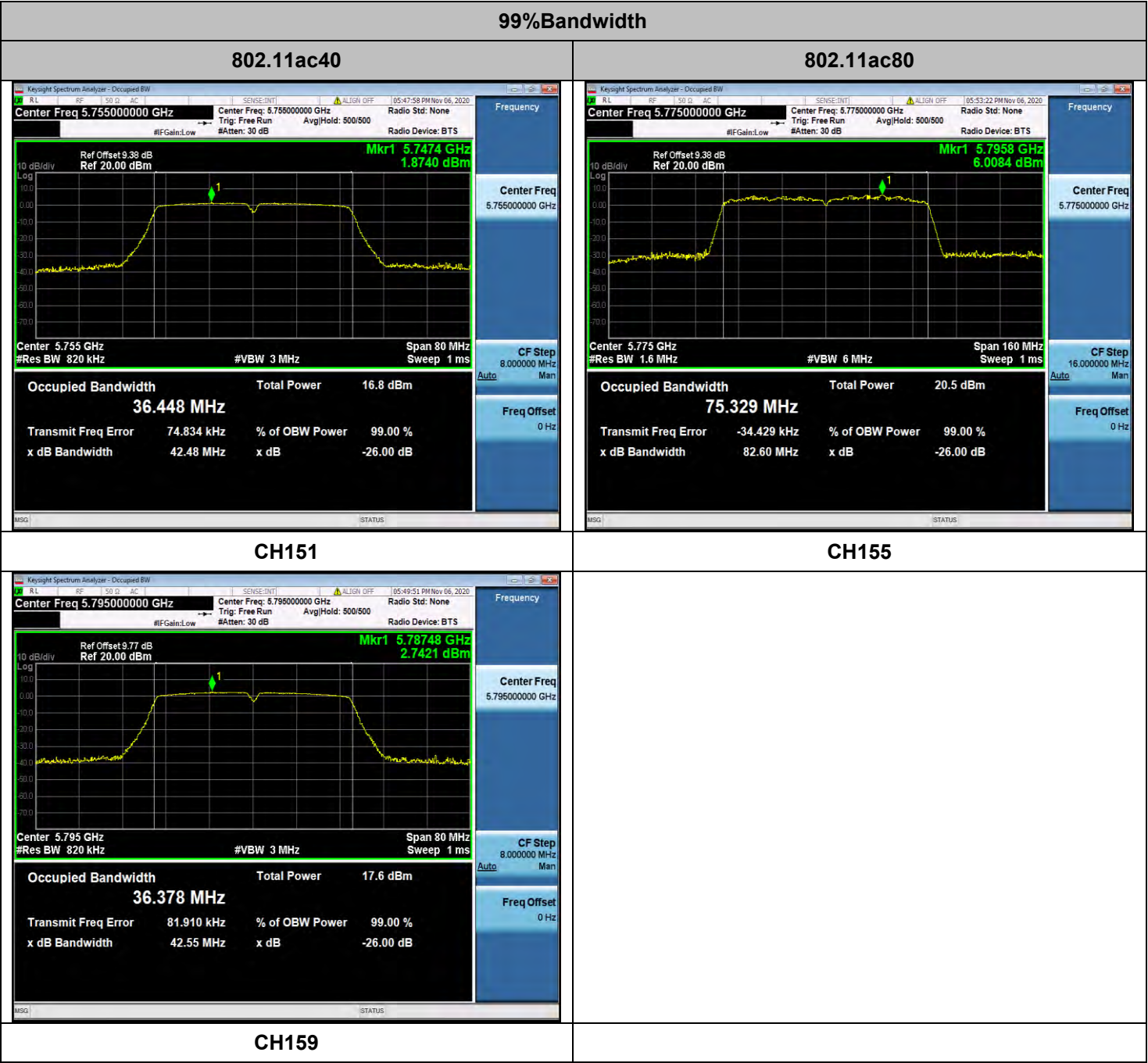
CH157



CH159

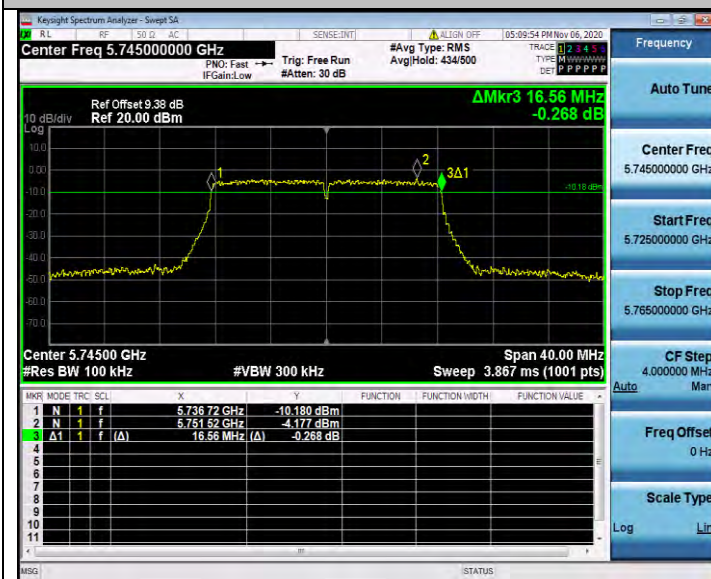


CH165

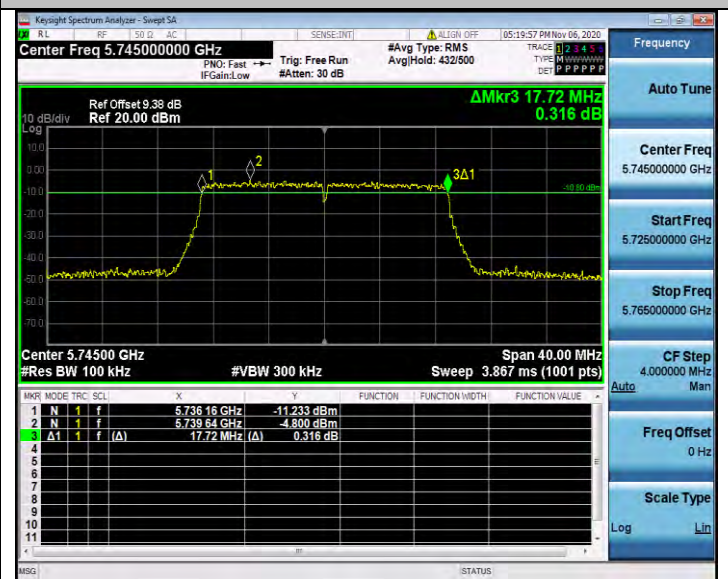


6dB Bandwidth

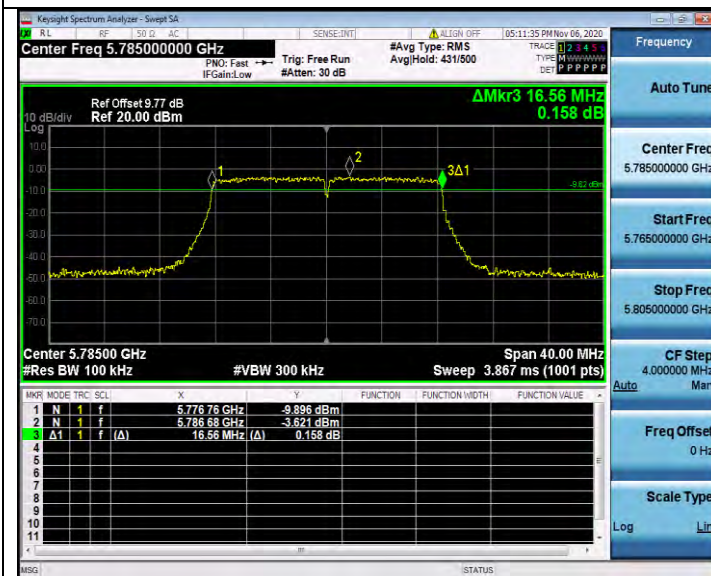
802.11a



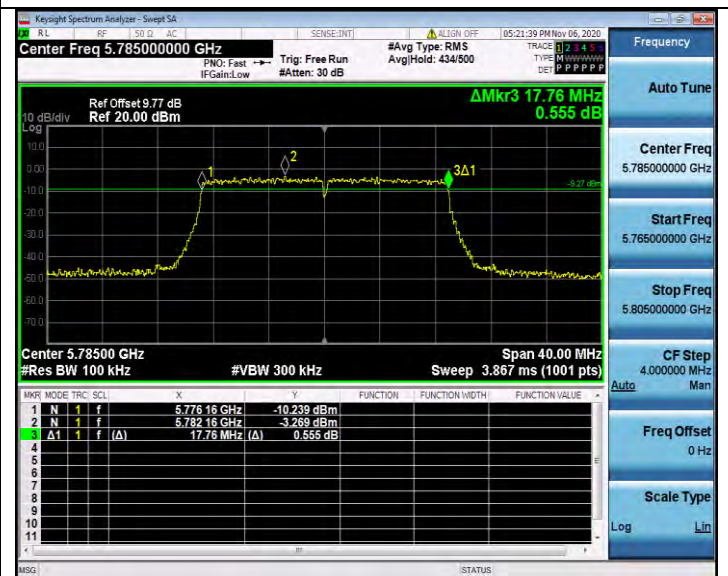
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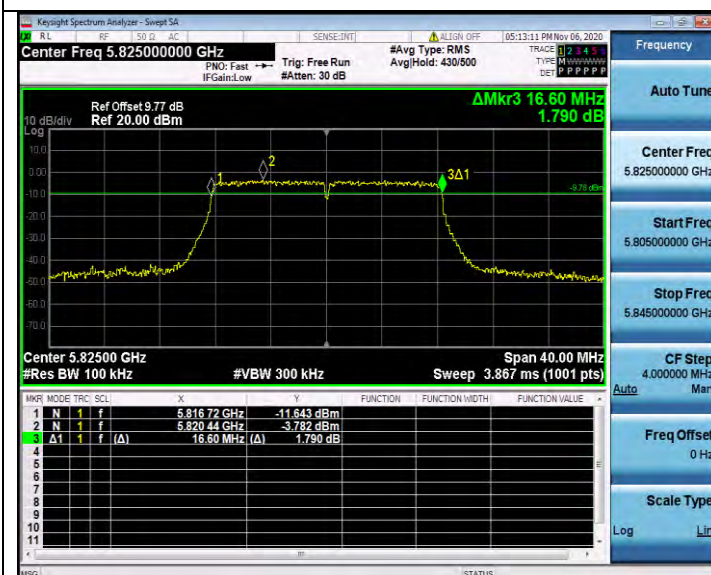
CH149



CH149



CH157



CH157



CH165

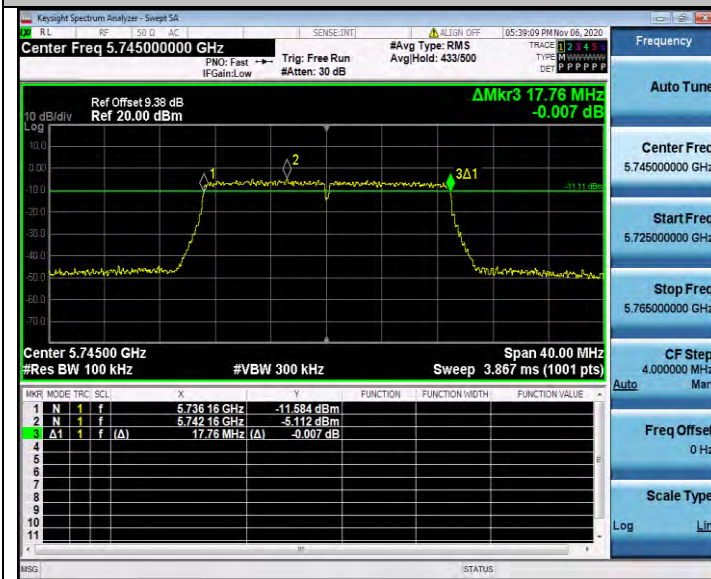


CH165

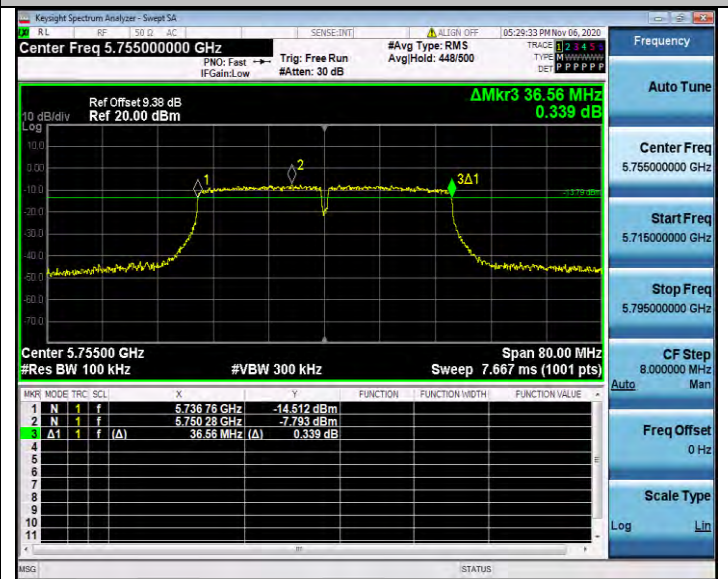


6dB Bandwidth

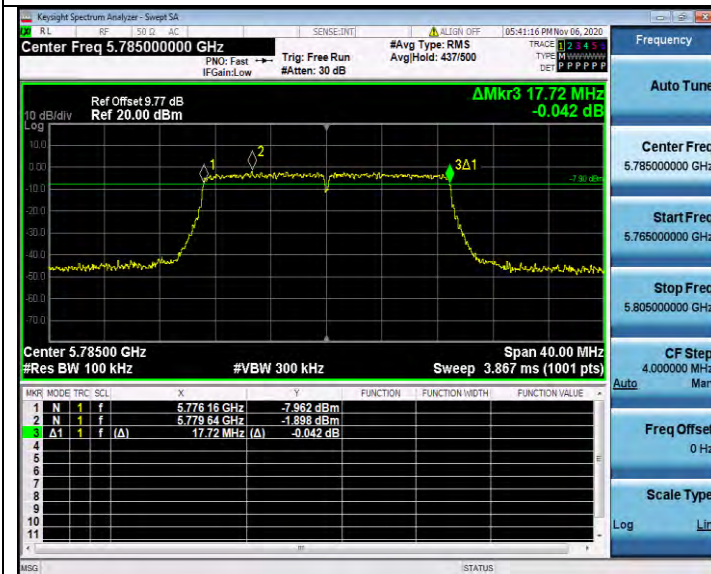
802.11ac20



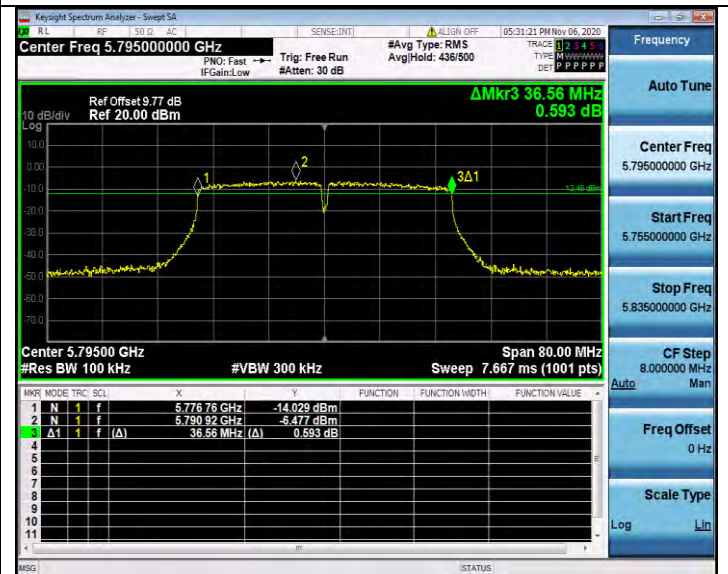
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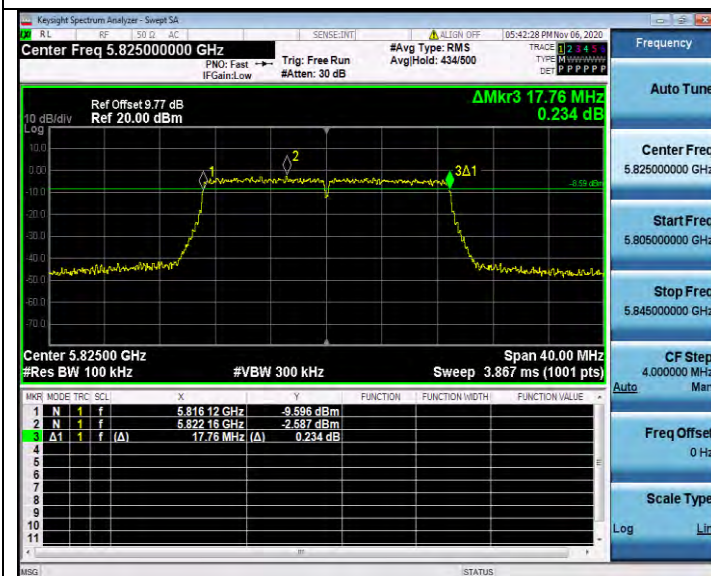
CH149



CH151



CH157



CH159



CH165

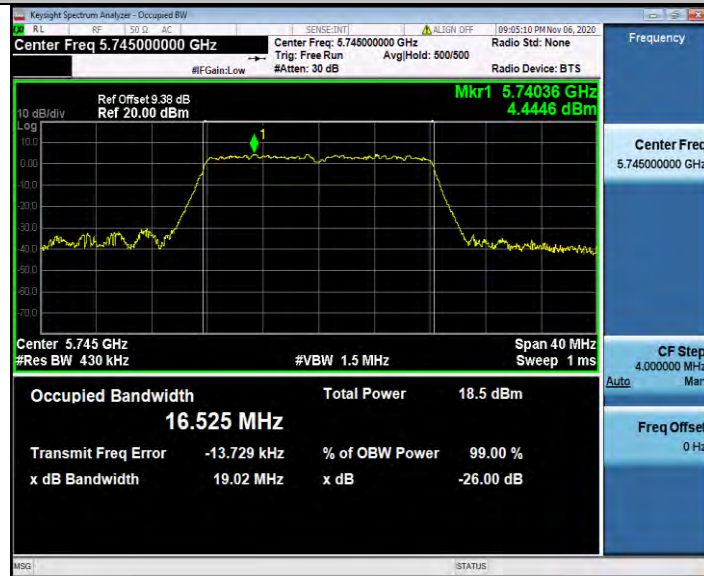


Antenna 1:

99%Bandwidth

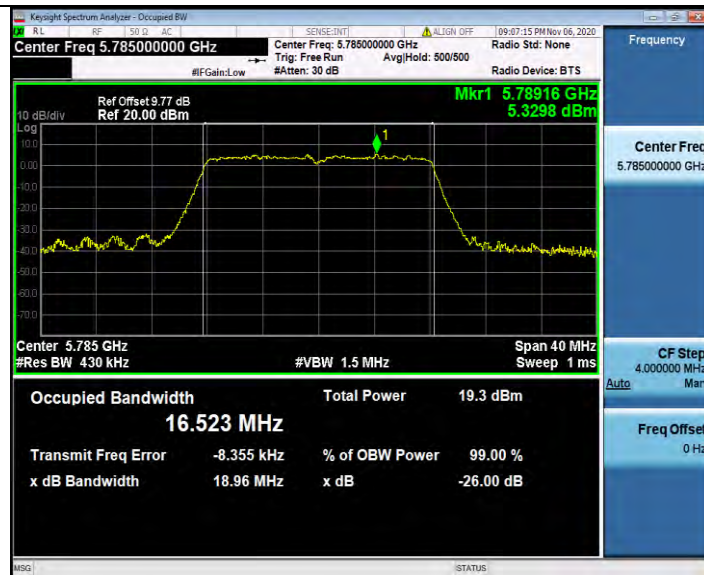
802.11a

802.11n HT20



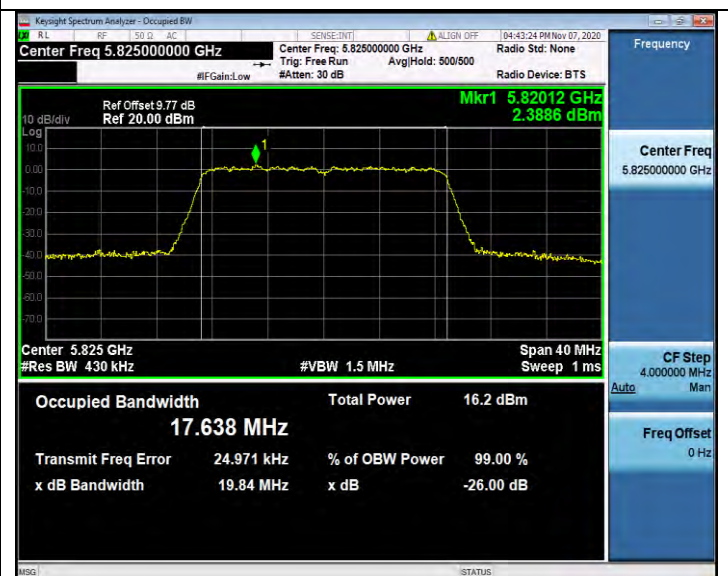
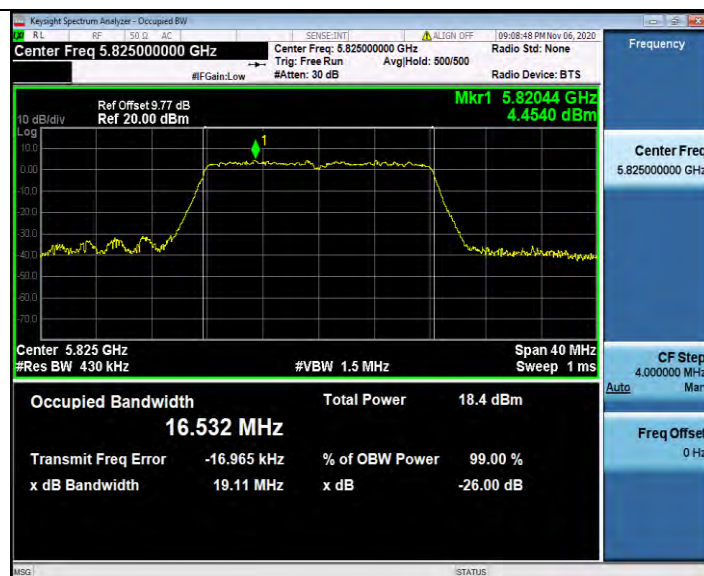
CH149

CH149



CH157

CH157

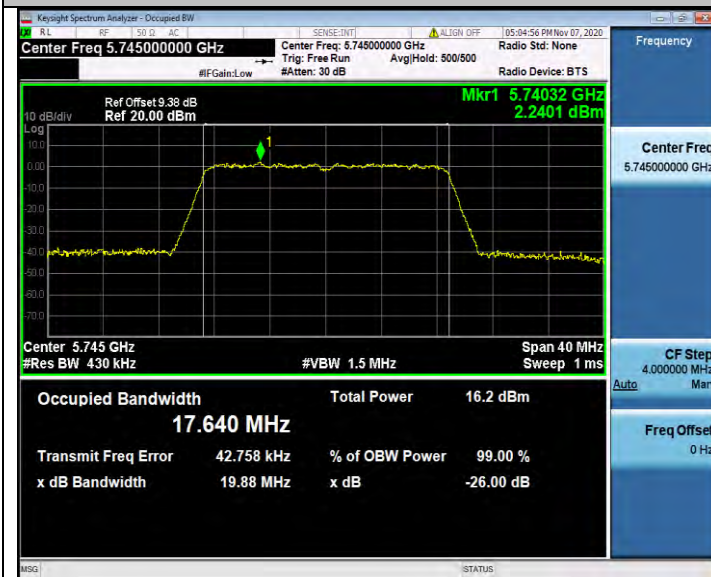


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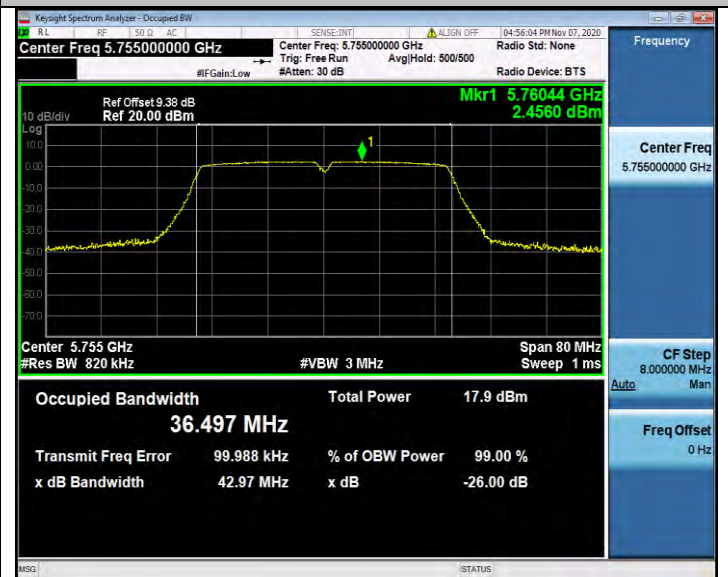
CH165

99%Bandwidth

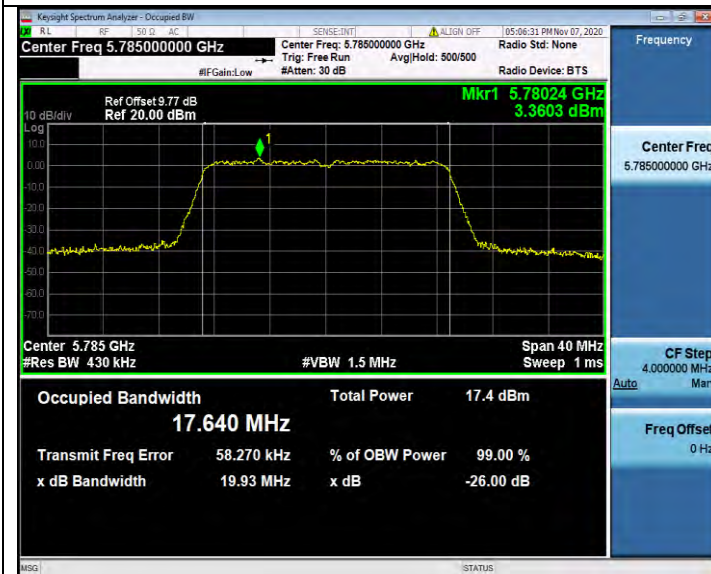
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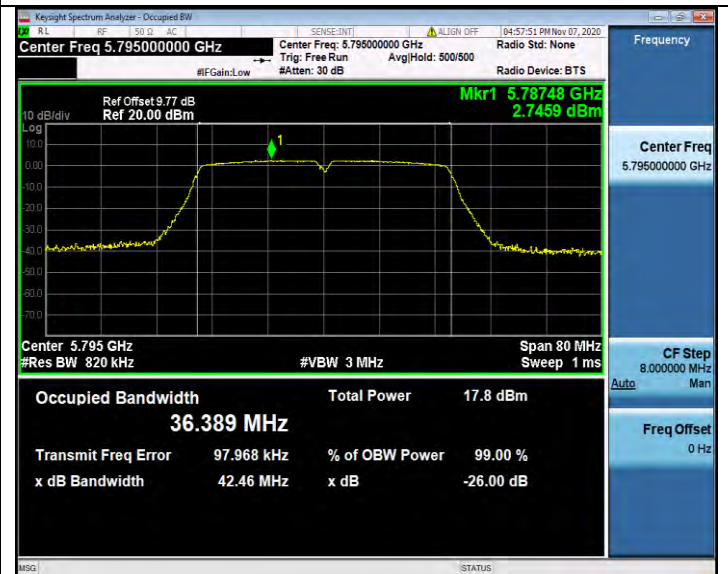
802.11n HT40



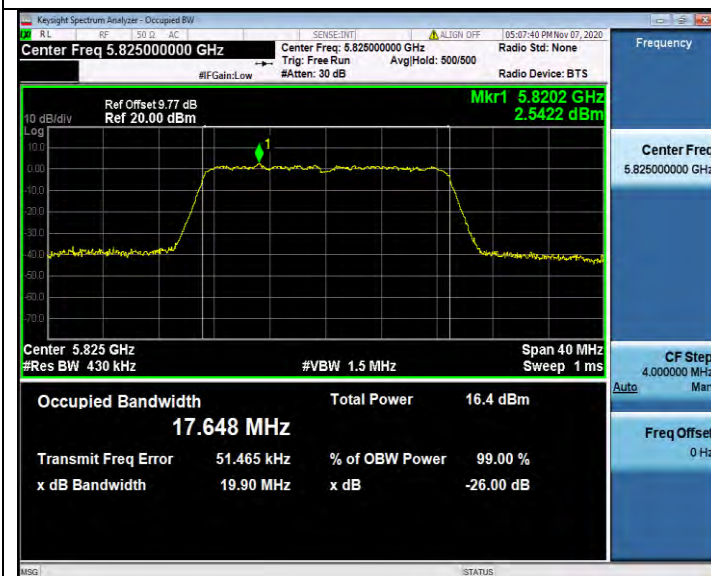
CH149



CH151



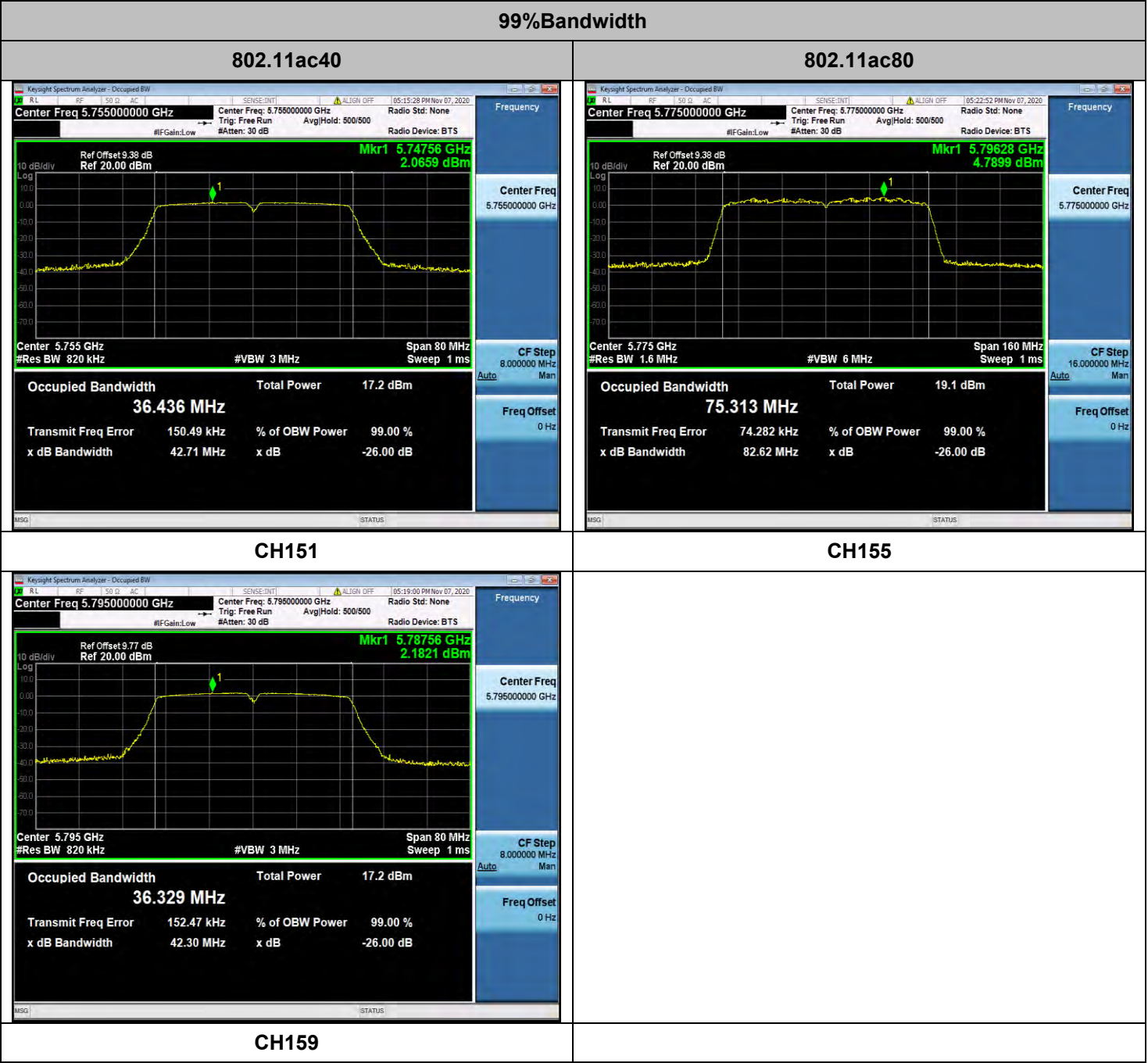
CH157



CH159

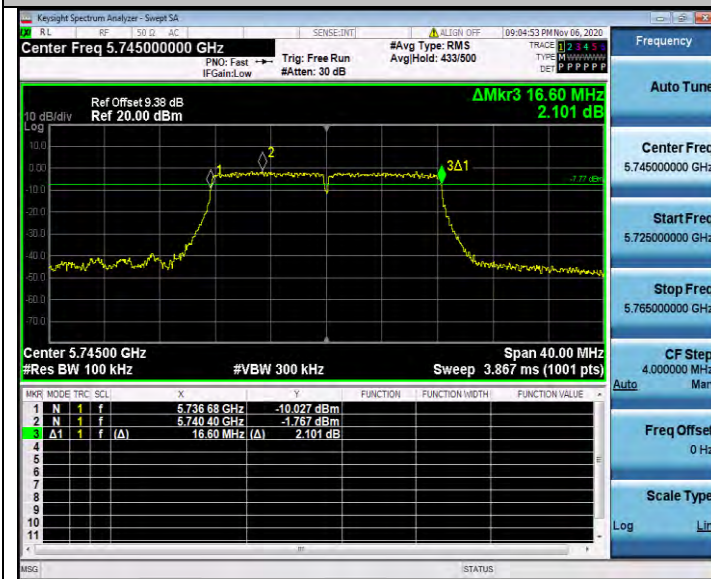


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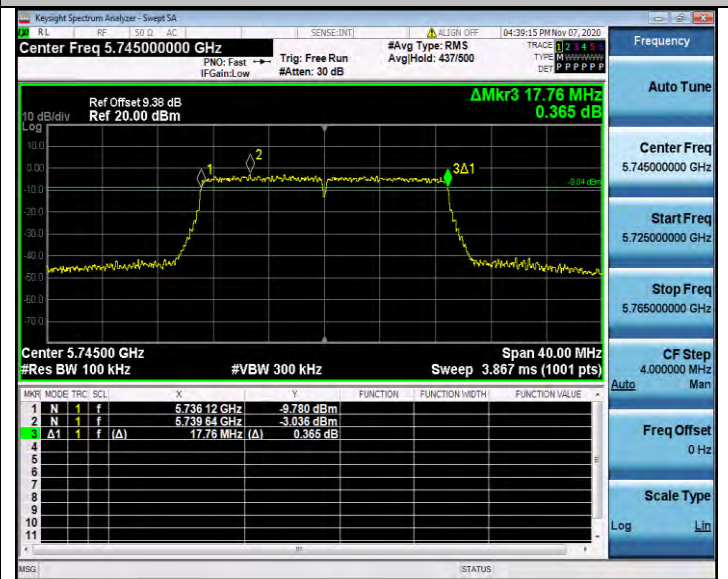


6dB Bandwidth

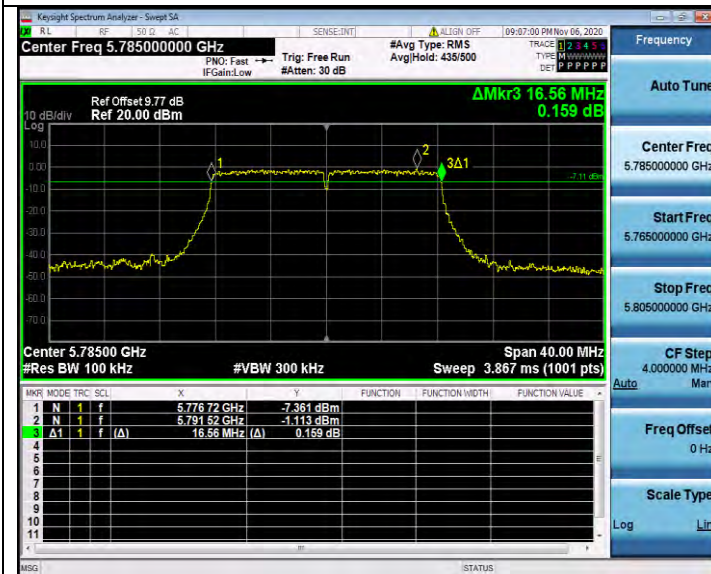
802.11a



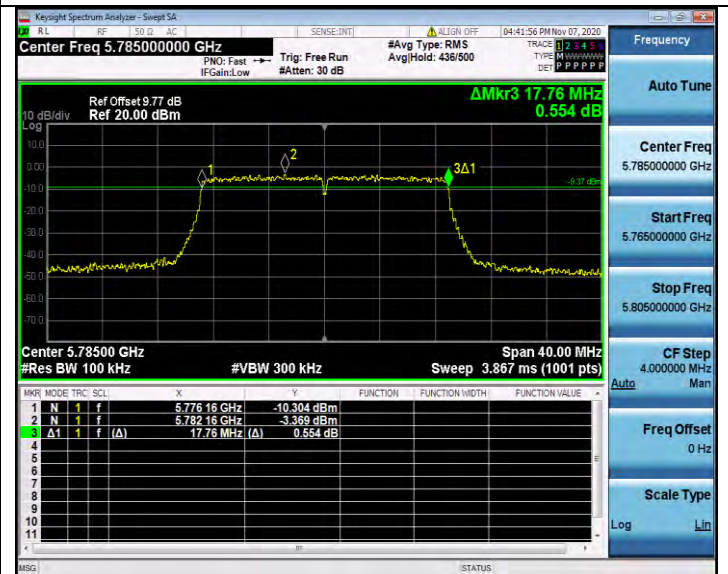
802.11n HT20



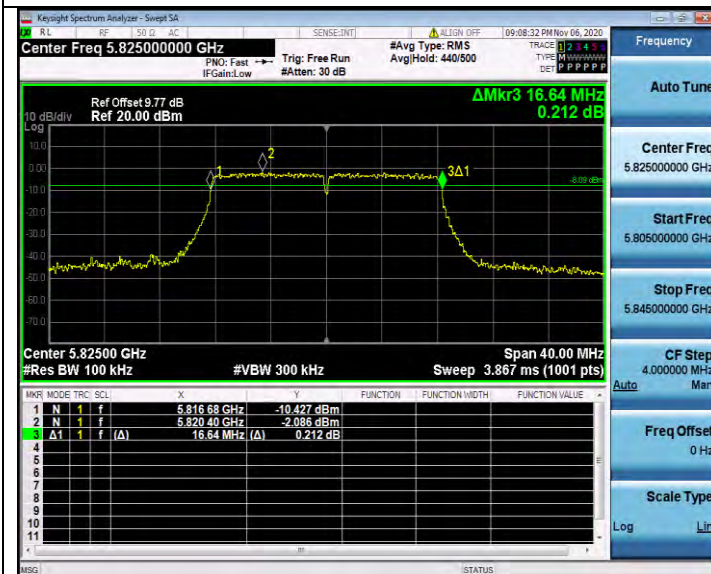
CH149



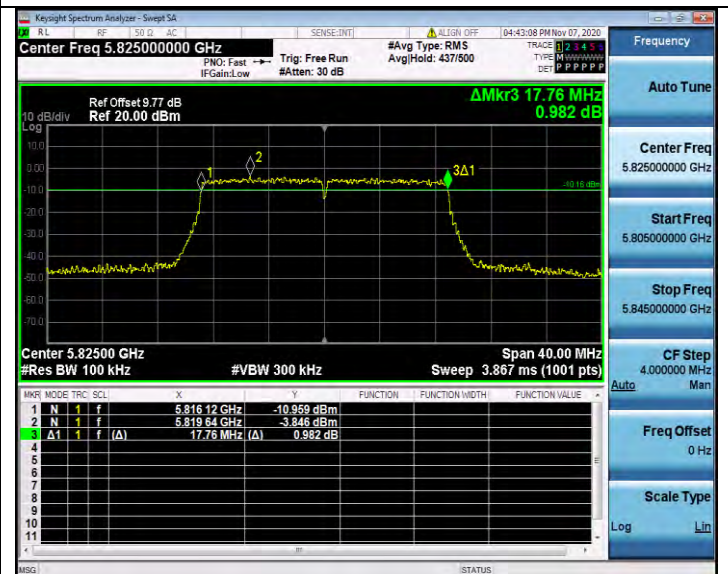
CH149



CH157



CH157



CH165

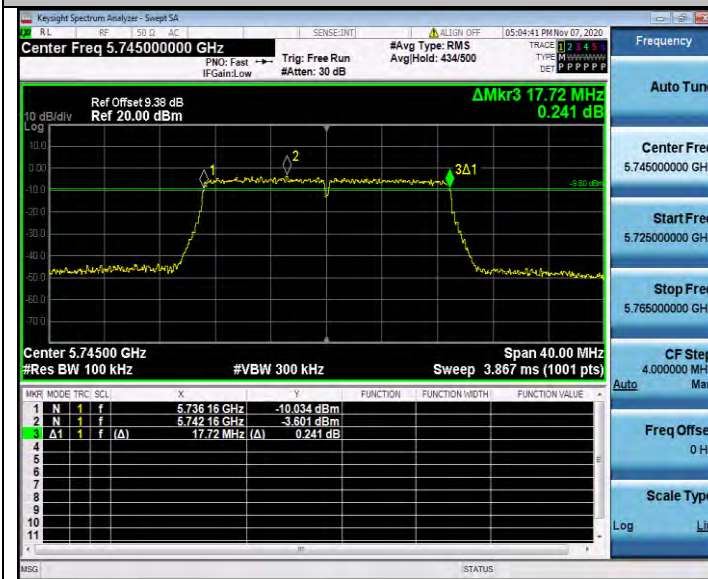


CH165

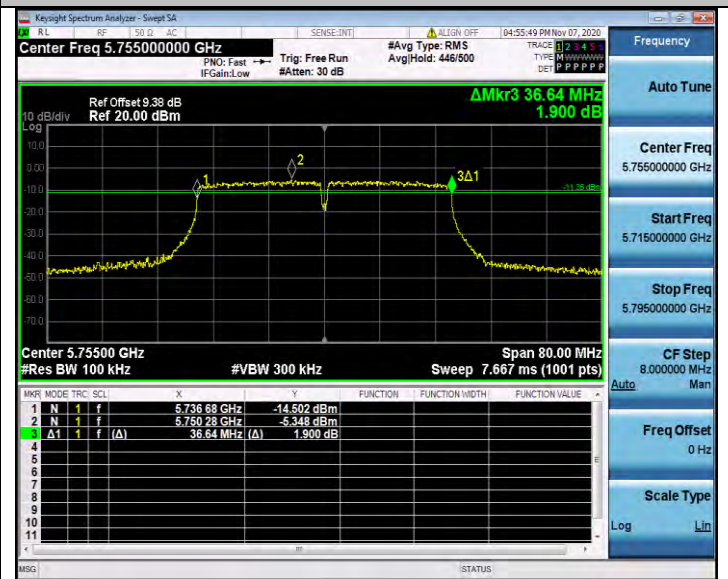


6dB Bandwidth

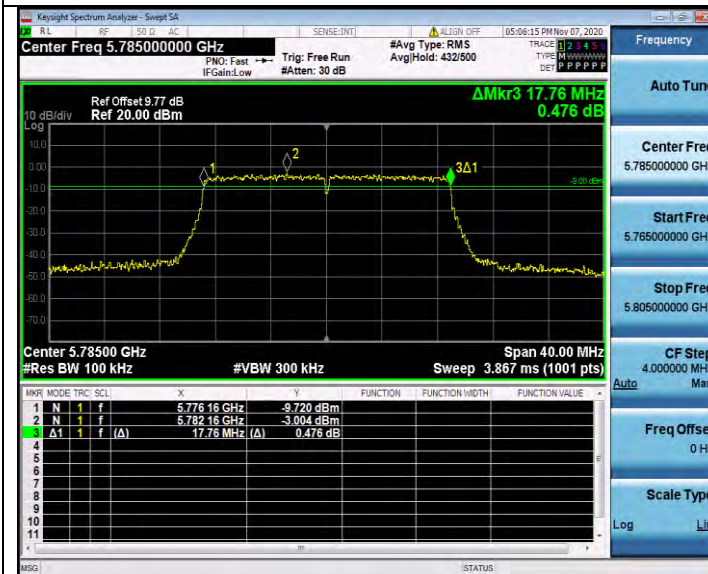
802.11ac20



802.11n HT40



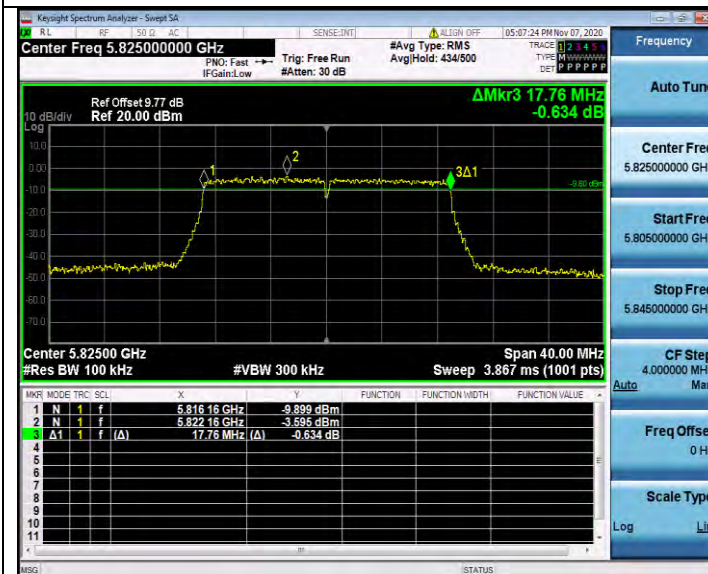
CH149



CH151



CH157



CH159



CH165

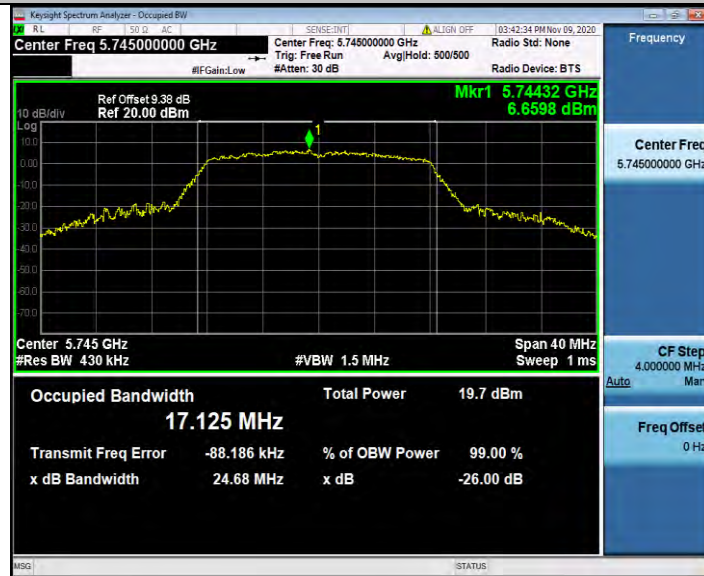


MT7668BU: Antenna 0:

99%Bandwidth

802.11a

802.11n HT20



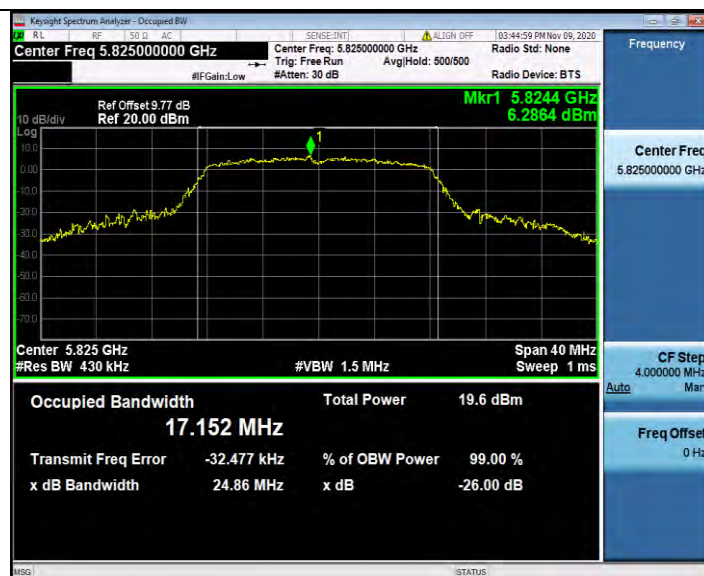
CH149

CH149



CH157

CH157

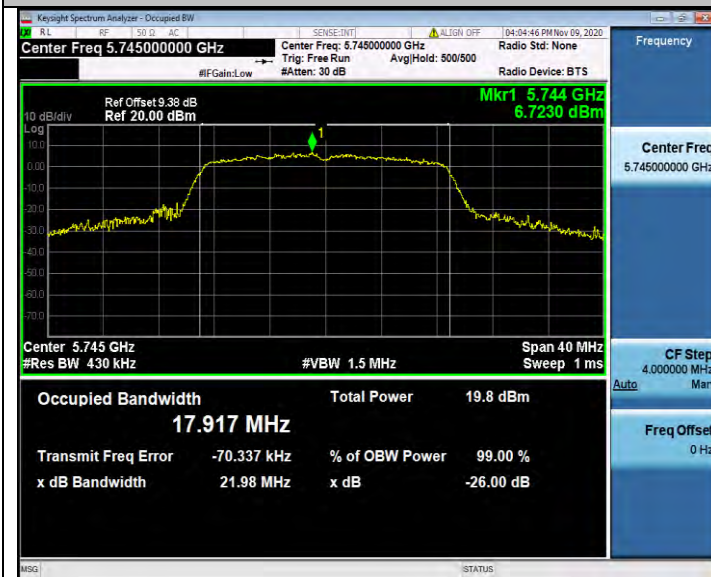


CH165

CH165

99%Bandwidth

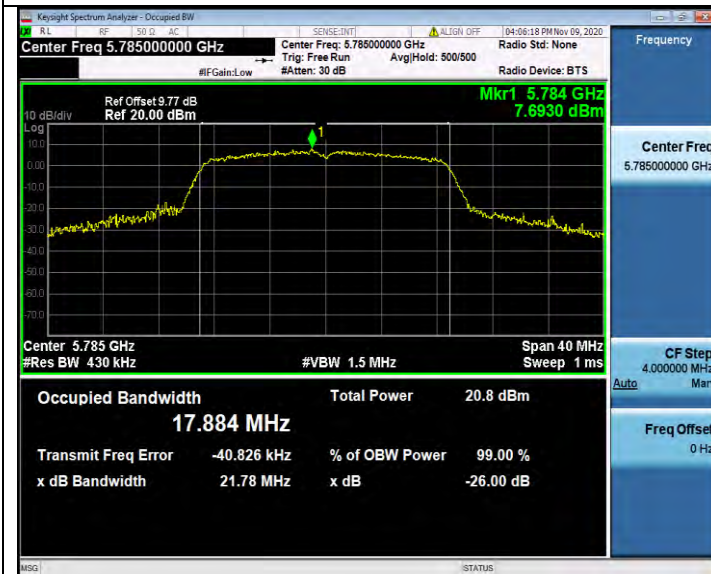
802.11ac20



802.11n HT40



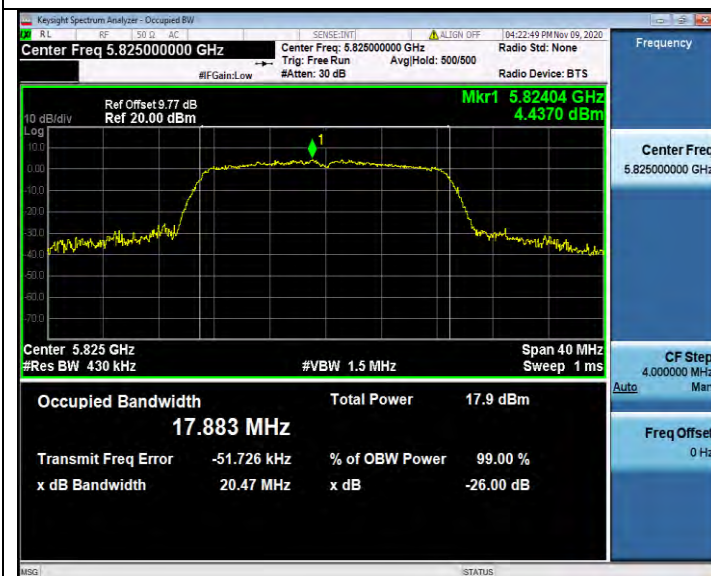
CH149



CH151



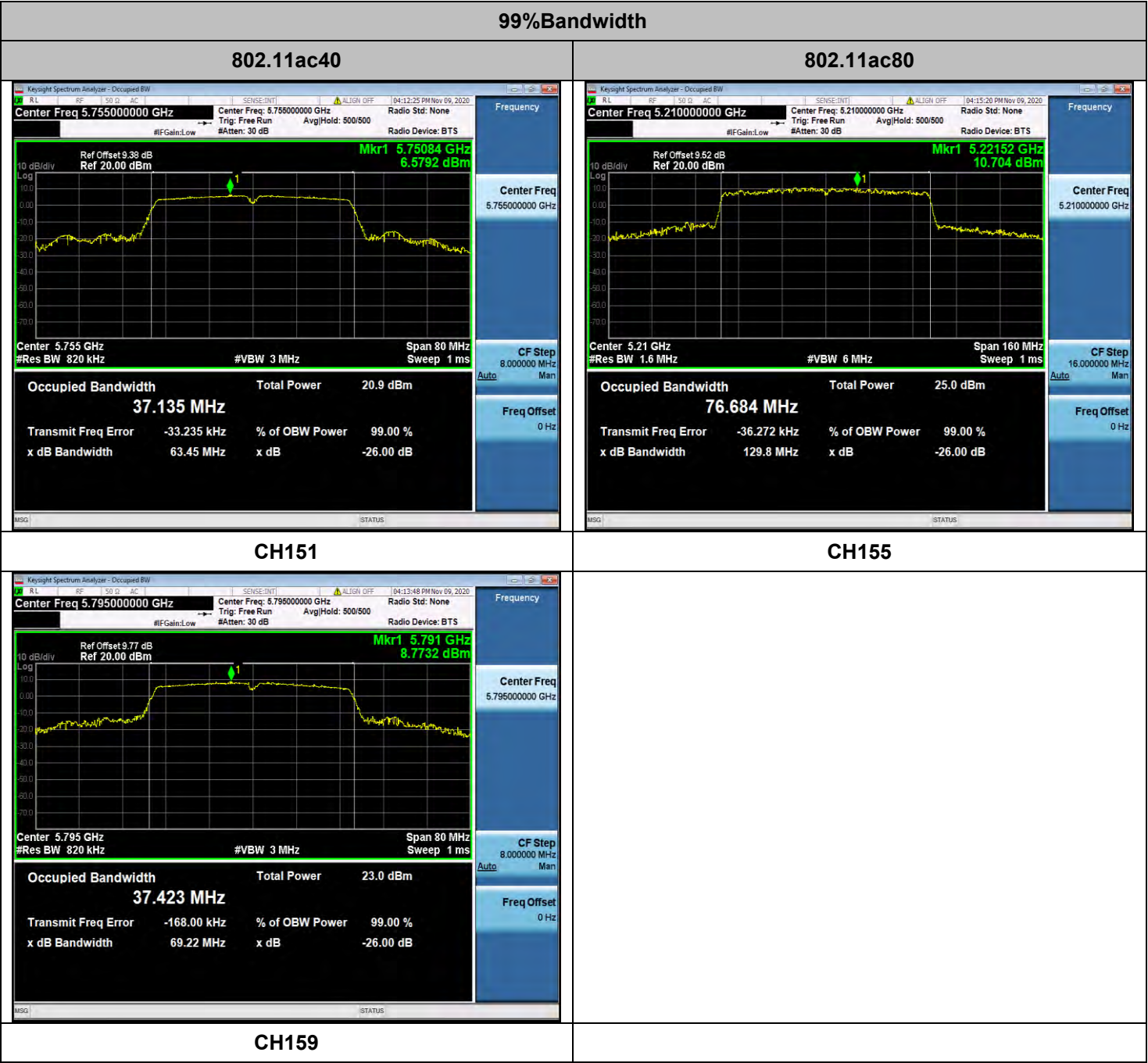
CH157



CH159



CH165



6dB Bandwidth

802.11a



802.11n HT20



CH149



CH149



CH157



CH157



CH165



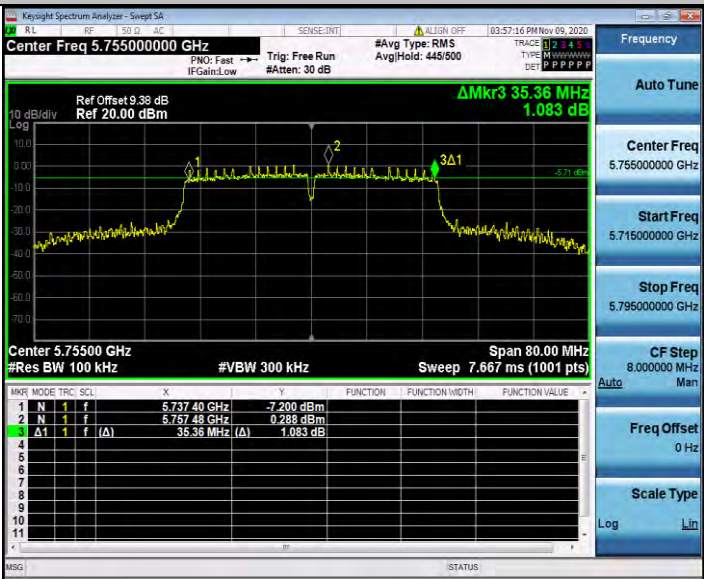
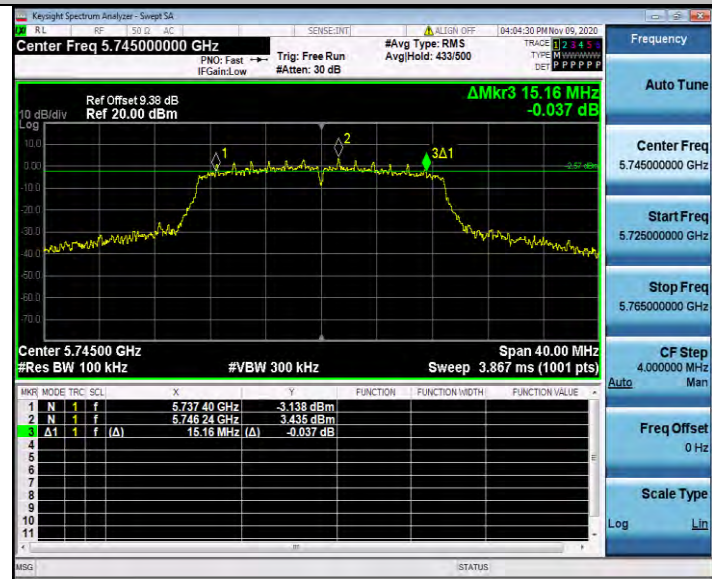
CH165



6dB Bandwidth

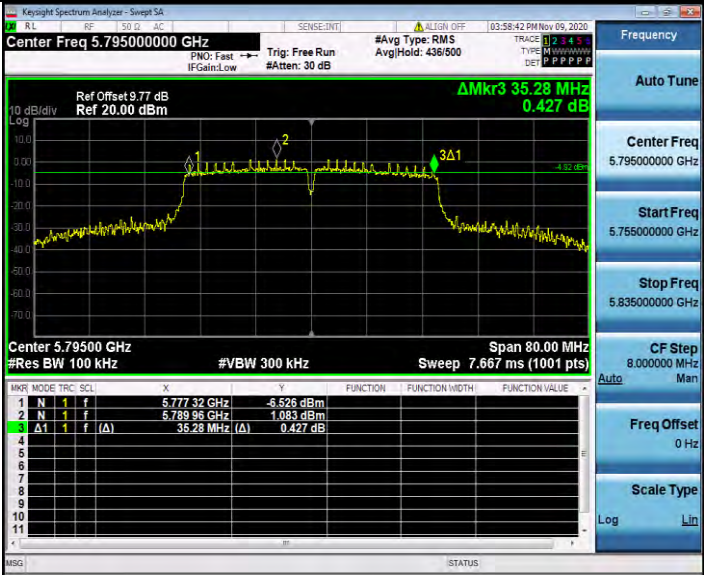
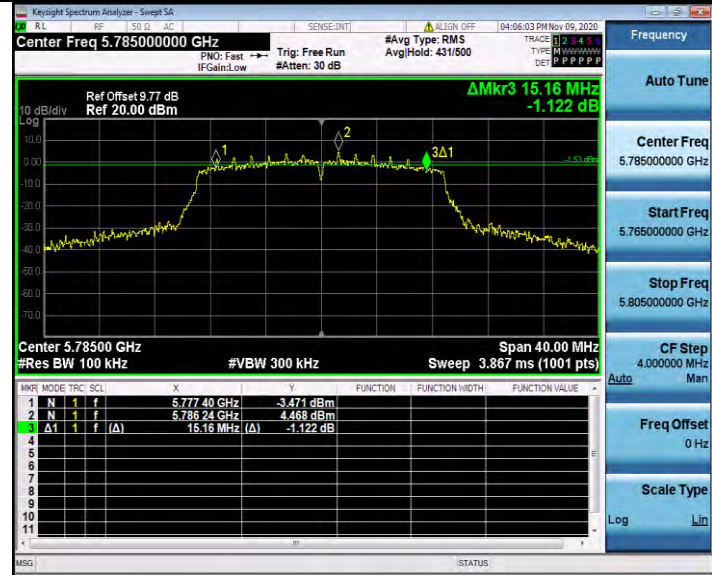
802.11ac20

802.11n HT40



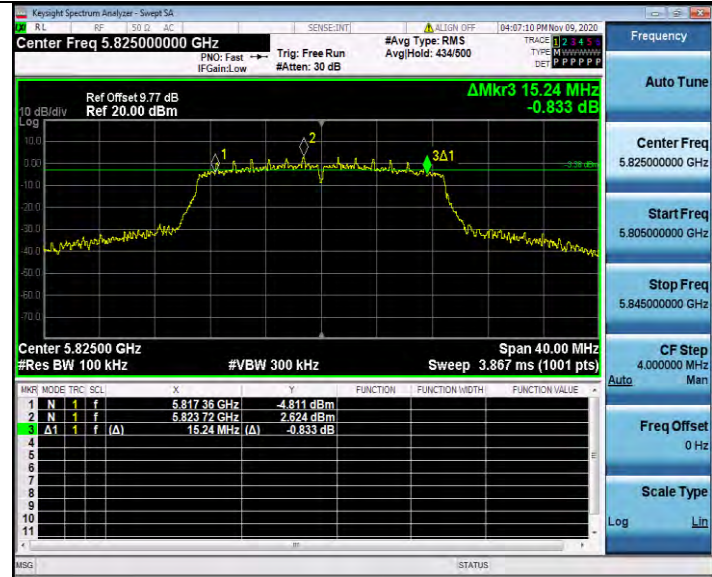
CH149

CH151



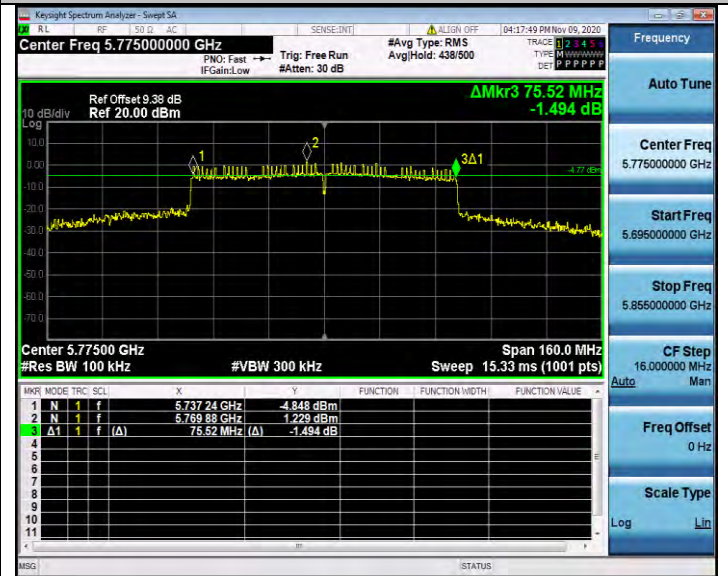
CH157

CH159



CH165

802.11ac80



CH155

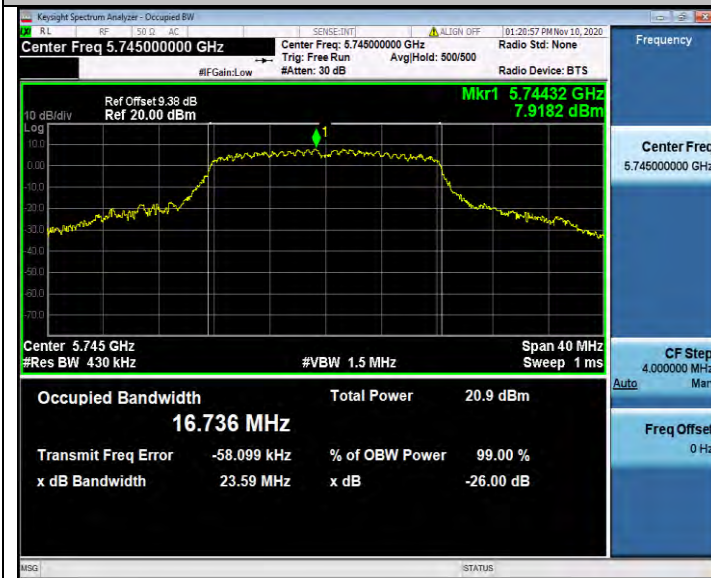


CH159

Antenna 1:

99%Bandwidth

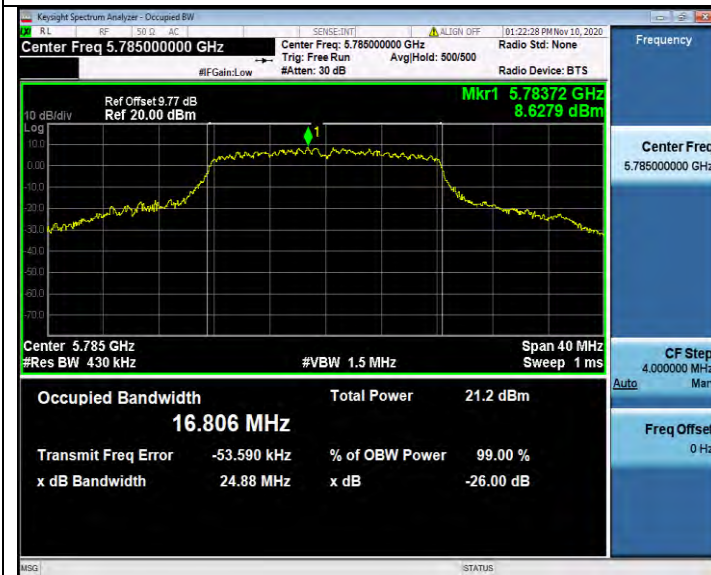
802.11a



802.11n HT20



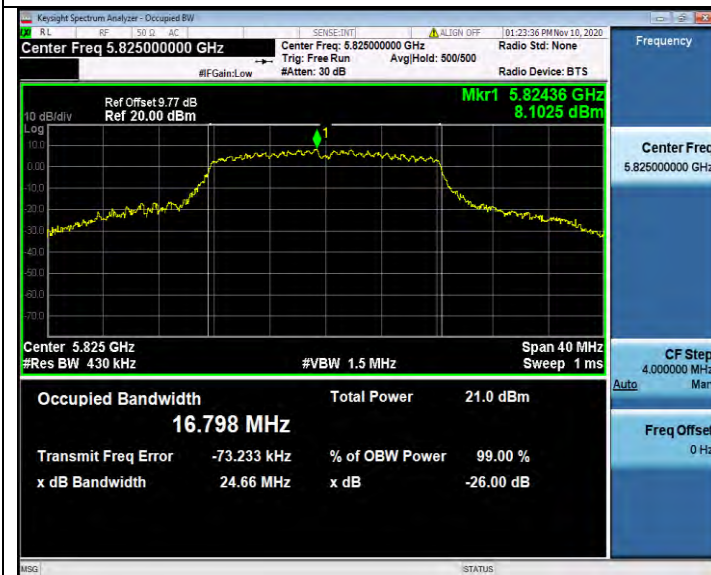
CH149



CH149



CH157



CH157

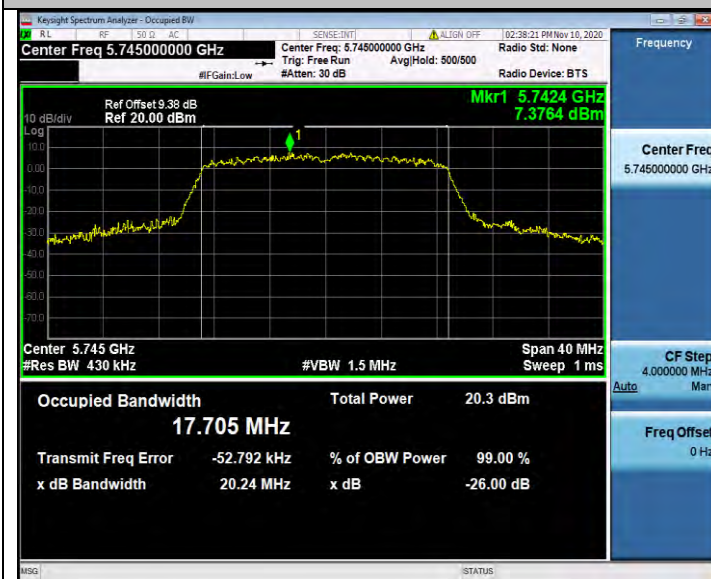


CH165

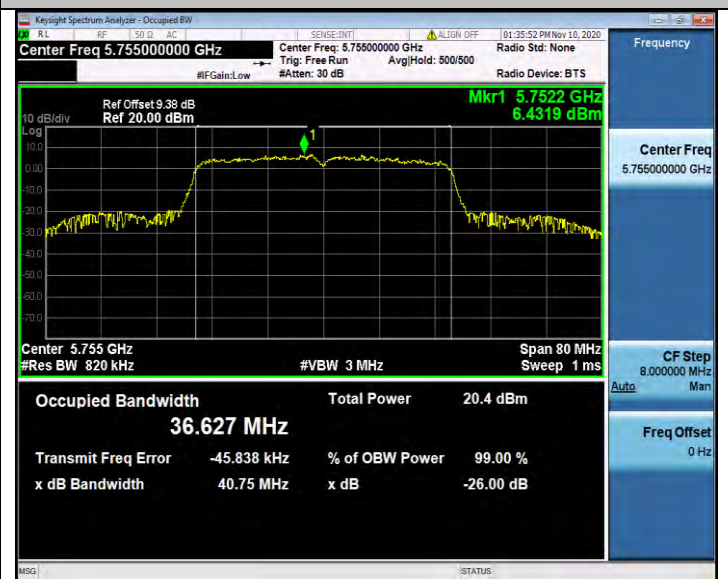
CH165

99%Bandwidth

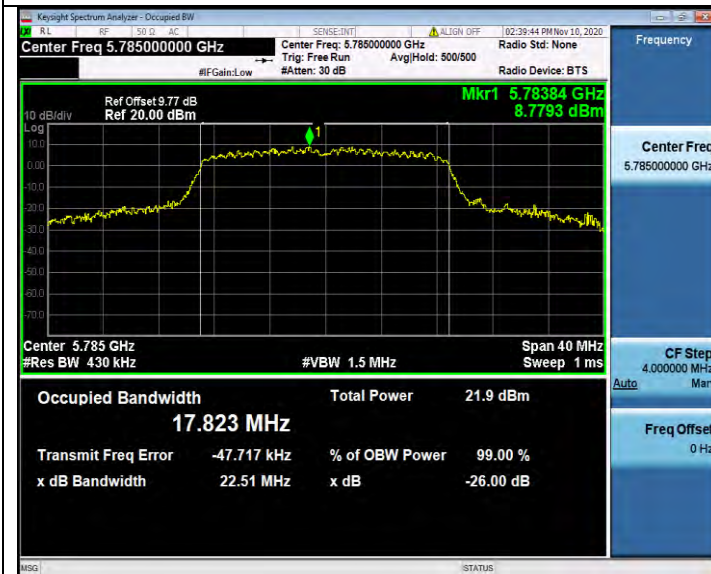
802.11ac20



802.11n HT40



CH149



CH151



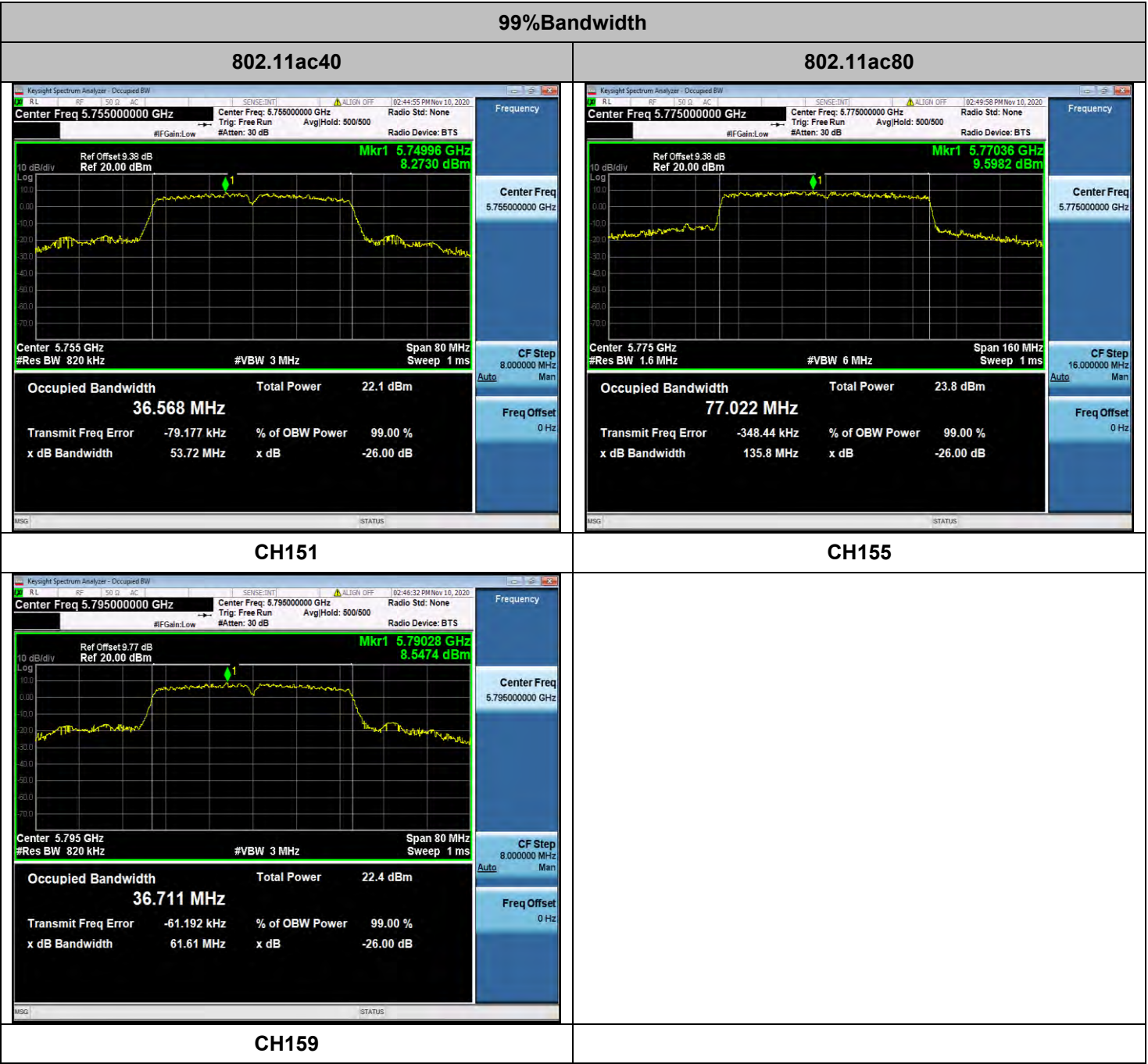
CH157



CH159



CH165



CH159

KeySight Spectrum Analyzer - Occupied BW

Center Freq 5.795000000 GHz

Center Freq: 5.795000000 GHz

Trig: Free Run

Avg/Hold: 500/500

Radio Std: None

#FGain:Low

#Atten: 30 dB

Radio Device: BTS

Frequency

Ref Offset 9.77 dB

Ref 20.00 dBm

Mkr1 5.79028 GHz

8.5474 dBm

Center Freq 5.795000000 GHz

Center 5.795 GHz

#Res BW 820 kHz

#VBW 3 MHz

Span 80 MHz

Sweep 1 ms

CF Step 8.000000 MHz

Auto

Man

Frequency Offset 0 Hz

Occupied Bandwidth 36.711 MHz

Total Power 22.4 dBm

Transmit Freq Error -61.192 kHz

% of OBW Power 99.00 %

x dB Bandwidth 61.61 MHz

x dB -26.00 dB

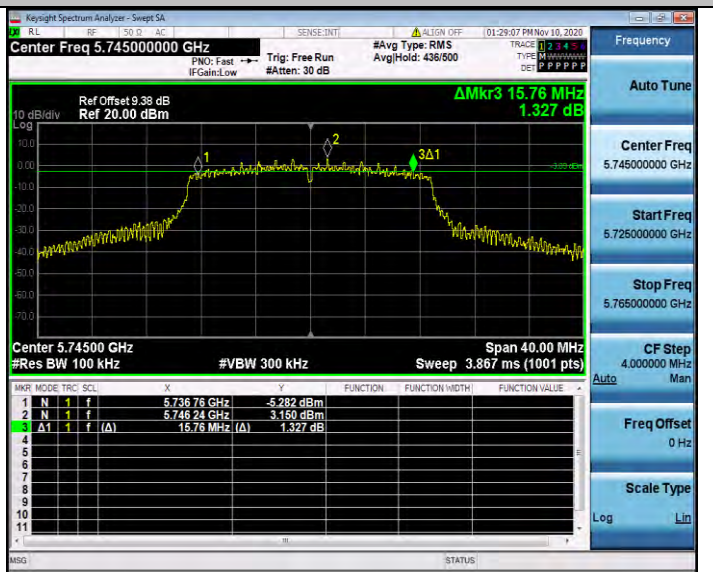
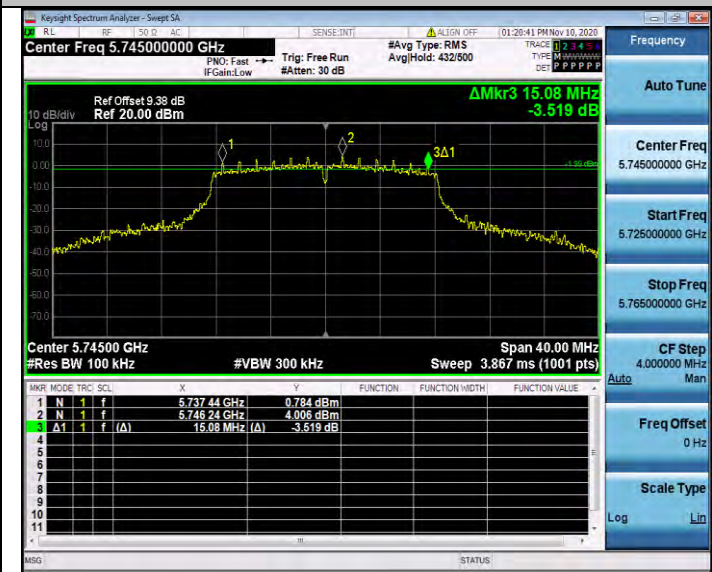
MSG

STATUS

6dB Bandwidth

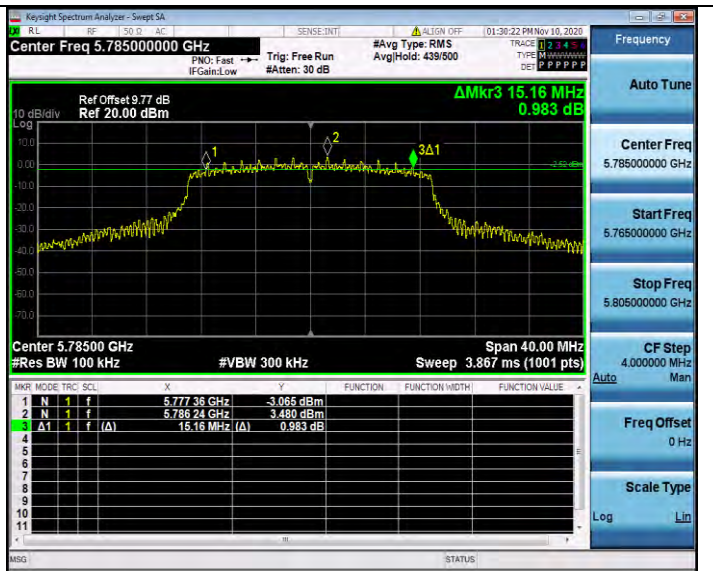
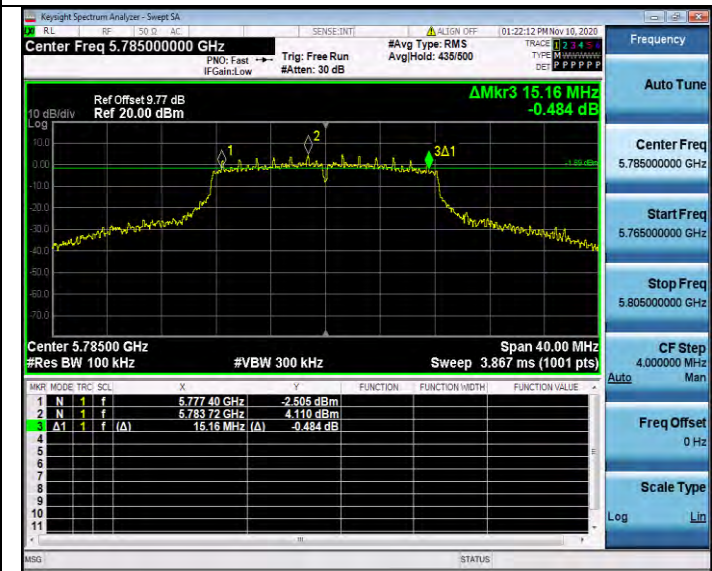
802.11a

802.11n HT20



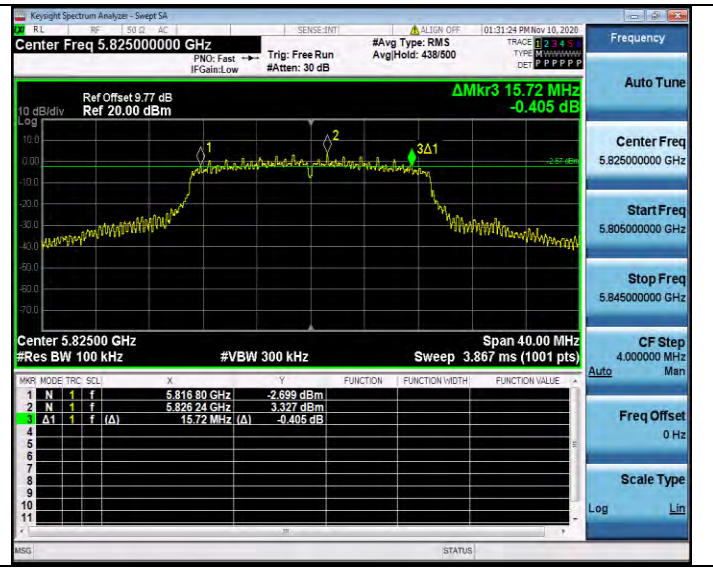
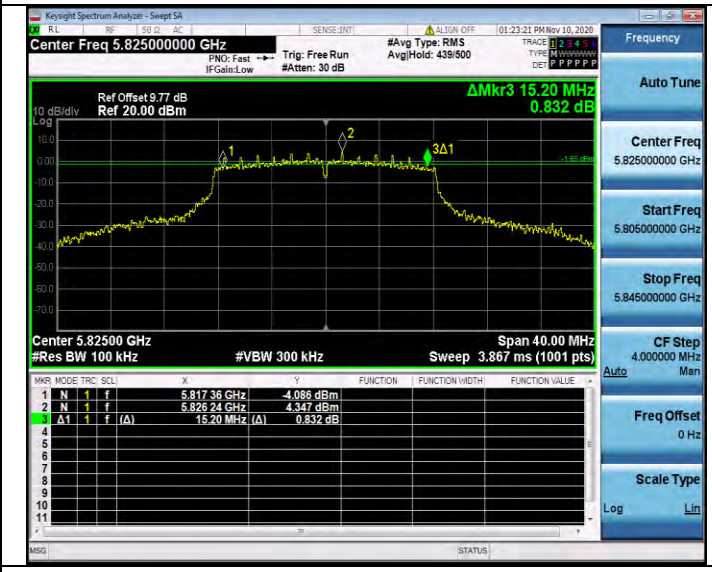
CH149

CH149



CH157

CH157



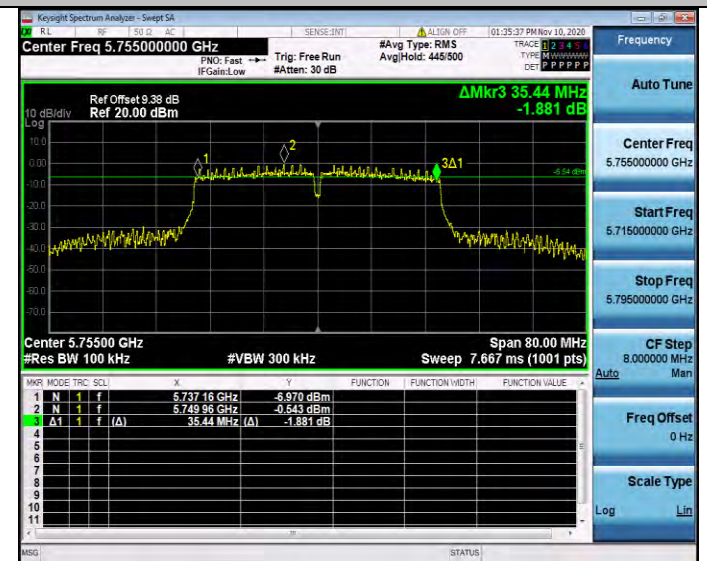
CH165

CH165

6dB Bandwidth

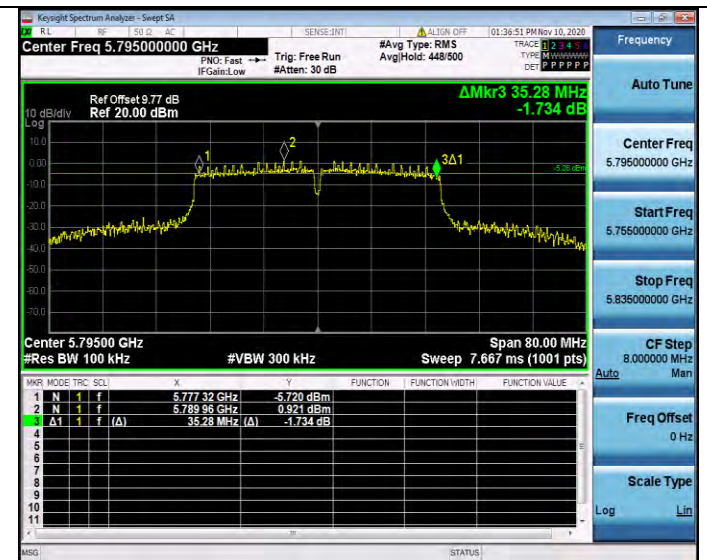
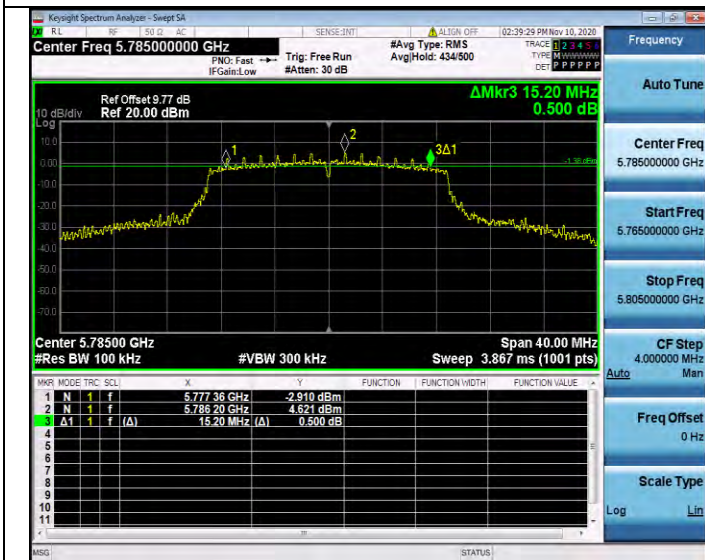
802.11ac20

802.11n HT40



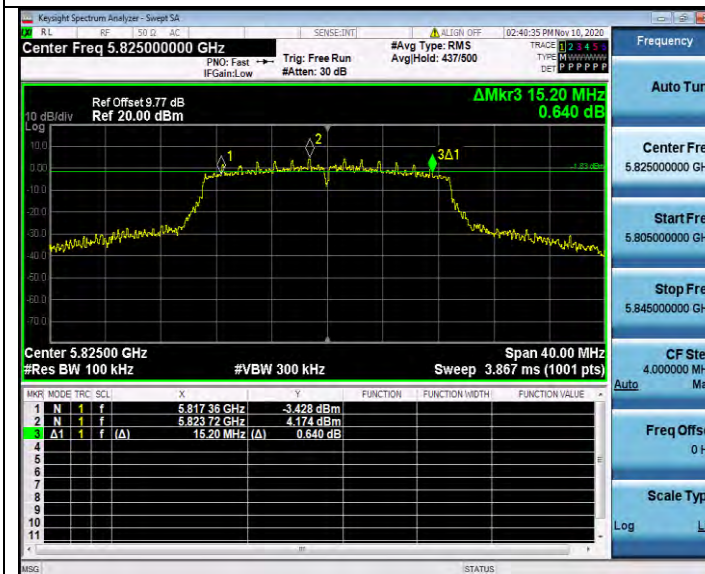
CH149

CH151



CH157

CH159



CH165

802.11ac80



CH155

CH159