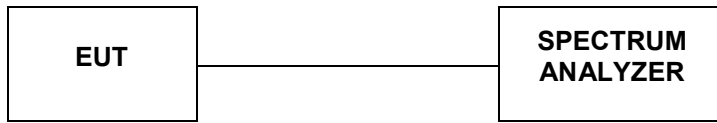


4.6. 6dB Bandwidth

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

Antenna 0:

Type	Channel	99%Bandwidth (MHz)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	16.682	15.200	≥500	Pass
	157	16.646	15.200		
	165	16.647	15.160		
802.11nHT20	149	17.676	16.720	≥500	Pass
	157	17.654	15.760		
	165	17.608	15.800		
802.11n40	151	36.590	35.920	≥500	Pass
	159	36.636	36.480		
802.11ac20	149	17.727	15.800	≥500	Pass
	157	17.712	15.120		
	165	17.714	15.120		
802.11ac40	151	36.381	35.280	≥500	Pass
	159	36.435	35.280		
802.11ac80	155	75.955	76.000	≥500	Pass

Antenna 1:

Type	Channel	99%Bandwidth (MHz)	6dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	149	17.106	15.640	≥500	Pass
	157	17.045	15.120		
	165	17.052	15.160		
802.11nHT20	149	18.026	15.160	≥500	Pass
	157	18.045	15.160		
	165	18.017	15.200		
802.11n40	151	36.639	35.360	≥500	Pass
	159	36.692	35.360		
802.11ac20	149	17.895	15.200	≥500	Pass
	157	17.850	15.760		
	165	17.845	15.160		
802.11ac40	151	36.697	35.360	≥500	Pass
	159	36.665	35.440		
802.11ac80	155	76.070	76.000	≥500	Pass

Antenna 0:

99%Bandwidth

802.11a

802.11n HT20



CH149

CH149



CH157

CH157



CH165

CH165

99%Bandwidth

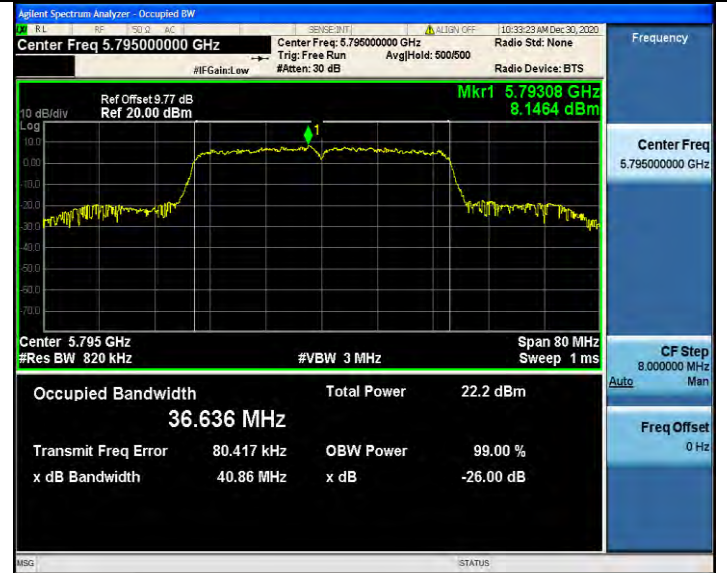
802.11ac20

802.11n HT40



CH149

CH151



CH157

CH159

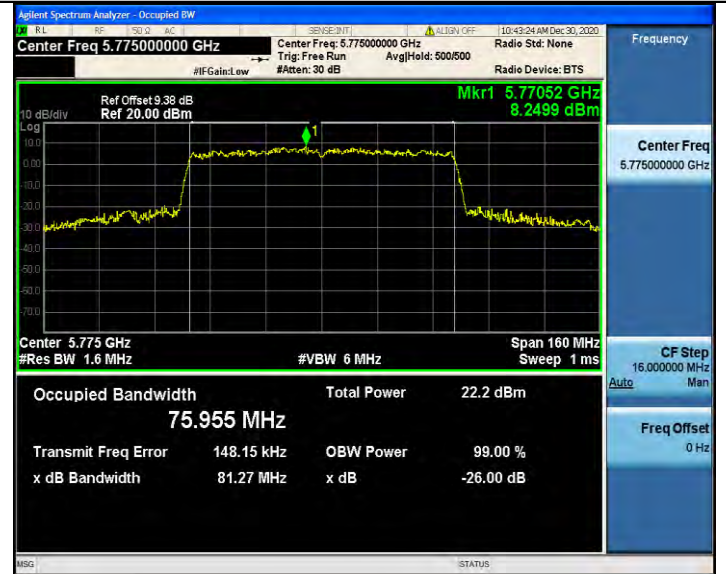


CH165

99%Bandwidth

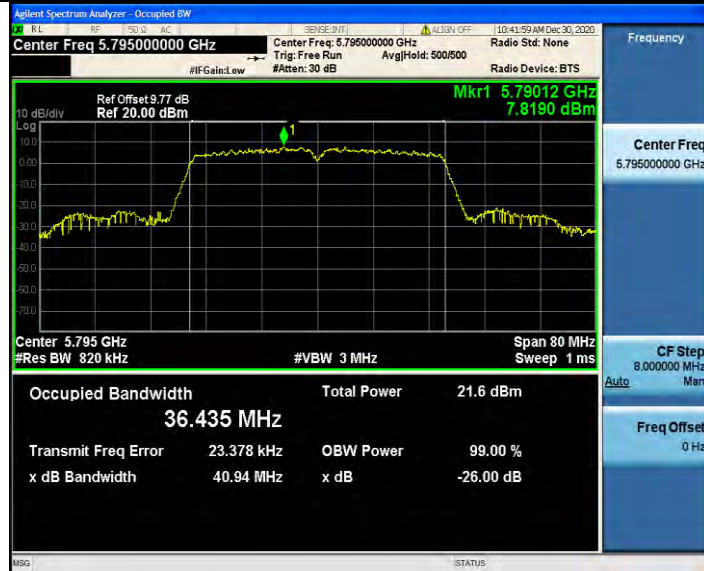
802.11ac40

802.11ac80



CH151

CH155



CH159



6dB Bandwidth

802.11a

802.11n HT20



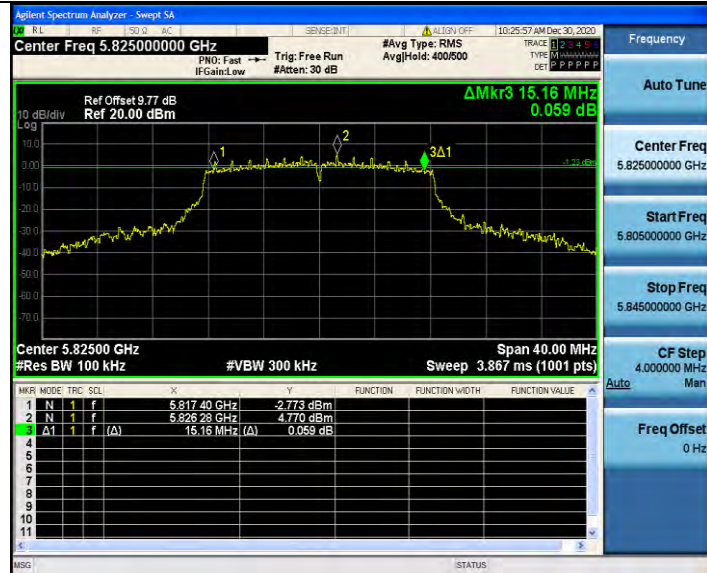
CH149

CH149



CH157

CH157



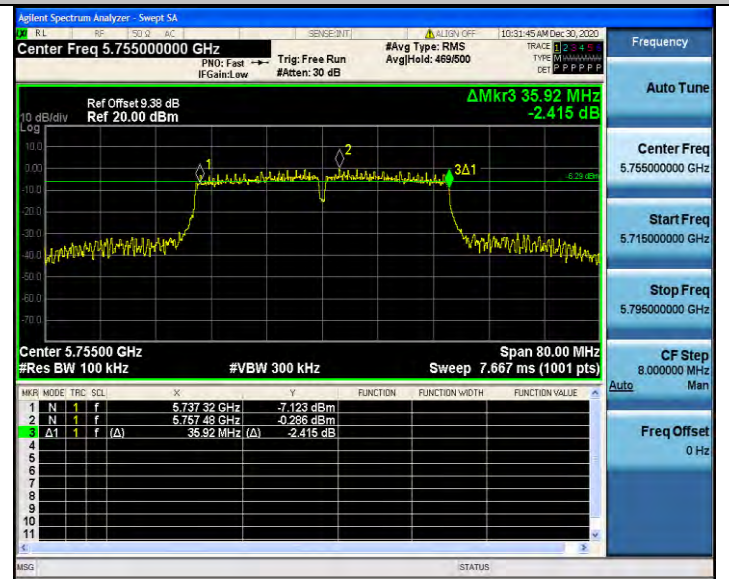
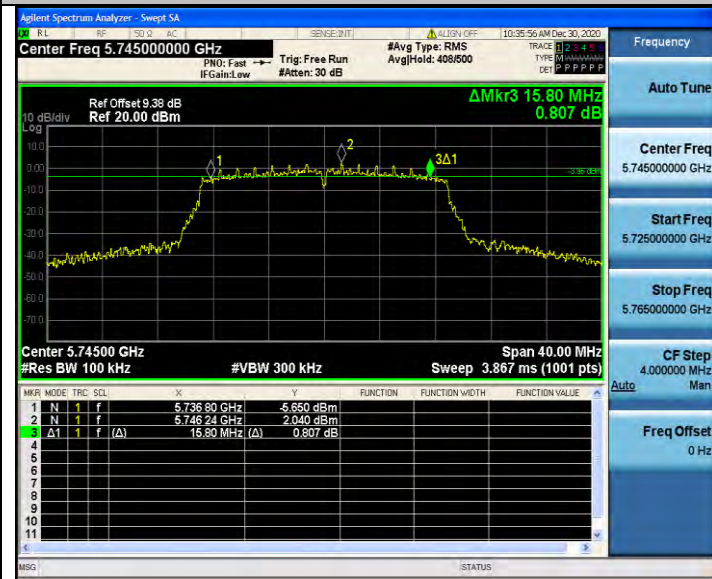
CH165

CH165

6dB Bandwidth

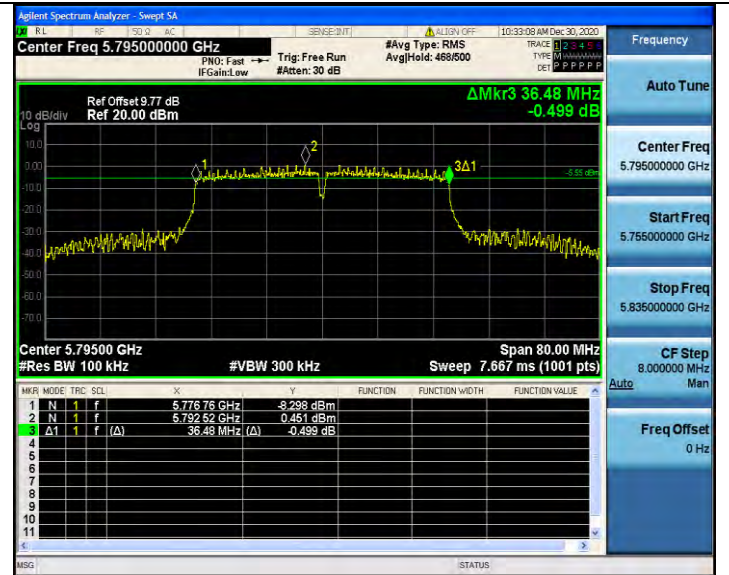
802.11ac20

802.11n HT40



CH149

CH151



CH157

CH159

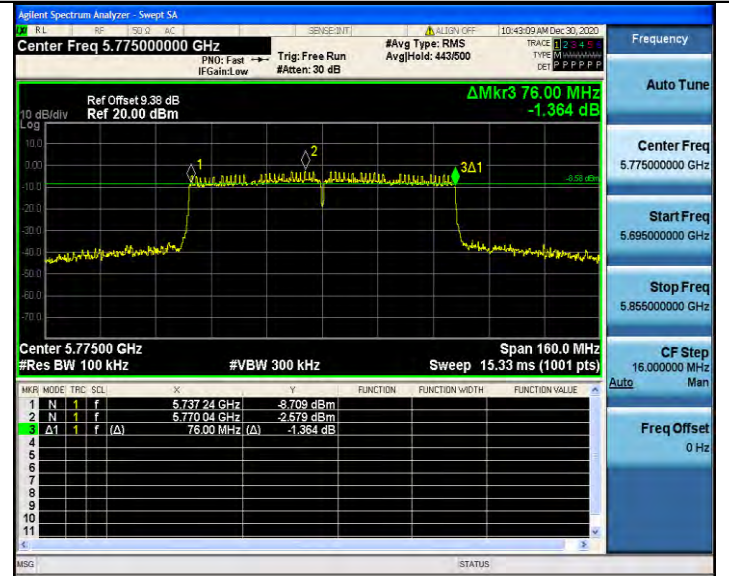
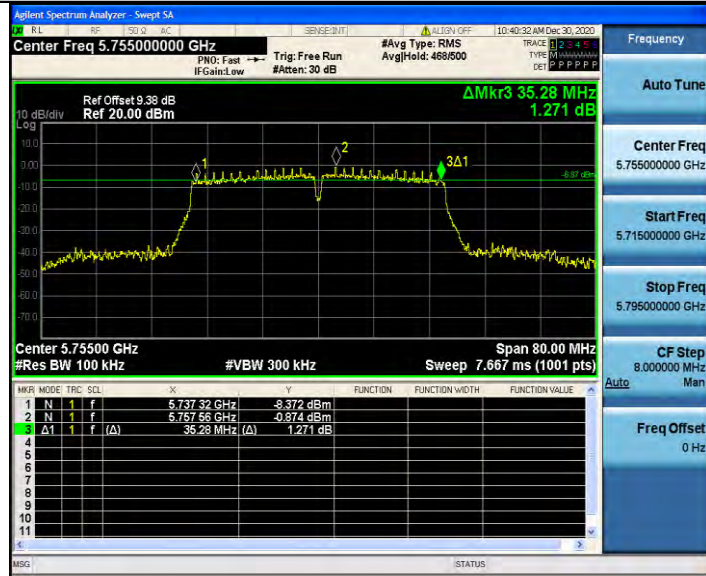


CH165

6dB Bandwidth

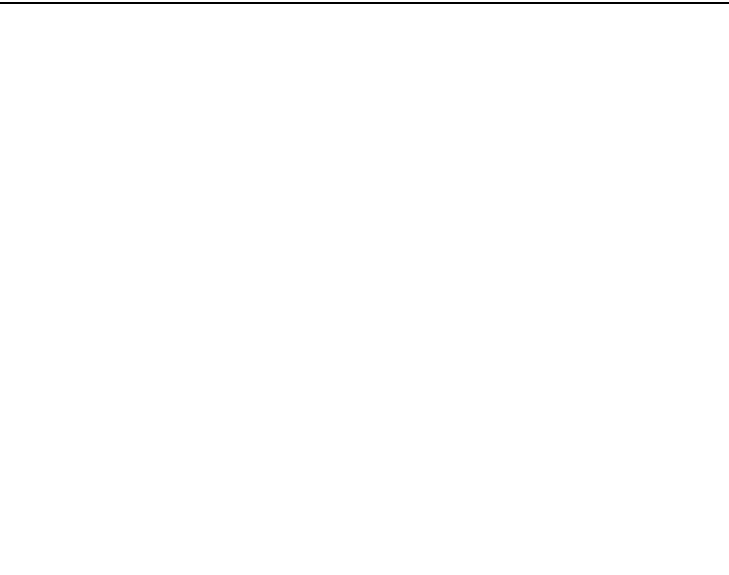
802.11ac40

802.11ac80



CH151

CH155



CH159

Antenna 1:

99%Bandwidth

802.11a

802.11n HT20



CH149

CH149



CH157

CH157



CH165

CH165

99%Bandwidth

802.11ac20

802.11n HT40



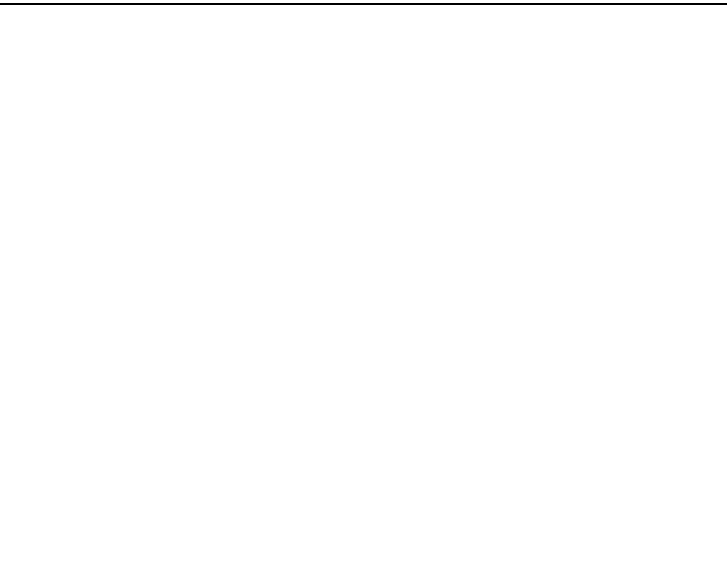
CH149

CH151



CH157

CH159



CH165

99%Bandwidth

802.11ac40

802.11ac80



CH151

CH155



CH159

CH159

6dB Bandwidth

802.11a

802.11n HT20



CH149

CH149



CH157

CH157



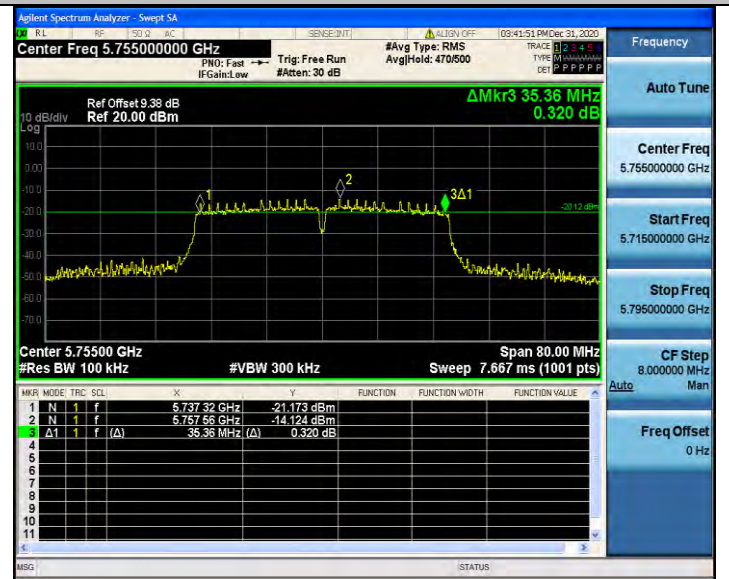
CH165

CH165

6dB Bandwidth

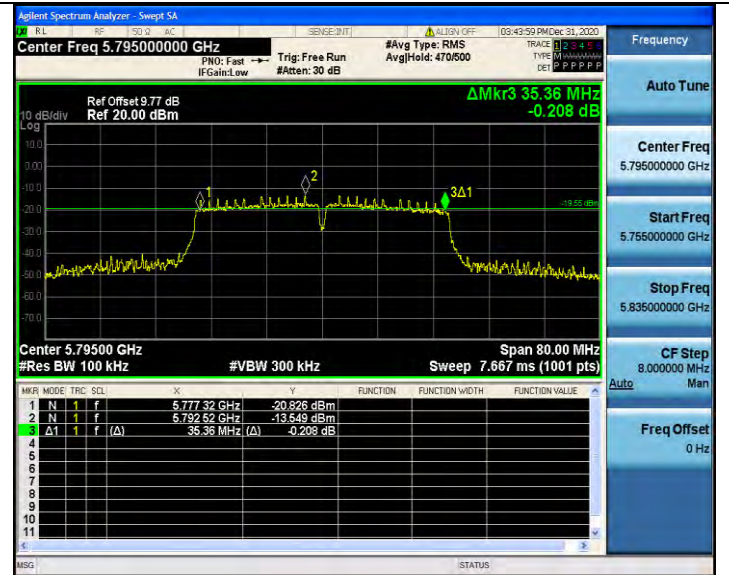
802.11ac20

802.11n HT40



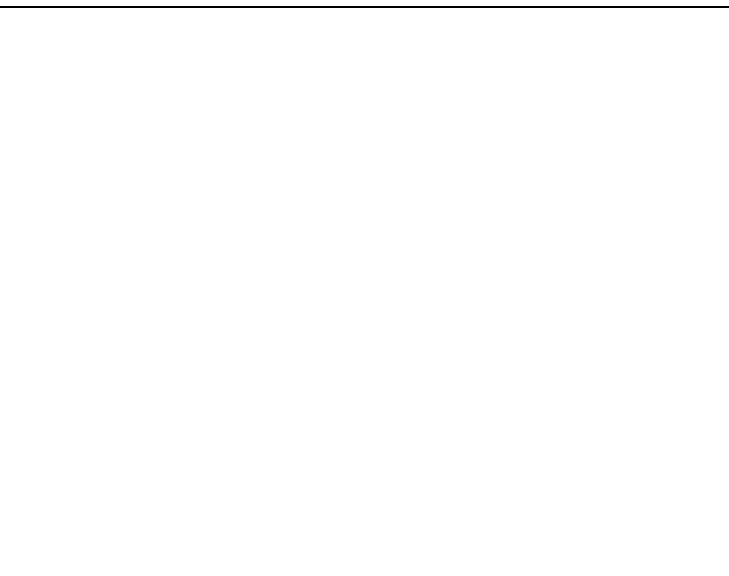
CH149

CH151



CH157

CH159

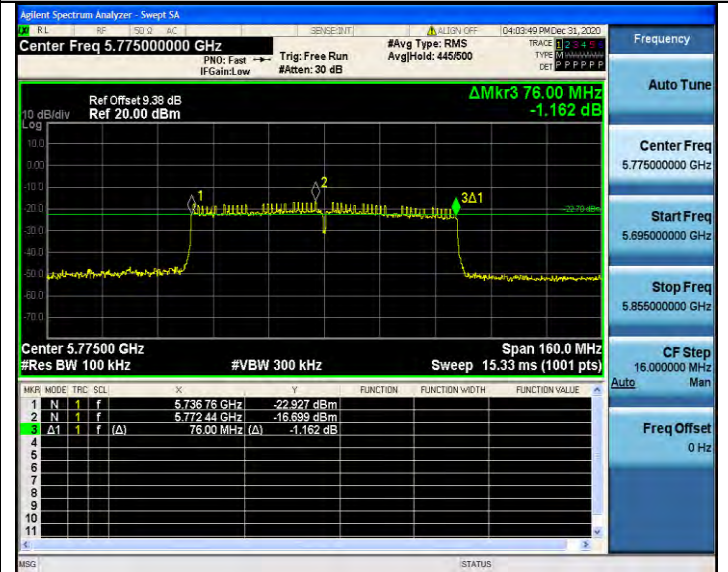
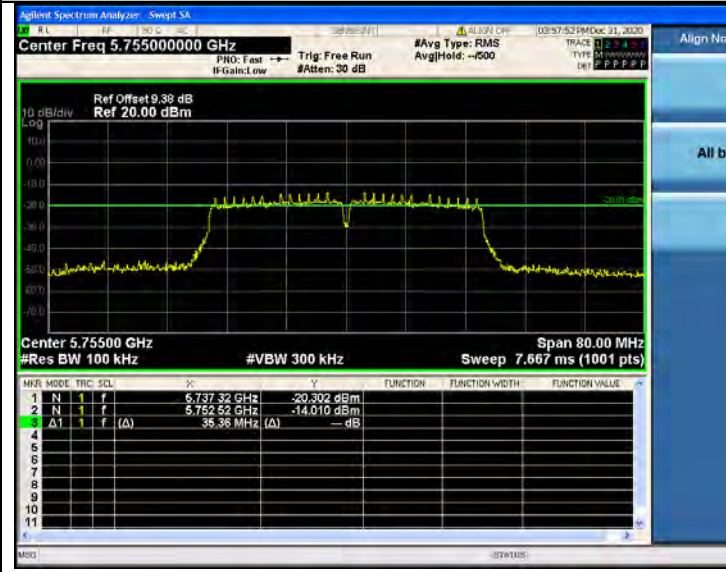


CH165

6dB Bandwidth

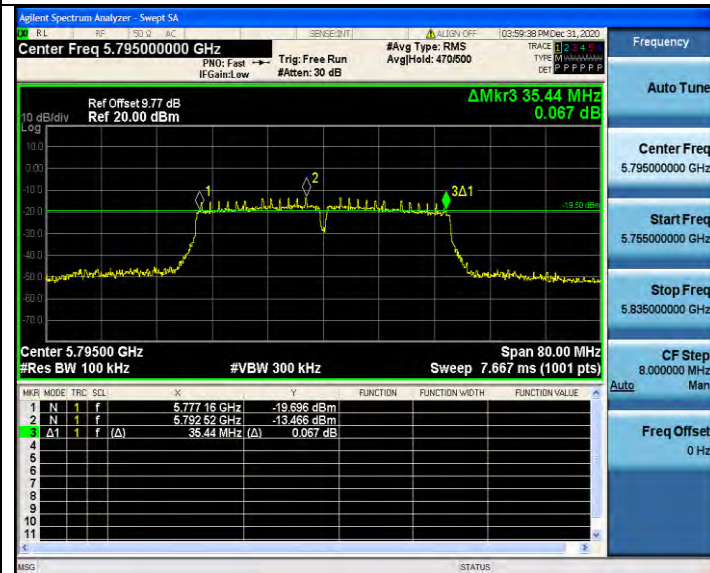
802.11ac40

802.11ac80



CH151

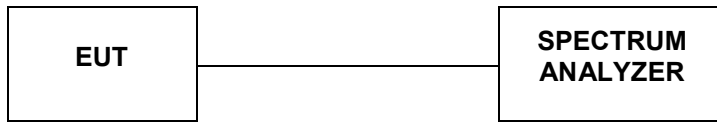
CH155



CH159

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:

- a. Set RBW = 220 kHz/430 kHz /820 kHz (approximately 1% of the emission bandwidth).
- b. Set the video bandwidth (VBW) = 3* 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 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 0:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.608	19.800	-	Pass
	40	16.597	19.520		
	48	16.593	19.680		
802.11nHT20	36	17.684	21.320	-	Pass
	40	17.685	21.240		
	48	17.682	20.600		
802.11n40	38	36.720	40.160	-	Pass
	46	36.688	40.160		
802.11ac20	36	17.767	20.240	-	Pass
	40	17.753	20.240		
	48	17.732	20.240		
802.11ac40	38	36.567	40.320	-	Pass
	46	36.451	40.400		
802.11ac80	42	75.993	80.320	-	Pass

Antenna 1:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	17.038	20.080	-	Pass
	40	17.071	20.120		
	48	17.100	20.440		
802.11nHT20	36	17.940	20.600	-	Pass
	40	17.945	20.160		
	48	17.922	20.160		
802.11n40	38	37.079	40.800	-	Pass
	46	36.879	40.560		
802.11ac20	36	17.925	20.280	-	Pass
	40	17.914	20.360		
	48	17.844	20.280		
802.11ac40	38	36.870	46.160	-	Pass
	46	36.711	40.880		
802.11ac80	42	76.033	81.280	-	Pass

Antenna 0:

99%Bandwidth

802.11a

802.11n HT20



CH36

CH36



CH40

CH40



CH48

CH48

99%Bandwidth

802.11ac20

802.11n HT40



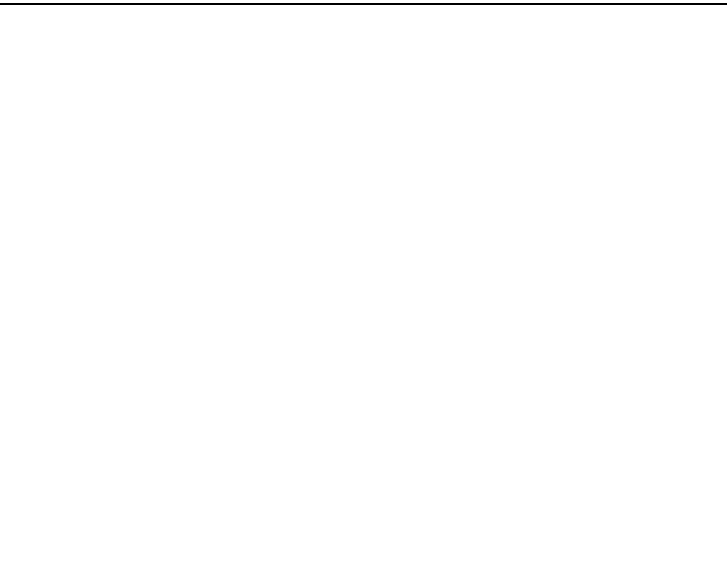
CH36

CH38



CH40

CH46



CH48

99%Bandwidth

802.11ac40

802.11ac80



CH38

CH42



CH46

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

802.11ac40



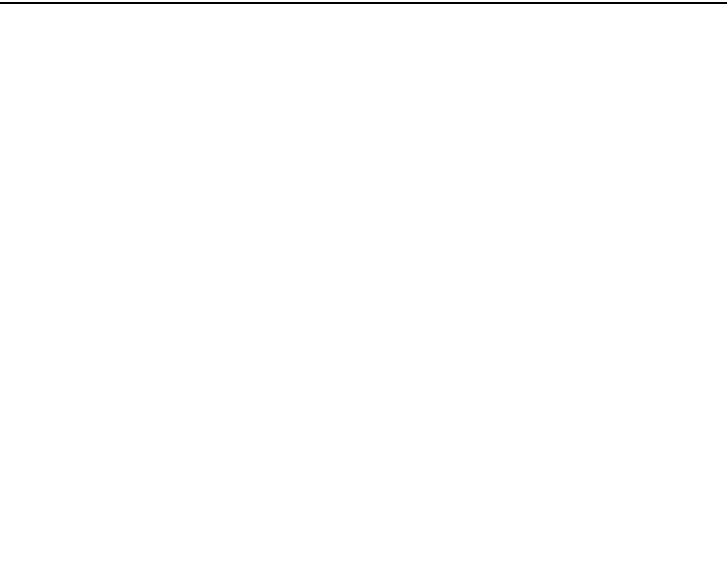
802.11ac80



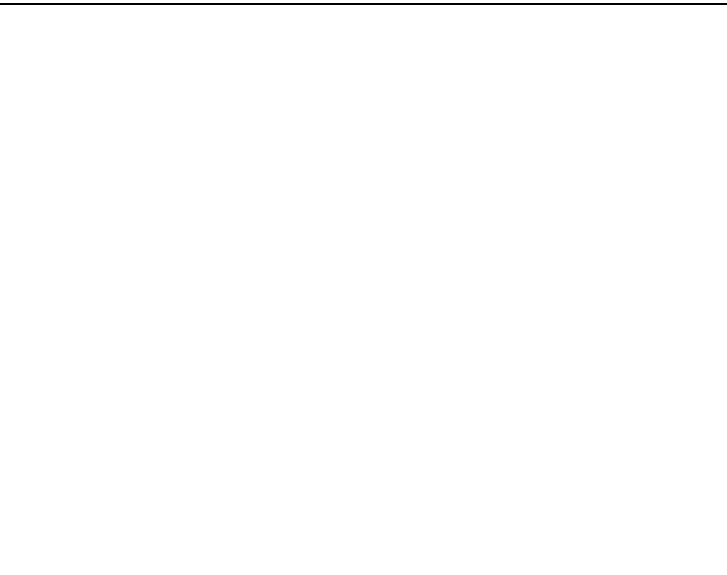
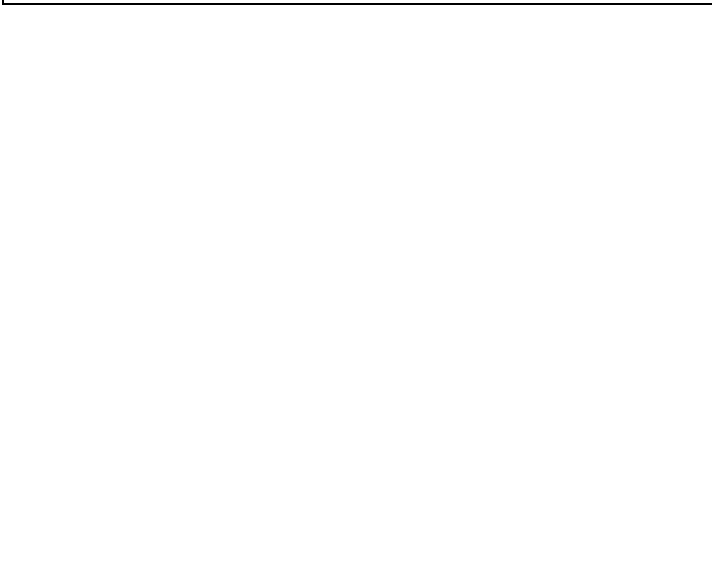
CH38



CH42



CH46

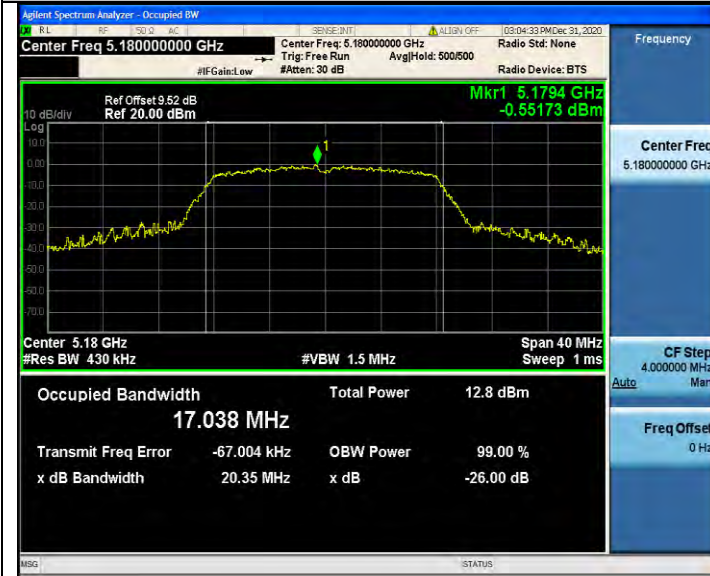


Antenna 1:

99%Bandwidth

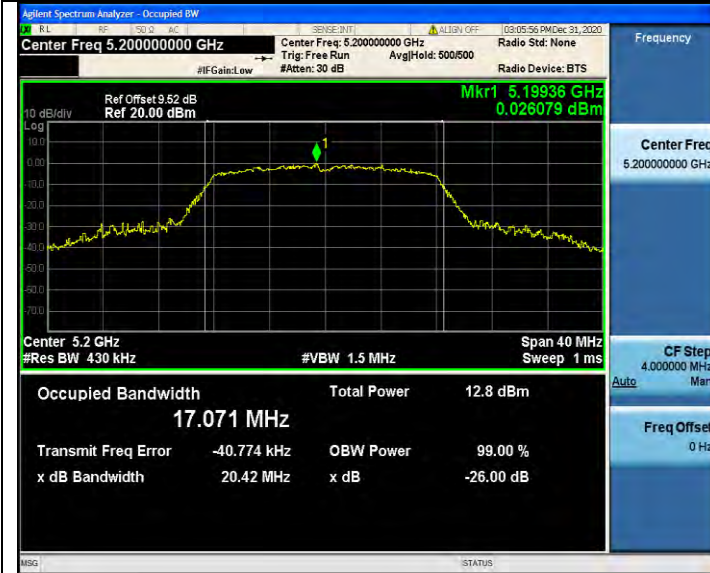
802.11a

802.11n HT20



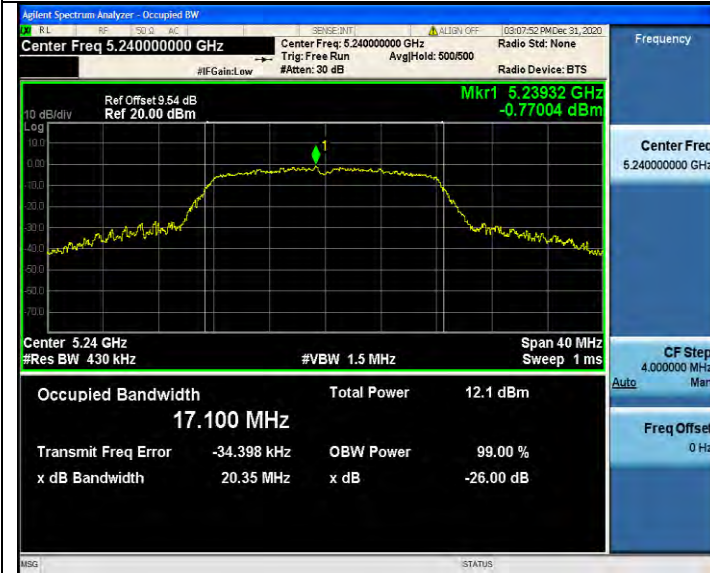
CH36

CH36



CH40

CH40



CH48

CH48

99%Bandwidth

802.11ac20

802.11n HT40



CH36

CH38



CH40

CH46



CH48