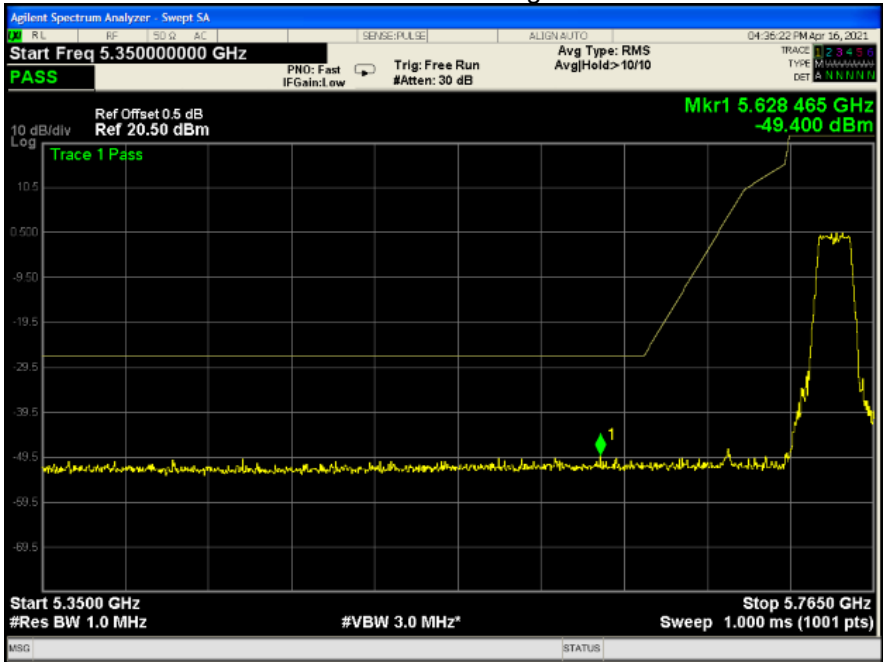
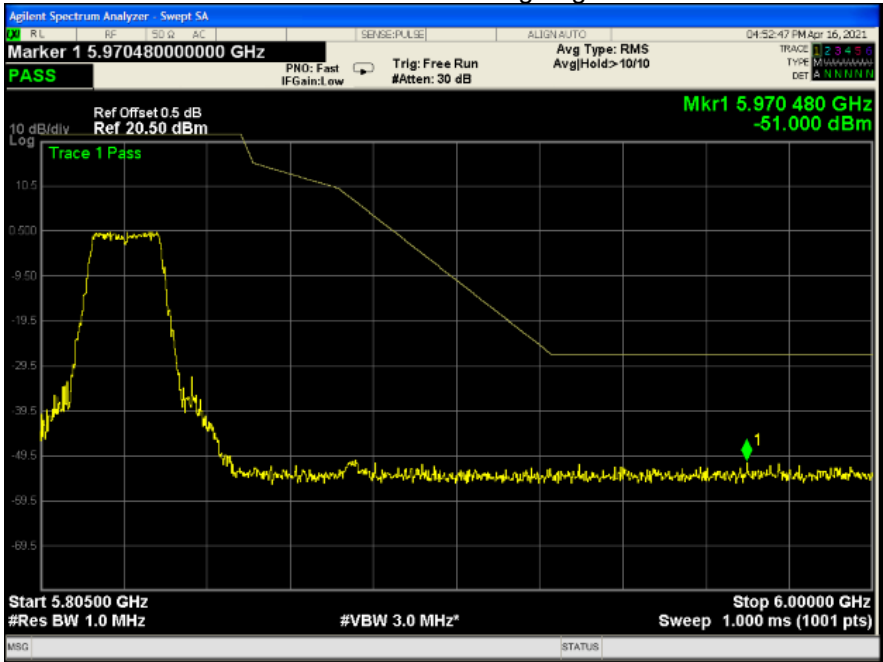


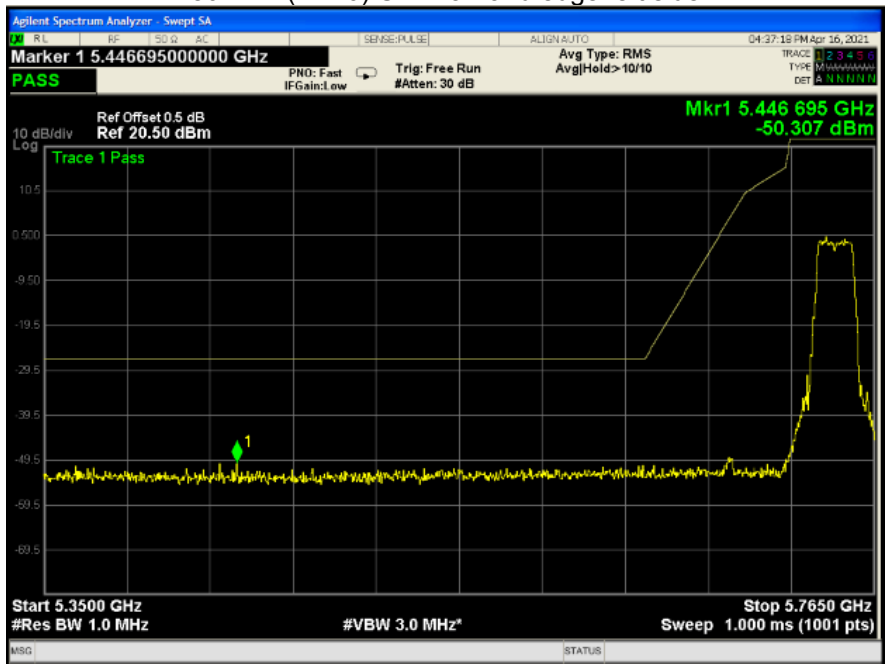
802.11a U-NII-3 Band edge-left side



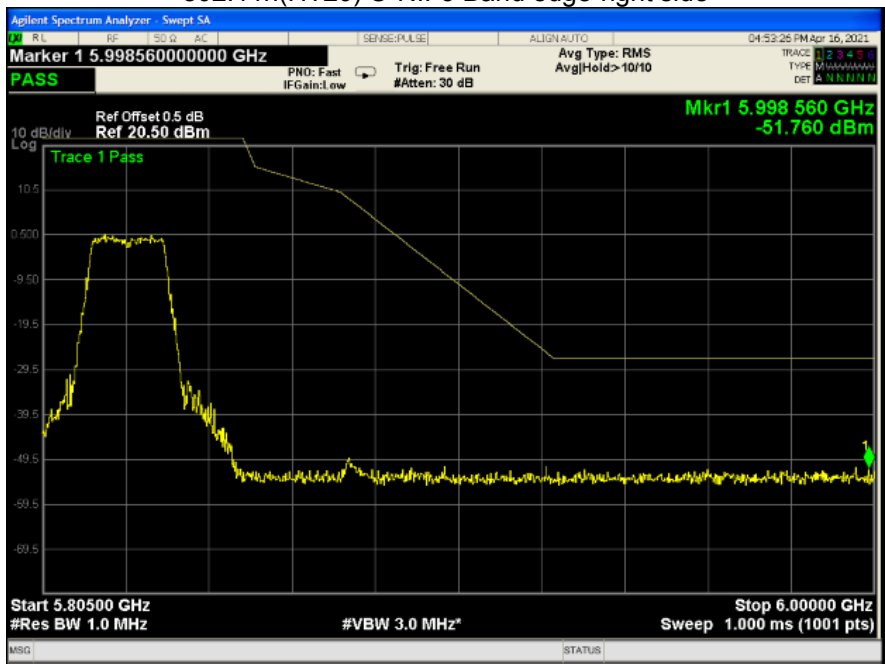
802.11a U-NII-3 Band edge-right side



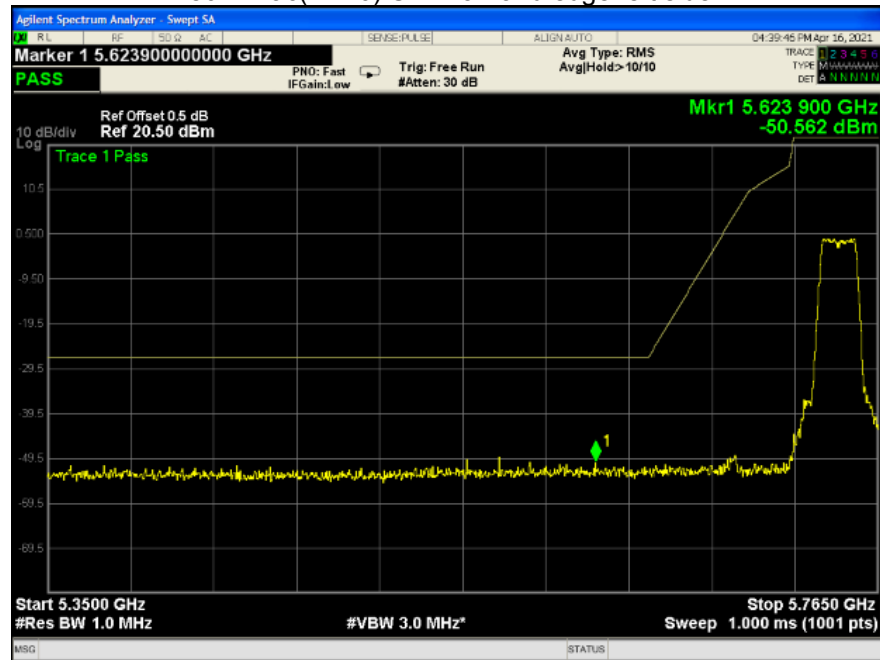
802.11n(HT20) U-NII-3 Band edge-left side



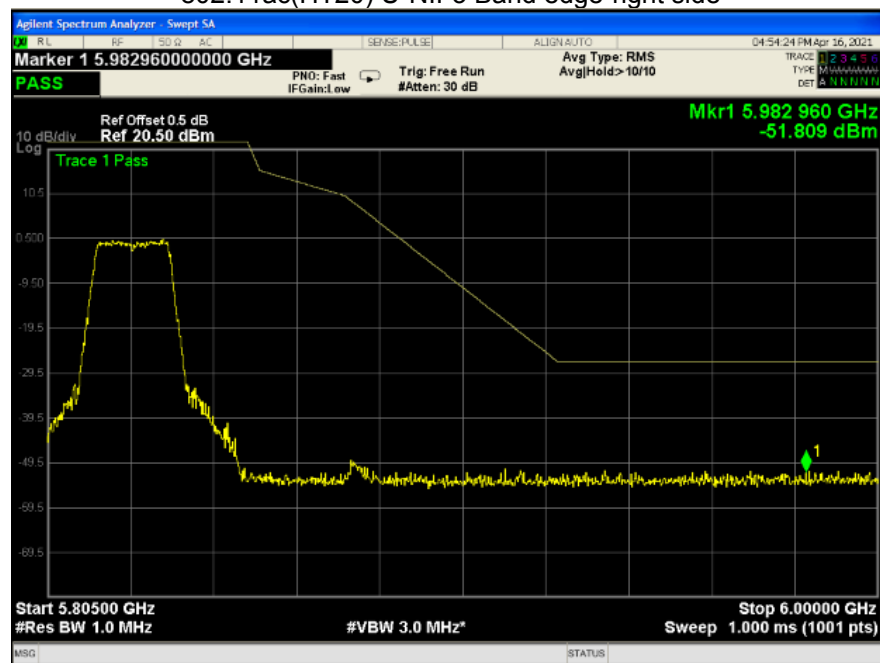
802.11n(HT20) U-NII-3 Band edge-right side



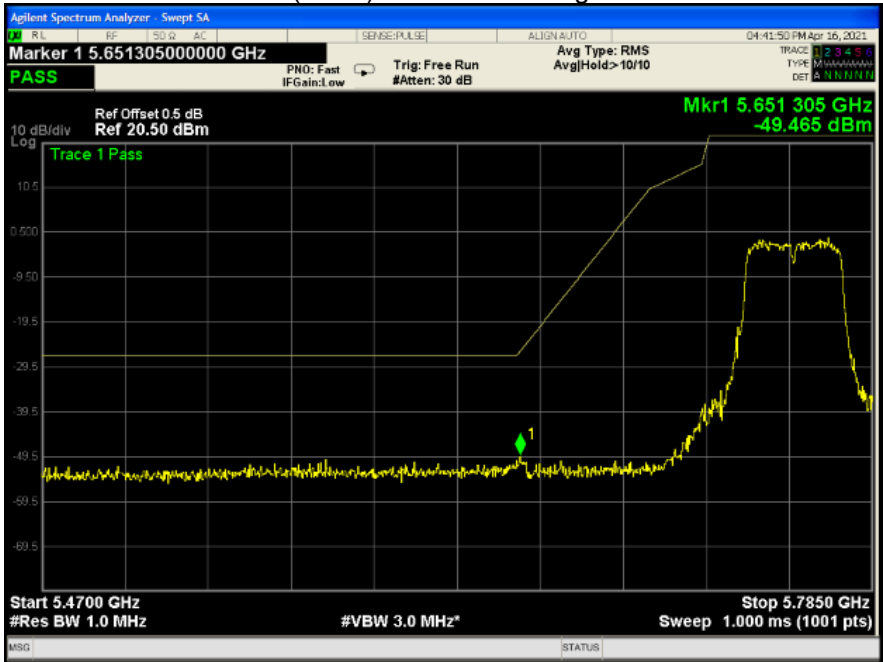
802.11ac(HT20) U-NII-3 Band edge-left side



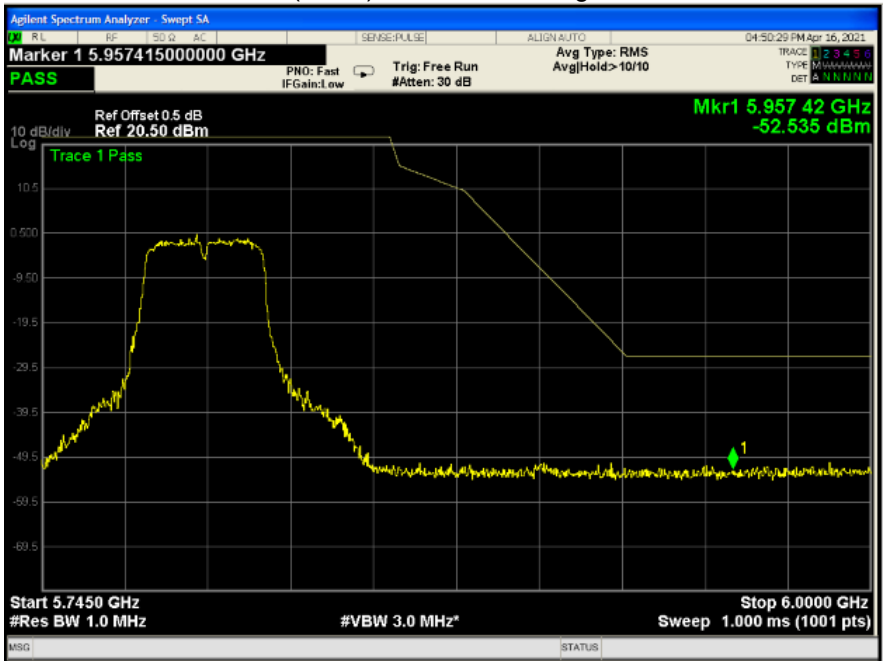
802.11ac(HT20) U-NII-3 Band edge-right side



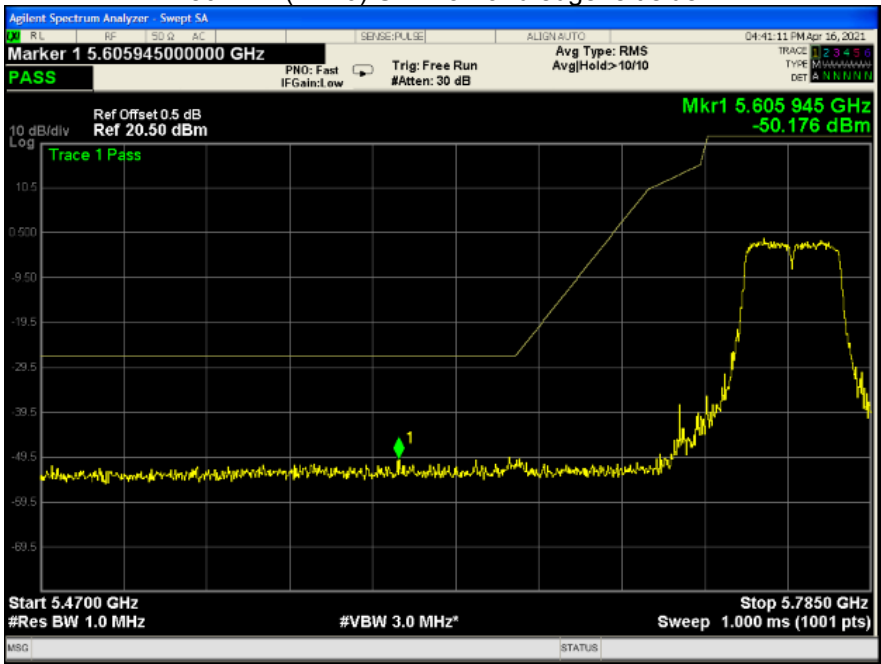
802.11ac(HT40) U-NII-3 Band edge-left side



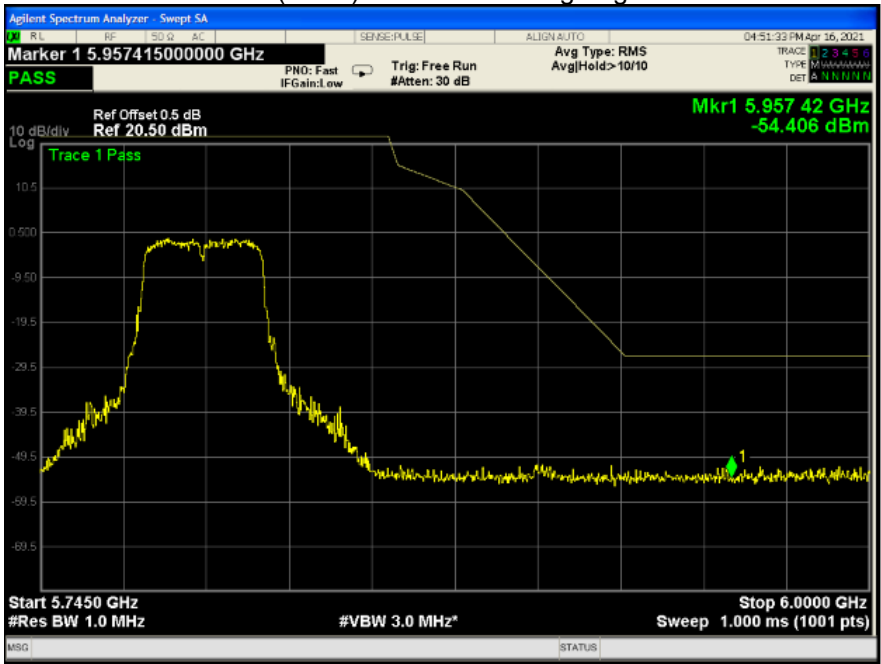
802.11ac(HT40) U-NII-3 Band edge-left side



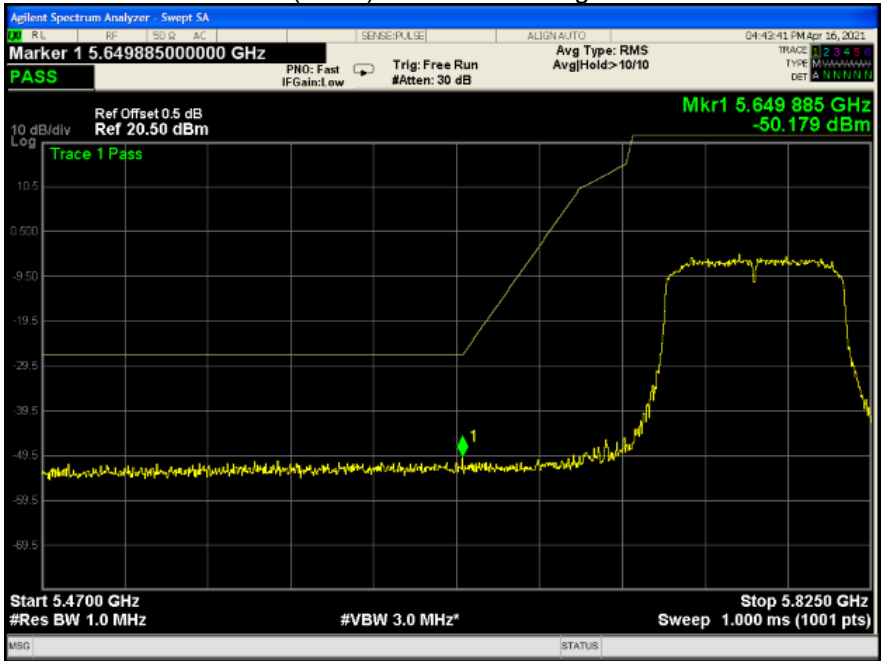
802.11n(HT40) U-NII-3 Band edge-left side



802.11n(HT40) U-NII-3 Band edge-right side



802.11ac(HT80) U-NII-3 Band edge-left side



802.11ac(HT80) U-NII-3 Band edge-left side



10 6 dB Bandwidth

Test Requirement: FCC CFR47 Part 15 Section 15.407(e)
 KDB789033 D02 General U-NII Test Procedures New Rules v02r01
 Test Method: Section C
 Test Limit: ≥ 500 kHz
 Test Result: PASS

10.1 Test Procedure:

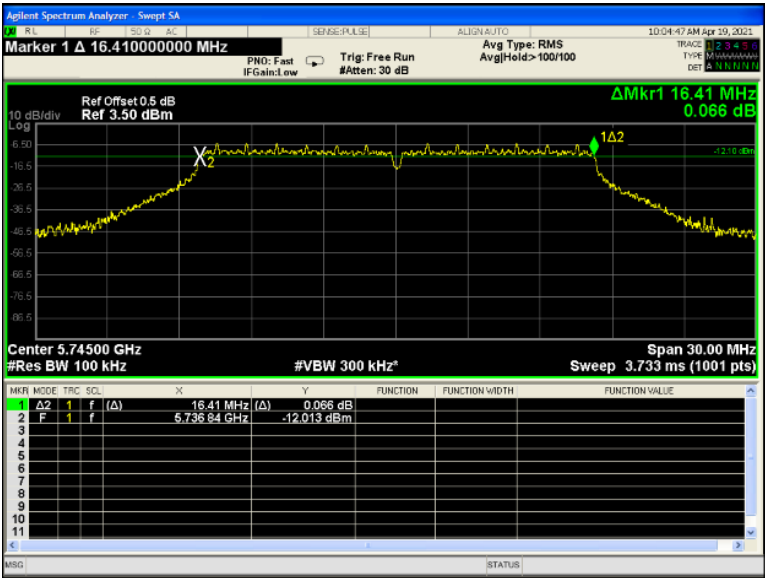
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

10.2 Test Result:

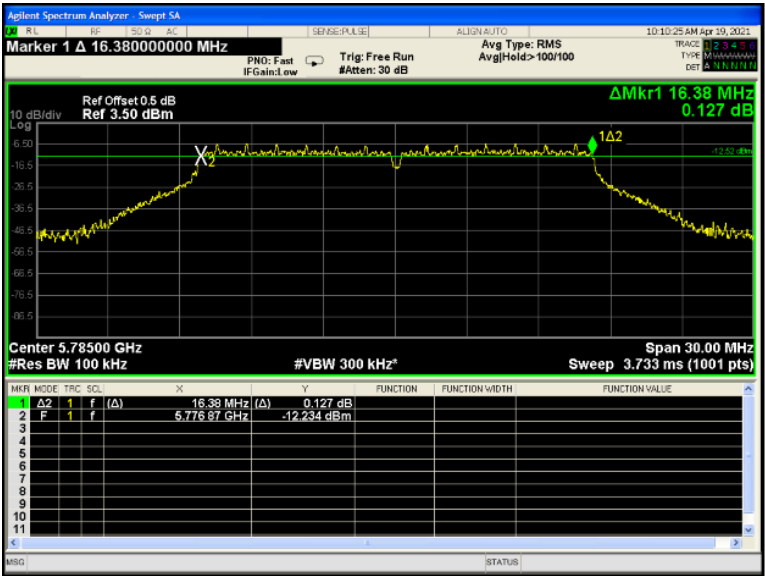
Band	Operation mode	6 dB Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.41	16.38	16.38
	802.11n(HT20)	17.64	17.67	17.64
	802.11n(HT40)	35.64	/	35.34
	802.11ac(HT20)	17.64	17.64	17.64
	802.11ac(HT40)	35.46	/	34.16
	802.11ac(HT80)	75.00	/	/

Test result plots shown as follows:

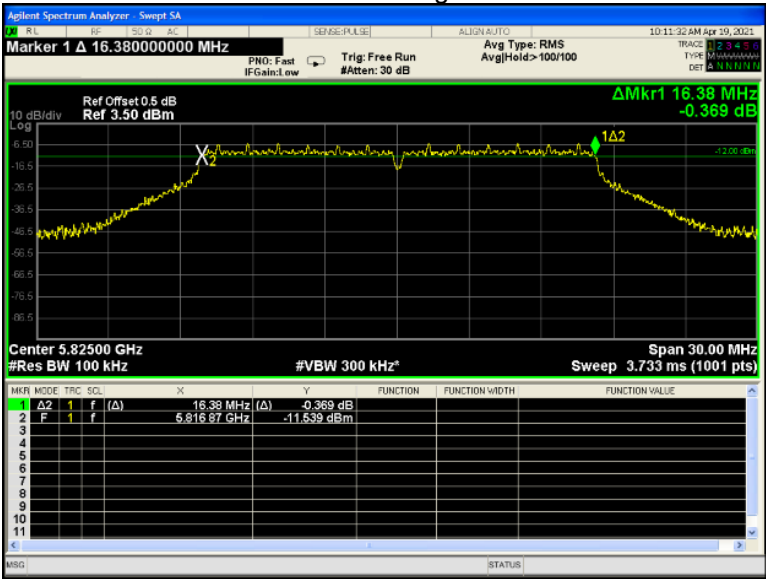
802.11a U-NII-3 Low channel



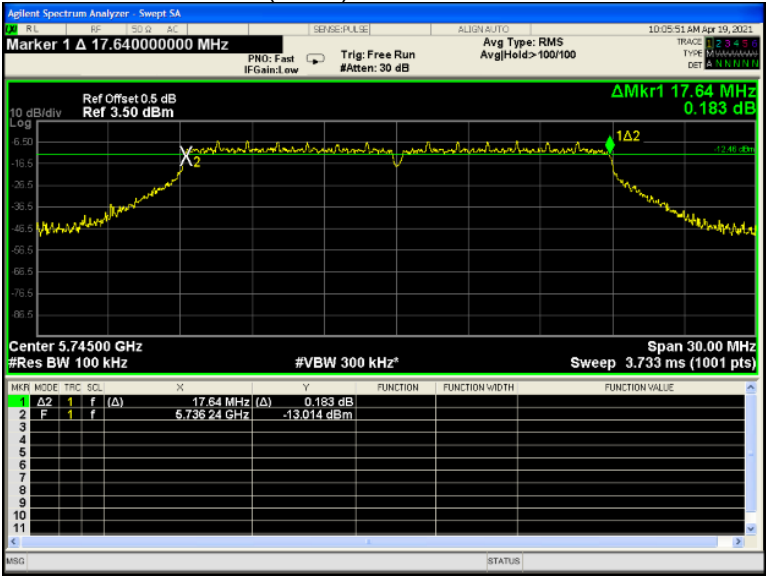
802.11a U-NII-3 Middle channel



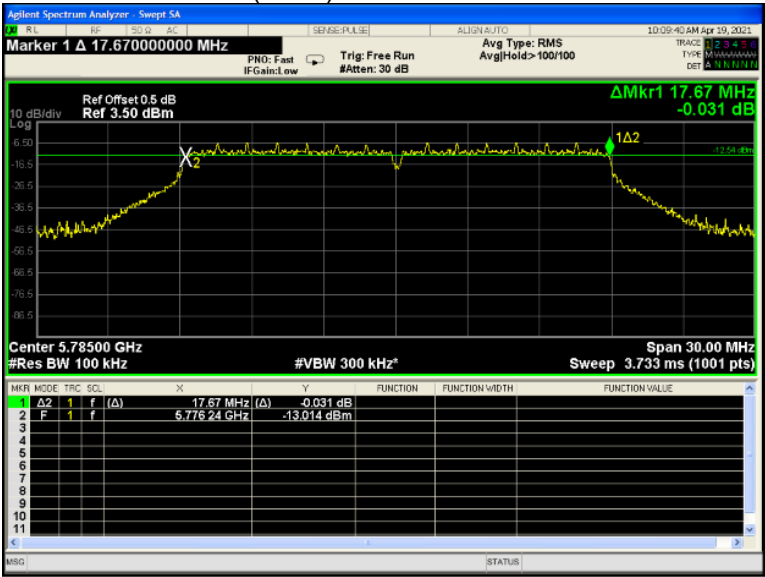
802.11a U-NII-3 High channel



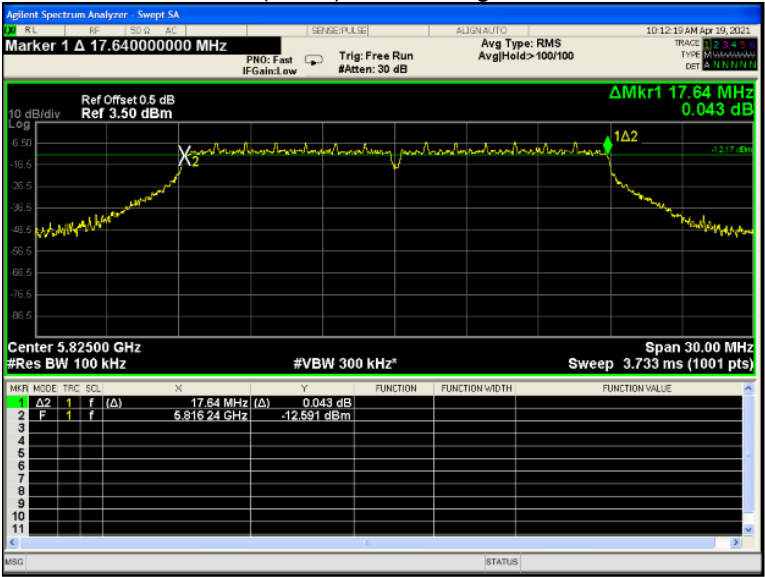
802.11n(HT20) U-NII-3 Low channel



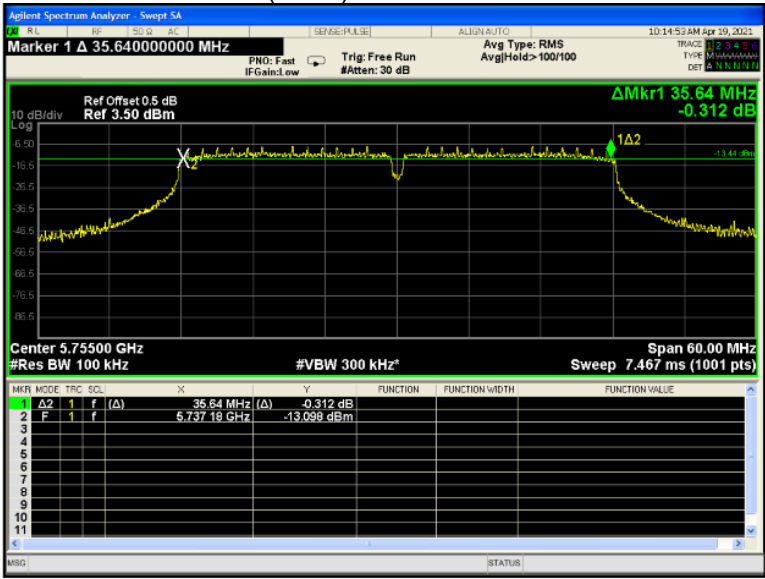
802.11n(HT20) U-NII-3 Middle channel



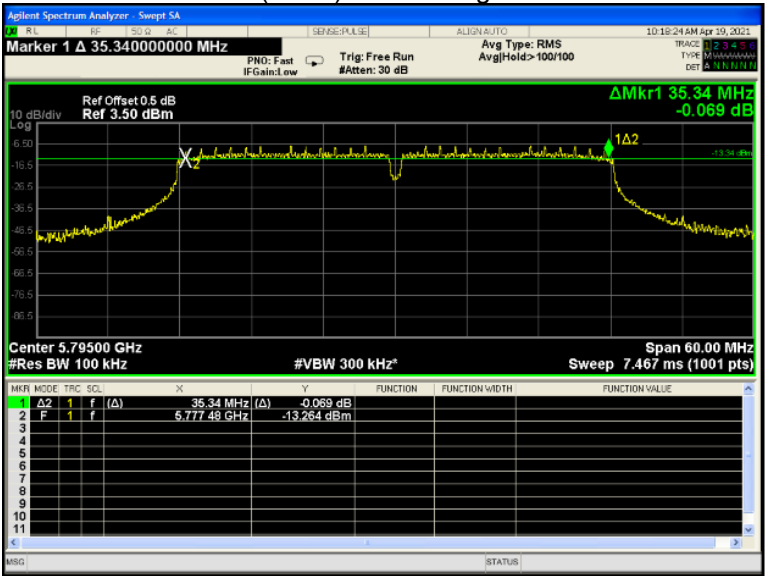
802.11n(HT20) U-NII-3 High channel



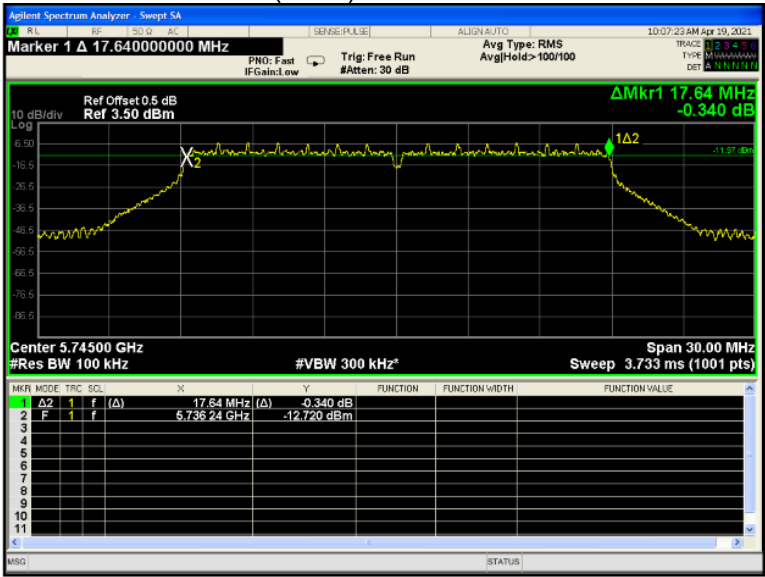
802.11n(HT40) U-NII-3 Low channel



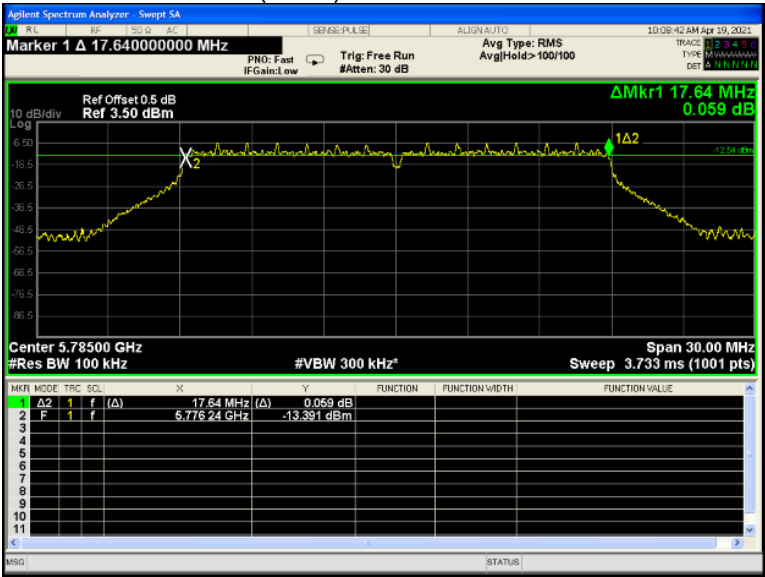
802.11n(HT40) U-NII-3 High channel



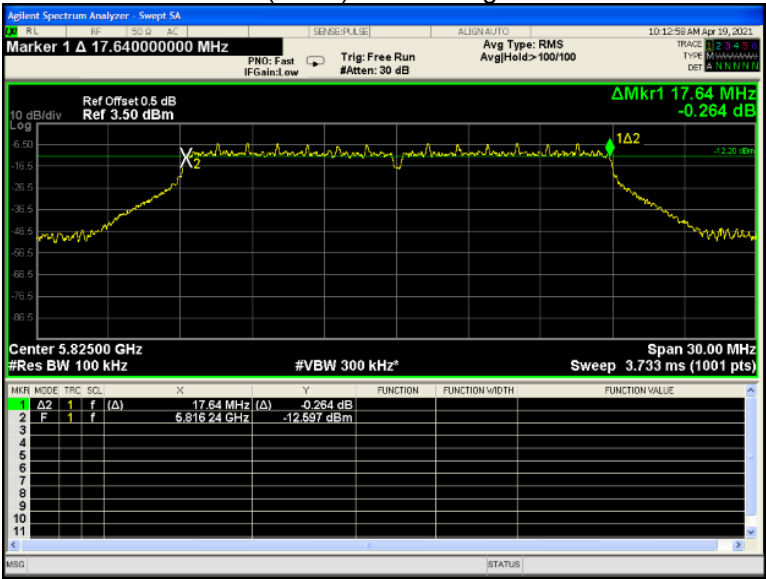
802.11ac(HT20) U-NII-3 Low channel



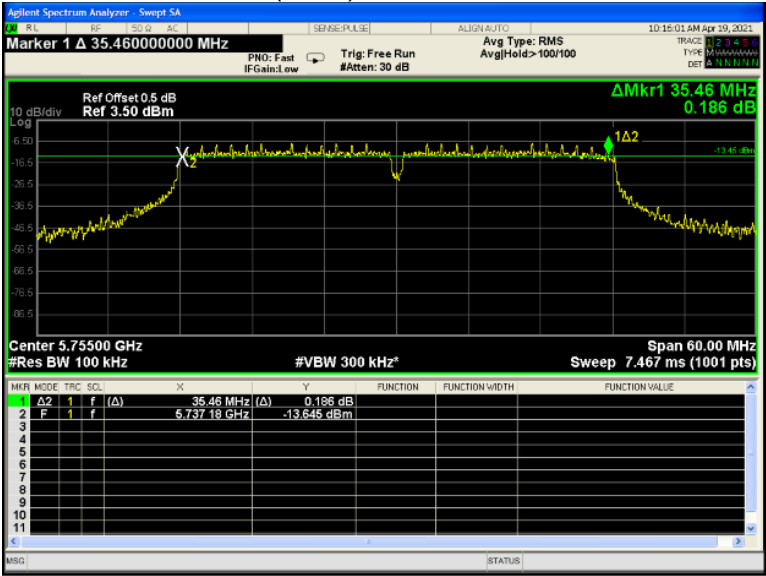
802.11ac(HT20) U-NII-3 Middle channel



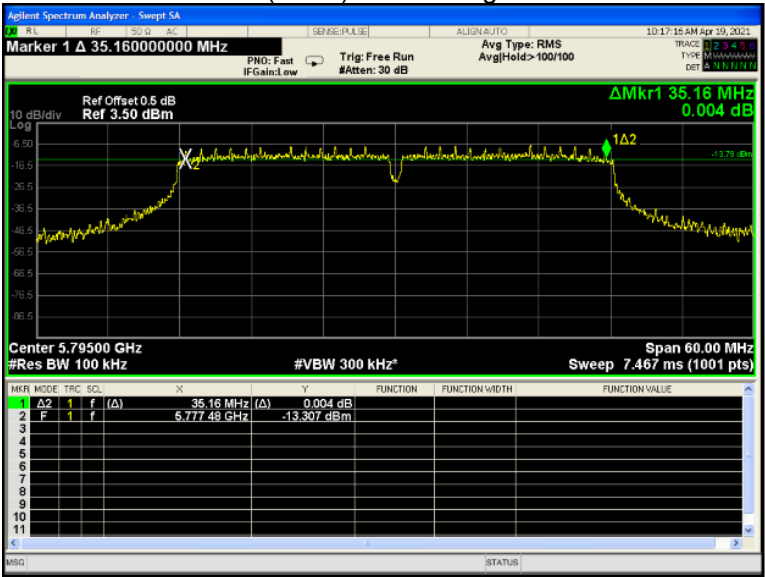
802.11ac(HT20) U-NII-3 High channel



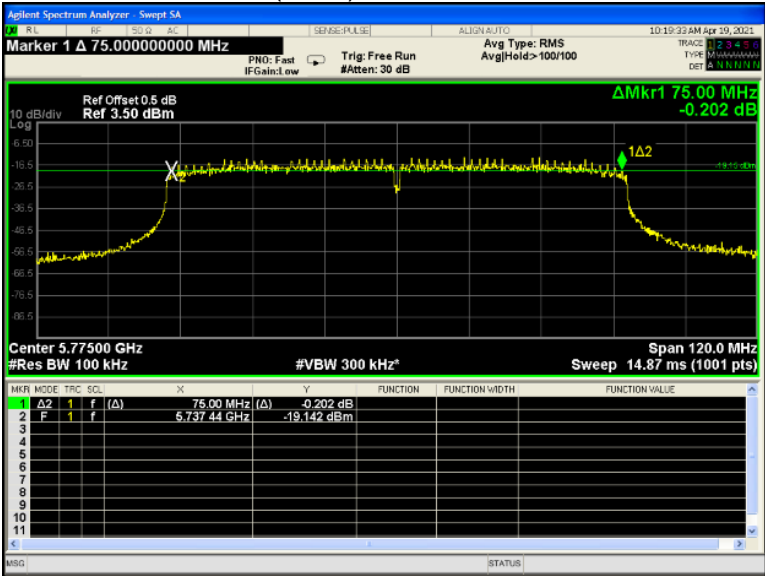
802.11ac(HT40) U-NII-3 Low channel



802.11ac(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Low channel



11 26 dB Bandwidth and 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section D
Test Limit:	No restriction limits
Test Result:	PASS

11.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 1% to 5% of the OBW, VBW = 3x RBW

11.2 Test Result:

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-1	802.11a	21.01	20.79	21.29	16.729	16.730	16.742
	802.11n(HT20)	21.46	21.81	21.80	17.826	17.865	17.825
	802.11ac(HT20)	21.36	21.03	21.24	17.708	17.751	17.703
	802.11n(HT40)	41.44	/	41.09	36.031	/	36.166
	802.11ac(HT40)	40.92	/	41.38	36.152	/	36.095
	802.11ac(HT80)	81.38	/	/	74.777	/	/

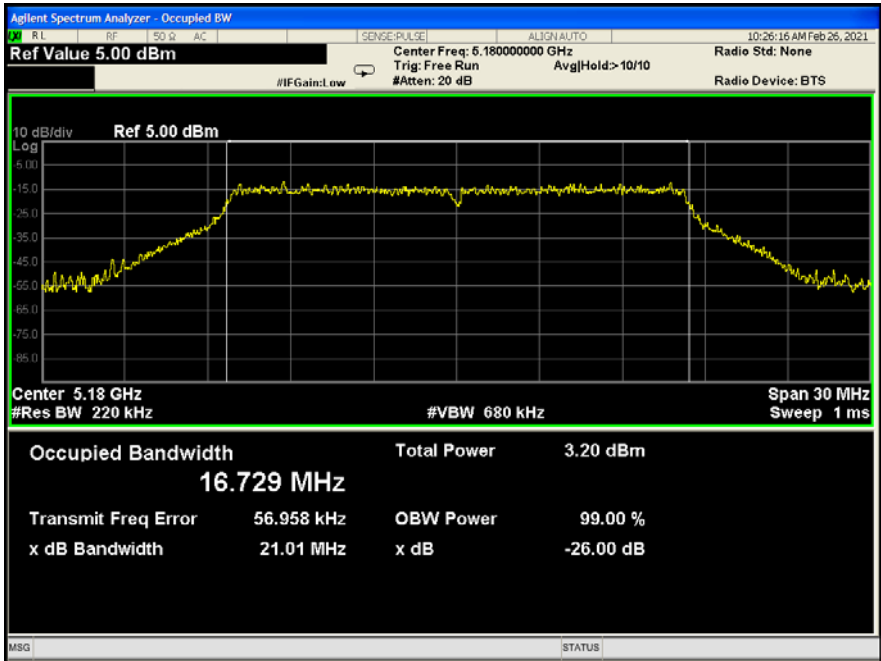
Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2A	802.11a	21.75	22.11	21.83	16.772	16.770	16.773
	802.11n(HT20)	23.09	21.90	22.10	17.894	17.846	17.840
	802.11ac(HT20)	21.77	21.89	21.67	17.845	17.840	17.840
	802.11n(HT40)	42.75	/	42.12	36.150	/	36.141
	802.11ac(HT40)	42.28	/	42.33	36.131	/	36.123
	802.11ac(HT80)	83.27	/	/	74.786	/	/

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2C	802.11a	21.84	21.76	21.29	16.722	16.797	16.694
	802.11n(HT20)	22.33	22.10	21.68	17.858	17.855	17.836
	802.11ac(HT20)	21.82	21.91	21.91	17.853	17.846	17.852
	802.11n(HT40)	42.72	42.73	41.77	36.116	36.124	36.121
	802.11ac(HT40)	41.86	42.01	42.31	36.126	36.081	36.140
	802.11ac(HT80)	82.19	82.92	/	74.721	74.852	/

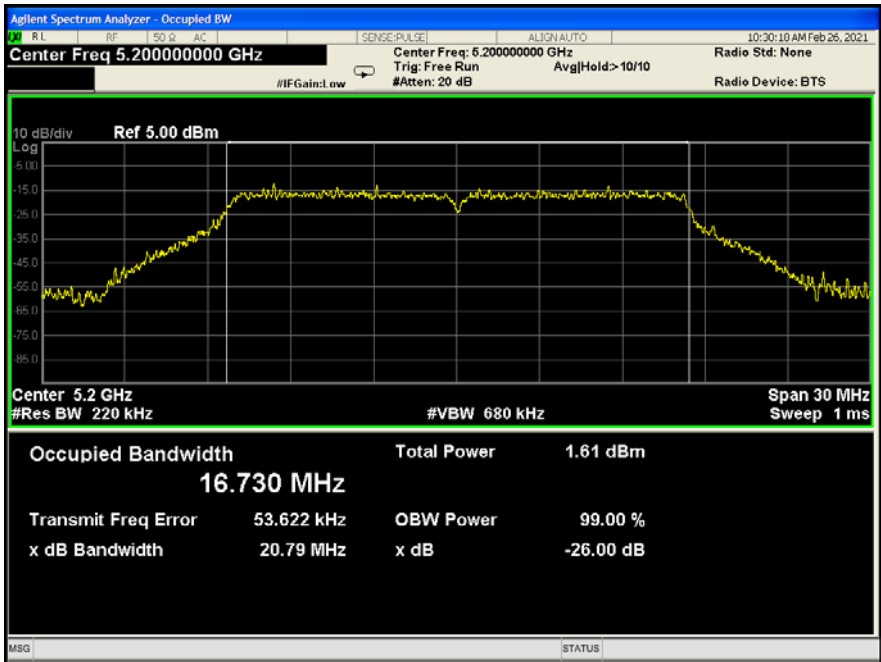
Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-3	802.11a	21.23	20.93	20.87	16.782	16.676	16.669
	802.11n(HT20)	21.85	20.71	21.36	16.752	17.776	17.796
	802.11ac(HT20)	21.40	21.55	21.37	17.813	17.824	17.814
	802.11n(HT40)	41.13	/	39.95	36.156	/	36.020
	802.11ac(HT40)	40.24	/	41.23	36.021	/	35.985
	802.11ac(HT80)	82.61	/	/	75.105	/	/

Test result plots shown as follows:

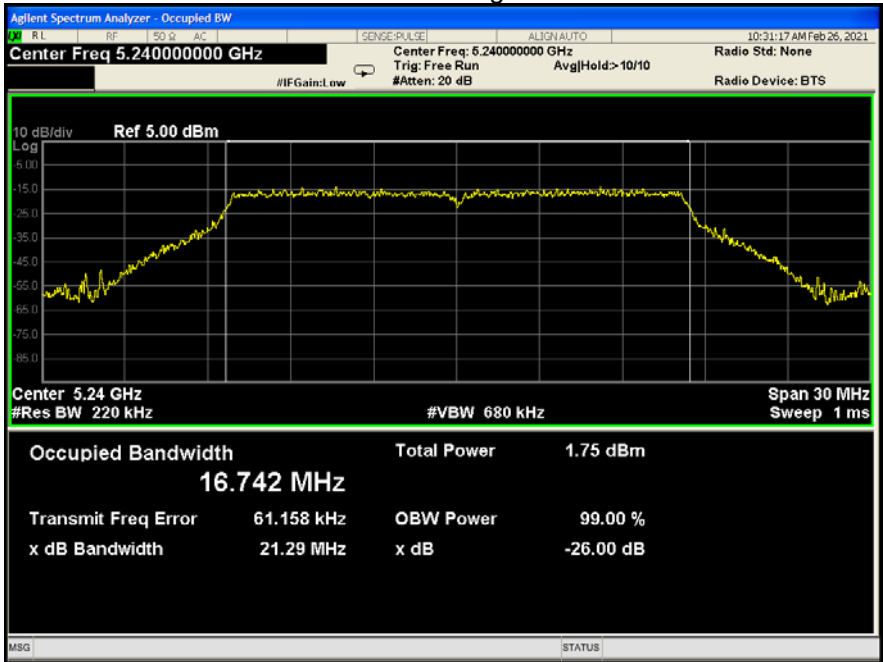
802.11a U-NII-1 Low channel



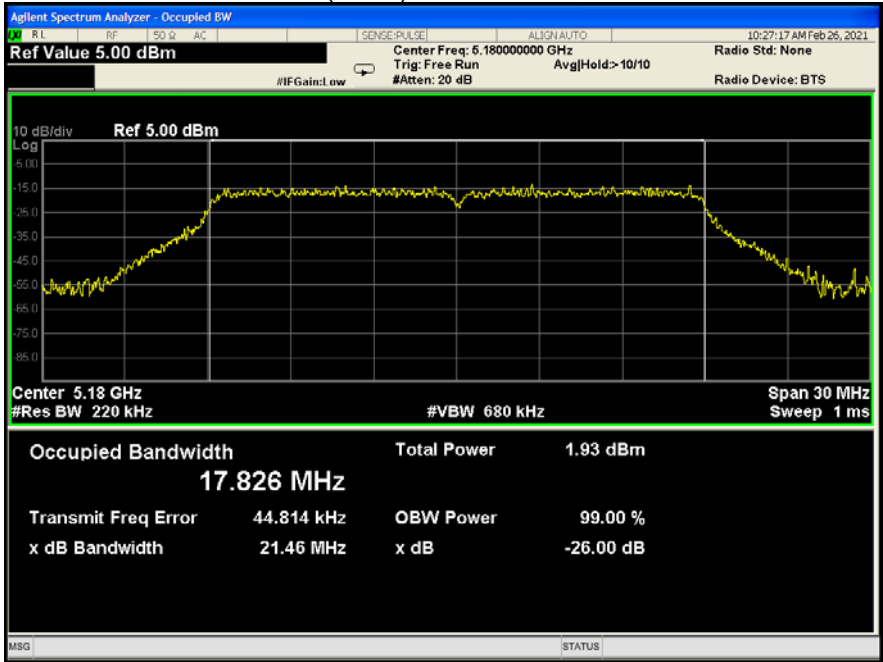
802.11a U-NII-1 Middle channel



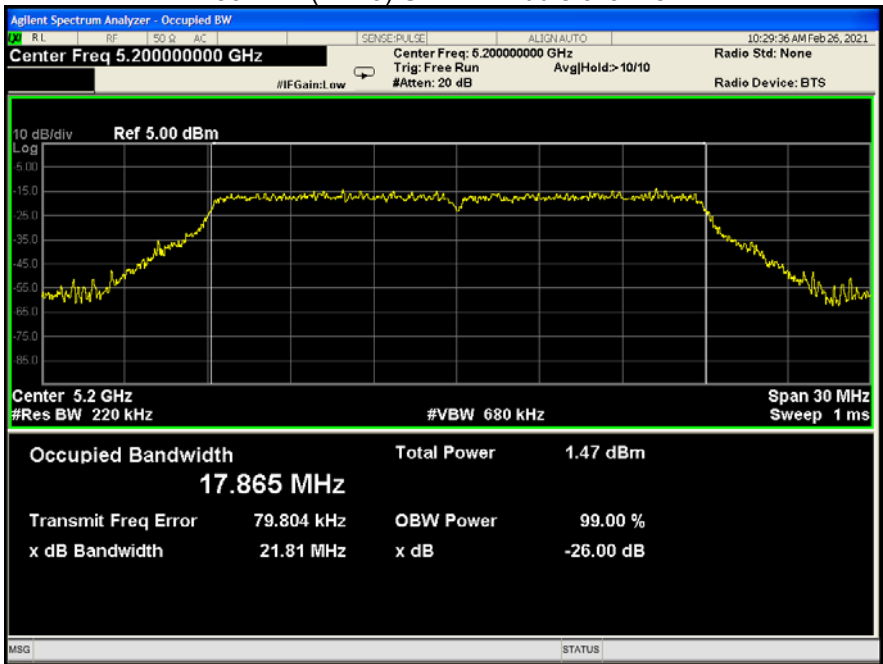
802.11a U-NII-1 High channel



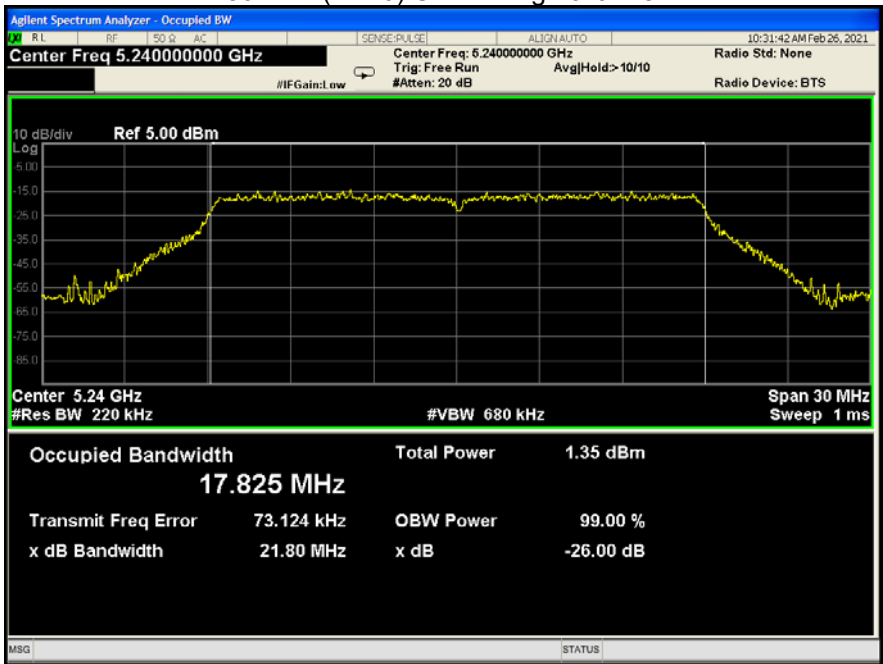
802.11n(HT20) U-NII-1 Low channel



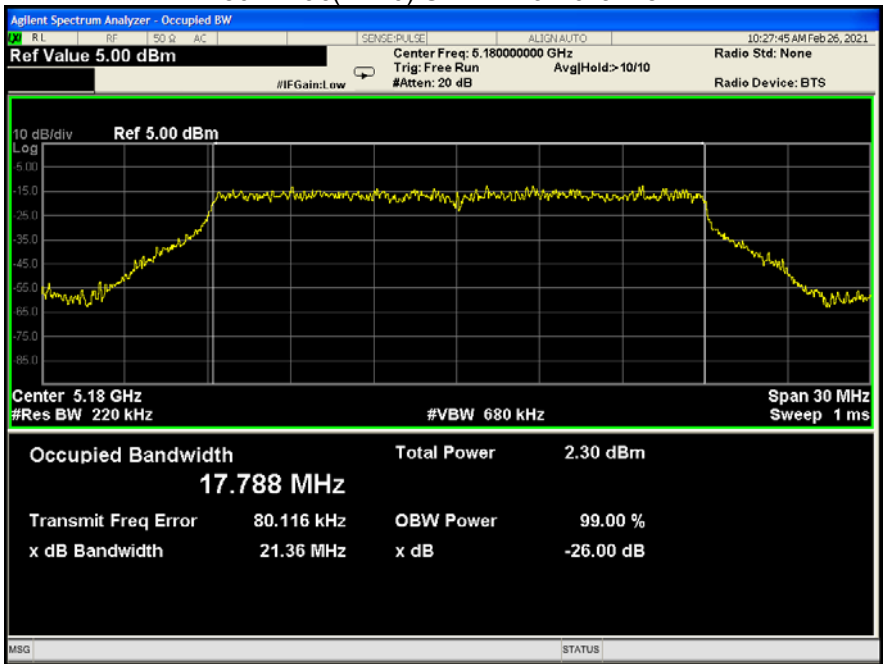
802.11n(HT20) U-NII-1 Middle channel



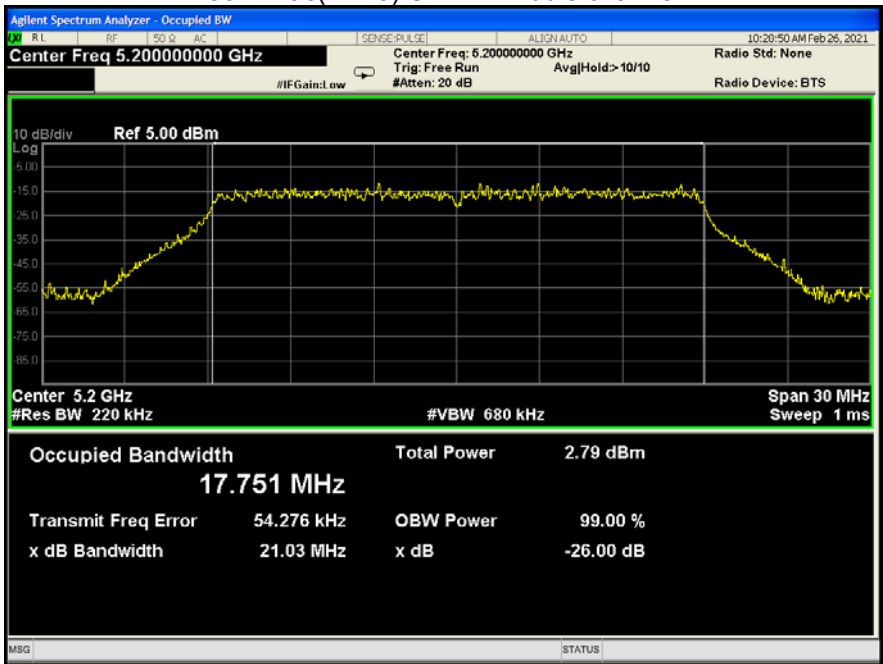
802.11n(HT20) U-NII-1 High channel



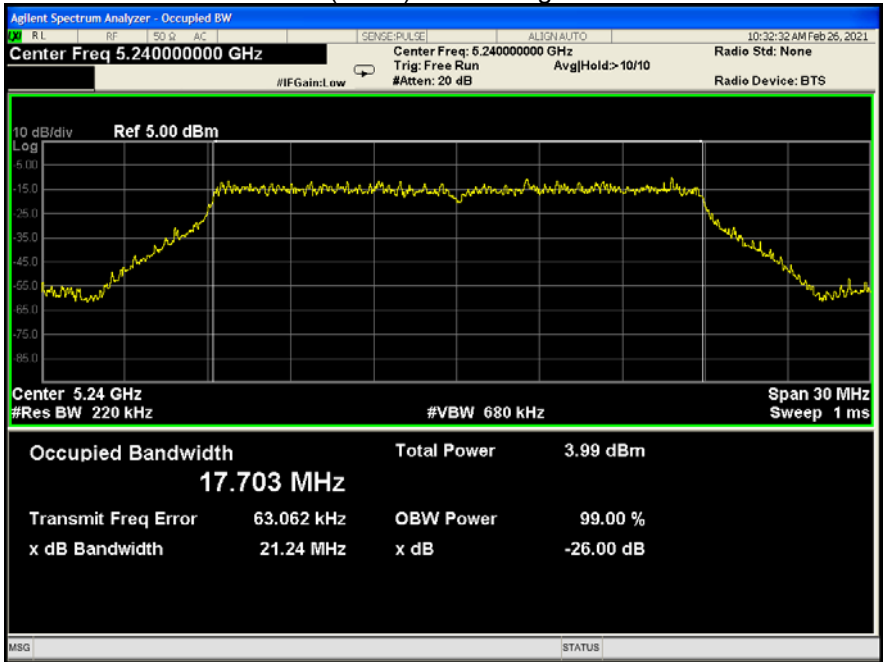
802.11ac(HT20) U-NII-1 Low channel



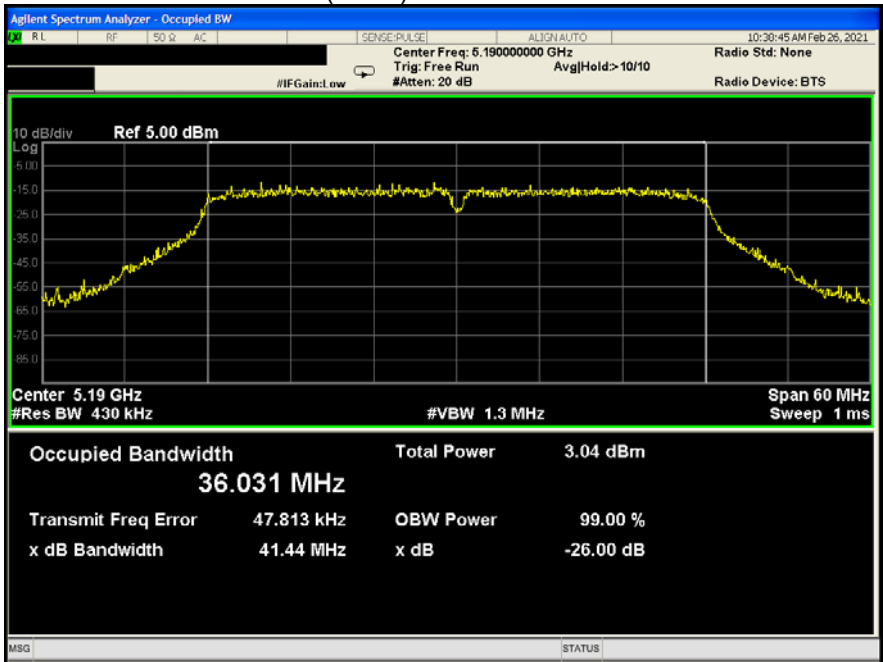
802.11ac(HT20) U-NII-1 Middle channel



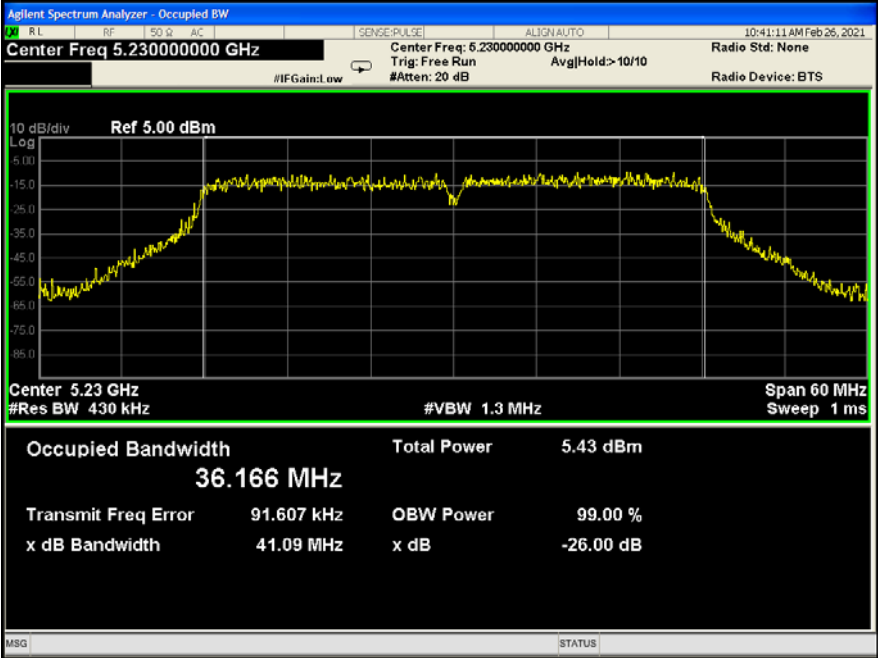
802.11ac(HT20) U-NII-1 High channel



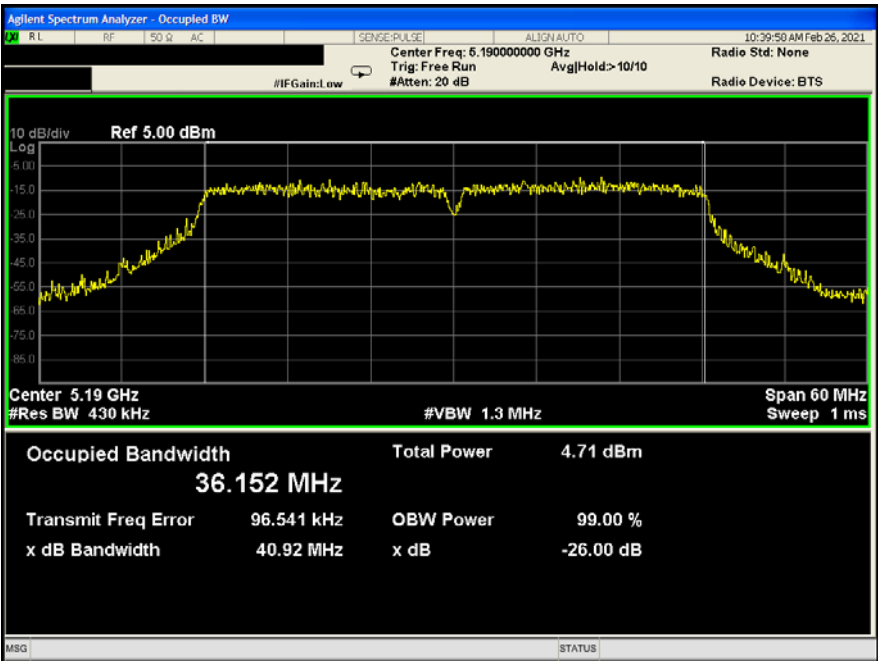
802.11n(HT40) U-NII-1 Low channel



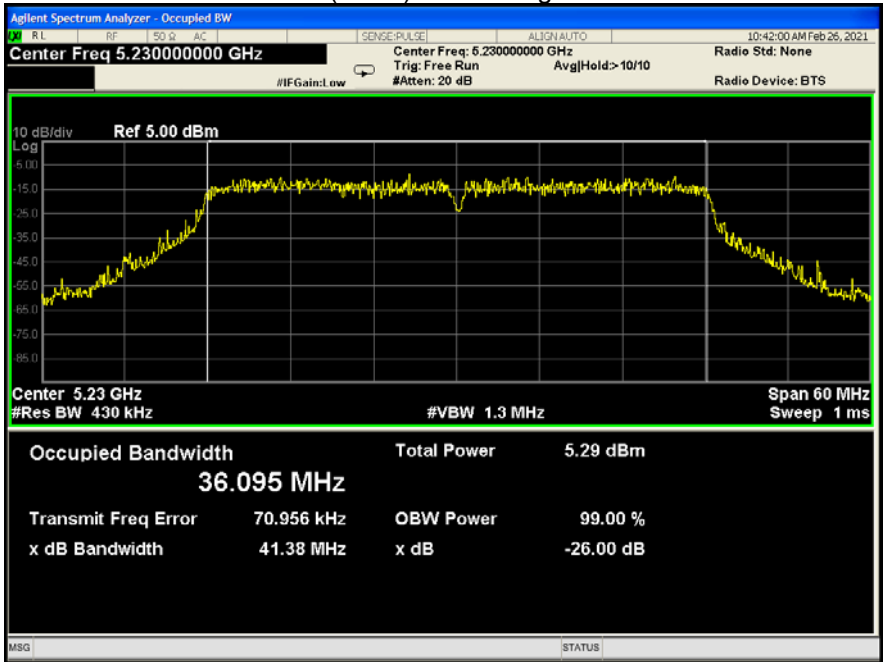
802.11n(HT40) U-NII-1 Highchannel



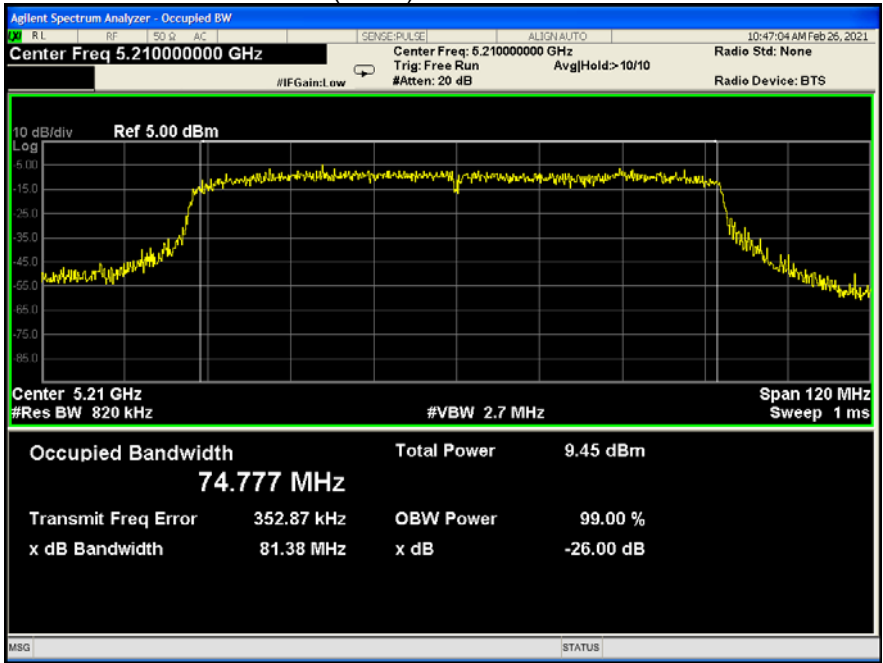
802.11ac(HT40) U-NII-1 Low channel



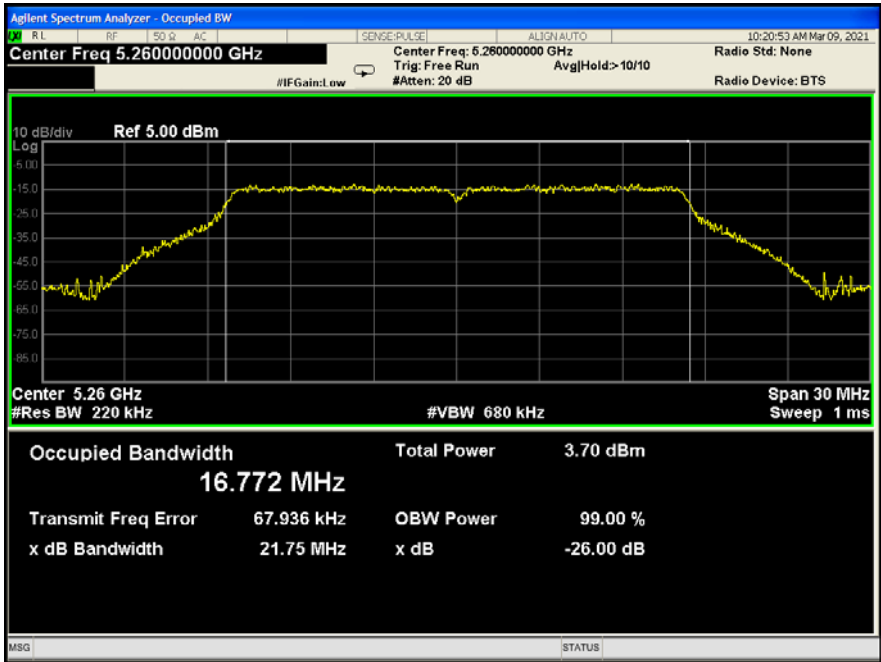
802.11ac(HT40) U-NII-1 High channel



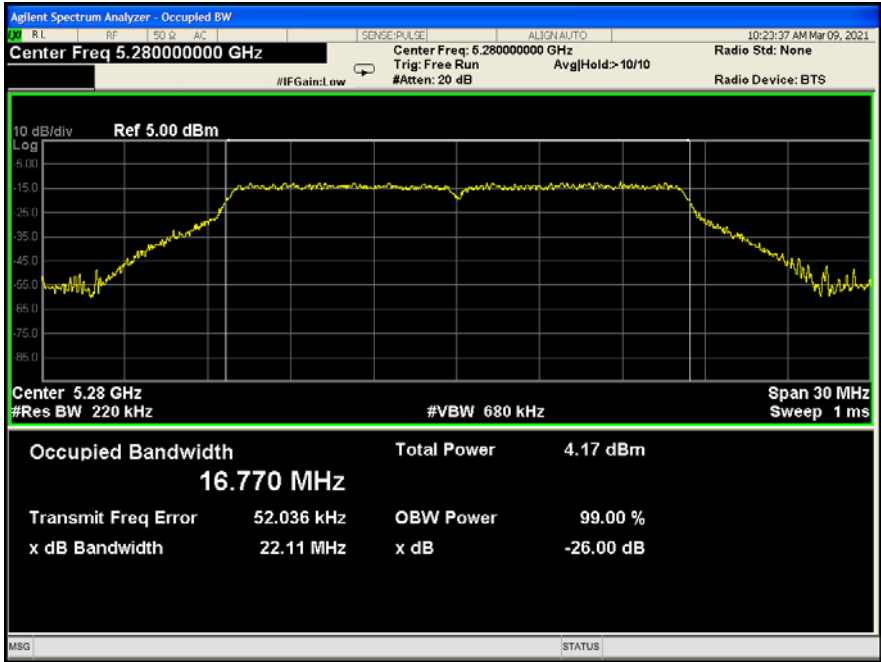
802.11ac(HT80) U-NII-1 Low channel



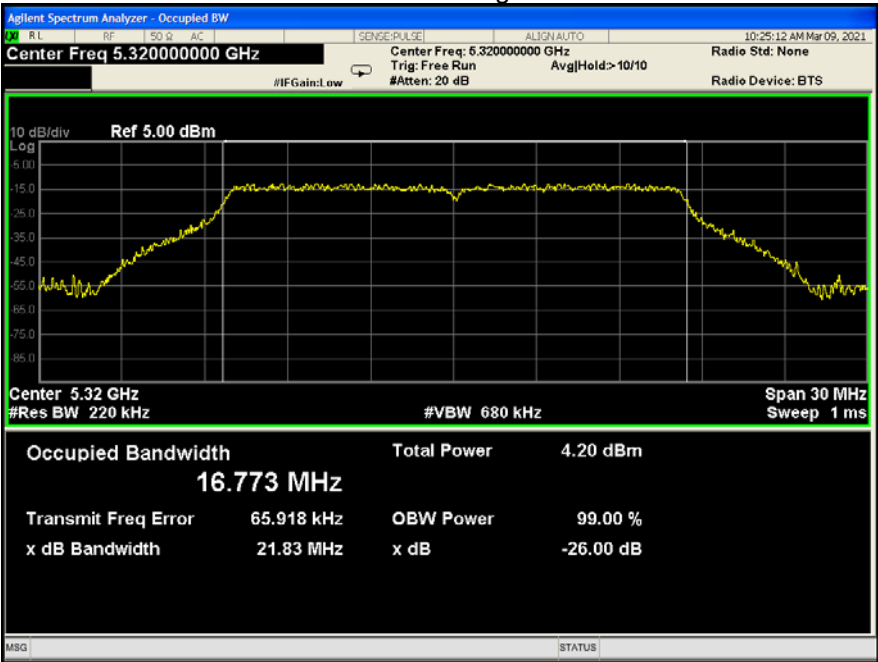
802.11a U-NII-2A Low channel



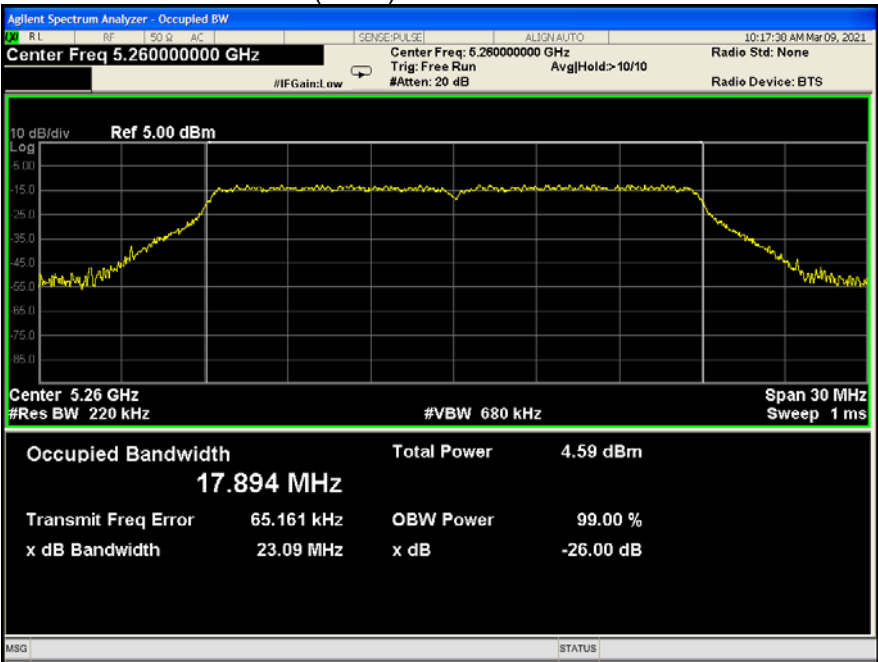
802.11a U-NII-2A Middle channel



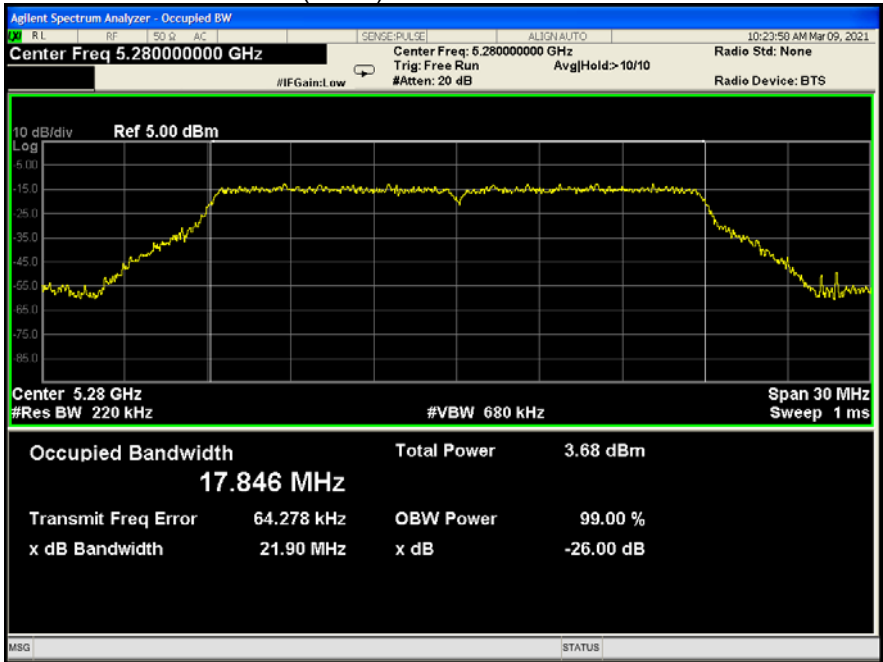
802.11a U-NII-2A High channel



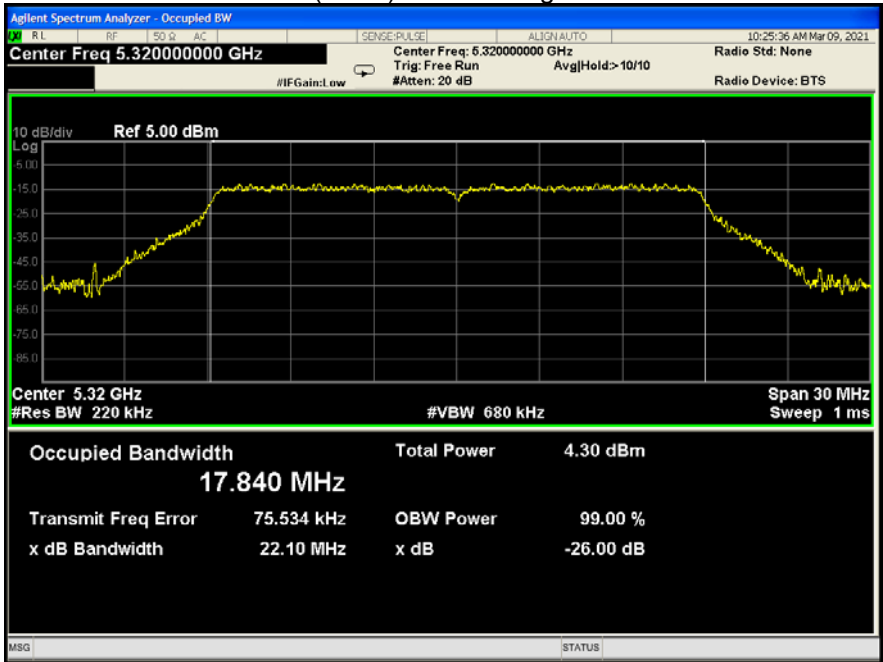
802.11n(HT20) U-NII-2A Low channel



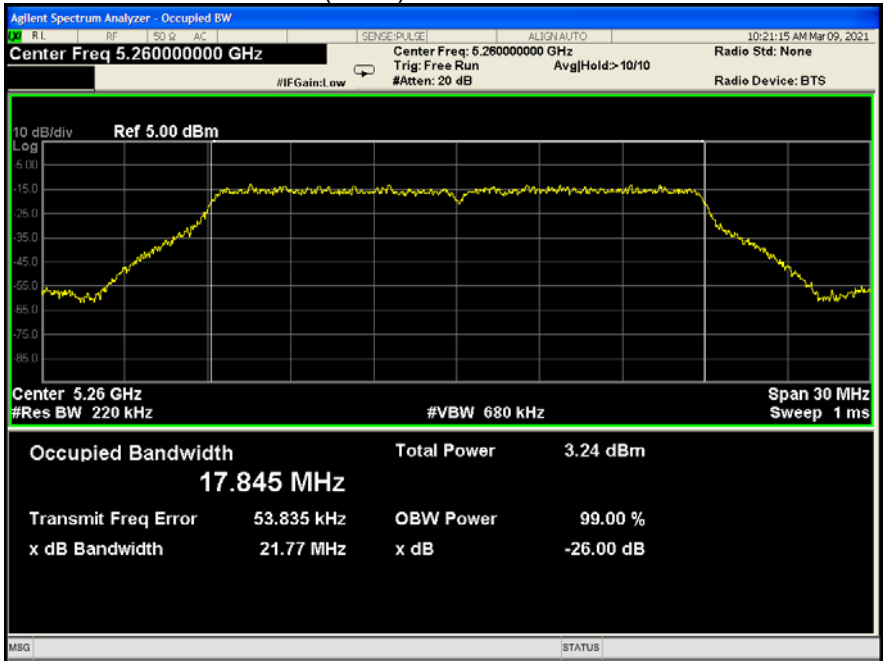
802.11n(HT20) U-NII-2A Middle channel



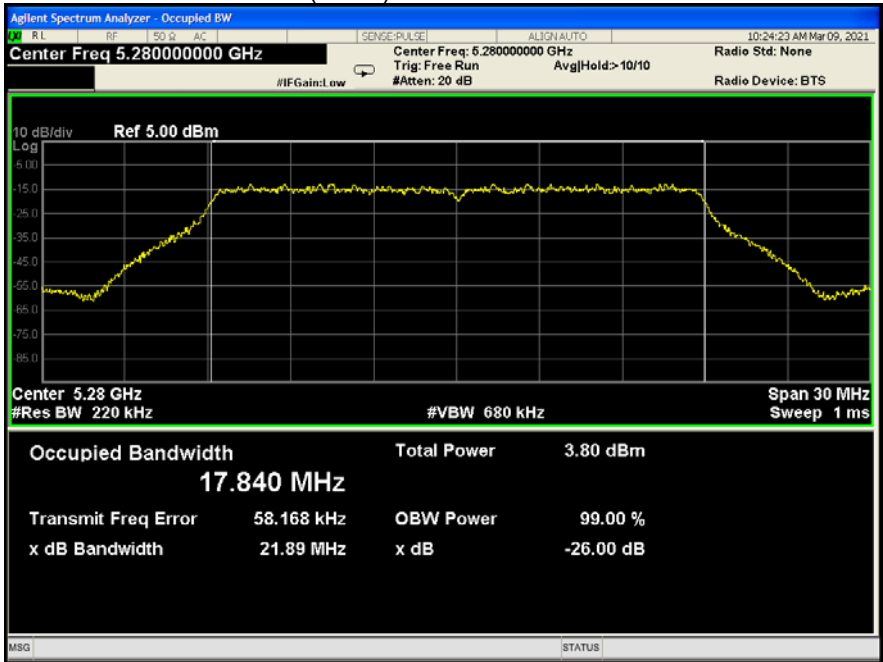
802.11n(HT20) U-NII-2A High channel



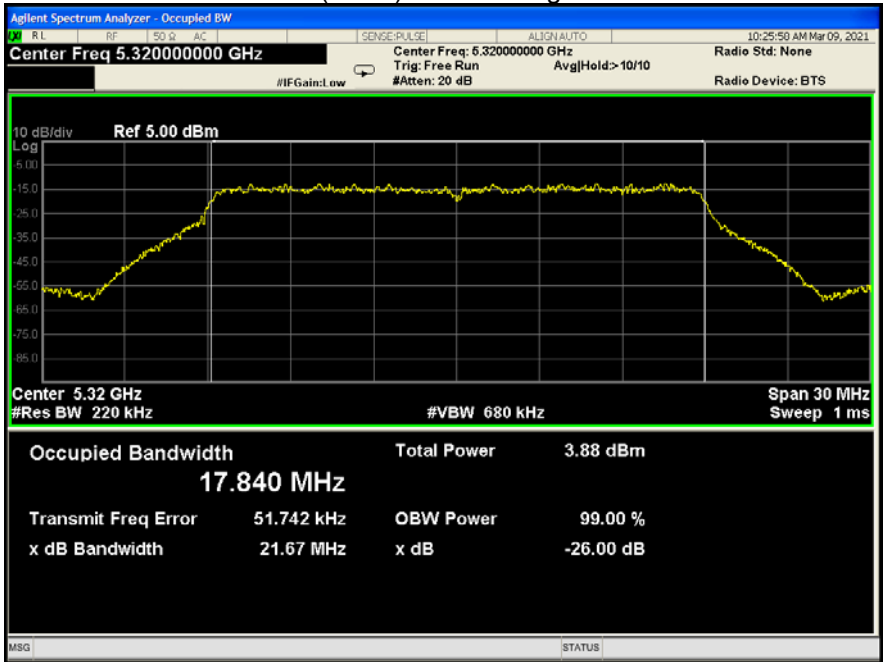
802.11ac(HT20) U-NII-2A Low channel



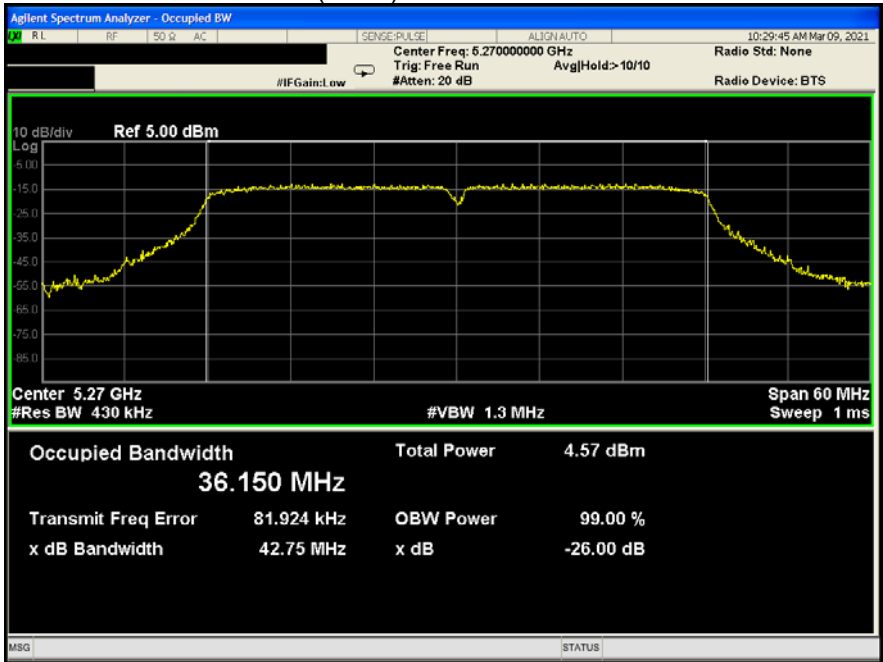
802.11ac(HT20) U-NII-2A Middle channel



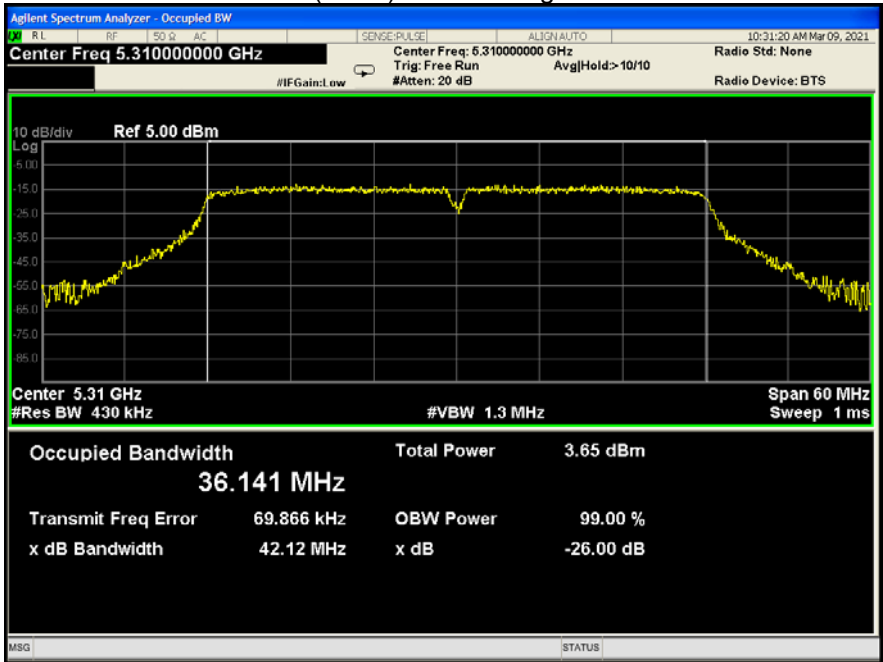
802.11ac(HT20) U-NII-2A High channel



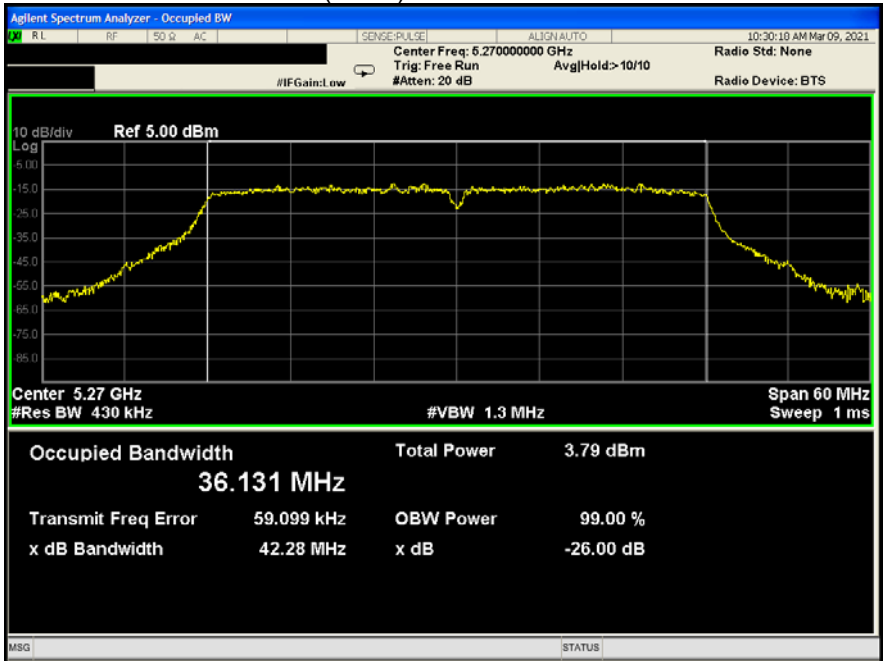
802.11n(HT40) U-NII-2A Low channel



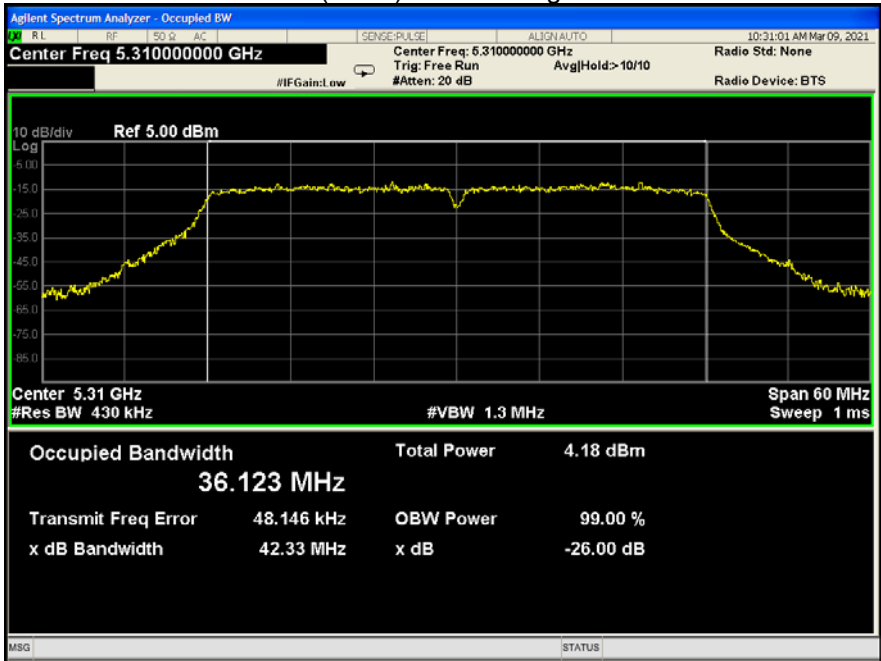
802.11n(HT40) U-NII-2A High channel



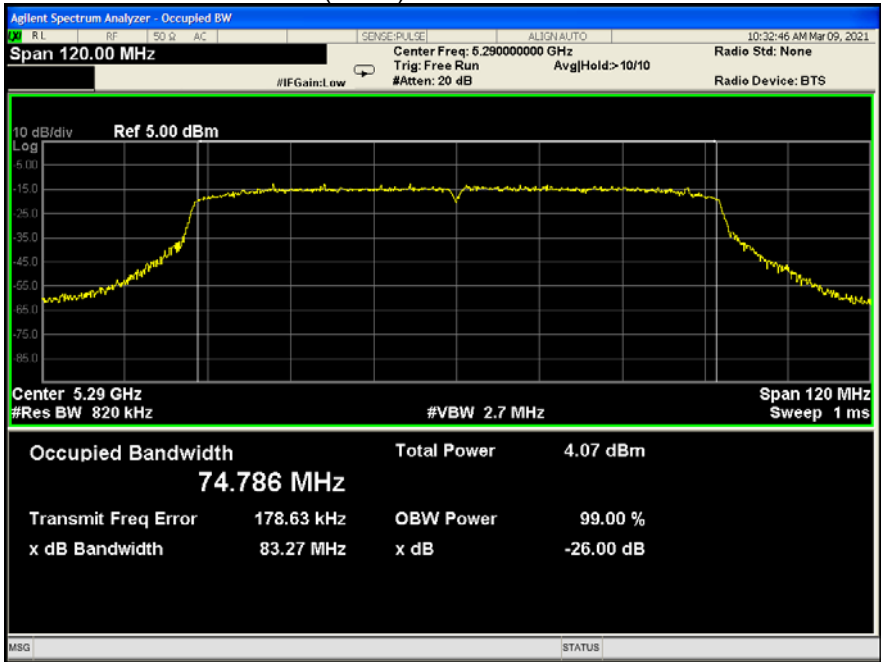
802.11ac(HT40) U-NII-2A Low channel



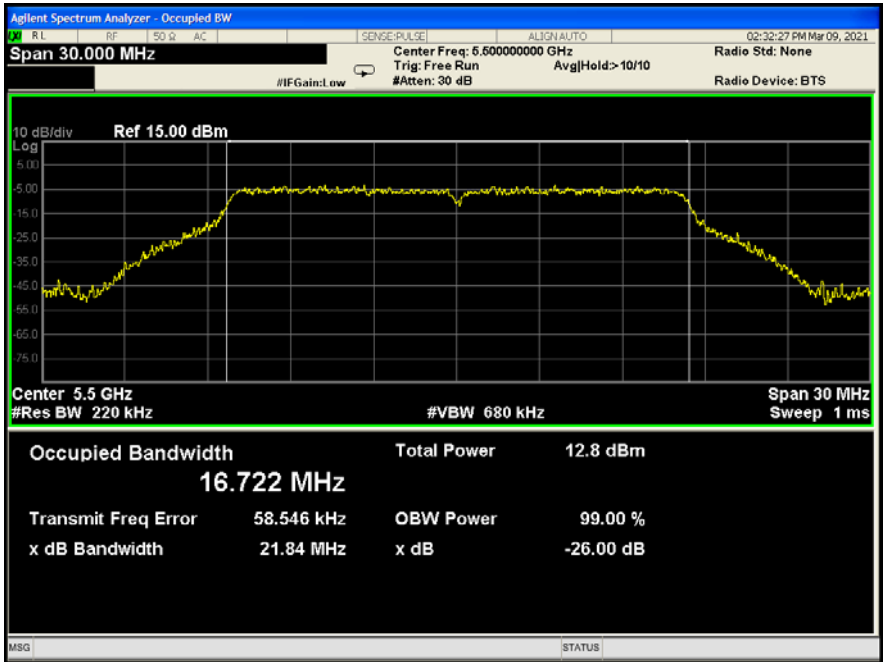
802.11ac(HT40) U-NII-2A High channel



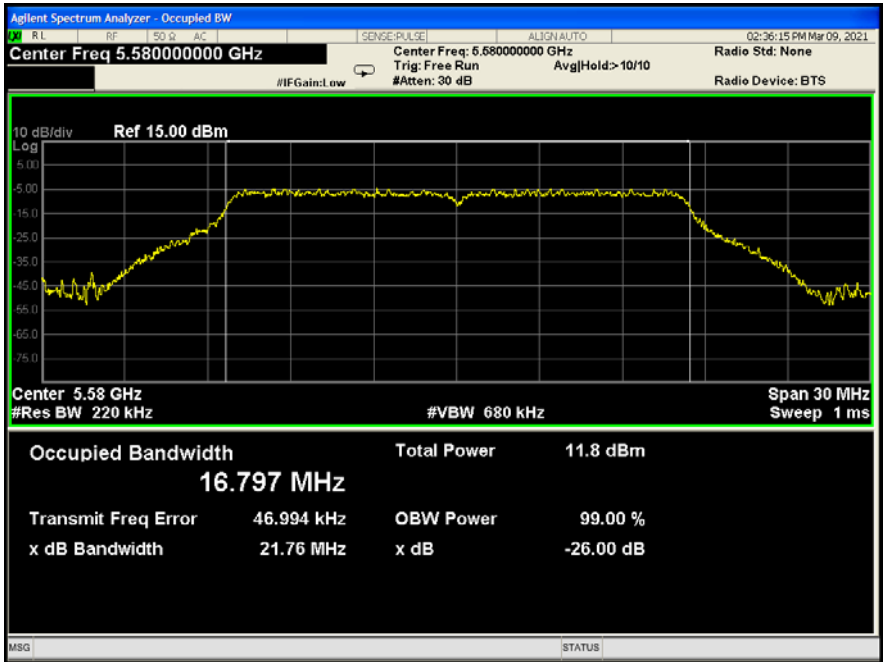
802.11ac(HT80) U-NII-2A Low channel



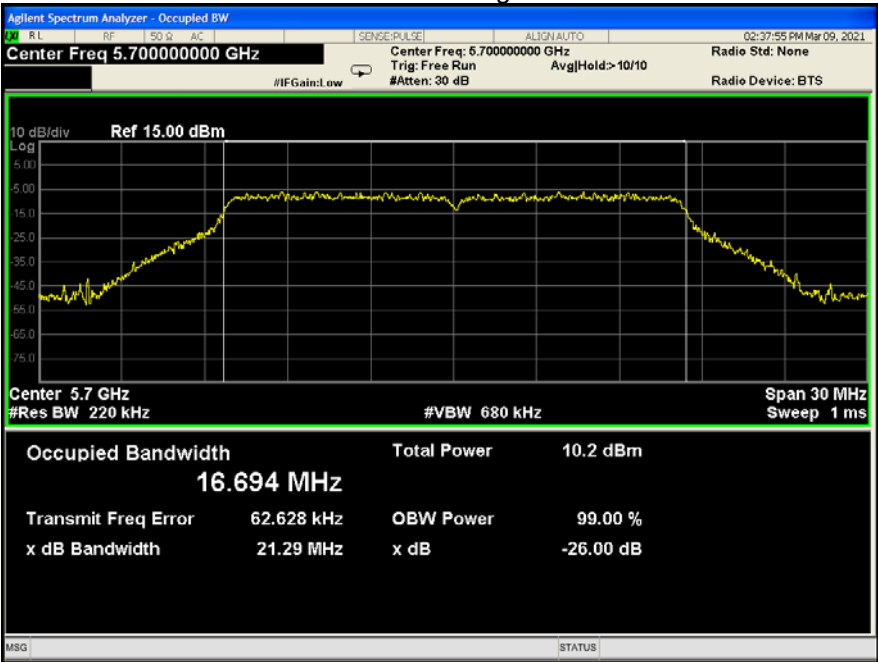
802.11a U-NII-2C Low channel



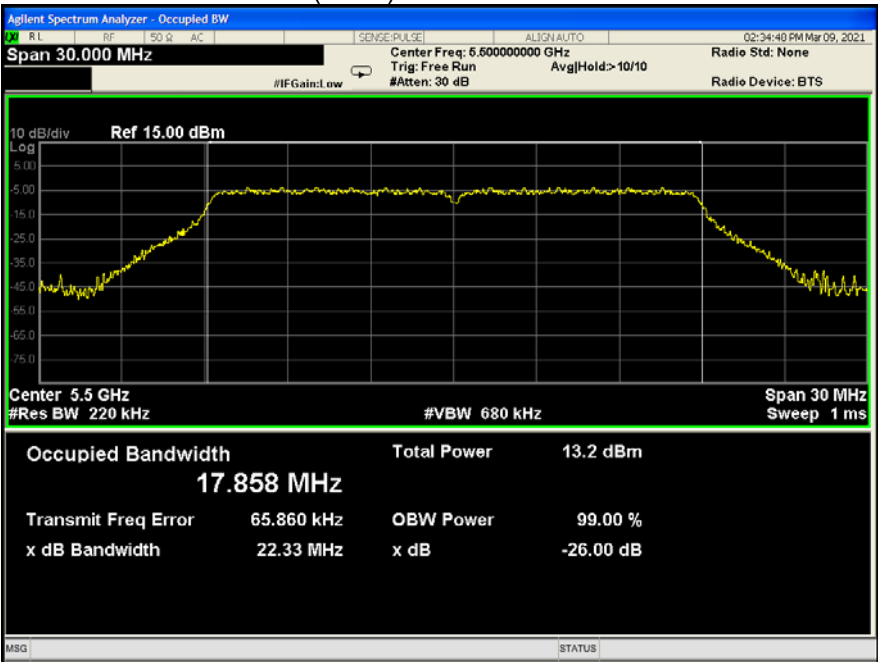
802.11a U-NII-2C Middle channel



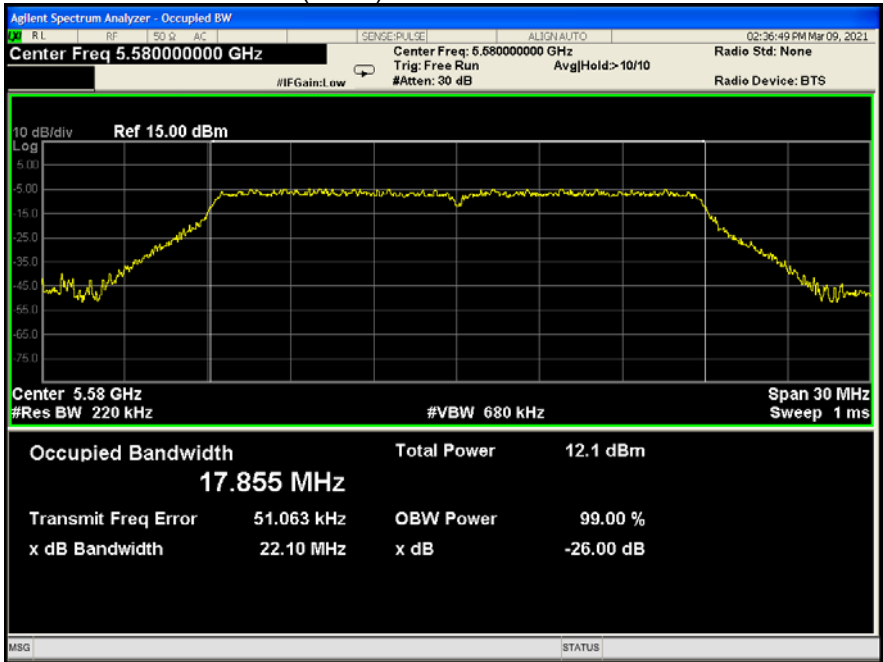
802.11a U-NII-2C High channel



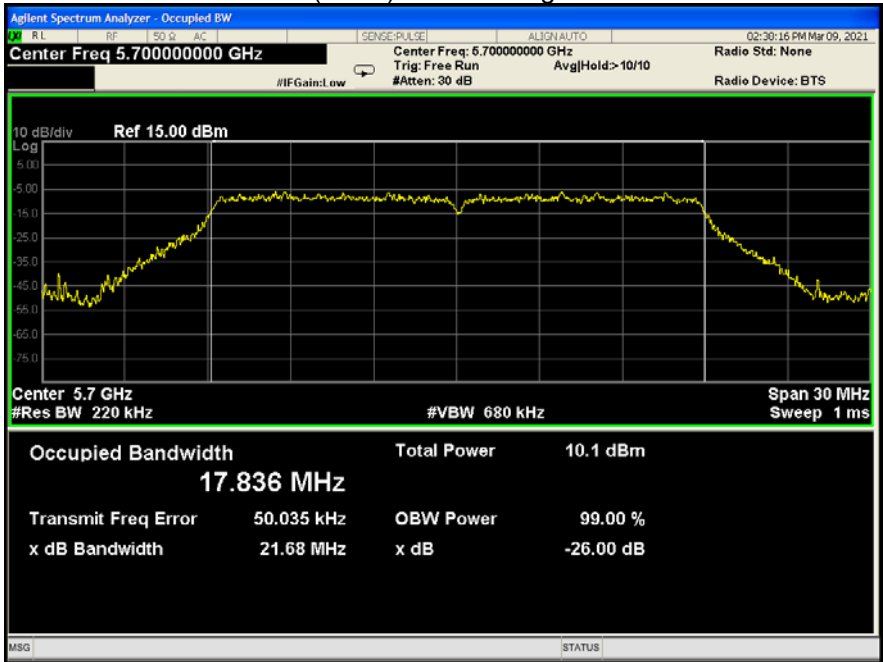
802.11n(HT20) U-NII-2C Low channel



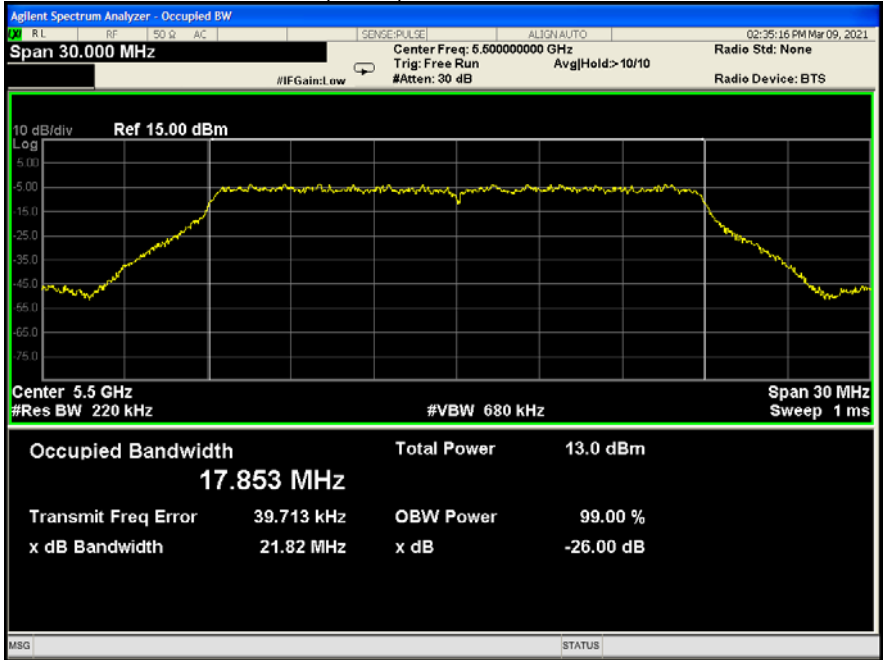
802.11n(HT20) U-NII-2C Middle channel



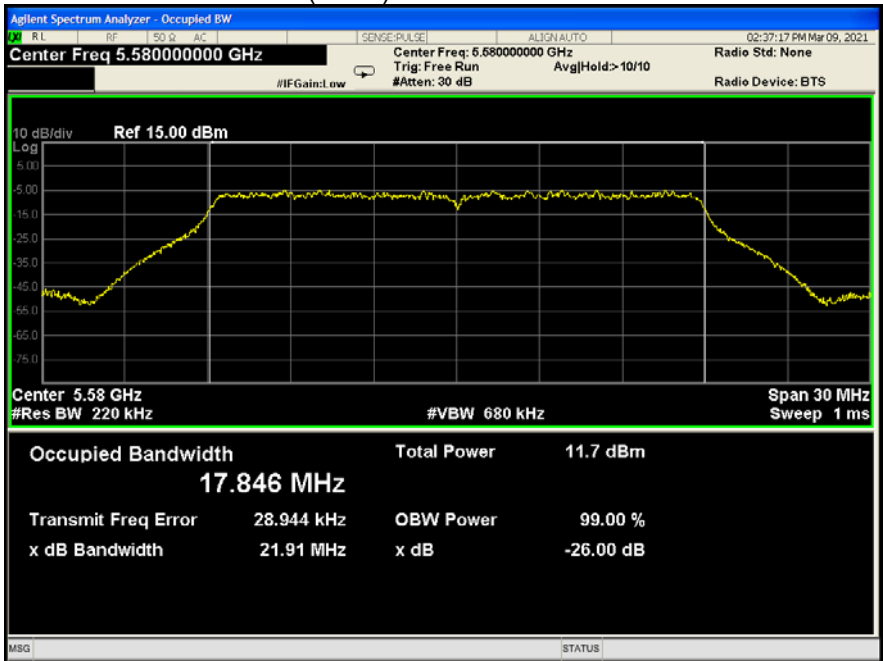
802.11n(HT20) U-NII-2C High channel



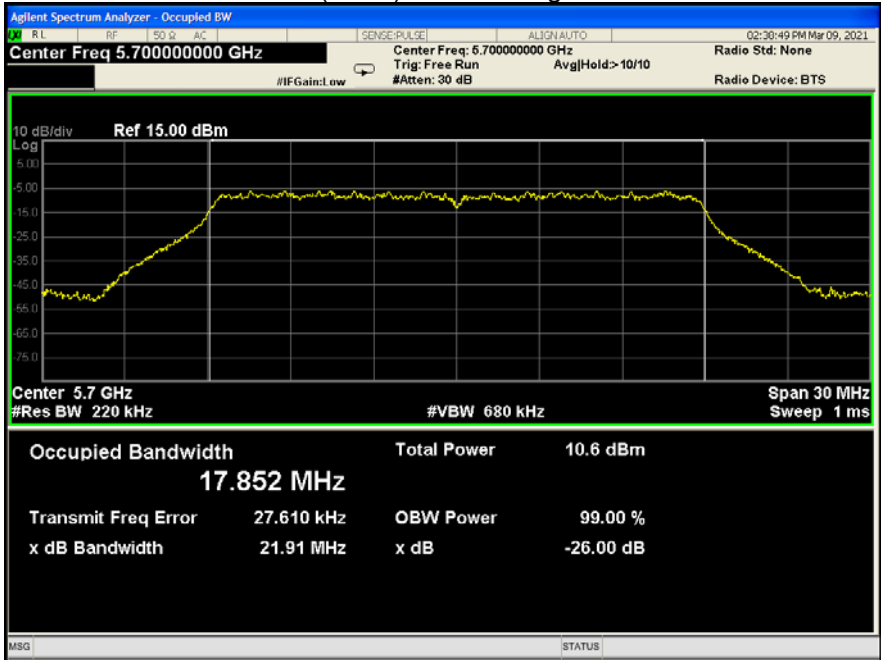
802.11ac(HT20) U-NII-2C Low channel



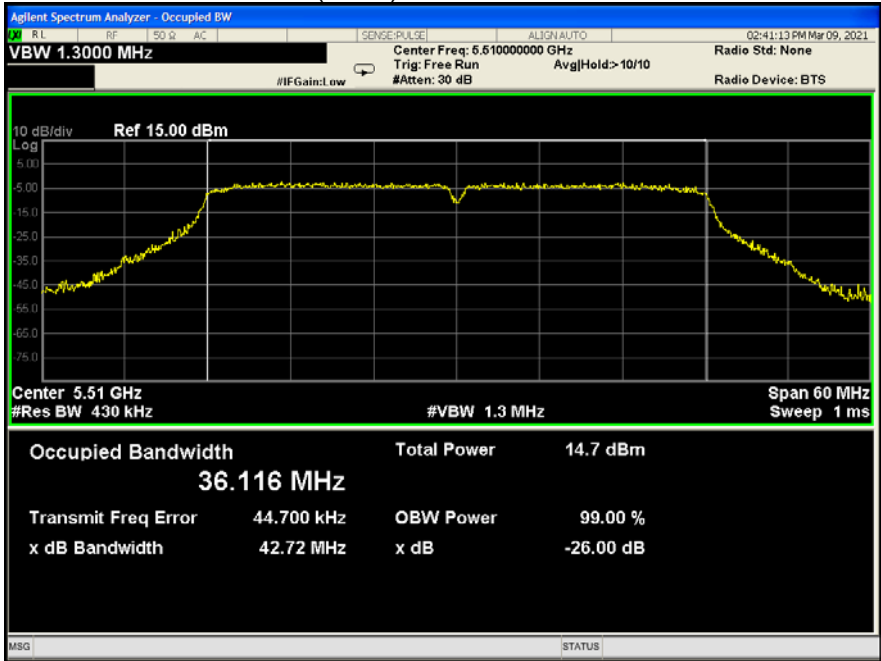
802.11ac(HT20) U-NII-2C Middle channel



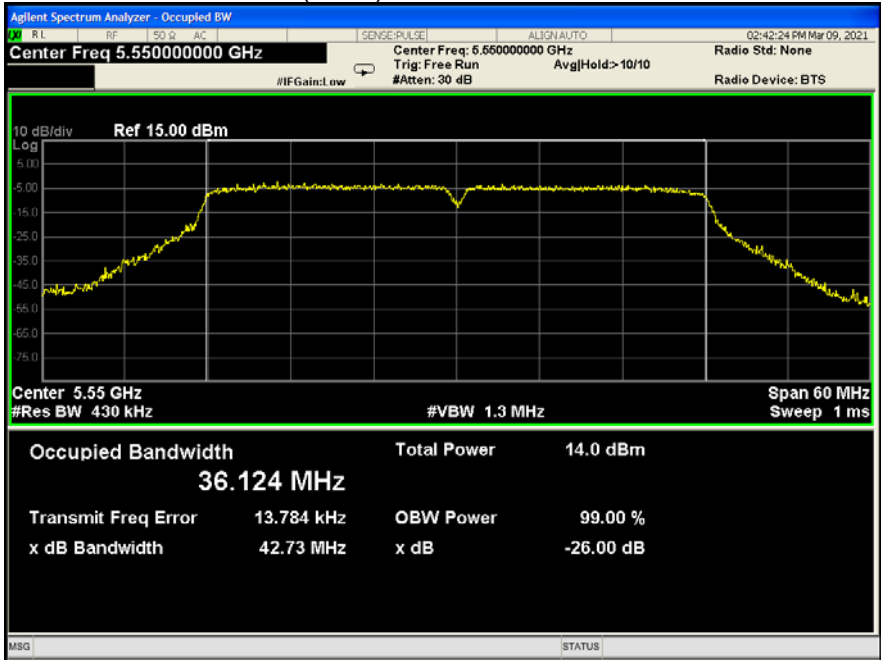
802.11ac(HT20) U-NII-2C High channel



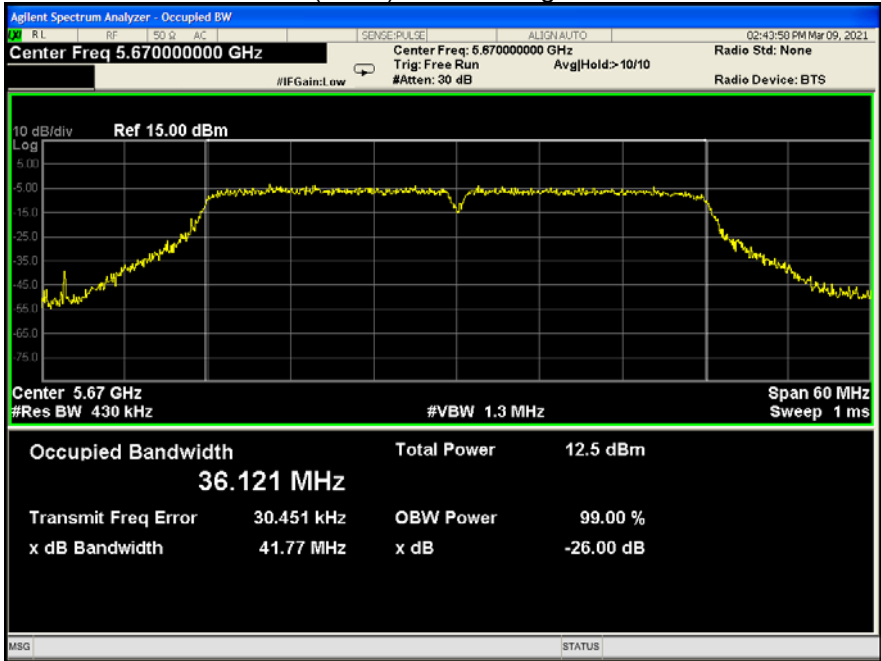
802.11n(HT40) U-NII-2C Low channel



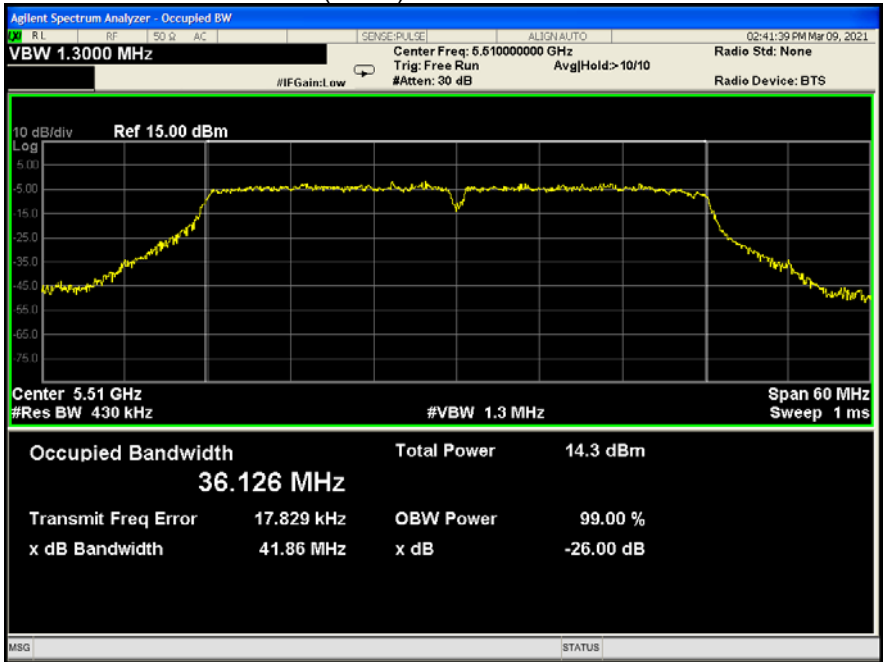
802.11n(HT40) U-NII-2C Middle channel



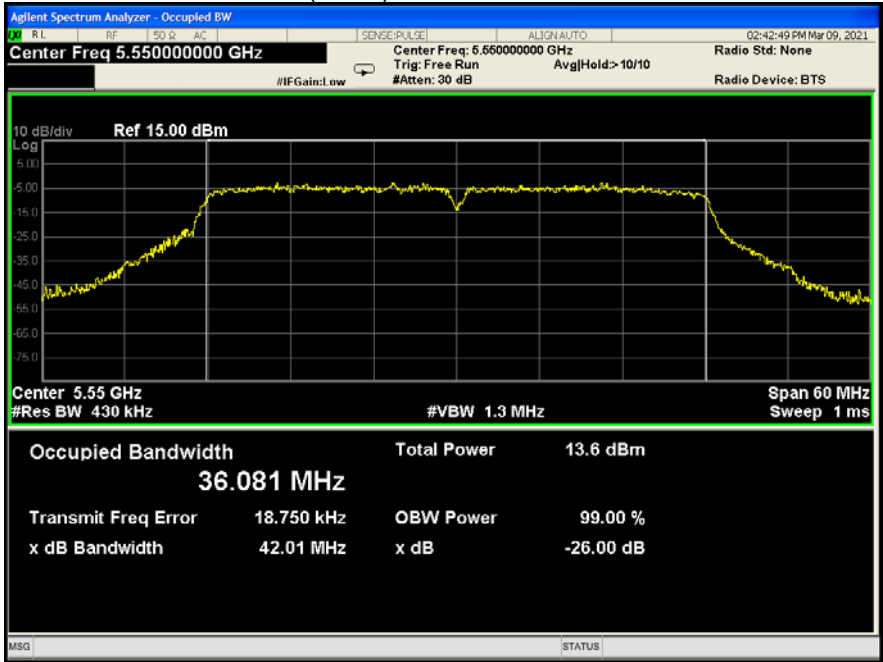
802.11n(HT40) U-NII-2C High channel



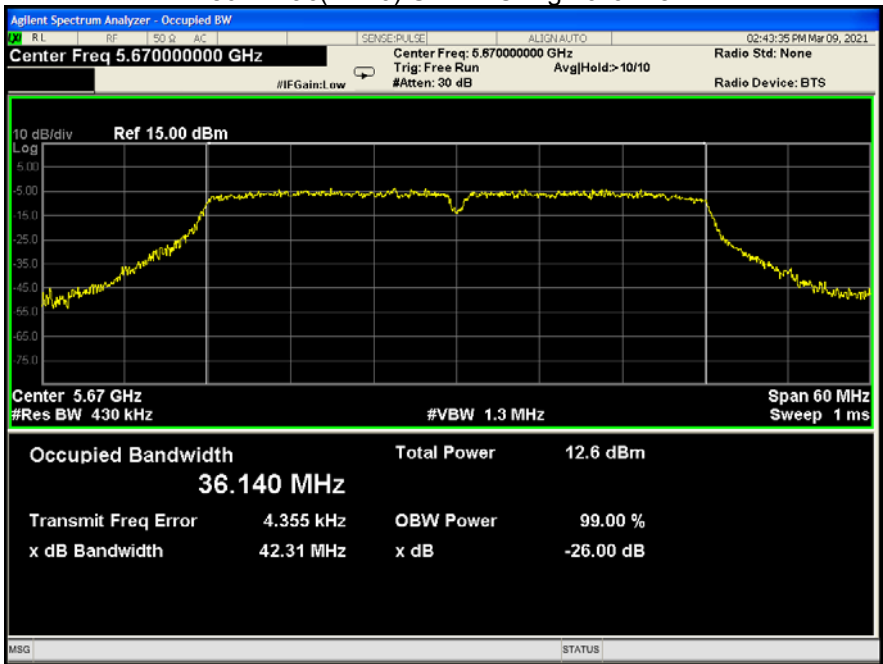
802.11ac(HT40) U-NII-2C Low channel



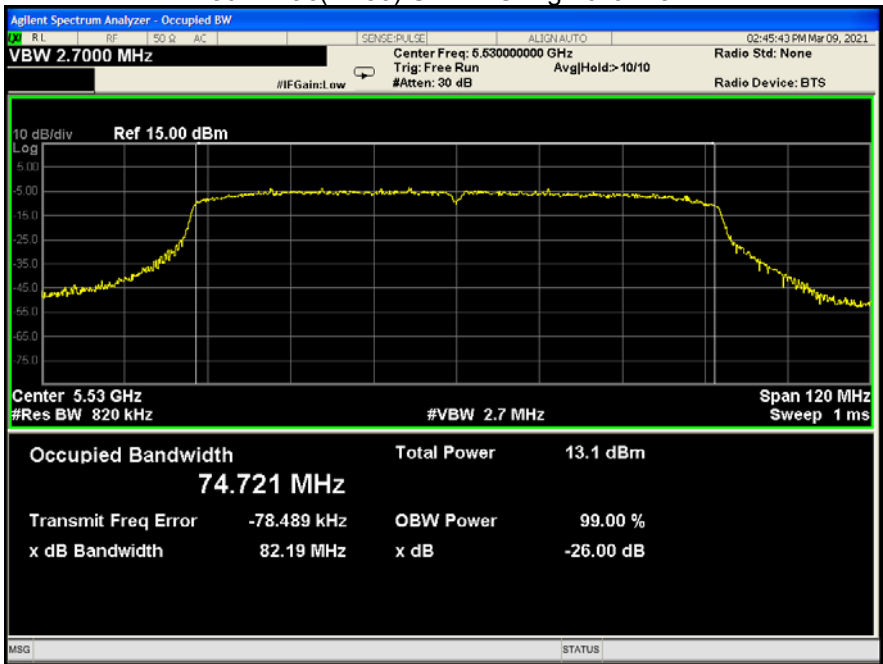
802.11ac(HT40) U-NII-2C Middle channel



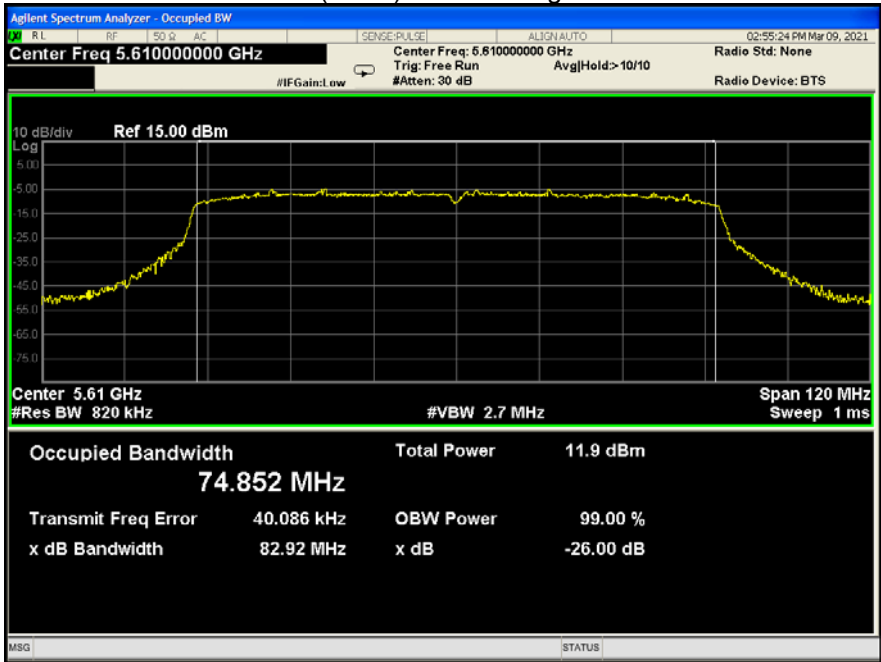
802.11ac(HT40) U-NII-2C High channel



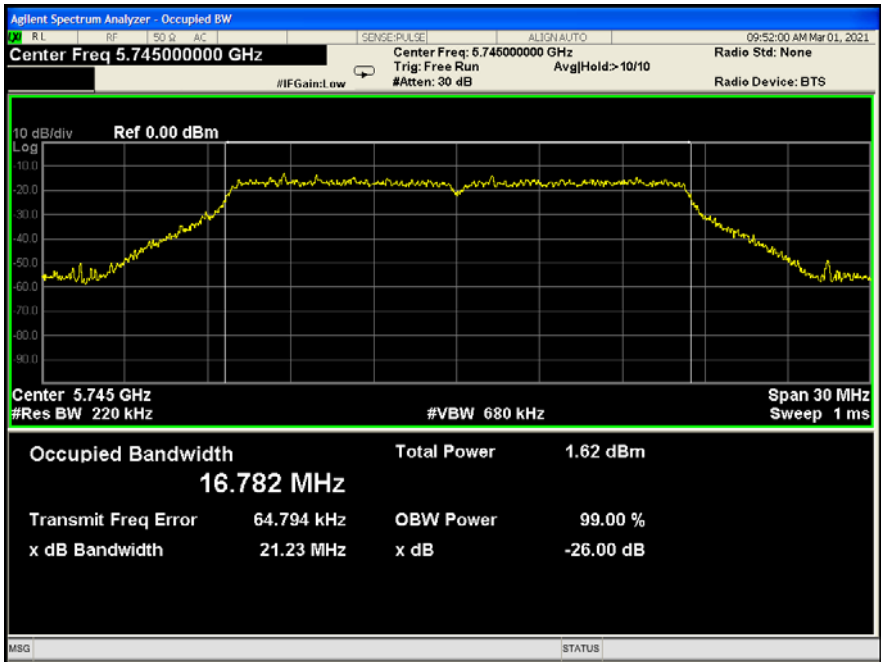
802.11ac(HT80) U-NII-2C High channel



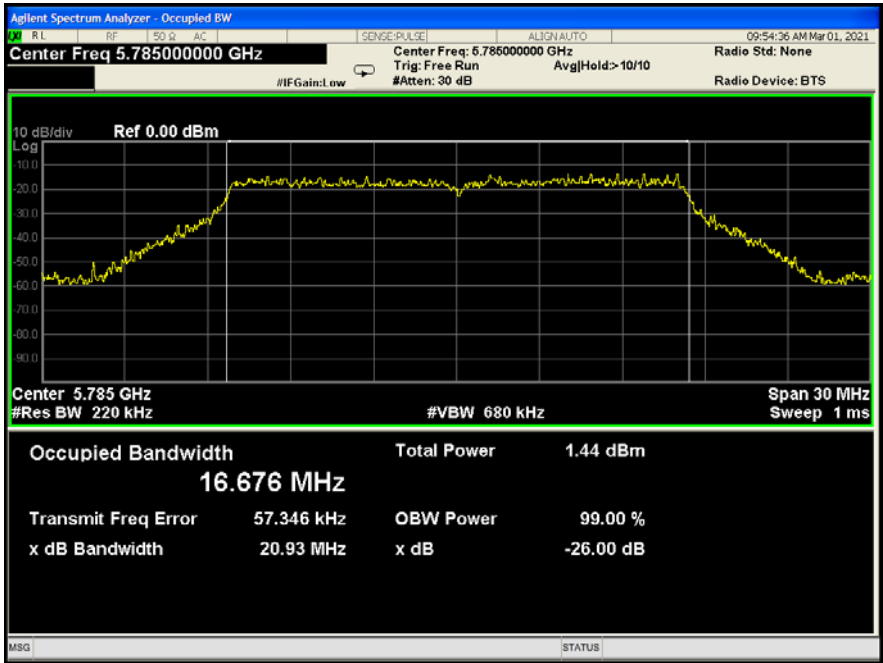
802.11ac(HT80) U-NII-2C High channel



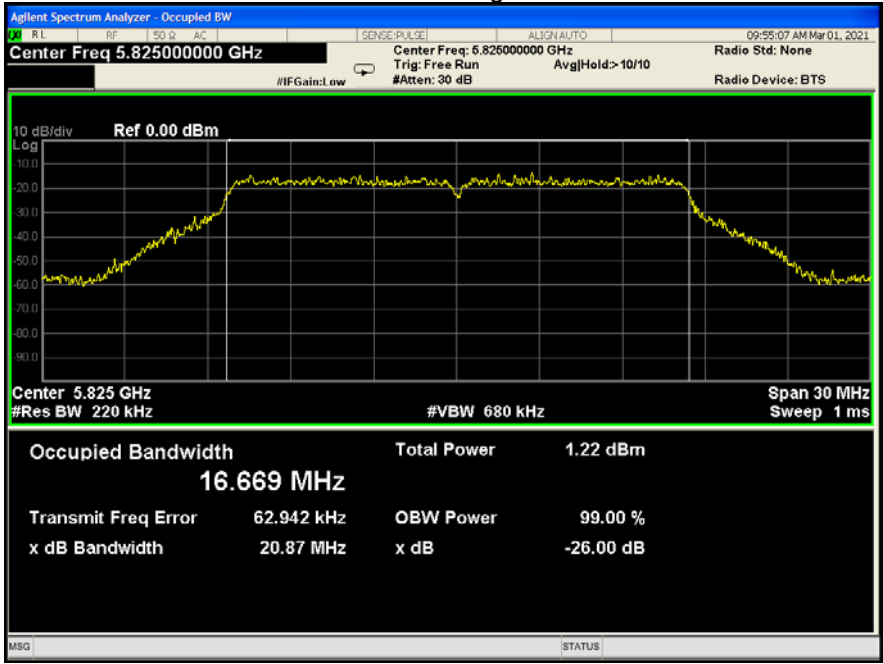
802.11a U-NII-3 Low channel



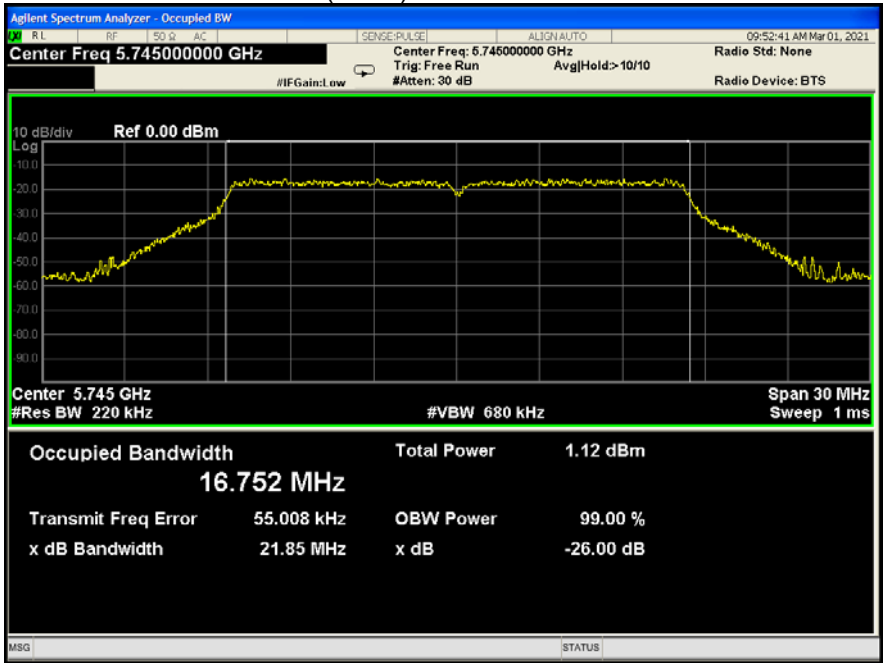
802.11a U-NII-3 Middle channel



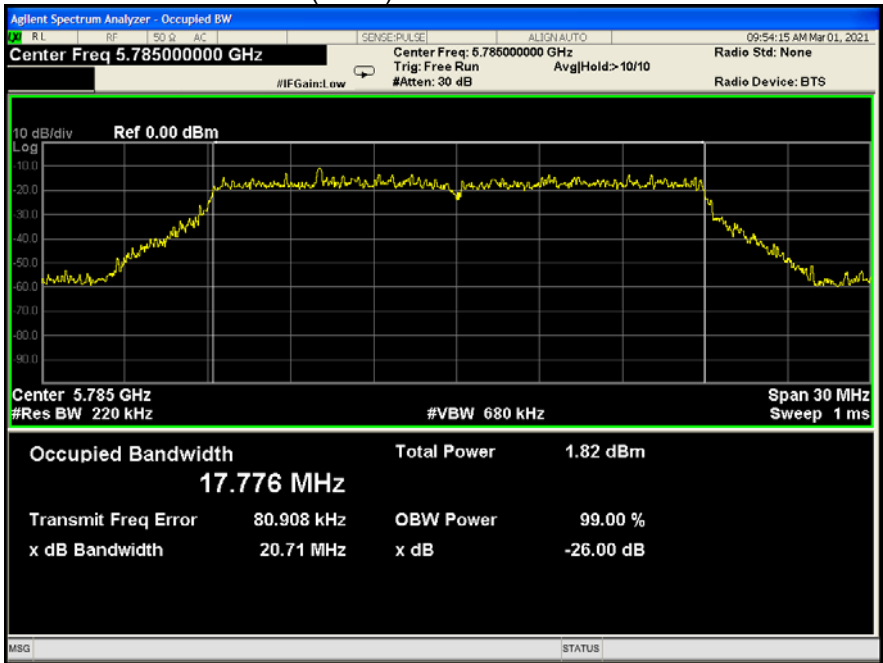
802.11a U-NII-3 High channel



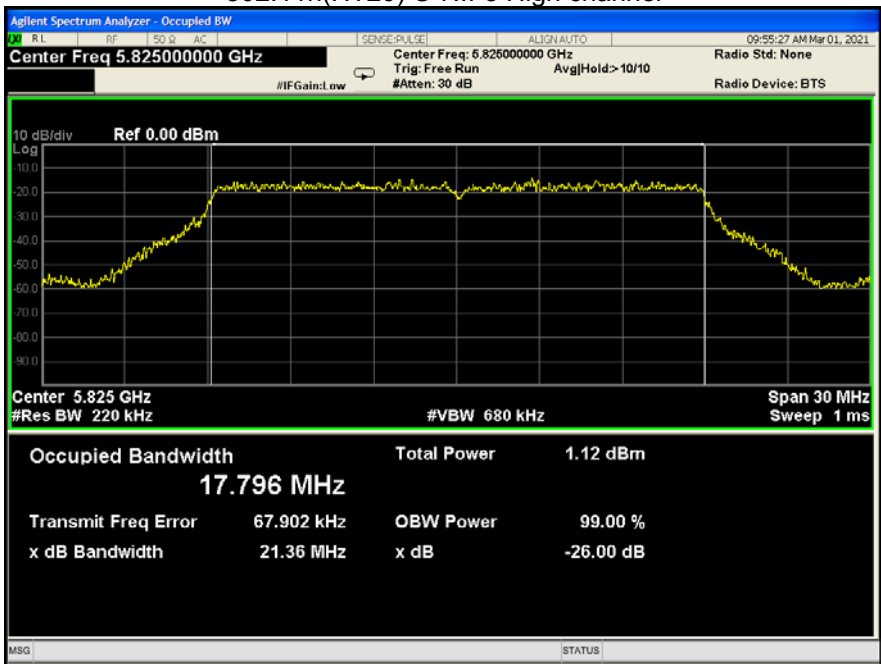
802.11n(HT20) U-NII-3 Low channel



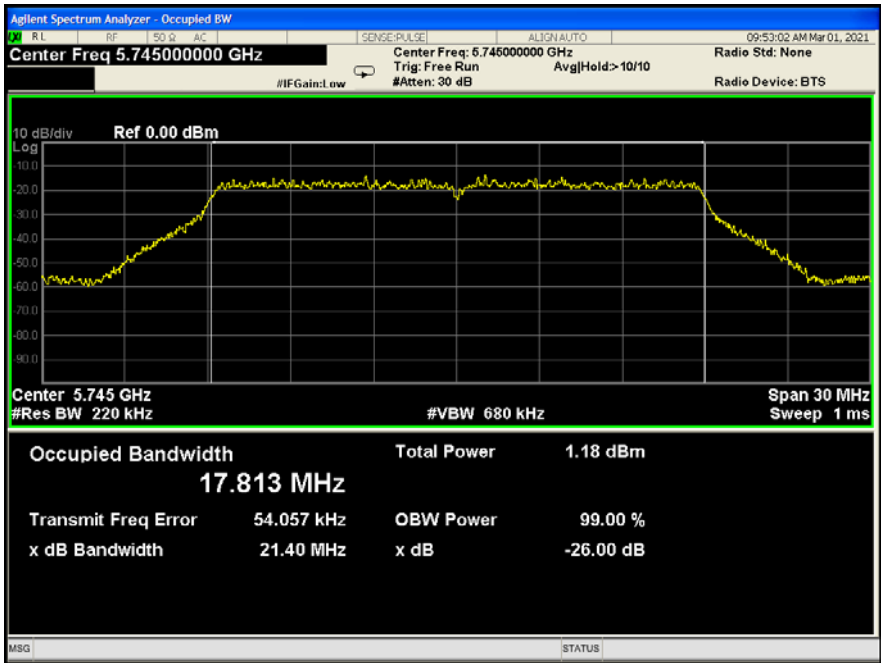
802.11n(HT20) U-NII-3 Middle channel



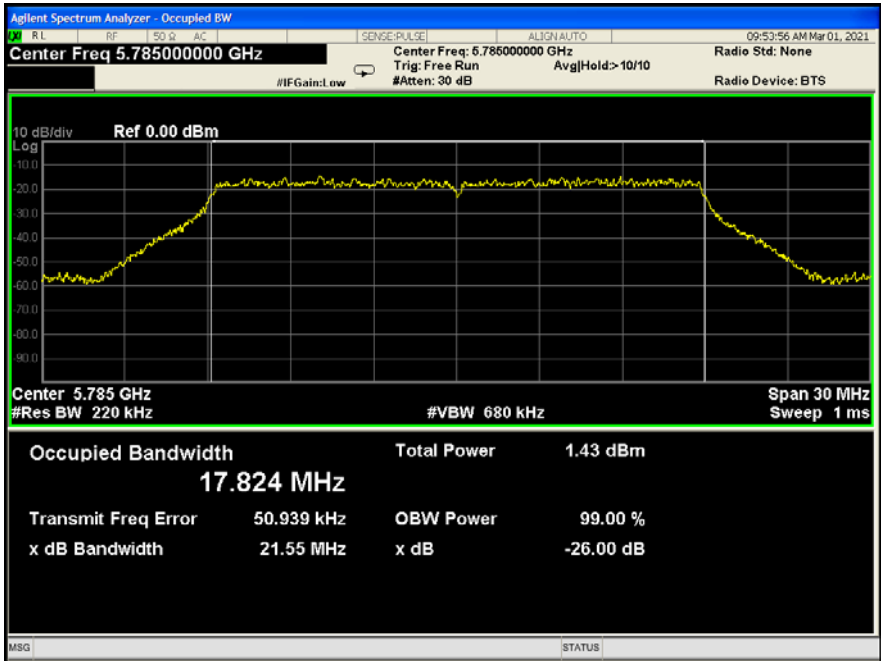
802.11n(HT20) U-NII-3 High channel



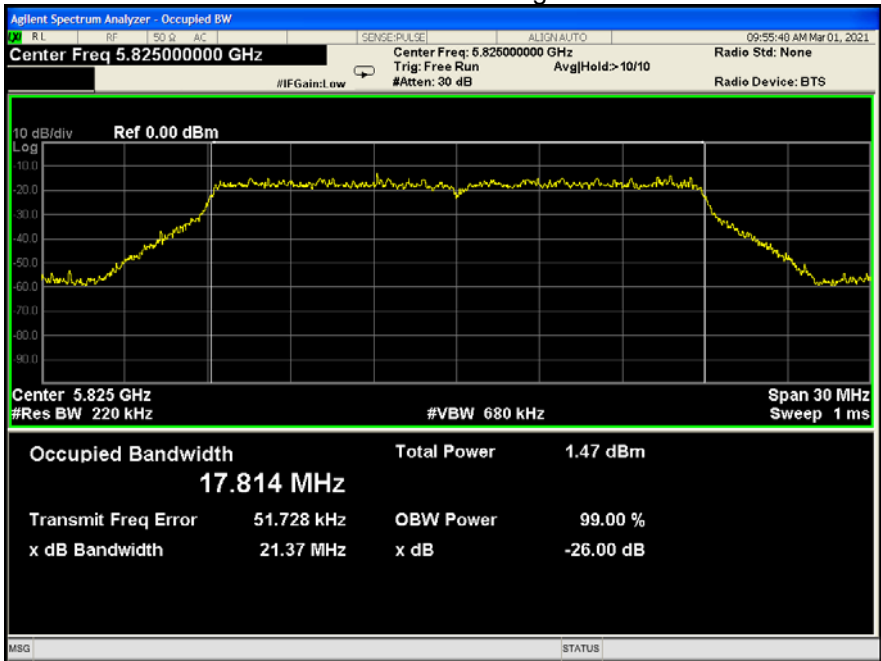
802.11ac HT20 U-NII-3 Low channel



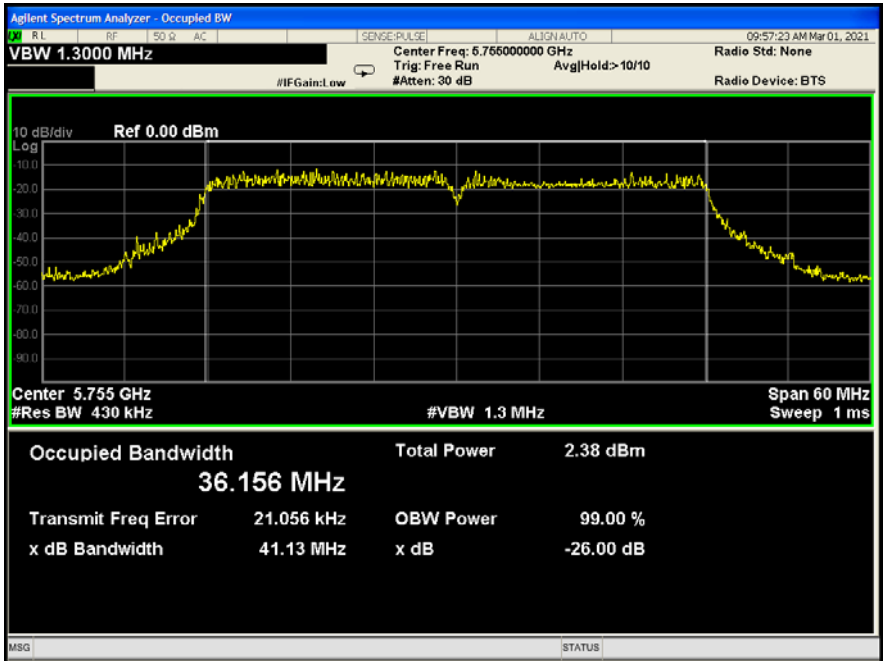
802.11ac HT20 U-NII-3 Middle channel



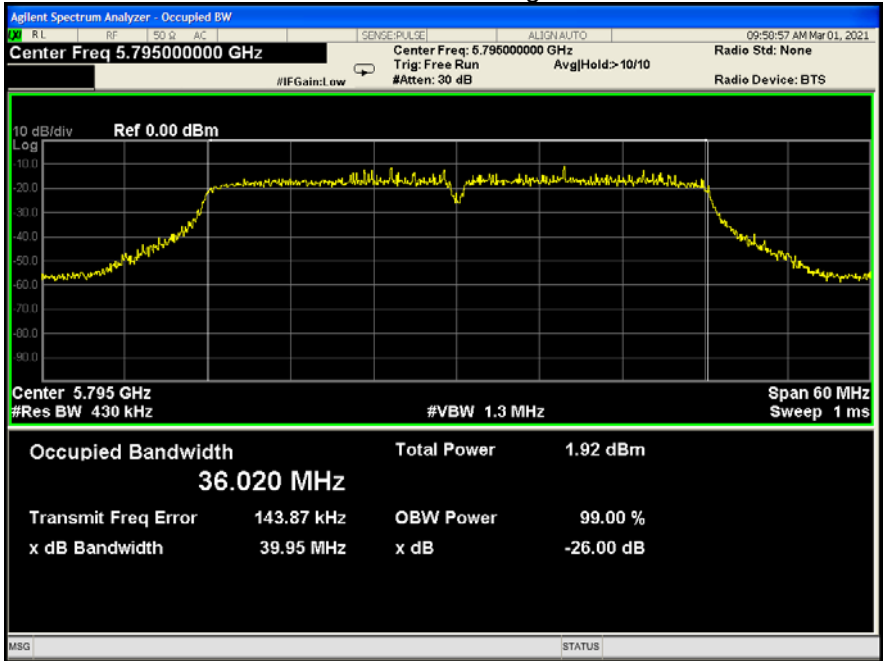
802.11ac HT20 U-NII-3 High channel



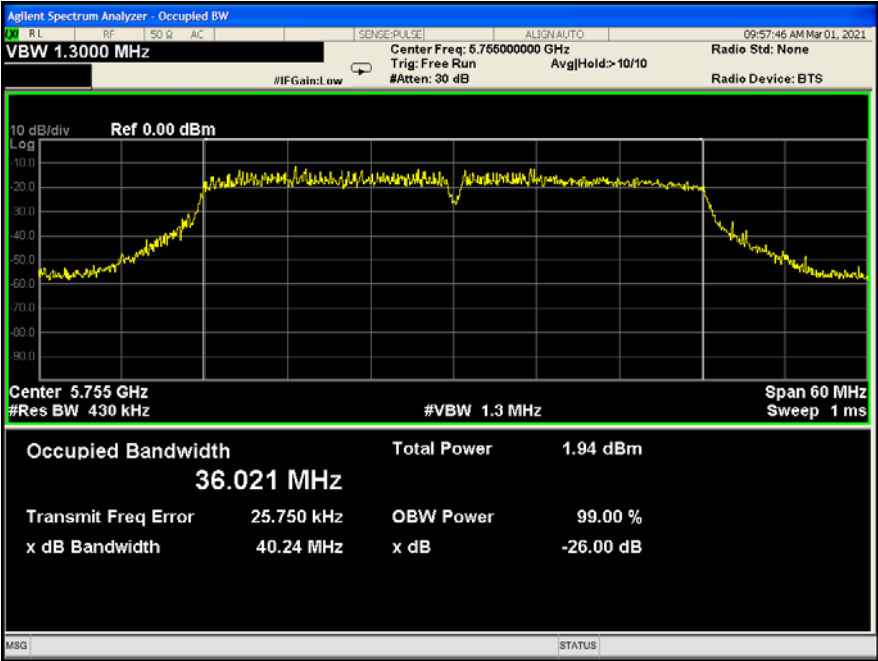
802.11n HT40 U-NII-3 Low channel



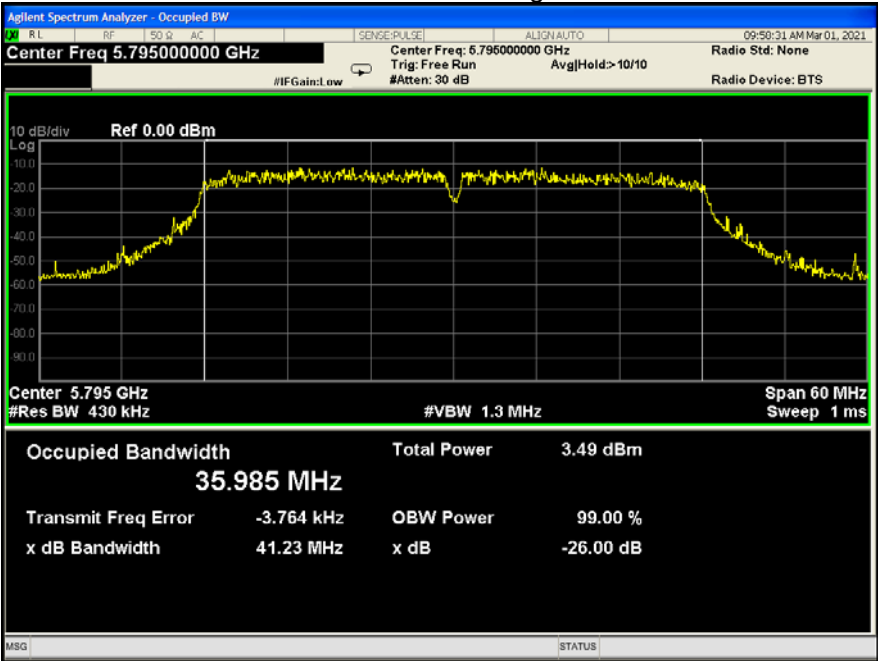
802.11n HT40 U-NII-3 High channel



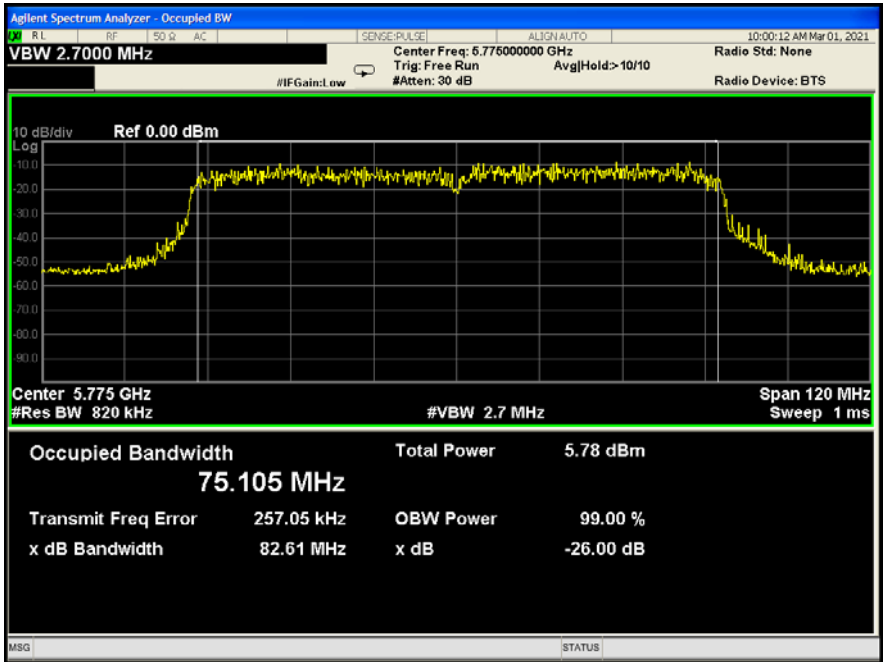
802.11ac HT40 U-NII-3 Low channel



802.11ac HT40 U-NII-3 High channel



802.11ac HT80 U-NII-3 Low channel



12 Conducted Output Power

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a) KDB789033 D02 General U-NII Test Procedures New Rules v02r01
Test Method:	Section E
Test Limit:	U-NII-1 250mW(24dBm) U-NII-2A 250mW(24dBm) or 11 dBm + 10 log B U-NII-2C 250mW(24dBm) or 11 dBm + 10 log B U-NII-3 1W(30dBm)
Test Result:	PASS Conducted output power= measurement power+10log(1/x) X is duty cycle=1, so 10log(1/1)=0
Remark:	Conducted output power= measurement power where B is the 26 dB emission bandwidth in megahertz

12.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the 99% occupied bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

12.2 Test Result :

Band	Operation mode	Conducted Output Power (dBm)		
		Low channel	Middle channel	High channel
U-NII-1	802.11a	12.59	11.79	10.06
	802.11n(HT20)	10.27	10.96	10.02
	802.11ac(HT20)	10.59	10.83	10.21
	802.11ac(HT40)	12.31	/	12.43
	802.11n(HT40)	10.01	/	12.60
	802.11ac(HT80)	10.62	/	/

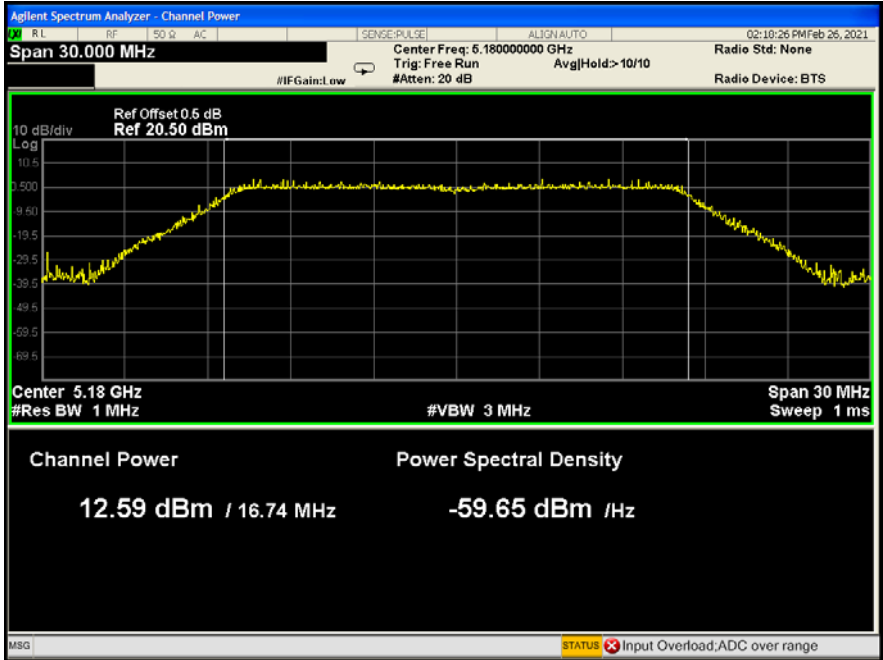
Band	Operation mode	Conducted Output Power (dBm)		
		Low channel	Middle channel	High channel
U-NII-2A	802.11a	15.51	15.36	15.55
	802.11n(HT20)	15.27	15.56	15.75
	802.11ac(HT20)	15.13	15.23	15.57
	802.11ac(HT40)	17.13	/	13.86
	802.11n(HT40)	15.43	/	13.93
	802.11ac(HT80)	16.48	/	/

Band	Operation mode	Conducted Output Power (dBm)		
		Low channel	Middle channel	High channel
U-NII-2C	802.11a	13.88	12.60	12.21
	802.11n(HT20)	13.55	12.54	12.40
	802.11ac(HT20)	13.57	12.79	12.19
	802.11ac(HT40)	15.69	15.88	14.30
	802.11n(HT40)	15.55	15.46	14.43
	802.11ac(HT80)	14.40	/	13.91

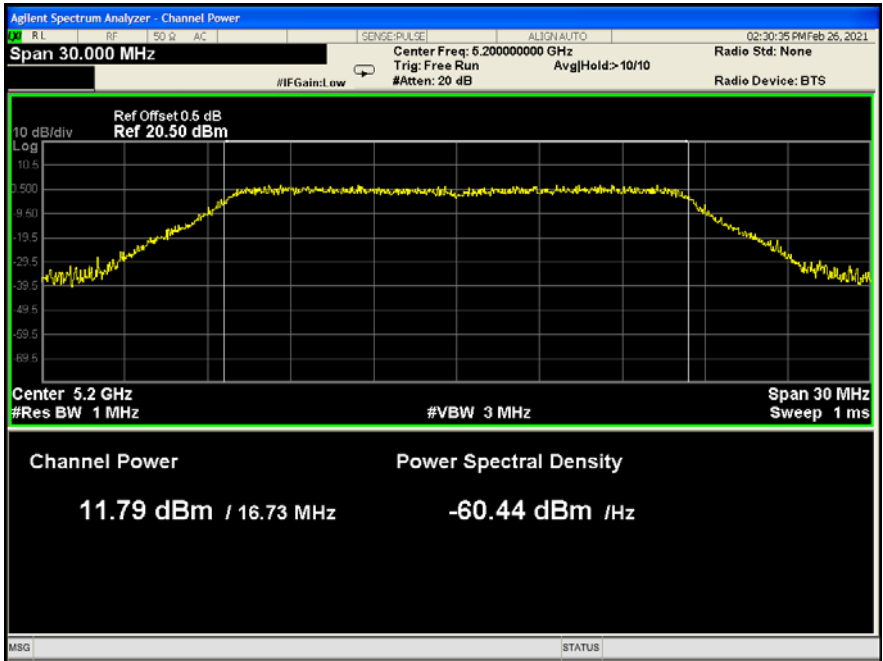
Band	Operation mode	Conducted Output Power (dBm)		
		Low channel	Middle channel	High channel
U-NII-3	802.11a	12.32	11.96	11.96
	802.11n(HT20)	11.72	11.76	11.15
	802.11ac(HT20)	11.33	11.89	12.02
	802.11ac(HT40)	15.77	/	13.89
	802.11n(HT40)	14.42	/	15.35
	802.11ac(HT80)	16.55	/	/

Test result plots shown as follows:

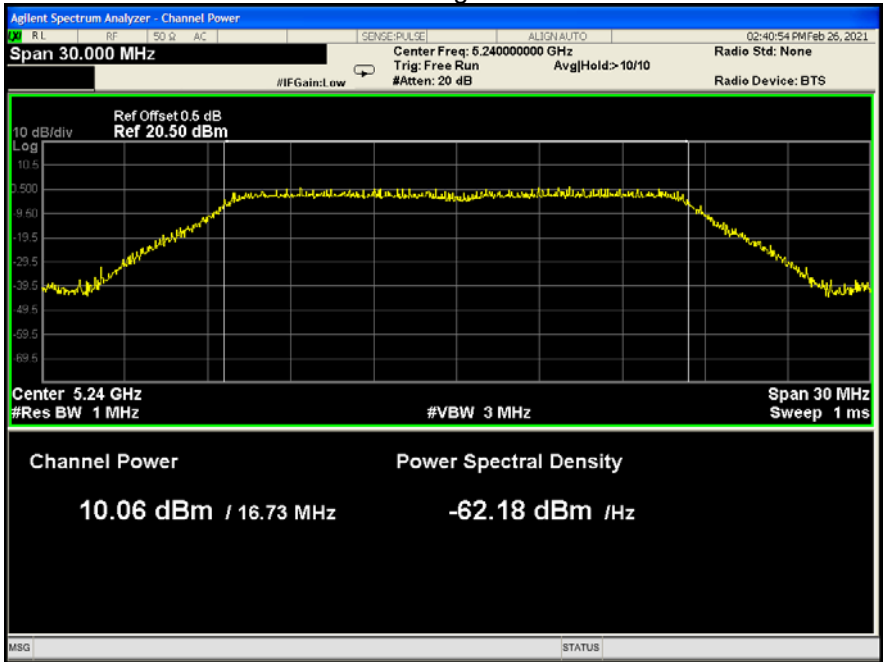
802.11a U-NII-1 Low channel



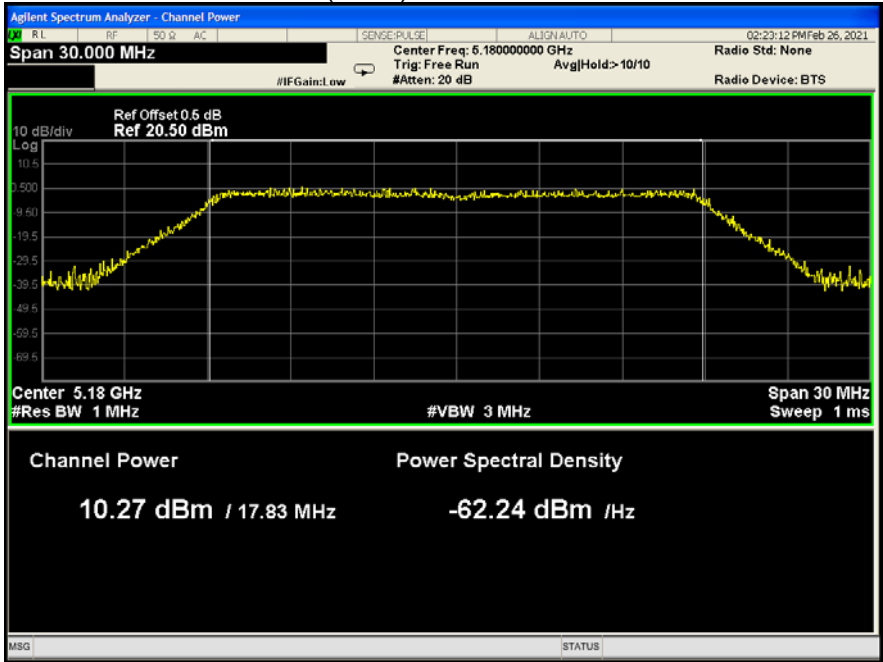
802.11a U-NII-1 Middle channel



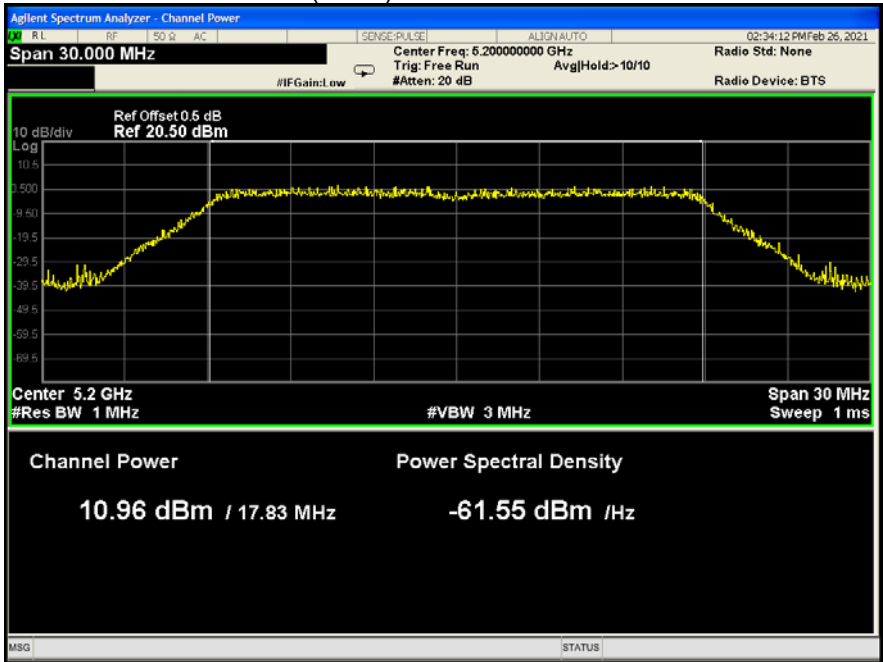
802.11a U-NII-1 High channel



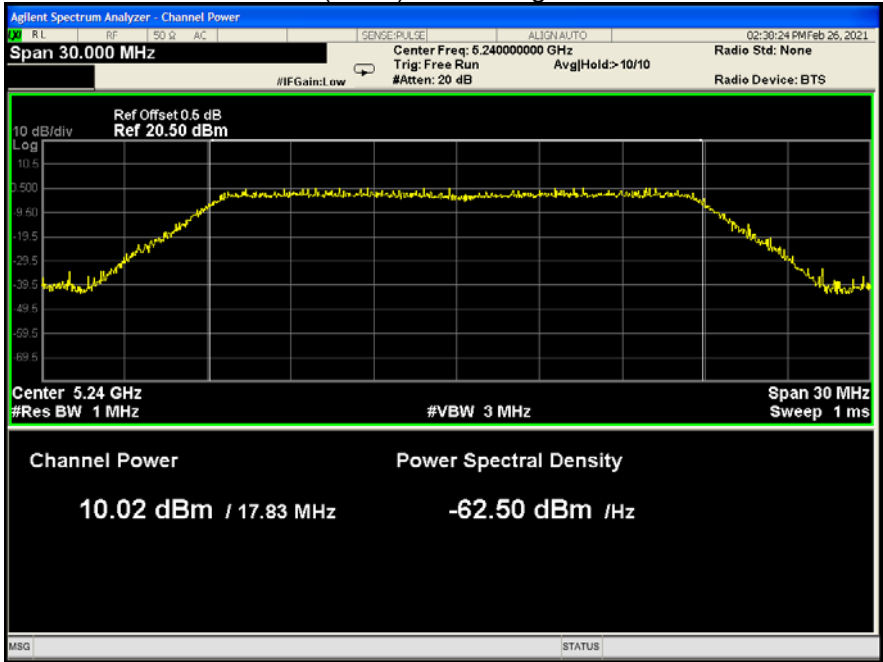
802.11n(HT20) U-NII-1 Low channel



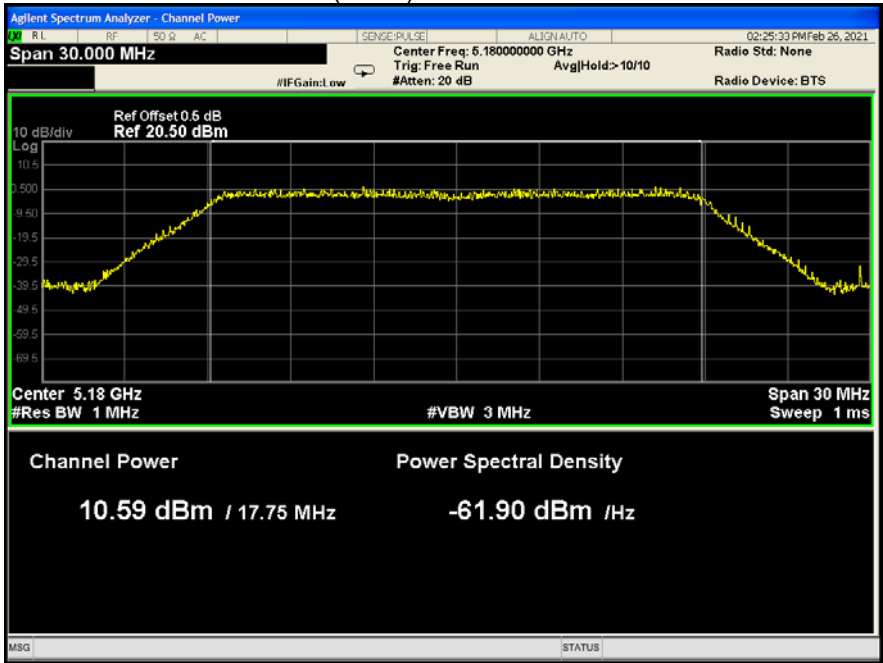
802.11n(HT20) U-NII-1 Middle channel



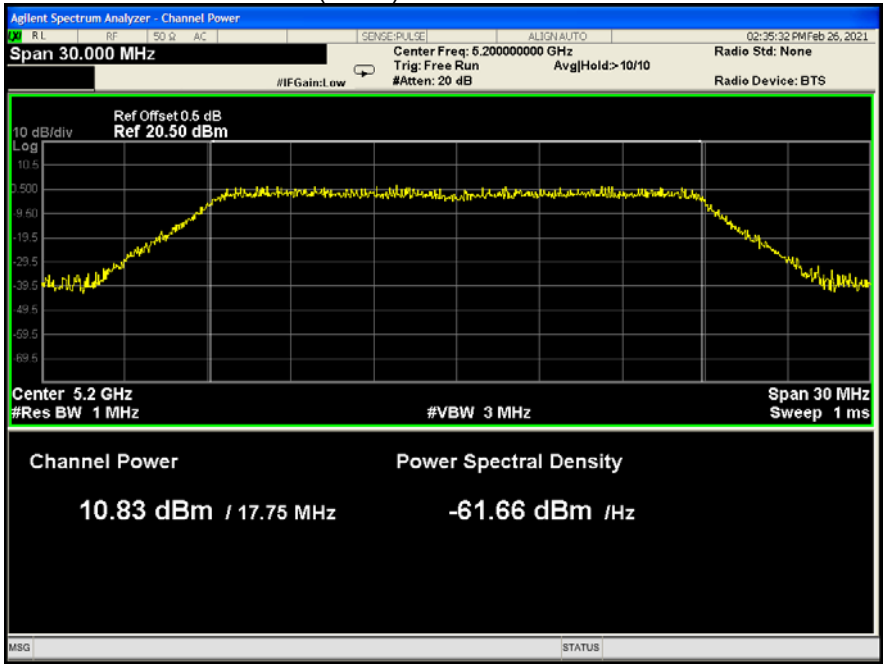
802.11n(HT20) U-NII-1 High channel



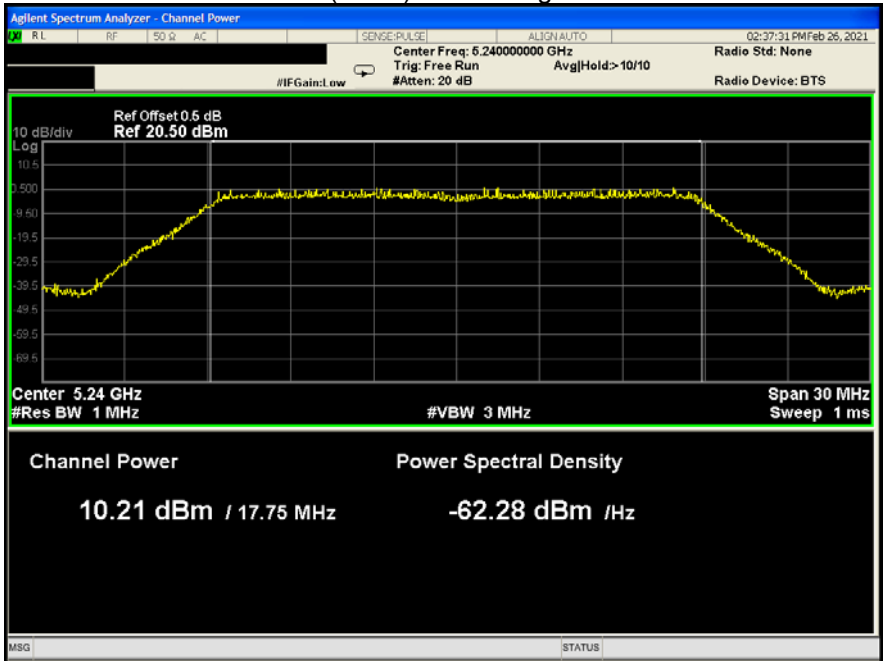
802.11ac(HT20) U-NII-1 Low channel



802.11ac(HT20) U-NII-1 Middle channel



802.11ac(HT20) U-NII-1 High channel



802.11ac(HT40) U-NII-1 Low channel

