

Appendix for 15.407

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1. Bandwidth

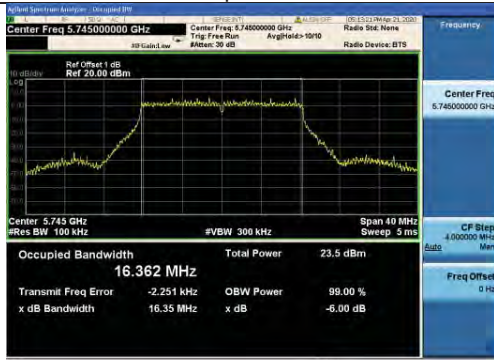
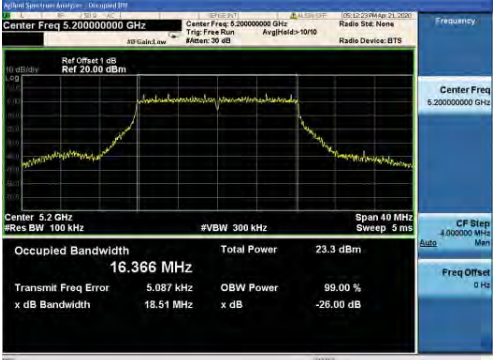
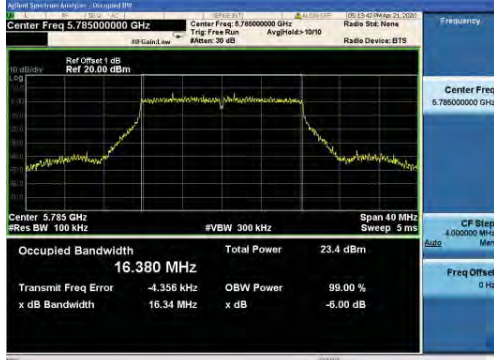
1.1 Test Result

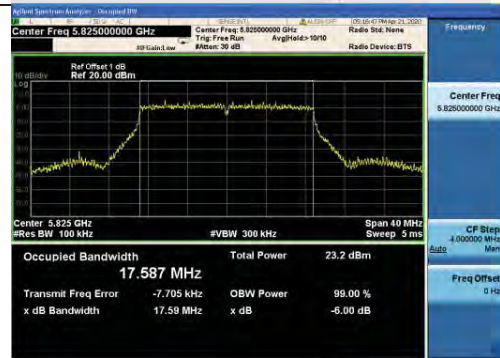
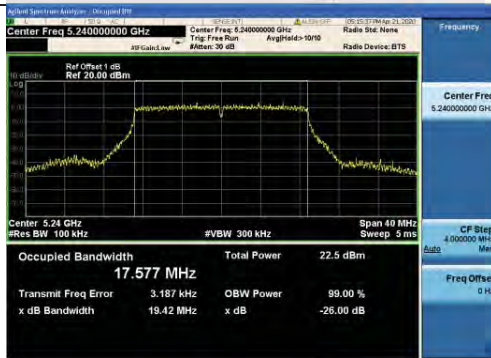
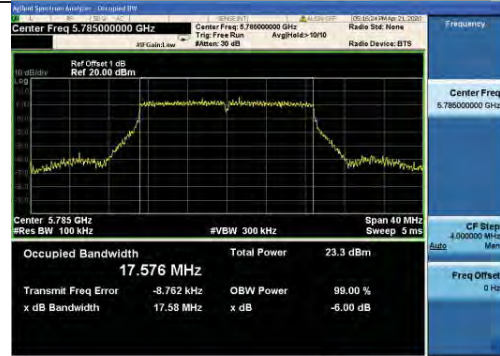
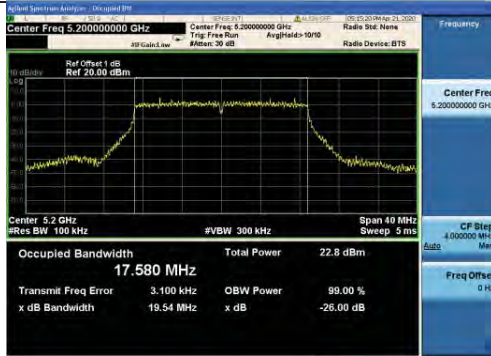
Test Mode	Frequency (MHz)	TX Type	Emission Bandwidth			Verdict
			Test Result (MHz)		Limits (MHz)	
			Ant1	Ant2		
802.11a	5180	SISO	18.52	18.43	/	PASS
	5200	SISO	18.51	18.46	/	PASS
	5240	SISO	18.75	18.31	/	PASS
	5745	SISO	16.35	16.35	≥0.5	PASS
	5785	SISO	16.34	16.34	≥0.5	PASS
	5825	SISO	16.34	16.36	≥0.5	PASS
802.11n(HT20)	5180	SISO	19.34	19.41	/	PASS
	5200	SISO	19.54	19.71	/	PASS
	5240	SISO	19.42	19.35	/	PASS
	5745	SISO	17.57	17.58	≥0.5	PASS
	5785	SISO	17.58	17.63	≥0.5	PASS
	5825	SISO	17.59	17.21	≥0.5	PASS
802.11n(HT40)	5190	SISO	38.56	38.11	/	PASS
	5230	SISO	38.22	38.21	/	PASS
	5755	SISO	35.67	36.29	≥0.5	PASS
	5795	SISO	34.44	36.04	≥0.5	PASS
802.11ac(VHT20)	5180	SISO	19.30	19.50	/	PASS
	5200	SISO	19.36	19.41	/	PASS
	5240	SISO	19.44	19.46	/	PASS
	5745	SISO	17.61	17.57	≥0.5	PASS
	5785	SISO	17.59	17.59	≥0.5	PASS
	5825	SISO	17.57	17.63	≥0.5	PASS
802.11ac(VHT40)	5190	SISO	37.91	38.49	/	PASS
	5230	SISO	38.60	38.51	/	PASS
	5755	SISO	35.66	35.73	≥0.5	PASS
	5795	SISO	35.70	35.45	≥0.5	PASS
802.11ac(VHT80)	5210	SISO	79.51	79.51	/	PASS
	5775	SISO	76.41	76.46	≥0.5	PASS

Test Mode	Frequency (MHz)	TX Type	99% Occupied Bandwidth		
			Test Result (MHz)		
			Ant1	Ant2	
802.11a	5180	SISO	16.362	16.364	Only for Report Use
	5200	SISO	16.366	16.368	Only for Report Use
	5240	SISO	16.359	16.380	Only for Report Use
	5745	SISO	16.362	16.368	Only for Report Use
	5785	SISO	16.380	16.380	Only for Report Use
	5825	SISO	16.360	16.361	Only for Report Use
802.11n(HT20)	5180	SISO	17.576	17.578	Only for Report Use
	5200	SISO	17.580	17.571	Only for Report Use
	5240	SISO	17.577	17.573	Only for Report Use
	5745	SISO	17.574	17.580	Only for Report Use
	5785	SISO	17.576	17.582	Only for Report Use
	5825	SISO	17.587	17.575	Only for Report Use
802.11n(HT40)	5190	SISO	35.909	35.888	Only for Report Use
	5230	SISO	35.939	35.944	Only for Report Use
	5755	SISO	35.926	35.964	Only for Report Use
	5795	SISO	35.905	35.923	Only for Report Use

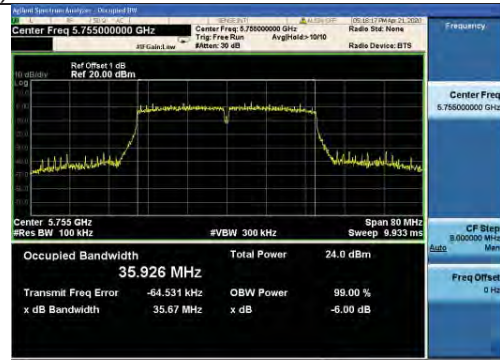
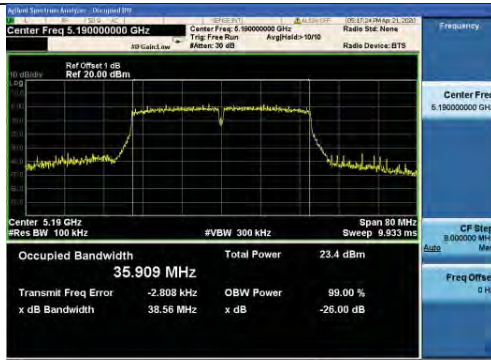
802.11ac(VHT20)	5180	SISO	17.580	17.549	Only for Report Use
	5200	SISO	17.572	17.556	Only for Report Use
	5240	SISO	17.574	17.583	Only for Report Use
	5745	SISO	17.575	17.560	Only for Report Use
	5785	SISO	17.578	17.584	Only for Report Use
802.11ac(VHT40)	5825	SISO	17.580	17.578	Only for Report Use
	5190	SISO	35.948	35.896	Only for Report Use
	5230	SISO	35.925	35.957	Only for Report Use
	5755	SISO	35.942	35.931	Only for Report Use
802.11ac(VHT80)	5795	SISO	35.934	35.886	Only for Report Use
	5210	SISO	75.642	75.579	Only for Report Use
	5775	SISO	75.591	75.655	Only for Report Use

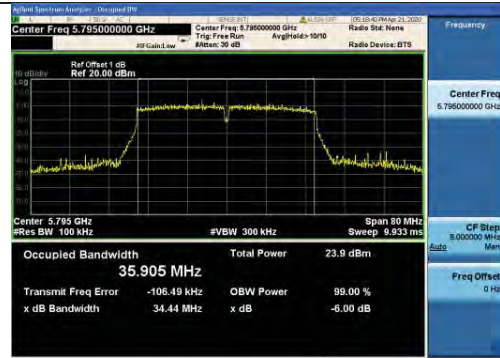
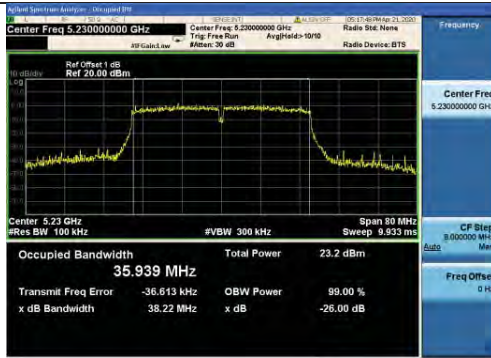
1.2 Test Graph - Emission Bandwidth and 99% Occupied Bandwidth

Ant1	
802.11a	
Emission Bandwidth	99% Occupied Bandwidth
 Center Freq 5.18000000 GHz Center Freq 5.18 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.362 MHz Total Power 23.2 dBm Transmit Freq Error 10.603 kHz OBW Power 99.00 % x dB Bandwidth 18.52 MHz x dB -26.00 dB	 Center Freq 5.74500000 GHz Center Freq 5.745 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.362 MHz Total Power 23.5 dBm Transmit Freq Error -2.251 kHz OBW Power 99.00 % x dB Bandwidth 16.35 MHz x dB -6.00 dB
 Center Freq 5.20000000 GHz Center Freq 5.2 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.366 MHz Total Power 23.3 dBm Transmit Freq Error 5.087 kHz OBW Power 99.00 % x dB Bandwidth 18.51 MHz x dB -26.00 dB	 Center Freq 5.78500000 GHz Center Freq 5.785 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.380 MHz Total Power 23.4 dBm Transmit Freq Error -4.356 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz x dB -6.00 dB
 Center Freq 5.24000000 GHz Center Freq 5.24 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.359 MHz Total Power 23.1 dBm Transmit Freq Error 798 Hz OBW Power 99.00 % x dB Bandwidth 18.75 MHz x dB -26.00 dB	 Center Freq 5.82500000 GHz Center Freq 5.825 GHz Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 5 ms CP Step 1.000000 MHz Ref Offset 1 dB Ref 20.00 dBm Occupied Bandwidth 16.360 MHz Total Power 23.6 dBm Transmit Freq Error -4.956 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz x dB -6.00 dB
802.11n(HT20)	

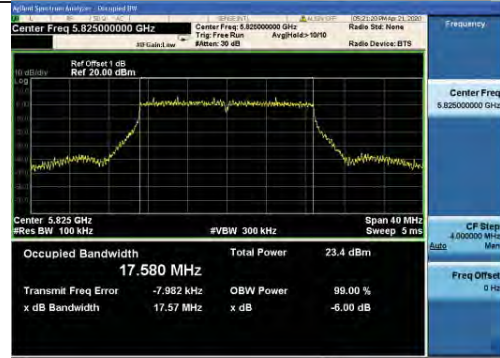
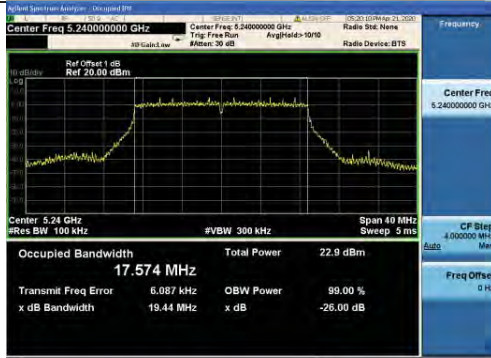
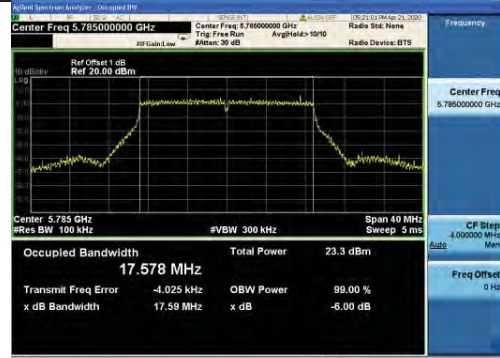
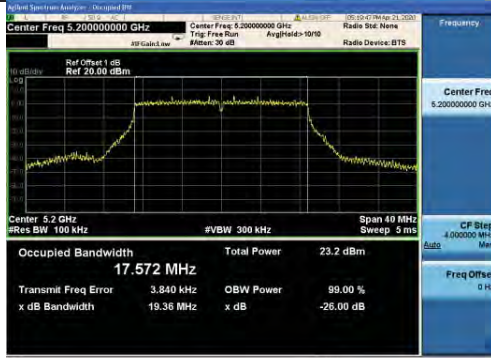
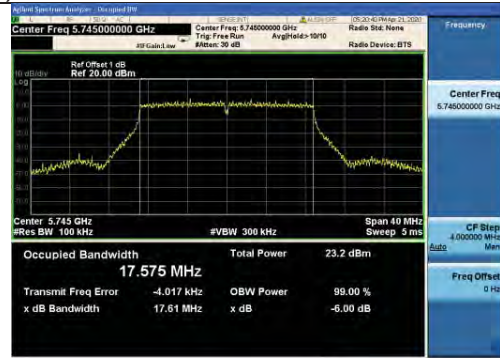


802.11n(HT40)

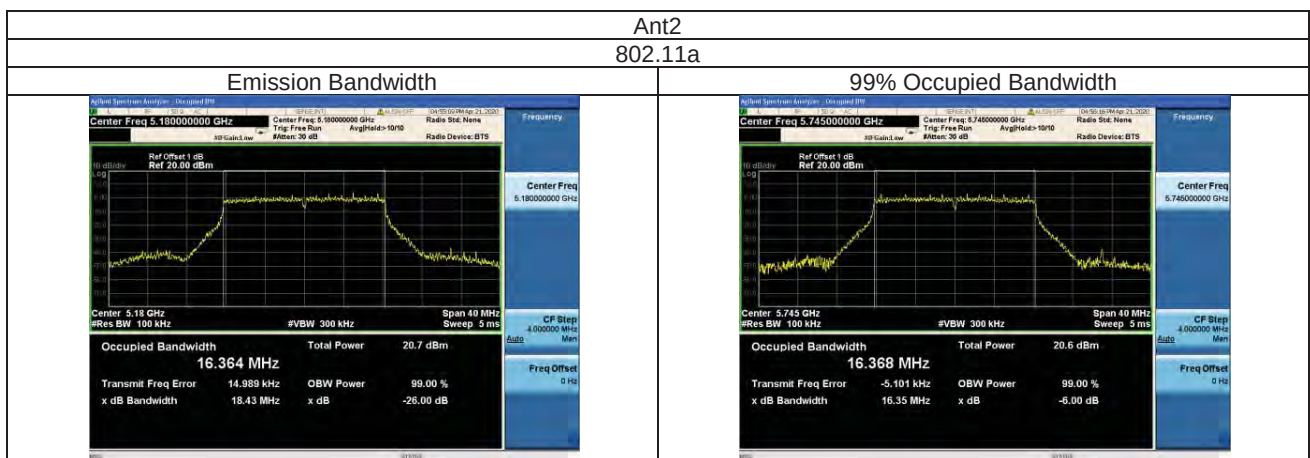
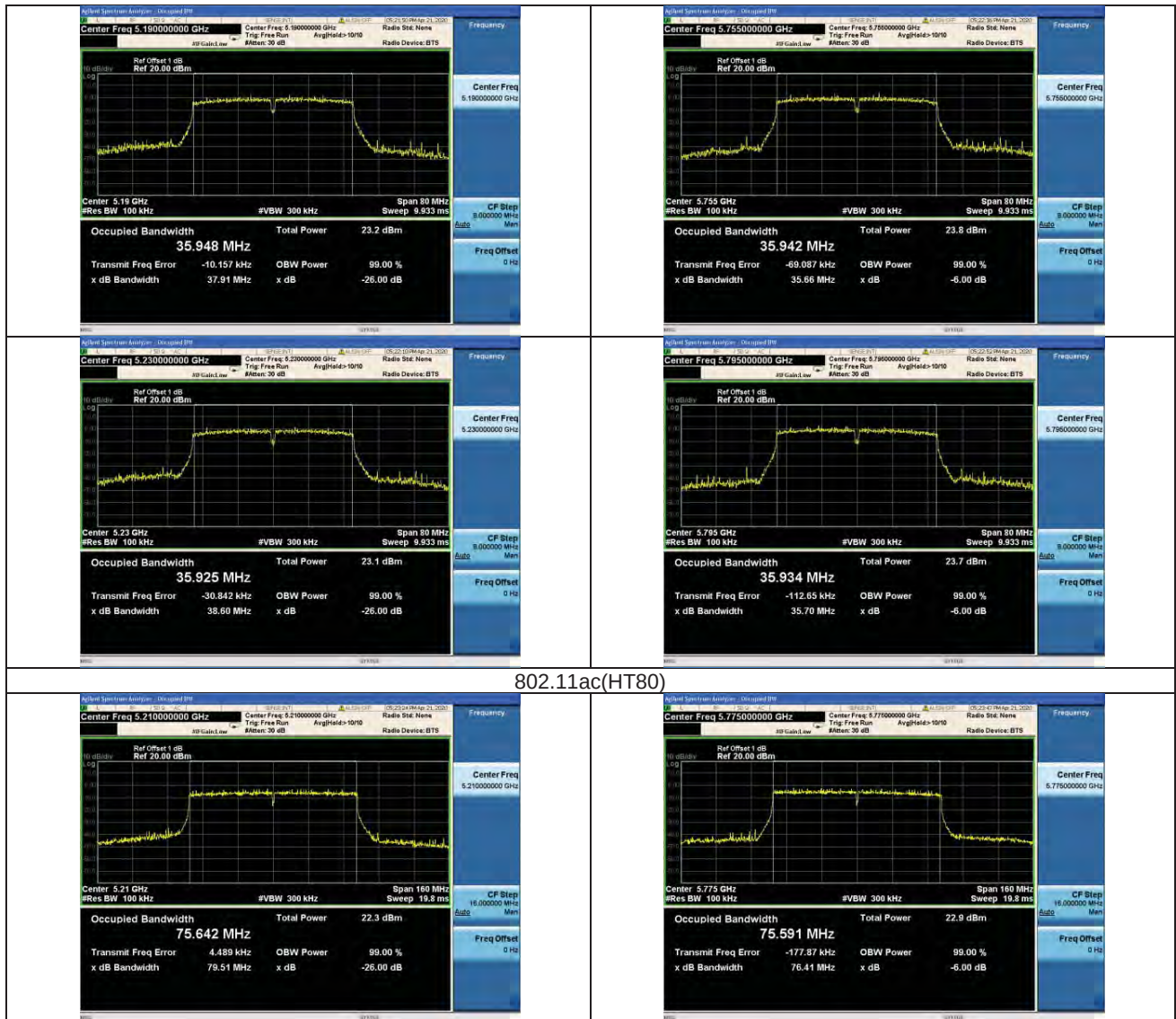


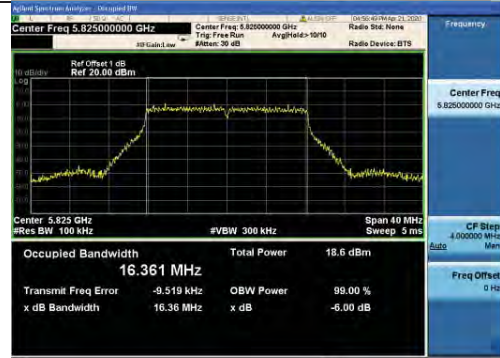
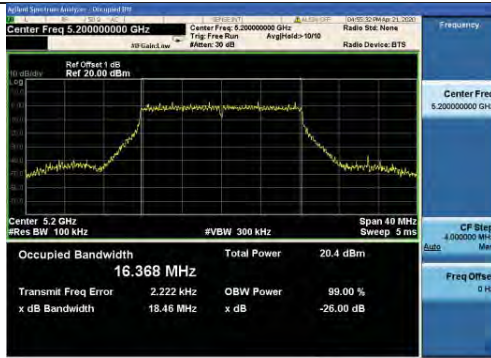


802.11ac(HT20)

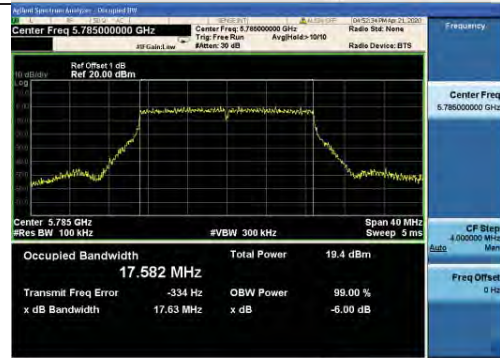
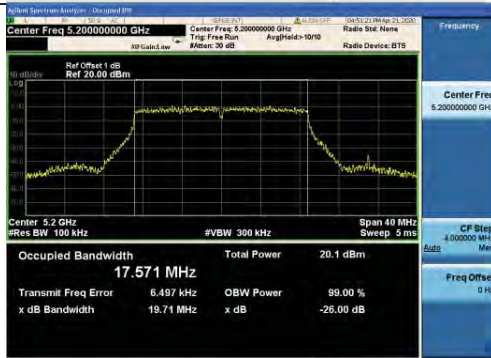
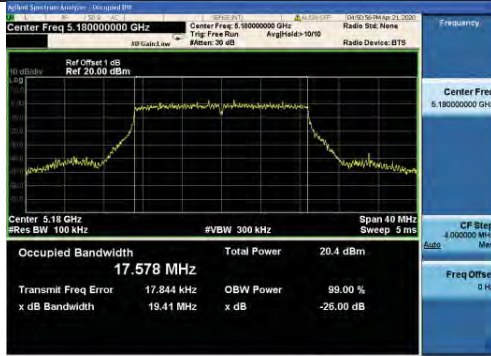


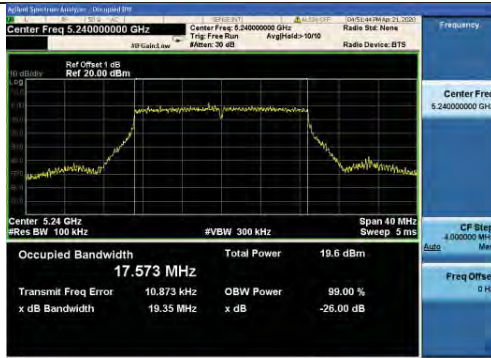
802.11ac(HT40)



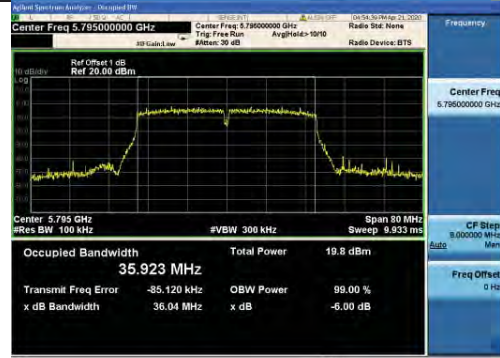
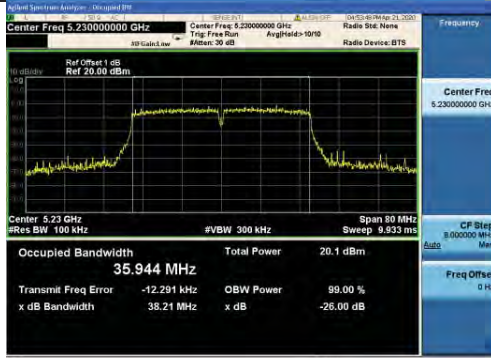
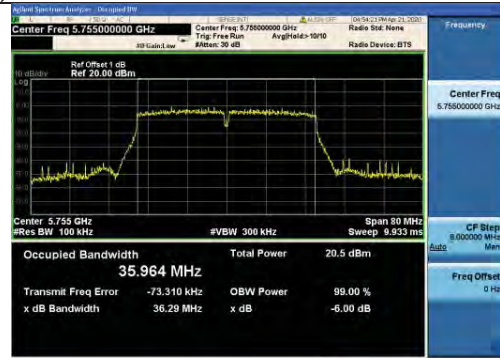
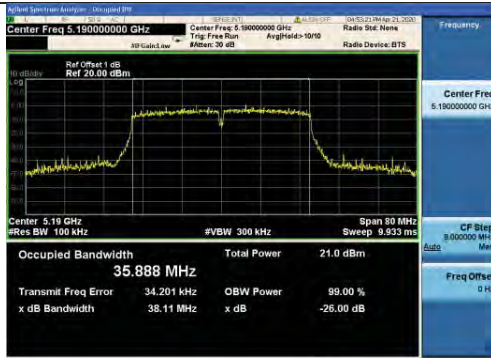


802.11n(HT20)

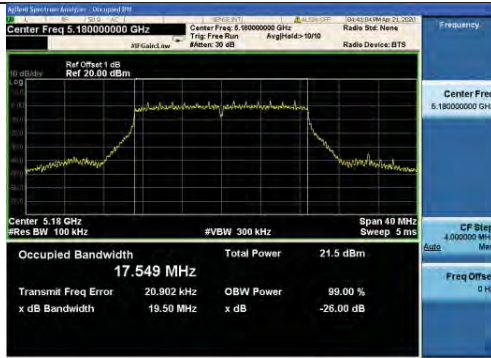


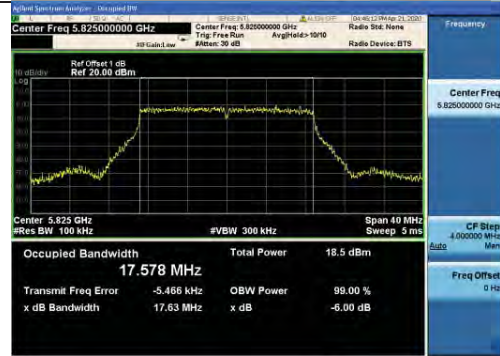
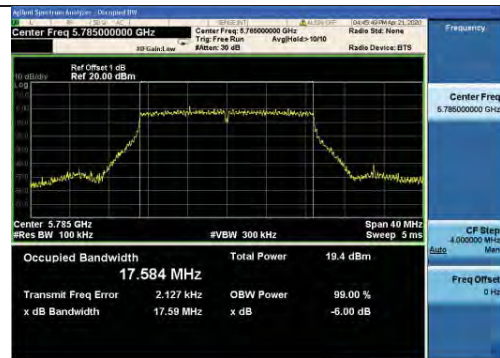
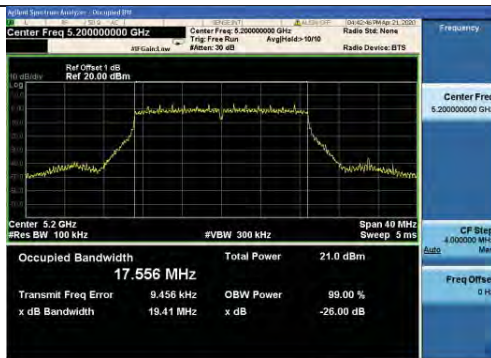


802.11n(HT40)

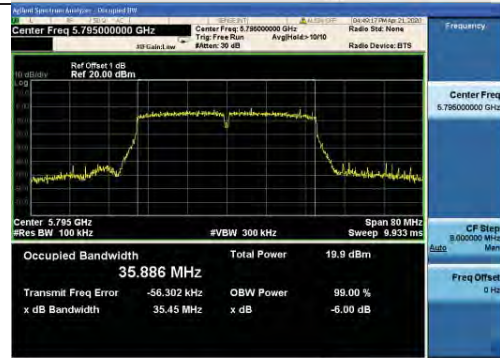
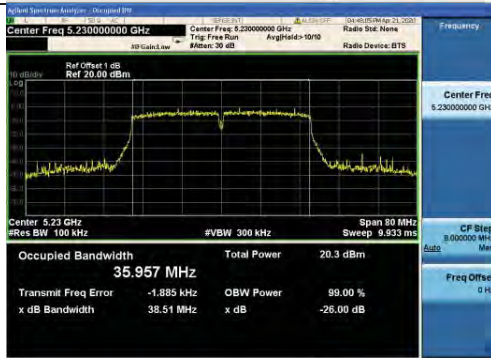
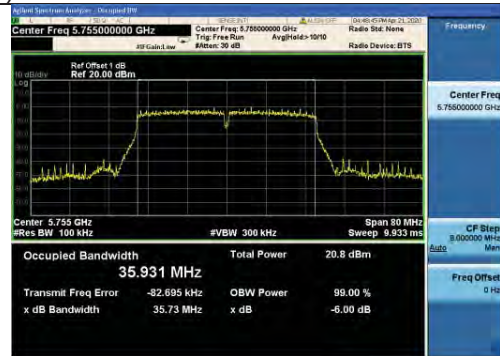
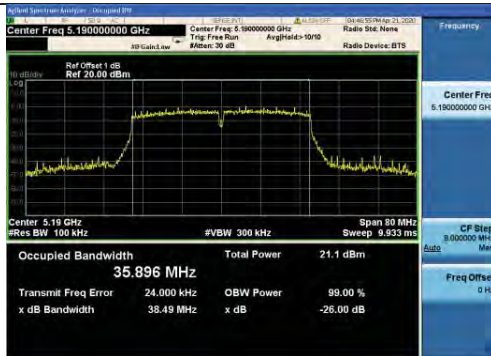


802.11a(HT20)

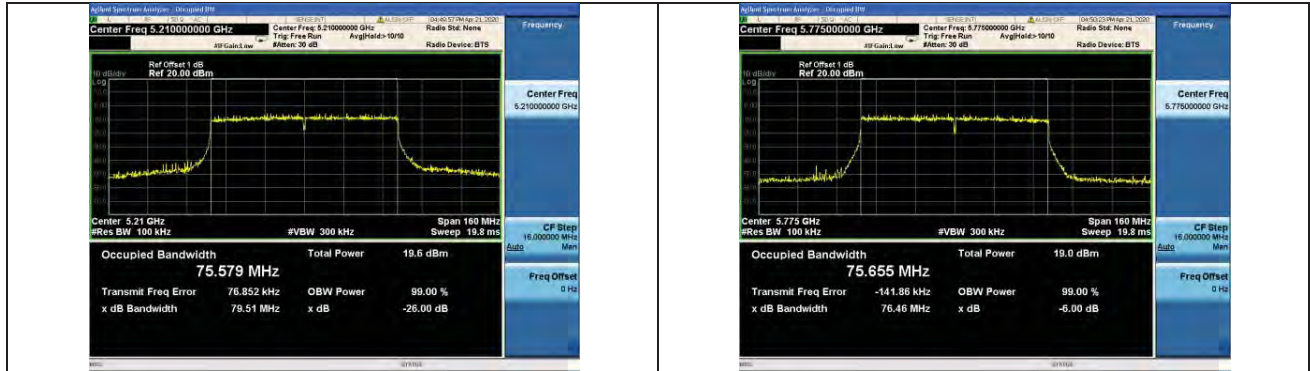




802.11ac(HT40)



802.11ac(HT80)

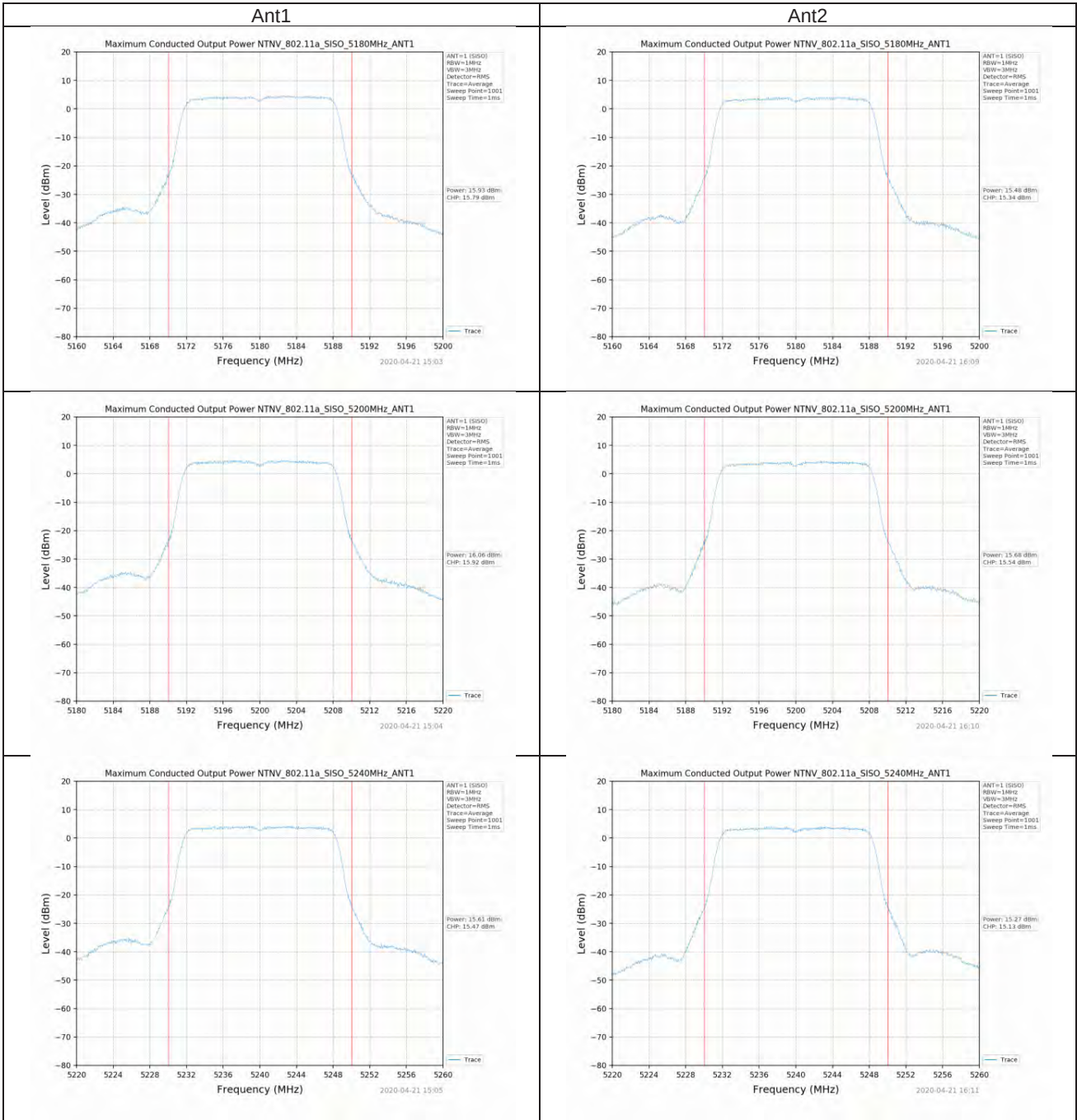


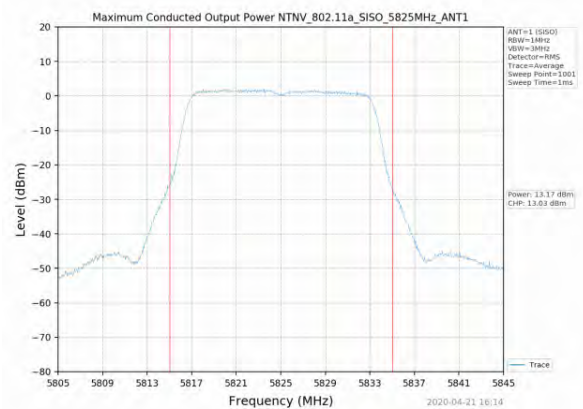
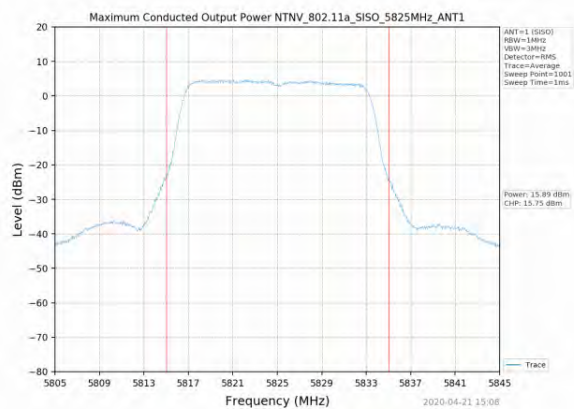
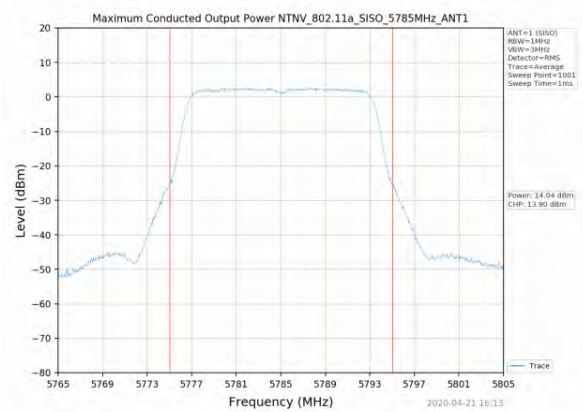
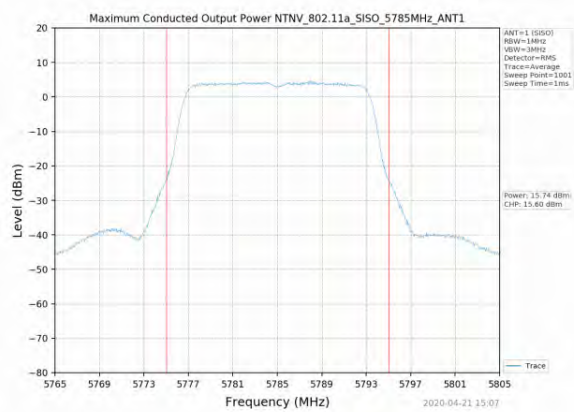
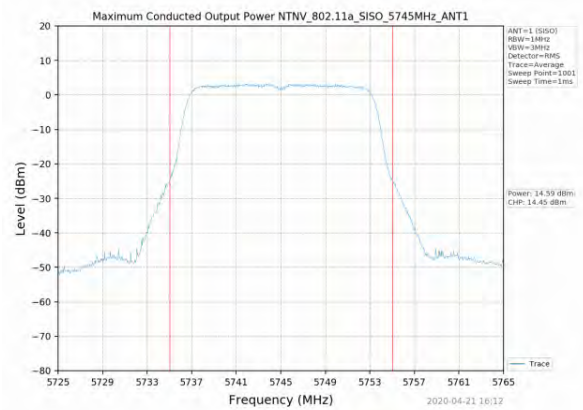
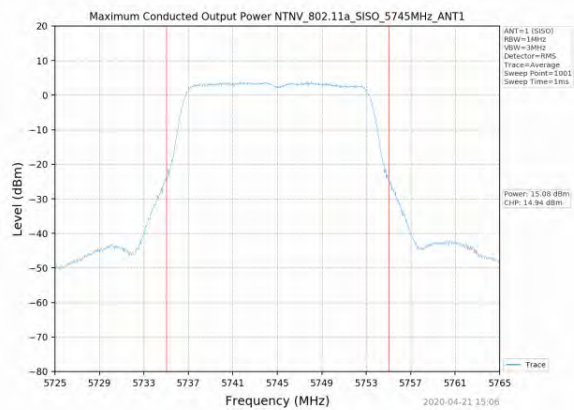
2. Maximum Conducted Output Power

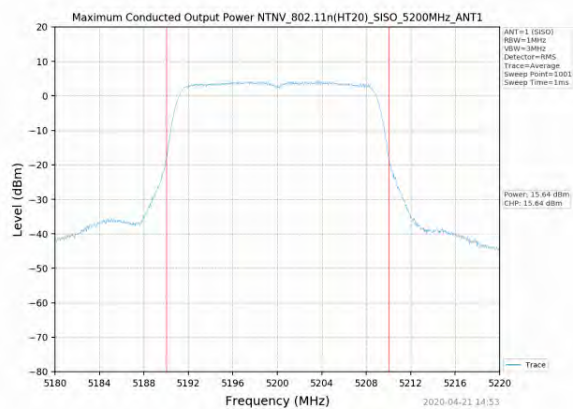
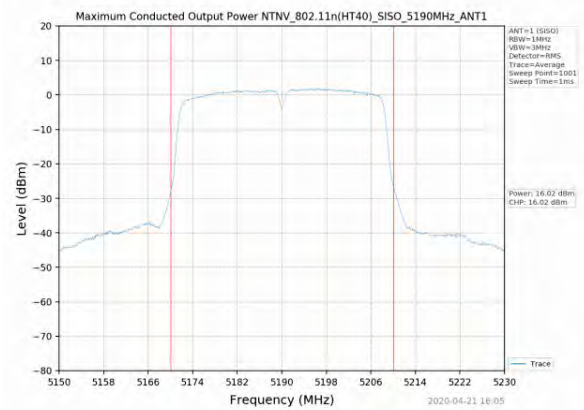
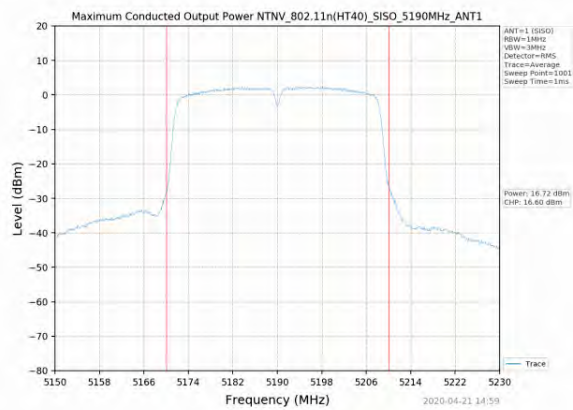
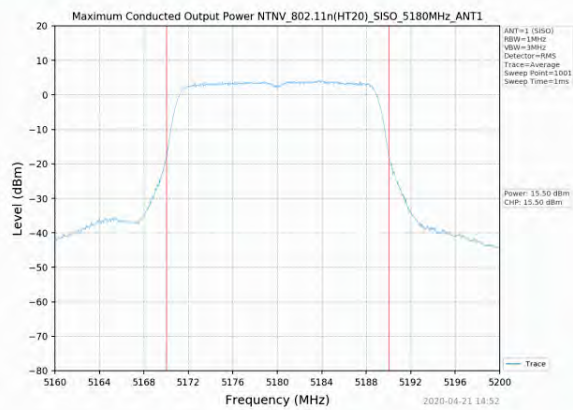
2.1 Test Result

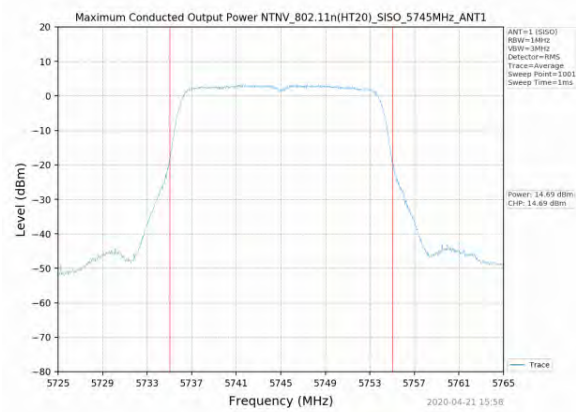
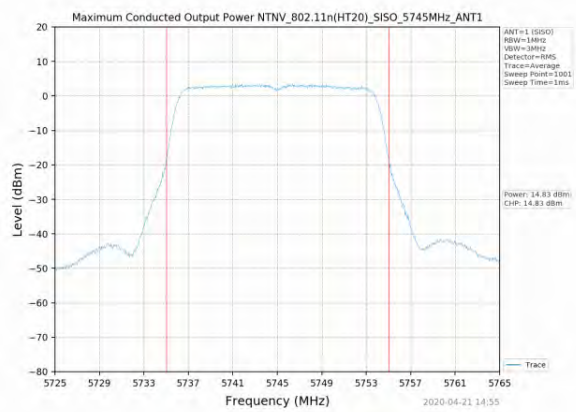
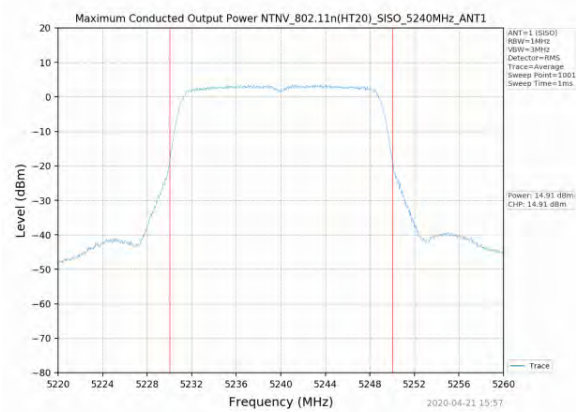
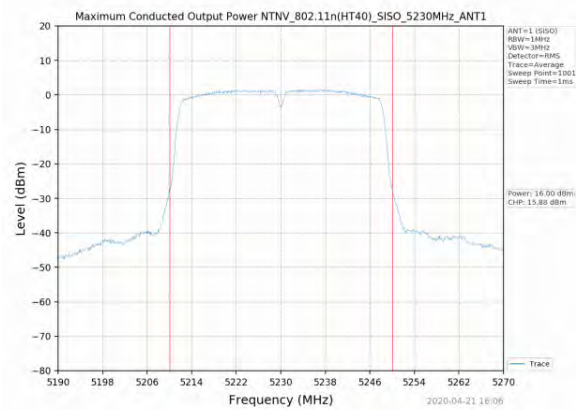
Test Mode	Frequency (MHz)	Tx Type	Measured Output Power (dBm)			Limits (dBm)	Verdict
			Ant1	Ant2	Output power Total		
802.11a	5180	SISO	15.93	15.48	/	≤24	PASS
	5200	SISO	16.06	15.68	/	≤24	PASS
	5240	SISO	15.61	15.27	/	≤24	PASS
	5745	SISO	15.08	14.59	/	≤30	PASS
	5785	SISO	15.74	14.04	/	≤30	PASS
	5825	SISO	15.89	13.17	/	≤30	PASS
802.11n	5180	SISO	15.50	15.05	18.29	≤23.99	PASS
	5190	SISO	16.72	16.02	19.39	≤23.99	PASS
	5200	SISO	15.64	15.24	18.45	≤23.99	PASS
	5230	SISO	16.36	16.00	19.19	≤23.99	PASS
	5240	SISO	15.17	14.91	18.05	≤23.99	PASS
	5745	SISO	14.83	14.69	17.77	≤29.99	PASS
	5755	SISO	15.90	15.38	18.66	≤29.99	PASS
	5785	SISO	15.38	13.94	17.73	≤29.99	PASS
	5795	SISO	16.55	14.69	18.73	≤29.99	PASS
802.11ac	5825	SISO	15.55	12.92	17.44	≤29.99	PASS
	5180	SISO	14.67	16.20	18.51	≤23.99	PASS
	5190	SISO	16.54	16.13	19.35	≤23.99	PASS
	5200	SISO	17.42	16.19	19.86	≤23.99	PASS
	5210	SISO	16.64	16.12	19.40	≤23.99	PASS
	5230	SISO	16.13	15.89	19.02	≤23.99	PASS
	5240	SISO	17.35	15.90	19.70	≤23.99	PASS
	5745	SISO	17.38	13.54	18.88	≤29.99	PASS
	5755	SISO	15.87	14.75	18.36	≤29.99	PASS
	5775	SISO	16.46	14.40	18.56	≤29.99	PASS
	5785	SISO	15.76	12.98	17.60	≤29.99	PASS
	5795	SISO	16.55	14.07	18.49	≤29.99	PASS
	5825	SISO	15.74	12.22	17.34	≤29.99	PASS

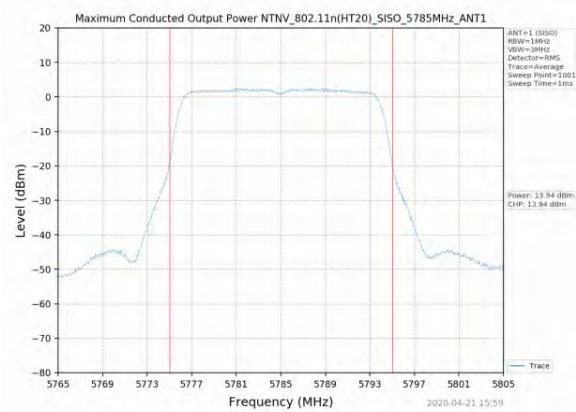
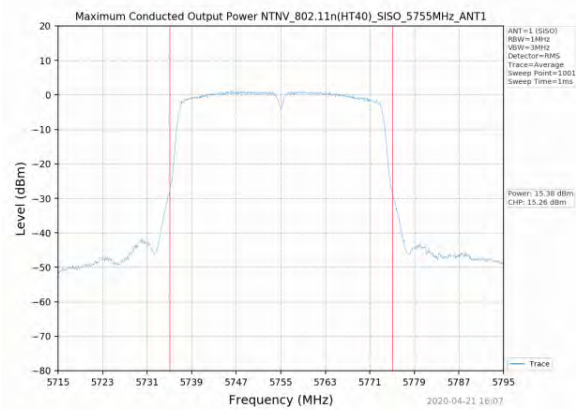
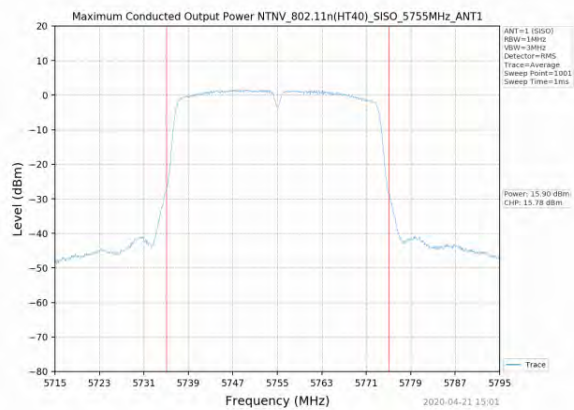
2.2 Test Graph

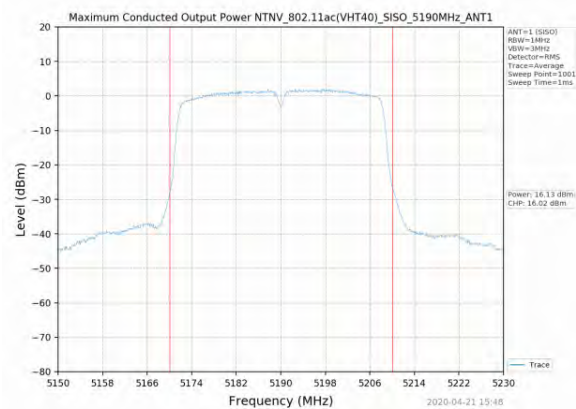
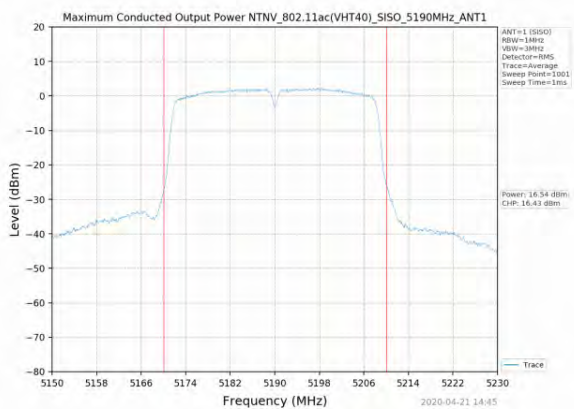
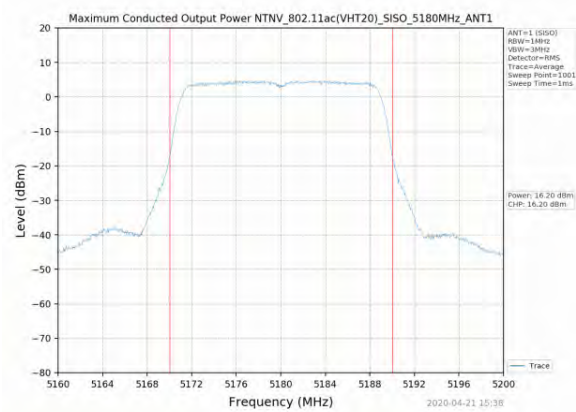
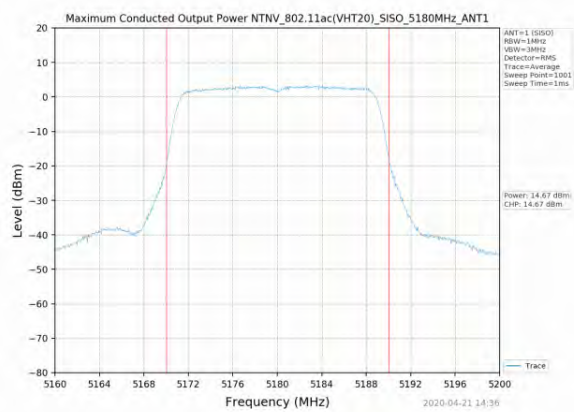
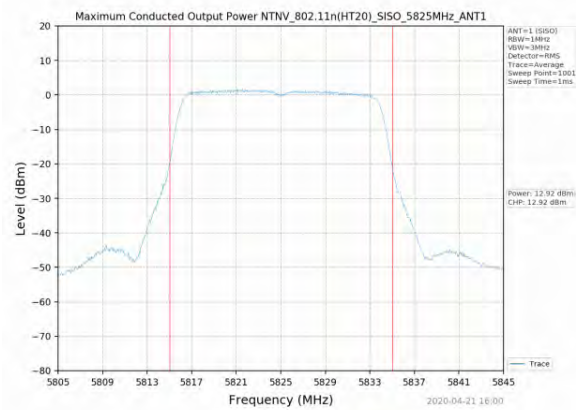


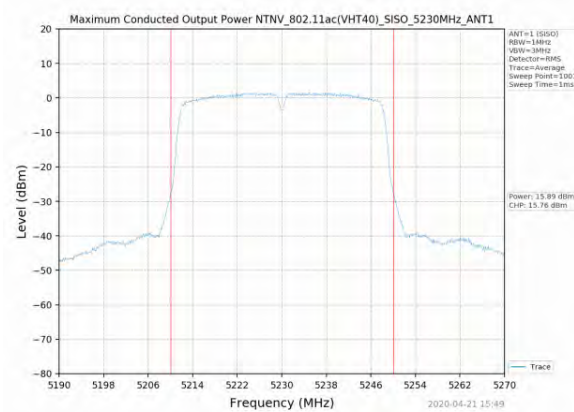
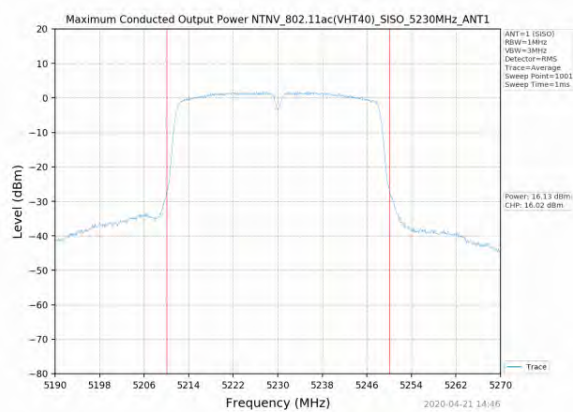
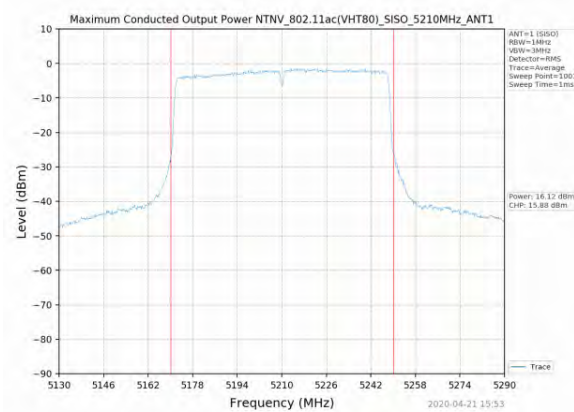
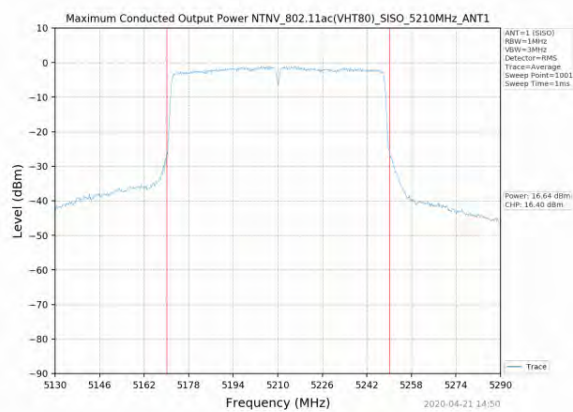
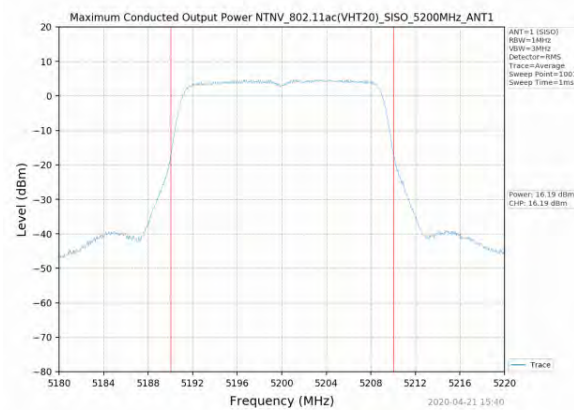


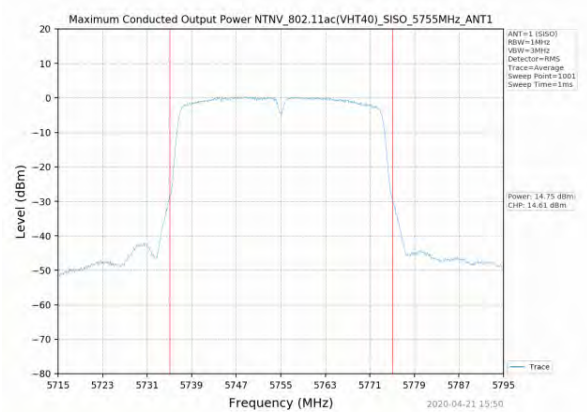
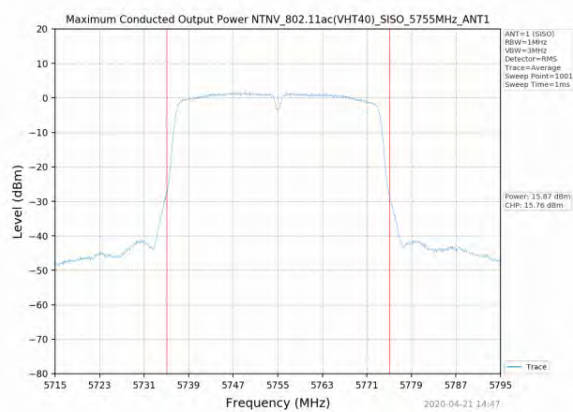
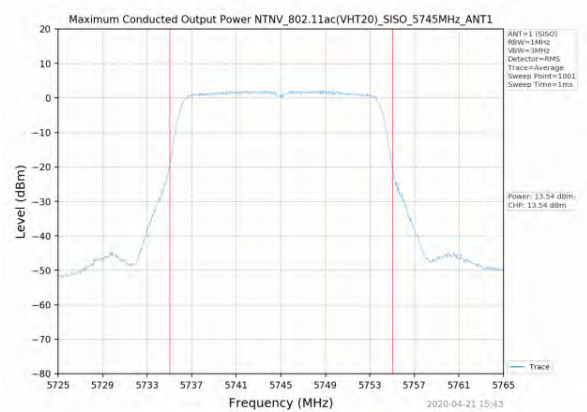
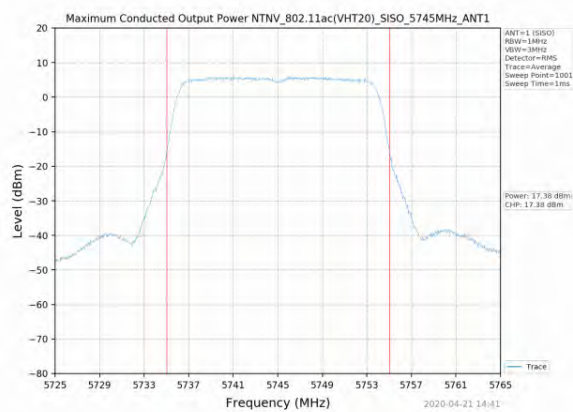
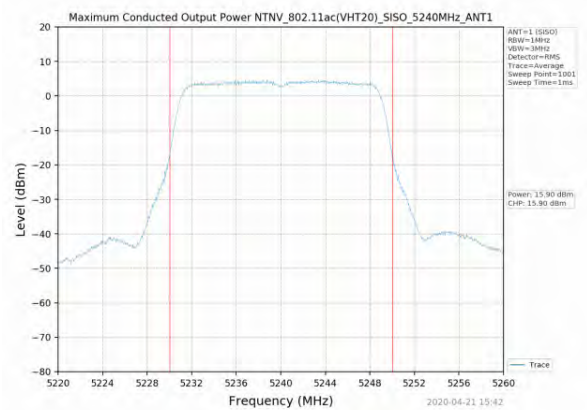
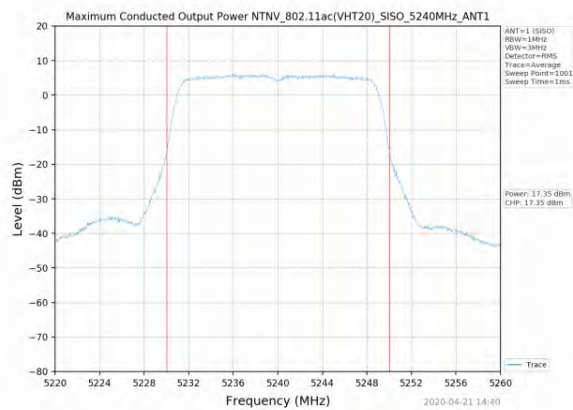


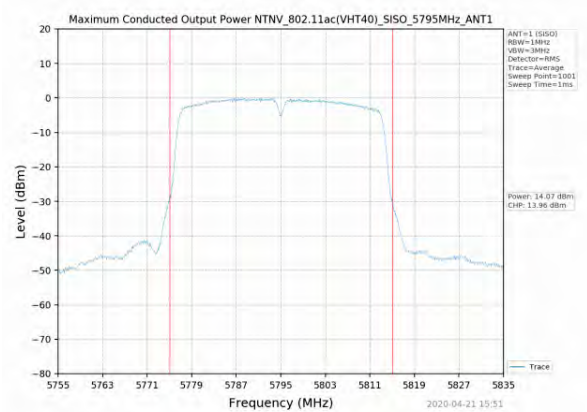
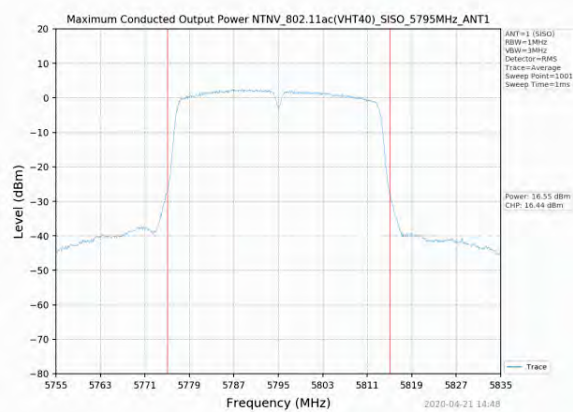
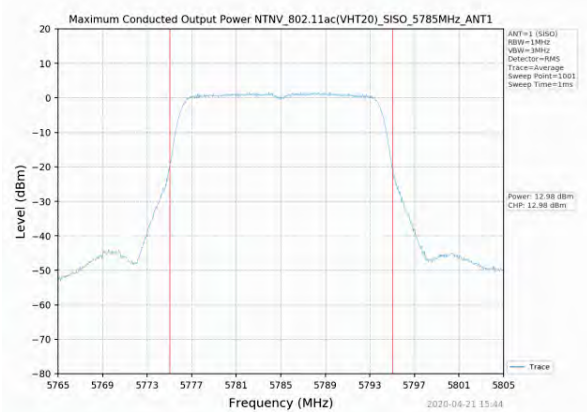
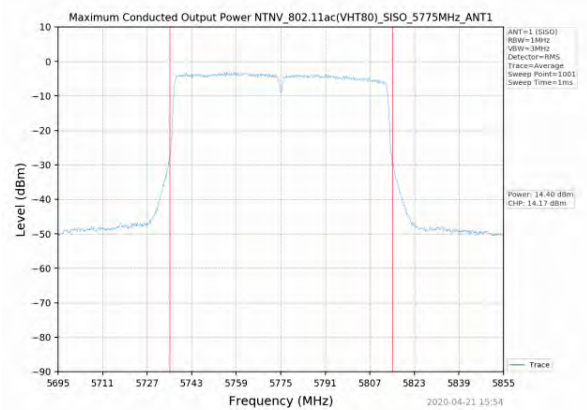
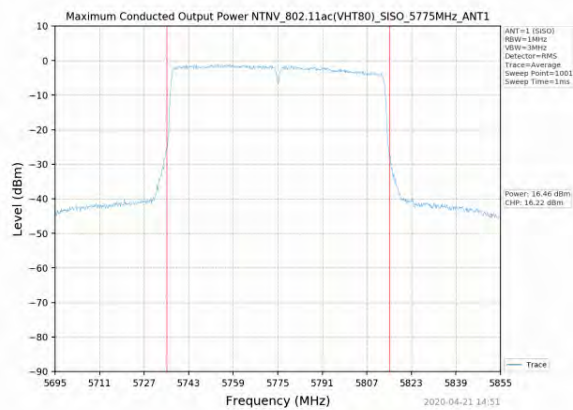


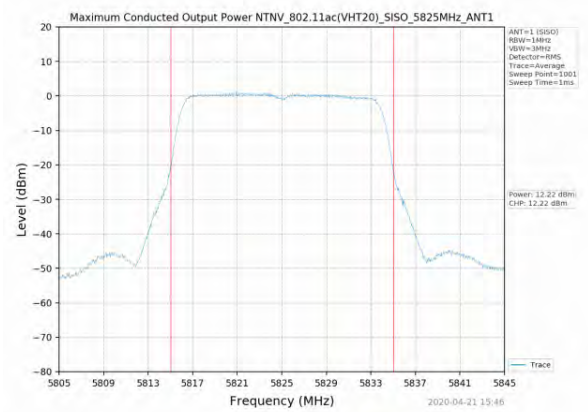
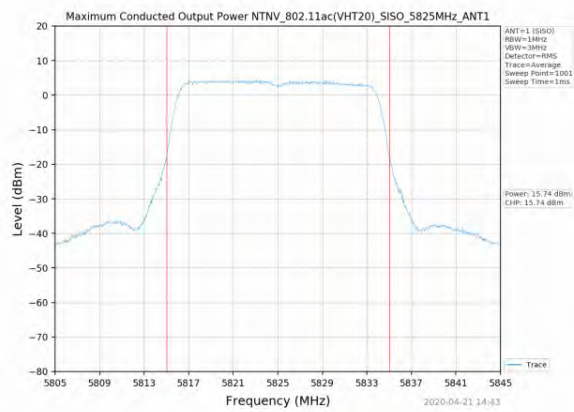










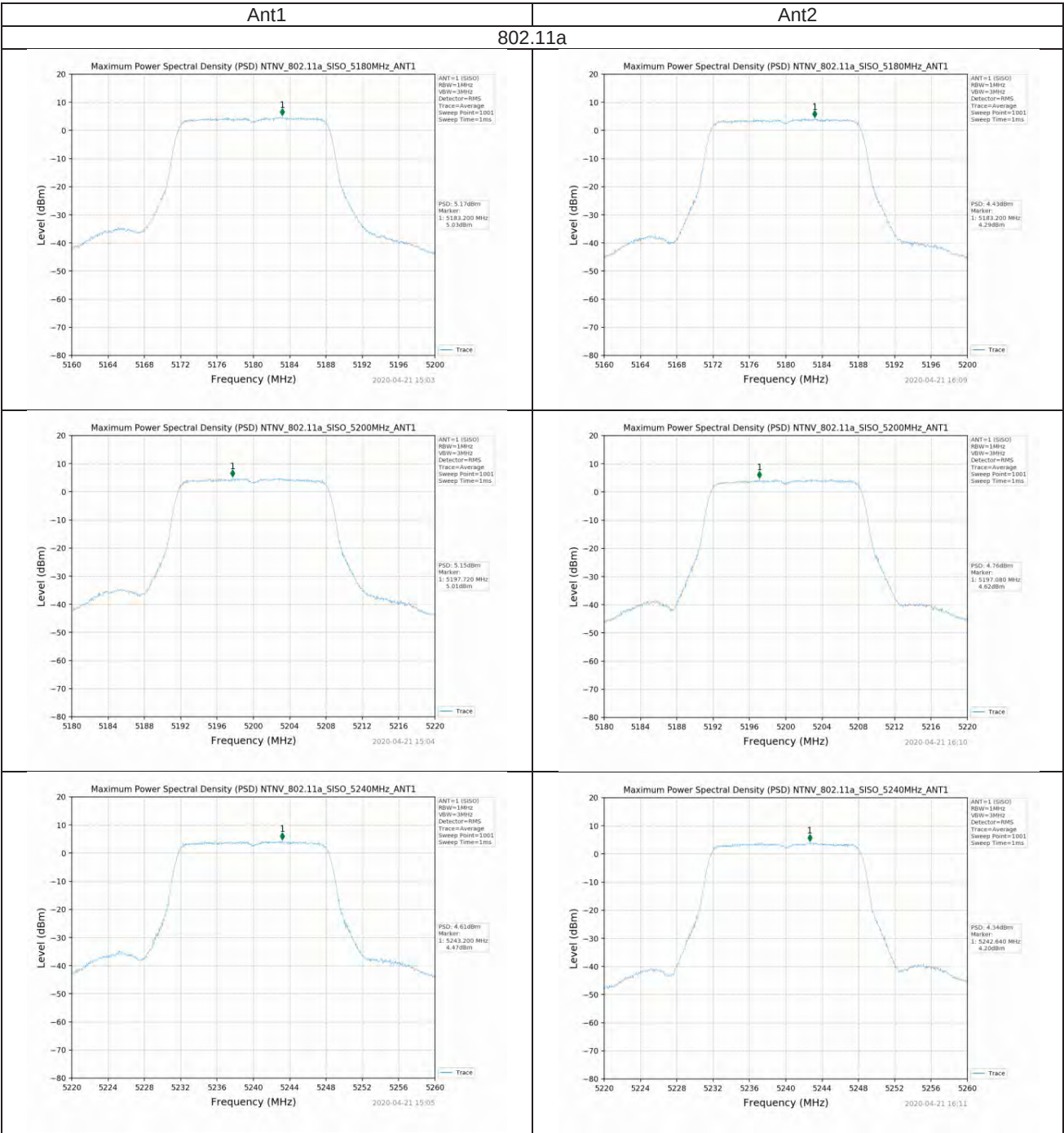


3. Maximum Power Spectral Density (PSD)

3.1 Test Result

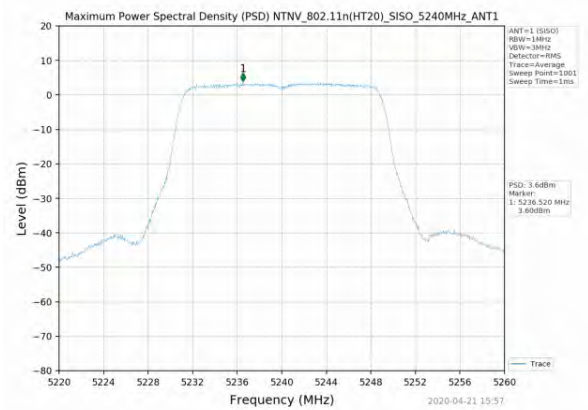
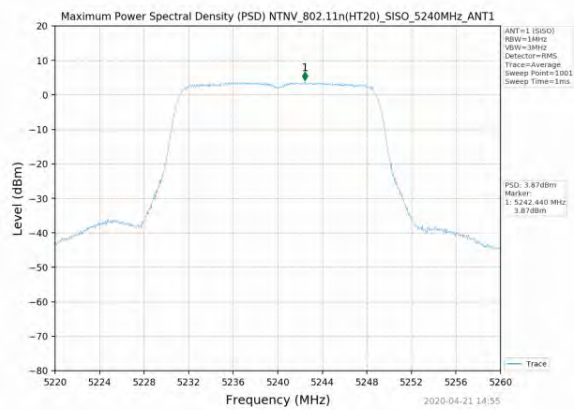
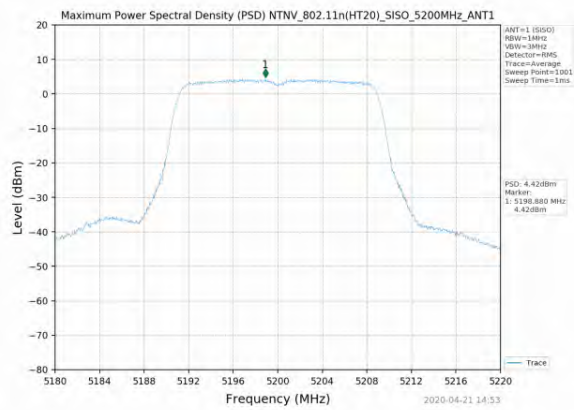
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)			Limits	Verdict
			Ant 1	Ant 2	Output power Total		
802.11a	5180	SISO	5.17	4.43	/	11dBm/MHz	PASS
	5200	SISO	5.15	4.76	/	11dBm/MHz	PASS
	5240	SISO	4.61	4.34	/	11dBm/MHz	PASS
	5745	SISO	4.885	6.491	/	30dBm/500KHz	PASS
	5785	SISO	4.937	5.823	/	30dBm/500KHz	PASS
	5825	SISO	4.496	4.788	/	30dBm/500KHz	PASS
802.11n(HT20)	5180	SISO	4.20	3.75	6.99	10.99dBm/MHz	PASS
	5200	SISO	4.42	4.09	7.27	10.99dBm/MHz	PASS
	5240	SISO	3.87	3.60	6.75	10.99dBm/MHz	PASS
	5745	SISO	4.921	5.753	8.37	29.99dBm/500KHz	PASS
	5785	SISO	4.551	5.035	7.81	29.99dBm/500KHz	PASS
	5825	SISO	5.507	4.420	8.01	29.99dBm/500KHz	PASS
802.11n(HT40)	5190	SISO	2.84	2.18	5.53	10.99dBm/MHz	PASS
	5230	SISO	2.37	1.80	5.10	10.99dBm/MHz	PASS
	5755	SISO	2.333	2.580	5.47	29.99dBm/500KHz	PASS
	5795	SISO	2.187	2.718	5.47	29.99dBm/500KHz	PASS
802.11ac(VHT20)	5180	SISO	5.85	4.90	8.41	10.99dBm/MHz	PASS
	5200	SISO	6.08	4.94	8.56	10.99dBm/MHz	PASS
	5240	SISO	6.04	4.85	8.5	10.99dBm/MHz	PASS
	5745	SISO	5.114	6.507	8.88	29.99dBm/500KHz	PASS
	5785	SISO	4.230	4.954	7.62	29.99dBm/500KHz	PASS
	5825	SISO	4.503	4.862	7.70	29.99dBm/500KHz	PASS
802.11ac(VHT40)	5190	SISO	2.48	2.11	5.31	10.99dBm/MHz	PASS
	5230	SISO	2.35	1.76	5.08	10.99dBm/MHz	PASS
	5755	SISO	2.185	2.279	5.24	29.99dBm/500KHz	PASS
	5795	SISO	1.939	2.371	5.17	29.99dBm/500KHz	PASS
802.11ac(VHT80)	5210	SISO	-0.74	-1.21	2.04	10.99dBm/MHz	PASS
	5775	SISO	-0.830	-0.766	2.21	29.99dBm/500KHz	PASS

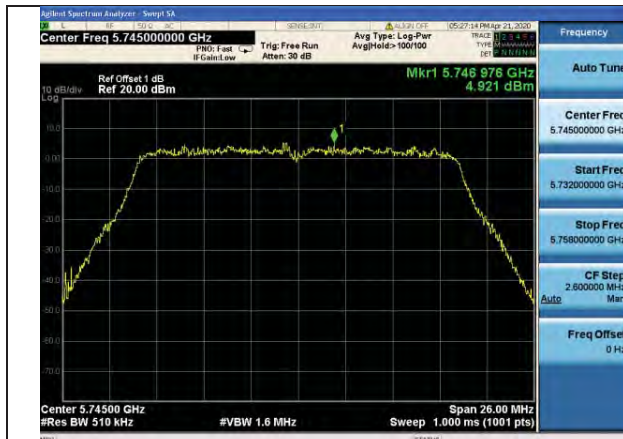
3.2 Test Graph



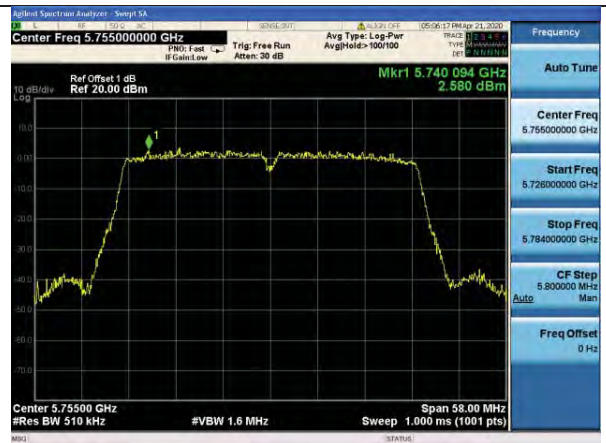
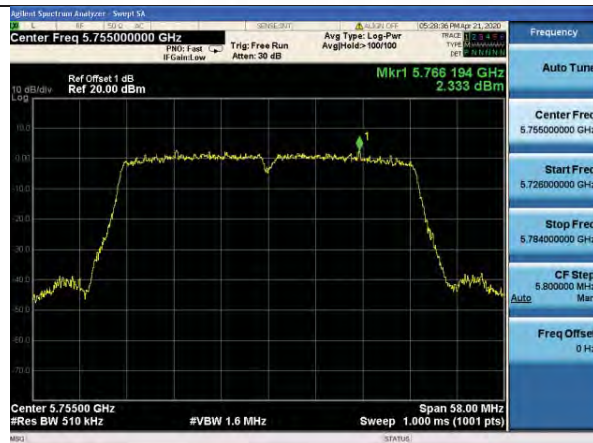
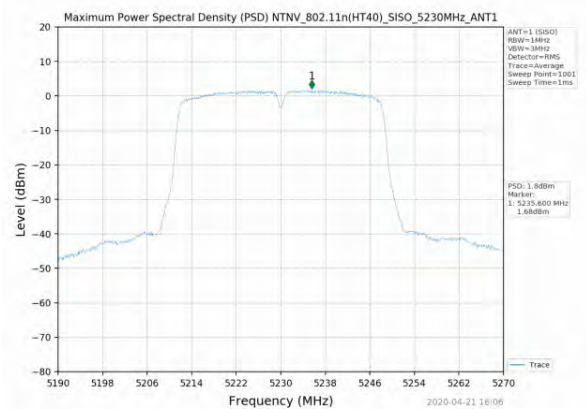
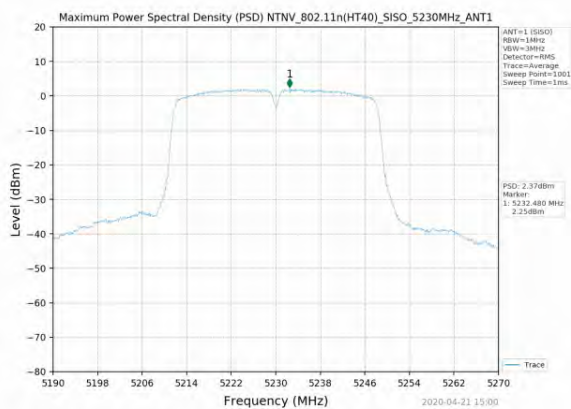
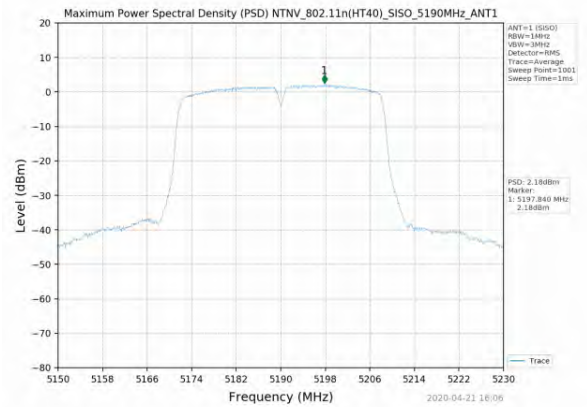
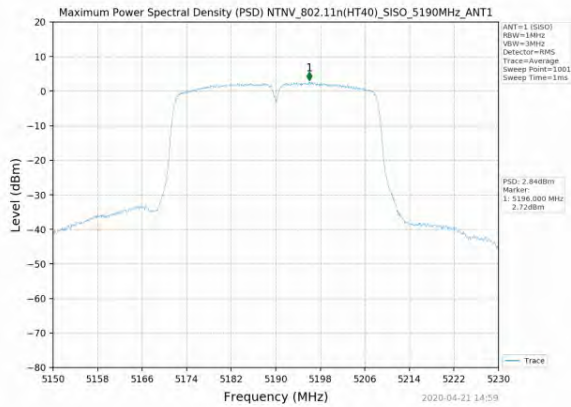


802.11n(HT20)



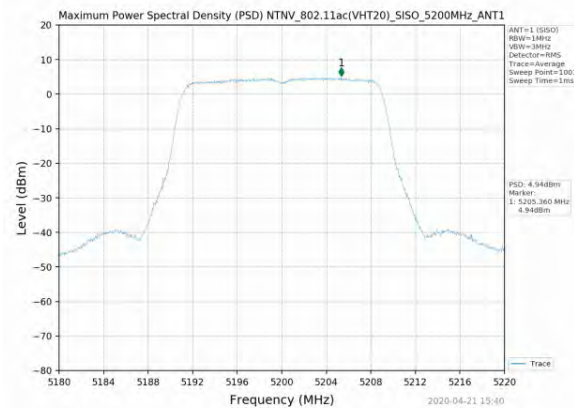
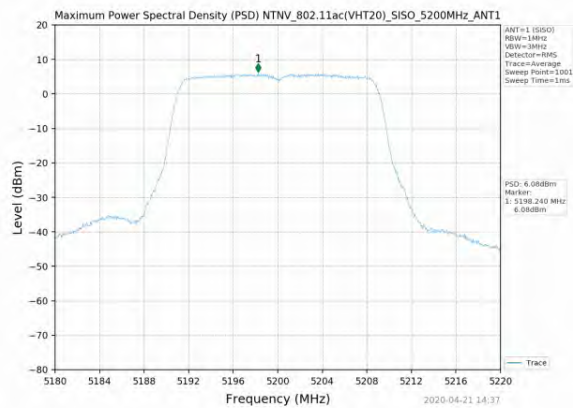
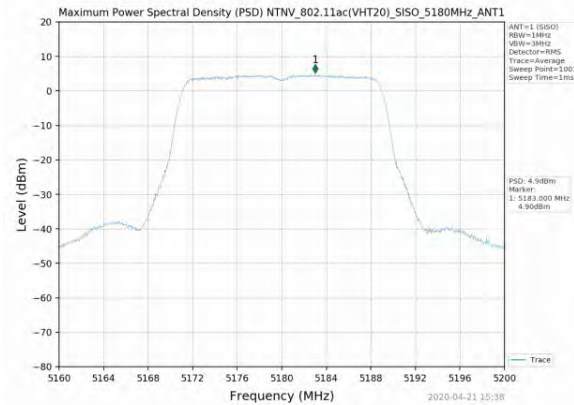
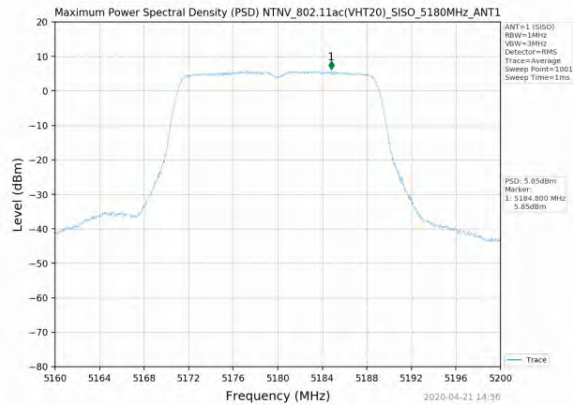


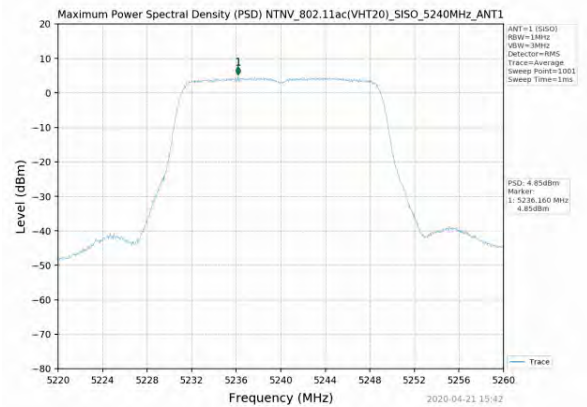
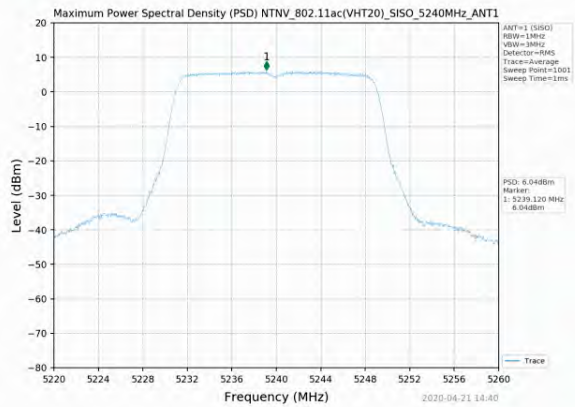
802.11n(HT40)





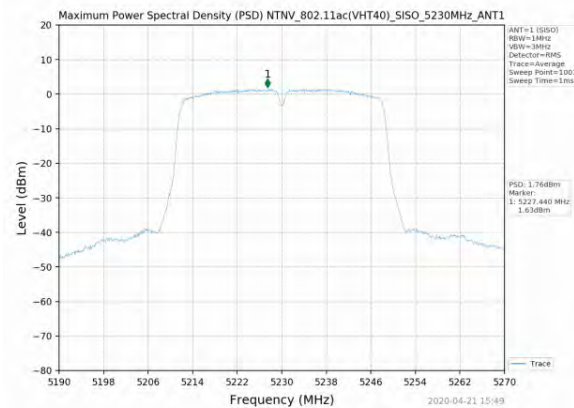
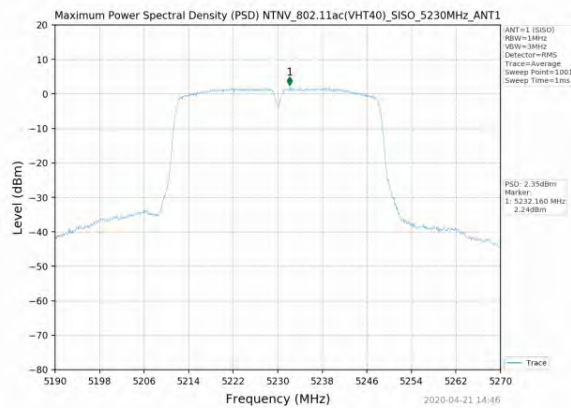
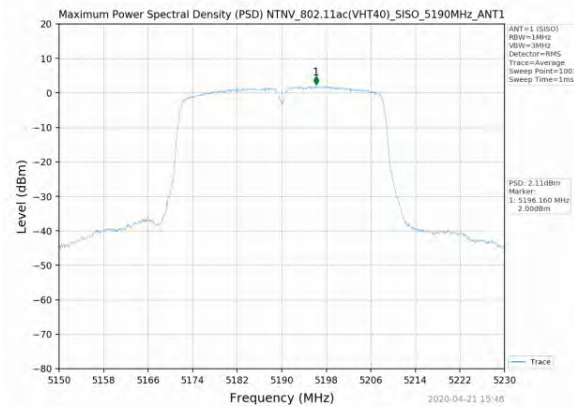
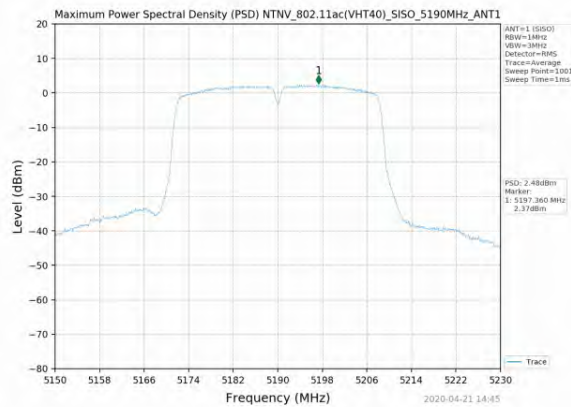
802.11ac(HT20)





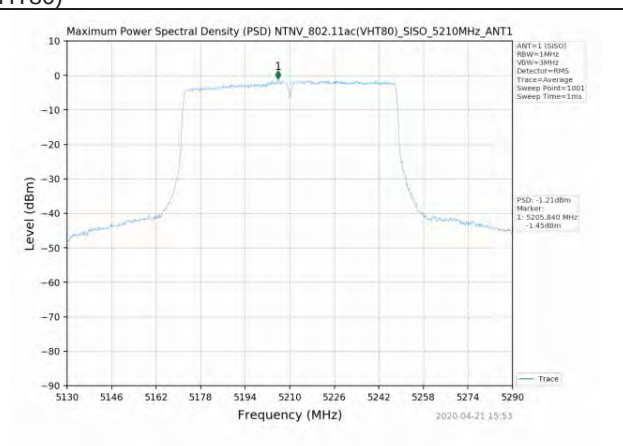
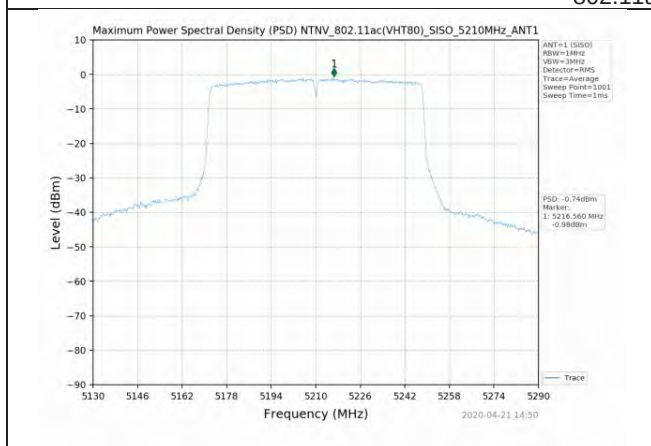


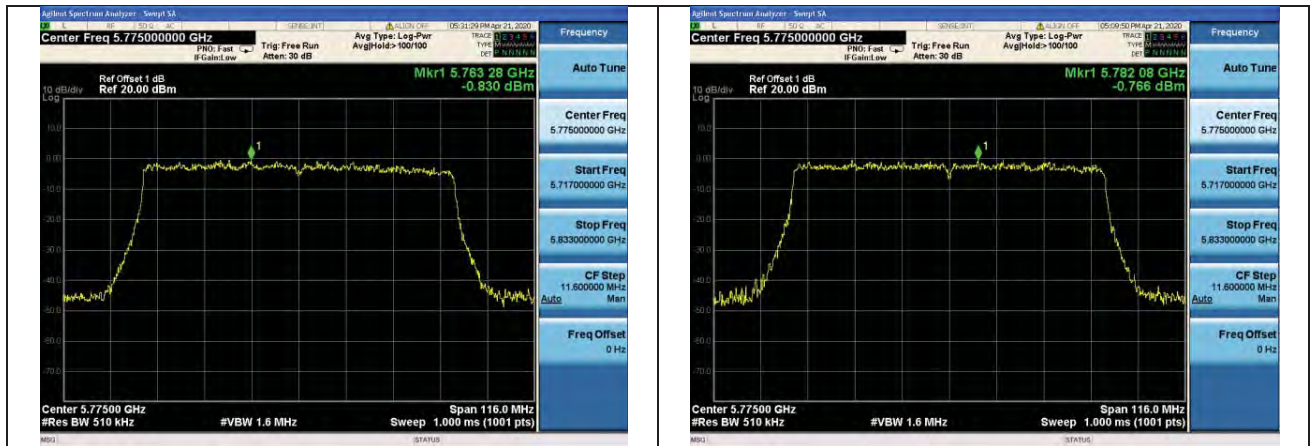
802.11ac(HT40)





802.11ac(HT80)





4. Frequency Stability

4.1 Test Result

Test Condition	Test Mode	Test Frequency [MHz]	Result[ppm]		Limit [ppm]	Verdict
			Ant1	Ant2		
NTNV	Carrier	5180	-0.19	-0.19	<=20	PASS
		5190	-0.19	-0.19	<=20	PASS
		5200	-0.19	-0.19	<=20	PASS
		5210	-0.19	-0.19	<=20	PASS
		5230	-0.19	-0.19	<=20	PASS
		5240	-0.19	-0.38	<=20	PASS
		5745	-0.17	-0.35	<=20	PASS
		5755	-0.17	-0.17	<=20	PASS
		5775	-0.17	-0.17	<=20	PASS
		5785	-0.17	-0.35	<=20	PASS
		5795	-0.17	-0.35	<=20	PASS
		5825	-0.34	-0.34	<=20	PASS