TEST REPORT

Appendix A: Test results of U-NII-1 Band

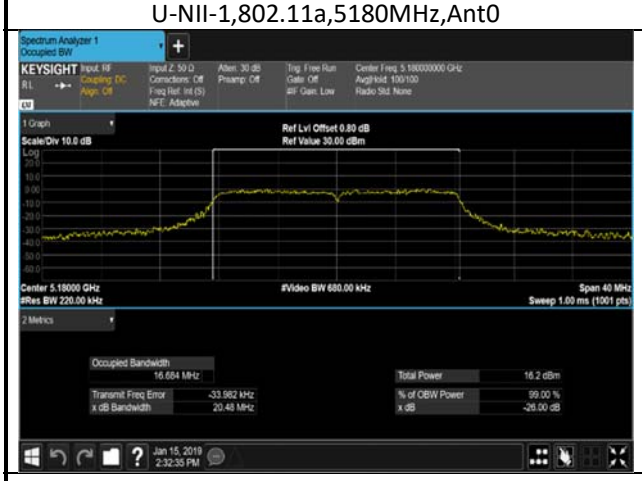
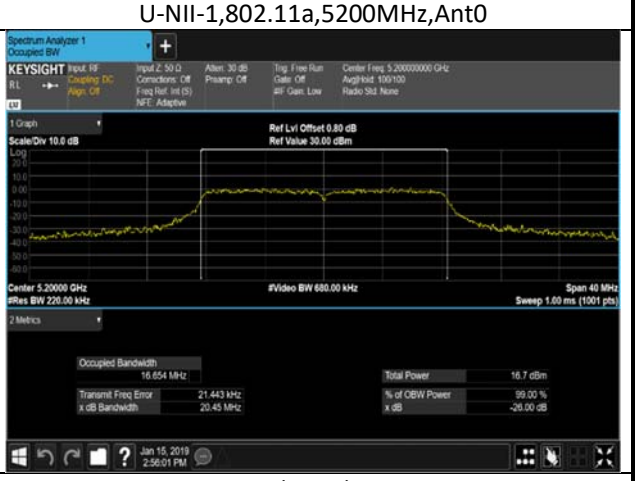
1 Occupied N dB Bandwidth

1.1 Test Data

U-NII-1 Occupied N dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11a	5180	Ant0	20.48	Pass
802.11a	5200	Ant0	20.45	Pass
802.11a	5240	Ant0	20.21	Pass
802.11n (HT20)	5180	Ant0	21.58	Pass
802.11n (HT20)	5200	Ant0	21.20	Pass
802.11n (HT20)	5240	Ant0	21.57	Pass
802.11n (HT40)	5190	Ant0	43.22	Pass
802.11n (HT40)	5230	Ant0	49.90	Pass
802.11ac (VHT80)	5210	Ant0	92.63	Pass

TEST REPORT

1.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0	U-NII-1,802.11a,5200MHz,Ant0
	
U-NII-1,802.11a,5240MHz,Ant0	U-NII-1,802.11n(HT20),5180MHz,Ant0
U-NII-1,802.11n(HT20),5200MHz,Ant0	U-NII-1,802.11n(HT20),5240MHz,Ant0

TEST REPORT

U-NII-1,802.11n(HT40),5190MHz,Ant0	U-NII-1,802.11n(HT40),5230MHz,Ant0
U-NII-1,802.11ac(VHT80),5210MHz ,Ant0	

TEST REPORT

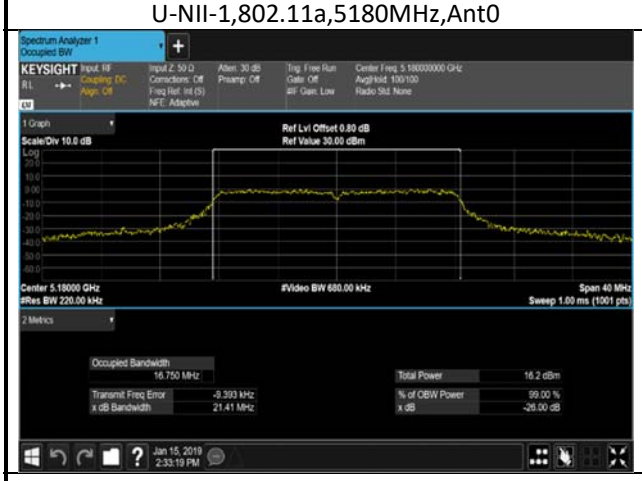
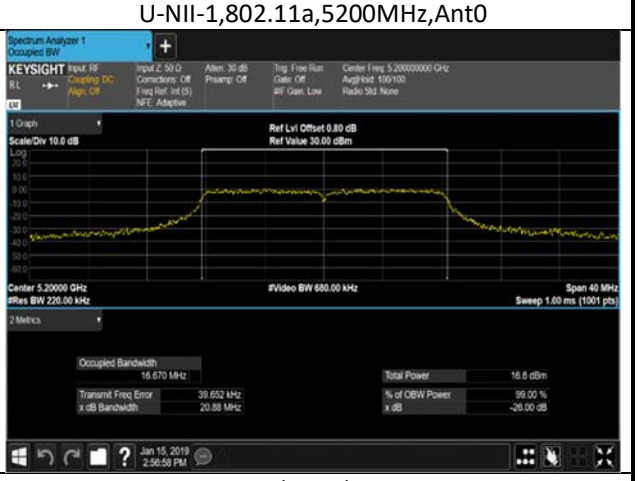
2 99% Occupied Bandwidth

2.1 Test Data

U-NII-1 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11a	5180	Ant0	16.750	Pass
802.11a	5200	Ant0	16.670	Pass
802.11a	5240	Ant0	16.645	Pass
802.11n (HT20)	5180	Ant0	17.683	Pass
802.11n (HT20)	5200	Ant0	17.710	Pass
802.11n (HT20)	5240	Ant0	17.674	Pass
802.11n (HT40)	5190	Ant0	36.443	Pass
802.11n (HT40)	5230	Ant0	36.493	Pass
802.11ac (VHT80)	5210	Ant0	75.781	Pass

TEST REPORT

2.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0	U-NII-1,802.11a,5200MHz,Ant0
	
U-NII-1,802.11a,5240MHz,Ant0	U-NII-1,802.11n(HT20),5180MHz,Ant0
U-NII-1,802.11n(HT20),5200MHz,Ant0	U-NII-1,802.11n(HT20),5240MHz,Ant0

TEST REPORT

U-NII-1,802.11n(HT40),5190MHz,Ant0	U-NII-1,802.11n(HT40),5230MHz,Ant0
U-NII-1,802.11ac(VHT80),5210MHz ,Ant0	

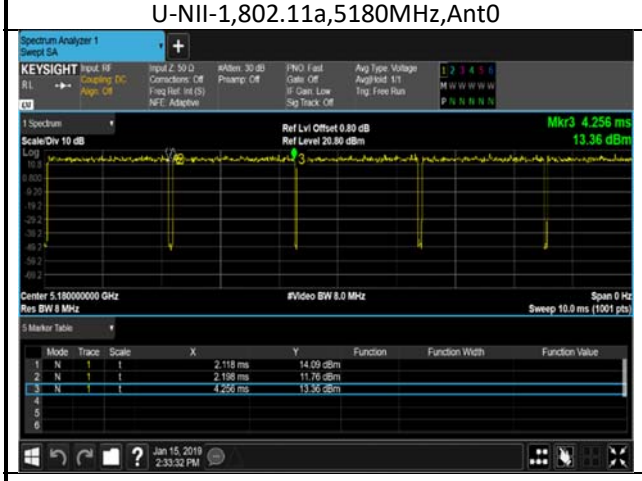
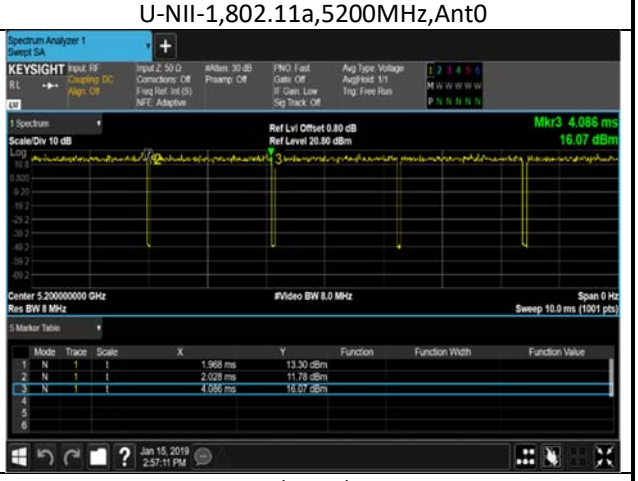
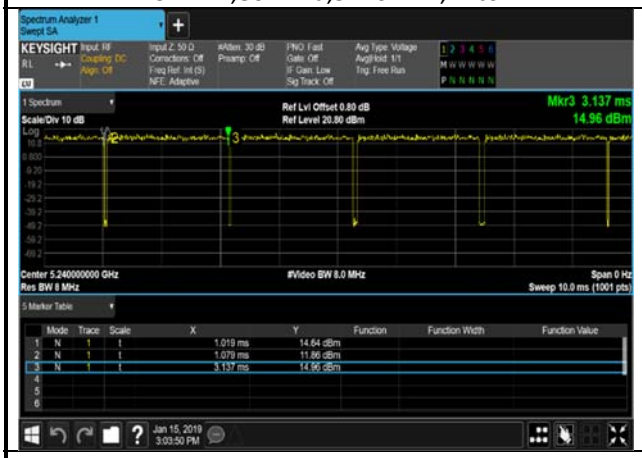
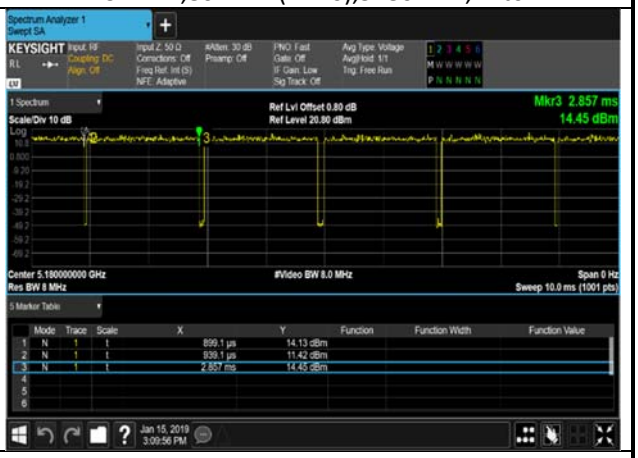
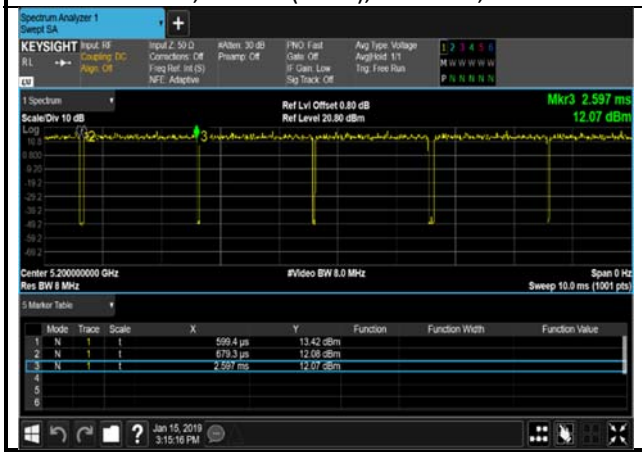
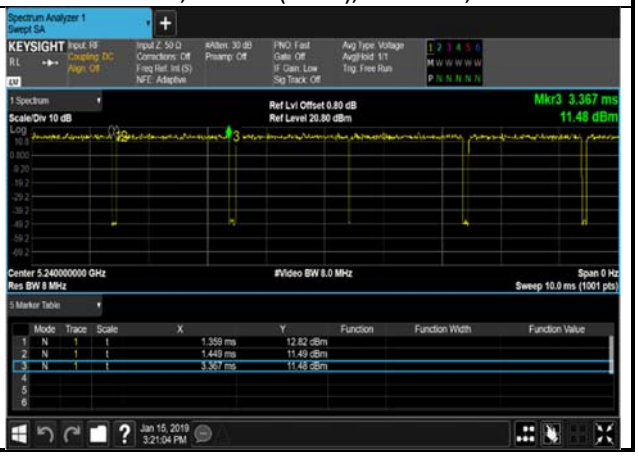
3 Duty Cycle

3.1 Test Data

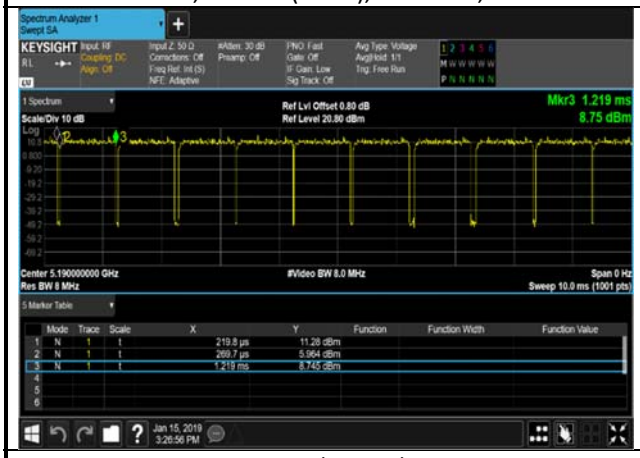
U-NII-1 Duty Cycle				
Mode	Test Frequency (MHz)	Ant	Duty Cycle (%)	Duty Cycle Factor (dB)
802.11a	5180	Ant0	96.26	0.17
802.11a	5200	Ant0	97.17	0.12
802.11a	5240	Ant0	97.17	0.12
802.11n (HT20)	5180	Ant0	97.96	0.09
802.11n (HT20)	5200	Ant0	96.00	0.18
802.11n (HT20)	5240	Ant0	95.52	0.20
802.11n (HT40)	5190	Ant0	95.00	0.22
802.11n (HT40)	5230	Ant0	94.95	0.23
802.11ac (VHT80)	5210	Ant0	86.79	0.62

TEST REPORT

3.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0	U-NII-1,802.11a,5200MHz,Ant0
	
U-NII-1,802.11a,5240MHz,Ant0	U-NII-1,802.11n(HT20),5180MHz,Ant0
	
U-NII-1,802.11n(HT20),5200MHz,Ant0	U-NII-1,802.11n(HT20),5240MHz,Ant0
	

TEST REPORT

U-NII-1,802.11n(HT40),5190MHz,Ant0	U-NII-1,802.11n(HT40),5230MHz,Ant0
	
U-NII-1,802.11ac(VHT80),5210MHz ,Ant0	

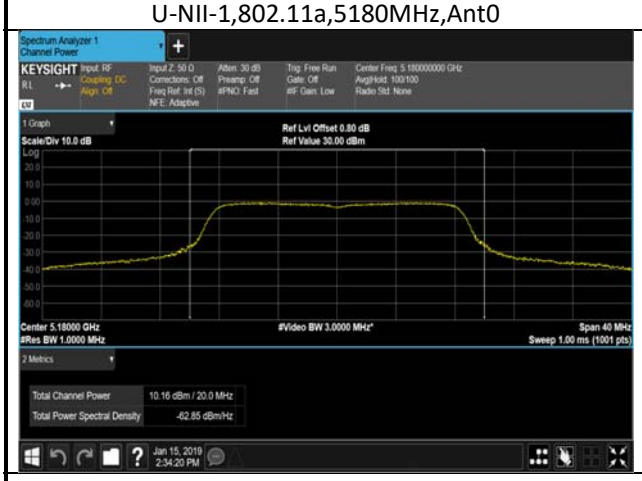
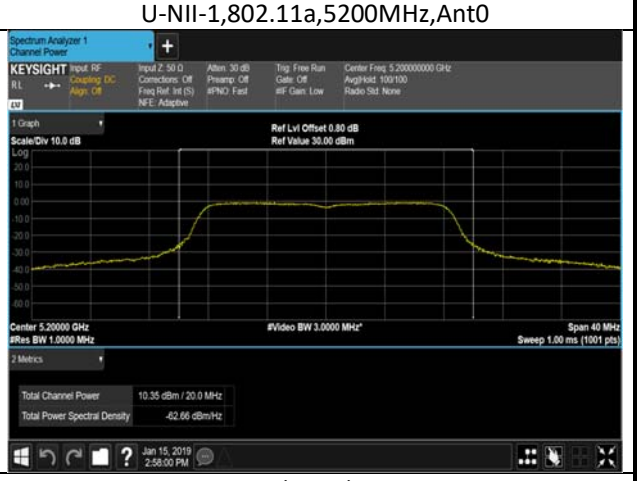
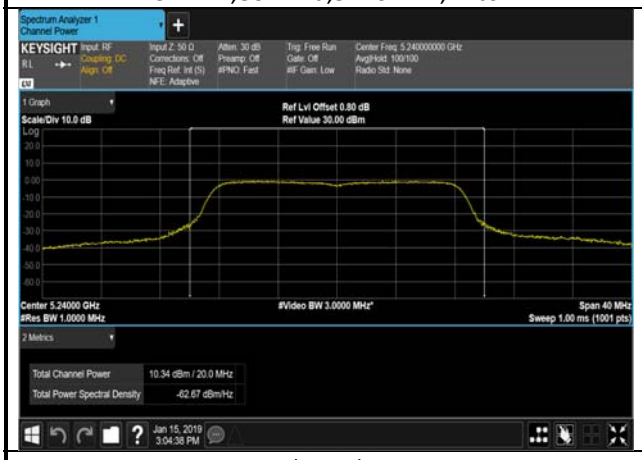
4 AVGSA Output Power

4.1 Test Data

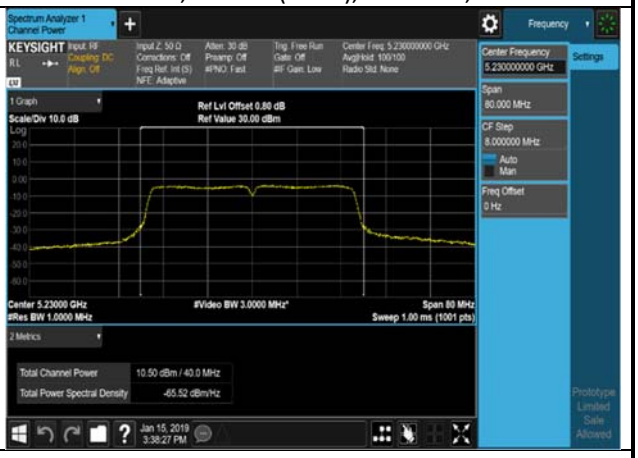
U-NII-1 AVGSA Output Power								
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
802.11a	5180	Ant0	0.17	10.33	24	13.03	23	Pass
802.11a	5200	Ant0	0.12	10.47	24	13.17	23	Pass
802.11a	5240	Ant0	0.12	10.46	24	13.16	23	Pass
802.11n (HT20)	5180	Ant0	0.09	10.04	24	12.74	23	Pass
802.11n (HT20)	5200	Ant0	0.18	10.15	24	12.85	23	Pass
802.11n (HT20)	5240	Ant0	0.20	10.23	24	12.93	23	Pass
802.11n (HT40)	5190	Ant0	0.22	10.35	24	13.05	23	Pass
802.11n (HT40)	5230	Ant0	0.23	10.73	24	13.43	23	Pass
802.11ac (VHT80)	5210	Ant0	0.62	10.49	24	13.19	23	Pass

TEST REPORT

4.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0	U-NII-1,802.11a,5200MHz,Ant0
	
U-NII-1,802.11a,5240MHz,Ant0	U-NII-1,802.11n(HT20),5180MHz,Ant0
	
U-NII-1,802.11n(HT20),5200MHz,Ant0	U-NII-1,802.11n(HT20),5240MHz,Ant0

TEST REPORT

U-NII-1,802.11n(HT40),5190MHz,Ant0	U-NII-1,802.11n(HT40),5230MHz,Ant0
	
U-NII-1,802.11ac(VHT80),5210MHz ,Ant0	

5 AVGSA Power Spectral Density

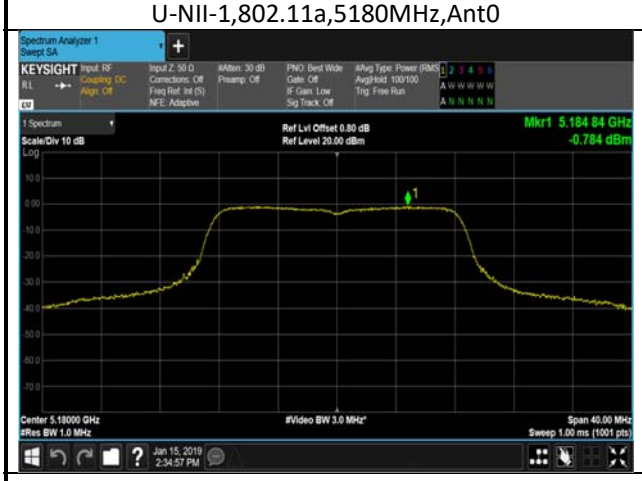
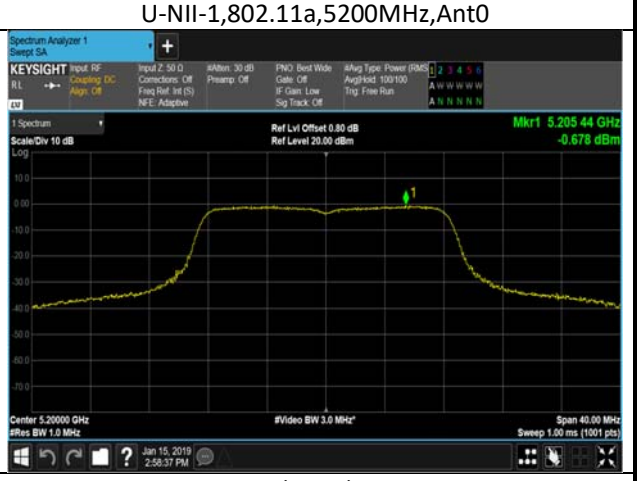
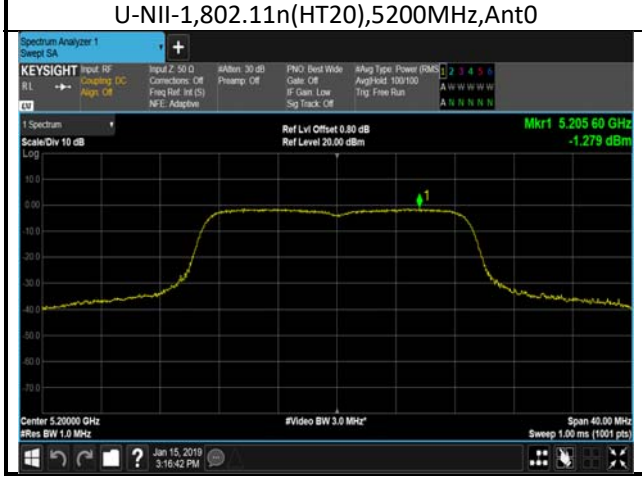
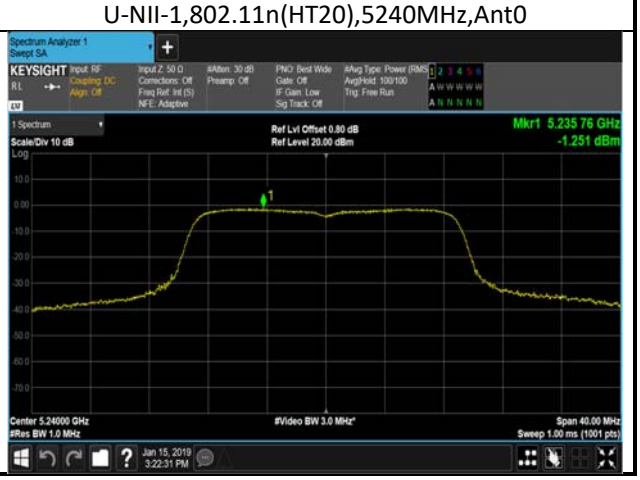
5.1 Test Data

U-NII-1 AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm/MHz)	RBW (kHz)	Limit (dBm/MHz)	Result
802.11a	5180	Ant0	0.17	-0.614	1000	11	Pass
802.11a	5200	Ant0	0.12	-0.558	1000	11	Pass
802.11a	5240	Ant0	0.12	-0.422	1000	11	Pass
802.11n (HT20)	5180	Ant0	0.09	-1.392	1000	11	Pass
802.11n (HT20)	5200	Ant0	0.18	-1.099	1000	11	Pass
802.11n (HT20)	5240	Ant0	0.20	-1.051	1000	11	Pass
802.11n (HT40)	5190	Ant0	0.22	-3.756	1000	11	Pass
802.11n (HT40)	5230	Ant0	0.23	-3.515	1000	11	Pass
802.11ac (VHT80)	5210	Ant0	0.62	-5.437	1000	11	Pass

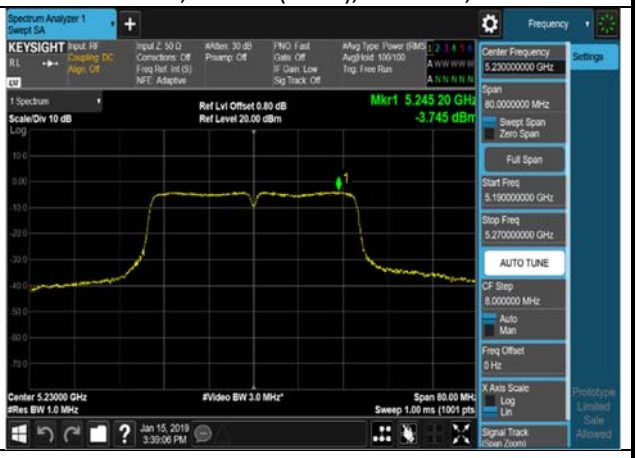
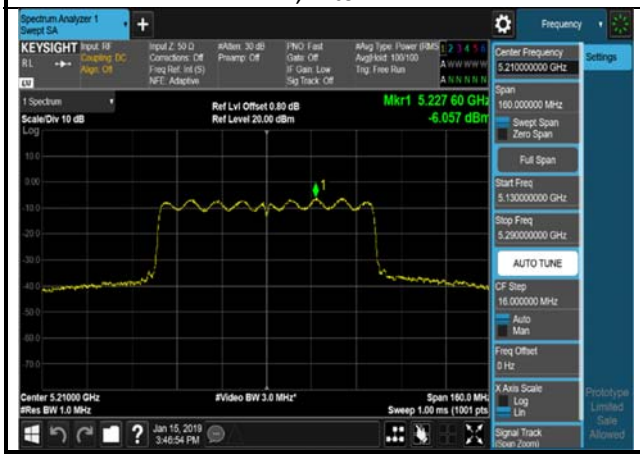
The maximum EIRP PSD = -0.422dBm/MHz+2.7dBi = **2.278**dBm/MHz which is lower than the limit of 10dBm in any 1 megahertz band listed in RSS-247.

TEST REPORT

5.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0	U-NII-1,802.11a,5200MHz,Ant0
	
U-NII-1,802.11a,5240MHz,Ant0	U-NII-1,802.11n(HT20),5180MHz,Ant0
U-NII-1,802.11n(HT20),5200MHz,Ant0	U-NII-1,802.11n(HT20),5240MHz,Ant0
	

TEST REPORT

U-NII-1,802.11n(HT40),5190MHz,Ant0	U-NII-1,802.11n(HT40),5230MHz,Ant0
	
U-NII-1,802.11ac(VHT80),5210MHz ,Ant0	
	

********** END **********