Appendix A: Test results

Power level setting using in test:

Band	Frequency	802.11 a		802.11 n (HT20)		Frequency	802.11 n (HT40)		Frequency	802.11 ac (VHT80)	
		Ant0	Ant1	Ant0	Ant1		Ant0	Ant1		Ant0	Ant1
NII 1	5180	52	52	51	51	5190	40	40	5210	34	34
	5200	52	52	50	50	5230	48	48			
	5240	48	48	52	52						

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	21.44	Pass
802.11a	5180	Ant1	20.68	Pass
802.11a	5200	Ant0	21.93	Pass
802.11a	5200	Ant1	21.01	Pass
802.11a	5240	Ant0	20.29	Pass
802.11a	5240	Ant1	20.41	Pass
802.11n (HT20)	5180	Ant0	22.11	Pass
802.11n (HT20)	5180	Ant1	20.91	Pass
802.11n (HT20)	5200	Ant0	22.37	Pass
802.11n (HT20)	5200	Ant1	21.11	Pass
802.11n (HT20)	5240	Ant0	22.82	Pass
802.11n (HT20)	5240	Ant1	22.53	Pass
802.11n (HT40)	5190	Ant0	40.82	Pass
802.11n (HT40)	5190	Ant1	40.99	Pass
802.11n (HT40)	5230	Ant0	42.17	Pass
802.11n (HT40)	5230	Ant1	44.49	Pass
802.11ac (VHT80)	5210	Ant0	81.50	Pass
802.11ac (VHT80)	5210	Ant1	80.90	Pass

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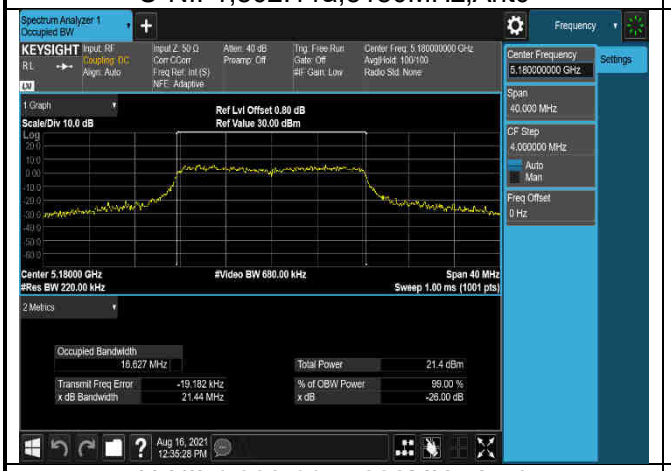
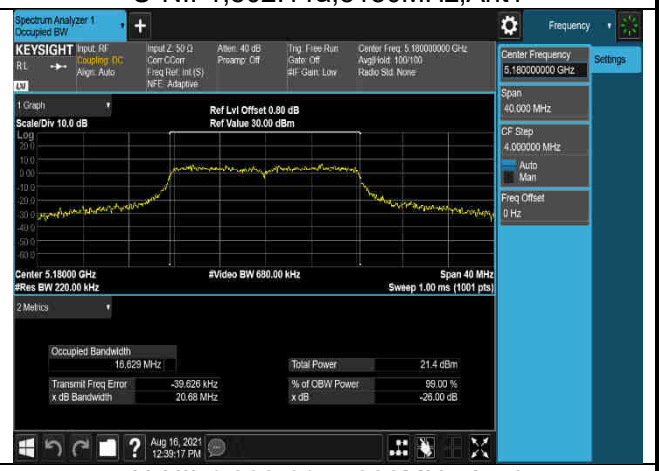
1.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0

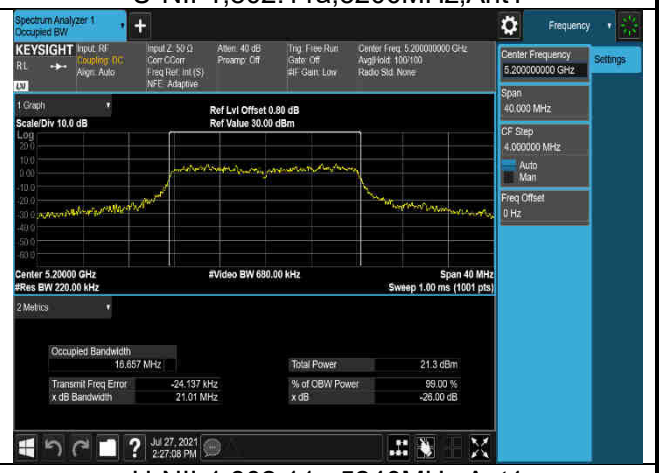


U-NII-1,802.11a,5180MHz,Ant1

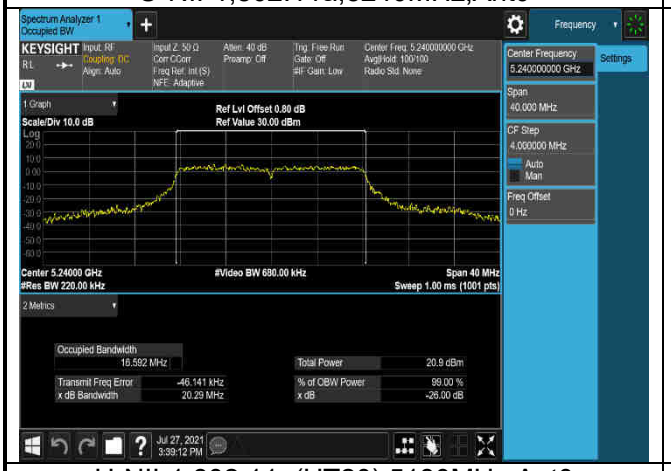


U-NII-1,802.11a,5200MHz,Ant0

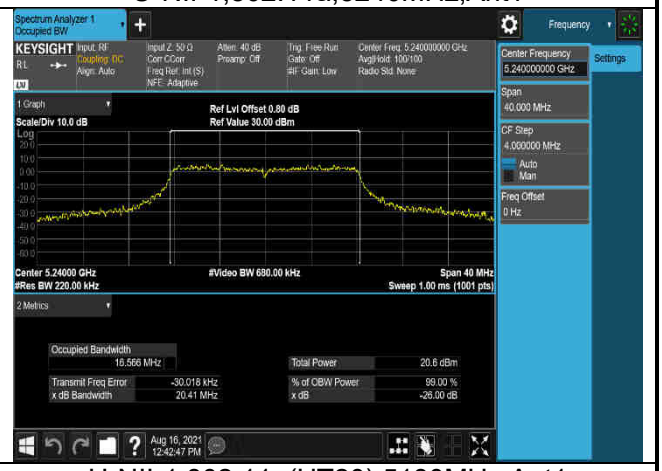
U-NII-1,802.11a,5200MHz,Ant1



U-NII-1,802.11a,5240MHz,Ant0



U-NII-1,802.11a,5240MHz,Ant1



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

U-NII-1,802.11n(HT20),5180MHz,Ant1

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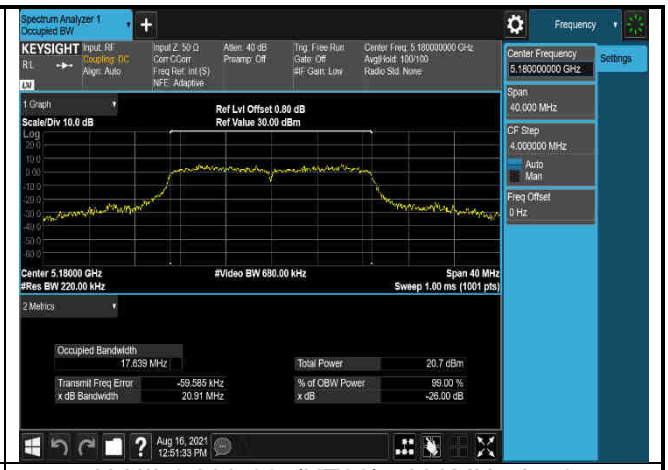
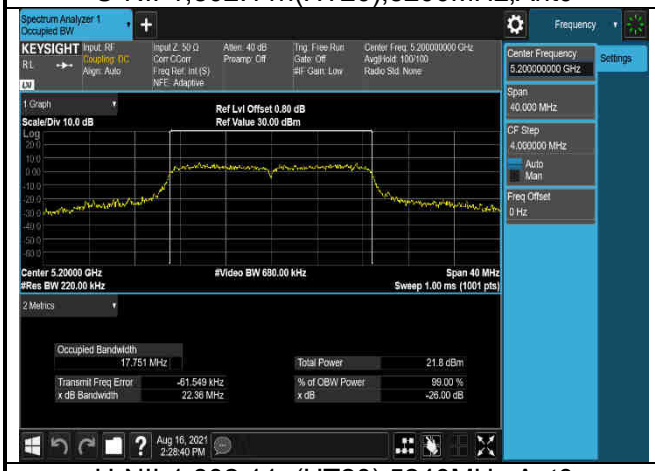
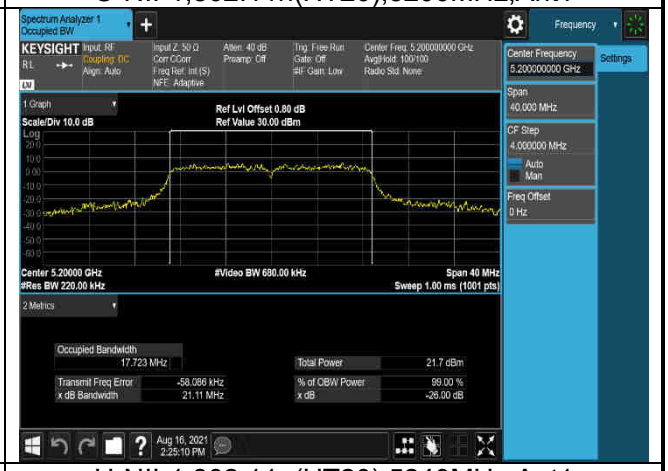
U-NII-1,802.11n(HT20),5200MHz,Ant0



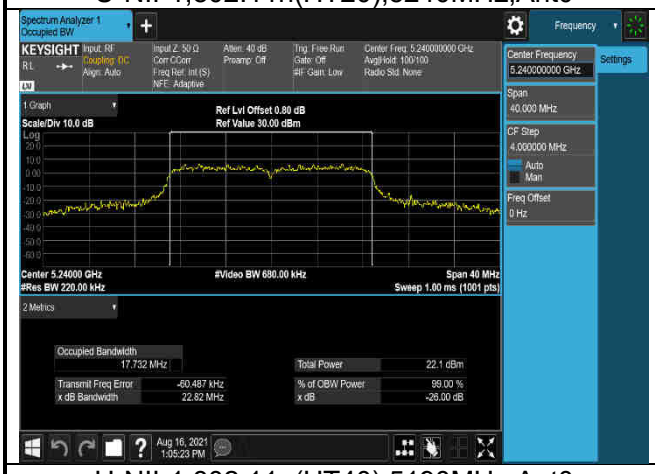
U-NII-1,802.11n(HT20),5200MHz,Ant1



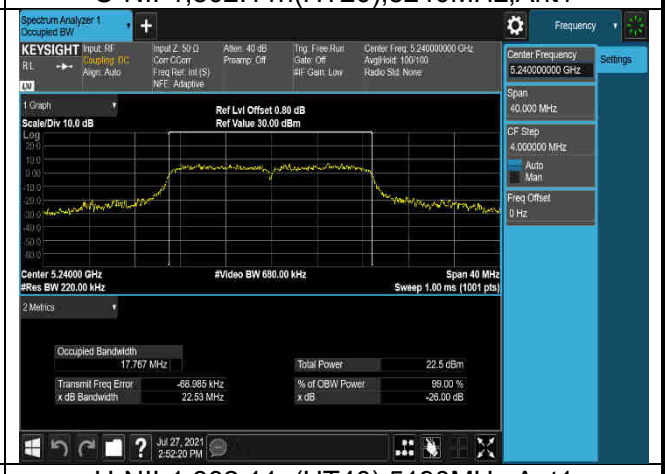
U-NII-1,802.11n(HT20),5240MHz,Ant0



U-NII-1,802.11n(HT20),5240MHz,Ant1



U-NII-1,802.11n(HT40),5190MHz,Ant0



U-NII-1,802.11n(HT40),5190MHz,Ant1

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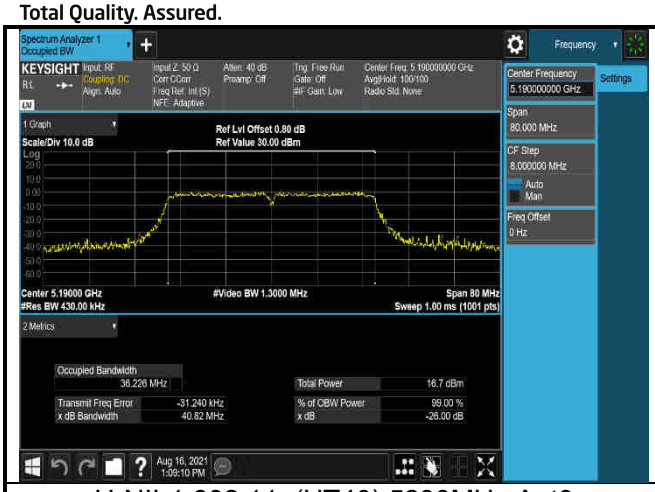
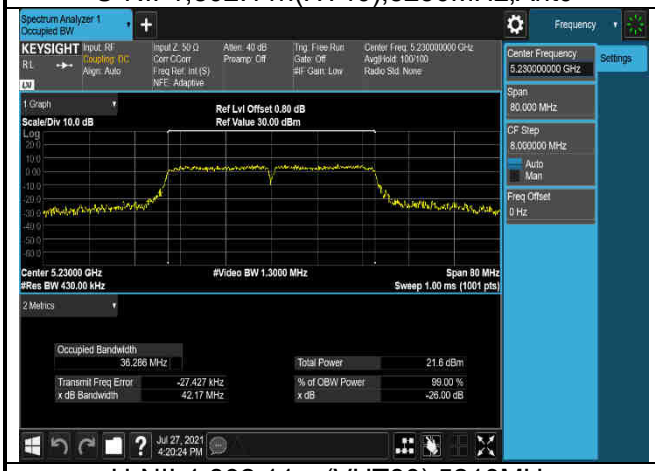
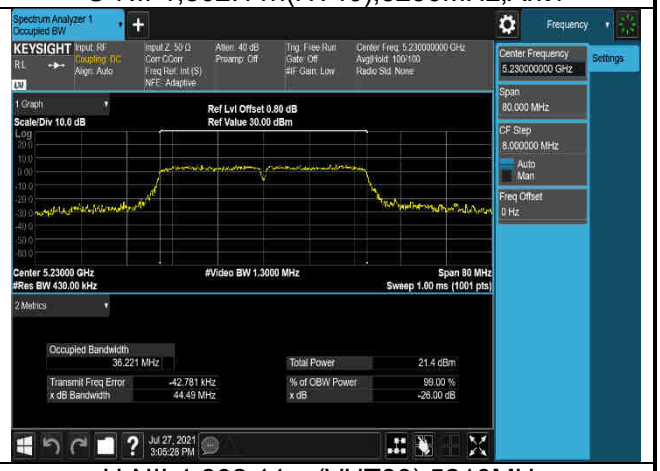


U-NII-1,802.11n(HT40),5230MHz,Ant0

U-NII-1,802.11n(HT40),5230MHz,Ant1



U-NII-1,802.11ac(VHT80),5210MHz
,Ant0



U-NII-1,802.11ac(VHT80),5210MHz
,Ant1

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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	16.636	Pass
802.11a	5180	Ant1	16.669	Pass
802.11a	5200	Ant0	16.680	Pass
802.11a	5200	Ant1	16.582	Pass
802.11a	5240	Ant0	16.605	Pass
802.11a	5240	Ant1	16.609	Pass
802.11n (HT20)	5180	Ant0	17.680	Pass
802.11n (HT20)	5180	Ant1	17.698	Pass
802.11n (HT20)	5200	Ant0	17.741	Pass
802.11n (HT20)	5200	Ant1	17.701	Pass
802.11n (HT20)	5240	Ant0	17.787	Pass
802.11n (HT20)	5240	Ant1	17.716	Pass
802.11n (HT40)	5190	Ant0	36.189	Pass
802.11n (HT40)	5190	Ant1	36.171	Pass
802.11n (HT40)	5230	Ant0	36.326	Pass
802.11n (HT40)	5230	Ant1	36.286	Pass
802.11ac (VHT80)	5210	Ant0	75.438	Pass
802.11ac (VHT80)	5210	Ant1	75.278	Pass

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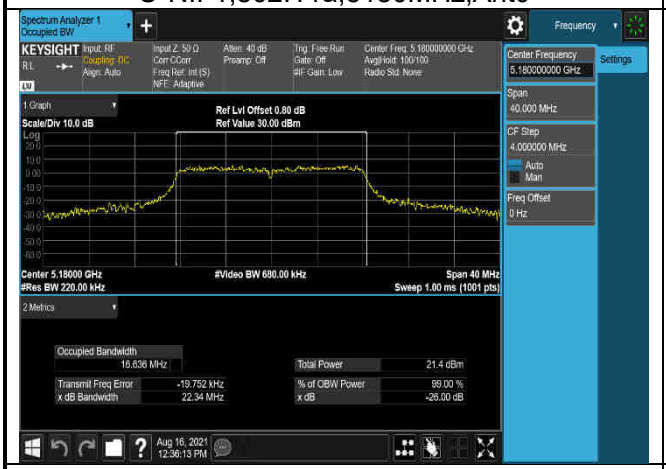
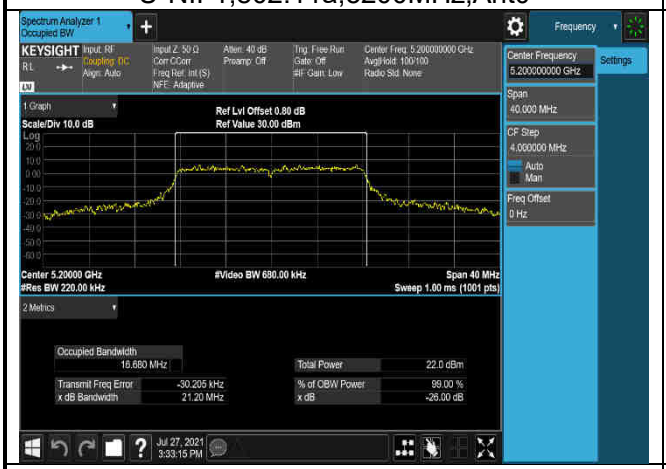
2.2 Test Plots

U-NII-1,802.11a,5180MHz,Ant0

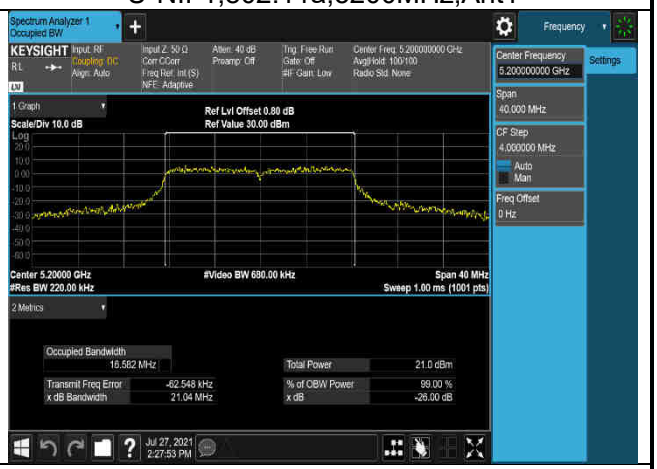


U-NII-1,802.11a,5180MHz,Ant1

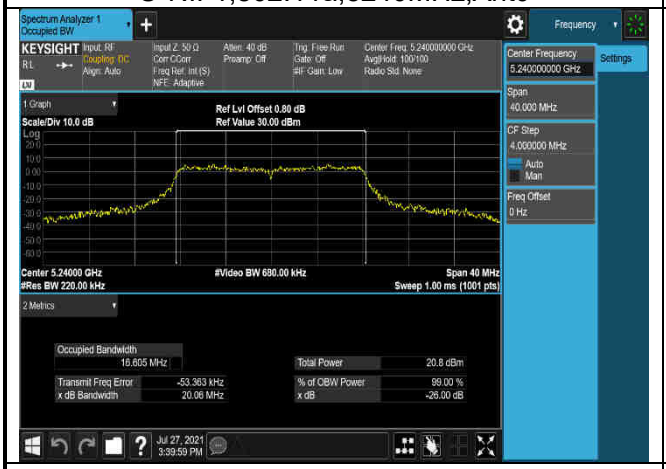
U-NII-1,802.11a,5200MHz,Ant0



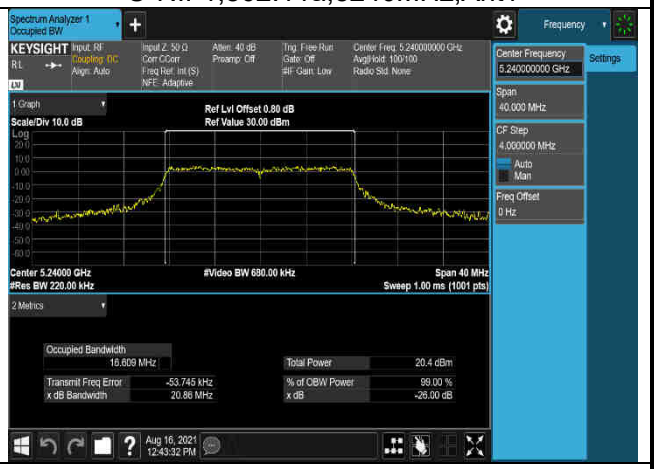
U-NII-1,802.11a,5200MHz,Ant1



U-NII-1,802.11a,5240MHz,Ant0



U-NII-1,802.11a,5240MHz,Ant1



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

U-NII-1,802.11n(HT20),5180MHz,Ant1

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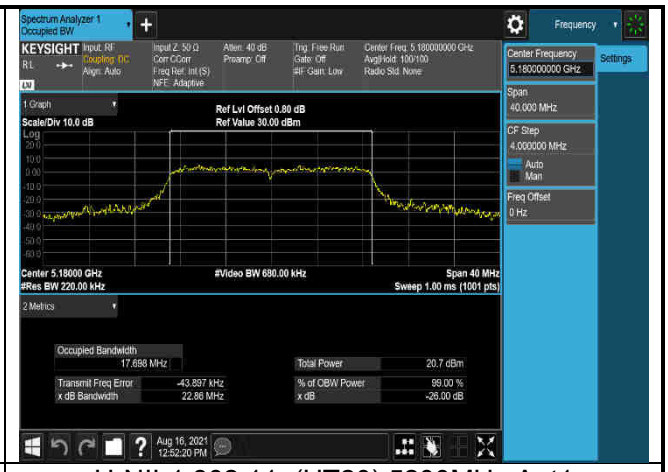
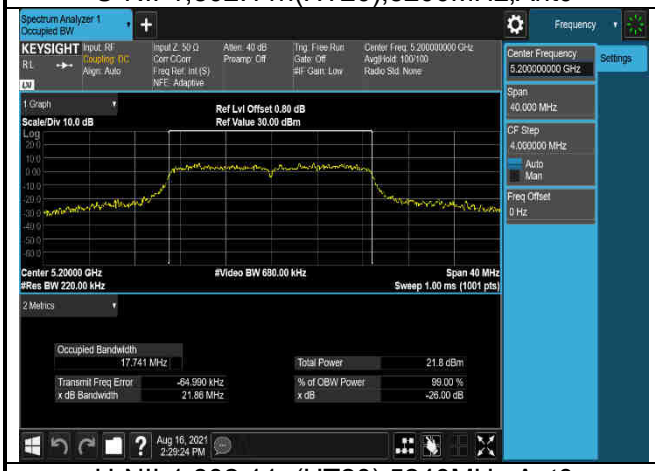
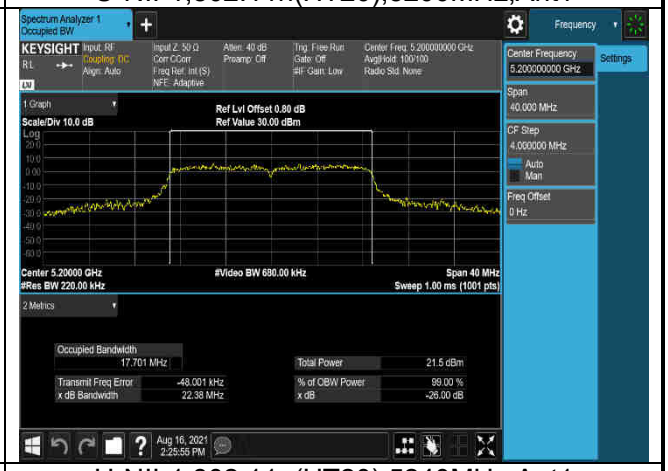
U-NII-1,802.11n(HT20),5200MHz,Ant0



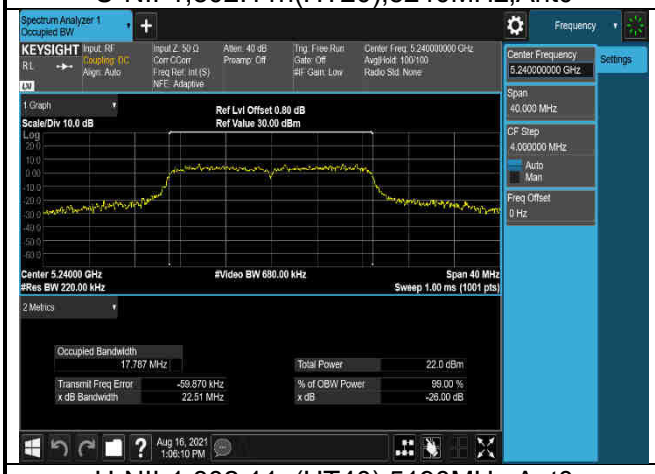
U-NII-1,802.11n(HT20),5200MHz,Ant1



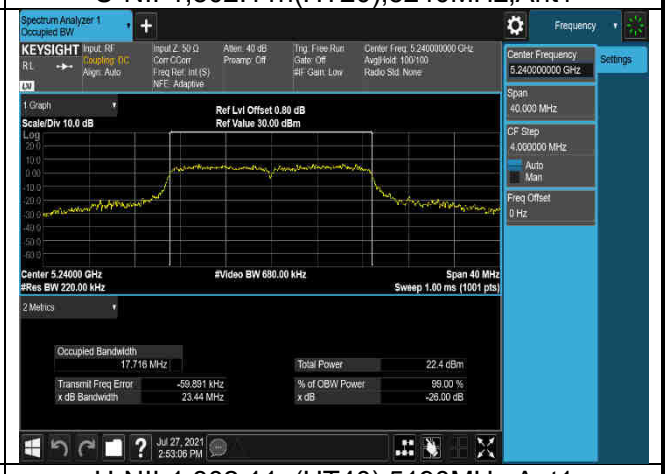
U-NII-1,802.11n(HT20),5240MHz,Ant0



U-NII-1,802.11n(HT20),5240MHz,Ant1



U-NII-1,802.11n(HT40),5190MHz,Ant0



U-NII-1,802.11n(HT40),5190MHz,Ant1

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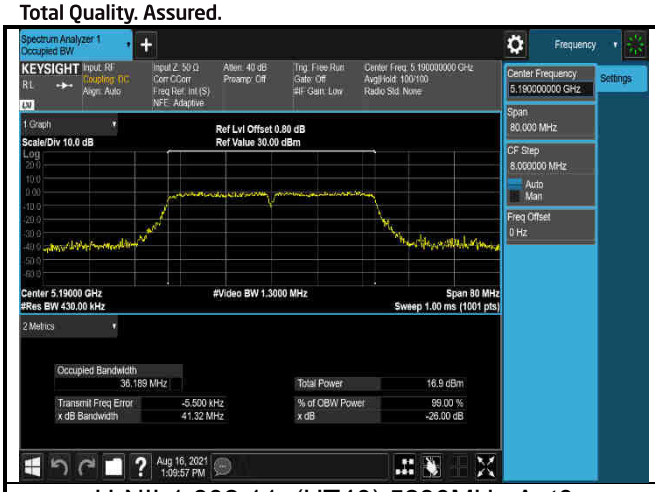
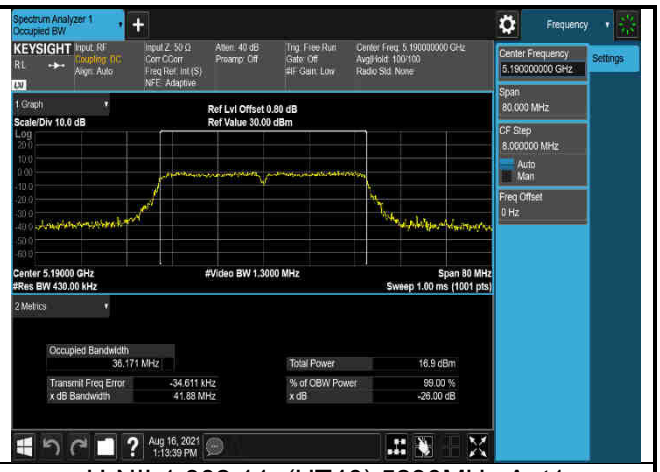
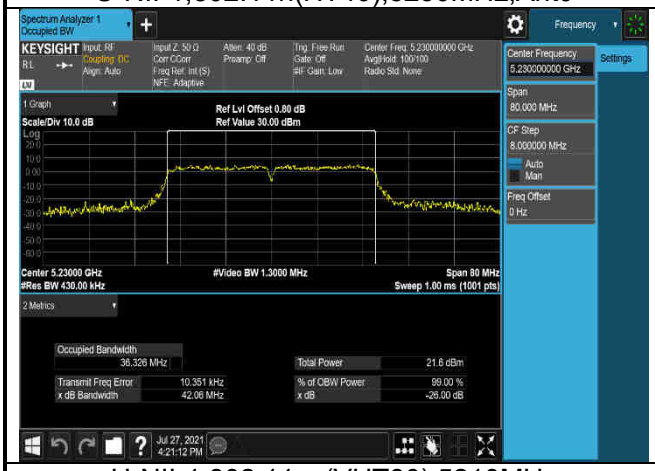


U-NII-1,802.11n(HT40),5230MHz,Ant0



U-NII-1,802.11n(HT40),5230MHz,Ant1



U-NII-1,802.11ac(VHT80),5210MHz
,Ant0

U-NII-1,802.11ac(VHT80),5210MHz
,Ant1

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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	57.63	2.39
802.11a	5180	Ant1	57.63	2.39
802.11a	5200	Ant0	57.63	2.39
802.11a	5200	Ant1	57.63	2.39
802.11a	5240	Ant0	57.63	2.39
802.11a	5240	Ant1	57.63	2.39
802.11n (HT20)	5180	Ant0	55.95	2.52
802.11n (HT20)	5180	Ant1	56.14	2.51
802.11n (HT20)	5200	Ant0	56.14	2.51
802.11n (HT20)	5200	Ant1	55.70	2.54
802.11n (HT20)	5240	Ant0	56.14	2.51
802.11n (HT20)	5240	Ant1	55.70	2.54
802.11n (HT40)	5190	Ant0	38.65	4.13
802.11n (HT40)	5190	Ant1	38.65	4.13
802.11n (HT40)	5230	Ant0	38.41	4.16
802.11n (HT40)	5230	Ant1	38.65	4.13
802.11ac (VHT80)	5210	Ant0	23.86	6.22
802.11ac (VHT80)	5210	Ant1	23.86	6.22

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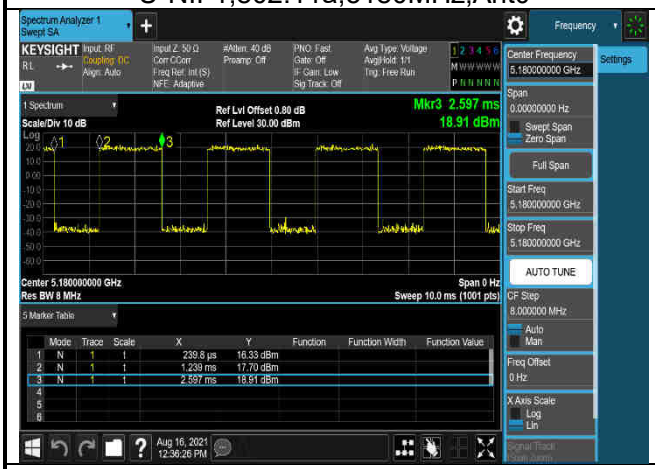
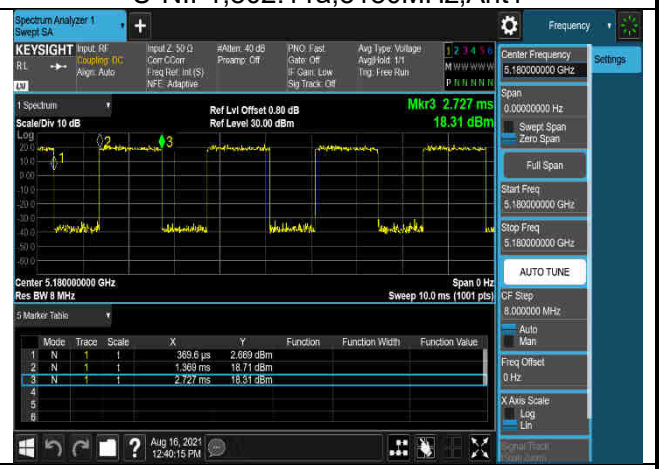
3.2 Test Plots

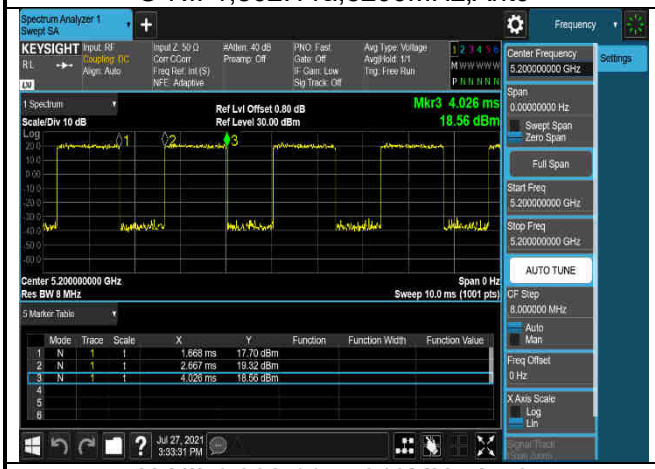
U-NII-1,802.11a,5180MHz,Ant0



U-NII-1,802.11a,5180MHz,Ant1

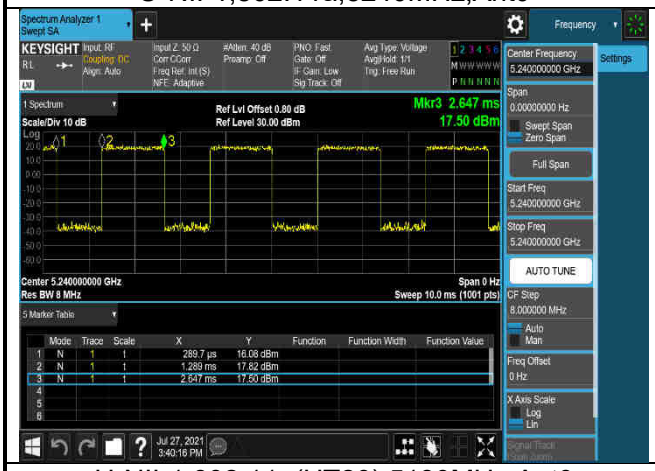


U-NII-1,802.11a,5200MHz,Ant0

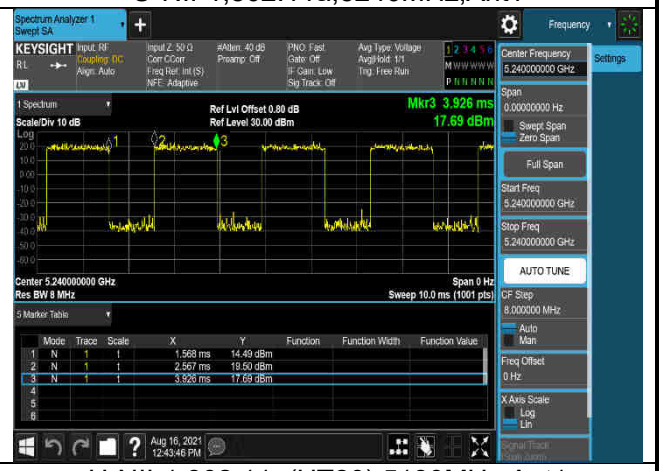


U-NII-1,802.11a,5200MHz,Ant1

U-NII-1,802.11a,5240MHz,Ant0



U-NII-1,802.11a,5240MHz,Ant1



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

U-NII-1,802.11n(HT20),5180MHz,Ant1

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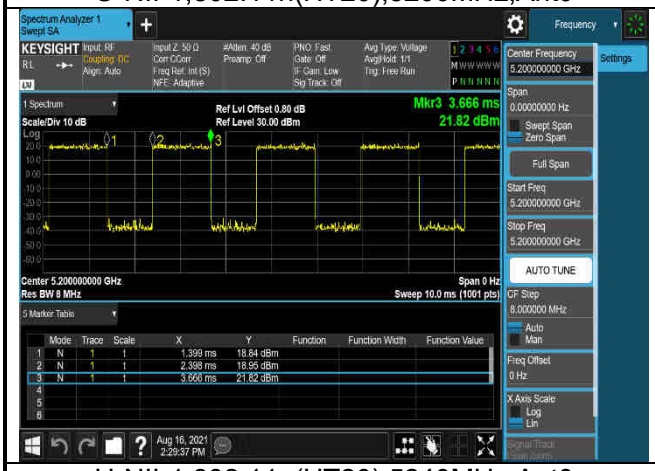
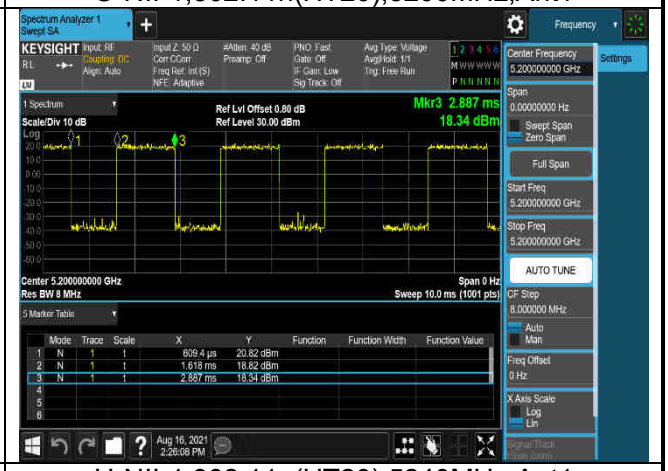
U-NII-1,802.11n(HT20),5200MHz,Ant0

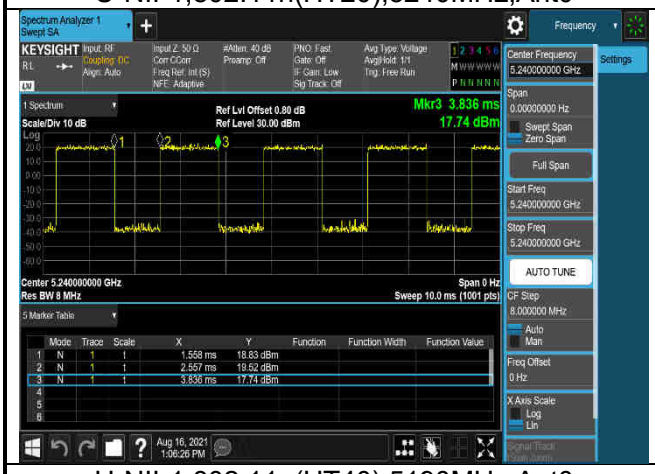
U-NII-1,802.11n(HT20),5200MHz,Ant1



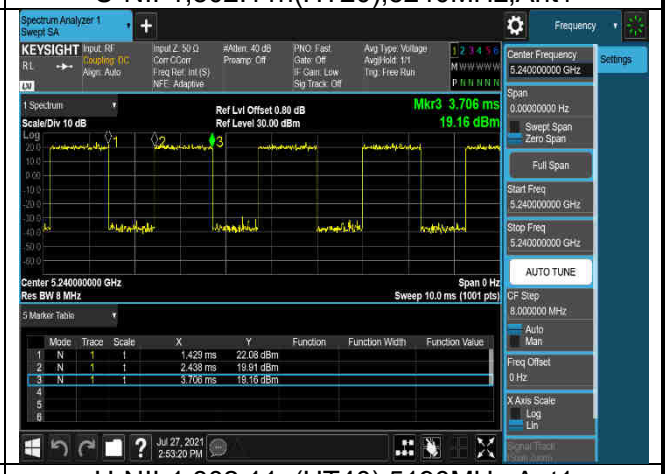
U-NII-1,802.11n(HT20),5240MHz,Ant0



U-NII-1,802.11n(HT20),5240MHz,Ant1



U-NII-1,802.11n(HT40),5190MHz,Ant0



U-NII-1,802.11n(HT40),5190MHz,Ant1

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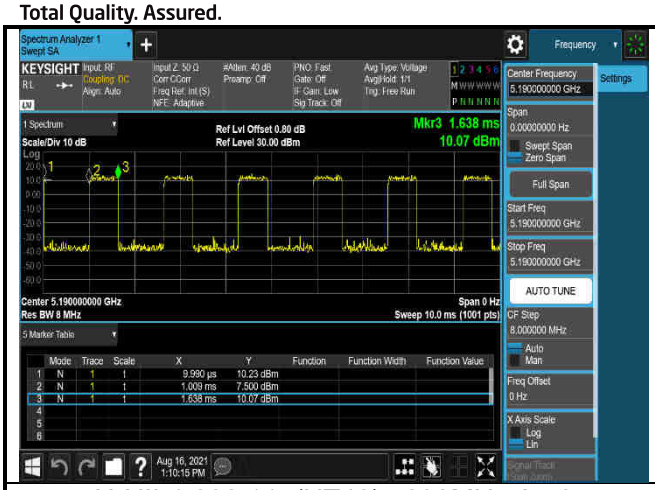
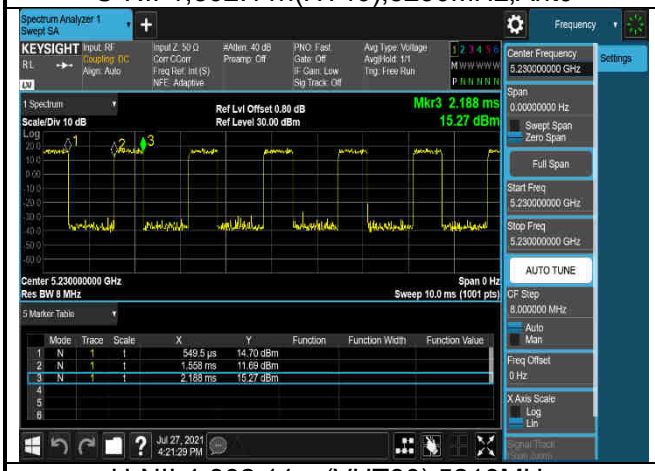
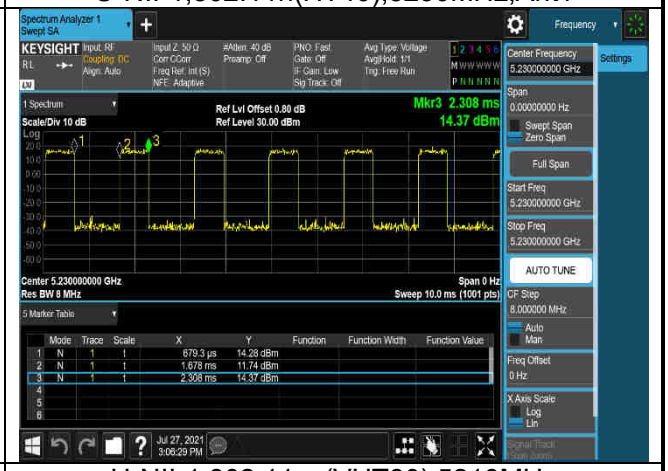


U-NII-1,802.11n(HT40),5230MHz,Ant0

U-NII-1,802.11n(HT40),5230MHz,Ant1



U-NII-1,802.11ac(VHT80),5210MHz ,Ant0



U-NII-1,802.11ac(VHT80),5210MHz ,Ant1

4. AVGSA Output Power

4.1 Test Data

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	U-NII-1 AVGSA Output Power							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	Limit (dBm)	EIRP (dBm)	IC Limit (dBm)	Result
802.11a	5180	Ant0	2.39	15.76	24	19.34	22	Pass
802.11a	5180	Ant1	2.39	15.16	24	18.74	22	Pass
802.11a	5200	Ant0	2.39	16.60	24	20.18	22	Pass
802.11a	5200	Ant1	2.39	16.09	24	19.67	22	Pass
802.11a	5240	Ant0	2.39	15.48	24	19.06	22	Pass
802.11a	5240	Ant1	2.39	15.10	24	18.68	22	Pass
802.11n (HT20)	5180	Ant0	2.52	15.04	24	18.62	22	Pass
802.11n (HT20)	5180	Ant1	2.51	14.83	24	18.41	22	Pass
802.11n (HT20)	5200	Ant0	2.52	15.91	24	19.49	22	Pass
802.11n (HT20)	5200	Ant1	2.54	15.84	24	19.42	22	Pass
802.11n (HT20)	5240	Ant0	2.51	16.44	24	20.02	22	Pass
802.11n (HT20)	5240	Ant1	2.54	16.69	24	20.27	23	Pass
802.11n (HT40)	5190	Ant0	4.13	11.40	24	14.98	23	Pass
802.11n (HT40)	5190	Ant1	4.13	11.43	24	15.01	23	Pass
802.11n (HT40)	5230	Ant0	4.16	15.97	24	19.55	23	Pass
802.11n (HT40)	5230	Ant1	4.13	15.90	24	19.48	23	Pass
802.11ac (VHT80)	5210	Ant0	6.22	10.20	24	13.78	23	Pass
802.11ac (VHT80)	5210	Ant1	6.22	10.10	24	13.68	23	Pass

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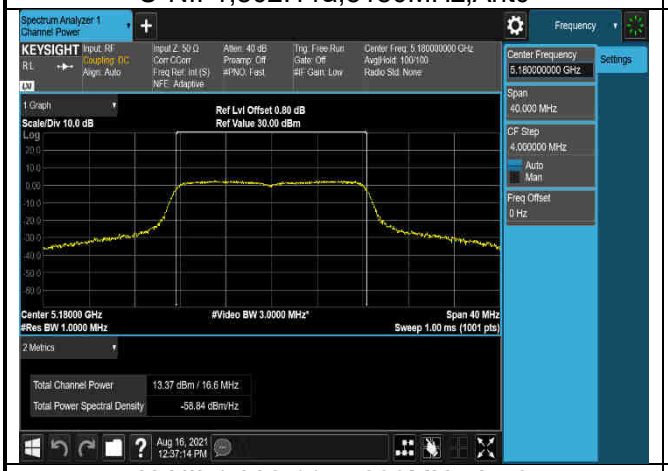
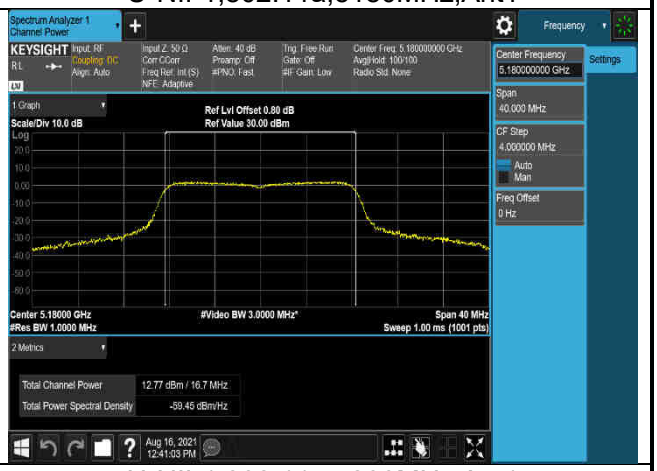
4.2 Test Plots

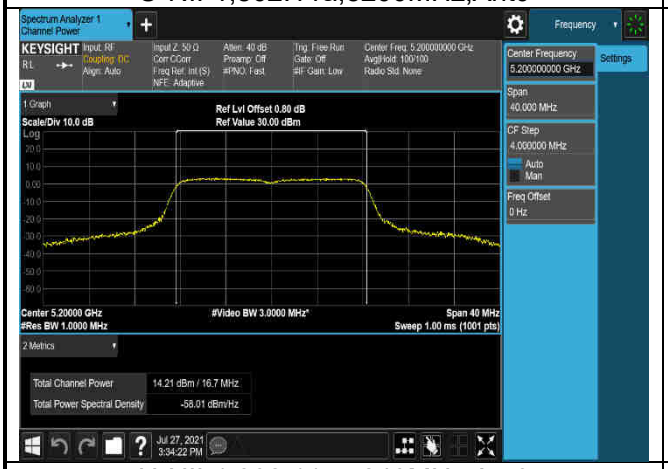
U-NII-1,802.11a,5180MHz,Ant0



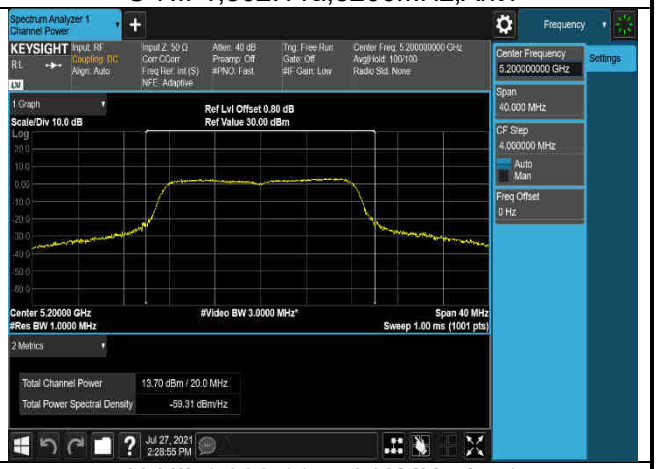
U-NII-1,802.11a,5180MHz,Ant1



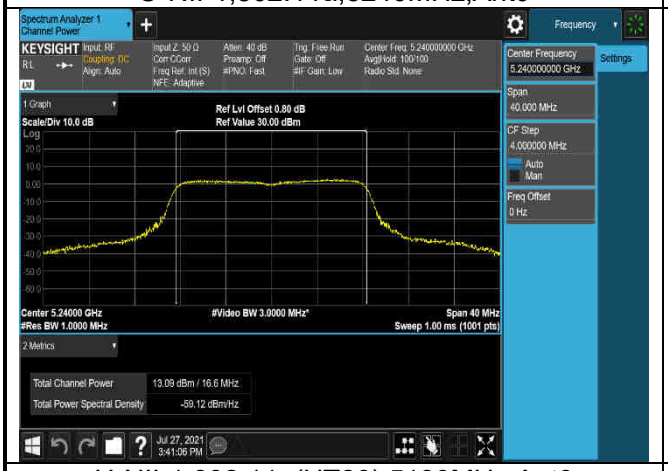
U-NII-1,802.11a,5200MHz,Ant0



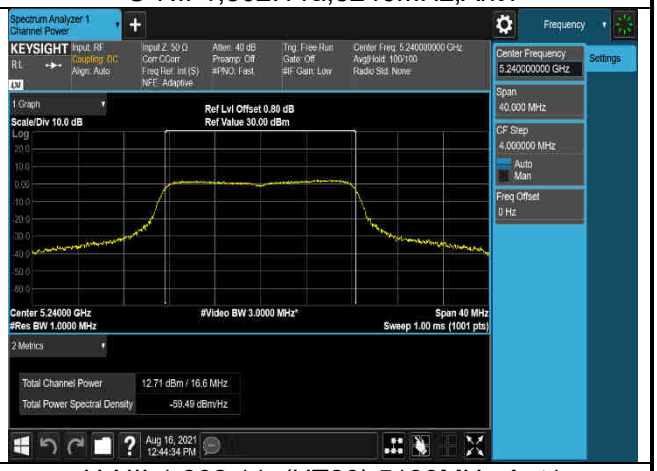
U-NII-1,802.11a,5200MHz,Ant1



U-NII-1,802.11a,5240MHz,Ant0



U-NII-1,802.11a,5240MHz,Ant1



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

U-NII-1,802.11n(HT20),5180MHz,Ant1

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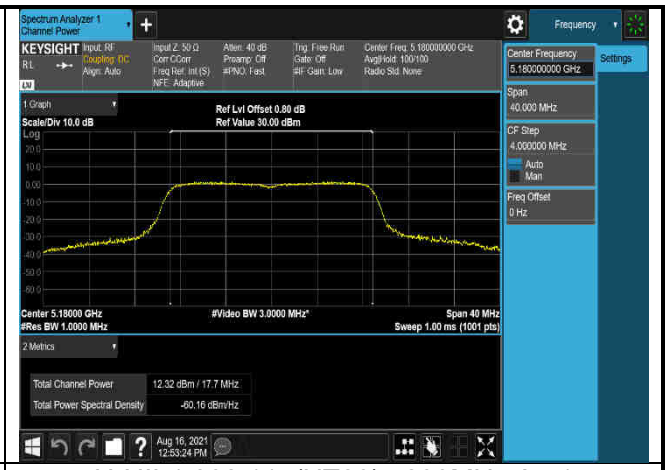
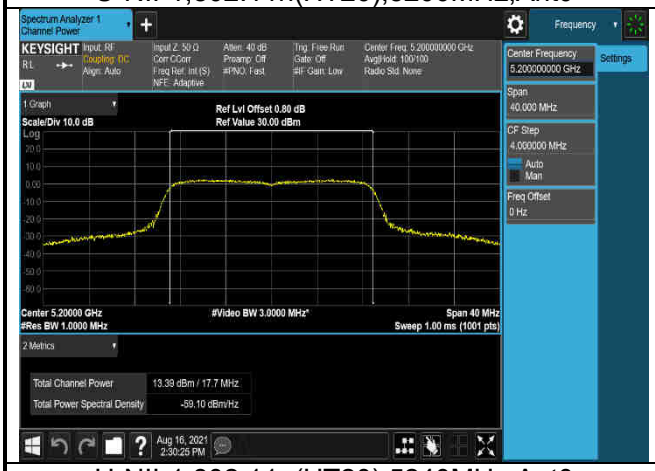
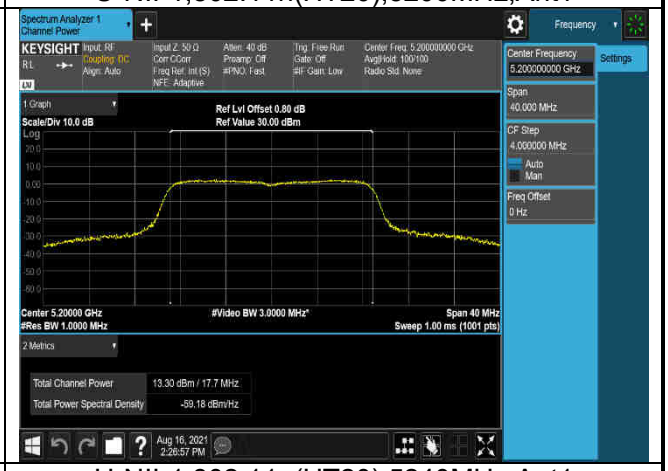
U-NII-1,802.11n(HT20),5200MHz,Ant0



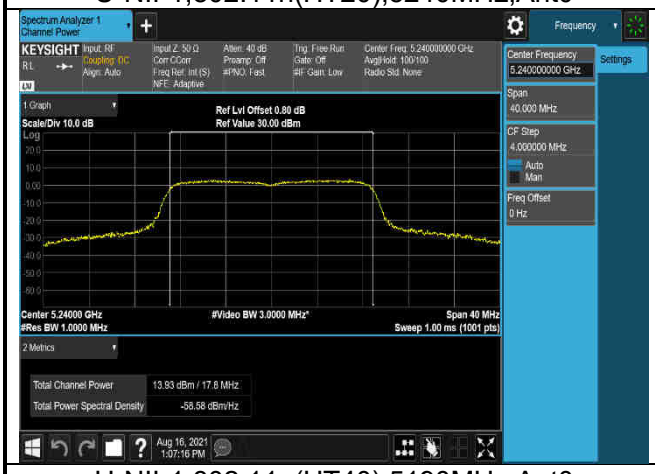
U-NII-1,802.11n(HT20),5200MHz,Ant1



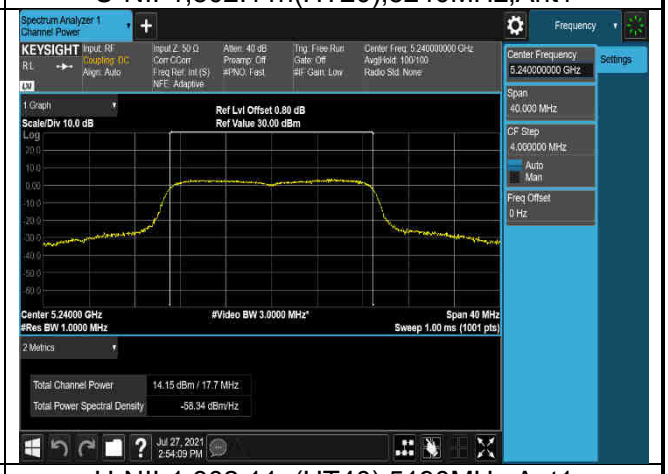
U-NII-1,802.11n(HT20),5240MHz,Ant0



U-NII-1,802.11n(HT20),5240MHz,Ant1



U-NII-1,802.11n(HT40),5190MHz,Ant0



U-NII-1,802.11n(HT40),5190MHz,Ant1

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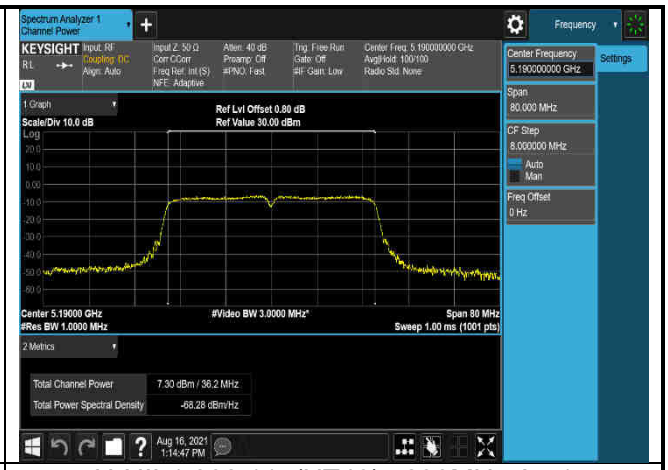
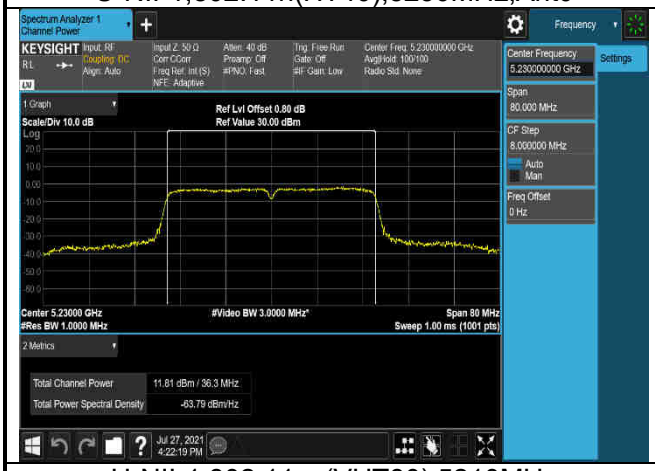
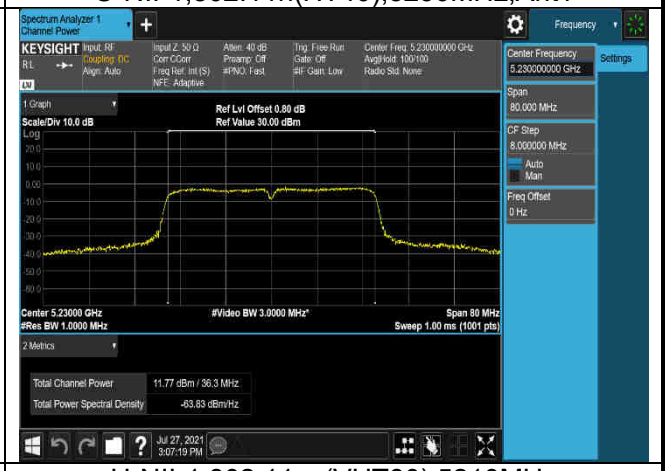
U-NII-1,802.11n(HT40),5230MHz,Ant0



U-NII-1,802.11n(HT40),5230MHz,Ant1



U-NII-1,802.11ac(VHT80),5210MHz
,Ant0



U-NII-1,802.11ac(VHT80),5210MHz
,Ant1

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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)	Total PSD (dBm)	FCC Limit (dBm)	ERIP PSD (dBm)	IC Limit (dBm)	Result
802.11a	5180	Ant0	2.39	5.212	11	8.892	10	Pass
802.11a	5180	Ant1	2.39	4.994	11	8.674	10	Pass
802.11a	5200	Ant0	2.39	5.426	11	9.106	10	Pass
802.11a	5200	Ant1	2.39	5.496	11	9.176	10	Pass
802.11a	5240	Ant0	2.39	4.522	11	8.202	10	Pass
802.11a	5240	Ant1	2.39	4.265	11	7.945	10	Pass
802.11n (HT20)	5180	Ant0	2.52	4.486	11	8.166	10	Pass
802.11n (HT20)	5180	Ant1	2.51	4.169	11	7.849	10	Pass
802.11n (HT20)	5200	Ant0	2.52	5.124	11	8.804	10	Pass
802.11n (HT20)	5200	Ant1	2.54	4.850	11	8.53	10	Pass
802.11n (HT20)	5240	Ant0	2.51	5.786	11	9.466	10	Pass
802.11n (HT20)	5240	Ant1	2.54	5.580	11	9.26	10	Pass
802.11n (HT40)	5190	Ant0	4.13	-2.600	11	1.08	10	Pass
802.11n (HT40)	5190	Ant1	4.13	-2.262	11	1.418	10	Pass
802.11n (HT40)	5230	Ant0	4.16	2.464	11	6.144	10	Pass
802.11n (HT40)	5230	Ant1	4.13	1.863	11	5.543	10	Pass
802.11ac (VHT80)	5210	Ant0	6.22	-6.321	11	-2.641	10	Pass
802.11ac (VHT80)	5210	Ant1	6.22	-5.768	11	-2.088	10	Pass

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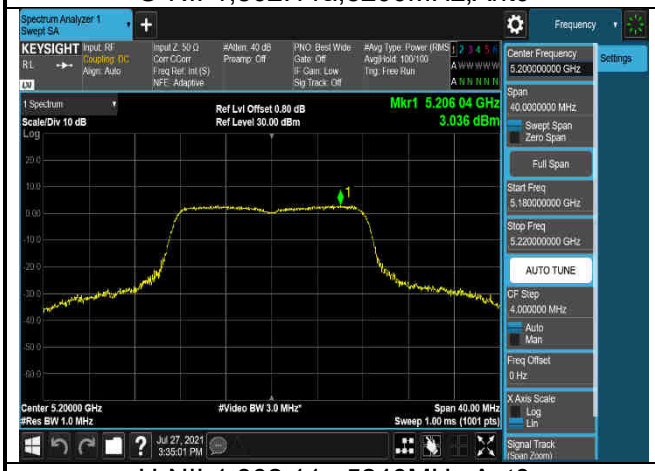
5.2 Test Plots

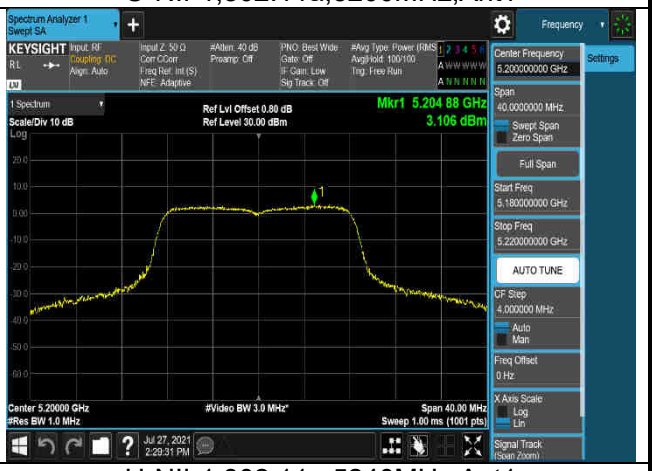
U-NII-1,802.11a,5180MHz,Ant0

U-NII-1,802.11a,5180MHz,Ant1

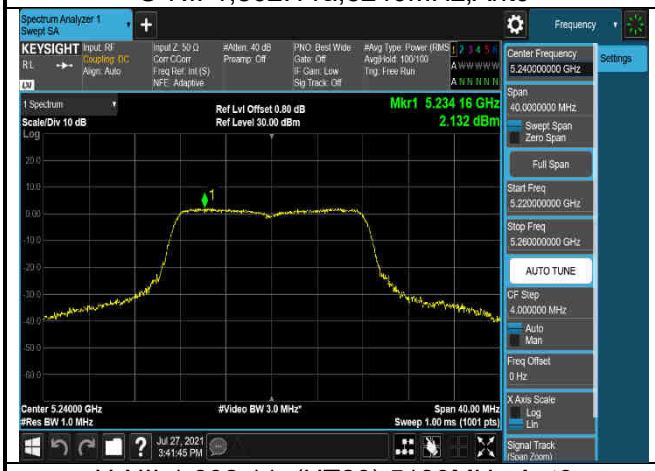
U-NII-1,802.11a,5200MHz,Ant0



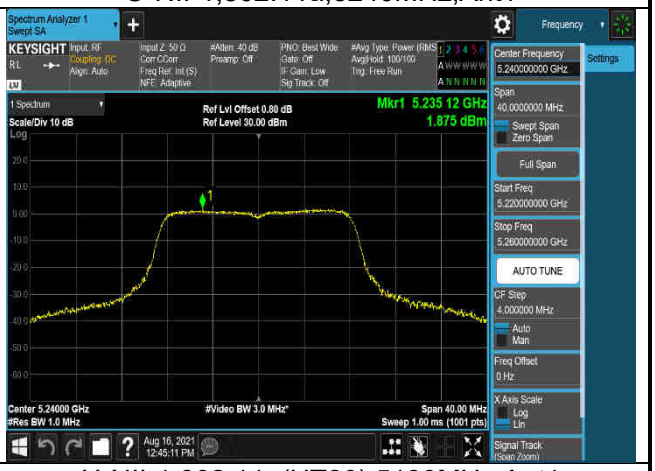
U-NII-1,802.11a,5200MHz,Ant1



U-NII-1,802.11a,5240MHz,Ant0



U-NII-1,802.11a,5240MHz,Ant1



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

U-NII-1,802.11n(HT20),5180MHz,Ant1

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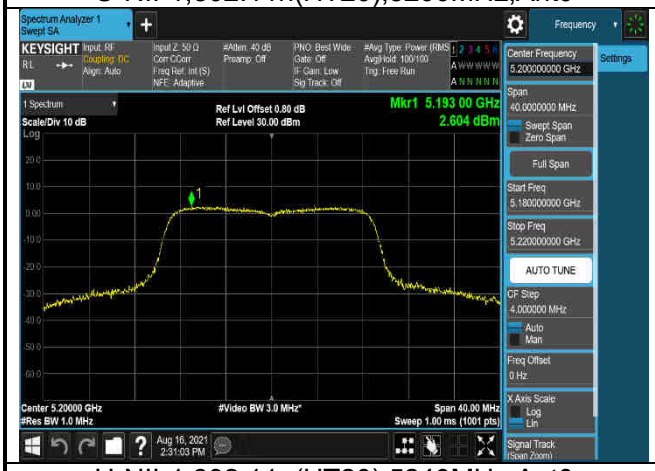
U-NII-1,802.11n(HT20),5200MHz,Ant0

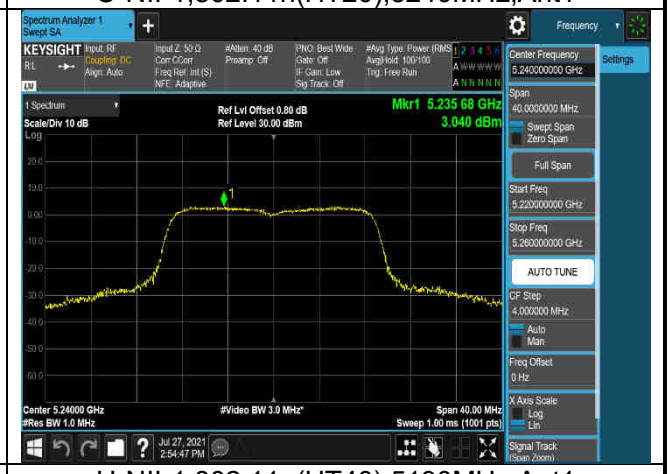
U-NII-1,802.11n(HT20),5200MHz,Ant1



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

U-NII-1,802.11n(HT20),5240MHz,Ant1

U-NII-1,802.11n(HT40),5190MHz,Ant0



U-NII-1,802.11n(HT40),5190MHz,Ant1

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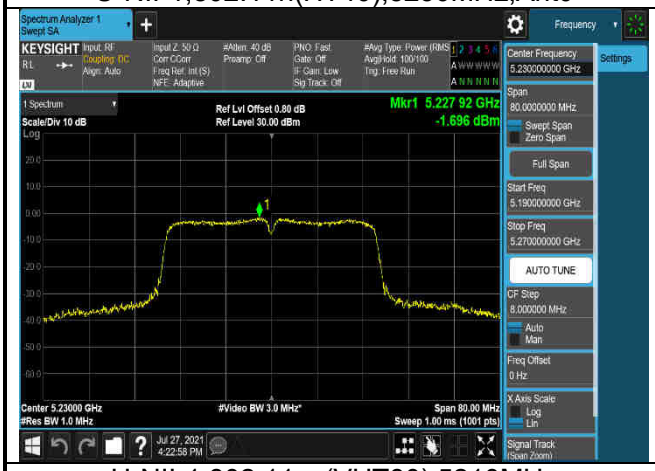
U-NII-1,802.11n(HT40),5230MHz,Ant0

U-NII-1,802.11n(HT40),5230MHz,Ant1



U-NII-1,802.11ac(VHT80),5210MHz
,Ant0

U-NII-1,802.11ac(VHT80),5210MHz
,Ant1

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