Appendix A: Test results

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 2C	5500	52	52	49	49	5510	40	40	5530	37	37
	5580	53	53	52	52	5550	46	46			
	5700	48	48	48	48	5670	44	44			

1. Occupied N dB Bandwidth

1.1 Test Data

U-NII-2c Occupied N dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11a	5500	Ant0	22.53	Pass
802.11a	5500	Ant1	21.58	Pass
802.11a	5580	Ant0	24.18	Pass
802.11a	5580	Ant1	28.46	Pass
802.11a	5700	Ant0	24.11	Pass
802.11a	5700	Ant1	24.01	Pass
802.11n (HT20)	5500	Ant0	21.35	Pass
802.11n (HT20)	5500	Ant1	22.61	Pass
802.11n (HT20)	5580	Ant0	23.33	Pass
802.11n (HT20)	5580	Ant1	24.62	Pass
802.11n (HT20)	5700	Ant0	22.93	Pass
802.11n (HT20)	5700	Ant1	23.49	Pass
802.11n (HT40)	5510	Ant0	40.77	Pass
802.11n (HT40)	5510	Ant1	40.93	Pass
802.11n (HT40)	5550	Ant0	52.67	Pass
802.11n (HT40)	5550	Ant1	51.08	Pass
802.11n (HT40)	5670	Ant0	50.42	Pass
802.11n (HT40)	5670	Ant1	50.66	Pass
802.11ac (VHT80)	5530	Ant0	80.45	Pass
802.11ac (VHT80)	5530	Ant1	81.90	Pass

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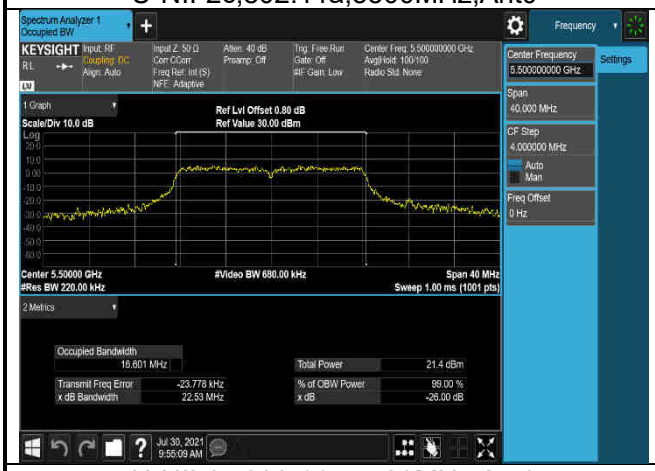
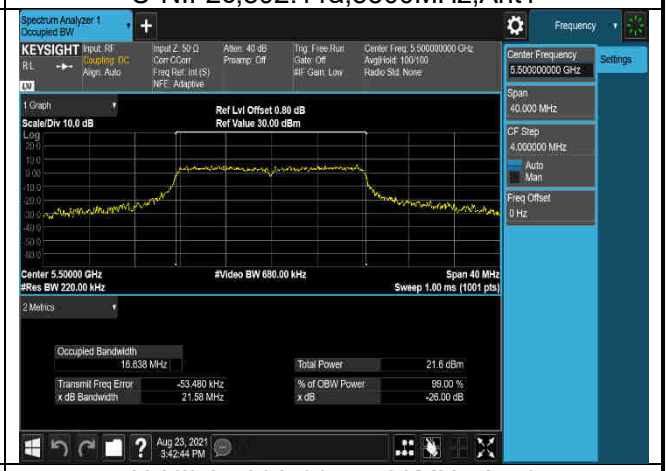
1.2 Test Plots

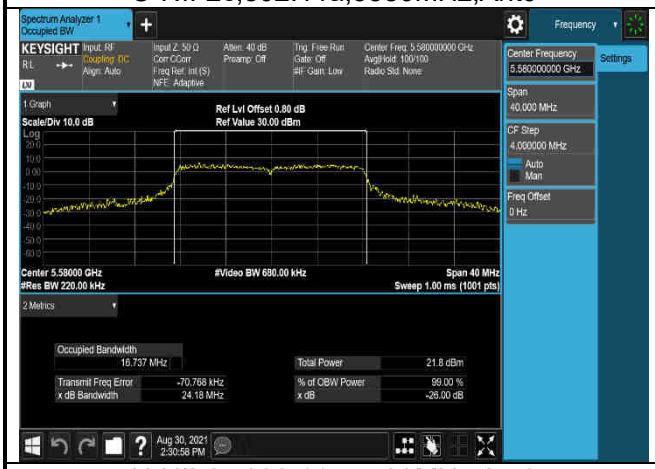
U-NII-2c,802.11a,5500MHz,Ant0



U-NII-2c,802.11a,5500MHz,Ant1



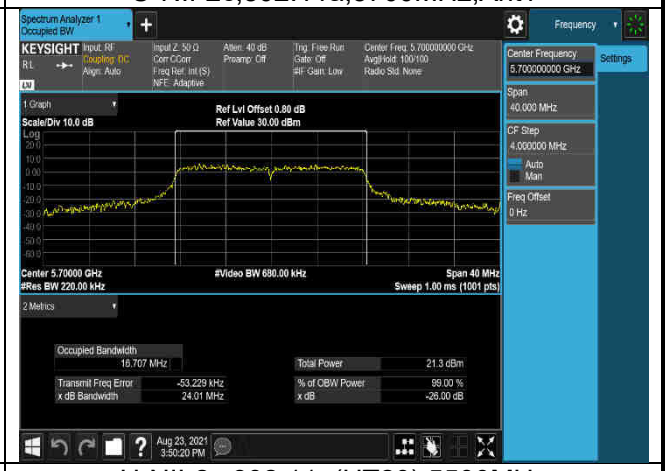
U-NII-2c,802.11a,5580MHz,Ant0



U-NII-2c,802.11a,5580MHz,Ant1

U-NII-2c,802.11a,5700MHz,Ant0

U-NII-2c,802.11a,5700MHz,Ant1



U-NII-2c,802.11n(HT20),5500MHz ,Ant0

U-NII-2c,802.11n(HT20),5500MHz ,Ant1

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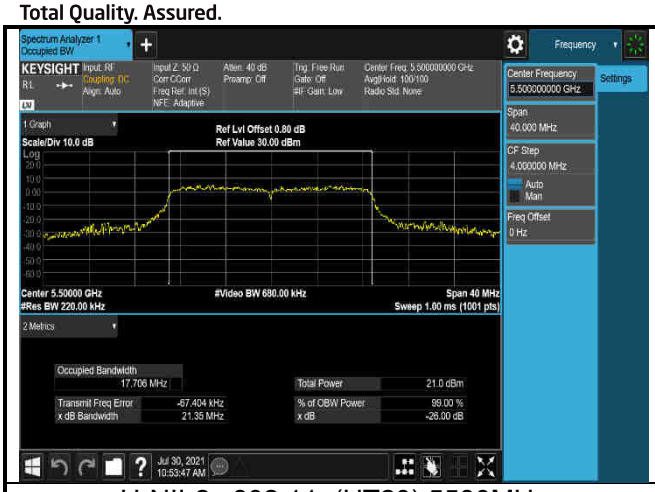
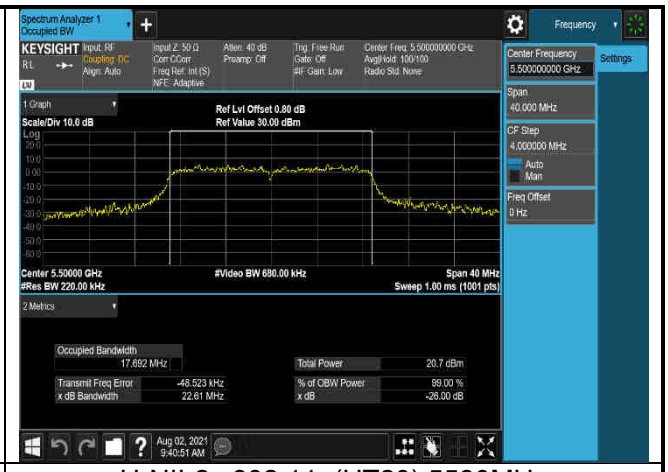
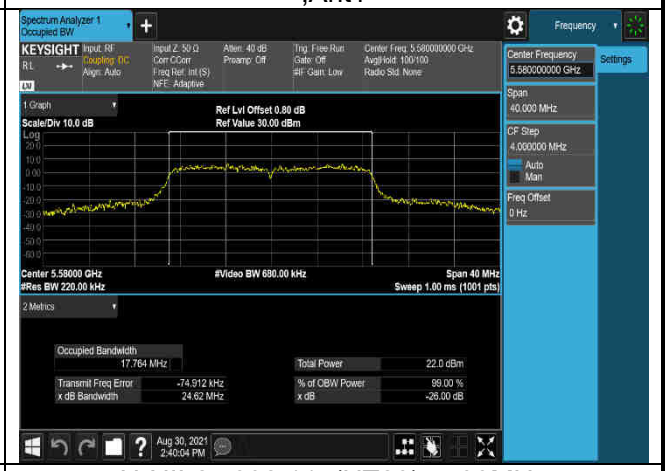


U-NII-2c,802.11n(HT20),5580MHz ,Ant0



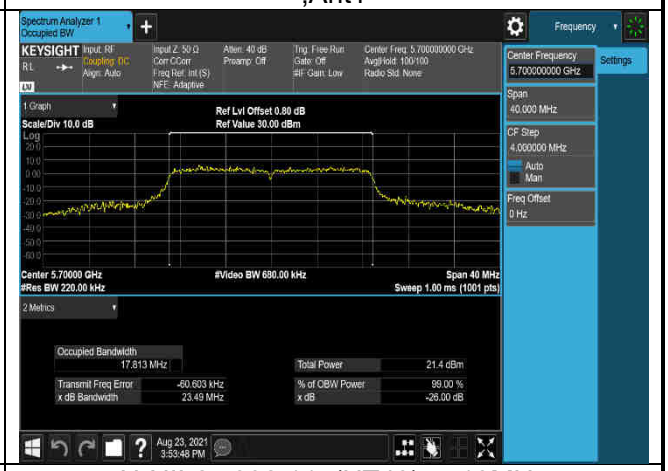
U-NII-2c,802.11n(HT20),5580MHz ,Ant1

U-NII-2c,802.11n(HT20),5700MHz ,Ant0



U-NII-2c,802.11n(HT20),5700MHz ,Ant1

U-NII-2c,802.11n(HT40),5510MHz ,Ant0



U-NII-2c,802.11n(HT40),5510MHz ,Ant1

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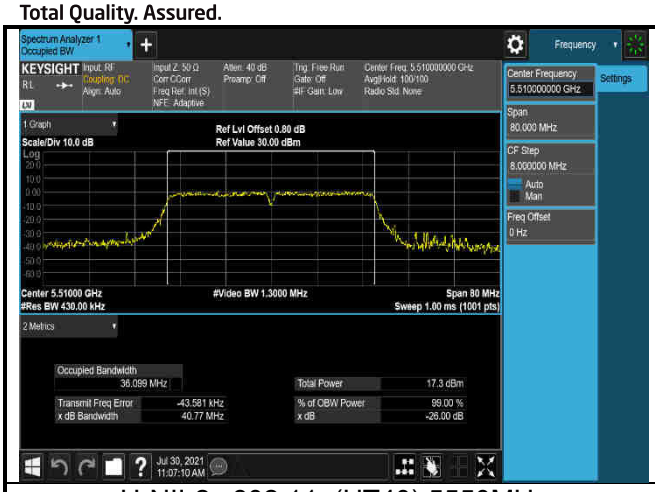
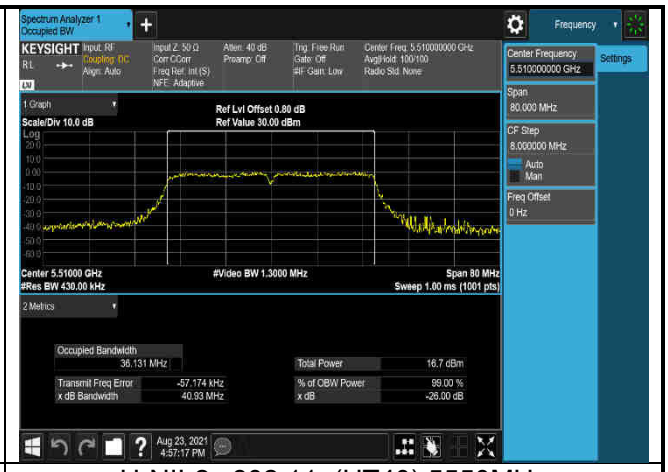


U-NII-2c,802.11n(HT40),5550MHz ,Ant0



U-NII-2c,802.11n(HT40),5550MHz ,Ant1

U-NII-2c,802.11n(HT40),5670MHz ,Ant0

U-NII-2c,802.11n(HT40),5670MHz ,Ant1

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant0

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant1

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2. 99% Occupied Bandwidth

2.1 Test Data

U-NII-2c 99% Occupied Bandwidth				
Mode	Test Frequency (MHz)	Ant	99% Occupied Bandwidth (MHz)	Result
802.11a	5500	Ant0	16.598	Pass
802.11a	5500	Ant1	16.618	Pass
802.11a	5580	Ant0	16.704	Pass
802.11a	5580	Ant1	16.745	Pass
802.11a	5700	Ant0	16.684	Pass
802.11a	5700	Ant1	16.725	Pass
802.11n (HT20)	5500	Ant0	17.654	Pass
802.11n (HT20)	5500	Ant1	17.708	Pass
802.11n (HT20)	5580	Ant0	17.760	Pass
802.11n (HT20)	5580	Ant1	17.783	Pass
802.11n (HT20)	5700	Ant0	17.725	Pass
802.11n (HT20)	5700	Ant1	17.744	Pass
802.11n (HT40)	5510	Ant0	36.128	Pass
802.11n (HT40)	5510	Ant1	36.221	Pass
802.11n (HT40)	5550	Ant0	36.273	Pass
802.11n (HT40)	5550	Ant1	36.293	Pass
802.11n (HT40)	5670	Ant0	36.268	Pass
802.11n (HT40)	5670	Ant1	36.310	Pass
802.11ac (VHT80)	5530	Ant0	75.300	Pass
802.11ac (VHT80)	5530	Ant1	75.523	Pass

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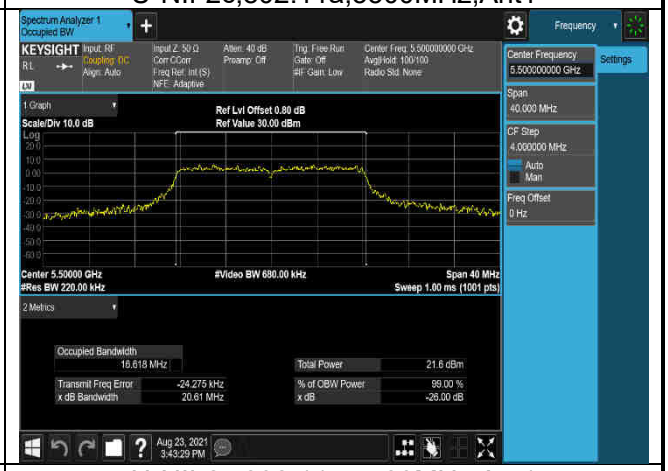
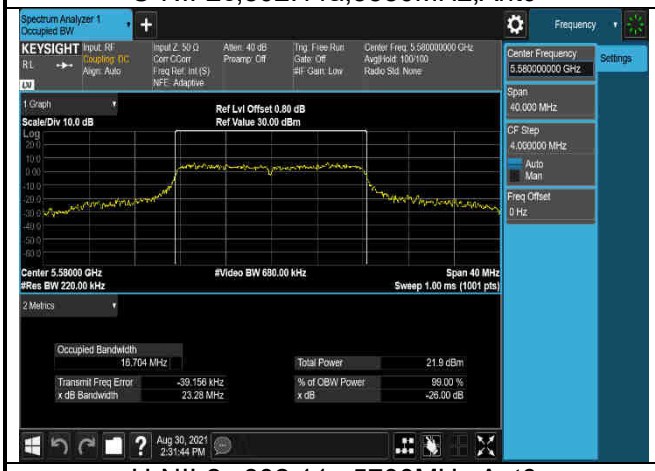
2.2 Test Plots

U-NII-2c,802.11a,5500MHz,Ant0

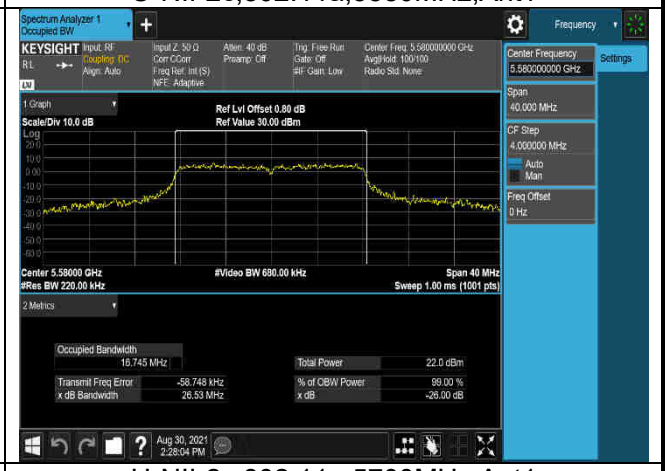
U-NII-2c,802.11a,5500MHz,Ant1



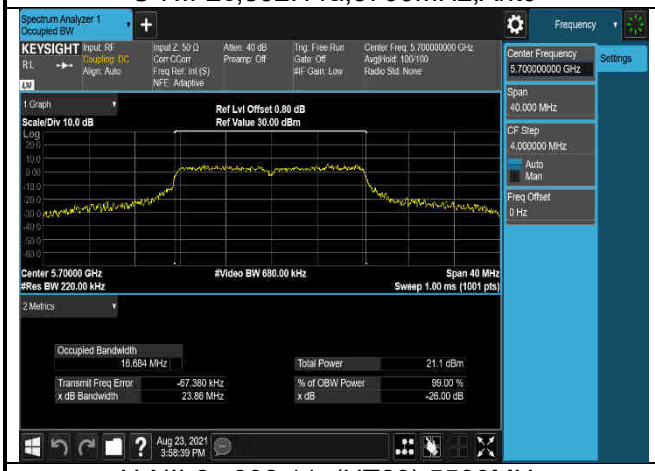
U-NII-2c,802.11a,5580MHz,Ant0



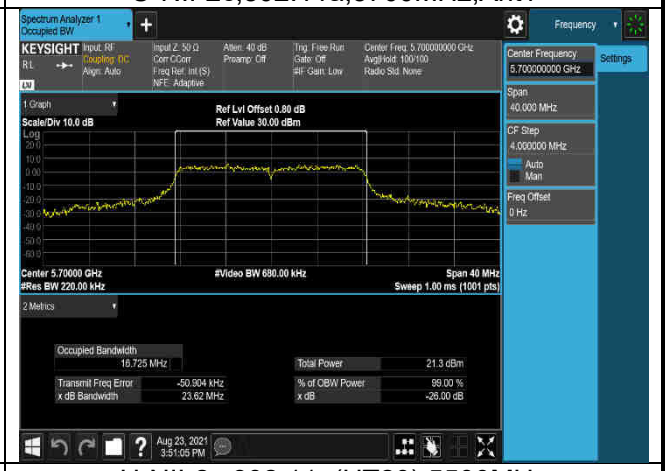
U-NII-2c,802.11a,5580MHz,Ant1



U-NII-2c,802.11a,5700MHz,Ant0



U-NII-2c,802.11a,5700MHz,Ant1



U-NII-2c,802.11n(HT20),5500MHz ,Ant0

U-NII-2c,802.11n(HT20),5500MHz ,Ant1

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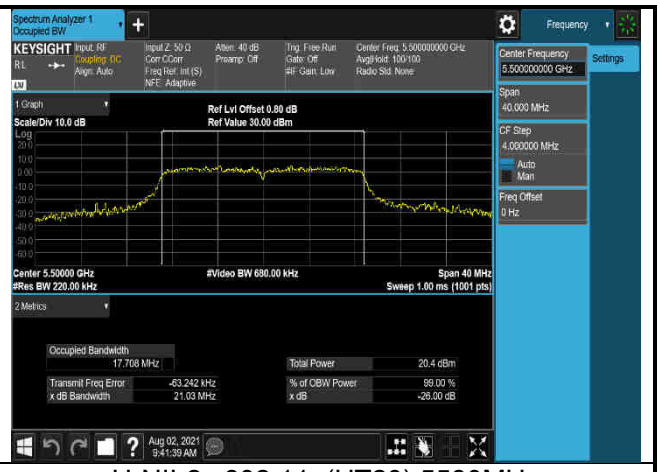
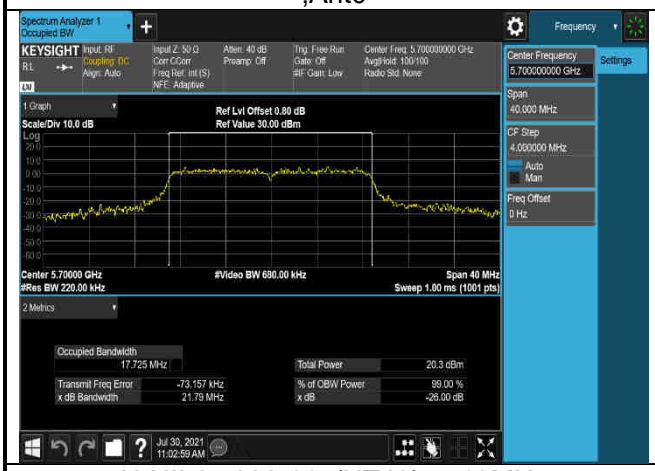
U-NII-2c,802.11n(HT20),5580MHz ,Ant0



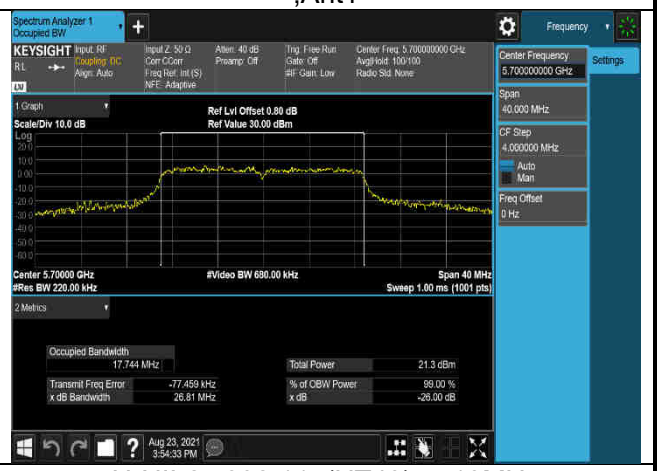
U-NII-2c,802.11n(HT20),5580MHz ,Ant1

U-NII-2c,802.11n(HT20),5700MHz ,Ant0

U-NII-2c,802.11n(HT20),5700MHz ,Ant1



U-NII-2c,802.11n(HT40),5510MHz ,Ant0



U-NII-2c,802.11n(HT40),5510MHz ,Ant1

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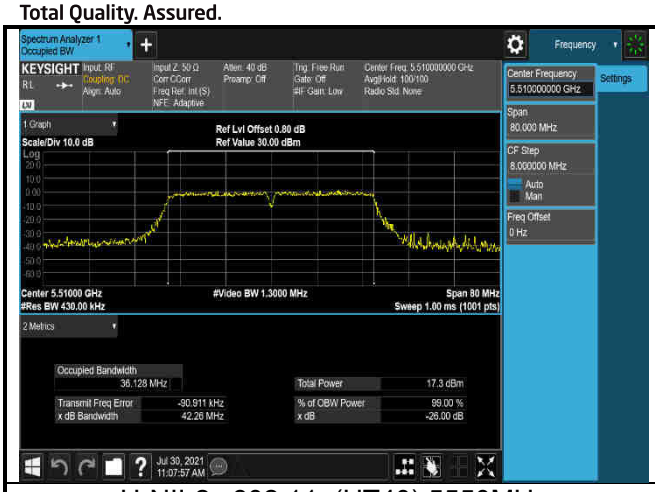
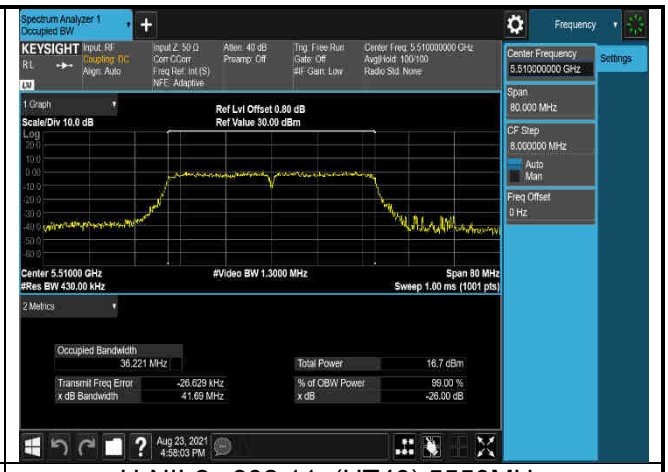


U-NII-2c,802.11n(HT40),5550MHz ,Ant0

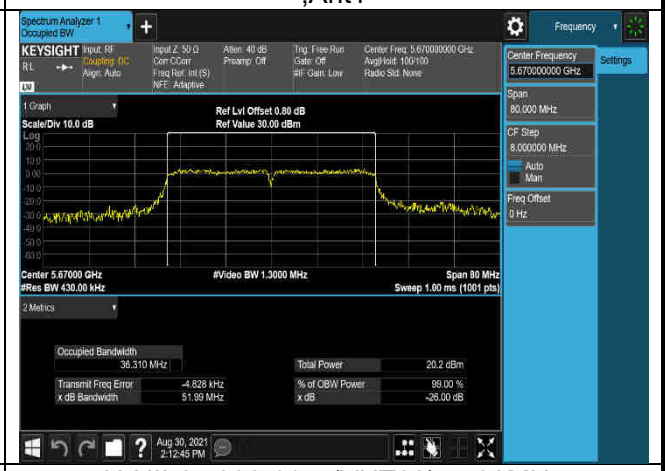


U-NII-2c,802.11n(HT40),5550MHz ,Ant1

U-NII-2c,802.11n(HT40),5670MHz ,Ant0

U-NII-2c,802.11n(HT40),5670MHz ,Ant1

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant0



U-NII-2c,802.11ac(VHT80),5530MHz ,Ant1

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3. Duty Cycle

3.1 Test Data

U-NII-2c Duty Cycle				
Mode	Test Frequency (MHz)	Ant	Duty Cycle (%)	Duty Cycle Factor (dB)
802.11a	5500	Ant0	57.63	2.39
802.11a	5500	Ant1	57.63	2.39
802.11a	5580	Ant0	57.38	2.41
802.11a	5580	Ant1	57.38	2.41
802.11a	5700	Ant0	57.63	2.39
802.11a	5700	Ant1	57.63	2.39
802.11n (HT20)	5500	Ant0	55.95	2.52
802.11n (HT20)	5500	Ant1	55.70	2.54
802.11n (HT20)	5580	Ant0	55.95	2.52
802.11n (HT20)	5580	Ant1	55.70	2.54
802.11n (HT20)	5700	Ant0	55.95	2.52
802.11n (HT20)	5700	Ant1	55.95	2.52
802.11n (HT40)	5510	Ant0	38.65	4.13
802.11n (HT40)	5510	Ant1	38.41	4.16
802.11n (HT40)	5550	Ant0	38.41	4.16
802.11n (HT40)	5550	Ant1	39.02	4.09
802.11n (HT40)	5670	Ant0	38.65	4.13
802.11n (HT40)	5670	Ant1	38.41	4.16
802.11ac (VHT80)	5530	Ant0	23.86	6.22
802.11ac (VHT80)	5530	Ant1	23.86	6.22

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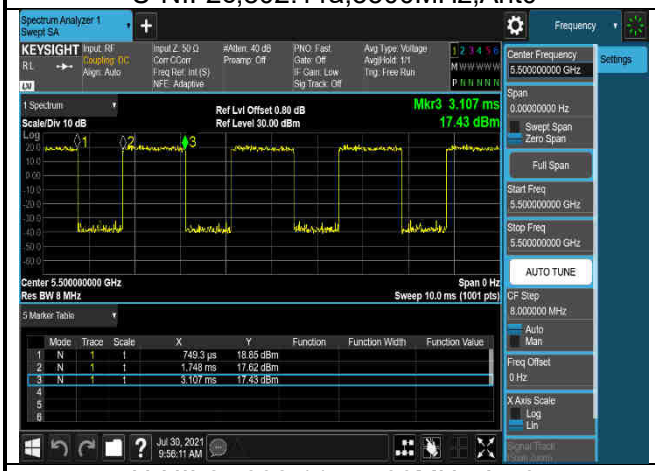
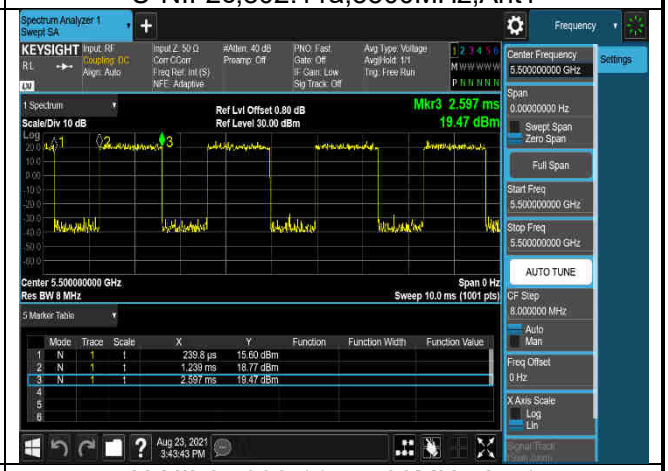
3.2 Test Plots

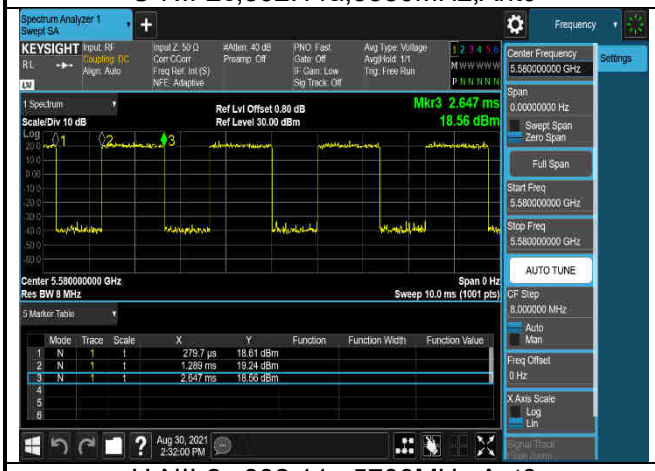
U-NII-2c,802.11a,5500MHz,Ant0



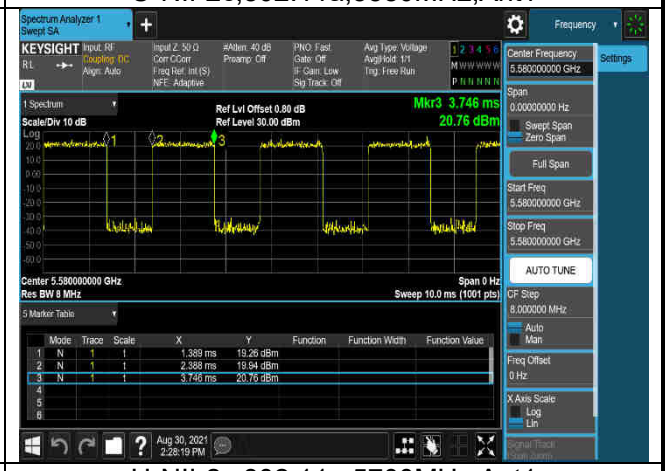
U-NII-2c,802.11a,5500MHz,Ant1



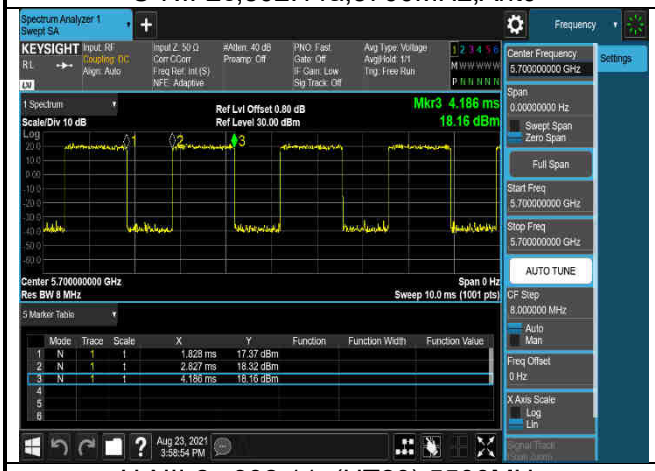
U-NII-2c,802.11a,5580MHz,Ant0



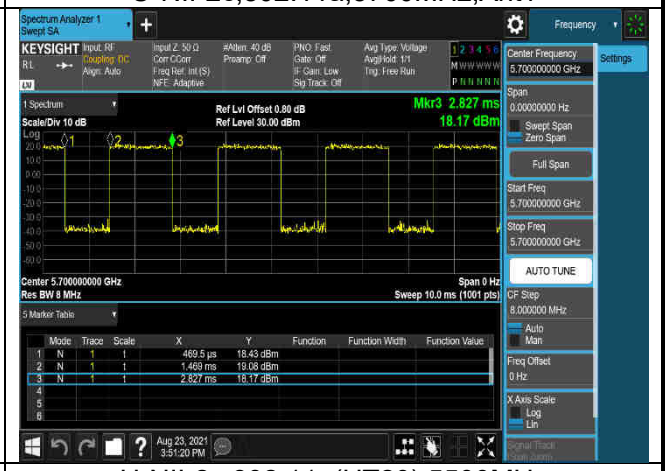
U-NII-2c,802.11a,5580MHz,Ant1



U-NII-2c,802.11a,5700MHz,Ant0



U-NII-2c,802.11a,5700MHz,Ant1



U-NII-2c,802.11n(HT20),5500MHz ,Ant0

U-NII-2c,802.11n(HT20),5500MHz ,Ant1

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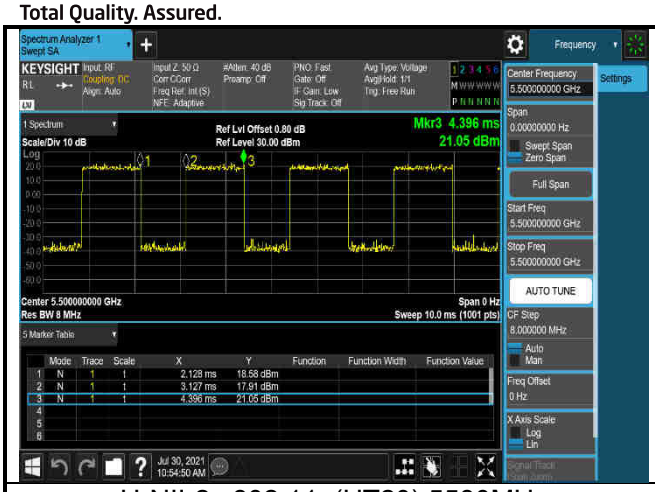
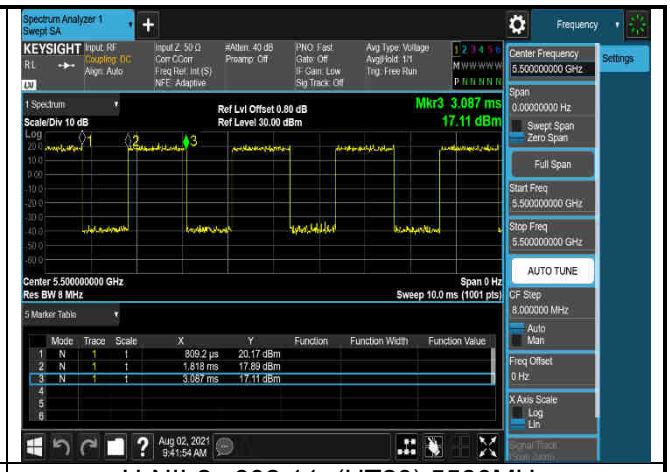


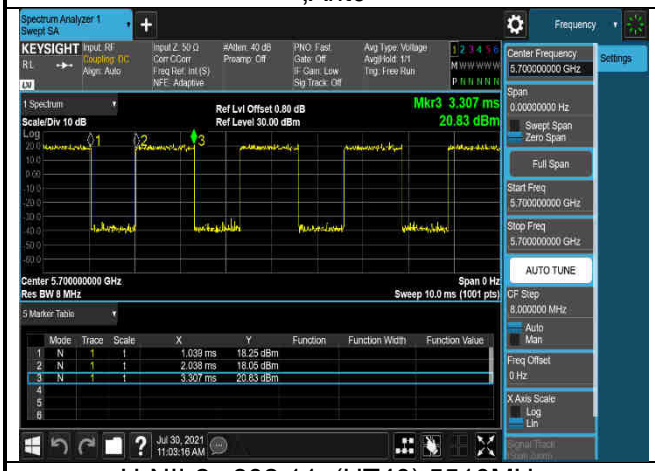
U-NII-2c,802.11n(HT20),5580MHz ,Ant0



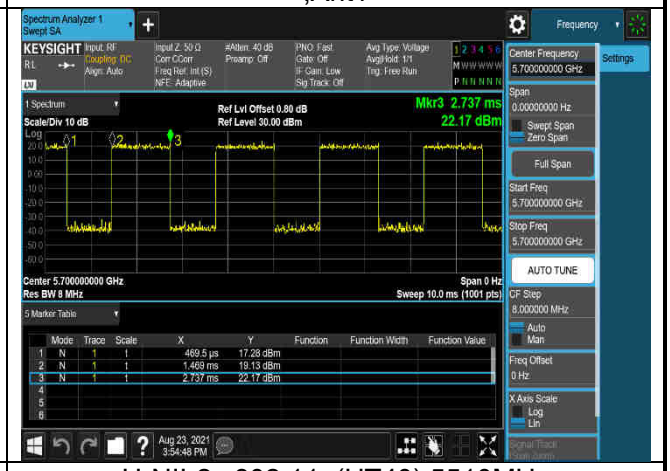
U-NII-2c,802.11n(HT20),5580MHz ,Ant1

U-NII-2c,802.11n(HT20),5700MHz ,Ant0

U-NII-2c,802.11n(HT20),5700MHz ,Ant1



U-NII-2c,802.11n(HT40),5510MHz ,Ant0



U-NII-2c,802.11n(HT40),5510MHz ,Ant1

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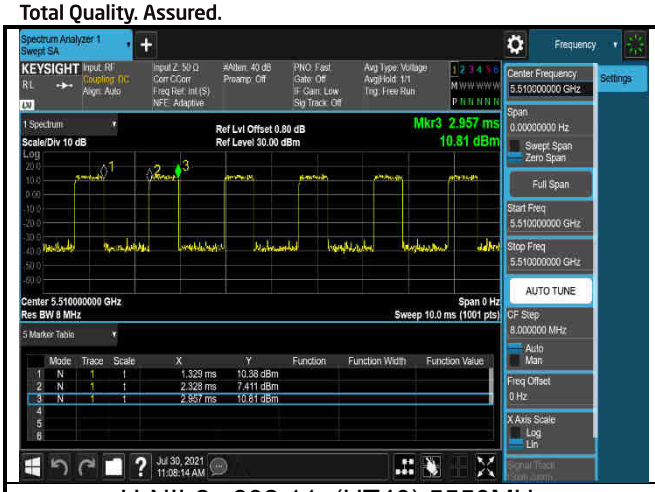
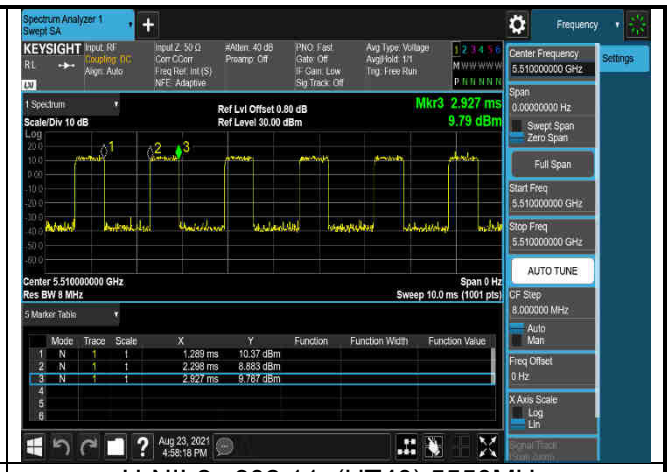
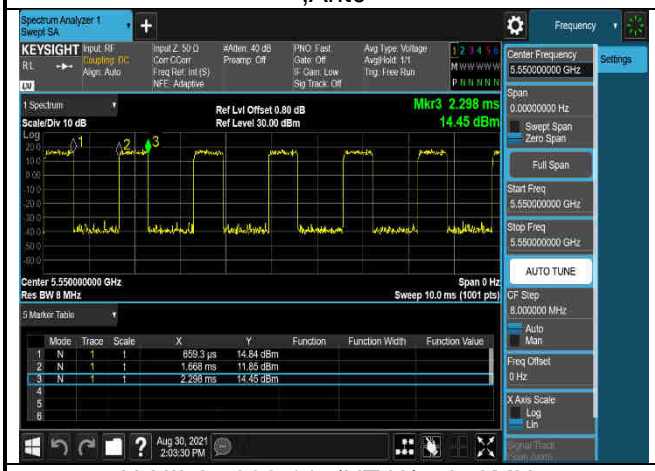


U-NII-2c,802.11n(HT40),5550MHz ,Ant0

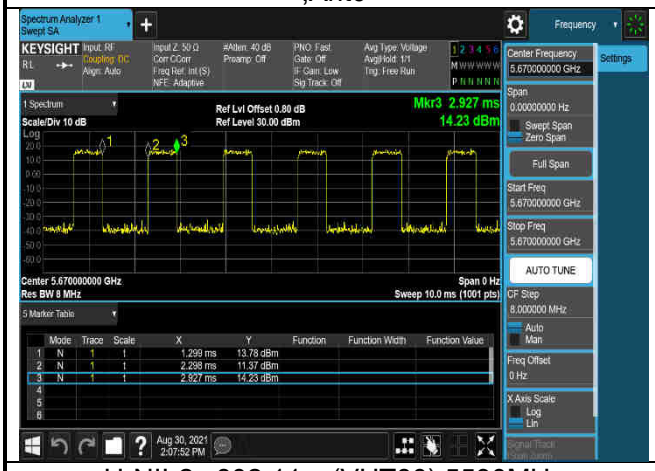


U-NII-2c,802.11n(HT40),5550MHz ,Ant1

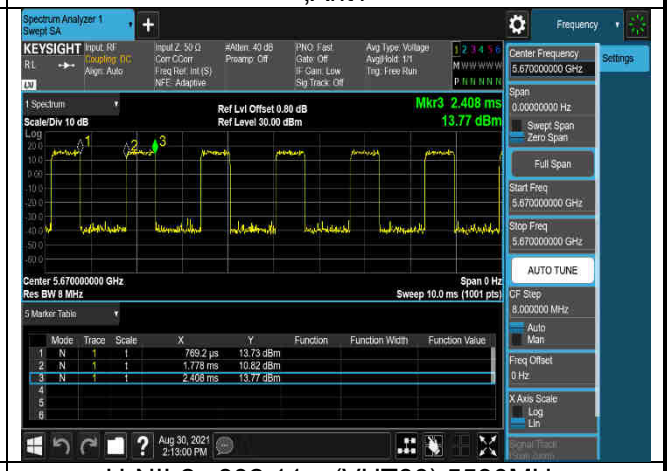


U-NII-2c,802.11n(HT40),5670MHz ,Ant0

U-NII-2c,802.11n(HT40),5670MHz ,Ant1



U-NII-2c,802.11ac(VHT80),5530MHz ,Ant0



U-NII-2c,802.11ac(VHT80),5530MHz ,Ant1

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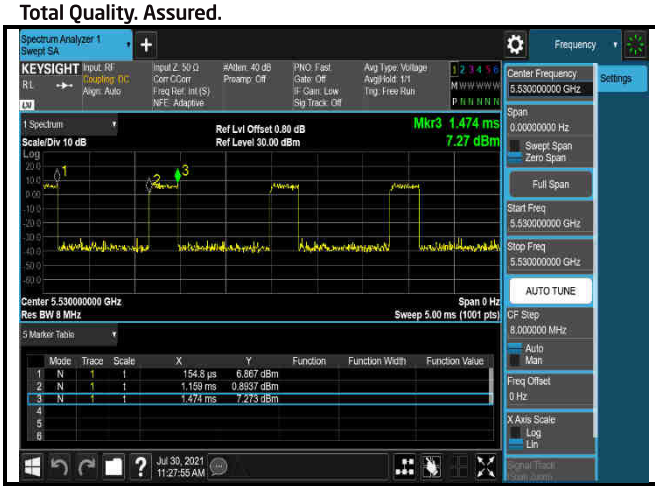

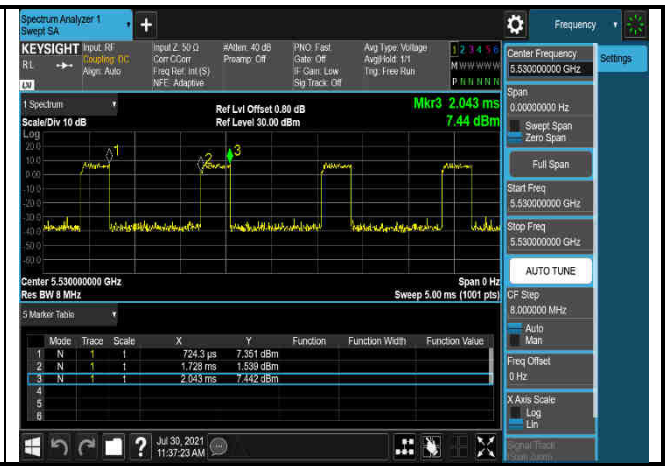

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4. AVGSA Output Power

4.1 Test Data

	U-NII-2c 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	5500	Ant0	2.39	15.10	24	18.68	23	Pass
802.11a	5500	Ant1	2.39	15.62	24	19.20	23	Pass
802.11a	5580	Ant0	2.41	16.32	24	19.90	23	Pass
802.11a	5580	Ant1	2.39	16.34	24	19.92	23	Pass
802.11a	5700	Ant0	2.39	15.44	24	19.02	23	Pass
802.11a	5700	Ant1	2.39	15.71	24	19.29	23	Pass
802.11n (HT20)	5500	Ant0	2.52	15.29	24	18.87	23	Pass
802.11n (HT20)	5500	Ant1	2.54	14.91	24	18.49	23	Pass
802.11n (HT20)	5580	Ant0	2.52	16.17	24	19.75	23	Pass
802.11n (HT20)	5580	Ant1	2.54	16.04	24	19.62	23	Pass
802.11n (HT20)	5700	Ant0	2.52	16.06	24	19.64	23	Pass
802.11n (HT20)	5700	Ant1	2.52	16.43	24	20.01	23	Pass
802.11n (HT40)	5510	Ant0	4.13	12.03	24	15.61	24	Pass
802.11n (HT40)	5510	Ant1	4.16	11.28	24	14.86	24	Pass
802.11n (HT40)	5550	Ant0	4.16	15.71	24	19.29	24	Pass
802.11n (HT40)	5550	Ant1	4.13	15.77	24	19.35	24	Pass
802.11n (HT40)	5670	Ant0	4.13	14.98	24	18.56	24	Pass
802.11n (HT40)	5670	Ant1	4.16	14.79	24	18.37	24	Pass
802.11ac (VHT80)	5530	Ant0	6.22	8.82	24	12.40	24	Pass
802.11ac (VHT80)	5530	Ant1	6.22	9.45	24	13.03	24	Pass

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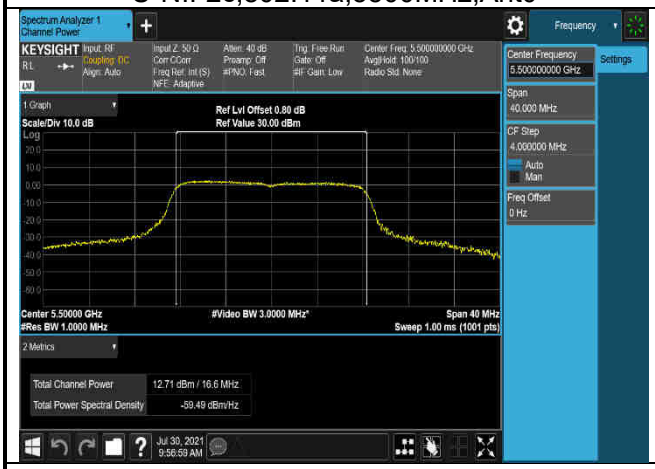
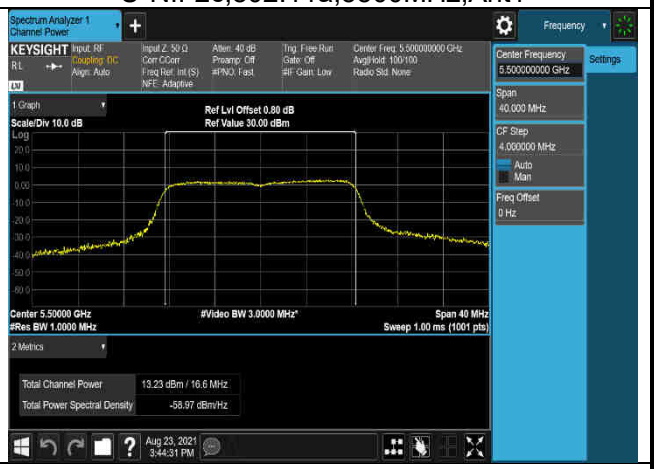
4.2 Test Plots

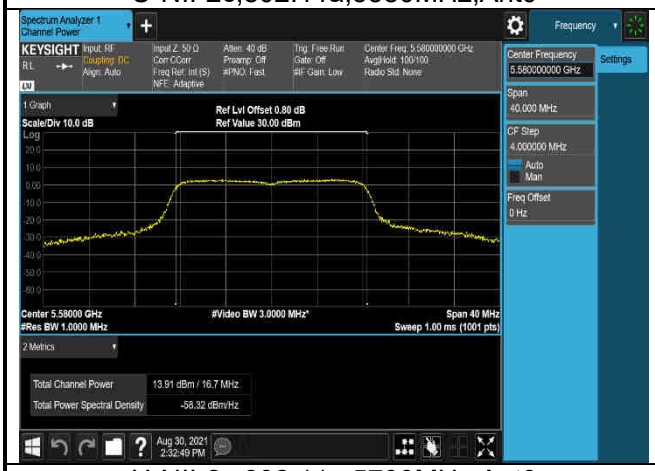
U-NII-2c,802.11a,5500MHz,Ant0



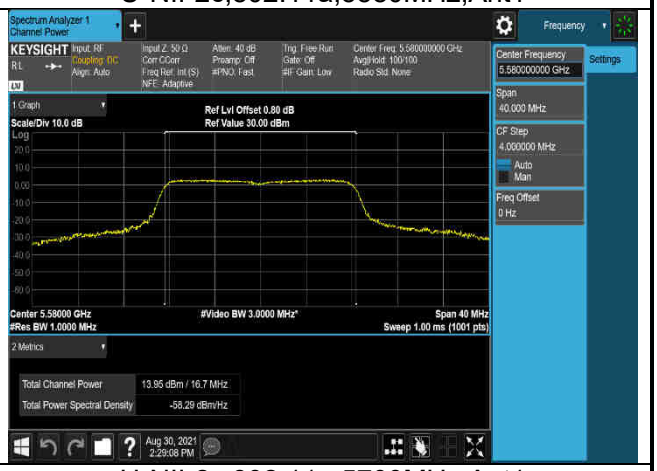
U-NII-2c,802.11a,5500MHz,Ant1



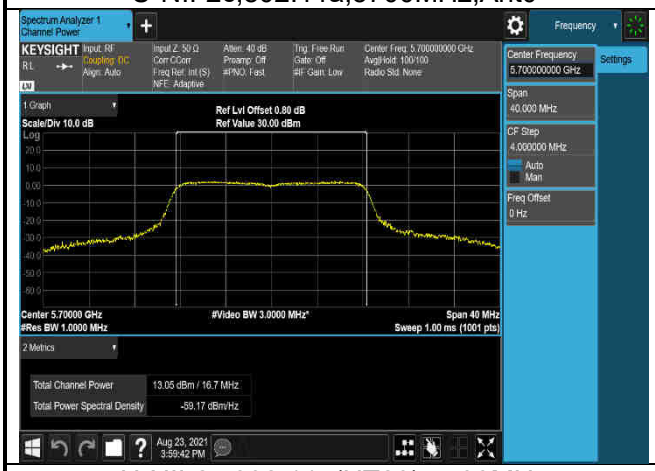
U-NII-2c,802.11a,5580MHz,Ant0



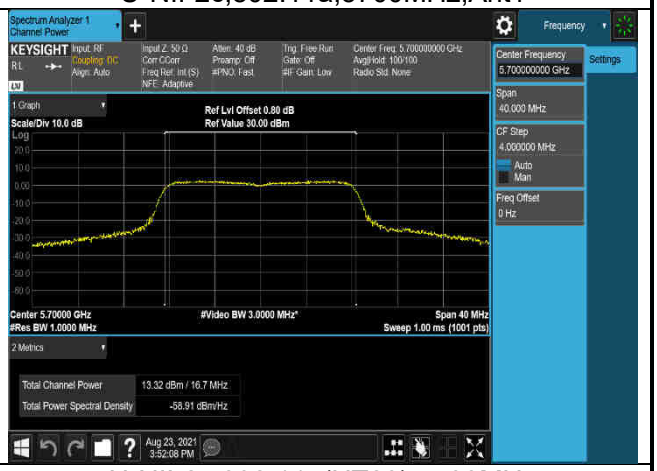
U-NII-2c,802.11a,5580MHz,Ant1



U-NII-2c,802.11a,5700MHz,Ant0



U-NII-2c,802.11a,5700MHz,Ant1



U-NII-2c,802.11n(HT20),5500MHz ,Ant0

U-NII-2c,802.11n(HT20),5500MHz ,Ant1

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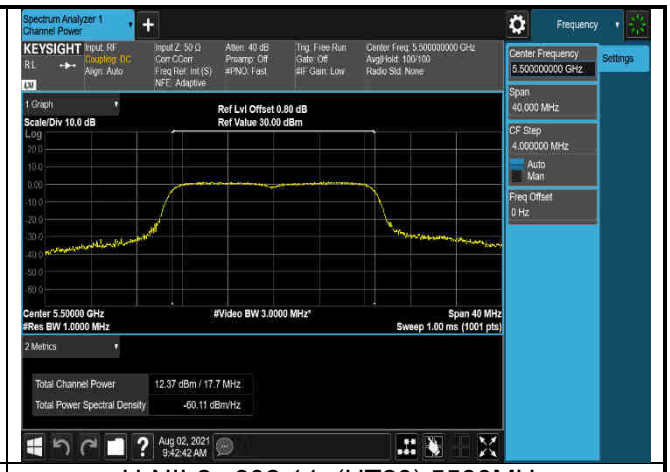
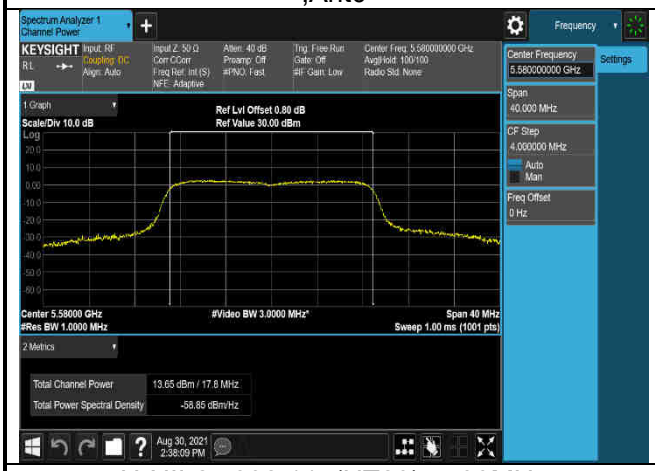
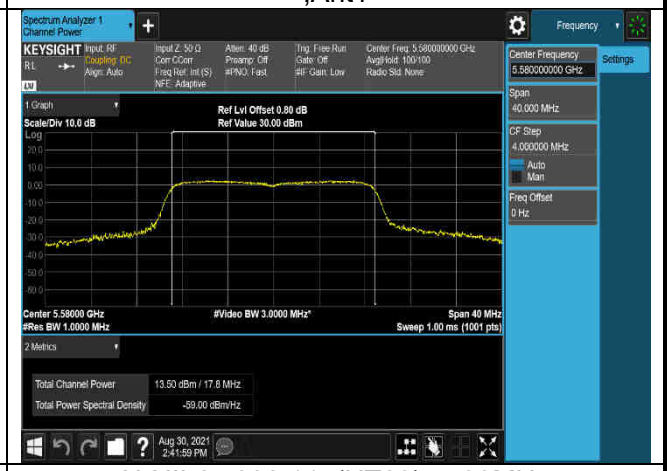
U-NII-2c,802.11n(HT20),5580MHz ,Ant0



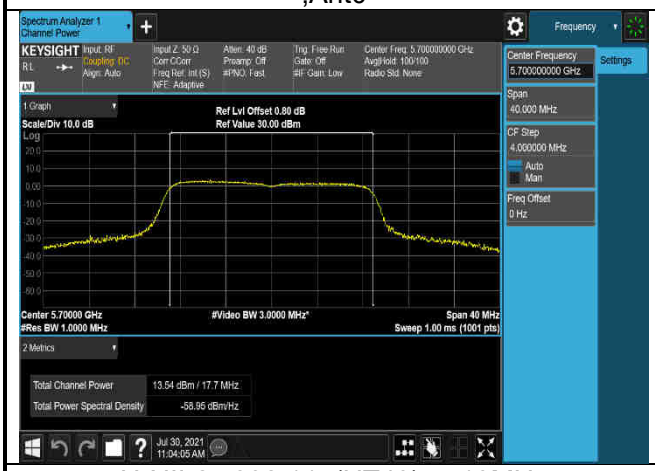
U-NII-2c,802.11n(HT20),5580MHz ,Ant1



U-NII-2c,802.11n(HT20),5700MHz ,Ant0



U-NII-2c,802.11n(HT20),5700MHz ,Ant1



U-NII-2c,802.11n(HT40),5510MHz ,Ant0

U-NII-2c,802.11n(HT40),5510MHz ,Ant1

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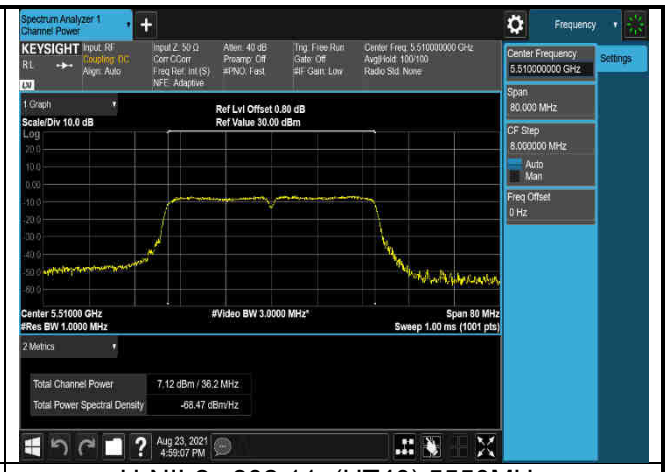
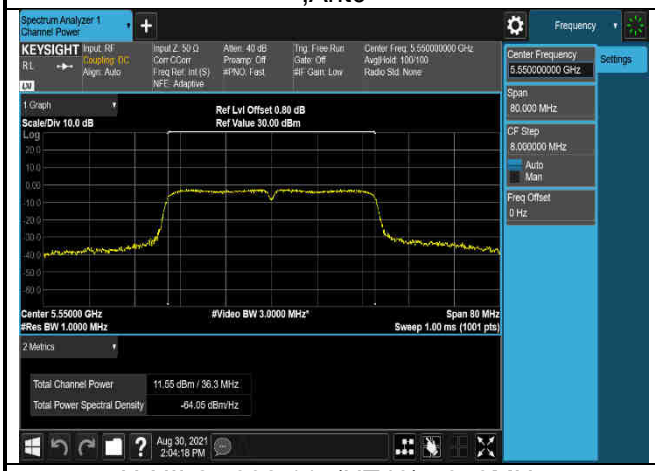
U-NII-2c,802.11n(HT40),5550MHz ,Ant0



U-NII-2c,802.11n(HT40),5550MHz ,Ant1



U-NII-2c,802.11n(HT40),5670MHz ,Ant0

U-NII-2c,802.11n(HT40),5670MHz ,Ant1

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant0

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant1

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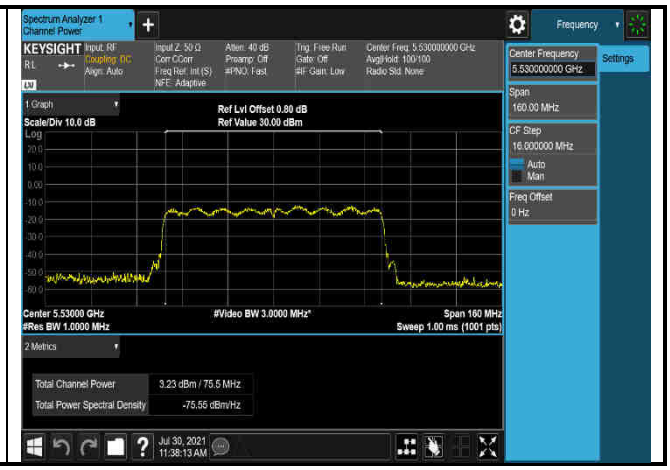

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5. AVGSA Power Spectral Density

5.1 Test Data

U-NII-2c AVGSA Power Spectral Density								
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm)	FCC Limit (dBm)	ERIP PSD (dBm)	IC Limit (dBm)	Result
802.11a	5500	Ant0	2.39	4.520	11	8.20	10	Pass
802.11a	5500	Ant1	2.39	4.999	11	8.679	10	Pass
802.11a	5580	Ant0	2.41	5.663	11	9.343	10	Pass
802.11a	5580	Ant1	2.39	5.690	11	9.37	10	Pass
802.11a	5700	Ant0	2.39	5.198	11	8.878	10	Pass
802.11a	5700	Ant1	2.39	4.281	11	7.961	10	Pass
802.11n (HT20)	5500	Ant0	2.52	4.500	11	8.18	10	Pass
802.11n (HT20)	5500	Ant1	2.54	3.850	11	7.53	10	Pass
802.11n (HT20)	5580	Ant0	2.52	5.265	11	8.945	10	Pass
802.11n (HT20)	5580	Ant1	2.54	5.455	11	9.135	10	Pass
802.11n (HT20)	5700	Ant0	2.52	4.309	11	7.989	10	Pass
802.11n (HT20)	5700	Ant1	2.52	4.895	11	8.575	10	Pass
802.11n (HT40)	5510	Ant0	4.13	-1.543	11	2.137	10	Pass
802.11n (HT40)	5510	Ant1	4.16	-2.203	11	1.477	10	Pass
802.11n (HT40)	5550	Ant0	4.16	1.580	11	5.26	10	Pass
802.11n (HT40)	5550	Ant1	4.13	2.218	11	5.898	10	Pass
802.11n (HT40)	5670	Ant0	4.13	1.111	11	4.791	10	Pass
802.11n (HT40)	5670	Ant1	4.16	0.590	11	4.27	10	Pass
802.11ac (VHT80)	5530	Ant0	6.22	-5.648	11	8.20	10	Pass
802.11ac (VHT80)	5530	Ant1	6.22	-5.157	11	8.679	10	Pass

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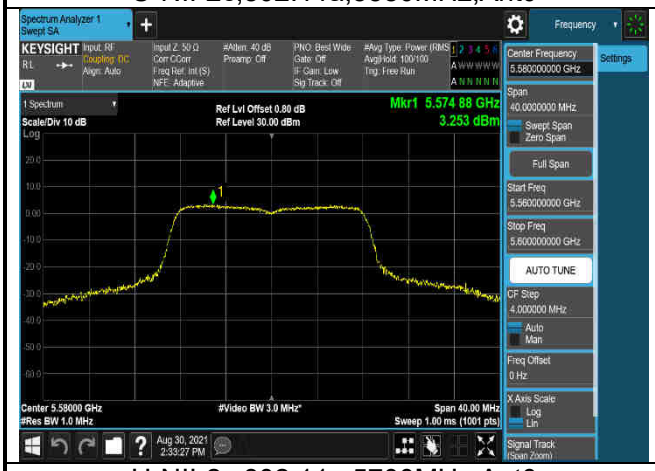
5.2 Test Plots

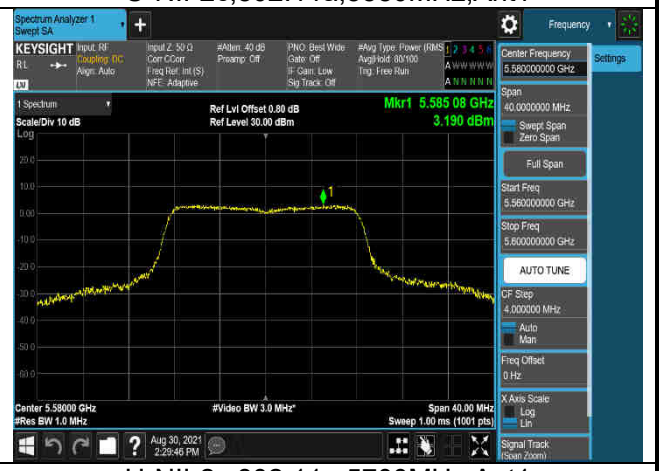
U-NII-2c,802.11a,5500MHz,Ant0

U-NII-2c,802.11a,5500MHz,Ant1

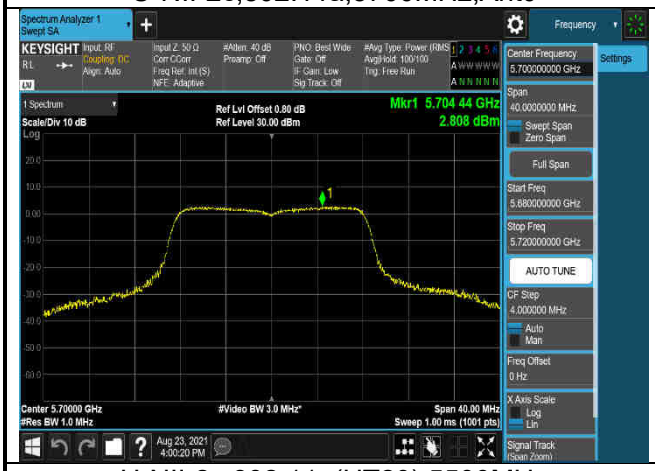
U-NII-2c,802.11a,5580MHz,Ant0



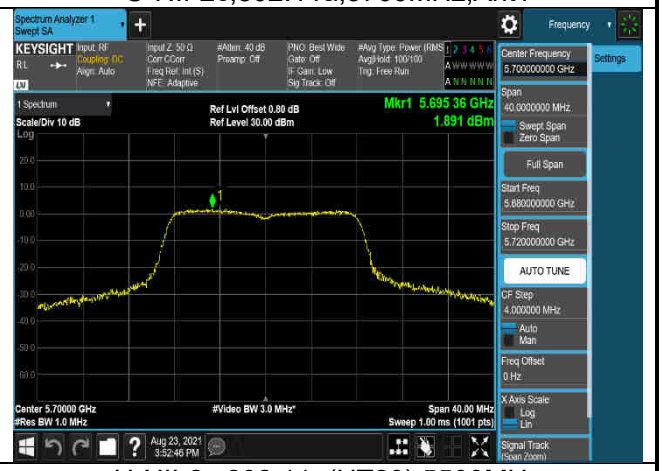
U-NII-2c,802.11a,5580MHz,Ant1



U-NII-2c,802.11a,5700MHz,Ant0



U-NII-2c,802.11a,5700MHz,Ant1



U-NII-2c,802.11n(HT20),5500MHz ,Ant0

U-NII-2c,802.11n(HT20),5500MHz ,Ant1

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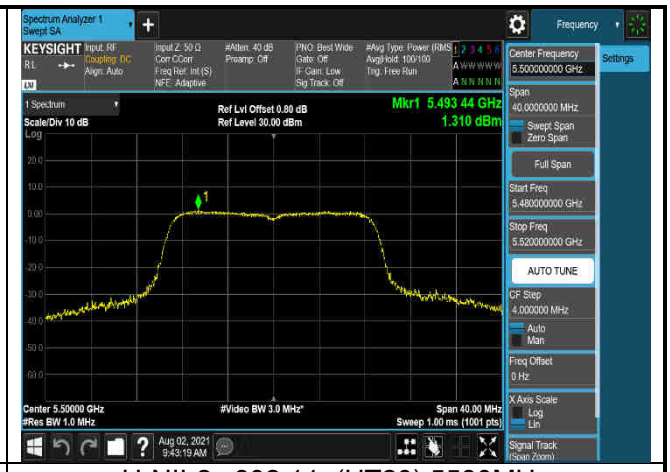
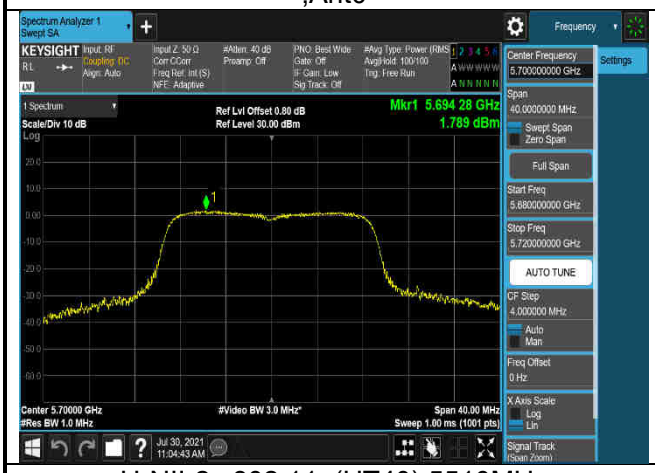
U-NII-2c,802.11n(HT20),5580MHz ,Ant0



U-NII-2c,802.11n(HT20),5580MHz ,Ant1

U-NII-2c,802.11n(HT20),5700MHz ,Ant0

U-NII-2c,802.11n(HT20),5700MHz ,Ant1



U-NII-2c,802.11n(HT40),5510MHz ,Ant0

U-NII-2c,802.11n(HT40),5510MHz ,Ant1

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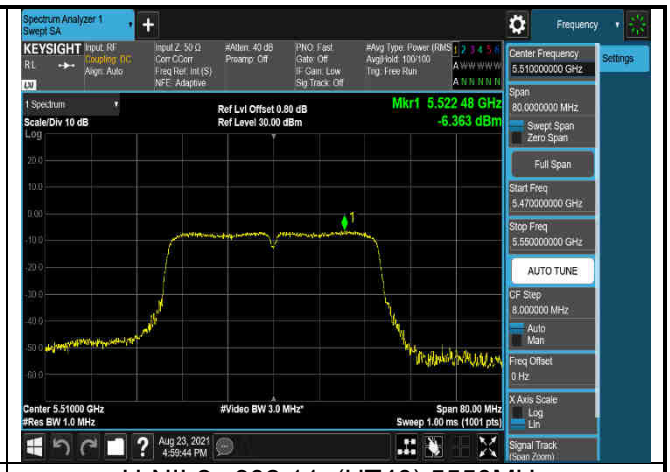
U-NII-2c,802.11n(HT40),5550MHz ,Ant0



U-NII-2c,802.11n(HT40),5550MHz ,Ant1

U-NII-2c,802.11n(HT40),5670MHz ,Ant0

U-NII-2c,802.11n(HT40),5670MHz ,Ant1

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant0

U-NII-2c,802.11ac(VHT80),5530MHz ,Ant1

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