

Appendix RF test data for WIFI5G

5.2G WIFI

1. Duty Cycle

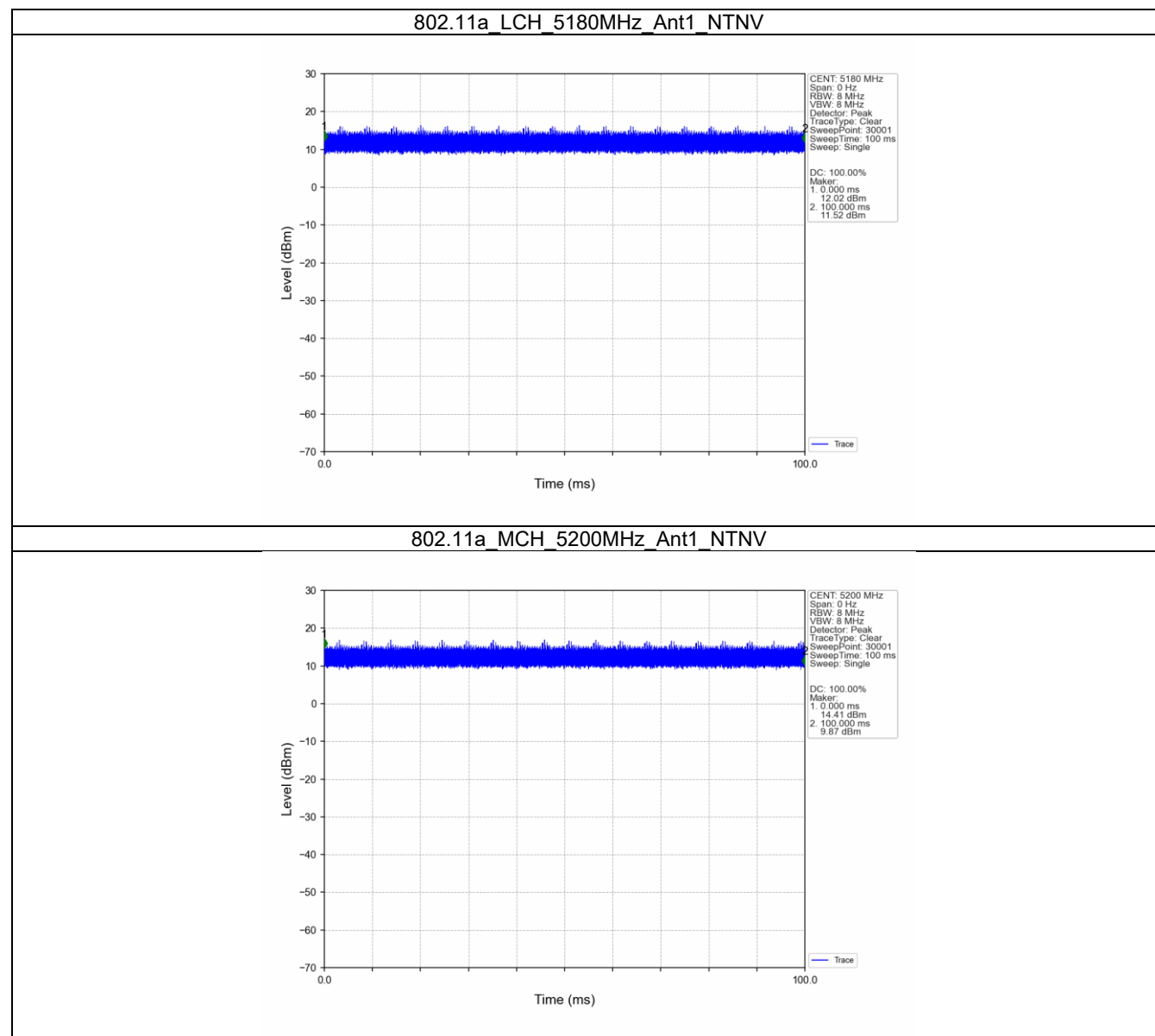
1.1 Test Result

1.1.1 Ant1

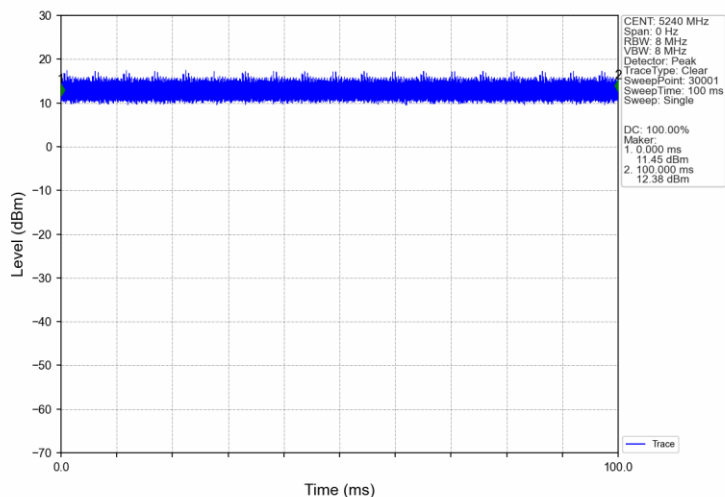
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00
802.11n (HT20)	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00
802.11n (HT40)	SISO	5190	100.000	100.000	100.00	0.00	0.00
		5230	100.000	100.000	100.00	0.00	0.00
802.11ac (VHT20)	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00
802.11ac (VHT40)	SISO	5190	100.000	100.000	100.00	0.00	0.00
		5230	100.000	100.000	100.00	0.00	0.00
802.11ac (VHT80)	SISO	5210	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

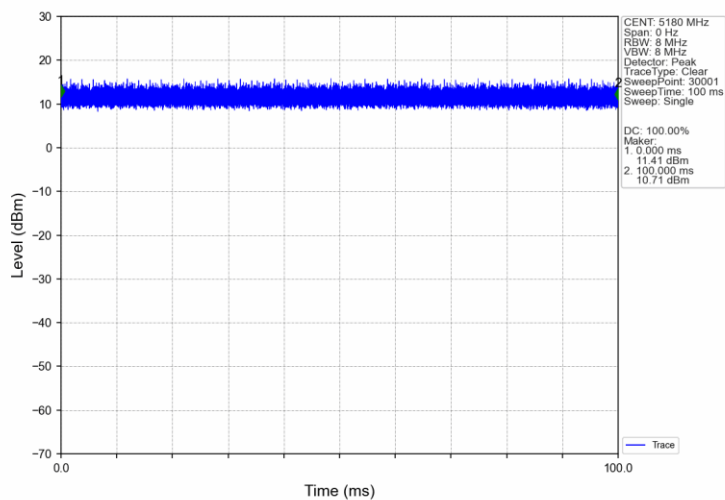
1.2.1 Ant1



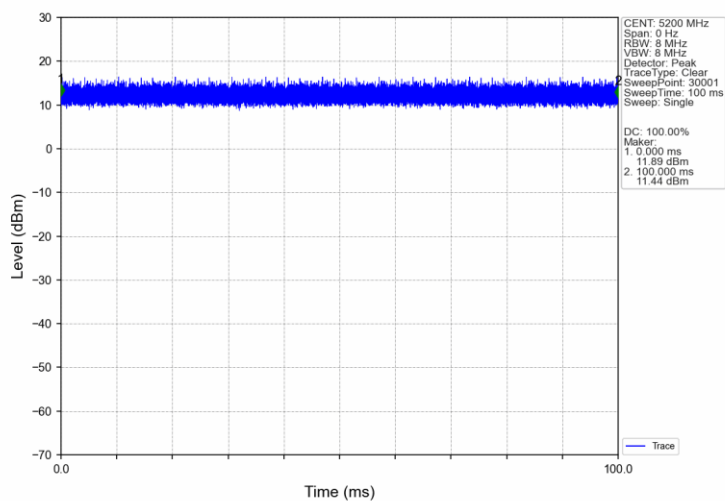
802.11a_HCH_5240MHz_Ant1_NTNV



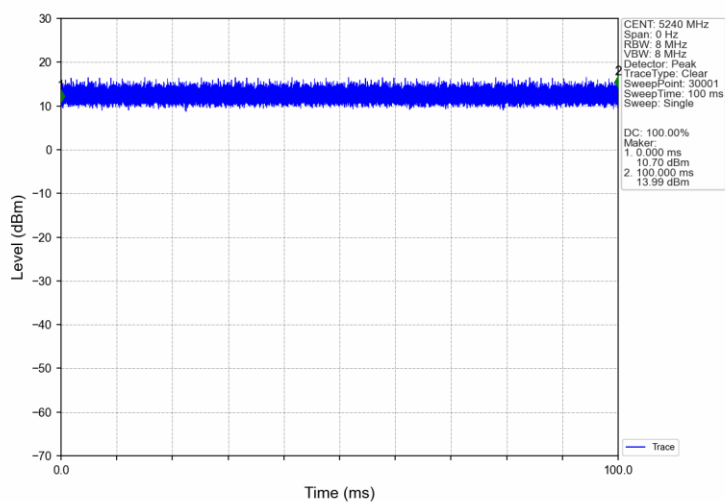
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



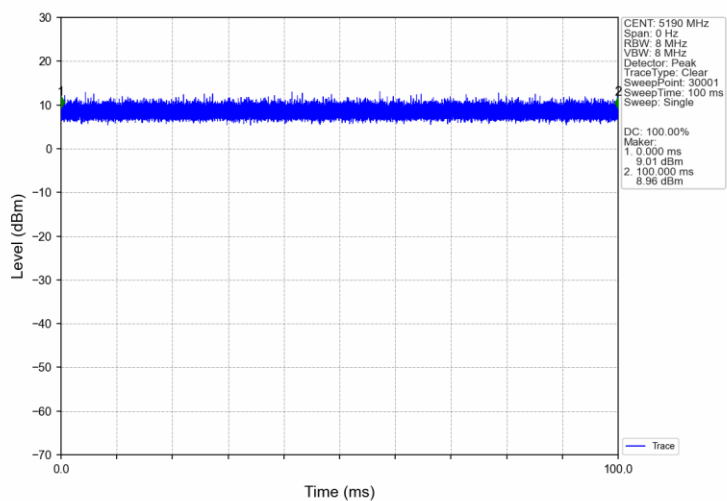
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



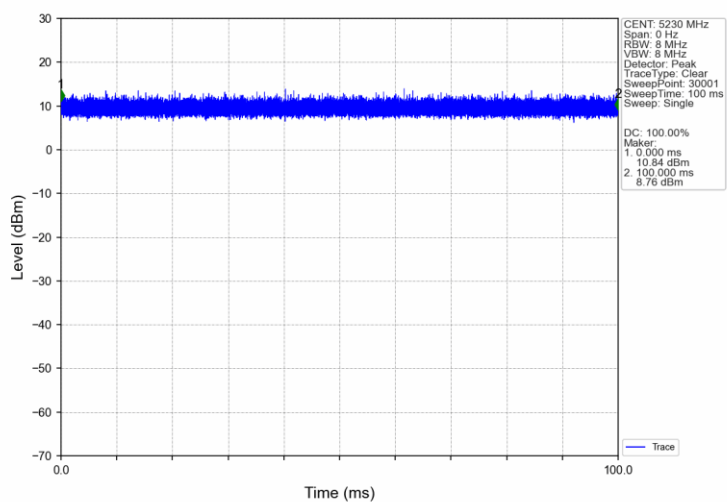
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



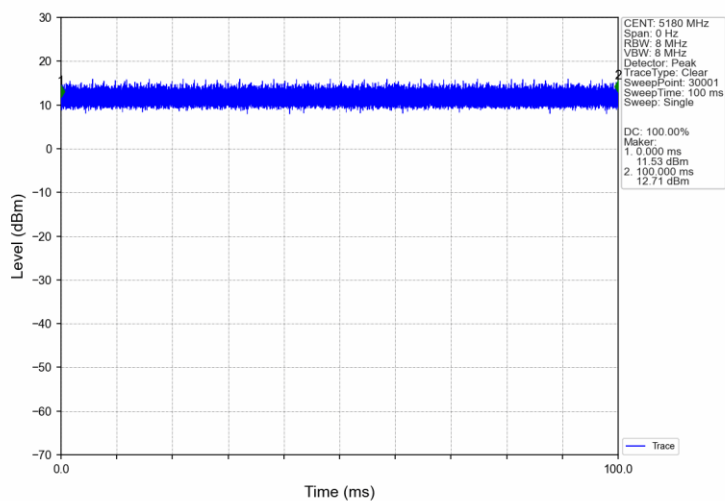
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



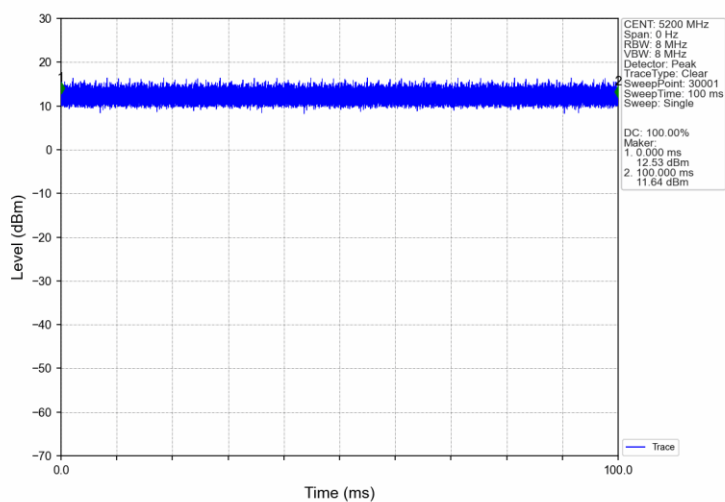
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



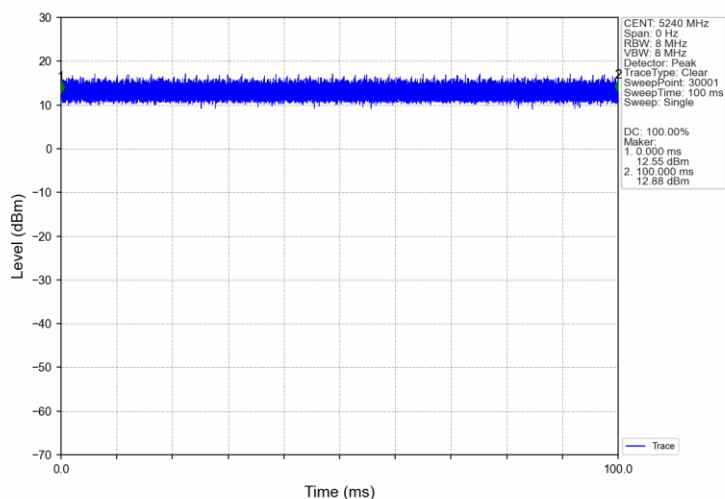
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



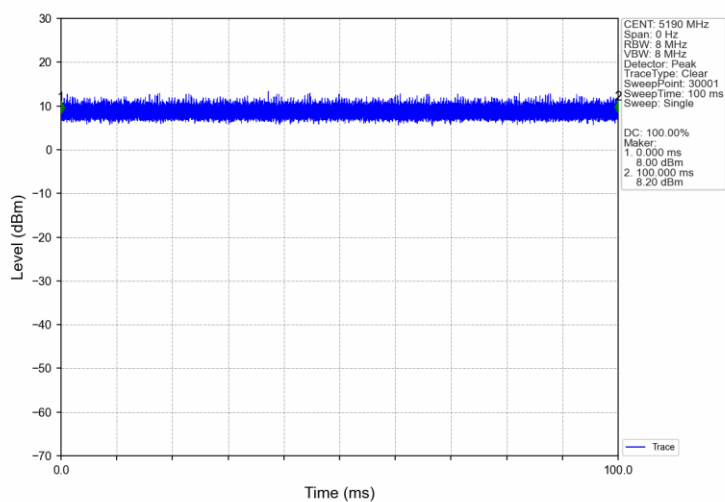
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



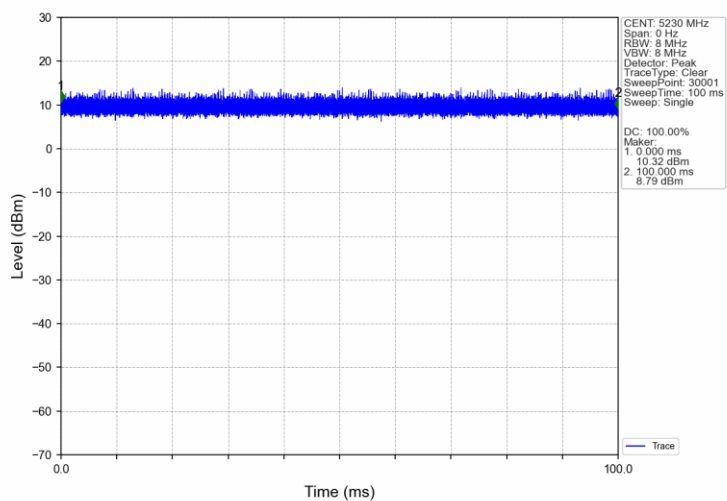
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



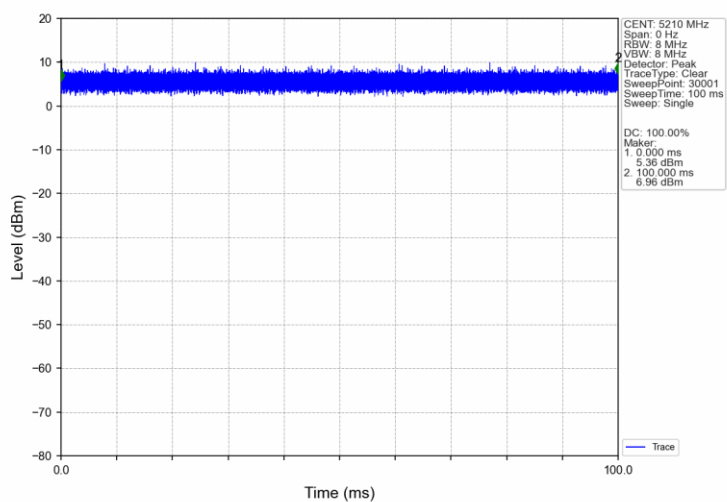
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

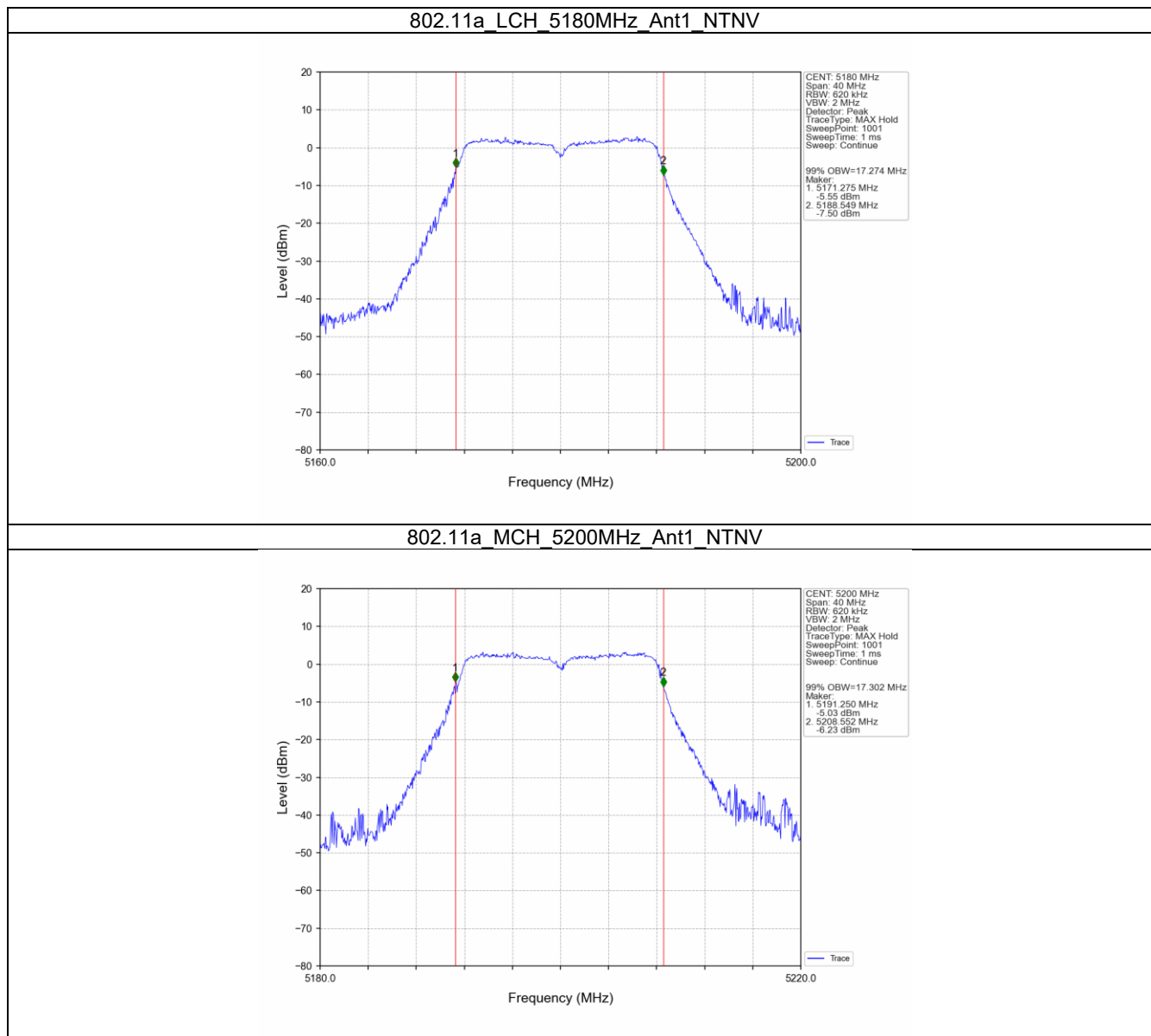
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.274	/	Pass
		5200	1	17.302	/	Pass
		5240	1	17.273	/	Pass
802.11n (HT20)	SISO	5180	1	18.226	/	Pass
		5200	1	18.225	/	Pass
		5240	1	18.212	/	Pass
802.11n (HT40)	SISO	5190	1	36.748	/	Pass
		5230	1	36.757	/	Pass
802.11ac (VHT20)	SISO	5180	1	18.282	/	Pass
		5200	1	18.240	/	Pass
		5240	1	18.241	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.783	/	Pass
		5230	1	36.719	/	Pass
802.11ac (VHT80)	SISO	5210	1	75.967	/	Pass

2.1.2 26dB BW

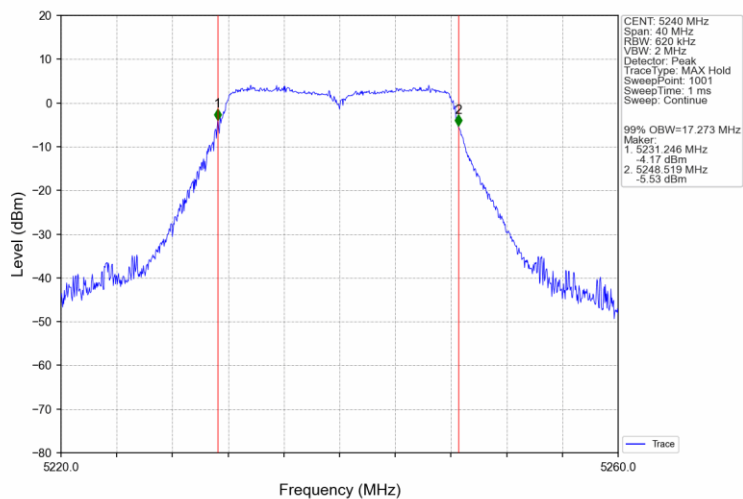
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	21.355	/	Pass
		5200	1	21.047	/	Pass
		5240	1	21.153	/	Pass
802.11n (HT20)	SISO	5180	1	21.841	/	Pass
		5200	1	21.680	/	Pass
		5240	1	21.880	/	Pass
802.11n (HT40)	SISO	5190	1	42.891	/	Pass
		5230	1	43.264	/	Pass
802.11ac (VHT20)	SISO	5180	1	22.010	/	Pass
		5200	1	21.855	/	Pass
		5240	1	22.048	/	Pass
802.11ac (VHT40)	SISO	5190	1	42.705	/	Pass
		5230	1	43.141	/	Pass
802.11ac (VHT80)	SISO	5210	1	81.878	/	Pass

2.2 Test Graph

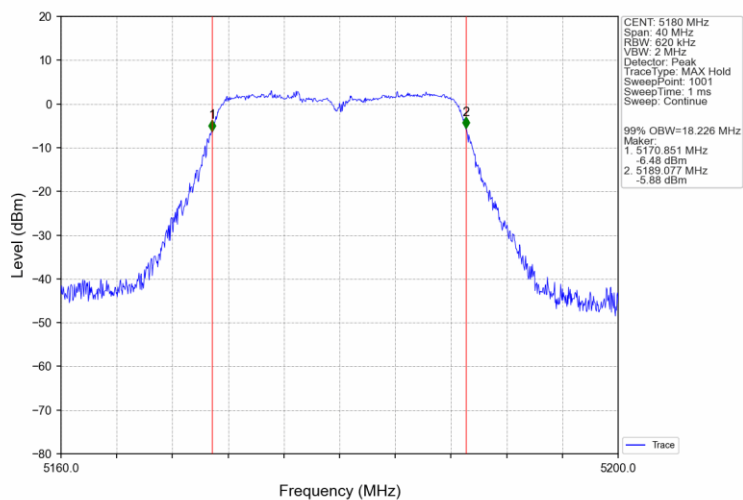
2.2.1 OBW



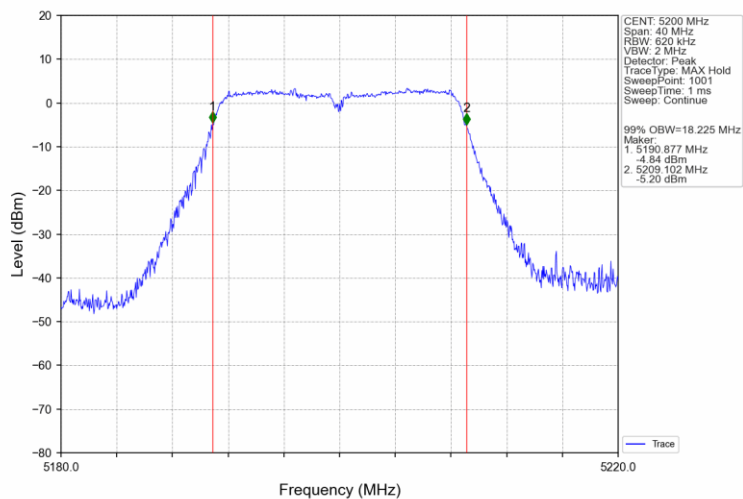
802.11a_HCH_5240MHz_Ant1_NTNV



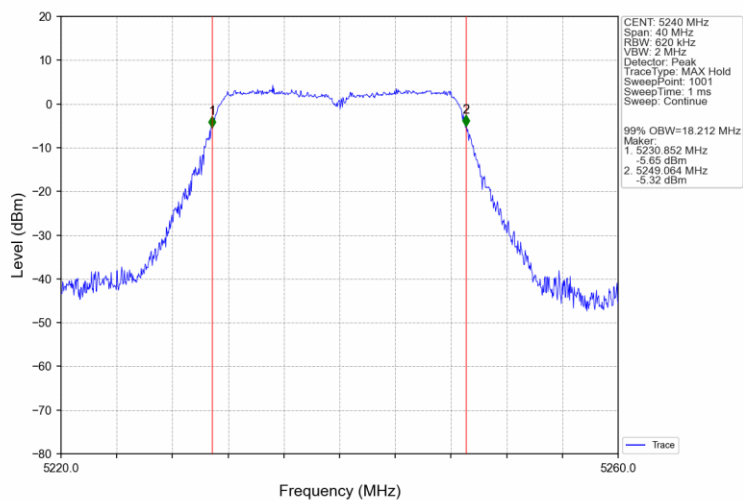
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



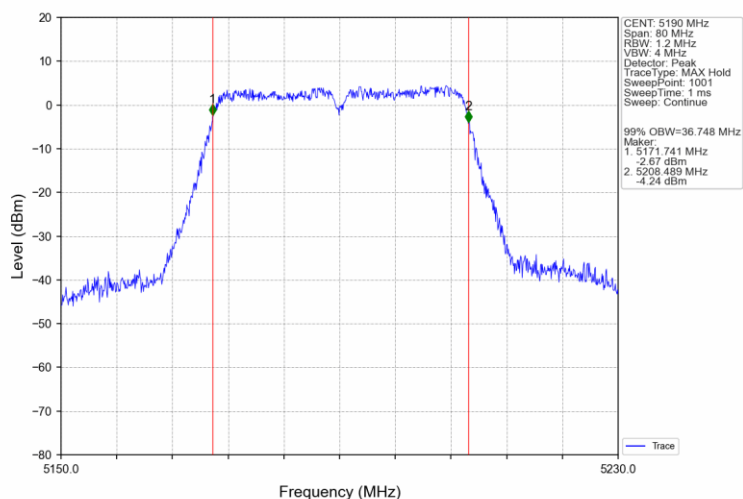
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



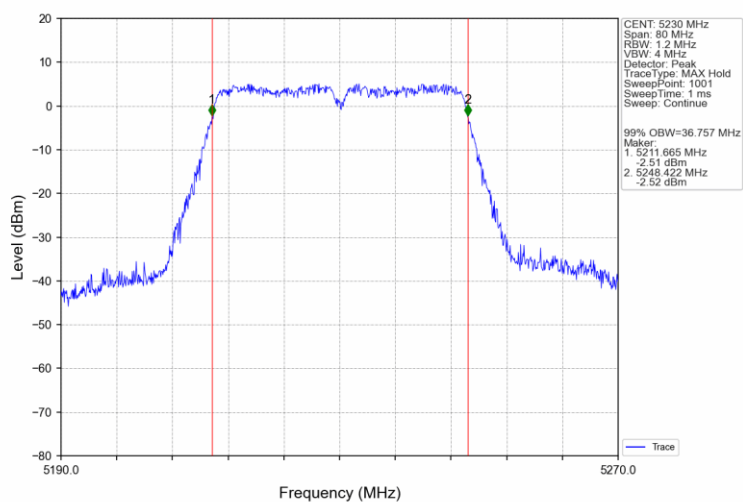
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



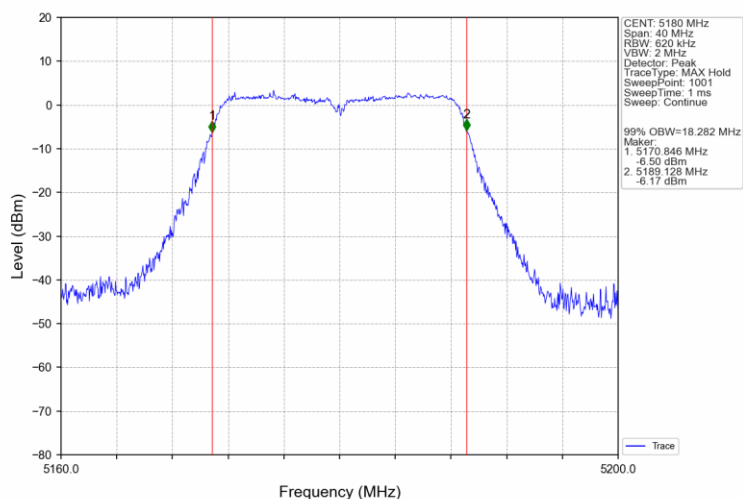
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



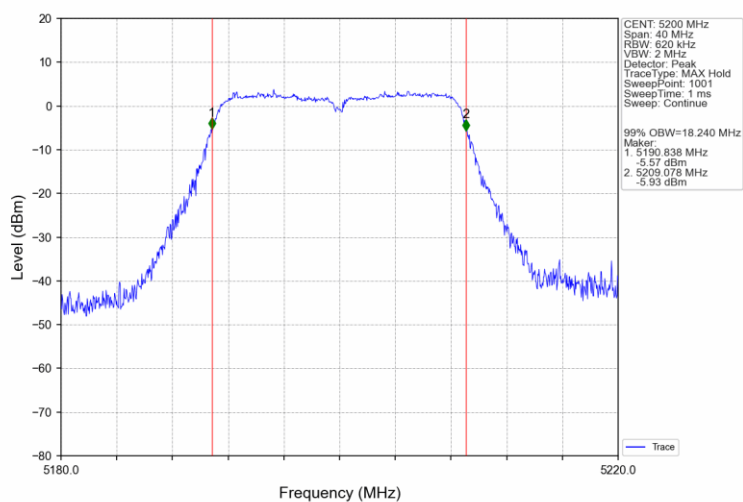
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



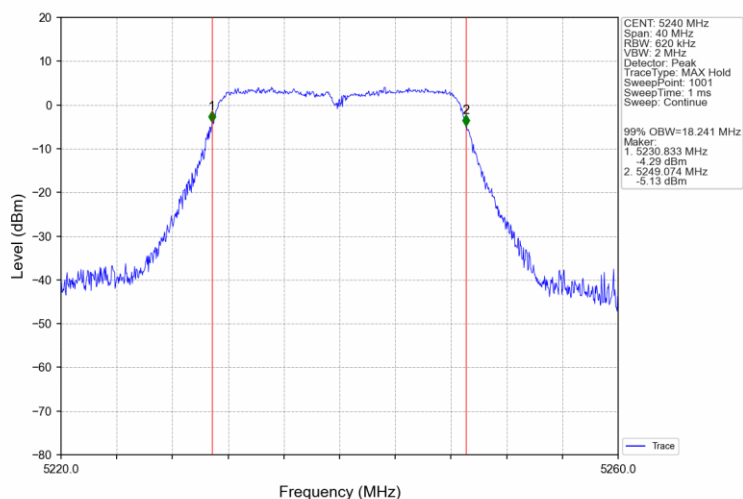
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



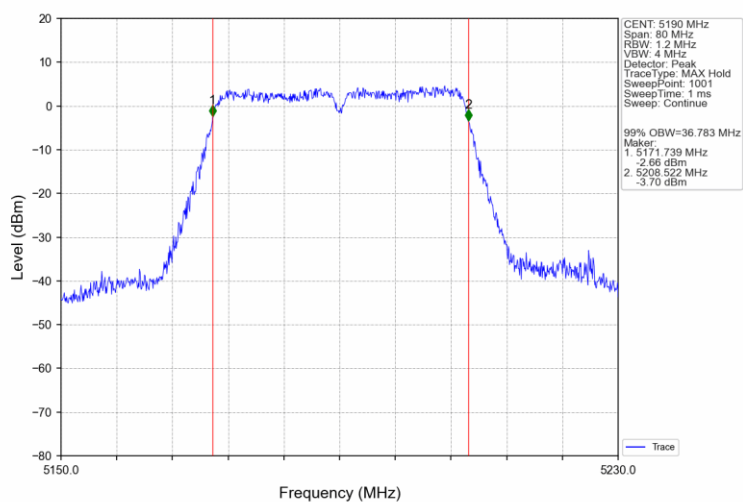
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



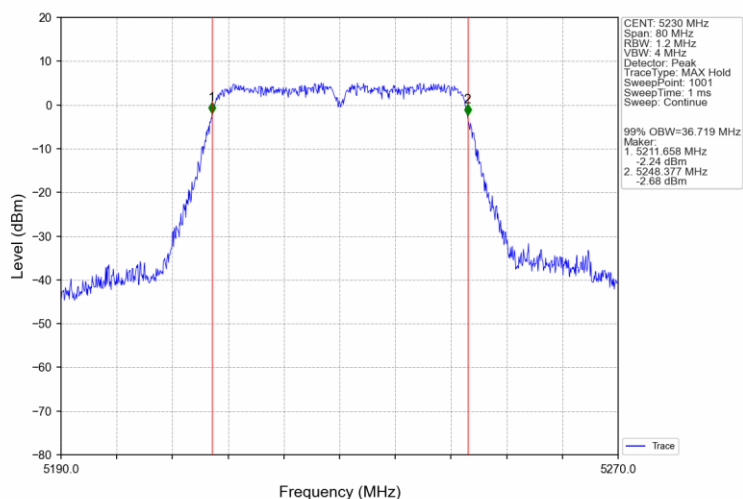
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



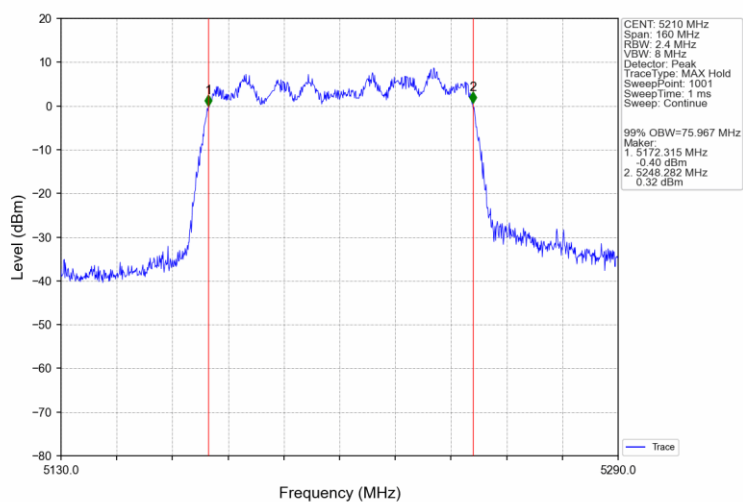
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV

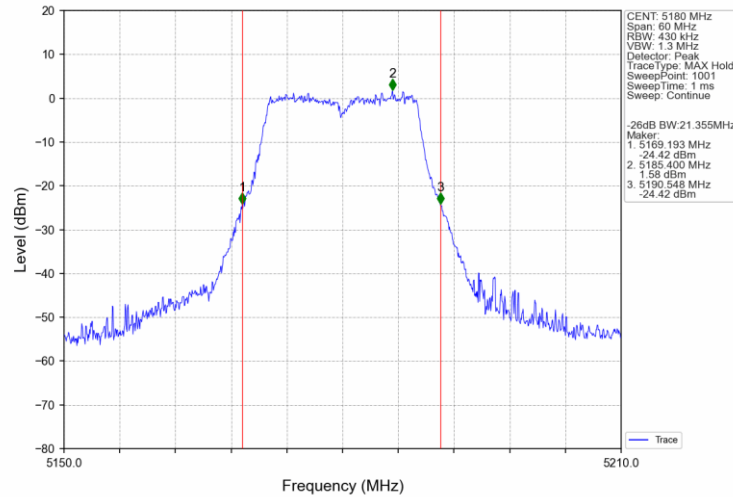


802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV

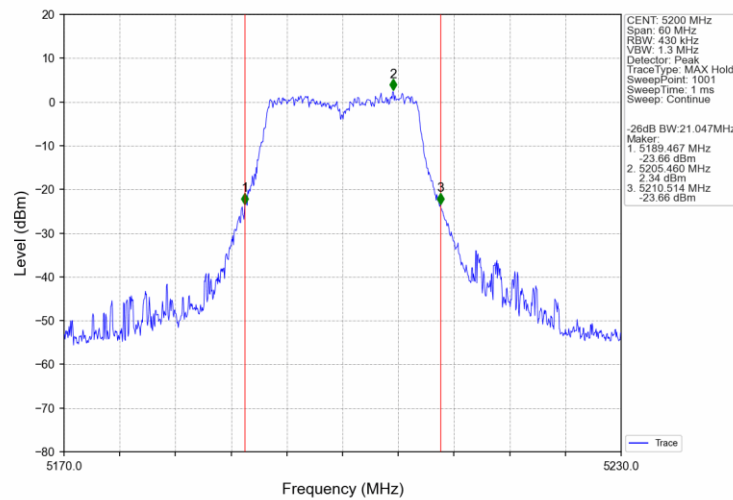


2.2.2 26dB BW

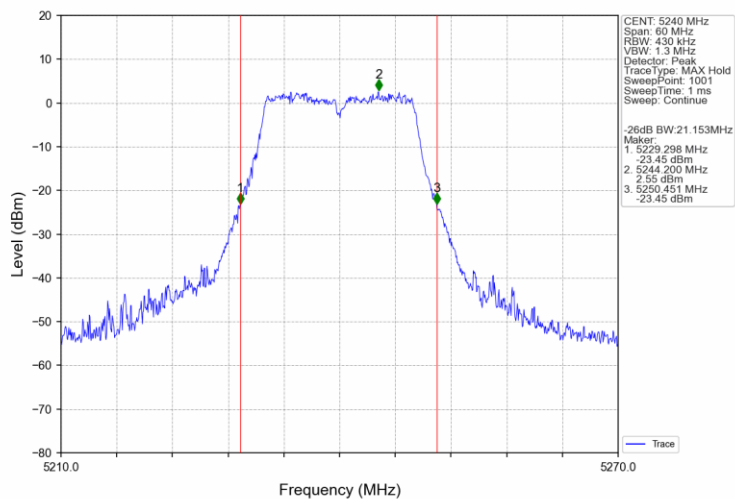
802.11a_LCH_5180MHz_Ant1_NTNV



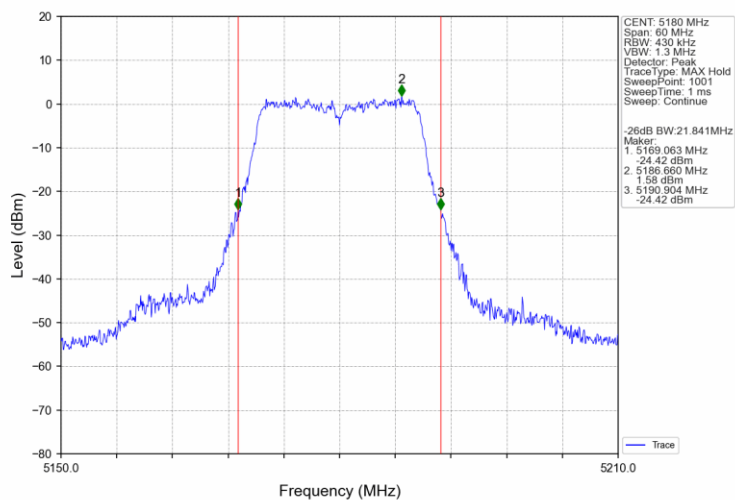
802.11a_MCH_5200MHz_Ant1_NTNV



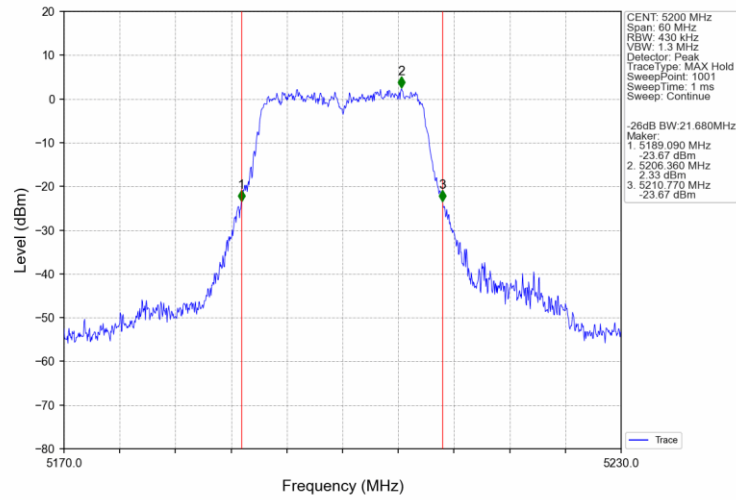
802.11a_HCH_5240MHz_Ant1_NTNV



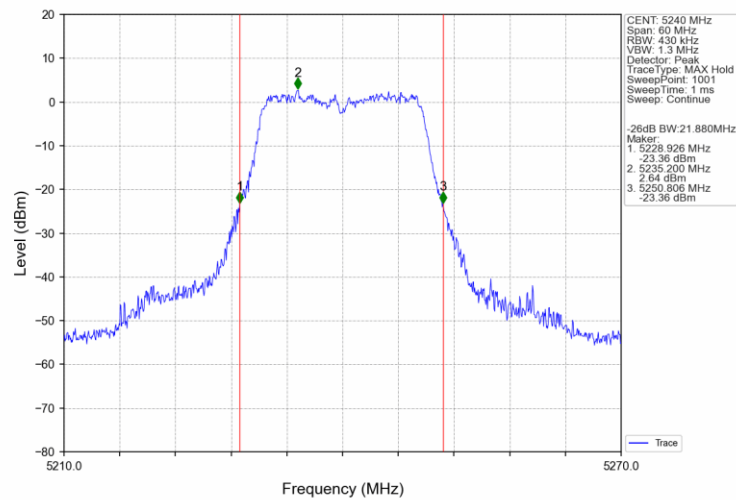
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



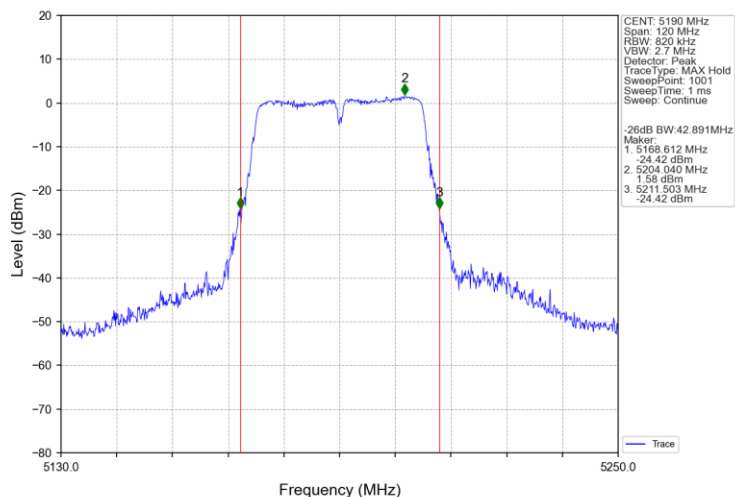
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



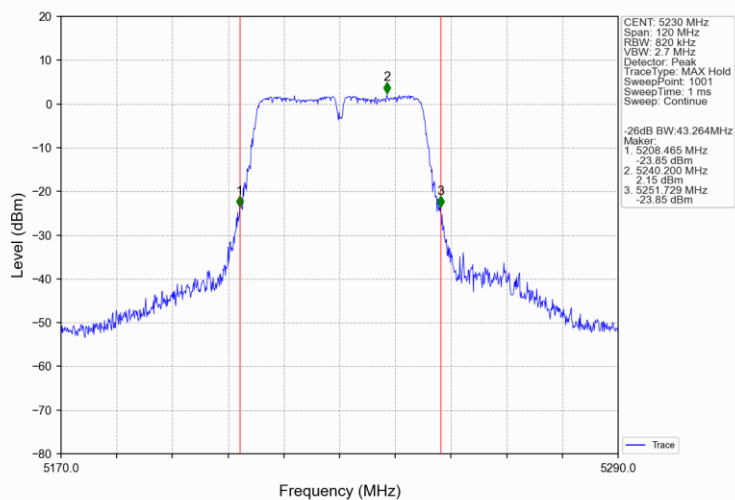
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



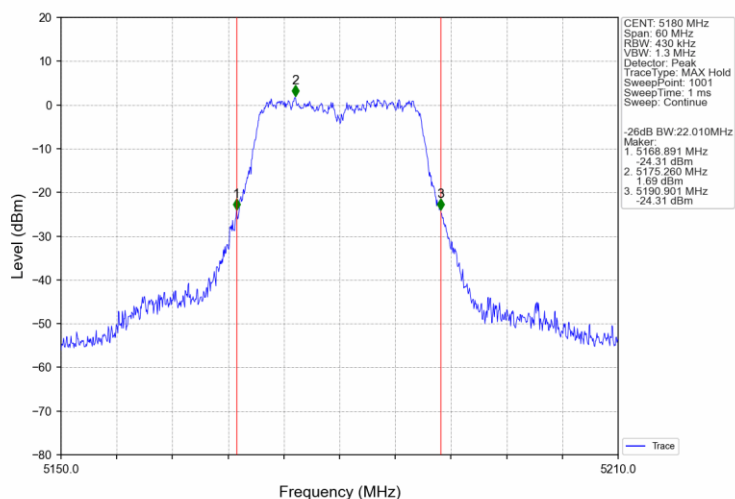
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



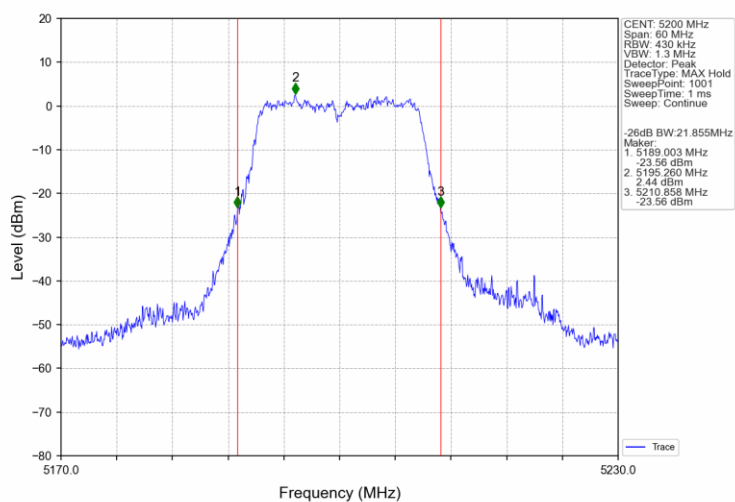
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



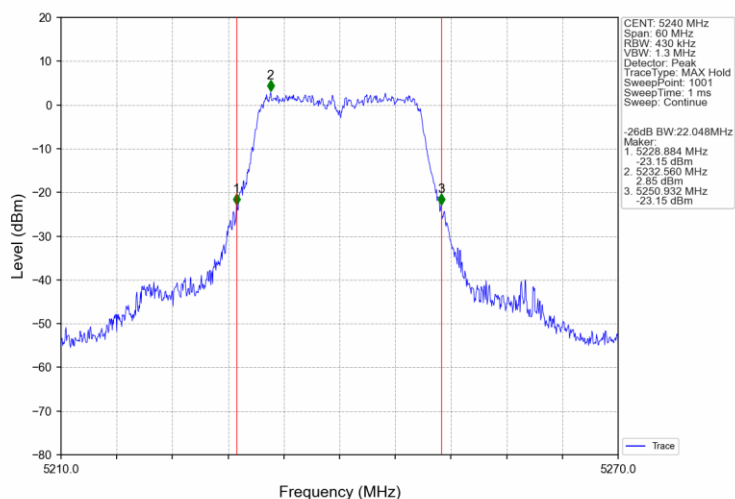
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



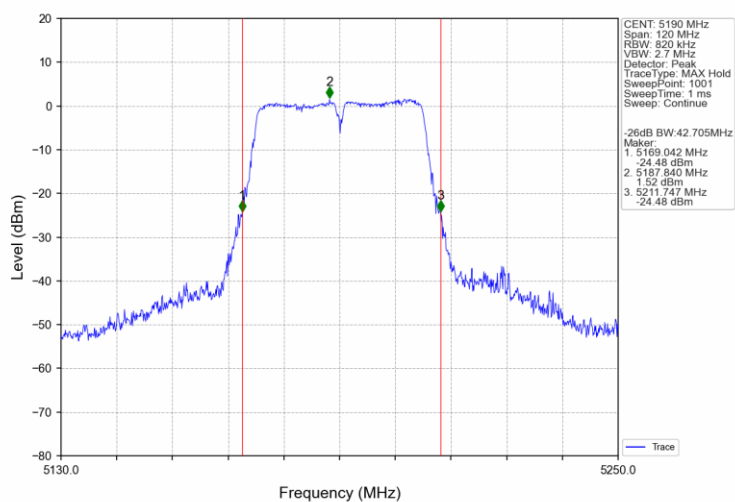
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



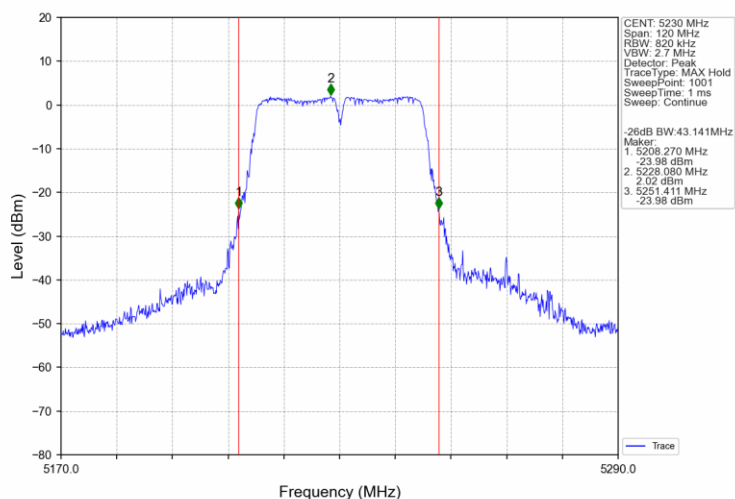
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



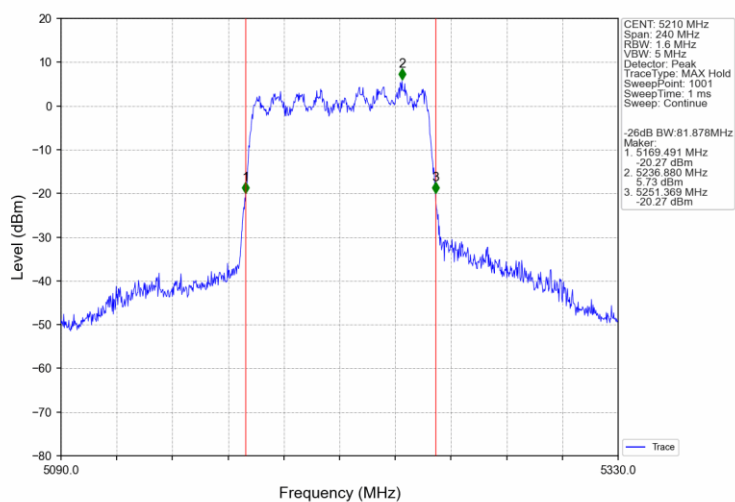
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	9.03	<=23.98	Pass
		5200	9.56	<=23.98	Pass
		5240	10.22	<=23.98	Pass
802.11n (HT20)	SISO	5180	9.23	<=23.98	Pass
		5200	9.85	<=23.98	Pass
		5240	10.04	<=23.98	Pass
802.11n (HT40)	SISO	5190	9.30	<=23.98	Pass
		5230	10.26	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	9.23	<=23.98	Pass
		5200	9.80	<=23.98	Pass
		5240	10.54	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	9.36	<=23.98	Pass
		5230	10.27	<=23.98	Pass
802.11ac (VHT80)	SISO	5210	9.70	<=23.98	Pass

Note1: Antenna Gain: Ant1: 0.30dBi;

4. Maximum Power Spectral Density

4.1 Test Result

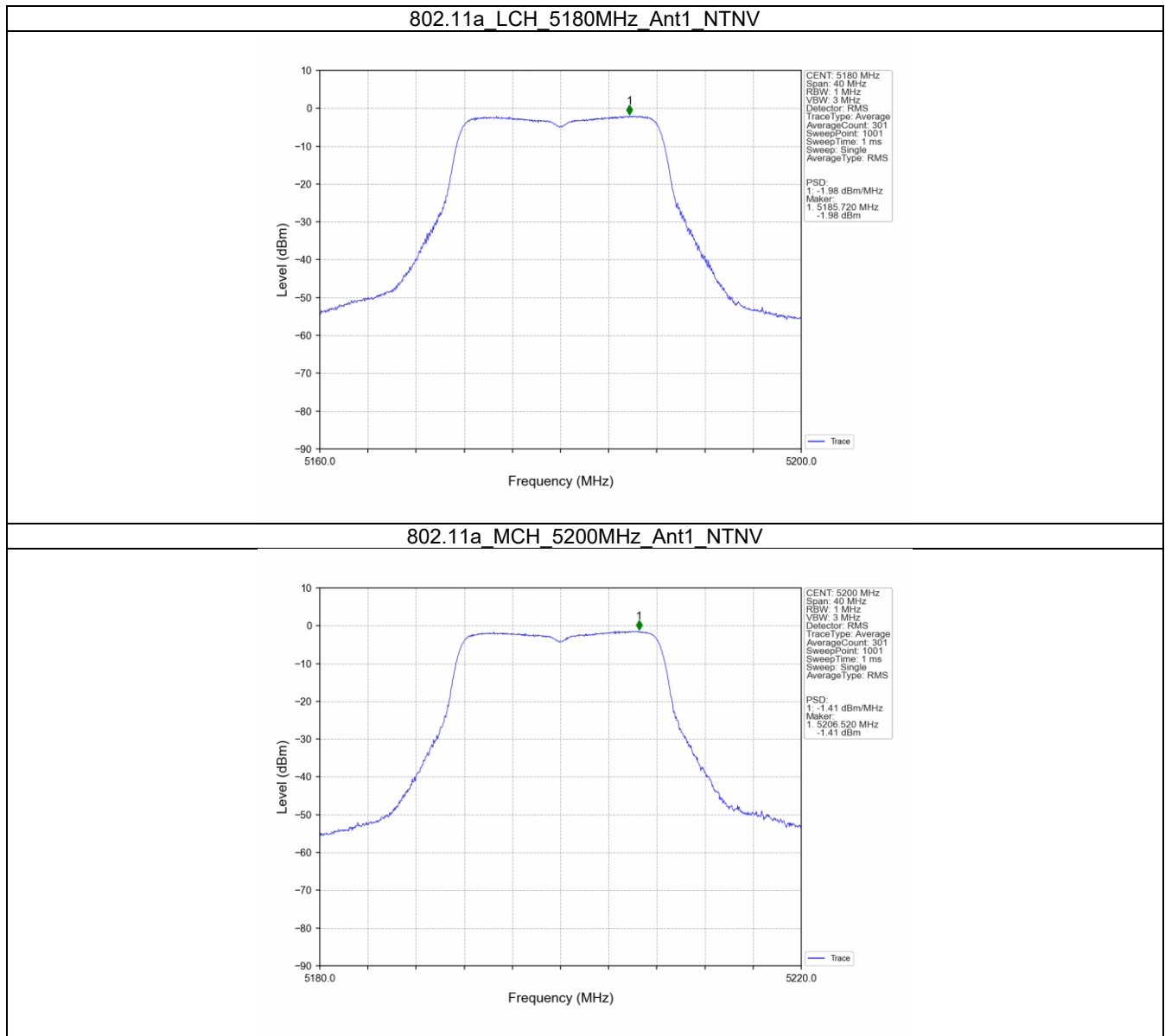
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-1.98	<=11	Pass
		5200	-1.41	<=11	Pass
		5240	-0.96	<=11	Pass
802.11n (HT20)	SISO	5180	-1.97	<=11	Pass
		5200	-1.35	<=11	Pass
		5240	-1.22	<=11	Pass
802.11n (HT40)	SISO	5190	-4.61	<=11	Pass
		5230	-4.21	<=11	Pass
802.11ac (VHT20)	SISO	5180	-1.89	<=11	Pass
		5200	-1.35	<=11	Pass
		5240	-0.76	<=11	Pass
802.11ac (VHT40)	SISO	5190	-4.75	<=11	Pass
		5230	-4.23	<=11	Pass
802.11ac (VHT80)	SISO	5210	-6.29	<=11	Pass

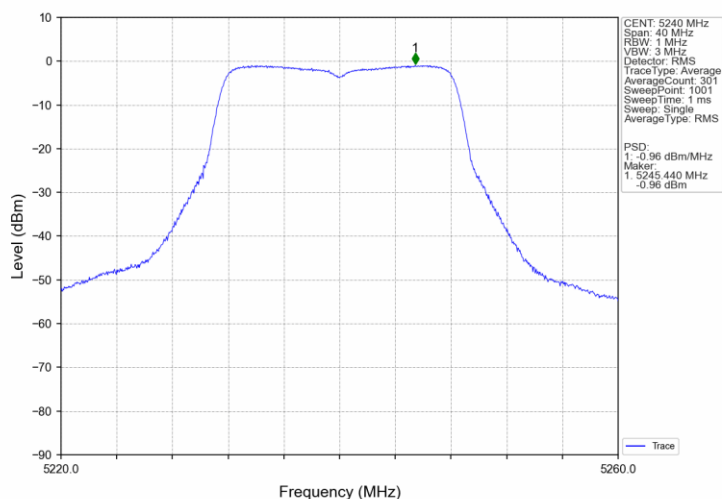
Note1: Antenna Gain: Ant1: 0.30dBi;

4.2 Test Graph

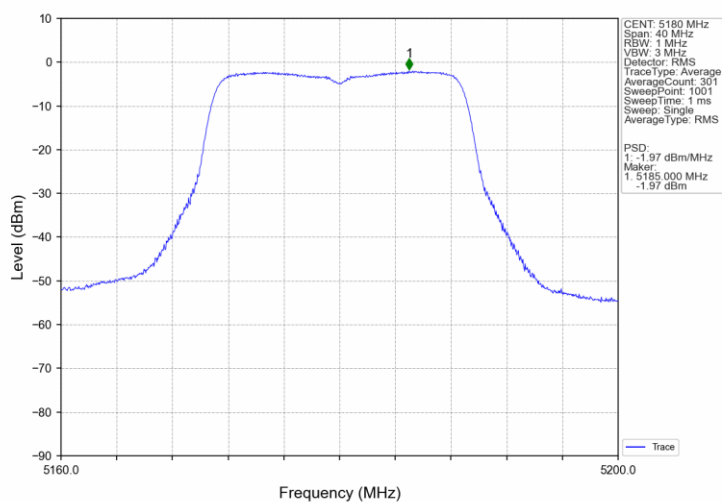
4.2.1 PSD



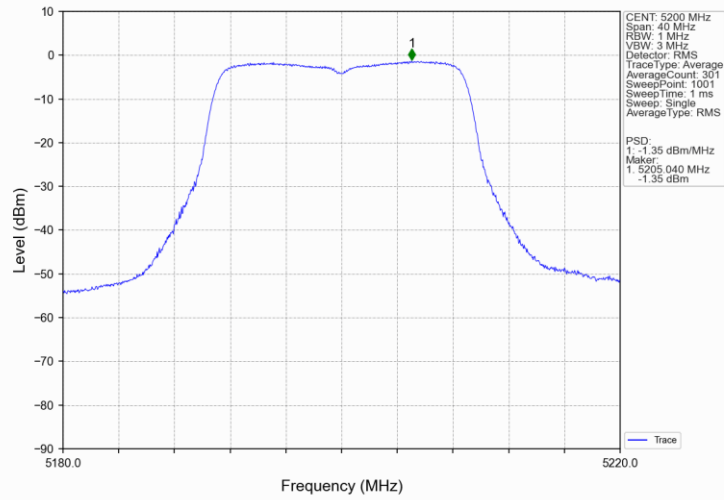
802.11a_HCH_5240MHz_Ant1_NTNV



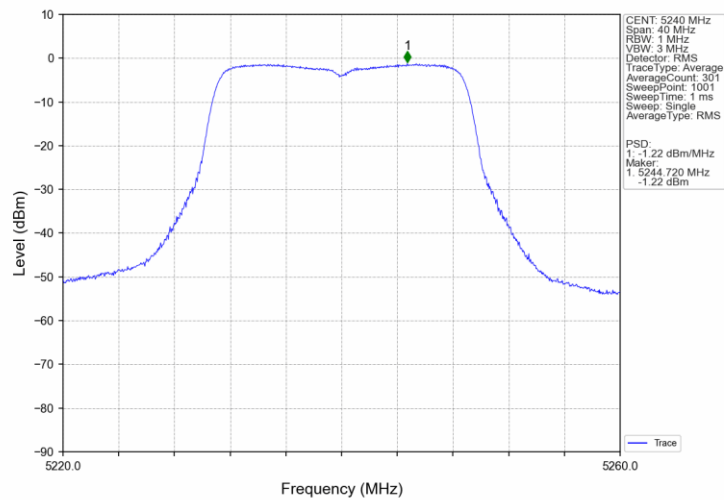
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



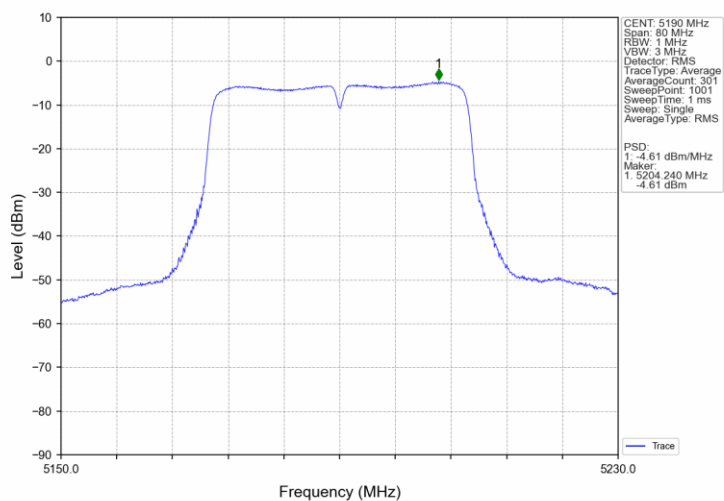
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



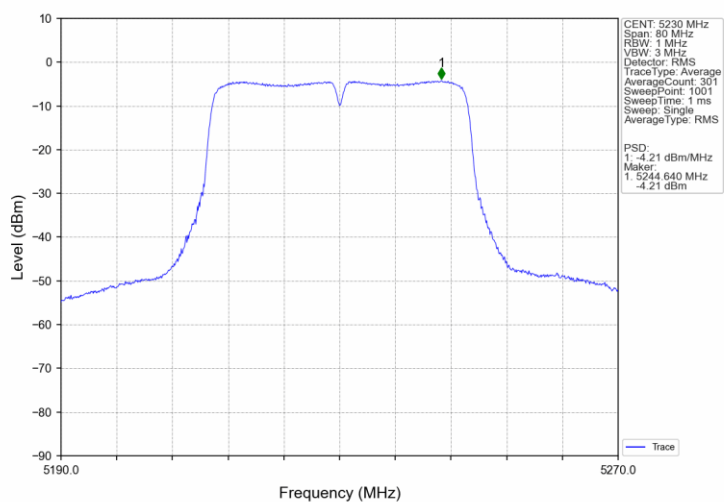
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



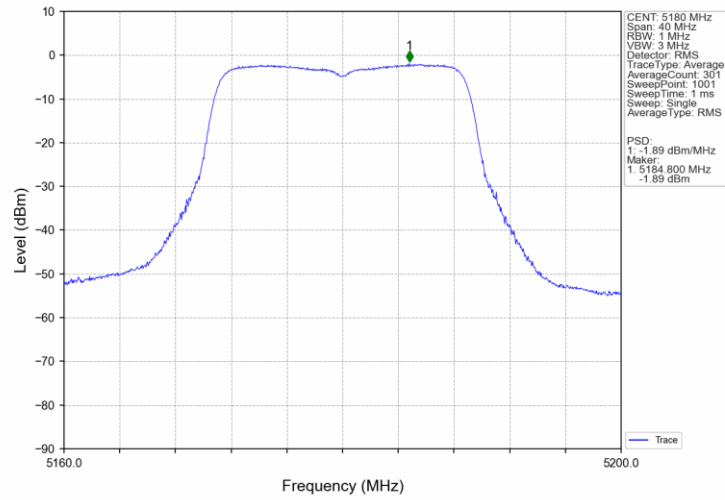
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



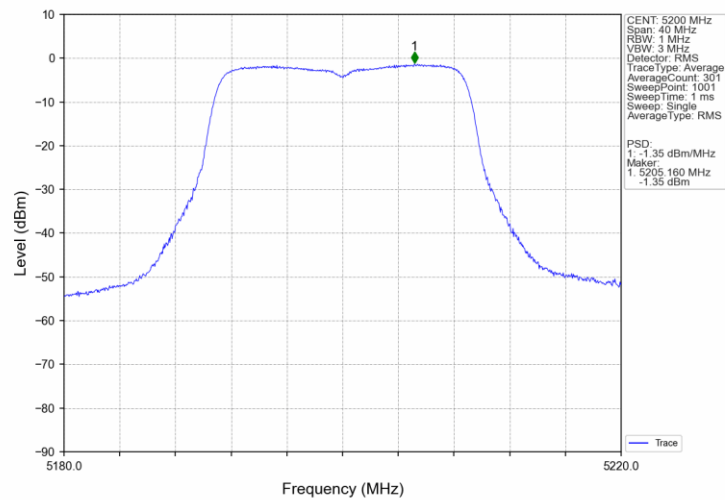
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



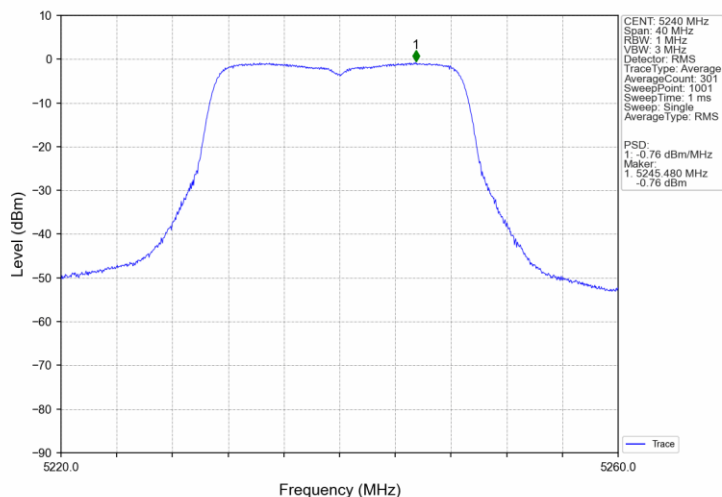
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



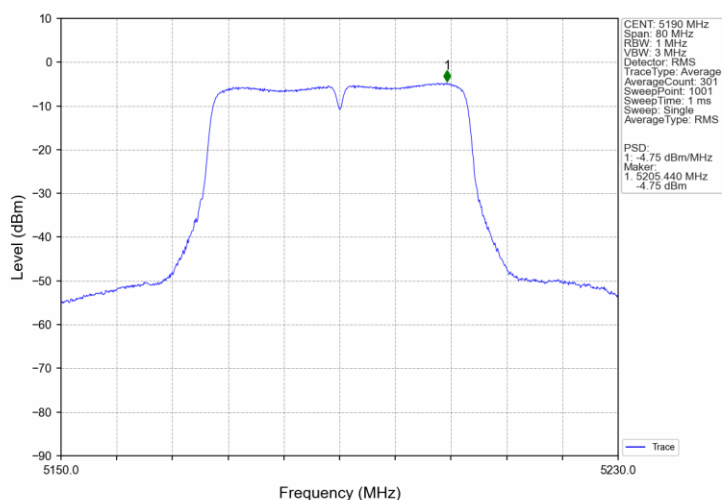
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



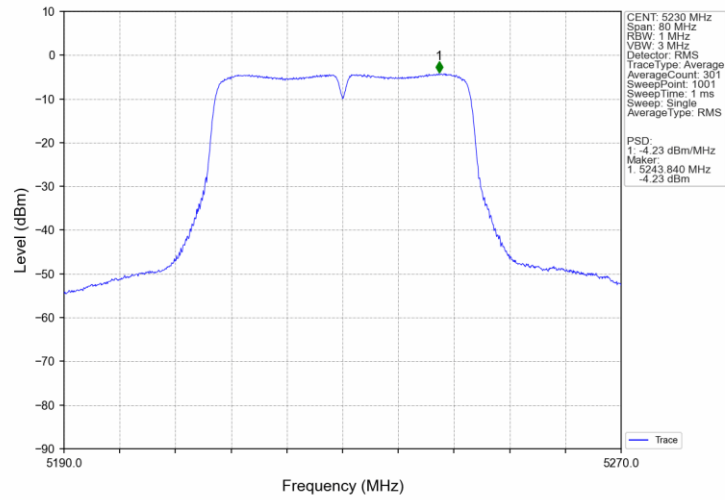
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



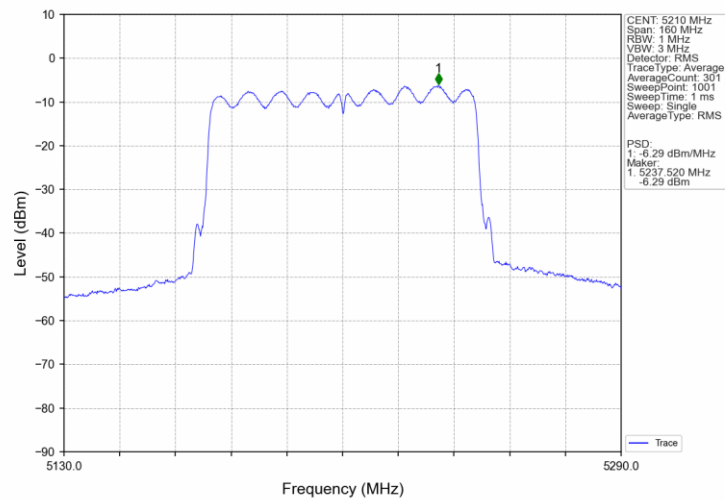
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	tage (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	2.84	5179.940	5150 to 5250	Pass
				3.30	5179.947	5150 to 5250	Pass
				3.80	5179.946	5150 to 5250	Pass
			-30	3.30	5179.946	5150 to 5250	Pass
			-20	3.30	5179.945	5150 to 5250	Pass
			-10	3.30	5179.945	5150 to 5250	Pass
			0	3.30	5179.944	5150 to 5250	Pass
			10	3.30	5179.944	5150 to 5250	Pass
			30	3.30	5179.944	5150 to 5250	Pass
			40	3.30	5179.944	5150 to 5250	Pass
			50	3.30	5179.943	5150 to 5250	Pass
		5200	20	2.84	5199.948	5150 to 5250	Pass
				3.30	5199.947	5150 to 5250	Pass
				3.80	5199.946	5150 to 5250	Pass
			-30	3.30	5199.946	5150 to 5250	Pass
			-20	3.30	5199.945	5150 to 5250	Pass
			-10	3.30	5199.945	5150 to 5250	Pass
			0	3.30	5199.944	5150 to 5250	Pass
			10	3.30	5199.944	5150 to 5250	Pass
			30	3.30	5199.943	5150 to 5250	Pass
			40	3.30	5199.943	5150 to 5250	Pass
			50	3.30	5199.943	5150 to 5250	Pass
		5240	20	2.84	5239.942	5150 to 5250	Pass
				3.30	5239.942	5150 to 5250	Pass
				3.80	5239.942	5150 to 5250	Pass
			-30	3.30	5239.941	5150 to 5250	Pass
			-20	3.30	5239.941	5150 to 5250	Pass
			-10	3.30	5239.941	5150 to 5250	Pass
			0	3.30	5239.941	5150 to 5250	Pass
			10	3.30	5239.941	5150 to 5250	Pass
			30	3.30	5239.941	5150 to 5250	Pass
			40	3.30	5239.940	5150 to 5250	Pass
			50	3.30	5239.940	5150 to 5250	Pass
		5190	20	2.84	5189.941	5150 to 5250	Pass
				3.30	5189.941	5150 to 5250	Pass
				3.80	5189.941	5150 to 5250	Pass
			-30	3.30	5189.941	5150 to 5250	Pass
			-20	3.30	5189.941	5150 to 5250	Pass
			-10	3.30	5189.941	5150 to 5250	Pass
			0	3.30	5189.940	5150 to 5250	Pass
			10	3.30	5189.940	5150 to 5250	Pass
			30	3.30	5189.940	5150 to 5250	Pass
			40	3.30	5189.940	5150 to 5250	Pass
			50	3.30	5189.940	5150 to 5250	Pass
		5230	20	2.84	5229.941	5150 to 5250	Pass
				3.30	5229.940	5150 to 5250	Pass
				3.80	5229.940	5150 to 5250	Pass
			-30	3.30	5229.940	5150 to 5250	Pass
			-20	3.30	5229.940	5150 to 5250	Pass



			-10	3.30	5229.940	5150 to 5250	Pass
			0	3.30	5229.940	5150 to 5250	Pass
			10	3.30	5229.940	5150 to 5250	Pass
			30	3.30	5229.940	5150 to 5250	Pass
			40	3.30	5229.940	5150 to 5250	Pass
			50	3.30	5229.939	5150 to 5250	Pass
		5210	20	2.84	5209.940	5150 to 5250	Pass
				3.30	5209.940	5150 to 5250	Pass
				3.80	5209.940	5150 to 5250	Pass
			-30	3.30	5209.940	5150 to 5250	Pass
			-20	3.30	5209.940	5150 to 5250	Pass
			-10	3.30	5209.940	5150 to 5250	Pass
			0	3.30	5209.940	5150 to 5250	Pass
			10	3.30	5209.939	5150 to 5250	Pass
			30	3.30	5209.939	5150 to 5250	Pass
			40	3.30	5209.939	5150 to 5250	Pass
			50	3.30	5209.939	5150 to 5250	Pass

***** End of Report *****