

Appendix RF test data for UNII Band 1

1. Duty Cycle

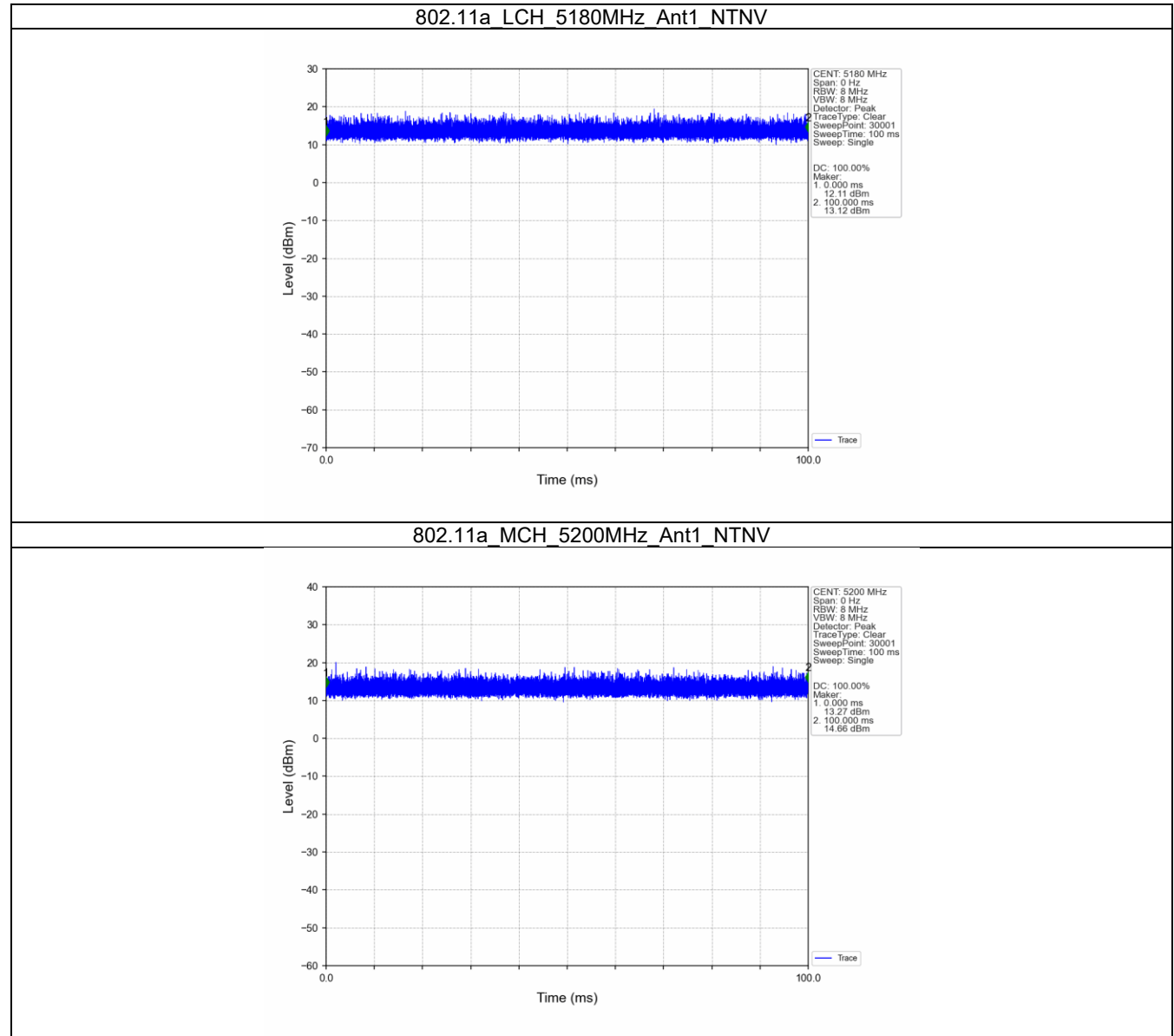
1.1 Test Result

1.1.1 Ant1

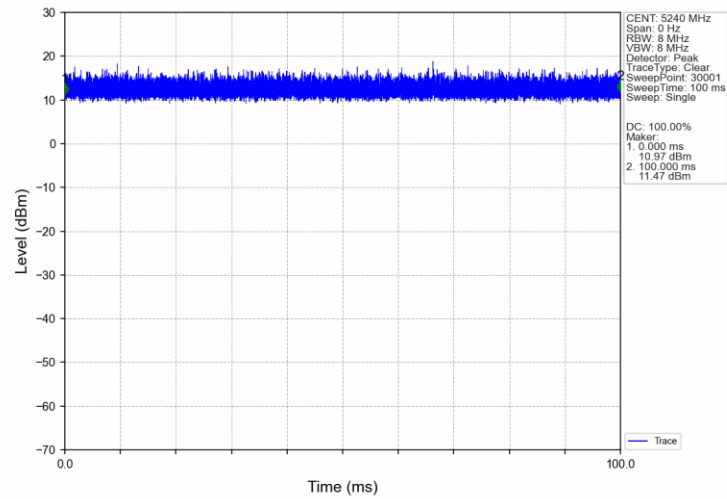
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5240	100.000	100.000	100.00	0.00	0.00
802.11n (HT20)	SISO	5180	100.000	100.000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

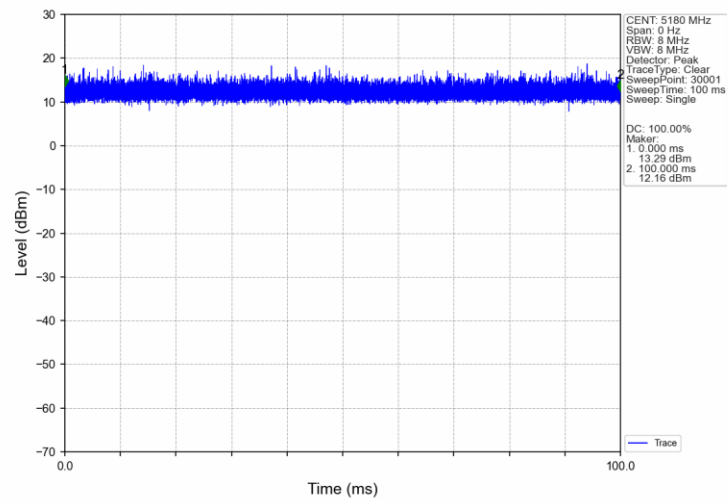
1.2.1 Ant1



802.11a_HCH_5240MHz_Ant1_NTNV

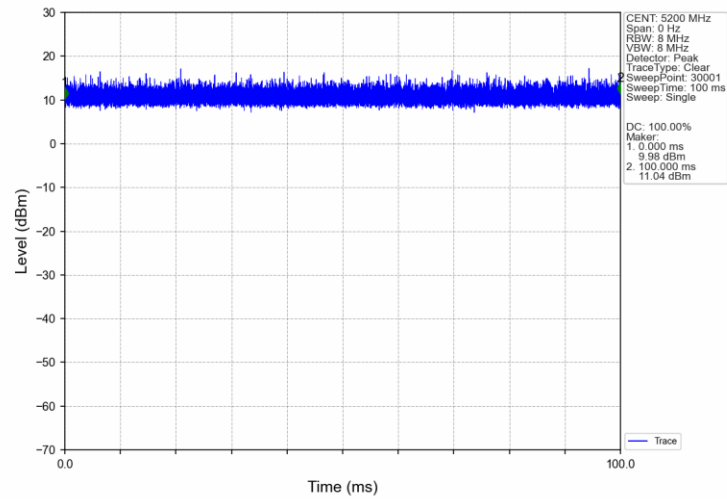


802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

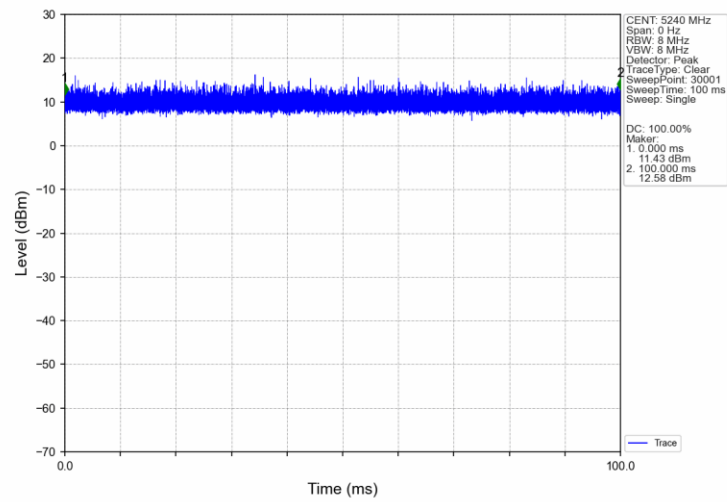




802.11n(HT20) MCH 5200MHz Ant1 NTN

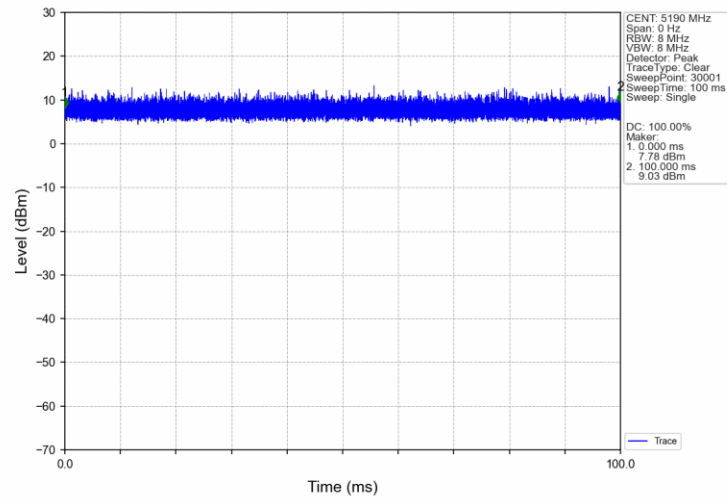


802.11n(HT20) HCH 5240MHz Ant1 NTN

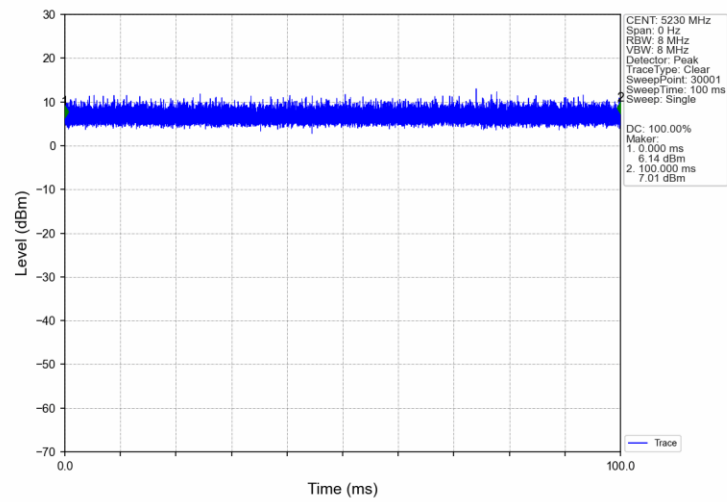




802.11n(HT40) LCH 5190MHz Ant1 NTV

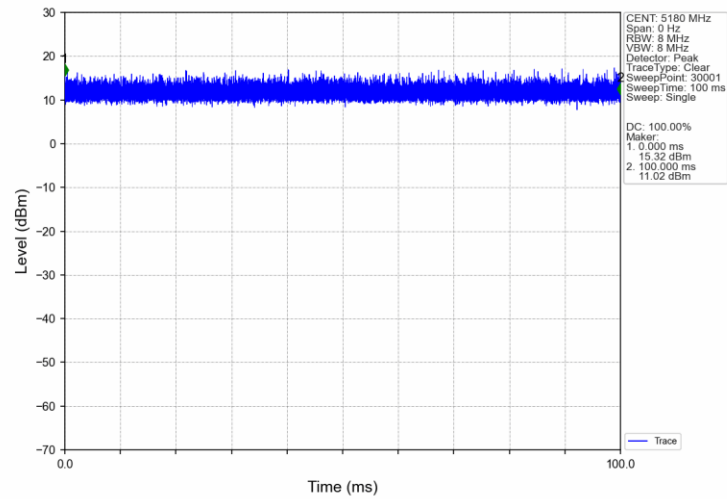


802.11n(HT40) HCH 5230MHz Ant1 NTV

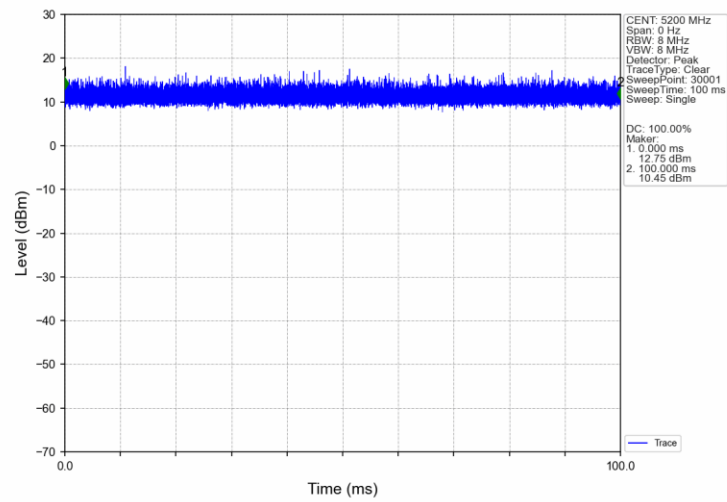




802.11ac(VHT20) LCH_5180MHz_Ant1_NTNV

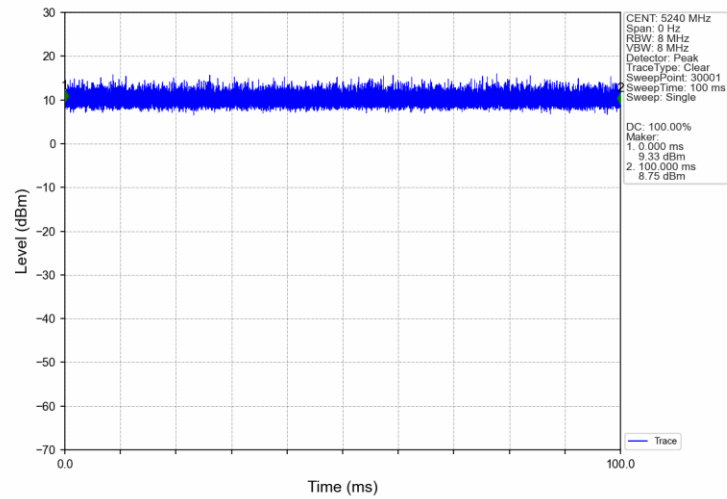


802.11ac(VHT20) MCH_5200MHz_Ant1_NTNV

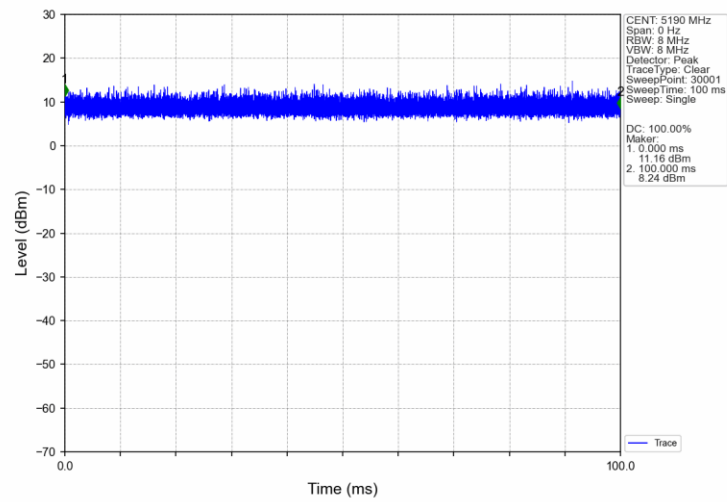




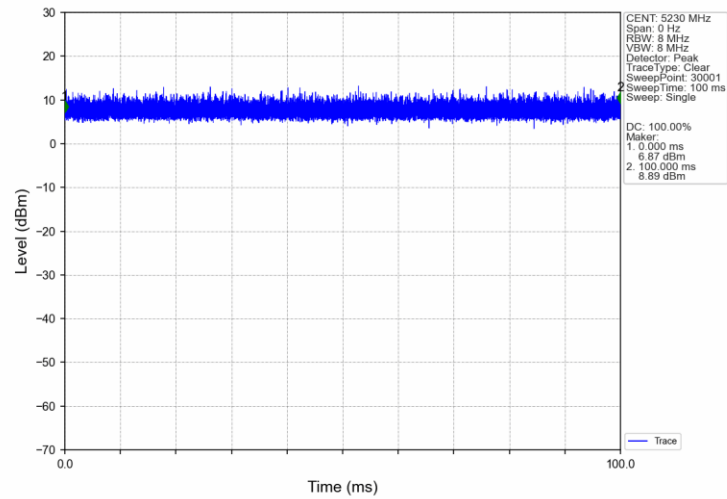
802.11ac(VHT20) HCH 5240MHz Ant1 NTN



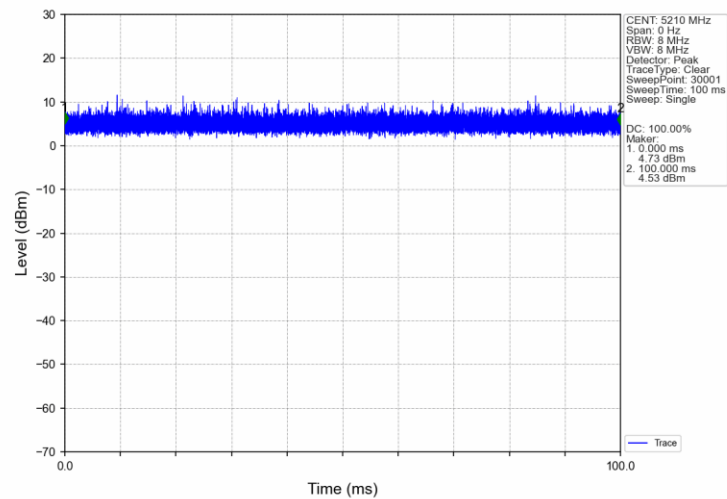
802.11ac(VHT40) LCH 5190MHz Ant1 NTN



802.11ac(VHT40) HCH 5230MHz Ant1 NTN



802.11ac(VHT80) MCH 5210MHz Ant1 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

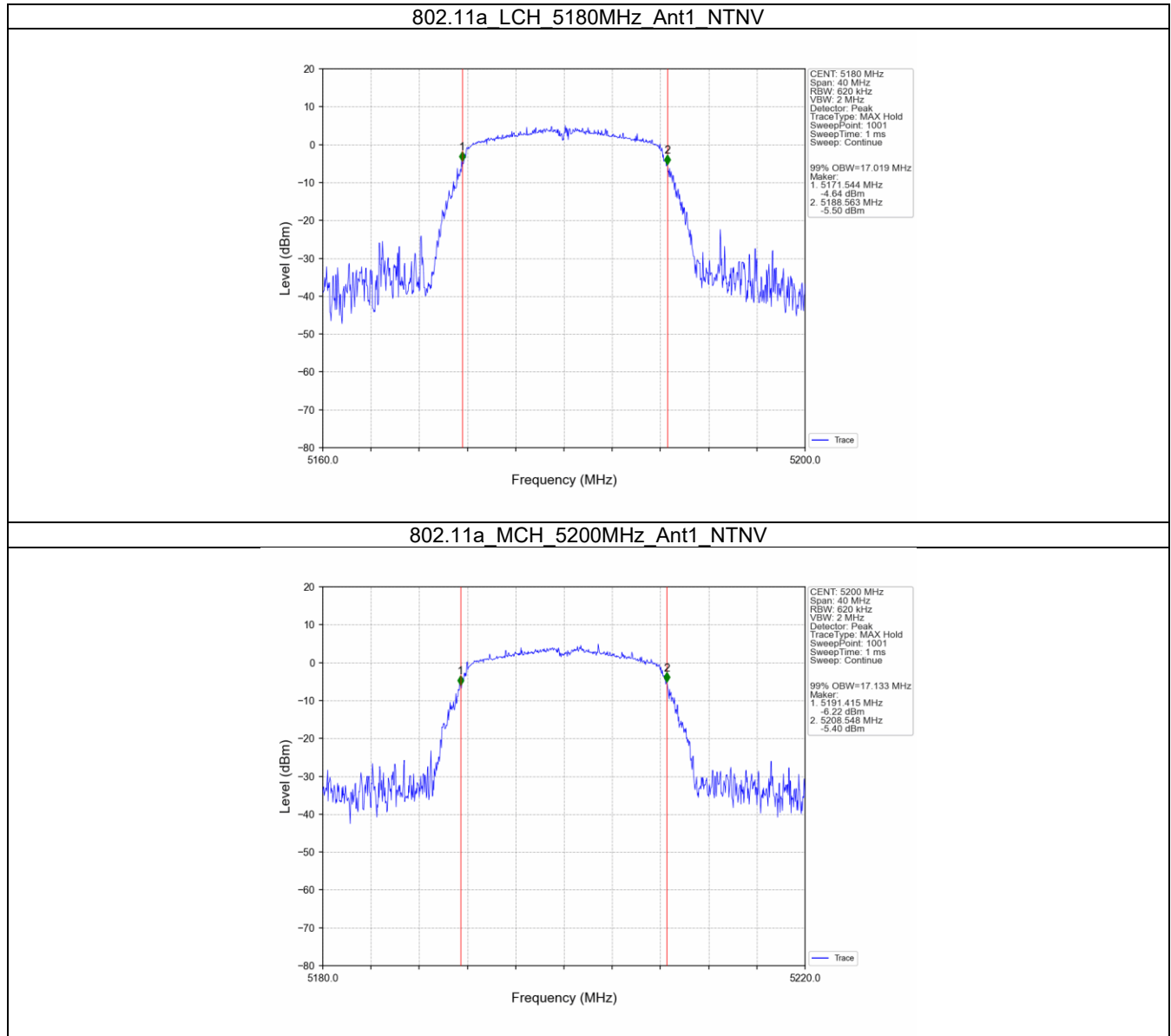
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.019	/	Pass
		5200	1	17.133	/	Pass
		5240	1	17.221	/	Pass
802.11n (HT20)	SISO	5180	1	17.981	/	Pass
		5200	1	17.993	/	Pass
		5240	1	18.040	/	Pass
802.11n (HT40)	SISO	5190	1	36.237	/	Pass
		5230	1	36.250	/	Pass
802.11ac (VHT20)	SISO	5180	1	17.988	/	Pass
		5200	1	18.001	/	Pass
		5240	1	18.040	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.118	/	Pass
		5230	1	36.385	/	Pass
802.11ac (VHT80)	SISO	5210	1	75.550	/	Pass

2.1.2 26dB BW

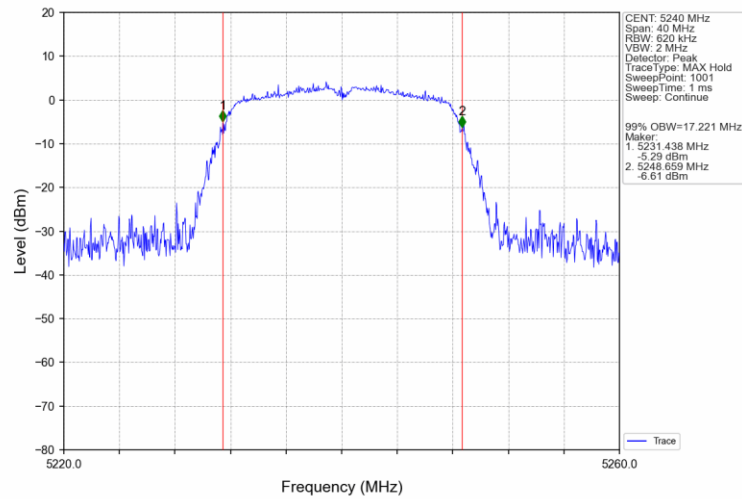
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	20.255	/	Pass
		5200	1	20.187	/	Pass
		5240	1	20.314	/	Pass
802.11n (HT20)	SISO	5180	1	20.422	/	Pass
		5200	1	20.660	/	Pass
		5240	1	20.602	/	Pass
802.11n (HT40)	SISO	5190	1	41.195	/	Pass
		5230	1	41.101	/	Pass
802.11ac (VHT20)	SISO	5180	1	20.652	/	Pass
		5200	1	20.660	/	Pass
		5240	1	20.386	/	Pass
802.11ac (VHT40)	SISO	5190	1	41.018	/	Pass
		5230	1	41.220	/	Pass
802.11ac (VHT80)	SISO	5210	1	81.459	/	Pass

2.2 Test Graph

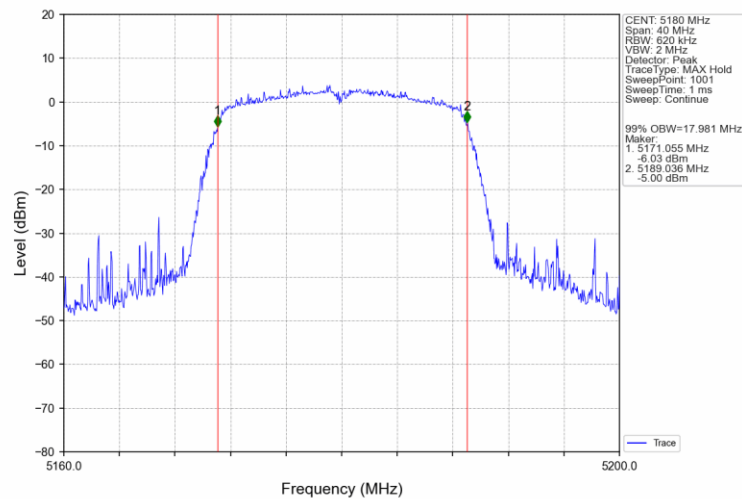
2.2.1 OBW



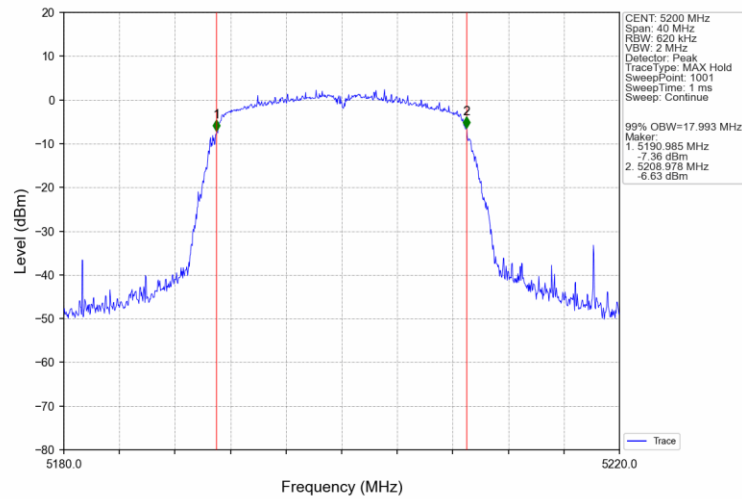
802.11a_HCH_5240MHz_Ant1_NTNV



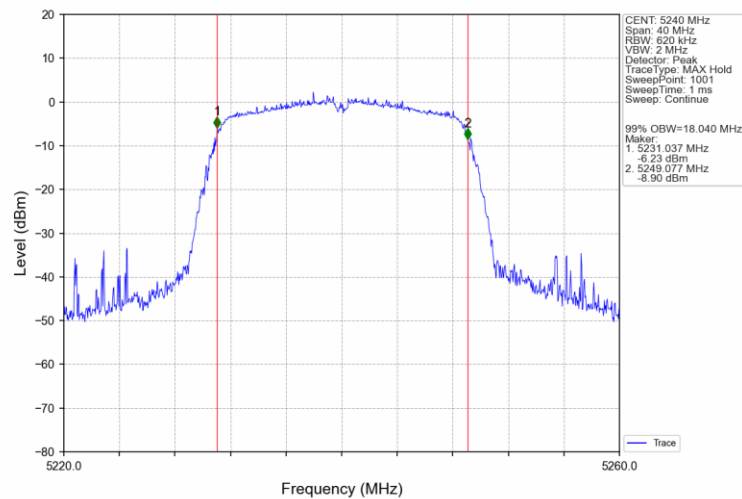
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



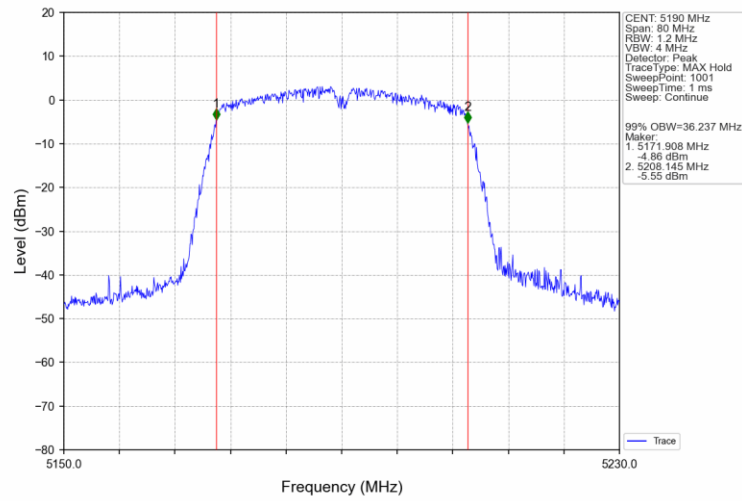
802.11n(HT20) MCH 5200MHz Ant1 NTNv



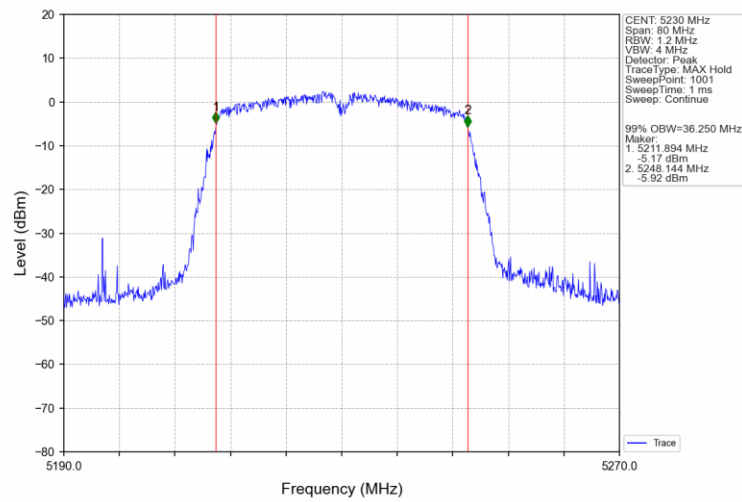
802.11n(HT20) HCH 5240MHz Ant1 NTNv



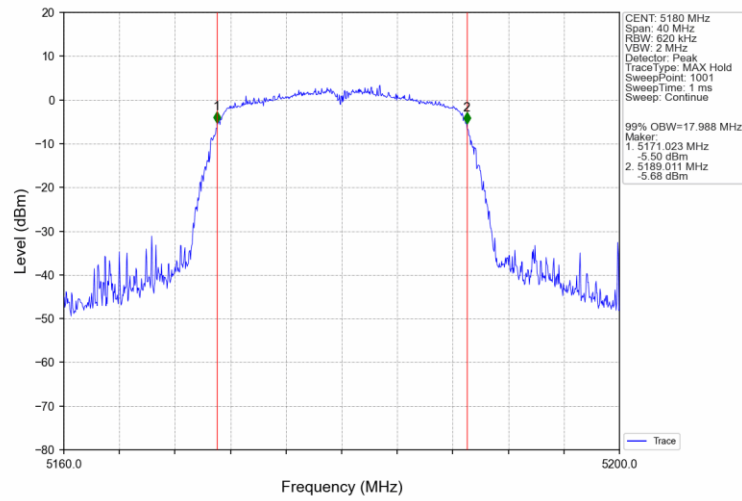
802.11n(HT40) LCH 5190MHz Ant1 NTN



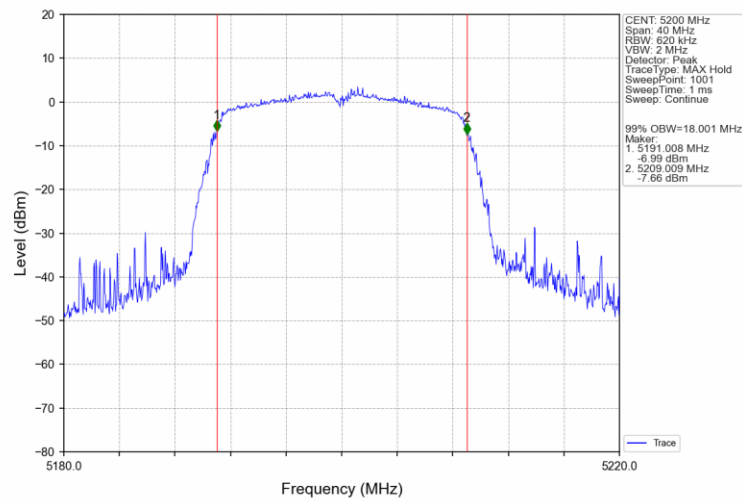
802.11n(HT40) HCH 5230MHz Ant1 NTN



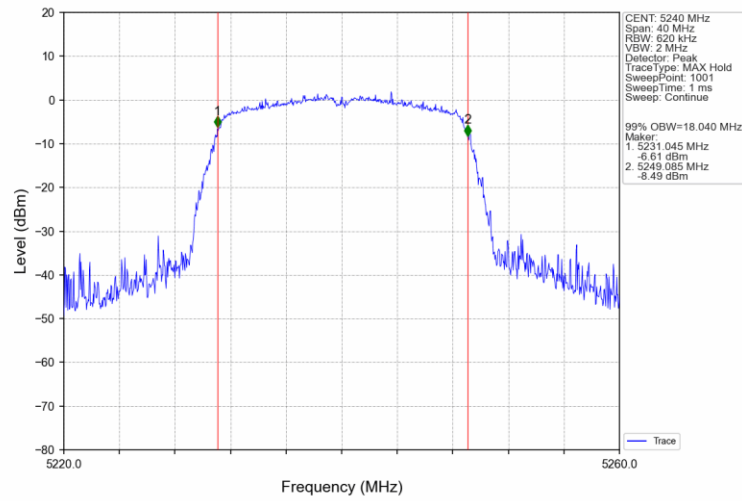
802.11ac(VHT20) LCH 5180MHz Ant1 NTNv



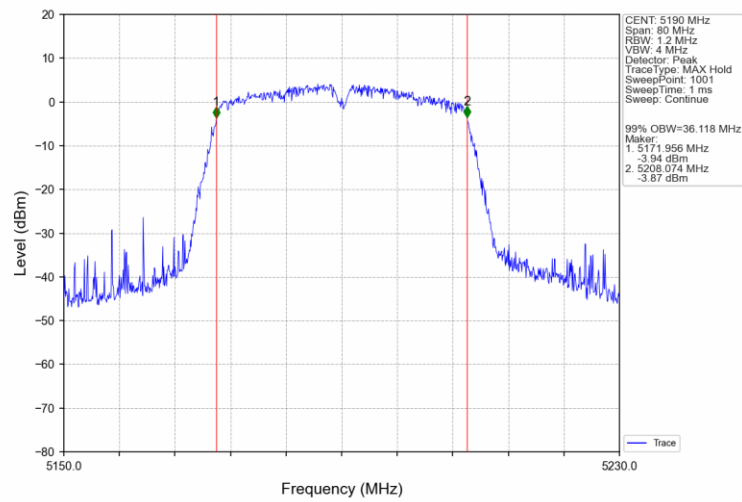
802.11ac(VHT20) MCH 5200MHz Ant1 NTNv



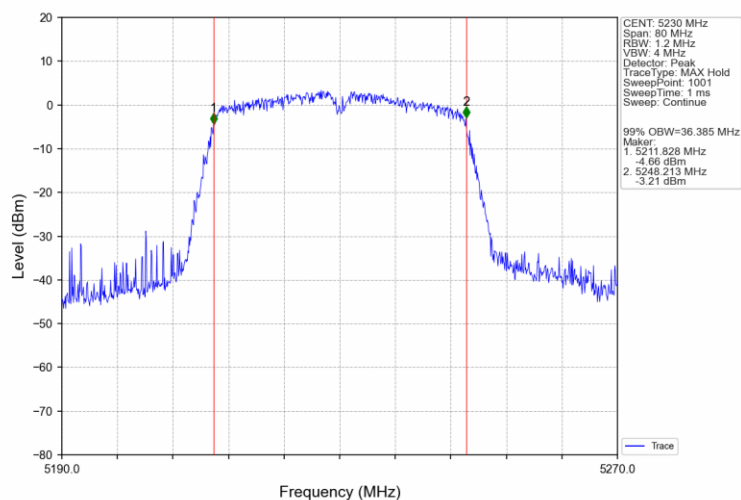
802.11ac(VHT20) HCH 5240MHz Ant1 NTNv



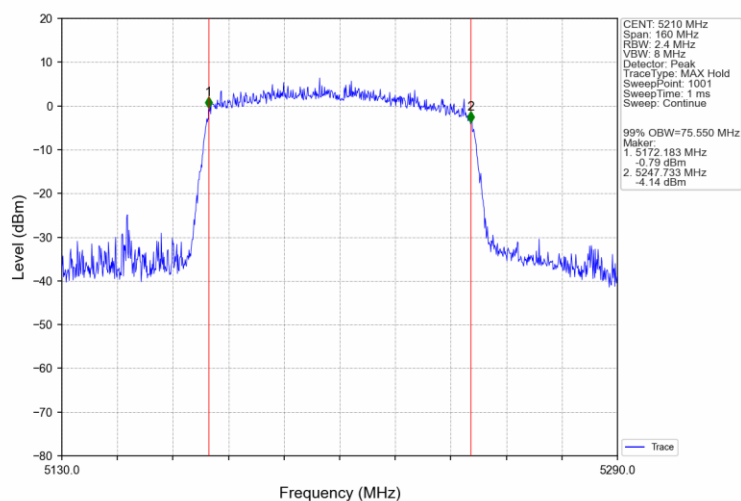
802.11ac(VHT40) LCH 5190MHz Ant1 NTNv



802.11ac(VHT40) HCH 5230MHz Ant1 NTN

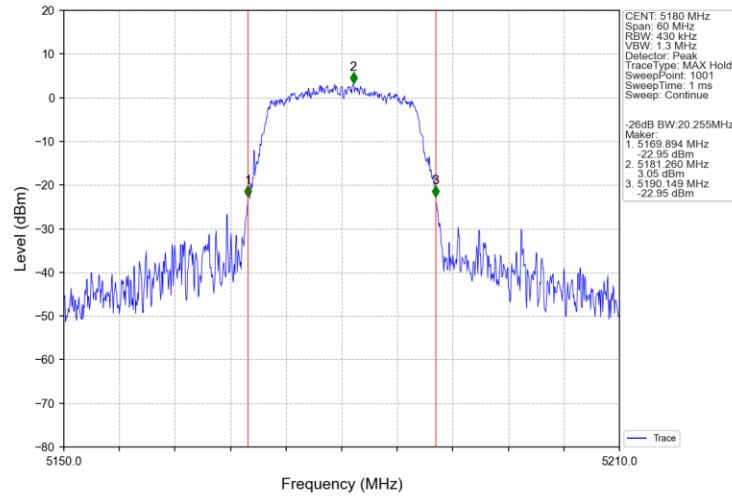


802.11ac(VHT80) MCH 5210MHz Ant1 NTN

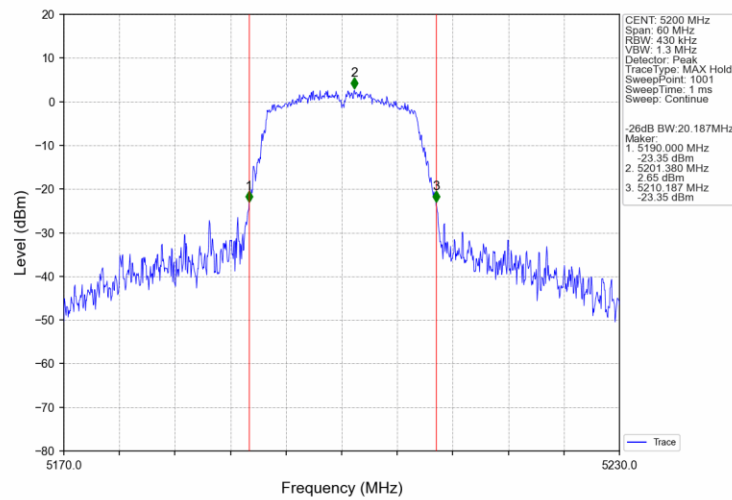


2.2.2 26dB BW

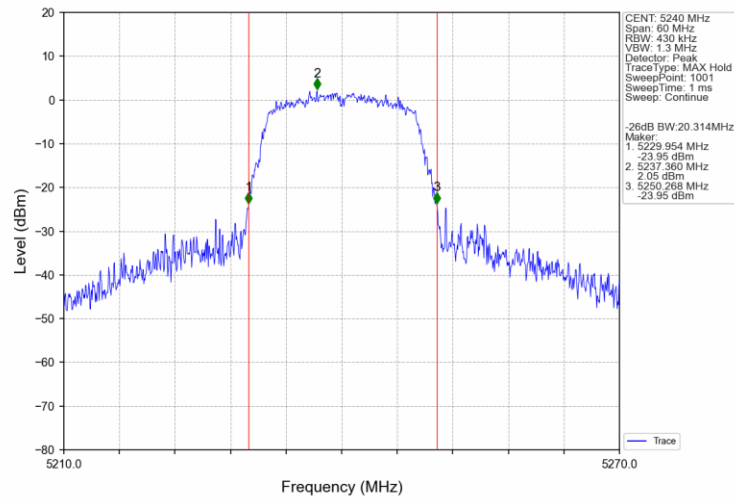
802.11a LCH 5180MHz Ant1 NTN



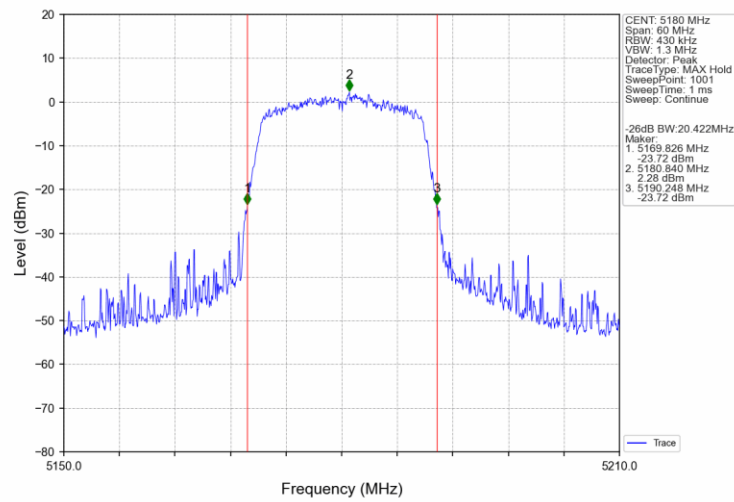
802.11a MCH 5200MHz Ant1 NTN



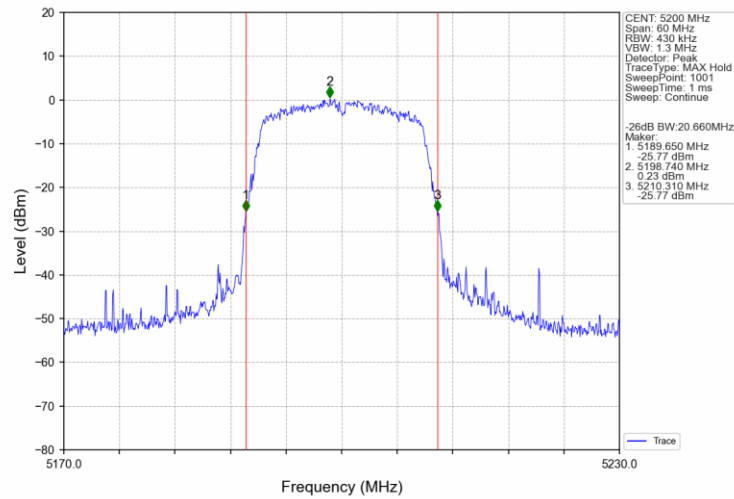
802.11a_HCH_5240MHz_Ant1_NTNV



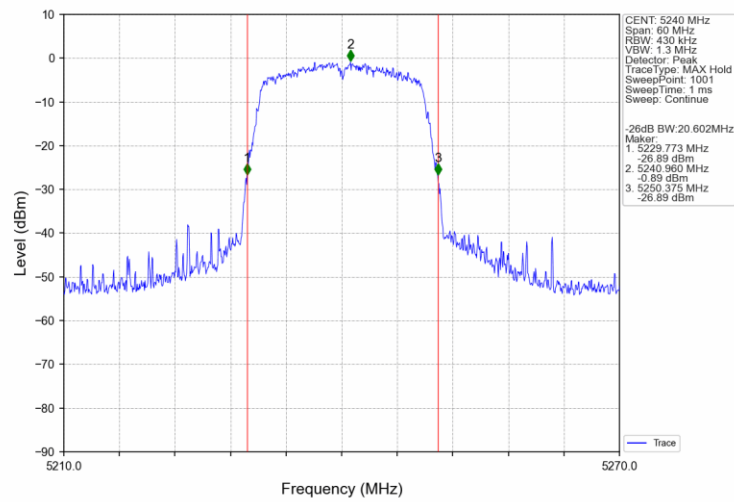
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



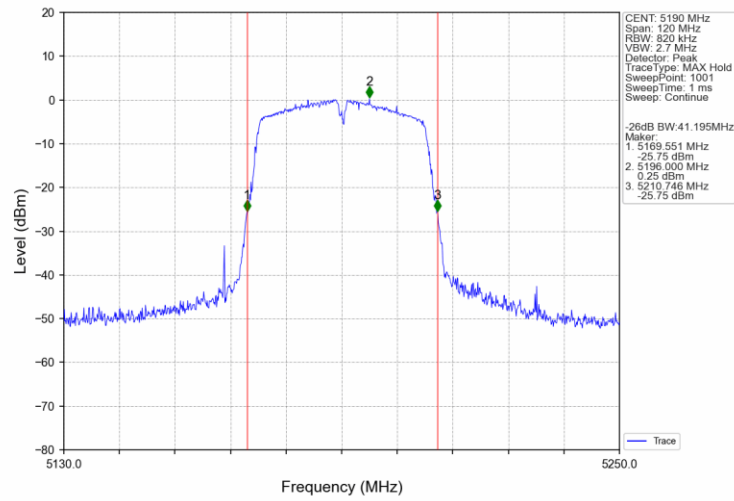
802.11n(HT20) MCH 5200MHz Ant1 NTNv



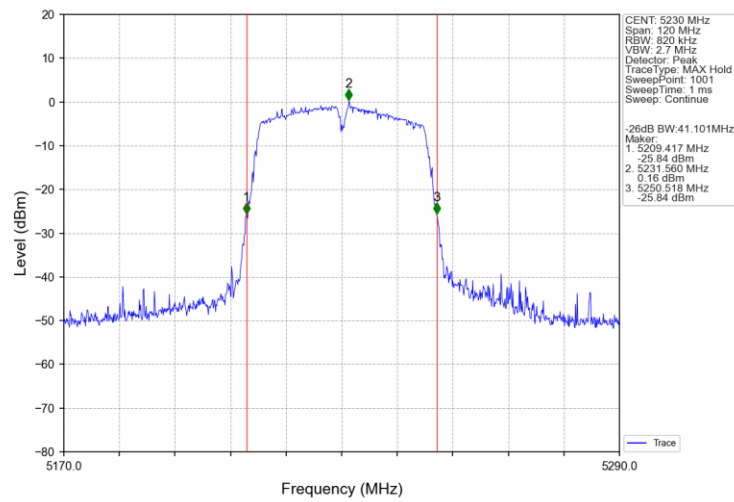
802.11n(HT20) HCH 5240MHz Ant1 NTNv



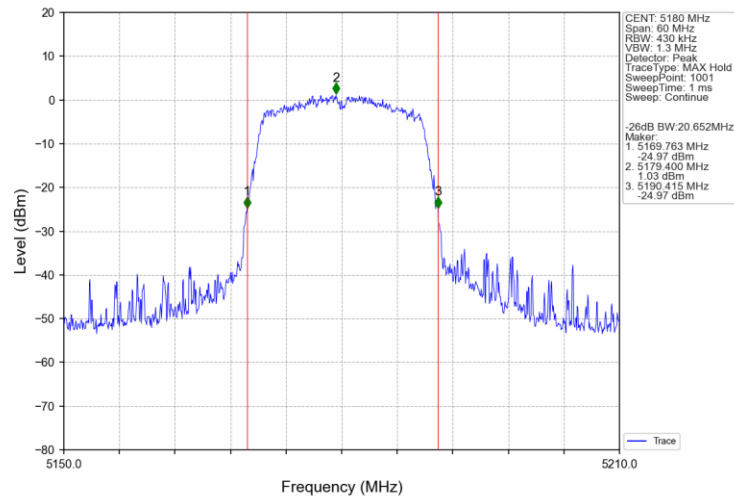
802.11n(HT40) LCH 5190MHz Ant1 NTN



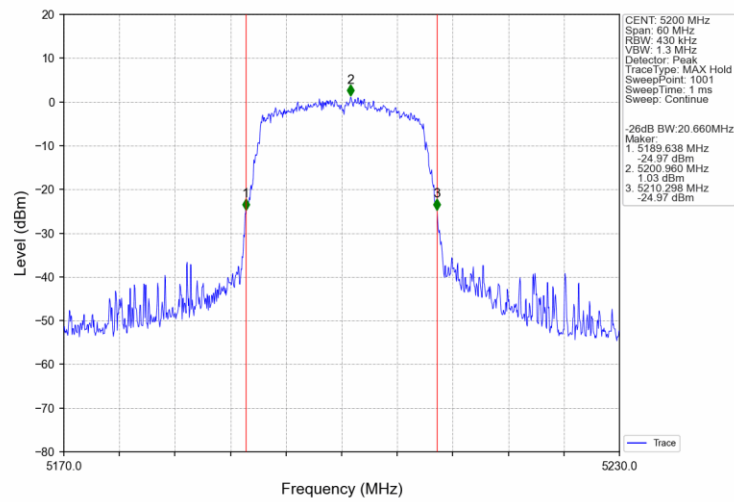
802.11n(HT40) HCH 5230MHz Ant1 NTN



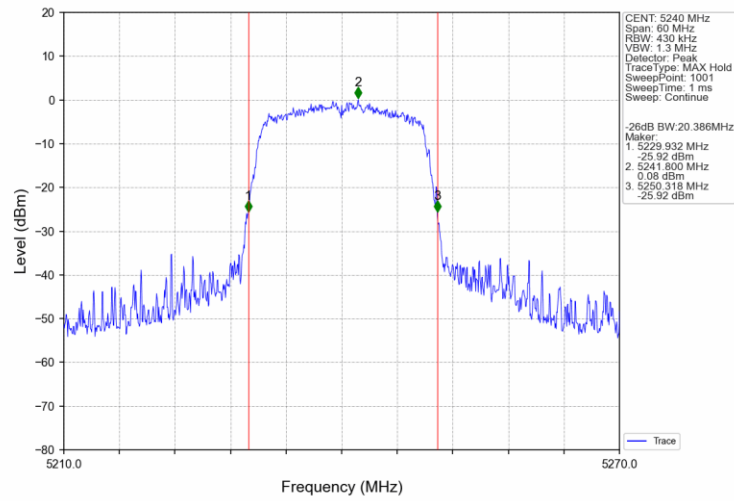
802.11ac(VHT20) LCH 5180MHz Ant1 NTNv



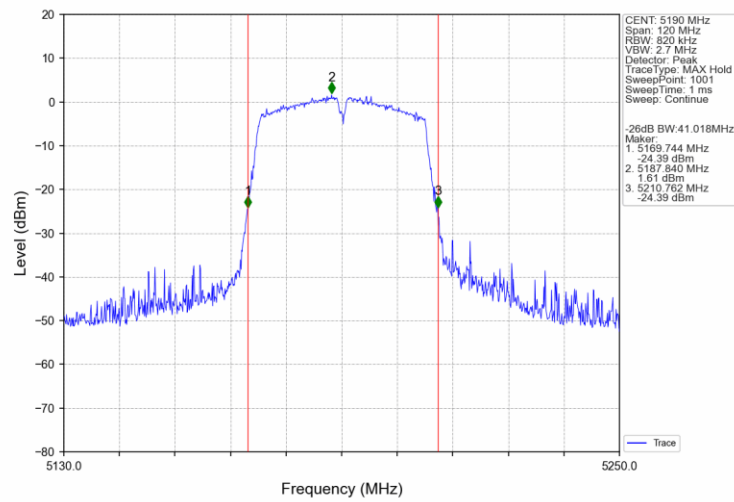
802.11ac(VHT20) MCH 5200MHz Ant1 NTNv



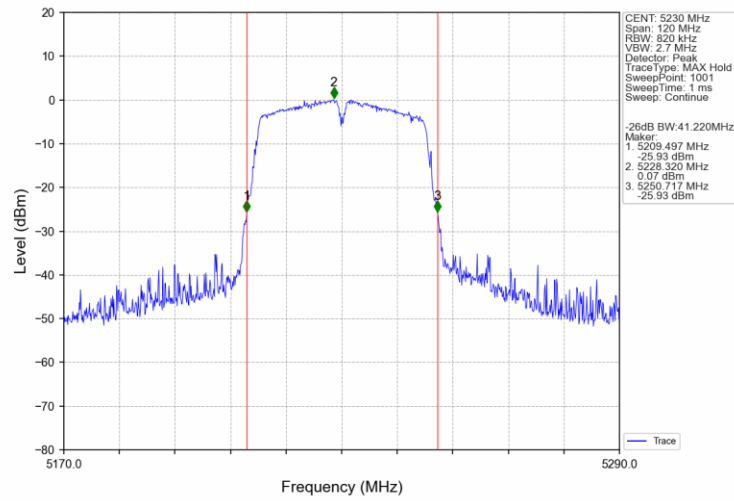
802.11ac(VHT20) HCH 5240MHz Ant1 NTNv



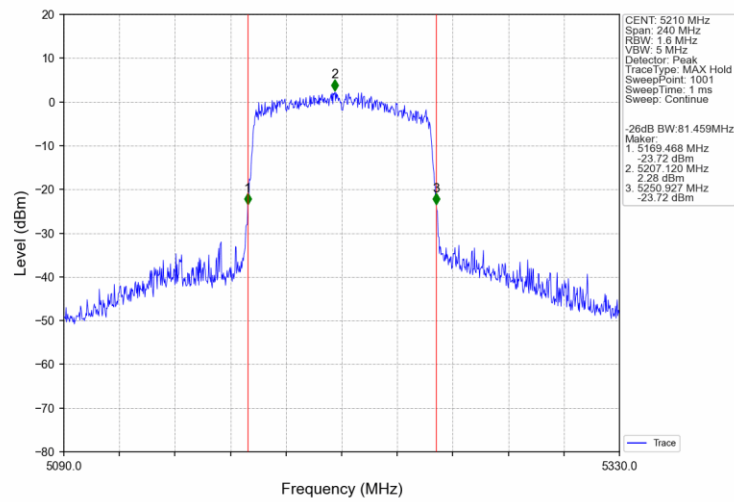
802.11ac(VHT40) LCH 5190MHz Ant1 NTNv



802.11ac(VHT40) HCH 5230MHz Ant1 NTN



802.11ac(VHT80) MCH 5210MHz Ant1 NTN



3. Maximum Conducted Output Power

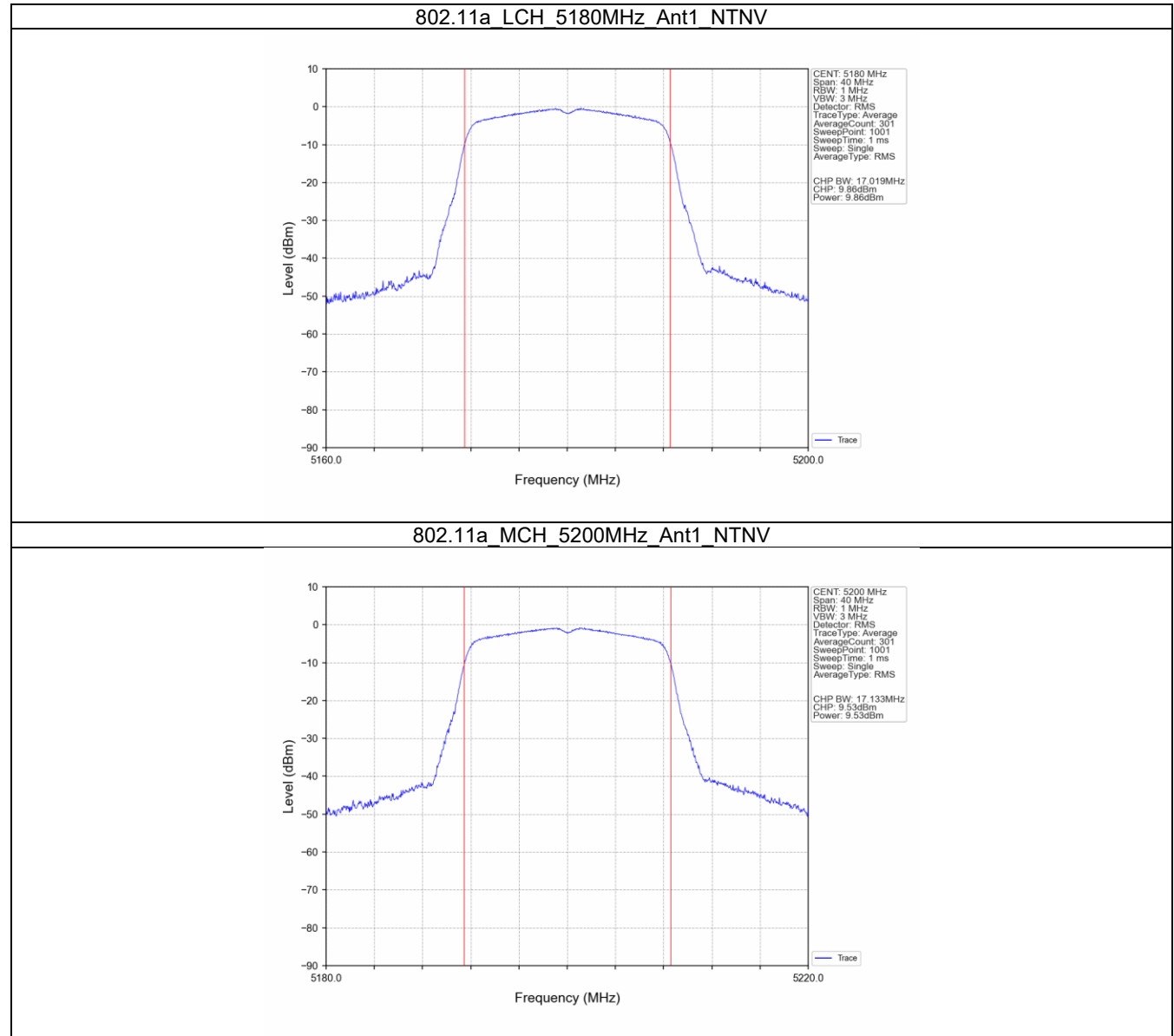
3.1 Test Result

3.1.1 Power

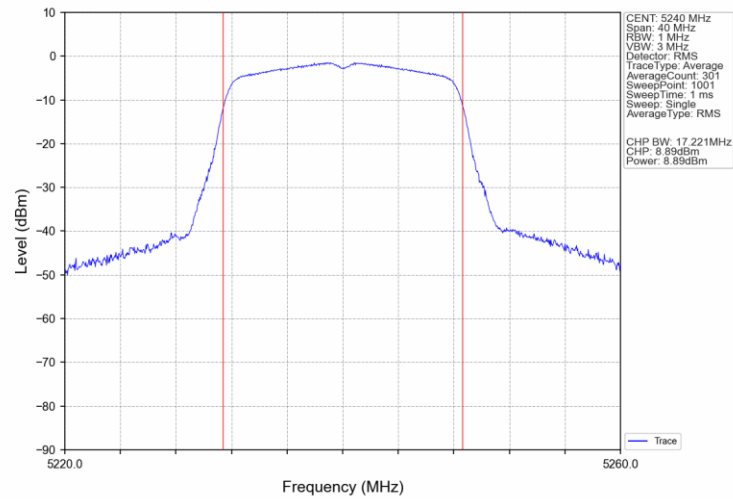
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	9.86	<=23.98	Pass
		5200	9.53	<=23.98	Pass
		5240	8.89	<=23.98	Pass
802.11n (HT20)	SISO	5180	8.88	<=23.98	Pass
		5200	7.38	<=23.98	Pass
		5240	6.49	<=23.98	Pass
802.11n (HT40)	SISO	5190	7.06	<=23.98	Pass
		5230	6.35	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	8.32	<=23.98	Pass
		5200	8.01	<=23.98	Pass
		5240	6.85	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	8.12	<=23.98	Pass
		5230	7.21	<=23.98	Pass
802.11ac (VHT80)	SISO	5210	7.66	<=23.98	Pass

3.2 Test Graph

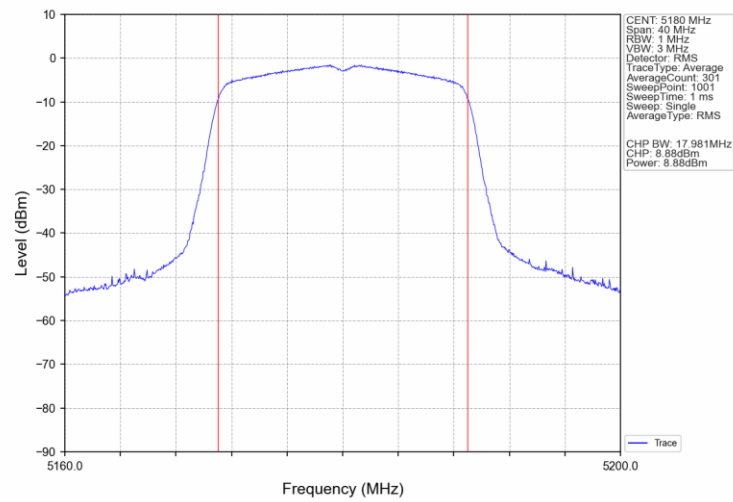
3.2.1 Power



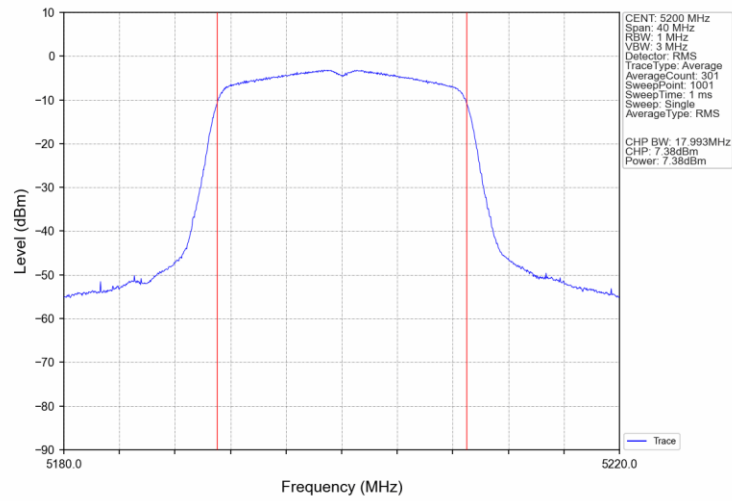
802.11a_HCH_5240MHz_Ant1_NTNV



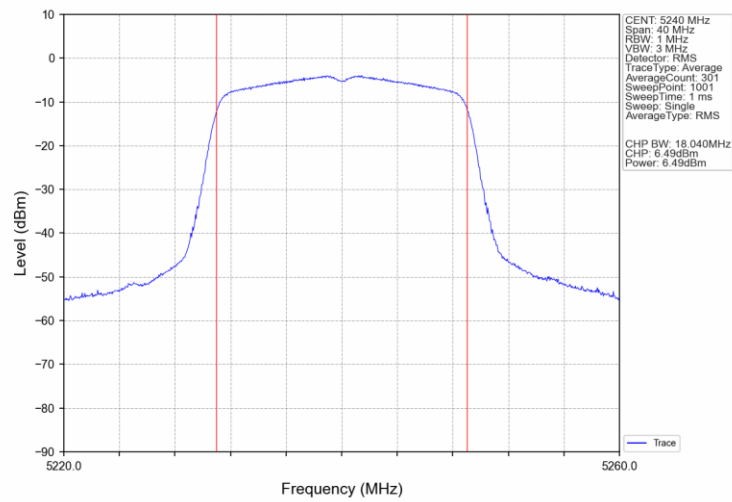
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



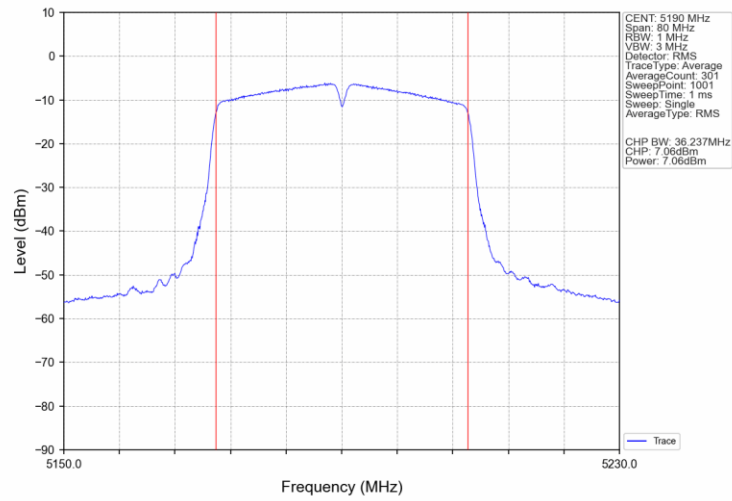
802.11n(HT20) MCH 5200MHz Ant1 NTV



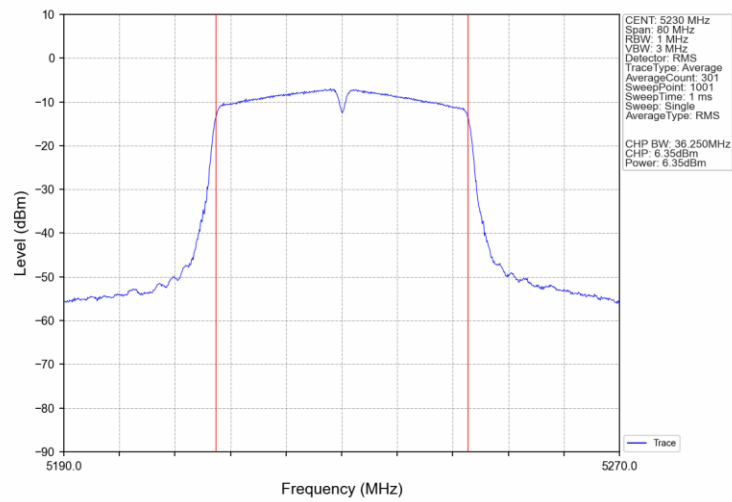
802.11n(HT20) HCH 5240MHz Ant1 NTV



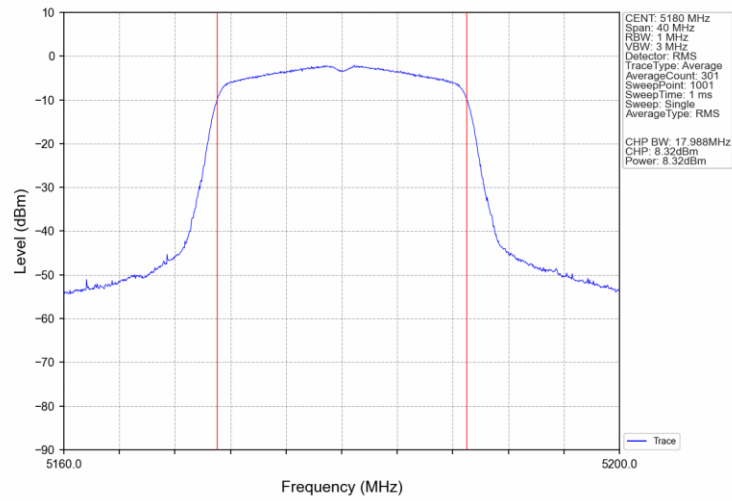
802.11n(HT40) LCH 5190MHz Ant1 NTN



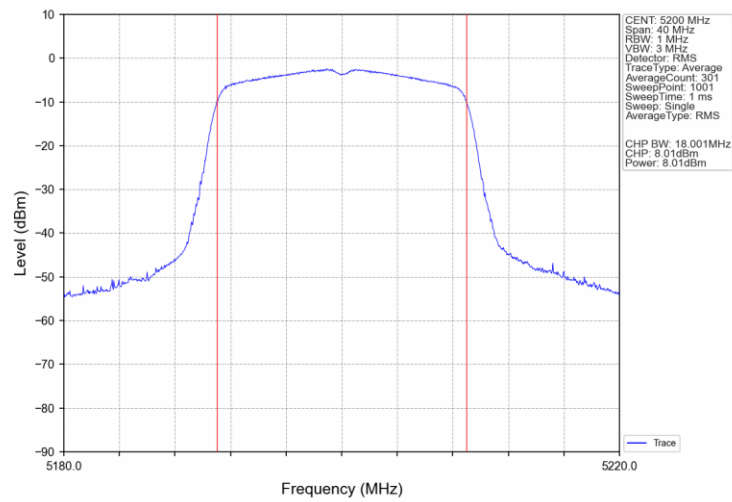
802.11n(HT40) HCH 5230MHz Ant1 NTN



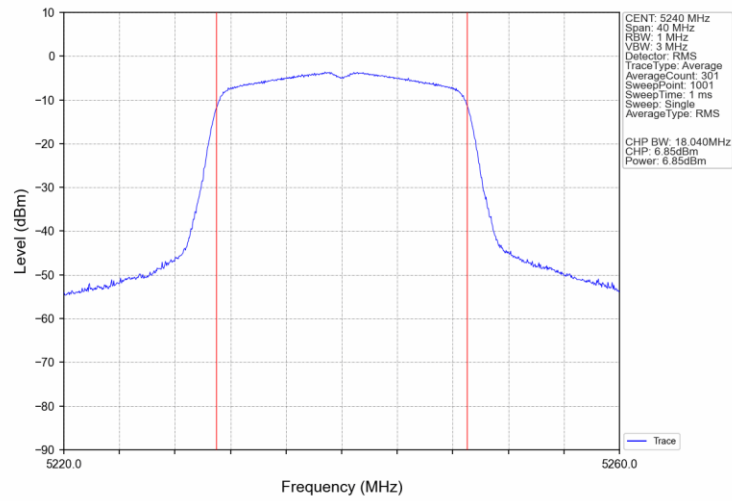
802.11ac(VHT20) LCH 5180MHz Ant1 NTN



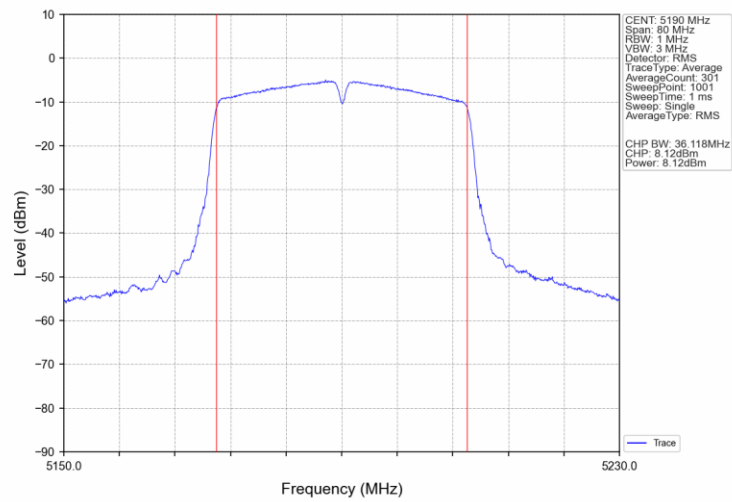
802.11ac(VHT20) MCH 5200MHz Ant1 NTN



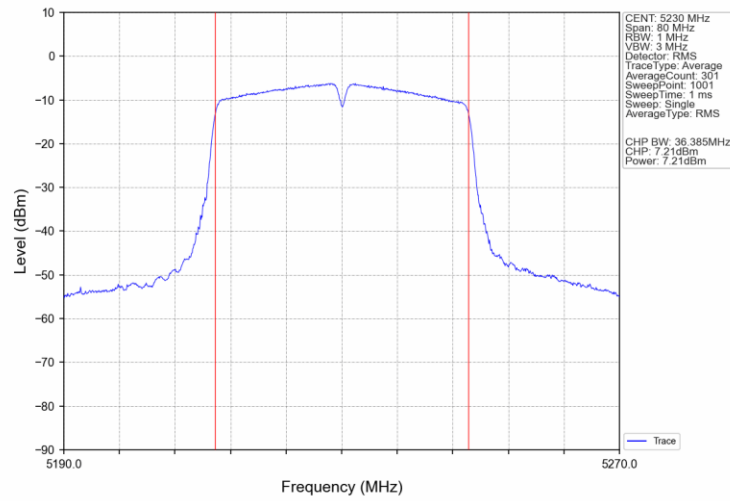
802.11ac(VHT20) HCH 5240MHz Ant1 NTN



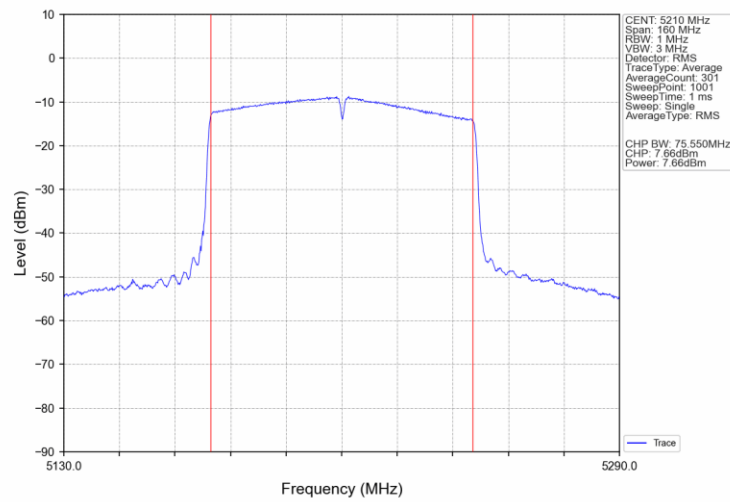
802.11ac(VHT40) LCH 5190MHz Ant1 NTN



802.11ac(VHT40) HCH 5230MHz Ant1 NTN



802.11ac(VHT80) MCH 5210MHz Ant1 NTN



4. Maximum Power Spectral Density

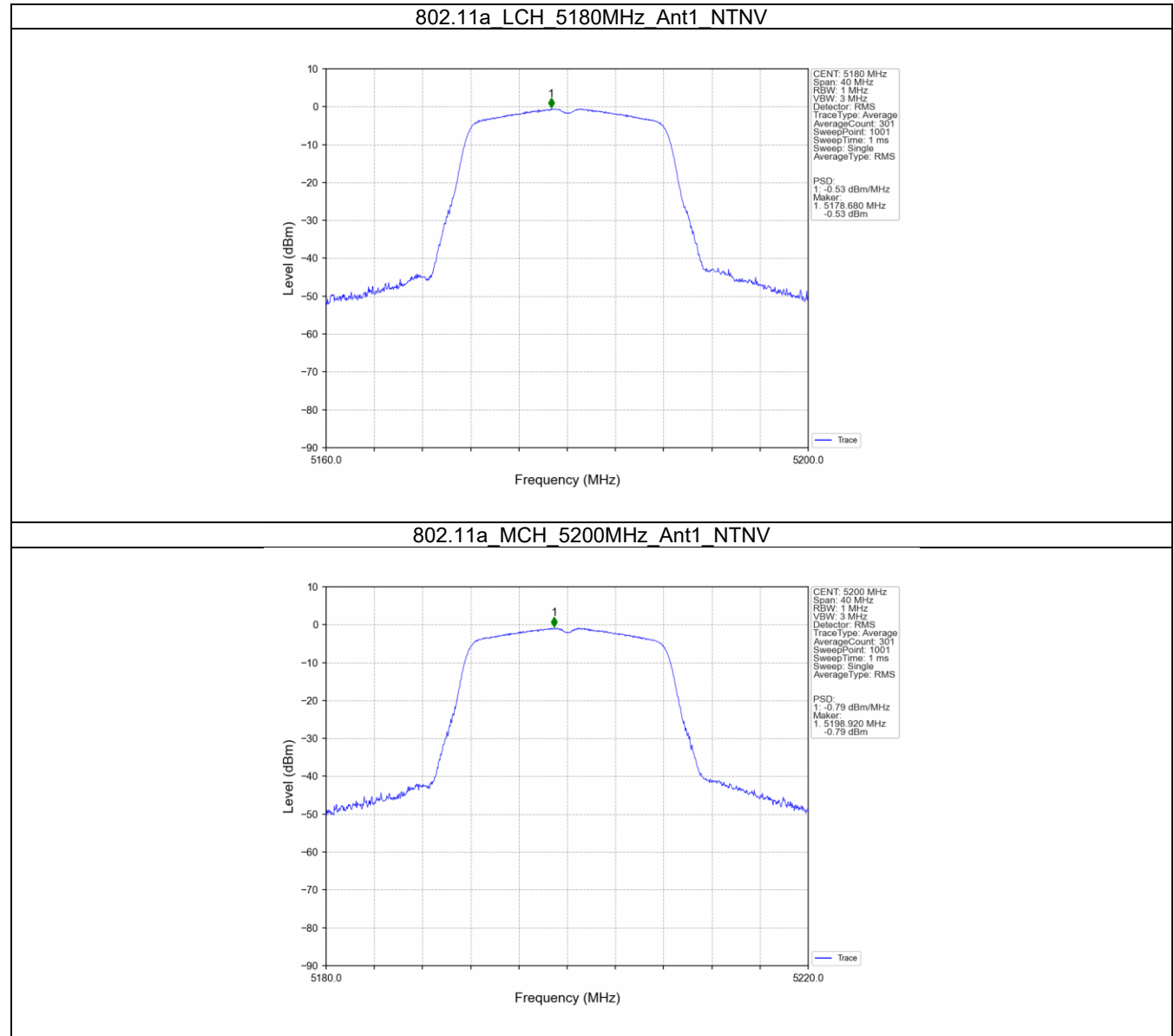
4.1 Test Result

4.1.1 PSD

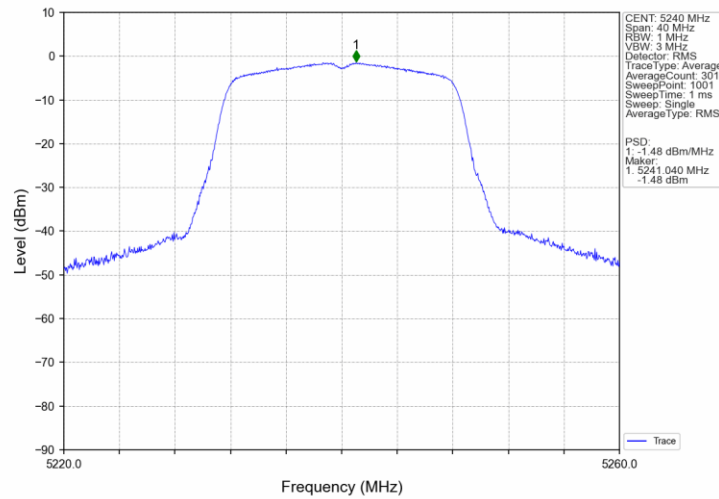
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-0.53	<=11	Pass
		5200	-0.79	<=11	Pass
		5240	-1.48	<=11	Pass
802.11n (HT20)	SISO	5180	-1.42	<=11	Pass
		5200	-3.08	<=11	Pass
		5240	-4.07	<=11	Pass
802.11n (HT40)	SISO	5190	-6.21	<=11	Pass
		5230	-7.02	<=11	Pass
802.11ac (VHT20)	SISO	5180	-2.07	<=11	Pass
		5200	-2.37	<=11	Pass
		5240	-3.65	<=11	Pass
802.11ac (VHT40)	SISO	5190	-5.14	<=11	Pass
		5230	-6.17	<=11	Pass
802.11ac (VHT80)	SISO	5210	-8.90	<=11	Pass

4.2 Test Graph

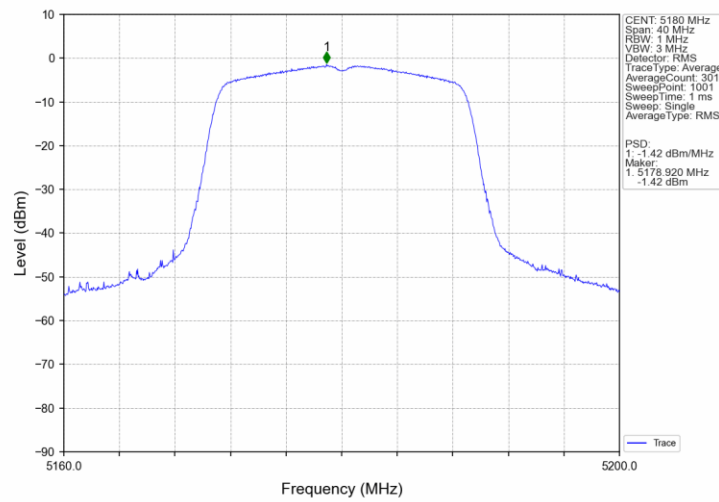
4.2.1 PSD



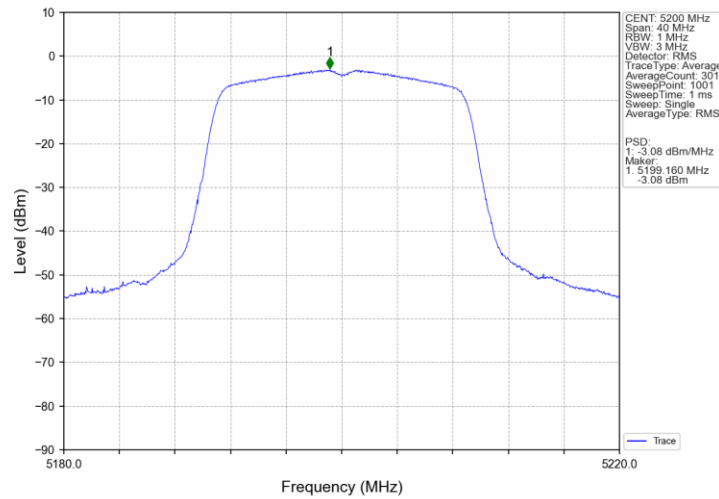
802.11a_HCH_5240MHz_Ant1_NTNV



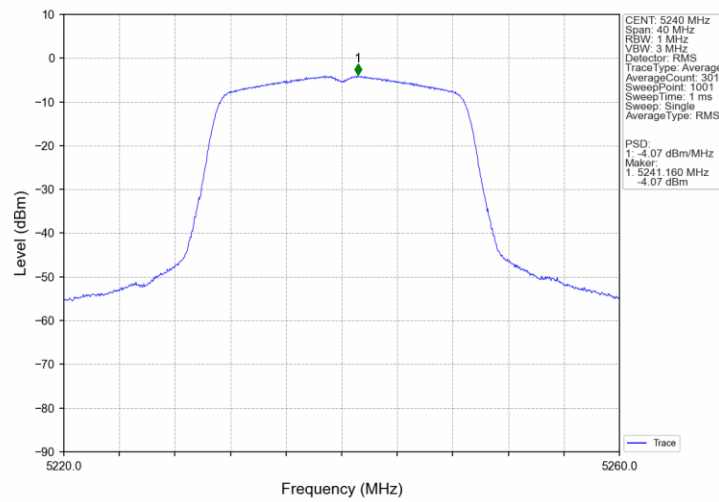
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



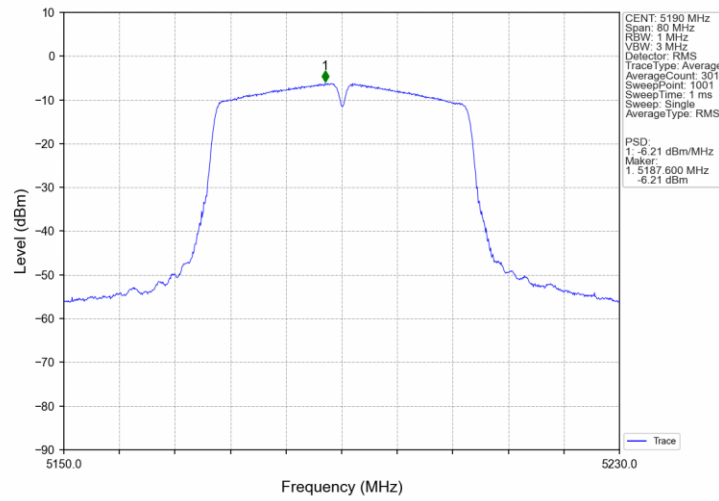
802.11n(HT20) MCH 5200MHz Ant1 NTVN



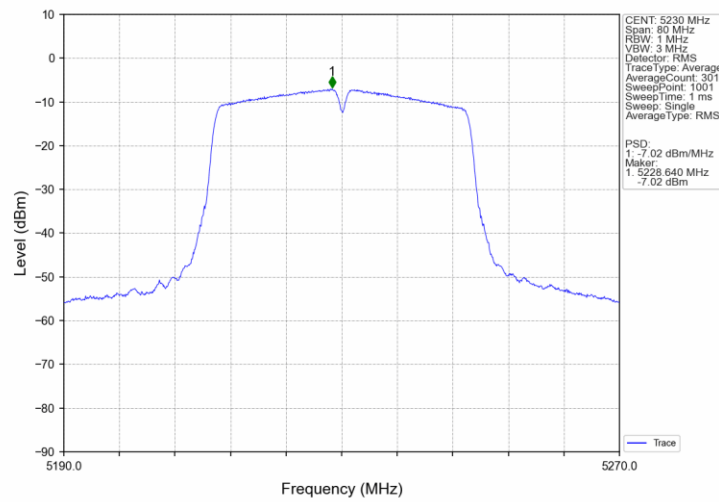
802.11n(HT20) HCH 5240MHz Ant1 NTVN



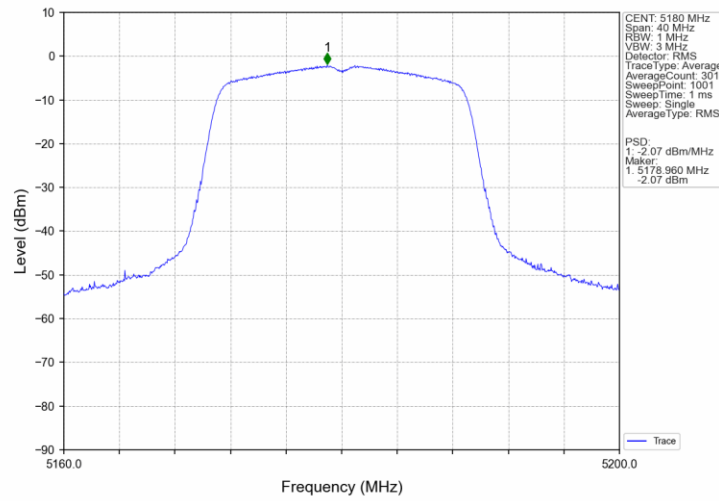
802.11n(HT40) LCH 5190MHz Ant1 NTN



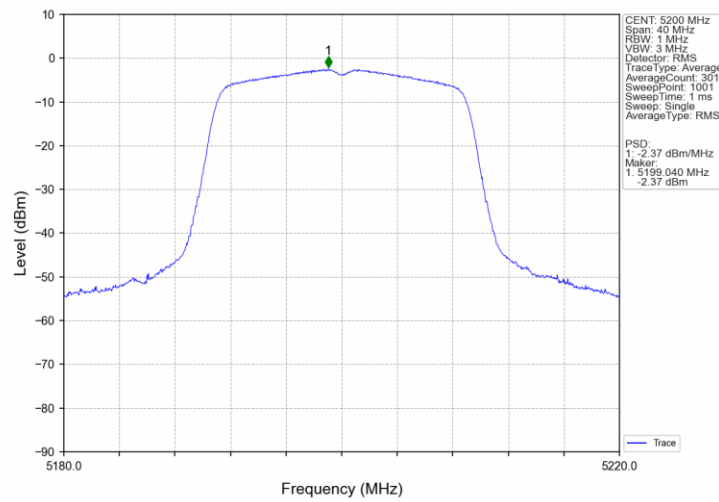
802.11n(HT40) HCH 5230MHz Ant1 NTN



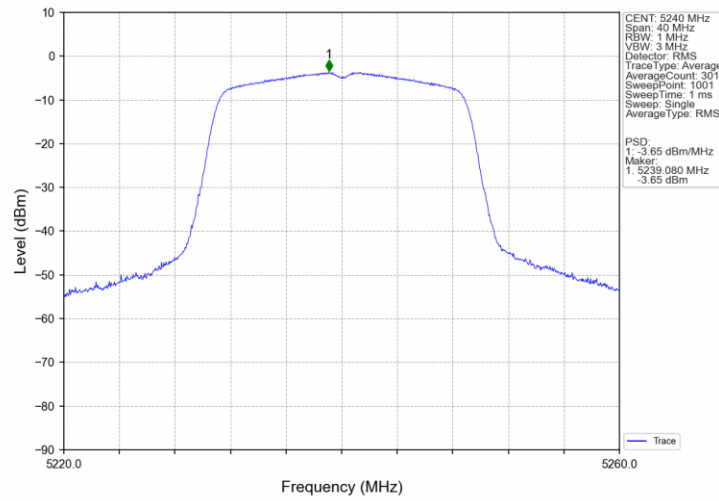
802.11ac(VHT20) LCH 5180MHz Ant1 NTN



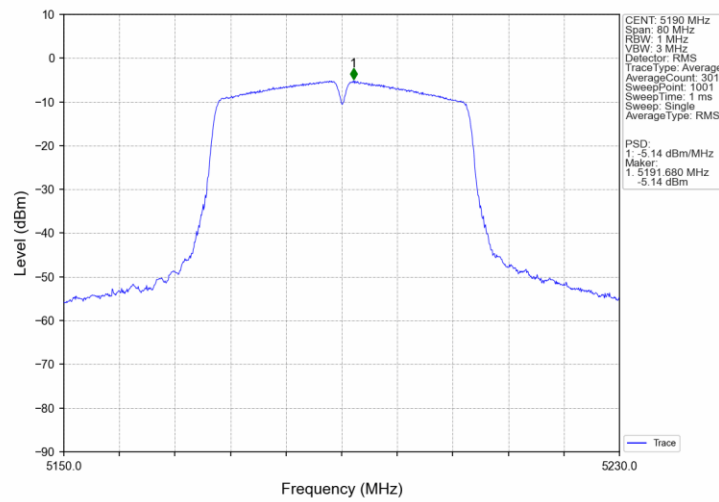
802.11ac(VHT20) MCH 5200MHz Ant1 NTN



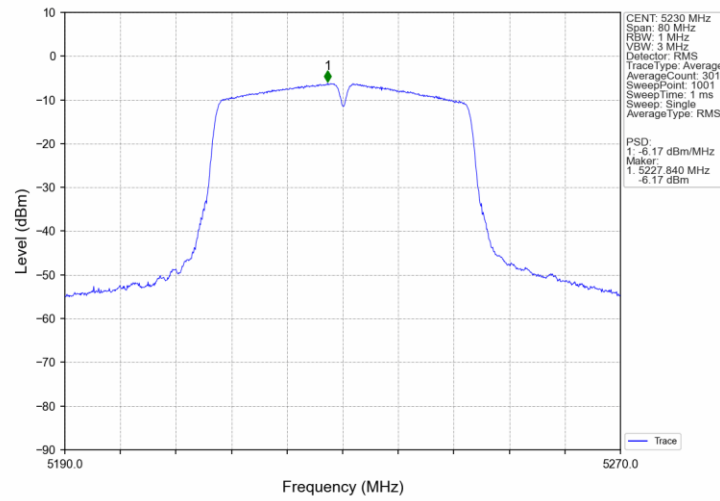
802.11ac(VHT20) HCH 5240MHz Ant1 NTN



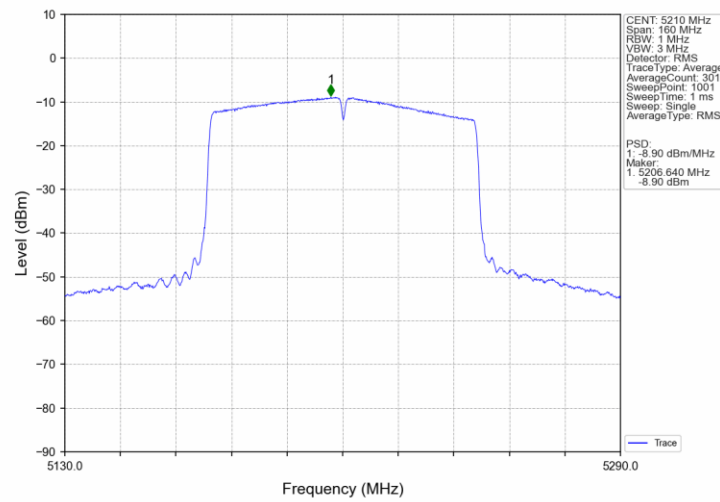
802.11ac(VHT40) LCH 5190MHz Ant1 NTN



802.11ac(VHT40) HCH 5230MHz Ant1 NTN



802.11ac(VHT80) MCH 5210MHz Ant1 NTN



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	3.23	5179.986	5150 to 5250	Pass
				3.80	5179.986	5150 to 5250	Pass
				4.37	5179.985	5150 to 5250	Pass
			-30	3.80	5179.985	5150 to 5250	Pass
			-20	3.80	5179.985	5150 to 5250	Pass
			-10	3.80	5179.985	5150 to 5250	Pass
			0	3.80	5179.985	5150 to 5250	Pass
			10	3.80	5179.985	5150 to 5250	Pass
			30	3.80	5179.985	5150 to 5250	Pass
			40	3.80	5179.985	5150 to 5250	Pass
			50	3.80	5179.985	5150 to 5250	Pass
		5200	20	3.23	5199.984	5150 to 5250	Pass
				3.80	5199.984	5150 to 5250	Pass
				4.37	5199.984	5150 to 5250	Pass
			-30	3.80	5199.984	5150 to 5250	Pass
			-20	3.80	5199.984	5150 to 5250	Pass
			-10	3.80	5199.984	5150 to 5250	Pass
			0	3.80	5199.984	5150 to 5250	Pass
			10	3.80	5199.984	5150 to 5250	Pass
			30	3.80	5199.984	5150 to 5250	Pass
			40	3.80	5199.984	5150 to 5250	Pass
			50	3.80	5199.984	5150 to 5250	Pass
		5240	20	3.23	5239.984	5150 to 5250	Pass
				3.80	5239.984	5150 to 5250	Pass
				4.37	5239.984	5150 to 5250	Pass
			-30	3.80	5239.984	5150 to 5250	Pass
			-20	3.80	5239.984	5150 to 5250	Pass
			-10	3.80	5239.984	5150 to 5250	Pass
			0	3.80	5239.983	5150 to 5250	Pass
			10	3.80	5239.983	5150 to 5250	Pass
			30	3.80	5239.983	5150 to 5250	Pass
			40	3.80	5239.983	5150 to 5250	Pass
			50	3.80	5239.983	5150 to 5250	Pass
		5190	20	3.23	5189.983	5150 to 5250	Pass
				3.80	5189.983	5150 to 5250	Pass
				4.37	5189.983	5150 to 5250	Pass
			-30	3.80	5189.983	5150 to 5250	Pass
			-20	3.80	5189.983	5150 to 5250	Pass
			-10	3.80	5189.983	5150 to 5250	Pass
			0	3.80	5189.983	5150 to 5250	Pass
			10	3.80	5189.983	5150 to 5250	Pass
			30	3.80	5189.983	5150 to 5250	Pass
			40	3.80	5189.983	5150 to 5250	Pass
			50	3.80	5189.983	5150 to 5250	Pass
		5230	20	3.23	5229.982	5150 to 5250	Pass
				3.80	5229.982	5150 to 5250	Pass



				4.37	5229.982	5150 to 5250	Pass
			-30	3.80	5229.982	5150 to 5250	Pass
			-20	3.80	5229.982	5150 to 5250	Pass
			-10	3.80	5229.982	5150 to 5250	Pass
			0	3.80	5229.982	5150 to 5250	Pass
			10	3.80	5229.982	5150 to 5250	Pass
			30	3.80	5229.982	5150 to 5250	Pass
			40	3.80	5229.982	5150 to 5250	Pass
			50	3.80	5229.982	5150 to 5250	Pass
		5210	20	3.23	5209.991	5150 to 5250	Pass
				3.80	5209.991	5150 to 5250	Pass
				4.37	5209.991	5150 to 5250	Pass
			-30	3.80	5209.990	5150 to 5250	Pass
			-20	3.80	5209.990	5150 to 5250	Pass
			-10	3.80	5209.990	5150 to 5250	Pass
			0	3.80	5209.989	5150 to 5250	Pass
			10	3.80	5209.989	5150 to 5250	Pass
			30	3.80	5209.989	5150 to 5250	Pass
			40	3.80	5209.988	5150 to 5250	Pass
			50	3.80	5209.988	5150 to 5250	Pass

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