

Appendix RF test data for 5G WIFI

1. Duty Cycle

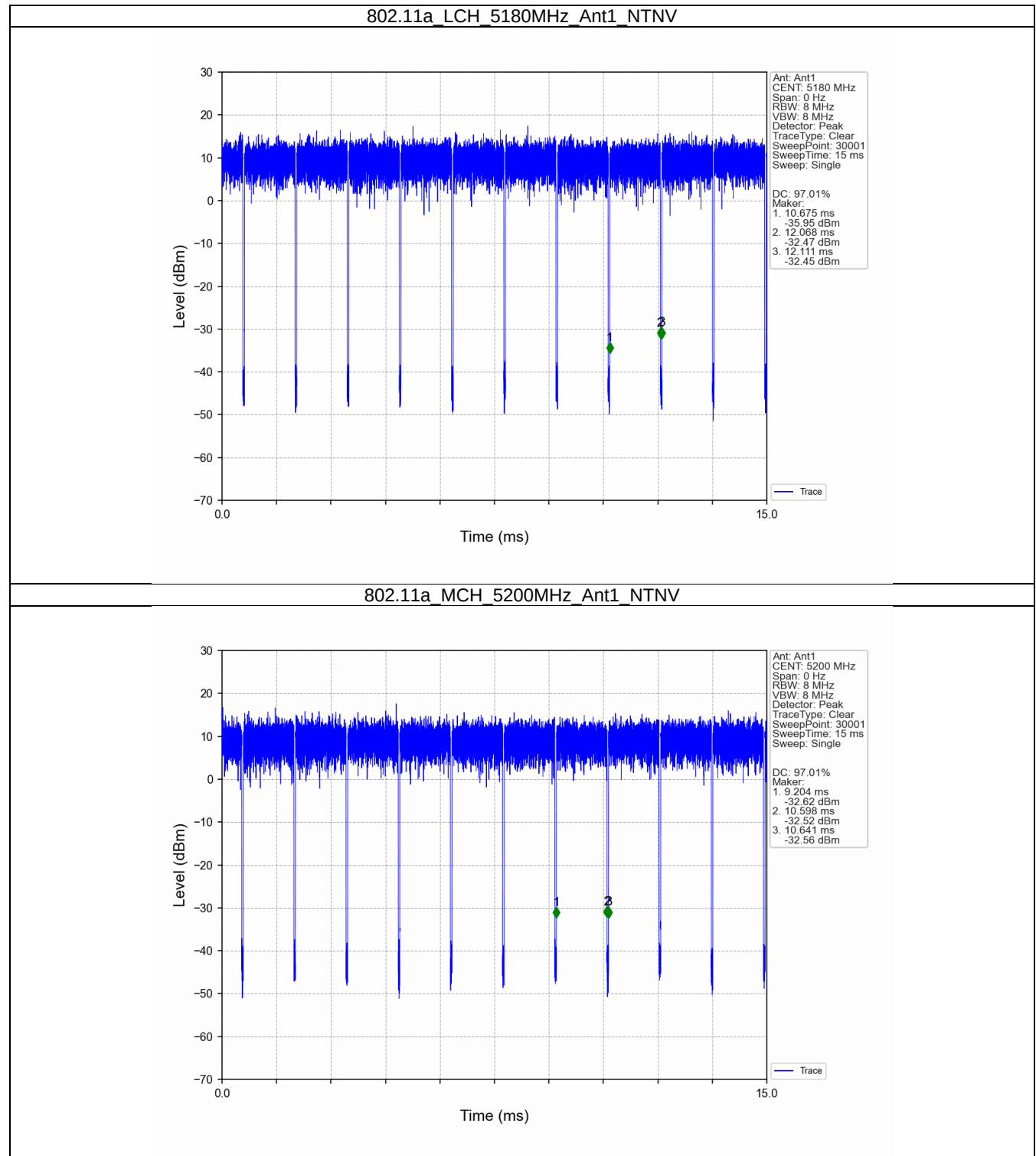
1.1 Test Result

1.1.1 Ant1

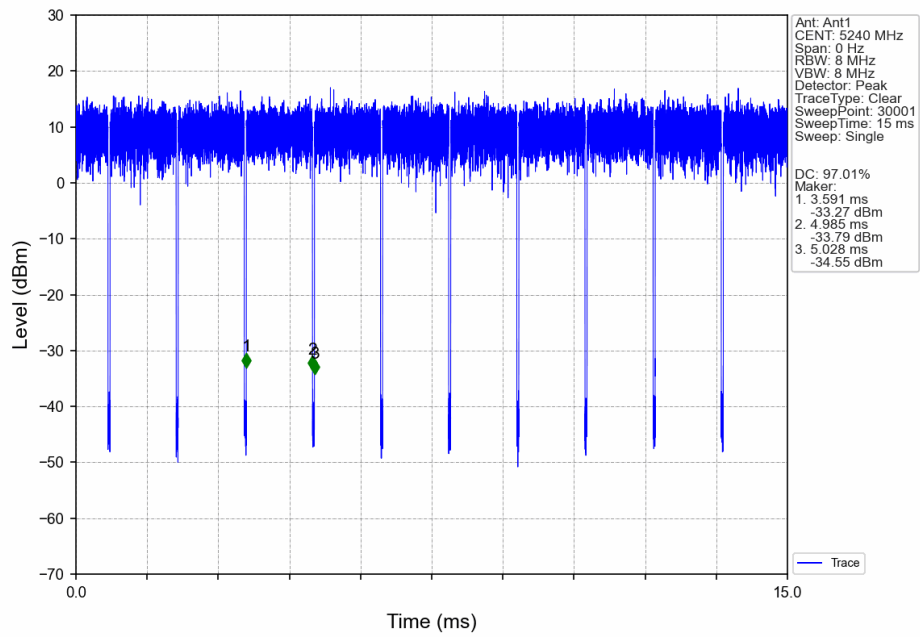
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	1.393	1.436	97.01	0.13	0.04
		5200	1.393	1.436	97.01	0.13	0.04
		5240	1.394	1.437	97.01	0.13	0.03
		5745	1.392	1.436	96.94	0.14	0.03
		5785	1.392	1.436	96.94	0.14	0.03
		5825	1.392	1.436	96.94	0.14	0.03
802.11n (HT20)	SISO	5180	1.302	1.345	96.80	0.14	0.10
		5200	1.300	1.344	96.73	0.14	0.03
		5240	1.300	1.345	96.65	0.15	0.07
		5745	1.300	1.344	96.73	0.14	0.03
		5785	1.300	1.345	96.65	0.15	0.03
		5825	1.301	1.345	96.73	0.14	0.10
802.11n (HT40)	SISO	5190	0.648	0.692	93.64	0.29	0.03
		5230	0.648	0.692	93.64	0.29	0.04
		5755	0.648	0.692	93.64	0.29	0.03
		5795	0.648	0.692	93.64	0.29	0.03

1.2 Test Graph

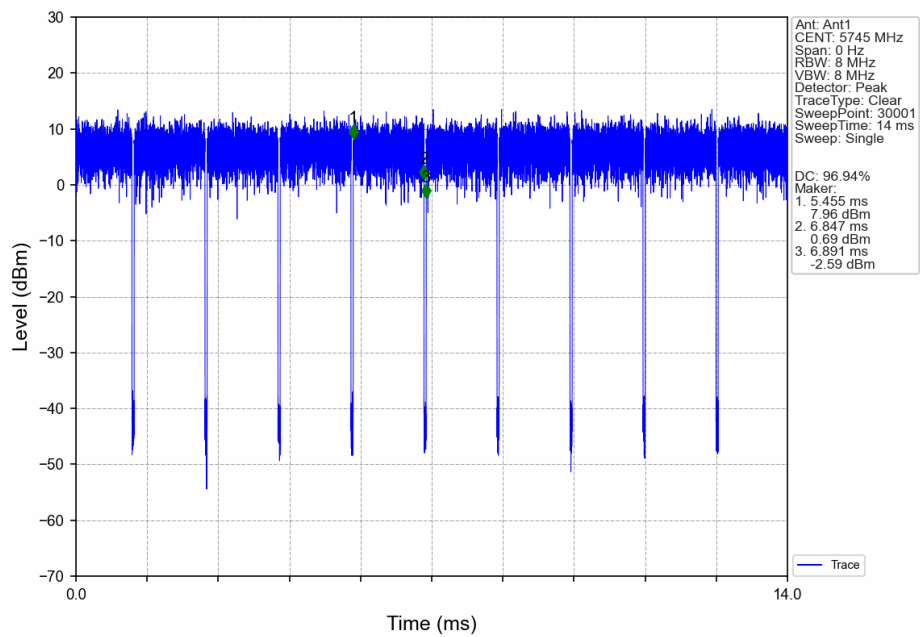
1.2.1 Ant1



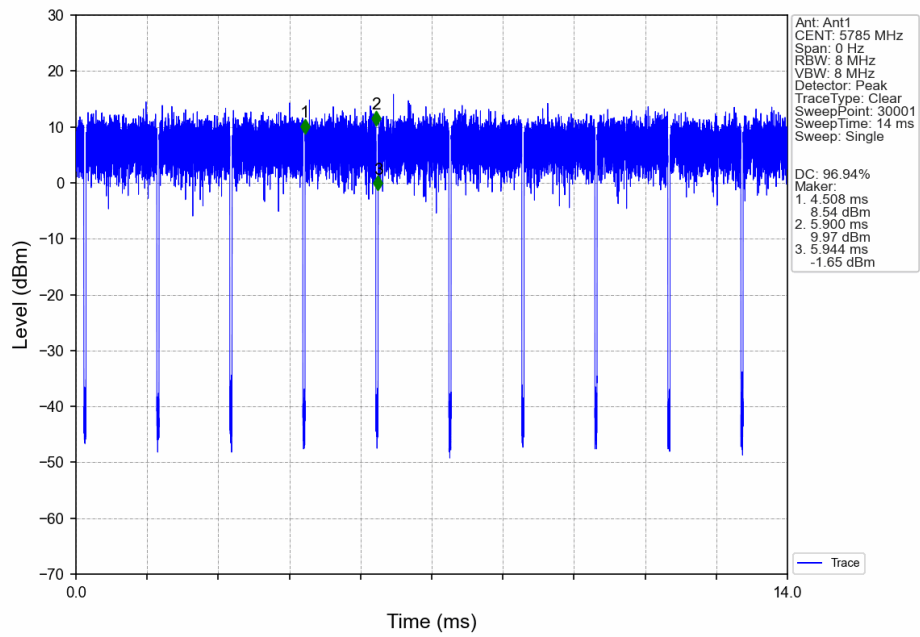
802.11a_HCH_5240MHz_Ant1_NTNV



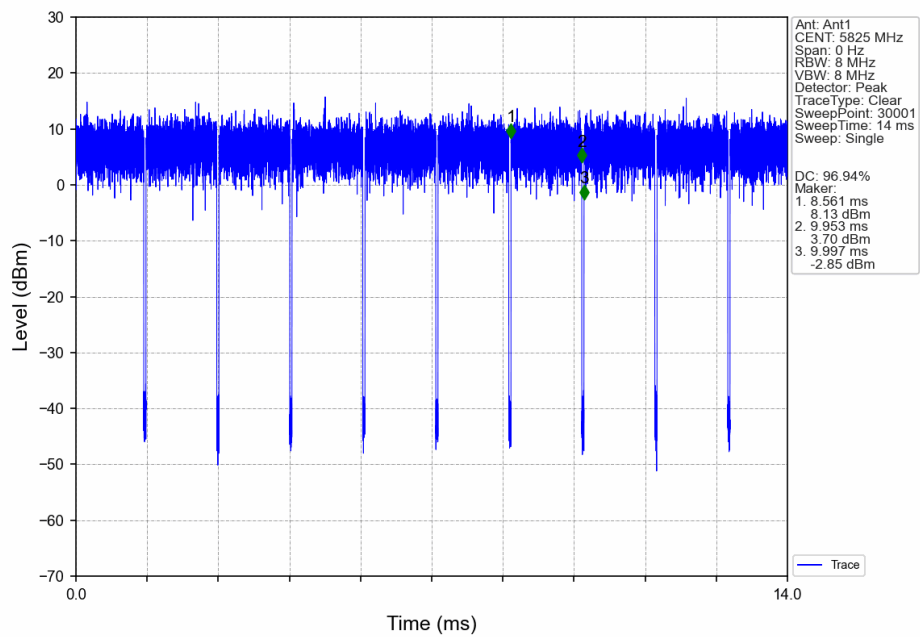
802.11a_LCH_5745MHz_Ant1_NTNV



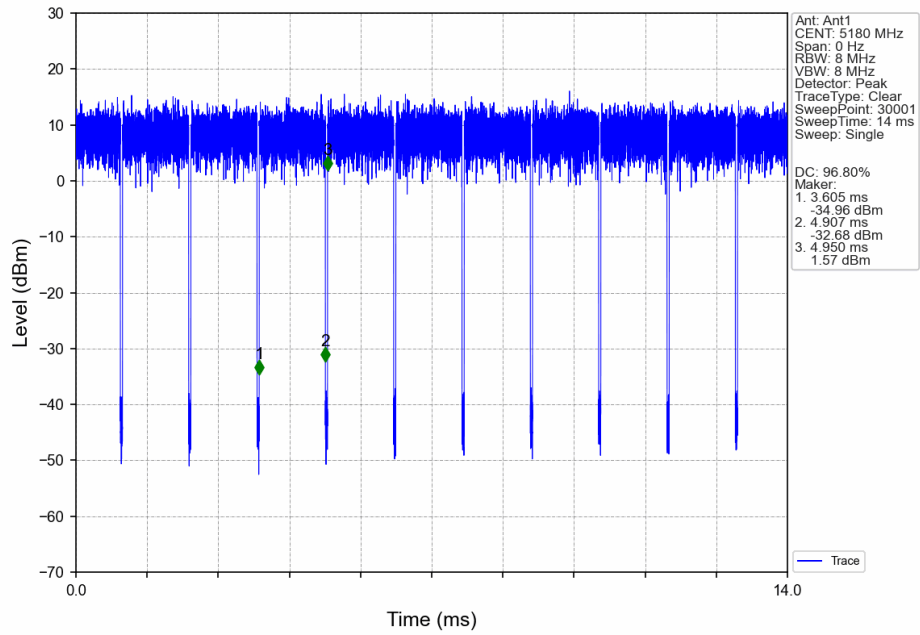
802.11a_MCH_5785MHz_Ant1_NTNV



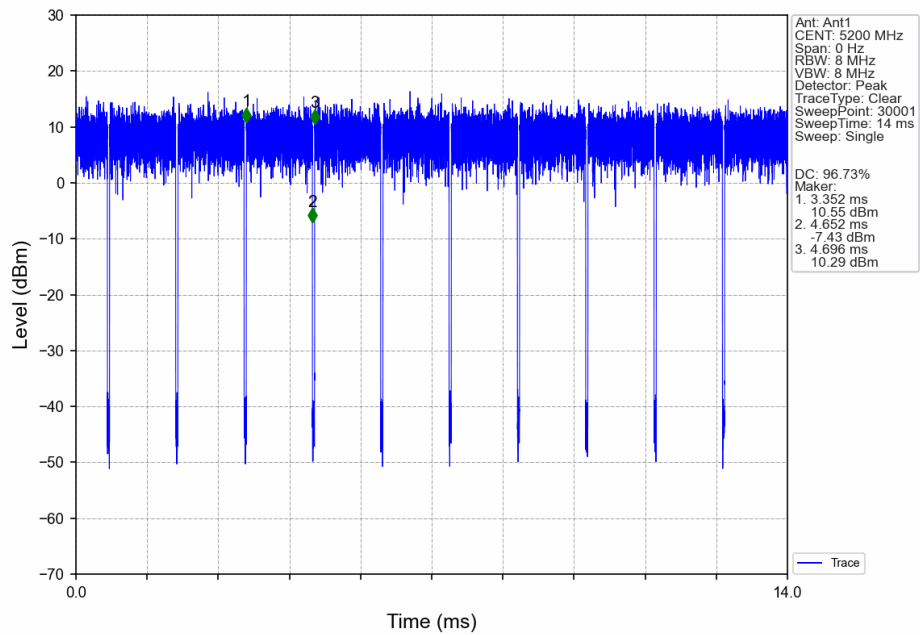
802.11a_HCH_5825MHz_Ant1_NTNV



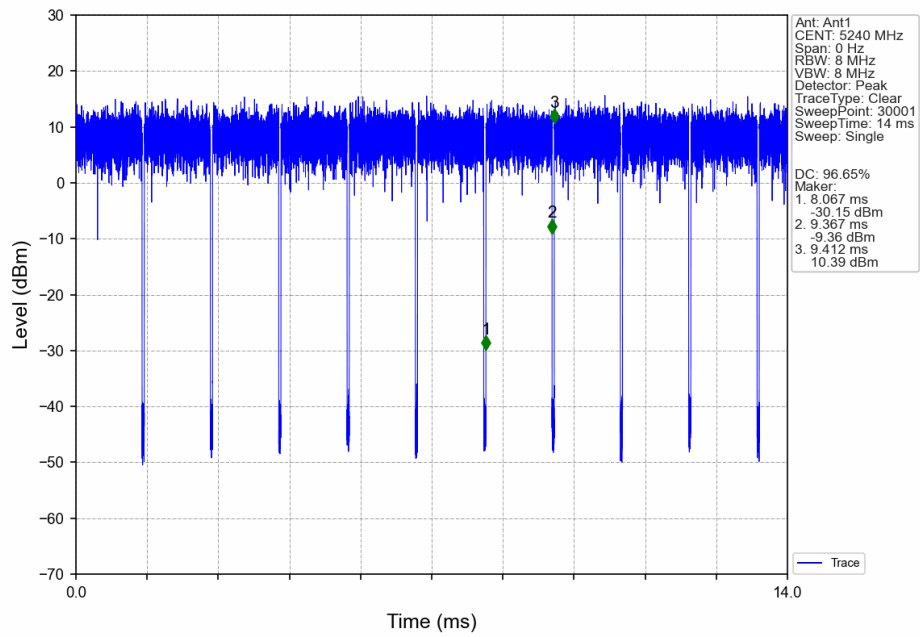
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



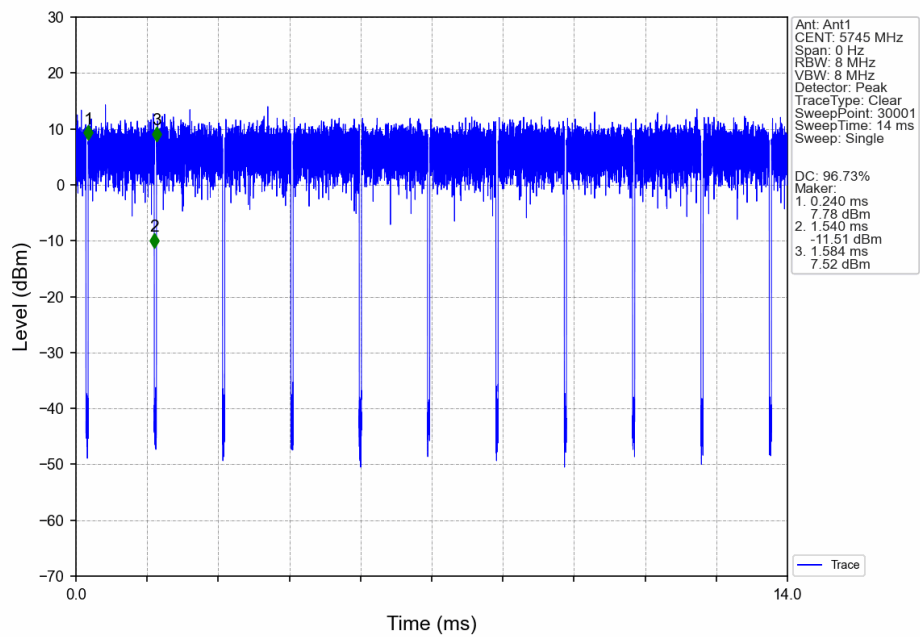
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



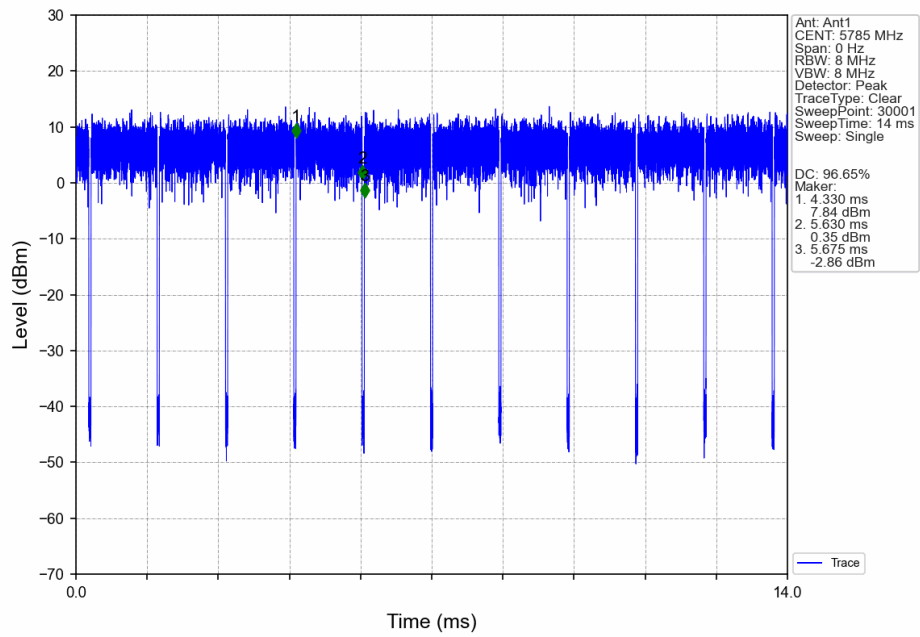
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



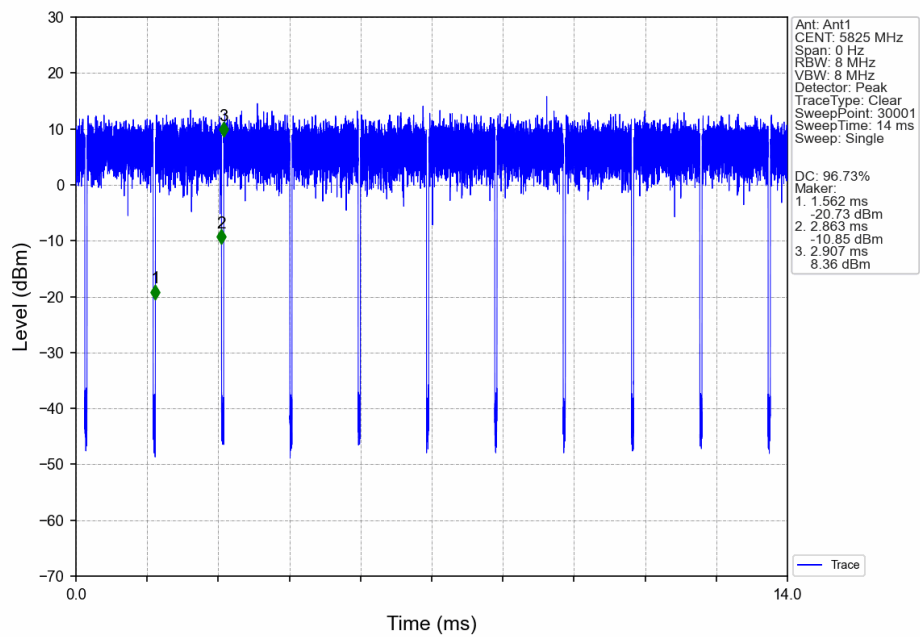
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



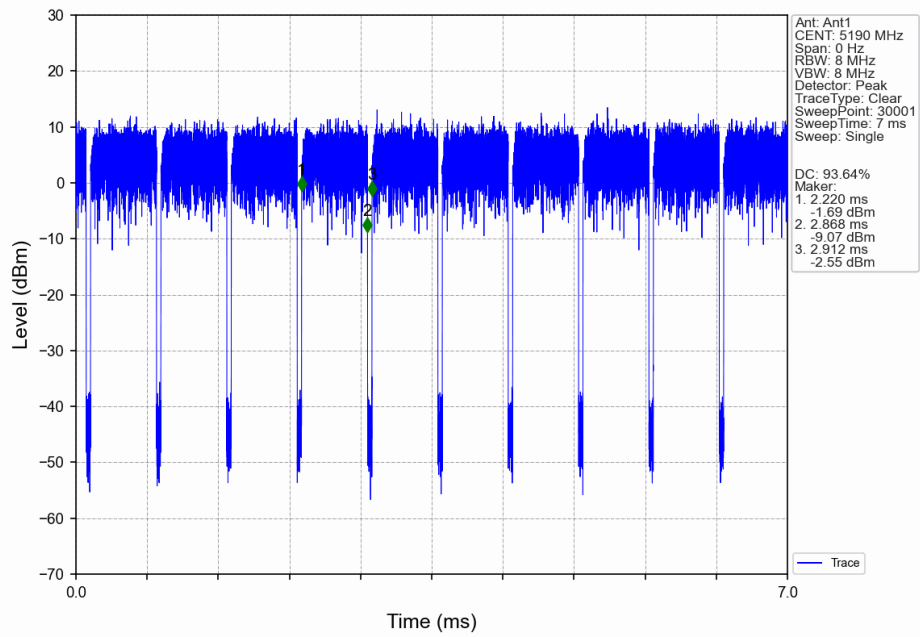
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



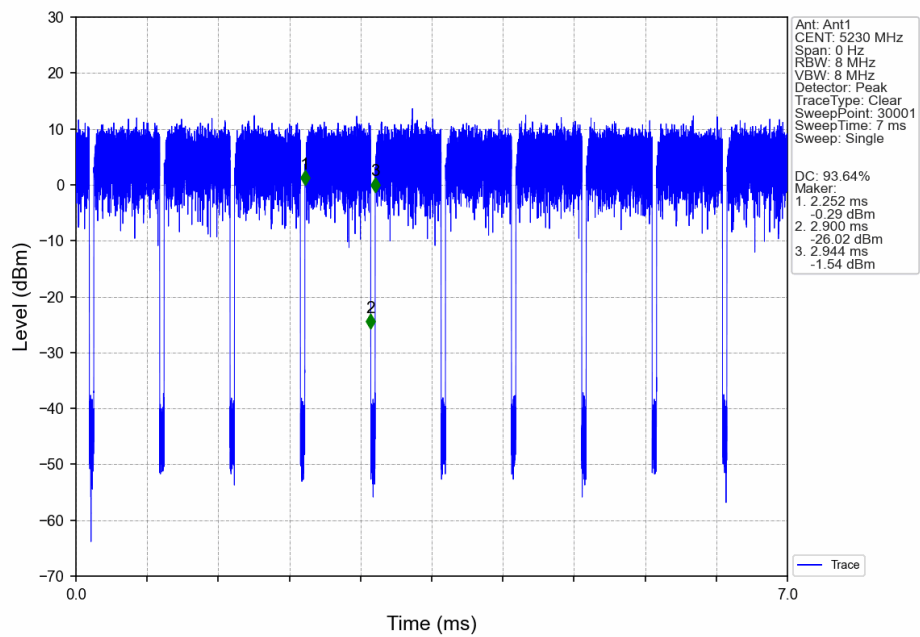
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



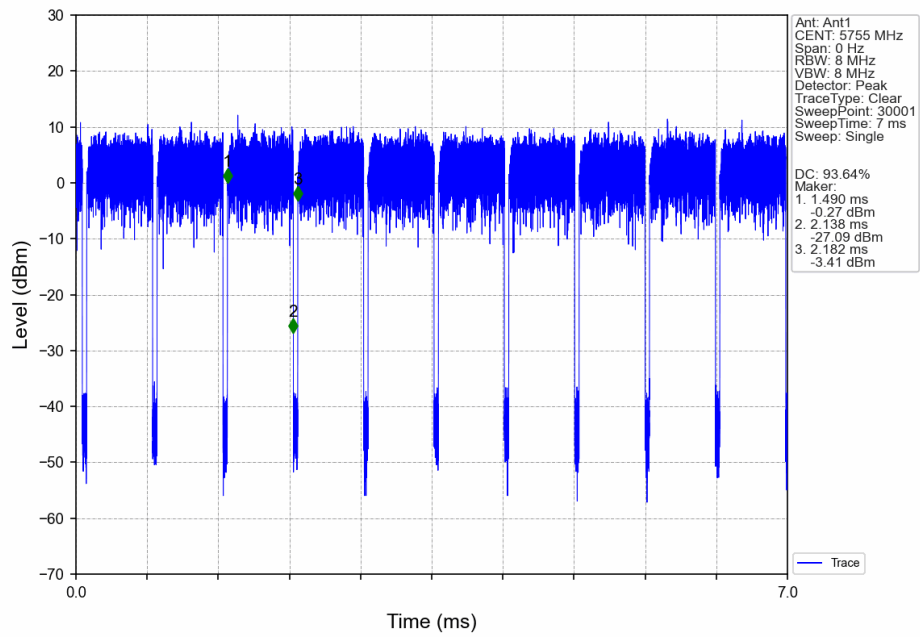
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



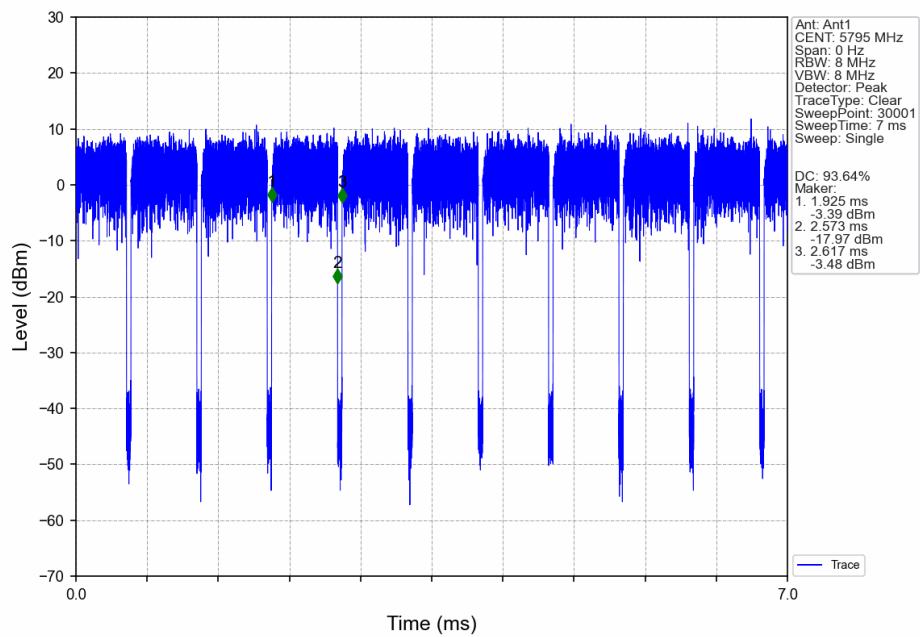
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



802.11n(HT40)_HCH_5795MHz_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	16.422	/	Pass
		5200	1	16.396	/	Pass
		5240	1	16.376	/	Pass
		5745	1	16.435	/	Pass
		5785	1	16.393	/	Pass
		5825	1	16.396	/	Pass
802.11n (HT20)	SISO	5180	1	17.559	/	Pass
		5200	1	17.550	/	Pass
		5240	1	17.572	/	Pass
		5745	1	17.558	/	Pass
		5785	1	17.534	/	Pass
		5825	1	17.563	/	Pass
802.11n (HT40)	SISO	5190	1	36.163	/	Pass
		5230	1	36.151	/	Pass
		5755	1	36.042	/	Pass
		5795	1	36.037	/	Pass

2.1.2 26dB BW

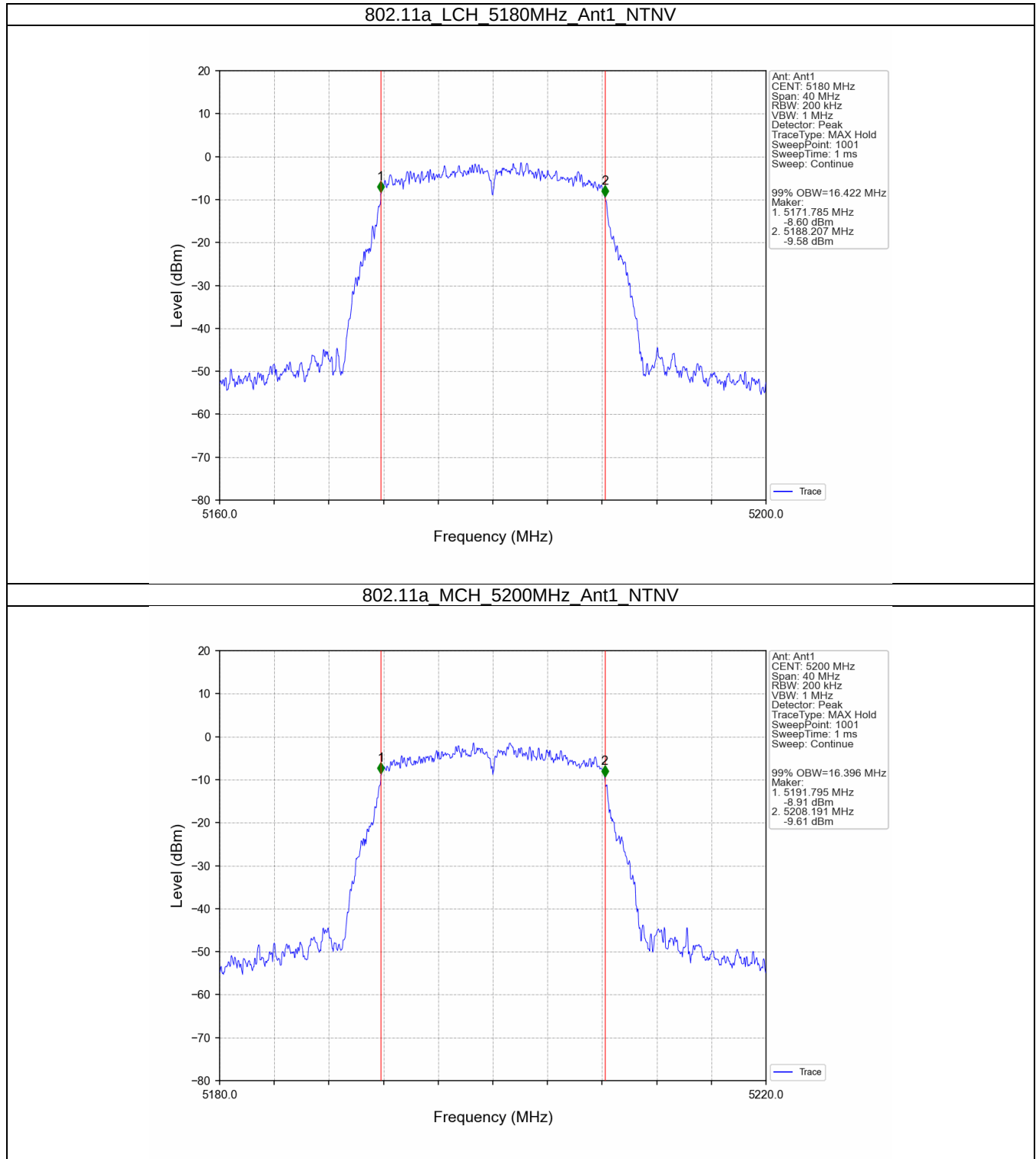
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	19.732	/	Pass
		5200	1	19.607	/	Pass
		5240	1	19.687	/	Pass
802.11n (HT20)	SISO	5180	1	19.950	/	Pass
		5200	1	19.944	/	Pass
		5240	1	20.407	/	Pass
802.11n (HT40)	SISO	5190	1	41.603	/	Pass
		5230	1	41.008	/	Pass

2.1.3 6dB BW

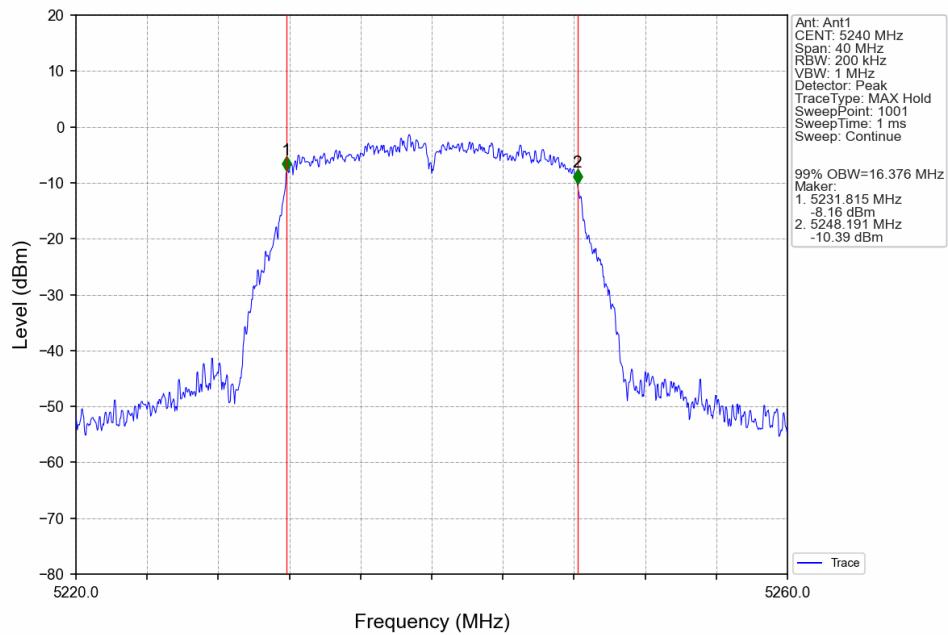
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	15.023	≥ 0.5	Pass
		5785	1	15.143	≥ 0.5	Pass
		5825	1	14.490	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	15.094	≥ 0.5	Pass
		5785	1	15.140	≥ 0.5	Pass
		5825	1	15.094	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	35.083	≥ 0.5	Pass
		5795	1	33.863	≥ 0.5	Pass

2.2 Test Graph

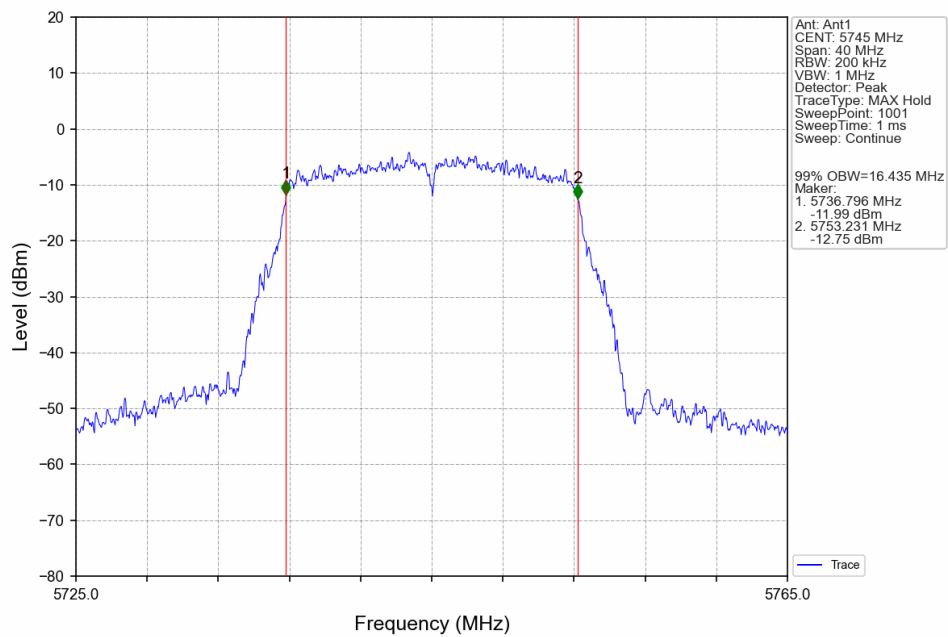
2.2.1 OBW



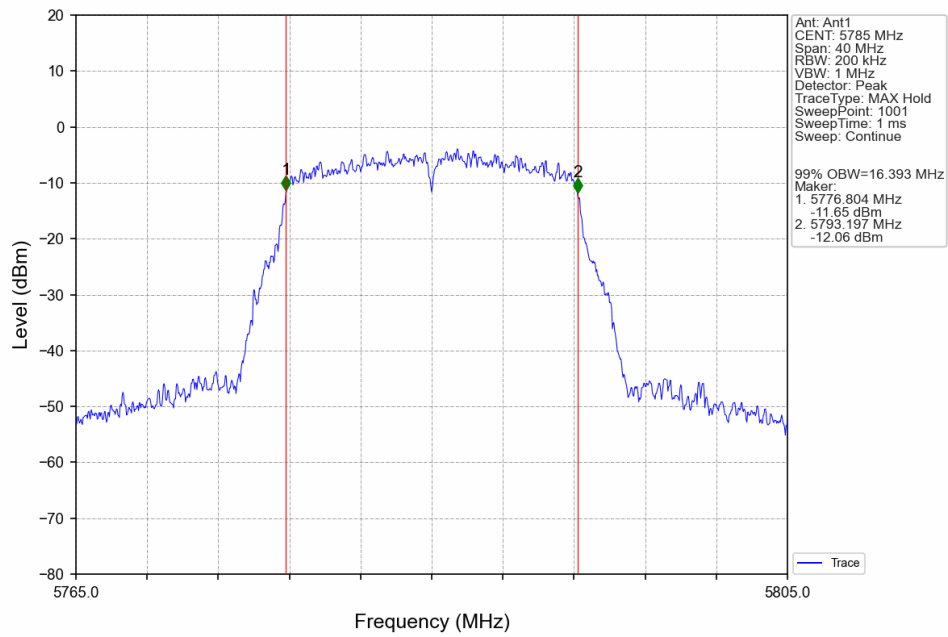
802.11a_HCH_5240MHz_Ant1_NTNV



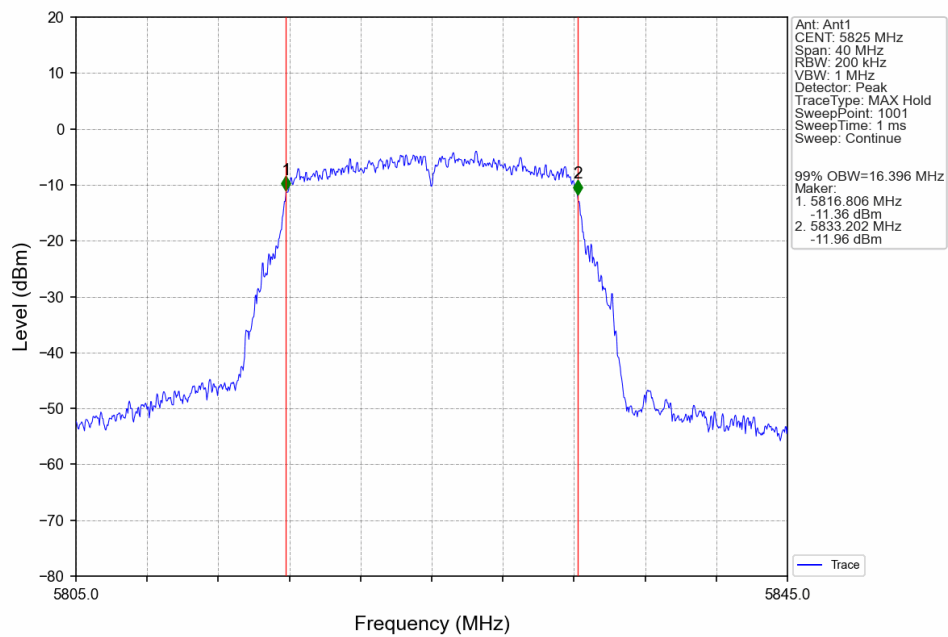
802.11a_LCH_5745MHz_Ant1_NTNV



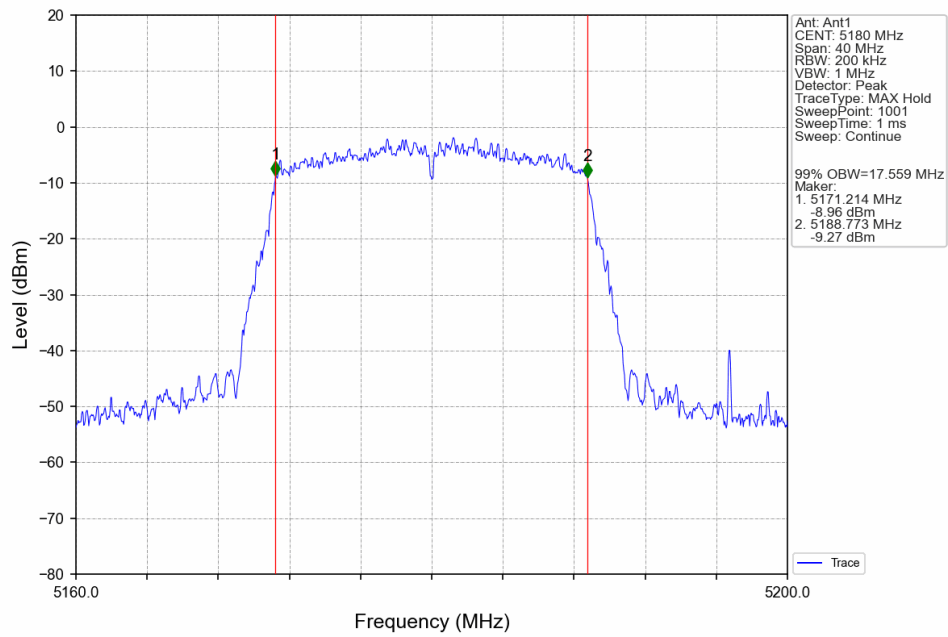
802.11a_MCH_5785MHz_Ant1_NTNV



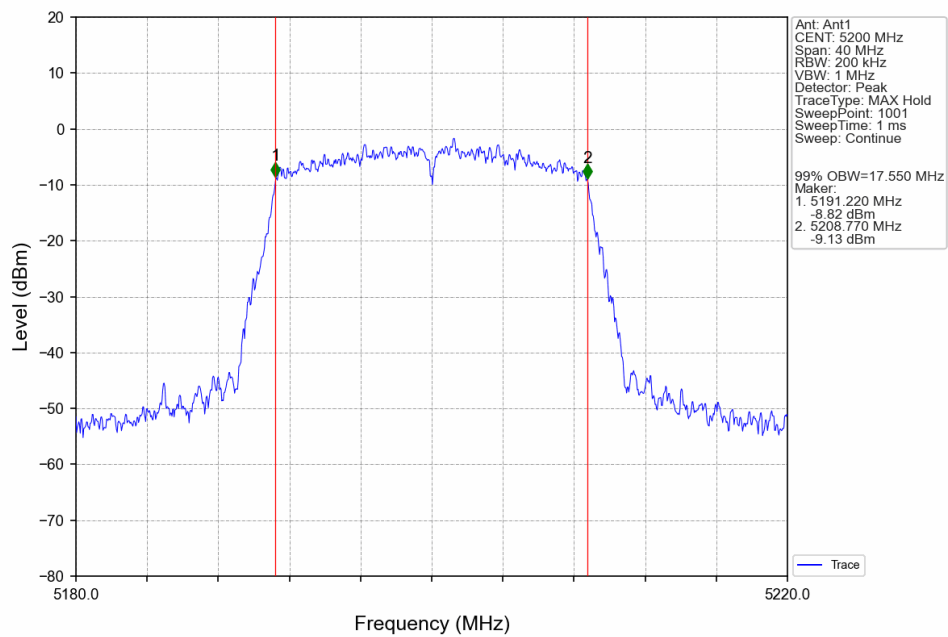
802.11a_HCH_5825MHz_Ant1_NTNV



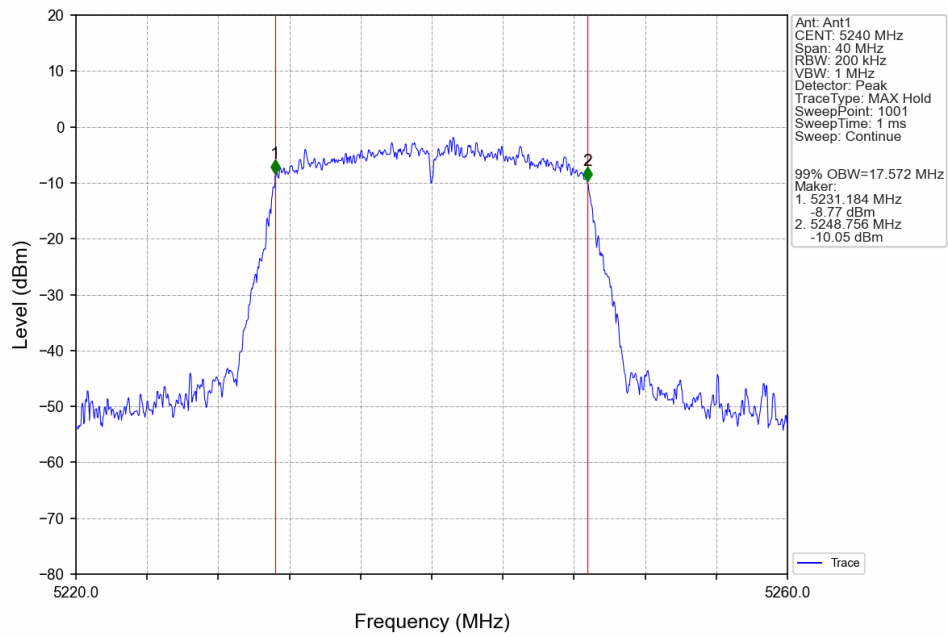
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



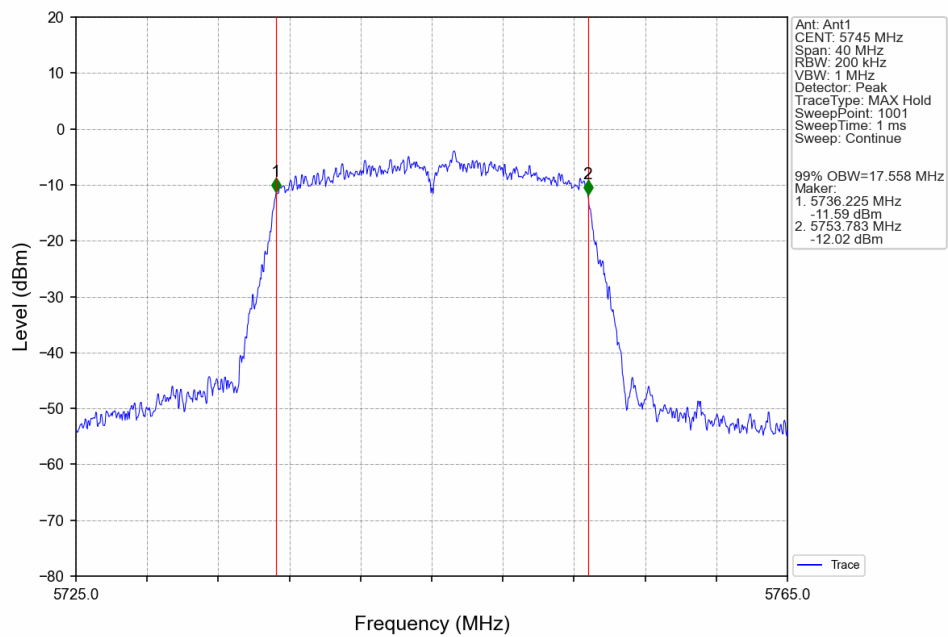
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



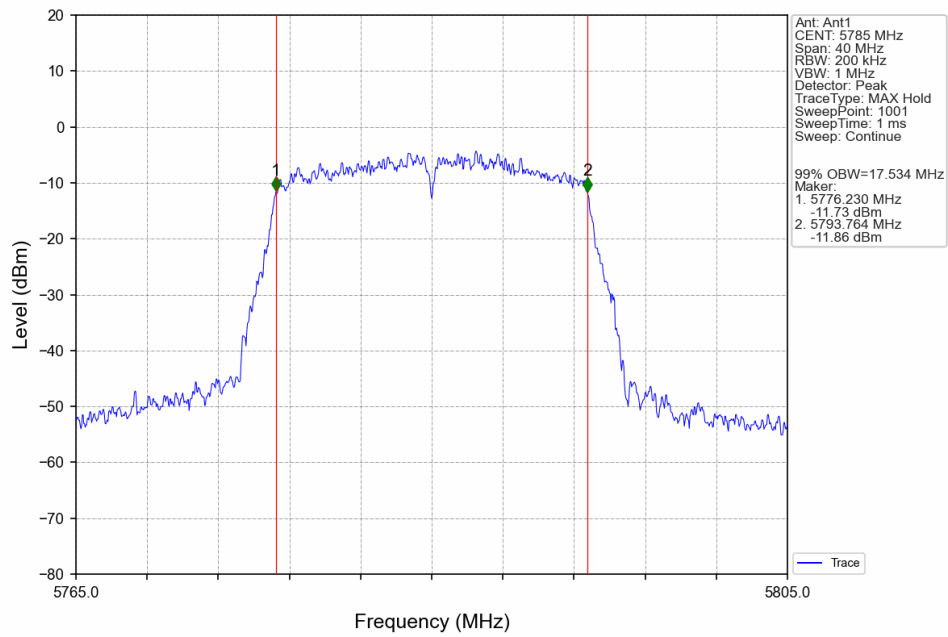
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



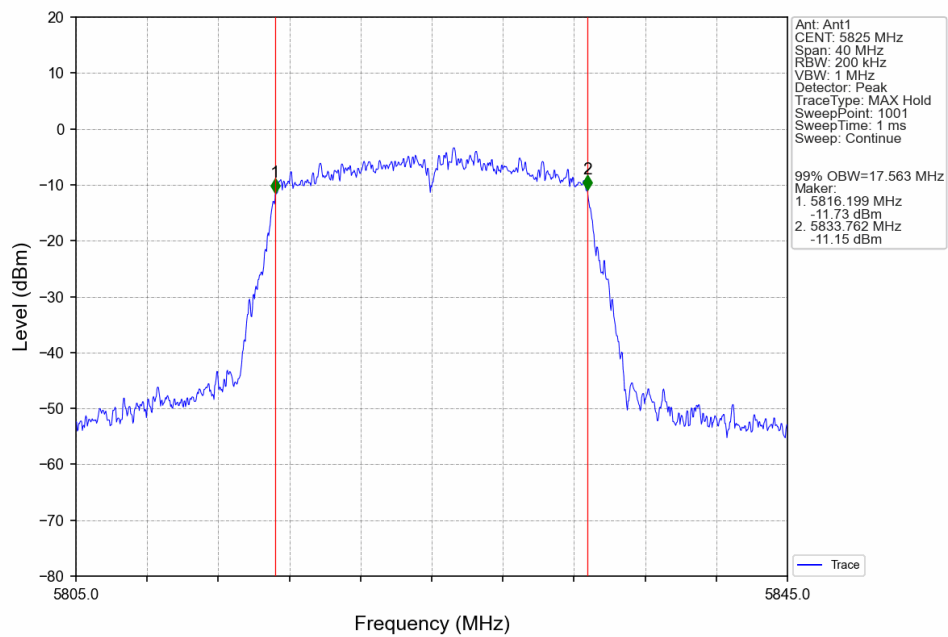
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



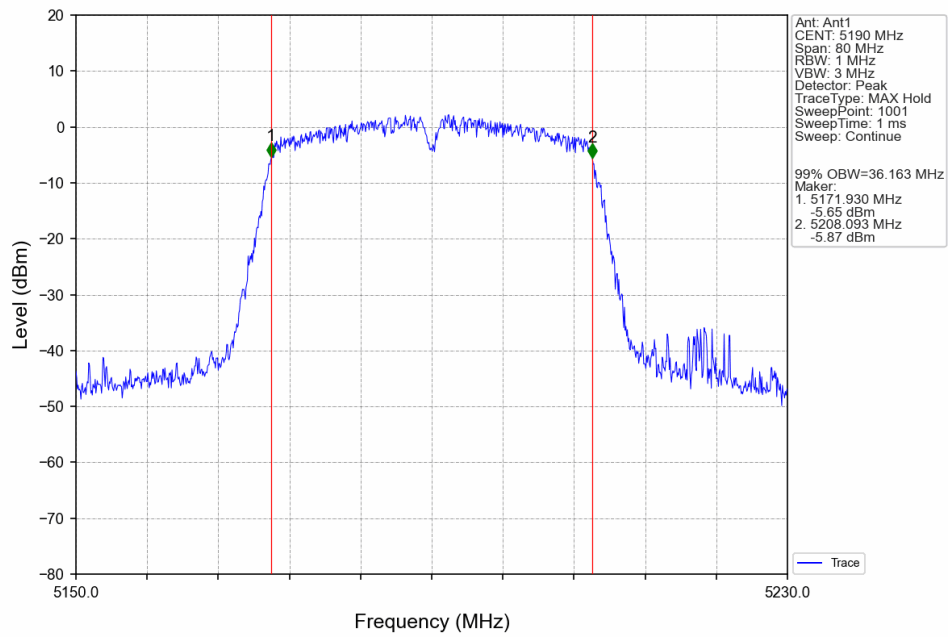
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



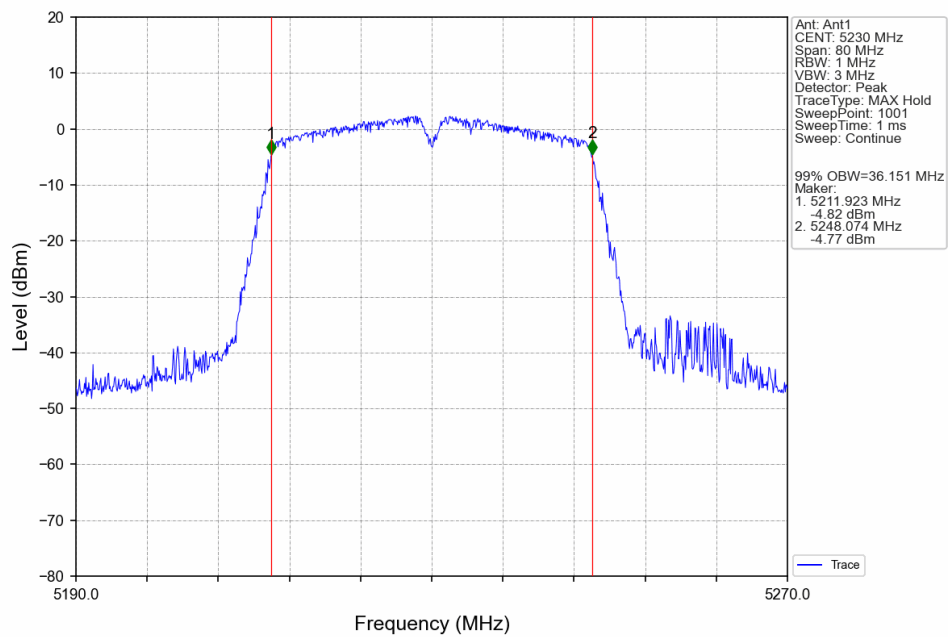
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



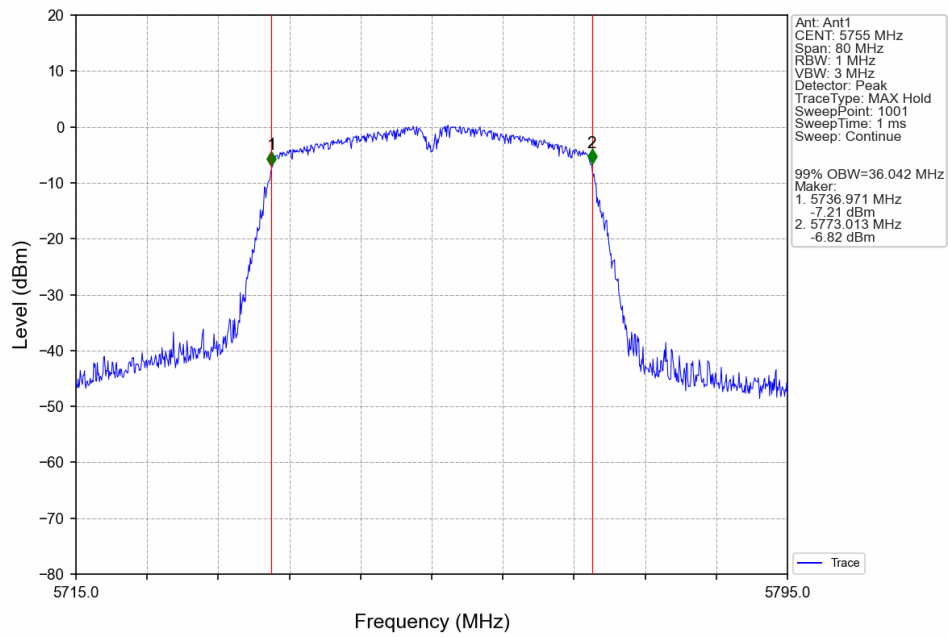
802.11n(HT40) LCH 5190MHz Ant1_NTNV



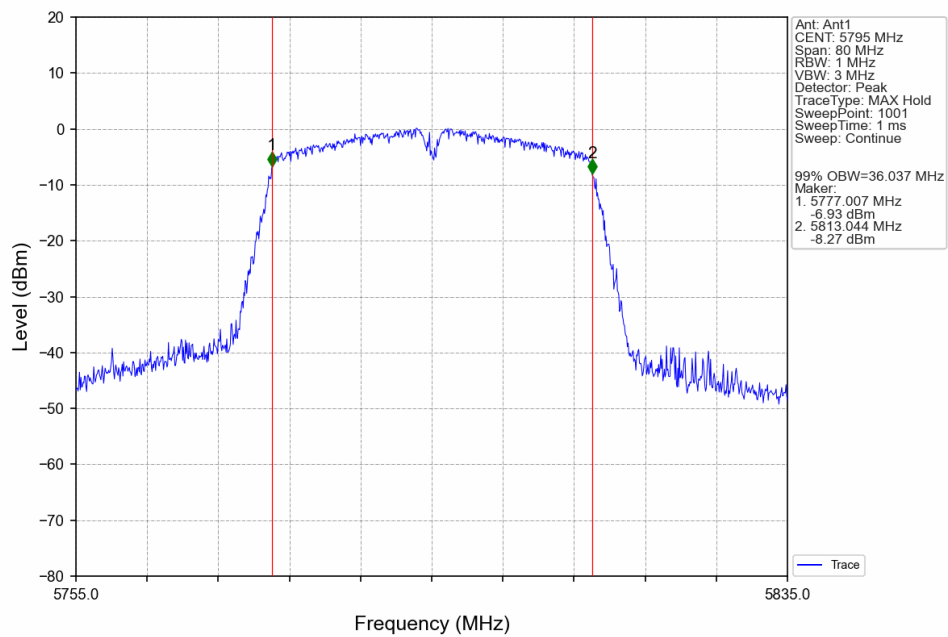
802.11n(HT40) HCH 5230MHz Ant1_NTNV



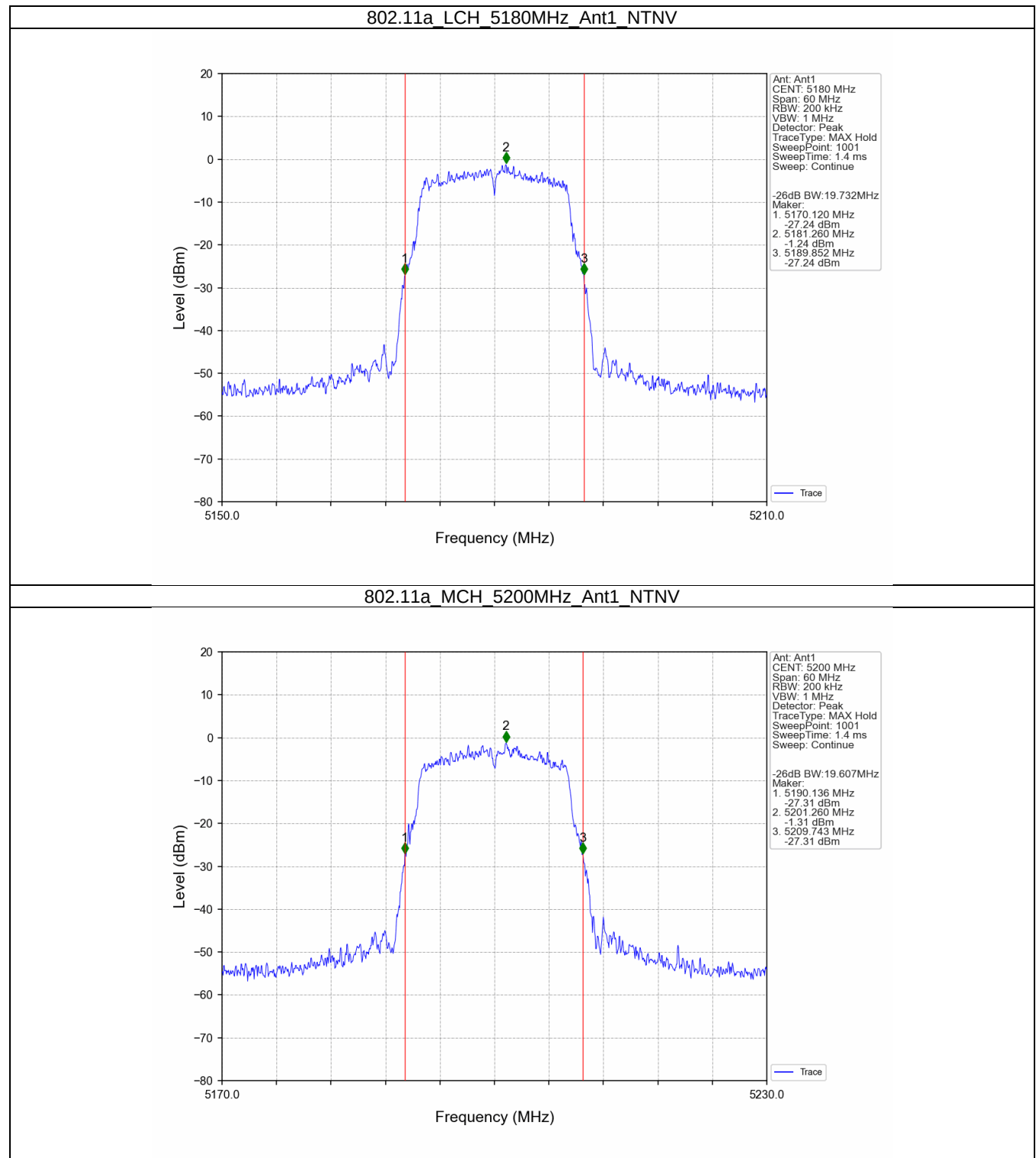
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



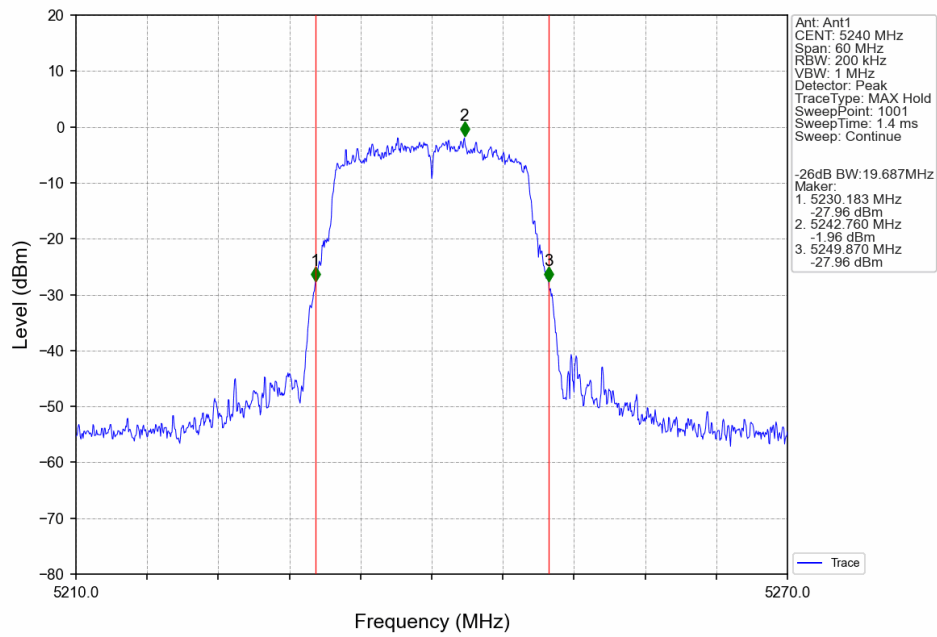
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



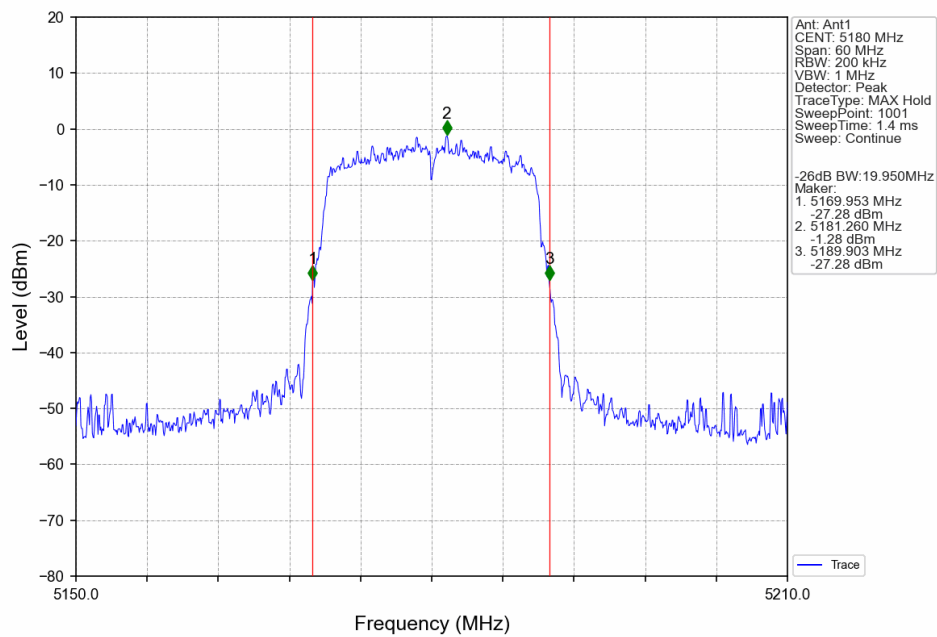
2.2.2 26dB BW



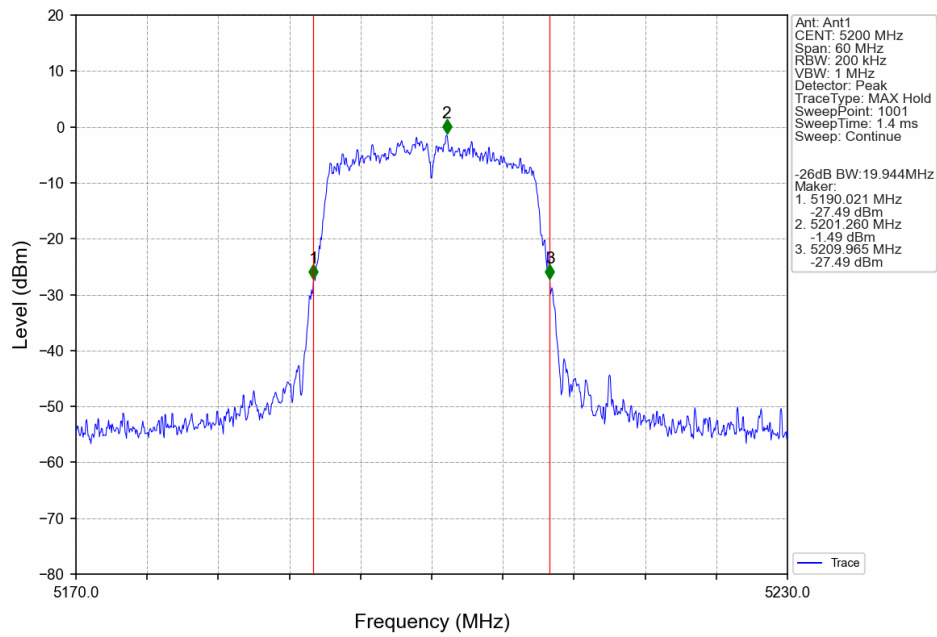
802.11a_HCH_5240MHz_Ant1_NTNV



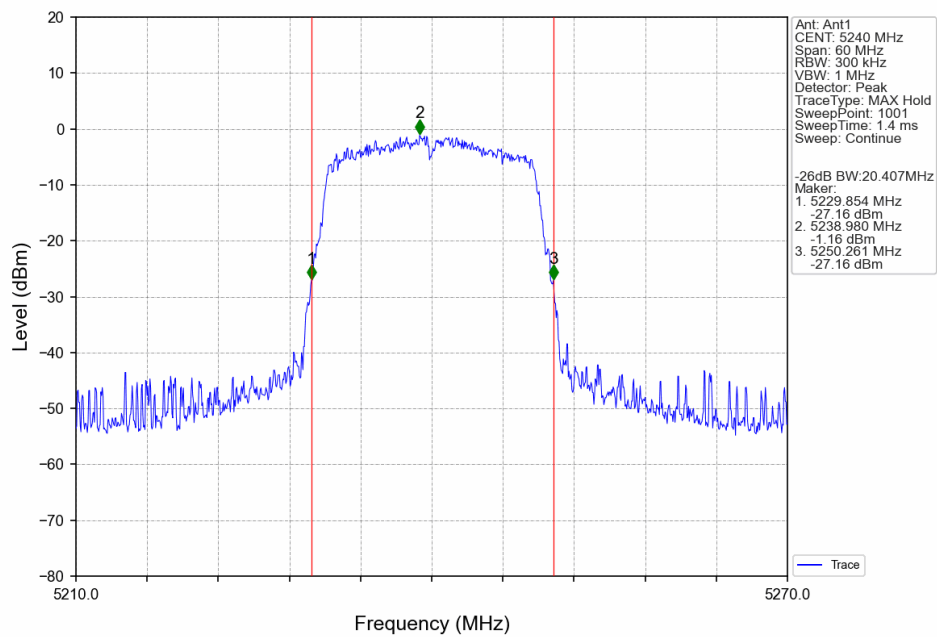
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



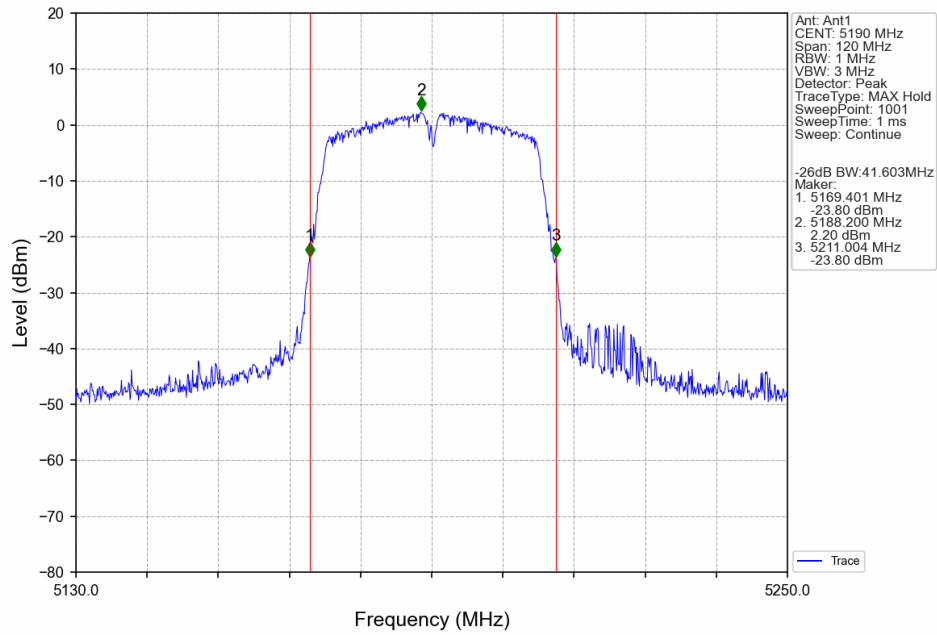
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



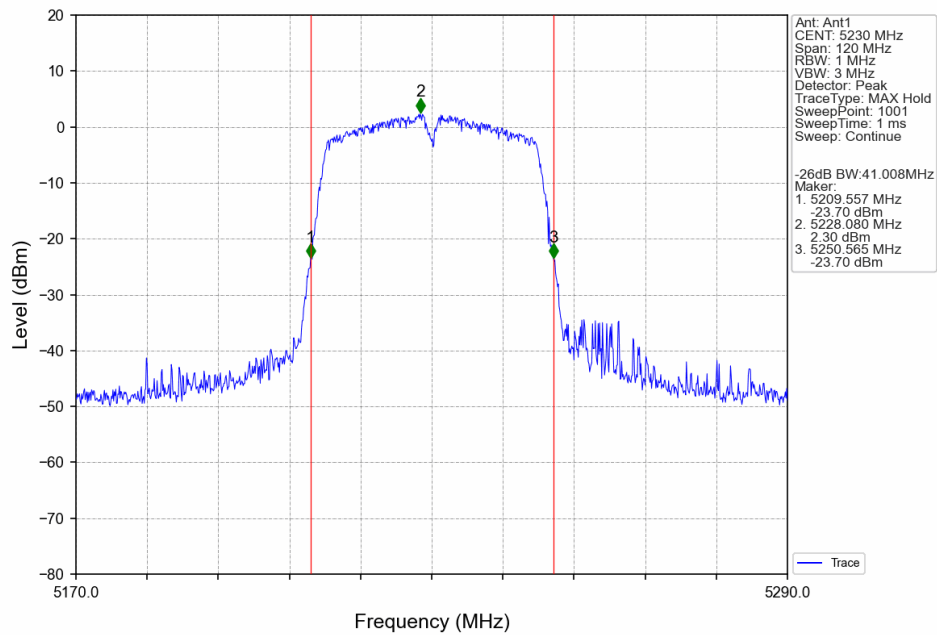
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



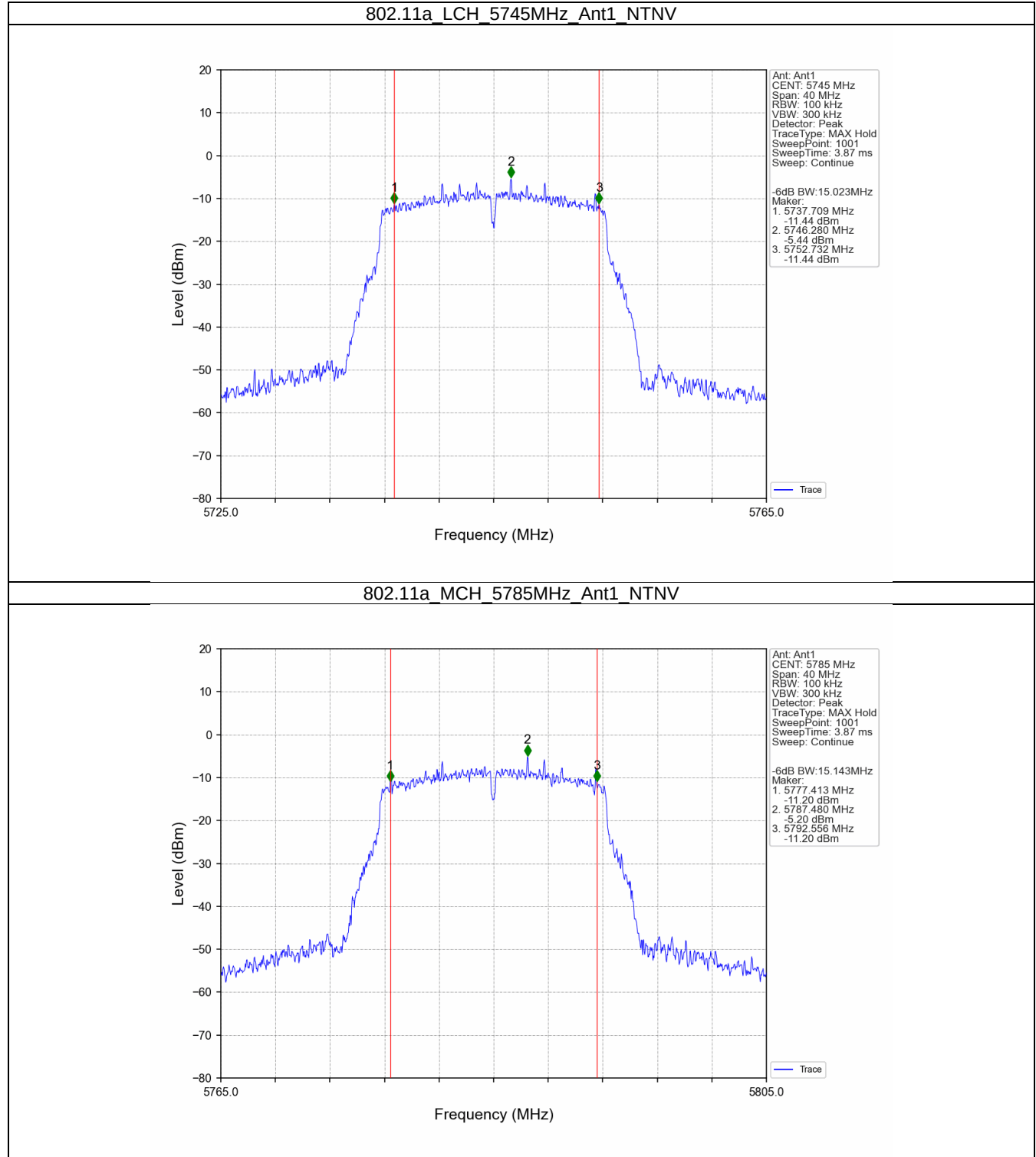
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



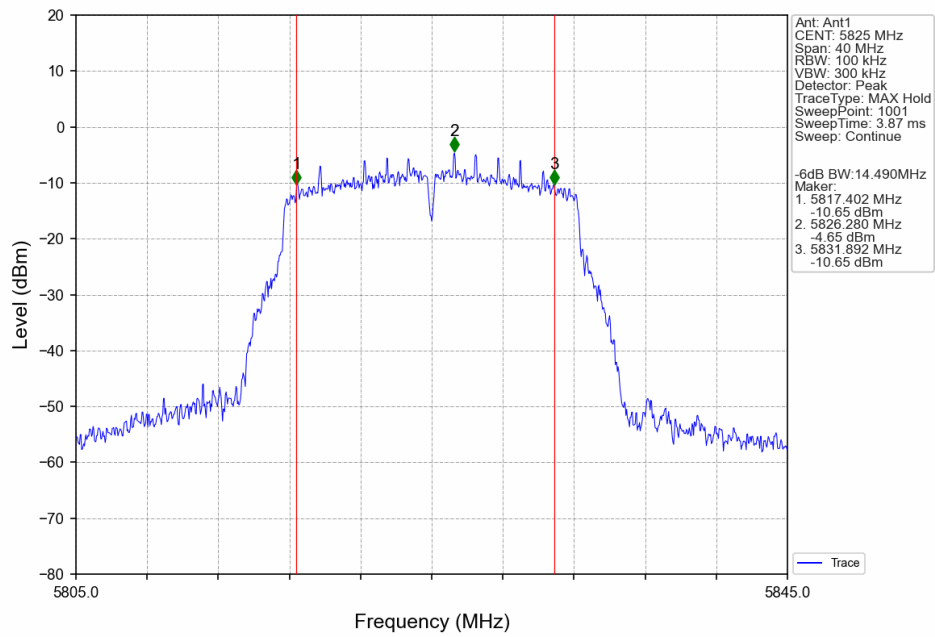
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



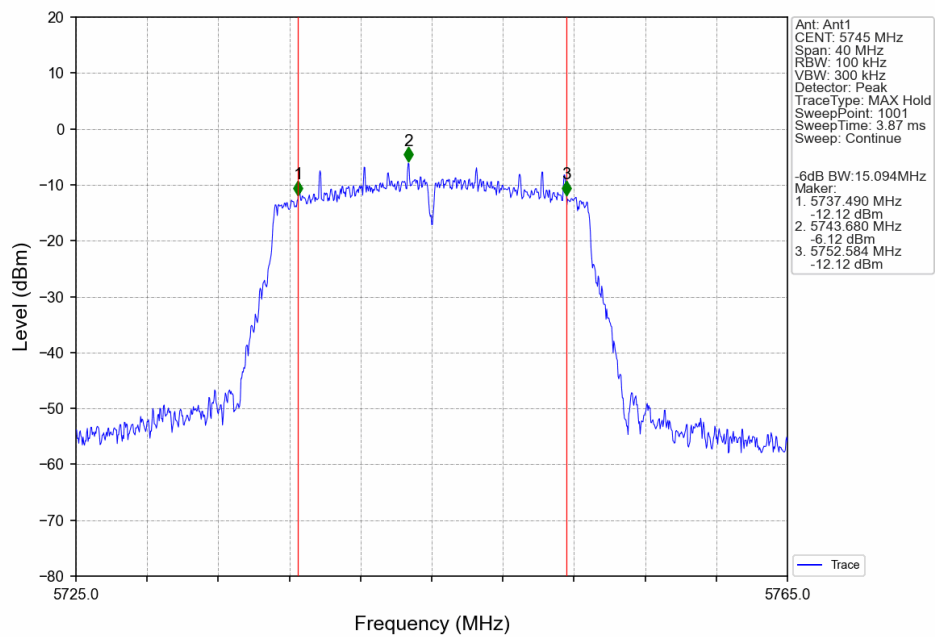
2.2.3 6dB BW



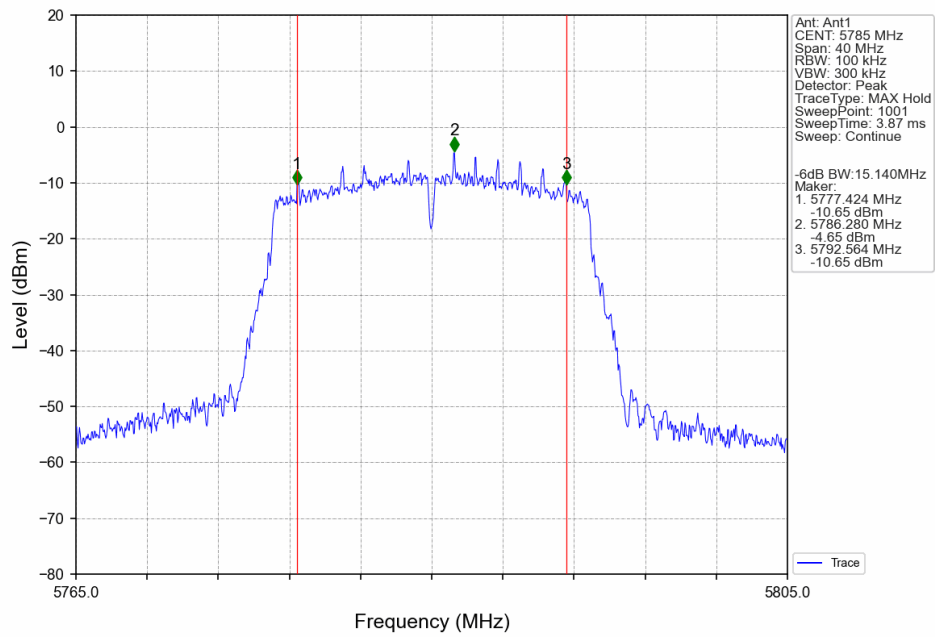
802.11a_HCH_5825MHz_Ant1_NTNV



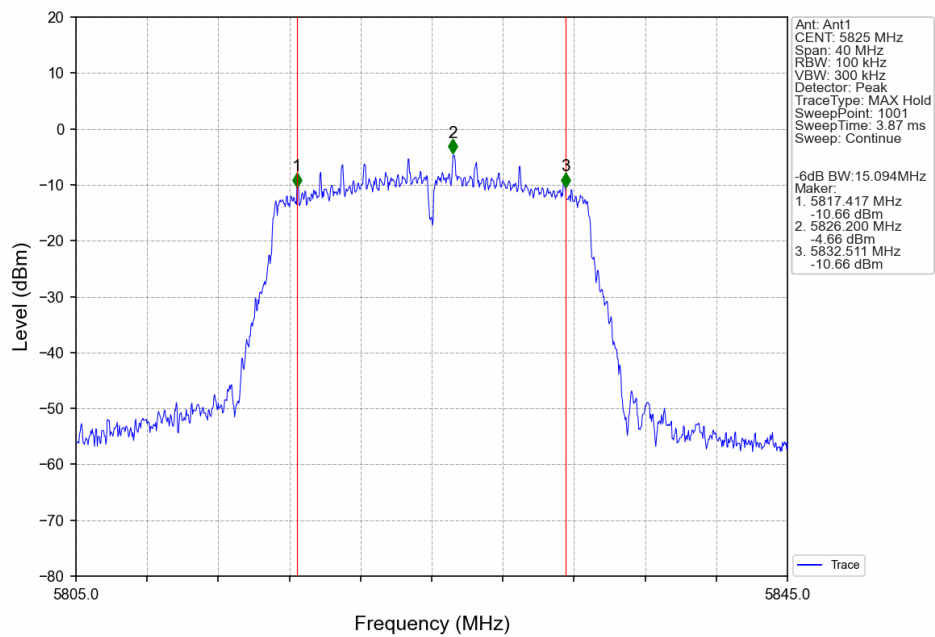
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



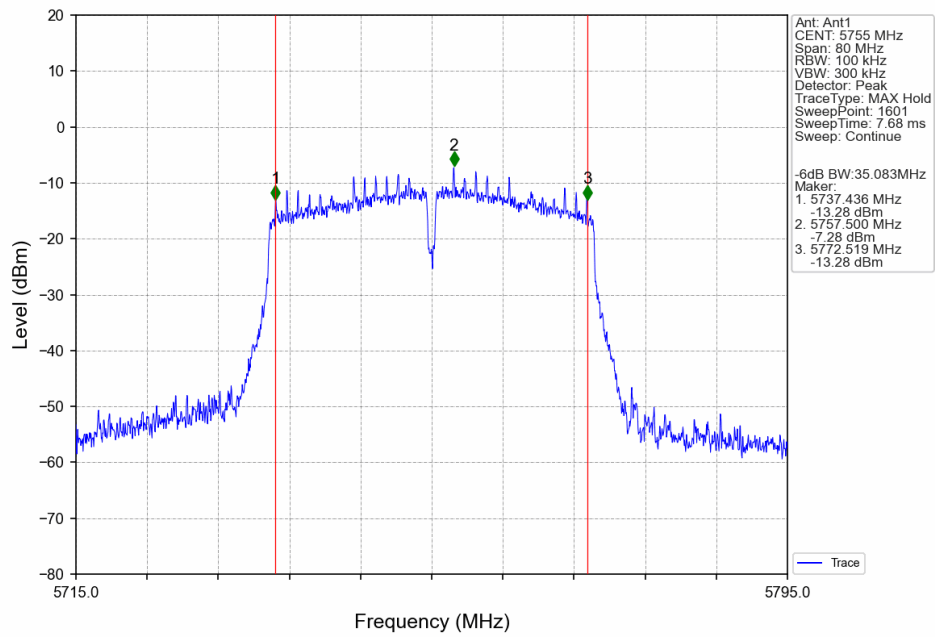
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



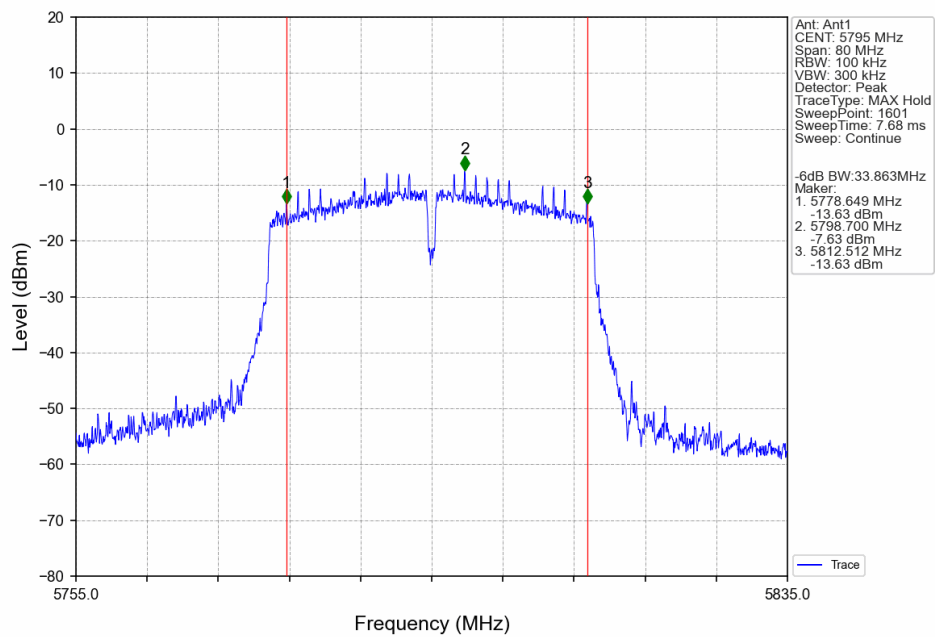
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



3. Maximum Conducted Output Power

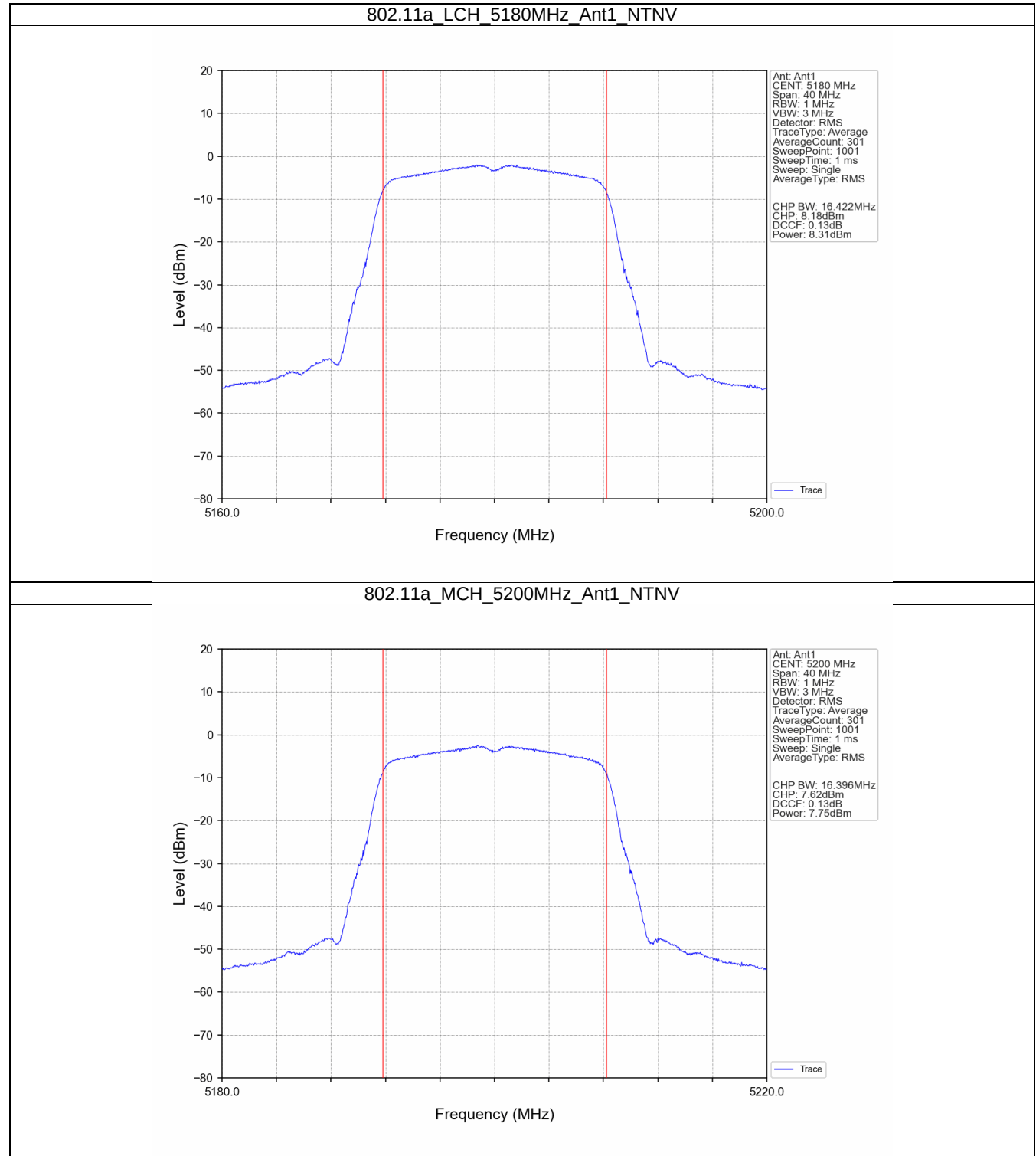
3.1 Test Result

3.1.1 Power

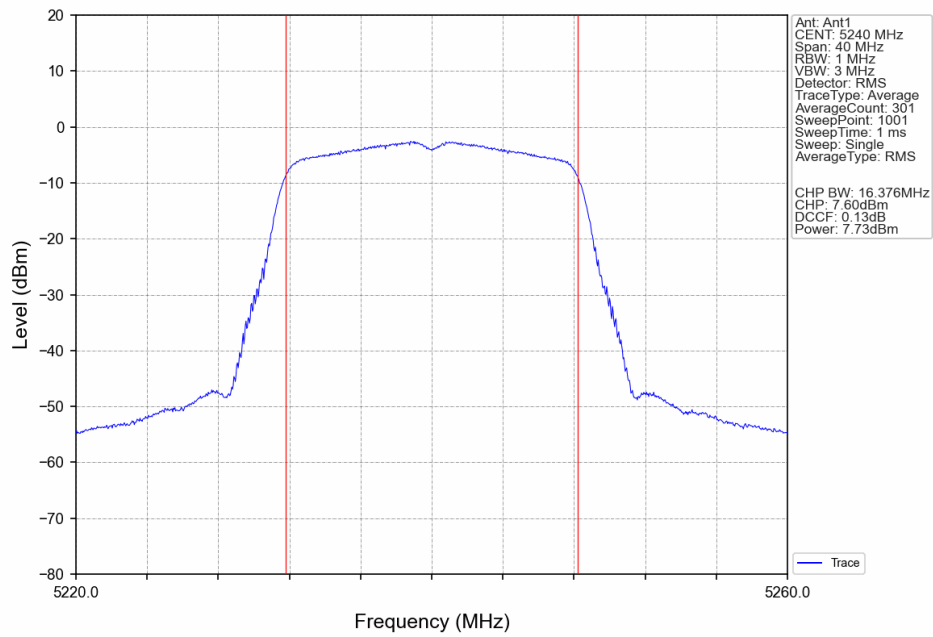
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	8.31	≤ 23.98	Pass
		5200	7.75	≤ 23.98	Pass
		5240	7.73	≤ 23.98	Pass
		5745	5.24	≤ 30	Pass
		5785	5.58	≤ 30	Pass
		5825	5.70	≤ 30	Pass
802.11n (HT20)	SISO	5180	7.60	≤ 23.98	Pass
		5200	7.46	≤ 23.98	Pass
		5240	7.40	≤ 23.98	Pass
		5745	4.95	≤ 30	Pass
		5785	5.26	≤ 30	Pass
		5825	5.53	≤ 30	Pass
802.11n (HT40)	SISO	5190	7.68	≤ 23.98	Pass
		5230	7.79	≤ 23.98	Pass
		5755	5.54	≤ 30	Pass
		5795	5.47	≤ 30	Pass

3.2 Test Graph

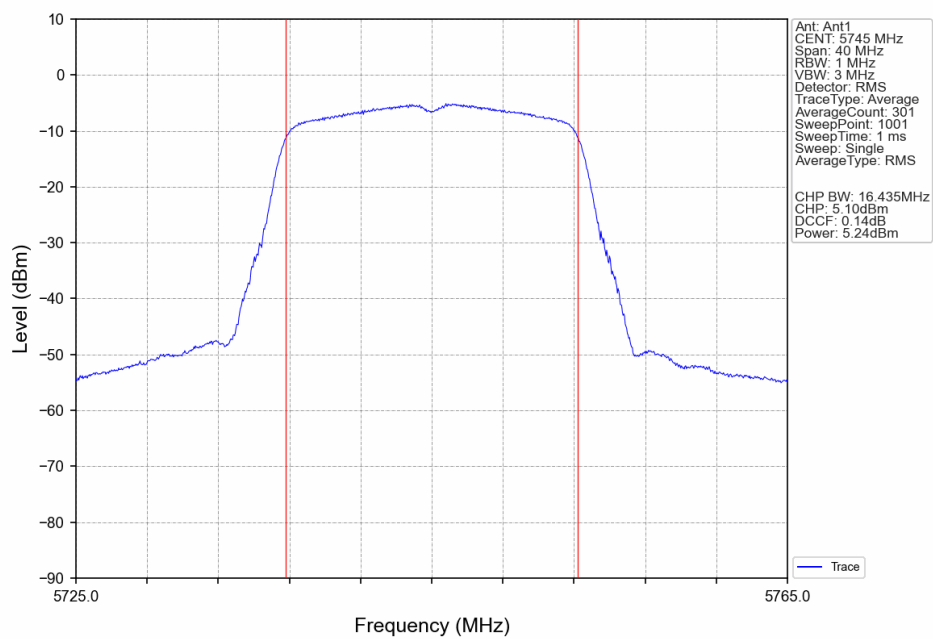
3.2.1 Power



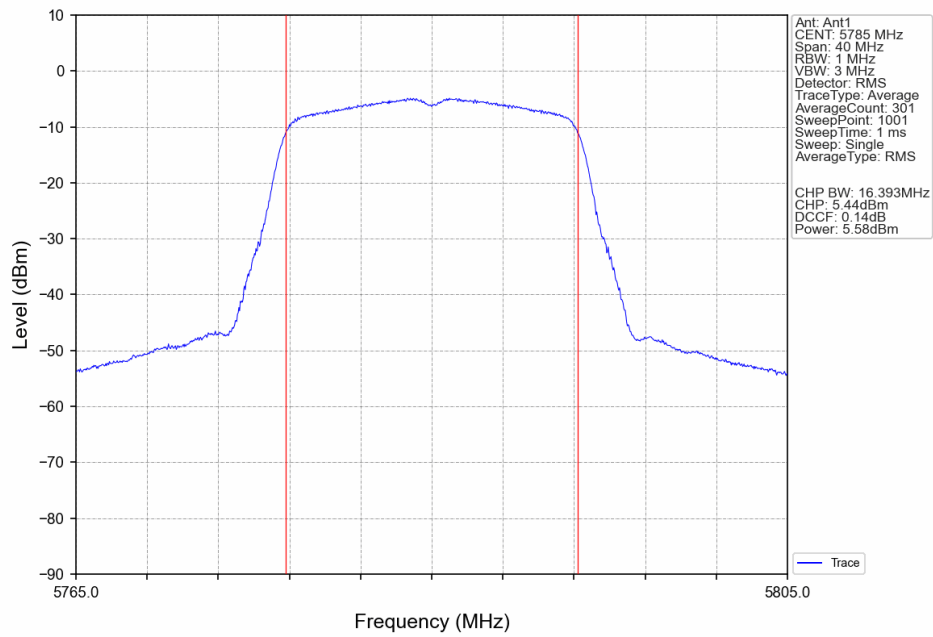
802.11a_HCH_5240MHz_Ant1_NTNV



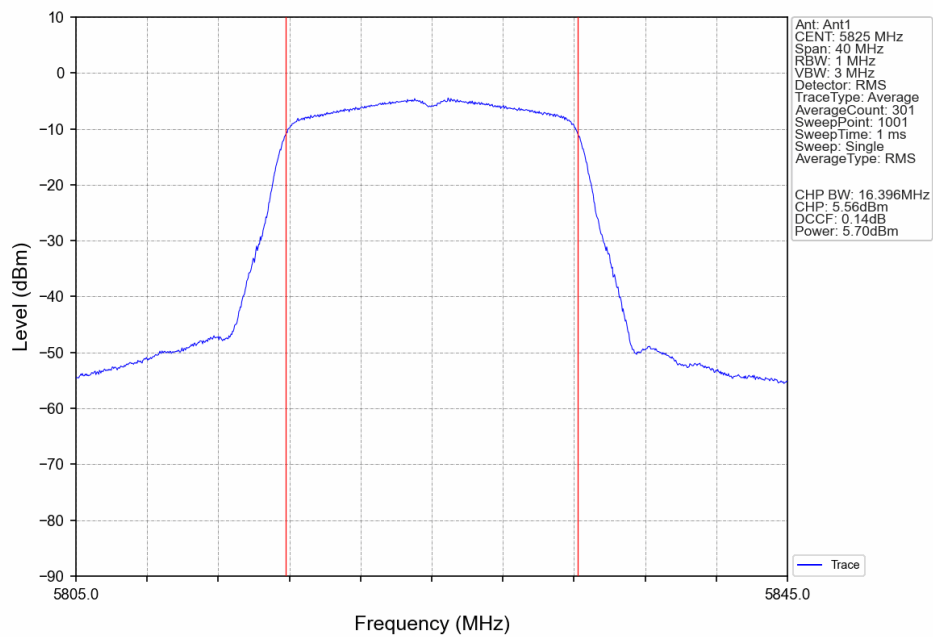
802.11a_LCH_5745MHz_Ant1_NTNV



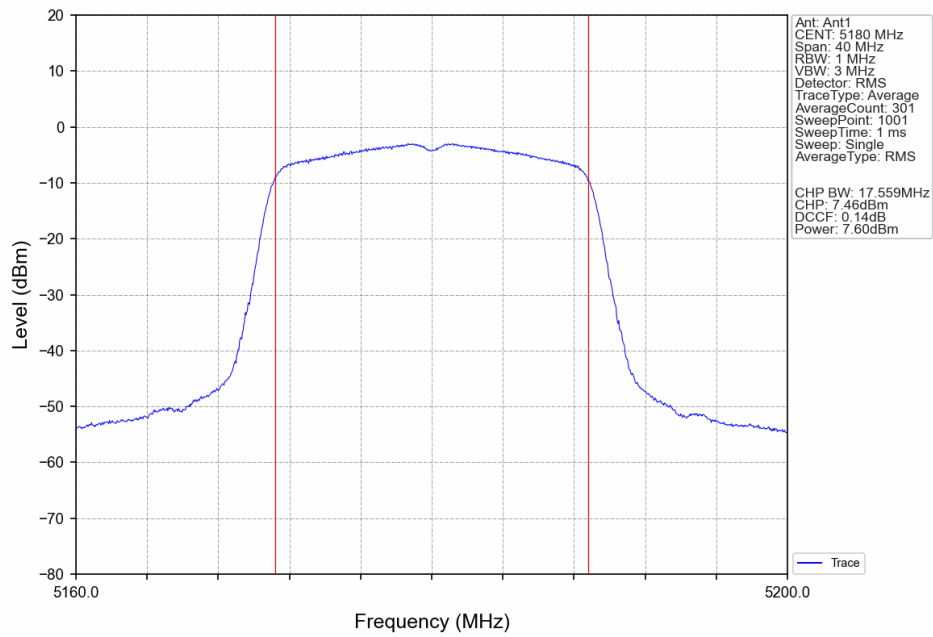
802.11a_MCH_5785MHz_Ant1_NTNV



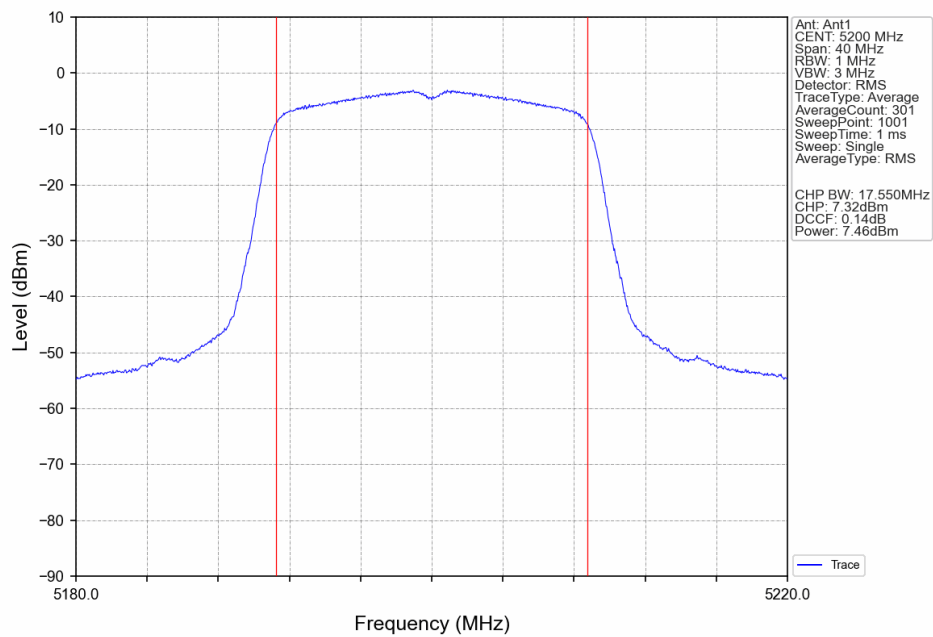
802.11a_HCH_5825MHz_Ant1_NTNV



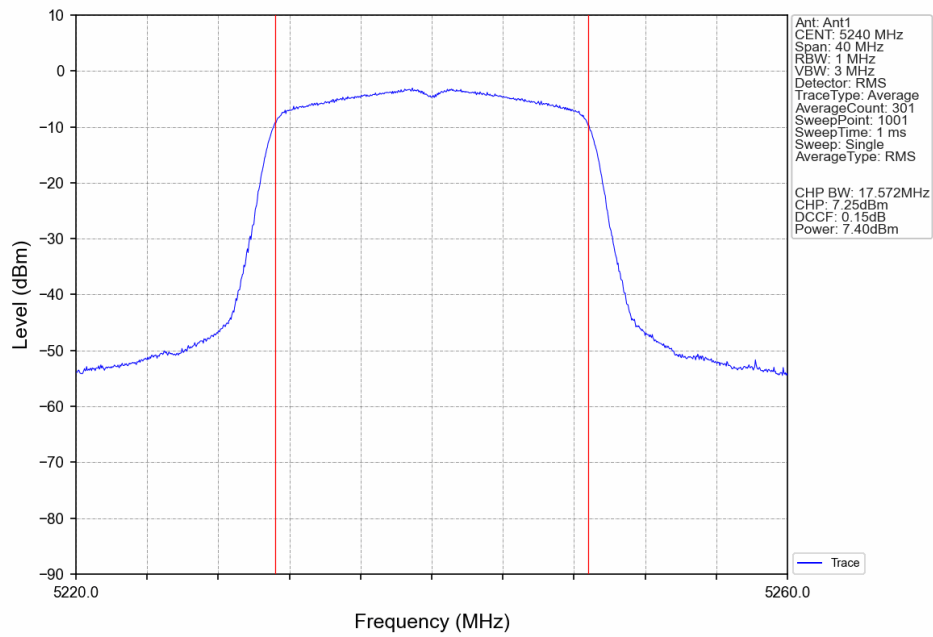
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



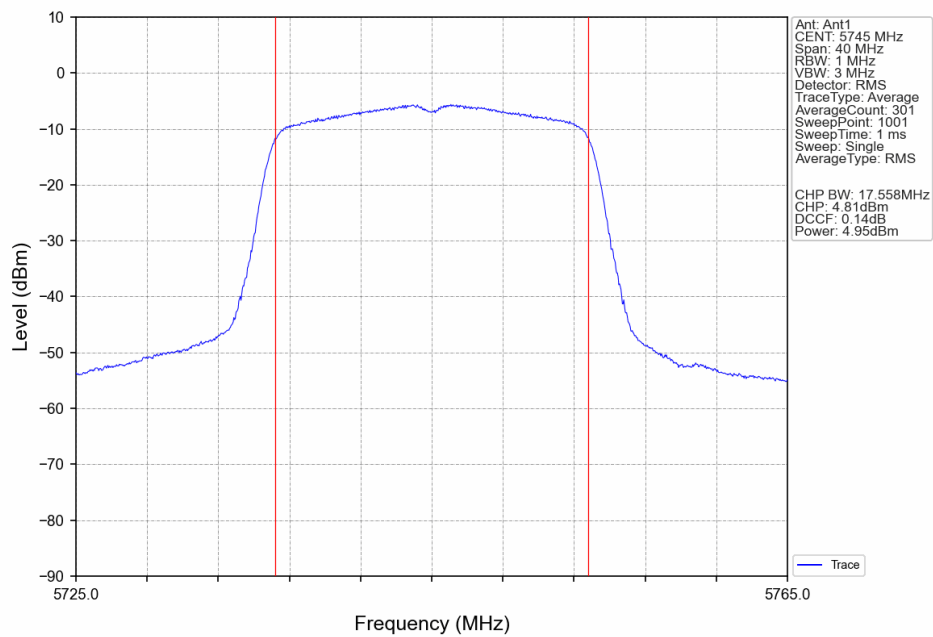
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



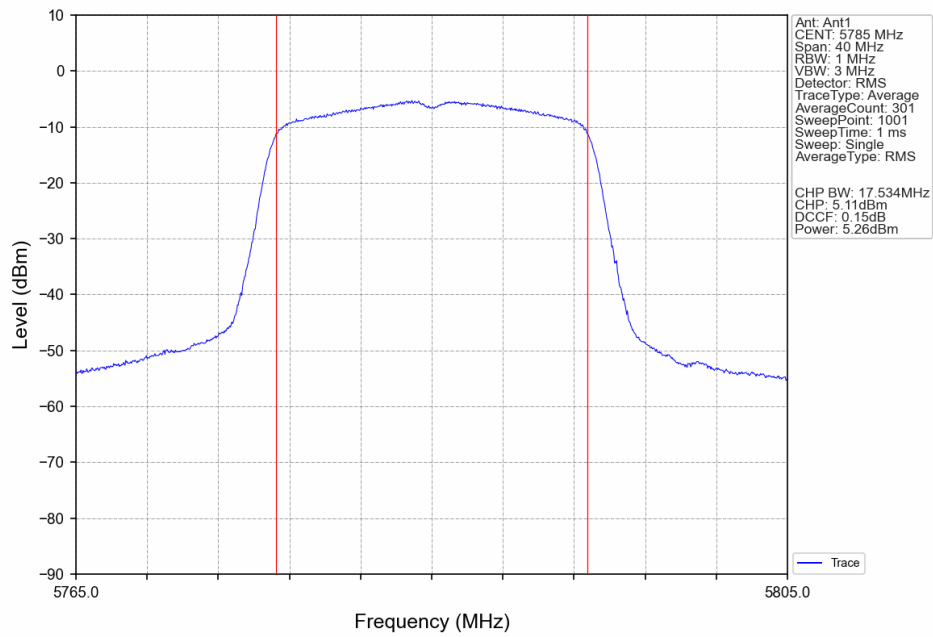
802.11n(HT20) HCH 5240MHz Ant1_NTNV



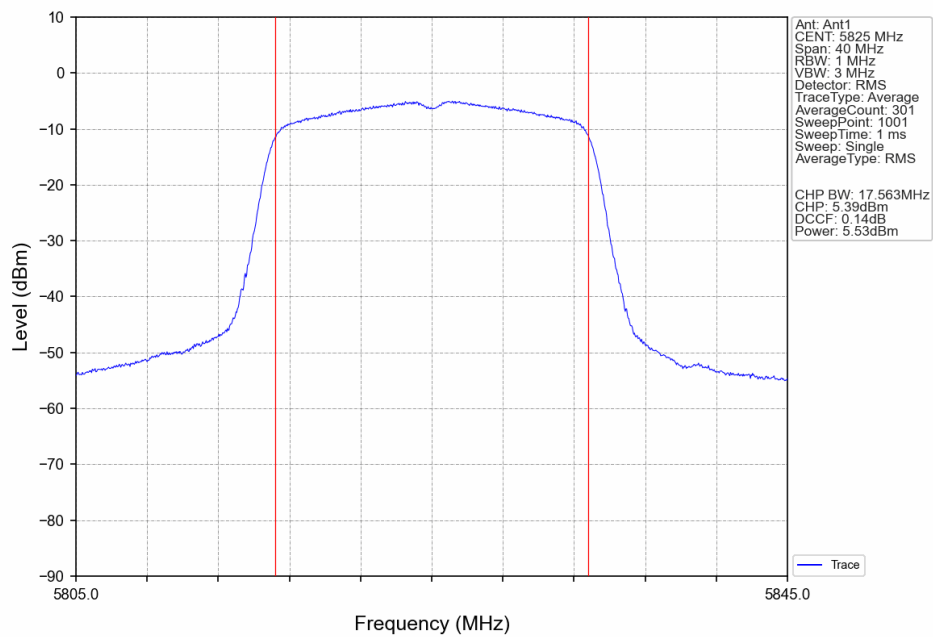
802.11n(HT20) LCH 5745MHz Ant1_NTNV



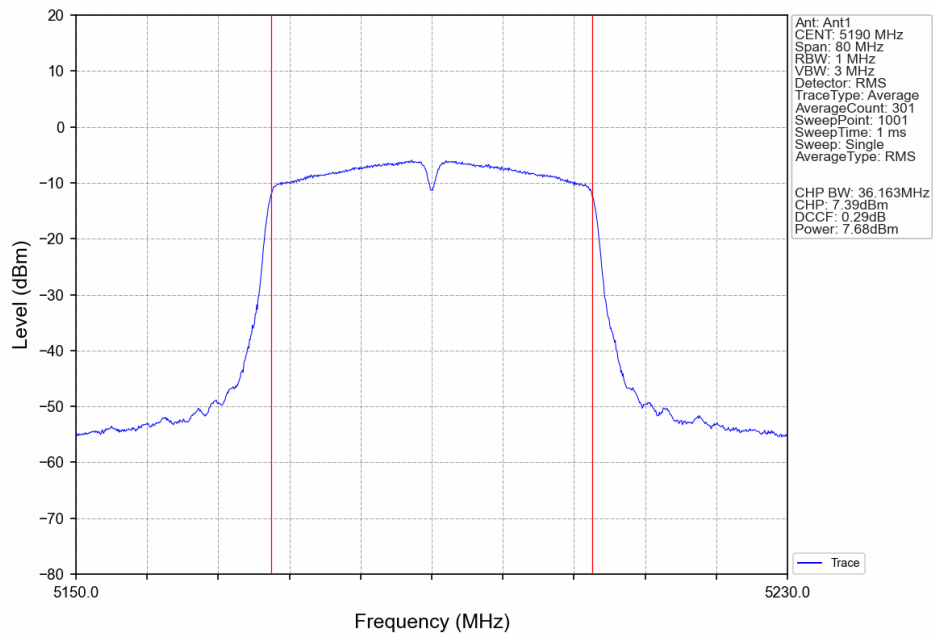
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



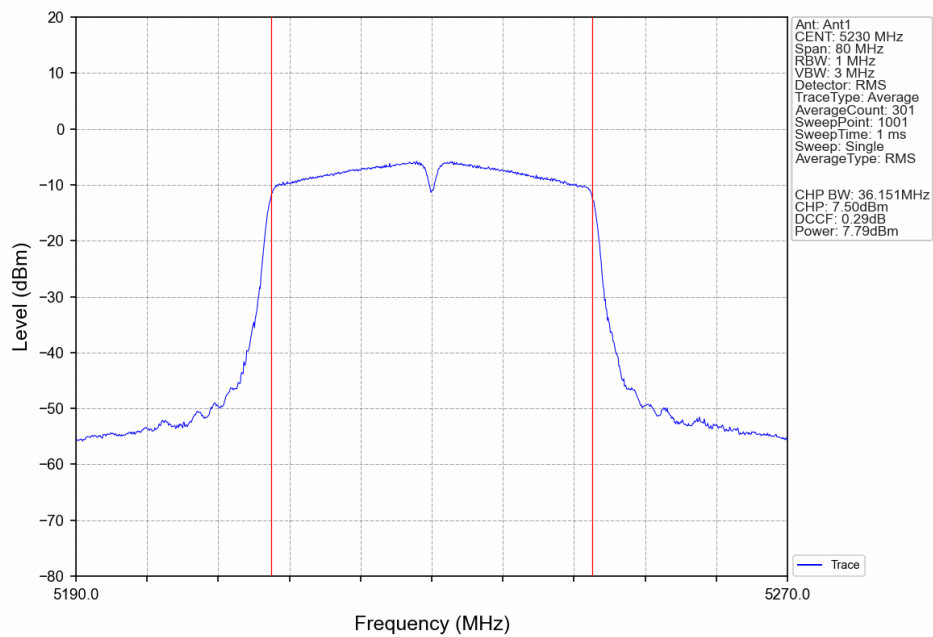
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



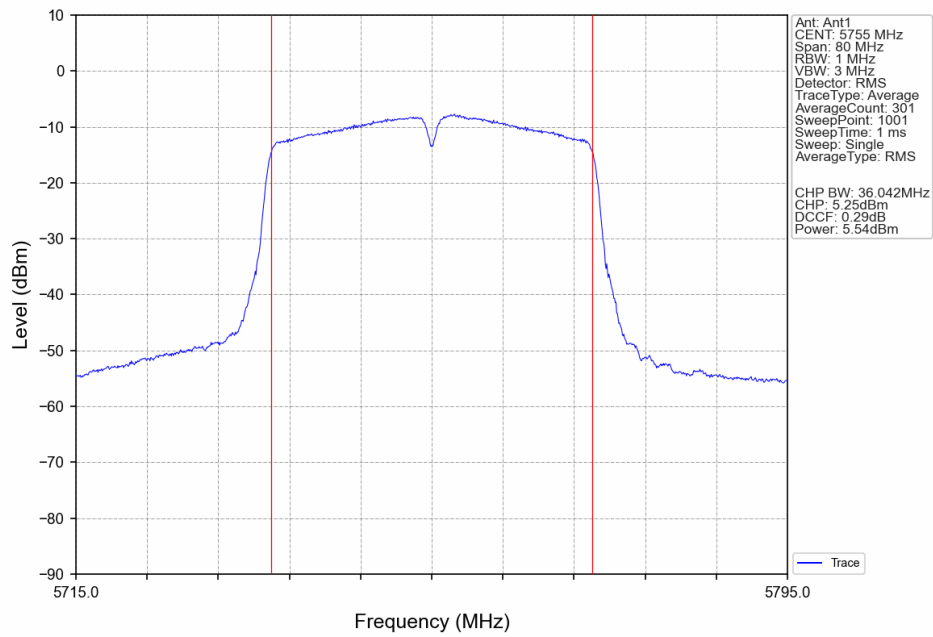
802.11n(HT40) LCH 5190MHz Ant1_NTNV



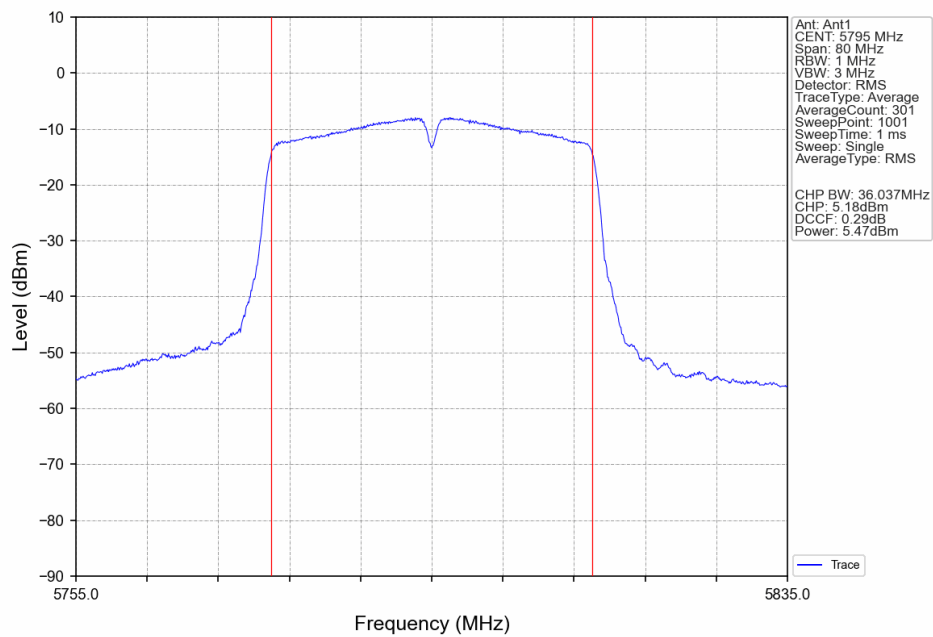
802.11n(HT40) HCH 5230MHz Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

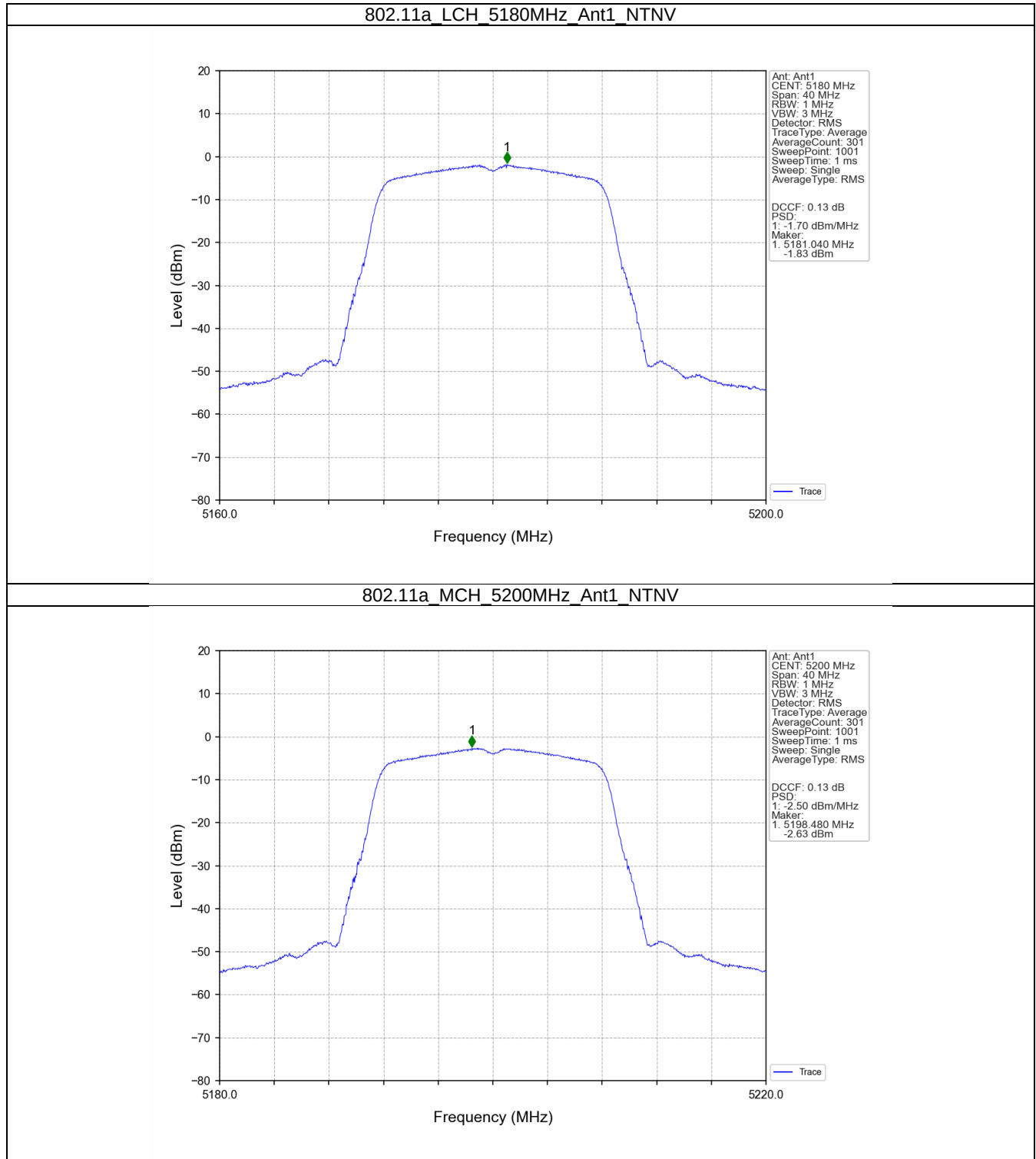
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-1.70	<=11	Pass
		5200	-2.50	<=11	Pass
		5240	-2.38	<=11	Pass
802.11n (HT20)	SISO	5180	-2.82	<=11	Pass
		5200	-2.54	<=11	Pass
		5240	-2.82	<=11	Pass
802.11n (HT40)	SISO	5190	-5.72	<=11	Pass
		5230	-5.60	<=11	Pass

4.1.2 PSD-Band3

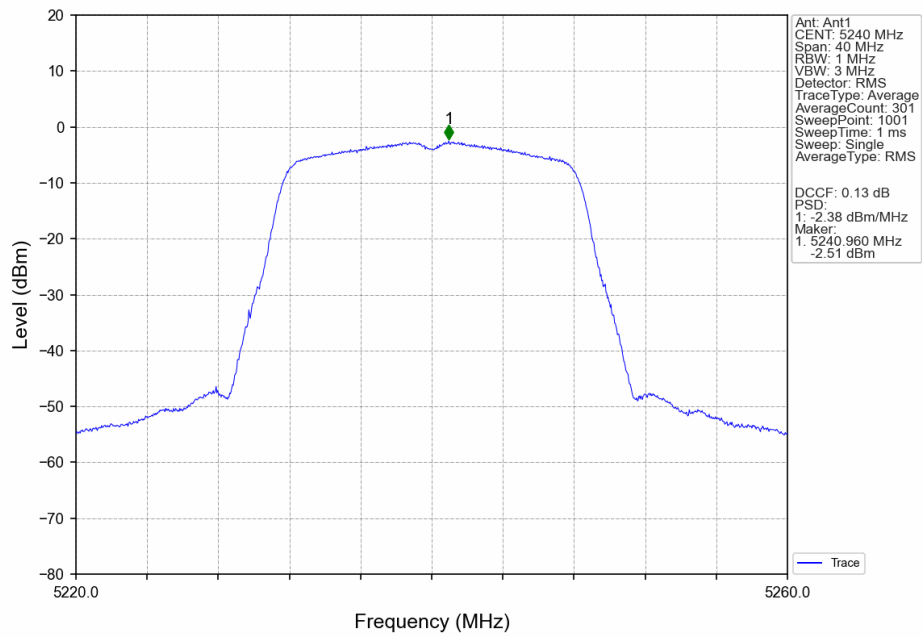
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	-7.53	<=30	Pass
		5785	-7.42	<=30	Pass
		5825	-7.35	<=30	Pass
802.11n (HT20)	SISO	5745	-8.06	<=30	Pass
		5785	-7.90	<=30	Pass
		5825	-7.52	<=30	Pass
802.11n (HT40)	SISO	5755	-10.53	<=30	Pass
		5795	-10.61	<=30	Pass

4.2 Test Graph

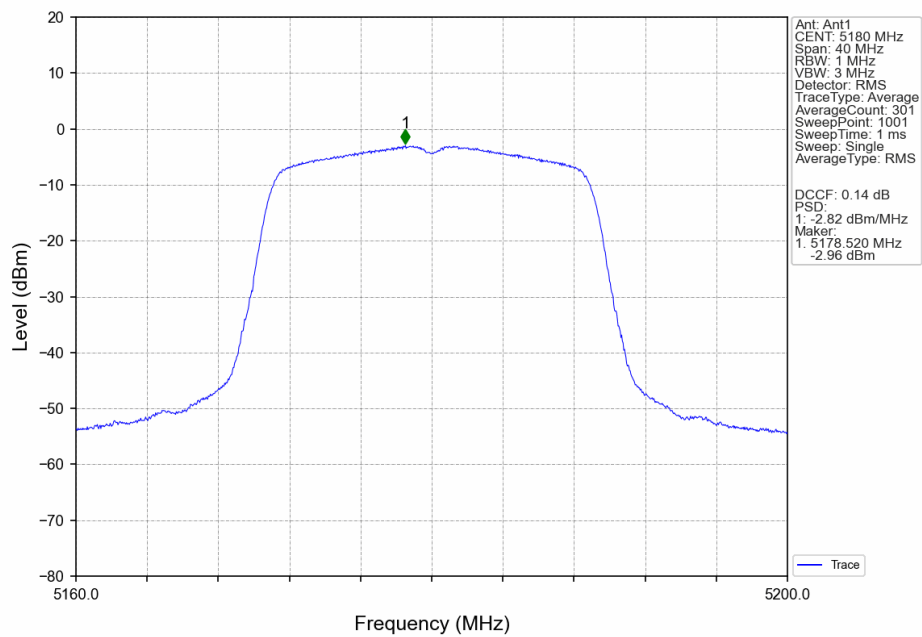
4.2.1 PSD



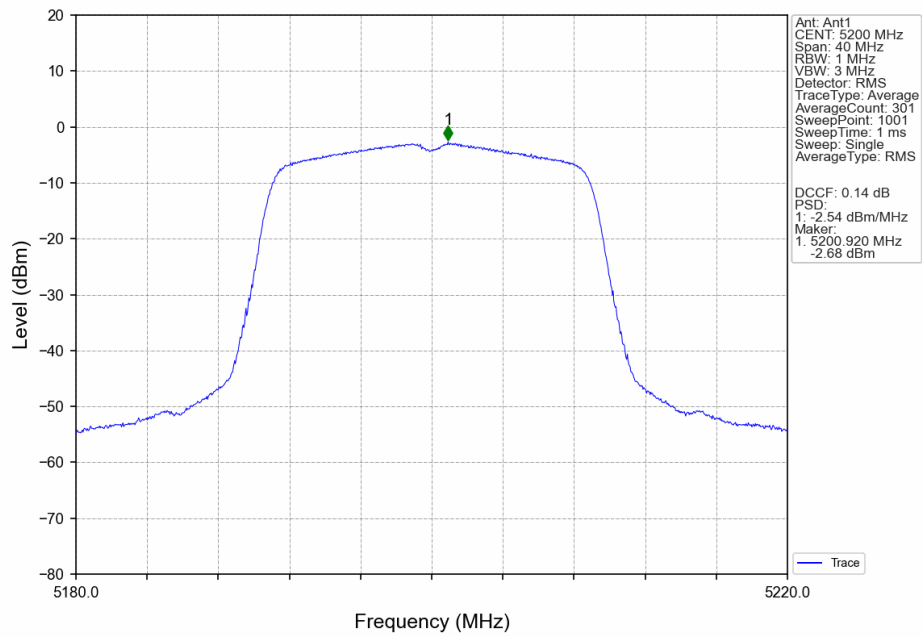
802.11a_HCH_5240MHz_Ant1_NTNV



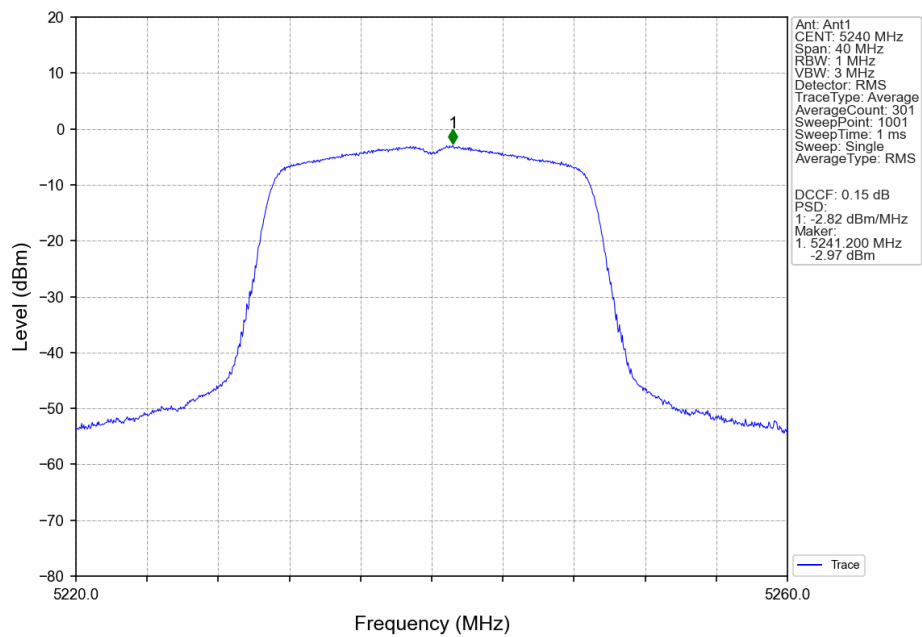
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



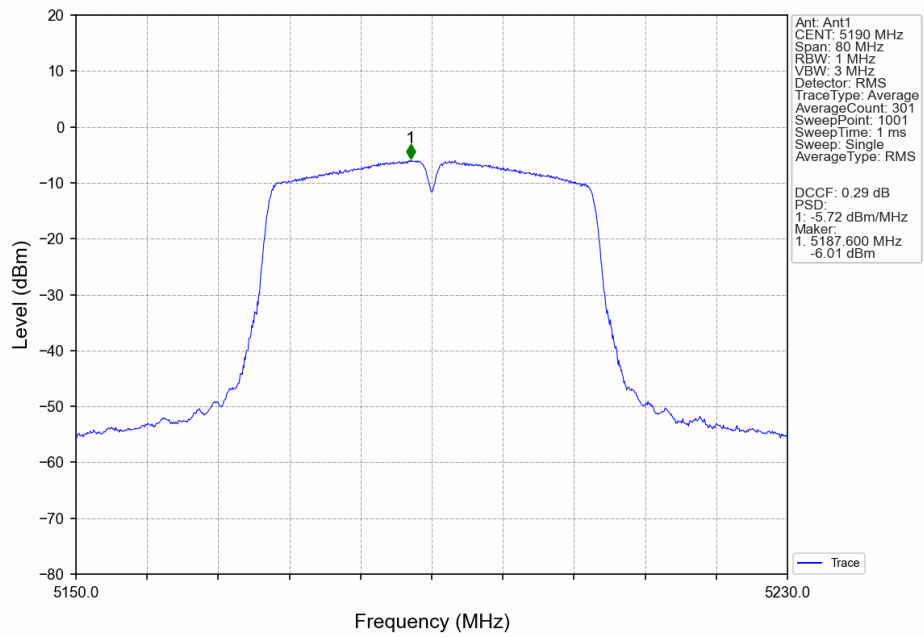
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



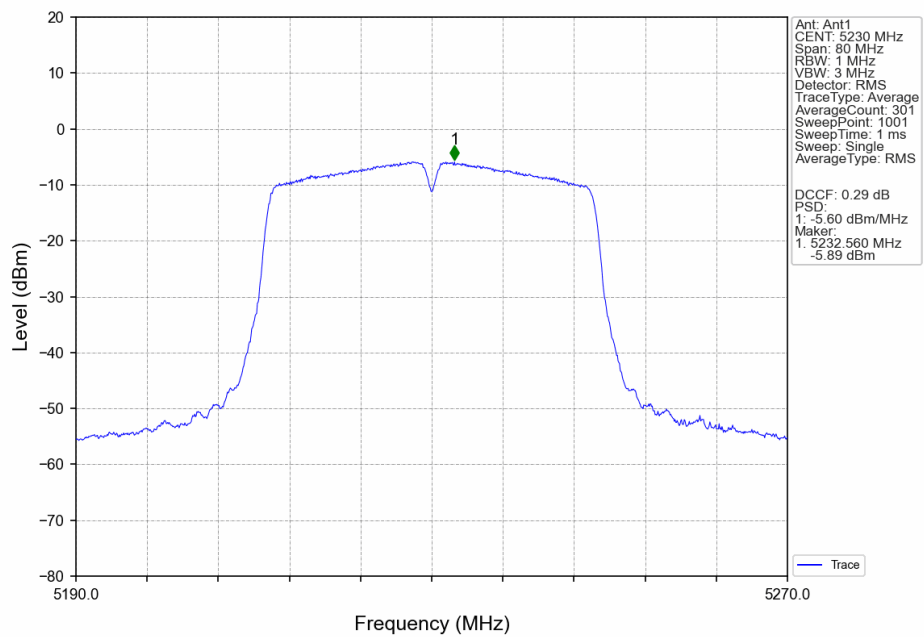
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



802.11n(HT40)_LCH_5190MHz_Ant1_NTNV

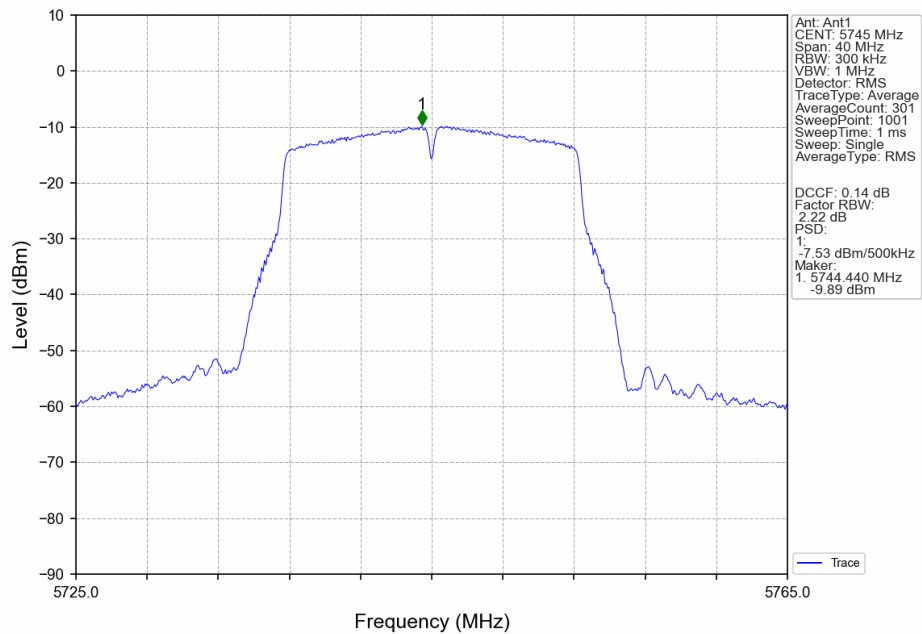


802.11n(HT40)_HCH_5230MHz_Ant1_NTNV

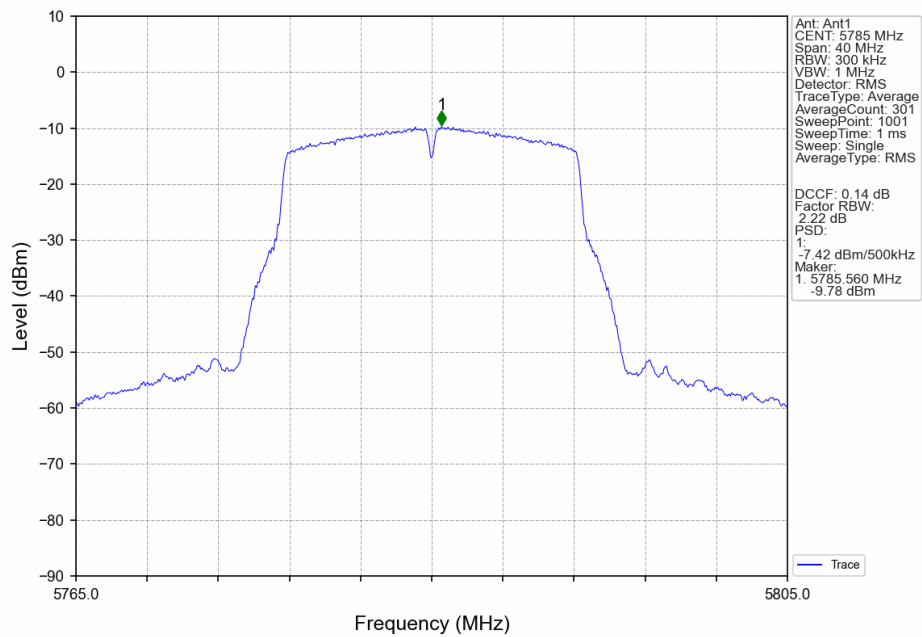


4.2.2 PSD-Band3

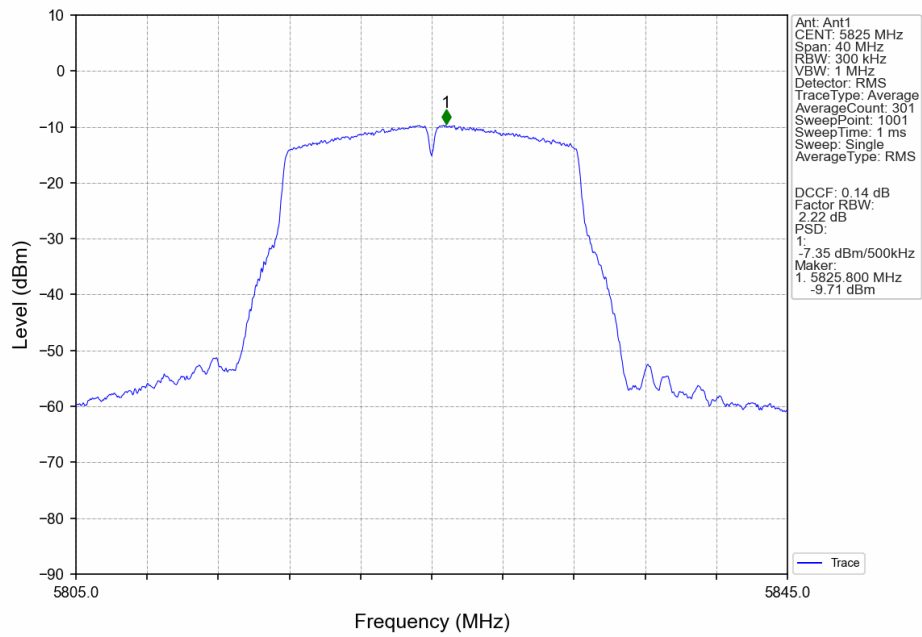
802.11a_LCH_5745MHz_Ant1_NTNV



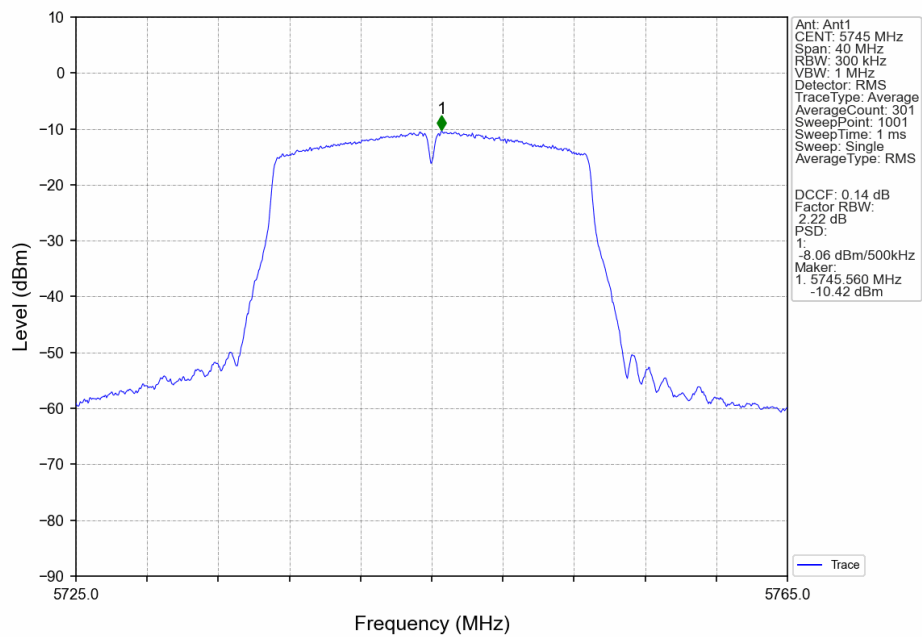
802.11a_MCH_5785MHz_Ant1_NTNV



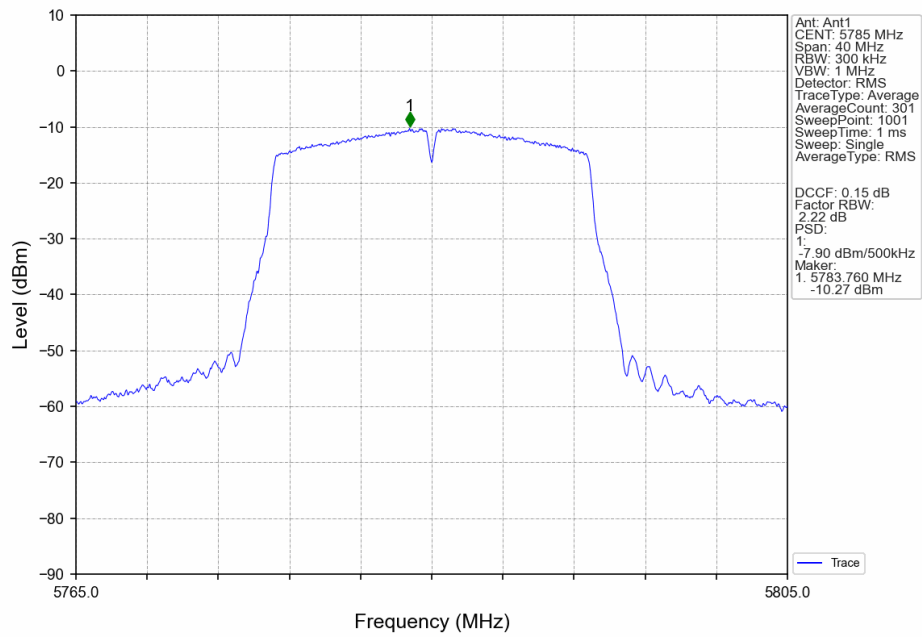
802.11a_HCH_5825MHz_Ant1_NTNV



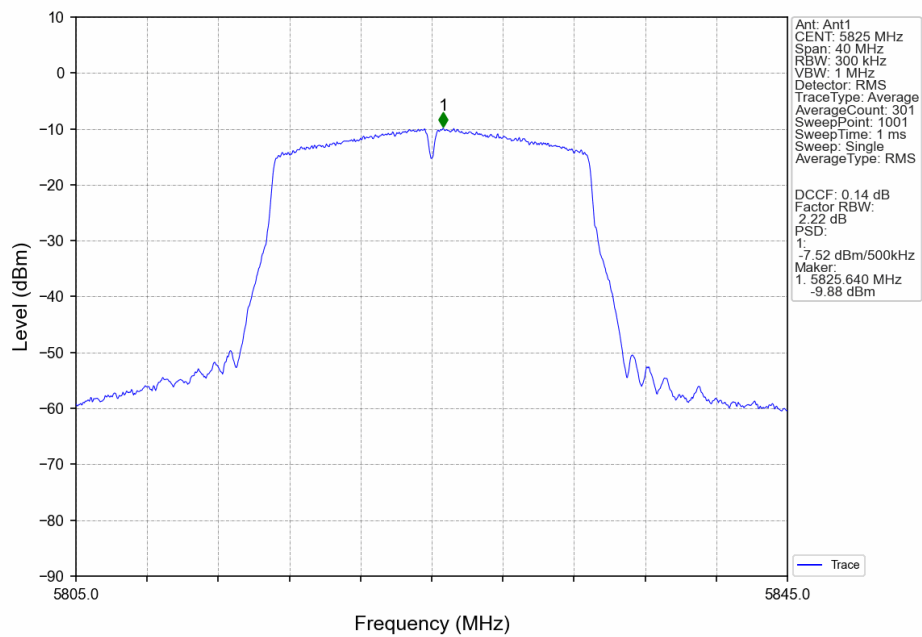
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



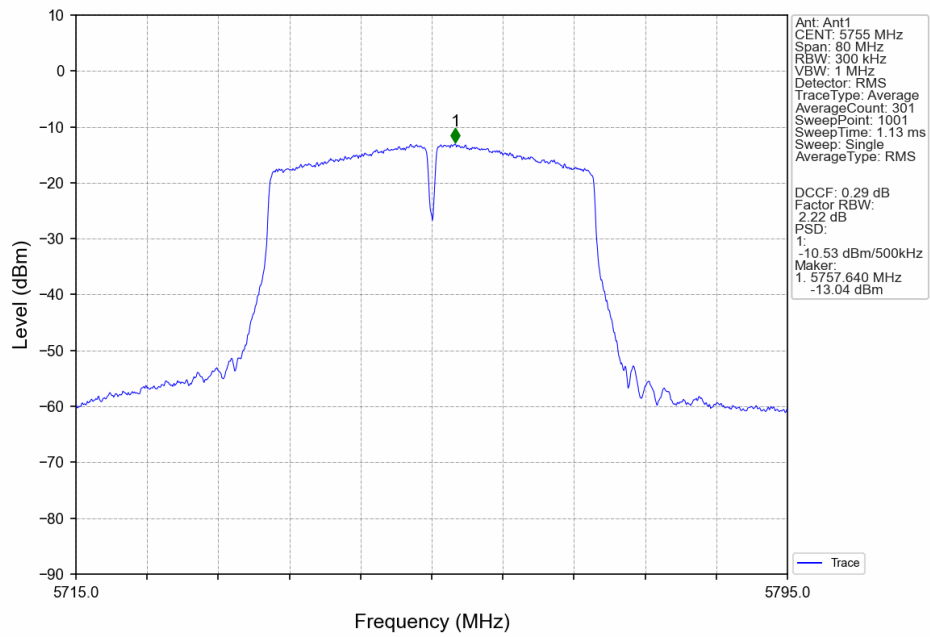
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



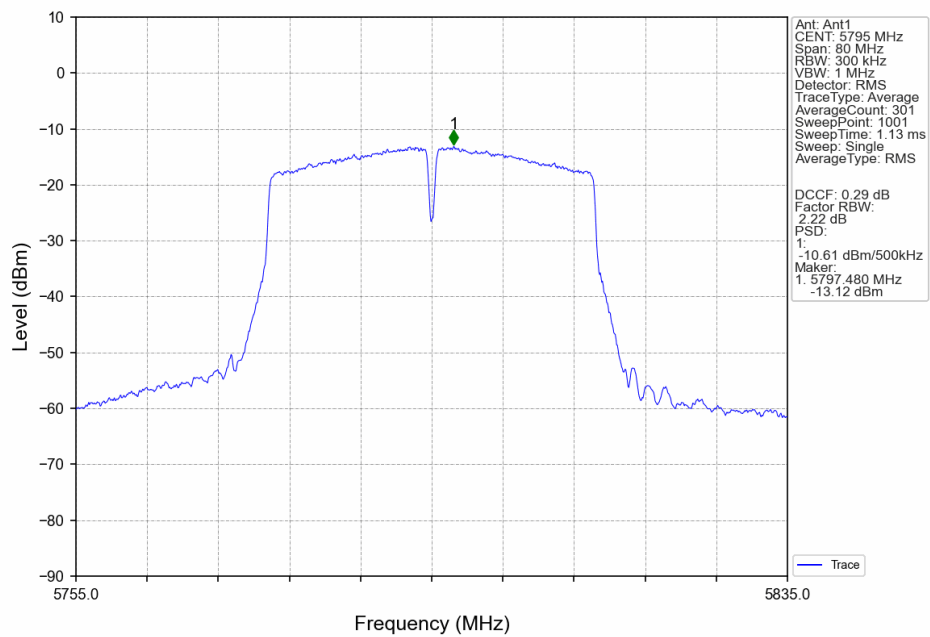
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	102	5179.979	5150 to 5250	Pass
				120	5179.979	5150 to 5250	Pass
				138	5179.979	5150 to 5250	Pass
			-30	120	5179.978	5150 to 5250	Pass
			-20	120	5179.978	5150 to 5250	Pass
			-10	120	5179.978	5150 to 5250	Pass
			0	120	5179.978	5150 to 5250	Pass
			10	120	5179.978	5150 to 5250	Pass
			30	120	5179.977	5150 to 5250	Pass
			40	120	5179.977	5150 to 5250	Pass
			50	120	5179.977	5150 to 5250	Pass
		5200	20	102	5199.977	5150 to 5250	Pass
				120	5199.977	5150 to 5250	Pass
				138	5199.976	5150 to 5250	Pass
			-30	120	5199.976	5150 to 5250	Pass
			-20	120	5199.976	5150 to 5250	Pass
			-10	120	5199.976	5150 to 5250	Pass
			0	120	5199.976	5150 to 5250	Pass
			10	120	5199.976	5150 to 5250	Pass
			30	120	5199.976	5150 to 5250	Pass
			40	120	5199.976	5150 to 5250	Pass
			50	120	5199.976	5150 to 5250	Pass
		5240	20	102	5239.975	5150 to 5250	Pass
				120	5239.975	5150 to 5250	Pass
				138	5239.975	5150 to 5250	Pass
			-30	120	5239.975	5150 to 5250	Pass
			-20	120	5239.975	5150 to 5250	Pass
			-10	120	5239.975	5150 to 5250	Pass
			0	120	5239.974	5150 to 5250	Pass
			10	120	5239.974	5150 to 5250	Pass
			30	120	5239.974	5150 to 5250	Pass
			40	120	5239.974	5150 to 5250	Pass
			50	120	5239.974	5150 to 5250	Pass
		5745	20	102	5744.971	5725 to 5850	Pass
				120	5744.972	5725 to 5850	Pass
				138	5744.971	5725 to 5850	Pass
			-30	120	5744.971	5725 to 5850	Pass
			-20	120	5744.971	5725 to 5850	Pass
			-10	120	5744.971	5725 to 5850	Pass
			0	120	5744.971	5725 to 5850	Pass
			10	120	5744.971	5725 to 5850	Pass
			30	120	5744.971	5725 to 5850	Pass
			40	120	5744.971	5725 to 5850	Pass
			50	120	5744.970	5725 to 5850	Pass
		5785	20	102	5784.970	5725 to 5850	Pass
				120	5784.970	5725 to 5850	Pass

				138	5784.971	5725 to 5850	Pass
			-30	120	5784.971	5725 to 5850	Pass
			-20	120	5784.970	5725 to 5850	Pass
			-10	120	5784.970	5725 to 5850	Pass
			0	120	5784.970	5725 to 5850	Pass
			10	120	5784.970	5725 to 5850	Pass
			30	120	5784.970	5725 to 5850	Pass
			40	120	5784.970	5725 to 5850	Pass
			50	120	5784.970	5725 to 5850	Pass
		5825	20	102	5824.970	5725 to 5850	Pass
				120	5824.970	5725 to 5850	Pass
				138	5824.970	5725 to 5850	Pass
			-30	120	5824.970	5725 to 5850	Pass
			-20	120	5824.970	5725 to 5850	Pass
			-10	120	5824.970	5725 to 5850	Pass
			0	120	5824.970	5725 to 5850	Pass
			10	120	5824.970	5725 to 5850	Pass
			30	120	5824.970	5725 to 5850	Pass
			40	120	5824.970	5725 to 5850	Pass
			50	120	5824.970	5725 to 5850	Pass
		5190	20	102	5189.973	5150 to 5250	Pass
				120	5189.948	5150 to 5250	Pass
				138	5190.491	5150 to 5250	Pass
			-30	120	5189.673	5150 to 5250	Pass
			-20	120	5189.526	5150 to 5250	Pass
			-10	120	5189.827	5150 to 5250	Pass
			0	120	5189.928	5150 to 5250	Pass
			10	120	5190.127	5150 to 5250	Pass
			30	120	5190.103	5150 to 5250	Pass
			40	120	5190.483	5150 to 5250	Pass
			50	120	5190.307	5150 to 5250	Pass
		5230	20	102	5229.980	5150 to 5250	Pass
				120	5229.980	5150 to 5250	Pass
				138	5229.979	5150 to 5250	Pass
			-30	120	5229.979	5150 to 5250	Pass
			-20	120	5229.978	5150 to 5250	Pass
			-10	120	5229.978	5150 to 5250	Pass
			0	120	5229.978	5150 to 5250	Pass
			10	120	5229.977	5150 to 5250	Pass
			30	120	5229.977	5150 to 5250	Pass
			40	120	5229.977	5150 to 5250	Pass
			50	120	5229.977	5150 to 5250	Pass
		5755	20	102	5754.973	5725 to 5850	Pass
				120	5754.973	5725 to 5850	Pass
				138	5754.973	5725 to 5850	Pass
			-30	120	5754.973	5725 to 5850	Pass
			-20	120	5754.973	5725 to 5850	Pass
			-10	120	5754.973	5725 to 5850	Pass
			0	120	5754.973	5725 to 5850	Pass
			10	120	5754.973	5725 to 5850	Pass
			30	120	5754.973	5725 to 5850	Pass
			40	120	5754.972	5725 to 5850	Pass
			50	120	5754.972	5725 to 5850	Pass
		5795	20	102	5794.971	5725 to 5850	Pass
				120	5794.972	5725 to 5850	Pass
				138	5794.972	5725 to 5850	Pass
			-30	120	5794.972	5725 to 5850	Pass
			-20	120	5794.972	5725 to 5850	Pass
			-10	120	5794.972	5725 to 5850	Pass



			0	120	5794.971	5725 to 5850	Pass
			10	120	5794.972	5725 to 5850	Pass
			30	120	5794.971	5725 to 5850	Pass
			40	120	5794.971	5725 to 5850	Pass
			50	120	5794.971	5725 to 5850	Pass

6. Form731

6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
5180	5240	0.0068	8.31
5745	5825	0.0037	5.70
5190	5230	0.0060	7.79
5755	5795	0.0036	5.54

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