

Appendix RF test data for 5G WIFI

1. Duty Cycle

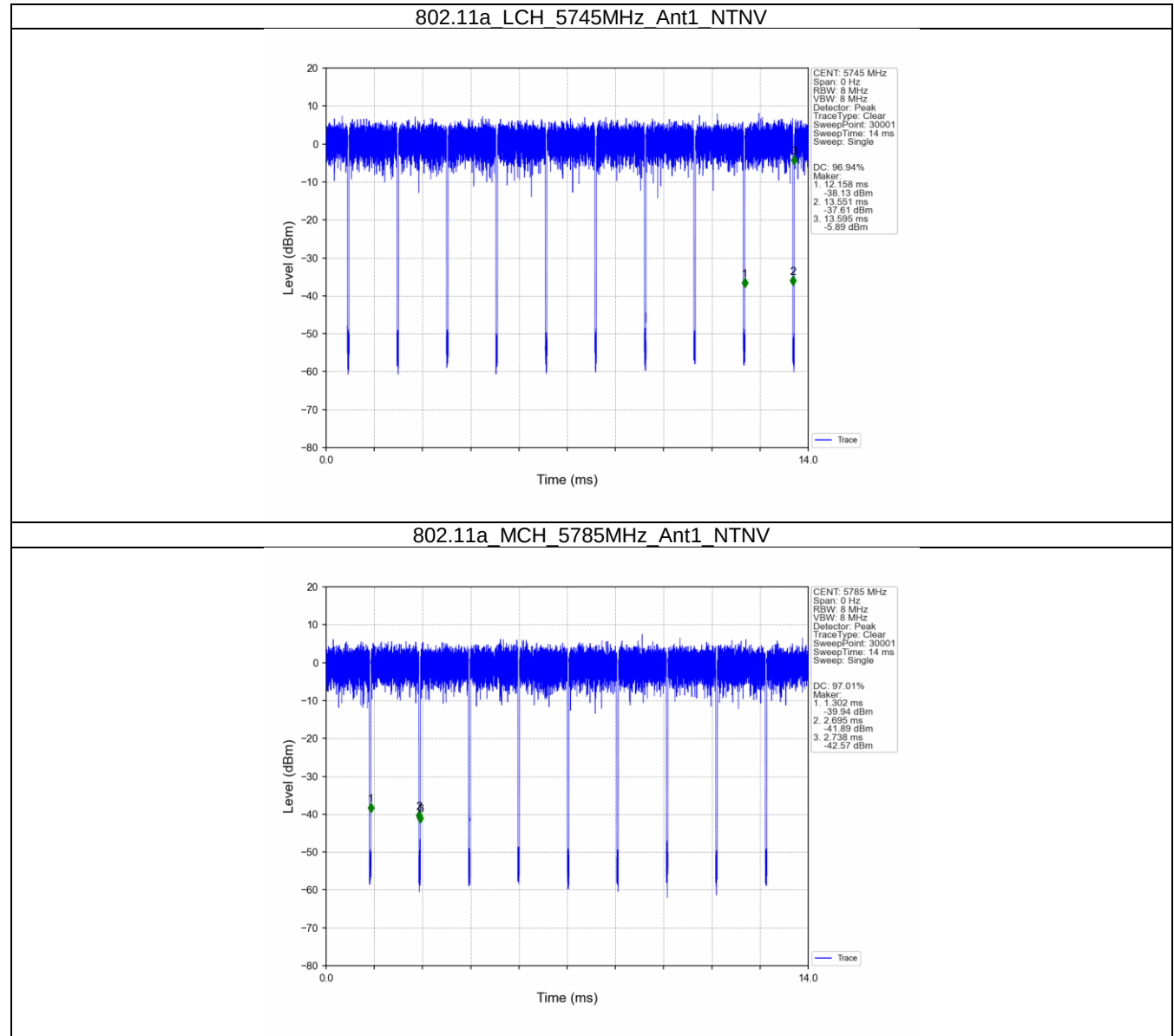
1.1 Test Result

1.1.1 Ant1

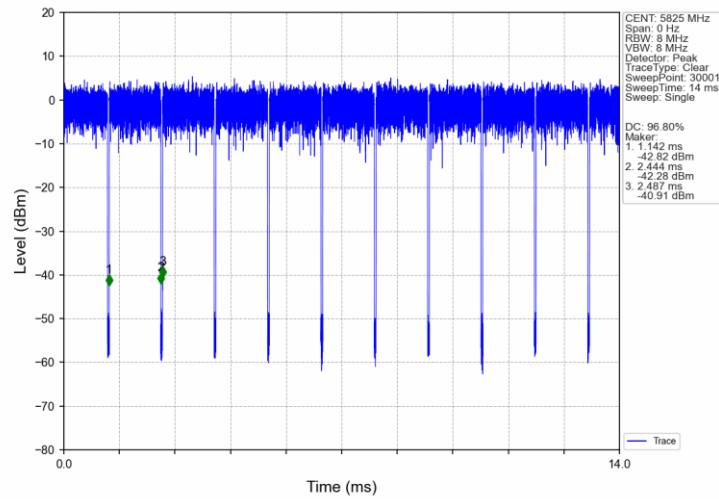
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5745	1.393	1.437	96.94	0.14	0.10
		5785	1.393	1.436	97.01	0.13	0.00
		5825	1.302	1.345	96.80	0.14	0.03
802.11n (HT20)	SISO	5745	1.302	1.344	96.88	0.14	0.03
		5785	1.302	1.344	96.88	0.14	0.03
		5825	1.302	1.344	96.88	0.14	0.03
802.11n (HT40)	SISO	5755	0.650	0.693	93.80	0.28	0.03
		5795	0.649	0.692	93.79	0.28	0.03
802.11ac (VHT20)	SISO	5745	1.313	1.357	96.76	0.14	0.07
		5785	1.314	1.356	96.90	0.14	0.03
		5825	1.314	1.356	96.90	0.14	0.00
802.11ac (VHT40)	SISO	5755	0.654	0.696	93.97	0.27	0.03
		5795	0.654	0.697	93.83	0.28	0.03

1.2 Test Graph

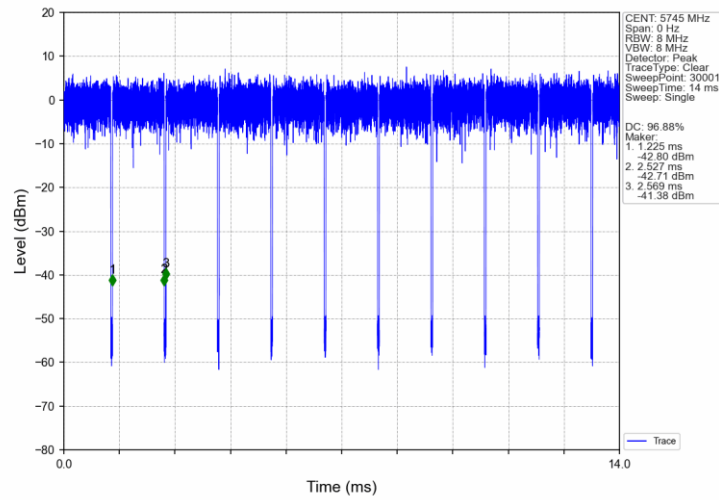
1.2.1 Ant1



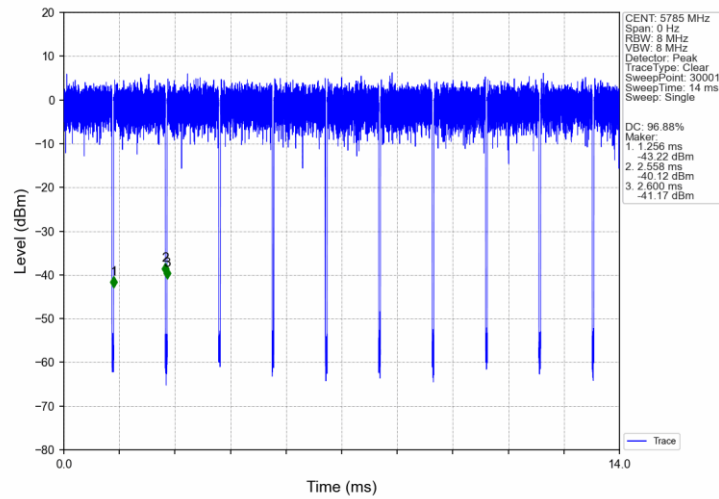
802.11a HCH 5825MHz Ant1 NTN



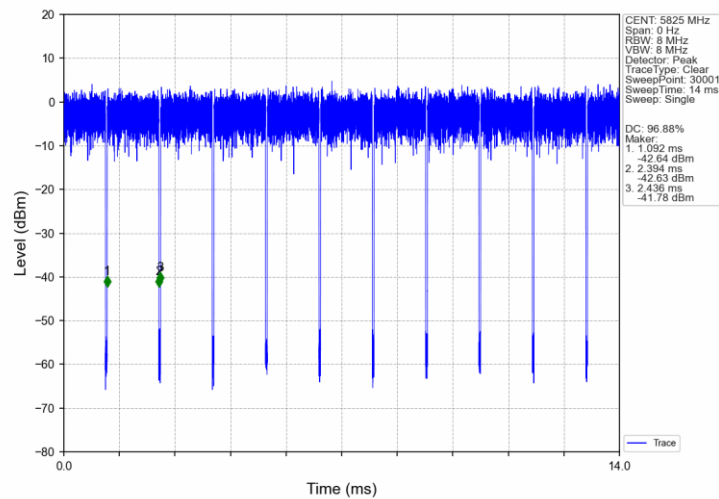
802.11n(HT20) LCH 5745MHz Ant1 NTN



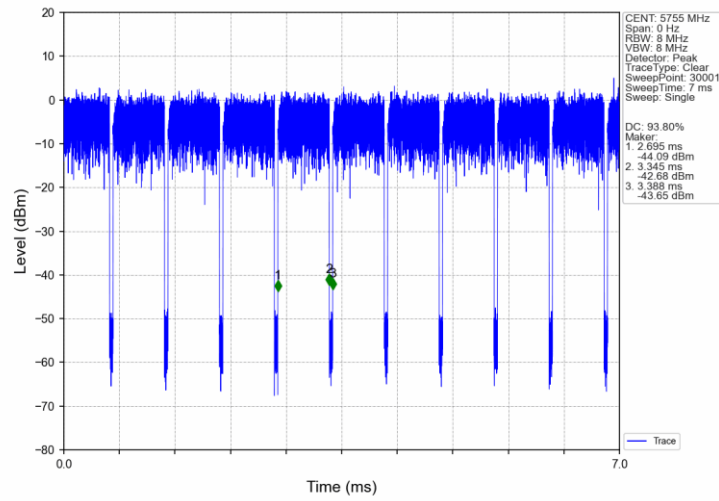
802.11n(HT20) MCH 5785MHz Ant1 NTN



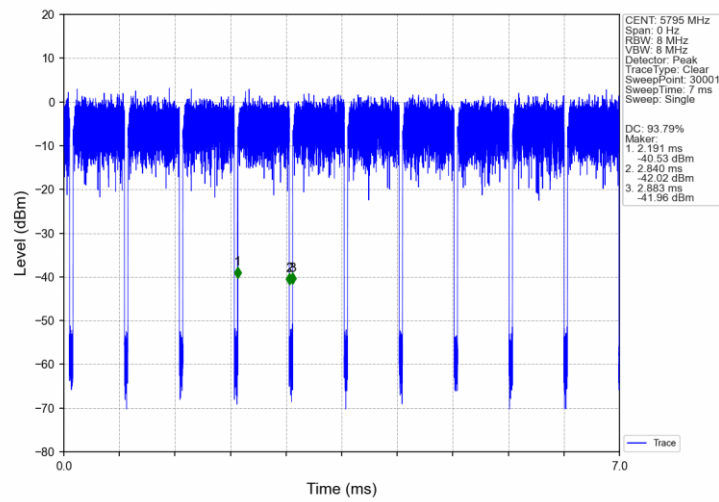
802.11n(HT20) HCH 5825MHz Ant1 NTN



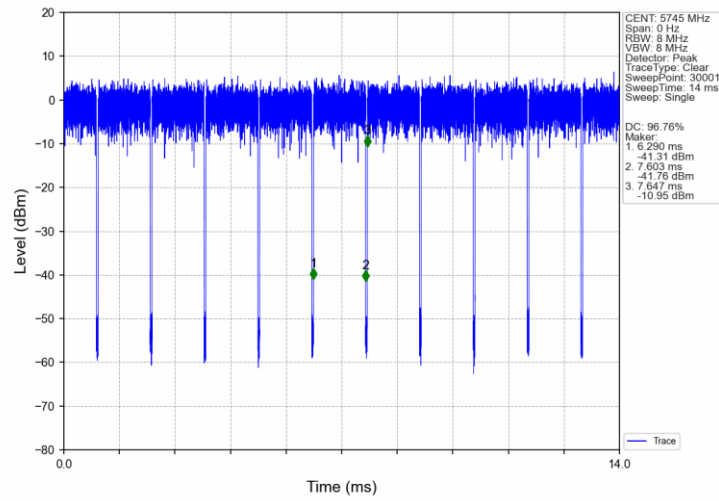
802.11n(HT40) LCH 5755MHz Ant1 NTN



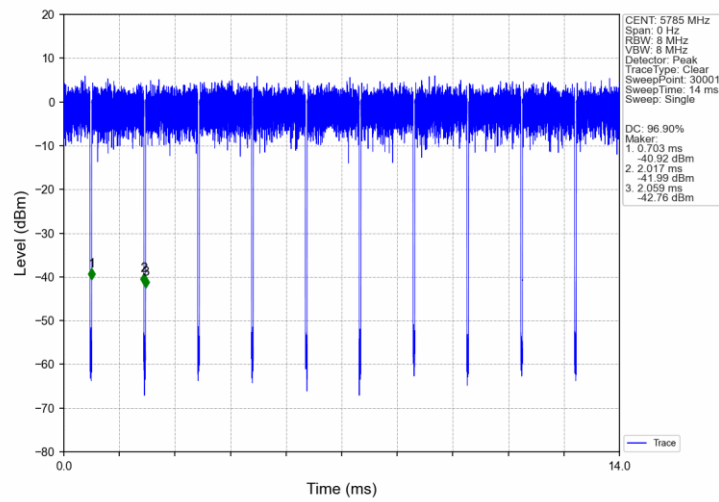
802.11n(HT40)_HCH_5795MHz_Ant1_NTN



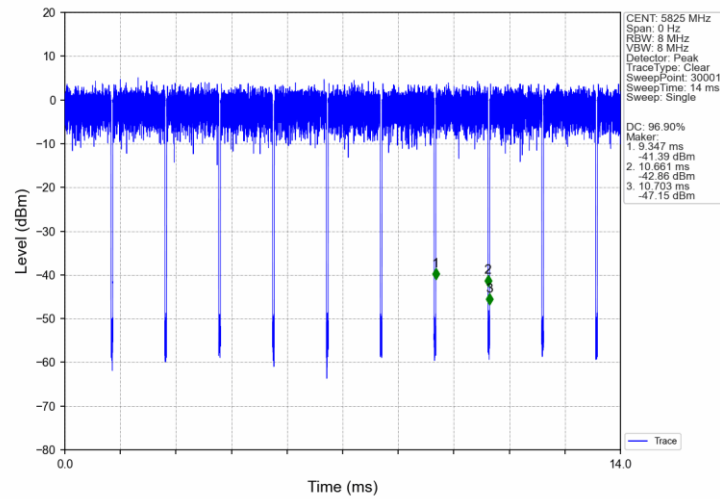
802.11ac(VHT20) LCH 5745MHz Ant1 NTN



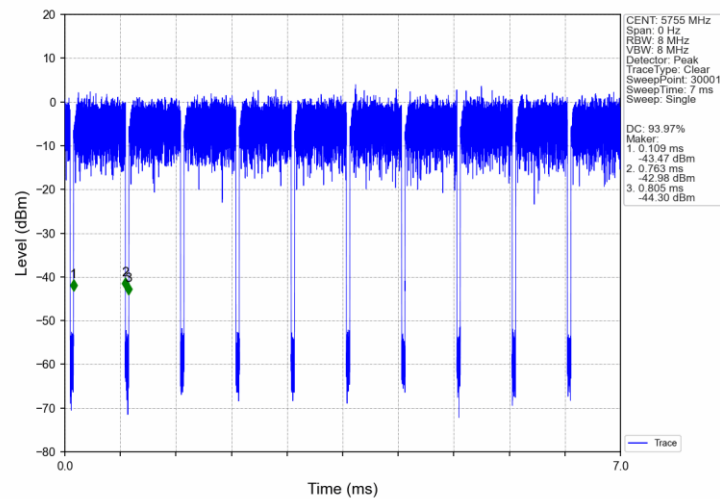
802.11ac(VHT20) MCH 5785MHz Ant1 NTN



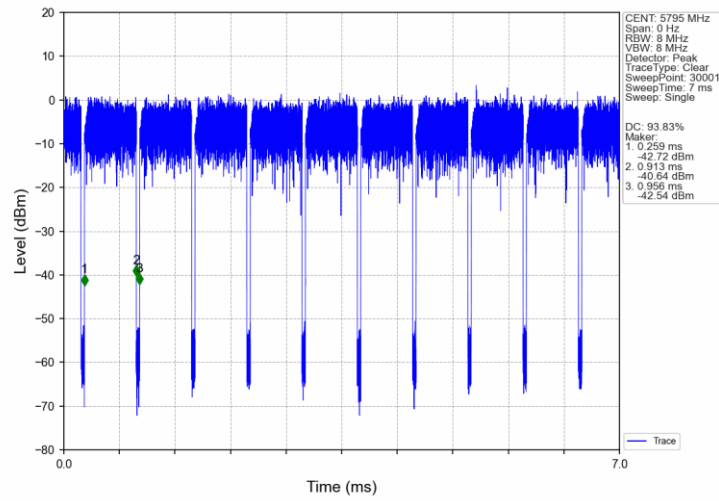
802.11ac(VHT20) HCH 5825MHz Ant1 NTN



802.11ac(VHT40) LCH 5755MHz Ant1 NTN



802.11ac(VHT40) HCH 5795MHz Ant1 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

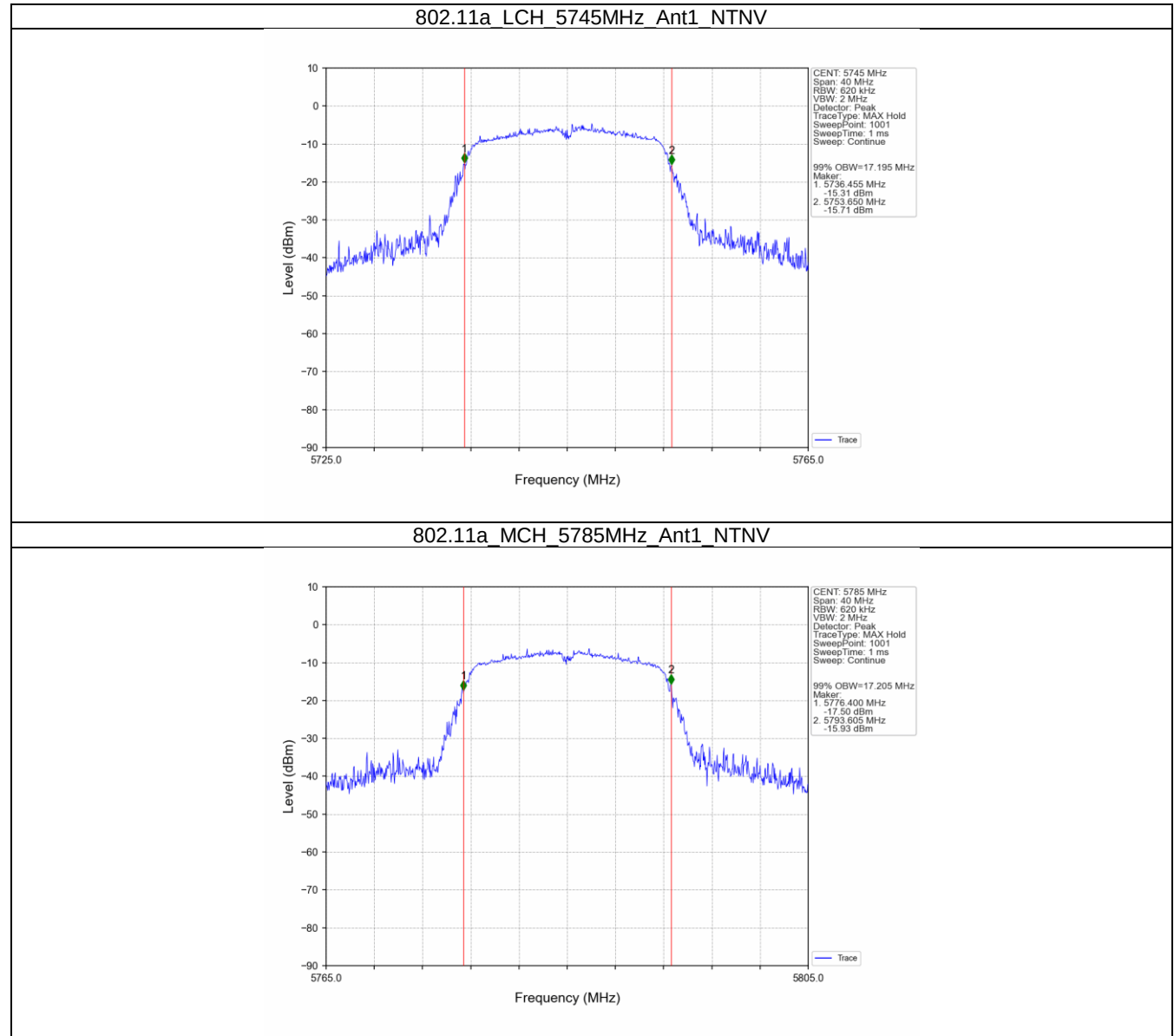
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	17.195	/	Pass
		5785	1	17.205	/	Pass
		5825	1	18.299	/	Pass
802.11n (HT20)	SISO	5745	1	18.095	/	Pass
		5785	1	18.015	/	Pass
		5825	1	18.205	/	Pass
802.11n (HT40)	SISO	5755	1	36.364	/	Pass
		5795	1	36.496	/	Pass
802.11ac (VHT20)	SISO	5745	1	18.002	/	Pass
		5785	1	18.013	/	Pass
		5825	1	18.155	/	Pass
802.11ac (VHT40)	SISO	5755	1	36.163	/	Pass
		5795	1	36.162	/	Pass

2.1.2 6dB BW

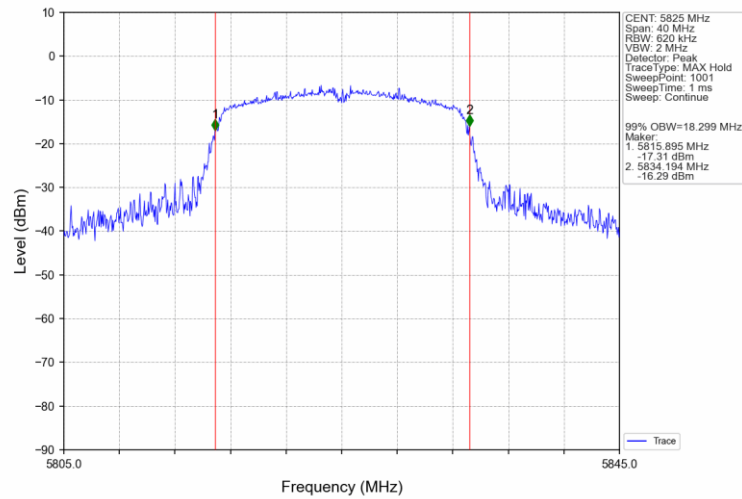
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	14.426	≥ 0.5	Pass
		5785	1	15.085	≥ 0.5	Pass
		5825	1	15.067	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	16.785	≥ 0.5	Pass
		5785	1	15.097	≥ 0.5	Pass
		5825	1	15.135	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	35.140	≥ 0.5	Pass
		5795	1	35.134	≥ 0.5	Pass
802.11ac (VHT20)	SISO	5745	1	15.038	≥ 0.5	Pass
		5785	1	15.452	≥ 0.5	Pass
		5825	1	15.133	≥ 0.5	Pass
802.11ac (VHT40)	SISO	5755	1	35.054	≥ 0.5	Pass
		5795	1	35.140	≥ 0.5	Pass

2.2 Test Graph

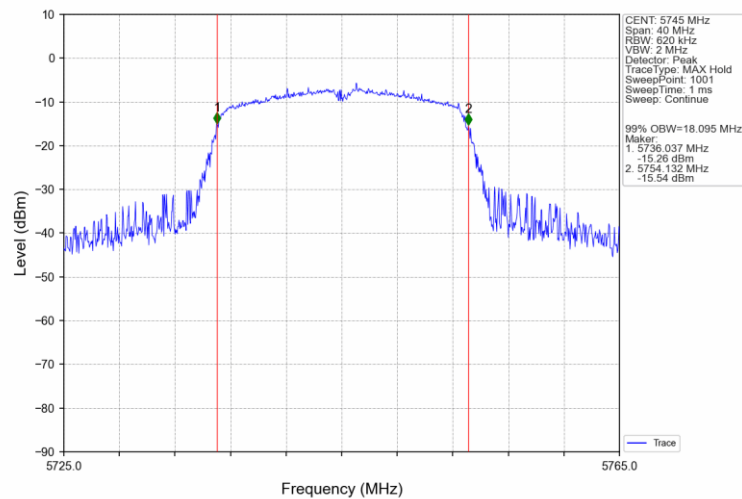
2.2.1 OBW



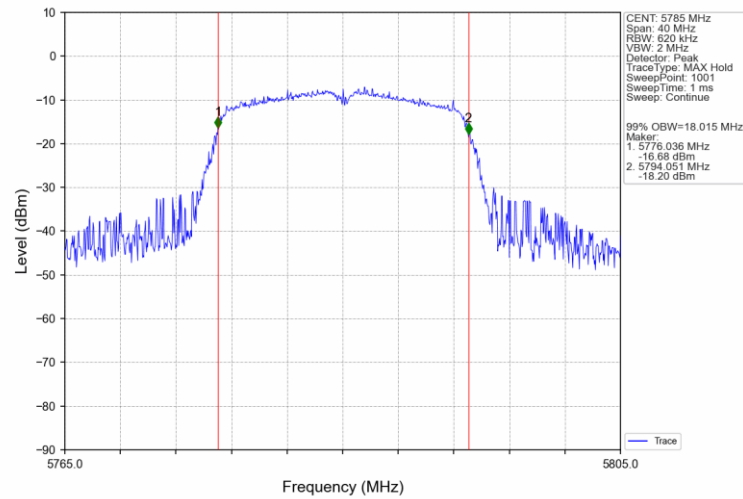
802.11a HCH 5825MHz Ant1 NTN



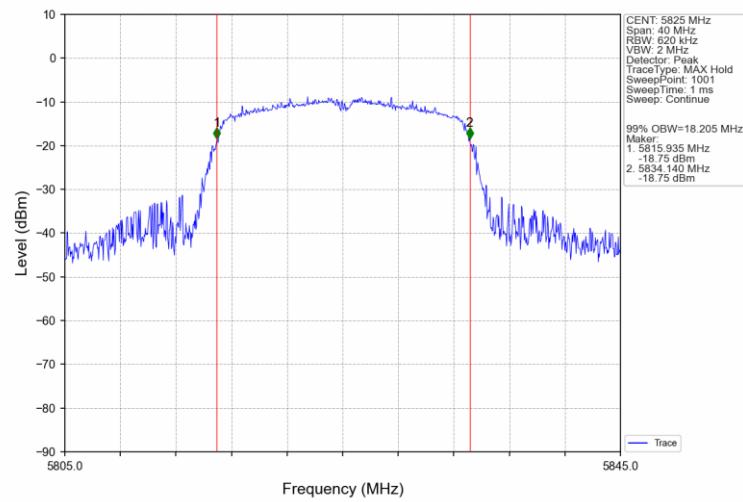
802.11n(HT20)_LCH_5745MHz_Ant1_NTN



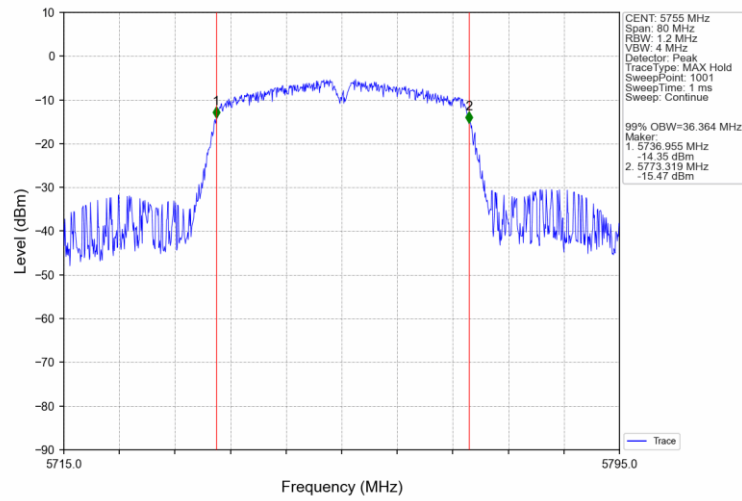
802.11n(HT20) MCH 5785MHz Ant1 NTN



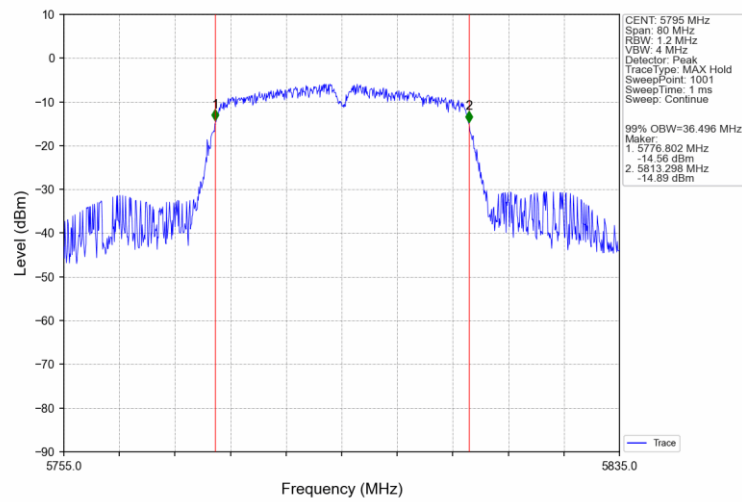
802.11n(HT20) HCH 5825MHz Ant1 NTN



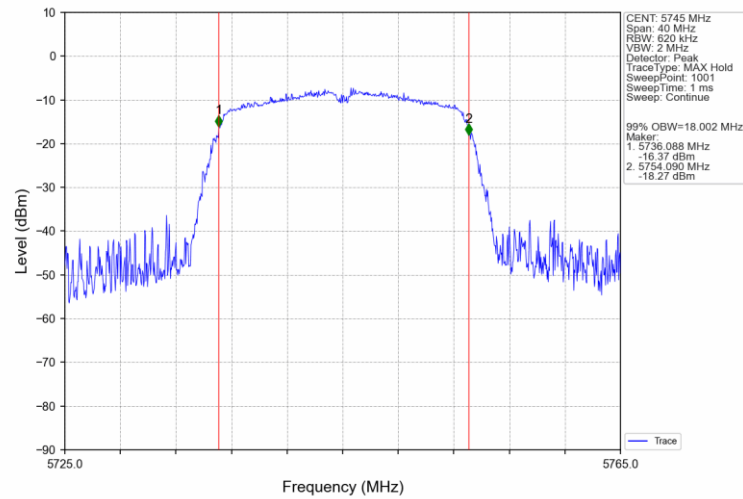
802.11n(HT40) LCH 5755MHz Ant1 NTN



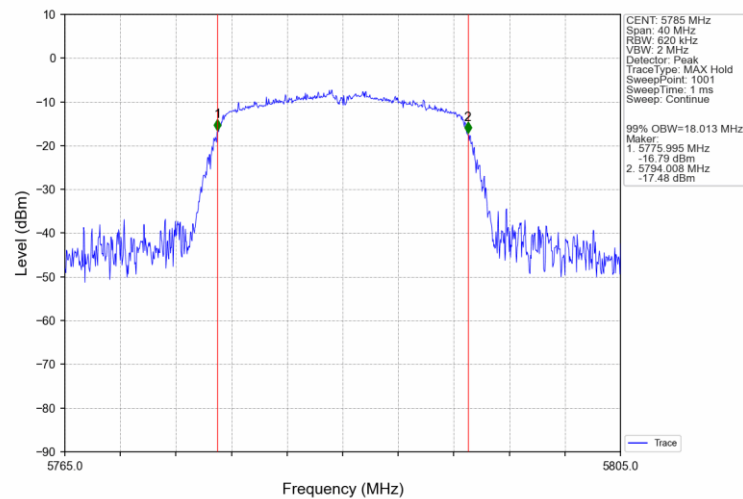
802.11n(HT40) HCH 5795MHz Ant1 NTN



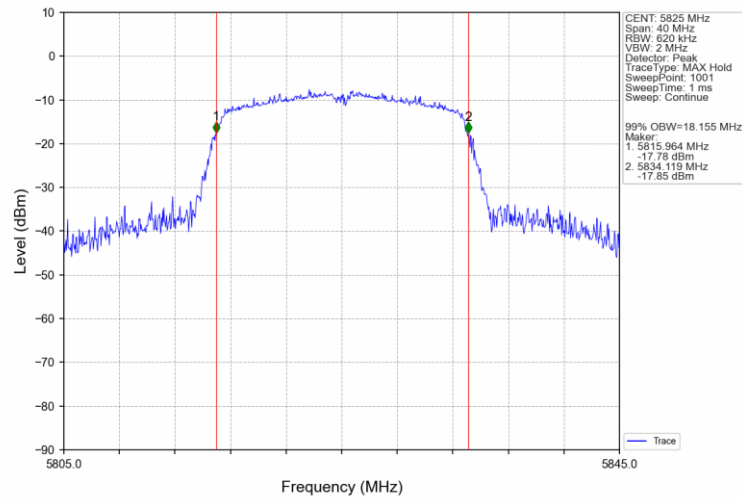
802.11ac(VHT20) LCH 5745MHz Ant1 NTN



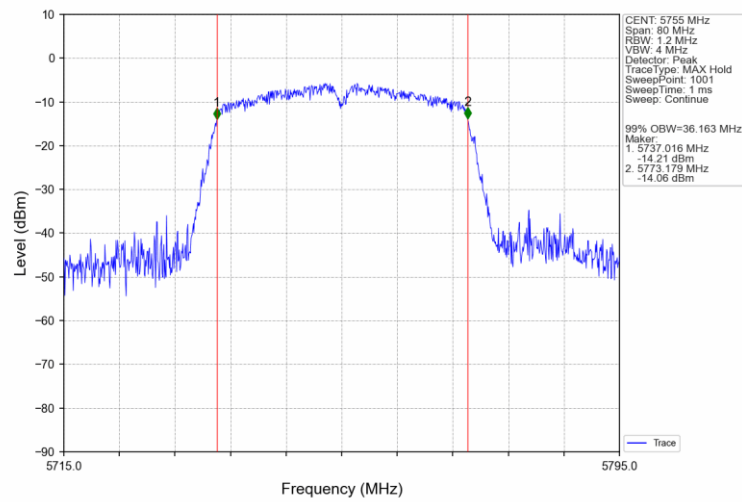
802.11ac(VHT20) MCH 5785MHz Ant1 NTN



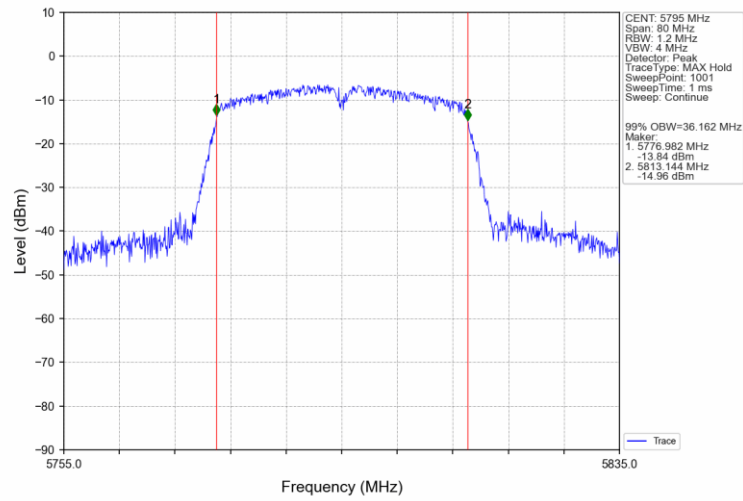
802.11ac(VHT20) HCH 5825MHz Ant1 NTN



802.11ac(VHT40) LCH 5755MHz Ant1 NTN

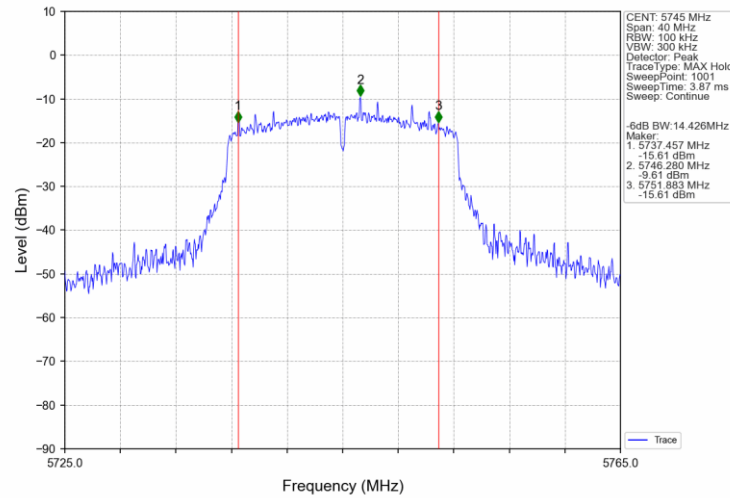


802.11ac(VHT40) HCH 5795MHz Ant1 NTN

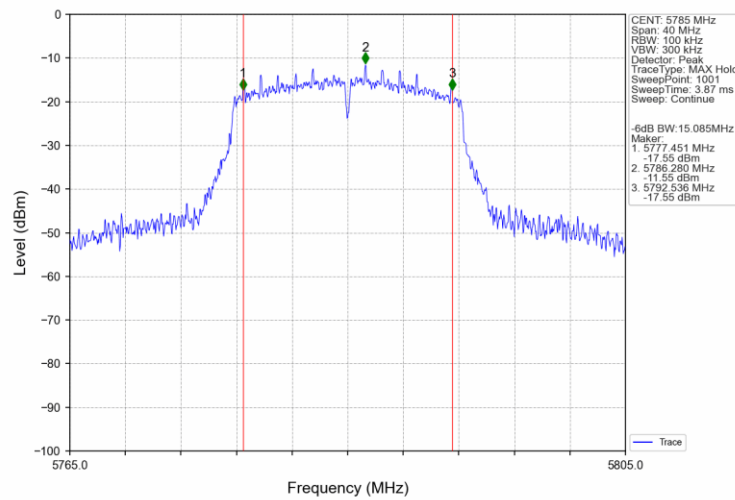


2.2.2 6dB BW

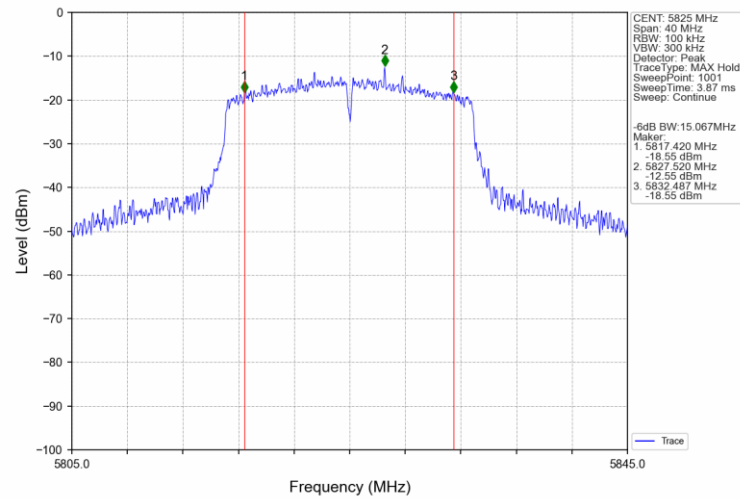
802.11a LCH 5745MHz Ant1 NTN



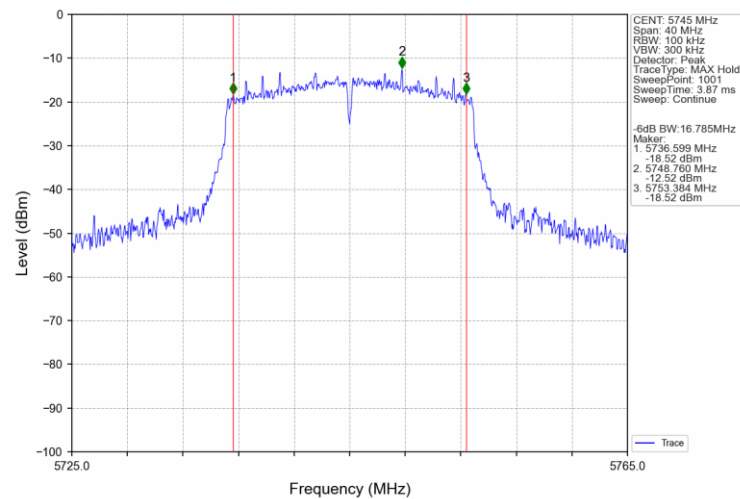
802.11a MCH 5785MHz Ant1 NTN



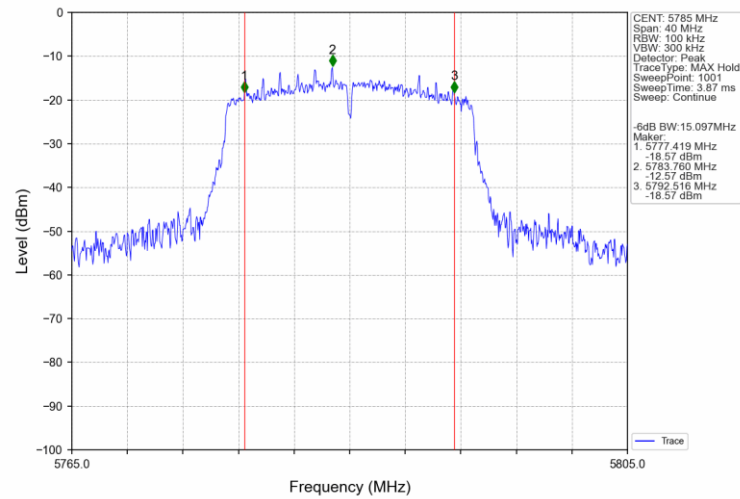
802.11a HCH 5825MHz Ant1 NTNv



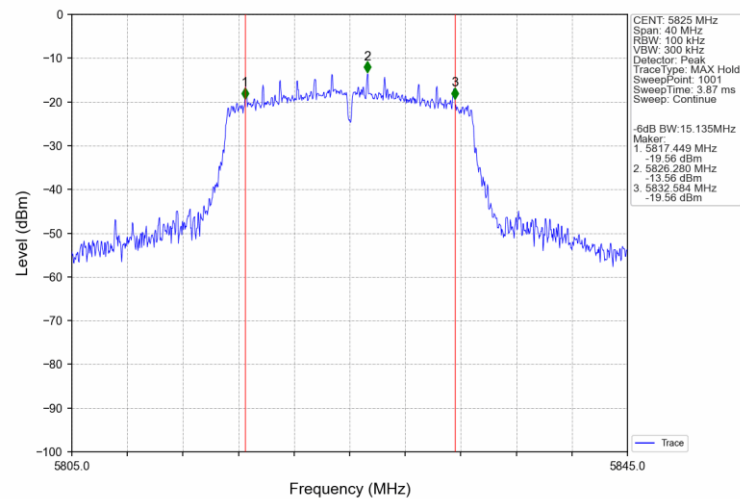
802.11n(HT20) LCH 5745MHz Ant1 NTNv



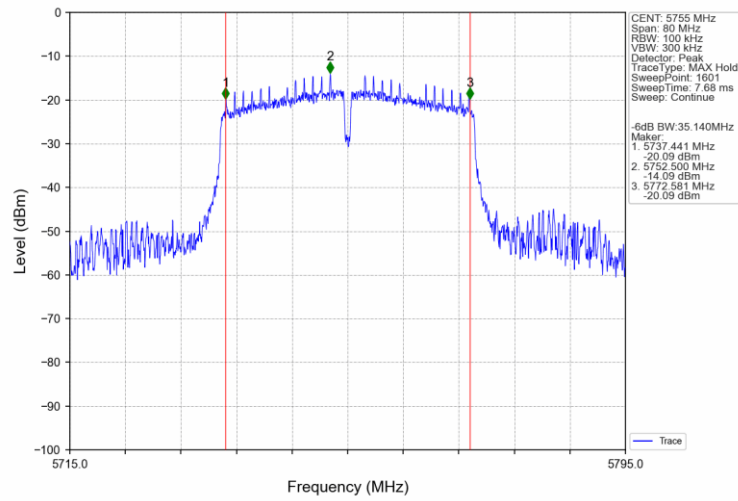
802.11n(HT20) MCH 5785MHz Ant1 NTNv



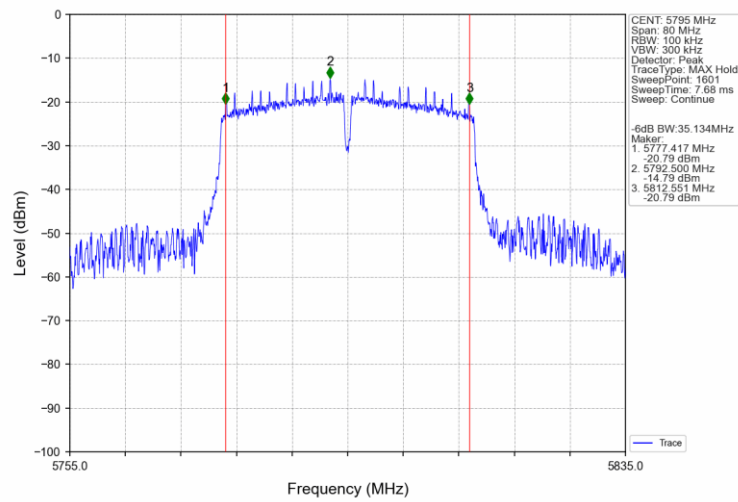
802.11n(HT20) HCH 5825MHz Ant1 NTNv



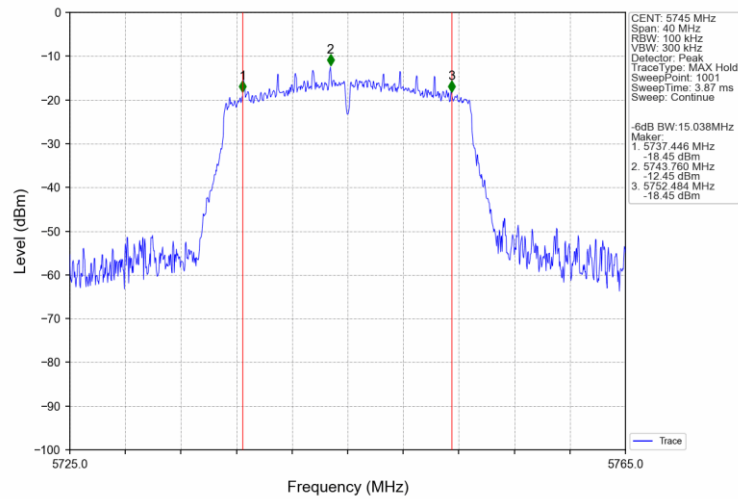
802.11n(HT40) LCH 5755MHz Ant1 NTN



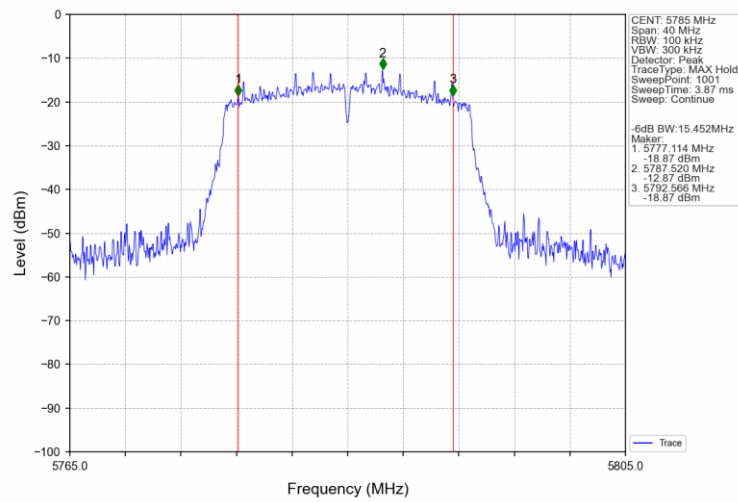
802.11n(HT40) HCH 5795MHz Ant1 NTN



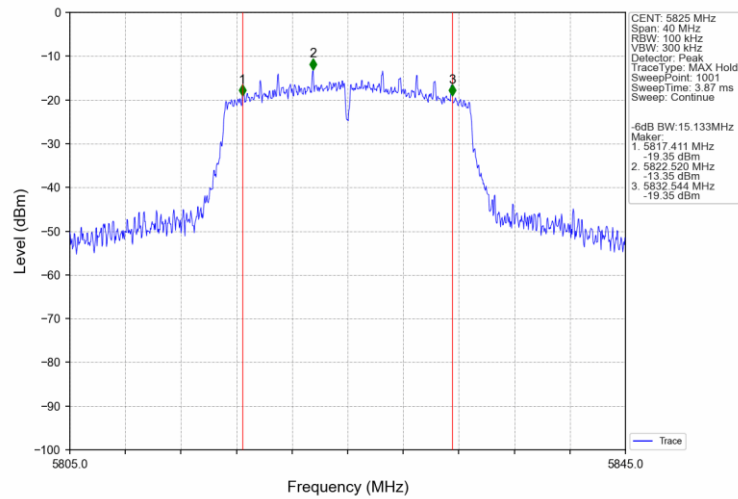
802.11ac(VHT20) LCH 5745MHz Ant1 NTN



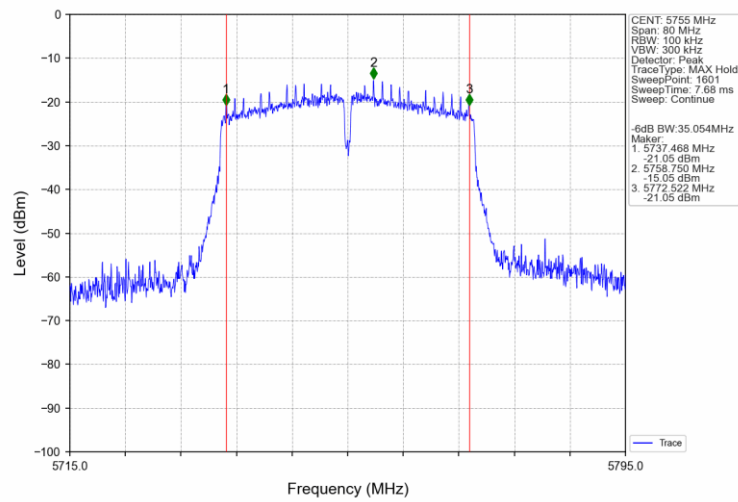
802.11ac(VHT20) MCH 5785MHz Ant1 NTN



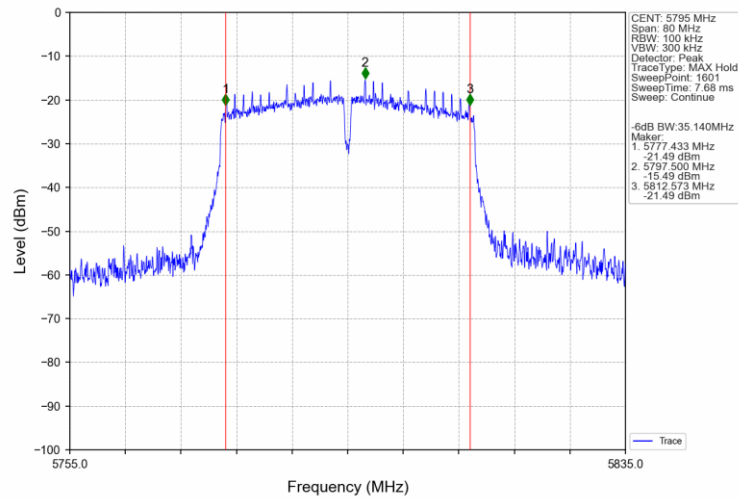
802.11ac(VHT20) HCH 5825MHz Ant1 NTN



802.11ac(VHT40) LCH 5755MHz Ant1 NTN



802.11ac(VHT40) HCH 5795MHz Ant1 NTN



3. Maximum Conducted Output Power

3.1 Test Result

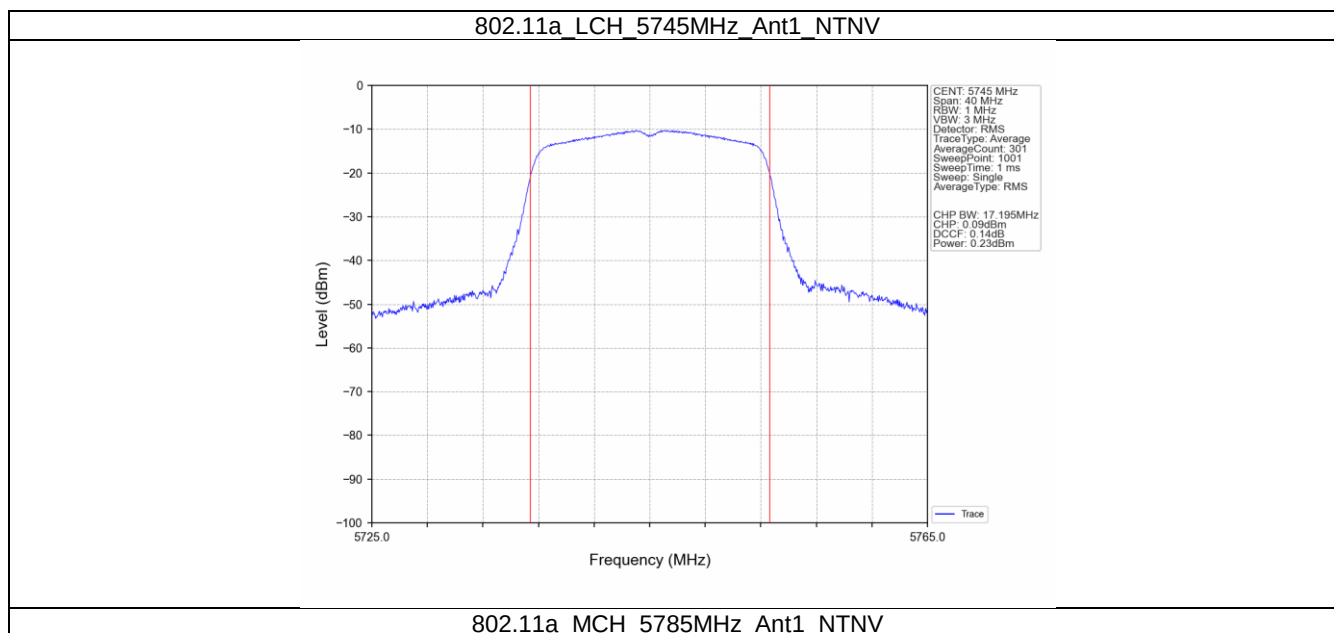
3.1.1 Power

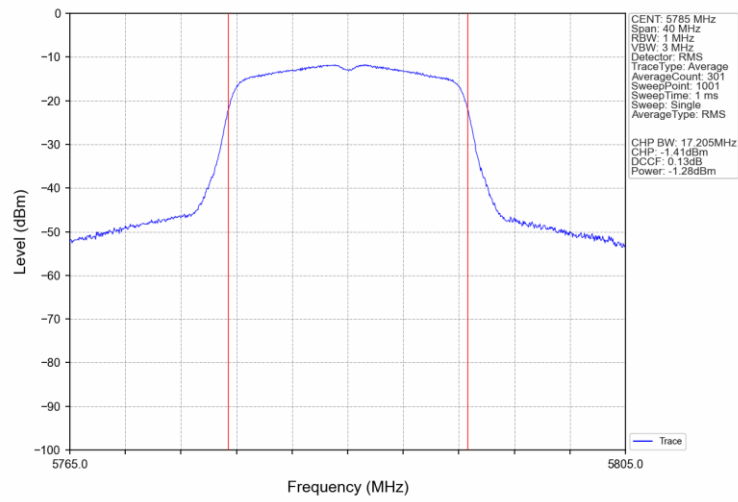
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	0.23	<=30	Pass
		5785	-1.28	<=30	Pass
		5825	-1.66	<=30	Pass
802.11n (HT20)	SISO	5745	-1.10	<=30	Pass
		5785	-2.03	<=30	Pass
		5825	-3.35	<=30	Pass
802.11n (HT40)	SISO	5755	-1.23	<=30	Pass
		5795	-1.77	<=30	Pass
802.11ac (VHT20)	SISO	5745	-1.80	<=30	Pass
		5785	-2.02	<=30	Pass
		5825	-2.37	<=30	Pass
802.11ac (VHT40)	SISO	5755	-1.96	<=30	Pass
		5795	-2.40	<=30	Pass

Note1: Antenna Gain: Ant1: 2.34dBi;

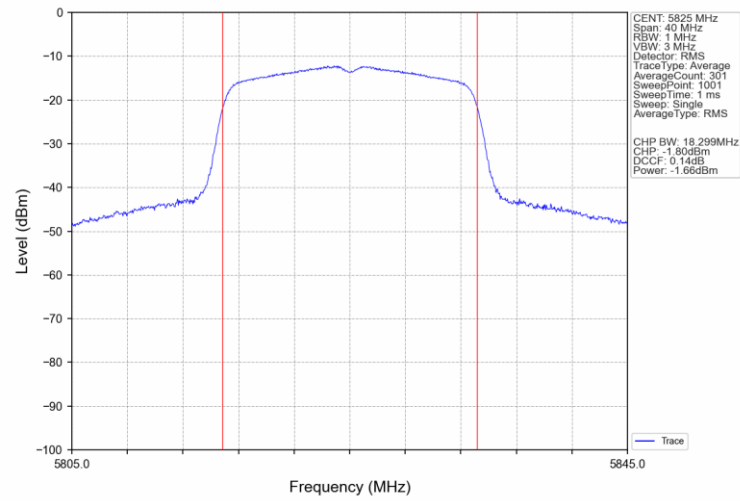
3.2 Test Graph

3.2.1 Power

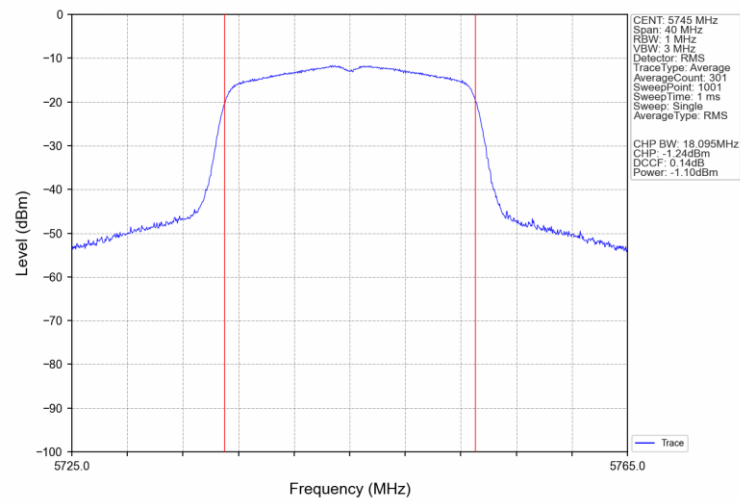




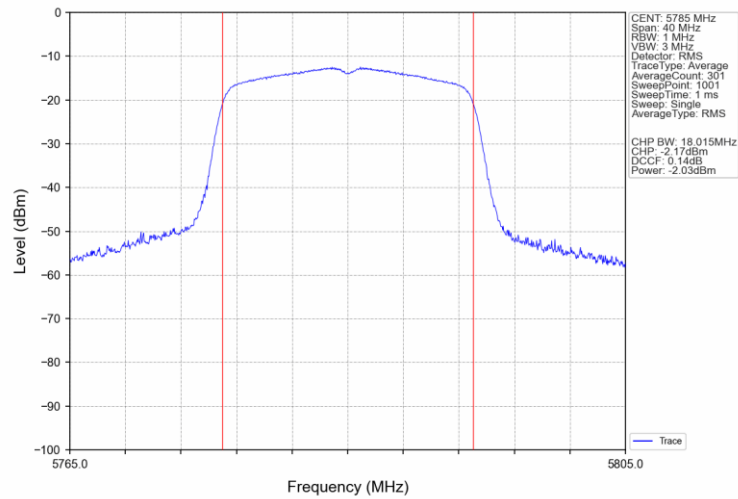
802.11a HCH 5825MHz Ant1 NTN



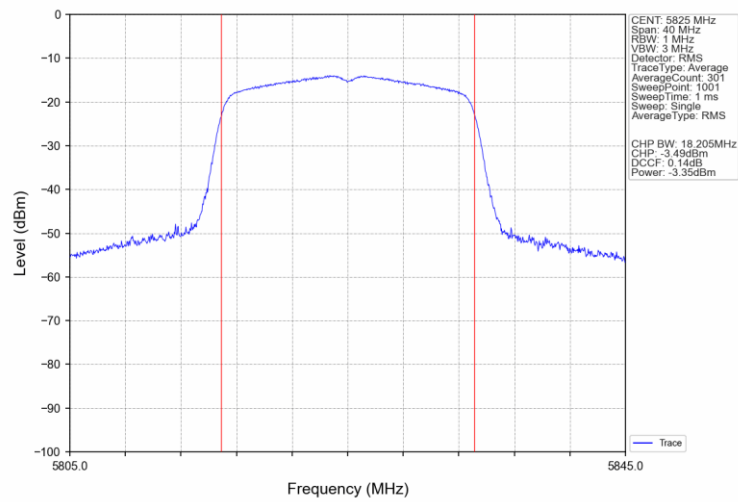
802.11n(HT20)_LCH_5745MHz_Ant1_NTN



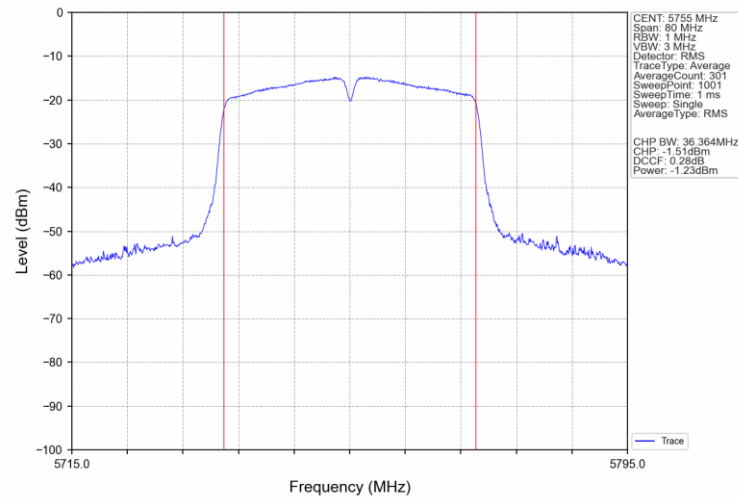
802.11n(HT20) MCH 5785MHz Ant1 NTNv



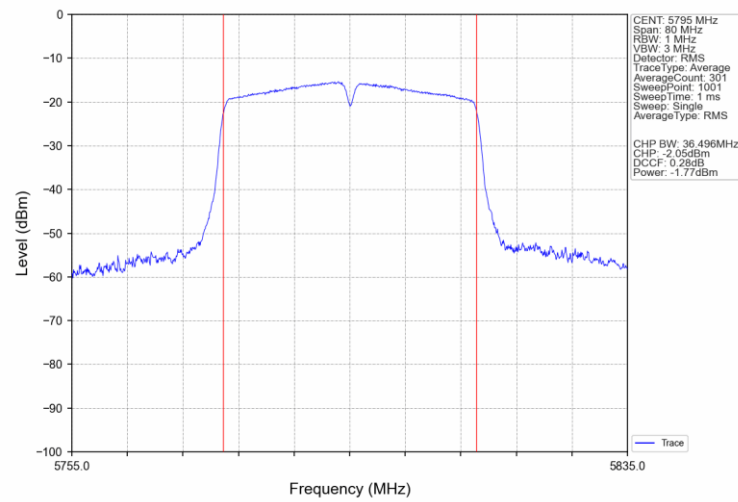
802.11n(HT20) HCH 5825MHz Ant1 NTNv



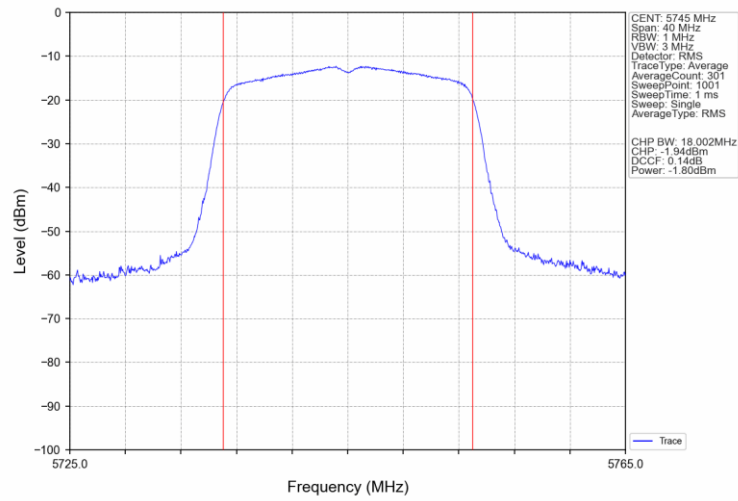
802.11n(HT40) LCH 5755MHz Ant1 NTN



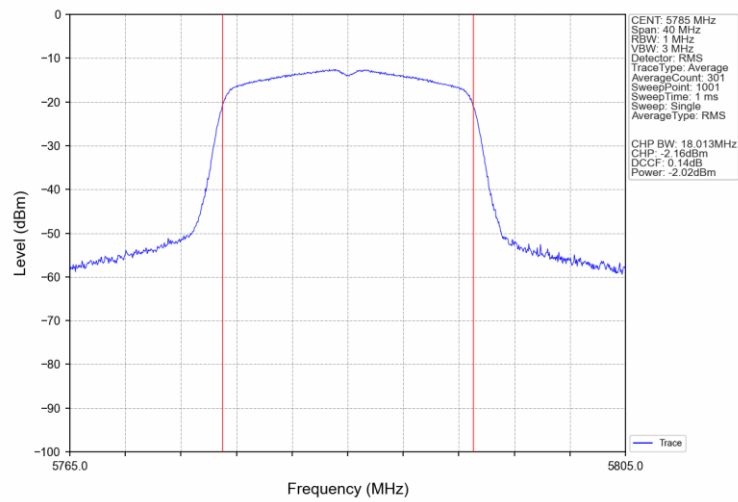
802.11n(HT40) HCH 5795MHz Ant1 NTN



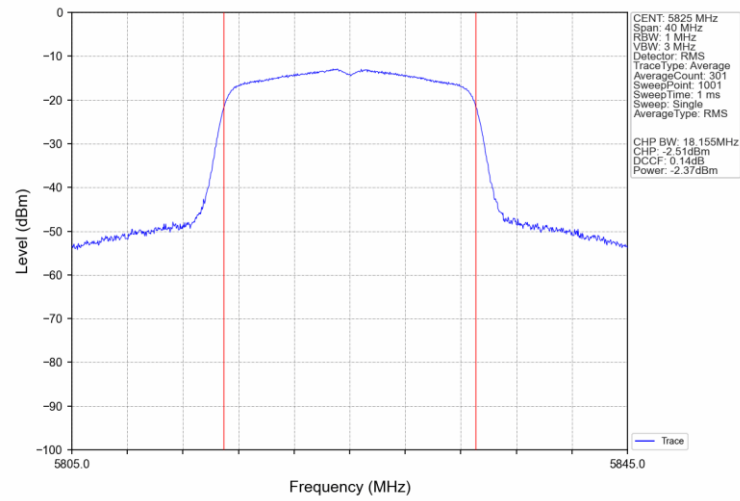
802.11ac(VHT20) LCH 5745MHz Ant1 NTN



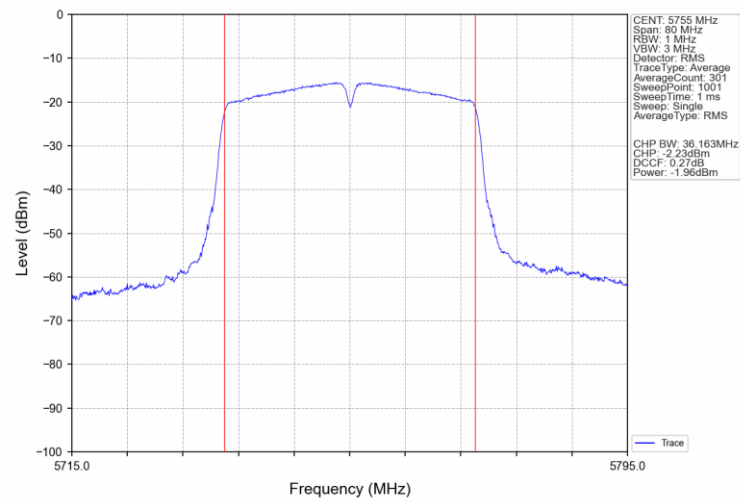
802.11ac(VHT20) MCH 5785MHz Ant1 NTN



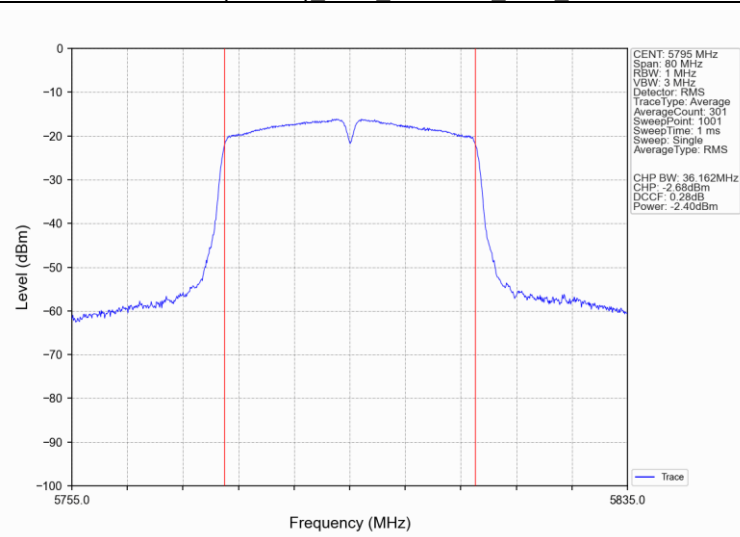
802.11ac(VHT20) HCH 5825MHz Ant1 NTN



802.11ac(VHT40) LCH 5755MHz Ant1 NTN



802.11ac(VHT40) HCH 5795MHz Ant1 NTN



4. Maximum Power Spectral Density

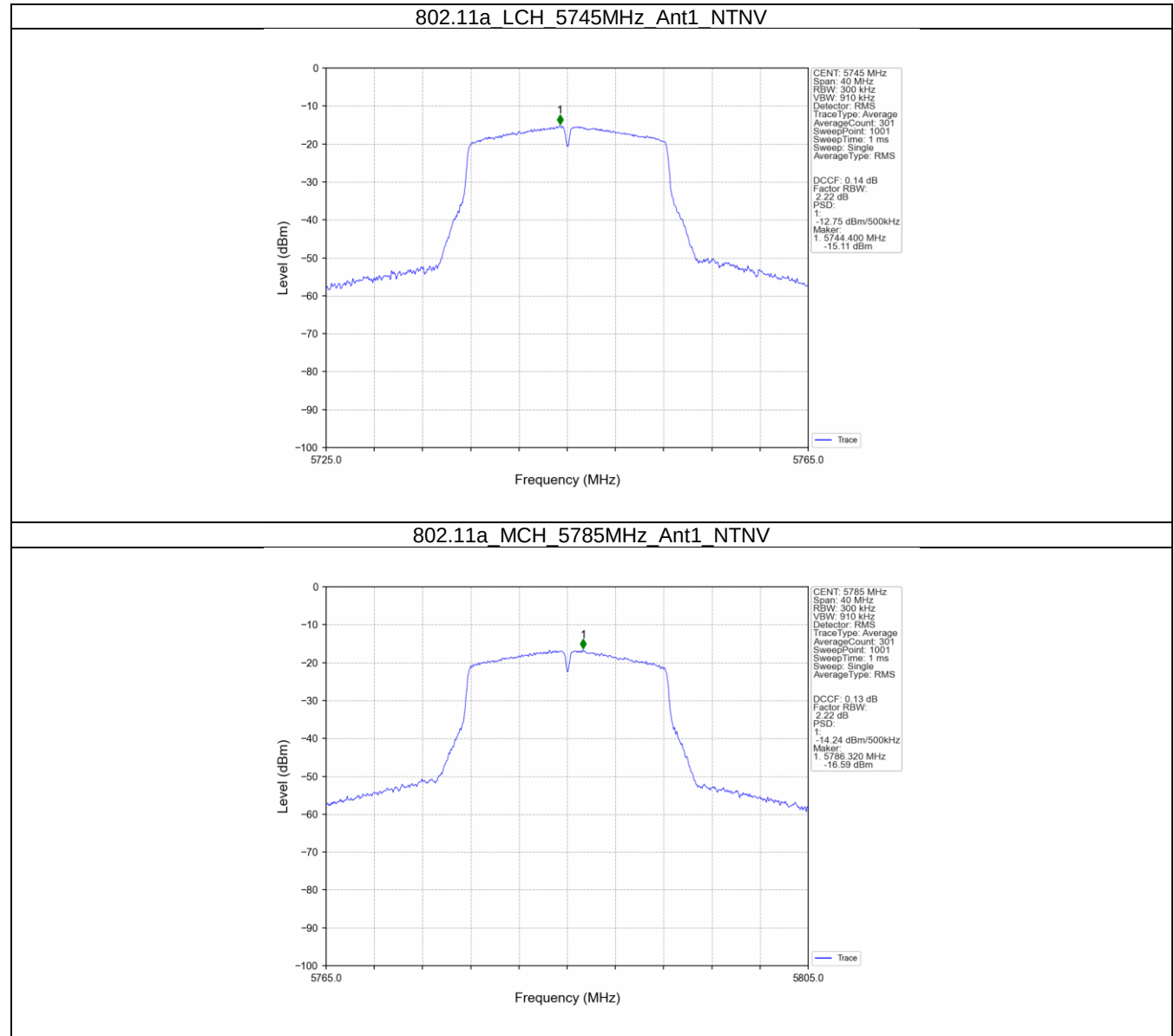
4.1 Test Result

4.1.1 PSD-Band3

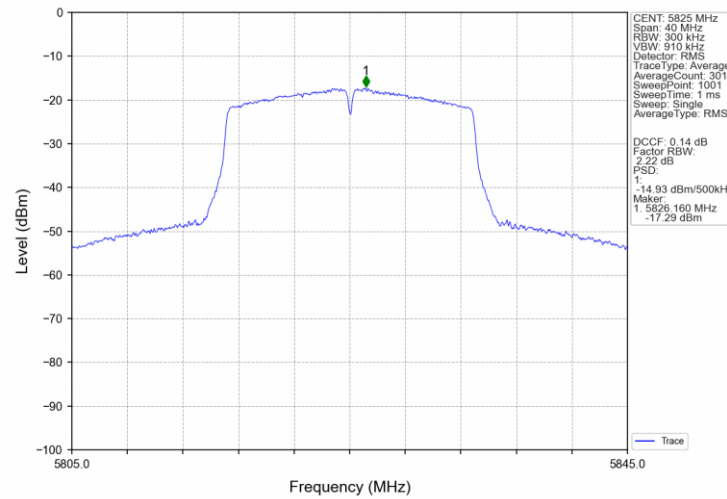
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	-12.75	<=30	Pass
		5785	-14.24	<=30	Pass
		5825	-14.93	<=30	Pass
802.11n (HT20)	SISO	5745	-14.56	<=30	Pass
		5785	-15.36	<=30	Pass
		5825	-16.59	<=30	Pass
802.11n (HT40)	SISO	5755	-17.69	<=30	Pass
		5795	-18.17	<=30	Pass
802.11ac (VHT20)	SISO	5745	-15.00	<=30	Pass
		5785	-15.23	<=30	Pass
		5825	-15.54	<=30	Pass
802.11ac (VHT40)	SISO	5755	-18.30	<=30	Pass
		5795	-18.86	<=30	Pass

4.2 Test Graph

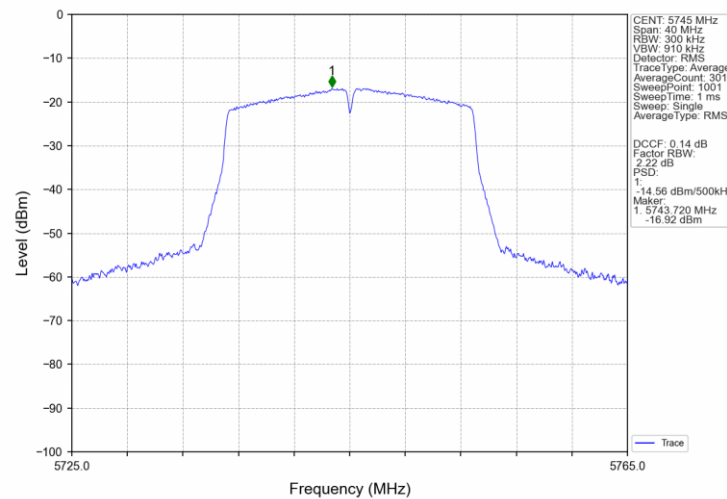
4.2.1 PSD-Band3



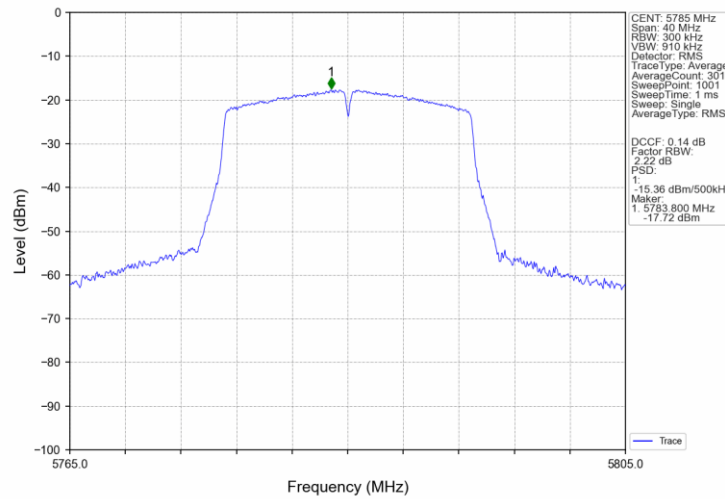
802.11a HCH 5825MHz Ant1 NTNV



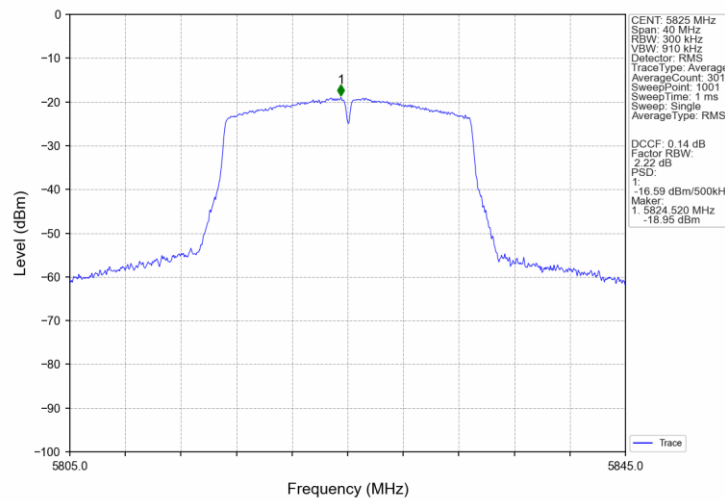
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



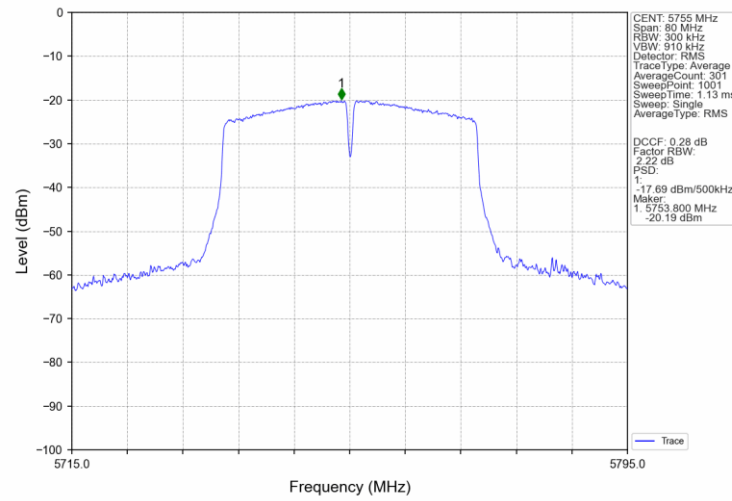
802.11n(HT20) MCH 5785MHz Ant1 NTV



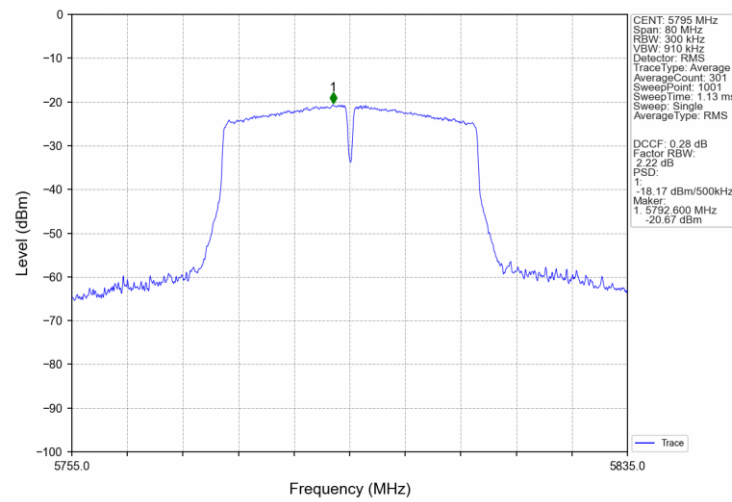
802.11n(HT20) HCH 5825MHz Ant1 NTV



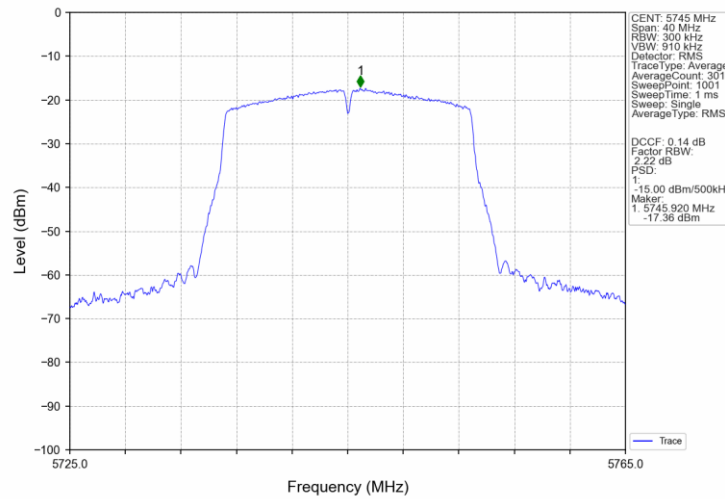
802.11n(HT40) LCH 5755MHz Ant1 NTN



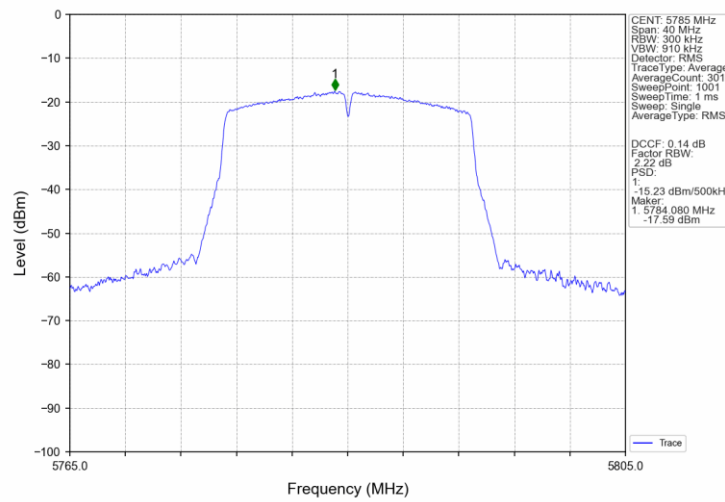
802.11n(HT40) HCH 5795MHz Ant1 NTN



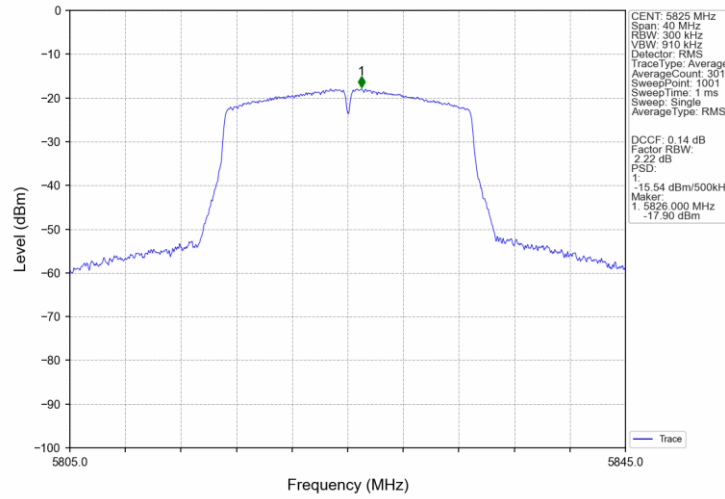
802.11ac(VHT20) LCH 5745MHz Ant1 NTN



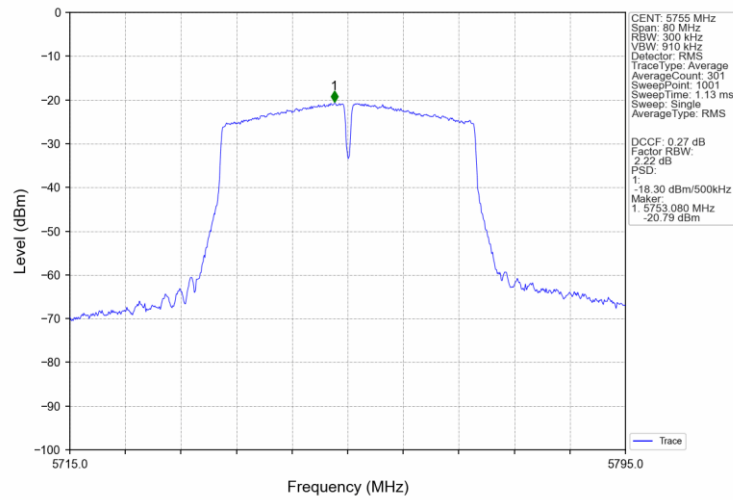
802.11ac(VHT20) MCH 5785MHz Ant1 NTN



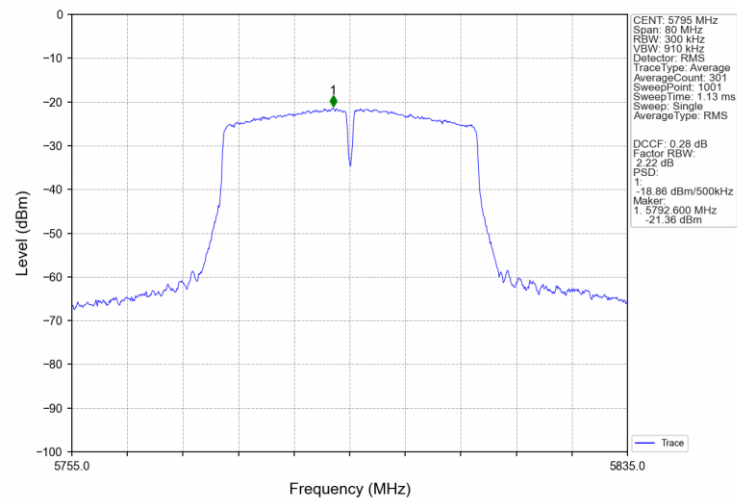
802.11ac(VHT20) HCH 5825MHz Ant1 NTN



802.11ac(VHT40) LCH 5755MHz Ant1 NTN



802.11ac(VHT40) HCH 5795MHz Ant1 NTNv



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	5745	20	3.70	5744.614	5738.122 to 5751.878	Pass
				3.15	5745.268	5738.122 to 5751.878	Pass
				1.26	5745.233	5738.122 to 5751.878	Pass
			-30	3.70	5745.360	5738.122 to 5751.878	Pass
			50	3.70	5744.737	5738.122 to 5751.878	Pass
		5785	20	3.70	5784.683	5778.118 to 5791.882	Pass
				3.15	5784.740	5778.118 to 5791.882	Pass
				1.26	5785.236	5778.118 to 5791.882	Pass
			-30	3.70	5785.238	5778.118 to 5791.882	Pass
			50	3.70	5784.739	5778.118 to 5791.882	Pass
		5825	20	3.70	5824.708	5817.68 to 5832.32	Pass
				3.15	5825.233	5817.68 to 5832.32	Pass
				1.26	5825.273	5817.68 to 5832.32	Pass
			-30	3.70	5824.732	5817.68 to 5832.32	Pass
			50	3.70	5824.736	5817.68 to 5832.32	Pass
		5755	20	3.70	5755.484	5740.454 to 5769.546	Pass
				3.15	5755.488	5740.454 to 5769.546	Pass
				1.26	5755.489	5740.454 to 5769.546	Pass
			-30	3.70	5755.495	5740.454 to 5769.546	Pass
			50	3.70	5755.489	5740.454 to 5769.546	Pass
		5795	20	3.70	5795.485	5780.402 to 5809.598	Pass
				3.15	5795.494	5780.402 to 5809.598	Pass
				1.26	5795.493	5780.402 to 5809.598	Pass
			-30	3.70	5795.487	5780.402 to 5809.598	Pass
			50	3.70	5795.500	5780.402 to 5809.598	Pass

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