

Appendix RF Test Data for WIFI 5G

Company: : Shenzhen Speediance Living Technology Co., Ltd
EUT : Interactive Multi-Media DigitalFitness Equipment
FCC ID : 2A4WP-GMBS2100A1
Model Number : GMBS2100A1
Report No. : HTT202505022F03
Reviewed By : Heber He

1. Duty Cycle

1.1 Test Result

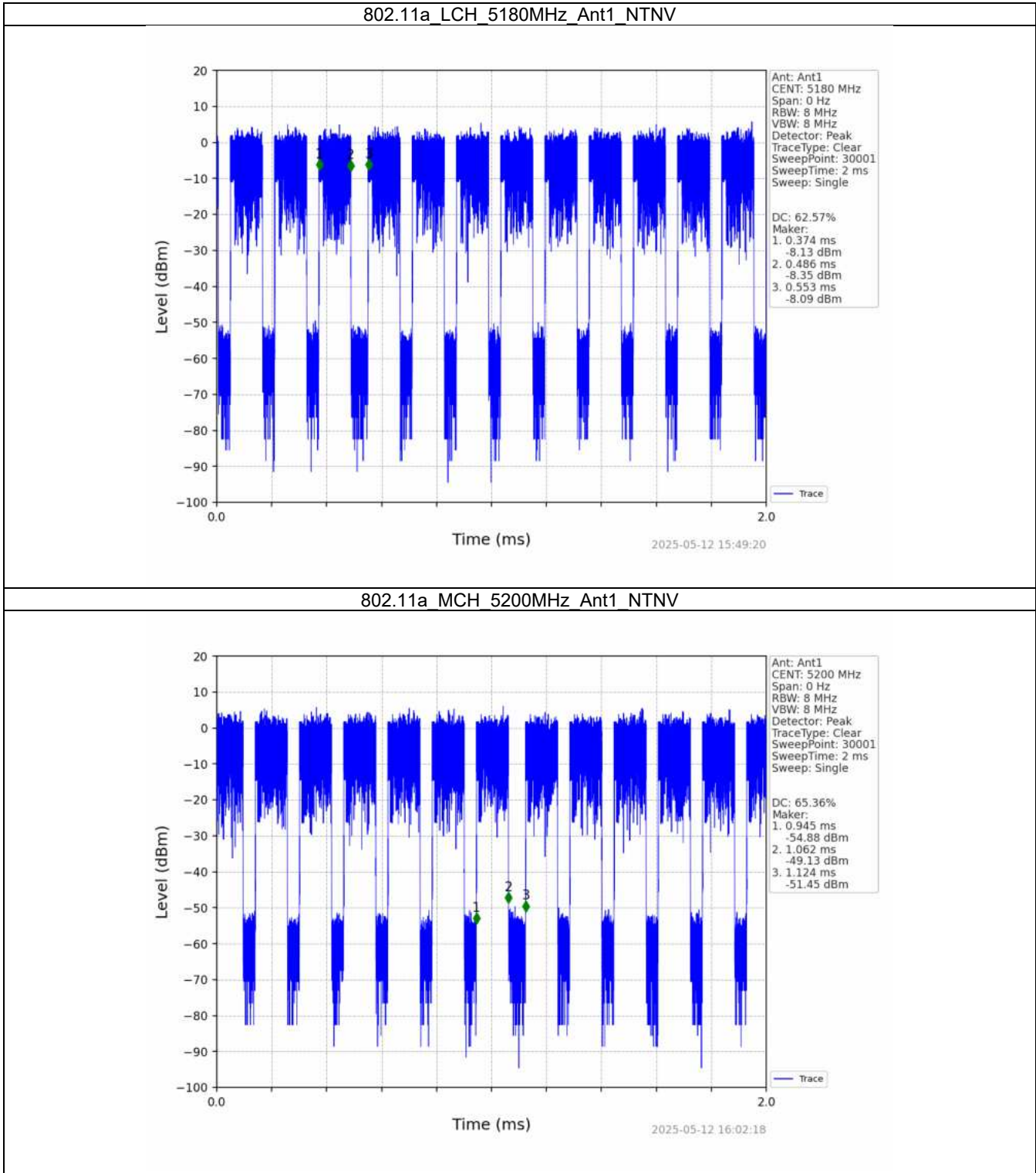
1.1.1 Ant1

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	0.112	0.179	62.57	2.04	7.05
		5200	0.117	0.179	65.36	1.85	7.41
		5240	0.117	0.161	72.67	1.39	0.04
		5260	0.119	0.179	66.48	1.77	7.64
		5300	0.116	0.161	72.05	1.42	0.11
		5320	0.116	0.161	72.05	1.42	0.11
		5500	0.117	0.170	68.82	1.62	3.85
		5580	0.117	0.161	72.67	1.39	0.12
		5700	0.117	0.161	72.67	1.39	0.12
		5745	0.117	0.161	72.67	1.39	0.08
		5785	0.117	0.161	72.67	1.39	0.08
		5825	0.117	0.188	62.23	2.06	10.54
802.11n (HT20)	MIMO	5180	0.081	0.125	64.80	1.88	0.09
		5200	0.082	0.125	65.60	1.83	0.21
		5240	0.080	0.134	59.70	2.24	4.33
		5260	0.080	0.125	64.00	1.94	0.12
		5300	0.080	0.125	64.00	1.94	0.12
		5320	0.082	0.125	65.60	1.83	0.30
		5500	0.081	0.125	64.80	1.88	0.12
		5580	0.081	0.125	64.80	1.88	0.08
		5700	0.082	0.125	65.60	1.83	0.13
		5745	0.081	0.125	64.80	1.88	0.15
		5785	0.081	0.125	64.80	1.88	0.09
		5825	0.081	0.125	64.80	1.88	0.10
802.11n (HT40)	MIMO	5190	0.062	0.106	58.49	2.33	0.09
		5230	0.063	0.106	59.43	2.26	0.14
		5270	0.062	0.106	58.49	2.33	0.28
		5310	0.062	0.106	58.49	2.33	0.14
		5510	0.062	0.106	58.49	2.33	0.14
		5550	0.063	0.106	59.43	2.26	0.21
		5670	0.063	0.106	59.43	2.26	0.11
		5755	0.062	0.106	58.49	2.33	0.17
		5795	0.063	0.106	59.43	2.26	0.19
802.11ac (VHT20)	MIMO	5180	0.089	0.132	67.42	1.71	0.24
		5200	0.089	0.132	67.42	1.71	0.11
		5240	0.089	0.132	67.42	1.71	0.13
		5260	0.088	0.150	58.67	2.32	8.16
		5300	0.089	0.132	67.42	1.71	0.15
		5320	0.087	0.132	65.91	1.81	0.10
		5500	0.088	0.132	66.67	1.76	0.06
		5580	0.088	0.132	66.67	1.76	0.10
		5700	0.088	0.132	66.67	1.76	0.15
		5745	0.089	0.132	67.42	1.71	0.13
		5785	0.088	0.132	66.67	1.76	0.13
802.11ac (VHT40)	MIMO	5825	0.088	0.132	66.67	1.76	0.10
		5190	0.066	0.146	45.21	3.45	15.02
		5230	0.066	0.110	60.00	2.22	0.15
		5270	0.067	0.110	60.91	2.15	0.12
		5310	0.066	0.110	60.00	2.22	0.15

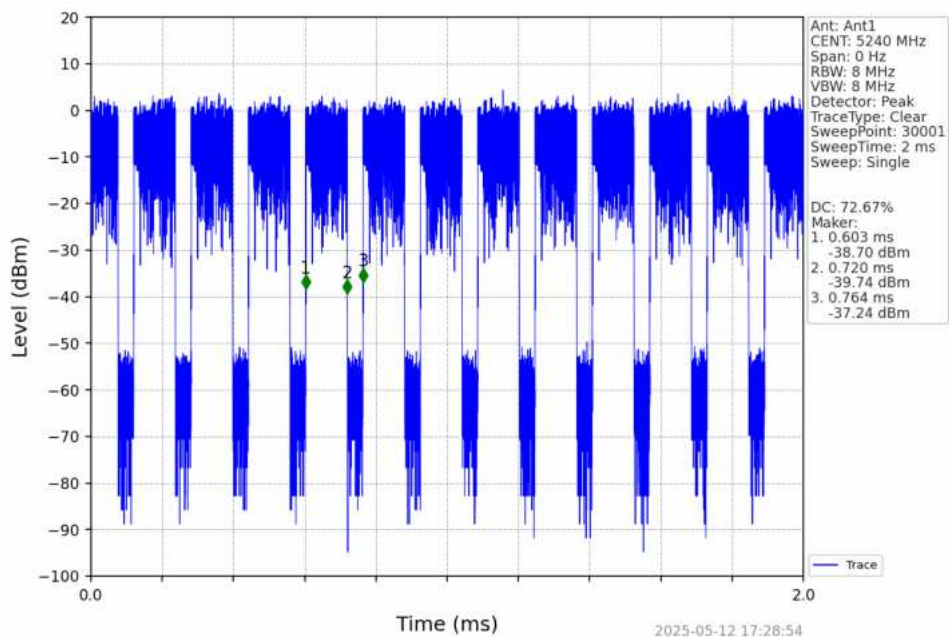
		5510	0.067	0.110	60.91	2.15	0.12
		5550	0.067	0.111	60.36	2.19	0.17
		5670	0.066	0.137	48.18	3.17	11.89
		5755	0.067	0.111	60.36	2.19	0.20
		5795	0.066	0.110	60.00	2.22	0.13
802.11ac (VHT80)	MIMO	5210	0.056	0.099	56.57	2.47	0.10
		5290	0.056	0.099	56.57	2.47	0.06
		5530	0.055	0.099	55.56	2.55	0.08
		5610	0.055	0.099	55.56	2.55	0.05
		5775	0.055	0.099	55.56	2.55	0.05

1.2 Test Graph

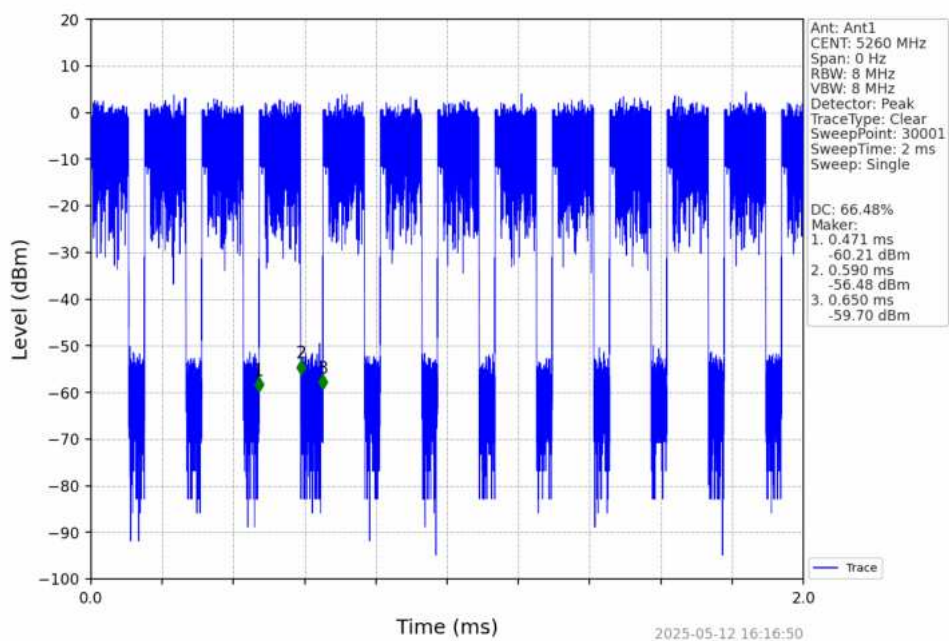
1.2.1 Ant1



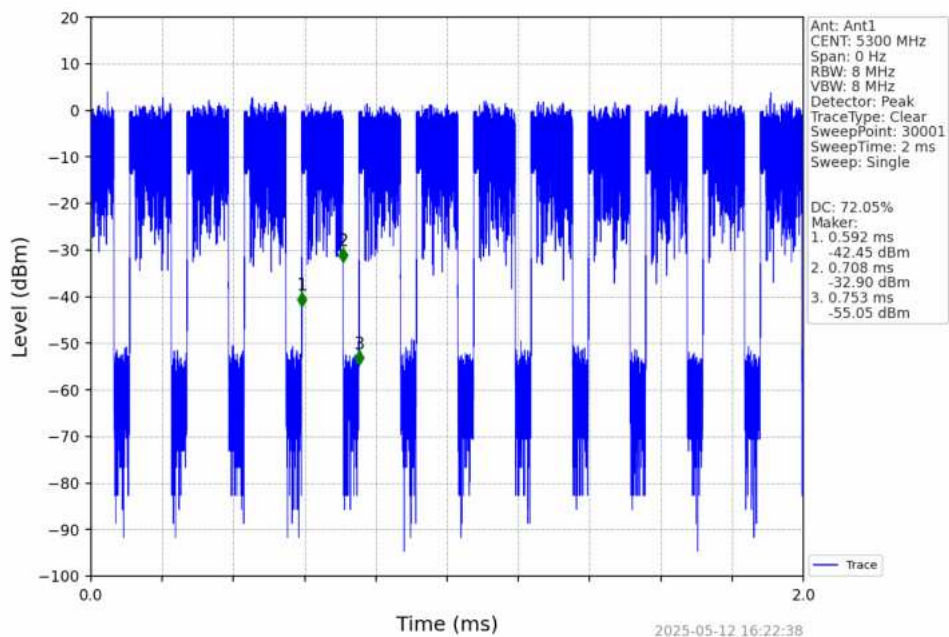
802.11a_HCH_5240MHz_Ant1_NTNV



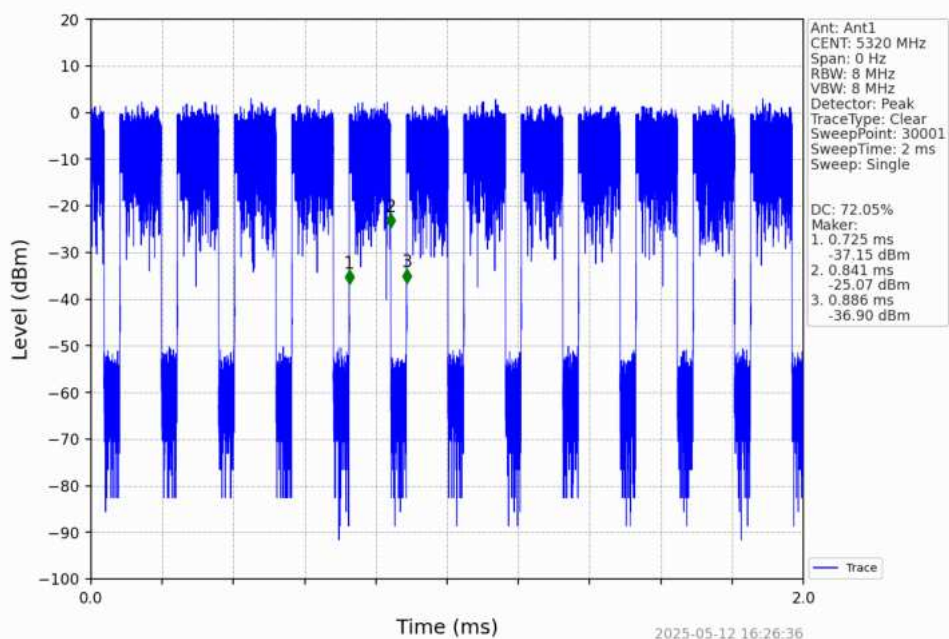
802.11a_LCH_5260MHz_Ant1_NTNV



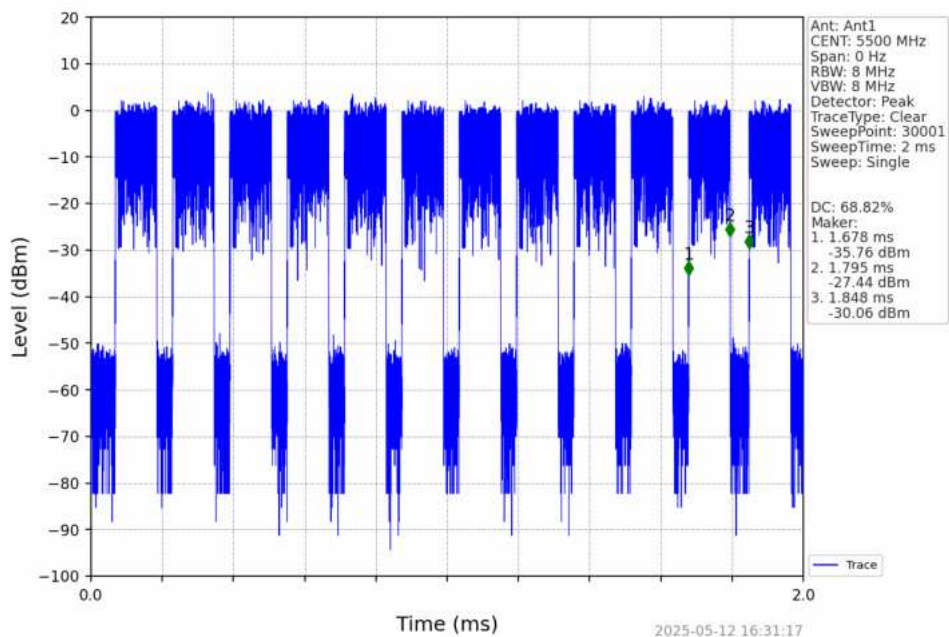
802.11a_MCH_5300MHz_Ant1_NTNV



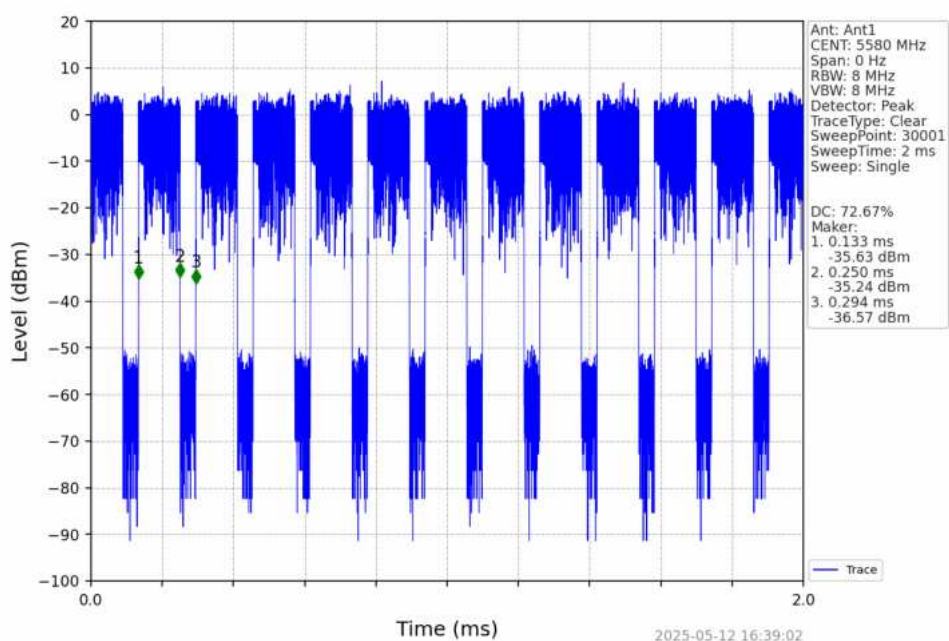
802.11a_HCH_5320MHz_Ant1_NTNV



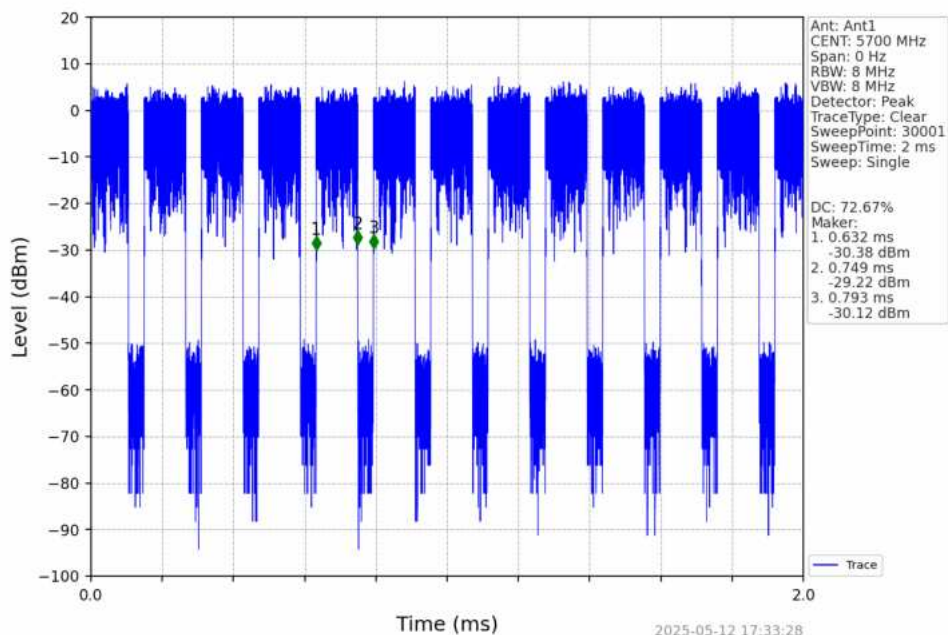
802.11a_LCH_5500MHz_Ant1_NTNV



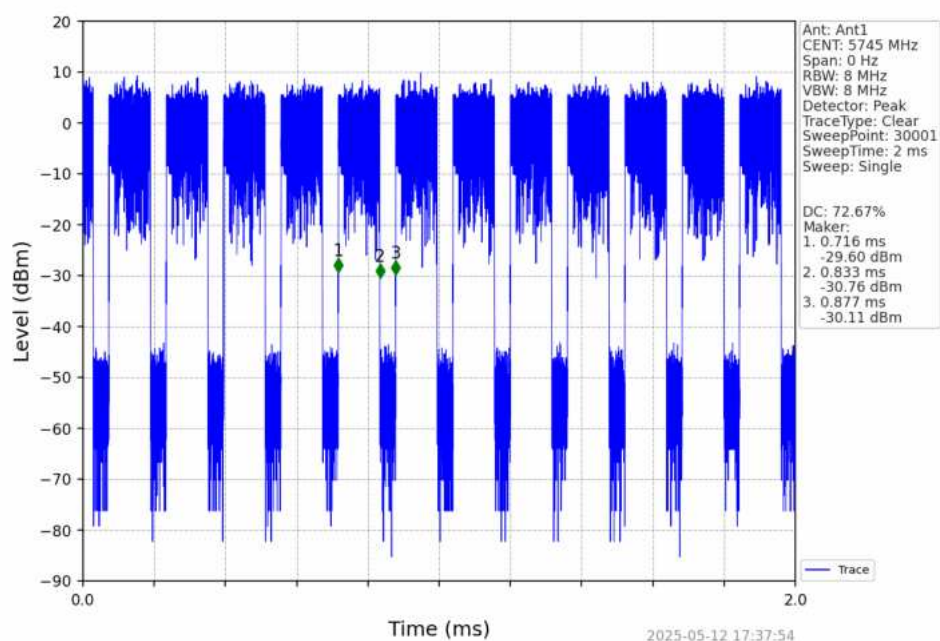
802.11a_MCH_5580MHz_Ant1_NTNV



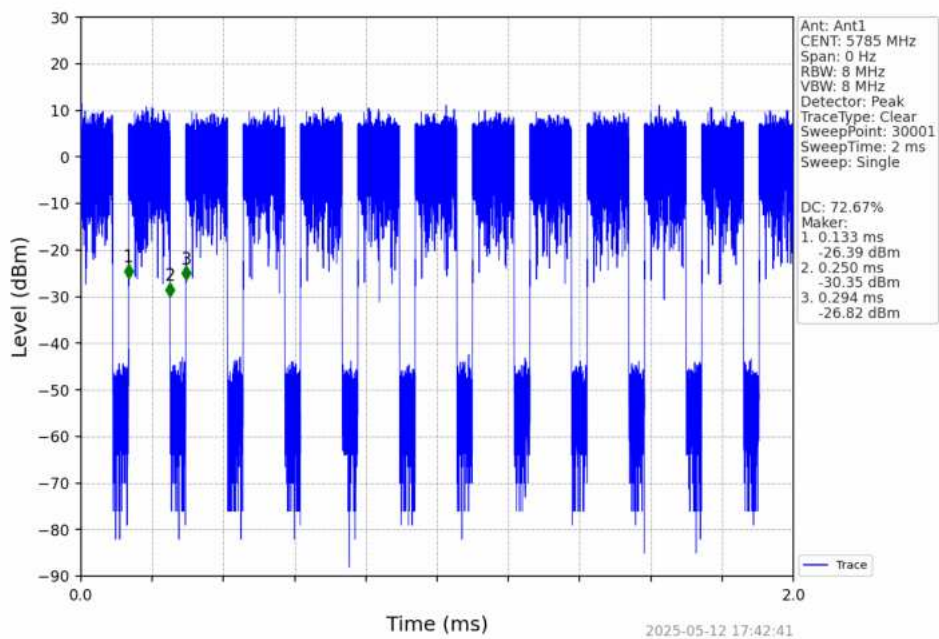
802.11a_HCH_5700MHz_Ant1_NTNV



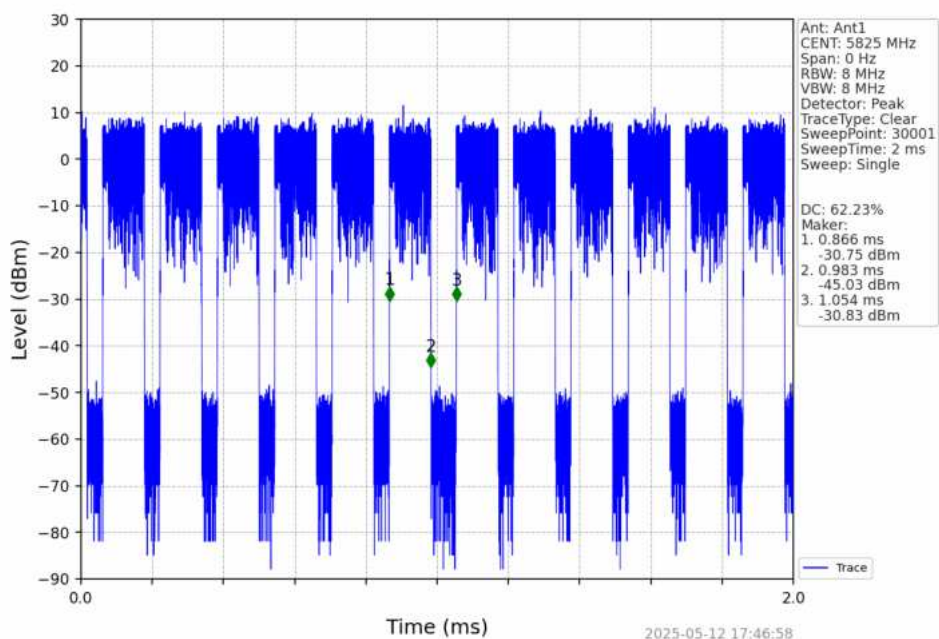
802.11a_LCH_5745MHz_Ant1_NTNV

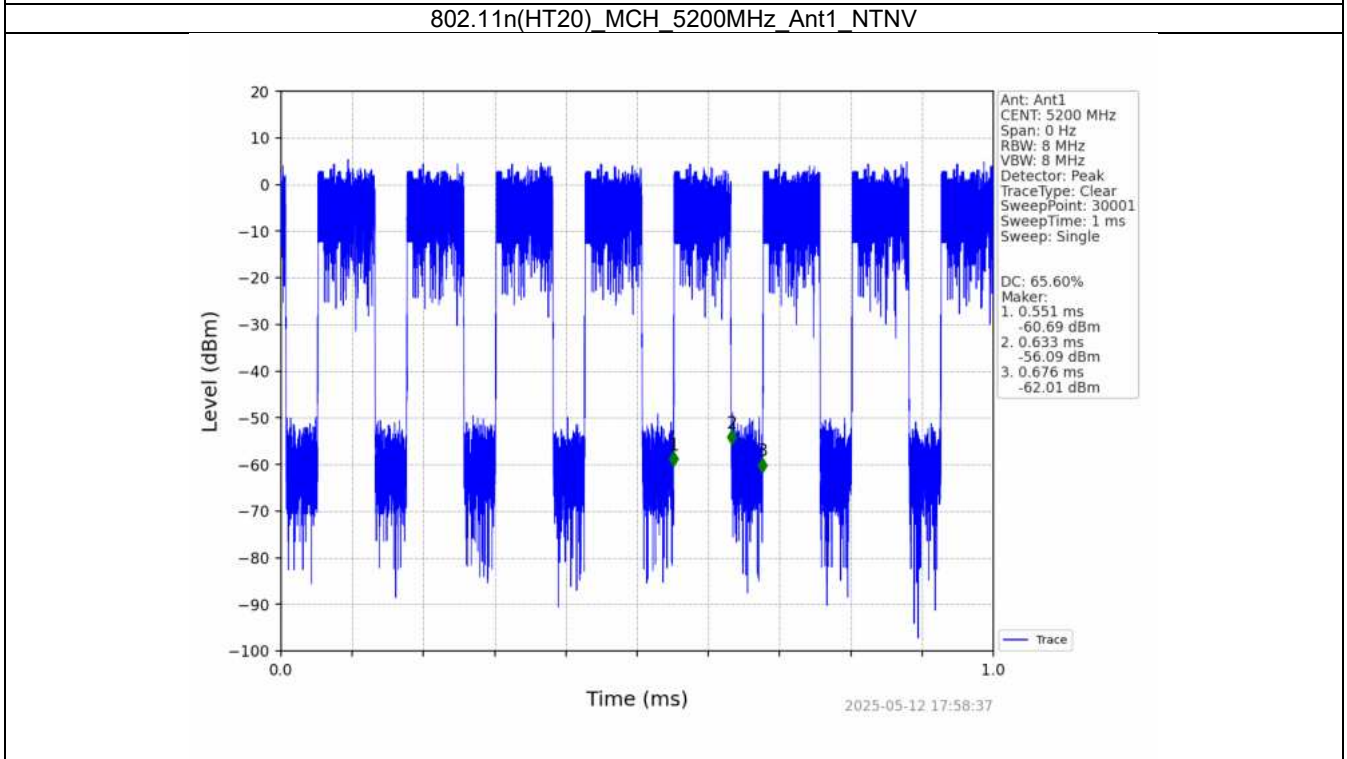
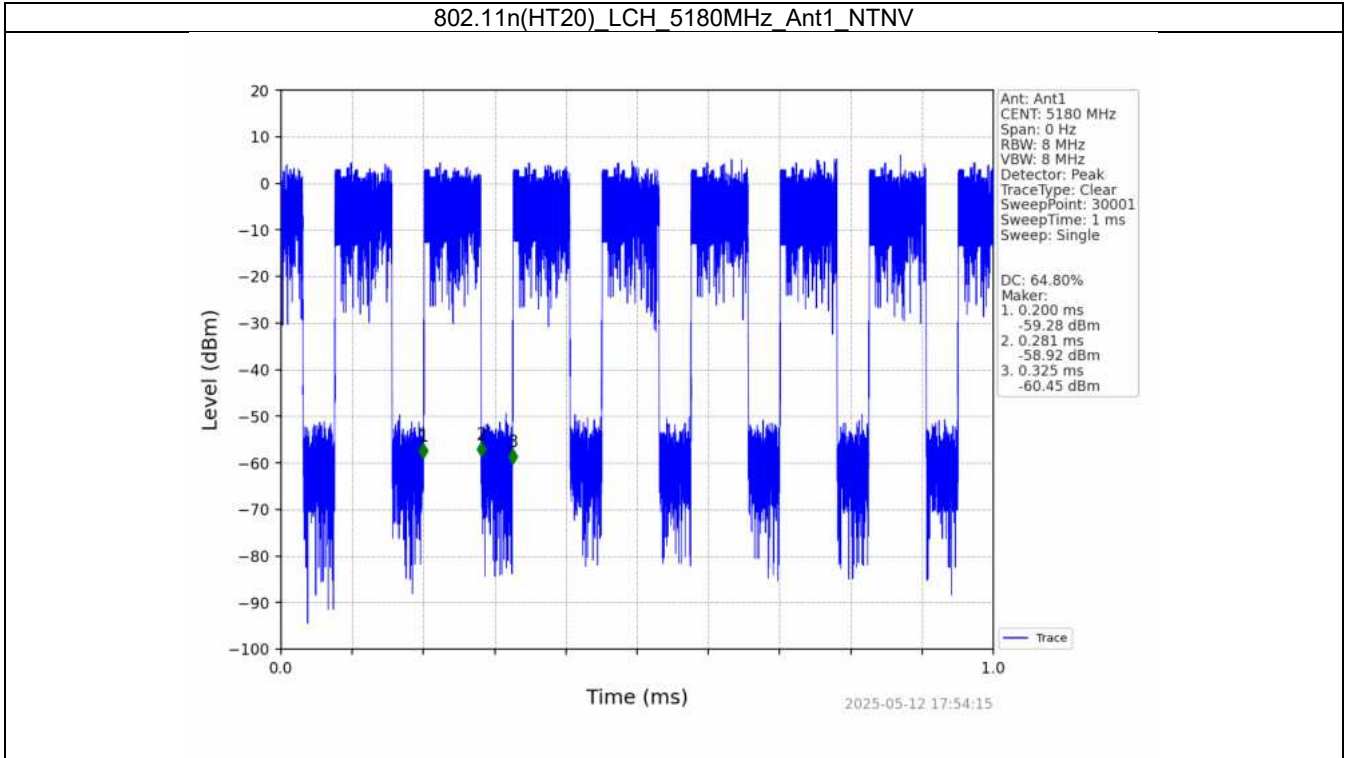


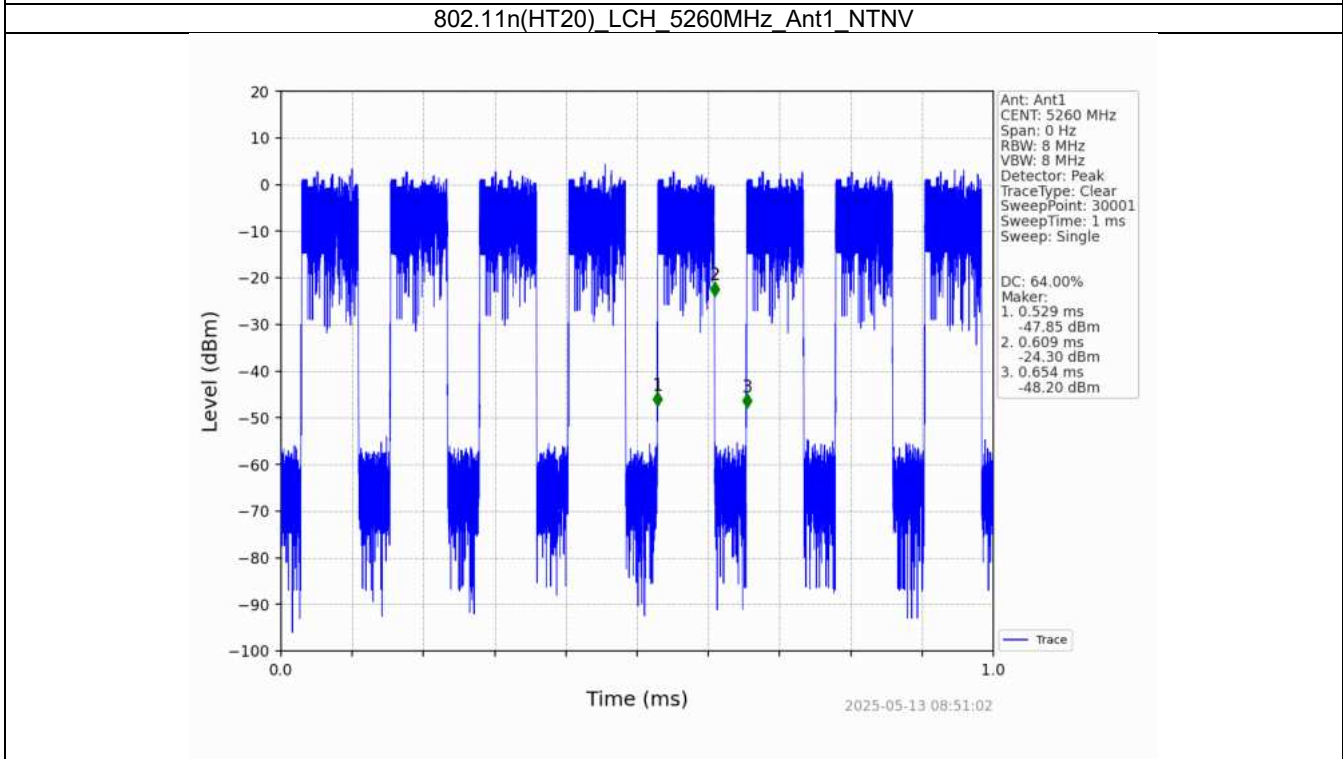
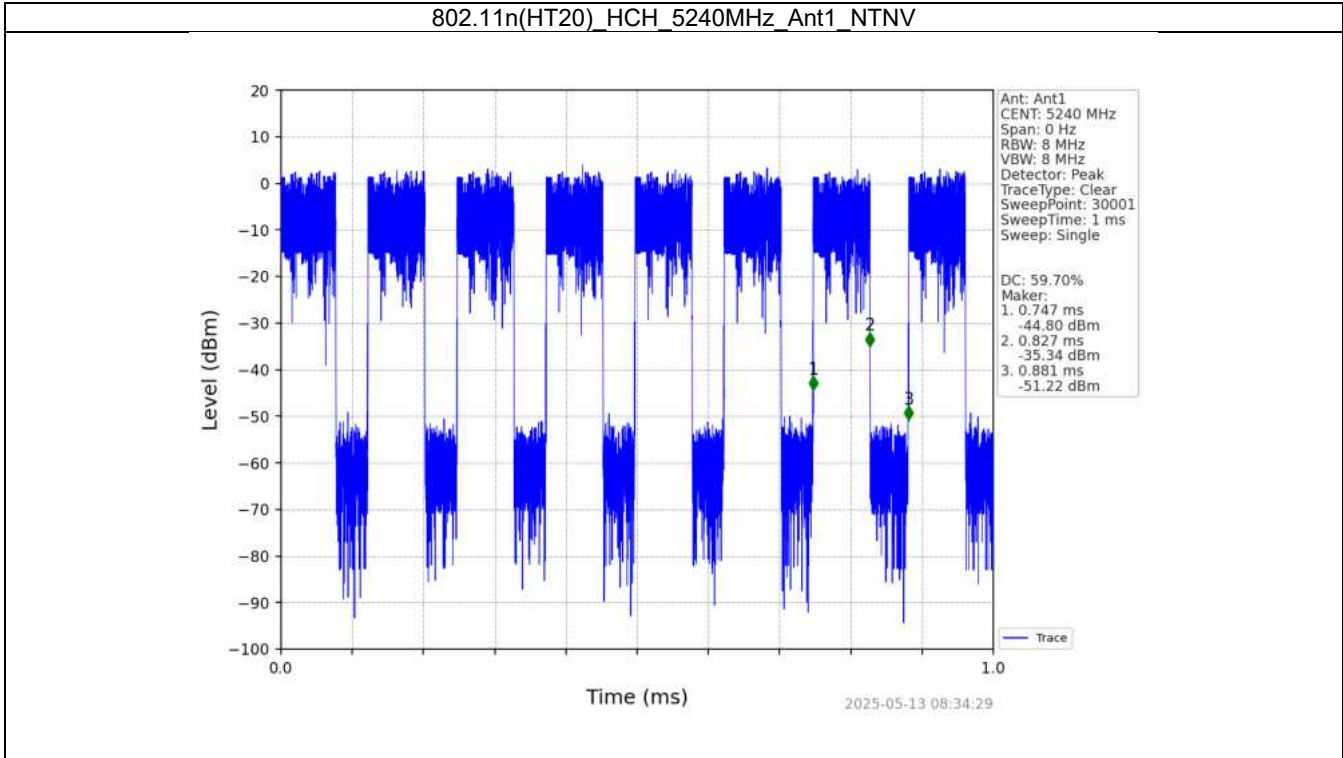
802.11a_MCH_5785MHz_Ant1_NTNV



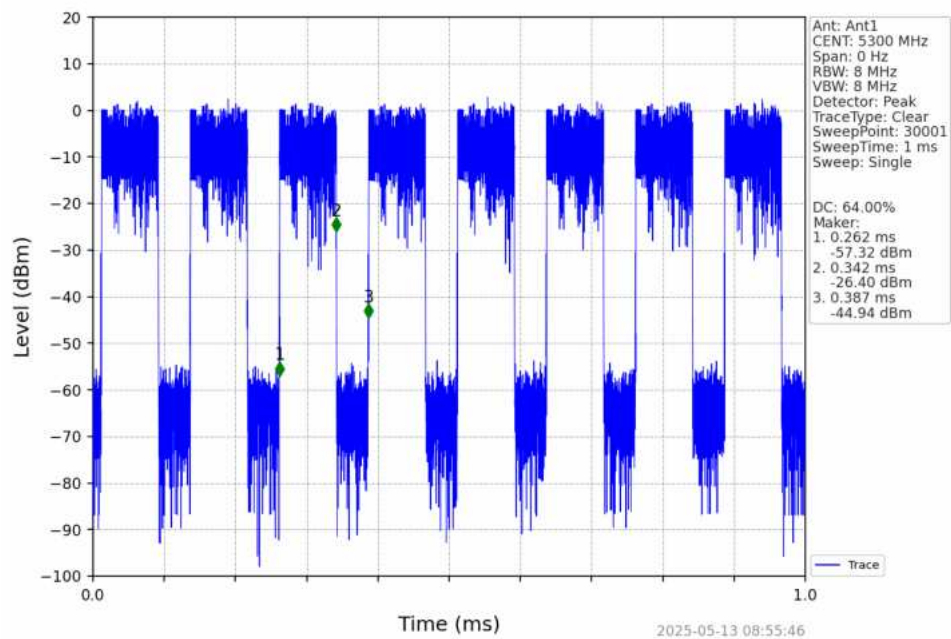
802.11a_HCH_5825MHz_Ant1_NTNV



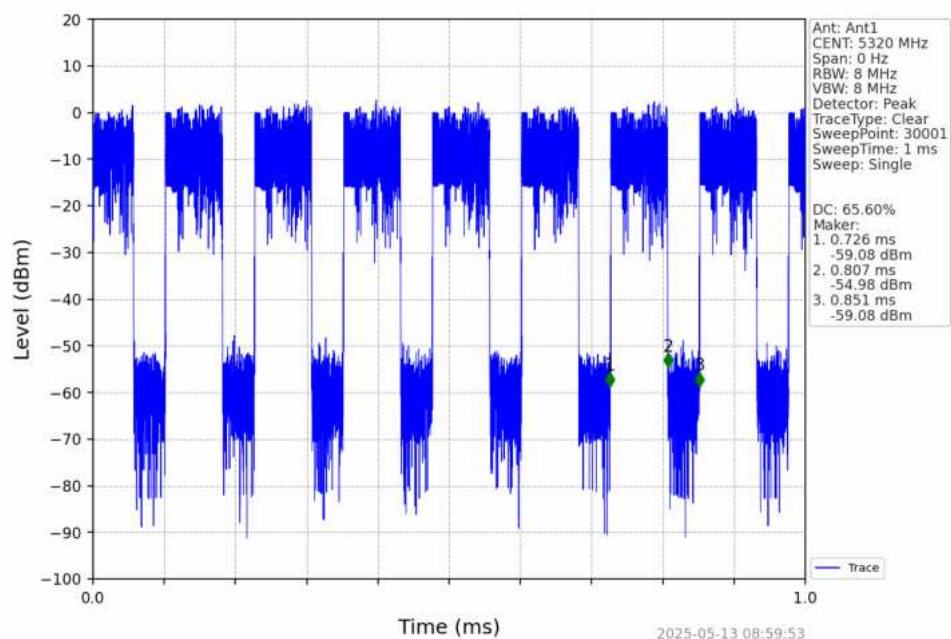




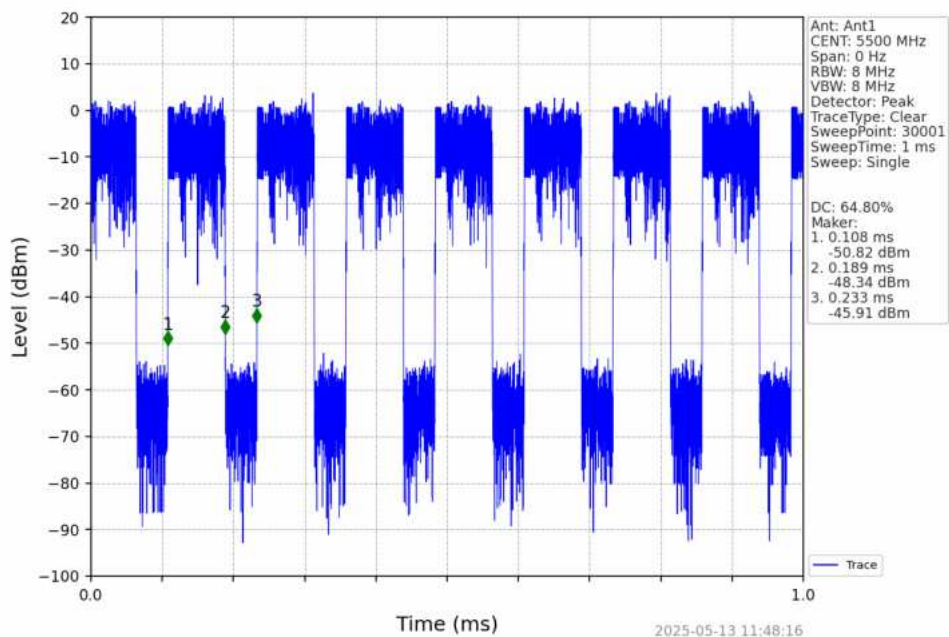
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



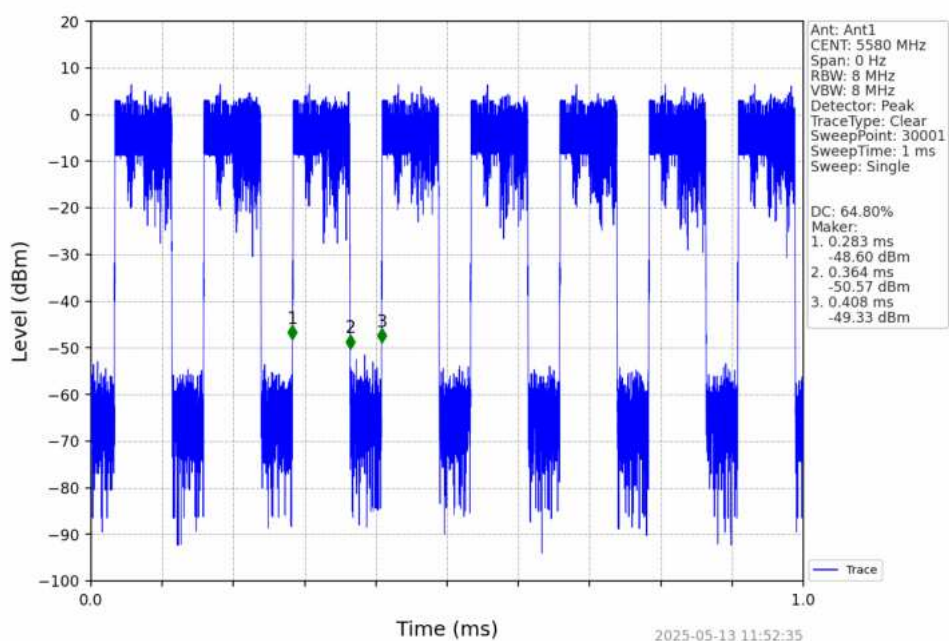
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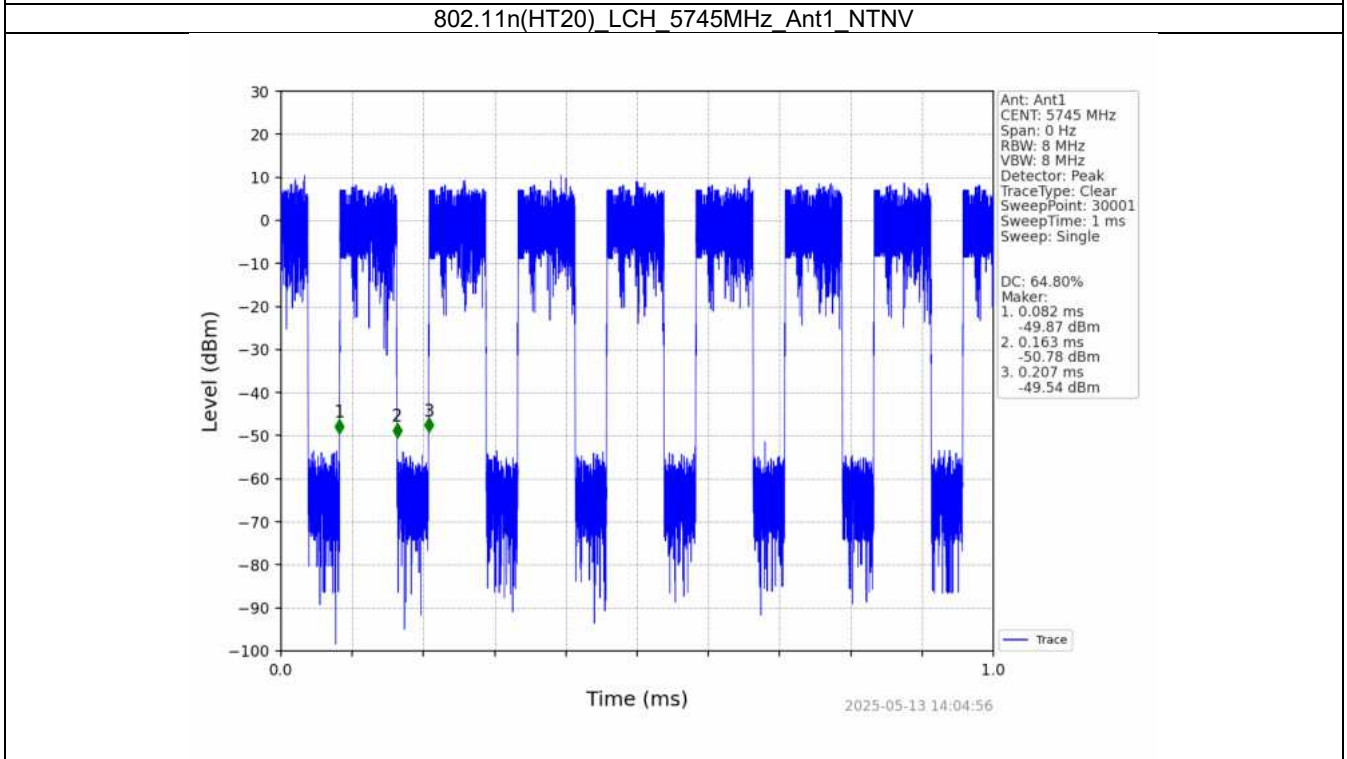
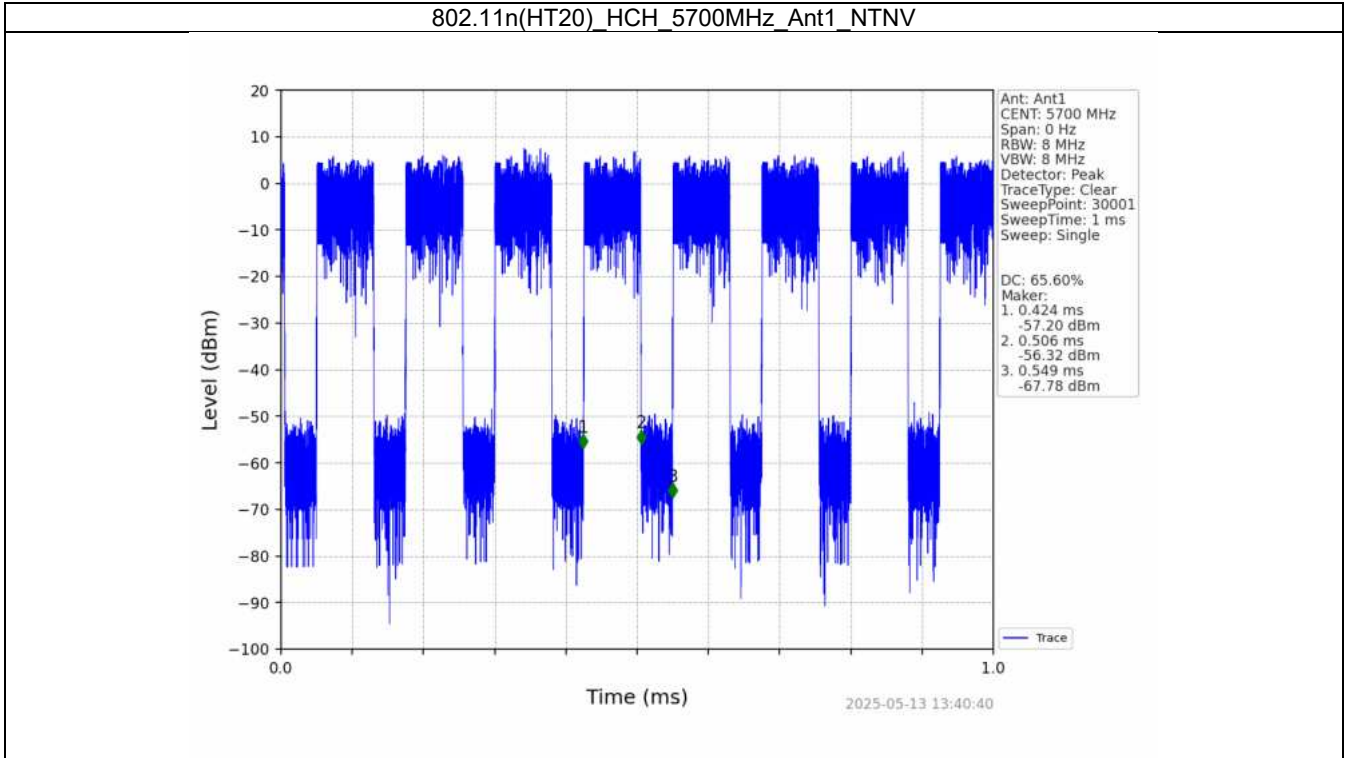


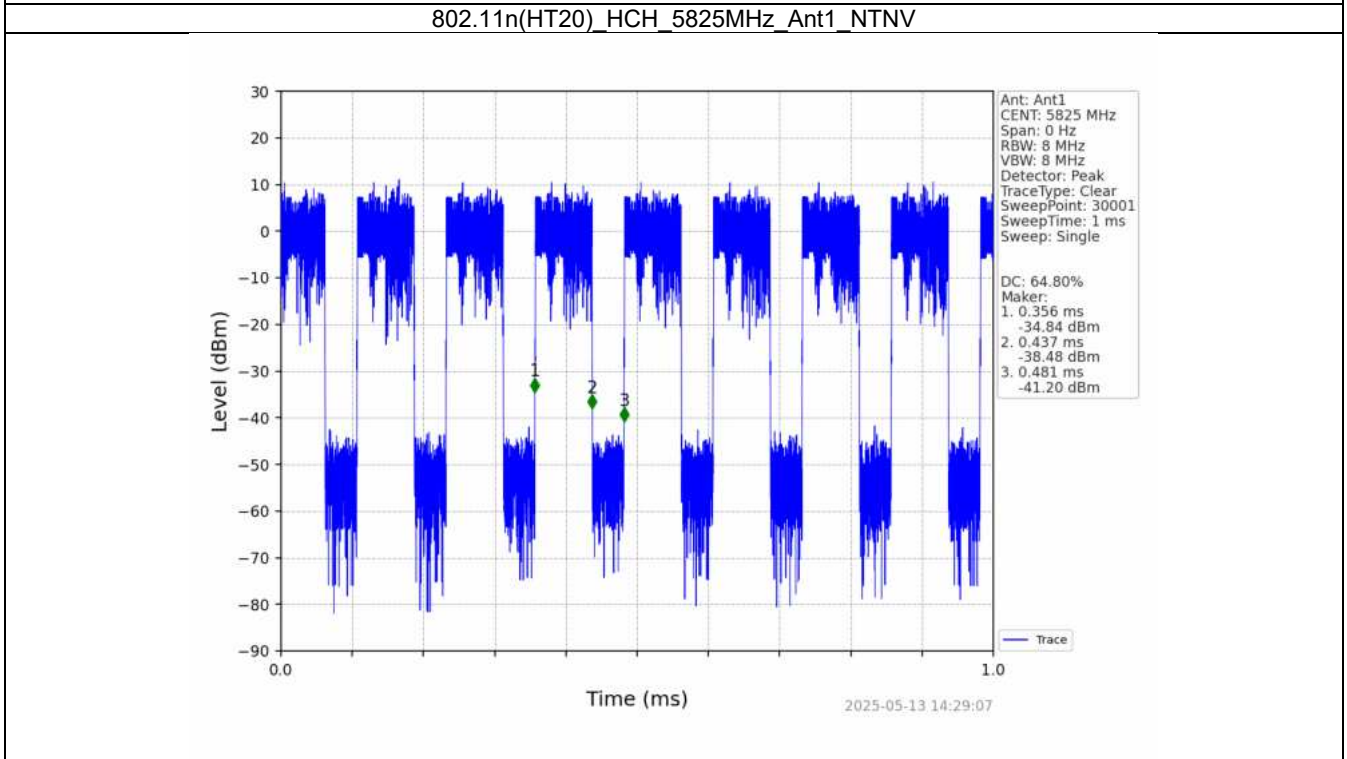
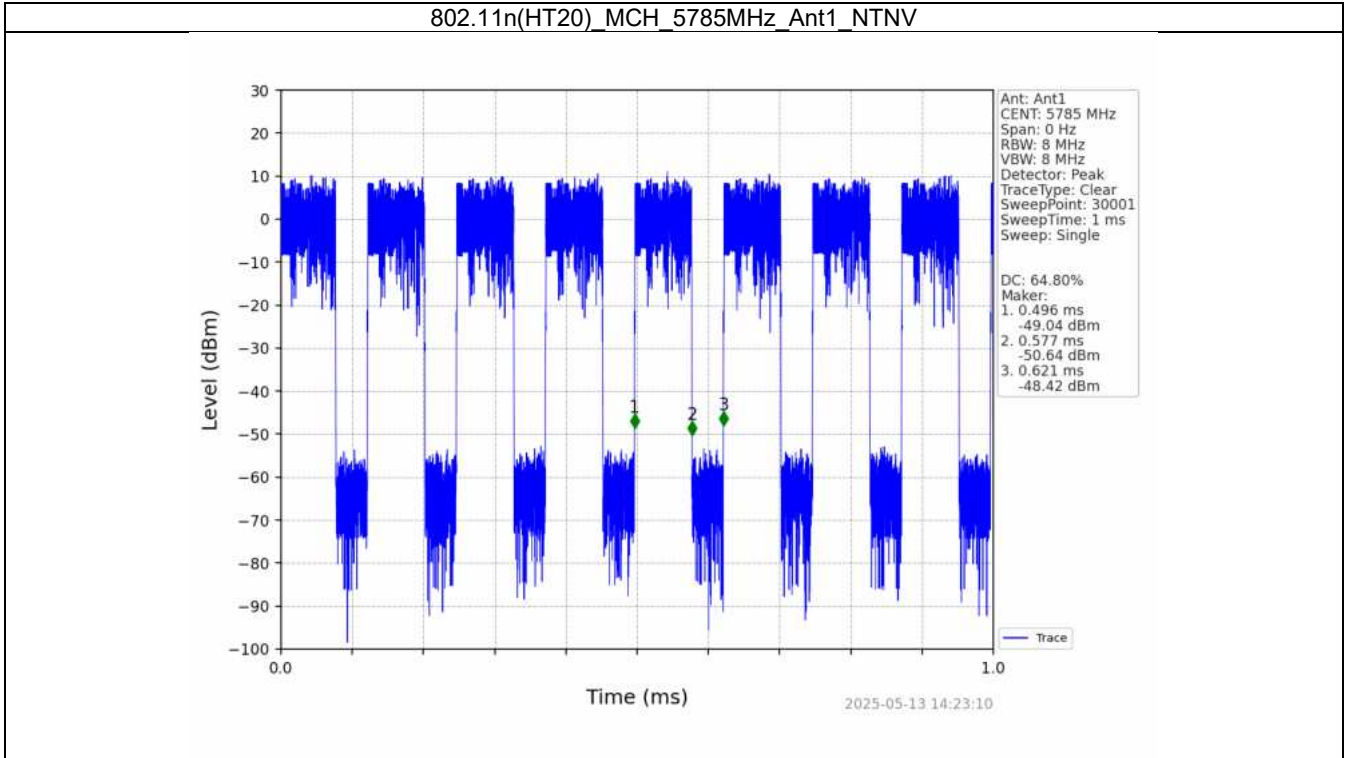
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



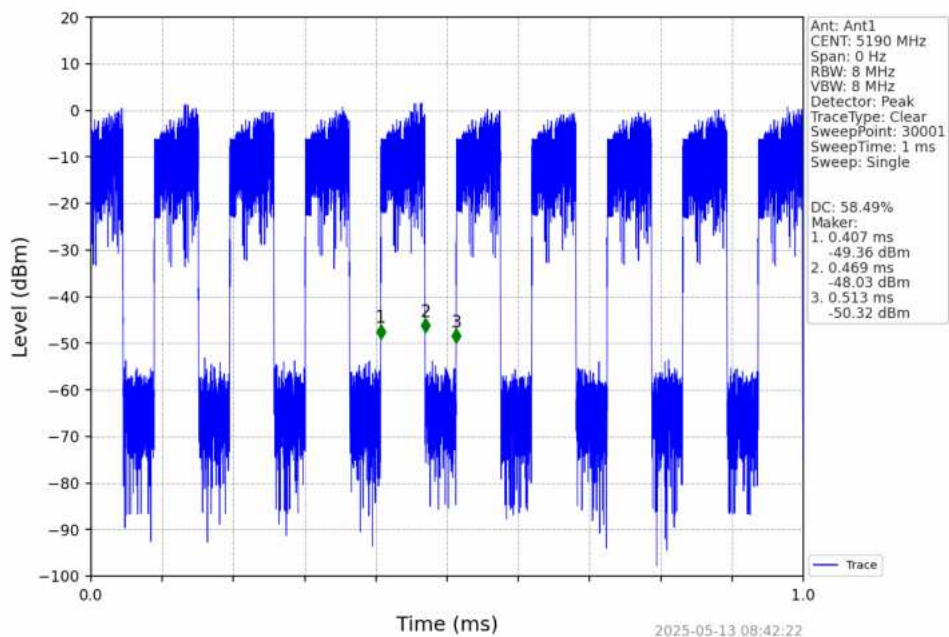
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



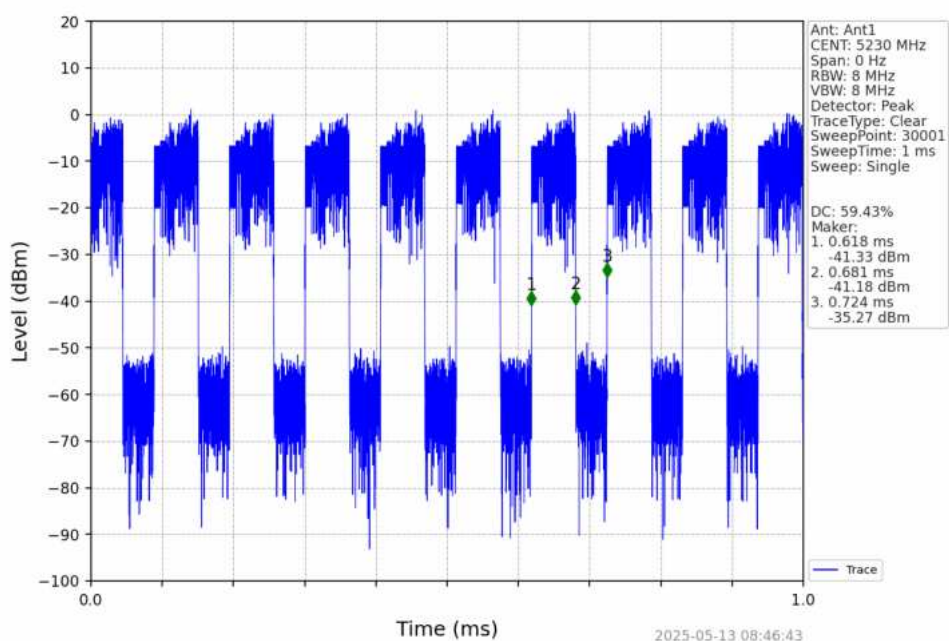


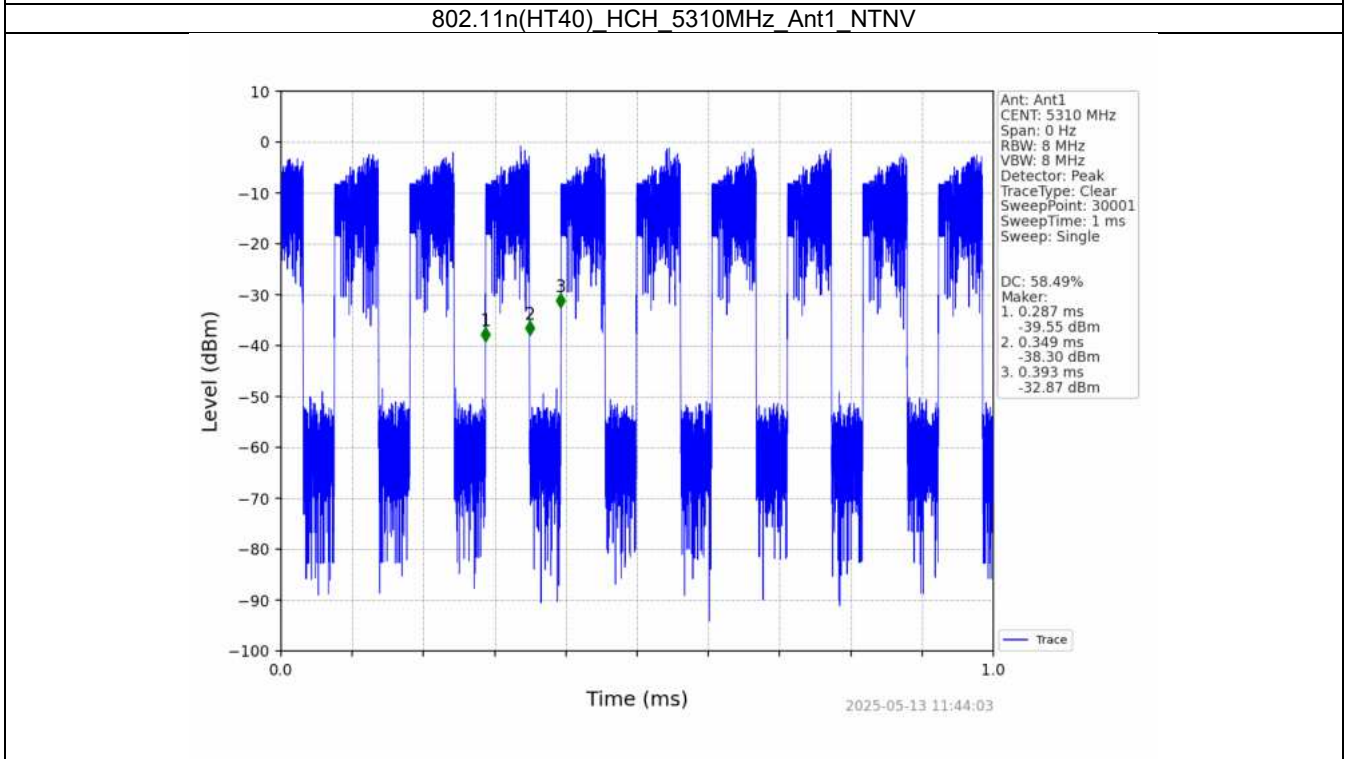
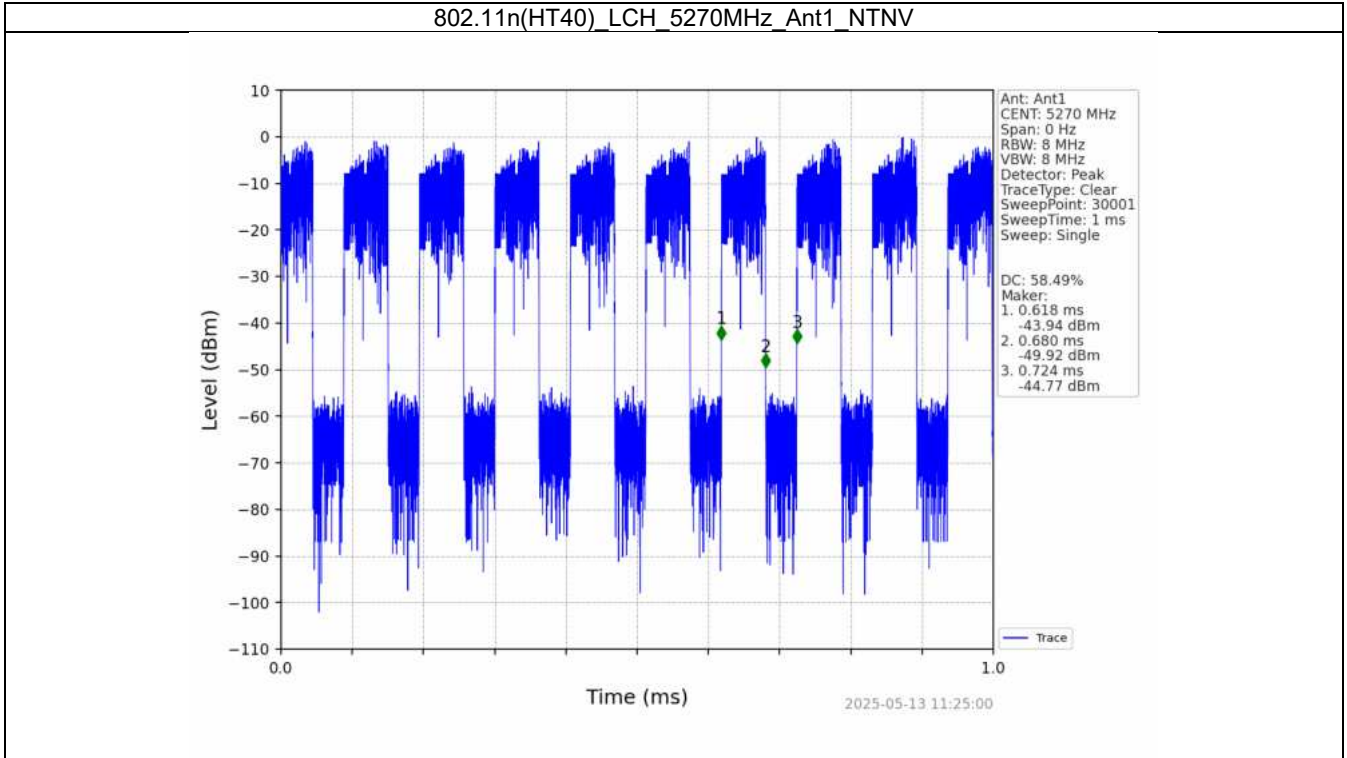


802.11n(HT40)_LCH_5190MHz_Ant1_NTNV

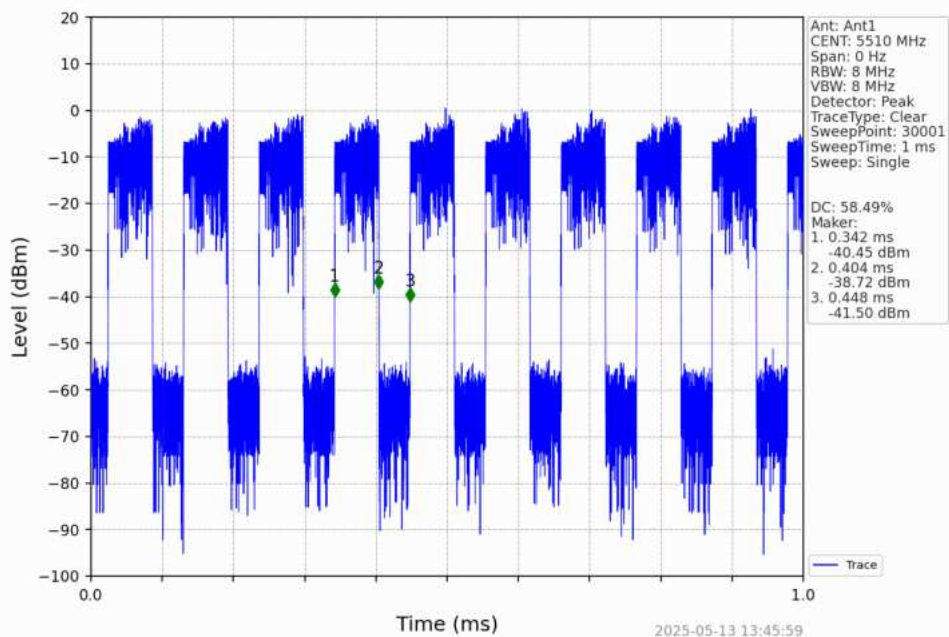


802.11n(HT40)_HCH_5230MHz_Ant1_NTNV

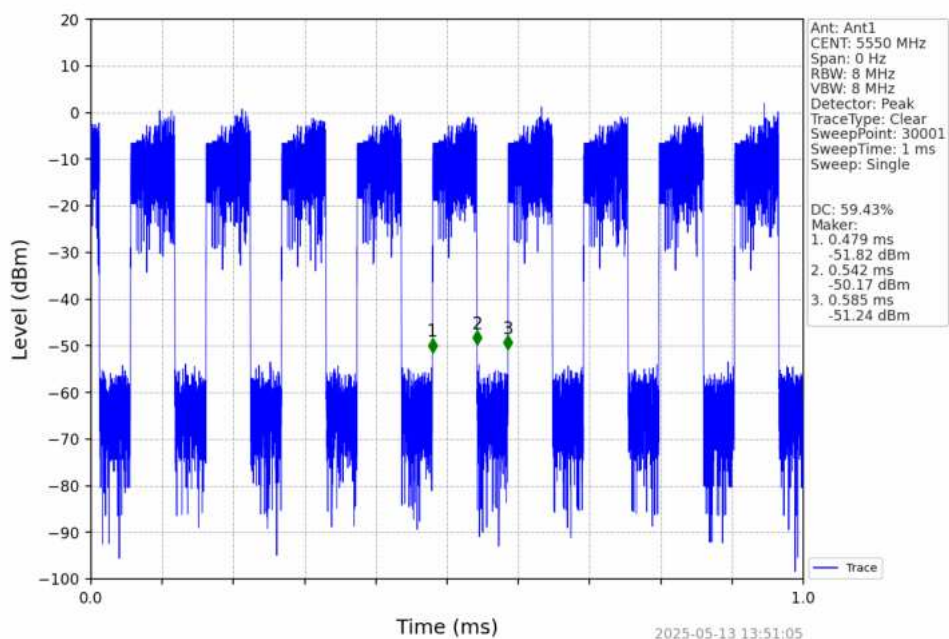


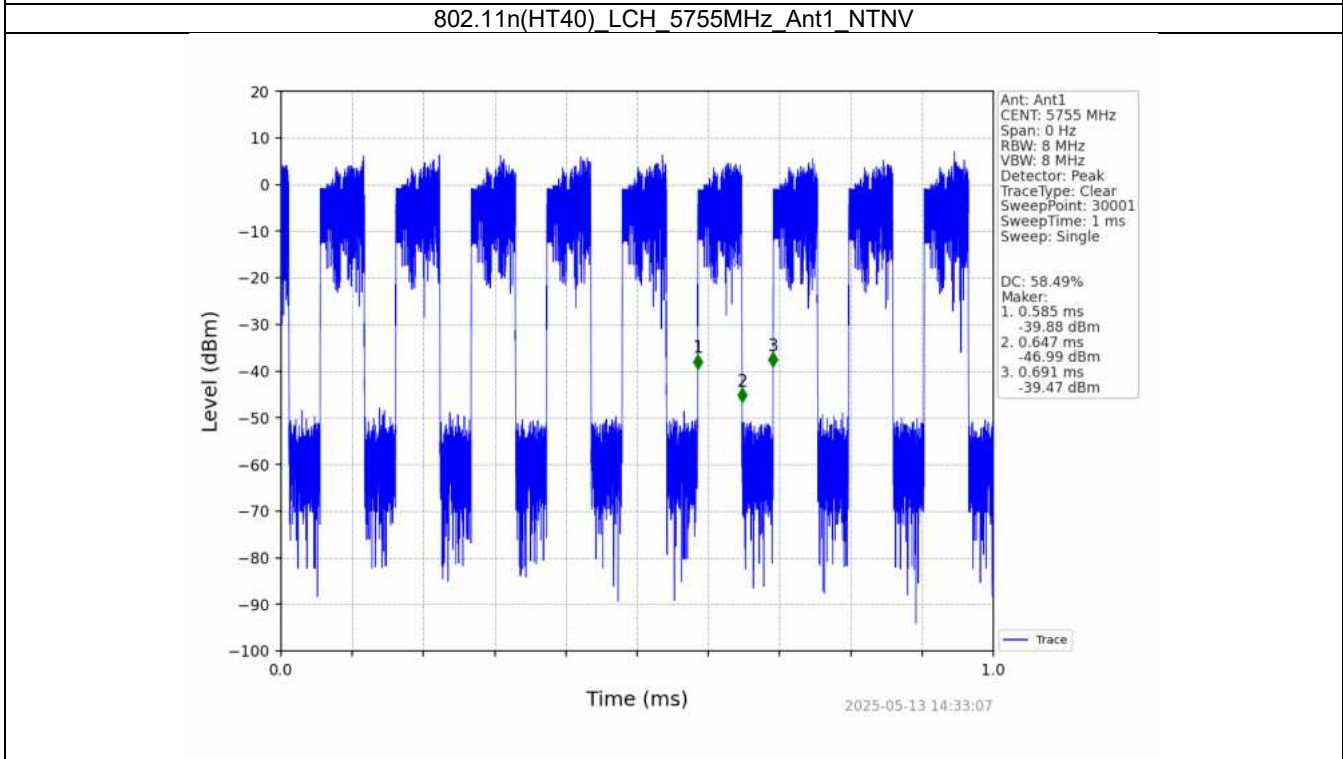
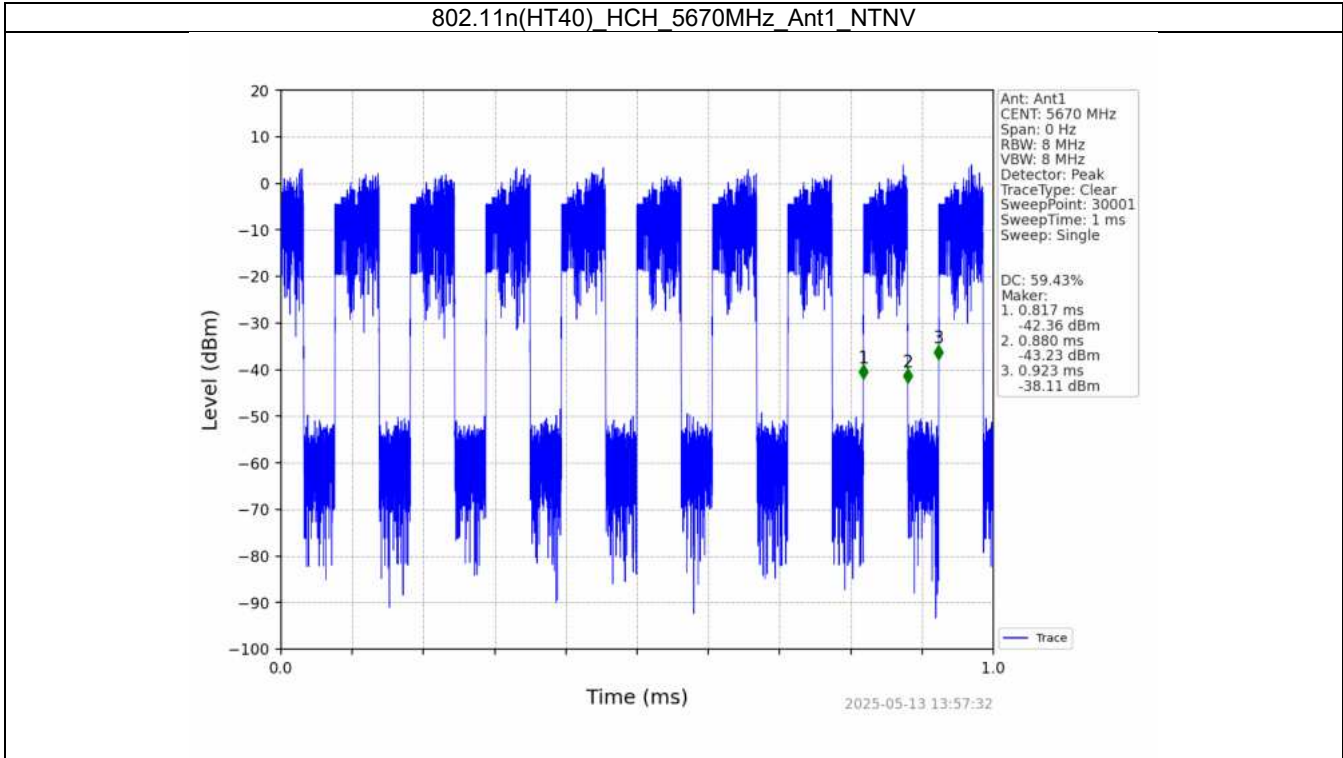


802.11n(HT40)_LCH_5510MHz_Ant1_NTNV

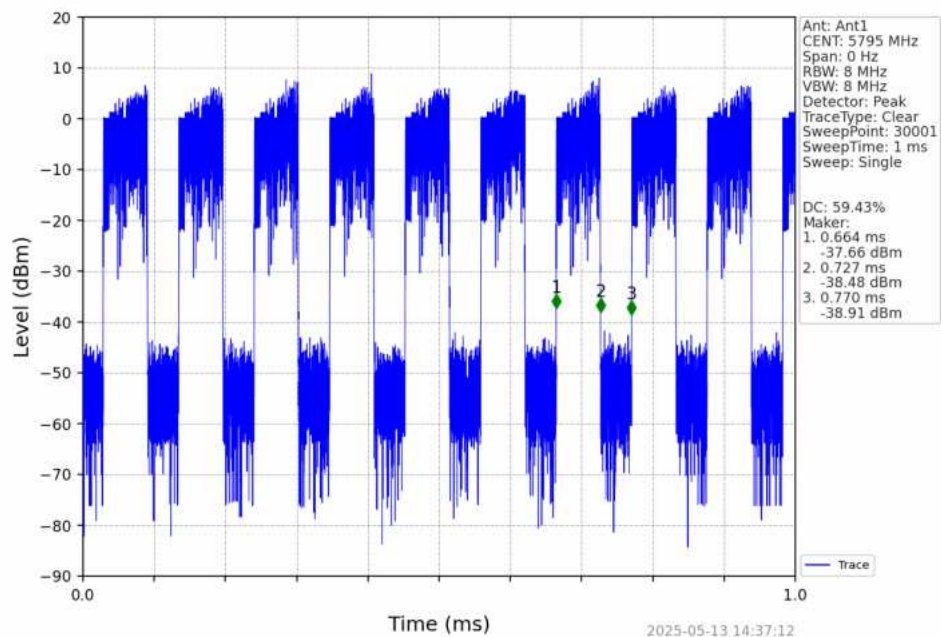


802.11n(HT40)_MCH_5550MHz_Ant1_NTNV

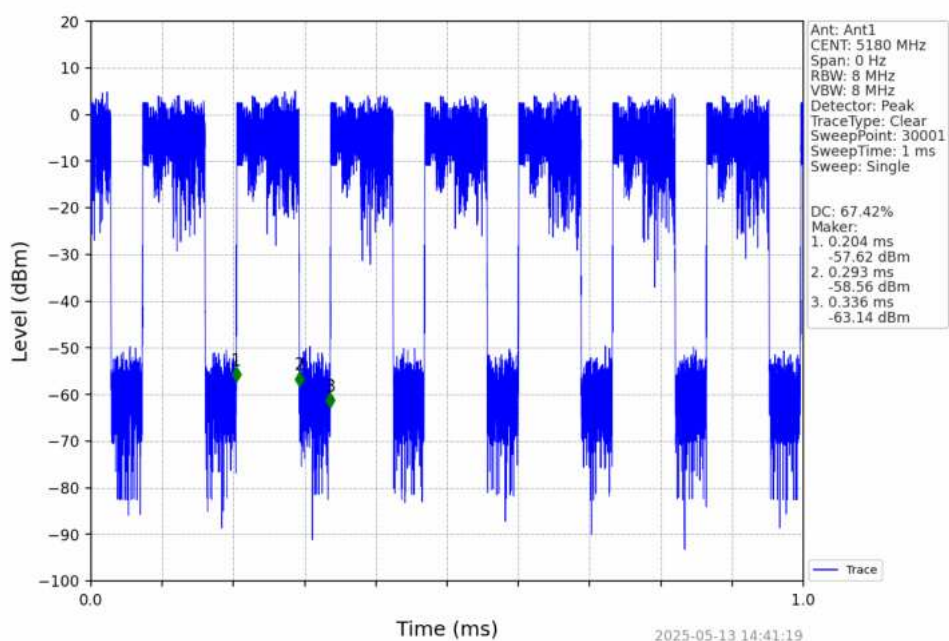


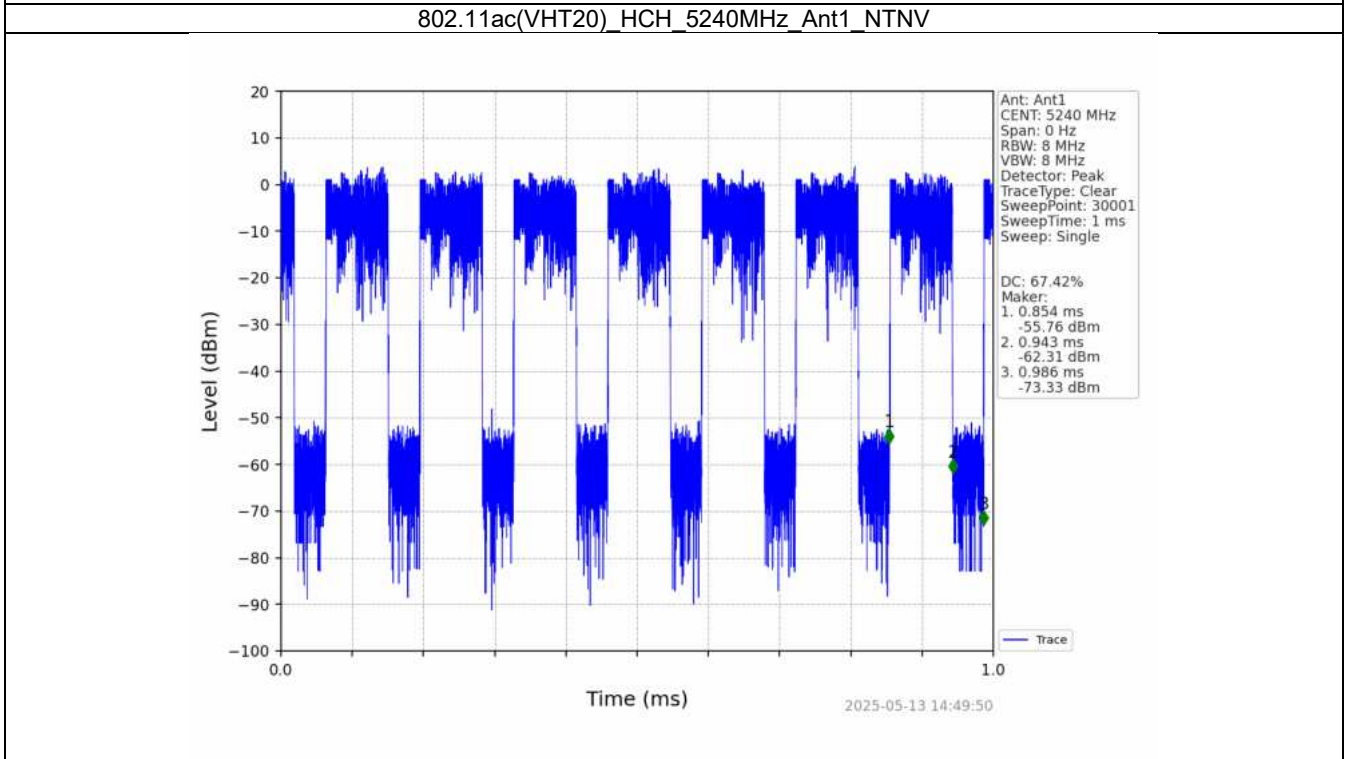
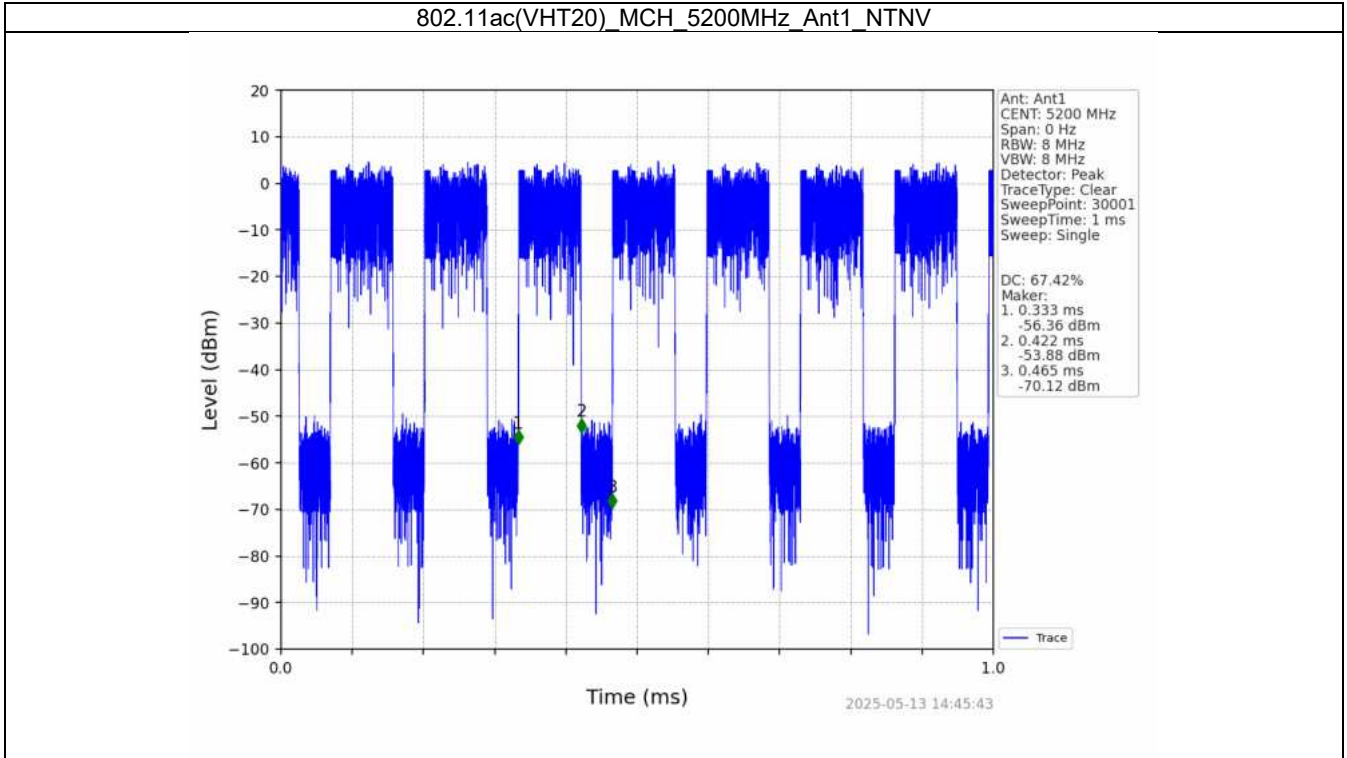


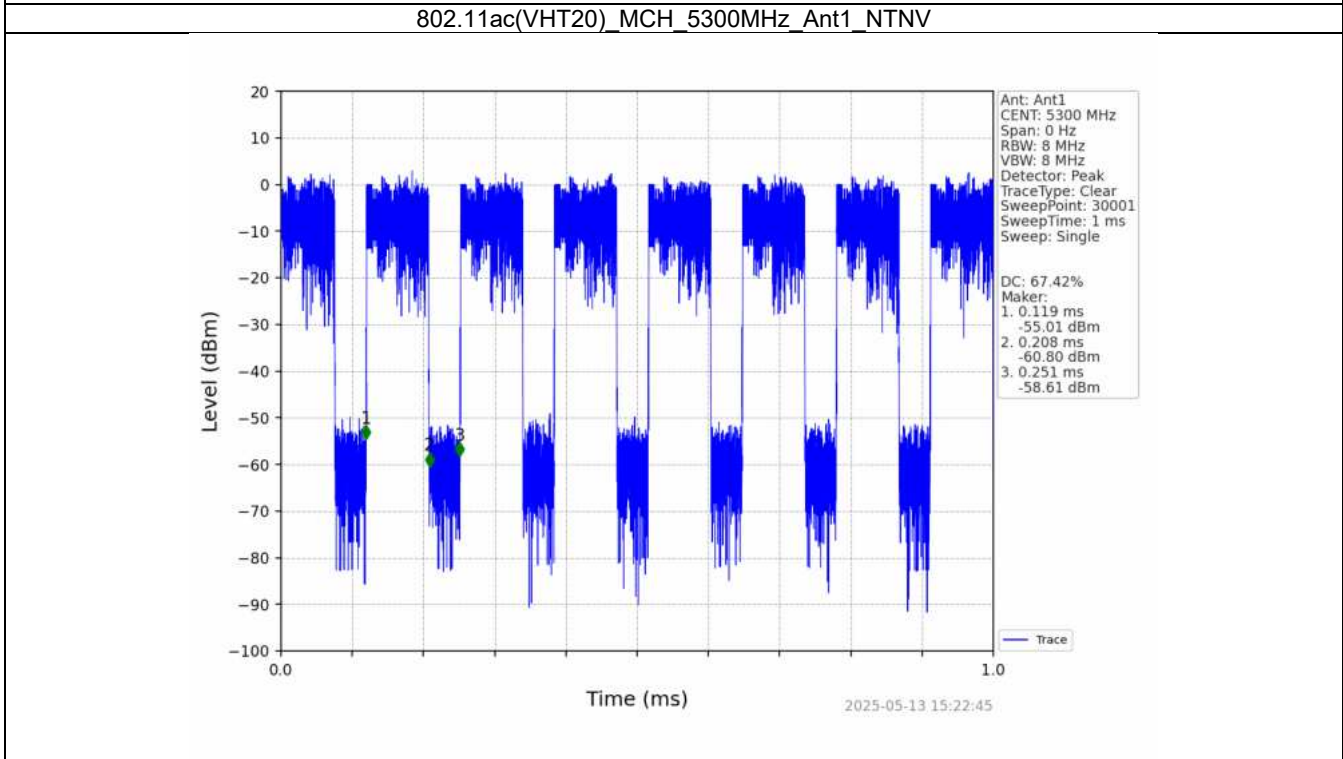
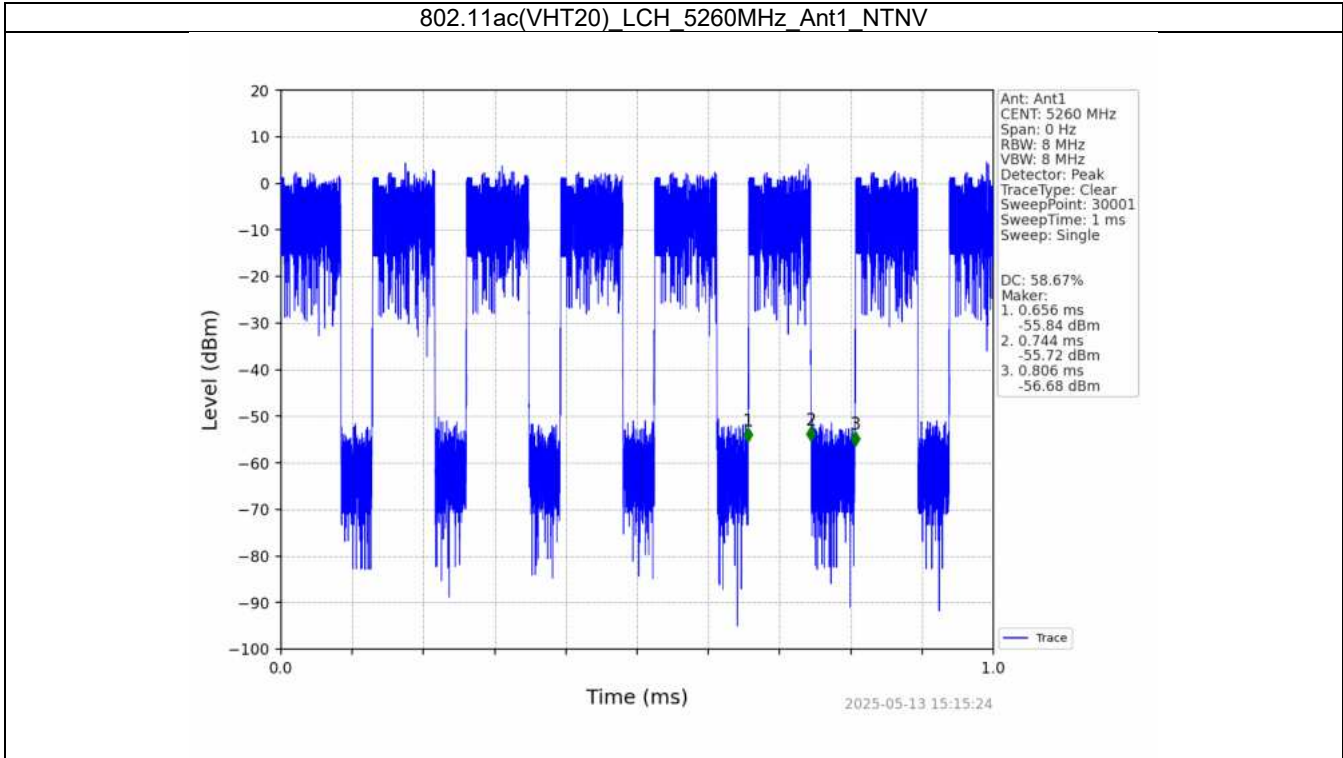
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



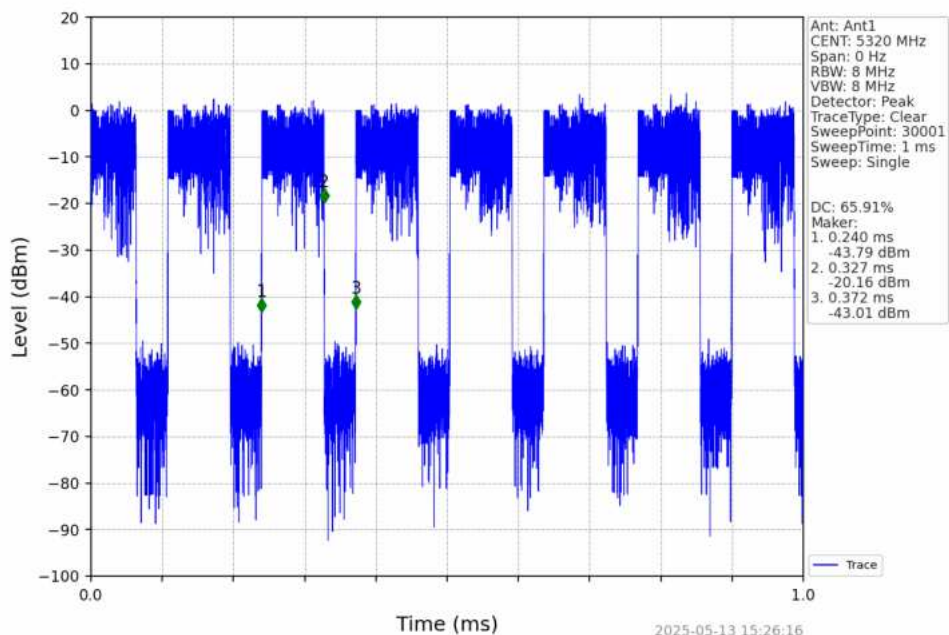
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



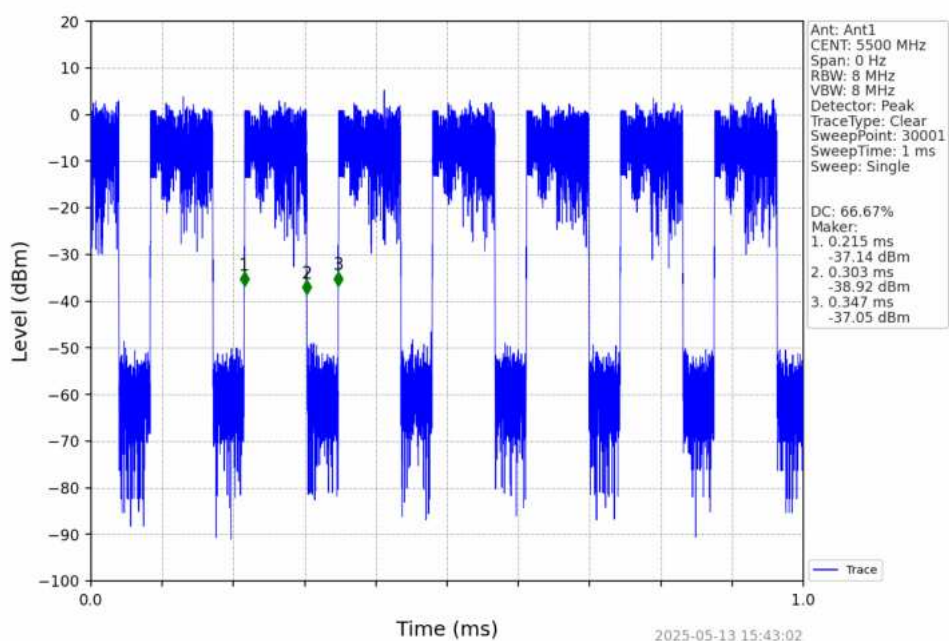


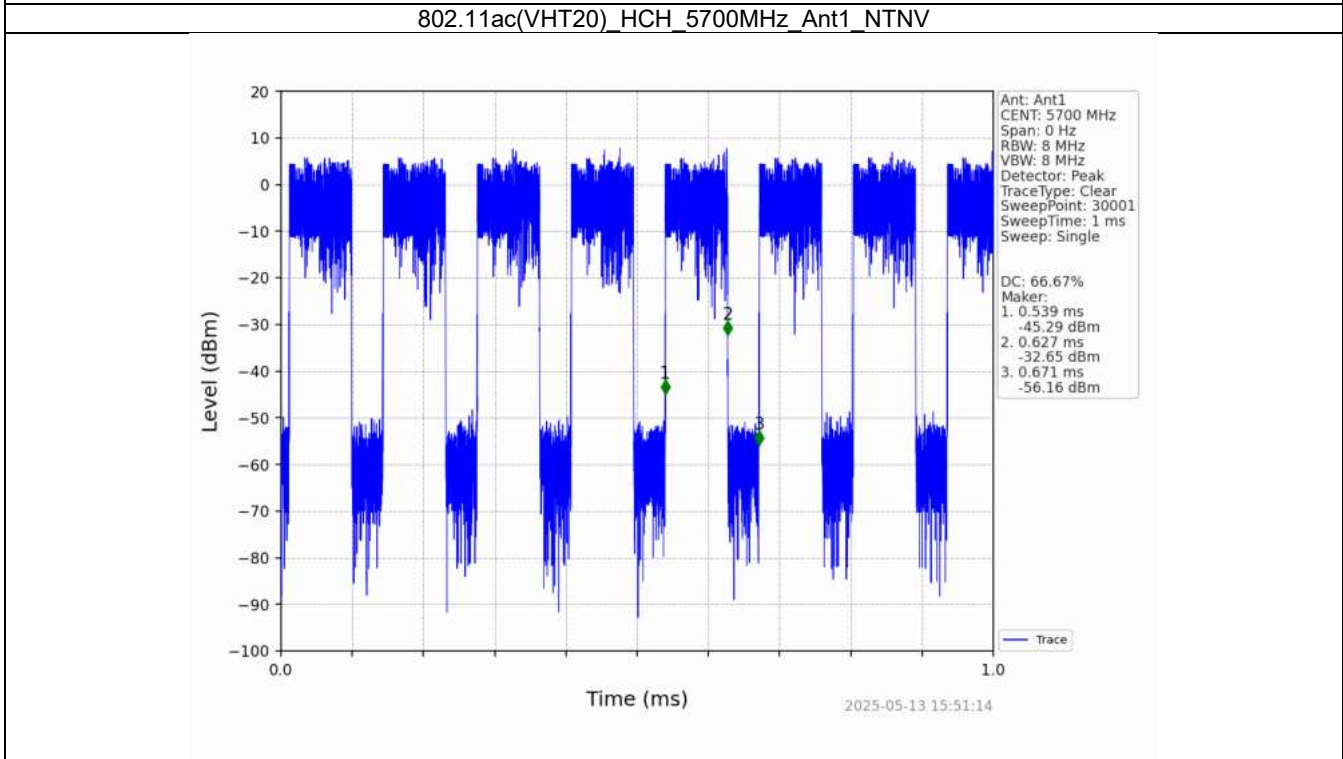
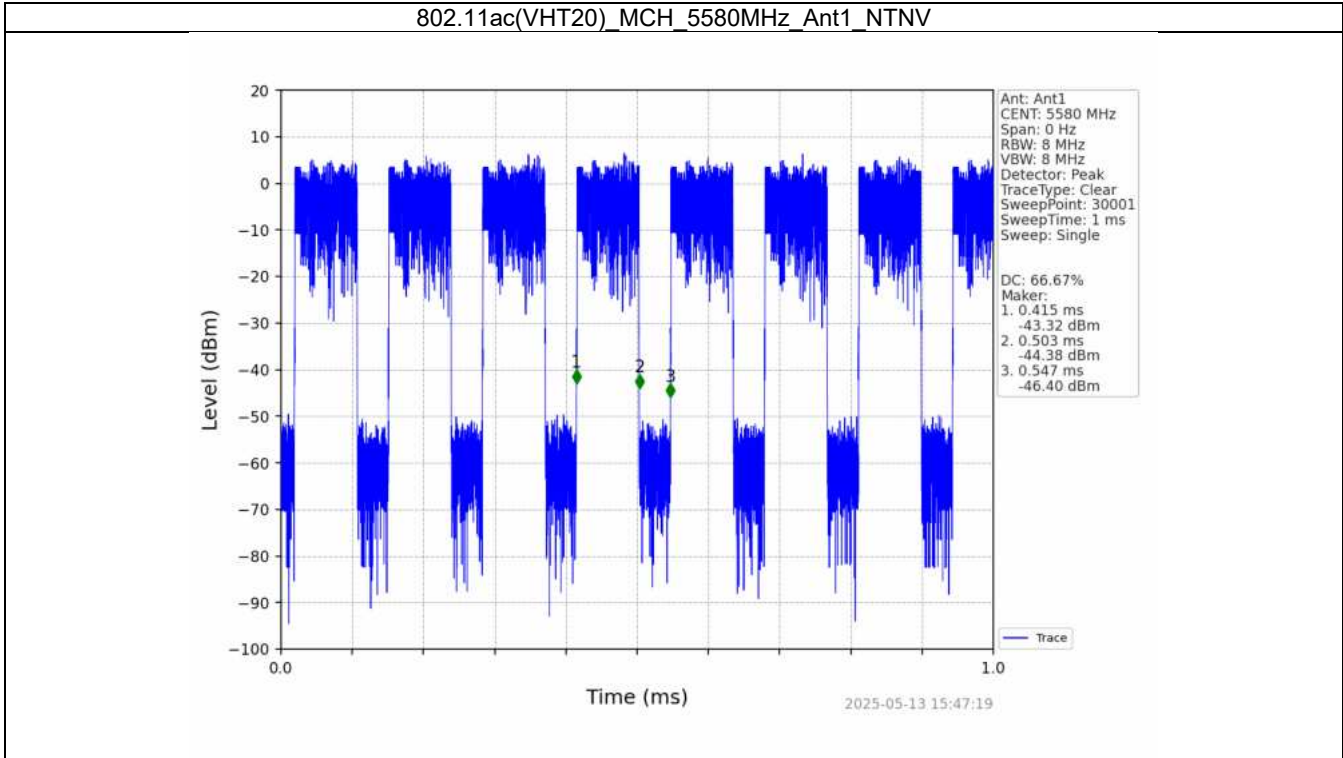


802.11ac(VHT20)_HCH_5320MHz_Ant1_NTNV

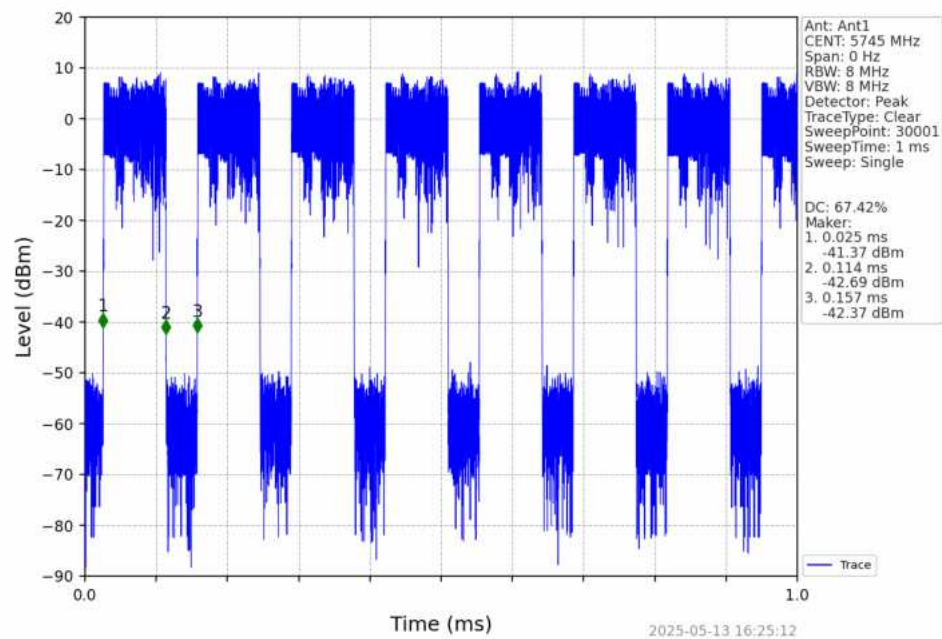


802.11ac(VHT20)_LCH_5500MHz_Ant1_NTNV

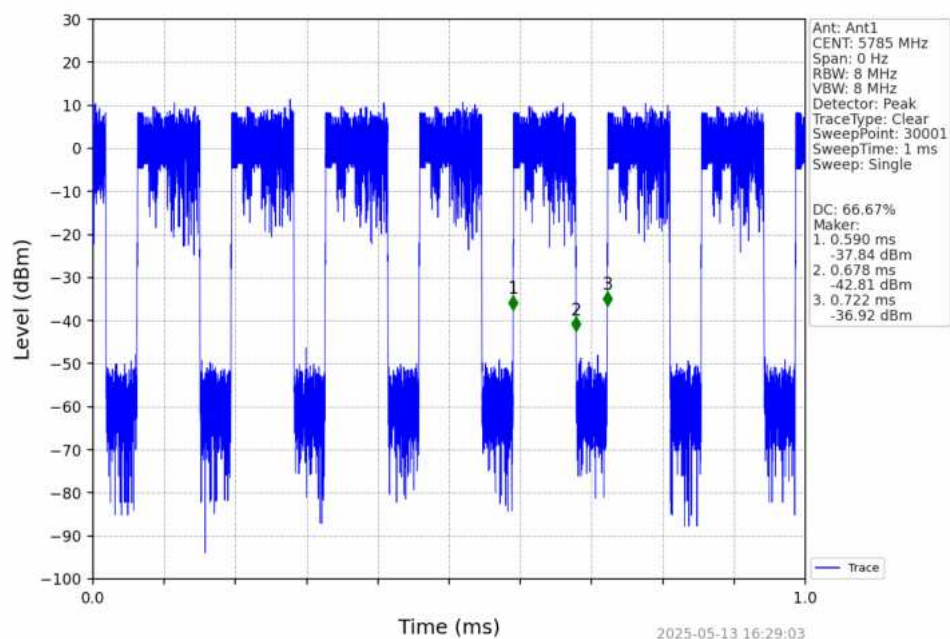




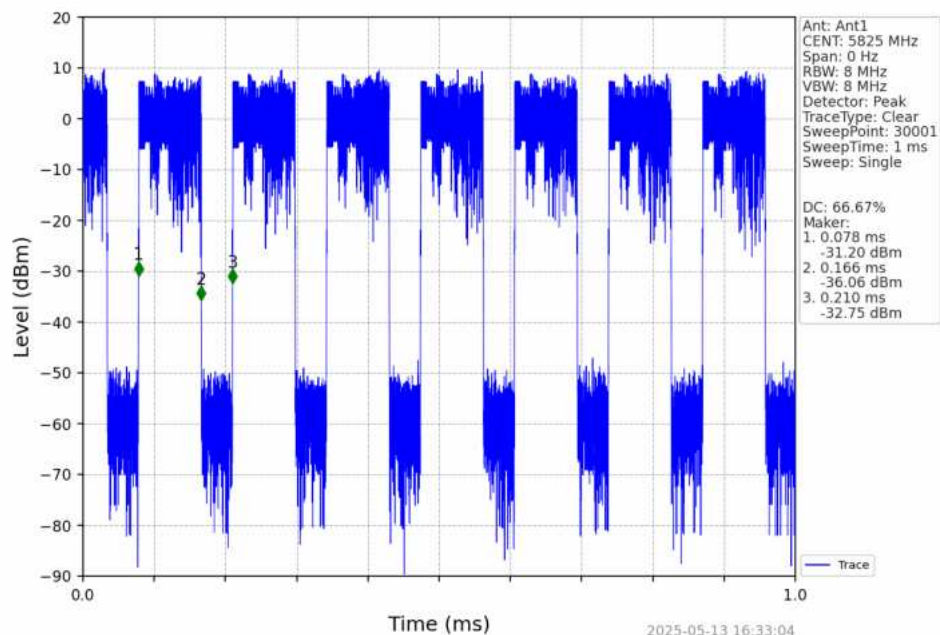
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



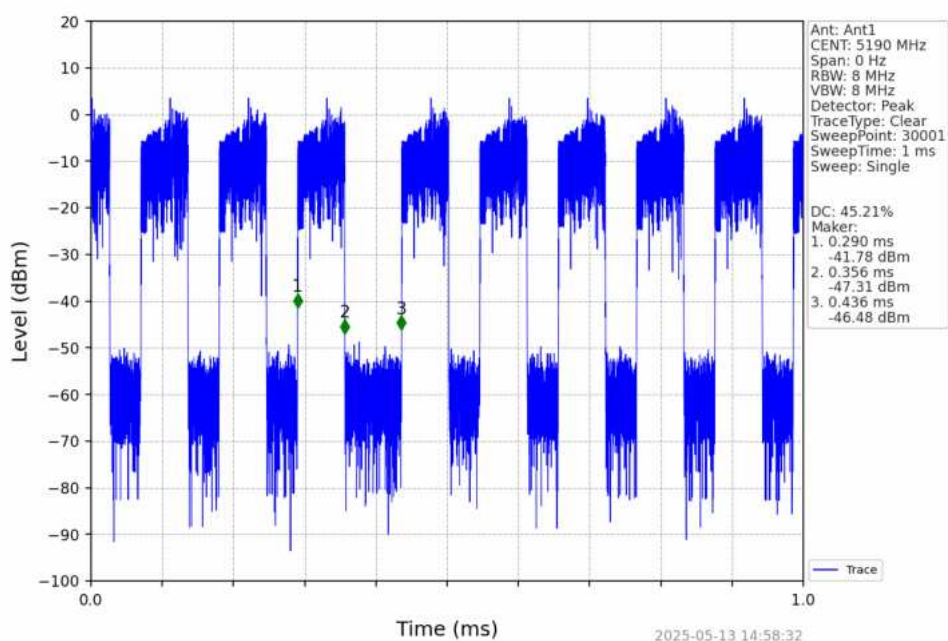
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV

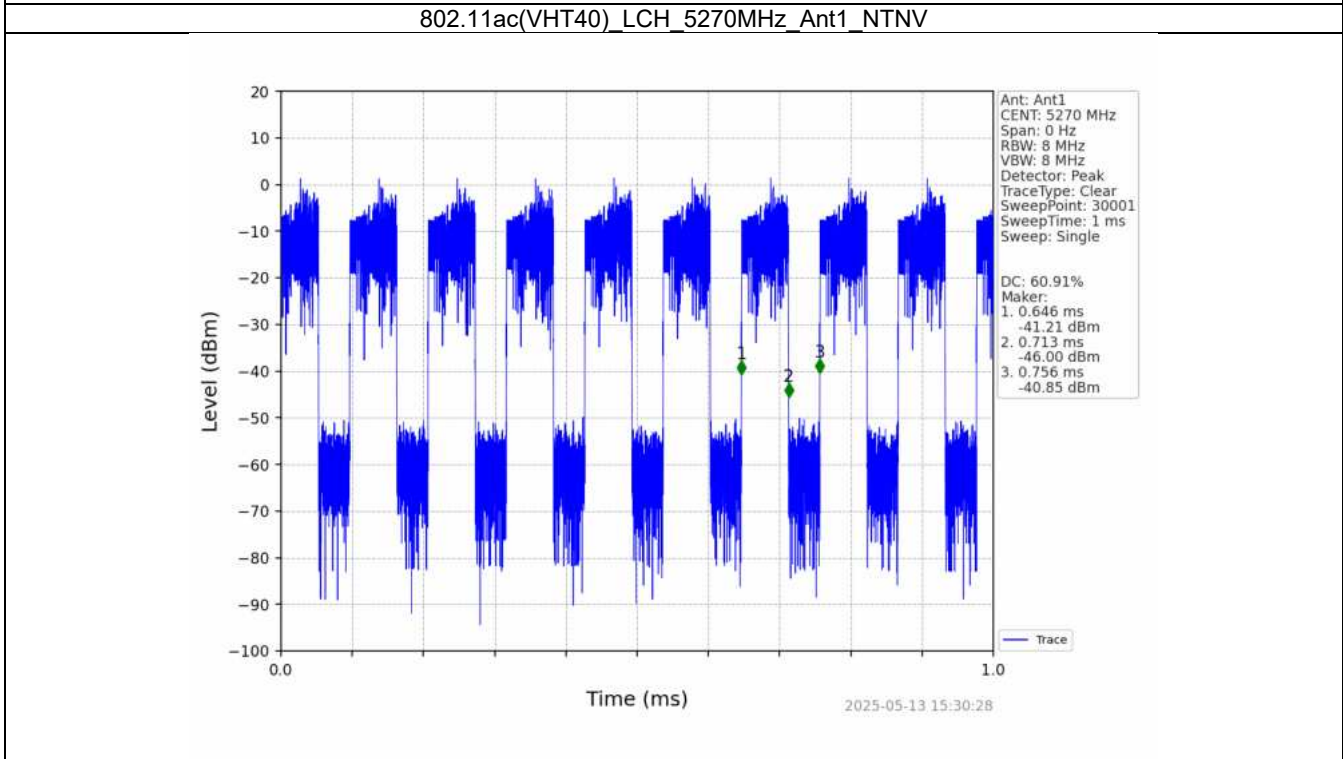
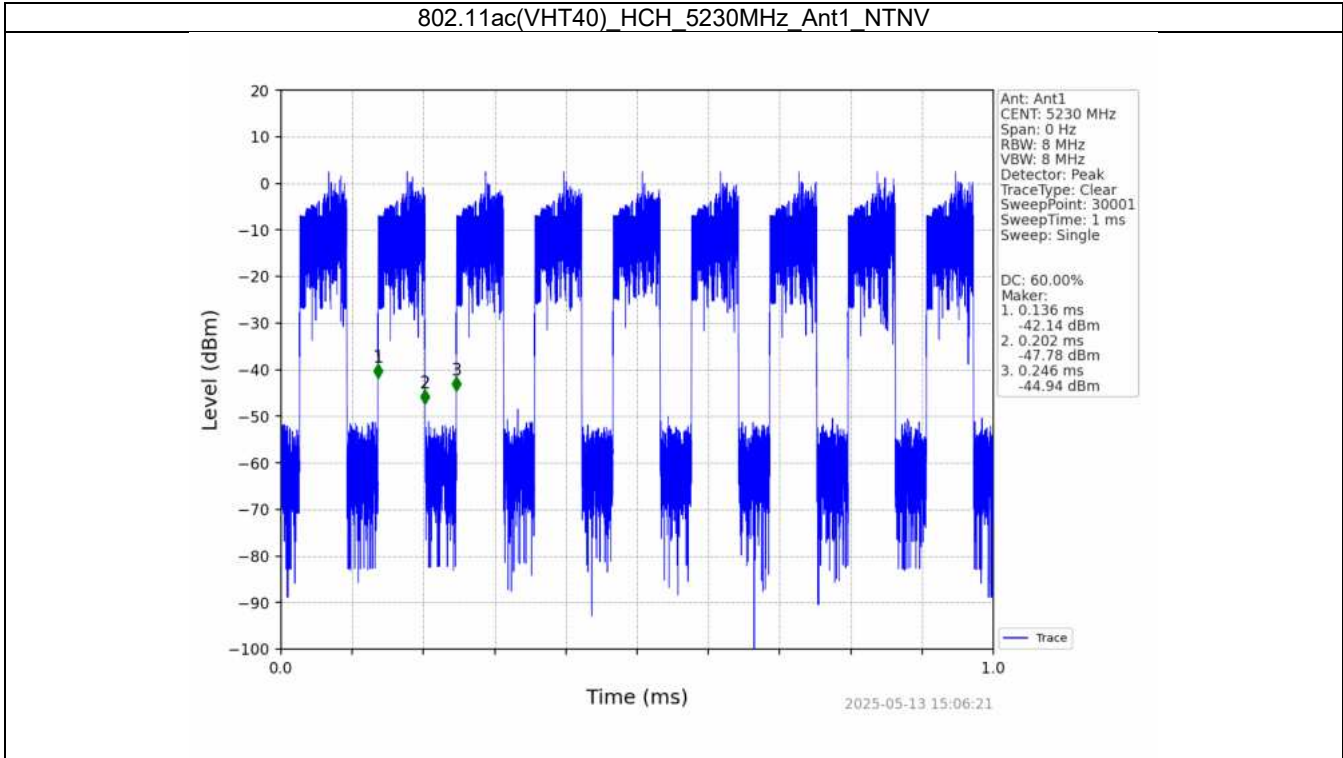


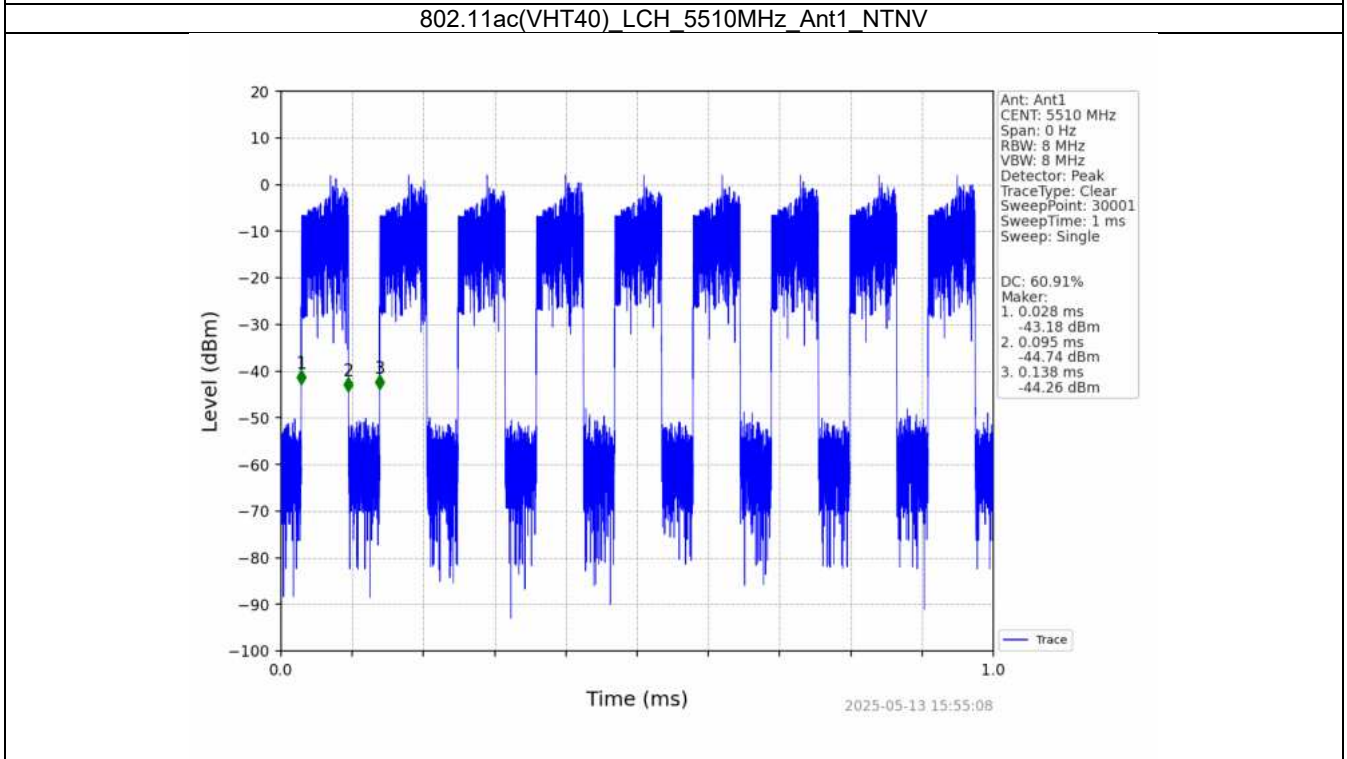
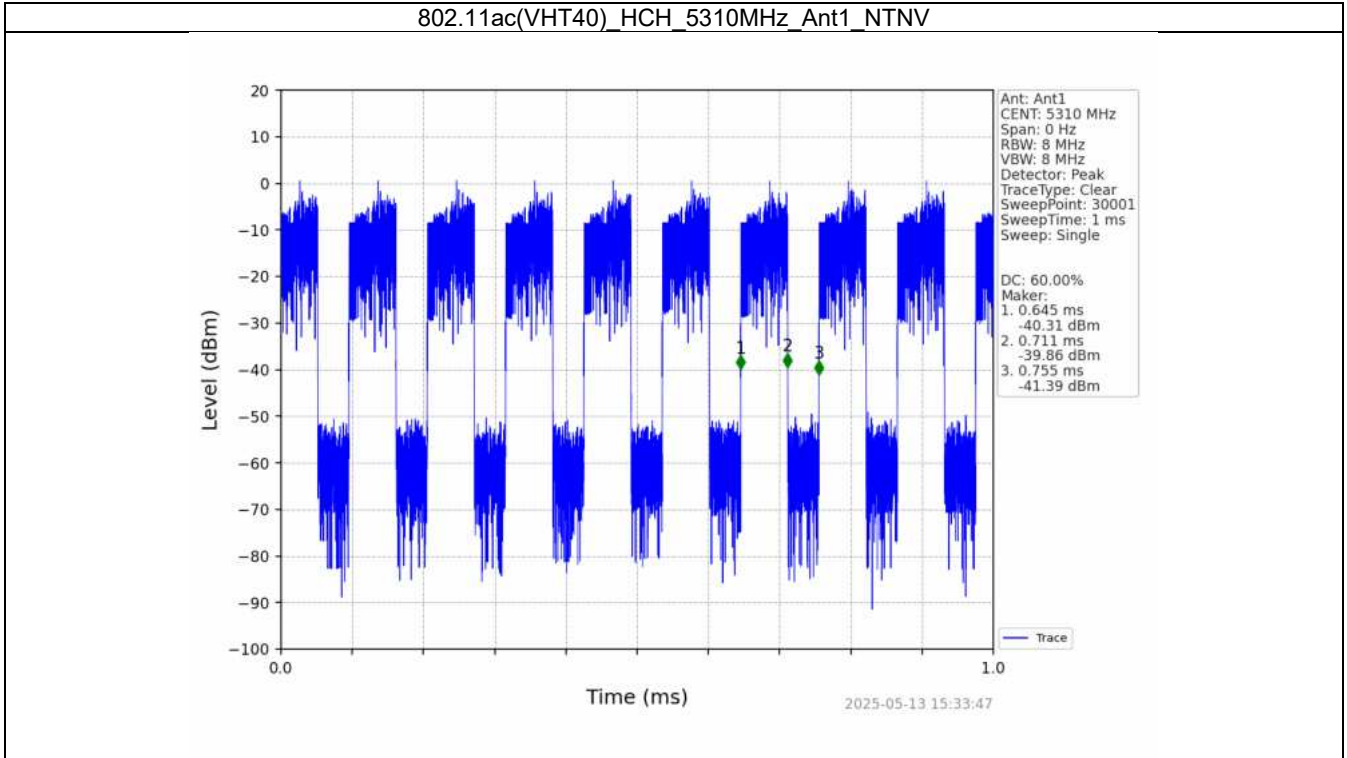
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV

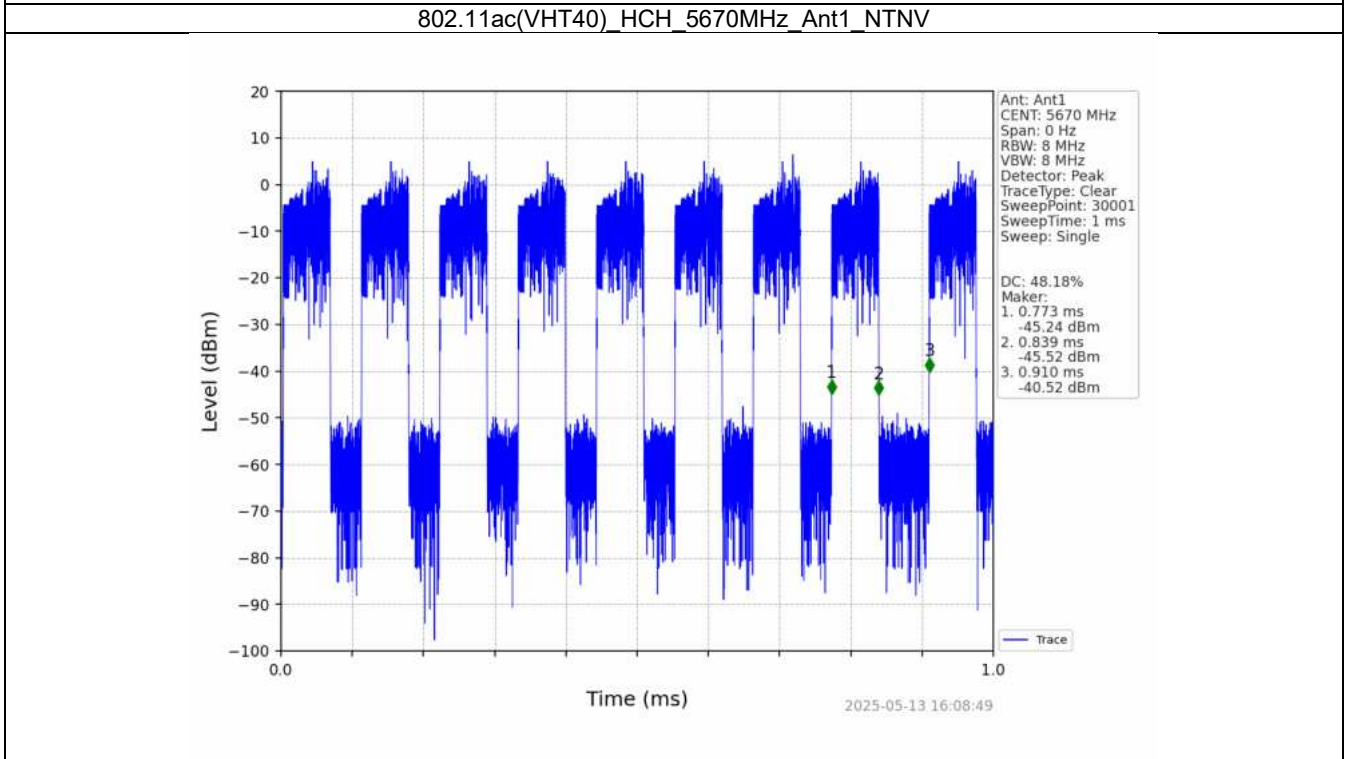
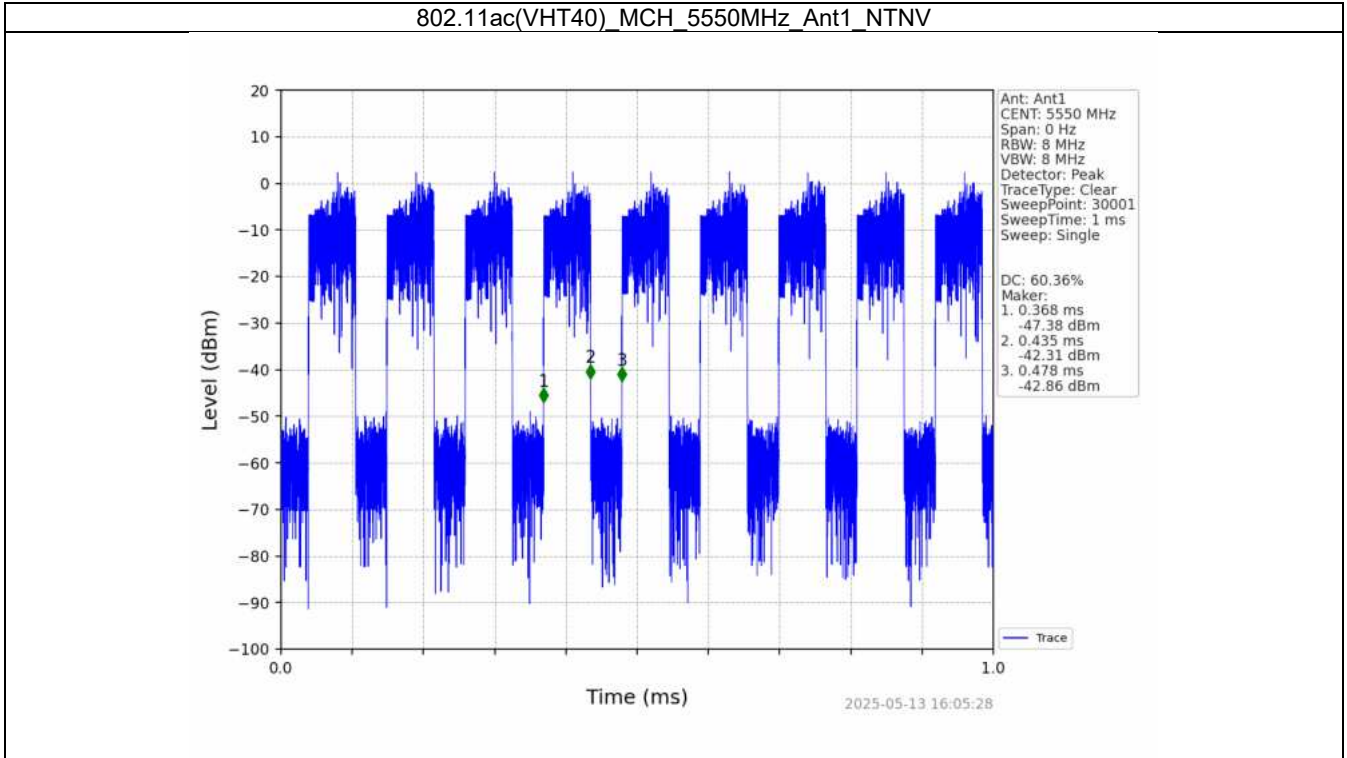


802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV

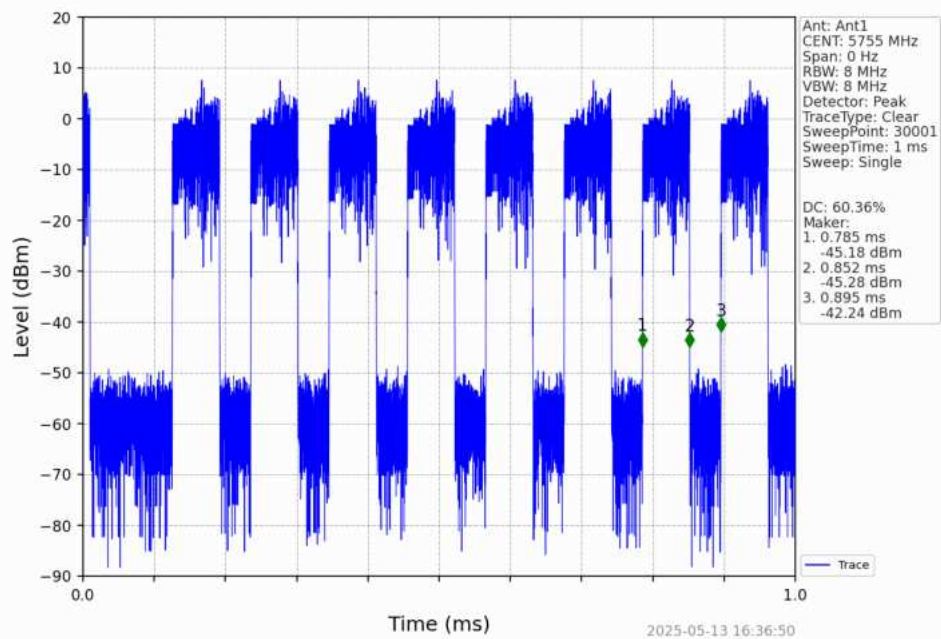




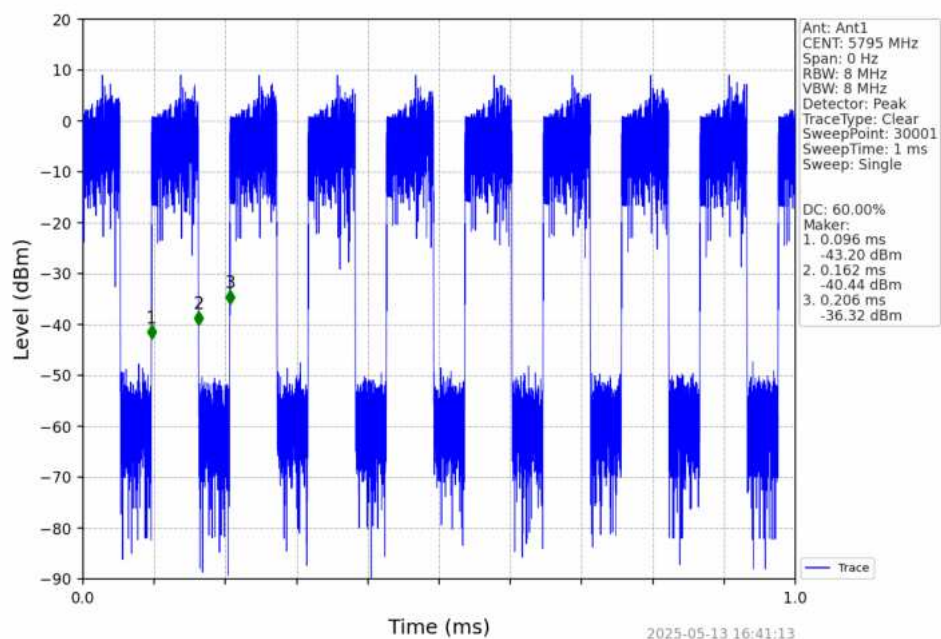


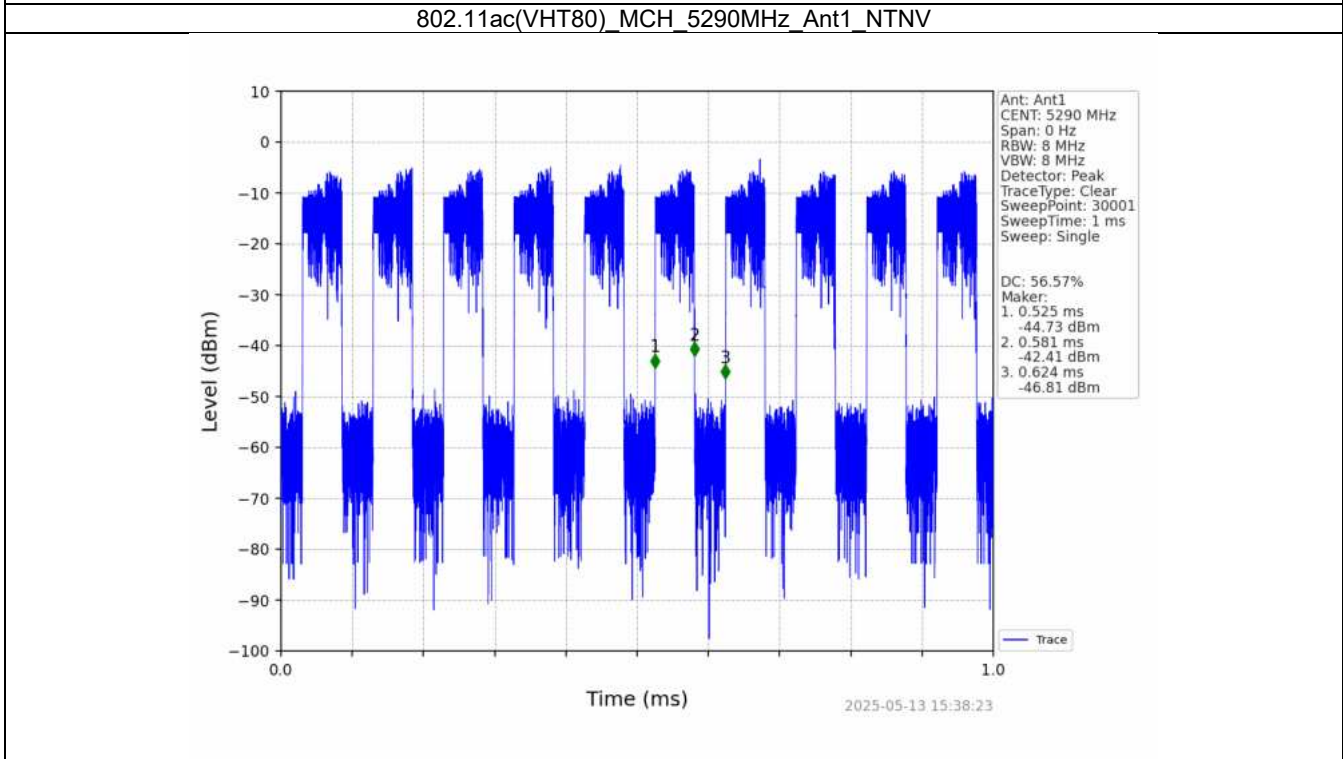
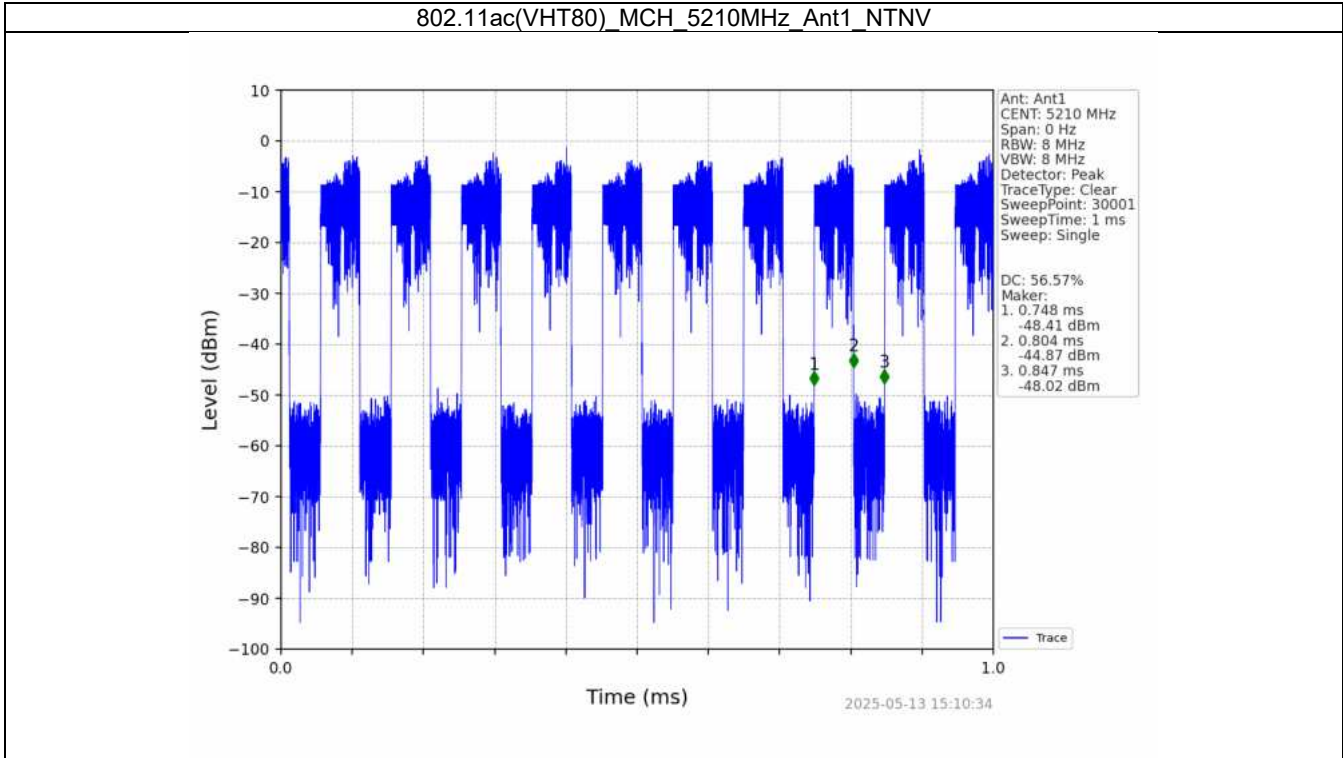


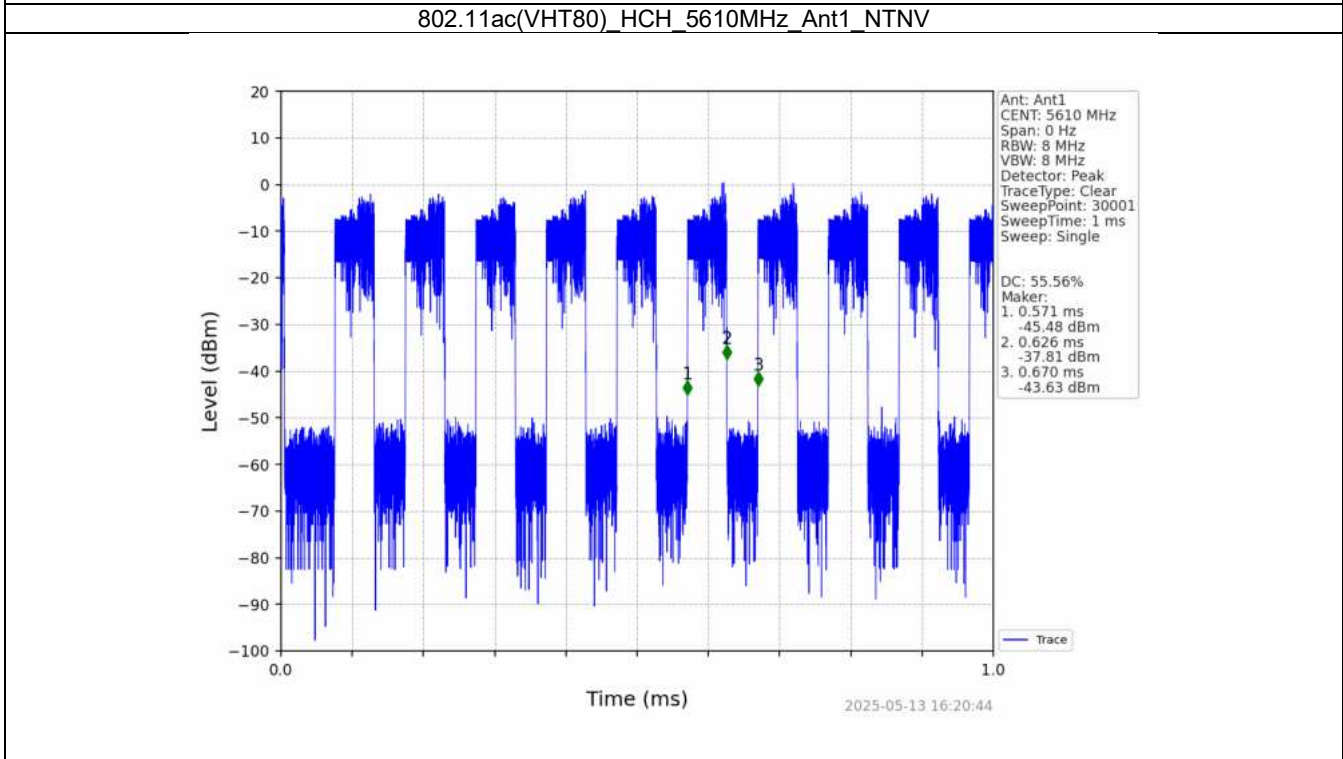
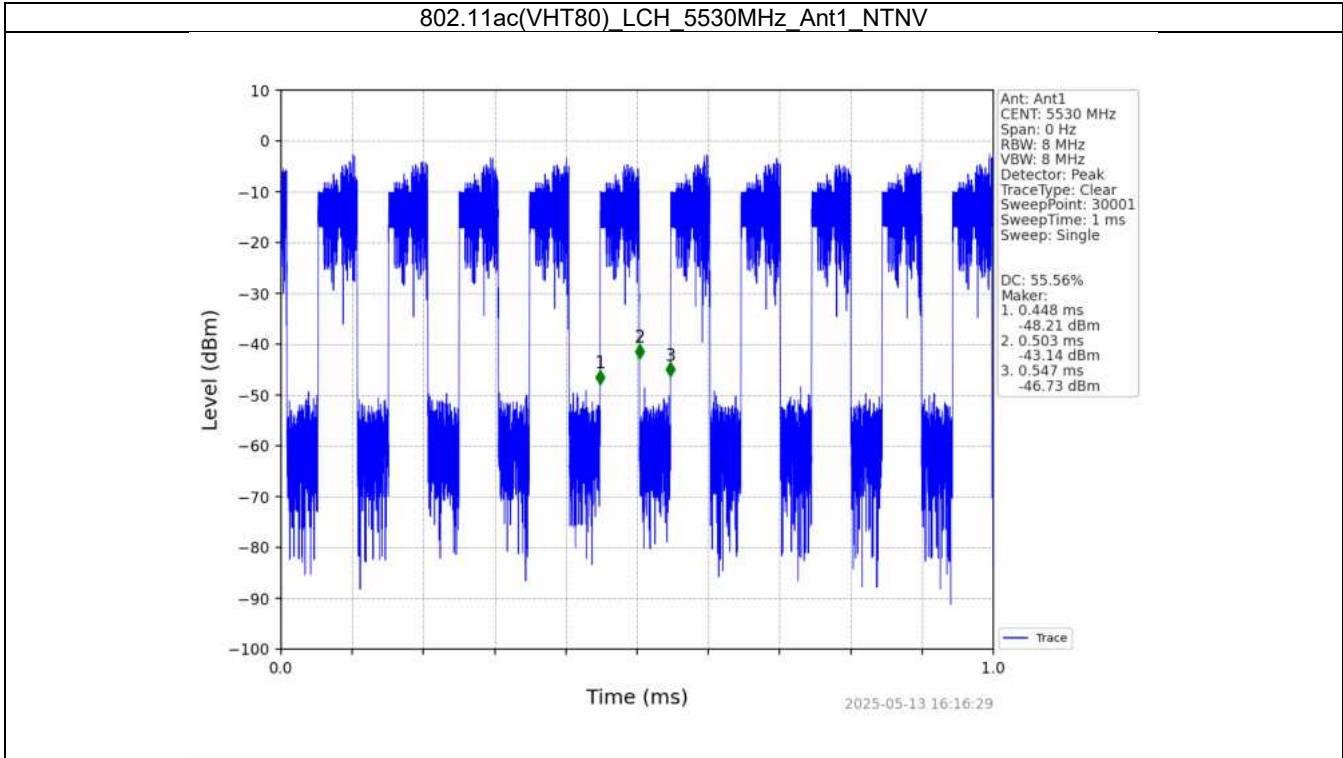
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV

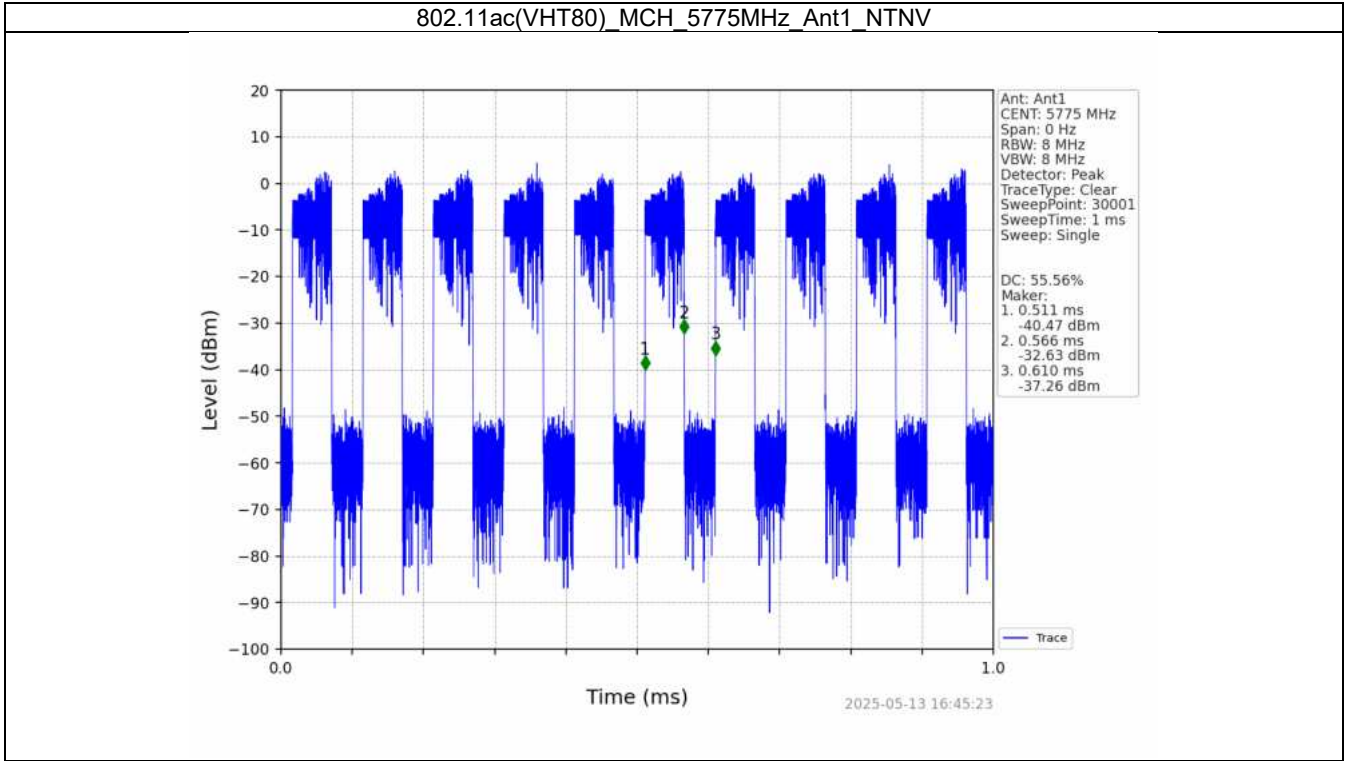


802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV









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	17.439	/	Pass
			2	17.437	/	Pass
		5200	1	17.461	/	Pass
			2	17.512	/	Pass
		5240	1	17.524	/	Pass
			2	17.533	/	Pass
		5260	1	17.527	/	Pass
			2	17.526	/	Pass
		5300	1	17.482	/	Pass
			2	17.521	/	Pass
		5320	1	17.534	/	Pass
			2	17.517	/	Pass
		5500	1	17.468	/	Pass
			2	17.470	/	Pass
		5580	1	17.433	/	Pass
			2	17.466	/	Pass
		5700	1	17.466	/	Pass
			2	17.485	/	Pass
		5745	1	17.475	/	Pass
			2	17.502	/	Pass
		5785	1	17.486	/	Pass
			2	17.481	/	Pass
		5825	1	17.550	/	Pass
			2	17.411	/	Pass
802.11n (HT20)	MIMO	5180	1	18.083	/	Pass
			2	18.209	/	Pass
		5200	1	18.132	/	Pass
			2	18.278	/	Pass
		5240	1	18.187	/	Pass
			2	18.378	/	Pass
		5260	1	18.165	/	Pass
			2	18.307	/	Pass
		5300	1	18.021	/	Pass
			2	18.220	/	Pass
		5320	1	18.057	/	Pass
			2	18.227	/	Pass
		5500	1	18.136	/	Pass
			2	18.290	/	Pass
		5580	1	18.149	/	Pass
			2	18.259	/	Pass
		5700	1	18.132	/	Pass
			2	18.254	/	Pass
		5745	1	18.123	/	Pass
			2	18.290	/	Pass
		5785	1	18.207	/	Pass
			2	18.208	/	Pass
		5825	1	18.143	/	Pass

802.11n (HT40)	MIMO	5190	2	18.286	/	Pass
			1	36.502	/	Pass
		5230	2	36.353	/	Pass
			1	36.602	/	Pass
		5270	2	36.499	/	Pass
			1	36.665	/	Pass
		5310	2	36.516	/	Pass
			1	36.651	/	Pass
		5510	2	36.688	/	Pass
			1	36.622	/	Pass
		5550	2	36.583	/	Pass
			1	36.567	/	Pass
		5670	2	36.537	/	Pass
			1	36.733	/	Pass
		5755	2	36.591	/	Pass
			1	36.595	/	Pass
		5795	2	36.584	/	Pass
			1	36.531	/	Pass
802.11ac (VHT20)	MIMO	5180	2	36.492	/	Pass
			1	18.091	/	Pass
		5200	2	18.295	/	Pass
			1	18.158	/	Pass
		5240	2	18.305	/	Pass
			1	18.219	/	Pass
		5260	2	18.276	/	Pass
			1	18.196	/	Pass
		5300	2	18.333	/	Pass
			1	18.136	/	Pass
		5320	2	18.328	/	Pass
			1	18.144	/	Pass
		5500	2	18.303	/	Pass
			1	18.136	/	Pass
		5580	2	18.296	/	Pass
			1	18.211	/	Pass
		5700	2	18.346	/	Pass
			1	18.074	/	Pass
		5745	2	18.272	/	Pass
			1	18.175	/	Pass
802.11ac (VHT40)	MIMO	5785	2	18.348	/	Pass
			1	18.166	/	Pass
		5825	2	18.298	/	Pass
			1	18.116	/	Pass
		5190	2	18.336	/	Pass
			1	36.544	/	Pass
		5230	2	36.621	/	Pass
			1	36.674	/	Pass
		5270	2	36.775	/	Pass
			1	36.770	/	Pass
		5310	2	36.781	/	Pass
			1	36.713	/	Pass
		5510	2	36.738	/	Pass
			1	36.609	/	Pass
		5550	2	36.754	/	Pass
			1	36.596	/	Pass
		5670	2	36.770	/	Pass
			1	36.771	/	Pass
		5755	2	36.816	/	Pass
			1	36.647	/	Pass
		5755	2	36.826	/	Pass
			1	36.647	/	Pass

802.11ac (VHT80)	MIMO	5795	1	36.642	/	Pass
			2	36.733	/	Pass
		5210	1	76.156	/	Pass
			2	76.288	/	Pass
		5290	1	76.367	/	Pass
			2	76.340	/	Pass
		5530	1	76.239	/	Pass
			2	76.413	/	Pass
		5610	1	76.139	/	Pass
			2	76.236	/	Pass
		5775	1	76.192	/	Pass
			2	76.246	/	Pass

2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	23.107	/	Pass
			2	21.810	/	Pass
		5200	1	26.445	/	Pass
			2	22.187	/	Pass
		5240	1	23.673	/	Pass
			2	21.205	/	Pass
		5260	1	22.104	/	Pass
			2	23.507	/	Pass
		5300	1	22.257	/	Pass
			2	24.878	/	Pass
		5320	1	26.581	/	Pass
			2	26.590	/	Pass
		5500	1	24.481	/	Pass
			2	24.259	/	Pass
		5580	1	20.192	/	Pass
			2	24.698	/	Pass
802.11n (HT20)	MIMO	5180	1	22.504	/	Pass
			2	20.580	/	Pass
		5200	1	21.660	/	Pass
			2	23.212	/	Pass
		5240	1	22.165	/	Pass
			2	24.619	/	Pass
		5260	1	20.228	/	Pass
			2	25.669	/	Pass
		5300	1	20.618	/	Pass
			2	24.649	/	Pass
		5320	1	22.154	/	Pass
			2	24.006	/	Pass
		5500	1	21.316	/	Pass
			2	25.203	/	Pass
		5580	1	24.649	/	Pass
			2	24.937	/	Pass
802.11n (HT40)	MIMO	5190	1	24.367	/	Pass
			2	23.848	/	Pass
		5230	1	40.341	/	Pass
			2	39.548	/	Pass
			1	41.151	/	Pass
			2	40.366	/	Pass
			1			
			2			

		5270	1	43.184	/	Pass
			2	40.607	/	Pass
		5310	1	43.584	/	Pass
			2	40.343	/	Pass
		5510	1	40.301	/	Pass
			2	42.075	/	Pass
		5550	1	40.488	/	Pass
			2	40.092	/	Pass
802.11ac (VHT20)	MIMO	5180	1	25.609	/	Pass
			2	22.465	/	Pass
		5200	1	26.833	/	Pass
			2	23.535	/	Pass
		5240	1	22.468	/	Pass
			2	24.895	/	Pass
		5260	1	24.207	/	Pass
			2	22.803	/	Pass
		5300	1	24.457	/	Pass
			2	25.225	/	Pass
		5320	1	25.136	/	Pass
			2	20.389	/	Pass
		5500	1	25.830	/	Pass
			2	21.915	/	Pass
		5580	1	26.432	/	Pass
			2	23.451	/	Pass
802.11ac (VHT40)	MIMO	5190	1	21.136	/	Pass
			2	21.034	/	Pass
		5230	1	42.479	/	Pass
			2	41.852	/	Pass
		5270	1	41.411	/	Pass
			2	41.751	/	Pass
		5310	1	42.612	/	Pass
			2	40.644	/	Pass
		5510	1	41.413	/	Pass
			2	41.400	/	Pass
802.11ac (VHT80)	MIMO	5550	1	41.209	/	Pass
			2	40.806	/	Pass
		5670	1	40.198	/	Pass
			2	40.904	/	Pass
		5210	1	42.286	/	Pass
			2	40.902	/	Pass
		5290	1	81.581	/	Pass
			2	80.735	/	Pass
		5530	1	86.102	/	Pass
			2	84.373	/	Pass
802.11ac (VHT80)	MIMO	5610	1	85.240	/	Pass
			2	81.956	/	Pass
		5610	1	81.277	/	Pass
			2	81.617	/	Pass

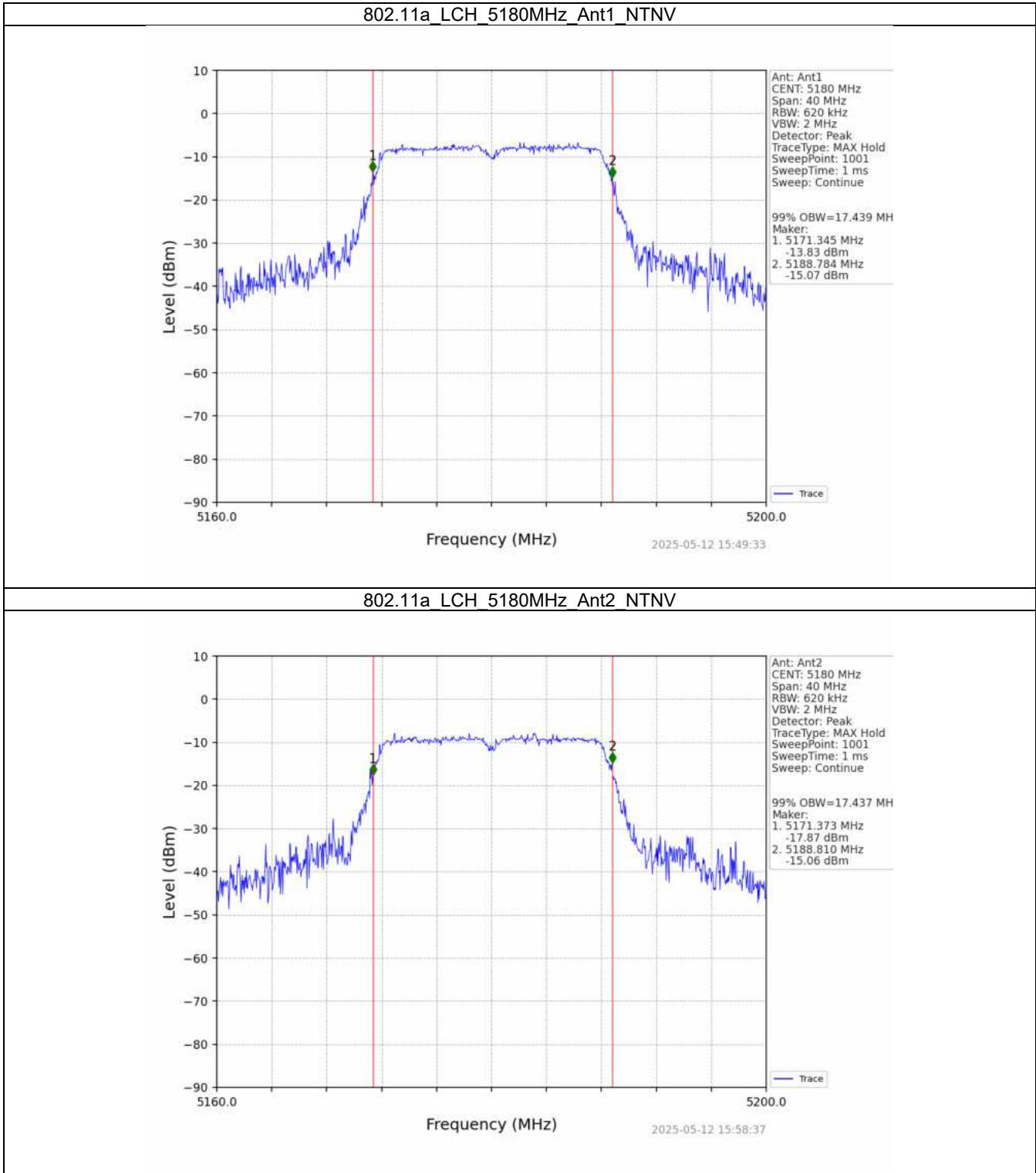
2.1.3 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.387	>=0.5	Pass
			2	16.375	>=0.5	Pass

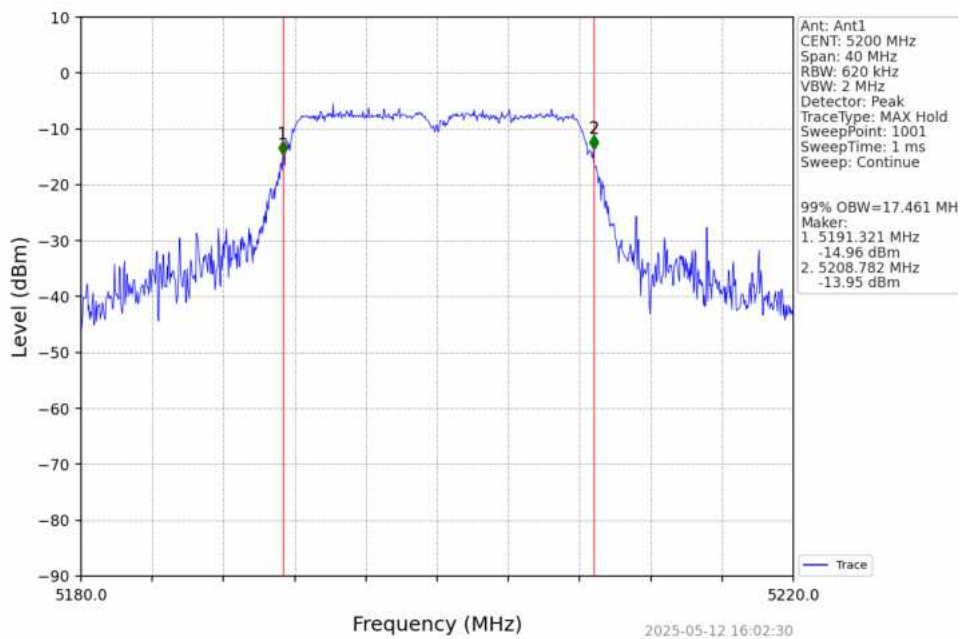
		5785	1	16.403	≥ 0.5	Pass
			2	16.394	≥ 0.5	Pass
		5825	1	16.366	≥ 0.5	Pass
			2	16.398	≥ 0.5	Pass
802.11n (HT20)	MIMO	5745	1	17.550	≥ 0.5	Pass
			2	17.634	≥ 0.5	Pass
		5785	1	17.577	≥ 0.5	Pass
			2	17.607	≥ 0.5	Pass
		5825	1	17.411	≥ 0.5	Pass
			2	17.480	≥ 0.5	Pass
802.11n (HT40)	MIMO	5755	1	35.407	≥ 0.5	Pass
			2	35.387	≥ 0.5	Pass
		5795	1	35.236	≥ 0.5	Pass
			2	35.271	≥ 0.5	Pass
802.11ac (VHT20)	MIMO	5745	1	17.380	≥ 0.5	Pass
			2	17.628	≥ 0.5	Pass
		5785	1	17.439	≥ 0.5	Pass
			2	17.490	≥ 0.5	Pass
		5825	1	17.572	≥ 0.5	Pass
			2	17.619	≥ 0.5	Pass
802.11ac (VHT40)	MIMO	5755	1	35.229	≥ 0.5	Pass
			2	35.619	≥ 0.5	Pass
		5795	1	35.207	≥ 0.5	Pass
			2	35.223	≥ 0.5	Pass
802.11ac (VHT80)	MIMO	5775	1	75.243	≥ 0.5	Pass
			2	75.275	≥ 0.5	Pass

2.2 Test Graph

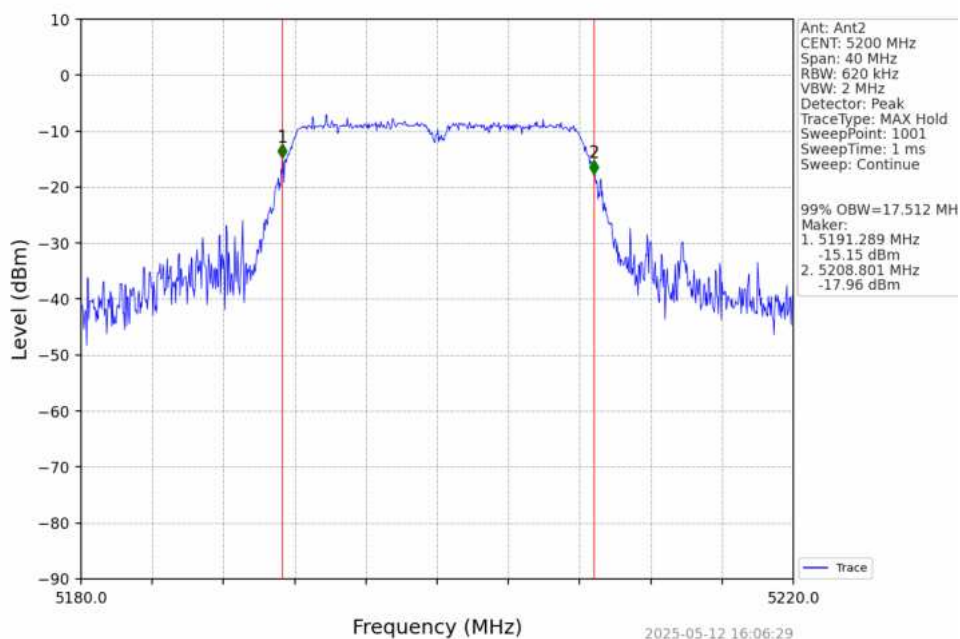
2.2.1 OBW



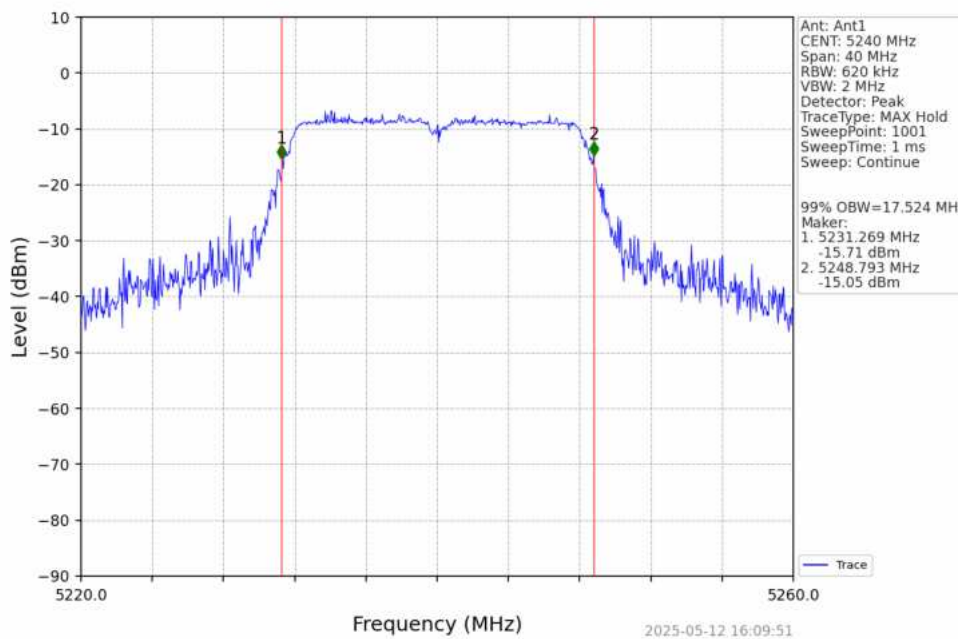
802.11a_MCH_5200MHz_Ant1_NTNV



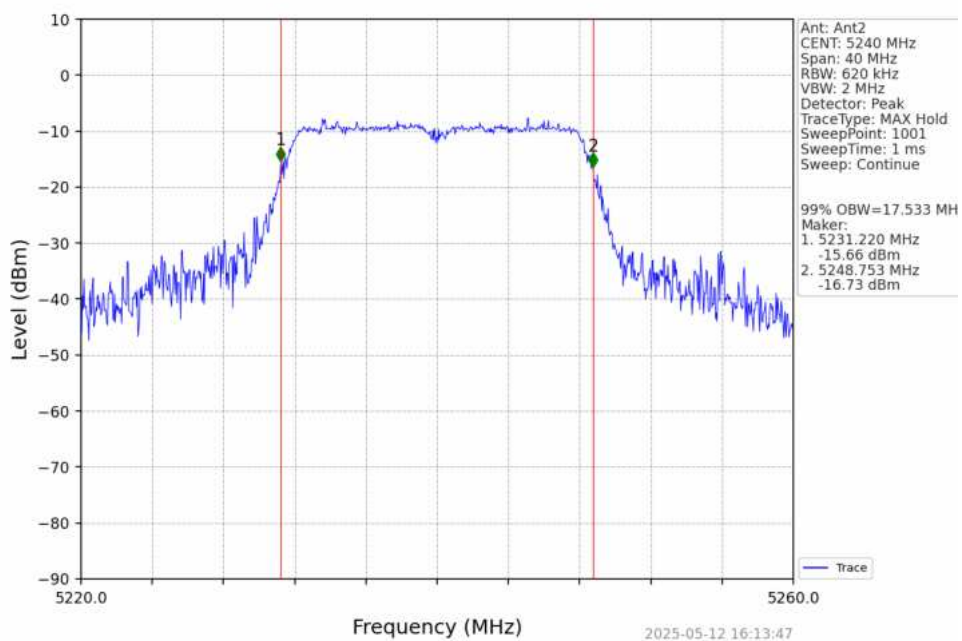
802.11a_MCH_5200MHz_Ant2_NTNV



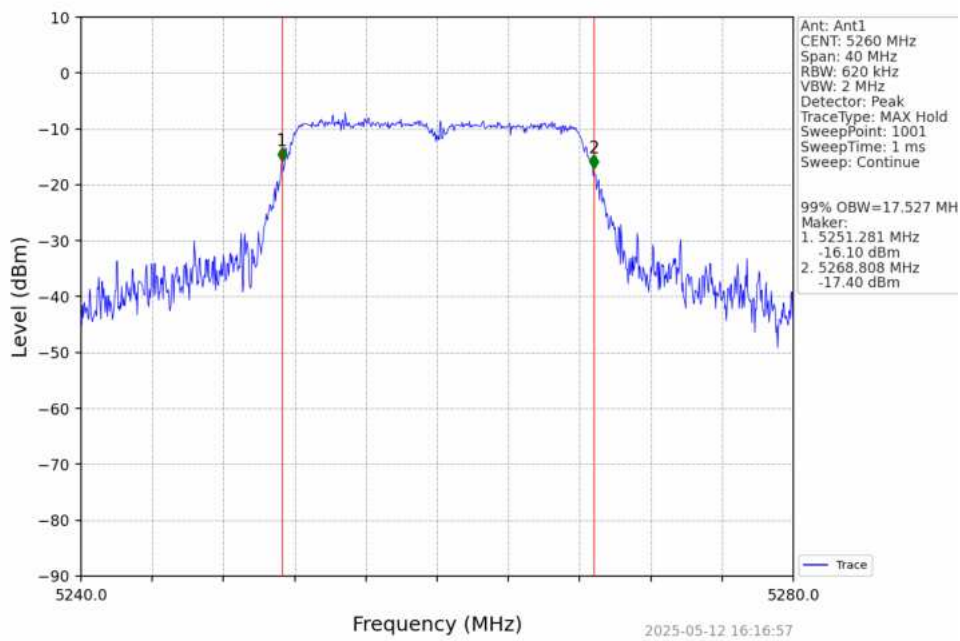
802.11a_HCH_5240MHz_Ant1_NTNV



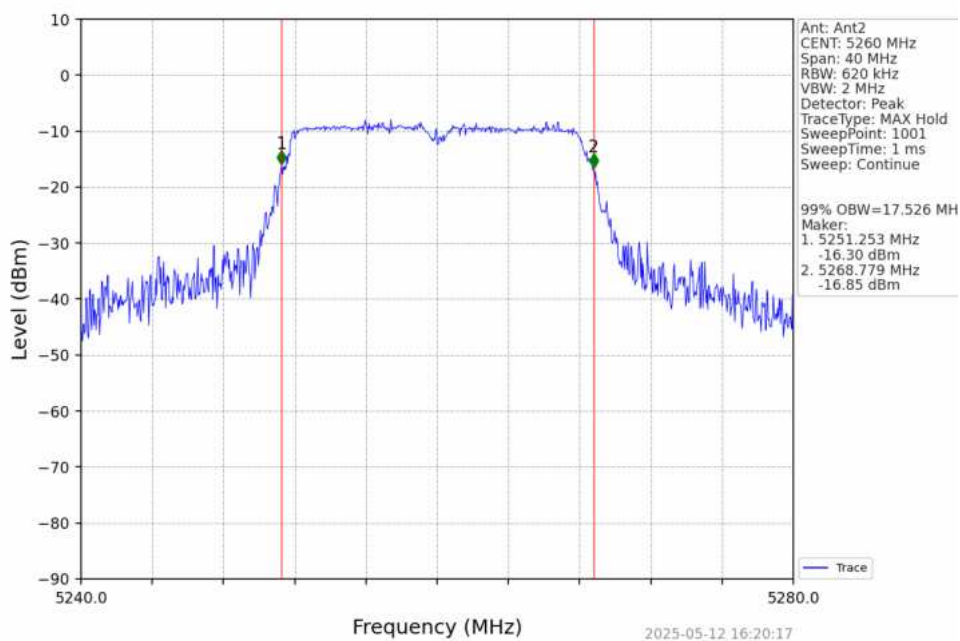
802.11a_HCH_5240MHz_Ant2_NTNV



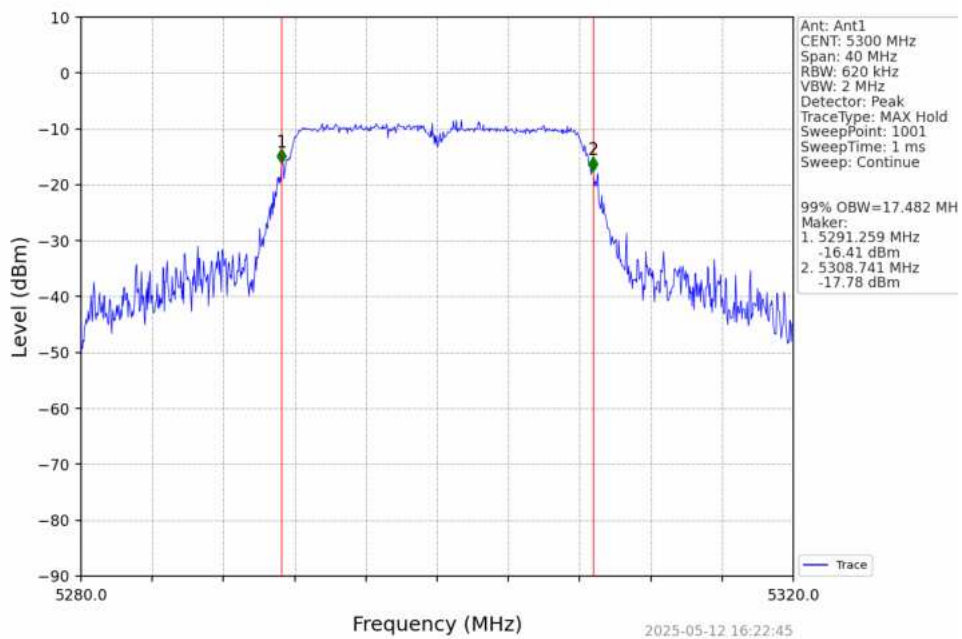
802.11a_LCH_5260MHz_Ant1_NTNV



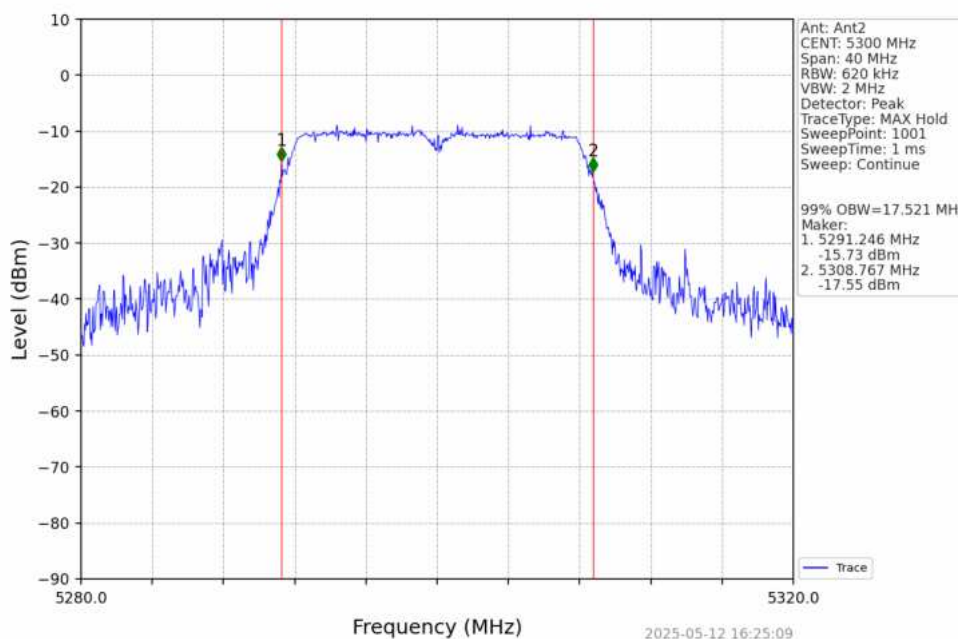
802.11a_LCH_5260MHz_Ant2_NTNV



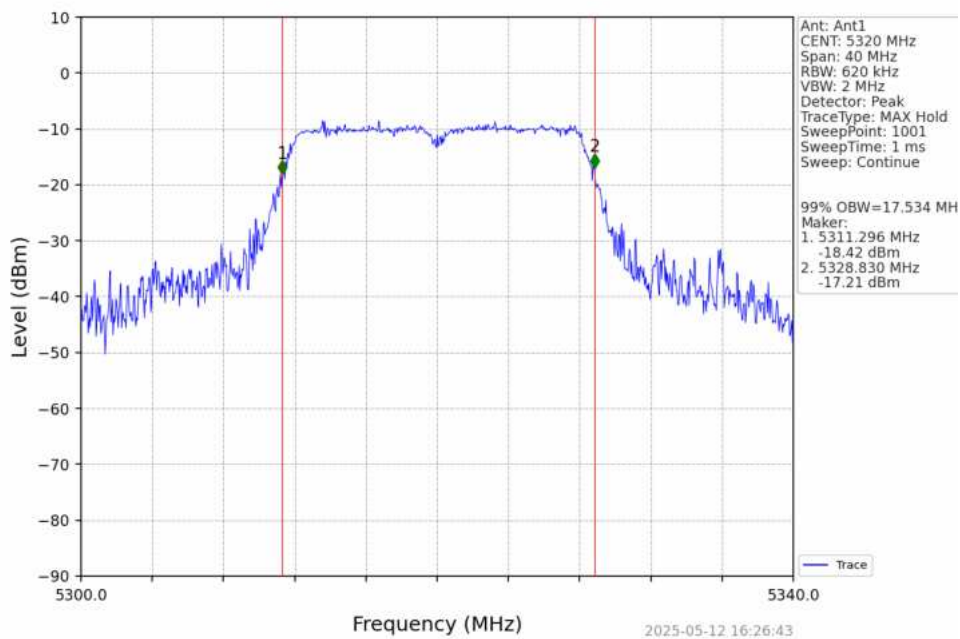
802.11a_MCH_5300MHz_Ant1_NTNV



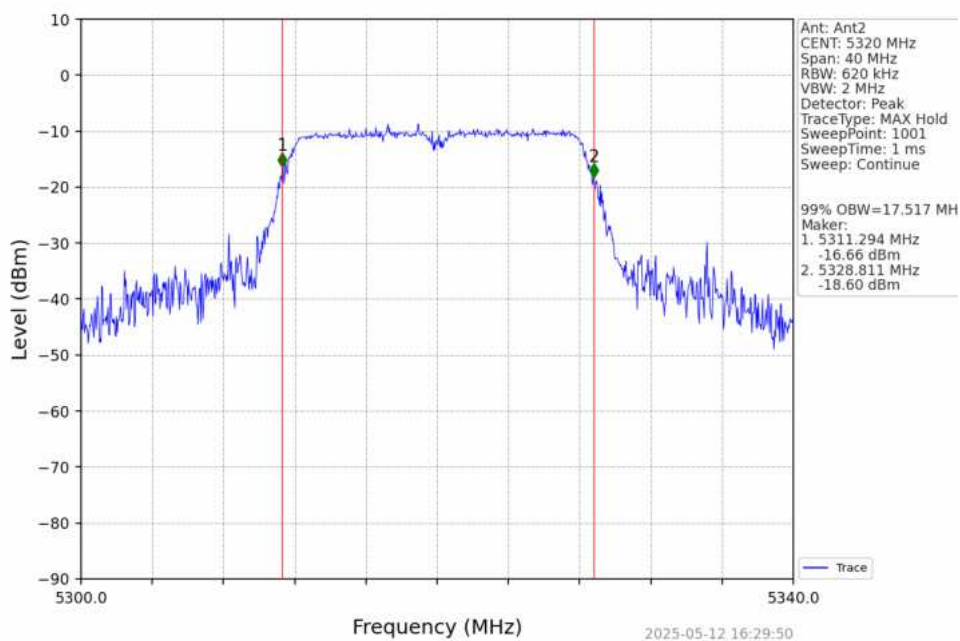
802.11a_MCH_5300MHz_Ant2_NTNV



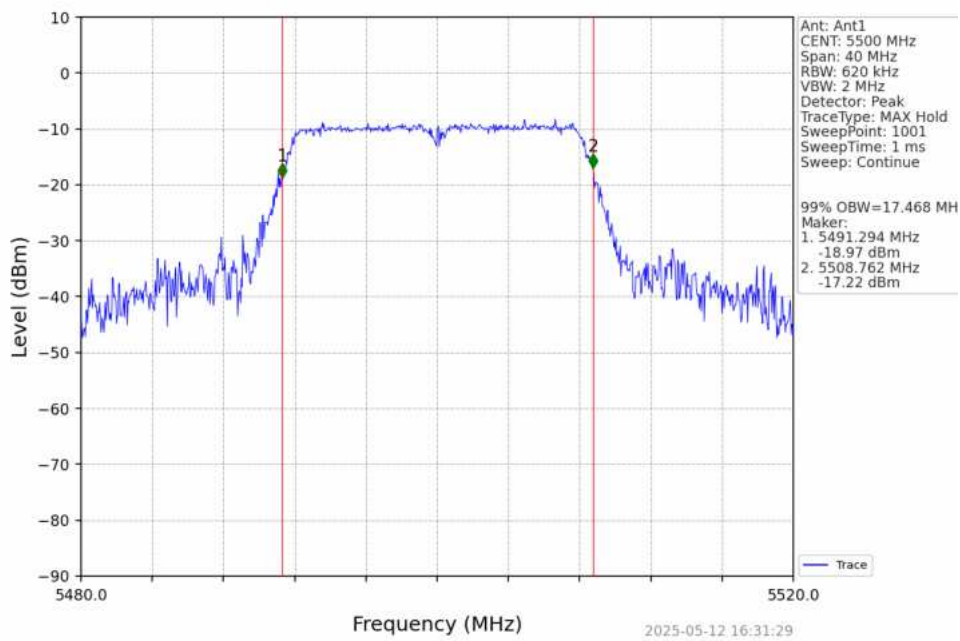
802.11a_HCH_5320MHz_Ant1_NTNV



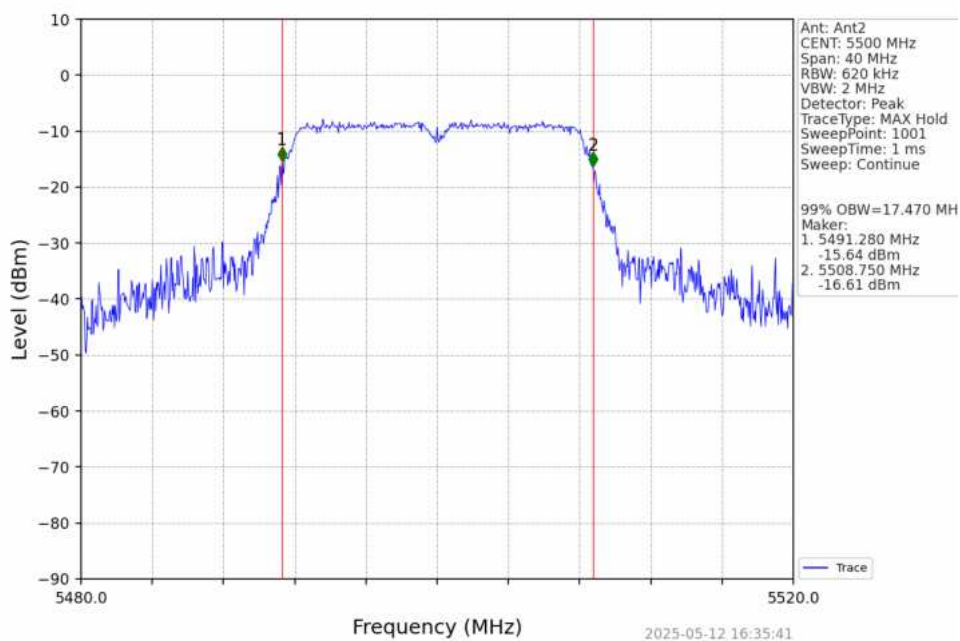
802.11a_HCH_5320MHz_Ant2_NTNV



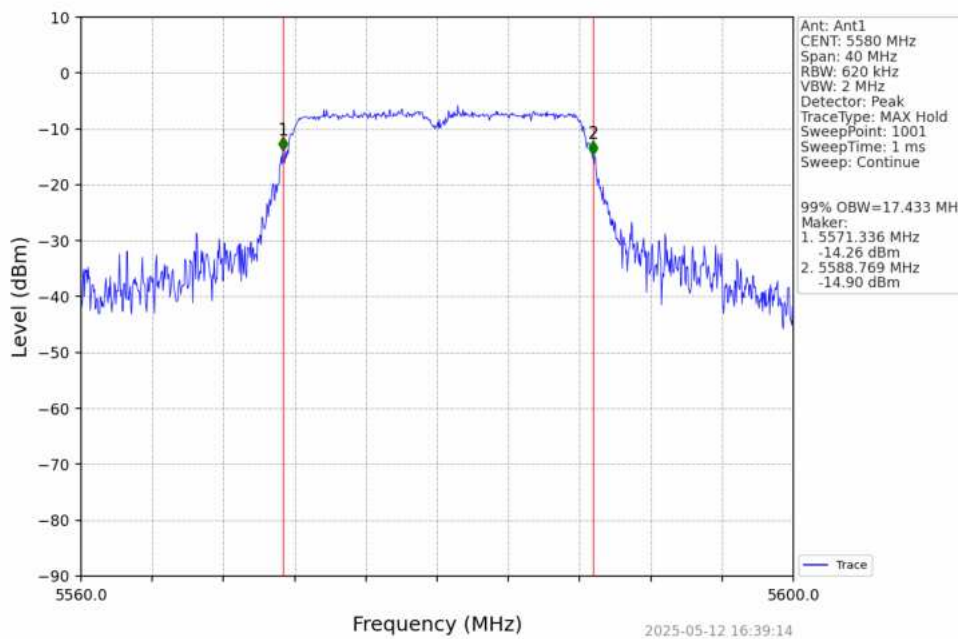
802.11a_LCH_5500MHz_Ant1_NTNV



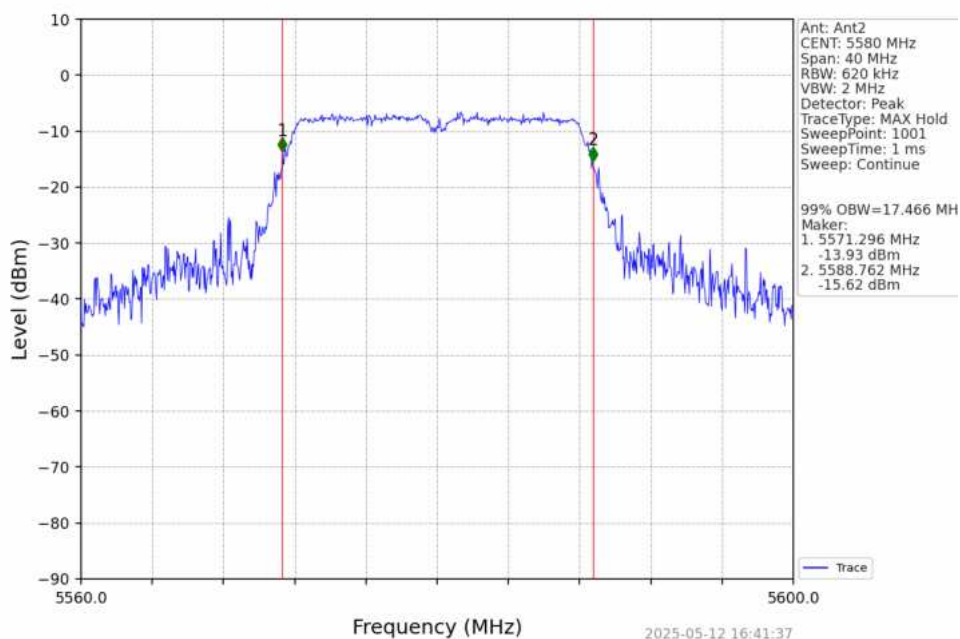
802.11a_LCH_5500MHz_Ant2_NTNV

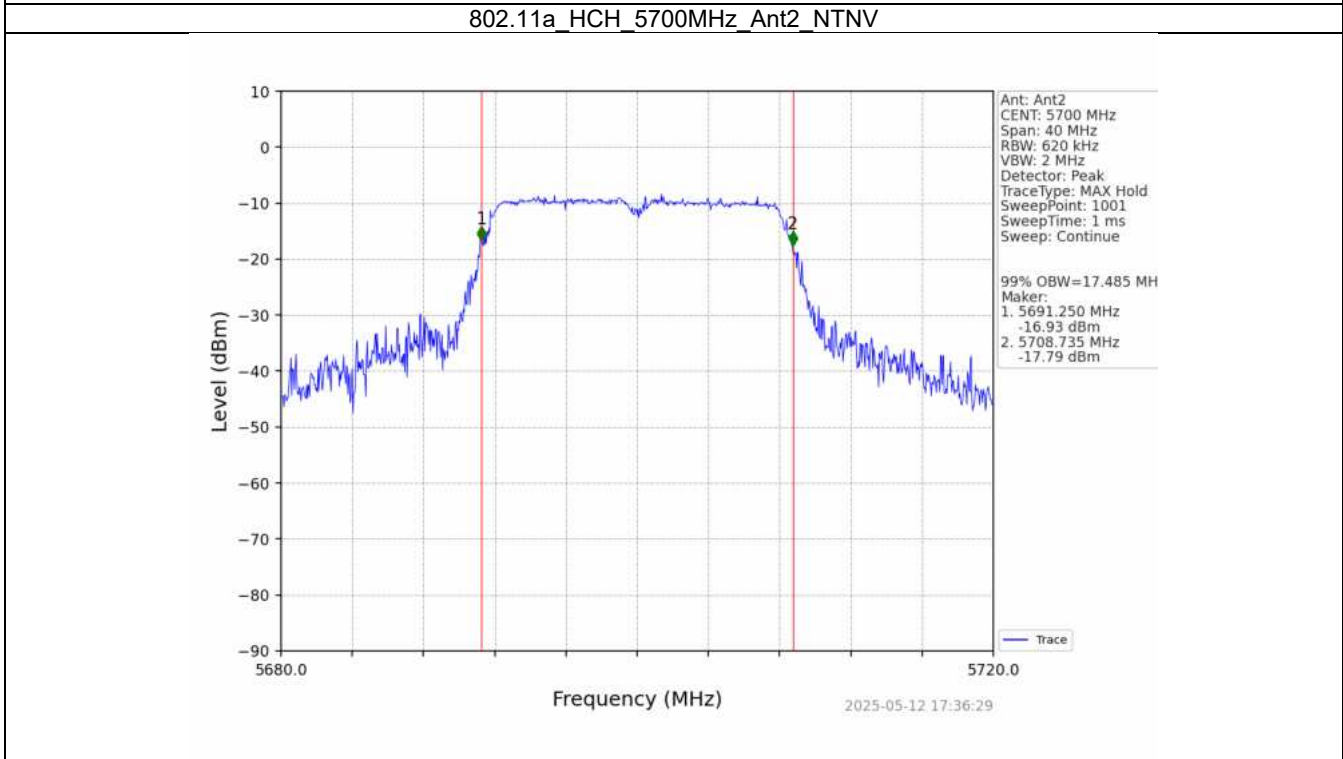
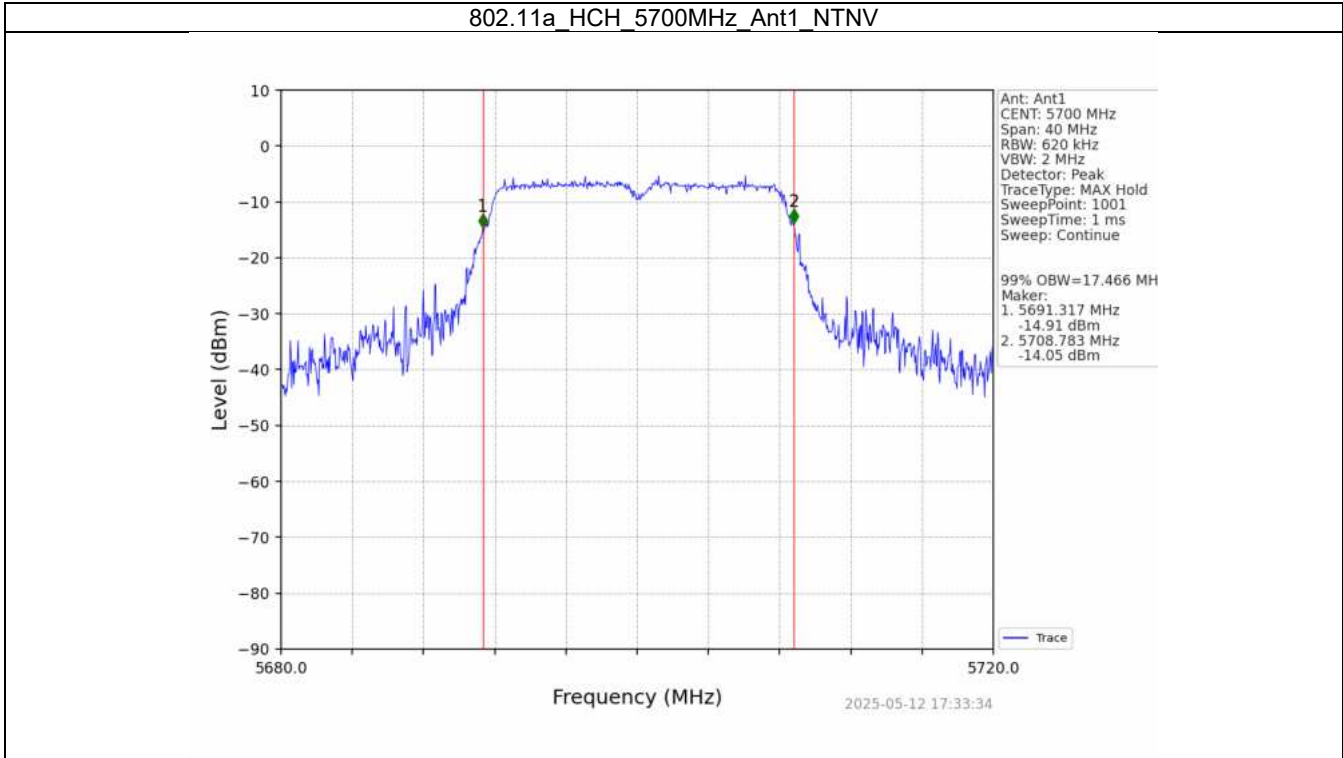


802.11a_MCH_5580MHz_Ant1_NTNV

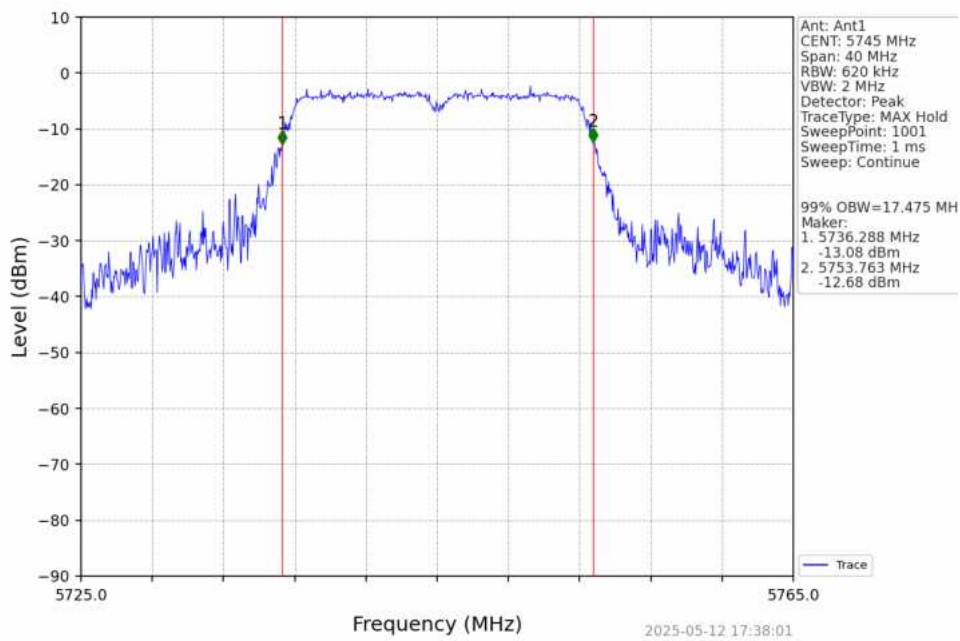


802.11a_MCH_5580MHz_Ant2_NTNV

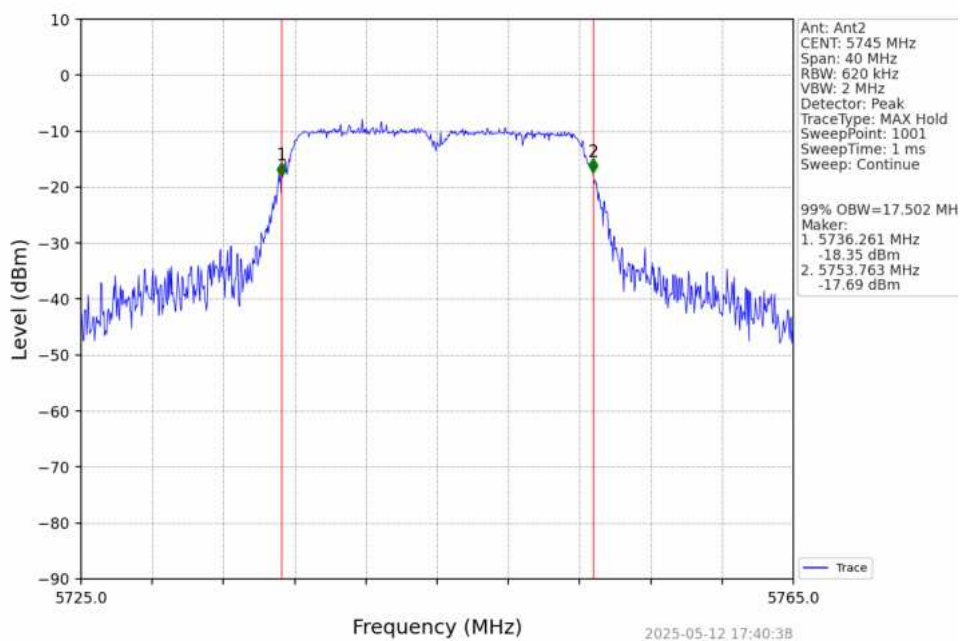




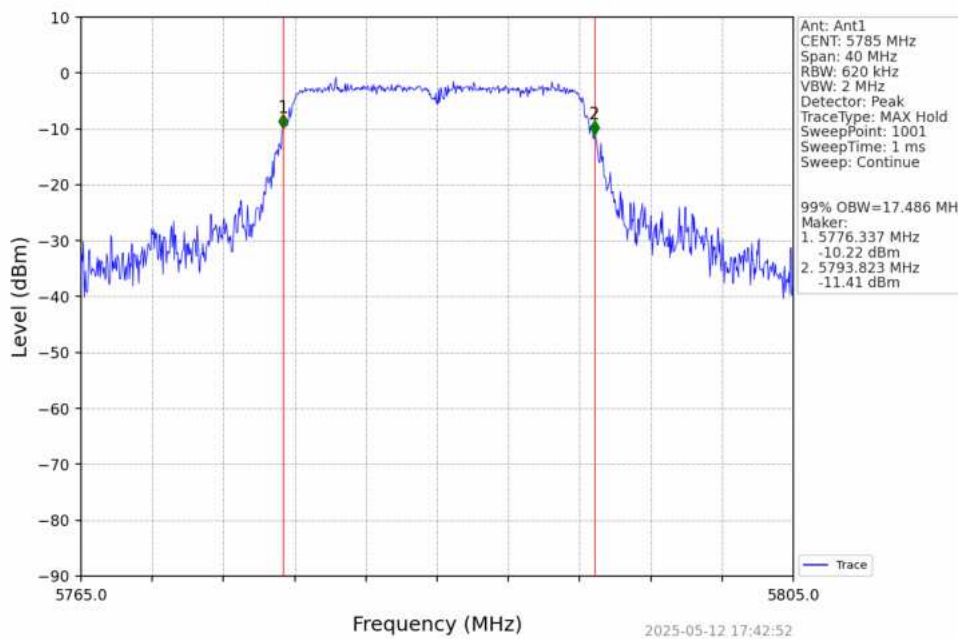
802.11a_LCH_5745MHz_Ant1_NTNV



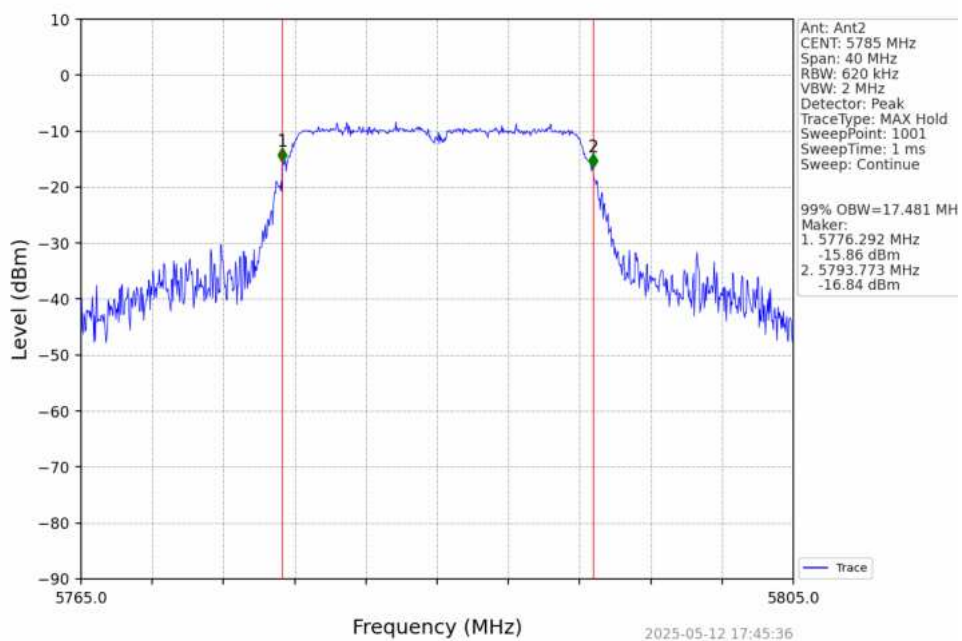
802.11a_LCH_5745MHz_Ant2_NTNV



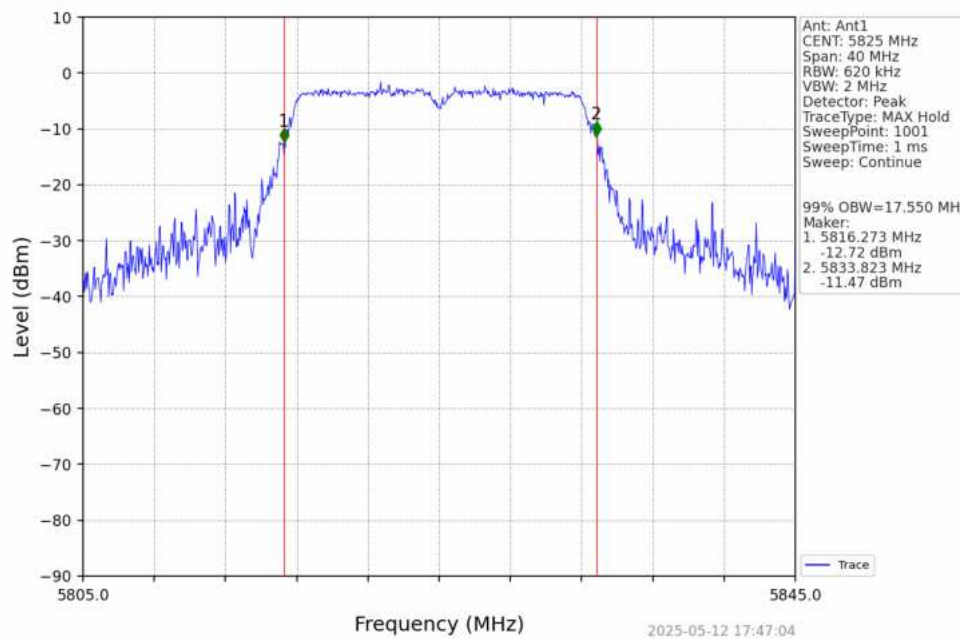
802.11a_MCH_5785MHz_Ant1_NTNV



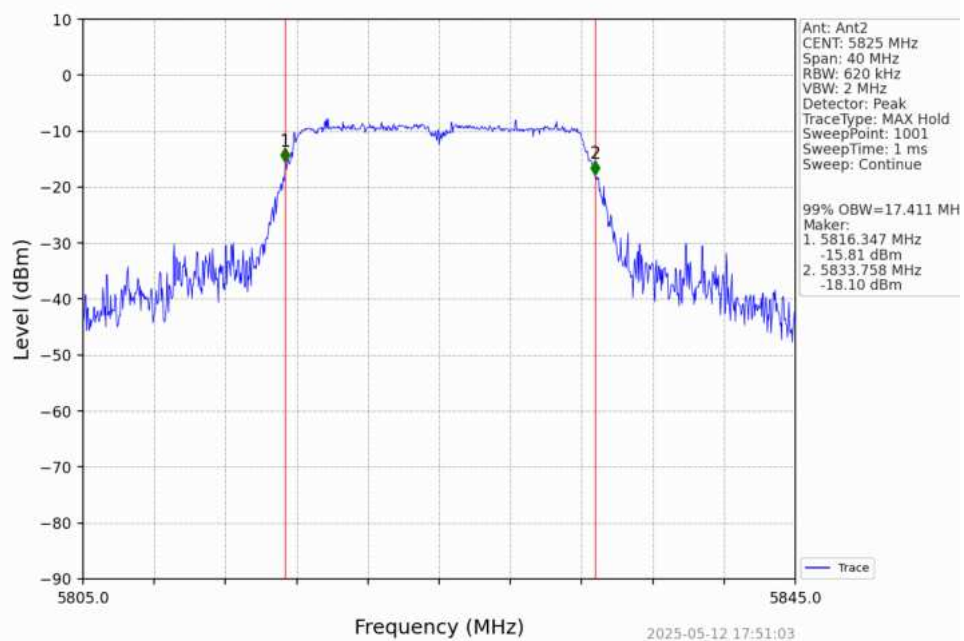
802.11a_MCH_5785MHz_Ant2_NTNV

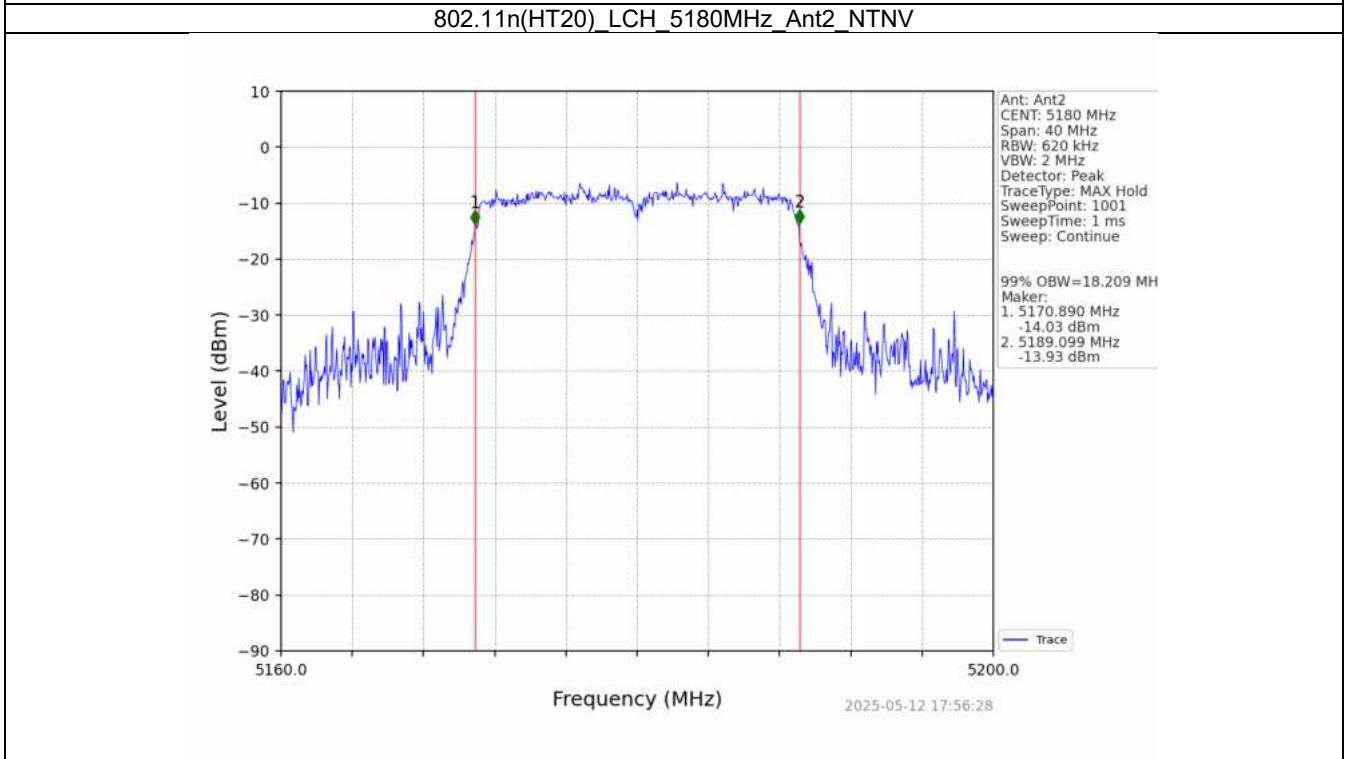
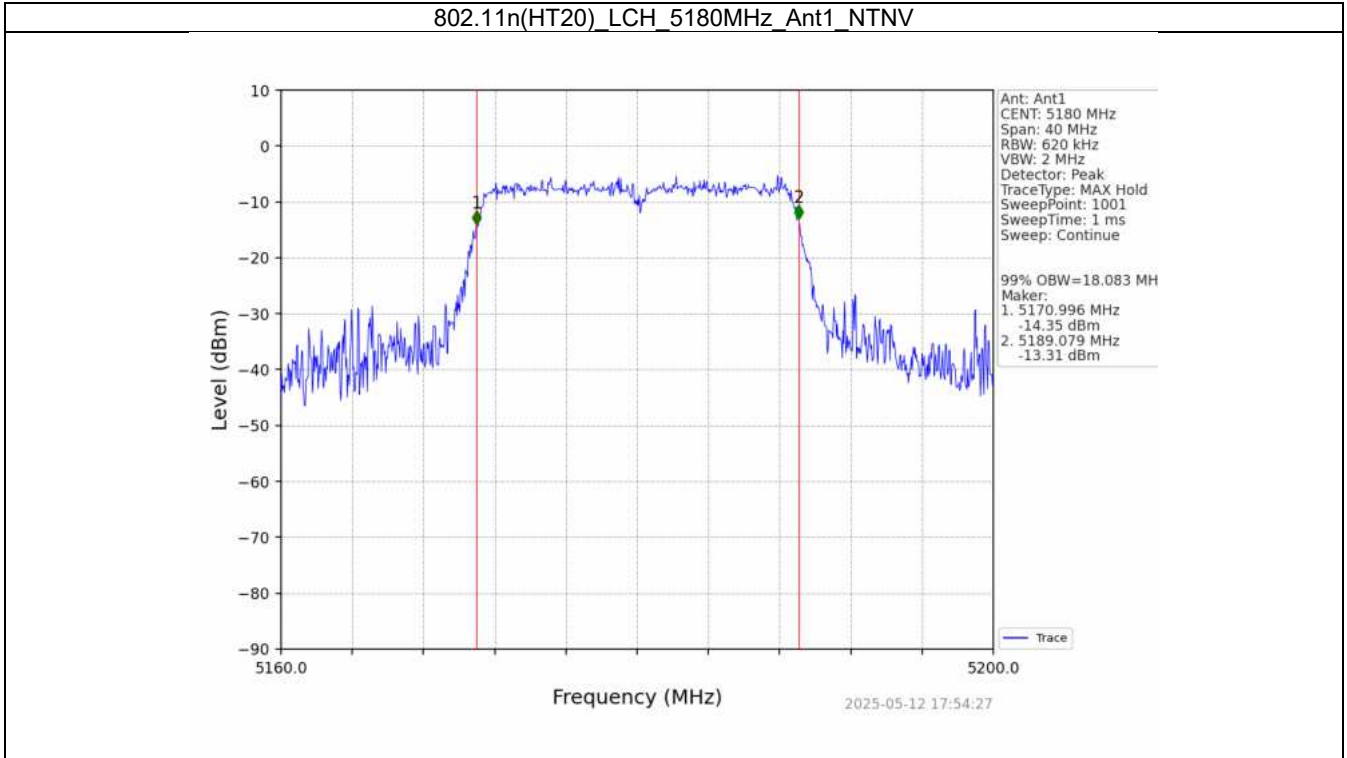


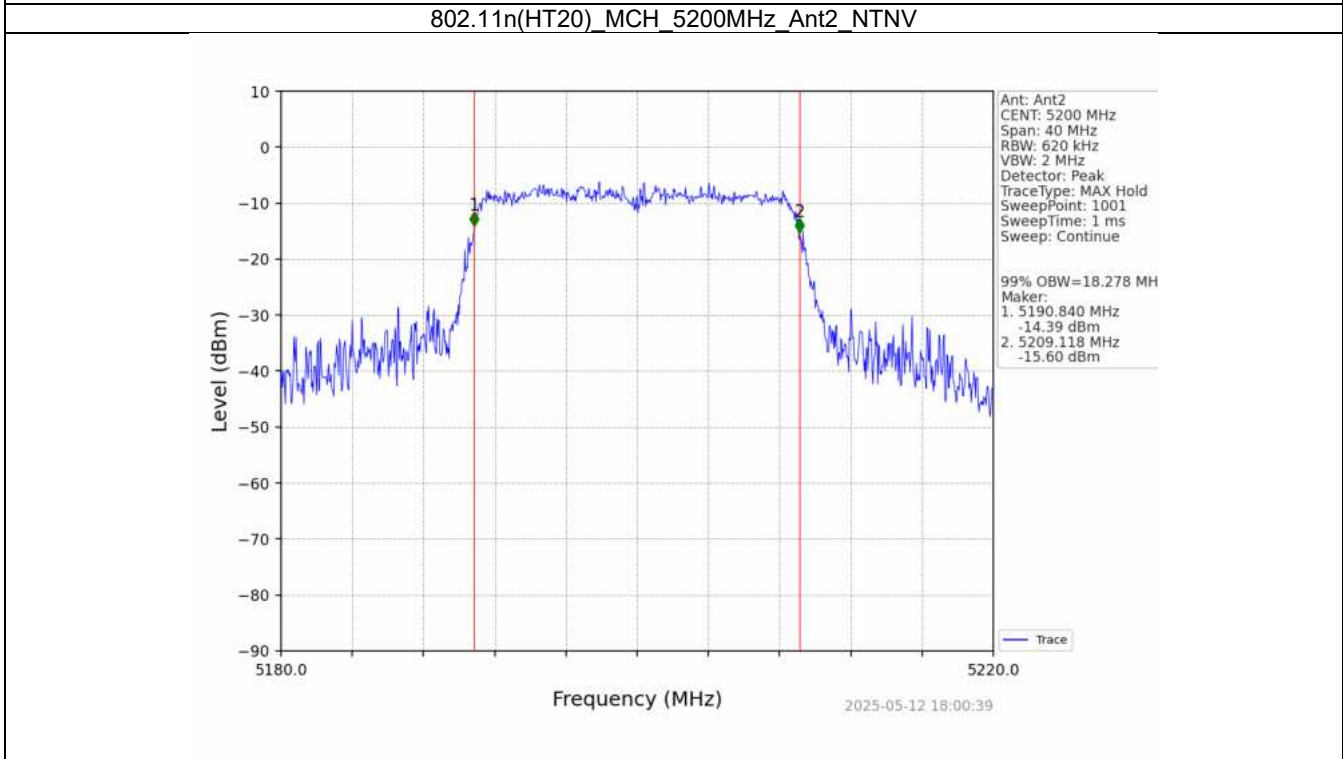
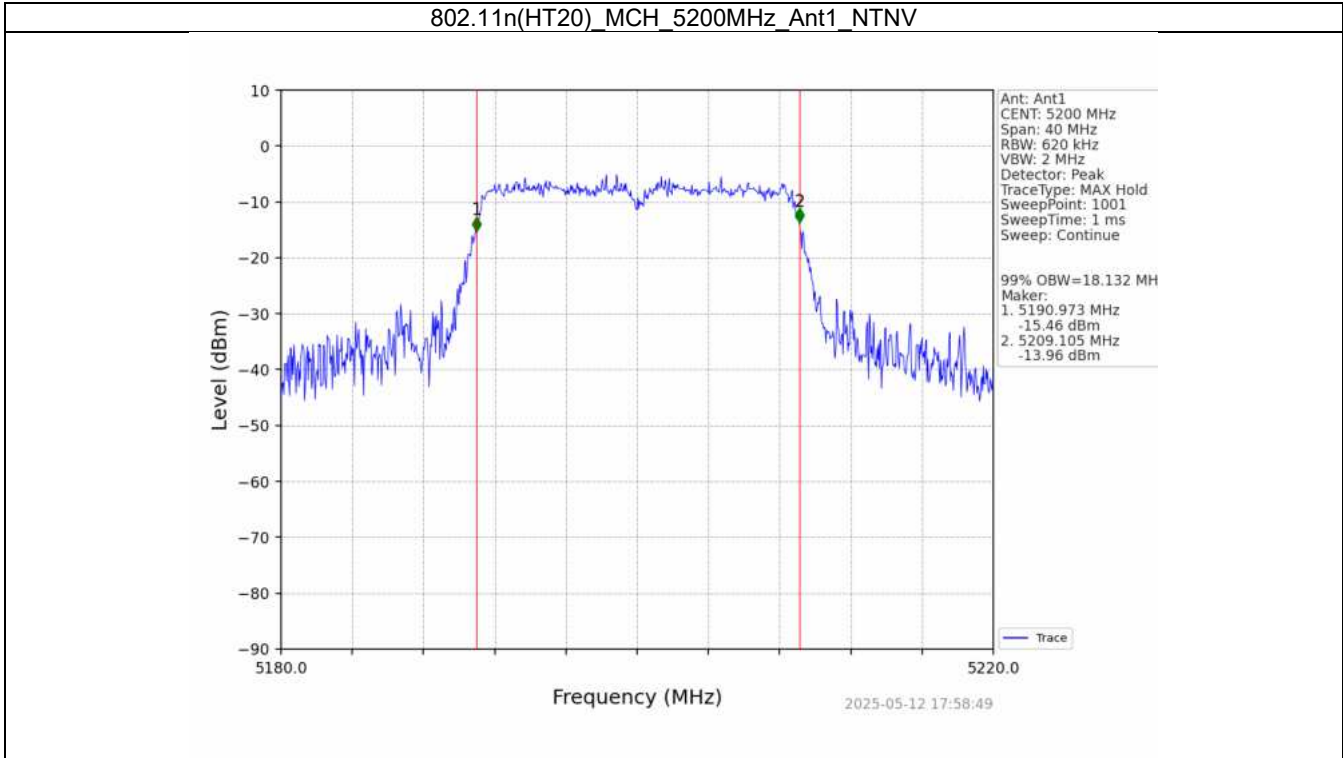
802.11a_HCH_5825MHz_Ant1_NTNV



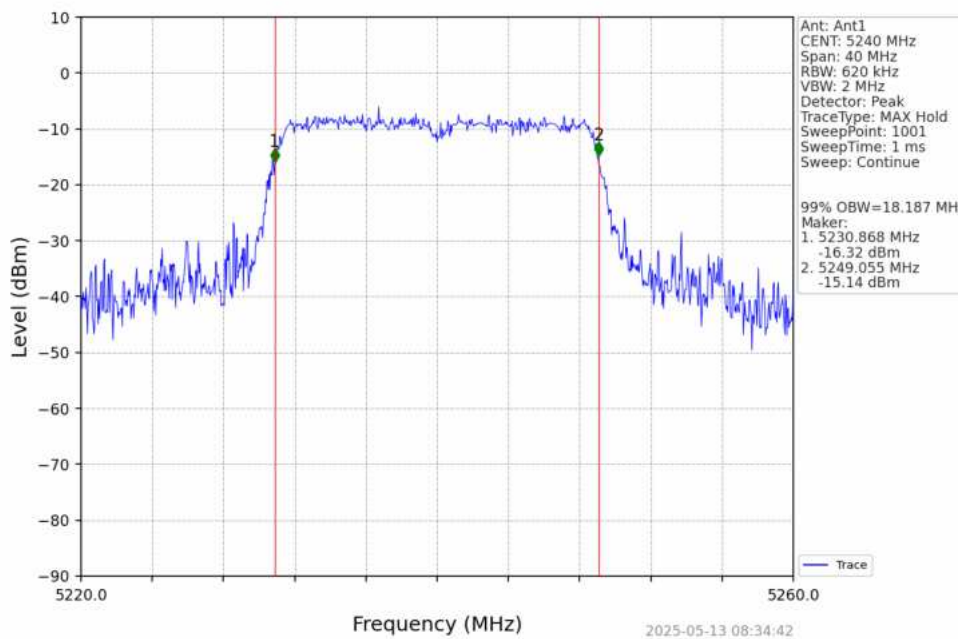
802.11a_HCH_5825MHz_Ant2_NTNV



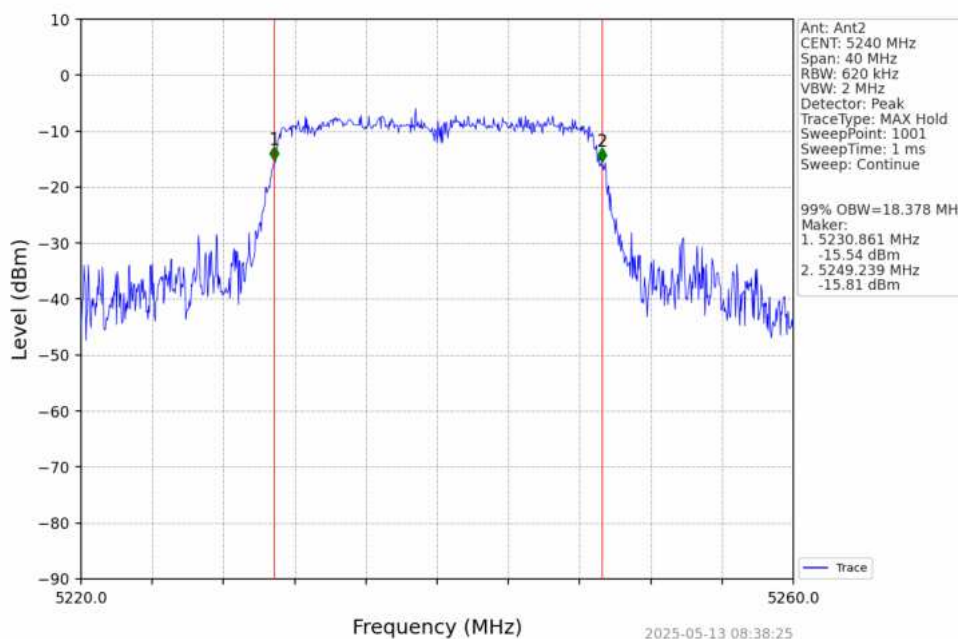


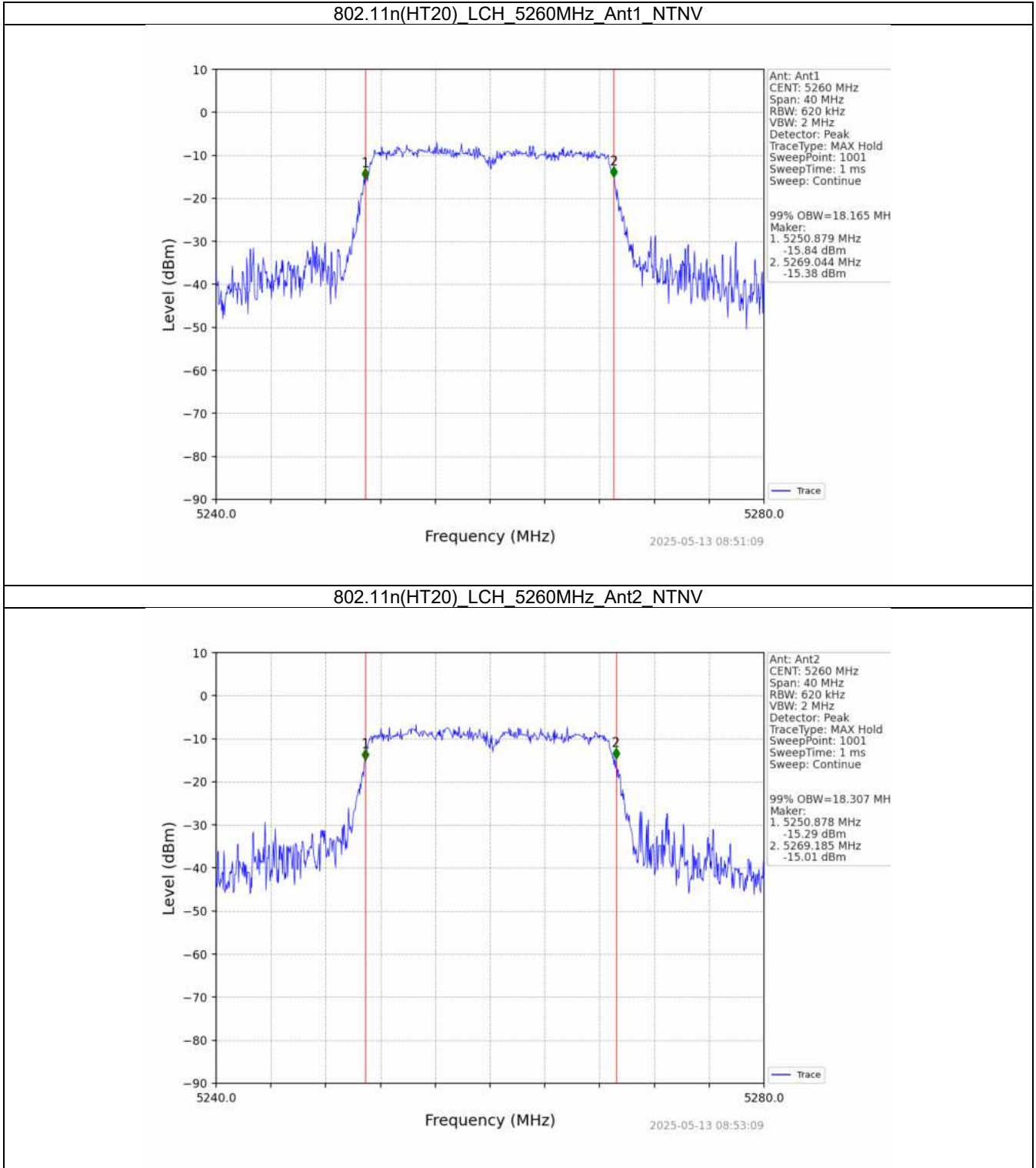


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

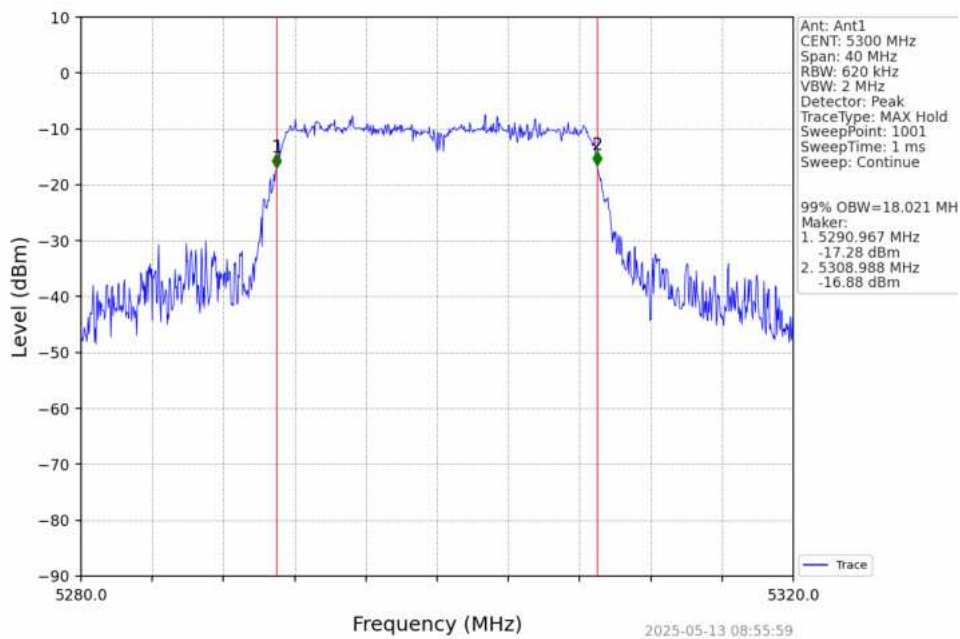


802.11n(HT20)_HCH_5240MHz_Ant2_NTNV

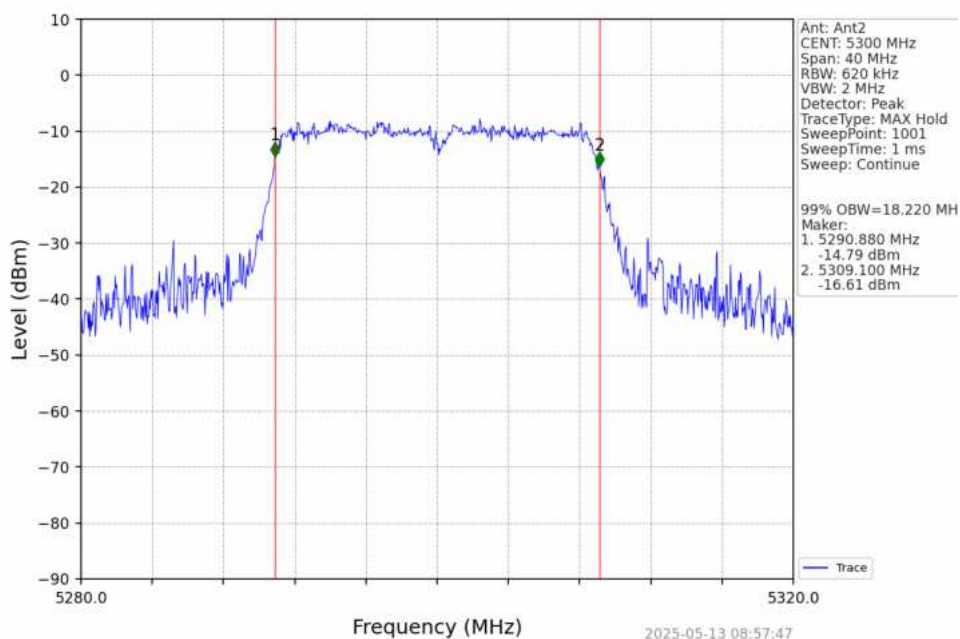


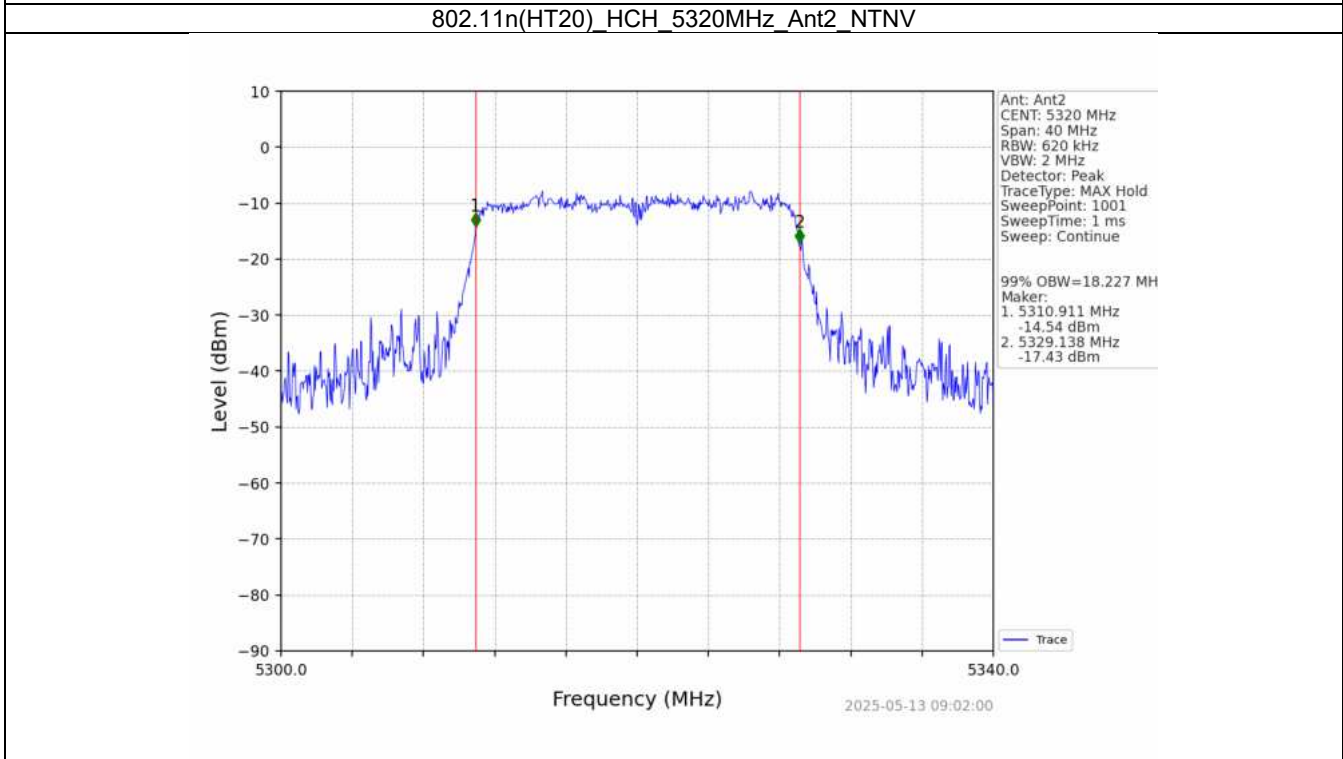
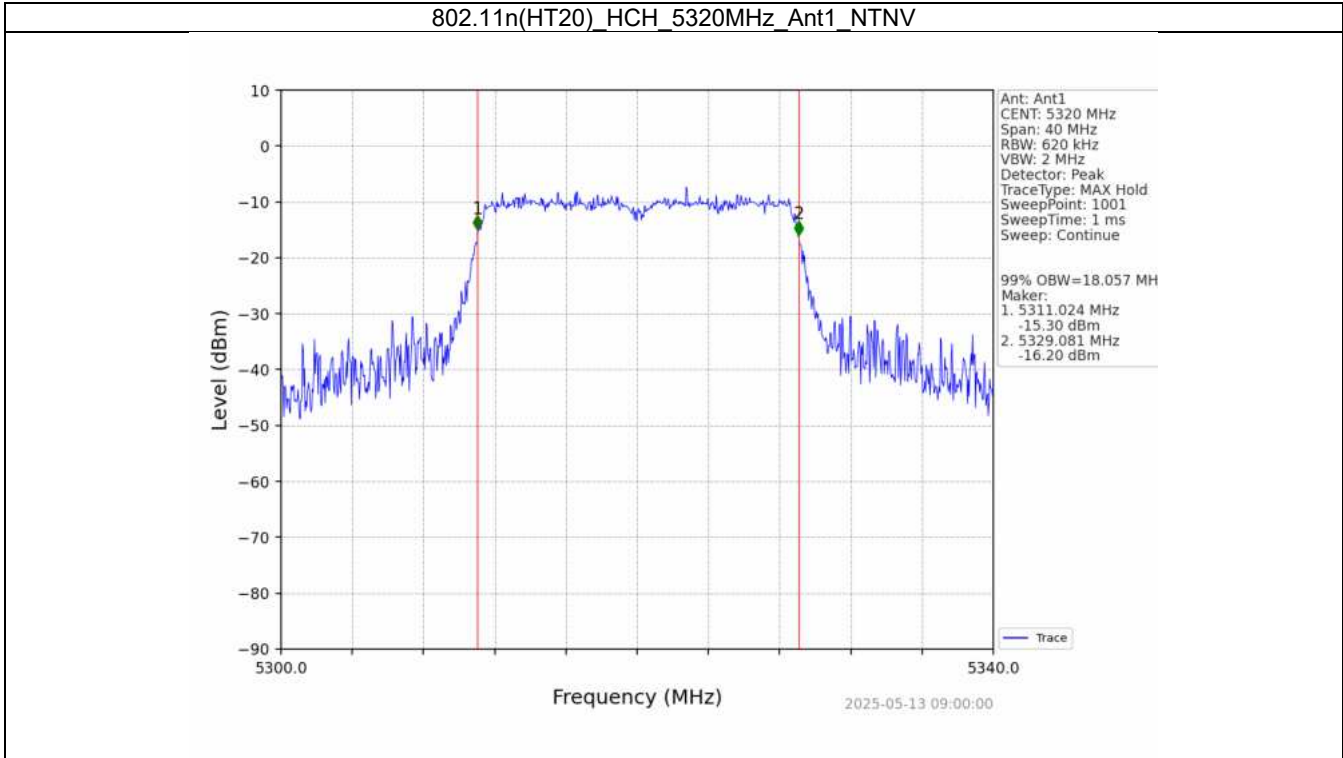


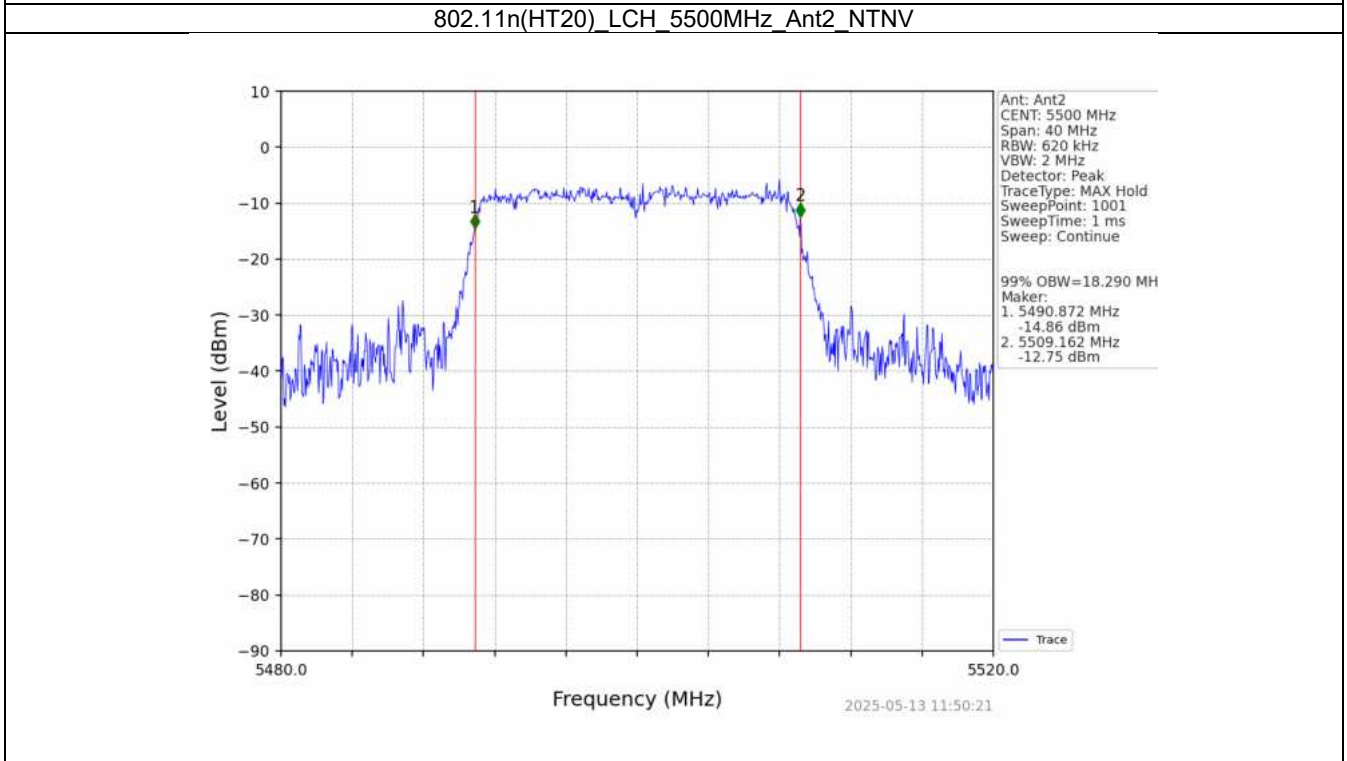
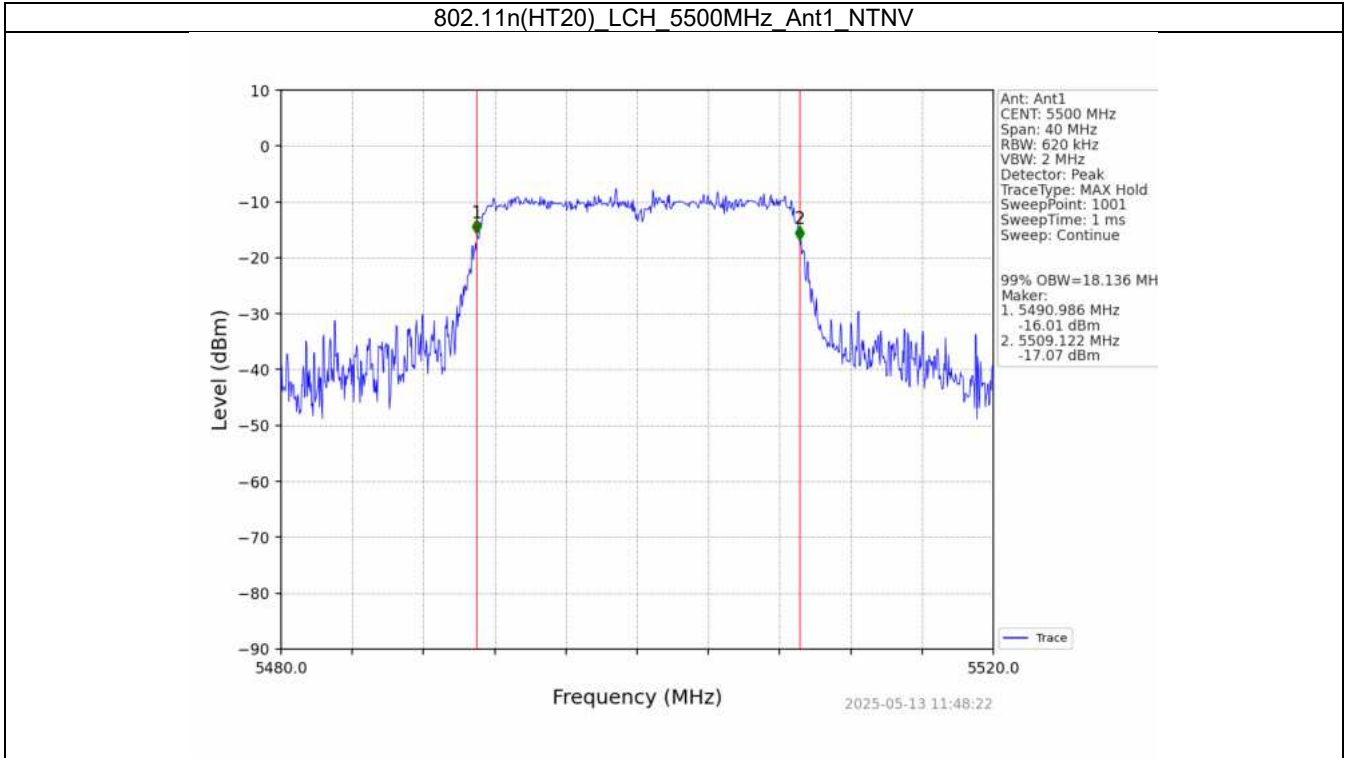
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV

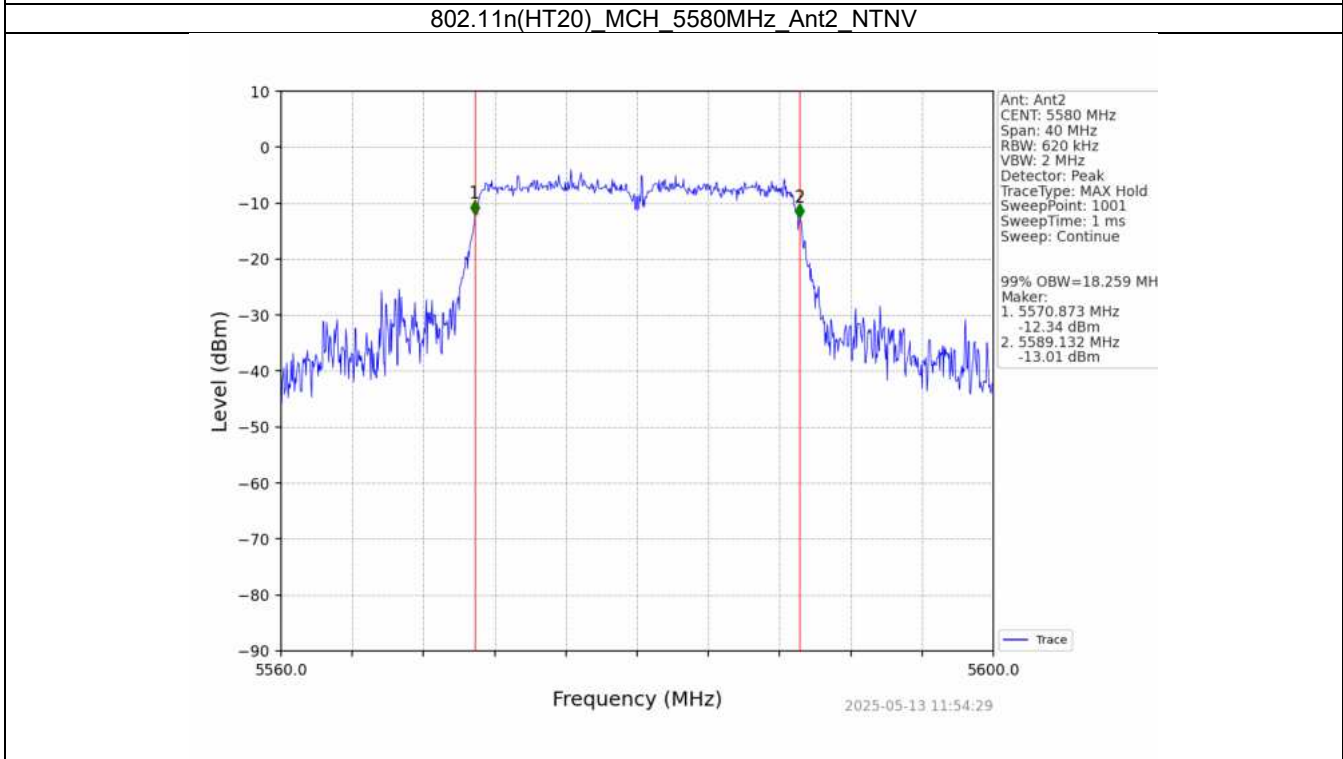
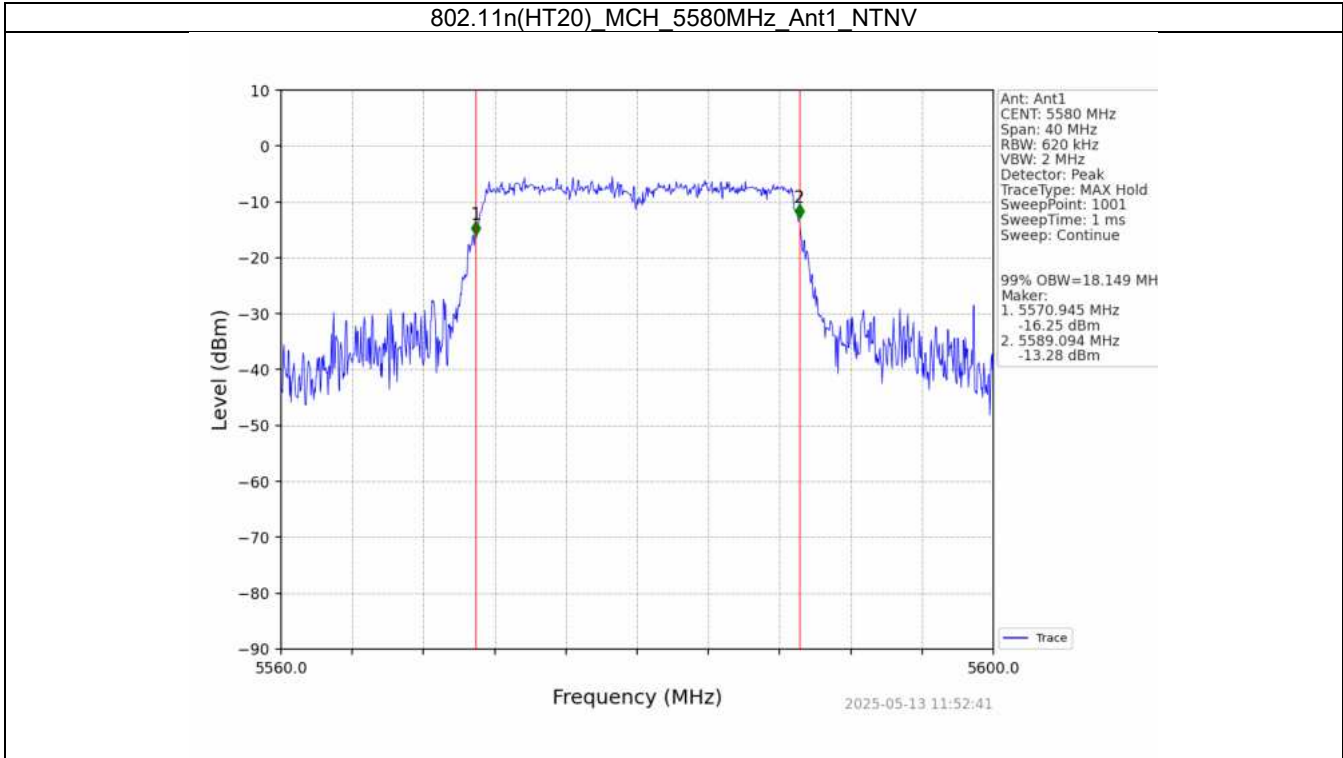


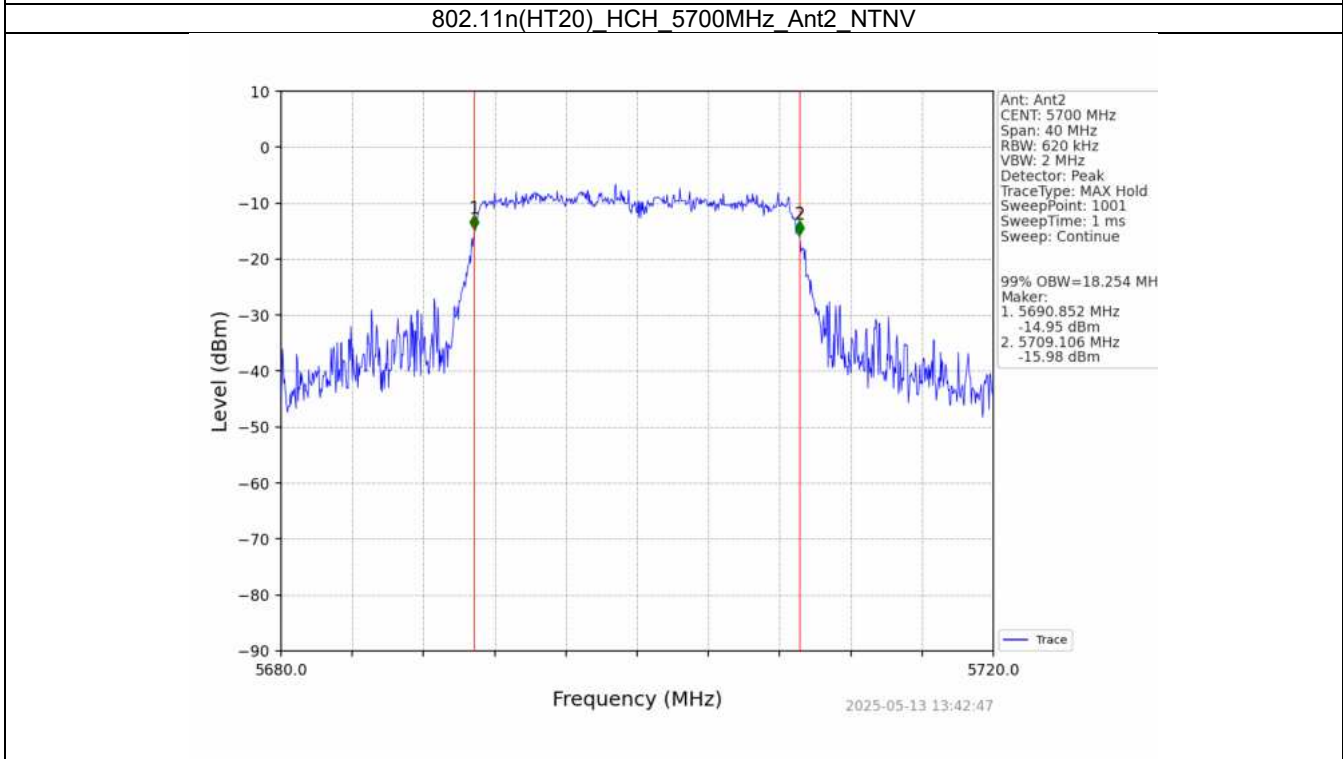
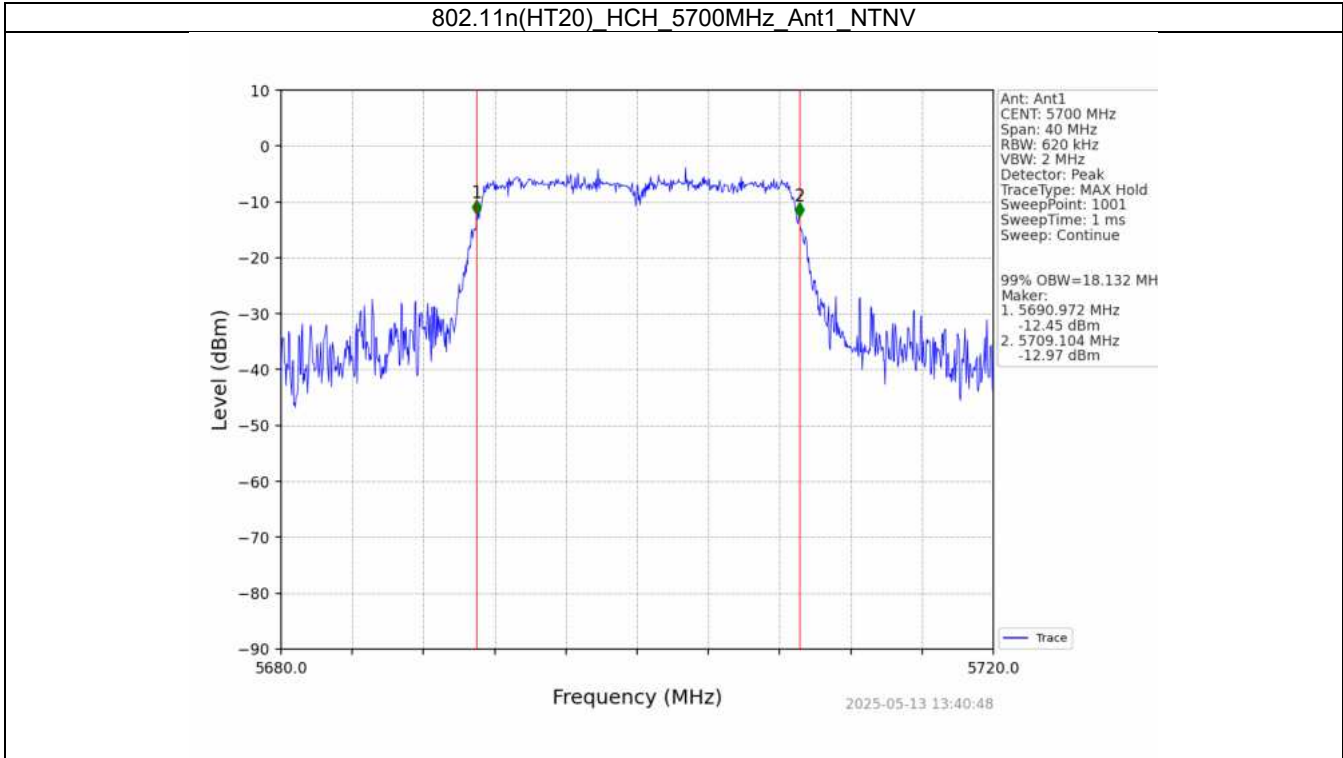
802.11n(HT20)_MCH_5300MHz_Ant2_NTNV

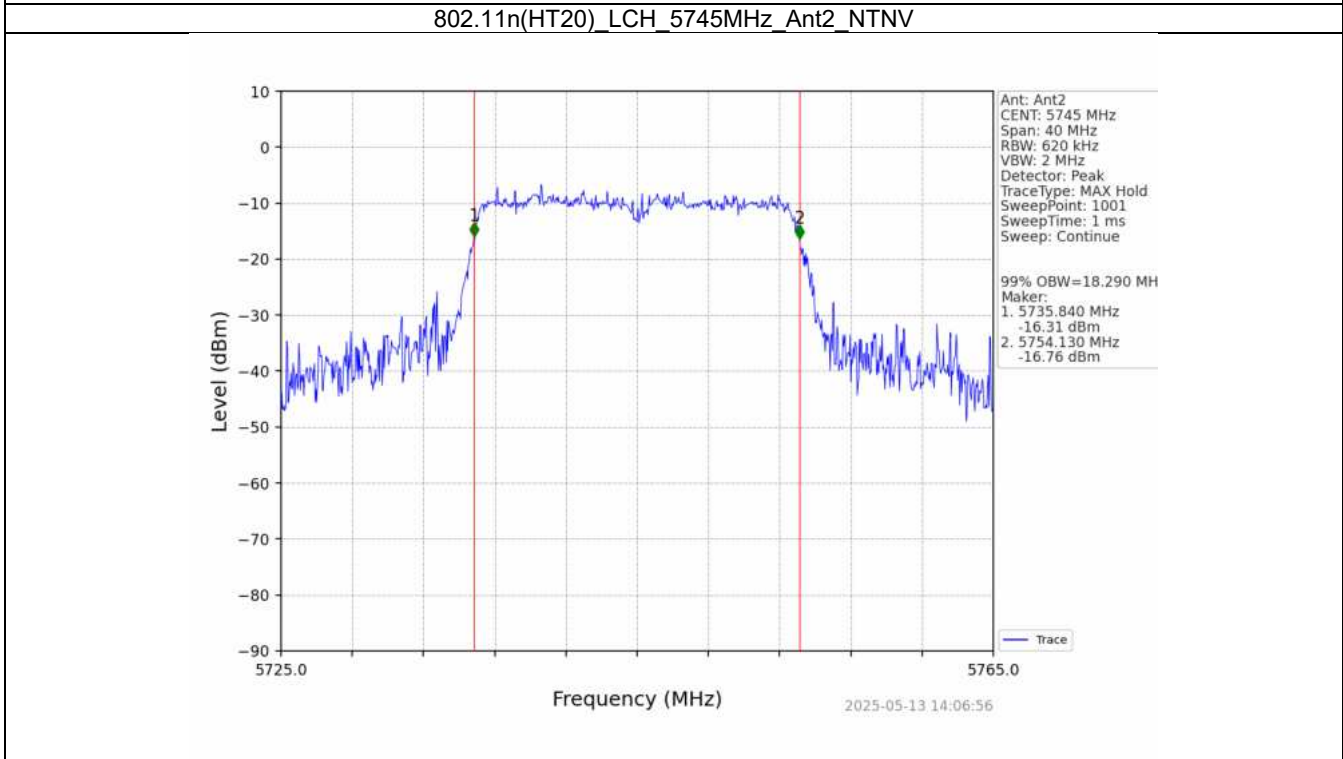
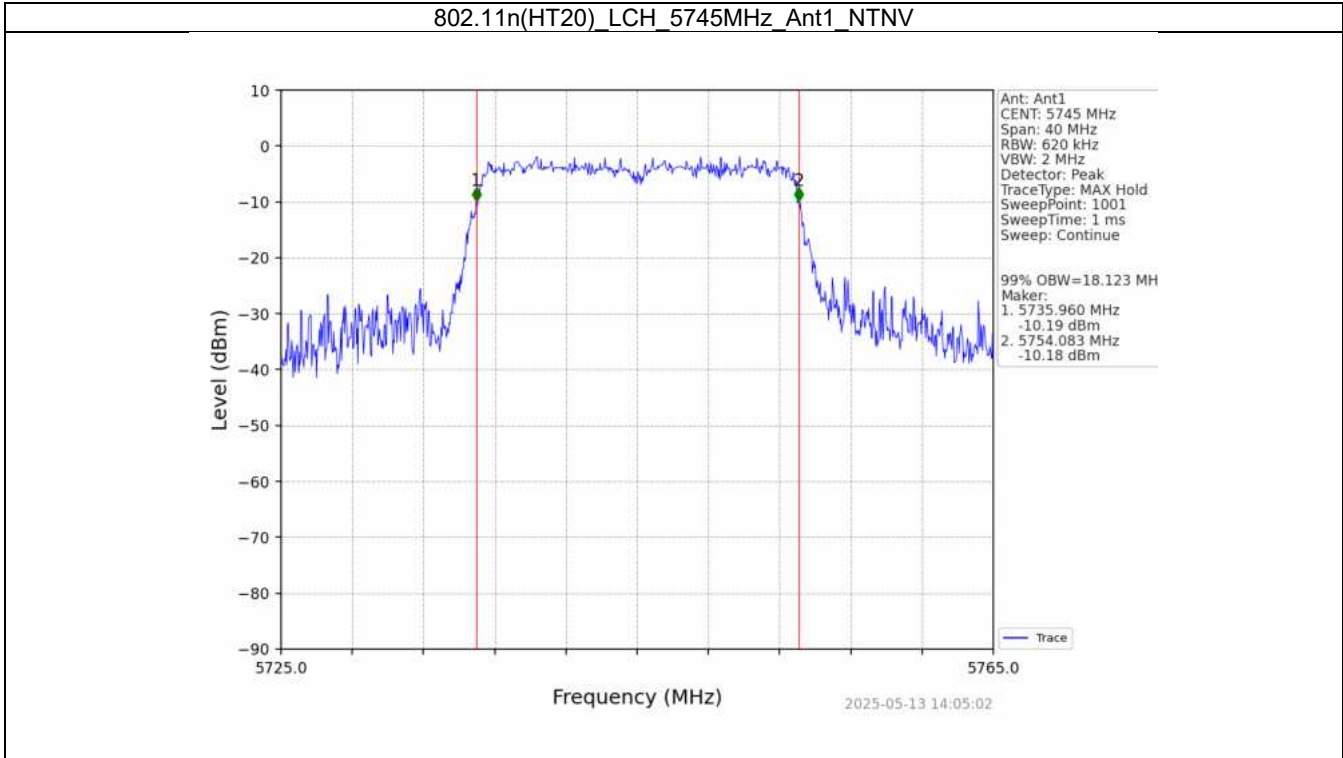


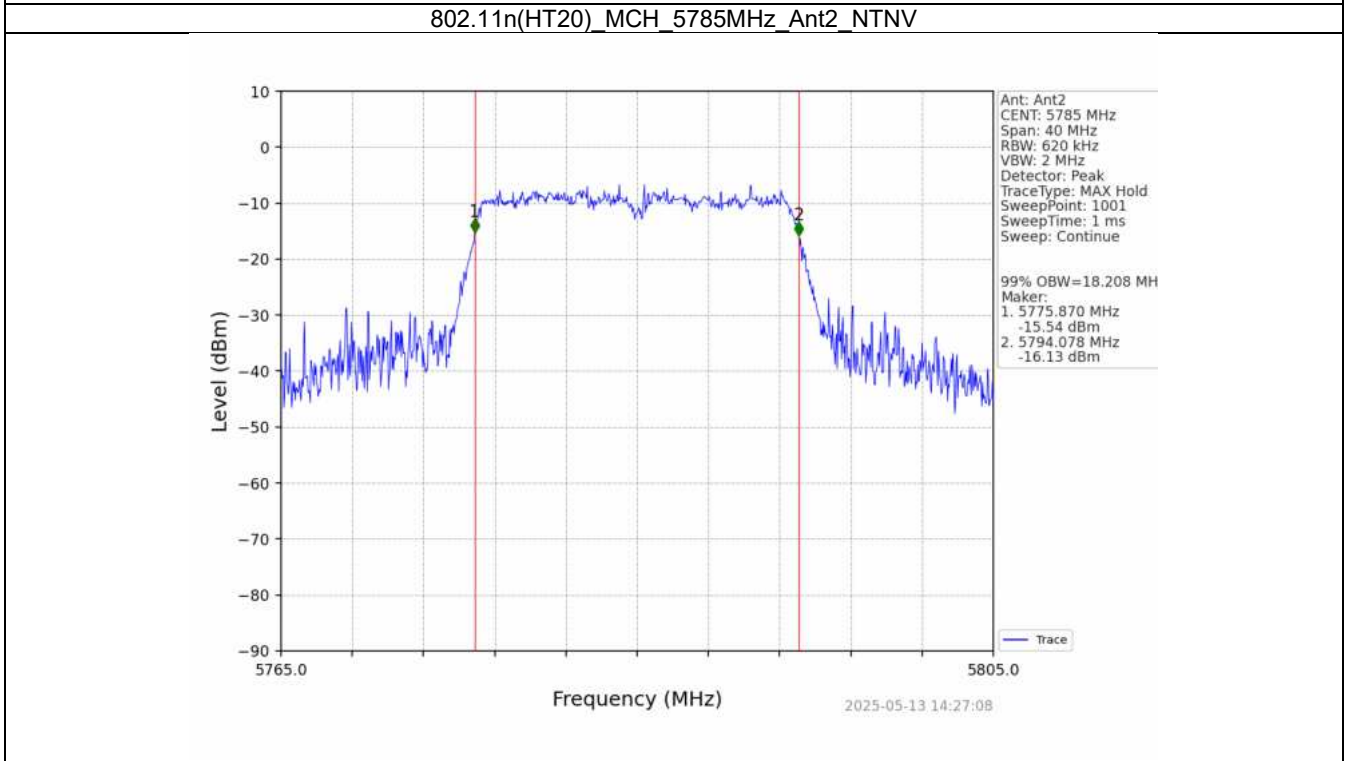
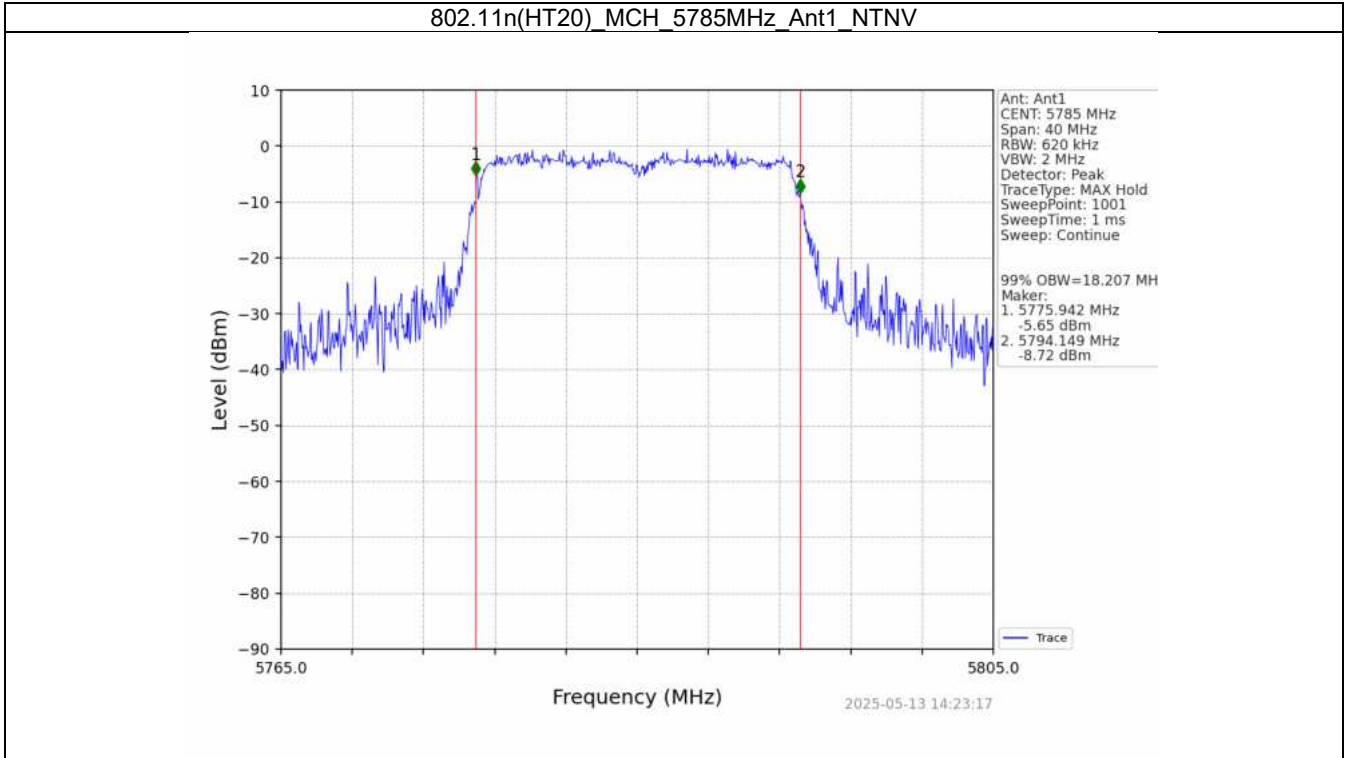




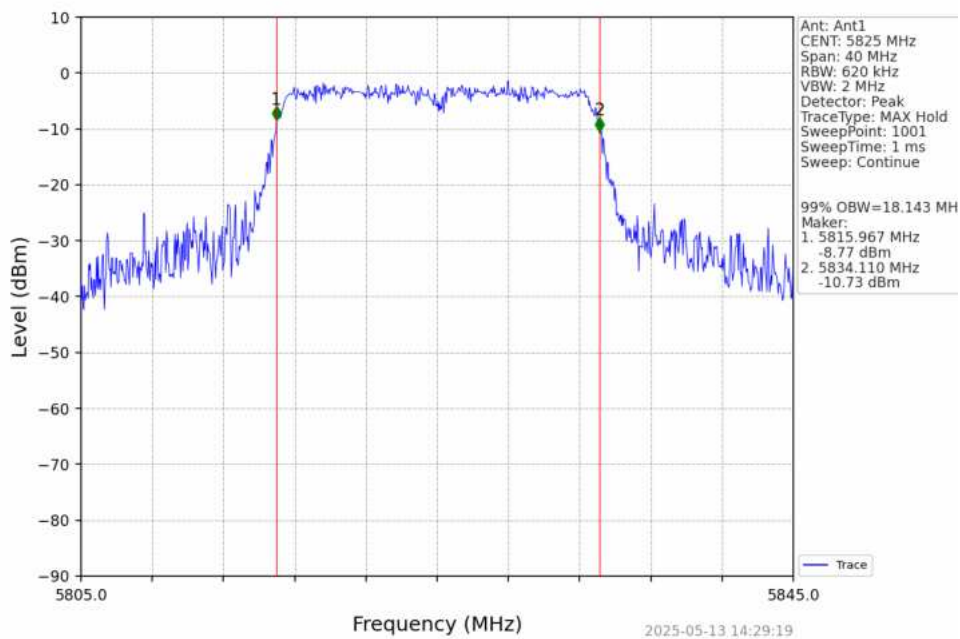




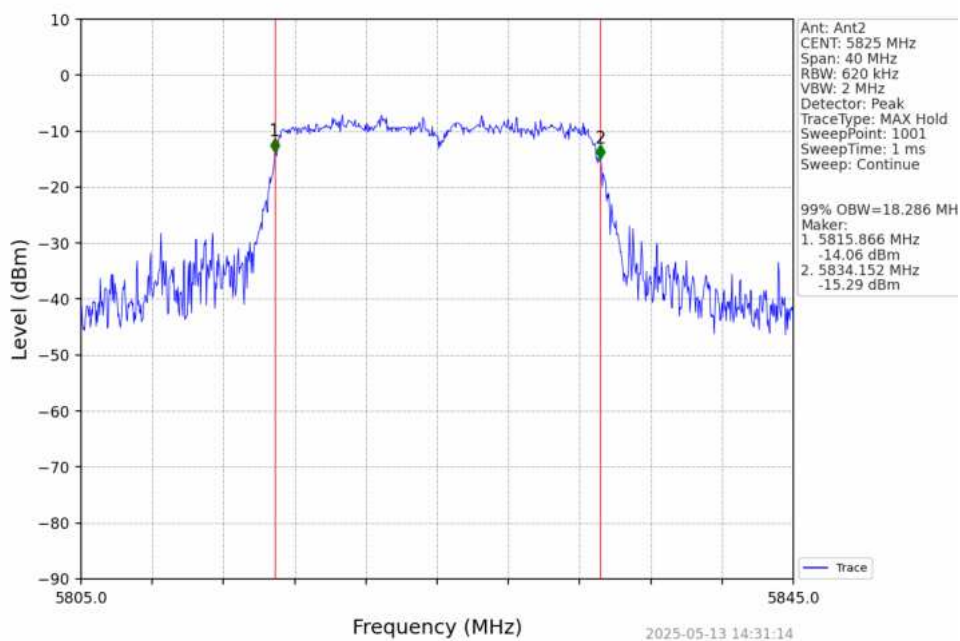




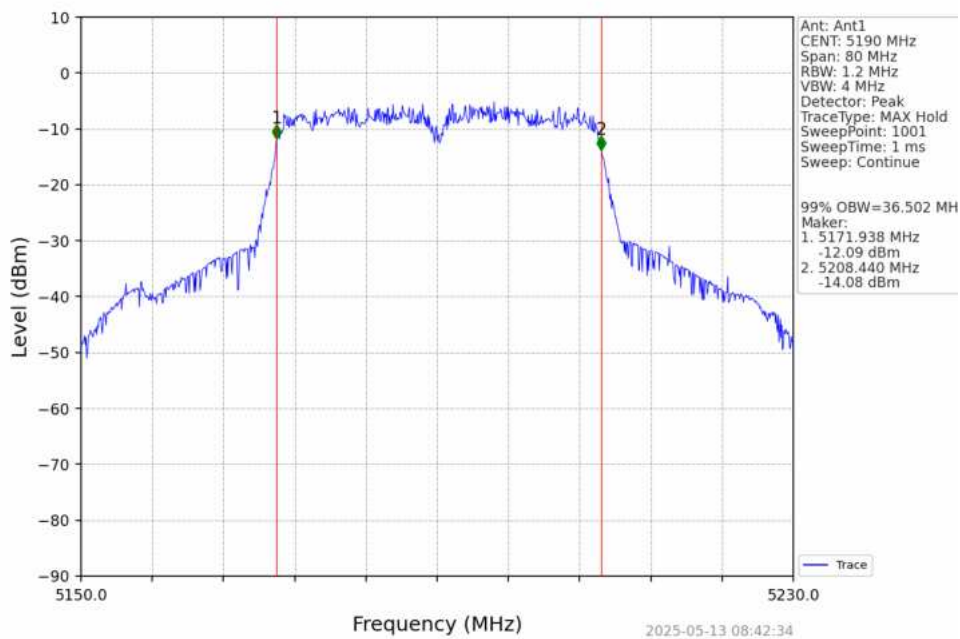
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



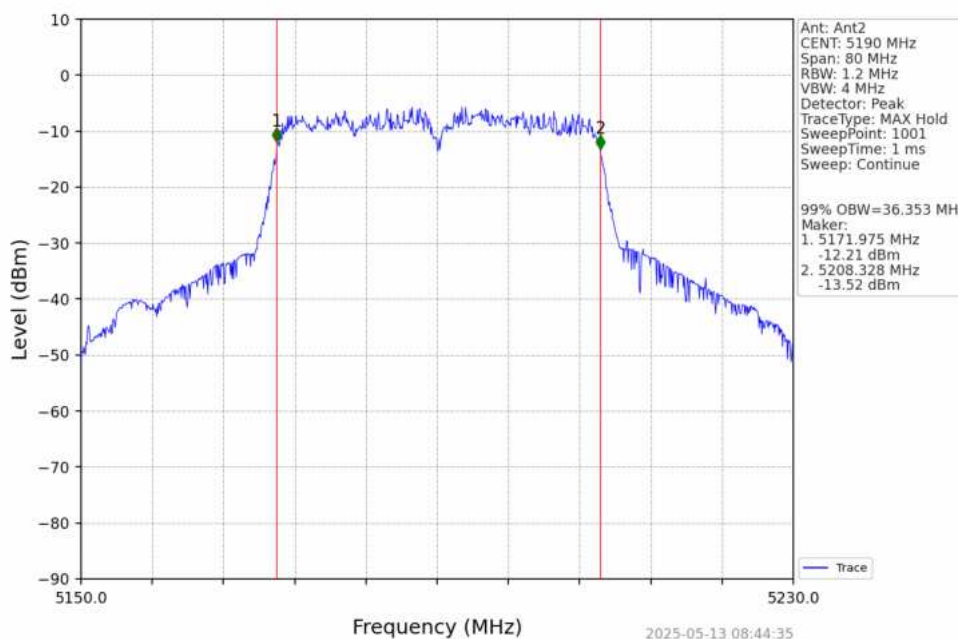
802.11n(HT20)_HCH_5825MHz_Ant2_NTNV



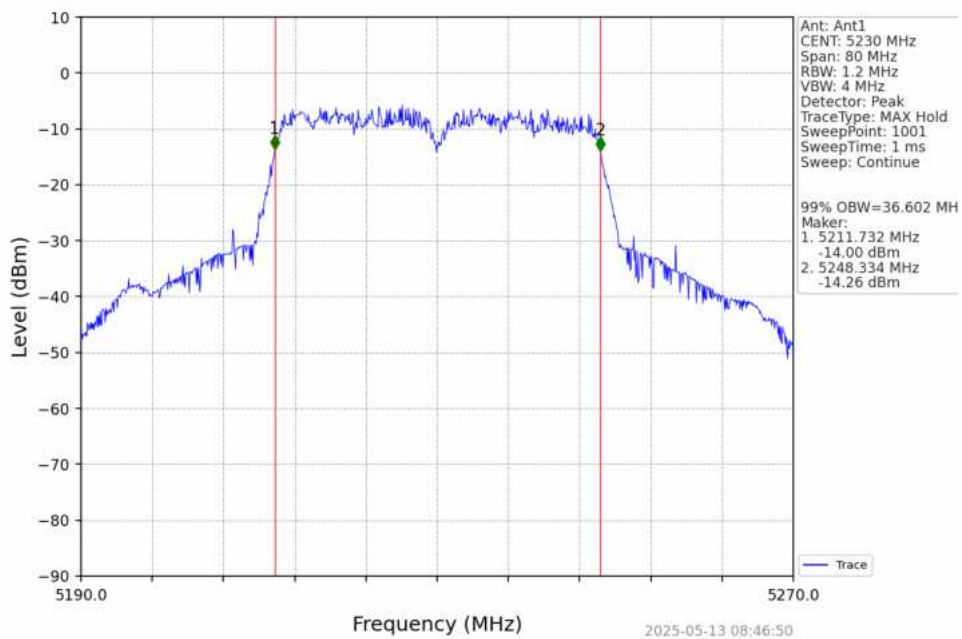
802.11n(HT40) LCH_5190MHz_Ant1_NTNV



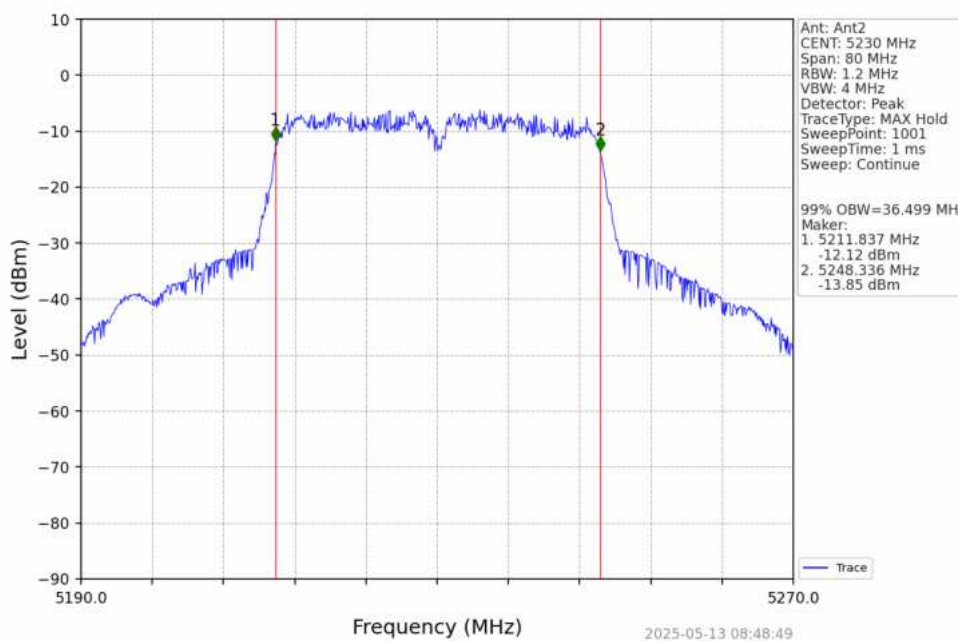
802.11n(HT40) LCH_5190MHz_Ant2_NTNV



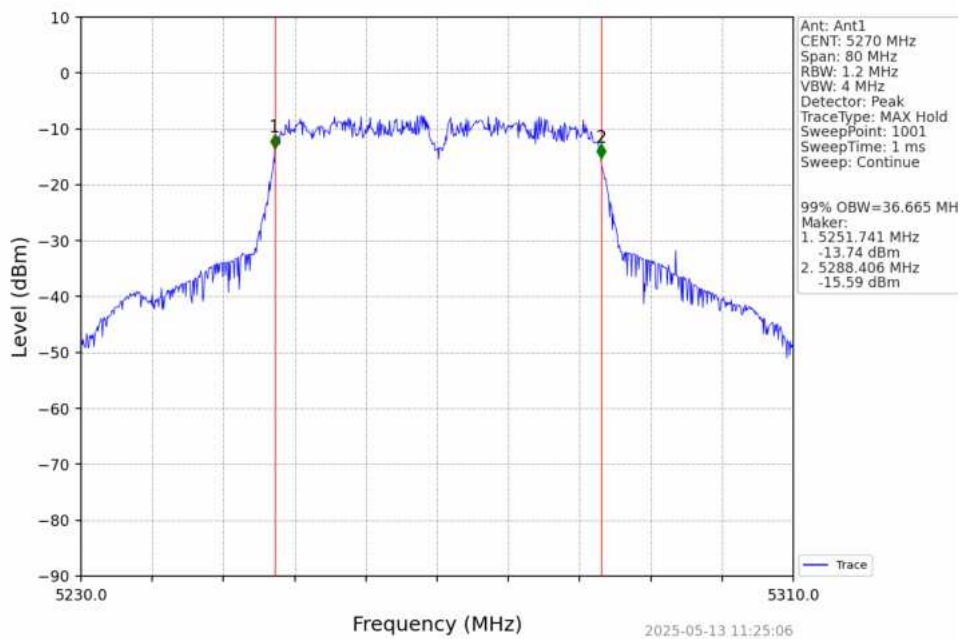
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



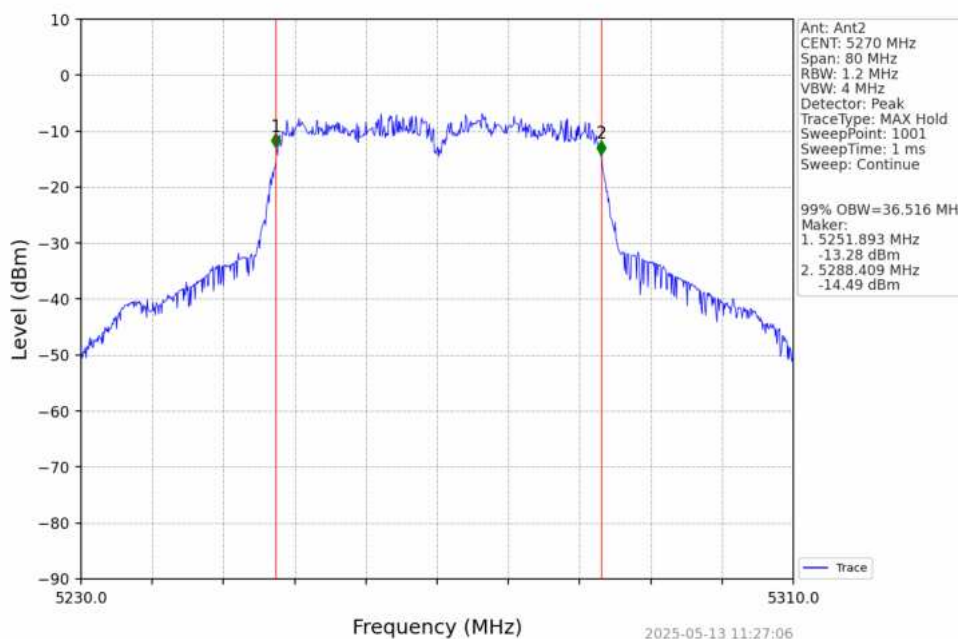
802.11n(HT40)_HCH_5230MHz_Ant2_NTNV



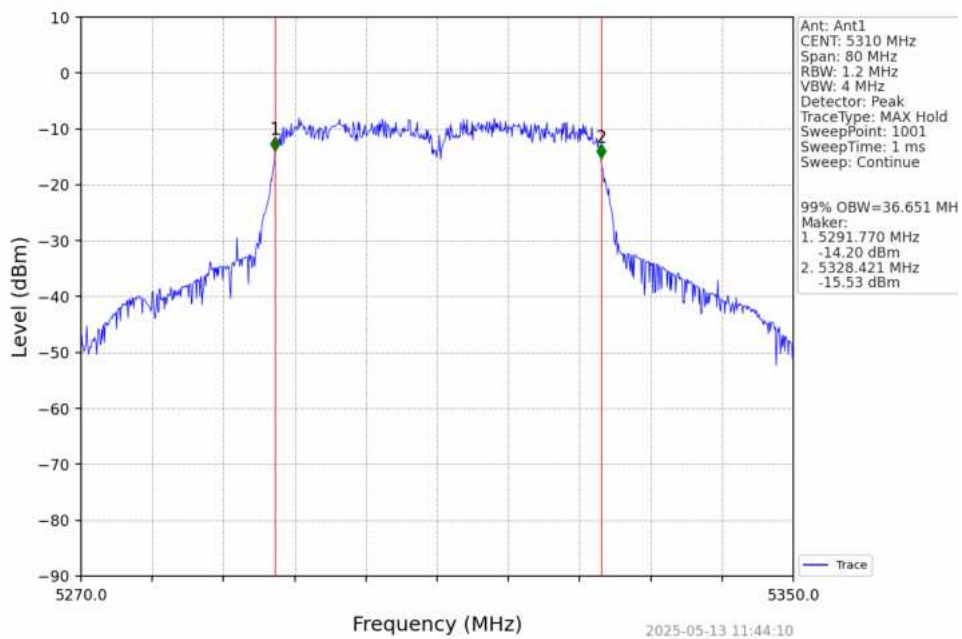
802.11n(HT40) LCH_5270MHz_Ant1_NTNV



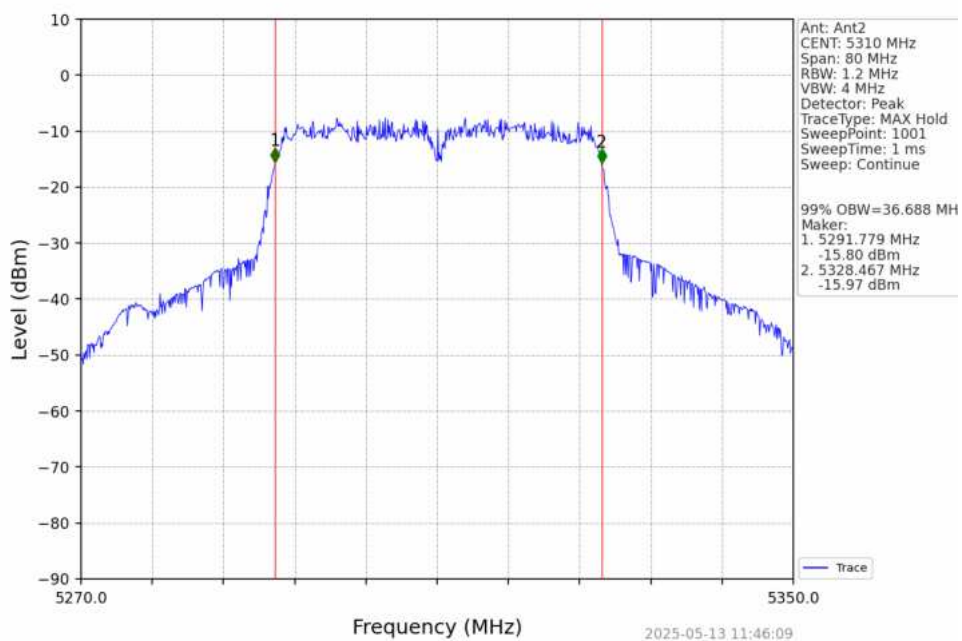
802.11n(HT40) LCH_5270MHz_Ant2_NTNV

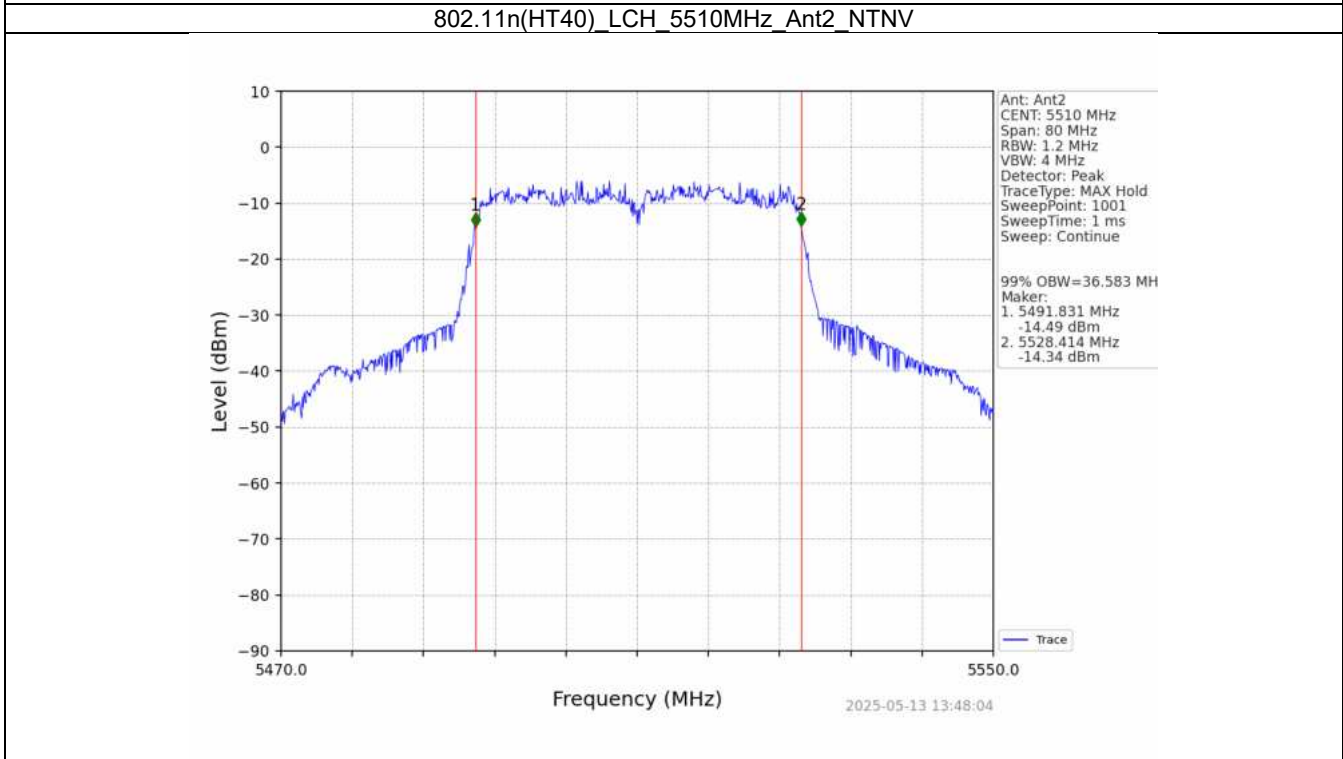
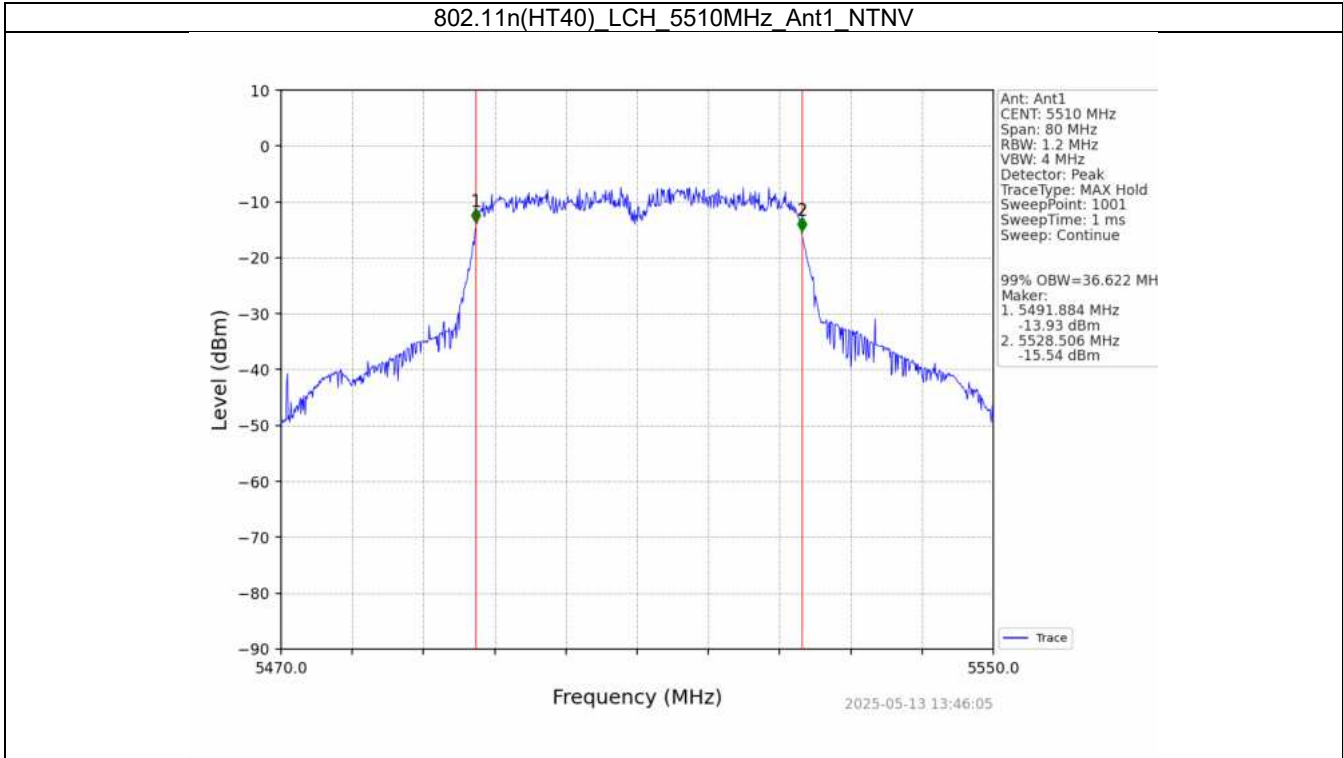


802.11n(HT40)_HCH_5310MHz_Ant1_NTNV

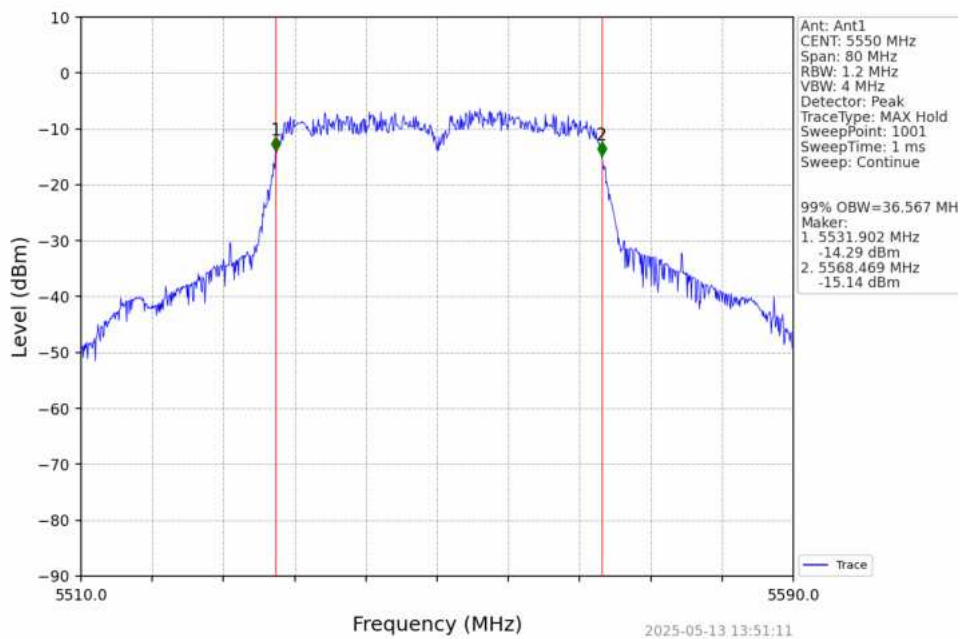


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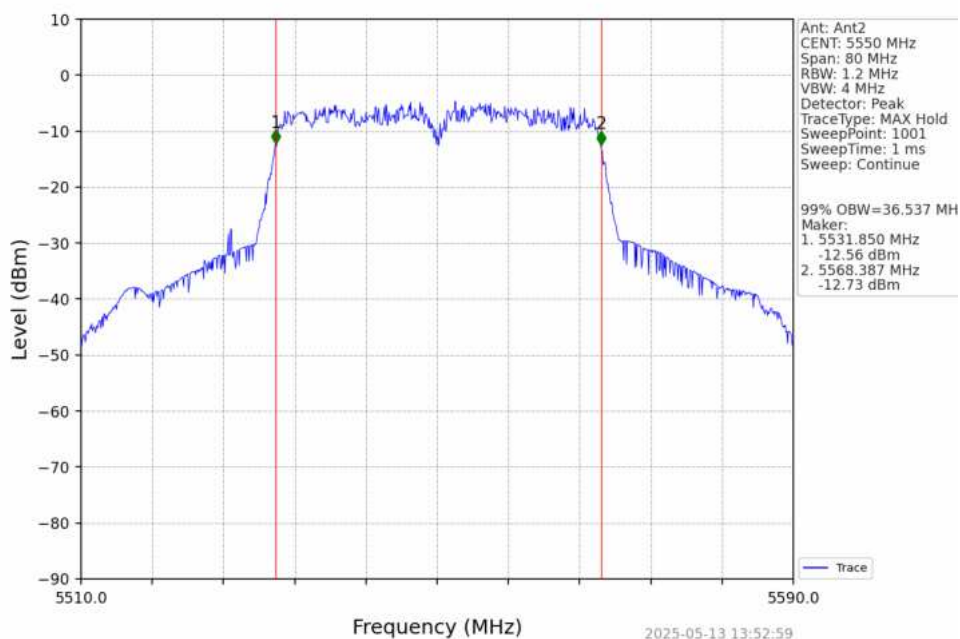




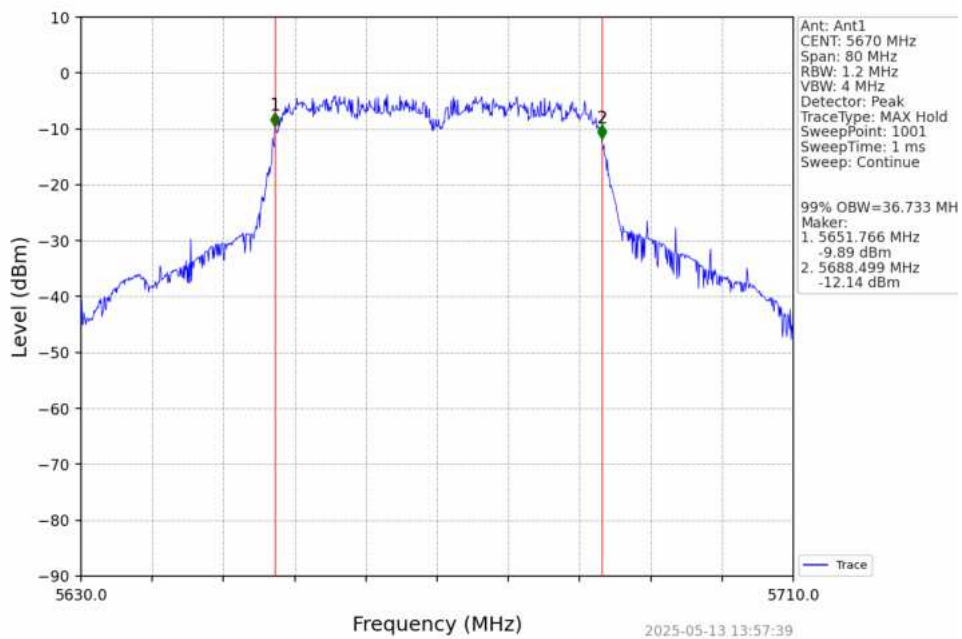
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



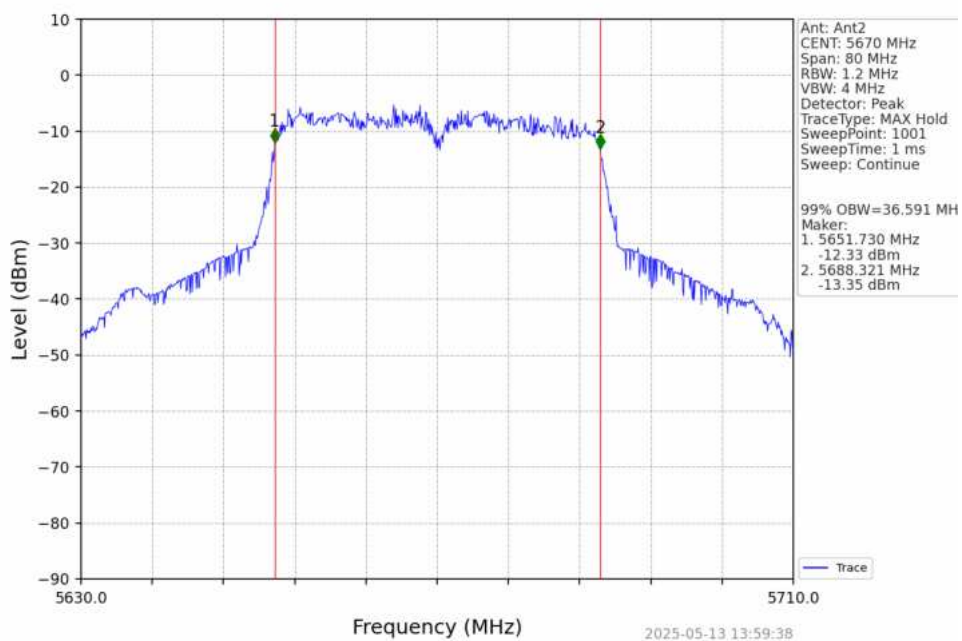
802.11n(HT40)_MCH_5550MHz_Ant2_NTNV



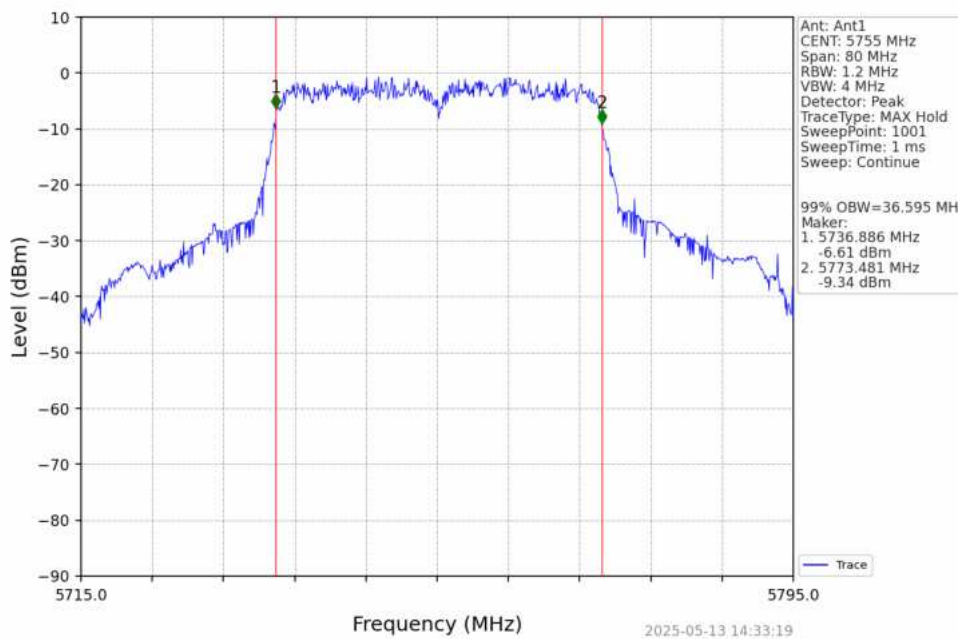
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



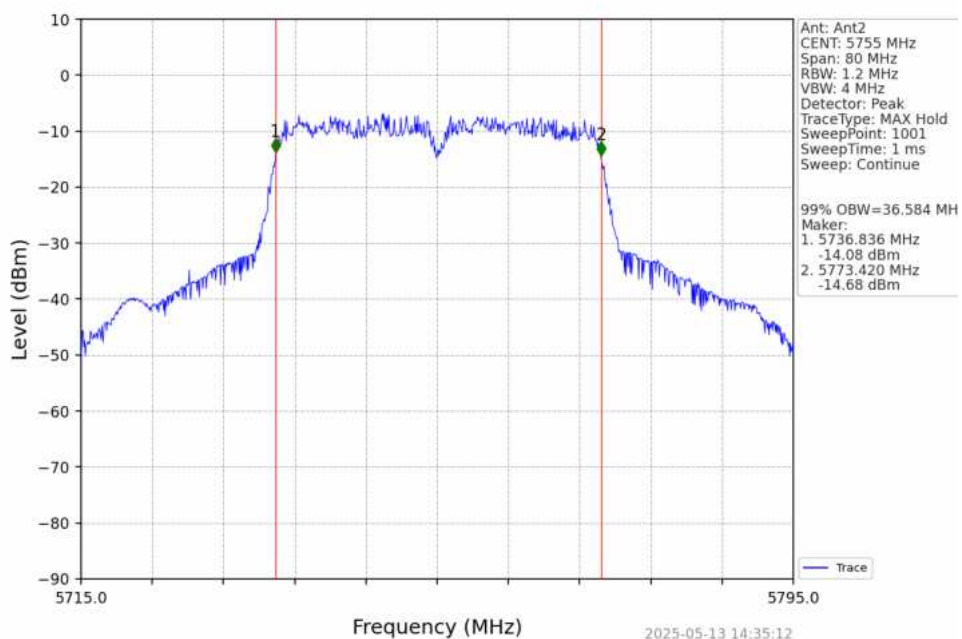
802.11n(HT40)_HCH_5670MHz_Ant2_NTNV



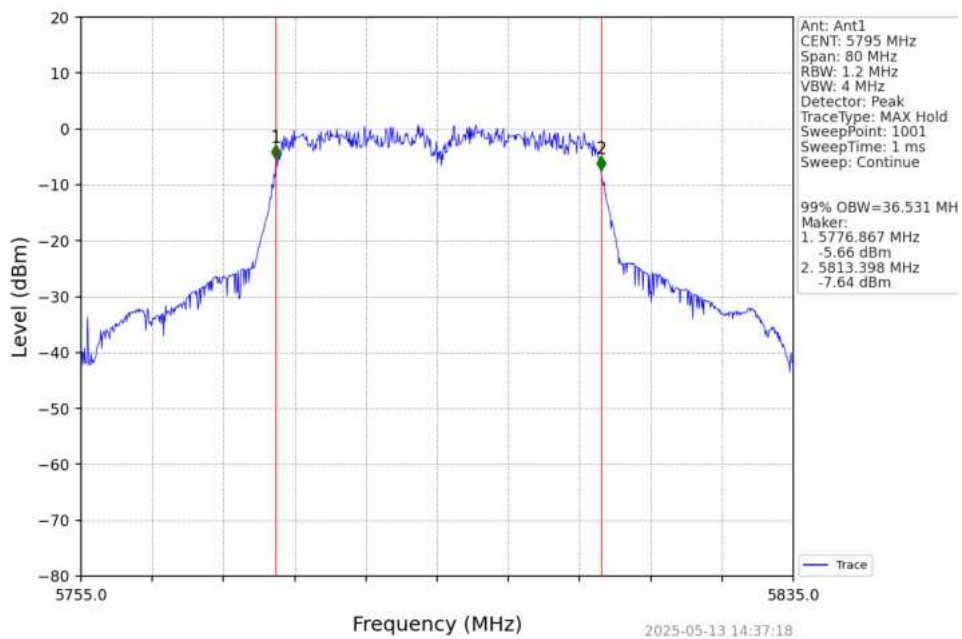
802.11n(HT40) LCH_5755MHz_Ant1_NTNV



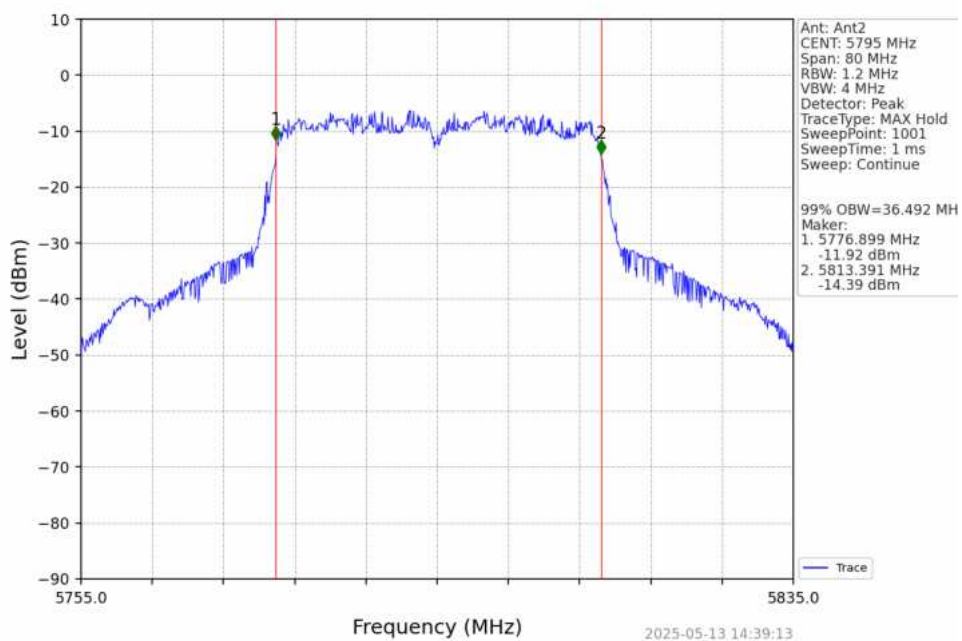
802.11n(HT40) LCH_5755MHz_Ant2_NTNV

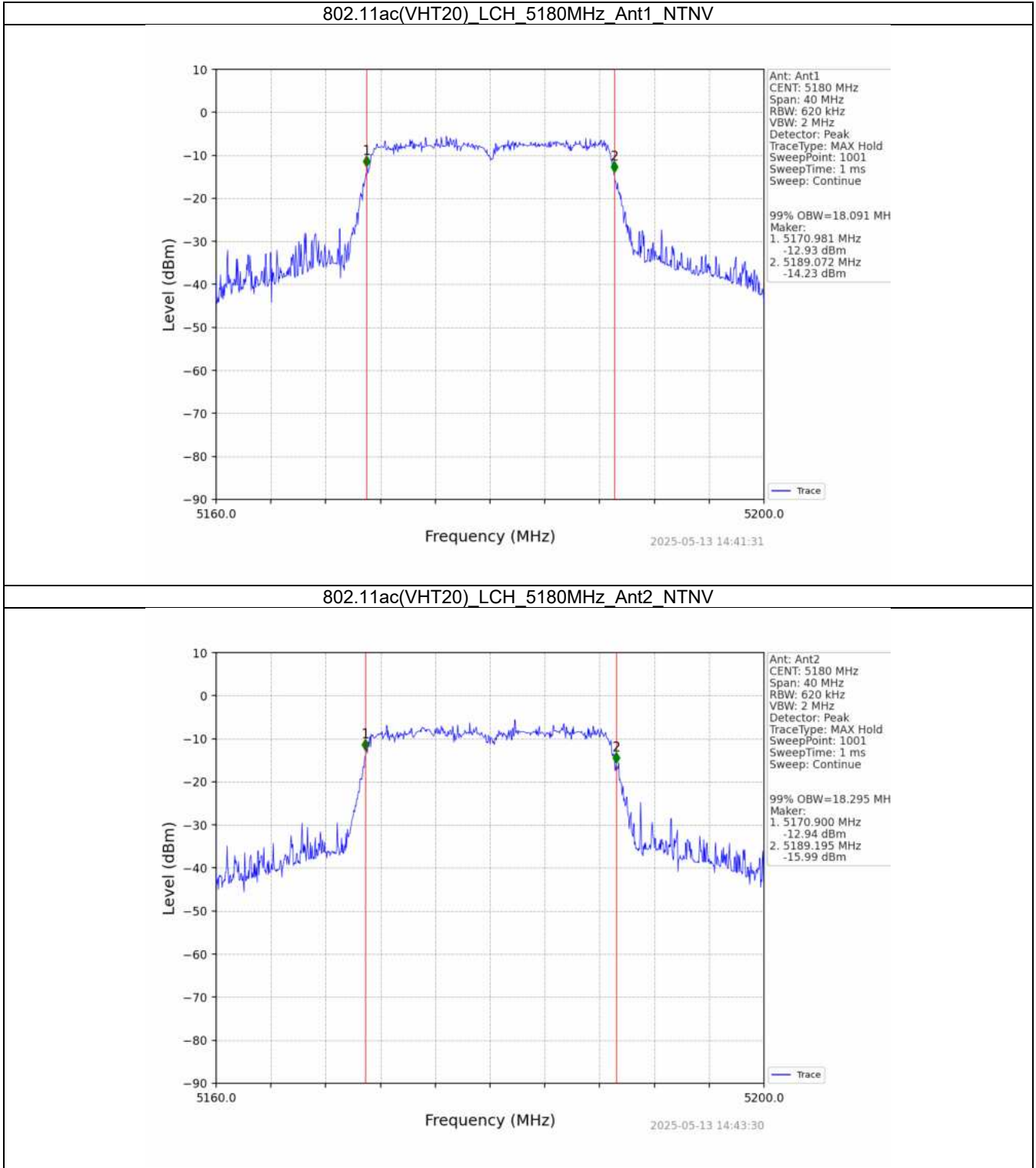


802.11n(HT40)_HCH_5795MHz_Ant1_NTNV

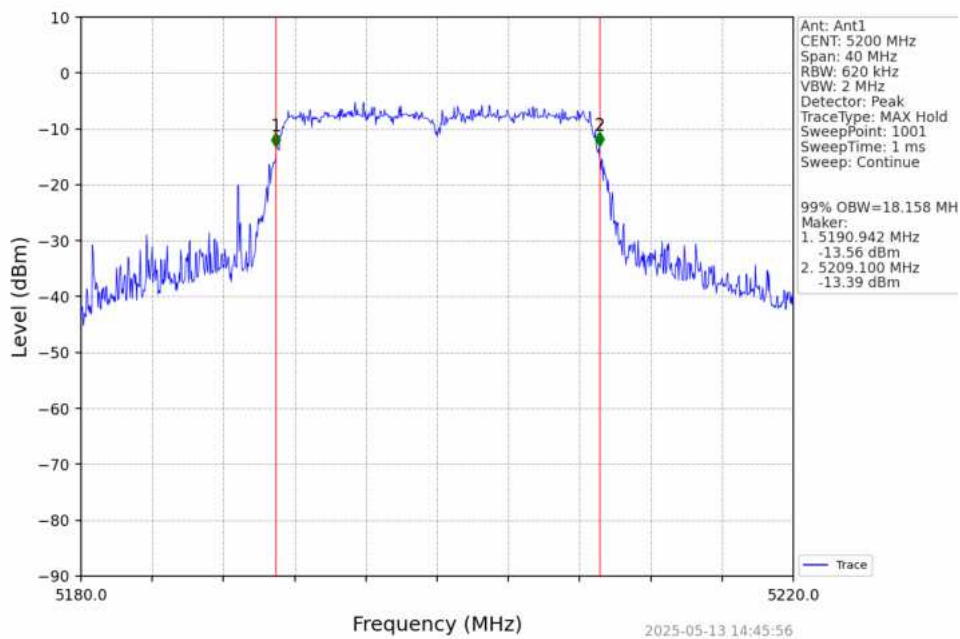


802.11n(HT40)_HCH_5795MHz_Ant2_NTNV





802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



802.11ac(VHT20)_MCH_5200MHz_Ant2_NTNV

