

Appendix RF test data for WIFI5G_UNII Band 1 (Module 2: BL-M8852BS2)

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

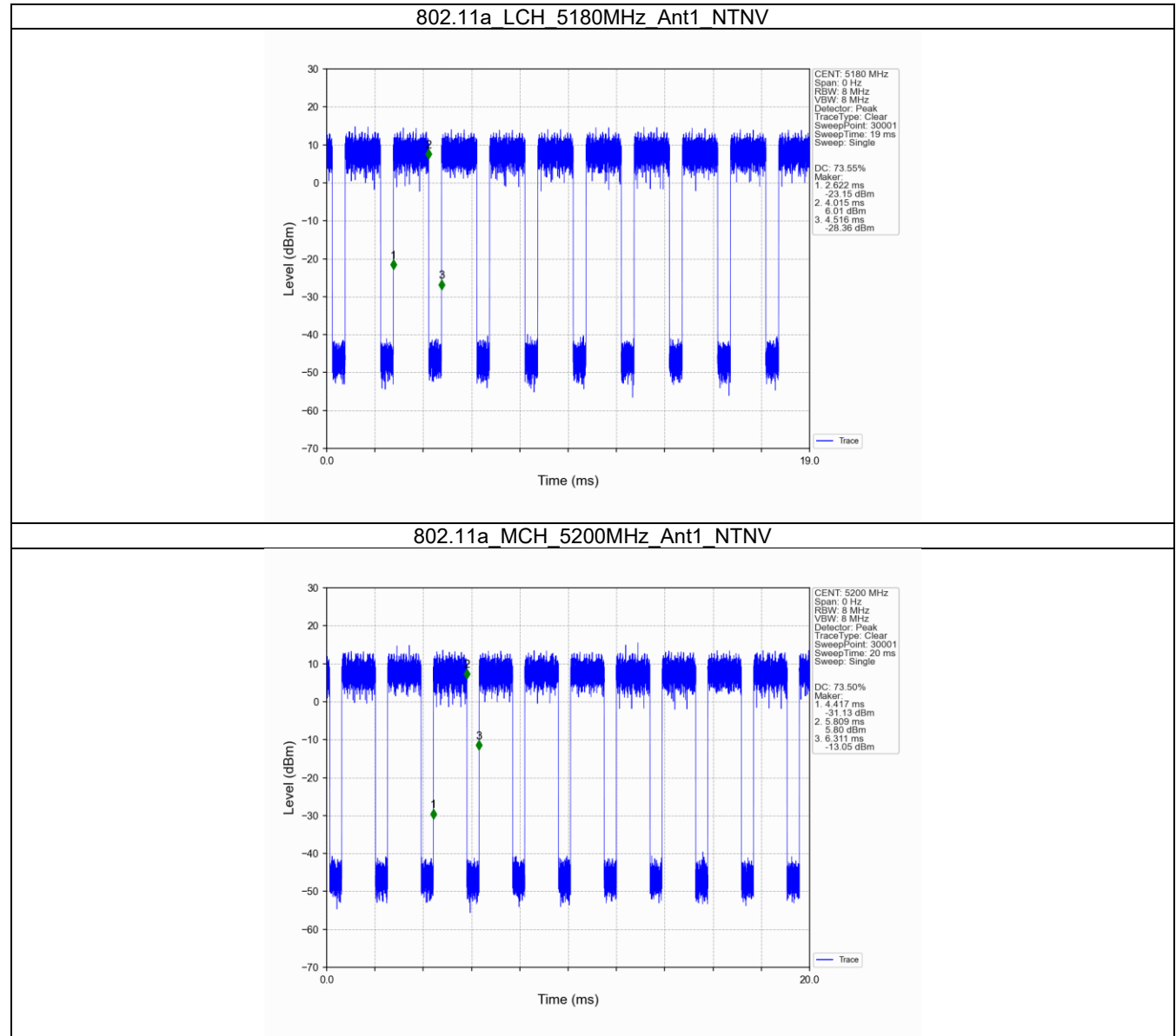
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	1.393	1.894	73.55	1.33	0.03
		5200	/	/	1.392	1.894	73.50	1.34	0.04
		5240	/	/	1.392	1.894	73.50	1.34	0.03
802.11n (HT20)	MIMO	5180	/	/	1.175	1.676	70.11	1.54	0.03
		5200	/	/	1.175	1.676	70.11	1.54	0.02
		5240	/	/	1.175	1.676	70.11	1.54	0.03
802.11n (HT40)	MIMO	5190	/	/	0.584	1.085	53.82	2.69	0.00
		5230	/	/	0.585	1.086	53.87	2.69	0.00
802.11ac (VHT20)	MIMO	5180	/	/	1.178	1.680	70.12	1.54	0.03
		5200	/	/	1.179	1.680	70.18	1.54	0.00
		5240	/	/	1.178	1.680	70.12	1.54	0.03
802.11ac (VHT40)	MIMO	5190	/	/	0.591	1.094	54.02	2.67	0.03
		5230	/	/	0.577	1.079	53.48	2.72	0.03
802.11ac (VHT80)	MIMO	5210	/	/	0.289	0.790	36.58	4.37	0.03
802.11ax (HEW20)	MIMO	5180	SU	/	1.392	1.894	73.50	1.34	0.02
		5200	SU	/	1.010	1.512	66.80	1.75	0.03
		5240	SU	/	1.010	1.512	66.80	1.75	0.03
802.11ax (HEW40)	MIMO	5190	SU	/	0.534	1.036	51.54	2.88	0.03
		5230	SU	/	0.534	1.035	51.59	2.87	0.04
802.11ax (HEW80)	MIMO	5210	SU	/	0.288	0.790	36.46	4.38	0.02

1.1.2 Ant2

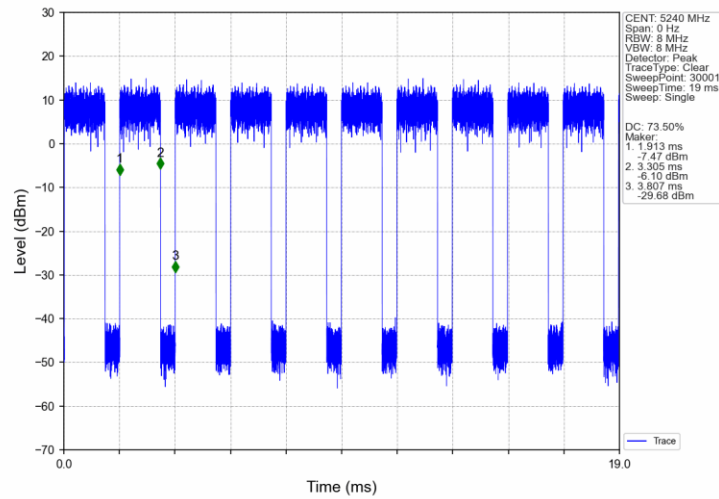
Ant2									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	100.000	100.000	100.00	0.00	0.00
		5200	/	/	1.393	1.895	73.51	1.34	0.06
		5240	/	/	100.000	100.000	100.00	0.00	0.00
802.11n (HT20)	MIMO	5180	/	/	1.174	1.675	70.09	1.54	0.03
		5200	/	/	1.175	1.676	70.11	1.54	0.03
		5240	/	/	1.174	1.676	70.05	1.55	0.03
802.11n (HT40)	MIMO	5190	/	/	0.584	1.086	53.78	2.69	0.02
		5230	/	/	0.584	1.086	53.78	2.69	0.00
802.11ac (VHT20)	MIMO	5180	/	/	1.178	1.680	70.12	1.54	0.03
		5200	/	/	1.179	1.681	70.14	1.54	0.03
		5240	/	/	1.179	1.681	70.14	1.54	0.03
802.11ac (VHT40)	MIMO	5190	/	/	0.591	1.093	54.07	2.67	0.03
		5230	/	/	0.577	1.079	53.48	2.72	0.03
802.11ac (VHT80)	MIMO	5210	/	/	0.289	0.791	36.54	4.37	0.03
802.11ax (HEW20)	MIMO	5180	SU	/	1.392	1.894	73.50	1.34	0.03
		5200	SU	/	1.011	1.512	66.87	1.75	0.03
		5240	SU	/	1.010	1.512	66.80	1.75	0.01
802.11ax (HEW40)	MIMO	5190	SU	/	0.534	1.036	51.54	2.88	0.03
		5230	SU	/	0.534	1.036	51.54	2.88	0.02
802.11ax (HEW80)	MIMO	5210	SU	/	0.288	0.790	36.46	4.38	0.03

1.2 Test Graph

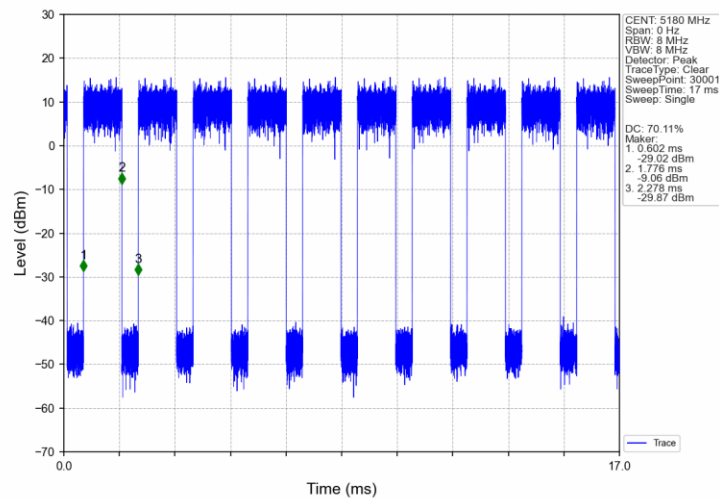
1.2.1 Ant1



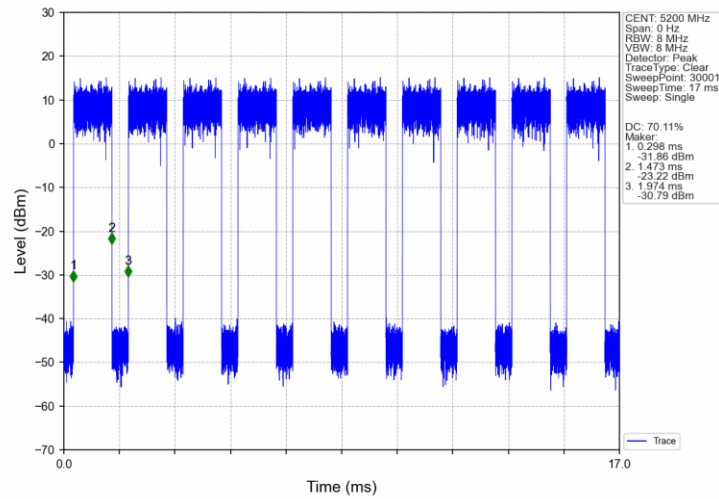
802.11a_HCH_5240MHz_Ant1_NTNV



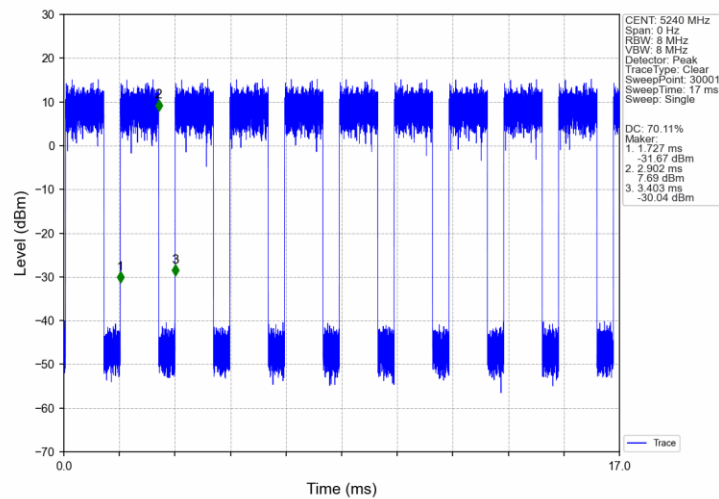
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



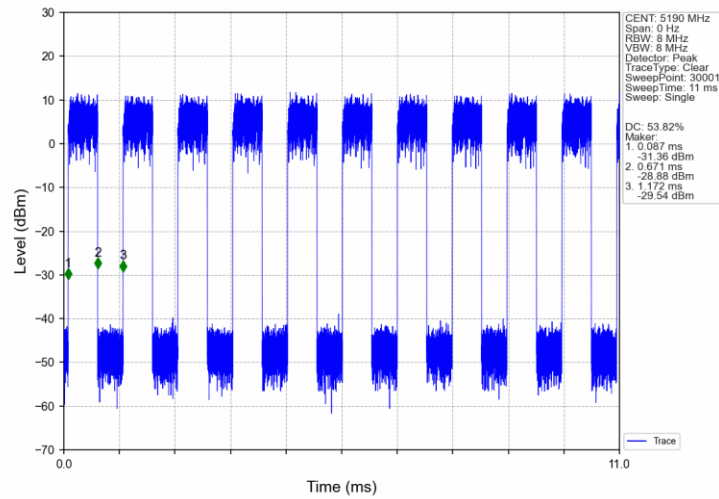
802.11n(HT20) MCH 5200MHz Ant1 NTV



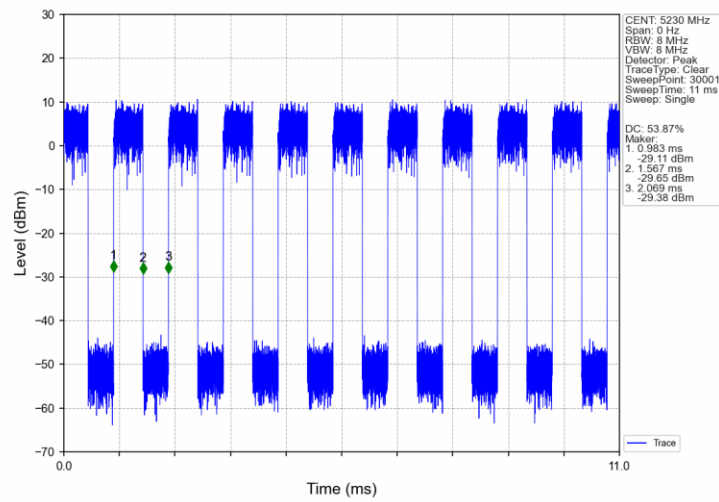
802.11n(HT20) HCH 5240MHz Ant1 NTV



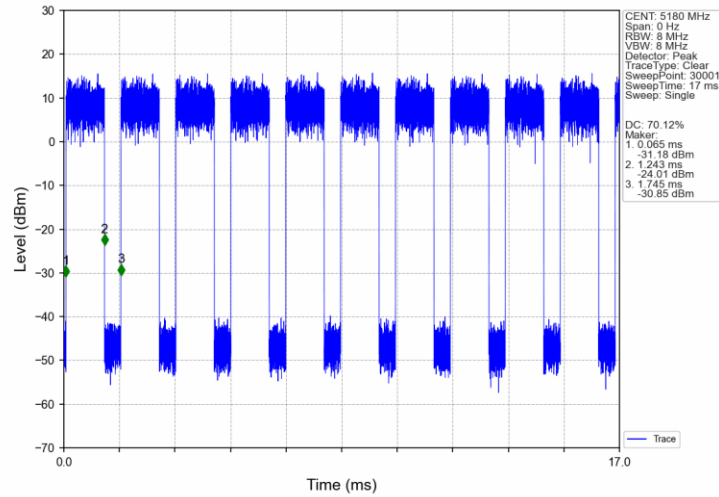
802.11n(HT40) LCH 5190MHz Ant1 NTN



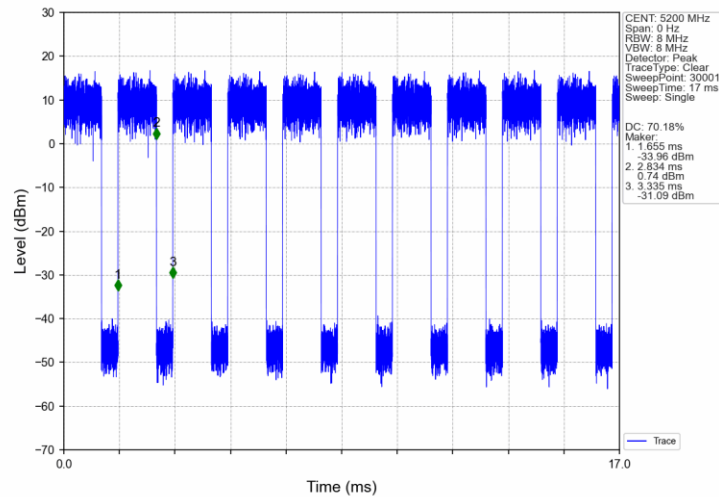
802.11n(HT40) HCH 5230MHz Ant1 NTN



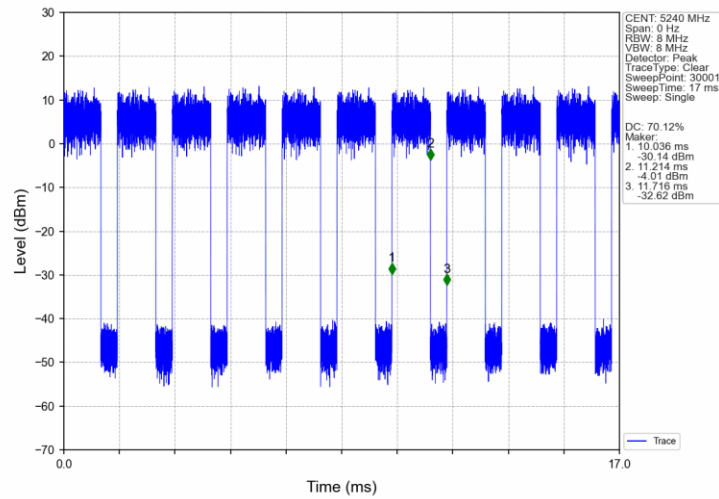
802.11ac(VHT20) LCH 5180MHz Ant1 NTN



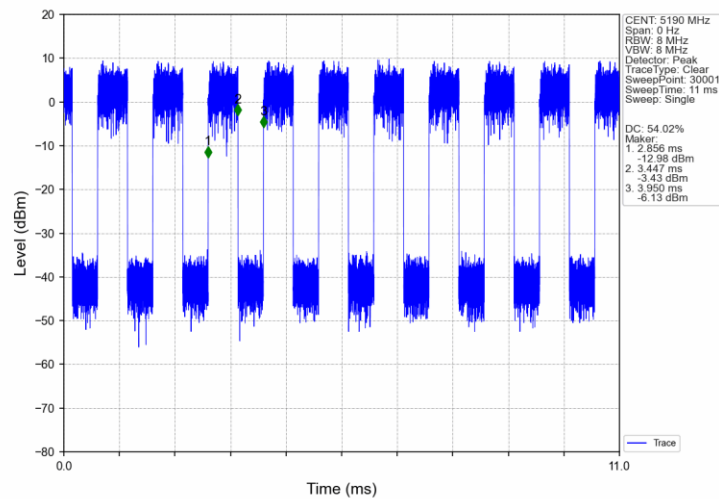
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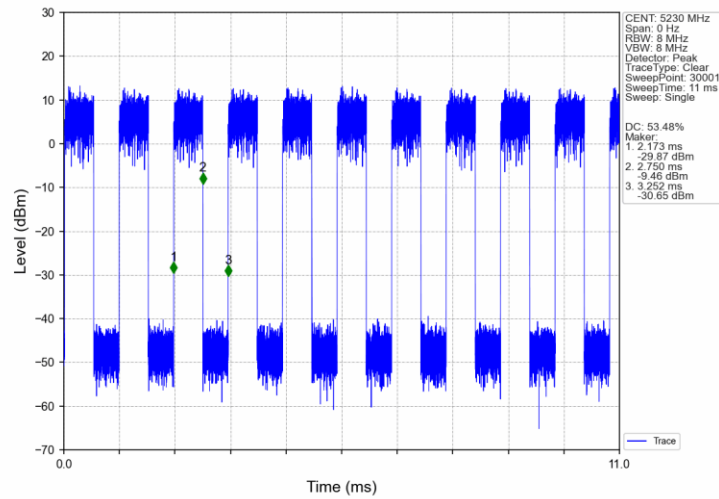
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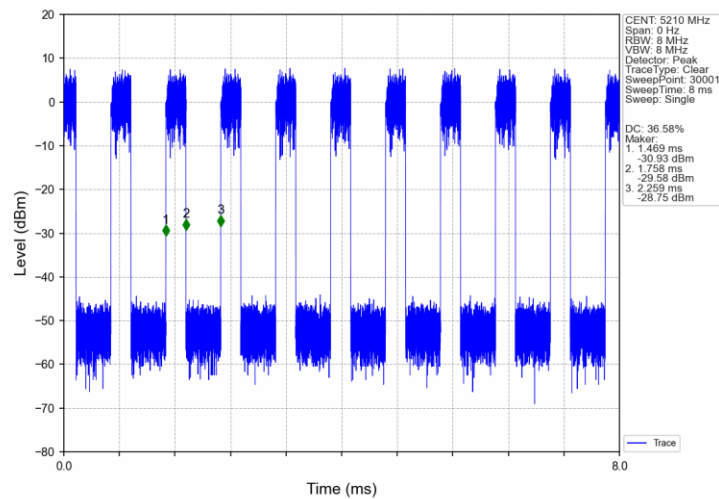
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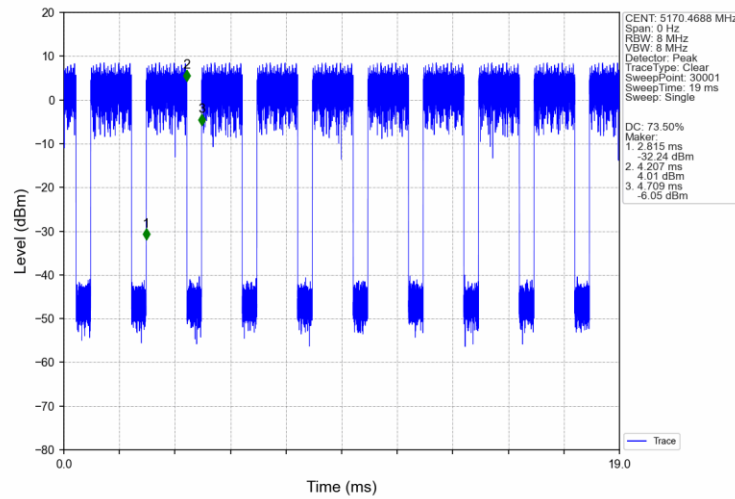
802.11ac(VHT40) HCH 5230MHz Ant1 NTN



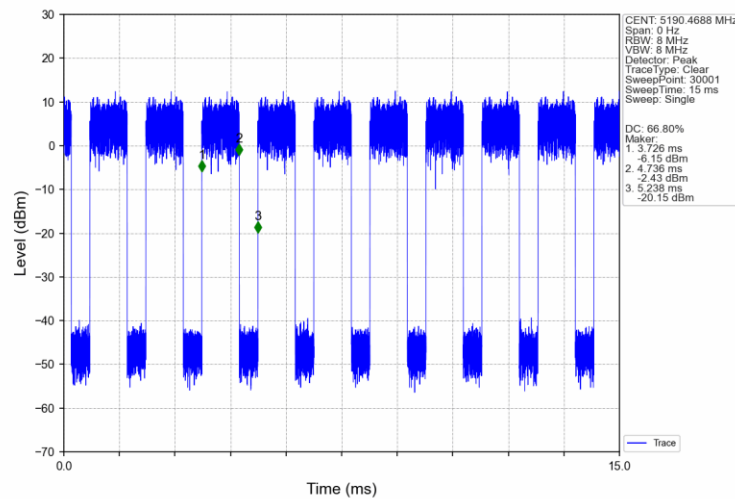
802.11ac(VHT80) MCH 5210MHz Ant1 NTN



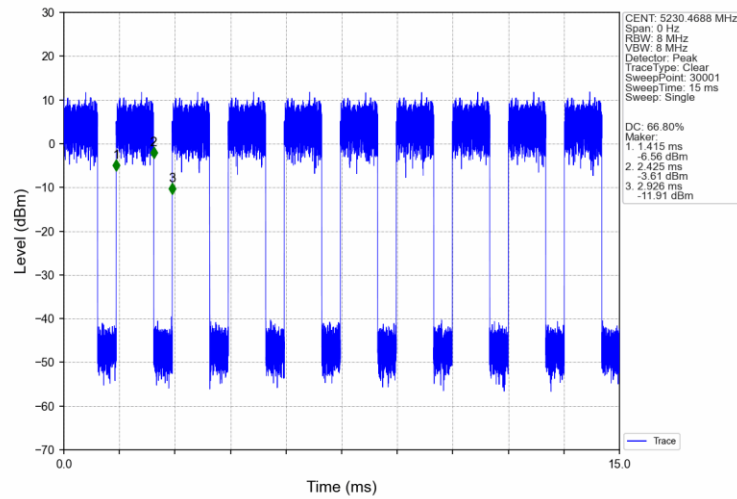
802.11ax(HEW20) LCH 5180MHz SU / Ant1 NTN



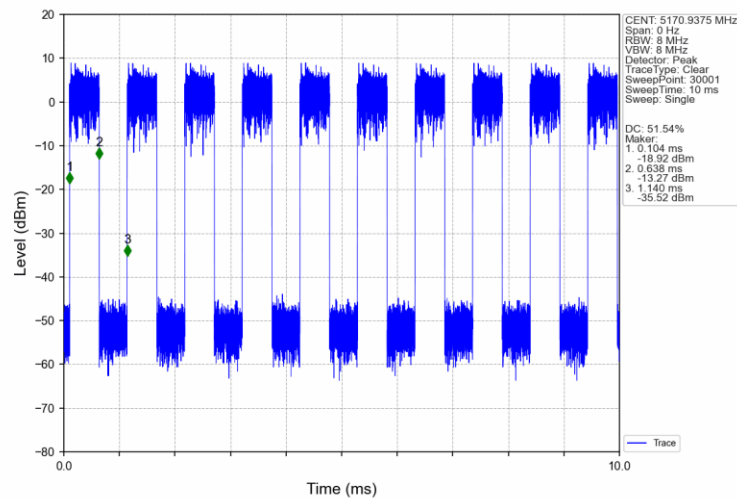
802.11ax(HEW20) MCH 5200MHz SU / Ant1 NTN



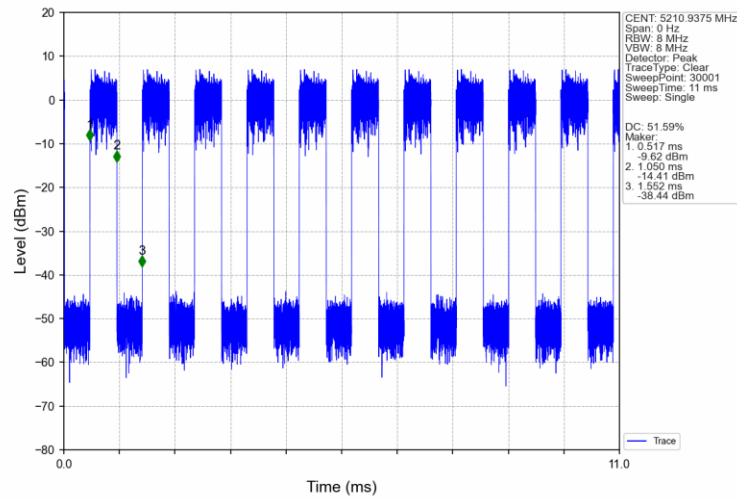
802.11ax(HEW20) HCH 5240MHz SU / Ant1 NTN



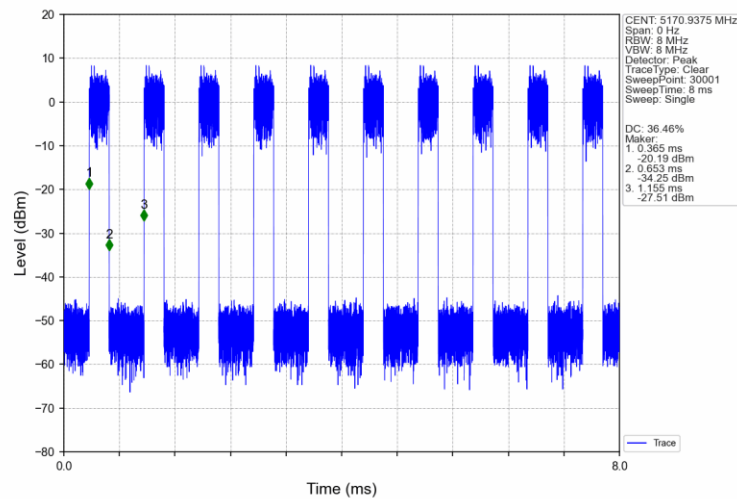
802.11ax(HEW40) LCH 5190MHz SU / Ant1 NTN



802.11ax(HEW40) HCH 5230MHz SU / Ant1 NTN

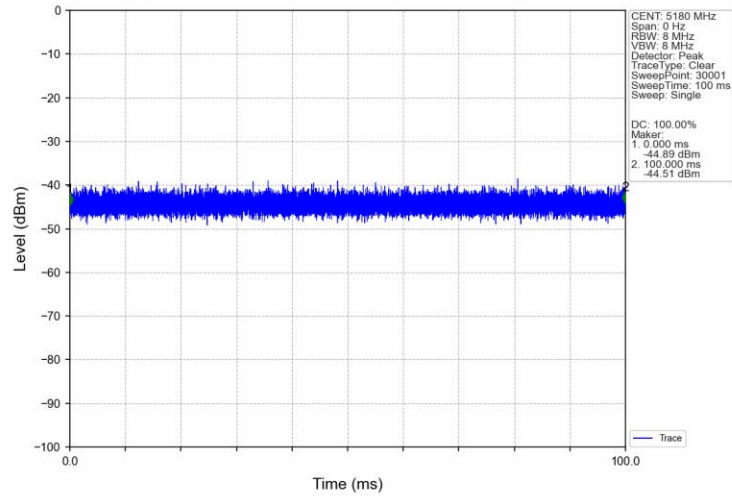


802.11ax(HEW80) MCH 5210MHz SU / Ant1 NTN

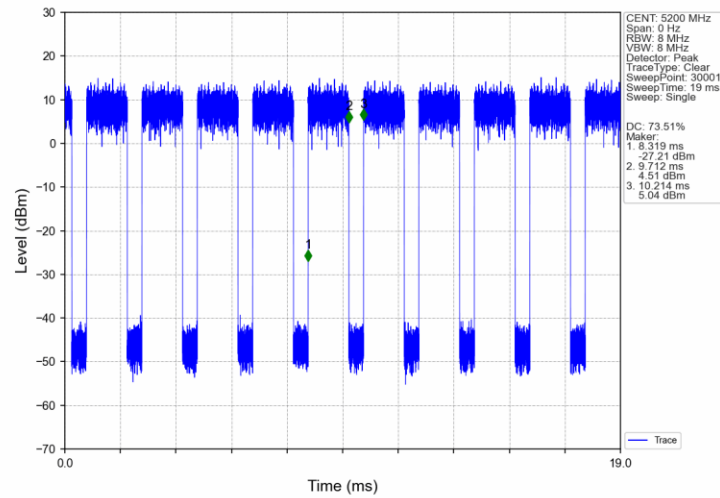


1.2.2 Ant2

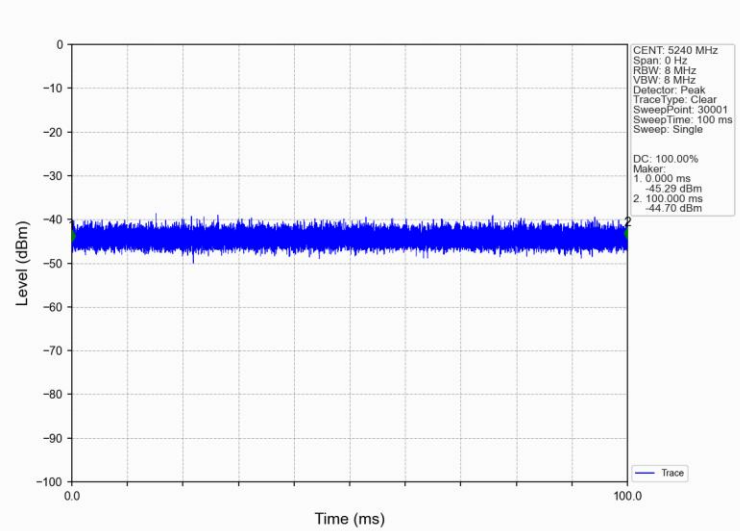
802.11a LCH 5180MHz Ant2 NTNv



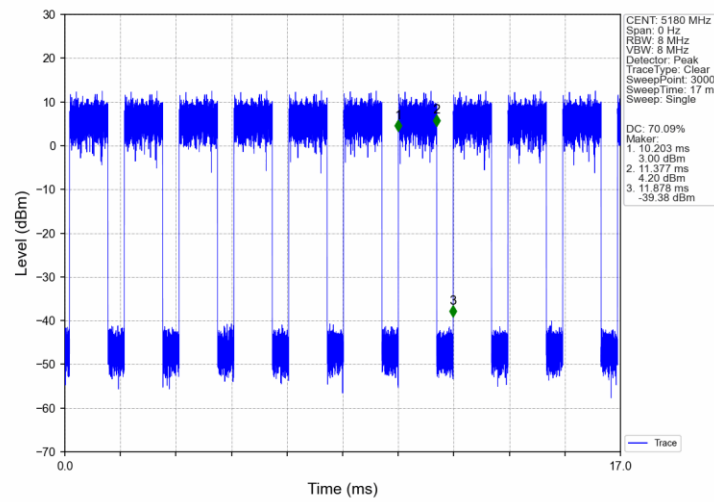
802.11a_MCH_5200MHz_Ant2 NTNv



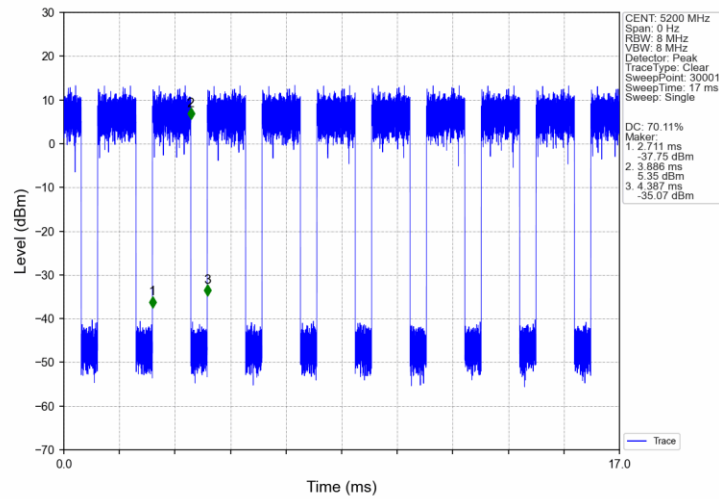
802.11a_HCH_5240MHz_Ant2_NTNV



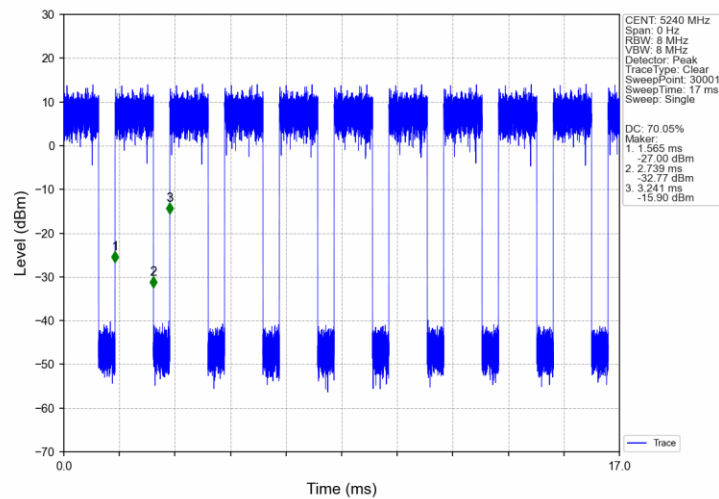
802.11n(HT20)_LCH_5180MHz_Ant2_NTNV



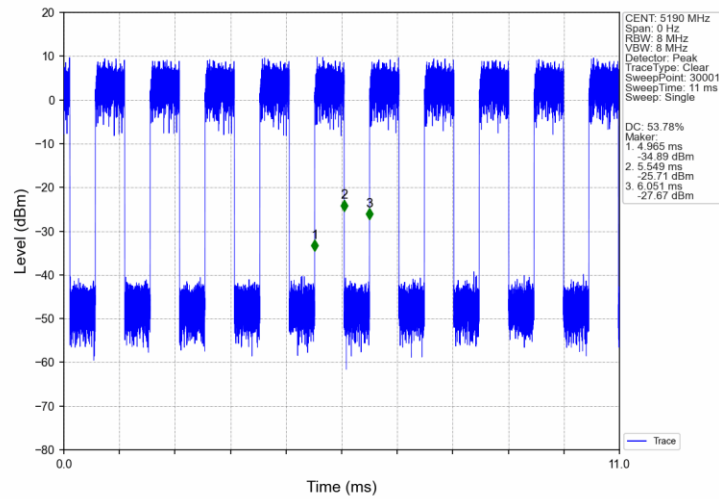
802.11n(HT20) MCH 5200MHz Ant2 NTN



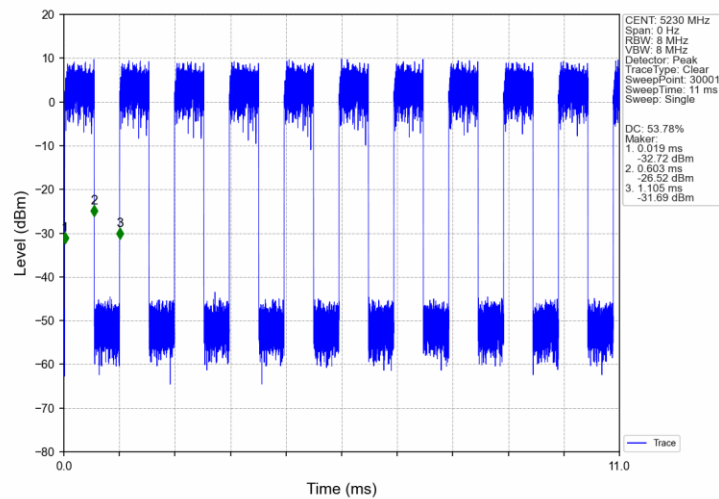
802.11n(HT20) HCH 5240MHz Ant2 NTN



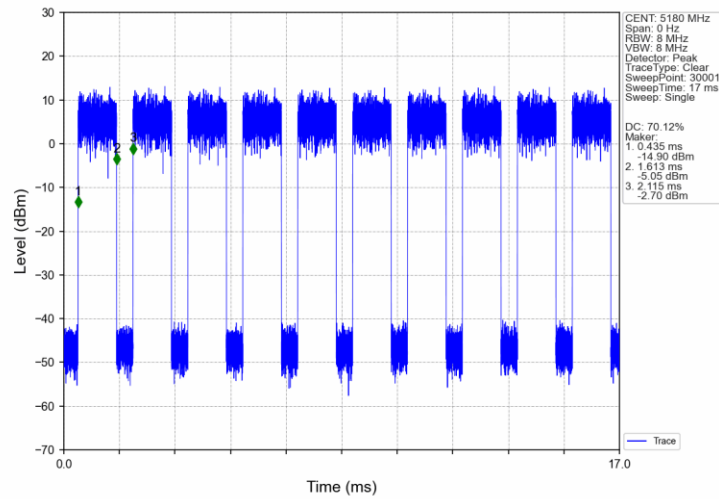
802.11n(HT40) LCH 5190MHz Ant2 NTN



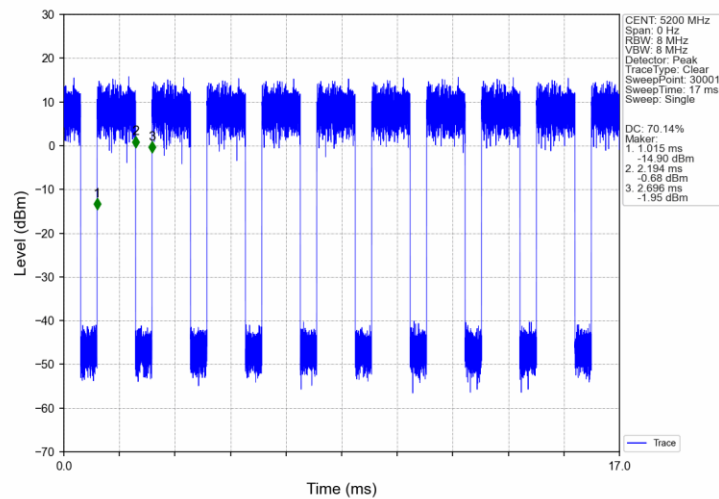
802.11n(HT40) HCH 5230MHz Ant2 NTN



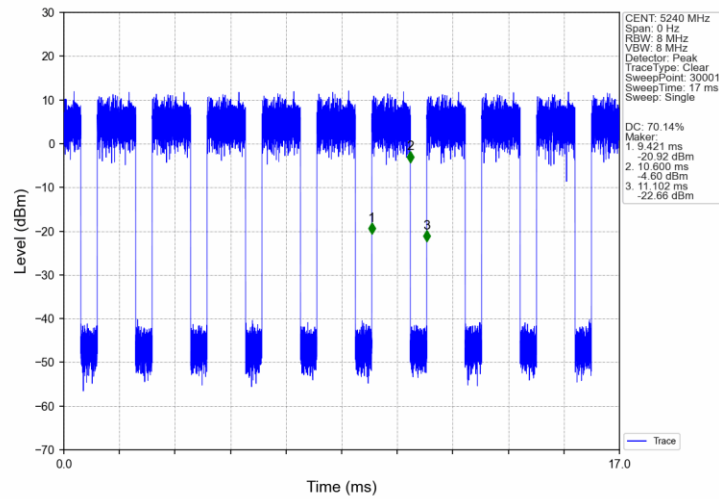
802.11ac(VHT20) LCH 5180MHz Ant2 NTN



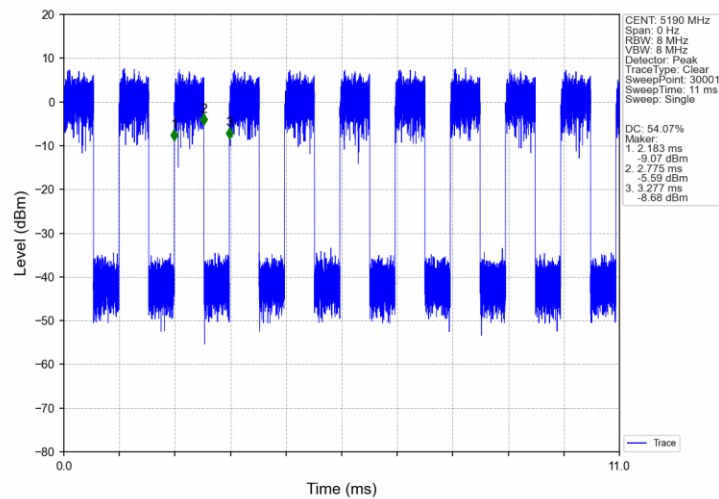
802.11ac(VHT20) MCH 5200MHz Ant2 NTN



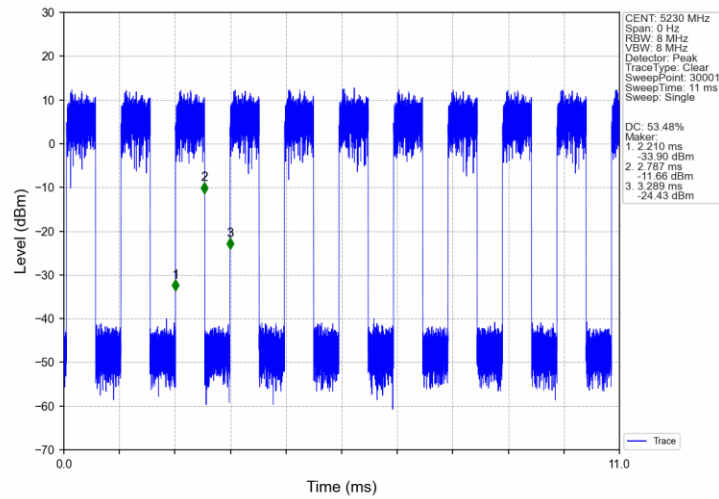
802.11ac(VHT20) HCH 5240MHz Ant2 NTN



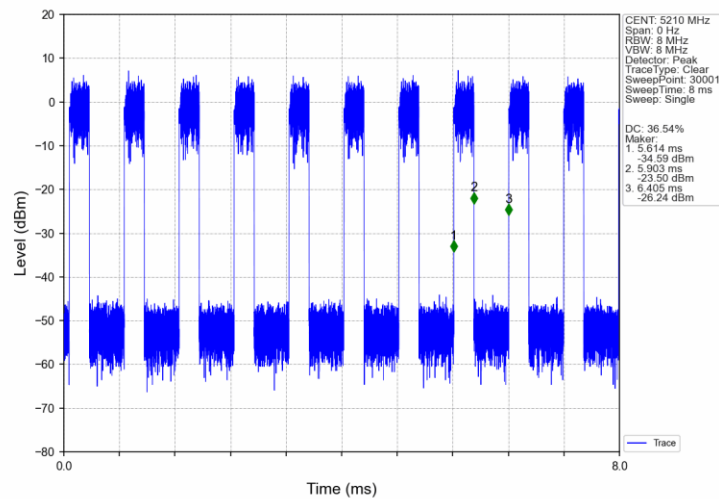
802.11ac(VHT40) LCH 5190MHz Ant2 NTN



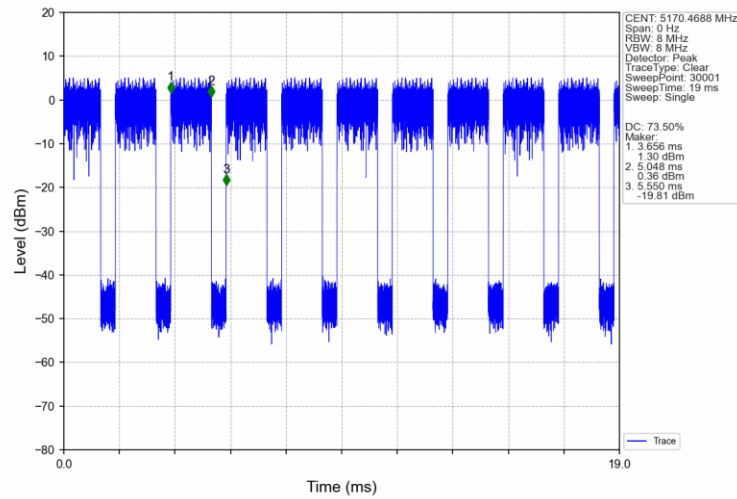
802.11ac(VHT40) HCH 5230MHz Ant2 NTN



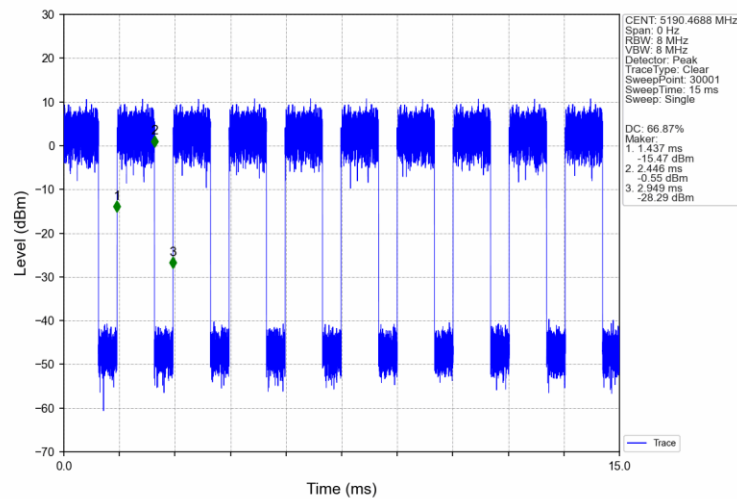
802.11ac(VHT80) MCH 5210MHz Ant2 NTN



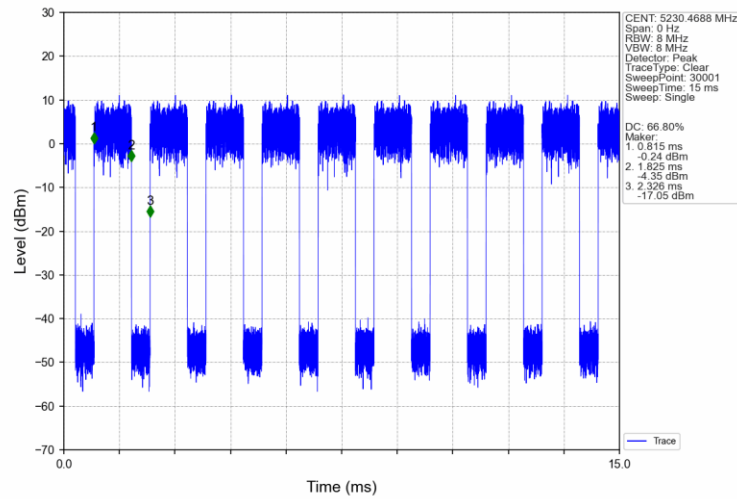
802.11ax(HEW20) LCH 5180MHz SU / Ant2 NTN



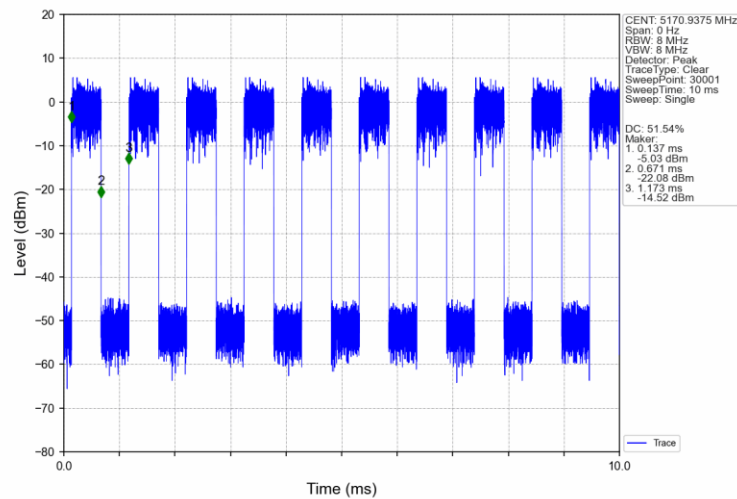
802.11ax(HEW20) MCH 5200MHz SU / Ant2 NTN



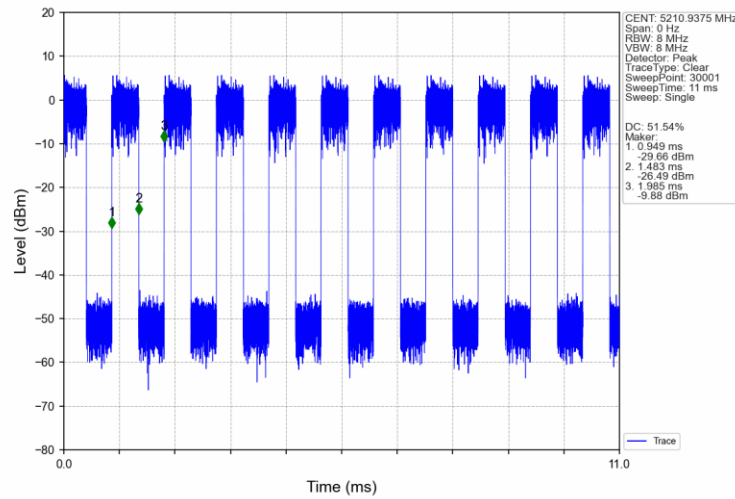
802.11ax(HEW20) HCH 5240MHz SU / Ant2 NTNv



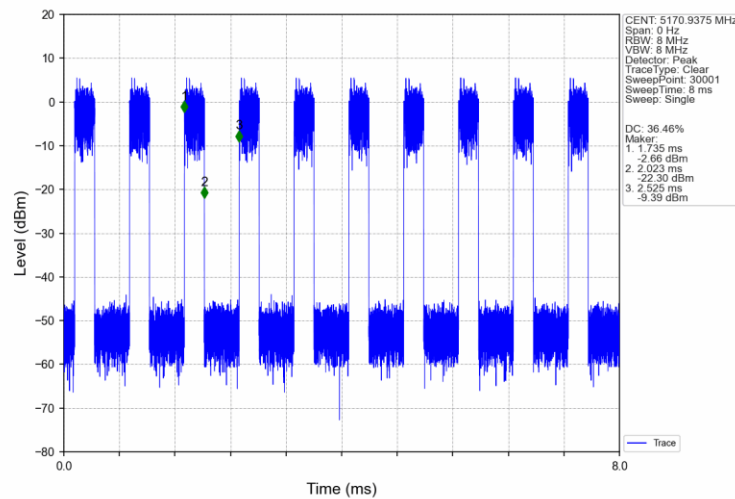
802.11ax(HEW40) LCH 5190MHz SU / Ant2 NTNv



802.11ax(HEW40) HCH 5230MHz SU / Ant2 NTN



802.11ax(HEW80) MCH 5210MHz SU / Ant2 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5180	/	/	1	16.638	/	Pass
		5200	/	/	1	16.662	/	Pass
		5240	/	/	1	16.661	/	Pass
802.11n (HT20)	MIMO	5180	/	/	1	17.698	/	Pass
		5200	/	/	1	17.711	/	Pass
		5240	/	/	1	17.708	/	Pass
802.11n (HT40)	MIMO	5190	/	/	1	36.301	/	Pass
		5230	/	/	1	36.349	/	Pass
802.11ac (VHT20)	MIMO	5180	/	/	1	17.644	/	Pass
		5200	/	/	1	17.644	/	Pass
		5240	/	/	1	17.671	/	Pass
802.11ac (VHT40)	MIMO	5190	/	/	1	36.295	/	Pass
		5230	/	/	1	36.329	/	Pass
802.11ac (VHT80)	MIMO	5210	/	/	1	76.918	/	Pass
802.11ax (HEW20)	MIMO	5180	SU	/	1	16.610	/	Pass
		5200	SU	/	1	19.081	/	Pass
		5240	SU	/	1	18.970	/	Pass
802.11ax (HEW40)	MIMO	5190	SU	/	1	37.978	/	Pass
		5230	SU	/	1	38.113	/	Pass
802.11ax (HEW80)	MIMO	5210	SU	/	1	78.214	/	Pass

Remark: both ANT1 and ANT2 tested, recorded the worst result of ANT1.

2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	26dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5180	/	/	1	18.985	/	Pass
		5200	/	/	1	18.788	/	Pass
		5240	/	/	1	18.730	/	Pass
802.11n (HT20)	MIMO	5180	/	/	1	19.791	/	Pass
		5200	/	/	1	19.880	/	Pass
		5240	/	/	1	19.769	/	Pass
802.11n (HT40)	MIMO	5190	/	/	1	39.287	/	Pass
		5230	/	/	1	39.276	/	Pass
802.11ac (VHT20)	MIMO	5180	/	/	1	19.706	/	Pass
		5200	/	/	1	19.758	/	Pass
		5240	/	/	1	19.854	/	Pass
802.11ac (VHT40)	MIMO	5190	/	/	1	39.260	/	Pass
		5230	/	/	1	39.414	/	Pass
802.11ac (VHT80)	MIMO	5210	/	/	1	86.527	/	Pass
802.11ax (HEW20)	MIMO	5180	SU	/	1	18.993	/	Pass
		5200	SU	/	1	20.473	/	Pass
		5240	SU	/	1	20.357	/	Pass
802.11ax (HEW40)	MIMO	5190	SU	/	1	40.419	/	Pass
		5230	SU	/	1	40.478	/	Pass

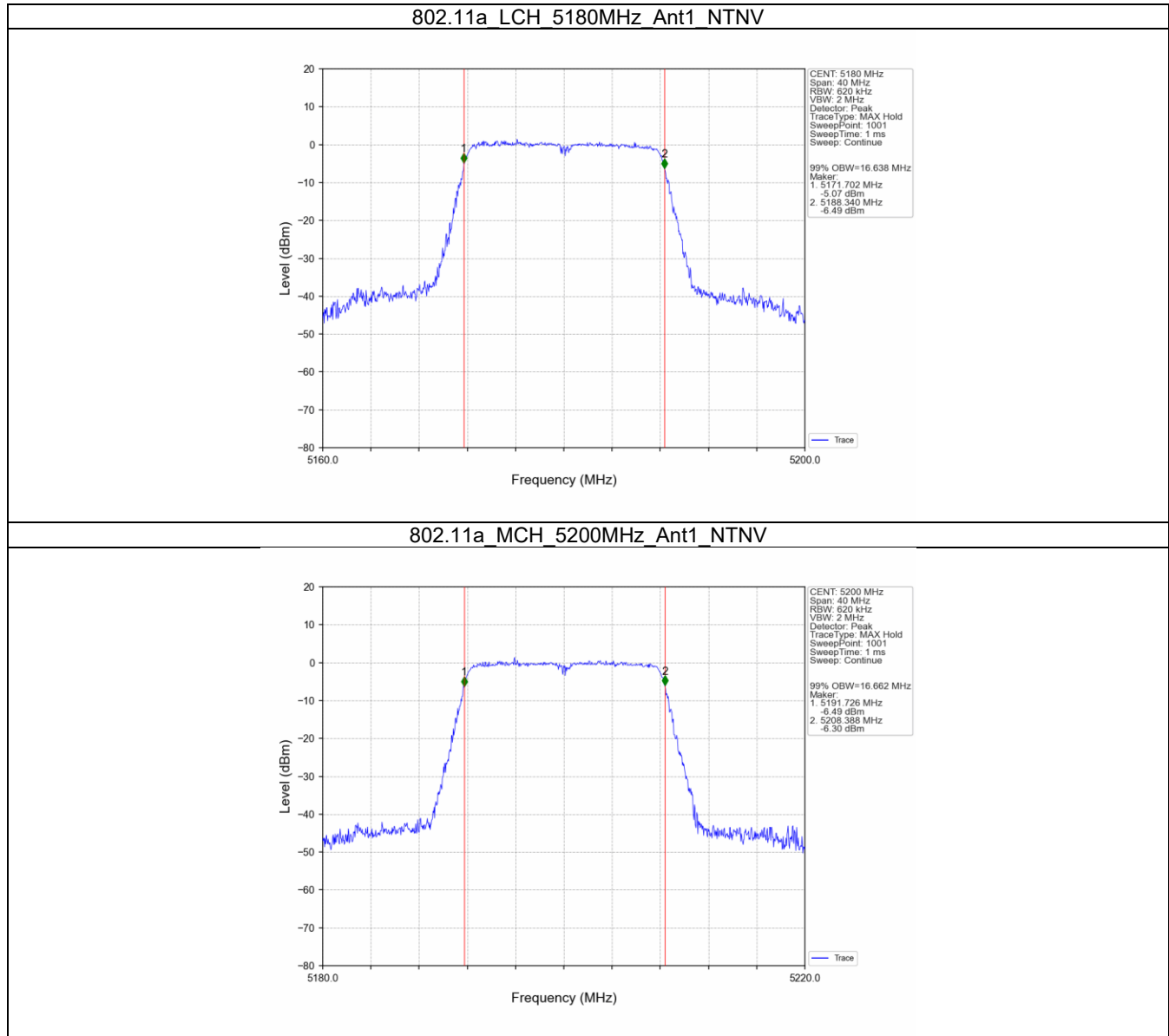


802.11ax (HEW80)	MIMO	5210	SU	/	1	81.925	/	Pass
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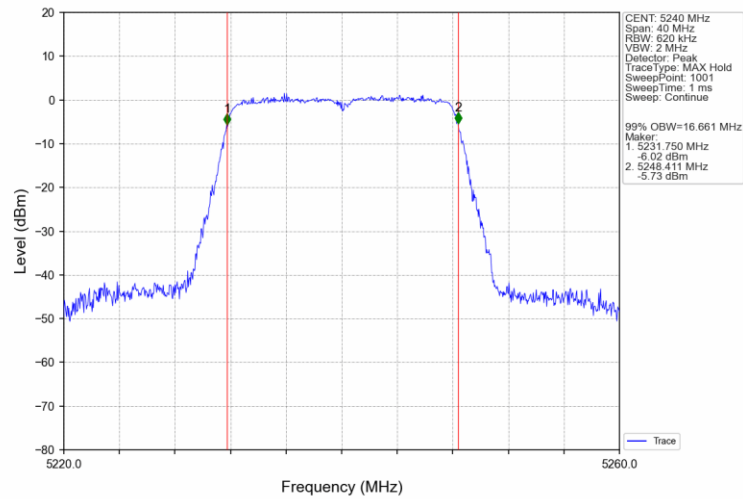
Remark: both ANT1 and ANT2 tested, recorded the worst result of ANT1.

2.2 Test Graph

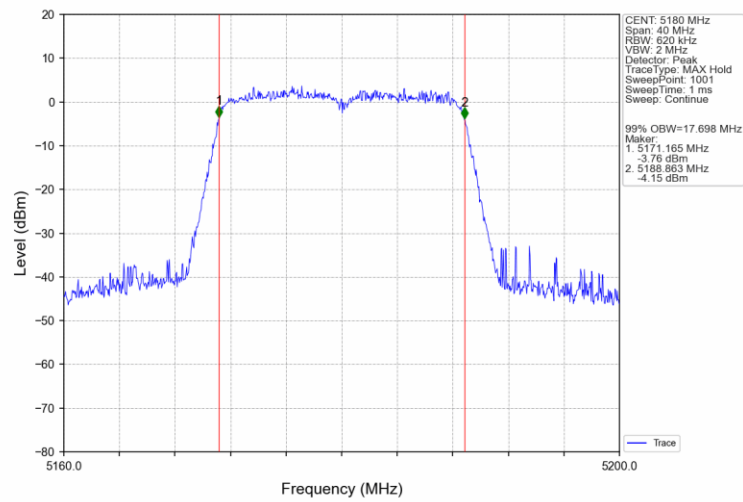
2.2.1 OBW



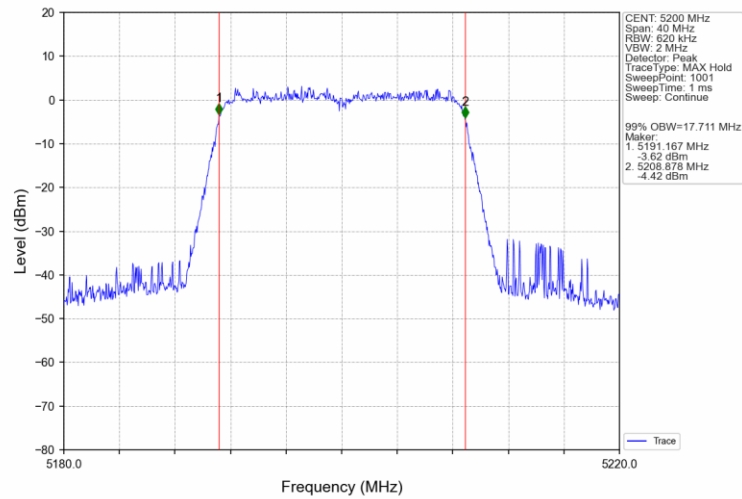
802.11a_HCH_5240MHz_Ant1_NTNV



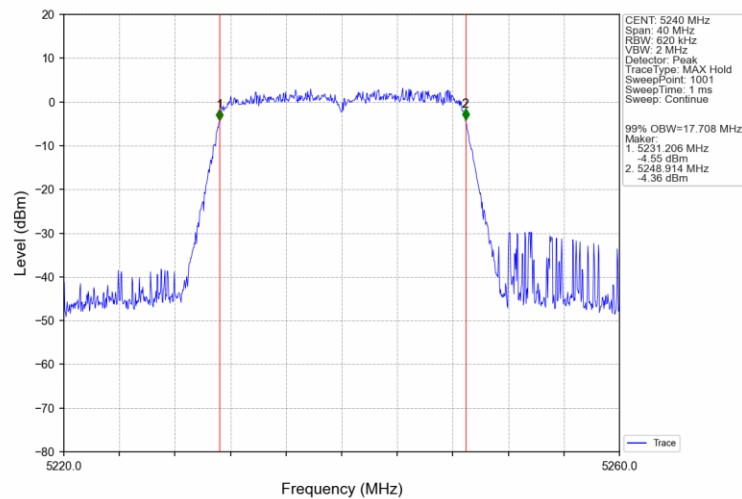
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



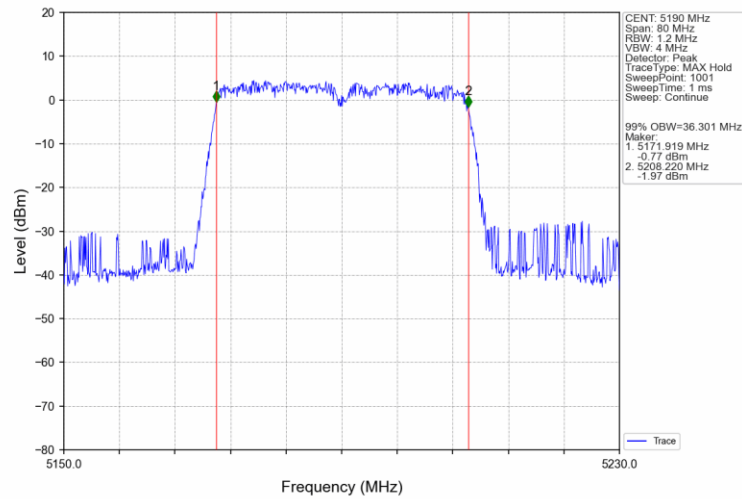
802.11n(HT20) MCH 5200MHz Ant1 NTNv



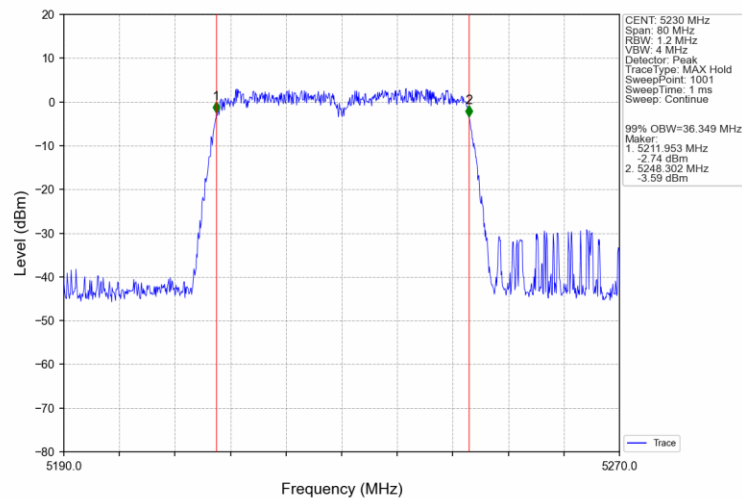
802.11n(HT20) HCH 5240MHz Ant1 NTNv



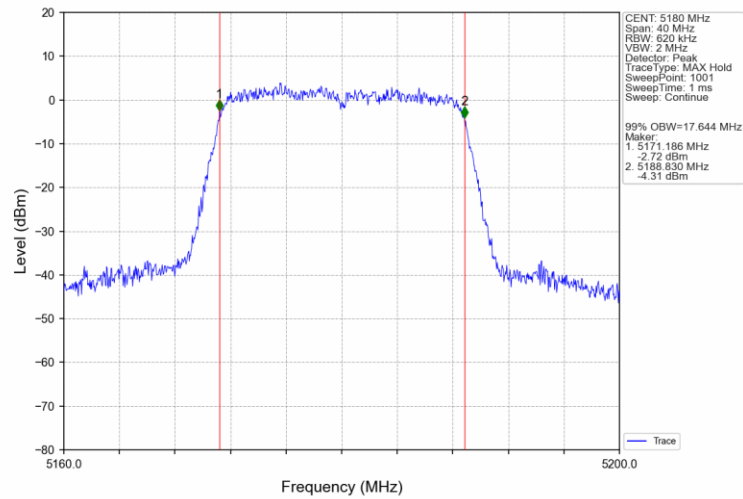
802.11n(HT40) LCH 5190MHz Ant1 NTN



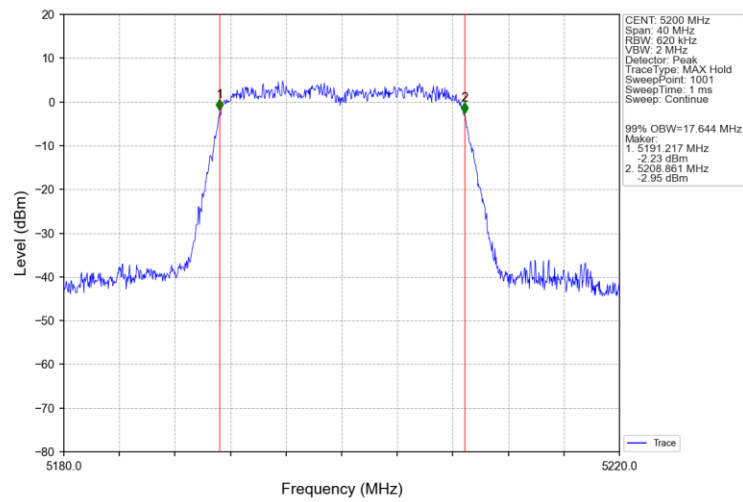
802.11n(HT40) HCH 5230MHz Ant1 NTN



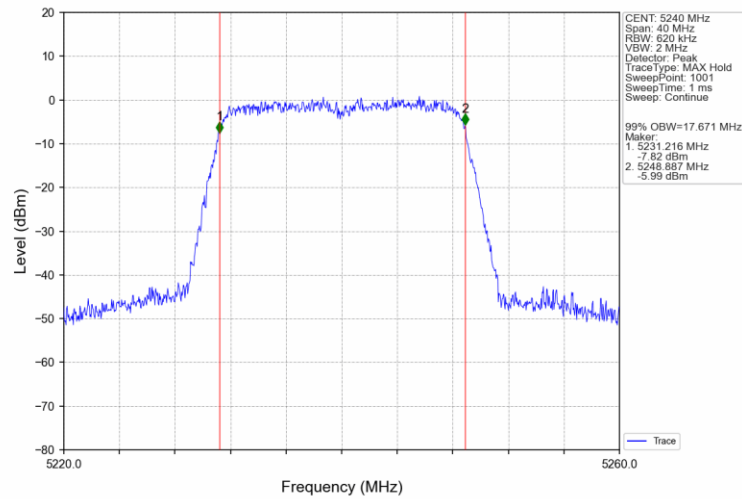
802.11ac(VHT20) LCH 5180MHz Ant1 NTNv



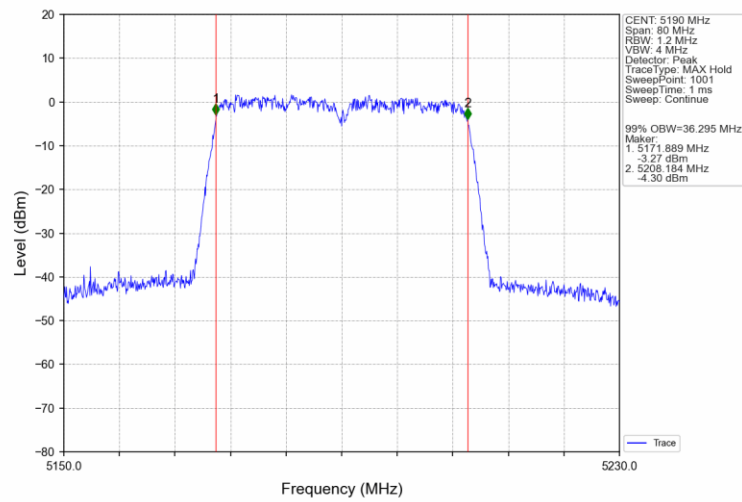
802.11ac(VHT20) MCH 5200MHz Ant1 NTNv



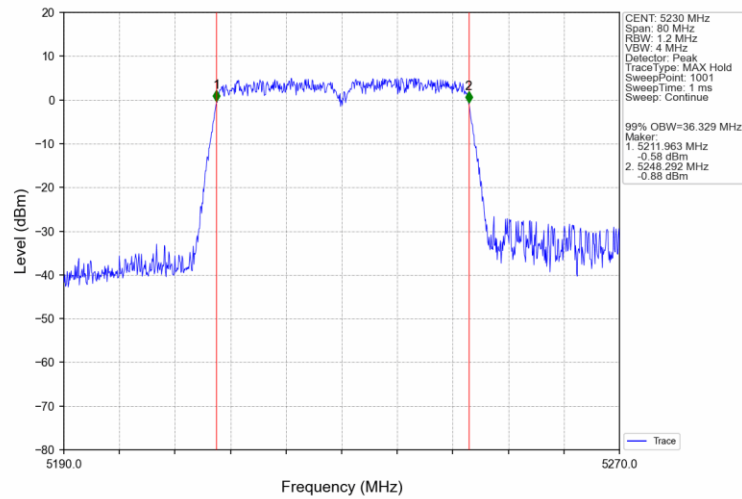
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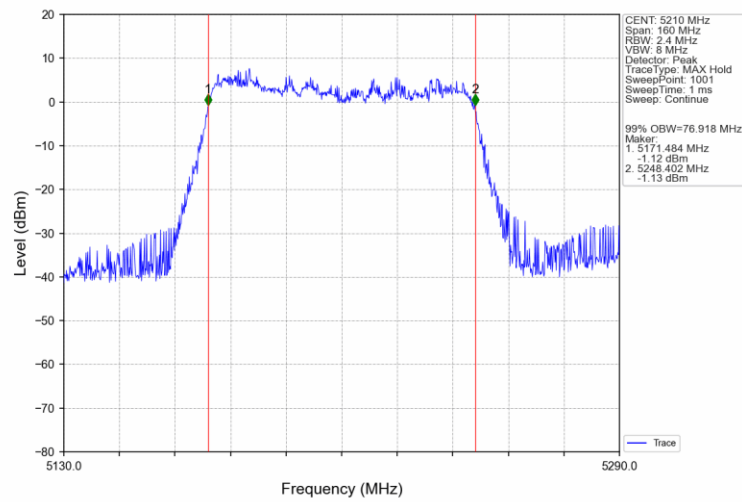
802.11ac(VHT40) LCH 5190MHz Ant1 NTN



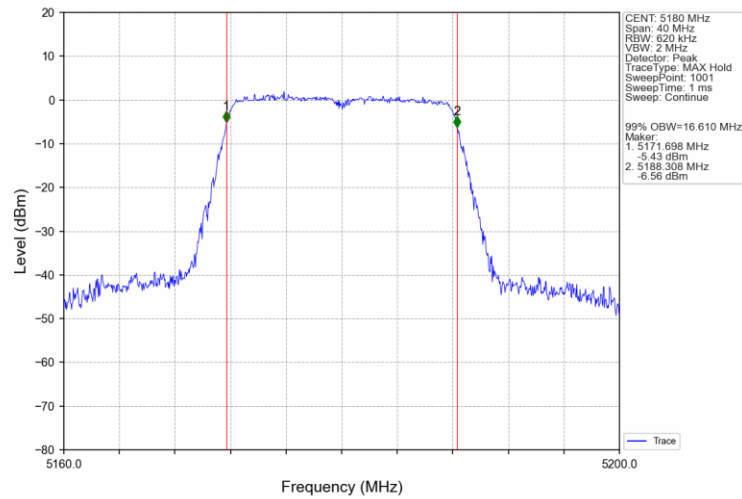
802.11ac(VHT40) HCH 5230MHz Ant1 NTN



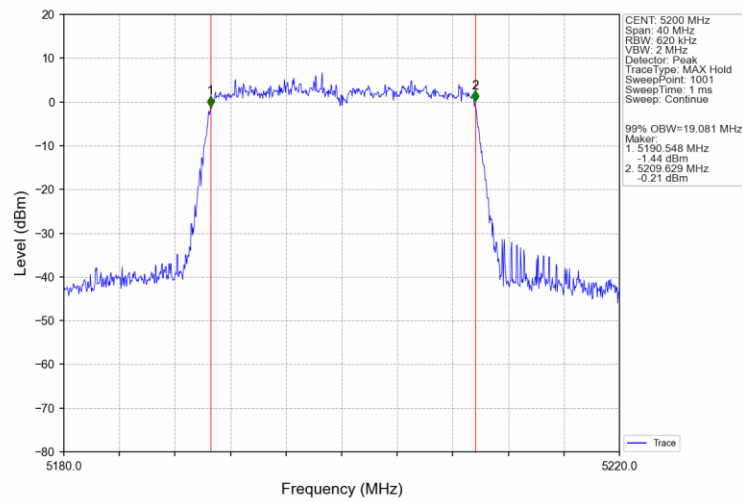
802.11ac(VHT80) MCH 5210MHz Ant1 NTN



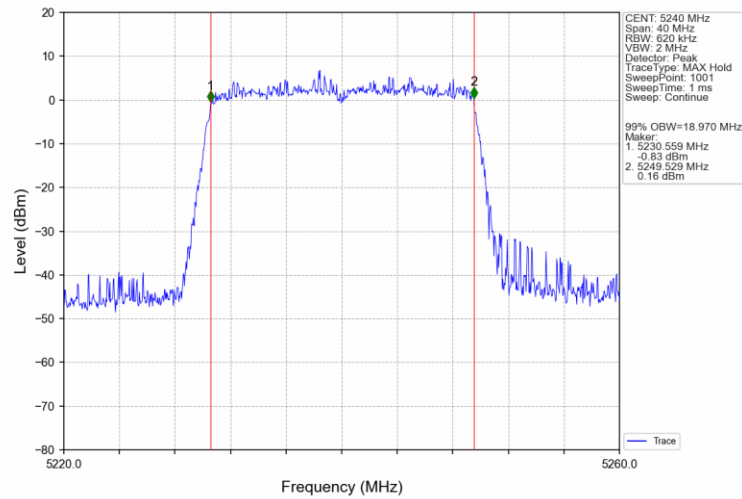
802.11ax(HEW20) LCH 5180MHz SU / Ant1 NTNv



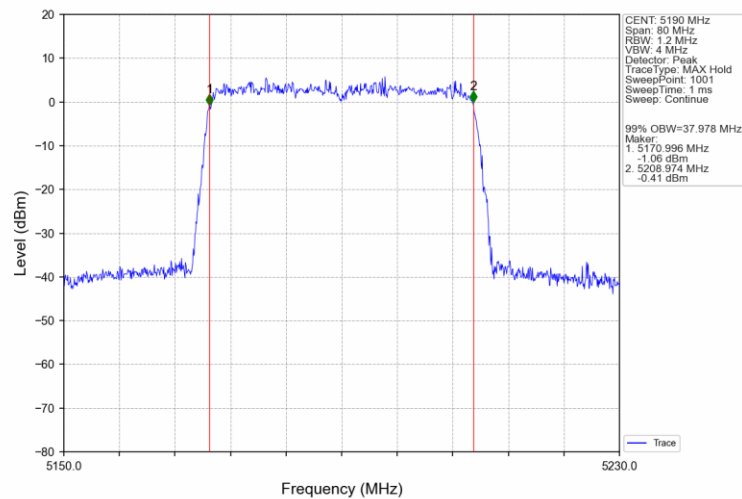
802.11ax(HEW20) MCH 5200MHz SU / Ant1 NTNv



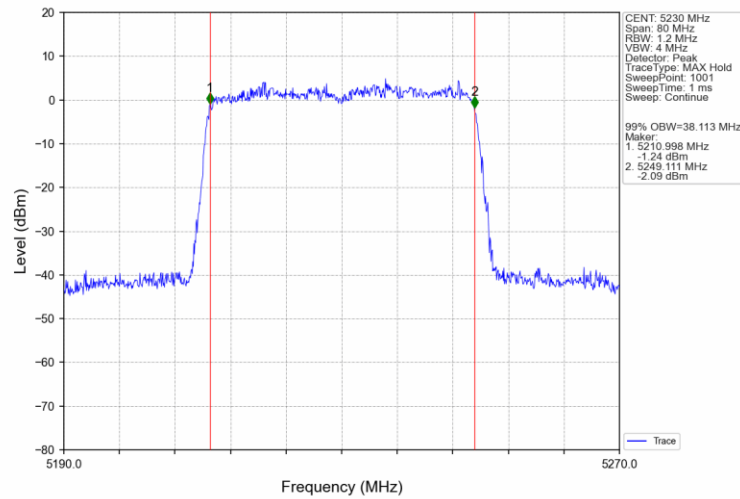
802.11ax(HEW20) HCH 5240MHz SU / Ant1 NTN



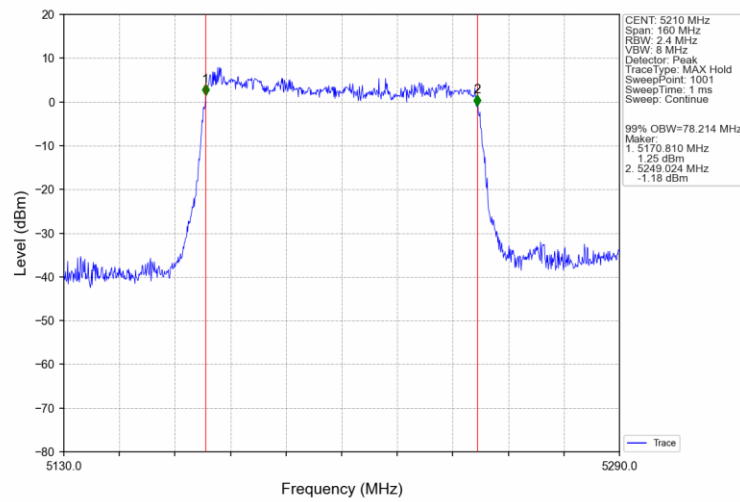
802.11ax(HEW40) LCH 5190MHz SU / Ant1 NTN



802.11ax(HEW40) HCH 5230MHz SU / Ant1 NTNv

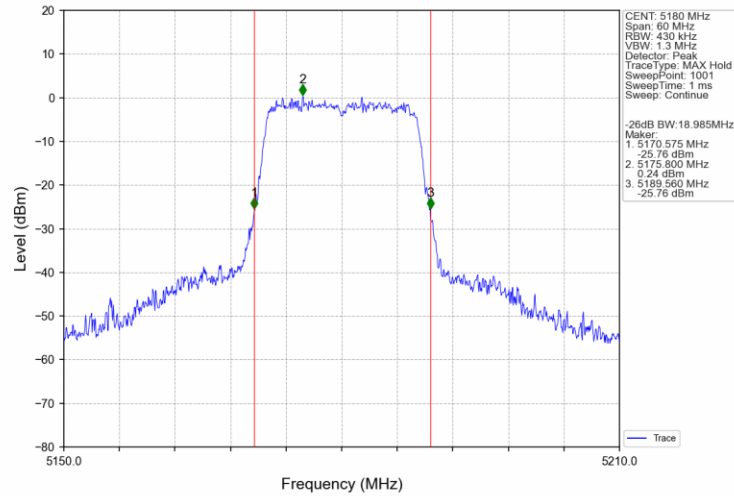


802.11ax(HEW80) MCH 5210MHz SU / Ant1 NTNv

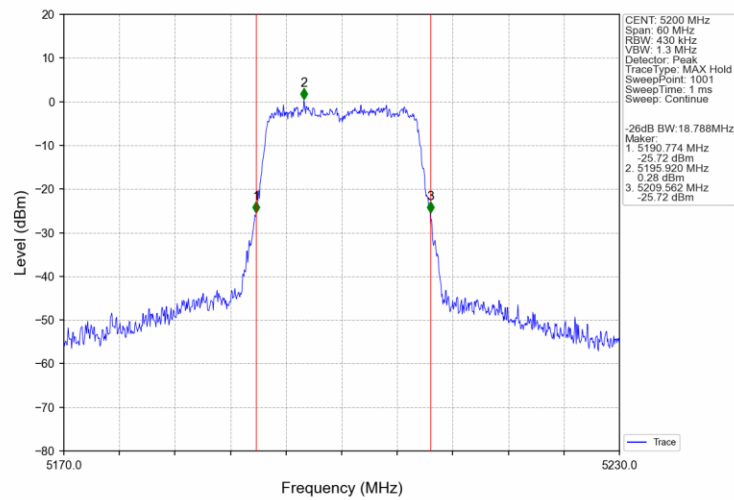


2.2.2 26dB BW

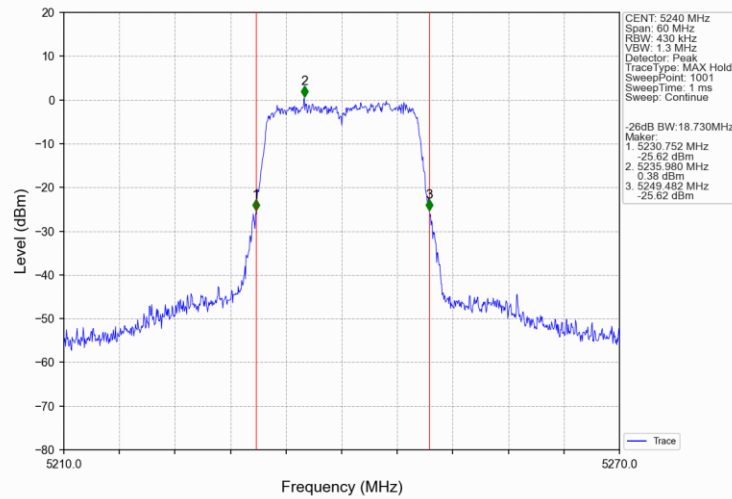
802.11a LCH 5180MHz Ant1 NTNv



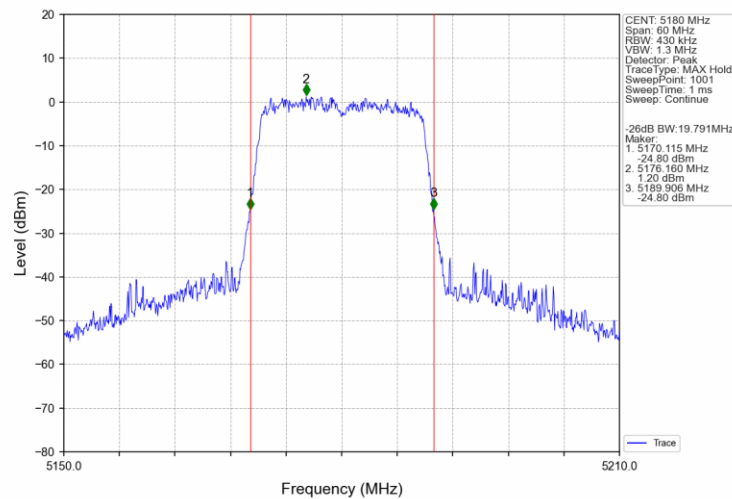
802.11a_MCH_5200MHz_Ant1_NTNv



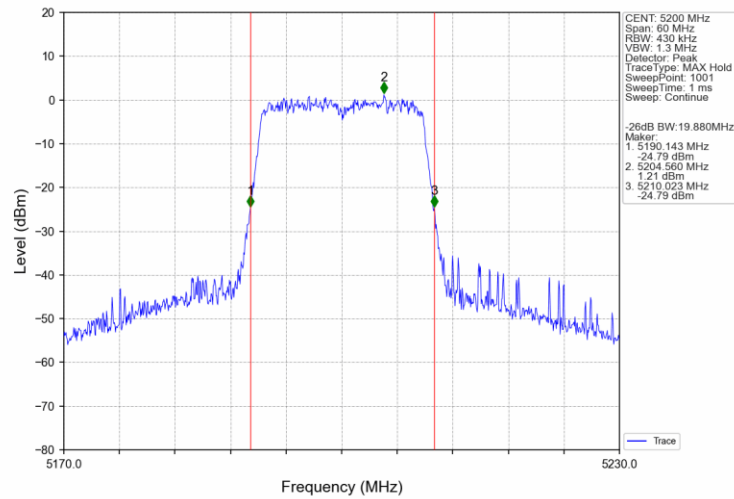
802.11a_HCH_5240MHz_Ant1_NTNV



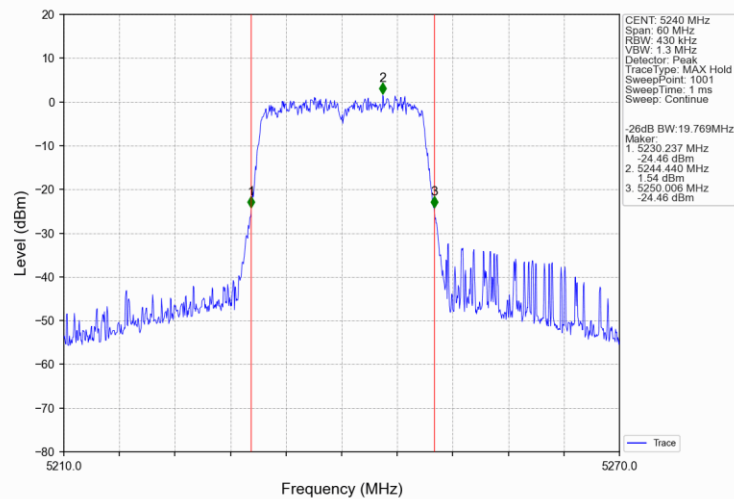
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



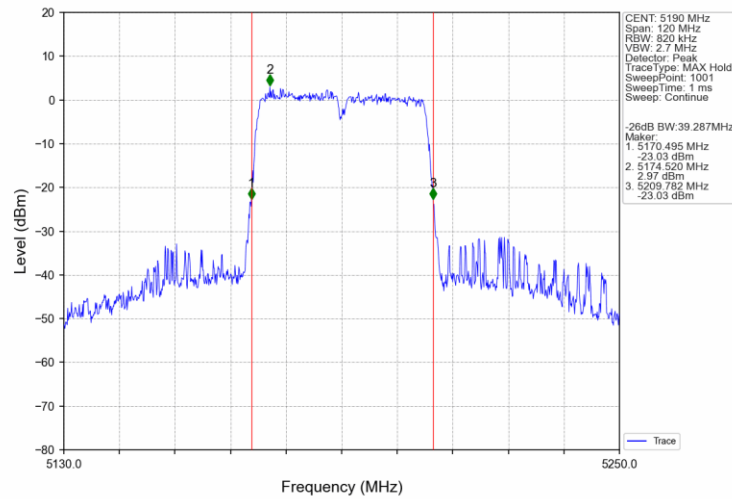
802.11n(HT20) MCH 5200MHz Ant1 NTNv



802.11n(HT20) HCH 5240MHz Ant1 NTNv



802.11n(HT40) LCH 5190MHz Ant1 NTN



802.11n(HT40) HCH 5230MHz Ant1 NTN

