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Annex for 5G Wi-Fi BAND 1

Test Report No.: CTL2603312051-WF04

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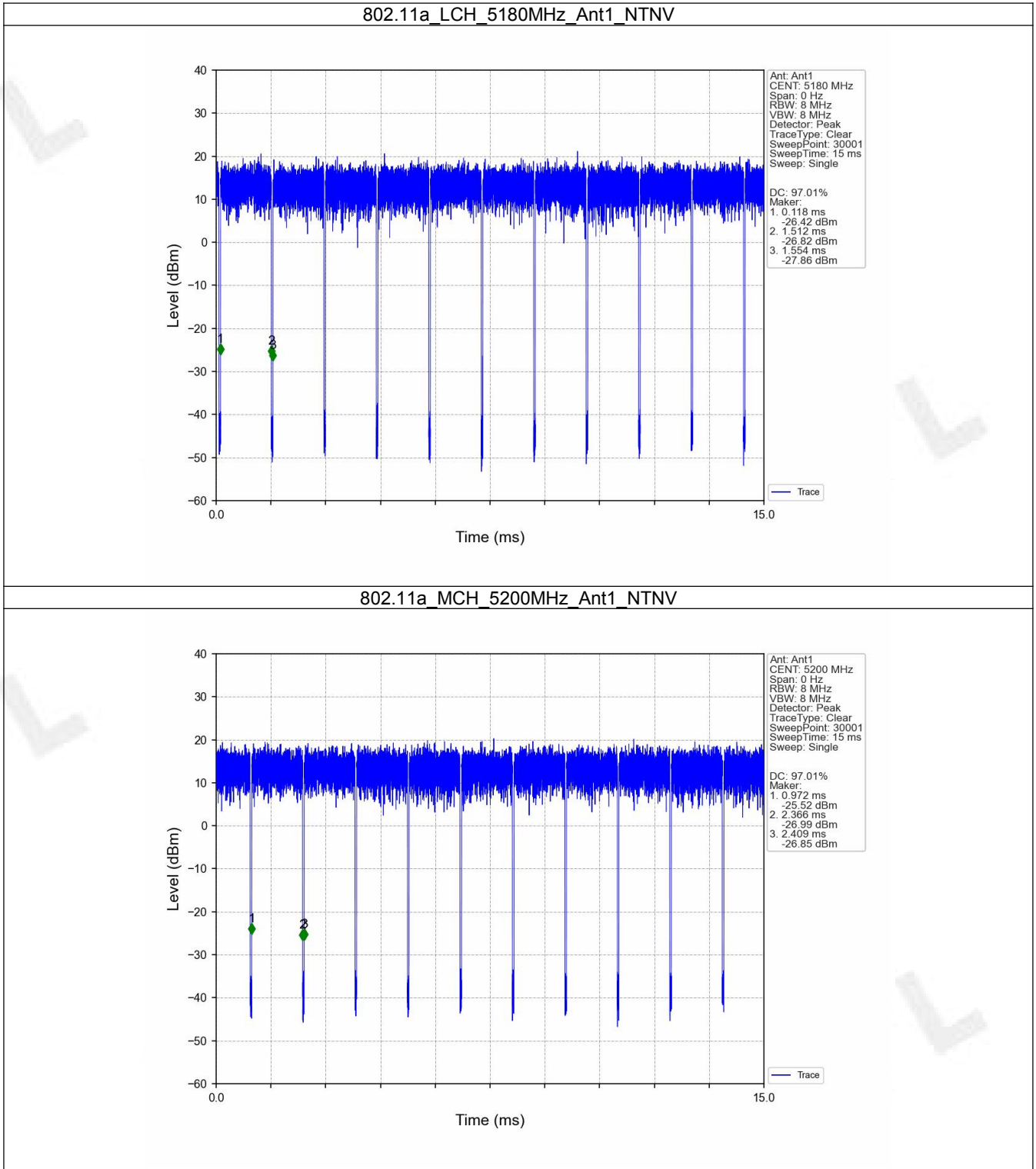
1. Duty Cycle**1.1 Test Result****1.1.1 Ant1**

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	1.394	1.437	97.01	0.13	0.03
		5200	1.394	1.437	97.01	0.13	0.03
		5240	1.395	1.437	97.08	0.13	0.00
802.11n (HT20)	SISO	5180	1.302	1.344	96.88	0.14	0.00
		5200	1.302	1.345	96.80	0.14	0.03
		5240	1.302	1.344	96.88	0.14	0.00
802.11n (HT40)	SISO	5190	0.637	0.680	93.68	0.28	0.03
		5230	0.638	0.680	93.82	0.28	0.03
802.11ac (VHT20)	SISO	5180	1.314	1.357	96.83	0.14	0.03
		5200	1.314	1.357	96.83	0.14	0.03
		5240	1.313	1.356	96.83	0.14	0.00
802.11ac (VHT40)	SISO	5190	0.654	0.696	93.97	0.27	0.03
		5230	0.654	0.696	93.97	0.27	0.03
802.11ac (VHT80)	SISO	5210	0.326	0.368	88.59	0.53	0.04

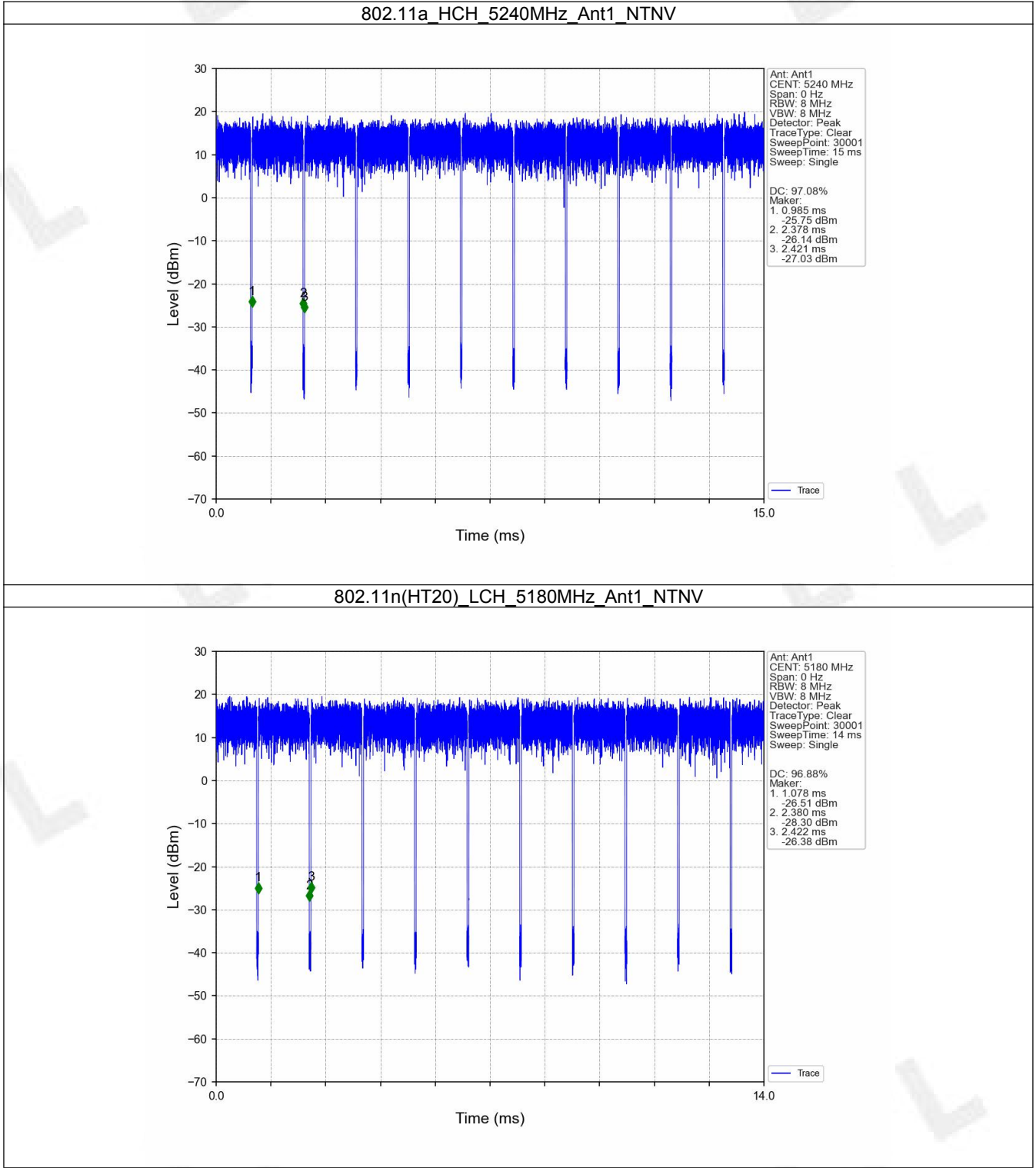
FCC ID: 2BWH8-S26-UITRA

1.2 Test Graph

1.2.1 Ant1

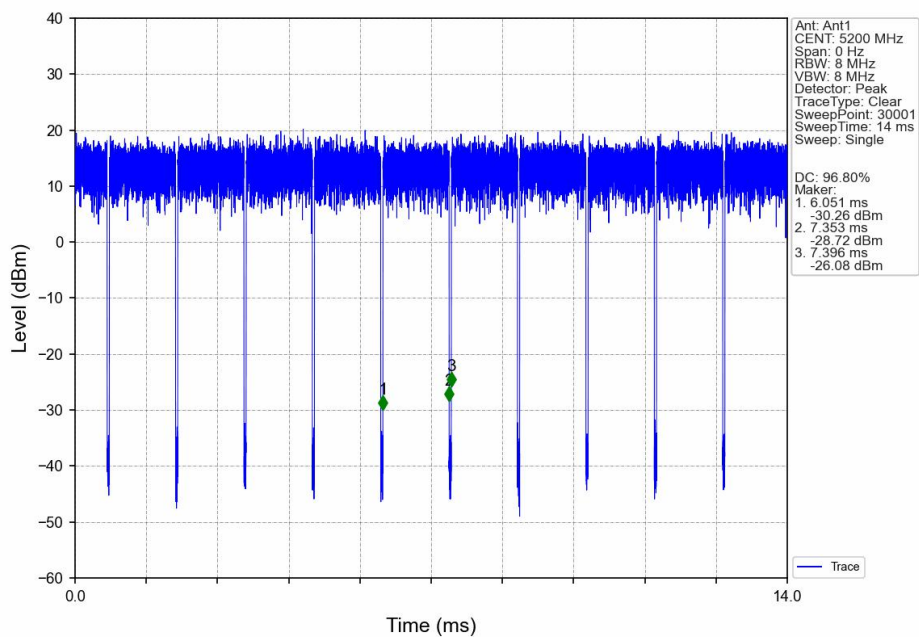


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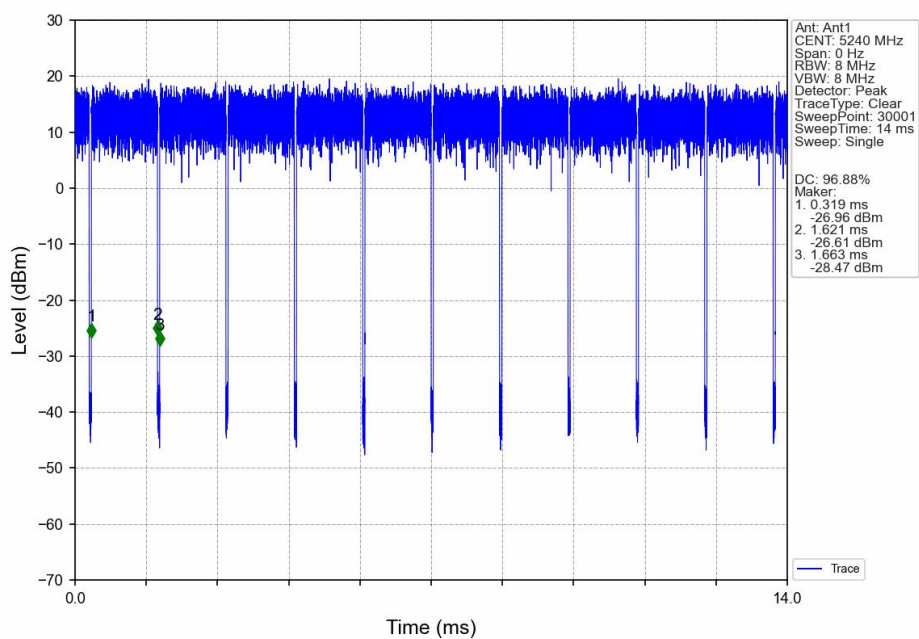


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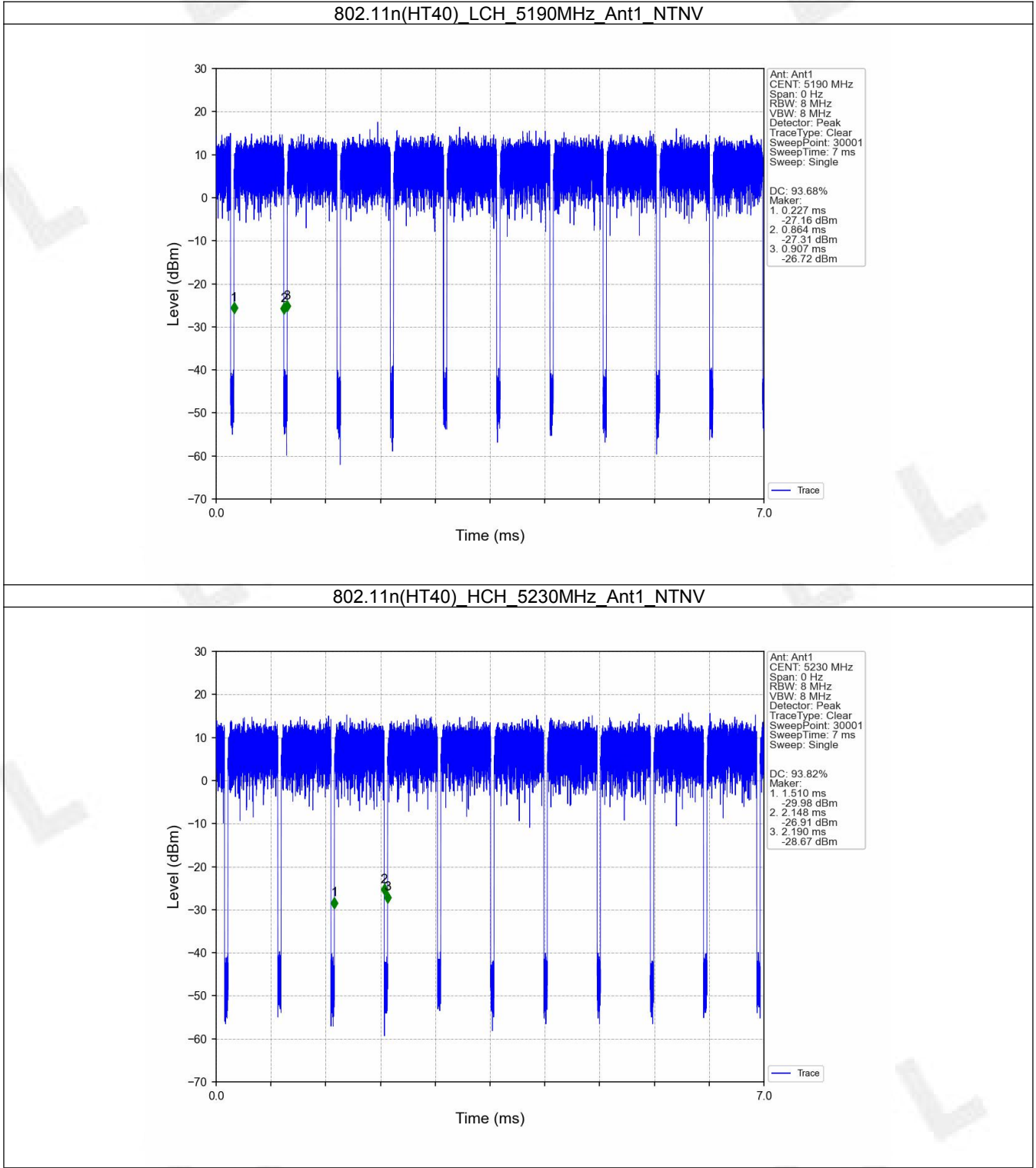
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



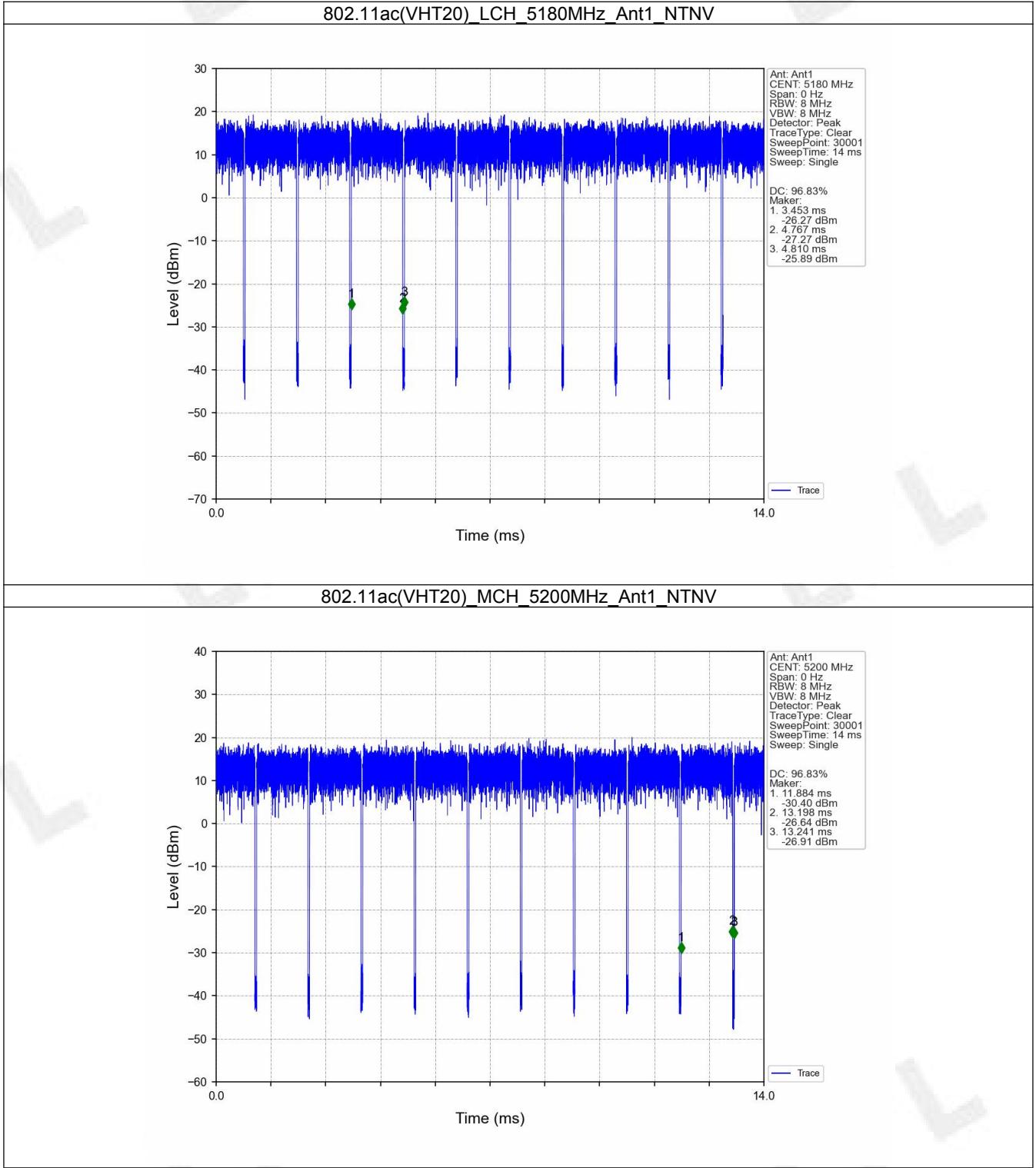
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



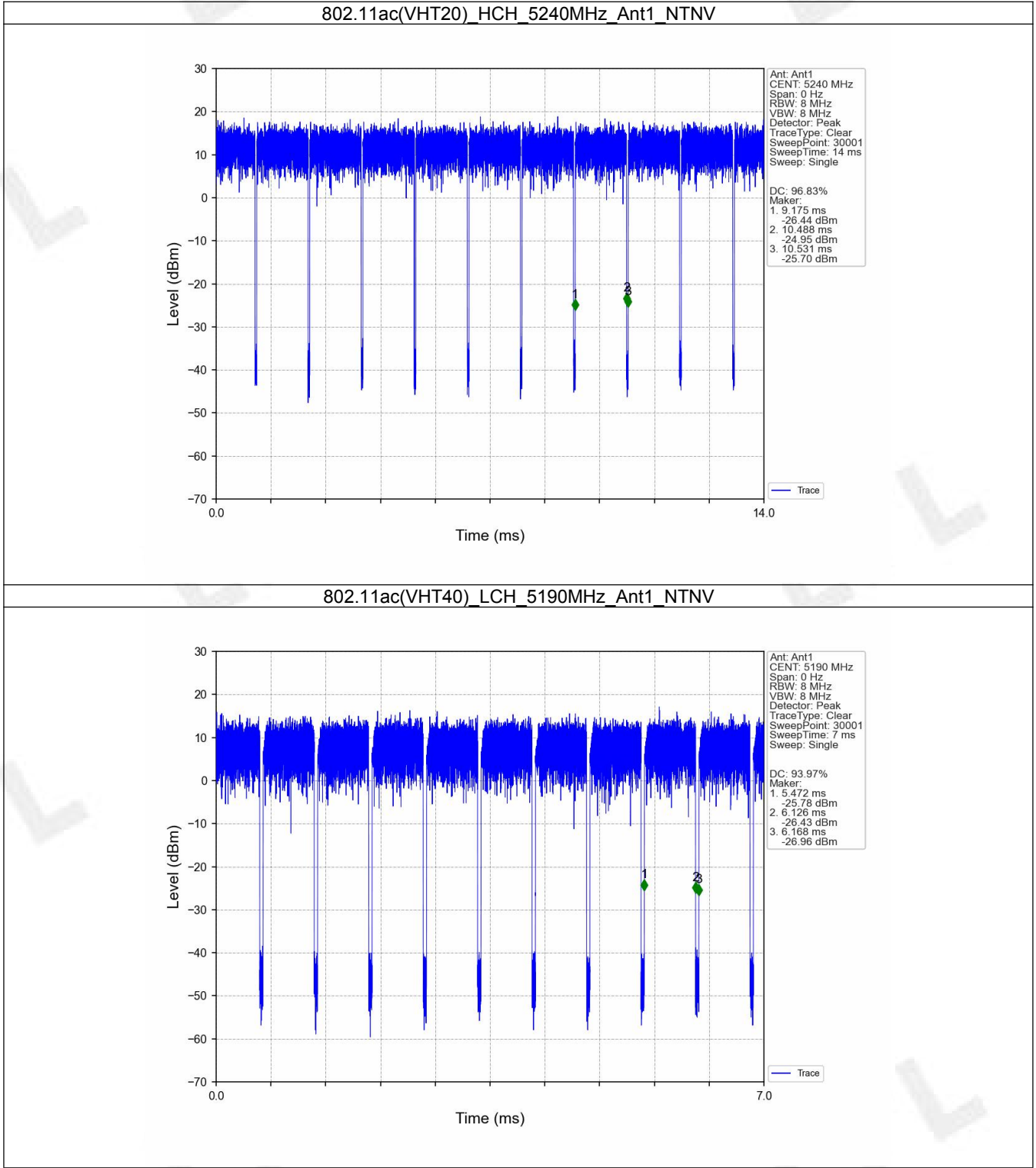
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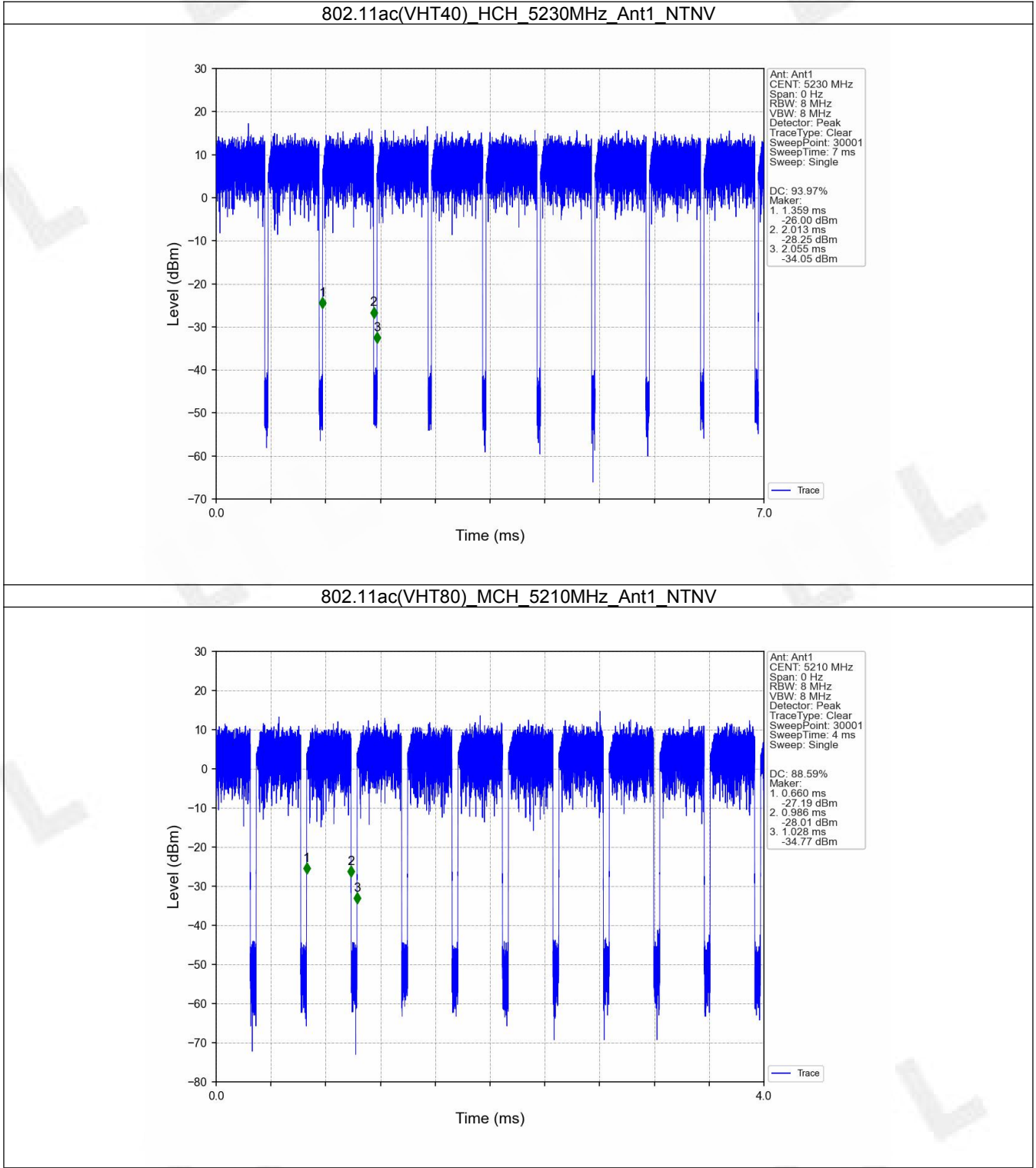
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2. Bandwidth**2.1 Test Result****2.1.1 OBW**

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	16.477	/	Pass
		5200	1	16.434	/	Pass
		5240	1	16.474	/	Pass
802.11n (HT20)	SISO	5180	1	17.610	/	Pass
		5200	1	17.572	/	Pass
		5240	1	17.635	/	Pass
802.11n (HT40)	SISO	5190	1	36.353	/	Pass
		5230	1	36.287	/	Pass
802.11ac (VHT20)	SISO	5180	1	17.579	/	Pass
		5200	1	17.594	/	Pass
		5240	1	17.595	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.135	/	Pass
		5230	1	36.180	/	Pass
802.11ac (VHT80)	SISO	5210	1	75.246	/	Pass

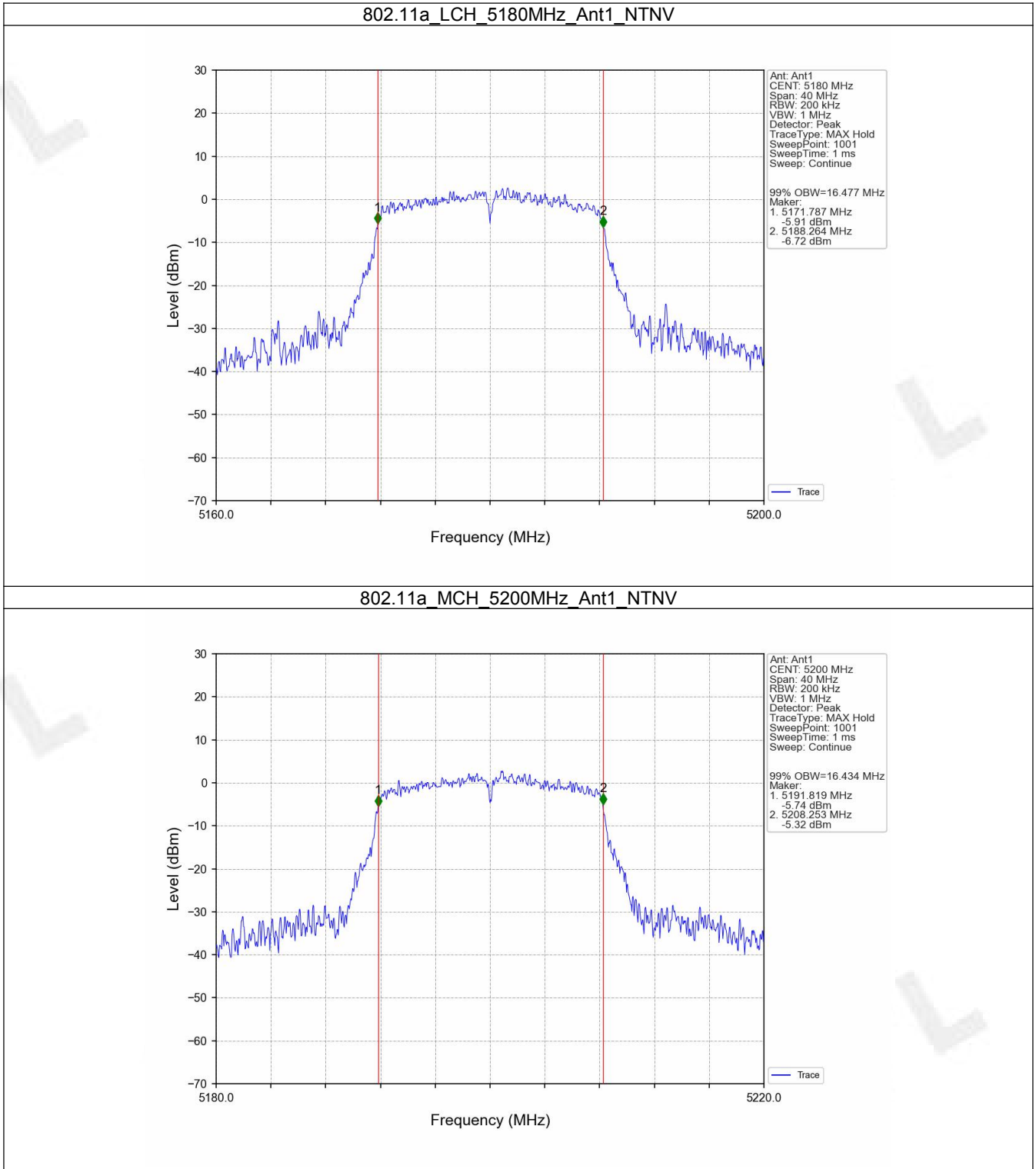
2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	19.692	/	Pass
		5200	1	19.891	/	Pass
		5240	1	19.739	/	Pass
802.11n (HT20)	SISO	5180	1	22.831	/	Pass
		5200	1	22.764	/	Pass
		5240	1	26.170	/	Pass
802.11n (HT40)	SISO	5190	1	41.261	/	Pass
		5230	1	41.112	/	Pass
802.11ac (VHT20)	SISO	5180	1	22.021	/	Pass
		5200	1	20.176	/	Pass
		5240	1	20.508	/	Pass
802.11ac (VHT40)	SISO	5190	1	40.837	/	Pass
		5230	1	41.339	/	Pass
802.11ac (VHT80)	SISO	5210	1	80.668	/	Pass

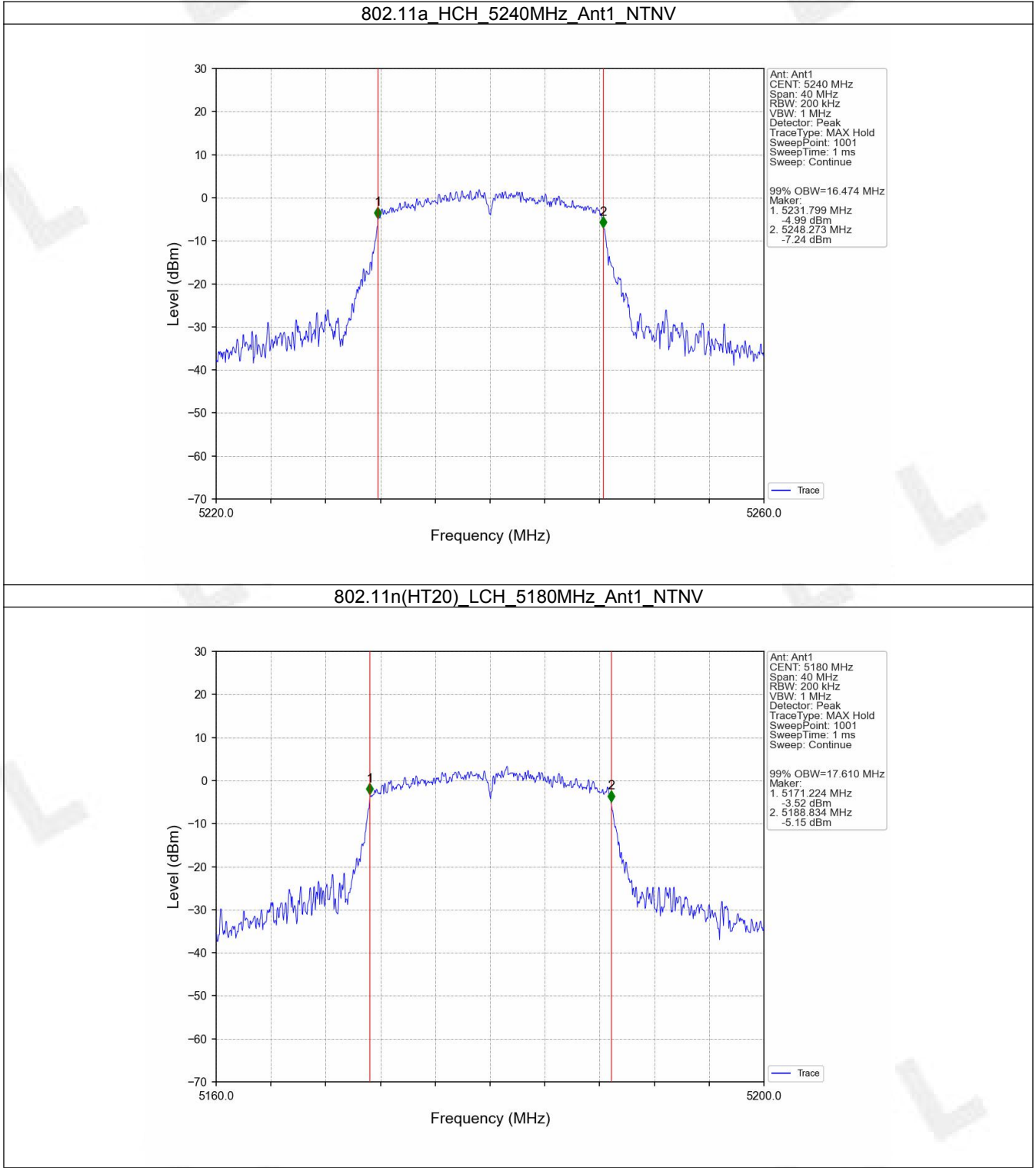
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2.2 Test Graph

2.2.1 OBW

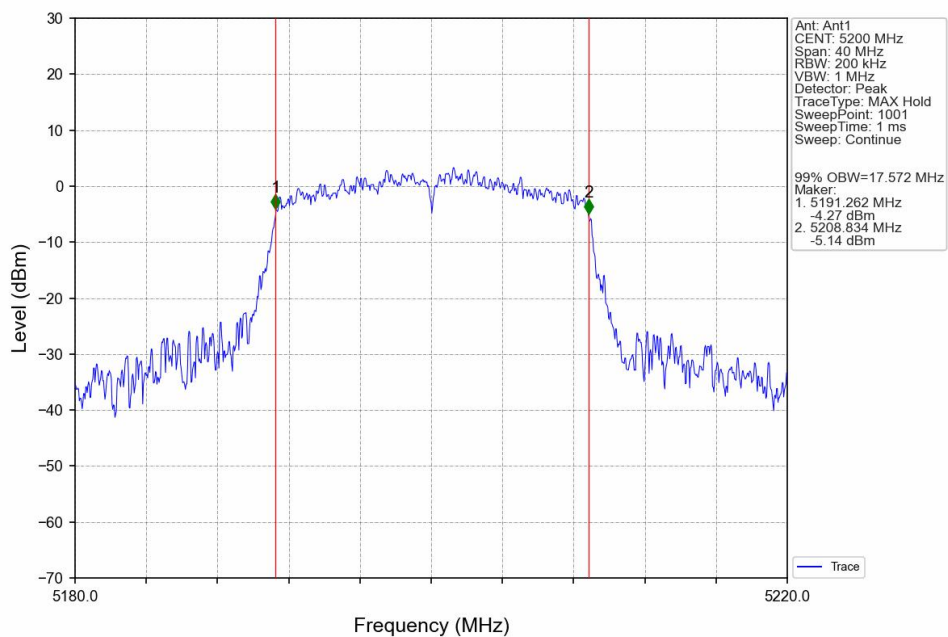


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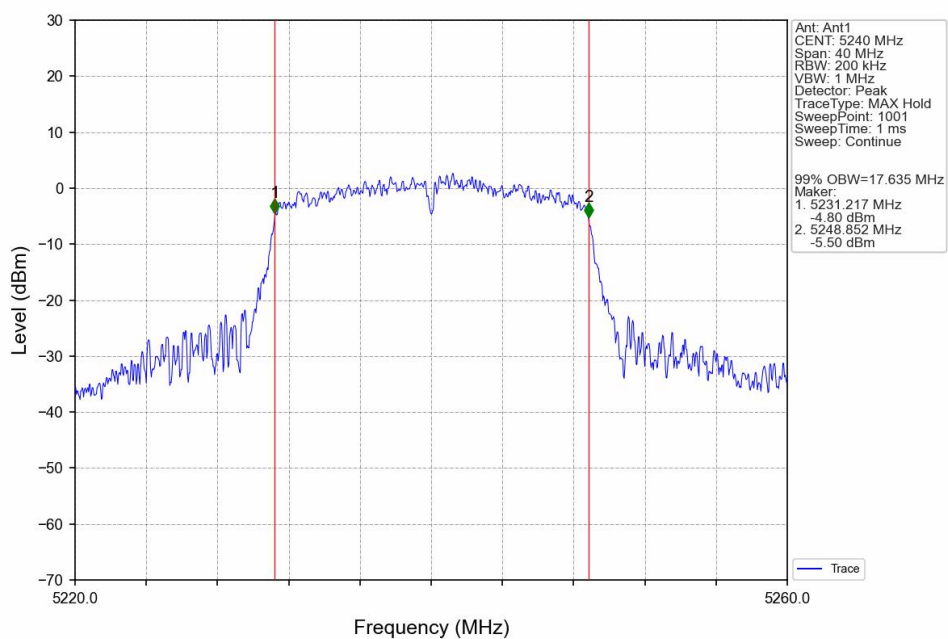


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802.11n(HT20)_MCH_5200MHz_Ant1_NTNV

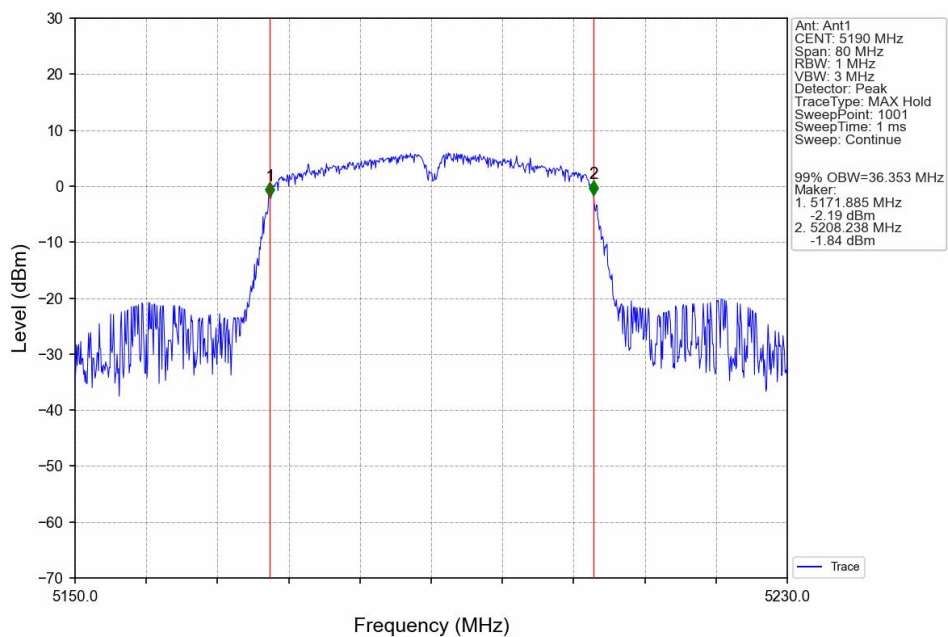


802.11n(HT20)_HCH_5240MHz_Ant1_NTNV

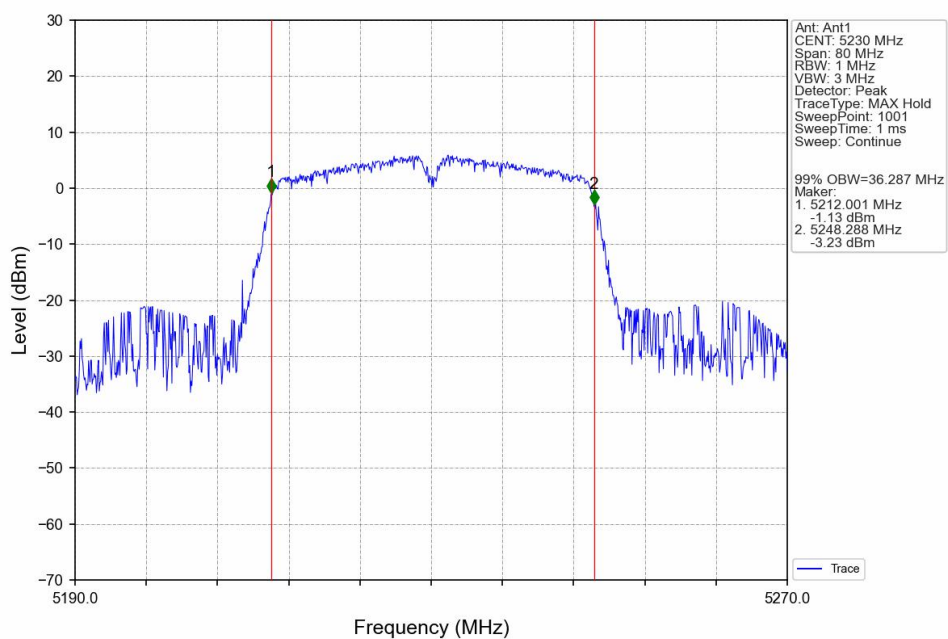


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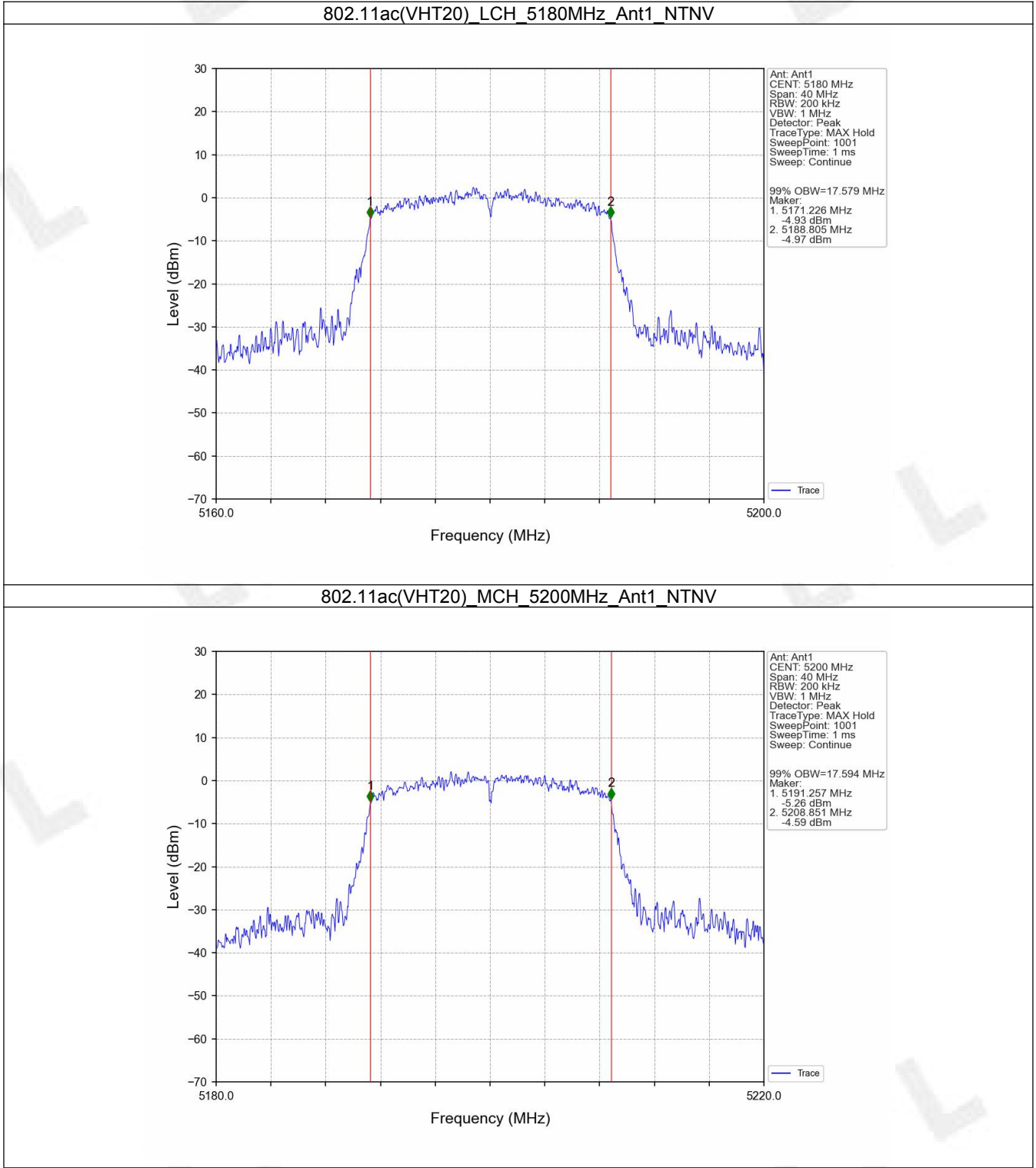
802.11n(HT40) LCH_5190MHz_Ant1_NTNV



802.11n(HT40) HCH_5230MHz_Ant1_NTNV

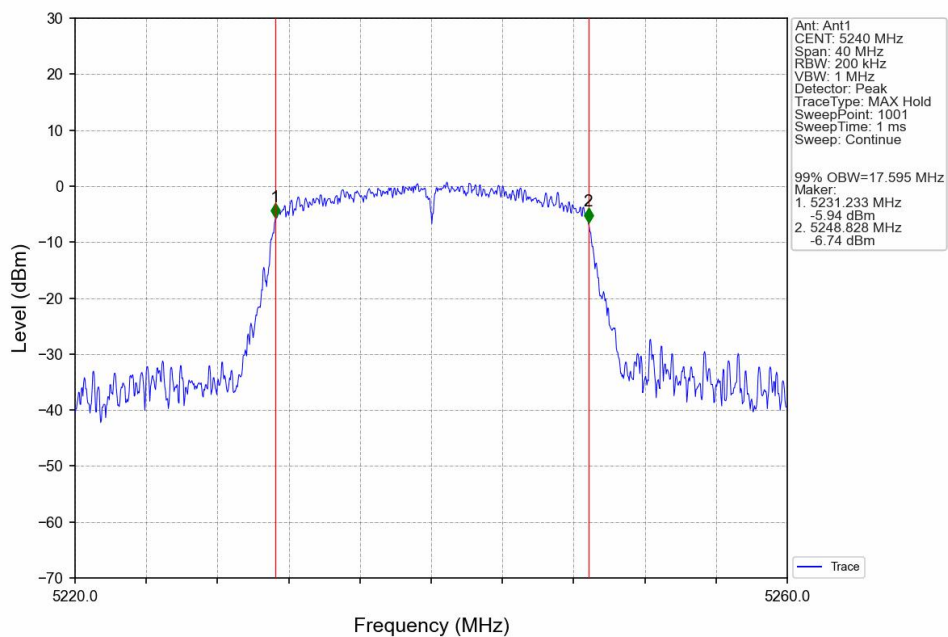


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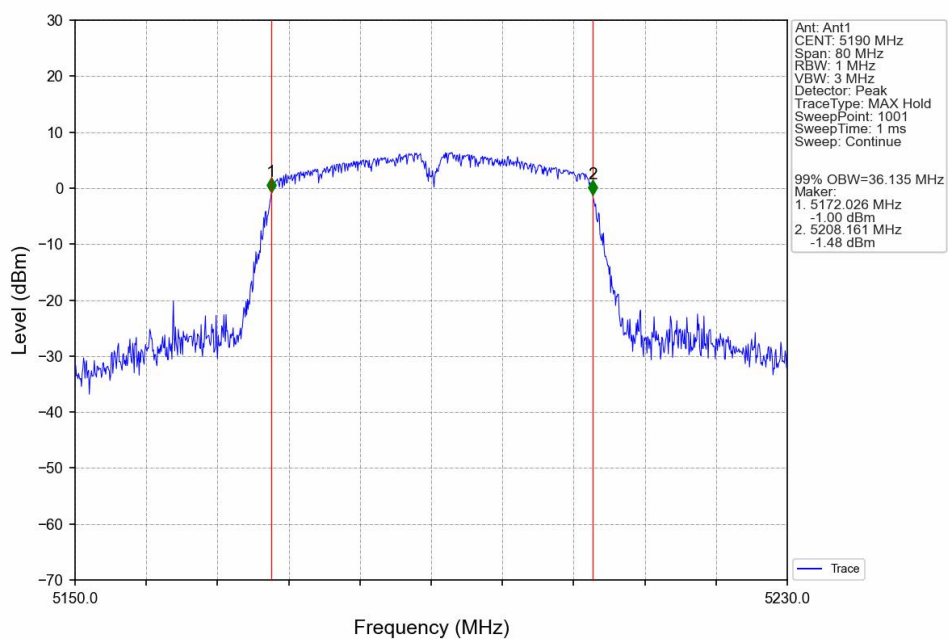


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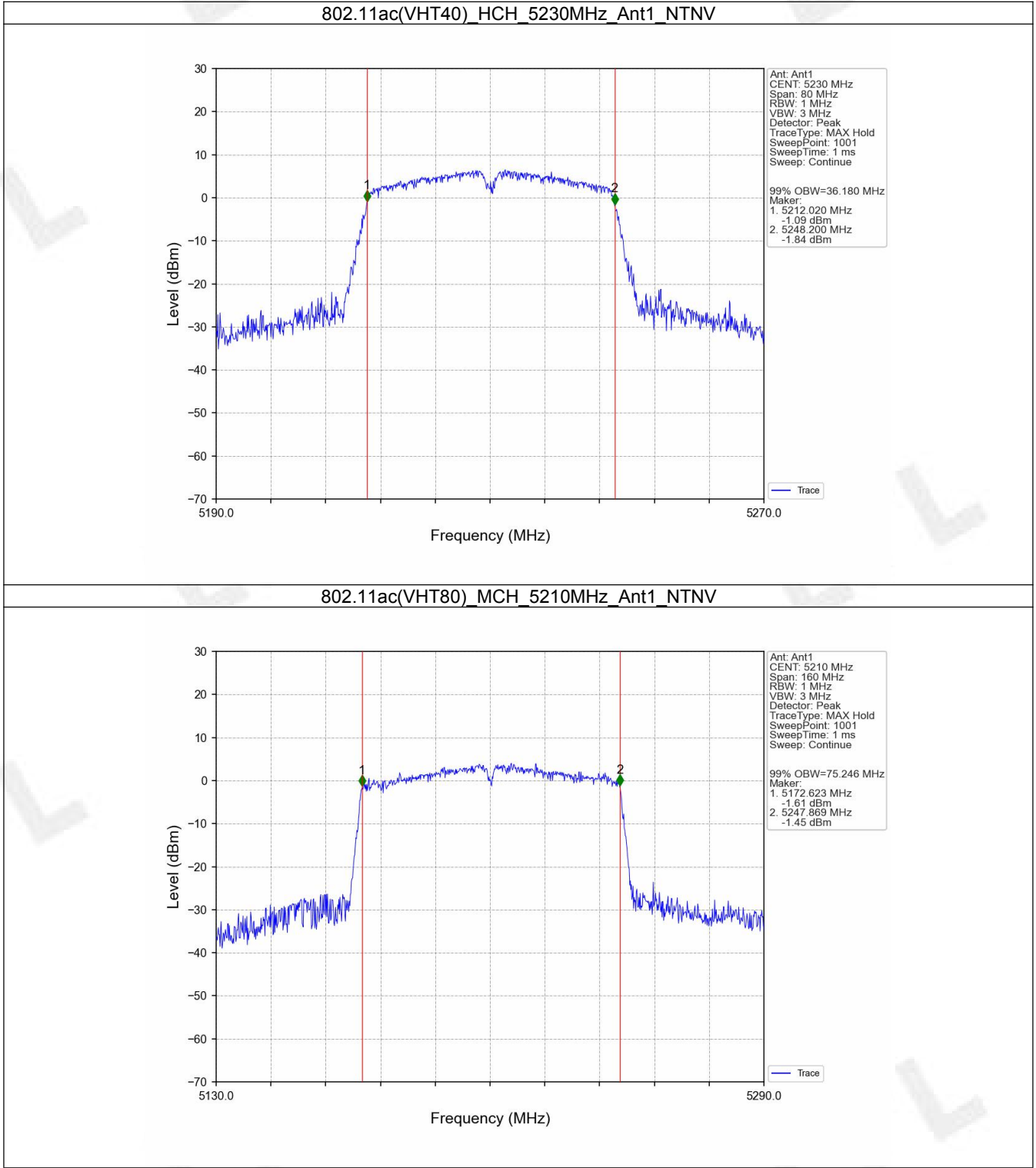
802.11ac(VHT20) HCH_5240MHz_Ant1_NTNV



802.11ac(VHT40) LCH_5190MHz_Ant1_NTNV

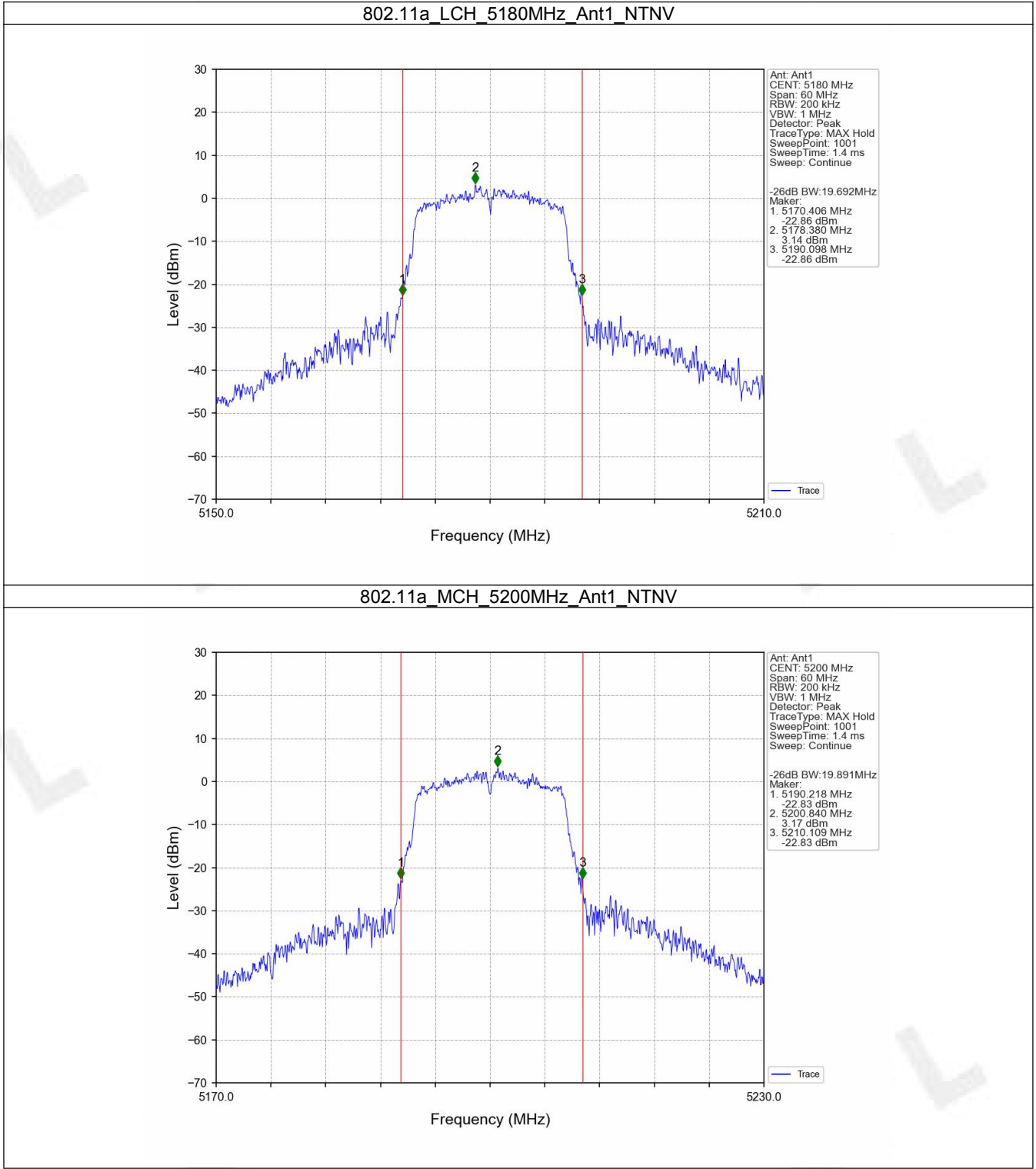


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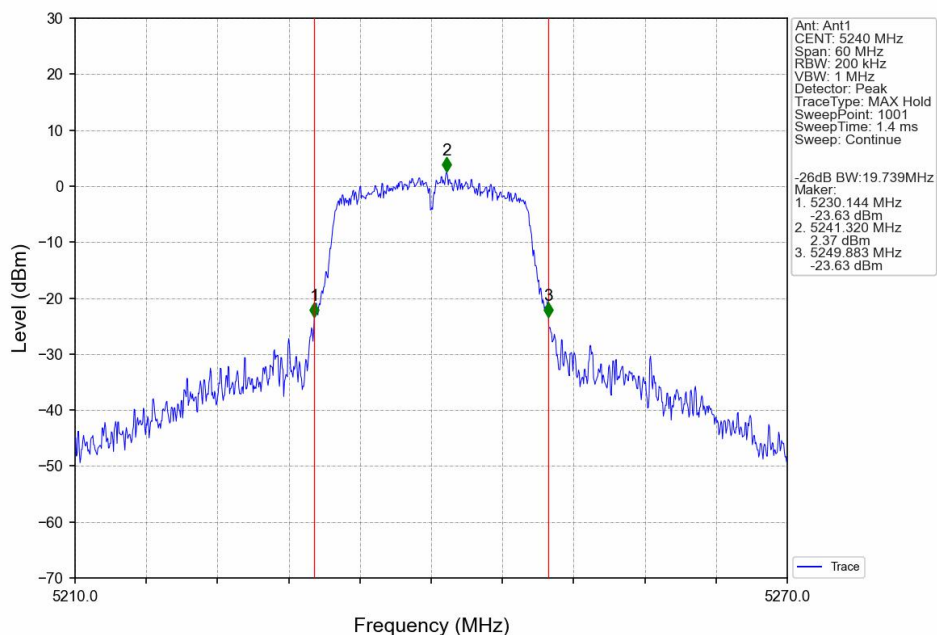
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2.2.2 26dB BW

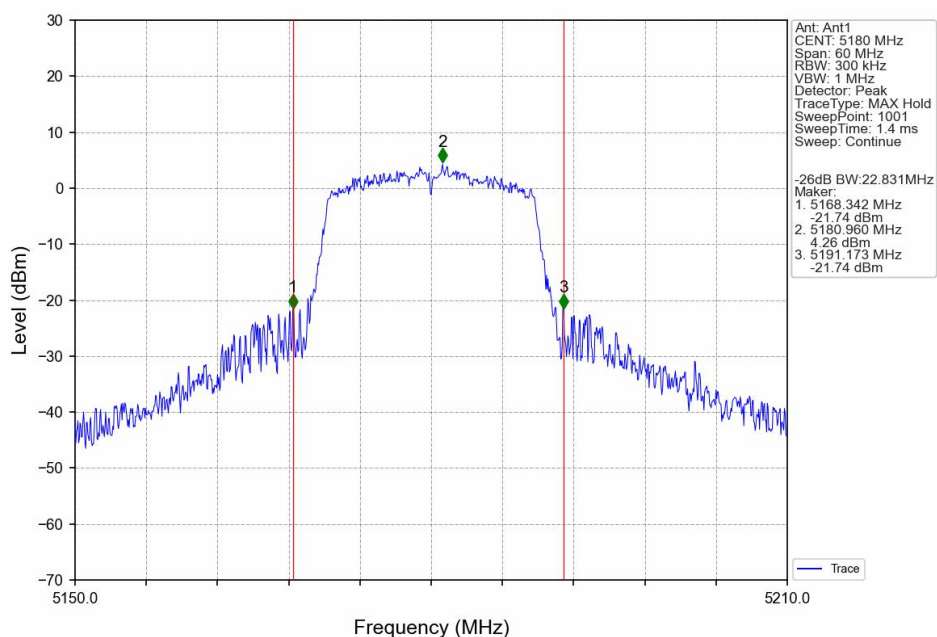


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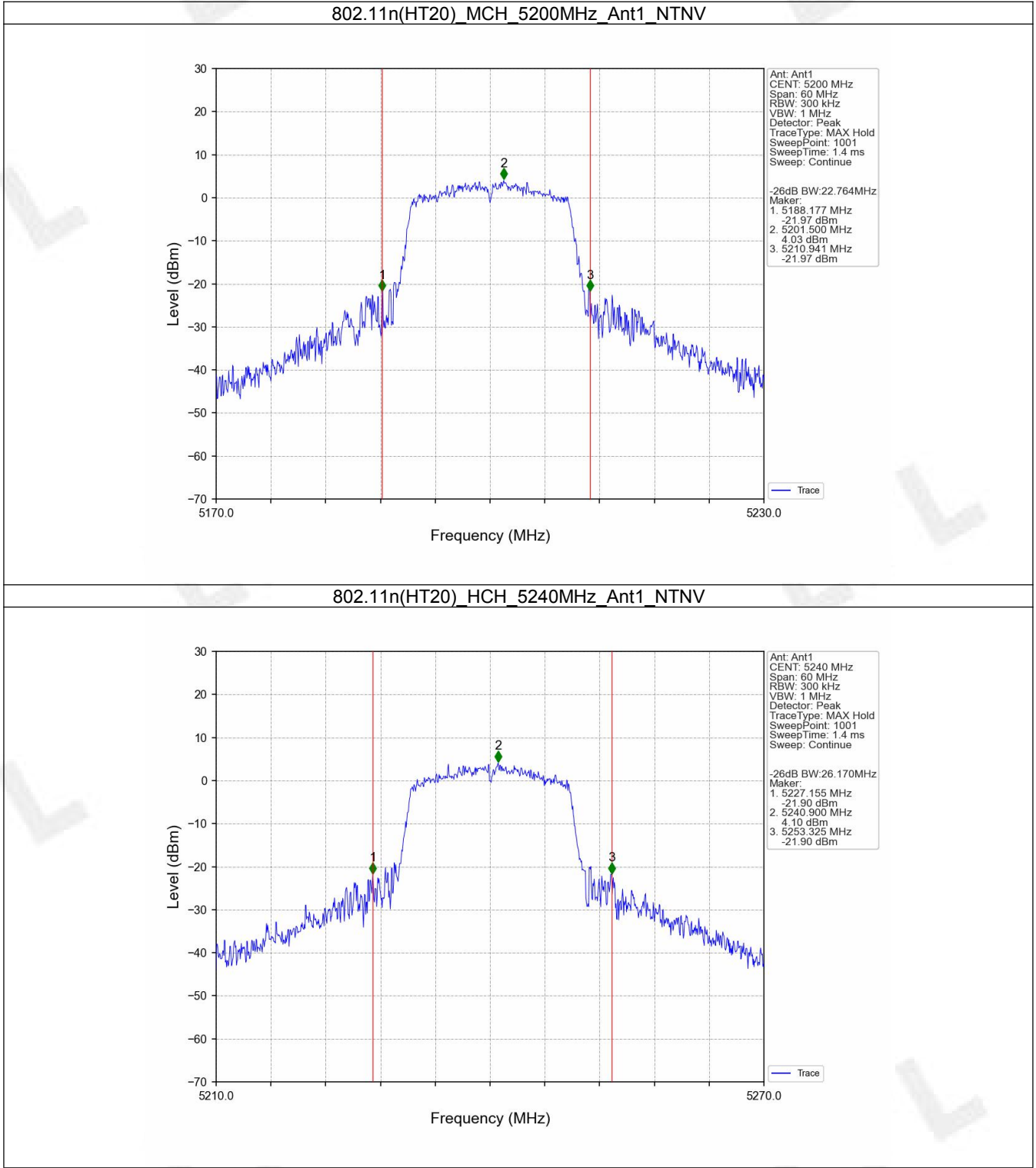
802.11a_HCH_5240MHz_Ant1_NTNV



802.11n(HT20)_LCH_5180MHz_Ant1_NTNV

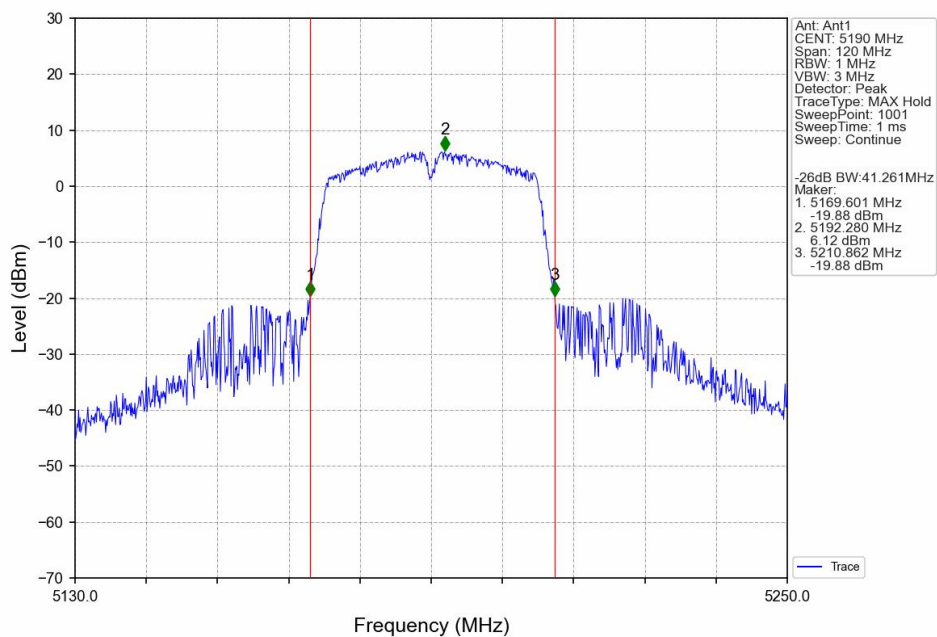


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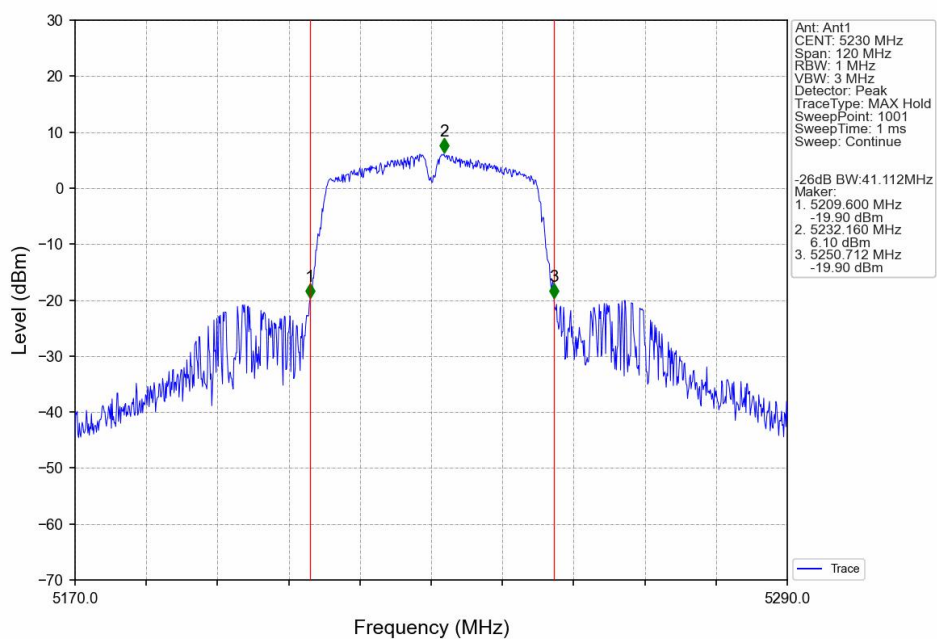


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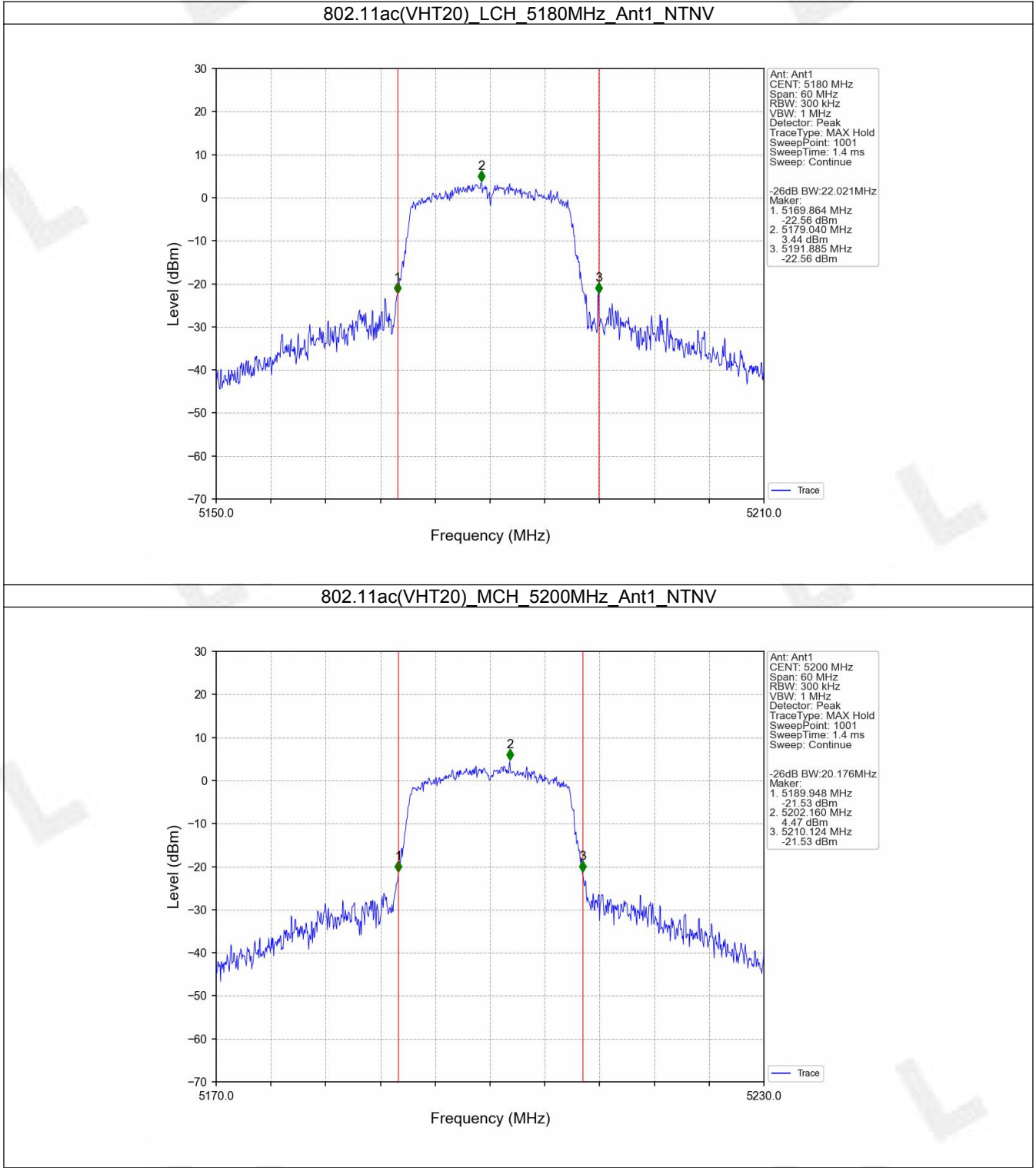
802.11n(HT40) LCH 5190MHz_Ant1_NTNV



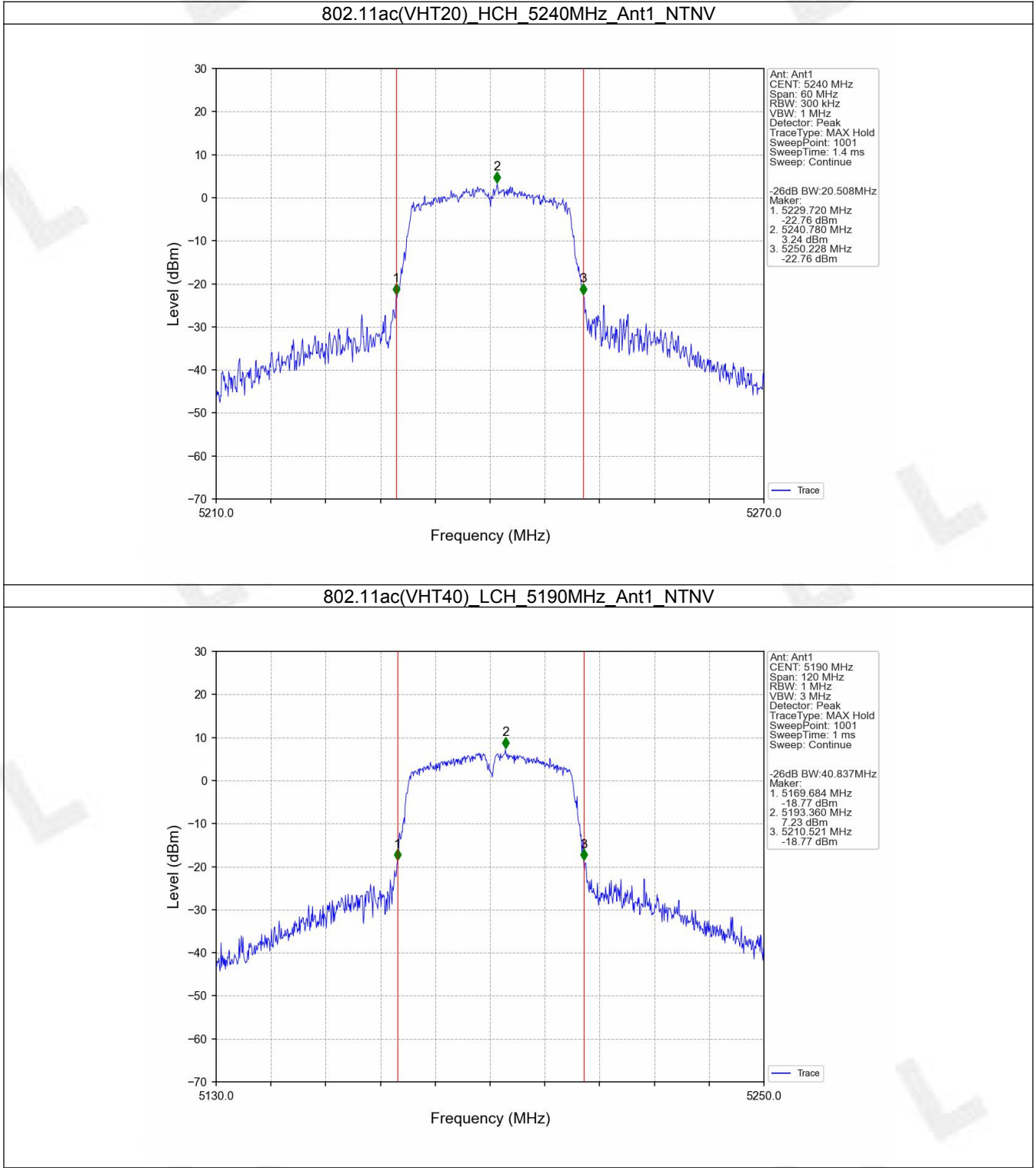
802.11n(HT40) HCH 5230MHz_Ant1_NTNV



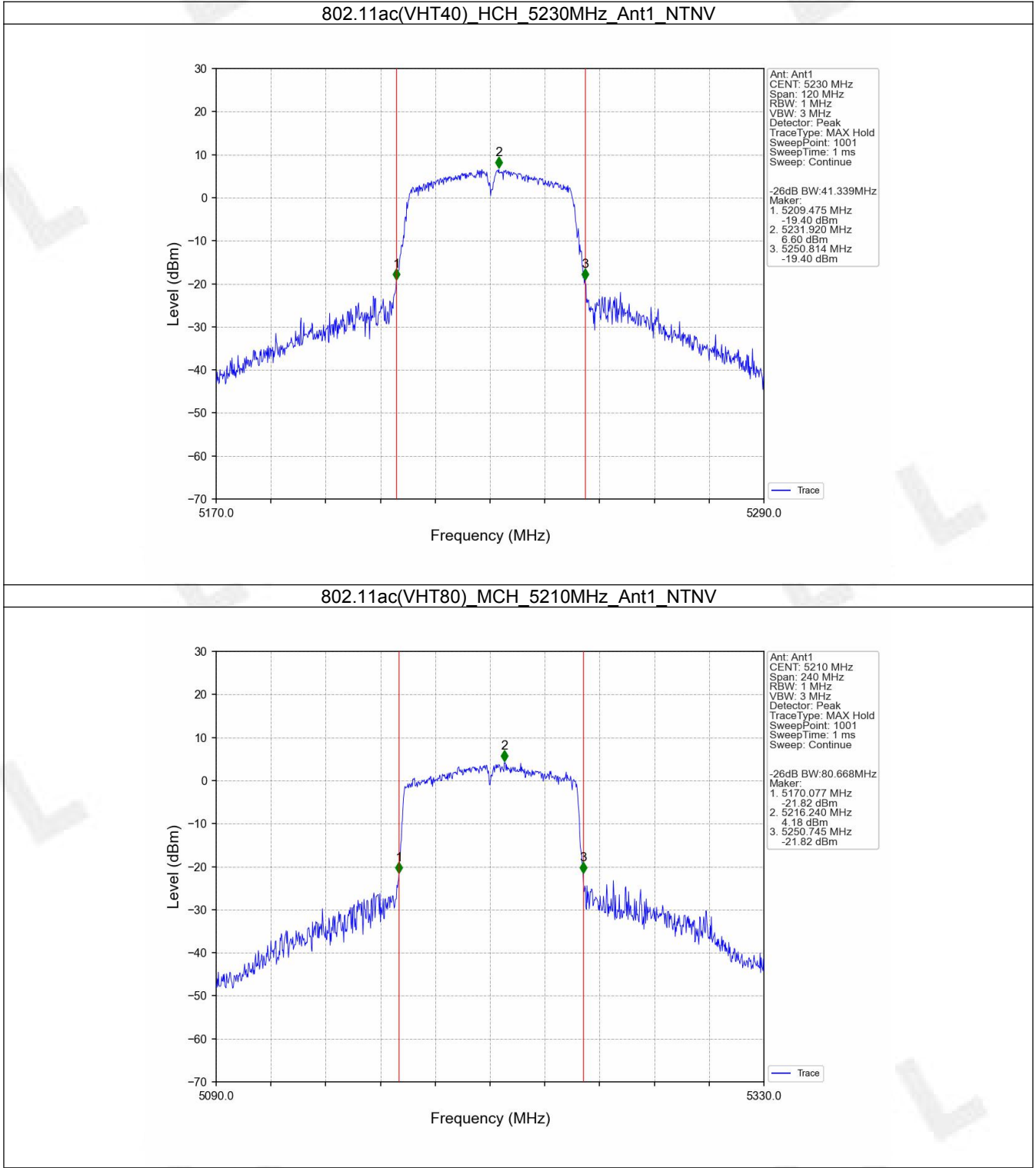
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FCC ID: 2BWH8-S26-UITRA



FCC ID: 2BWH8-S26-UITRA



FCC ID: 2BWH8-S26-UITRA

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	12.04	<=23.98	Pass
		5200	12.11	<=23.98	Pass
		5240	11.68	<=23.98	Pass
802.11n (HT20)	SISO	5180	12.21	<=23.98	Pass
		5200	12.35	<=23.98	Pass
		5240	12.24	<=23.98	Pass
802.11n (HT40)	SISO	5190	11.52	<=23.98	Pass
		5230	11.39	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	12.00	<=23.98	Pass
		5200	11.99	<=23.98	Pass
		5240	11.19	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	11.98	<=23.98	Pass
		5230	11.91	<=23.98	Pass
802.11ac (VHT80)	SISO	5210	12.32	<=23.98	Pass
Note1: Antenna Gain: Ant1: 0.88dBi;					
Note2: The duty factor is already compensated in the result;					

FCC ID: 2BWH8-S26-UITRA

4. Maximum Power Spectral Density**4.1 Test Result****4.1.1 PSD**

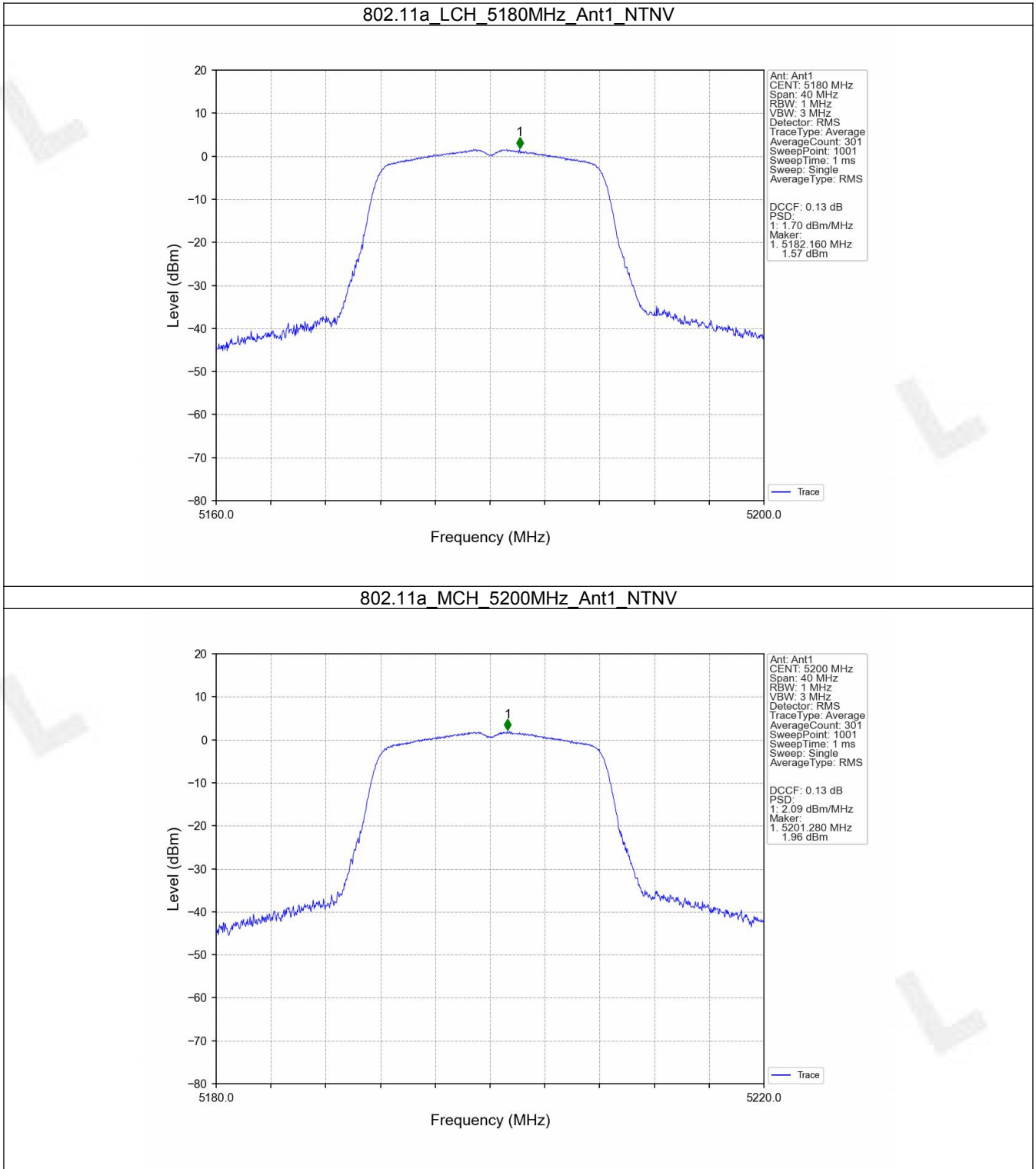
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	1.70	<=11	Pass
		5200	2.09	<=11	Pass
		5240	1.49	<=11	Pass
802.11n (HT20)	SISO	5180	1.89	<=11	Pass
		5200	2.01	<=11	Pass
		5240	1.97	<=11	Pass
802.11n (HT40)	SISO	5190	-1.83	<=11	Pass
		5230	-1.98	<=11	Pass
802.11ac (VHT20)	SISO	5180	1.57	<=11	Pass
		5200	1.50	<=11	Pass
		5240	0.84	<=11	Pass
802.11ac (VHT40)	SISO	5190	-1.28	<=11	Pass
		5230	-1.43	<=11	Pass
802.11ac (VHT80)	SISO	5210	-4.07	<=11	Pass

Note1: Antenna Gain: Ant1: 0.88dBi;

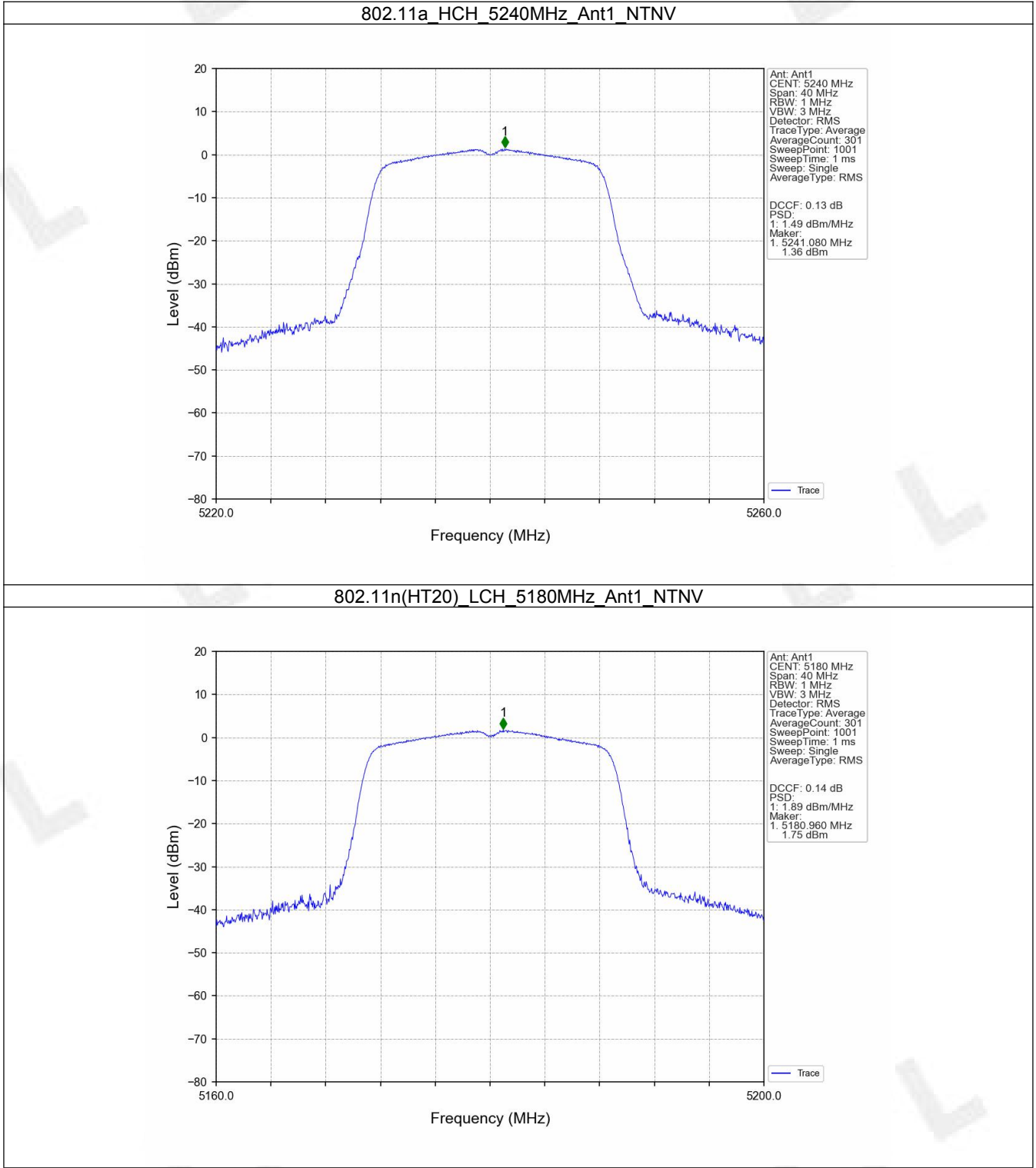
FCC ID: 2BWH8-S26-UITRA

4.2 Test Graph

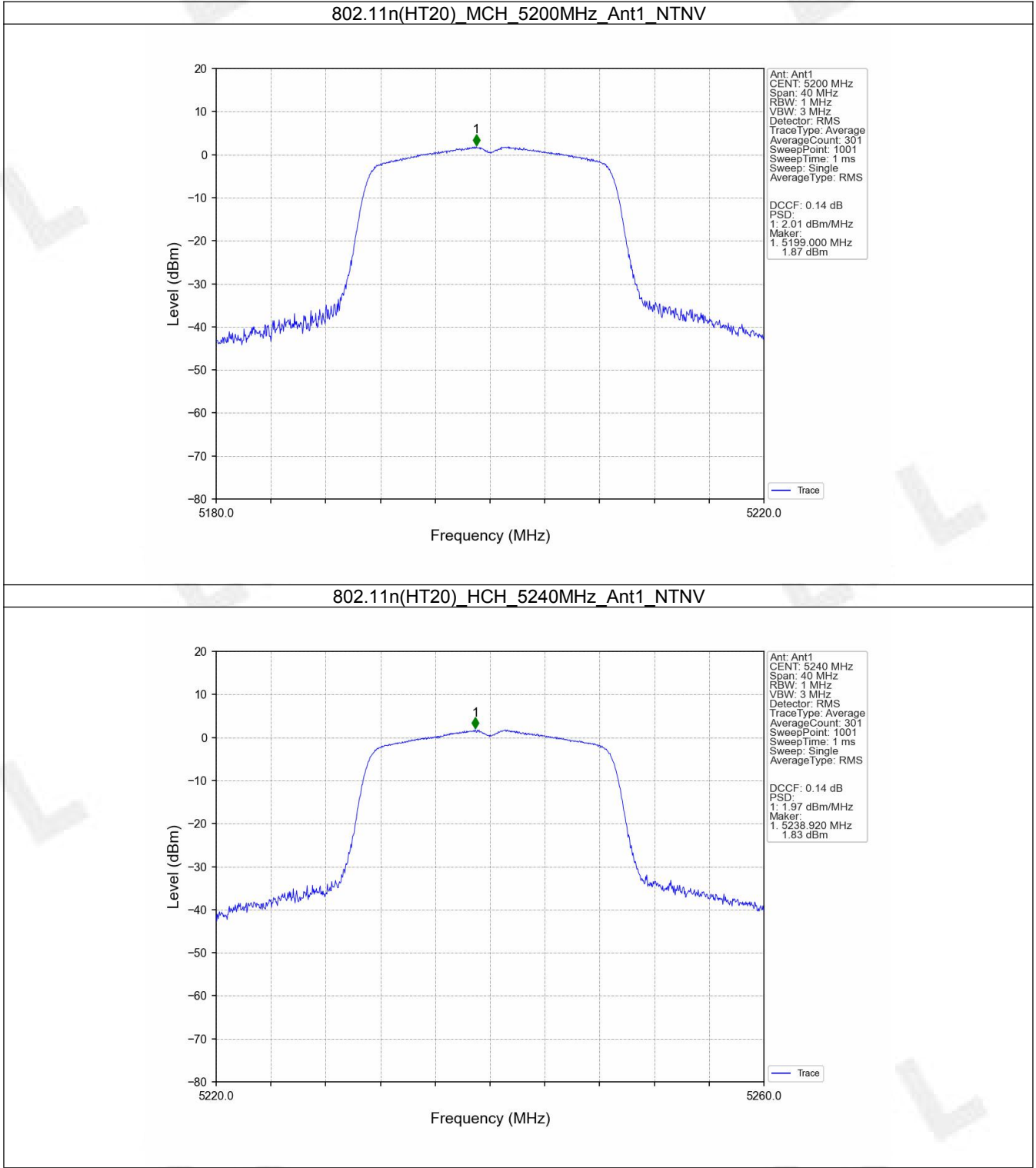
4.2.1 PSD



FCC ID: 2BWH8-S26-UITRA

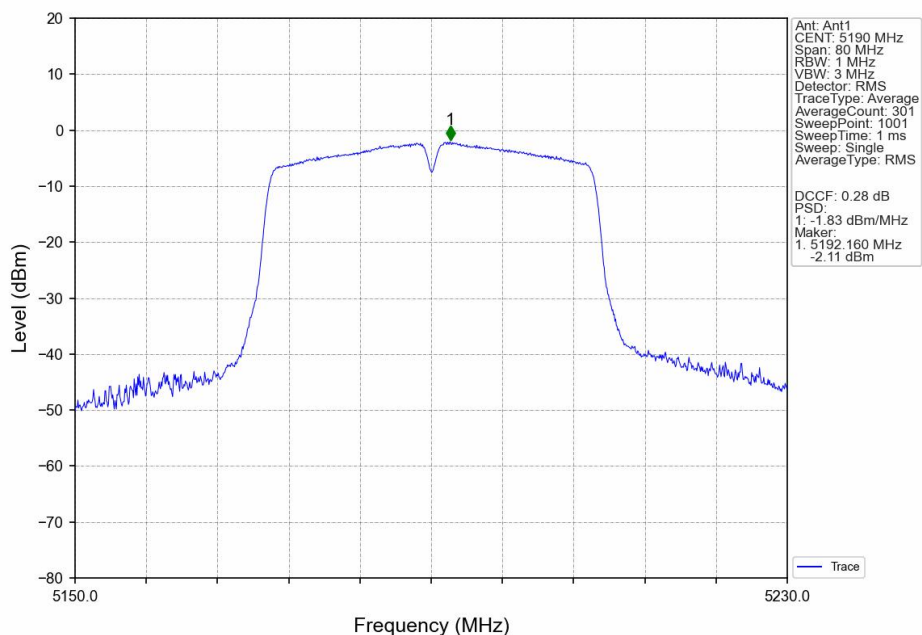


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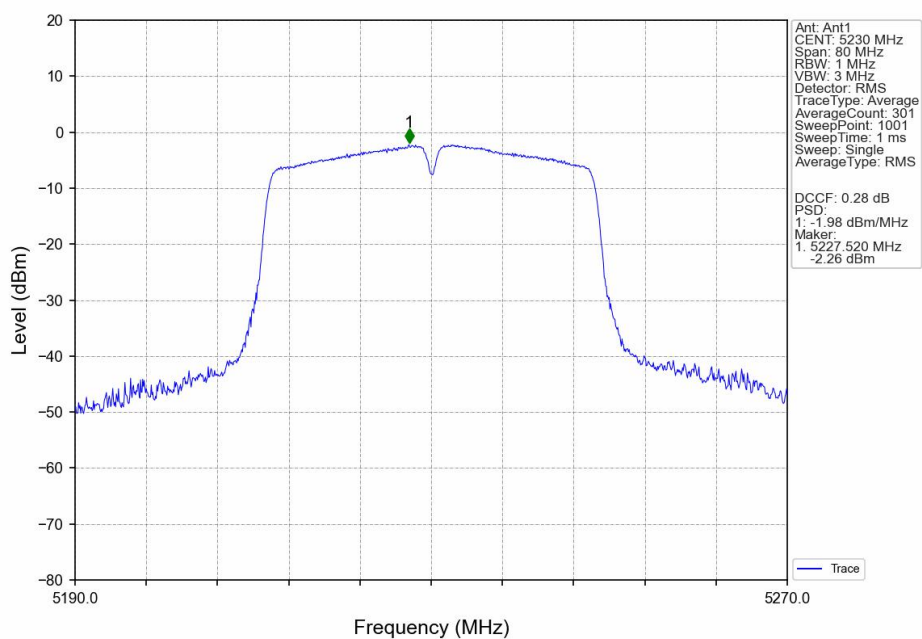


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802.11n(HT40)_LCH_5190MHz_Ant1_NTNV

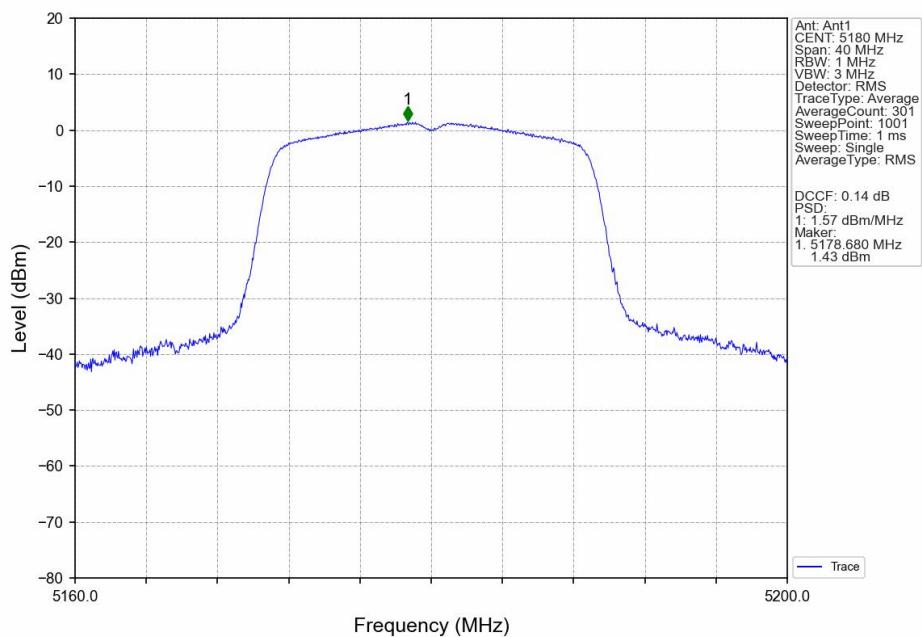


802.11n(HT40)_HCH_5230MHz_Ant1_NTNV

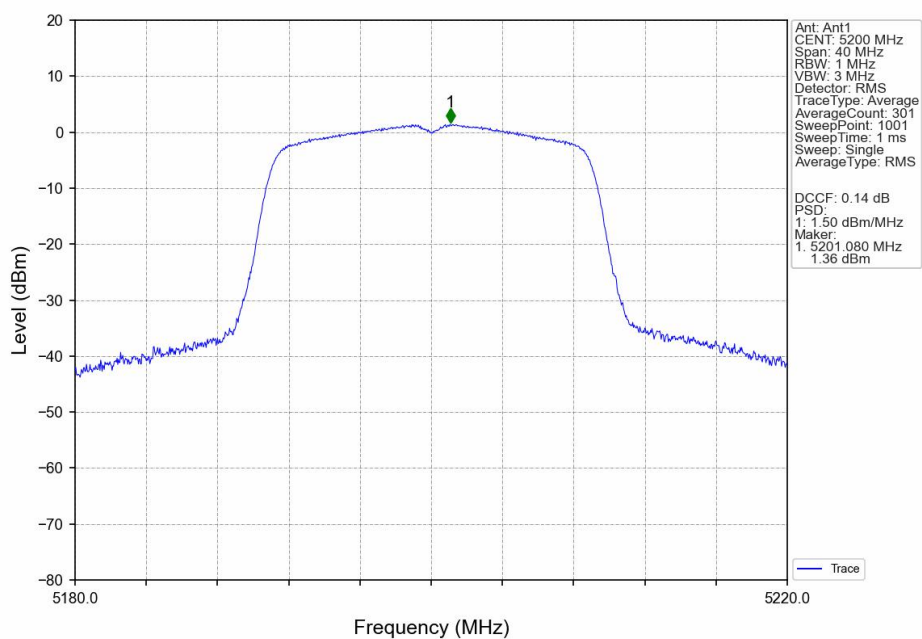


FCC ID: 2BWH8-S26-UITRA

802.11ac(VHT20) LCH_5180MHz_Ant1_NTNV

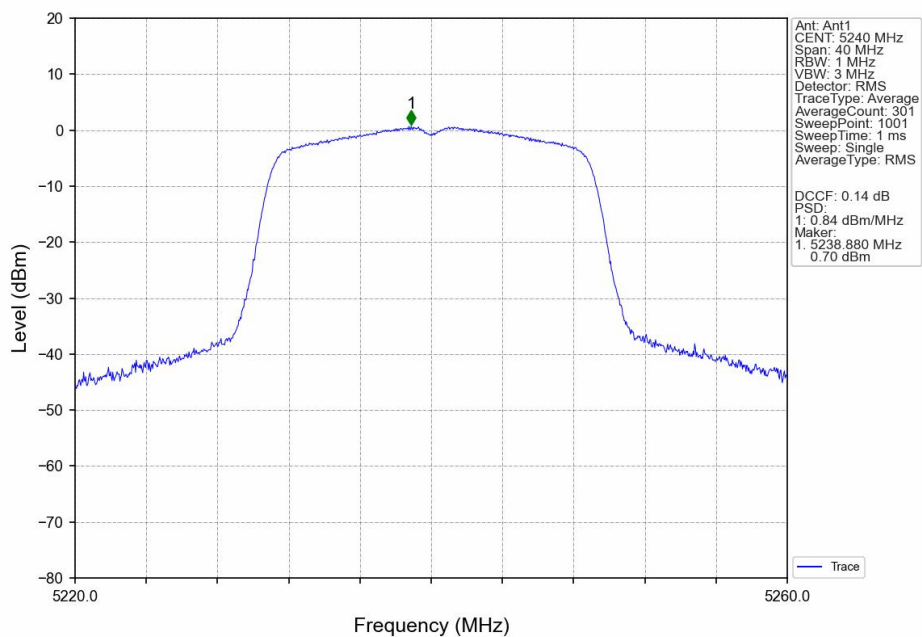


802.11ac(VHT20) MCH_5200MHz_Ant1_NTNV

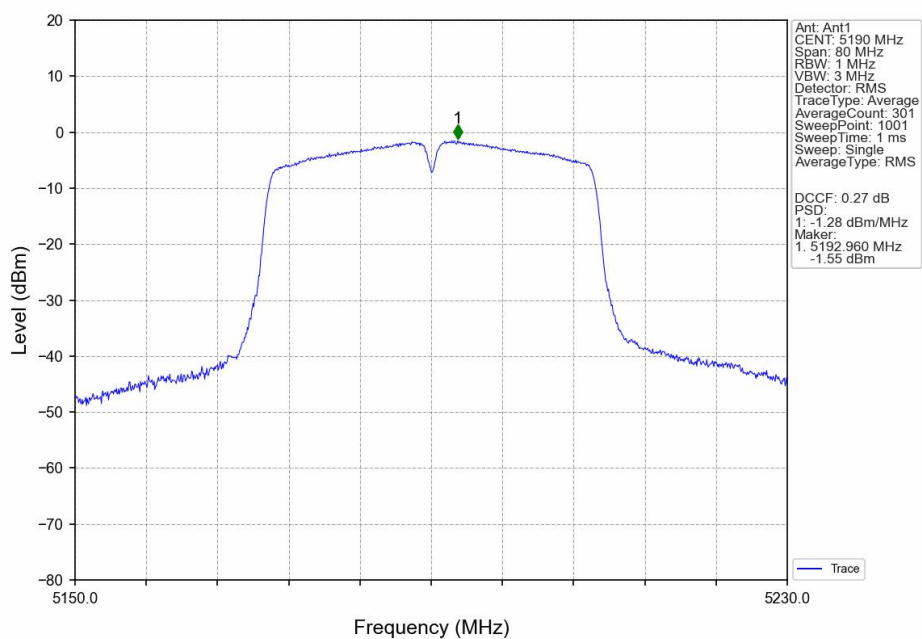


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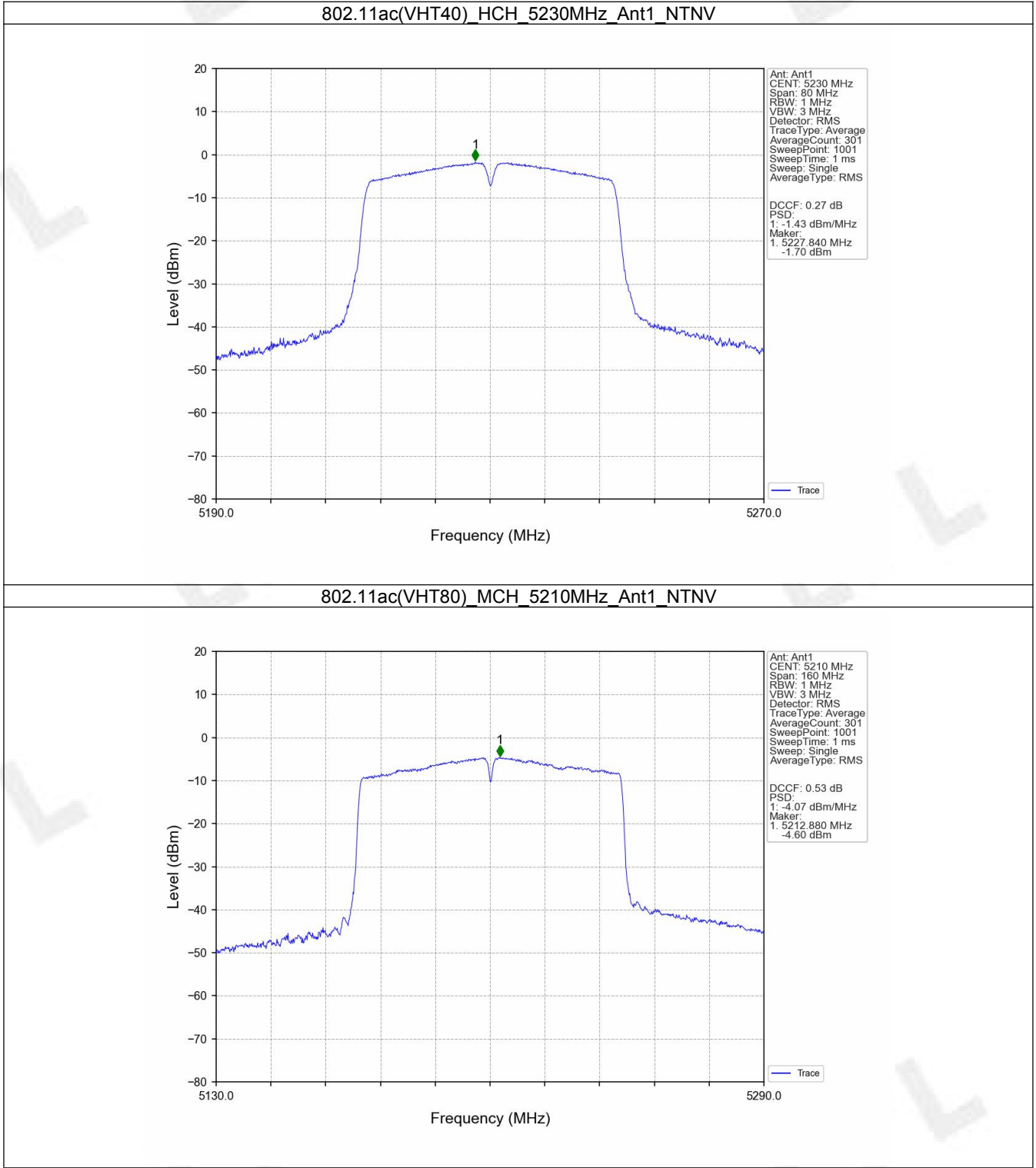
802.11ac(VHT20) HCH 5240MHz Ant1_NTNV



802.11ac(VHT40) LCH 5190MHz Ant1_NTNV



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FCC ID: 2BWH8-S26-UITRA

5. Frequency Stability**5.1 Test Result****5.1.1 Ant1**

Ant1							
Mode	Tx Type	Frequency (MHz)	Temperature (°C)	Voltage	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	LV	5179.994	5150 to 5250	Pass
				NV	5179.992	5150 to 5250	Pass
				HV	5179.991	5150 to 5250	Pass
			-30	NV	5179.991	5150 to 5250	Pass
			-20	NV	5179.990	5150 to 5250	Pass
			-10	NV	5179.989	5150 to 5250	Pass
			0	NV	5179.989	5150 to 5250	Pass
			10	NV	5179.988	5150 to 5250	Pass
			30	NV	5179.988	5150 to 5250	Pass
			40	NV	5179.987	5150 to 5250	Pass
			50	NV	5179.987	5150 to 5250	Pass
		5200	20	LV	5199.988	5150 to 5250	Pass
				NV	5199.987	5150 to 5250	Pass
				HV	5199.987	5150 to 5250	Pass
			-30	NV	5199.987	5150 to 5250	Pass
			-20	NV	5199.987	5150 to 5250	Pass
			-10	NV	5199.986	5150 to 5250	Pass
			0	NV	5199.986	5150 to 5250	Pass
			10	NV	5199.986	5150 to 5250	Pass
			30	NV	5199.986	5150 to 5250	Pass
			40	NV	5199.986	5150 to 5250	Pass
			50	NV	5199.985	5150 to 5250	Pass
		5240	20	LV	5239.985	5150 to 5250	Pass
				NV	5239.623	5150 to 5250	Pass
				HV	5239.514	5150 to 5250	Pass
			-30	NV	5240.017	5150 to 5250	Pass
			-20	NV	5239.908	5150 to 5250	Pass
			-10	NV	5239.617	5150 to 5250	Pass
			0	NV	5239.561	5150 to 5250	Pass
			10	NV	5240.178	5150 to 5250	Pass
			30	NV	5240.453	5150 to 5250	Pass
			40	NV	5239.707	5150 to 5250	Pass
			50	NV	5239.660	5150 to 5250	Pass
		5190	20	LV	5189.993	5150 to 5250	Pass
				NV	5189.992	5150 to 5250	Pass
				HV	5189.991	5150 to 5250	Pass
			-30	NV	5189.990	5150 to 5250	Pass
			-20	NV	5189.989	5150 to 5250	Pass
			-10	NV	5189.989	5150 to 5250	Pass
			0	NV	5189.989	5150 to 5250	Pass
			10	NV	5189.988	5150 to 5250	Pass
			30	NV	5189.988	5150 to 5250	Pass
			40	NV	5189.987	5150 to 5250	Pass
			50	NV	5189.987	5150 to 5250	Pass
		5230	20	LV	5229.986	5150 to 5250	Pass
				NV	5229.986	5150 to 5250	Pass
				HV	5229.986	5150 to 5250	Pass
			-30	NV	5229.985	5150 to 5250	Pass
			-20	NV	5229.985	5150 to 5250	Pass

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			-10	NV	5229.985	5150 to 5250	Pass
			0	NV	5229.985	5150 to 5250	Pass
			10	NV	5229.985	5150 to 5250	Pass
			30	NV	5229.985	5150 to 5250	Pass
			40	NV	5229.985	5150 to 5250	Pass
			50	NV	5229.985	5150 to 5250	Pass
		5210	20	LV	5209.987	5150 to 5250	Pass
				NV	5209.987	5150 to 5250	Pass
				HV	5209.986	5150 to 5250	Pass
			-30	NV	5209.986	5150 to 5250	Pass
			-20	NV	5209.986	5150 to 5250	Pass
			-10	NV	5209.985	5150 to 5250	Pass
			0	NV	5209.985	5150 to 5250	Pass
			10	NV	5209.985	5150 to 5250	Pass
			30	NV	5209.985	5150 to 5250	Pass
			40	NV	5209.985	5150 to 5250	Pass
			50	NV	5209.985	5150 to 5250	Pass