ANNEX E TEST DATA

For

Project No.:	8330EU012605W
Client:	Shenzhen Weilin Huachuang Technology Co.,Ltd
Product Description:	Wi-Fi camera
Model No.:	W02
FCC ID:	2BKBX-W02
Technology:	WiFi 2.4G
Test Engineer:	Mikey zhu
Test Date:	2025-06-11

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass

1. Duty Cycle

1.1 Test Result

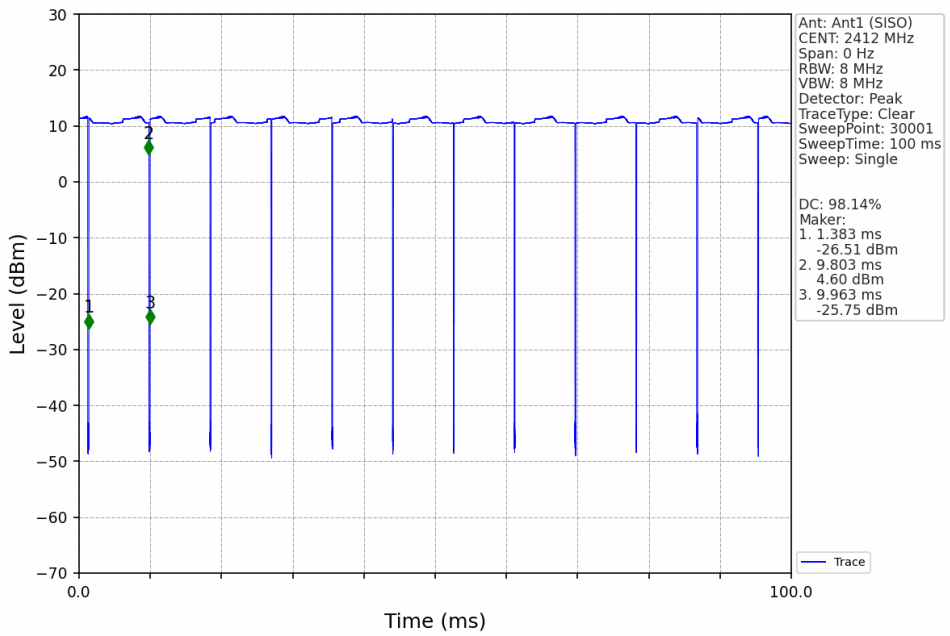
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.420	8.580	98.14	0.08	0.50
		2437	8.420	8.640	97.45	0.11	0.91
		2462	8.416	8.640	97.41	0.11	0.99
802.11g	SISO	2412	1.399	1.590	87.99	0.56	3.63
		2437	1.399	1.617	86.52	0.63	5.11
		2462	1.399	1.862	75.13	1.24	4.23
802.11n (HT20)	SISO	2412	5.107	5.458	93.57	0.29	4.39
		2437	5.090	5.258	96.80	0.14	0.83
		2462	5.090	5.563	91.50	0.39	1.82
802.11n (HT40)	SISO	2422	4.898	5.087	96.28	0.16	1.28
		2437	4.897	5.076	96.47	0.16	1.07
		2452	4.898	5.058	96.84	0.14	0.69

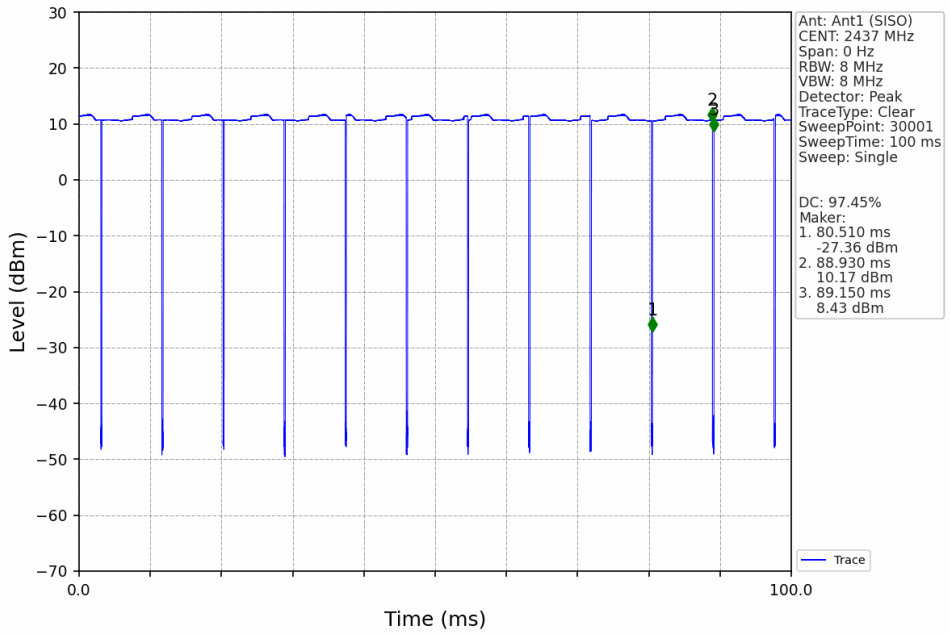
1.2 Test Graph

1.2.1 Ant1

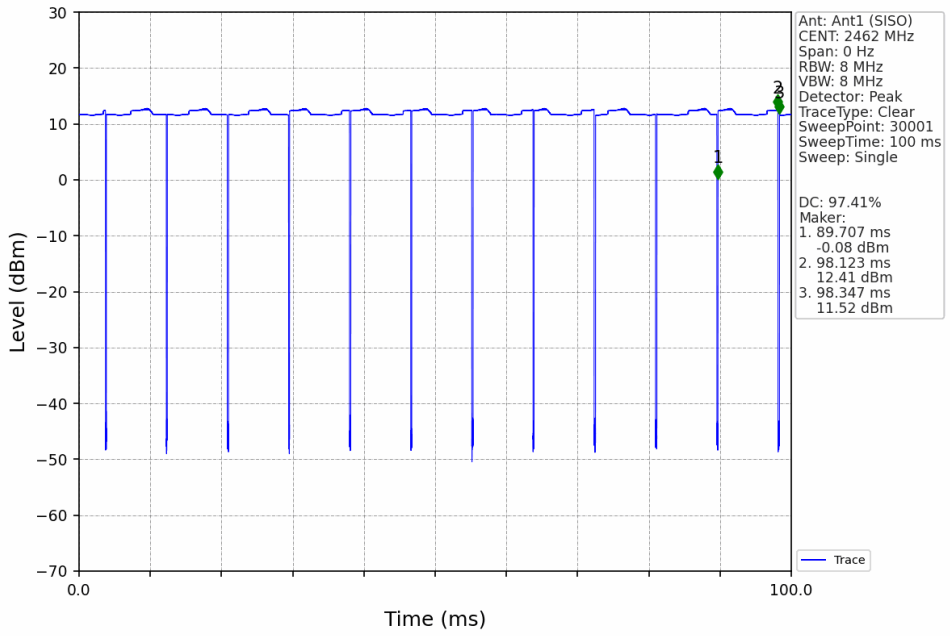
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



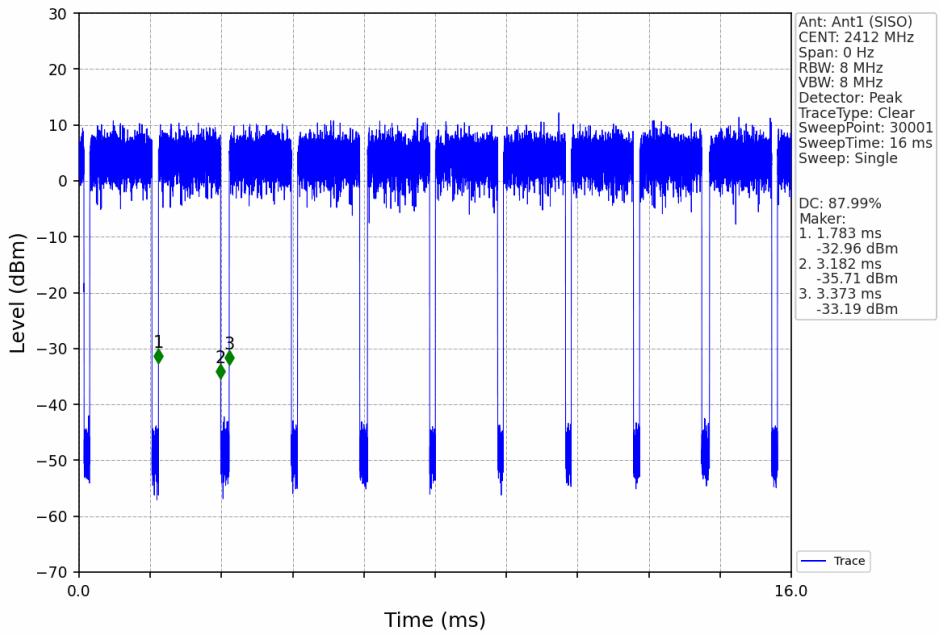
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



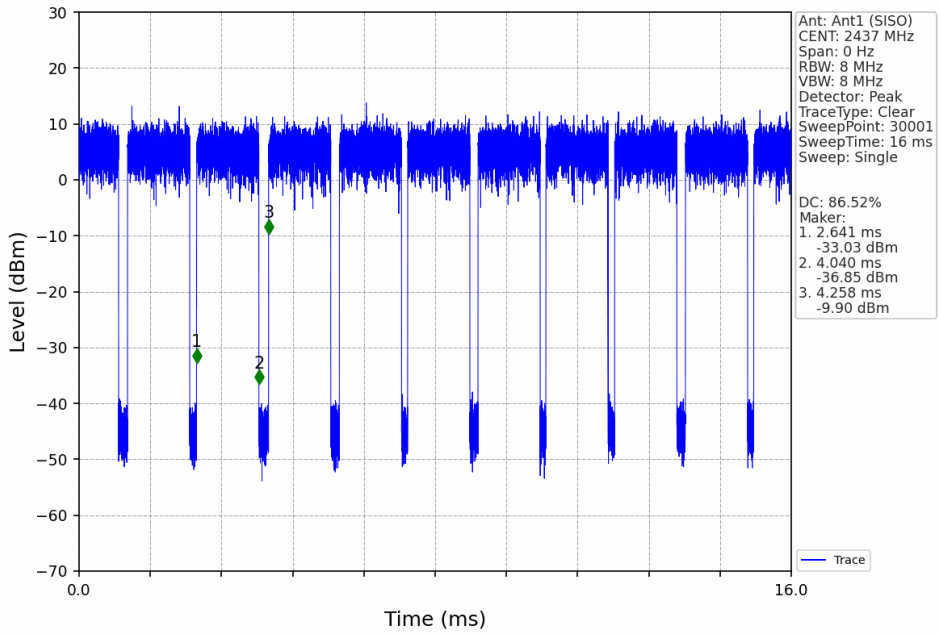
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



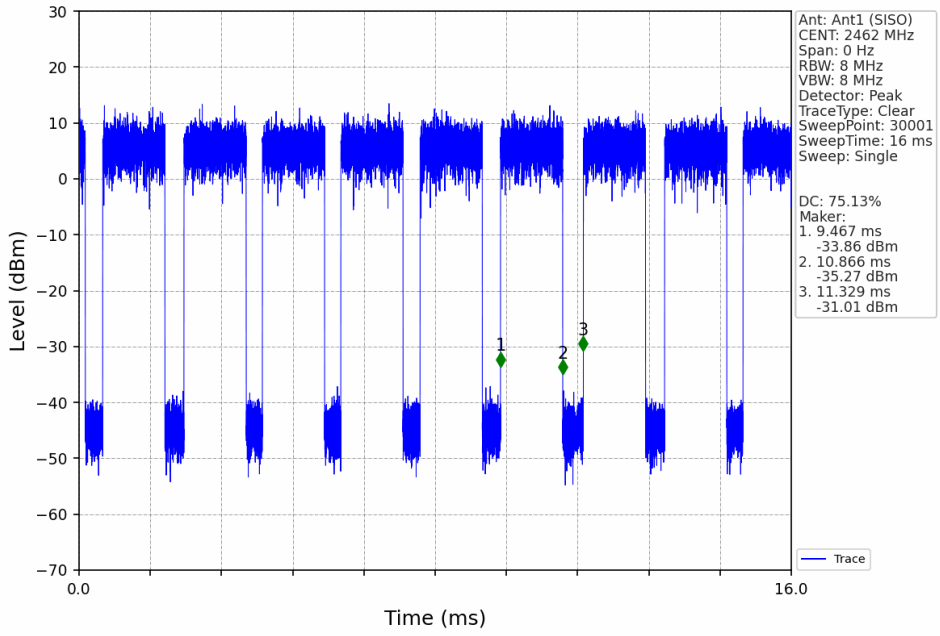
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



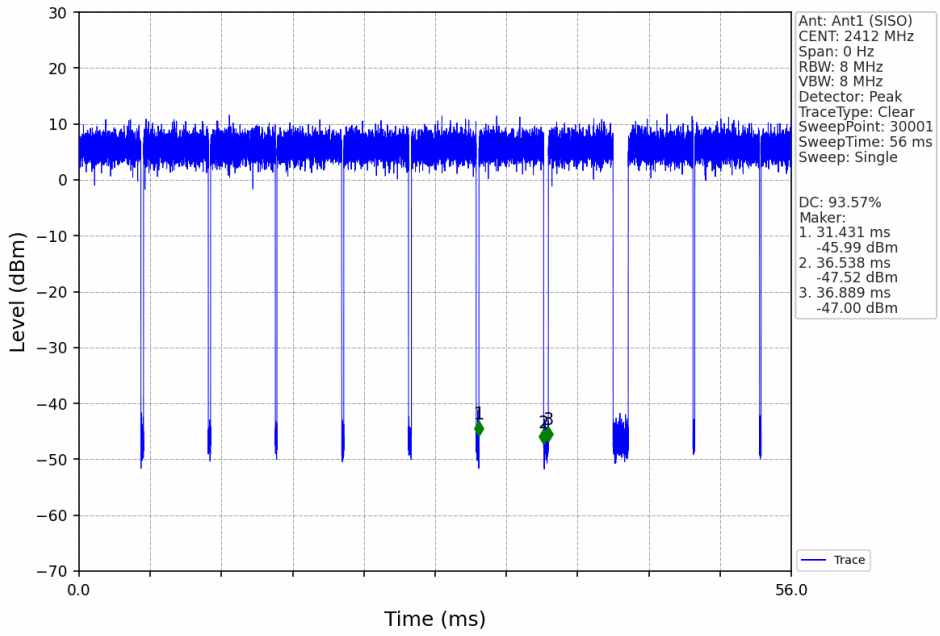
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



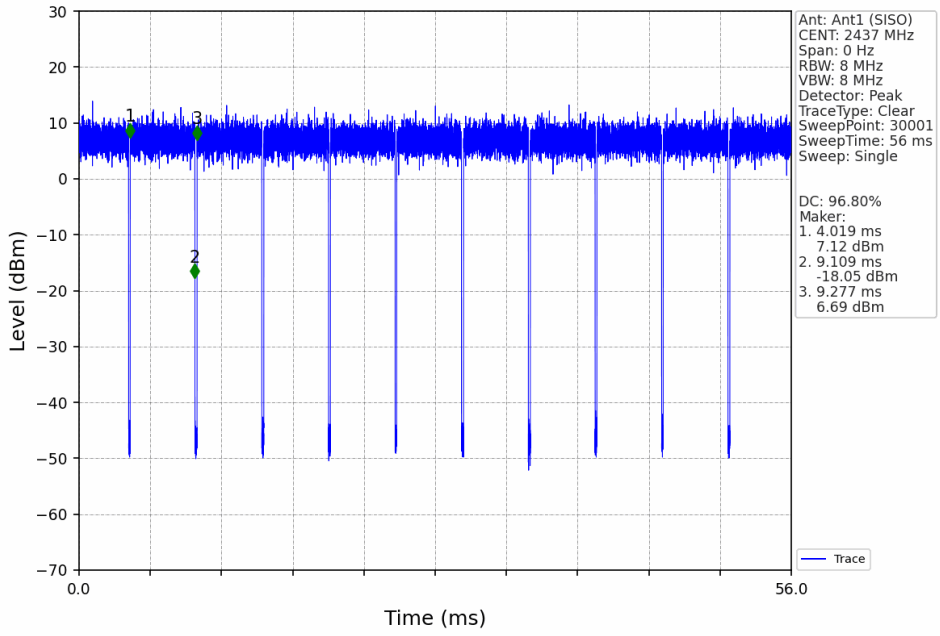
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



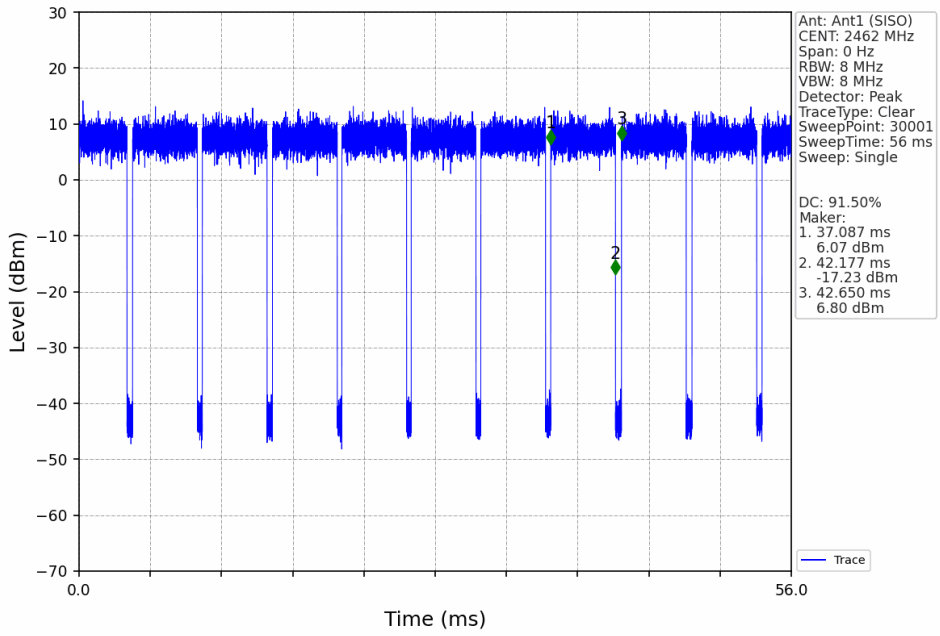
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



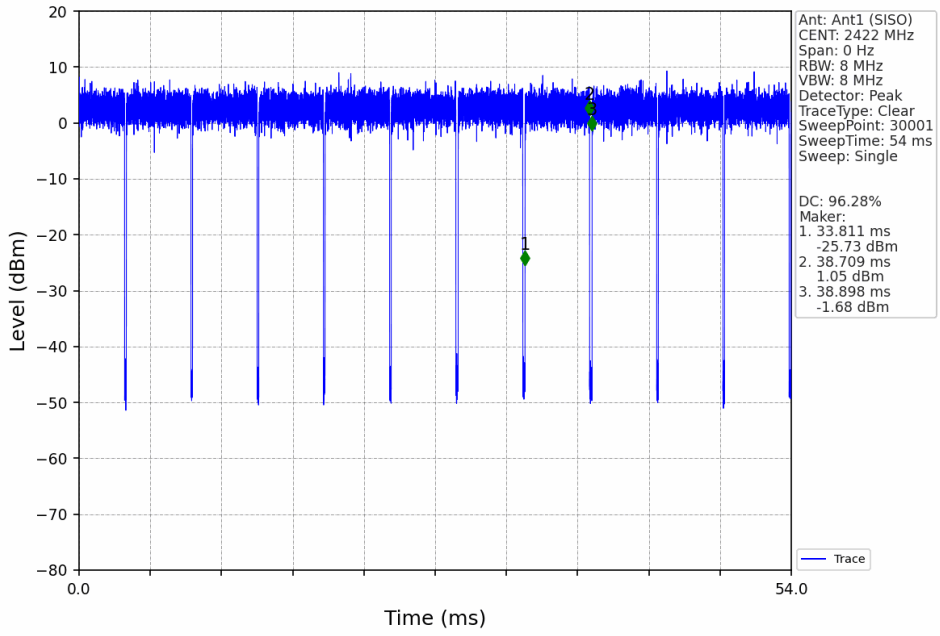
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



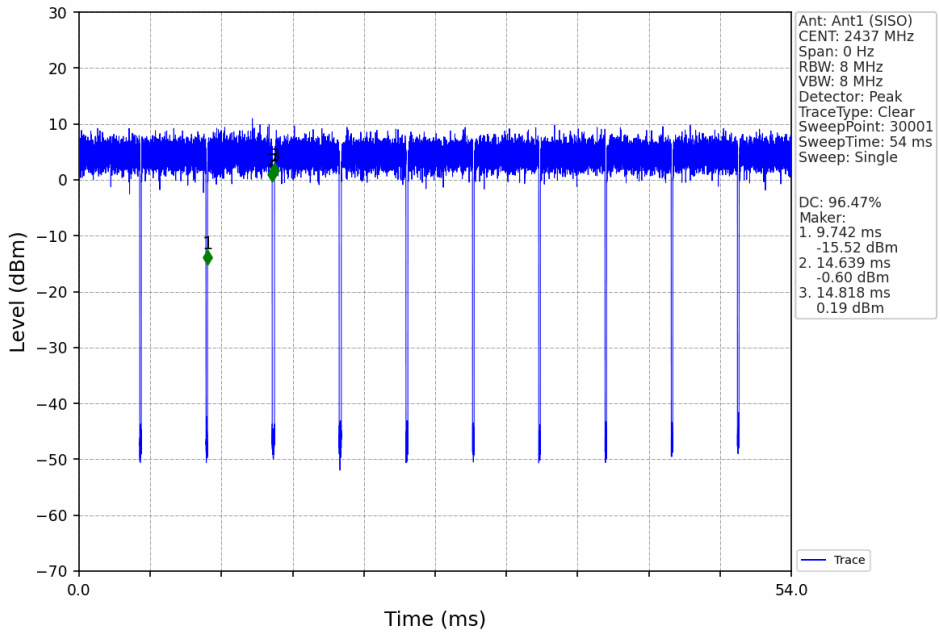
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



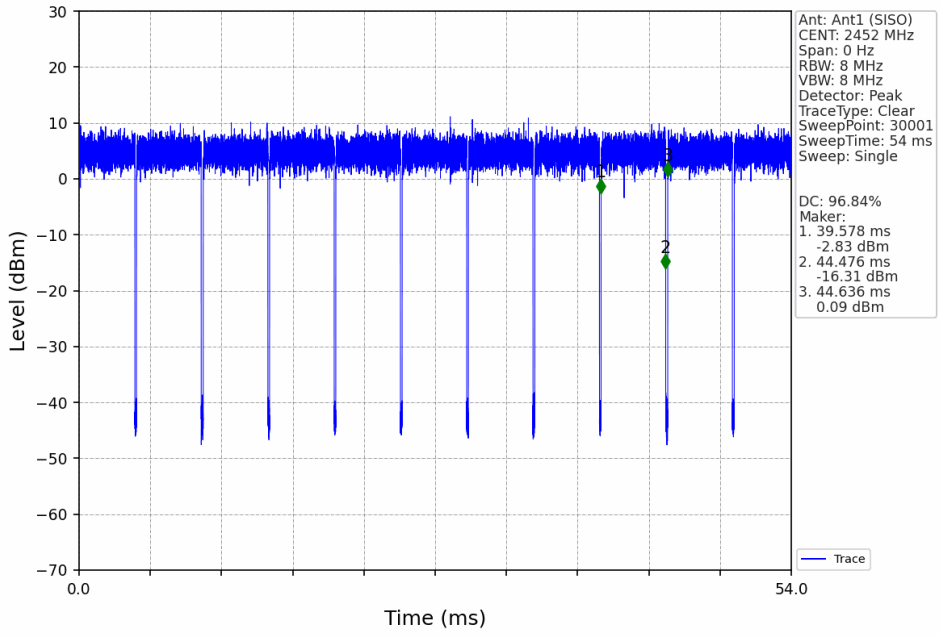
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.838	/	Pass
		2437	1	14.750	/	Pass
		2462	1	14.749	/	Pass
802.11g	SISO	2412	1	18.372	/	Pass
		2437	1	18.317	/	Pass
		2462	1	18.410	/	Pass
802.11n (HT20)	SISO	2412	1	19.348	/	Pass
		2437	1	19.416	/	Pass
		2462	1	19.226	/	Pass
802.11n (HT40)	SISO	2422	1	37.434	/	Pass
		2437	1	37.287	/	Pass
		2452	1	37.219	/	Pass

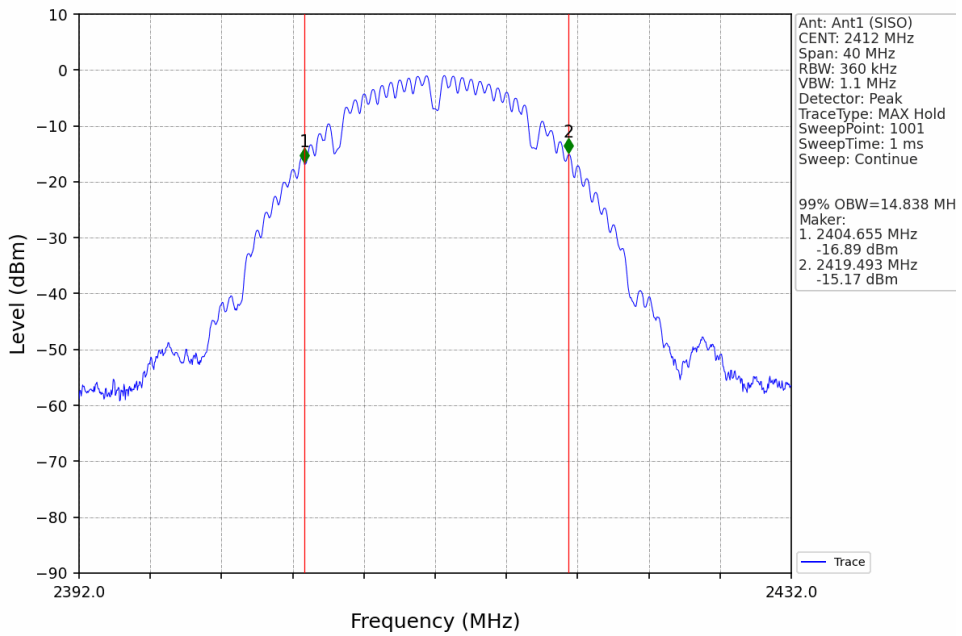
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.185	>=0.5	Pass
		2437	1	10.145	>=0.5	Pass
		2462	1	10.157	>=0.5	Pass
802.11g	SISO	2412	1	16.188	>=0.5	Pass
		2437	1	16.405	>=0.5	Pass
		2462	1	16.476	>=0.5	Pass
802.11n (HT20)	SISO	2412	1	17.574	>=0.5	Pass
		2437	1	17.629	>=0.5	Pass
		2462	1	17.639	>=0.5	Pass
802.11n (HT40)	SISO	2422	1	36.173	>=0.5	Pass
		2437	1	35.594	>=0.5	Pass
		2452	1	35.626	>=0.5	Pass

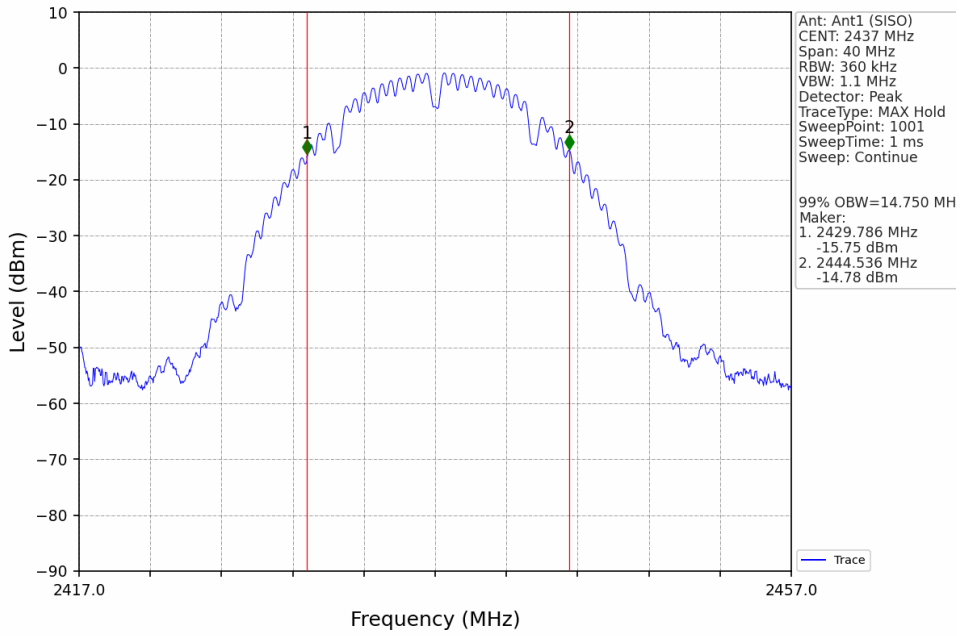
2.2 Test Graph

2.2.1 OBW

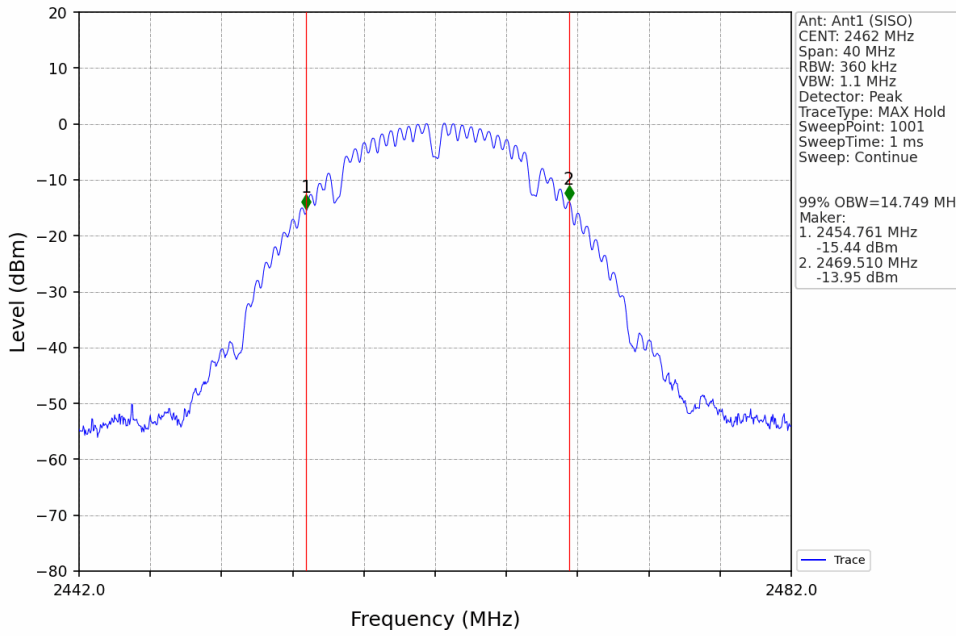
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



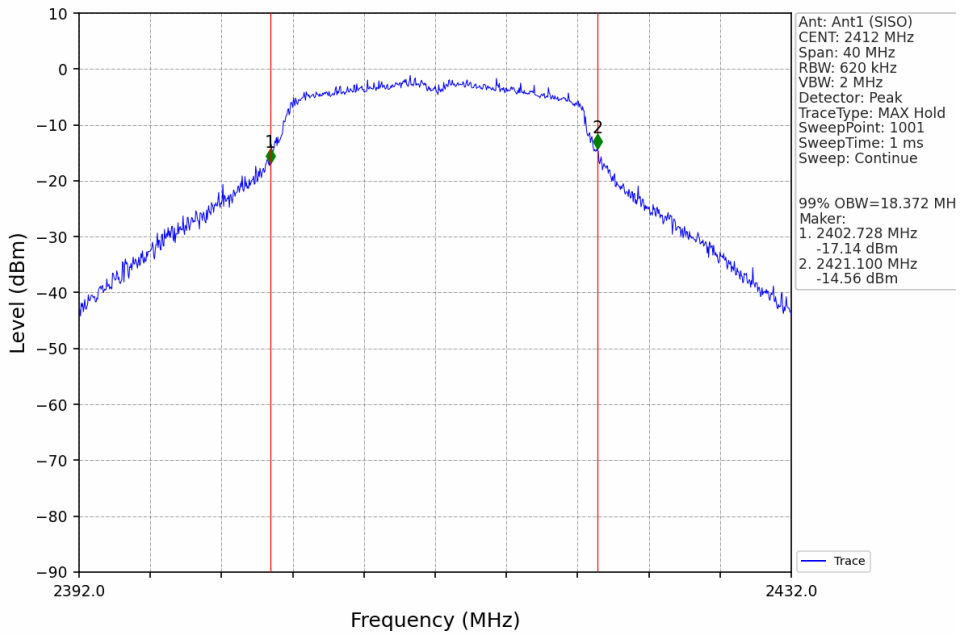
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



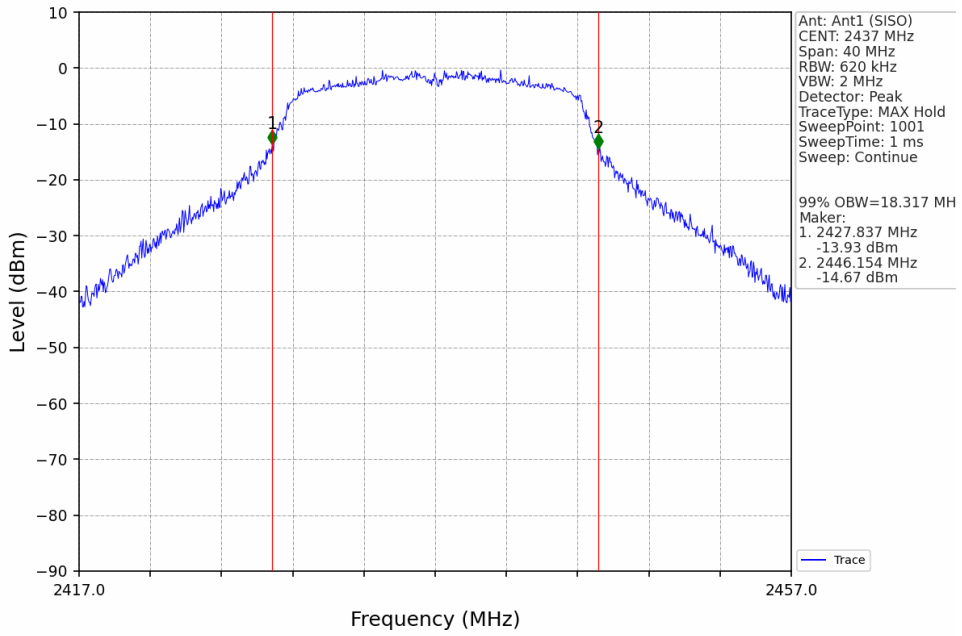
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



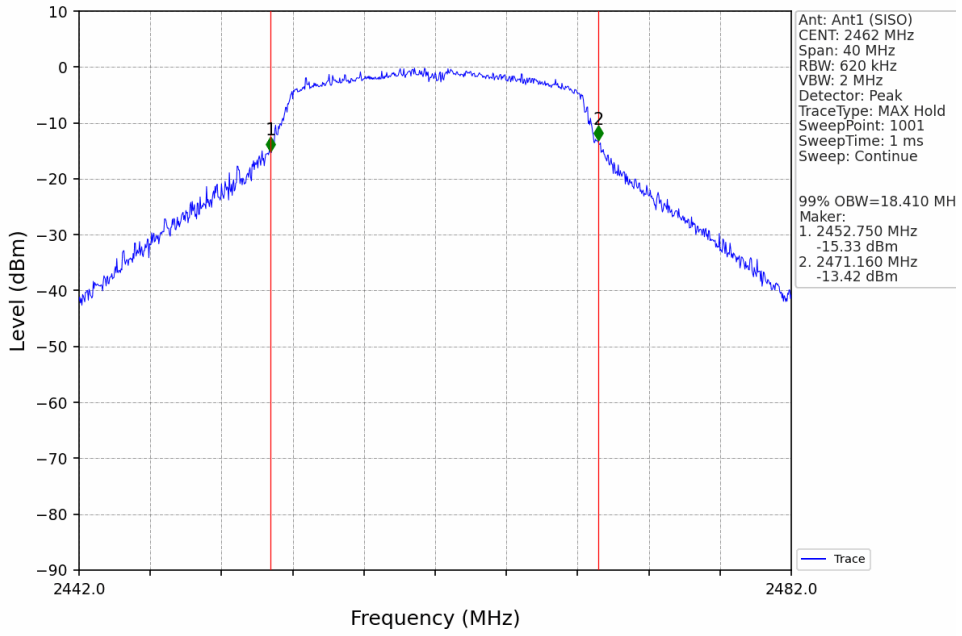
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



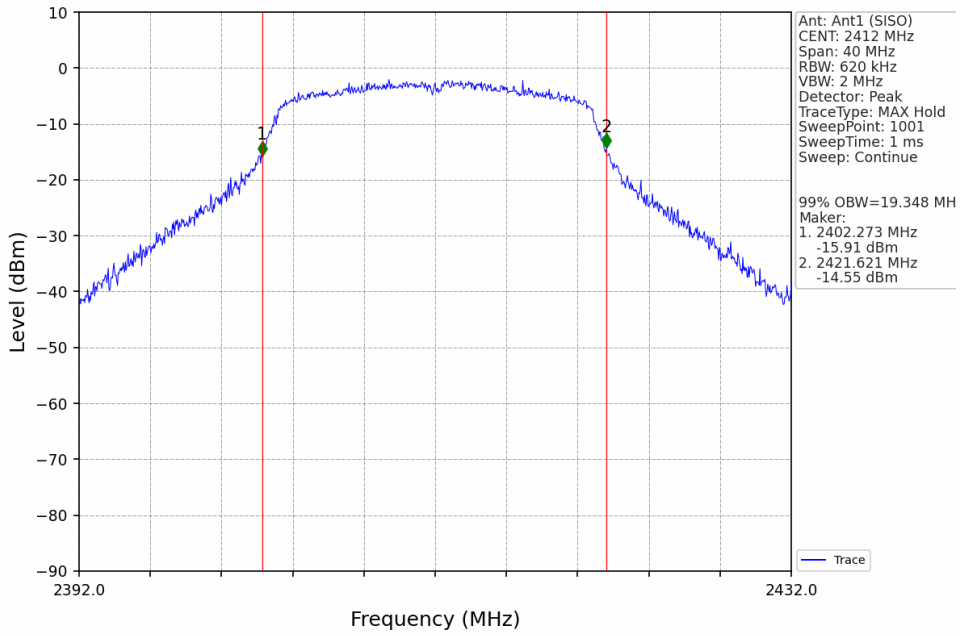
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



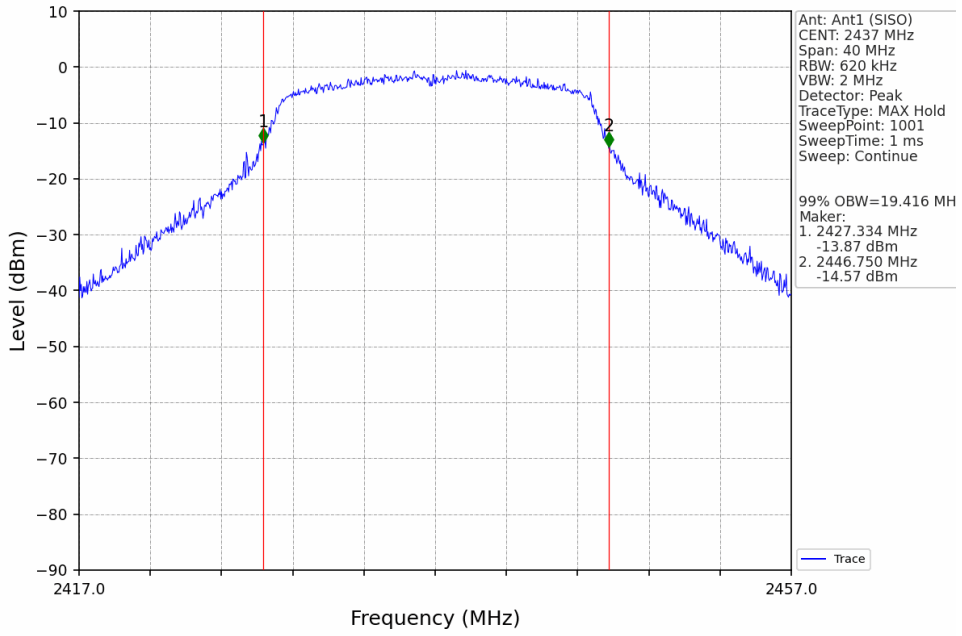
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



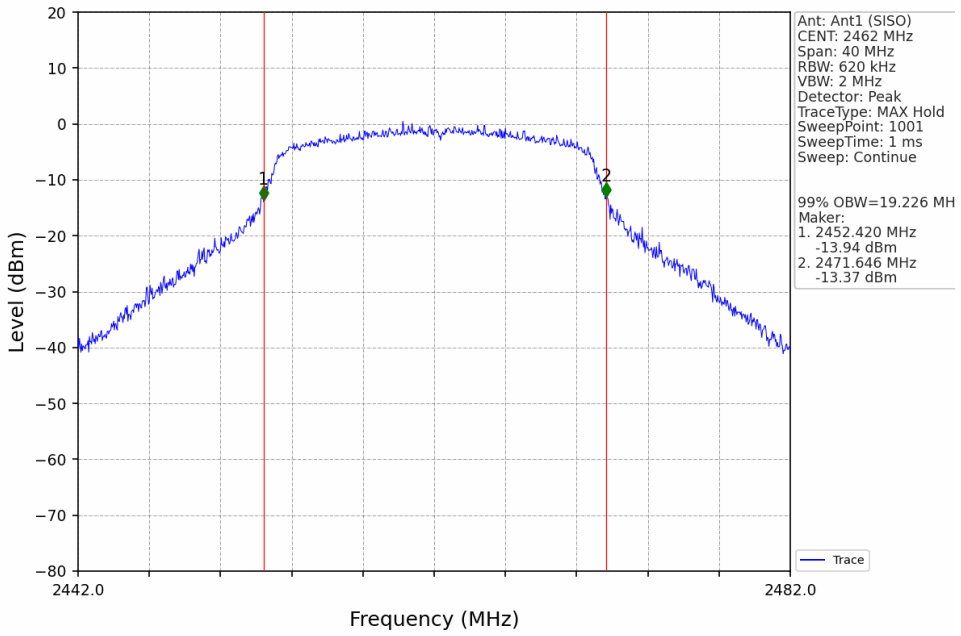
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



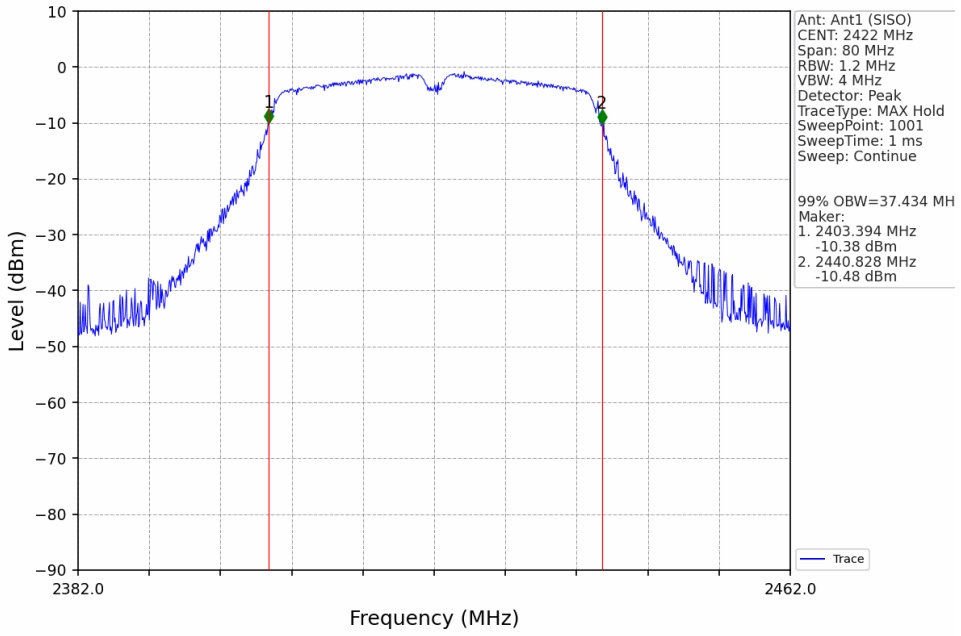
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



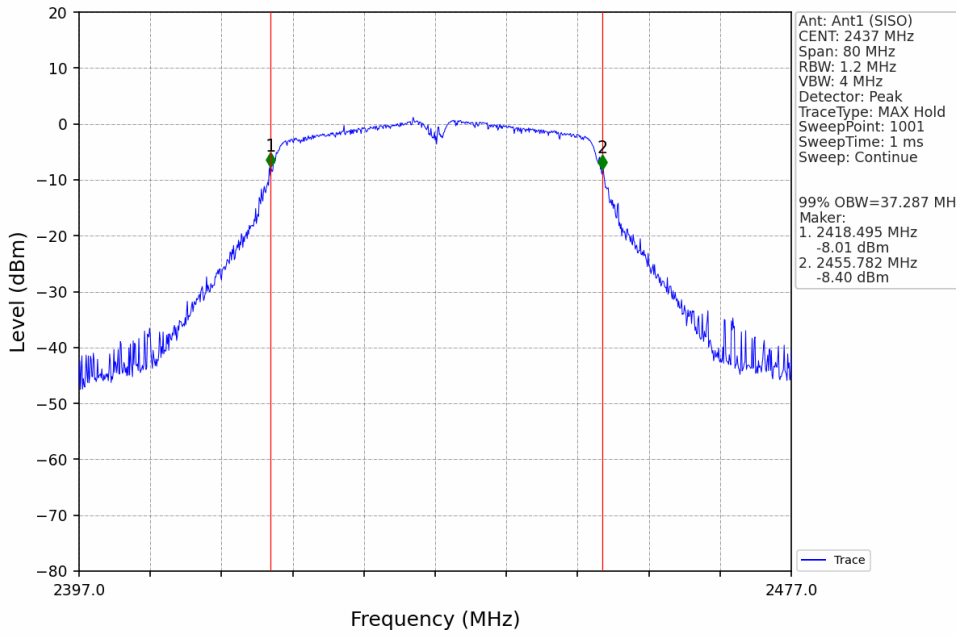
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



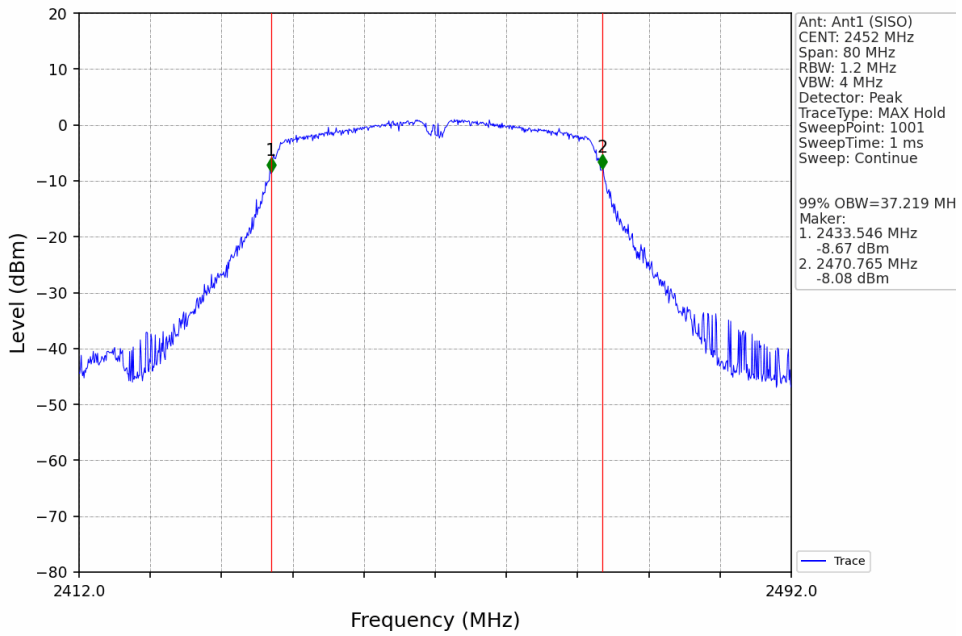
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

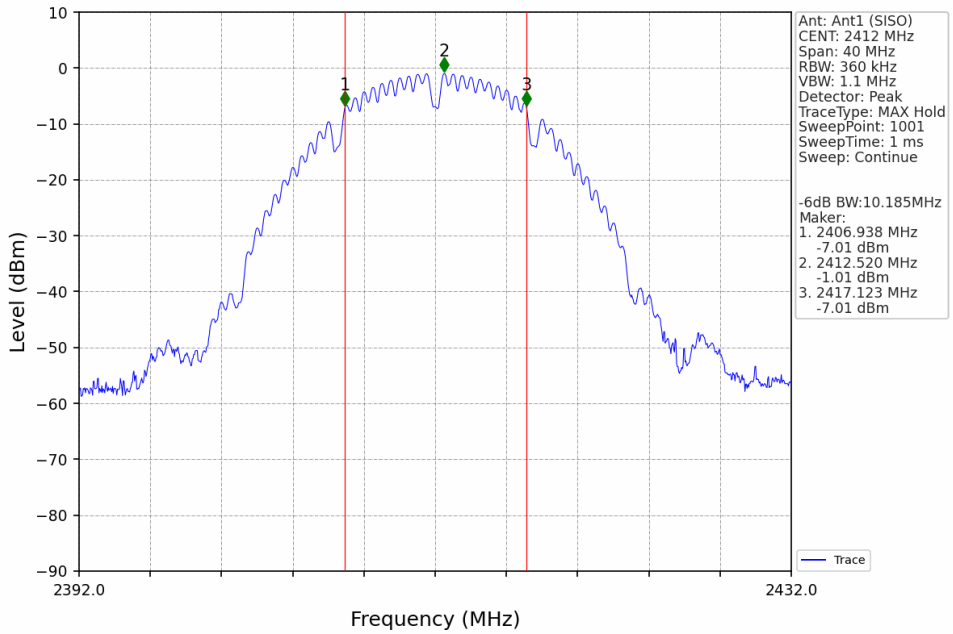


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

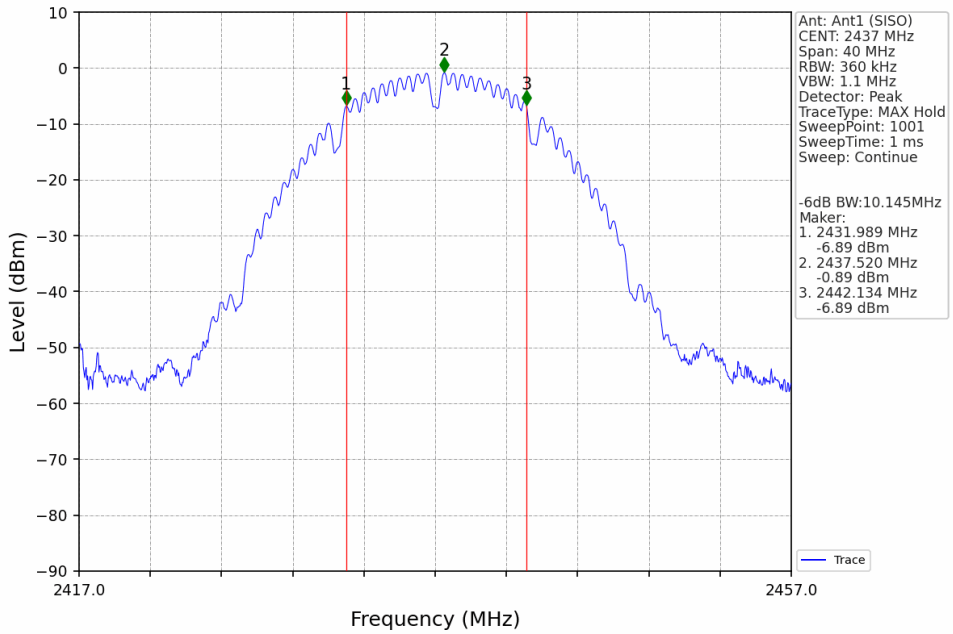


2.2.2 6dB BW

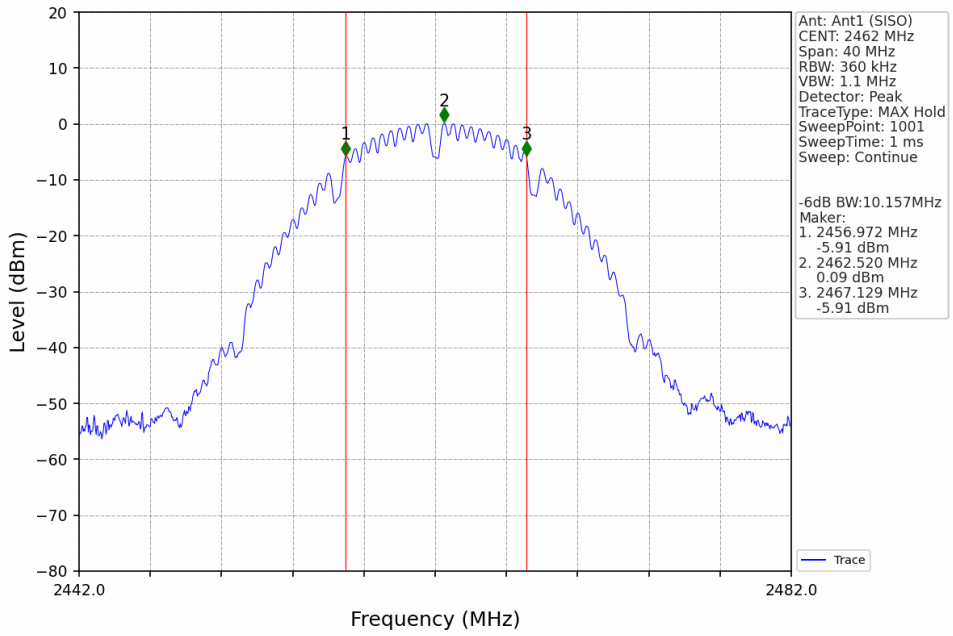
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



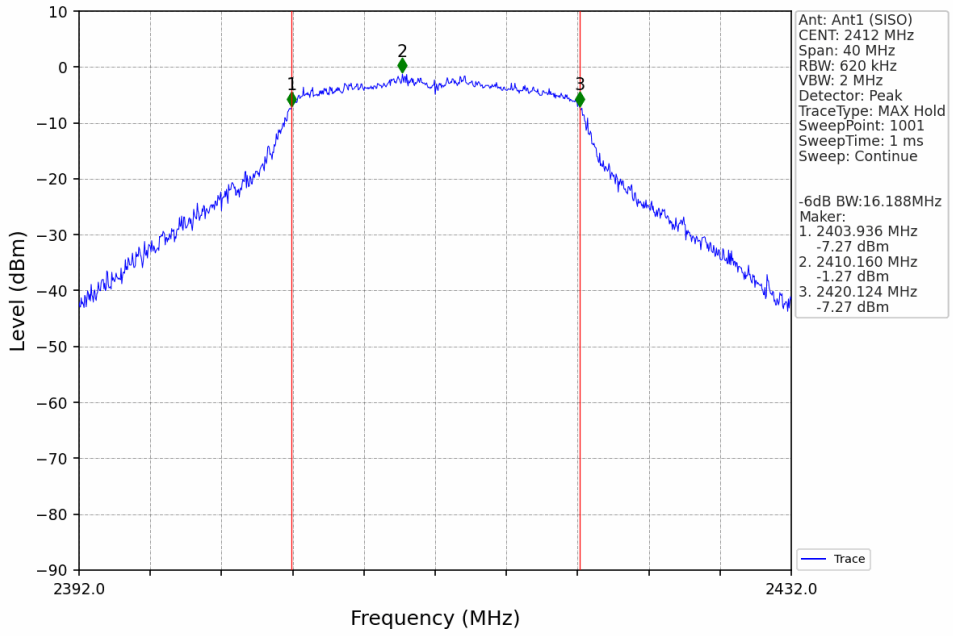
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



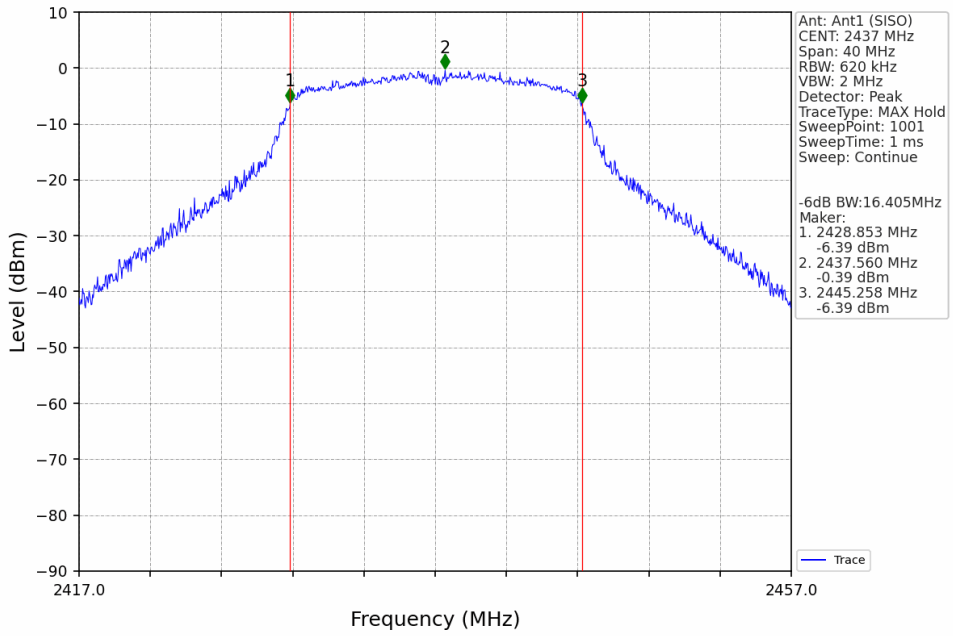
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



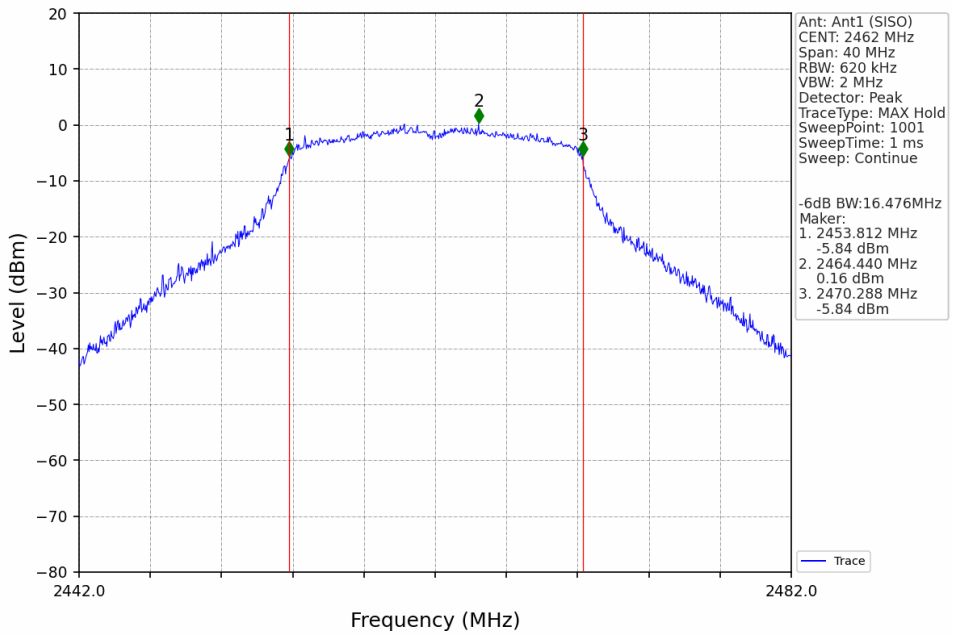
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



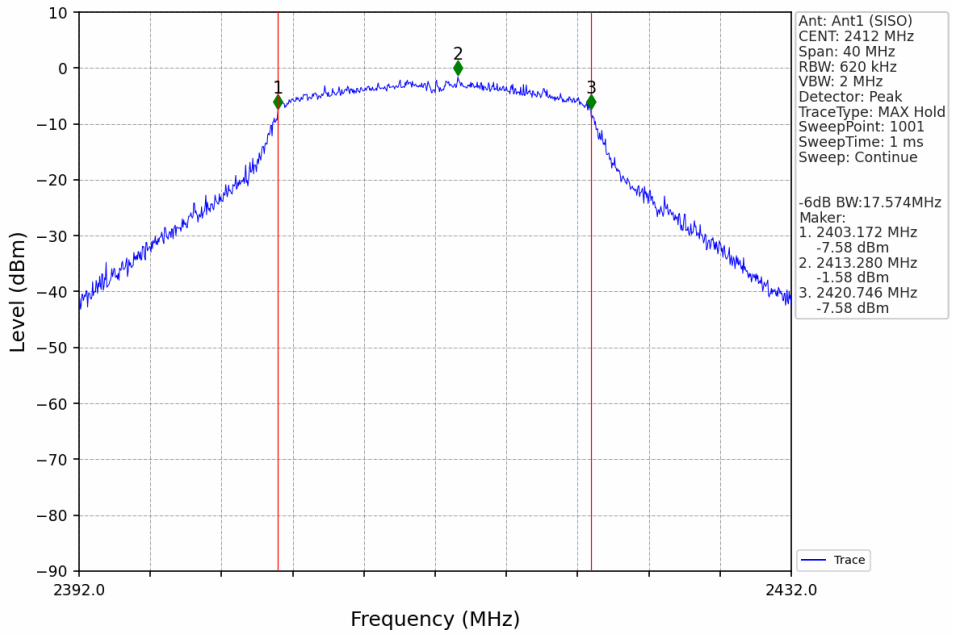
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



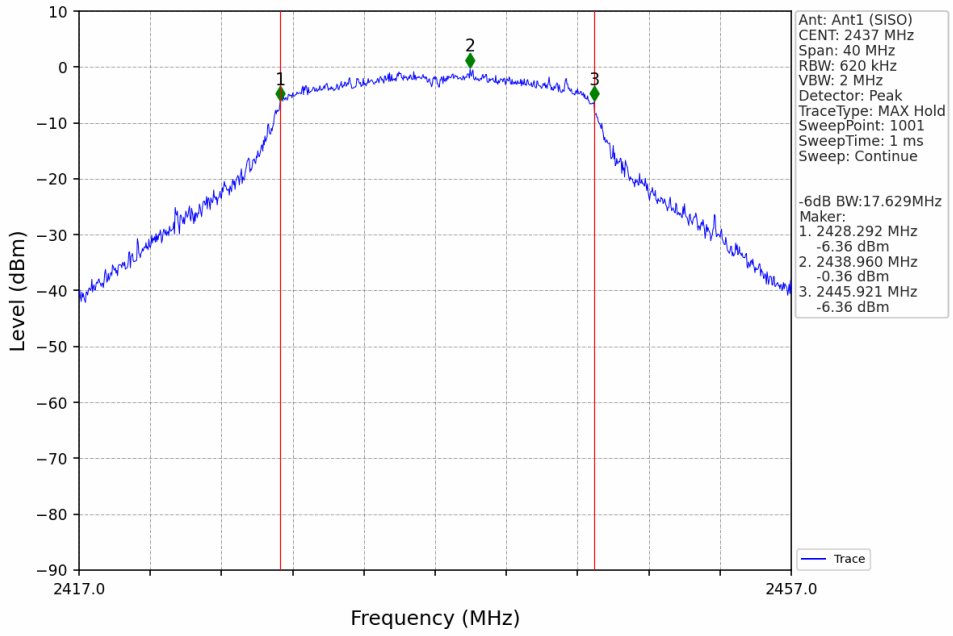
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



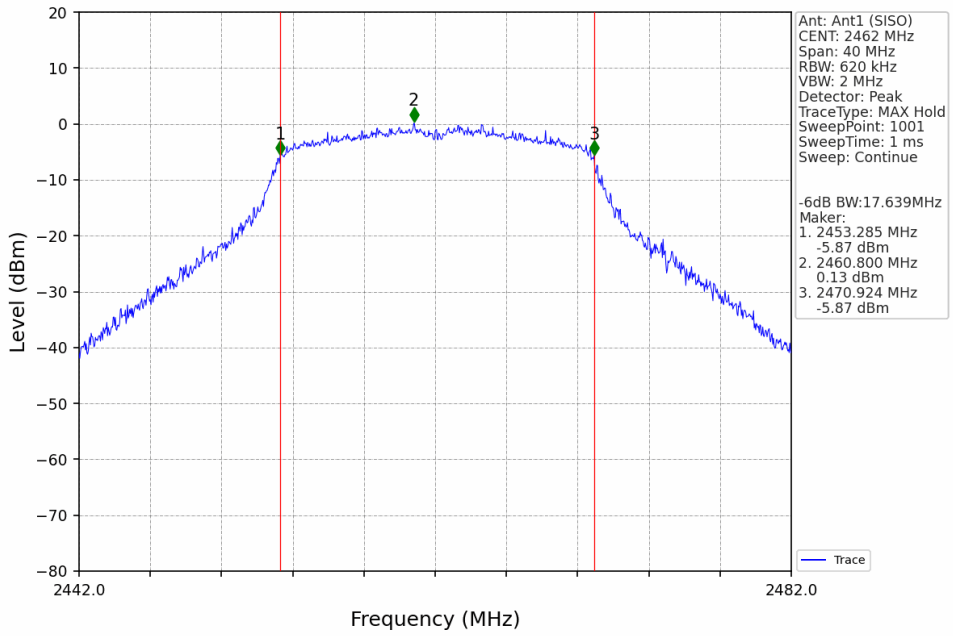
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



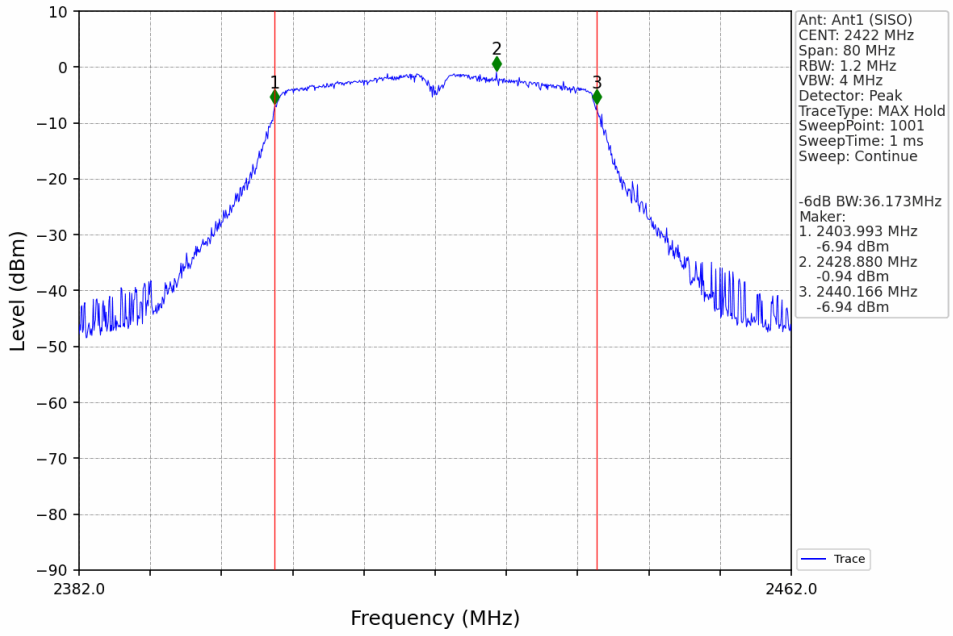
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



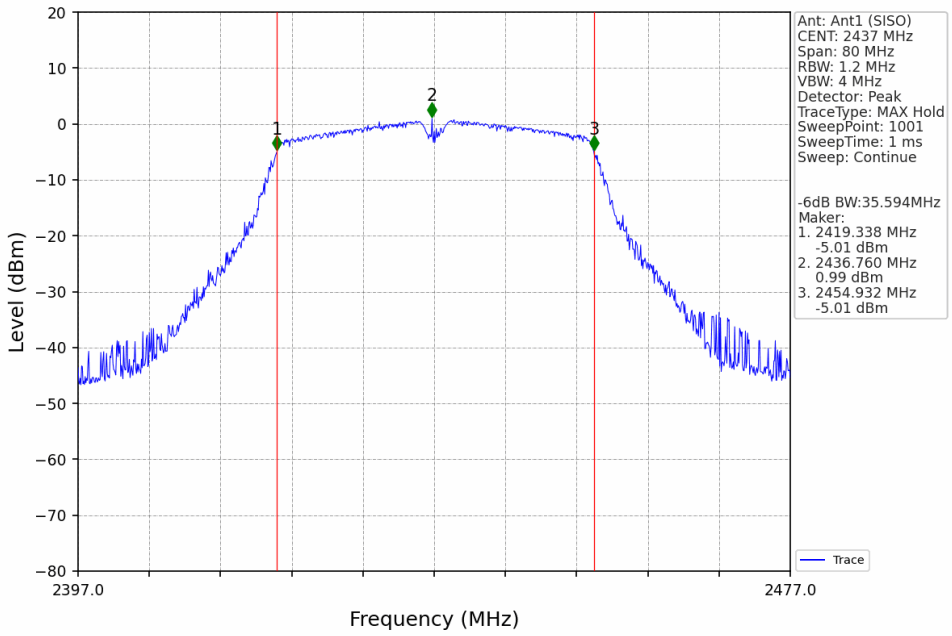
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



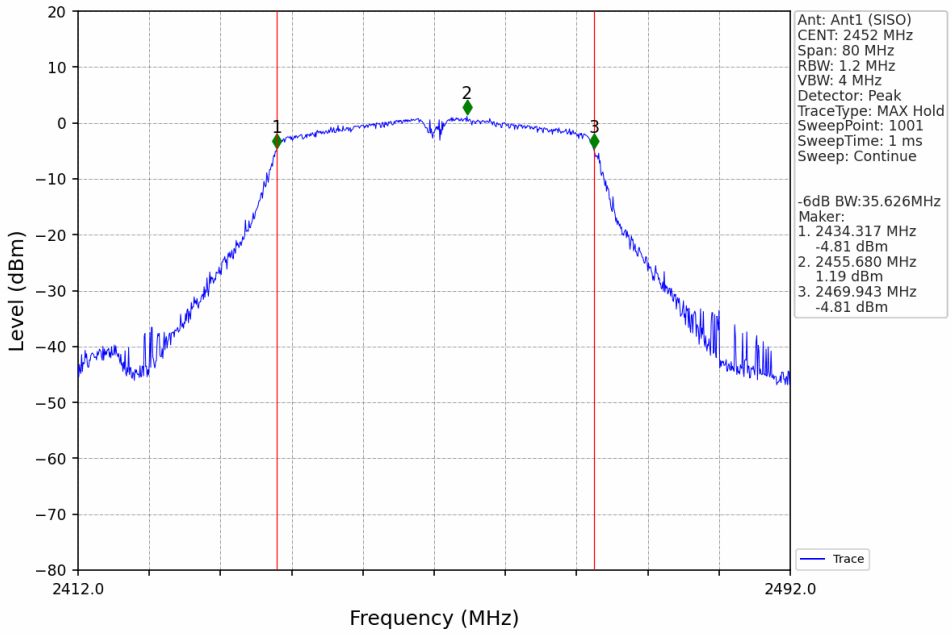
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	6.28	<=30	Pass
		2437	6.16	<=30	Pass
		2462	6.15	<=30	Pass
802.11g	SISO	2412	7.11	<=30	Pass
		2437	7.29	<=30	Pass
		2462	7.75	<=30	Pass
802.11n (HT20)	SISO	2412	8.04	<=30	Pass
		2437	8.23	<=30	Pass
		2462	8.71	<=30	Pass
802.11n (HT40)	SISO	2422	7.09	<=30	Pass
		2437	7.79	<=30	Pass
		2452	7.09	<=30	Pass

4. Maximum Power Spectral Density

4.1 Test Result

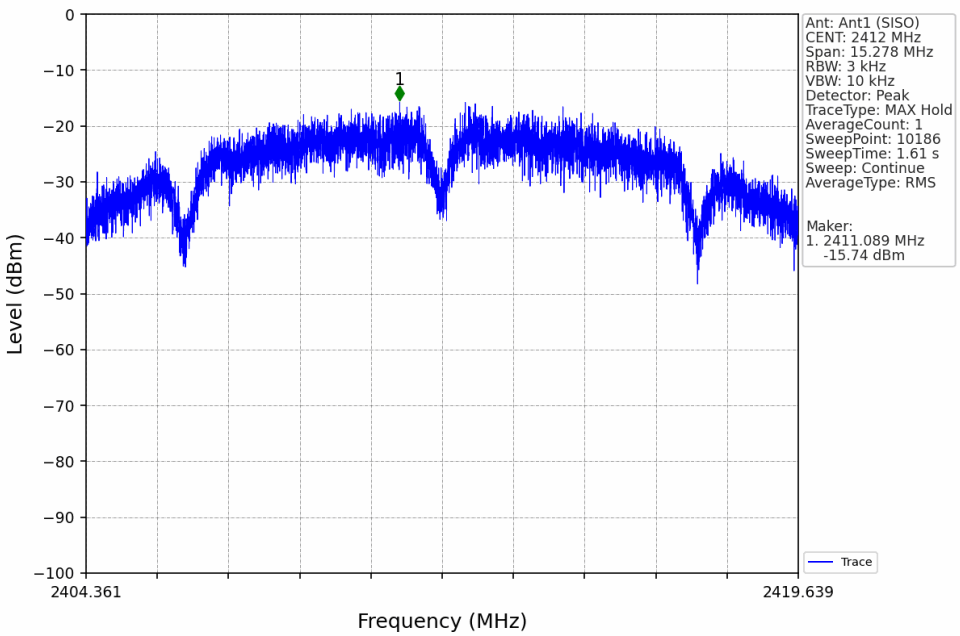
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-15.74	<=8	Pass
		2437	-16.54	<=8	Pass
		2462	-13.38	<=8	Pass
802.11g	SISO	2412	-22.48	<=8	Pass
		2437	-21.01	<=8	Pass
		2462	-20.73	<=8	Pass
802.11n (HT20)	SISO	2412	-22.67	<=8	Pass
		2437	-20.65	<=8	Pass
		2462	-19.76	<=8	Pass
802.11n (HT40)	SISO	2422	-23.59	<=8	Pass
		2437	-22.84	<=8	Pass
		2452	-21.64	<=8	Pass

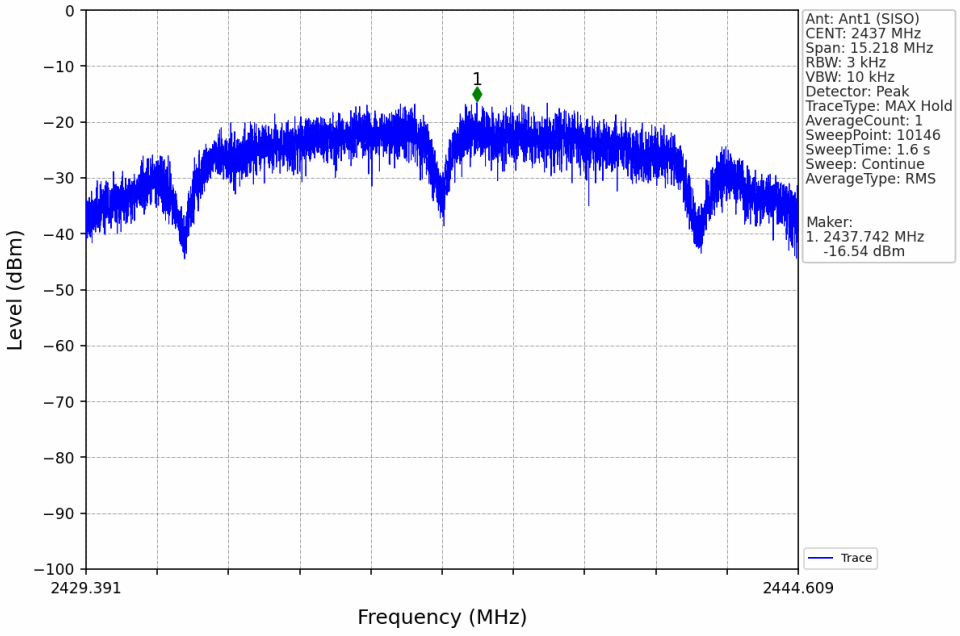
4.2 Test Graph

4.2.1 PSD

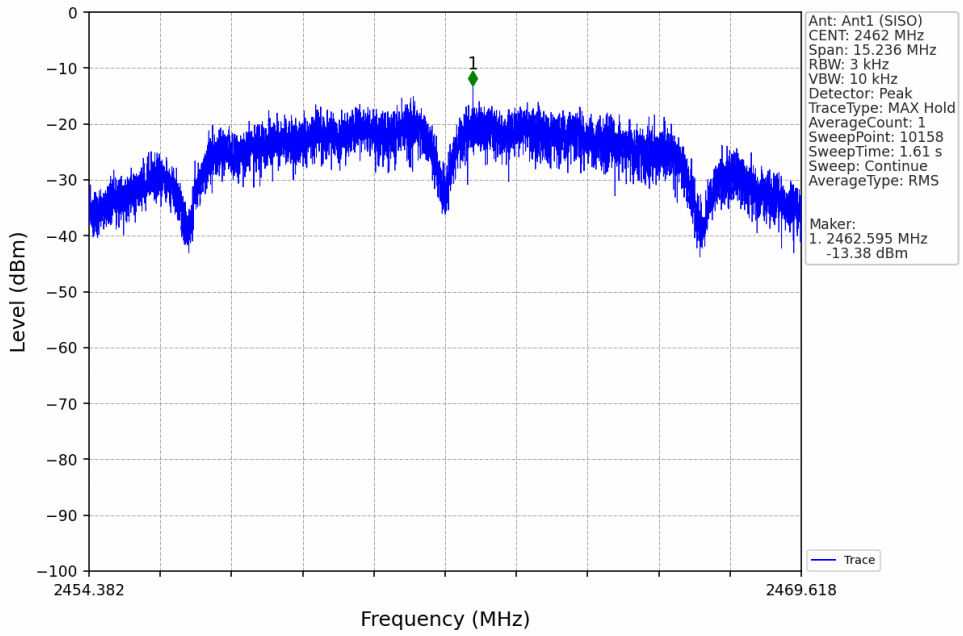
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



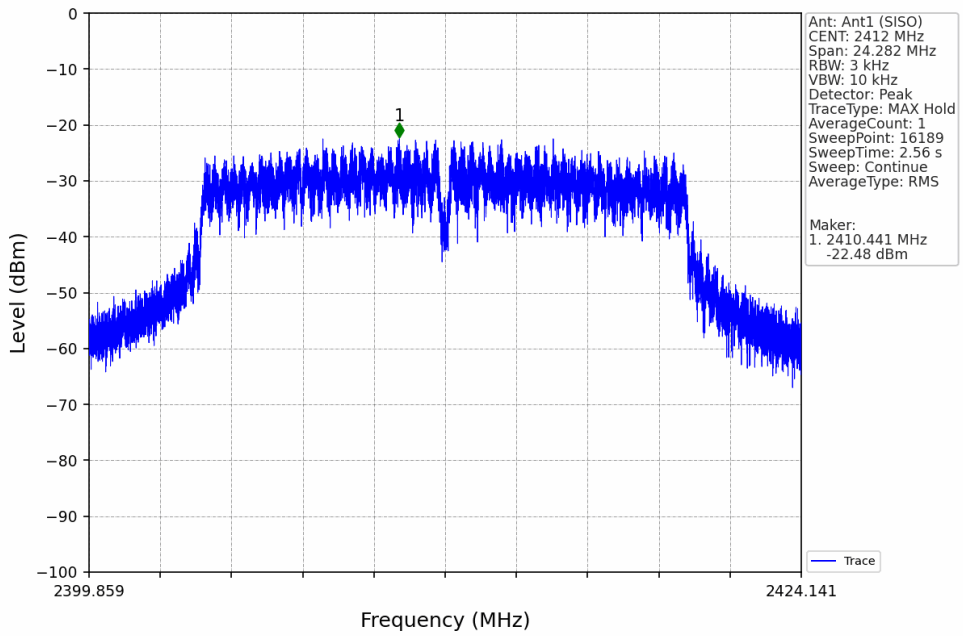
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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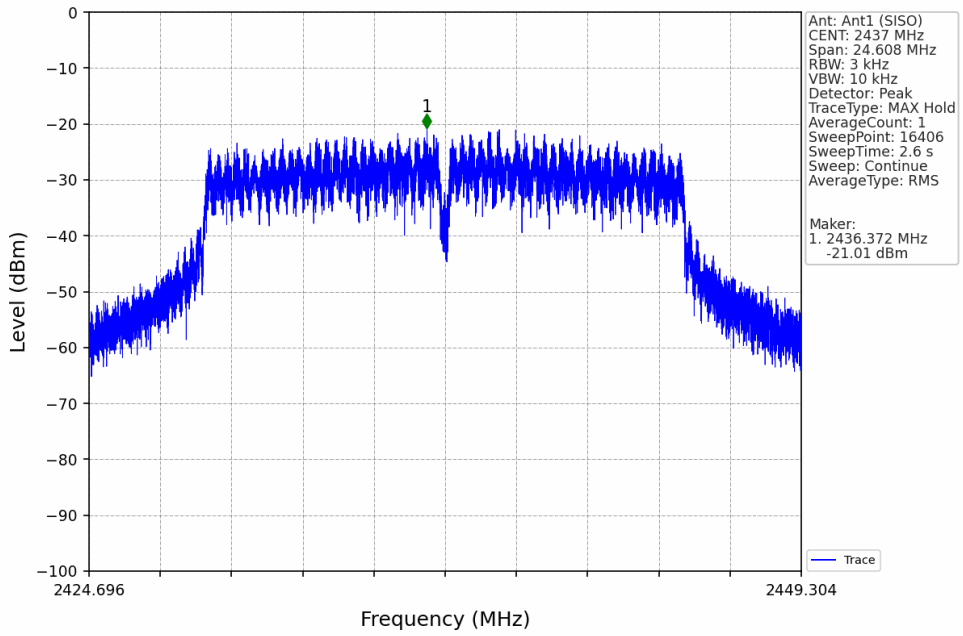

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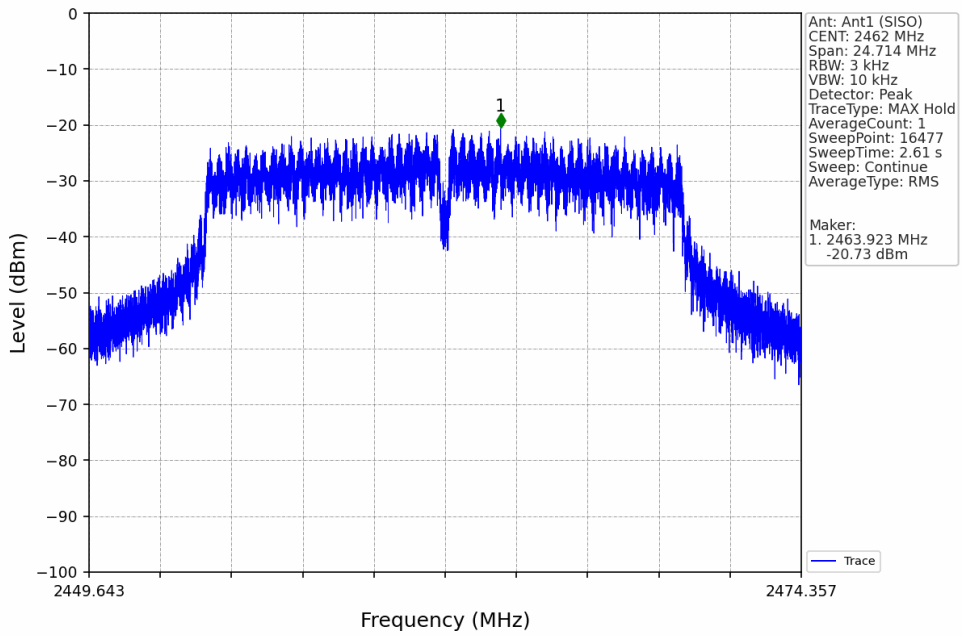
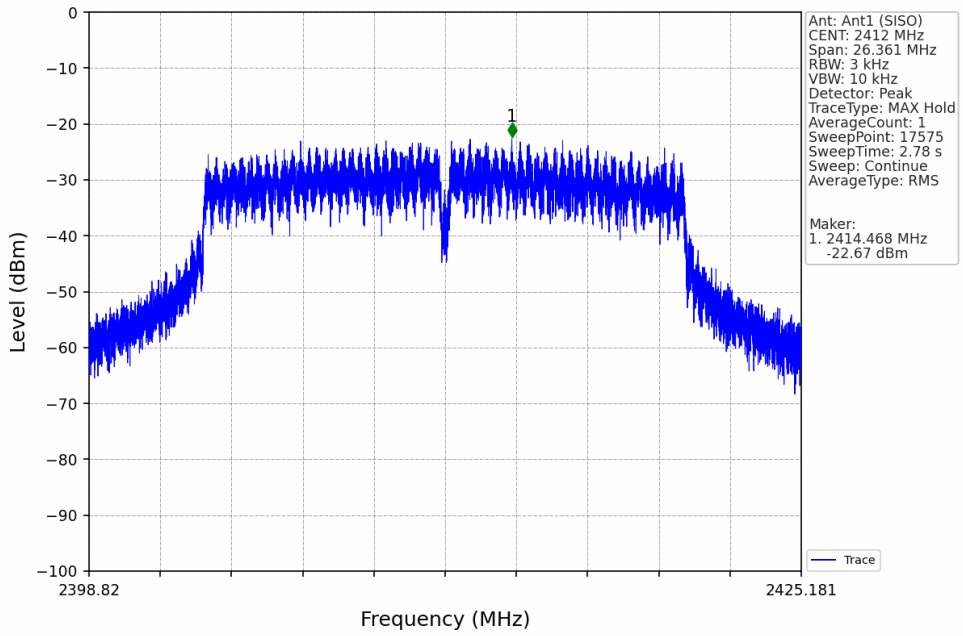


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



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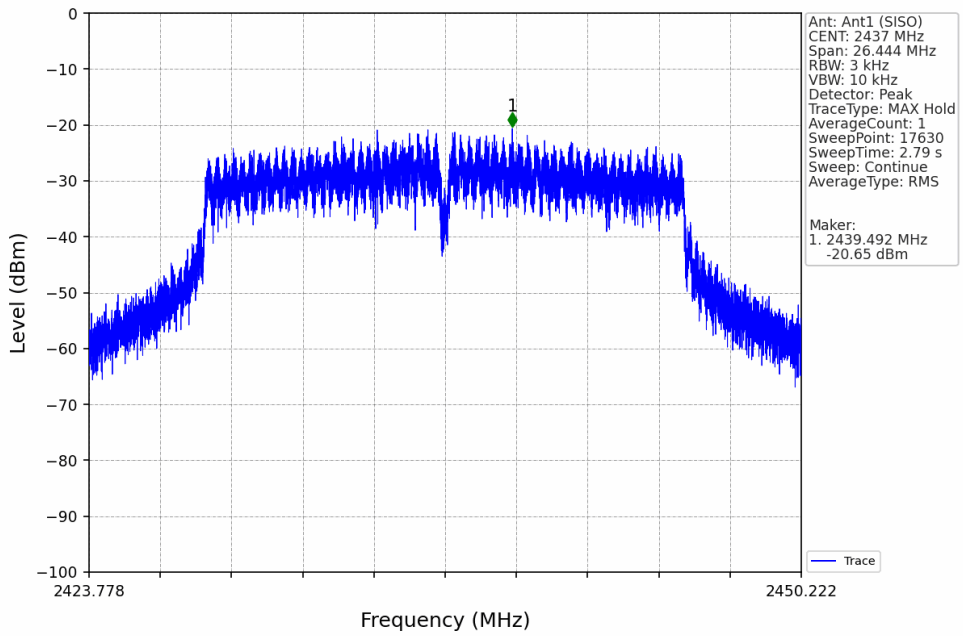

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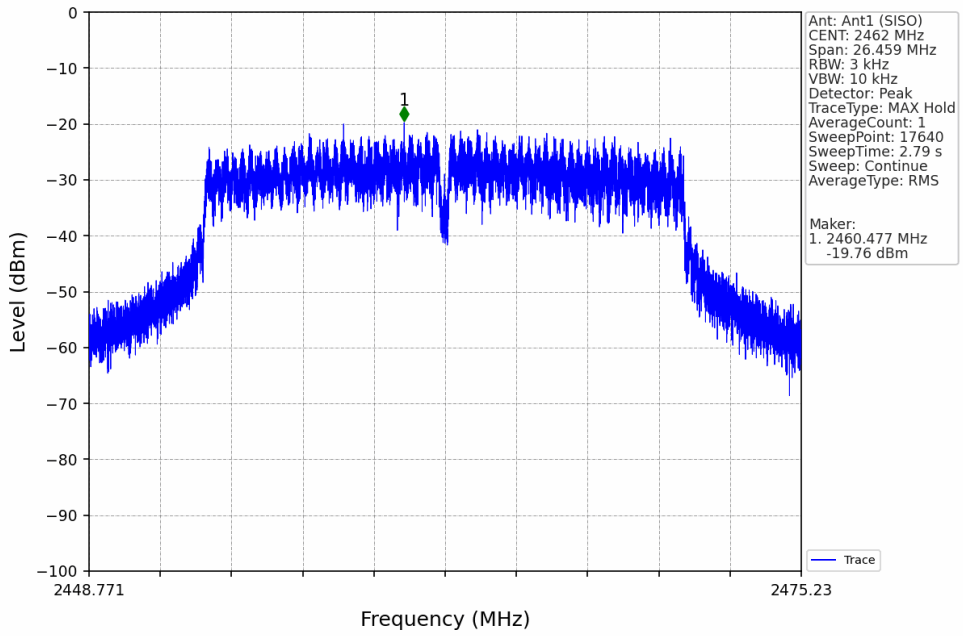
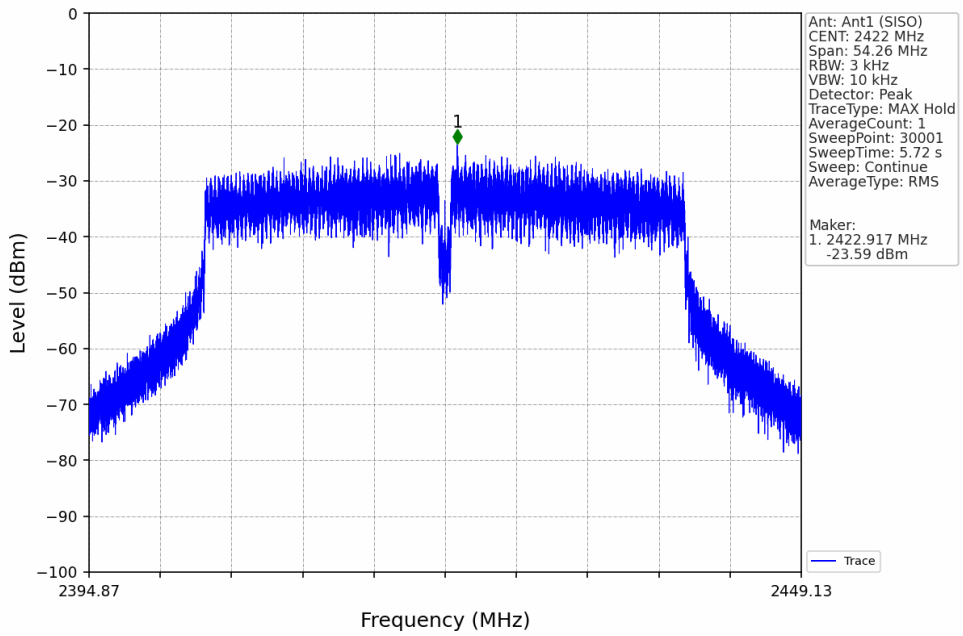
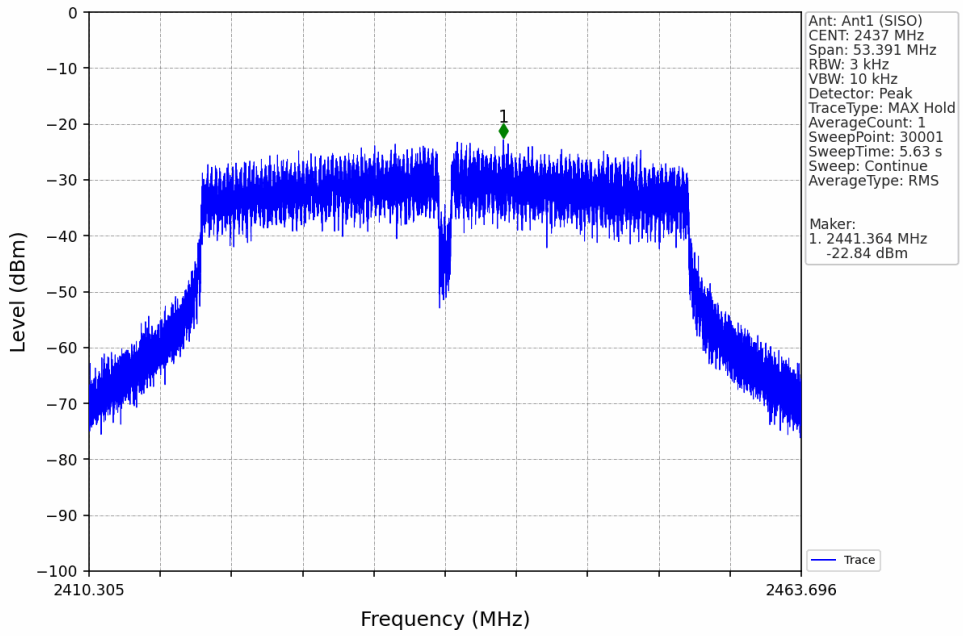


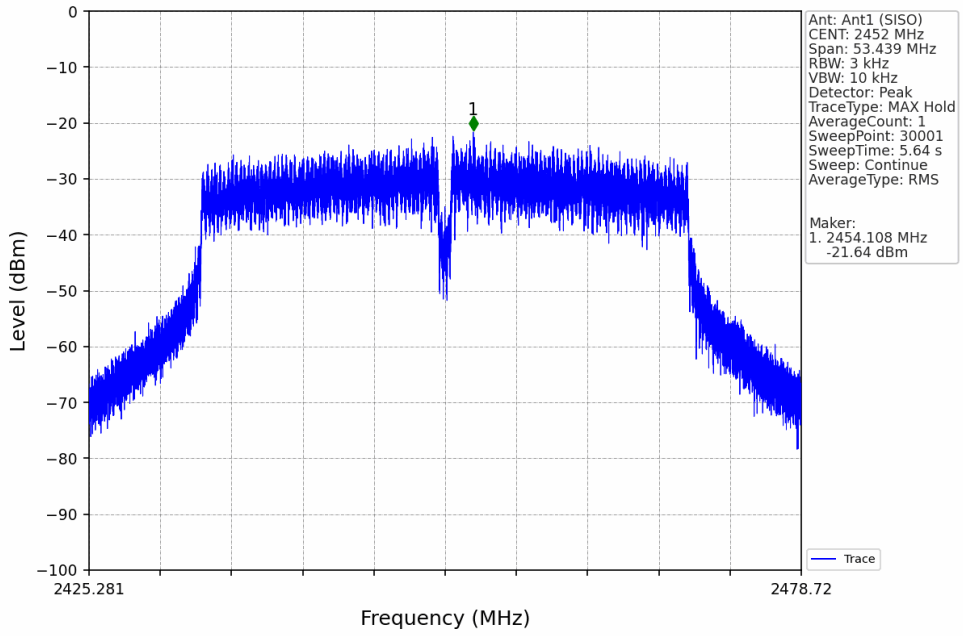
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	-1.07
		2437	1	-1.00
		2462	1	-0.01
802.11g	SISO	2412	1	-7.09
		2437	1	-5.97
		2462	1	-6.14
802.11n (HT20)	SISO	2412	1	-7.90
		2437	1	-6.98
		2462	1	-6.57
802.11n (HT40)	SISO	2422	1	-10.43
		2437	1	-9.90
		2452	1	-8.20
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.				

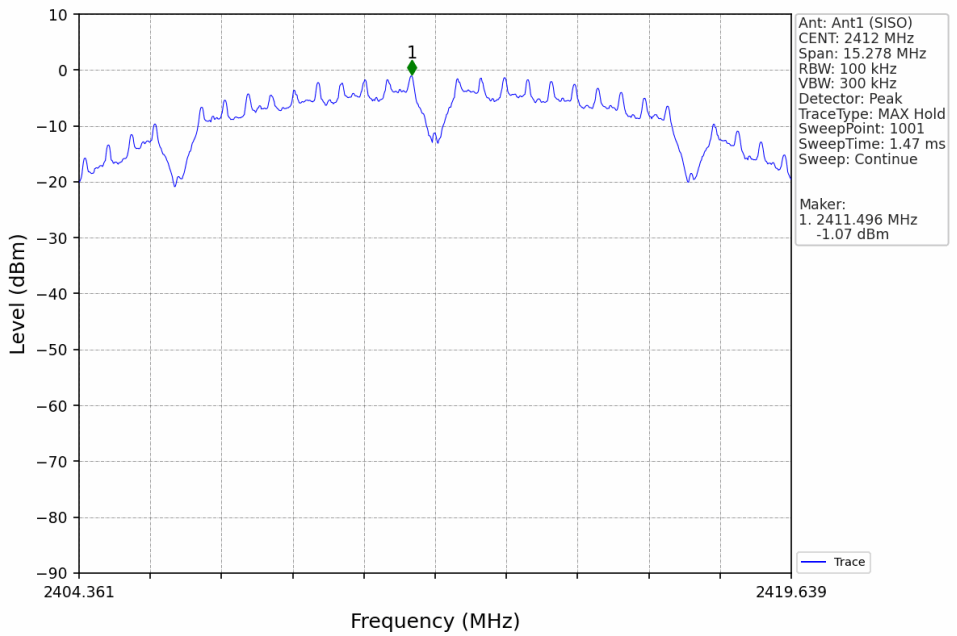
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	-1.07	-21.07	Pass
		2437	1	-1.00	-21.00	Pass
		2462	1	-0.01	-20.01	Pass
802.11g	SISO	2412	1	-7.09	-27.09	Pass
		2437	1	-5.97	-25.97	Pass
		2462	1	-6.14	-26.14	Pass
802.11n (HT20)	SISO	2412	1	-7.90	-27.90	Pass
		2437	1	-6.98	-26.98	Pass
		2462	1	-6.57	-26.57	Pass
802.11n (HT40)	SISO	2422	1	-10.43	-30.43	Pass
		2437	1	-9.90	-29.90	Pass
		2452	1	-8.20	-28.20	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.						

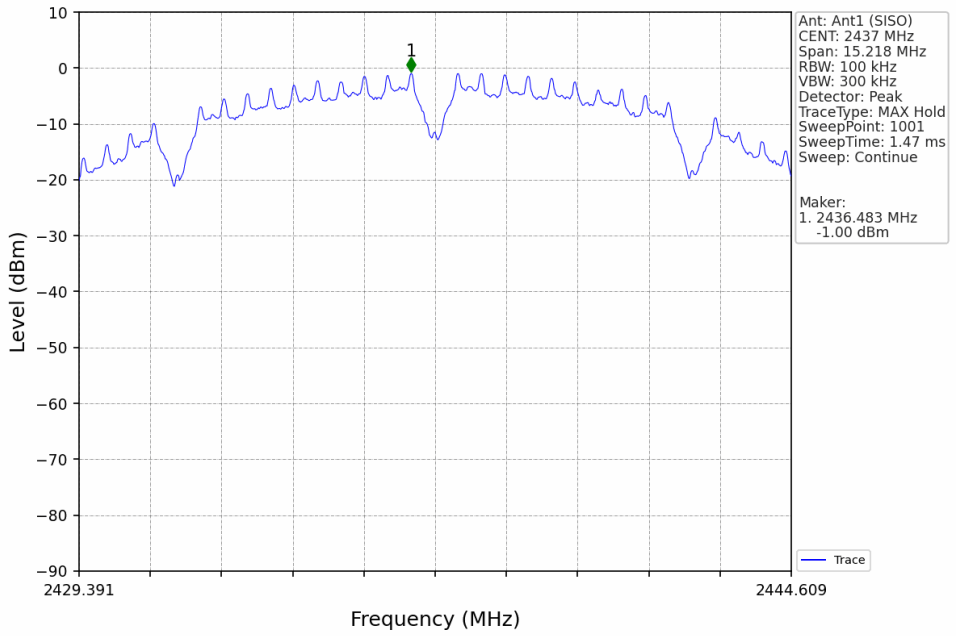
5.2 Test Graph

5.2.1 Ref

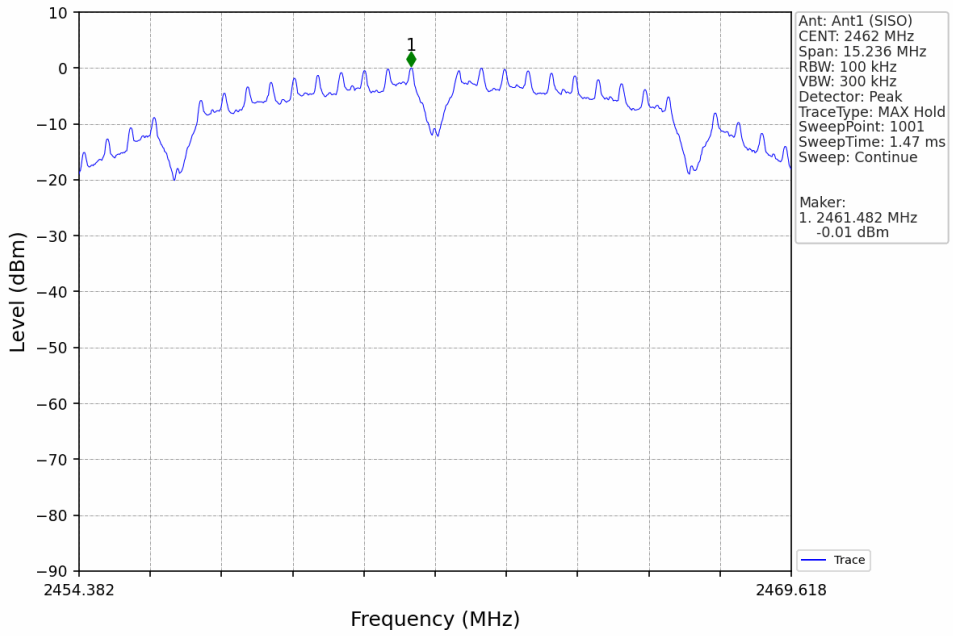
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



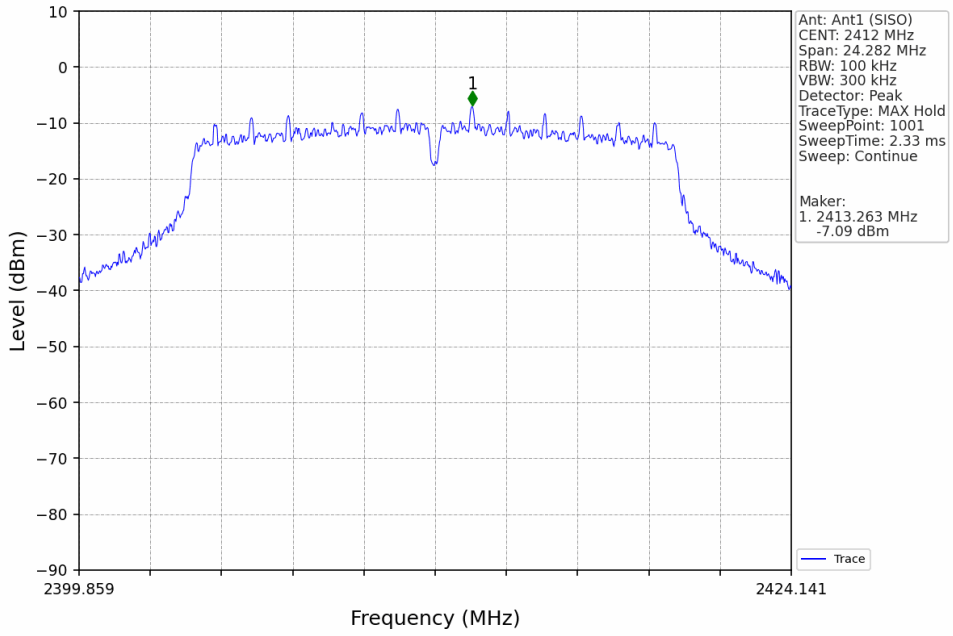
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



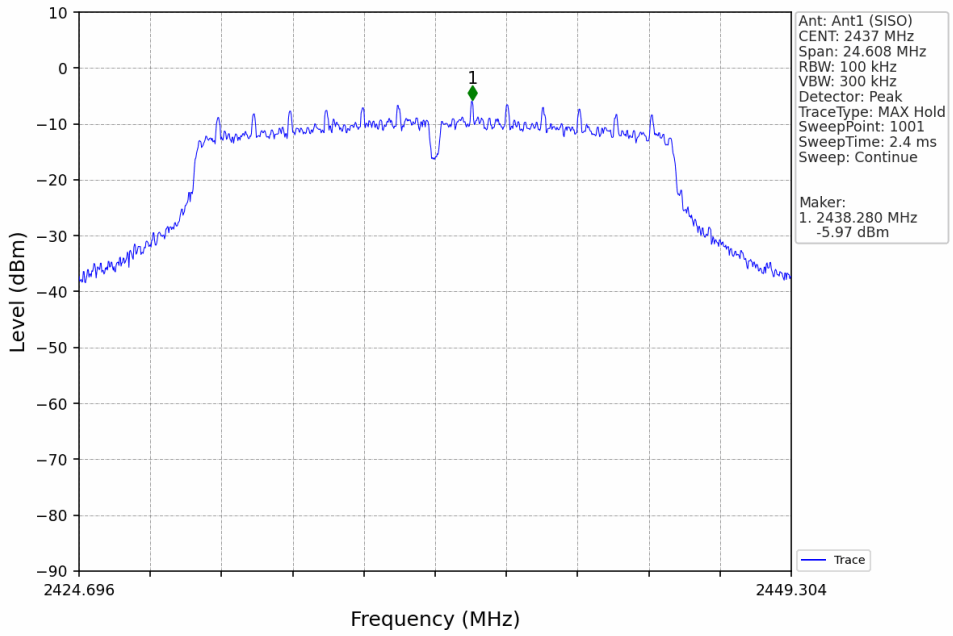
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



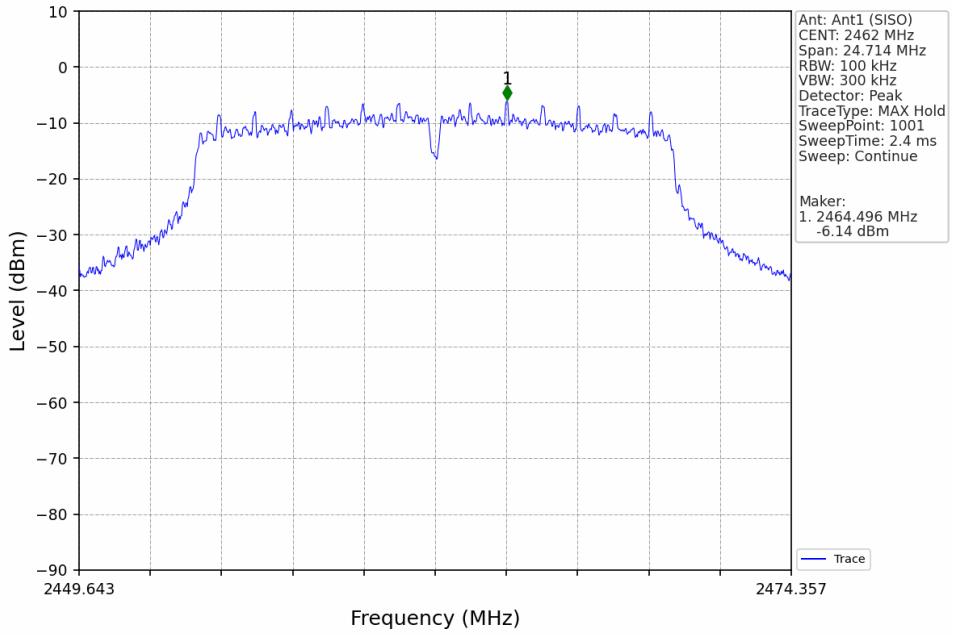
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



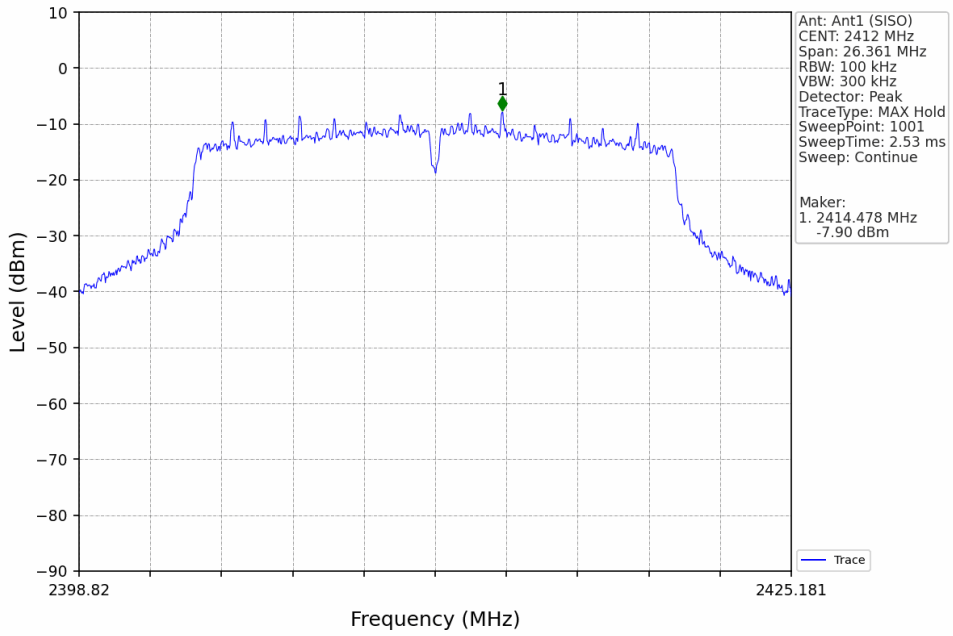
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



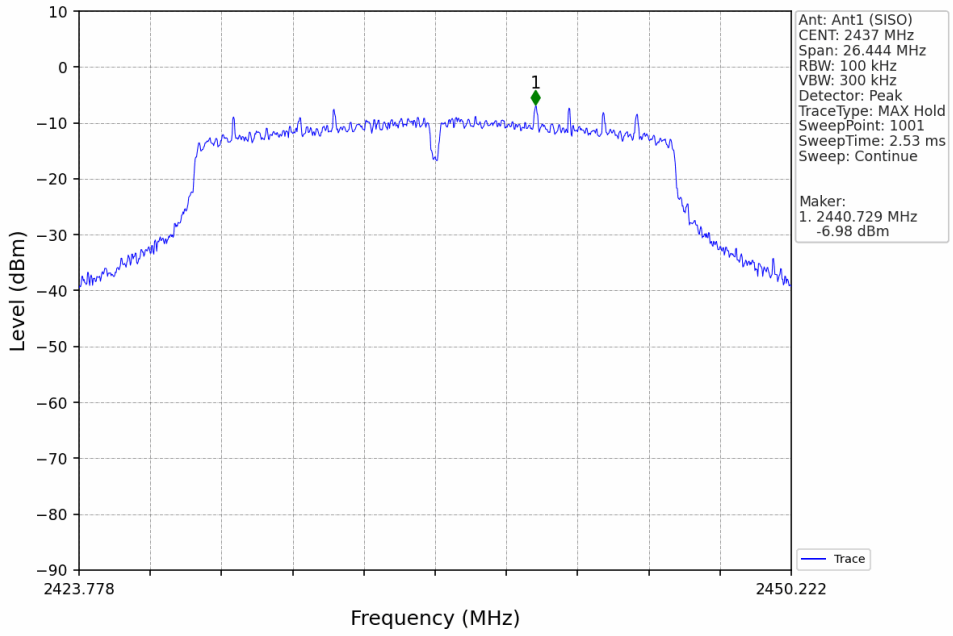
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



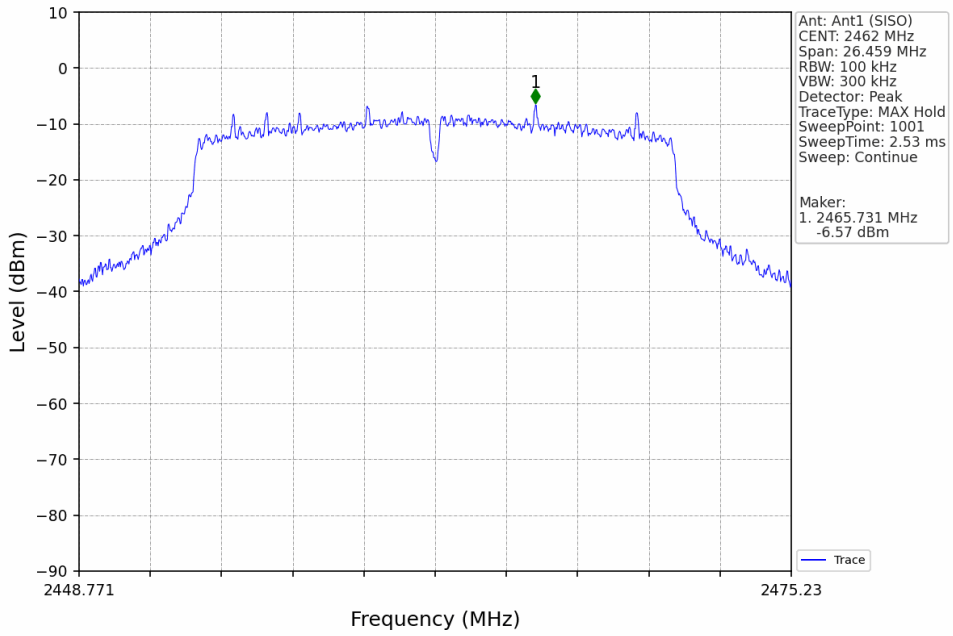
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



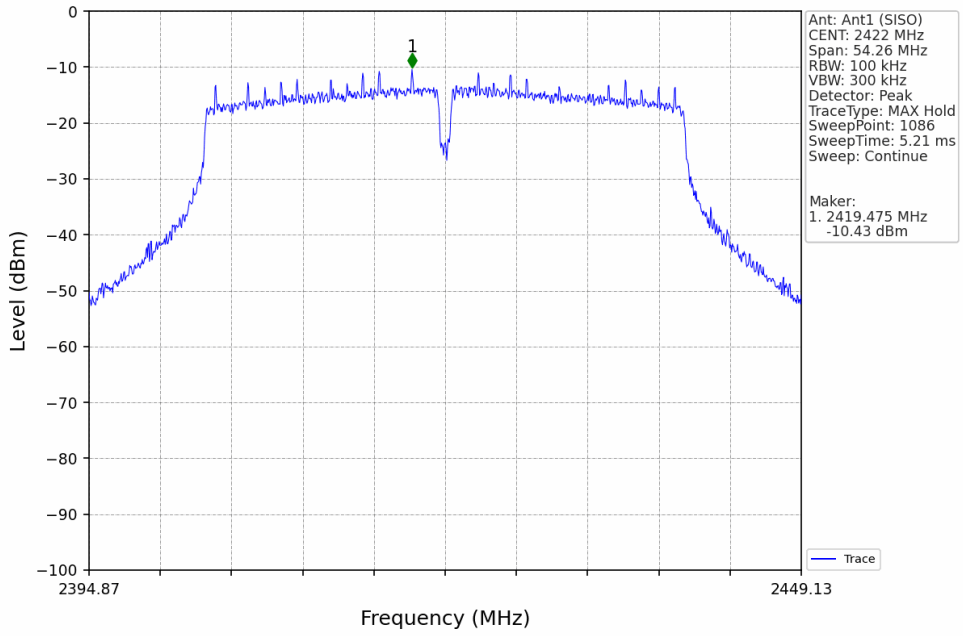
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



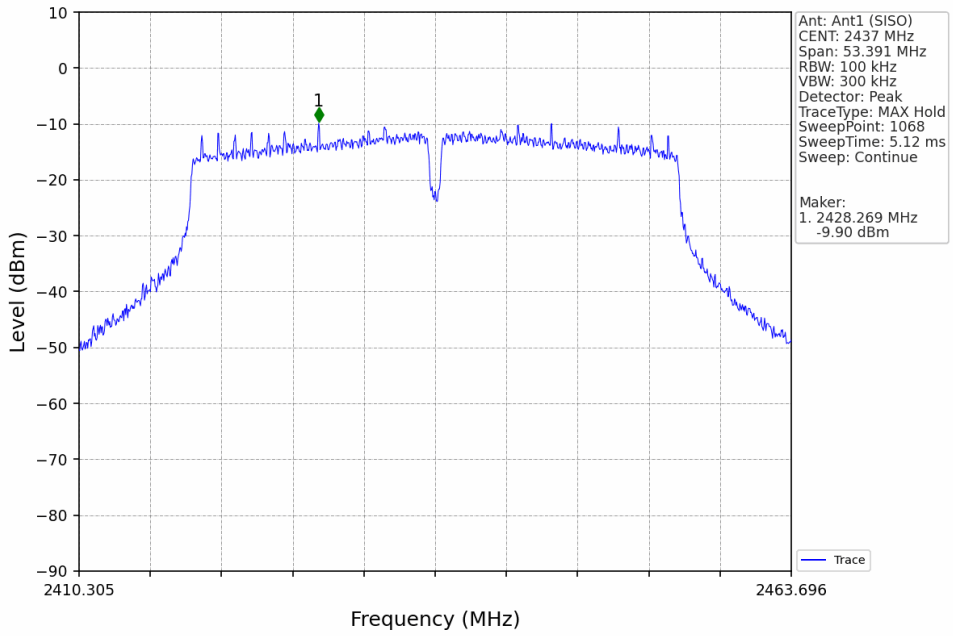
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



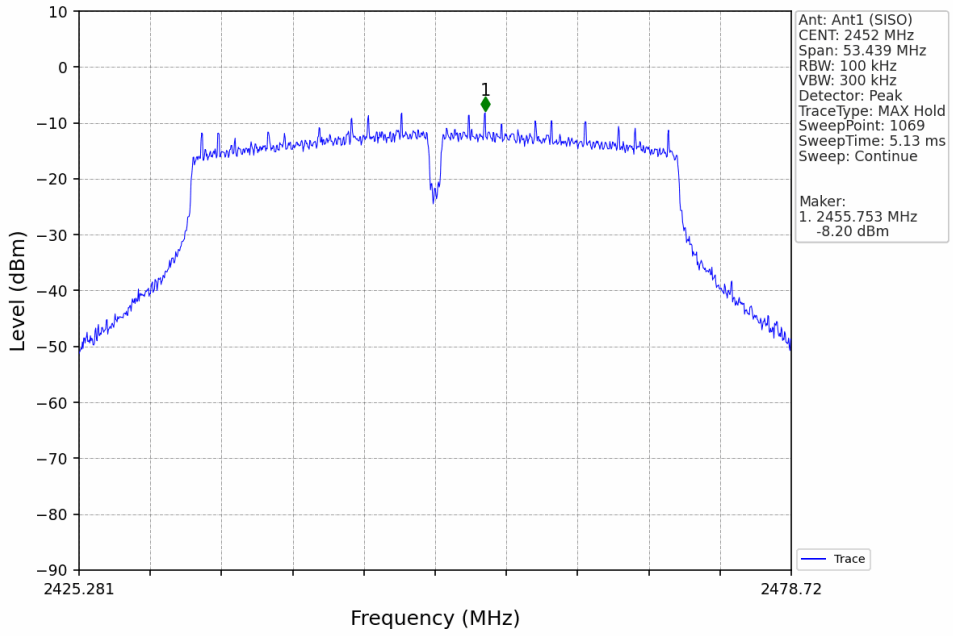
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

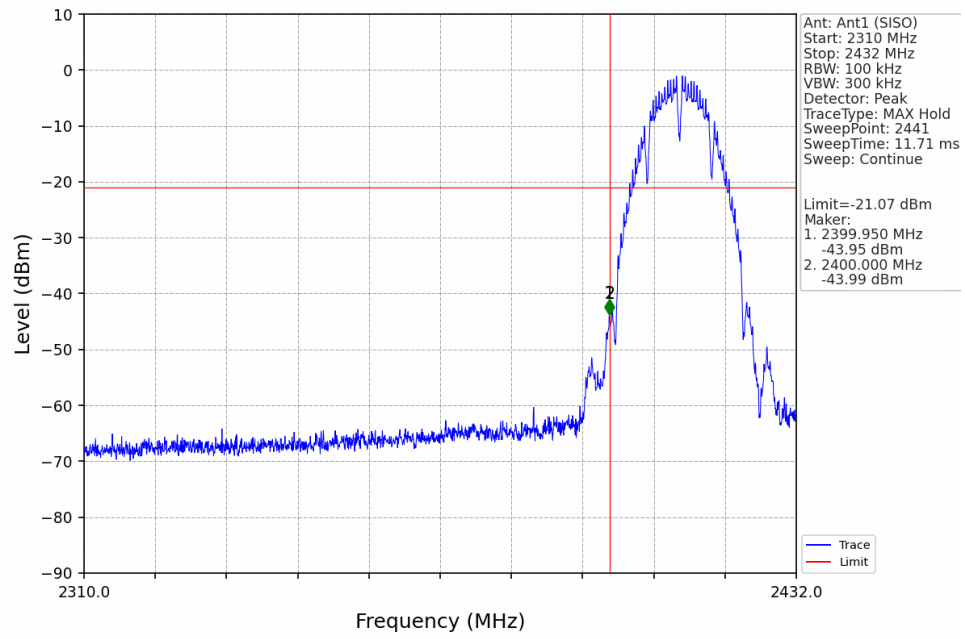


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



5.2.2 CSE

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



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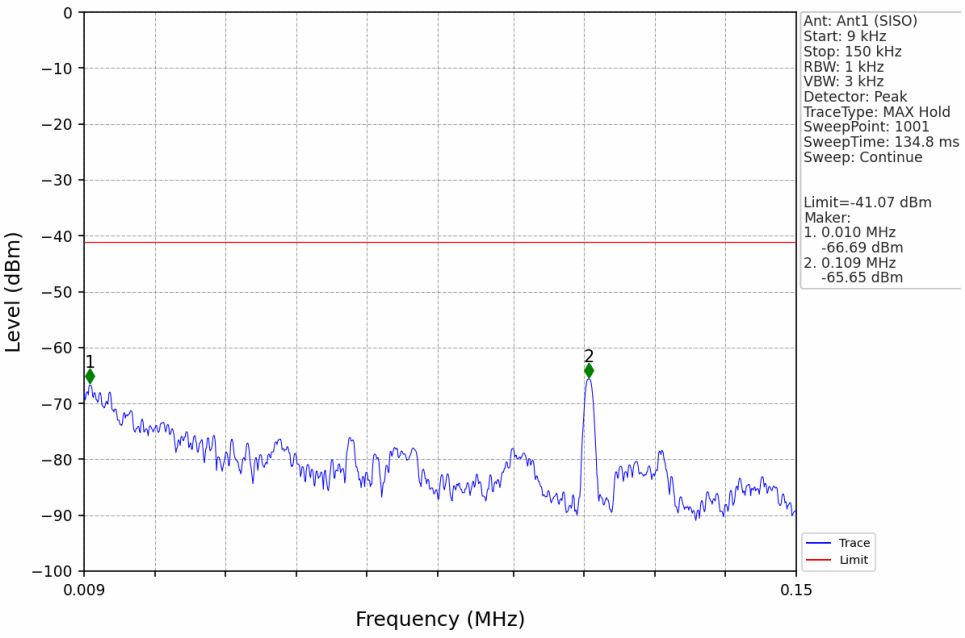

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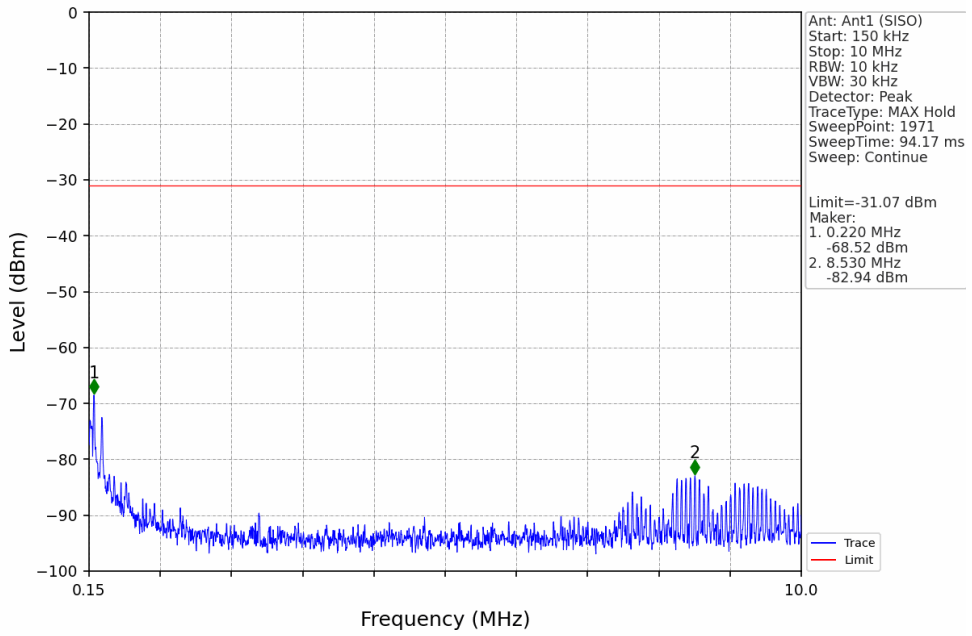

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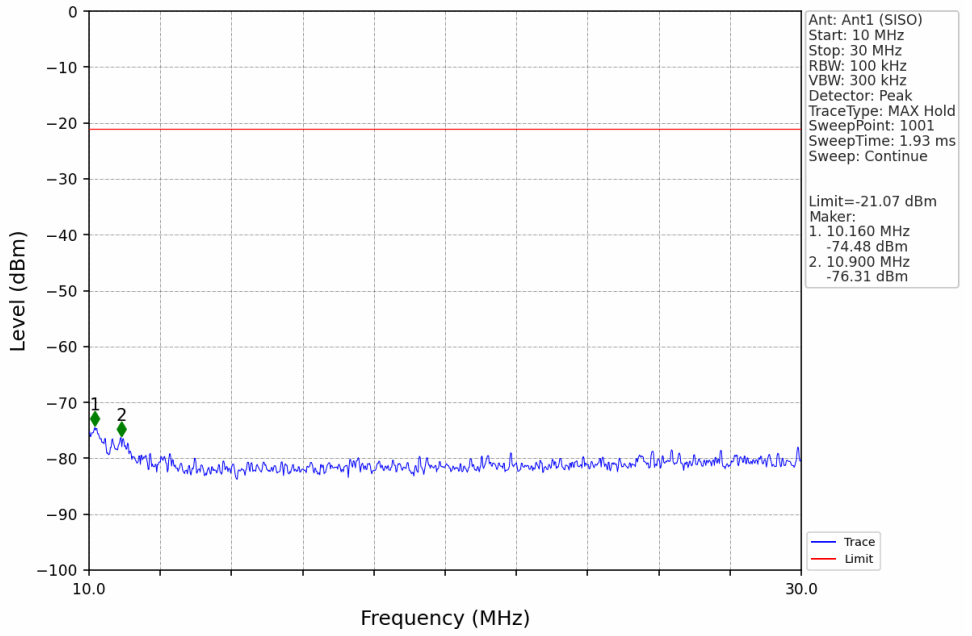

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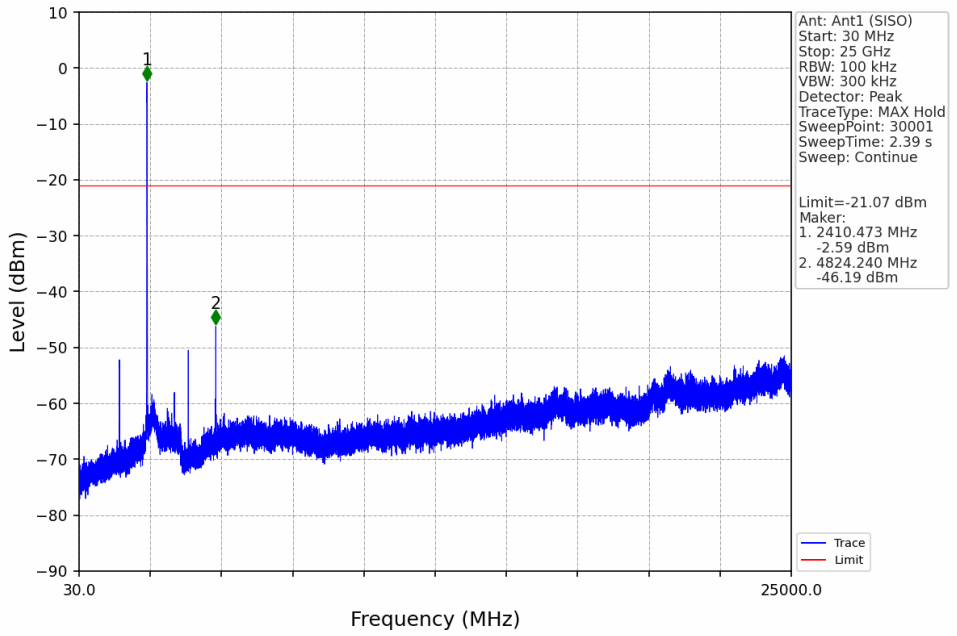

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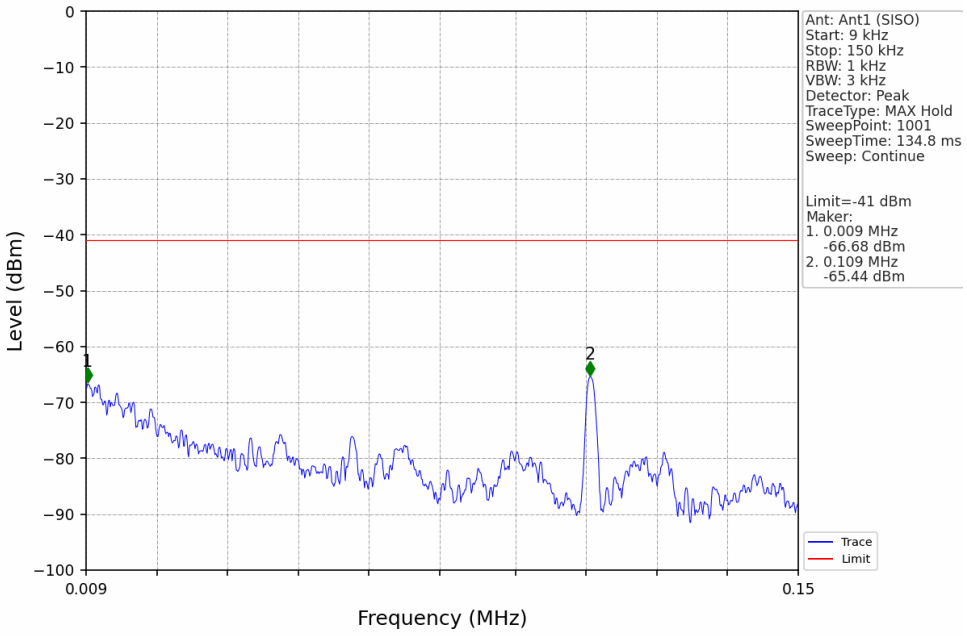

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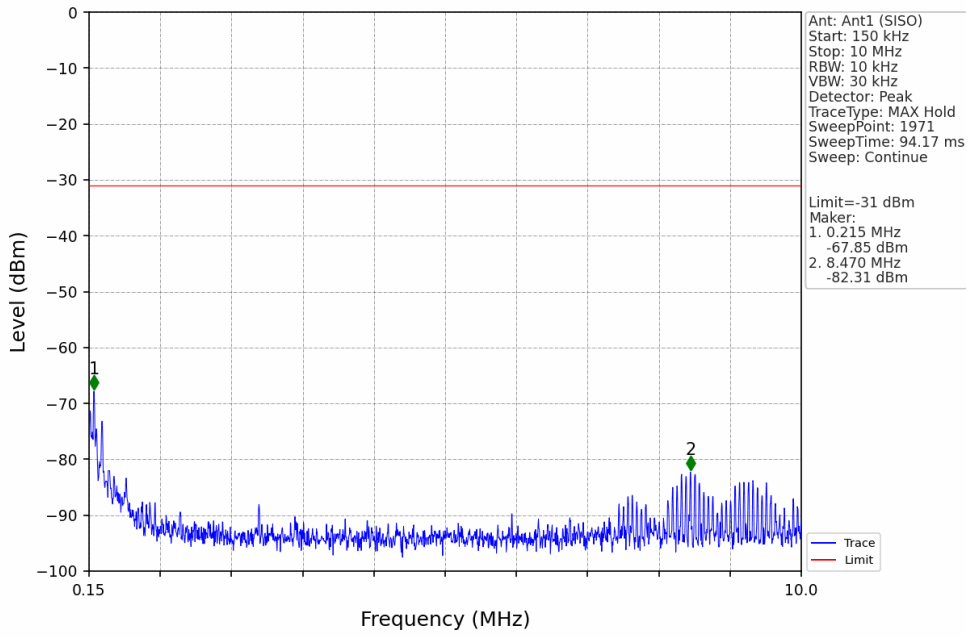

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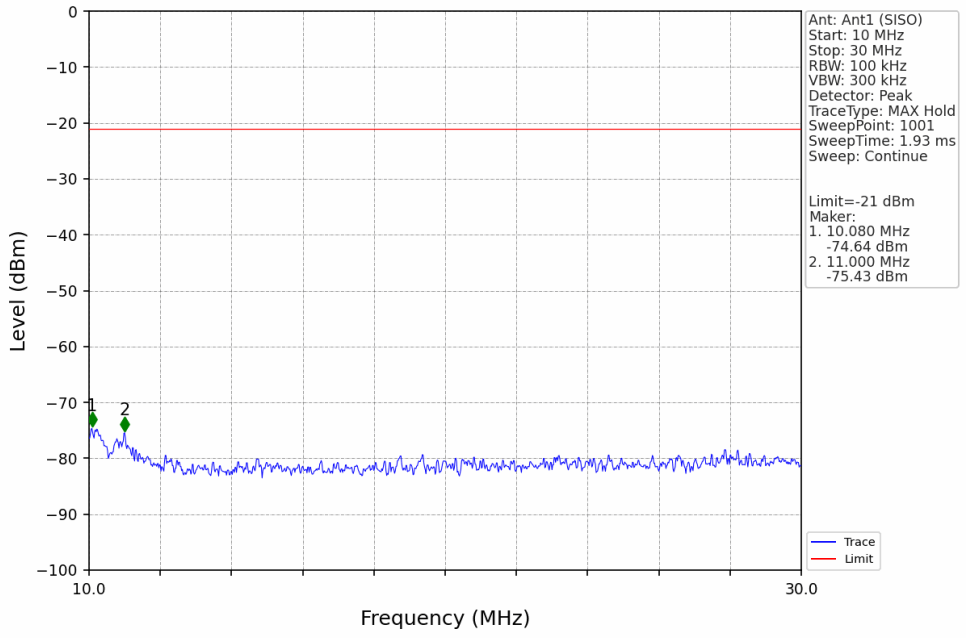

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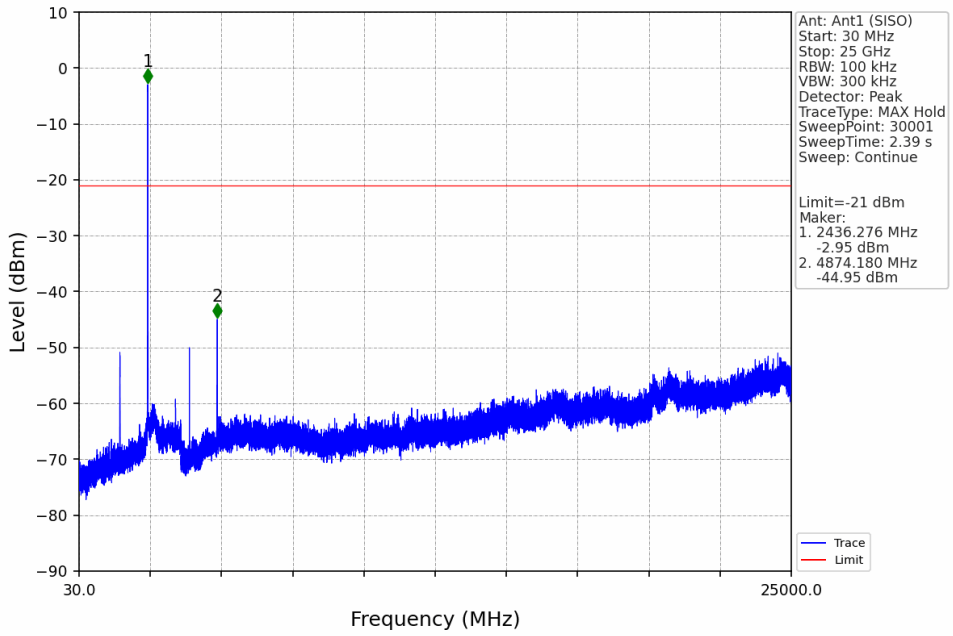

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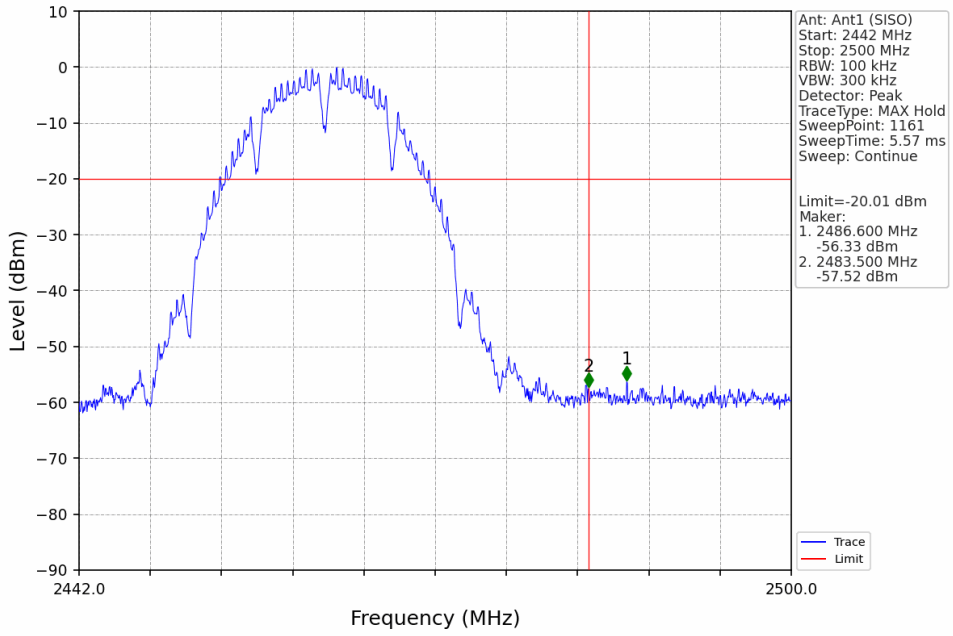

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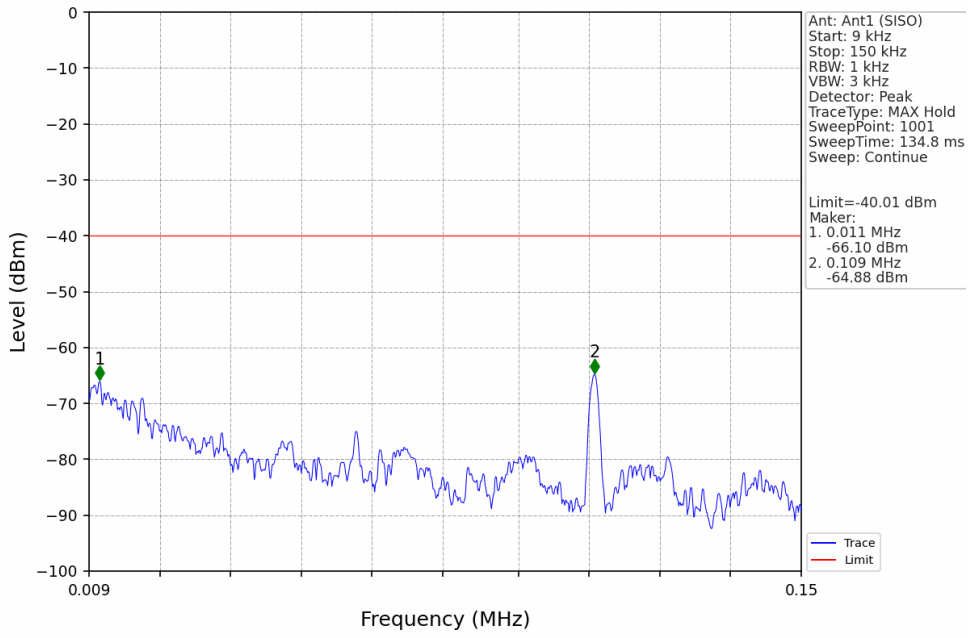

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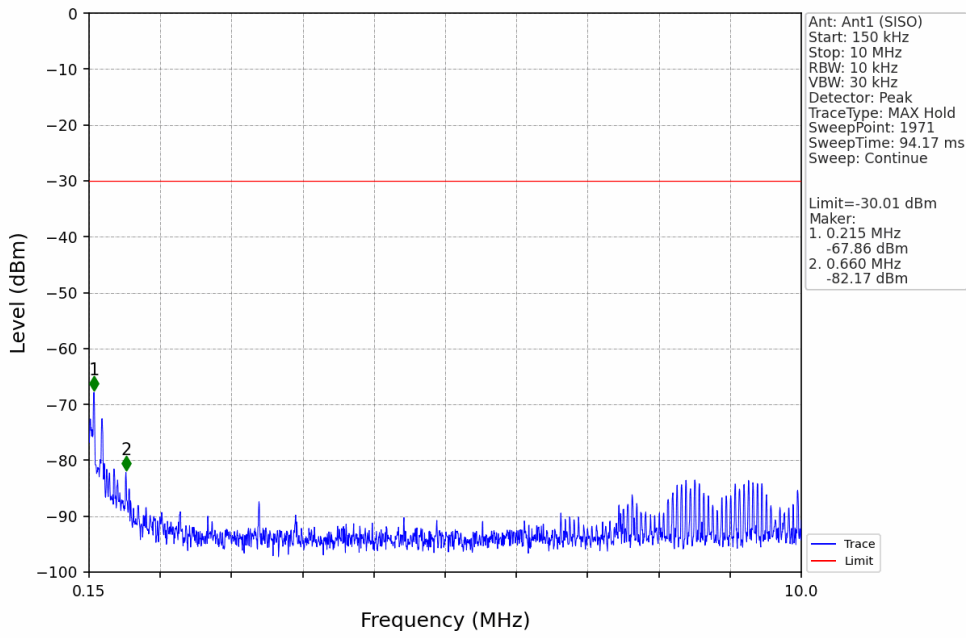

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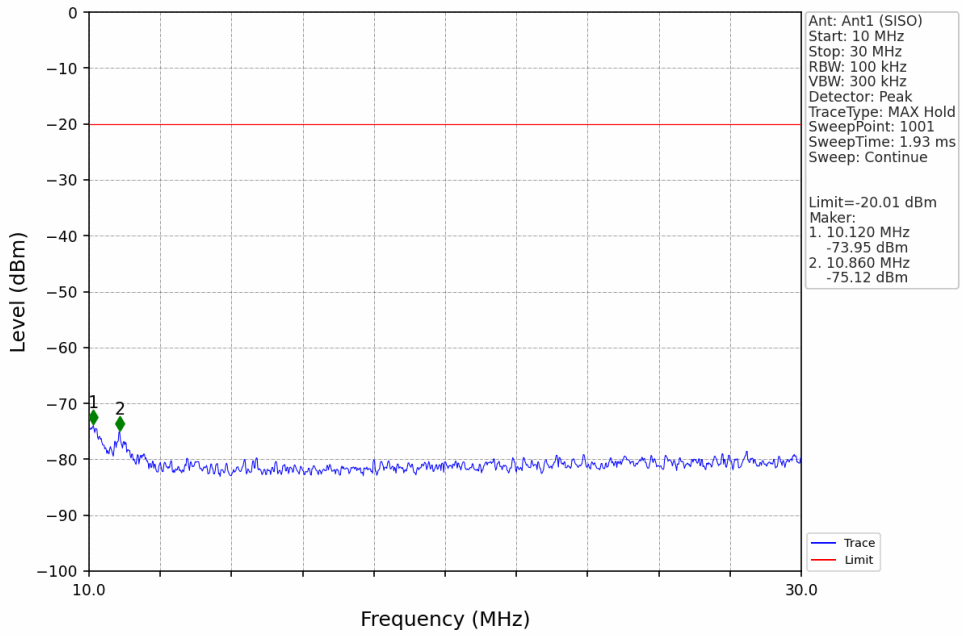

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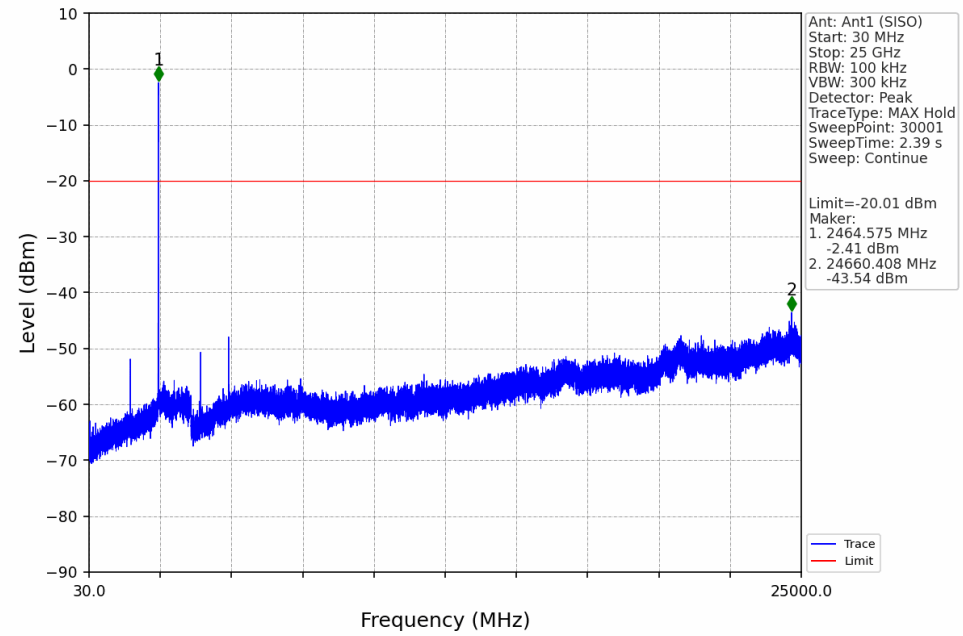
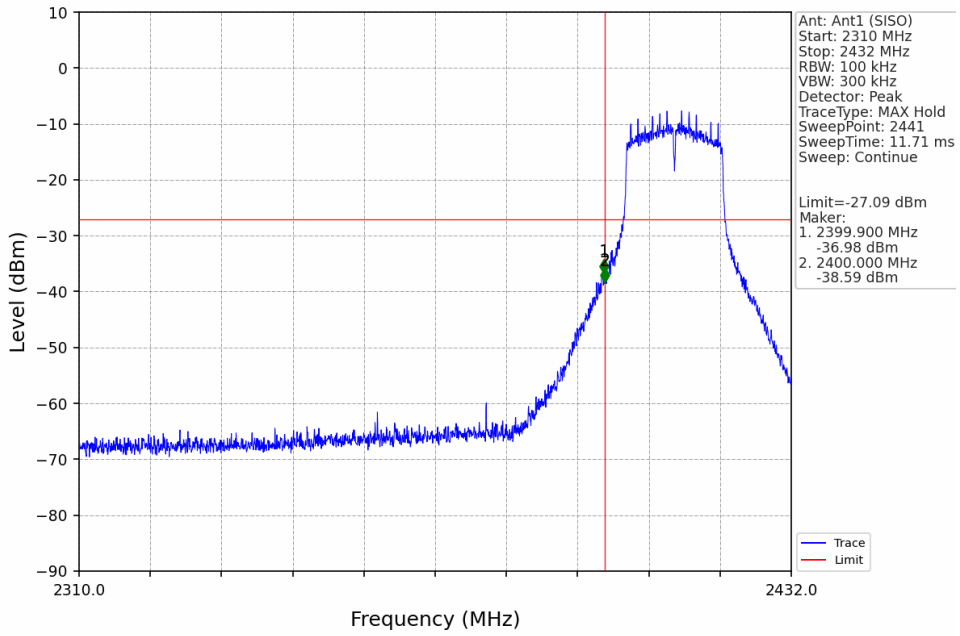


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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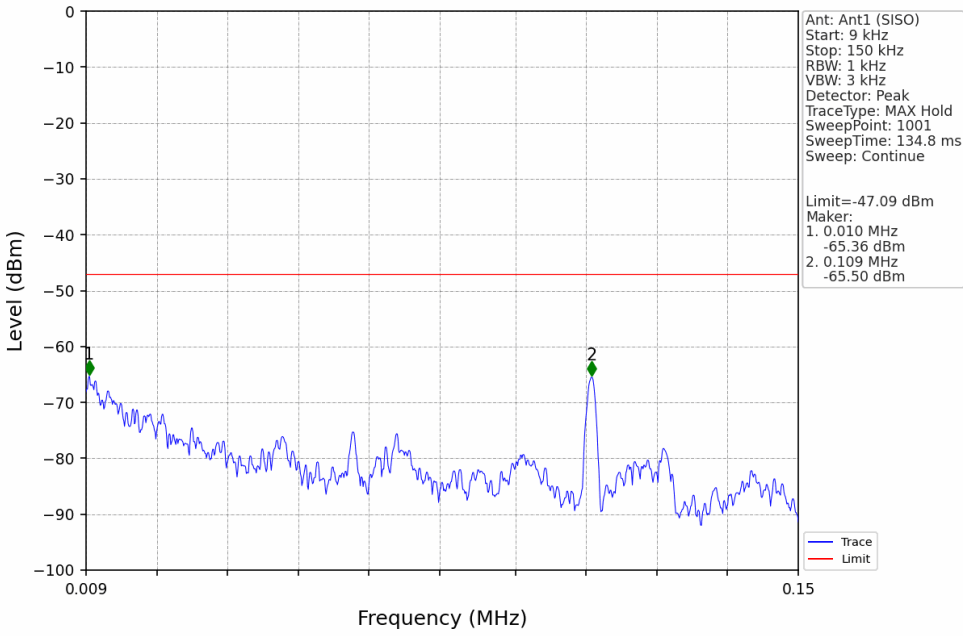

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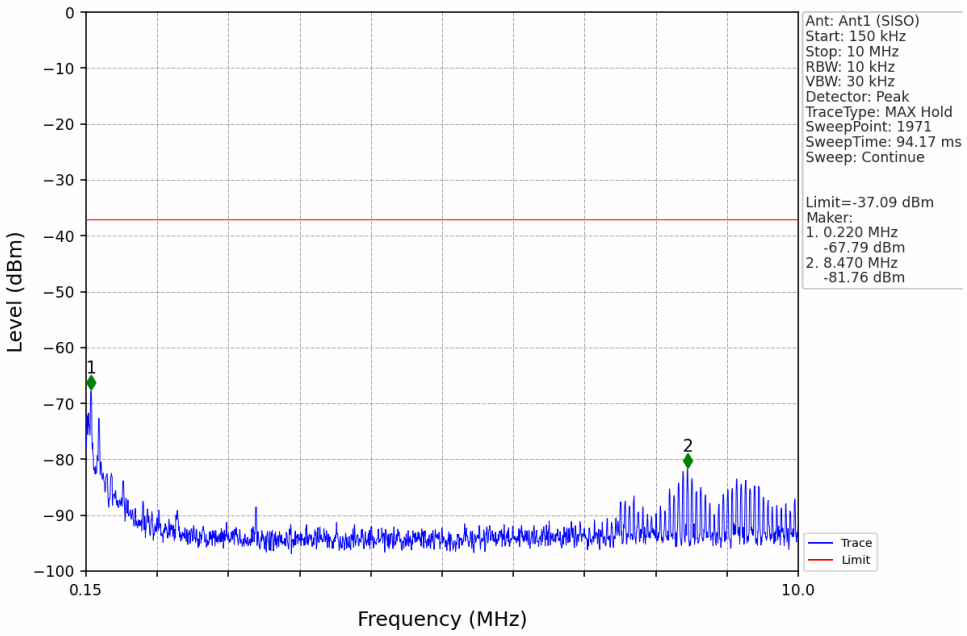

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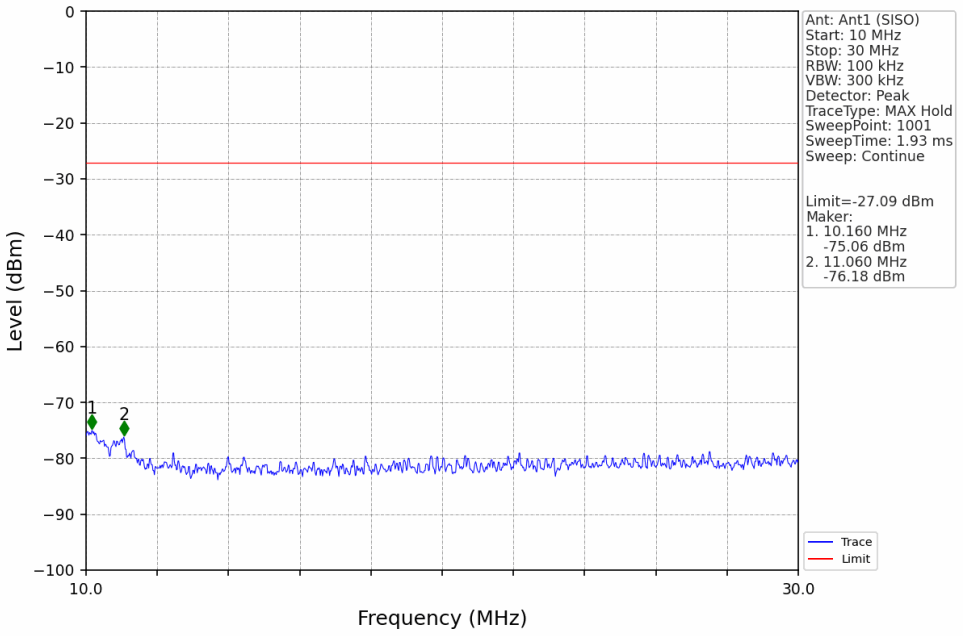

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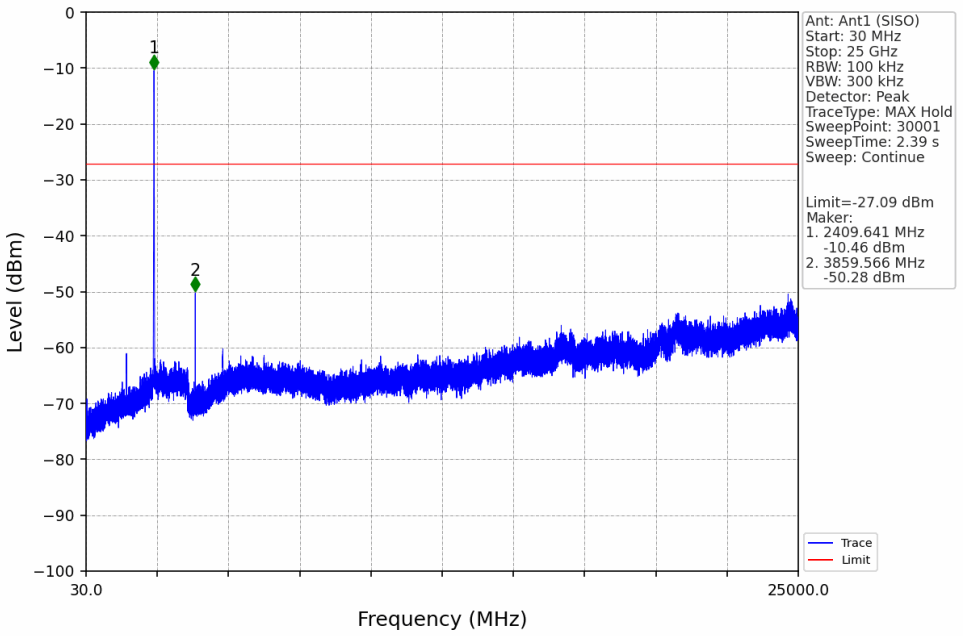

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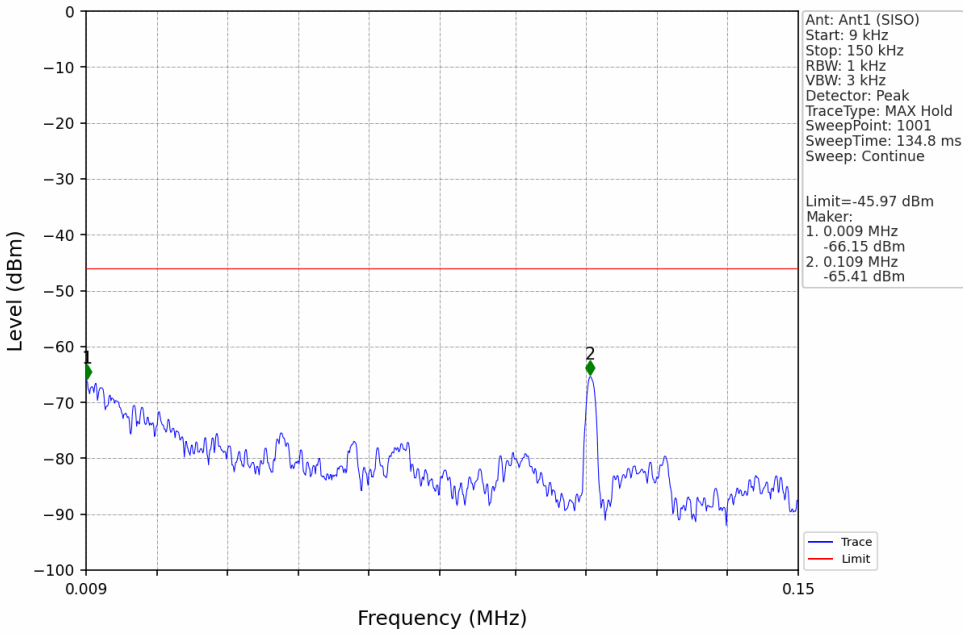

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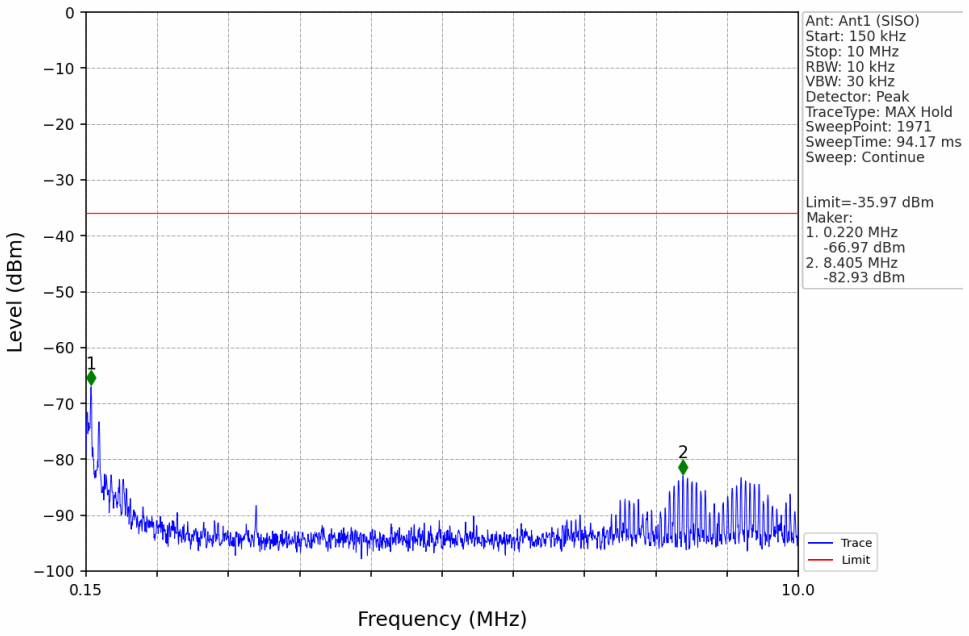
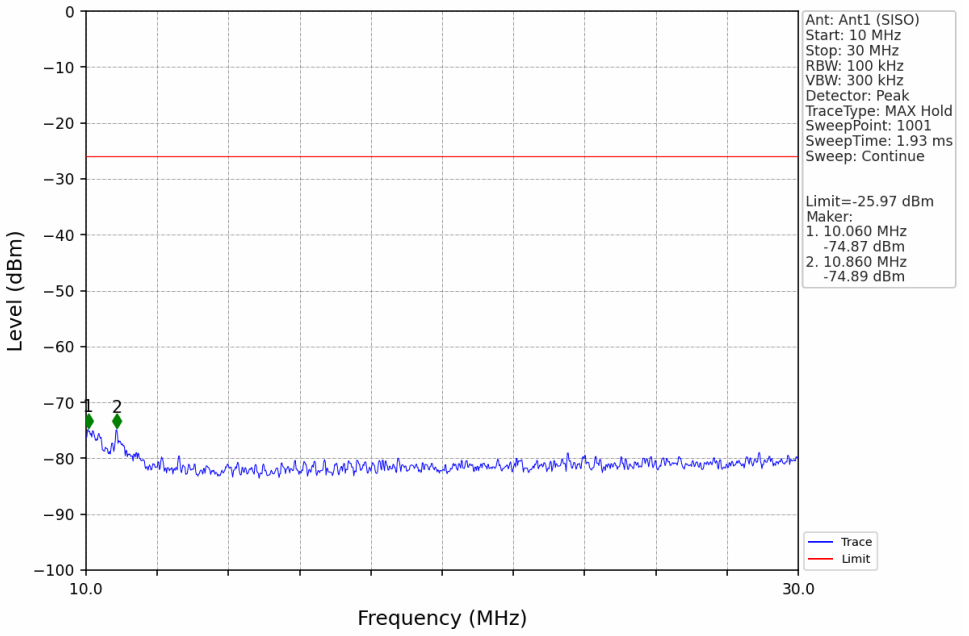
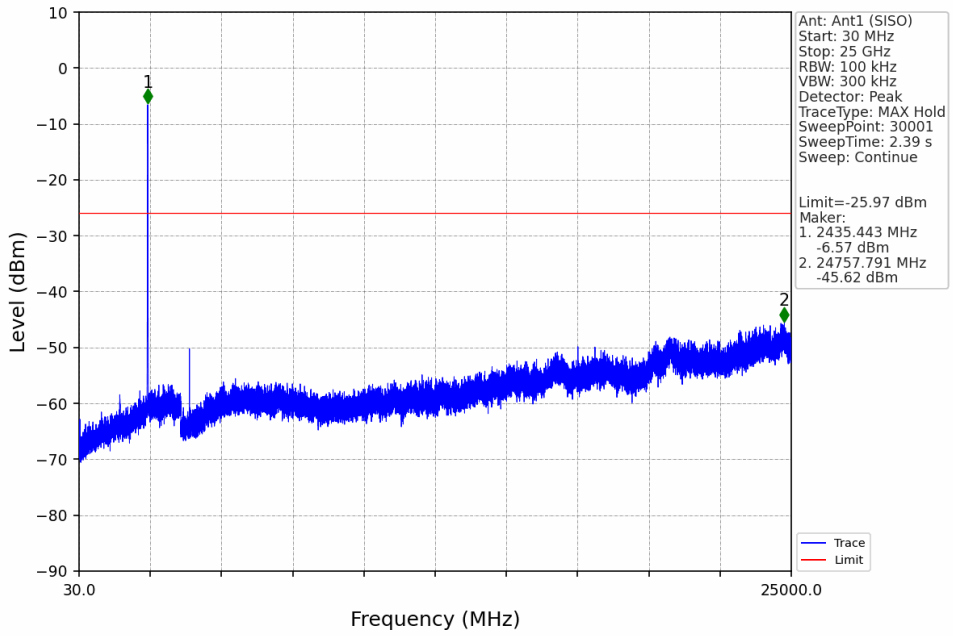


802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



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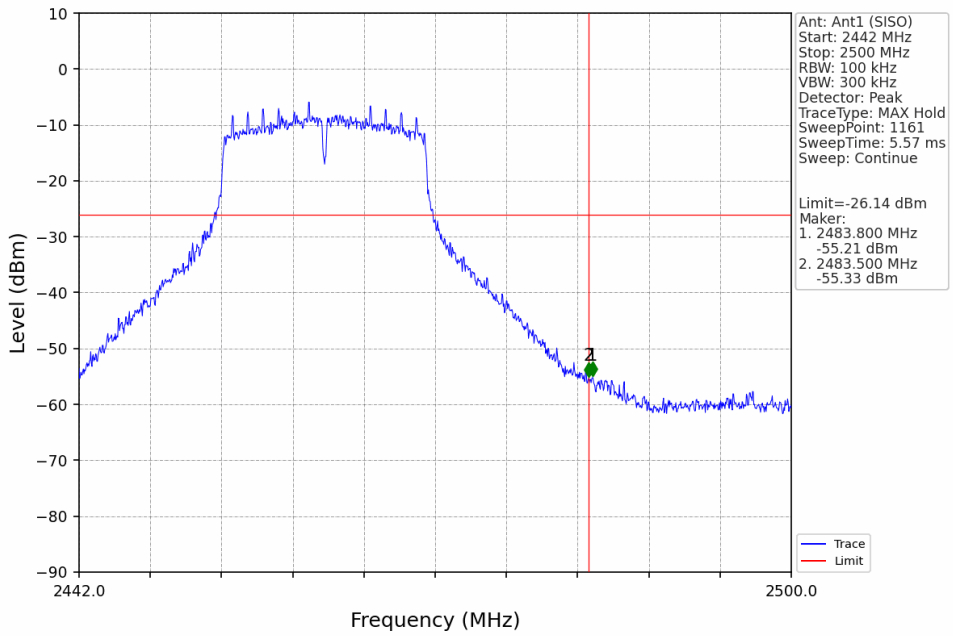

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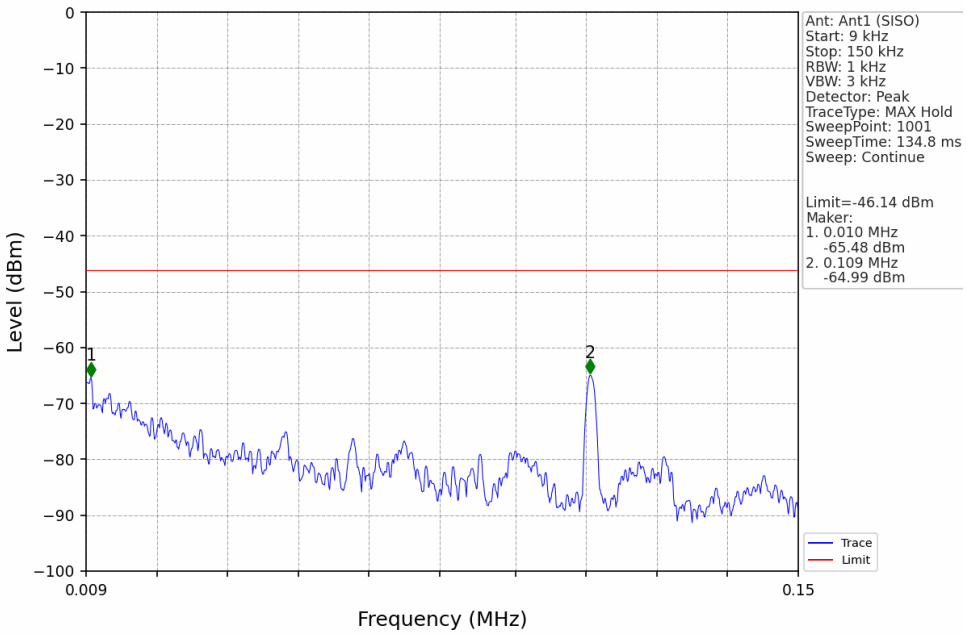

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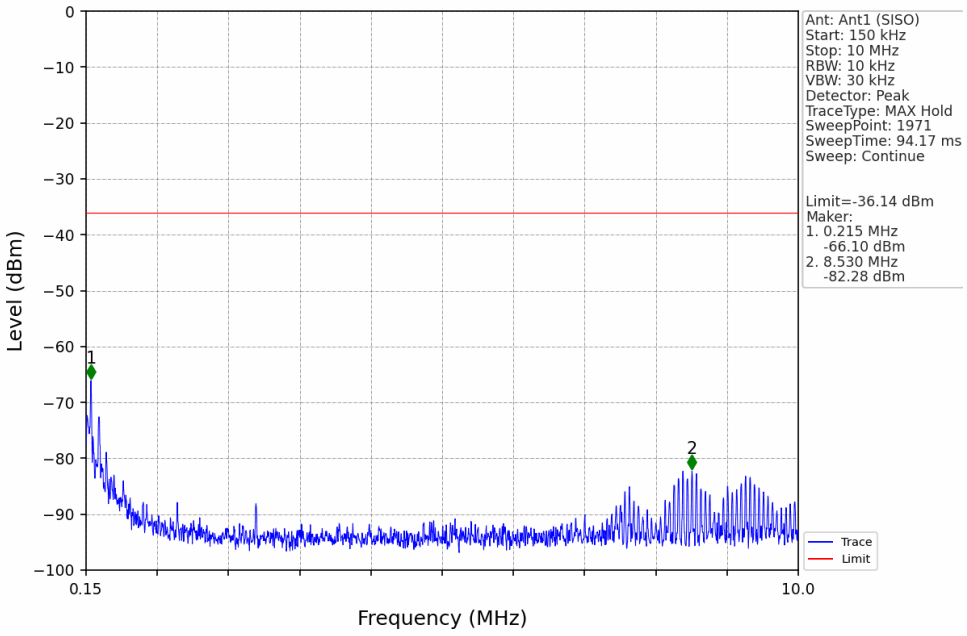

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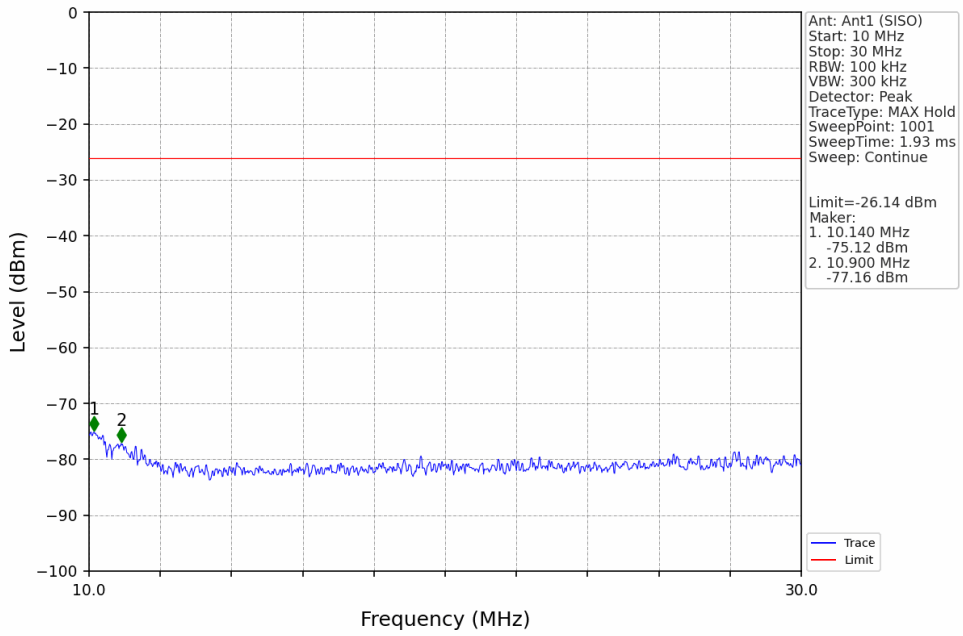

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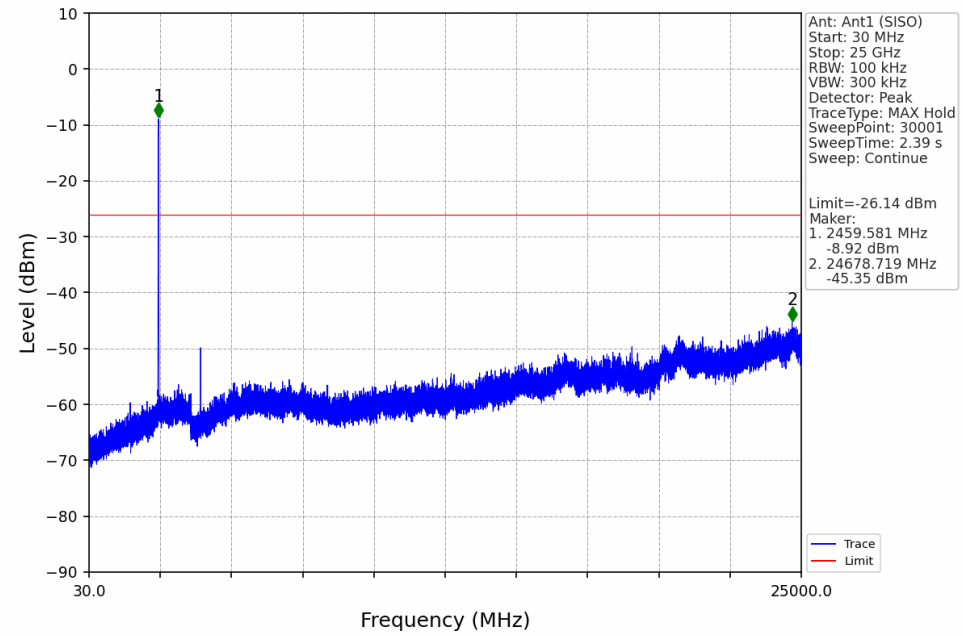
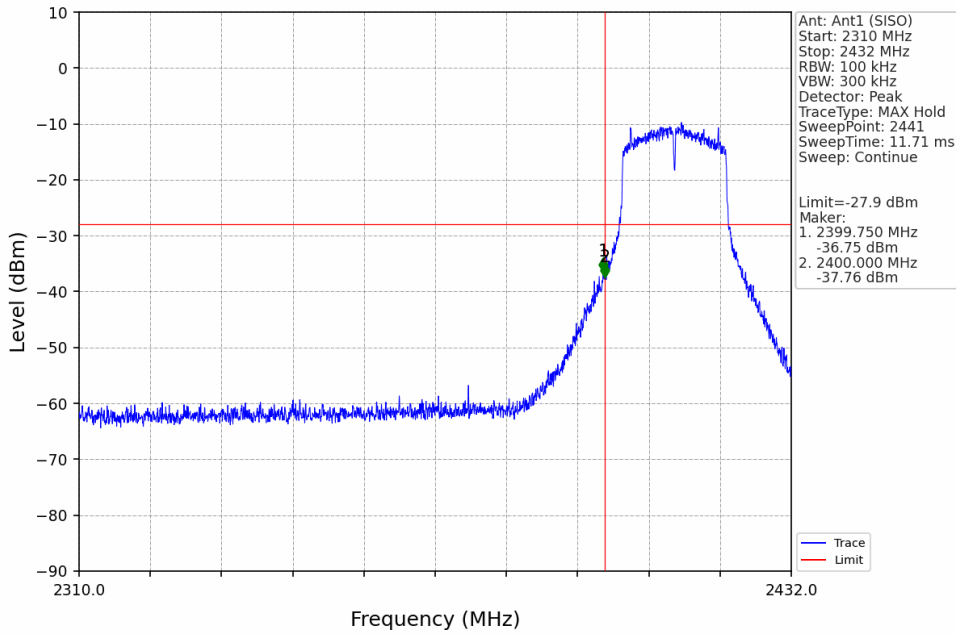
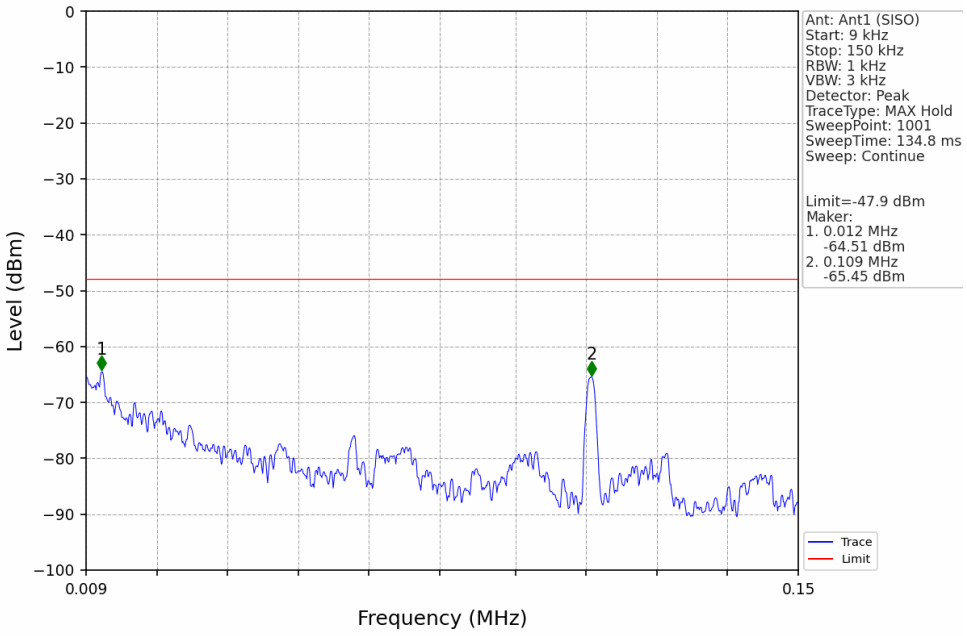


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



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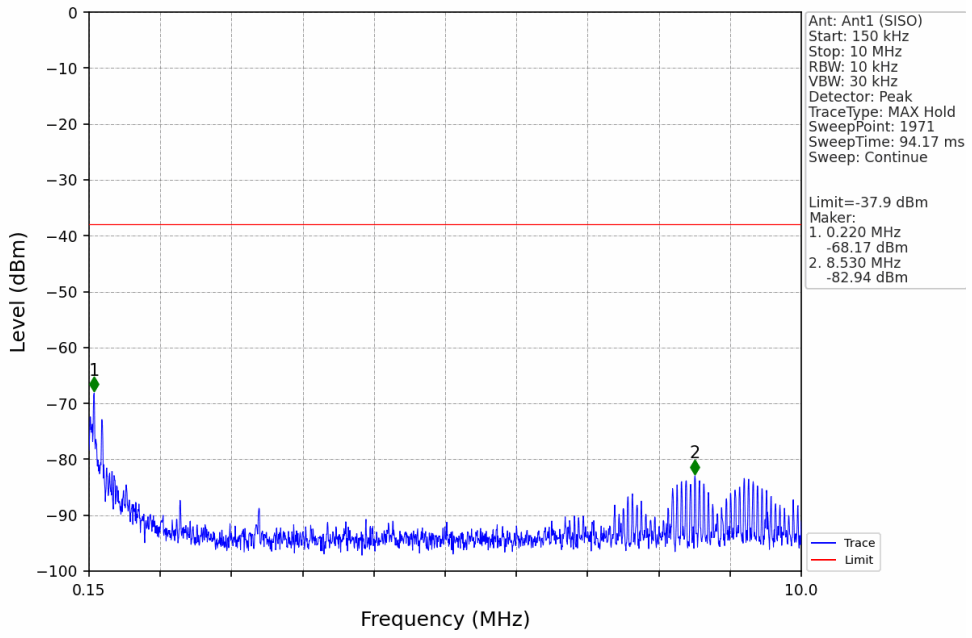
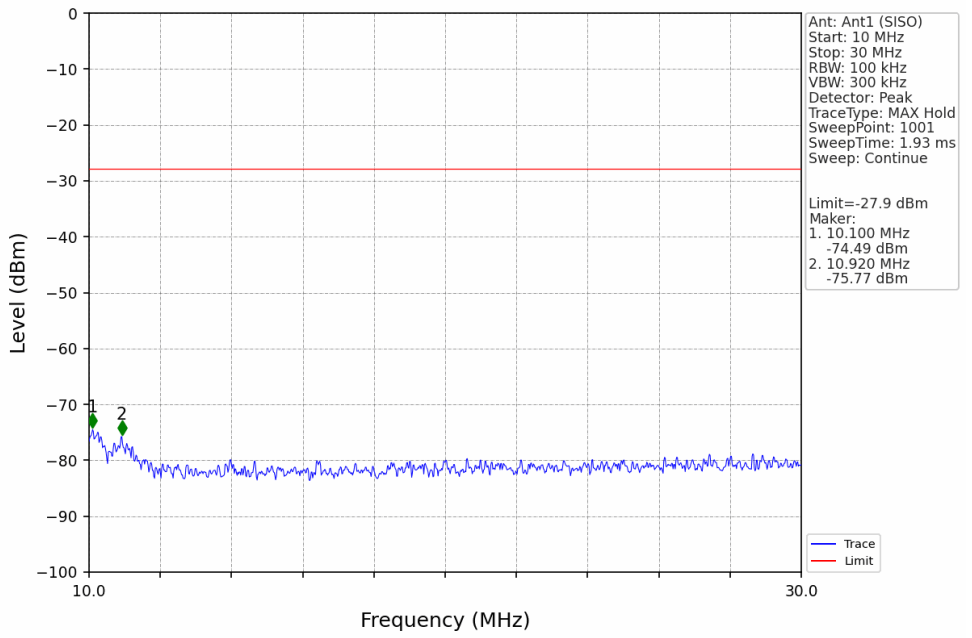
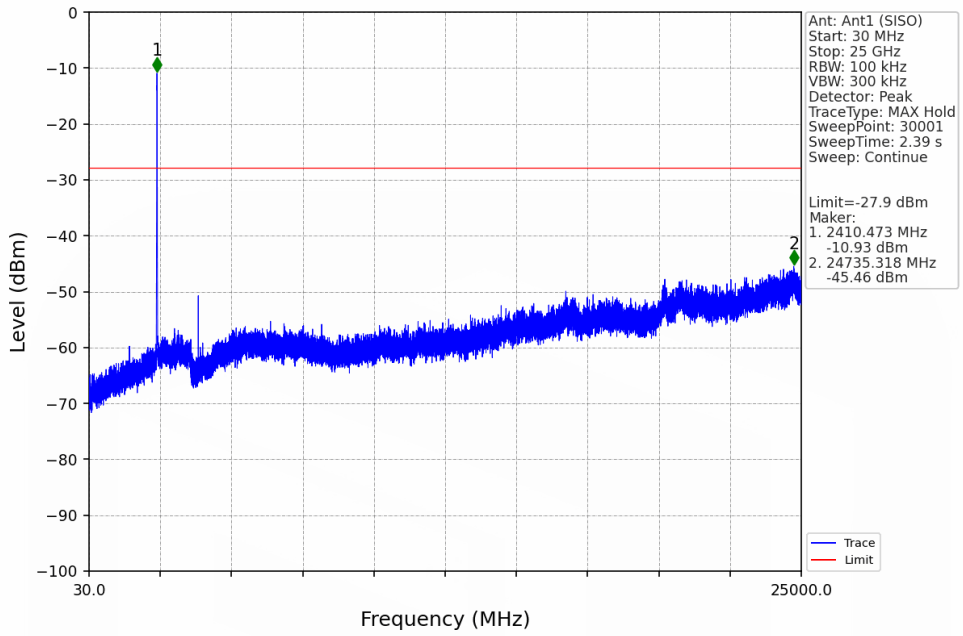


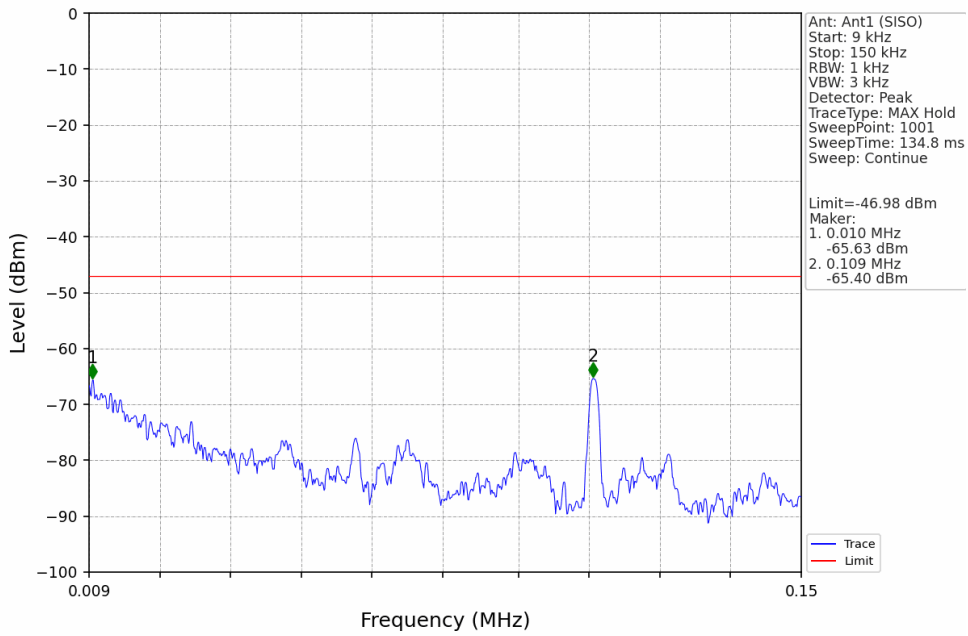
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



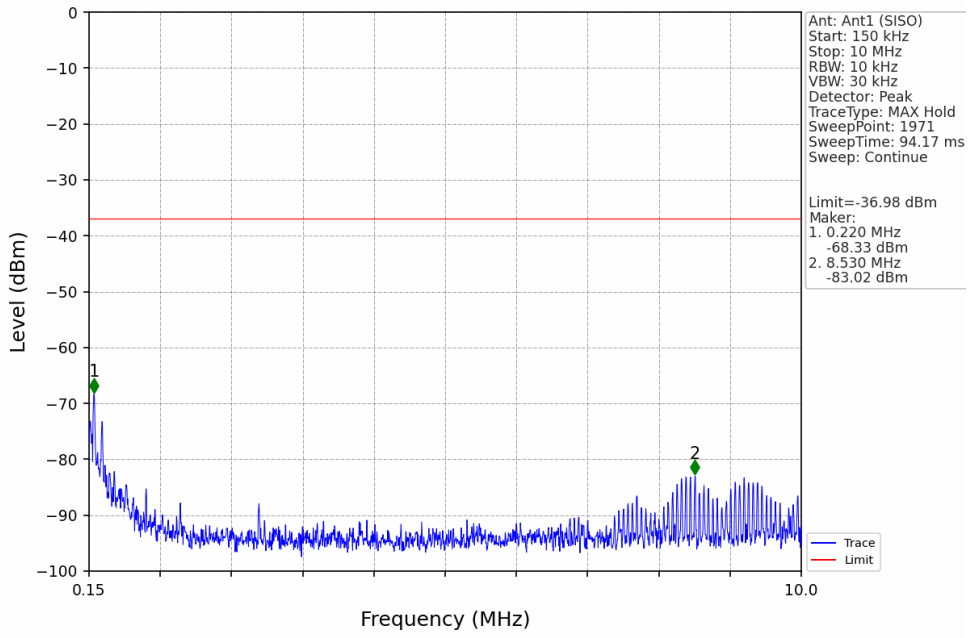
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



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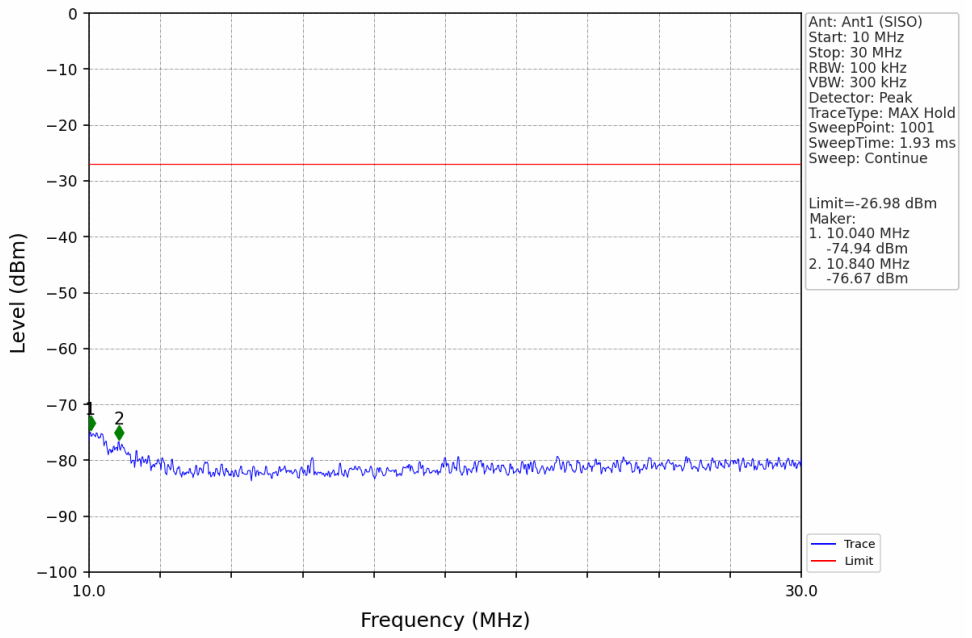

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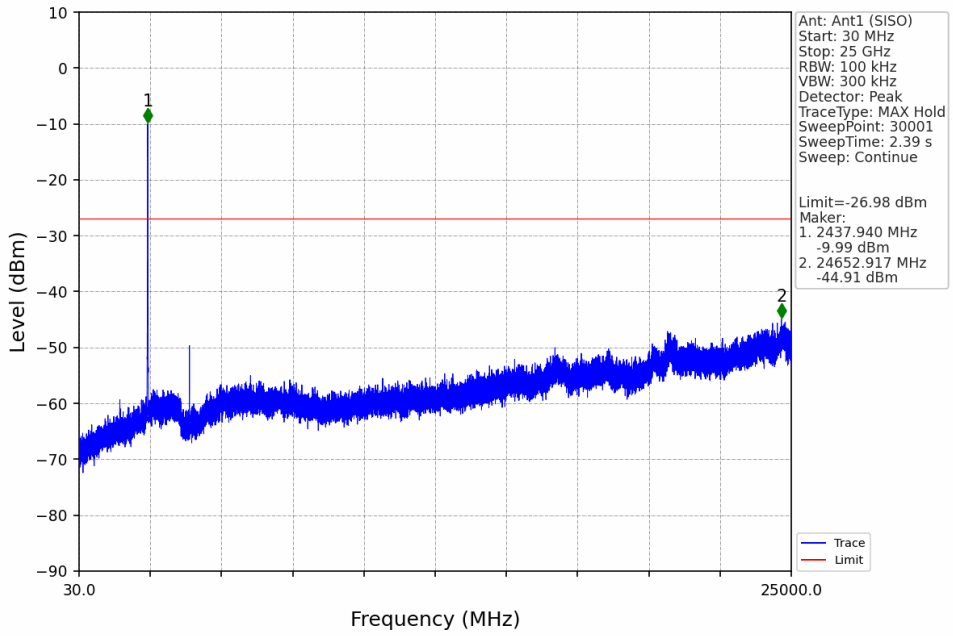
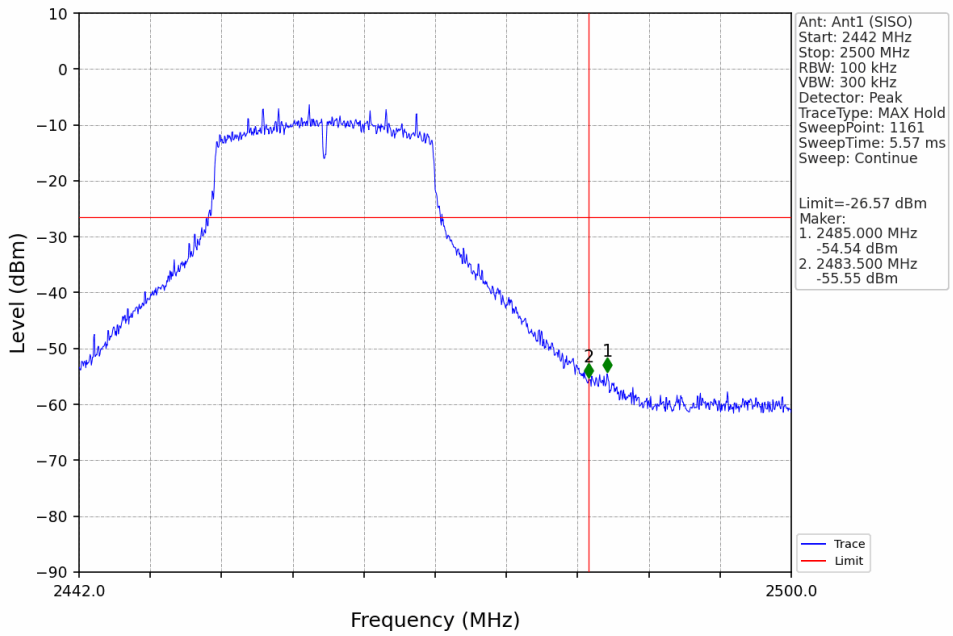


802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



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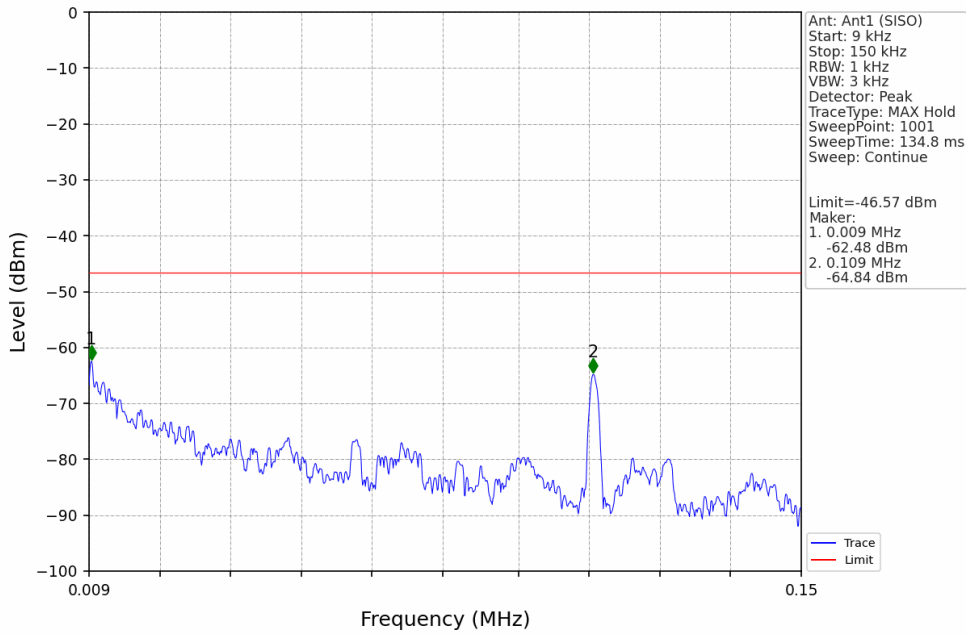

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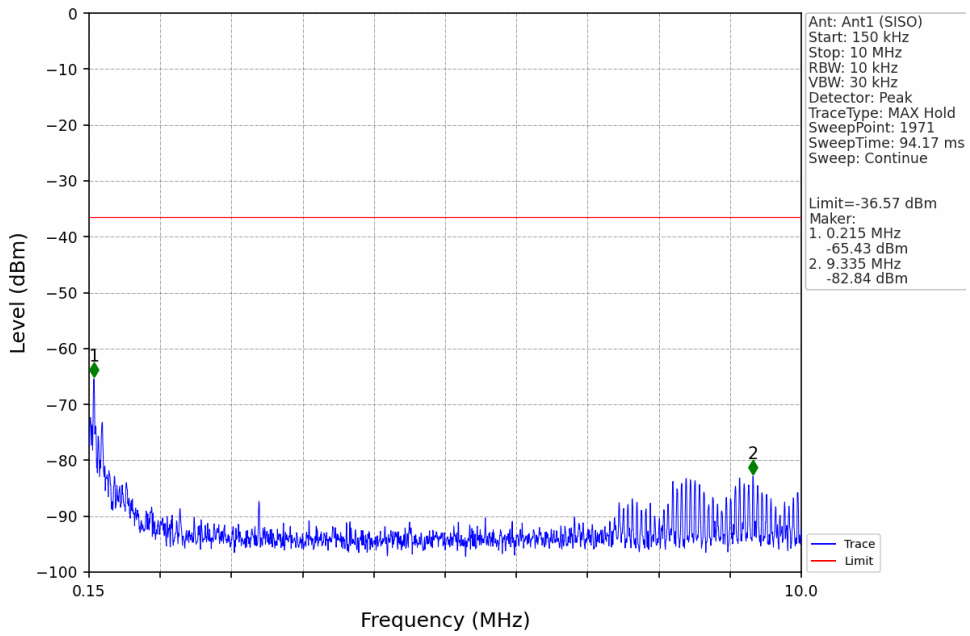

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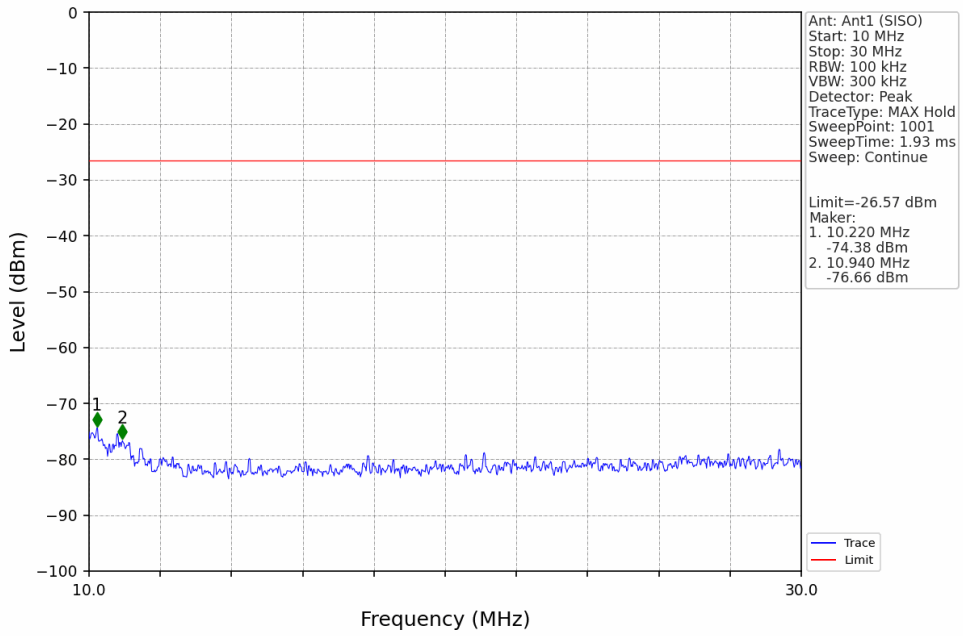
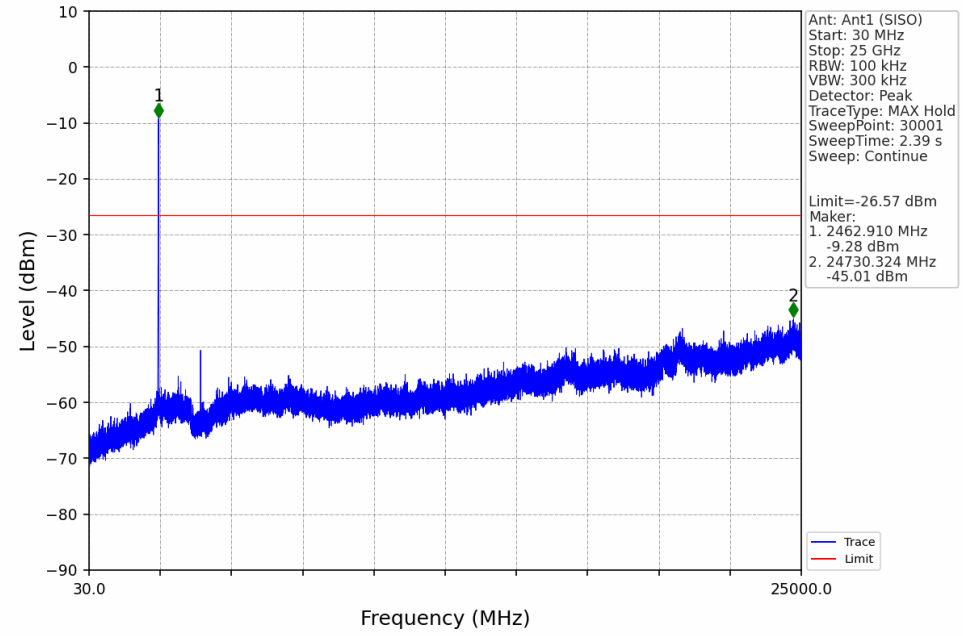
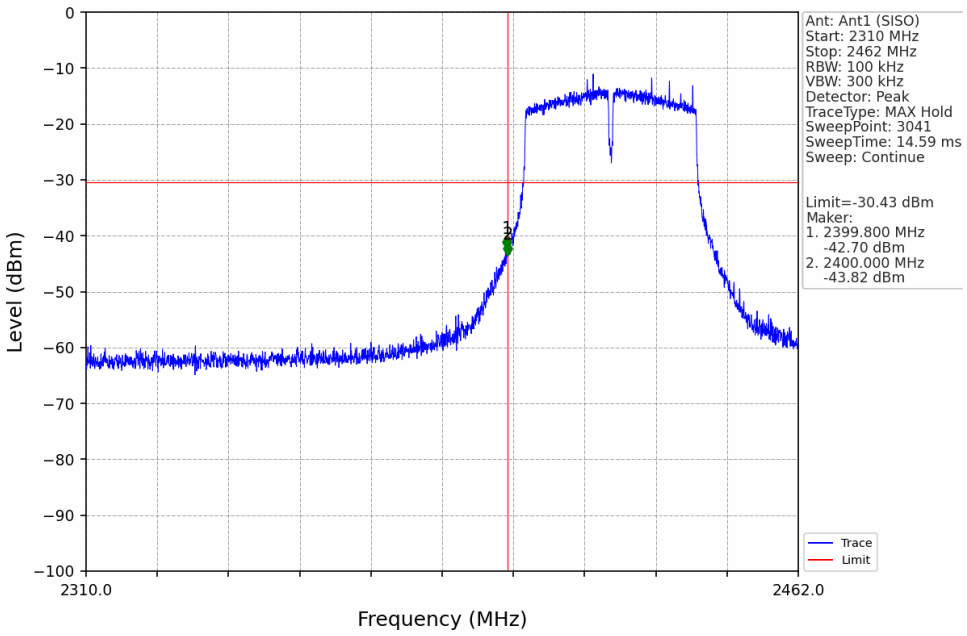


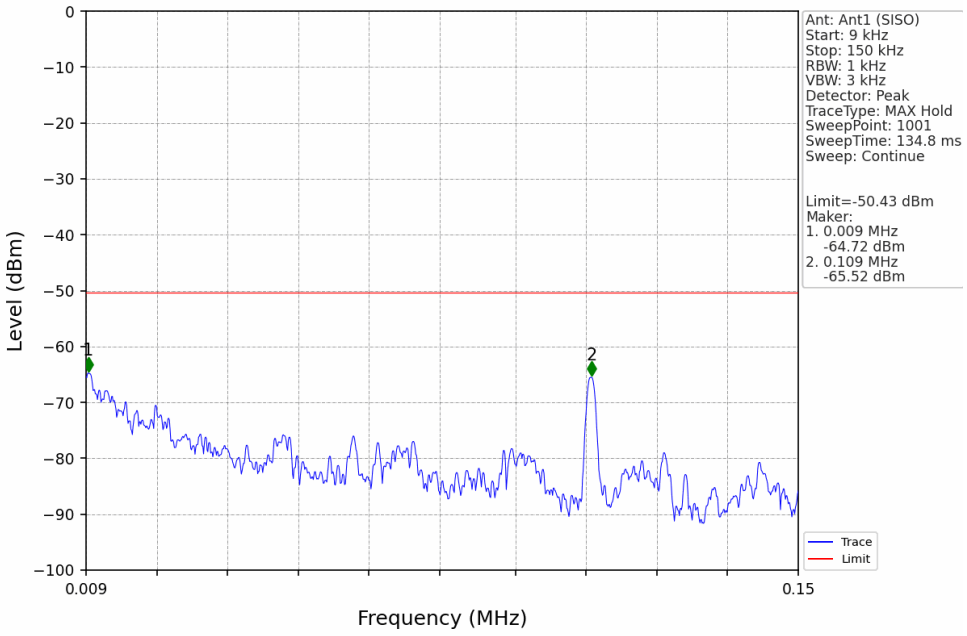
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



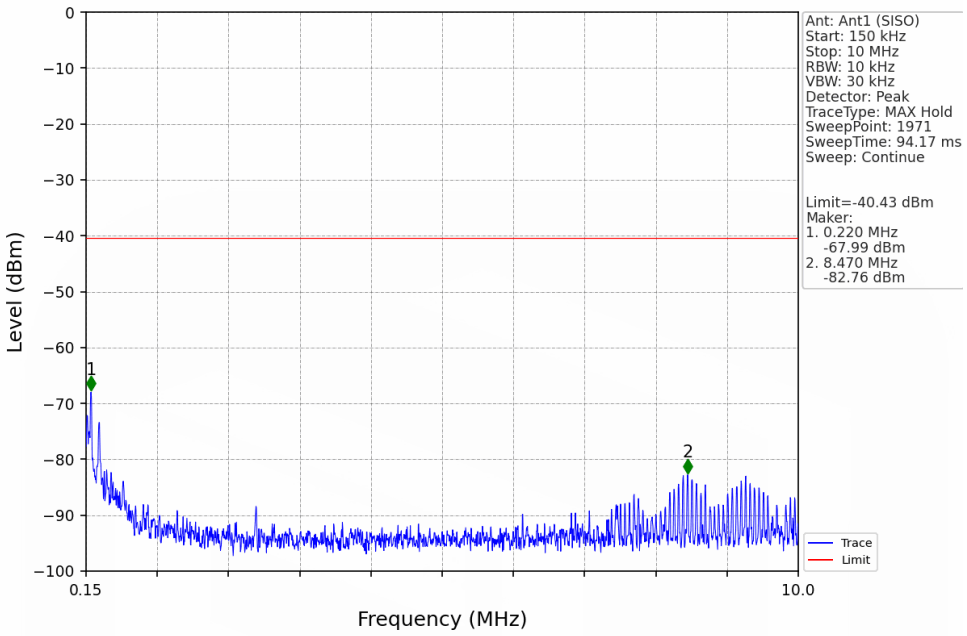
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



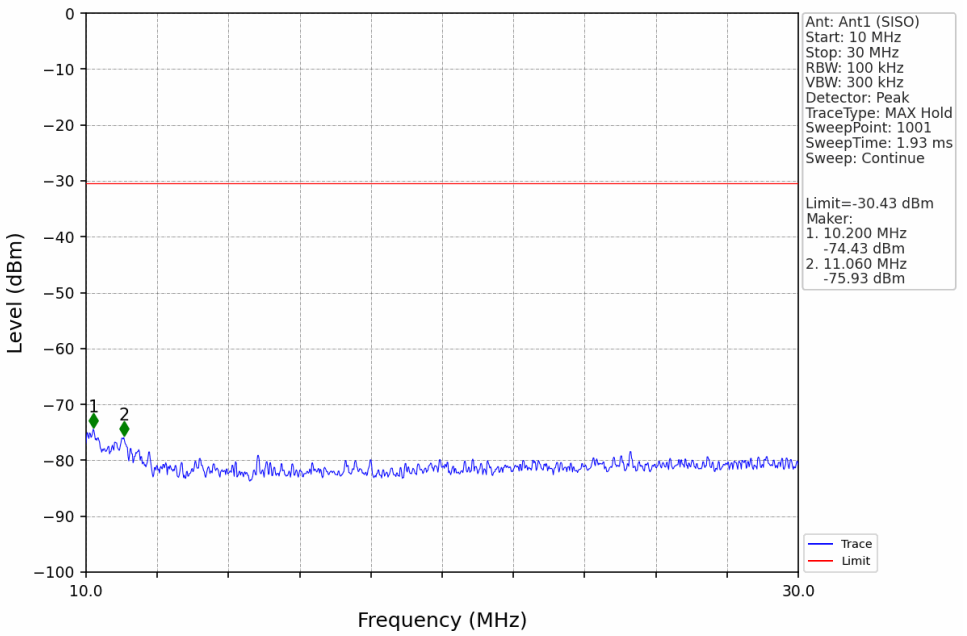
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



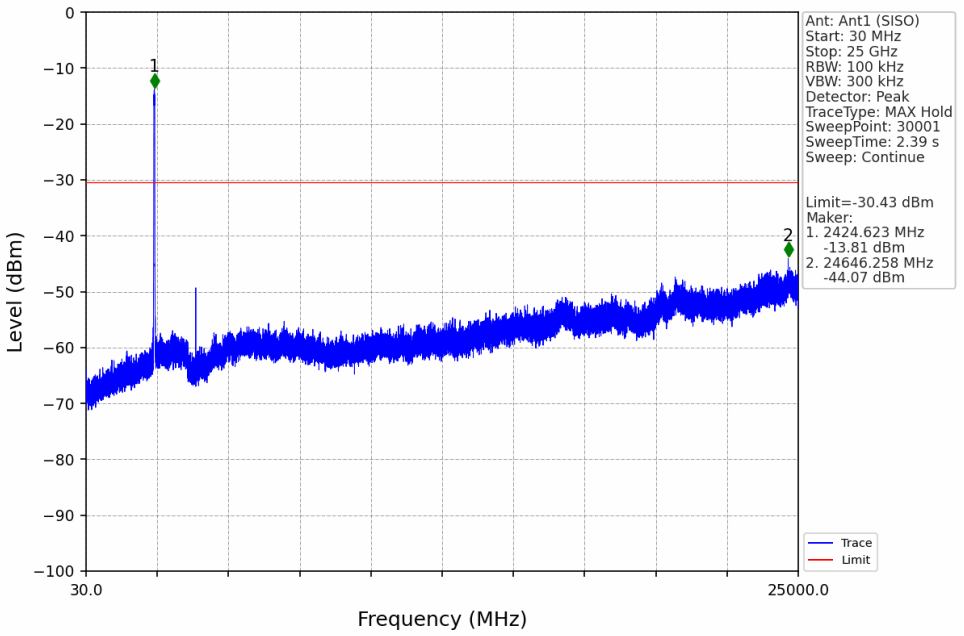
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



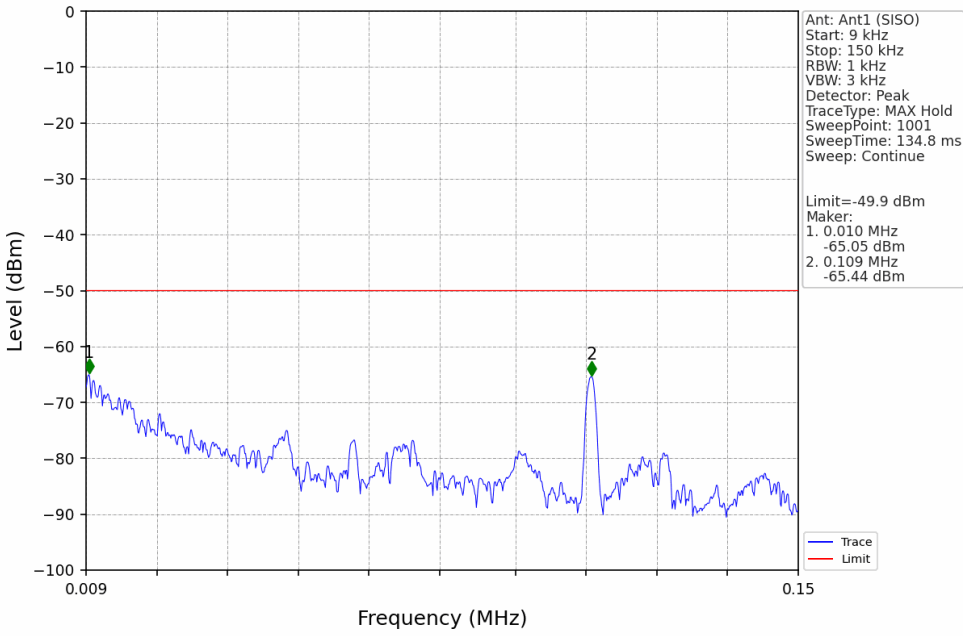
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



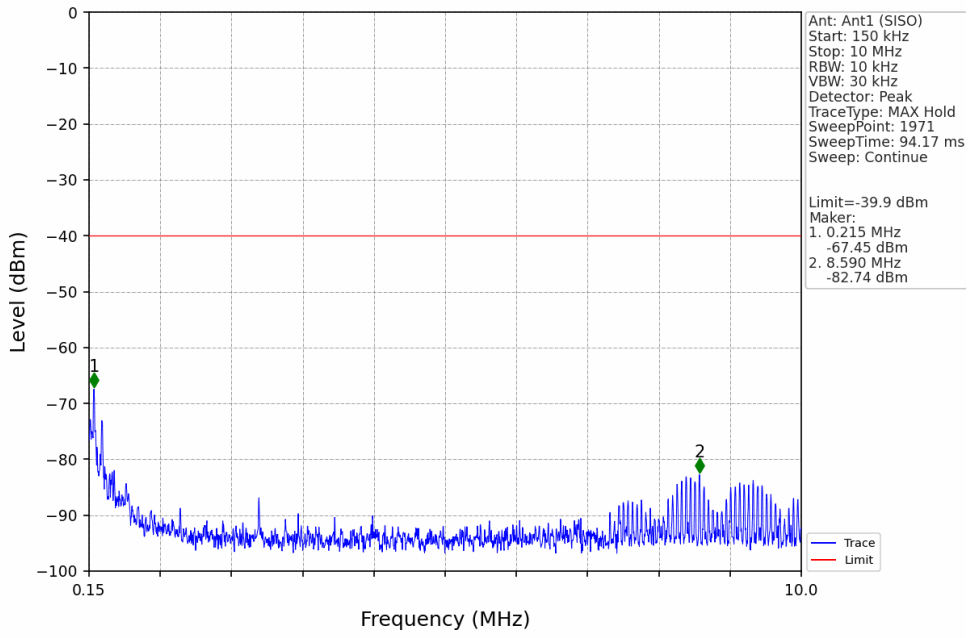
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



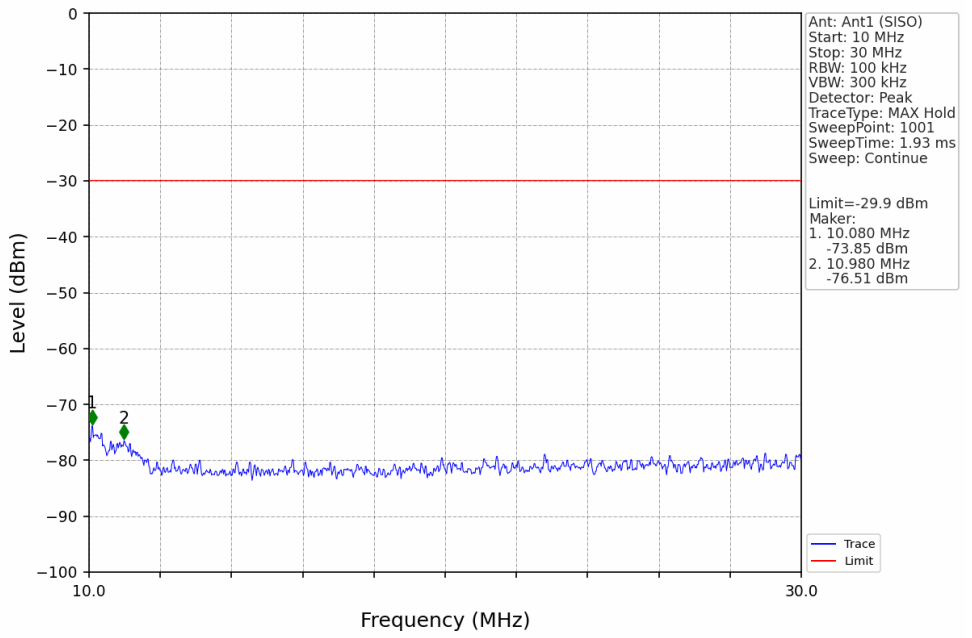
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



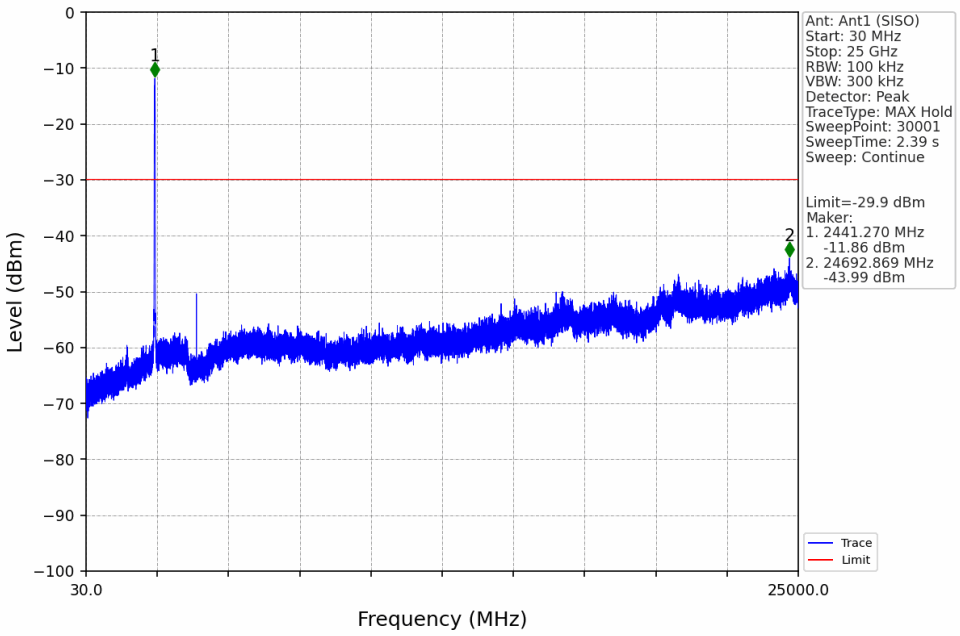
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



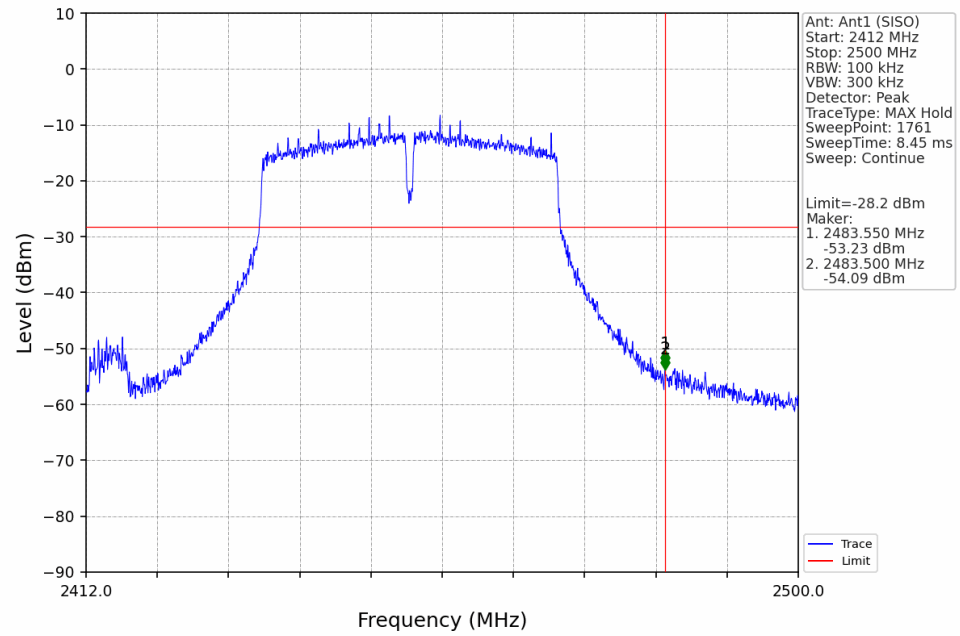
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



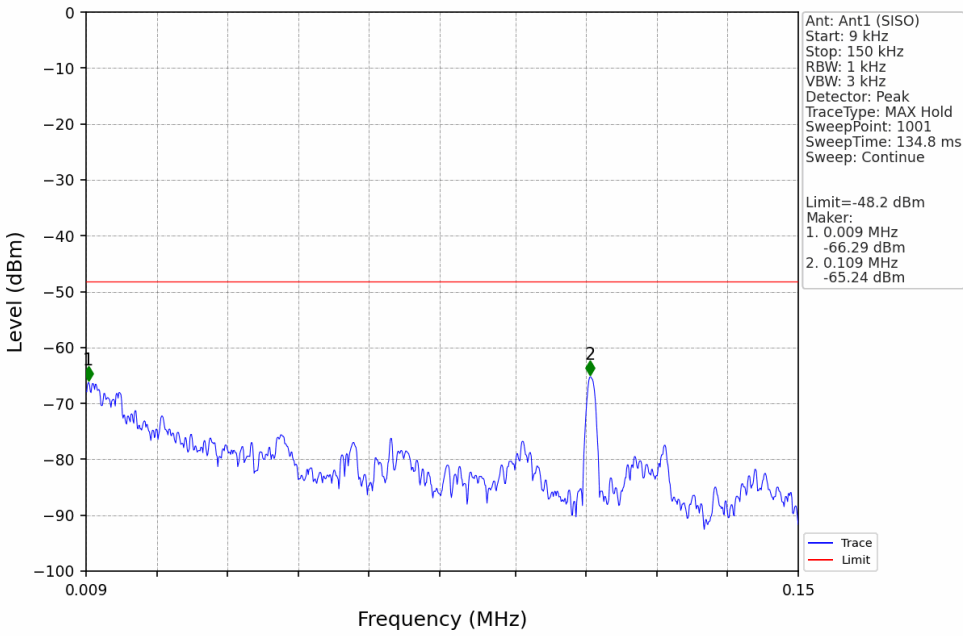
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



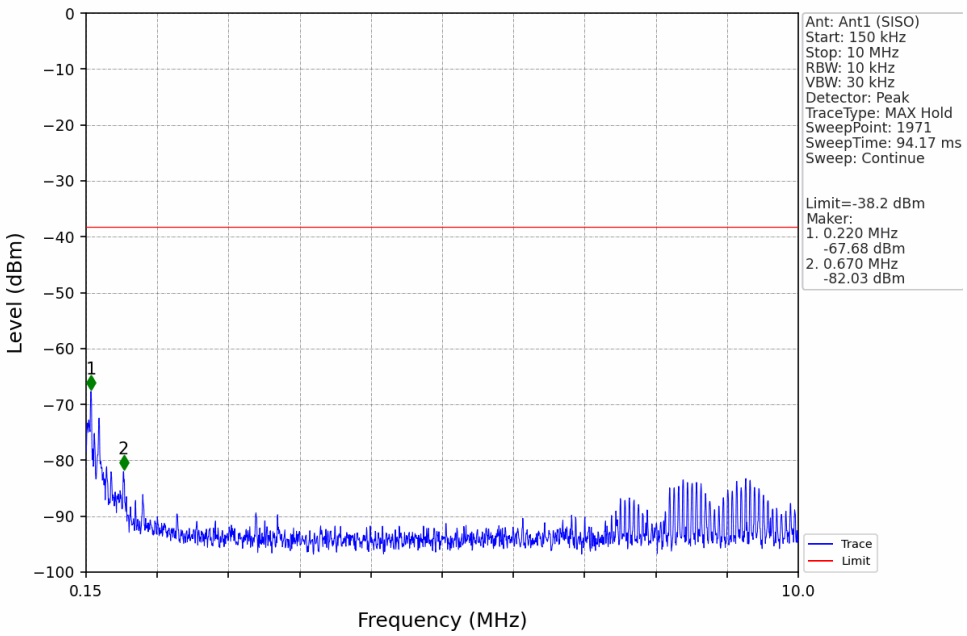
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



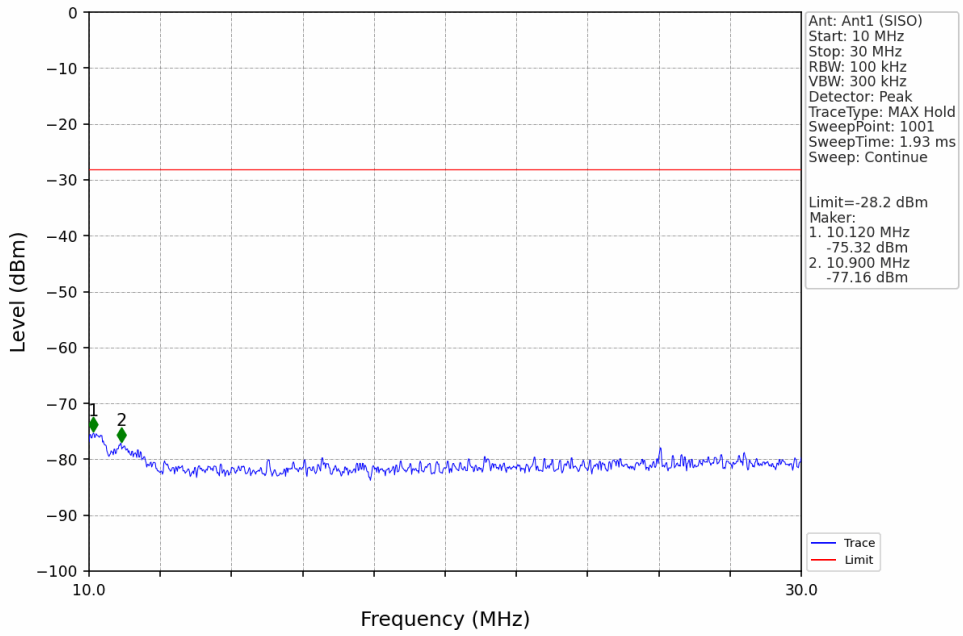
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



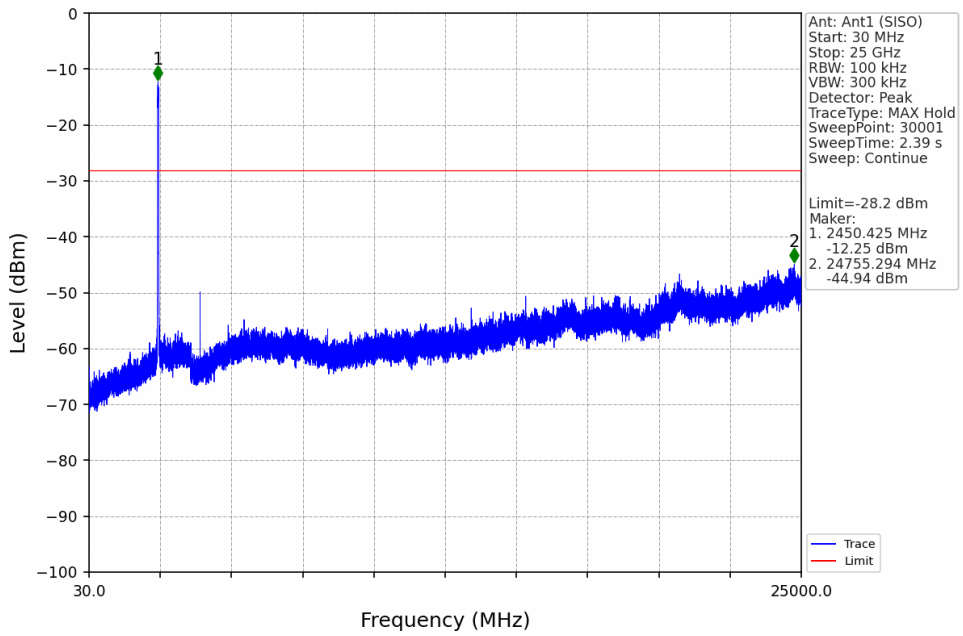
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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