

ANNEX E TEST DATA

For

Project No.:	8132EU111103W
Client:	Cheerlux (Shenzhen) Electronic Technology Co., Ltd.
Product Description:	Projector
Model No.:	C12
FCC ID:	2AYQQ-C12
Technology:	WiFi 2.4G
Test Engineer:	<i>Mikoy zhu</i>
Test Date:	2023-10-07

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
Unwanted Emissions In Restricted Frequency Bands	Pass
Frequency Error	Pass

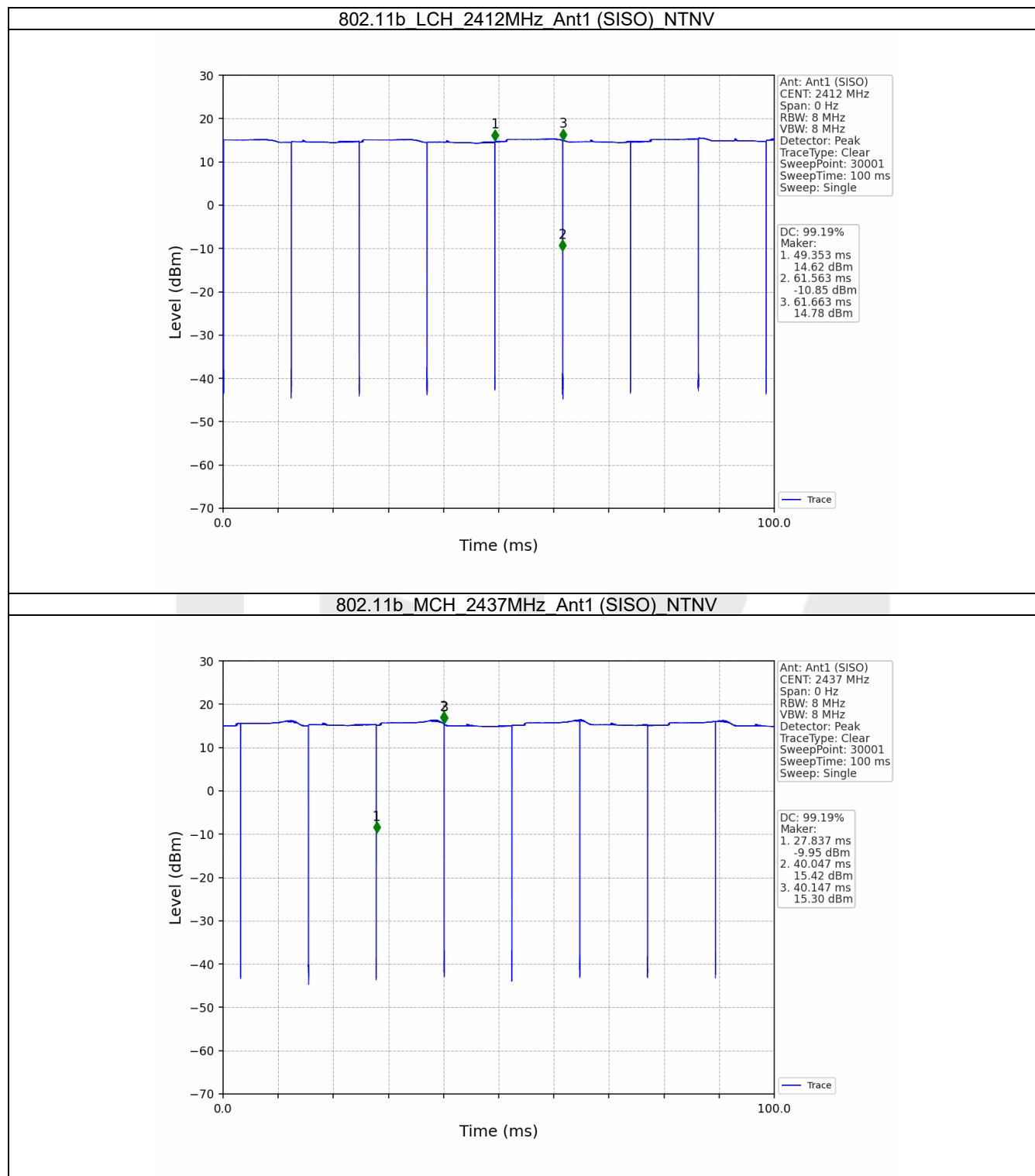
1. Duty Cycle

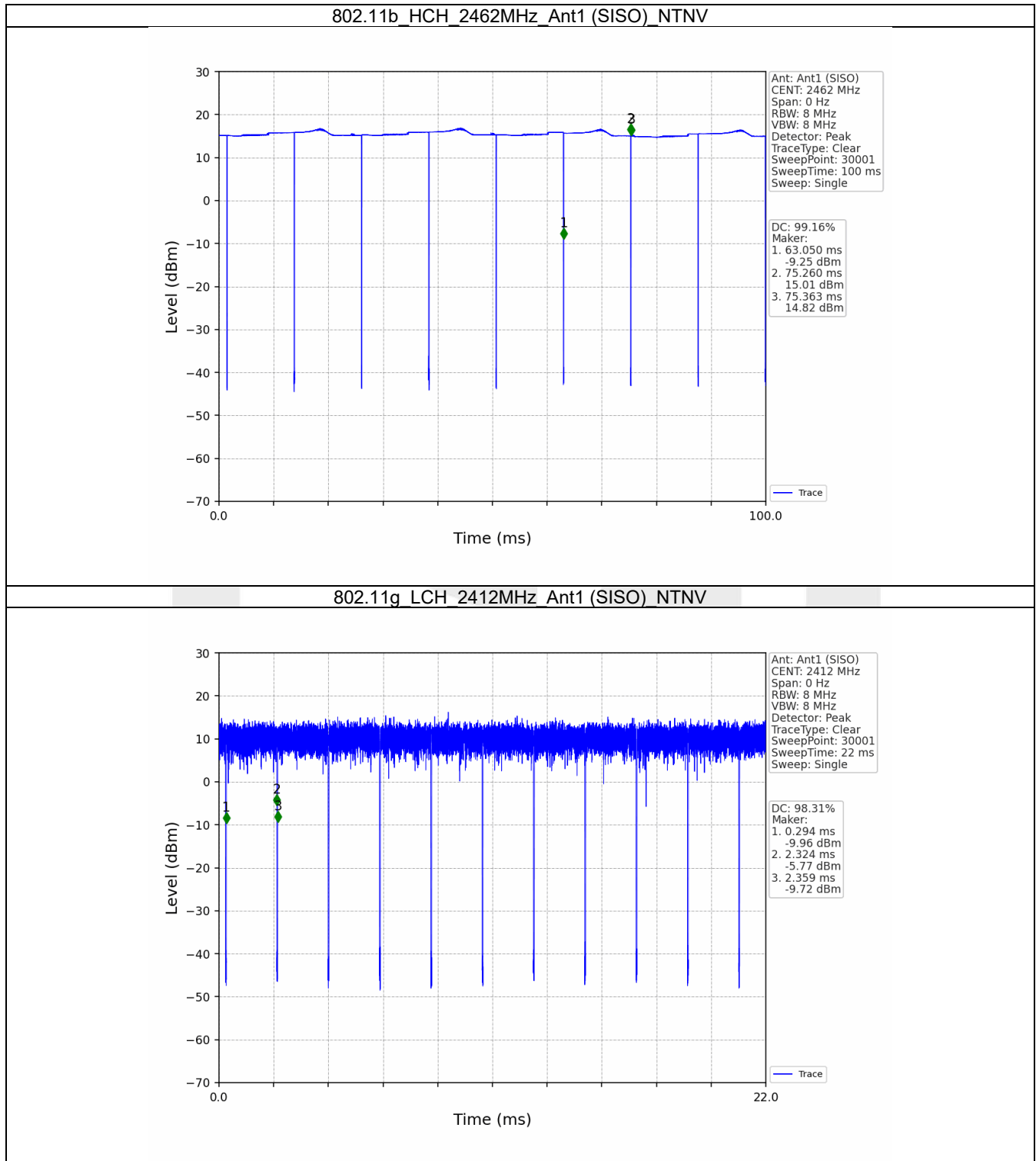
1.1 Ant1

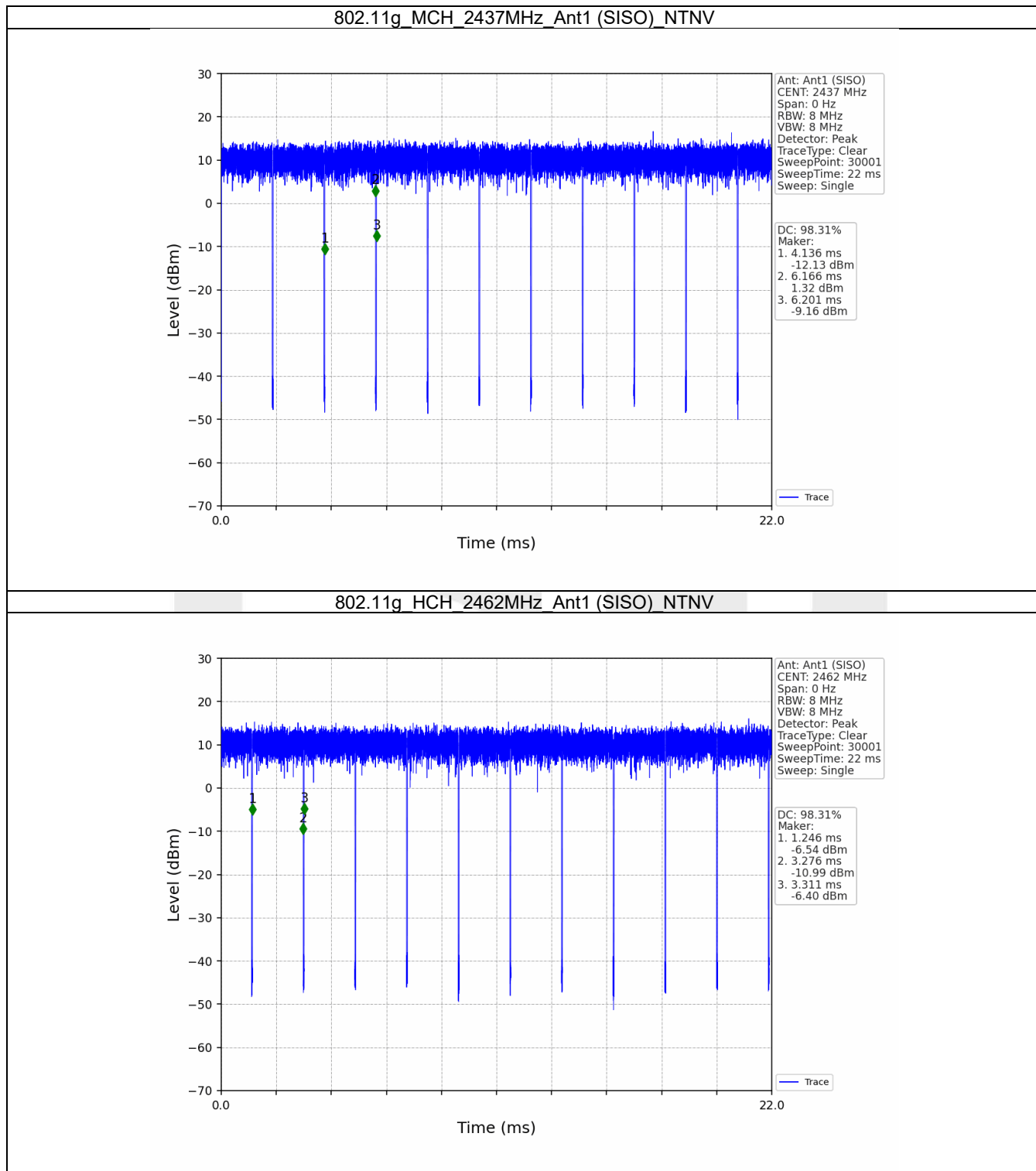
1.1.1 Test Result

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	12.210	12.310	99.19	0.04	0.05
		2437	12.210	12.310	99.19	0.04	0.05
		2462	12.210	12.313	99.16	0.04	0.08
802.11g	SISO	2412	2.030	2.065	98.31	0.07	0.04
		2437	2.030	2.065	98.31	0.07	0.04
		2462	2.030	2.065	98.31	0.07	0.04

1.1.2 Test Graph







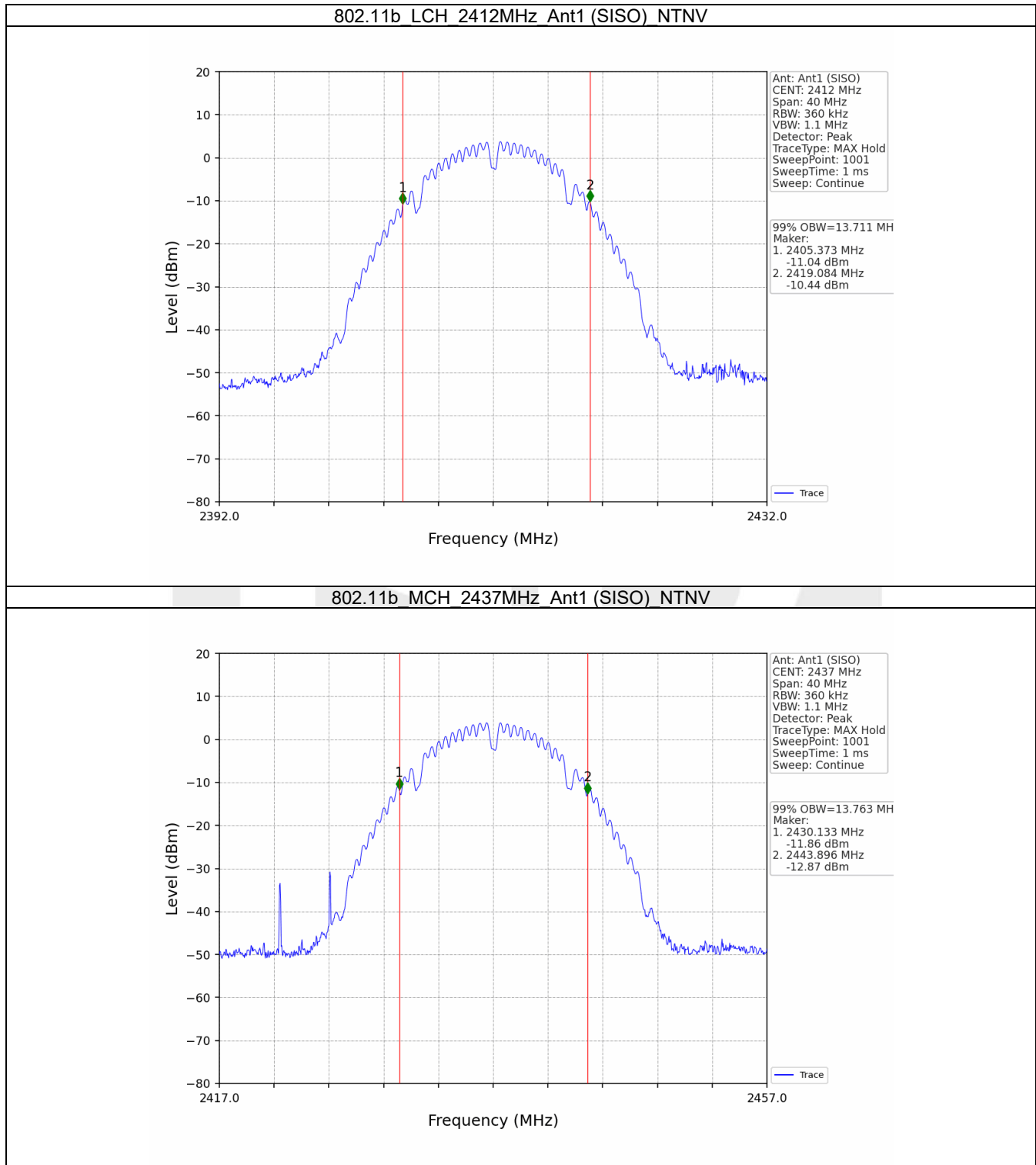
2. Bandwidth

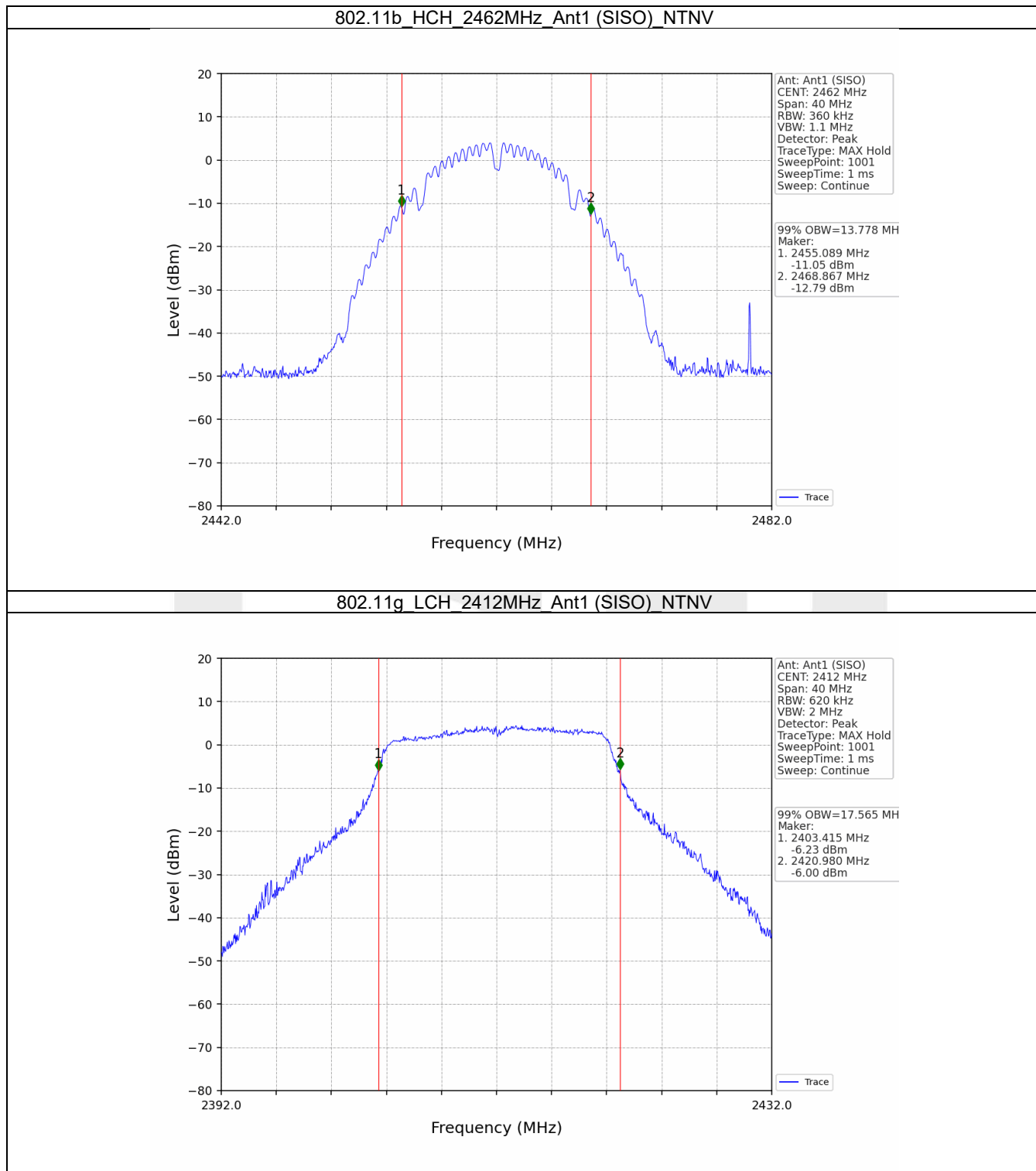
2.1 OBW

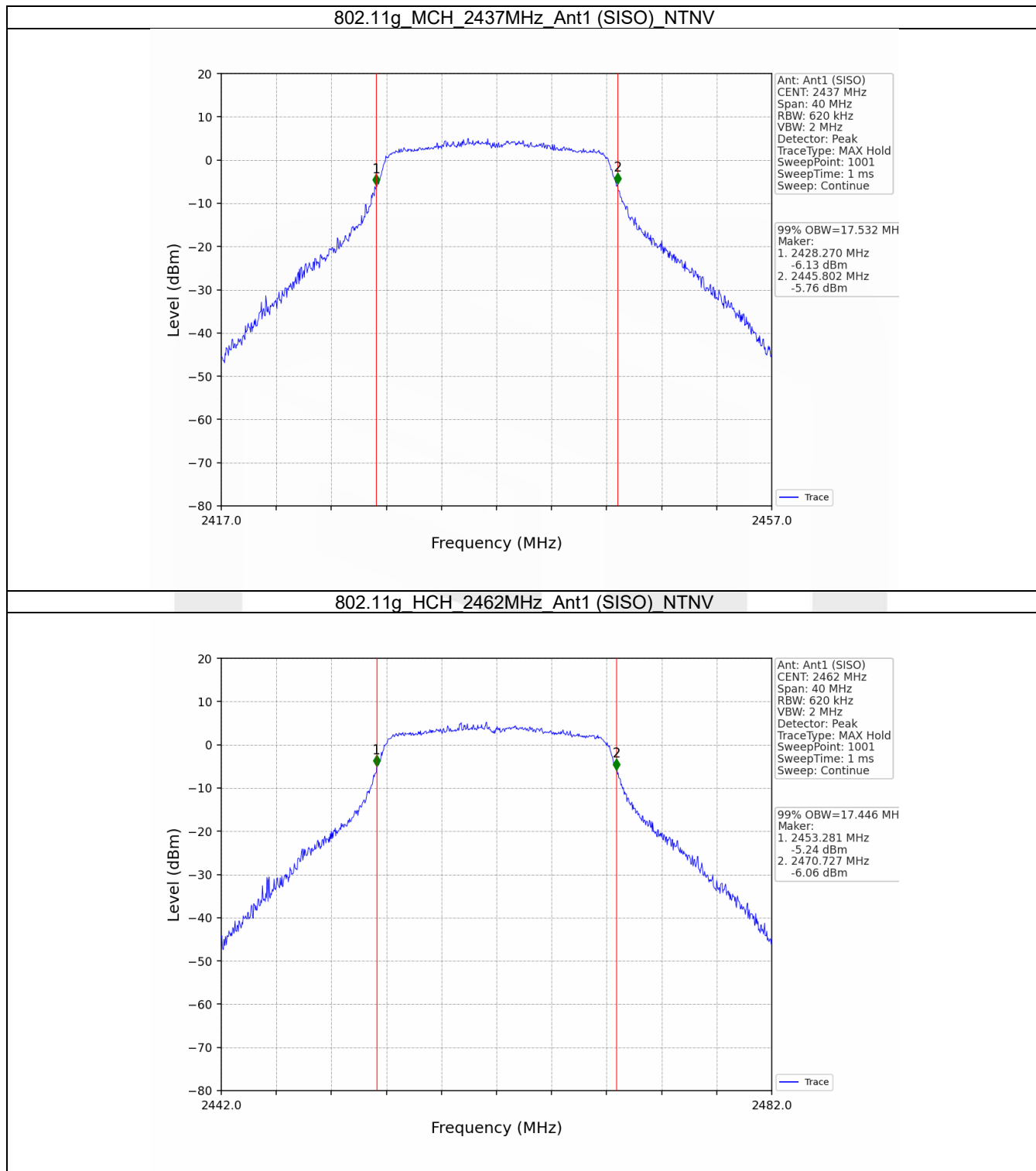
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
802.11b	SISO	2412	1	13.711	Pass
		2437	1	13.763	Pass
		2462	1	13.778	Pass
802.11g	SISO	2412	1	17.565	Pass
		2437	1	17.532	Pass
		2462	1	17.446	Pass

2.1.2 Test Graph





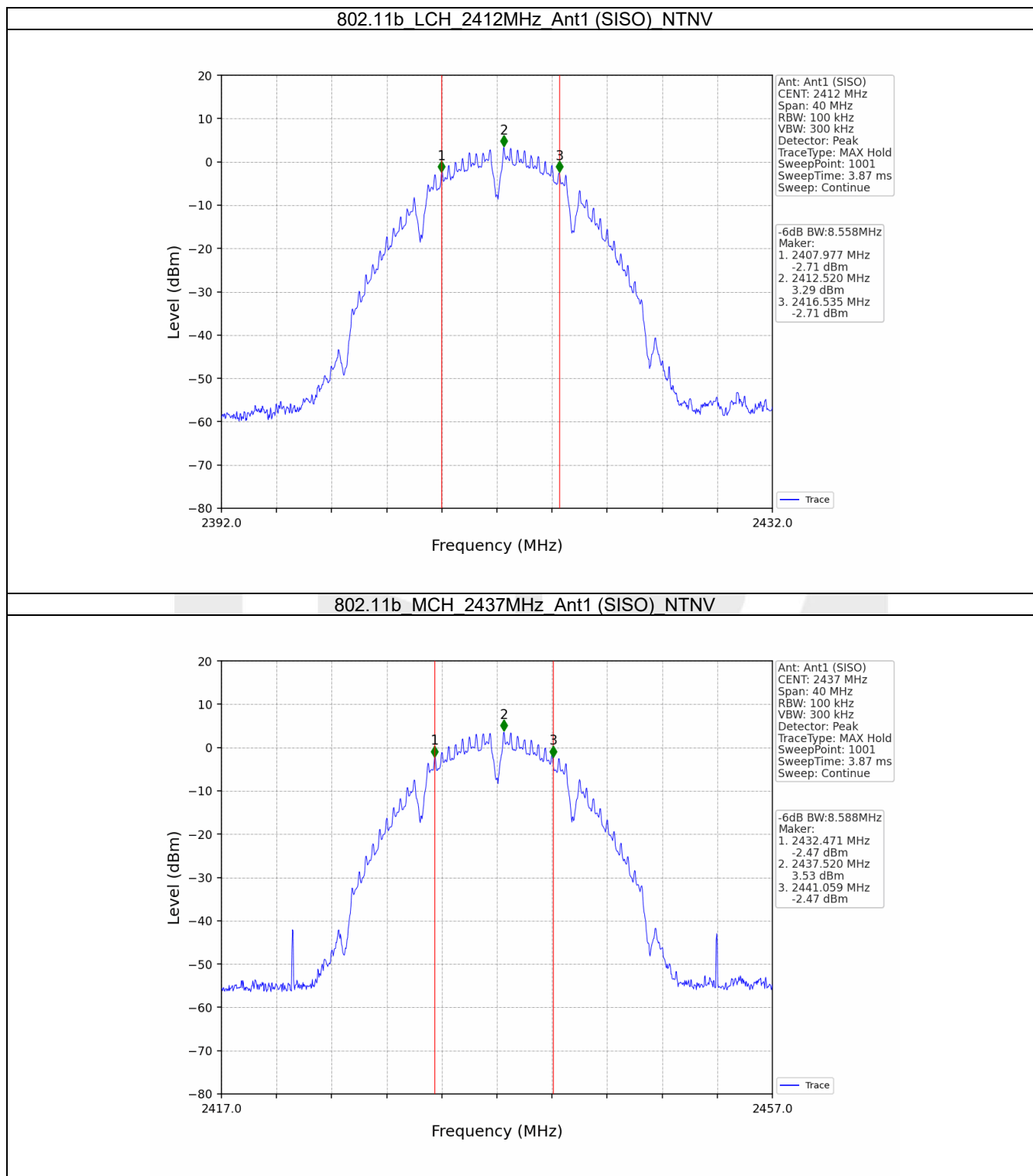


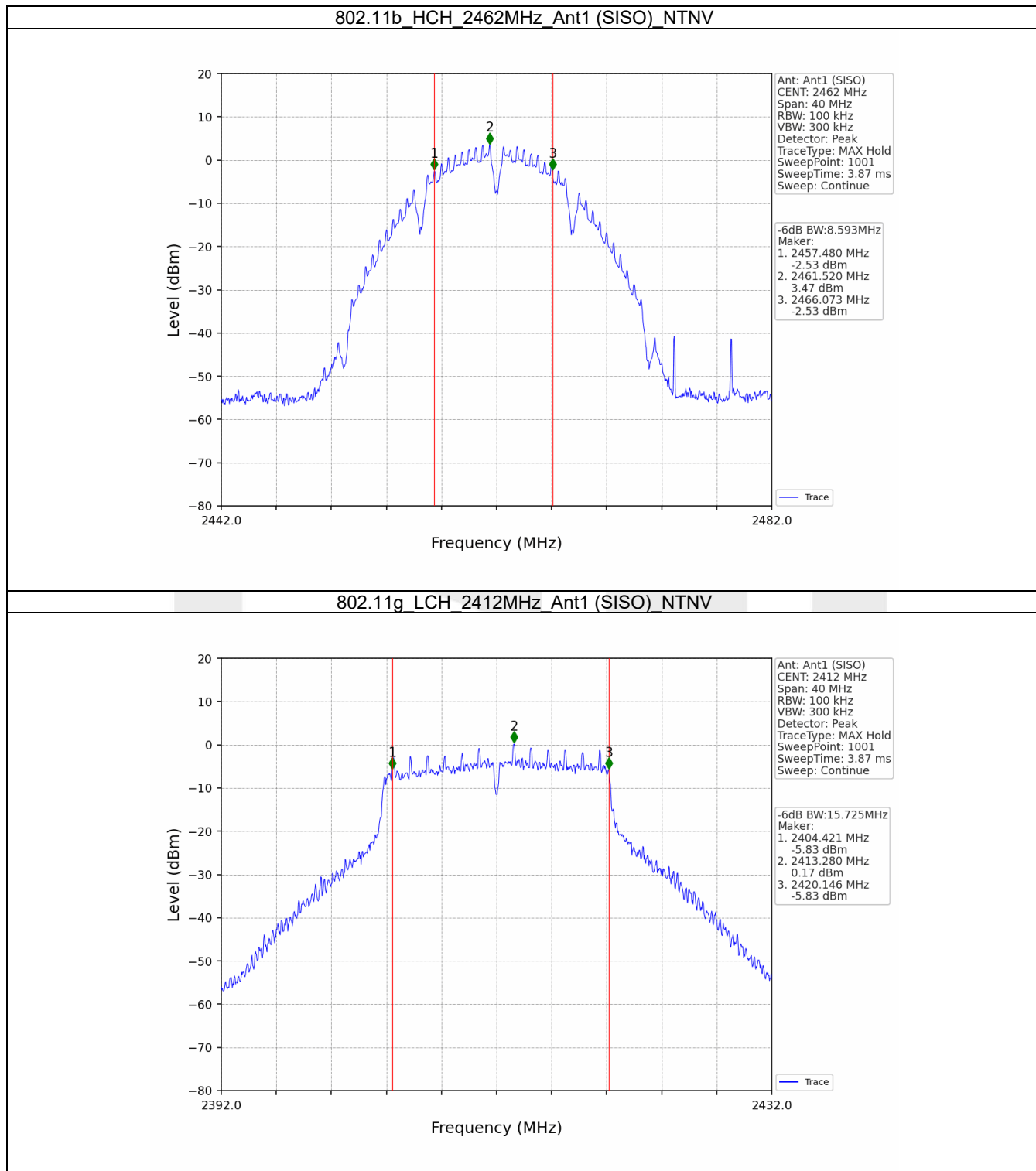
2.2 6dB BW

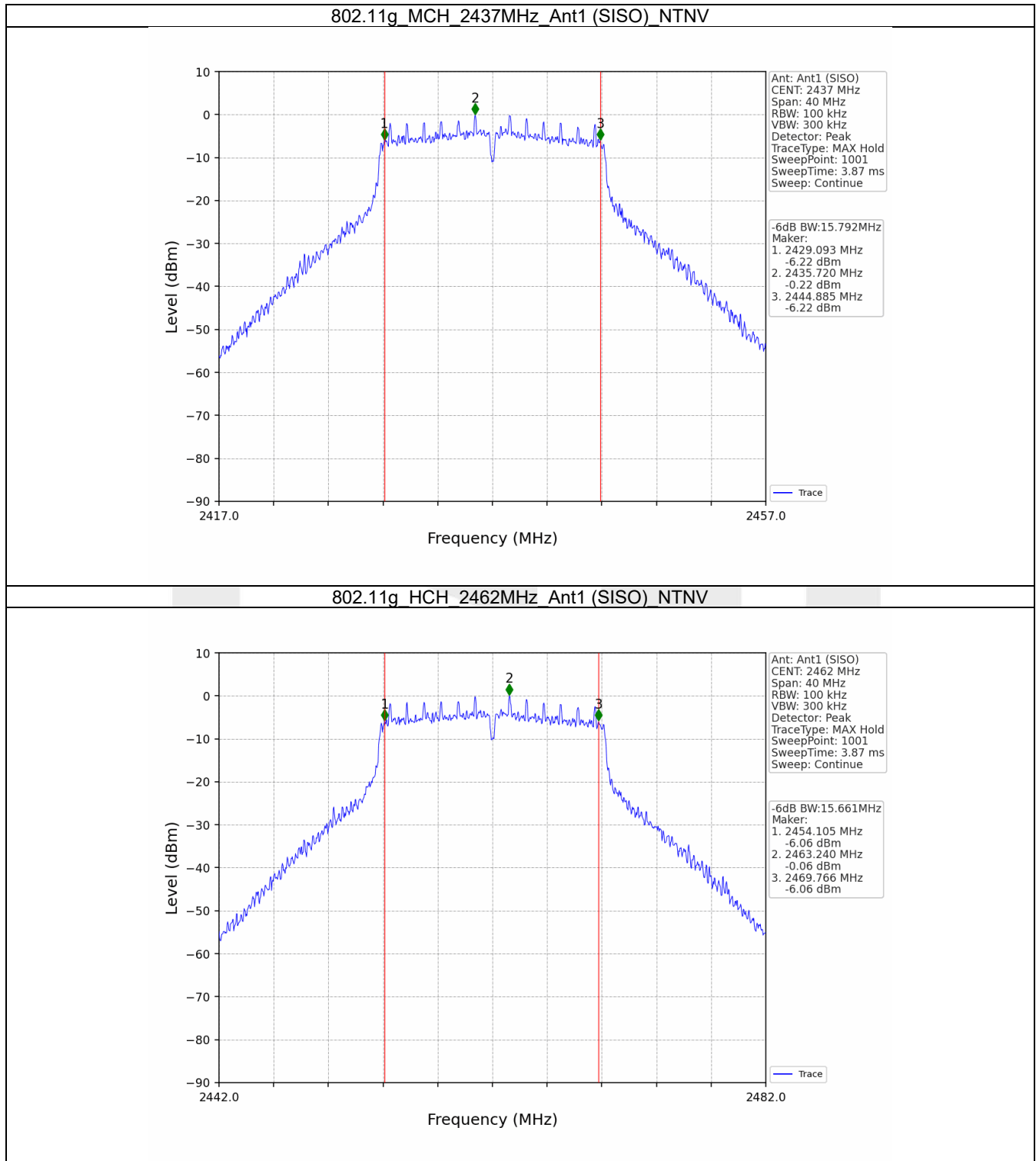
2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.558	≥ 0.5	Pass
		2437	1	8.588	≥ 0.5	Pass
		2462	1	8.593	≥ 0.5	Pass
802.11g	SISO	2412	1	15.725	≥ 0.5	Pass
		2437	1	15.792	≥ 0.5	Pass
		2462	1	15.661	≥ 0.5	Pass

2.2.2 Test Graph







3. Maximum Conducted Output Power

3.1 Power

3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	13.99	<=30	Pass
		2437	14.17	<=30	Pass
		2462	14.41	<=30	Pass
802.11g	SISO	2412	17.18	<=30	Pass
		2437	17.25	<=30	Pass
		2462	17.38	<=30	Pass

Note1: Antenna Gain: Ant1: 2.47dBi;

4. Maximum Power Spectral Density

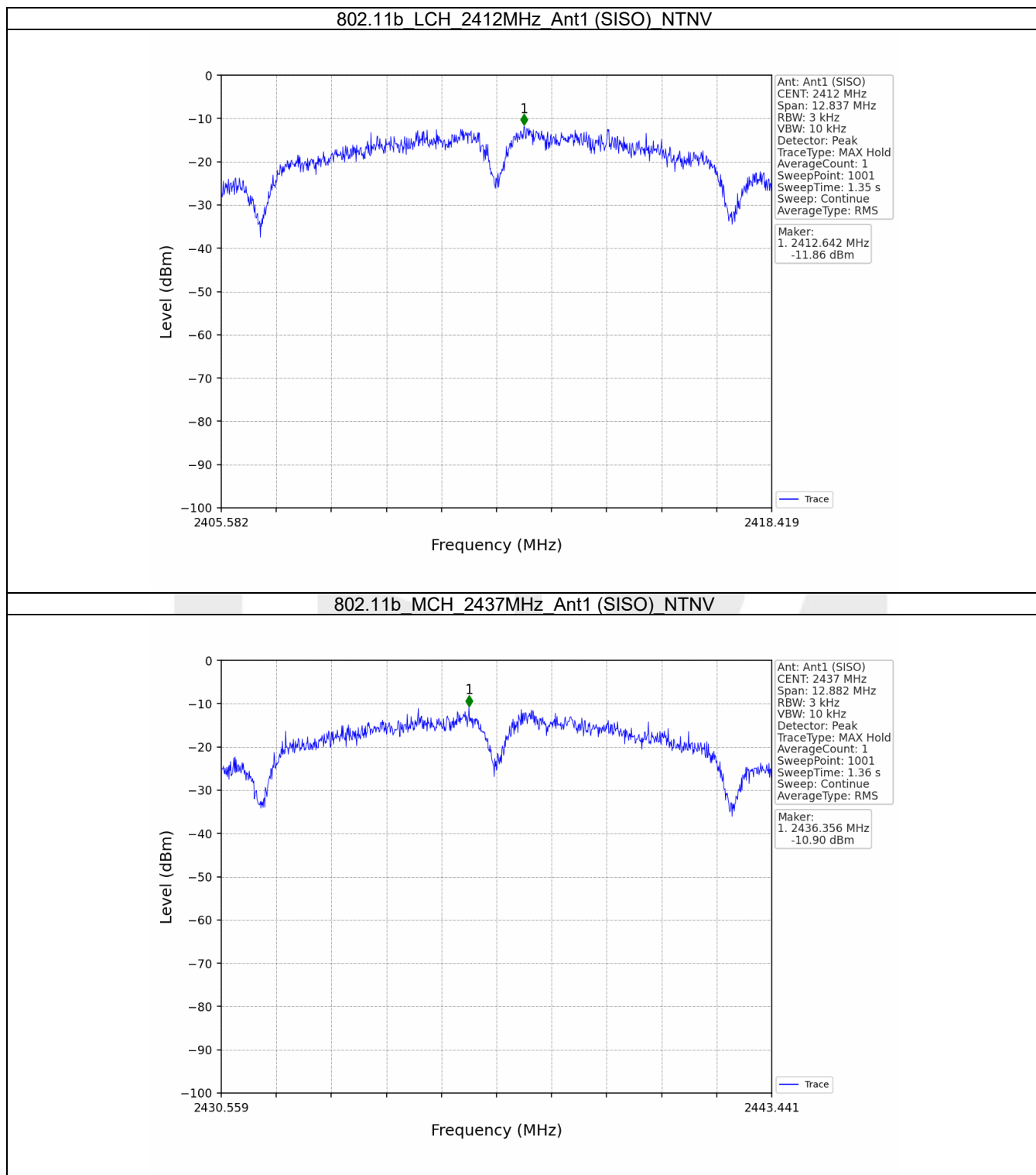
4.1 PSD

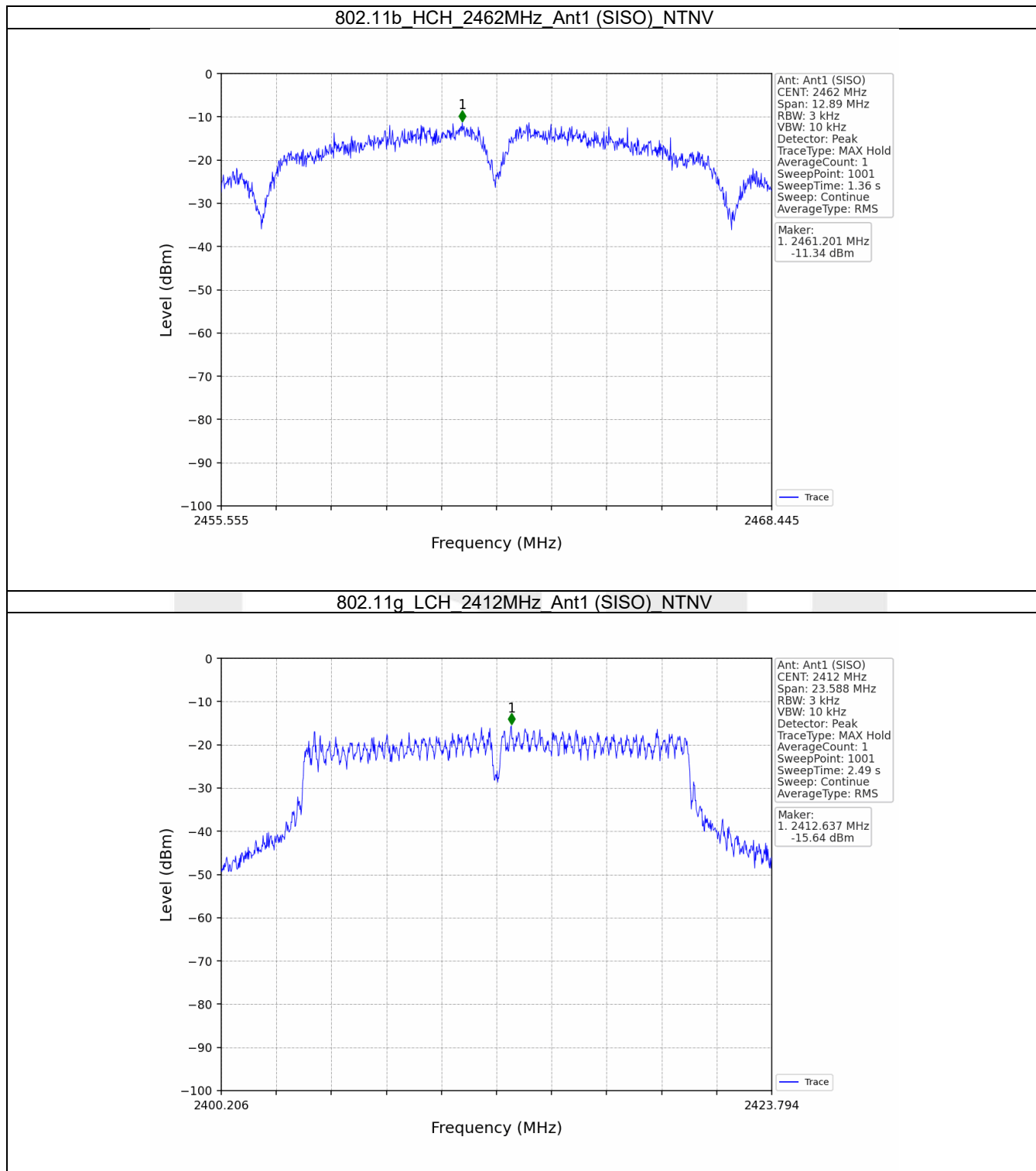
4.1.1 Test Result

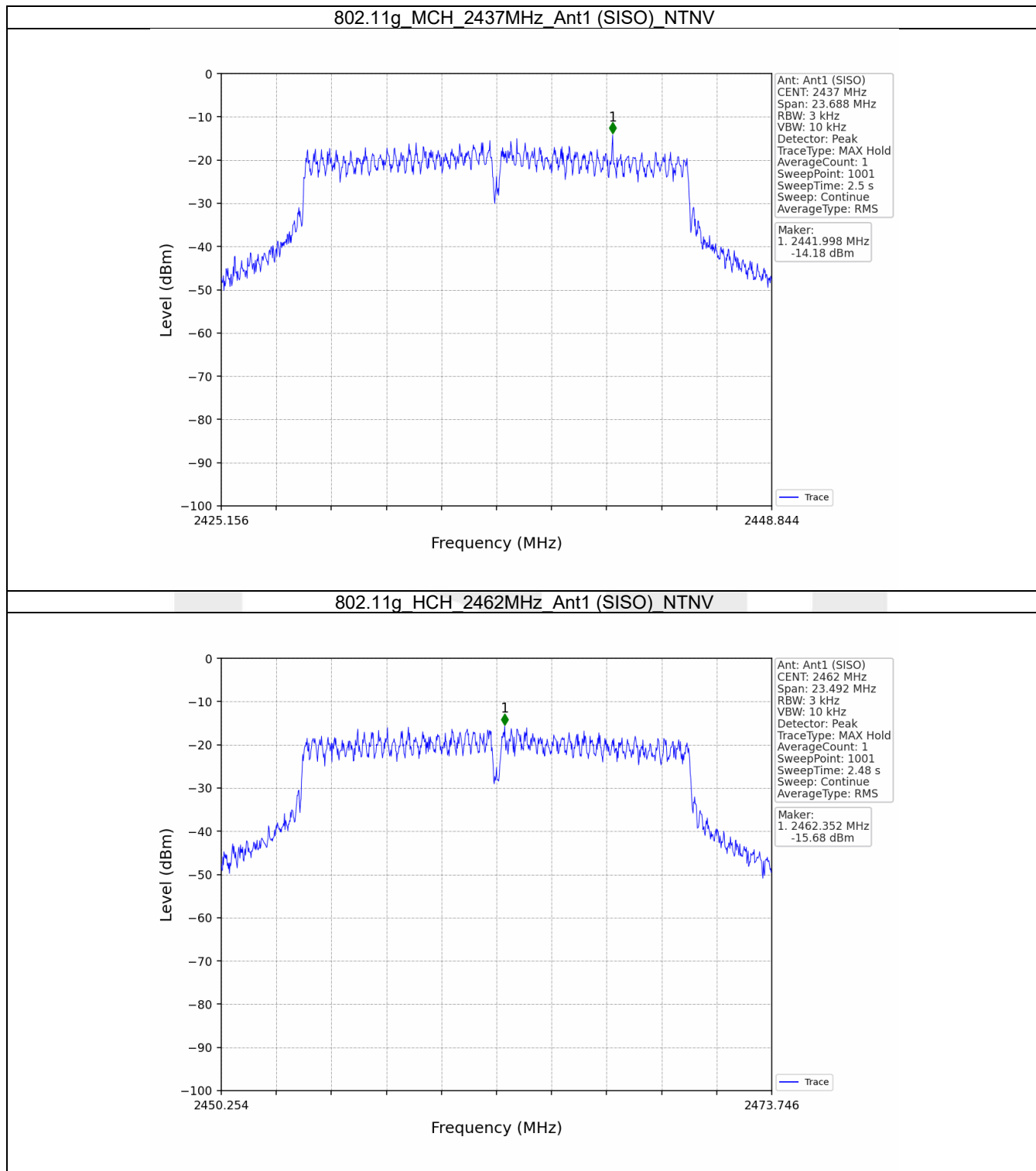
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-11.86	<=8	Pass
		2437	-10.90	<=8	Pass
		2462	-11.34	<=8	Pass
802.11g	SISO	2412	-15.64	<=8	Pass
		2437	-14.18	<=8	Pass
		2462	-15.68	<=8	Pass

Note1: Antenna Gain: Ant1: 2.47dBi;

4.1.2 Test Graph







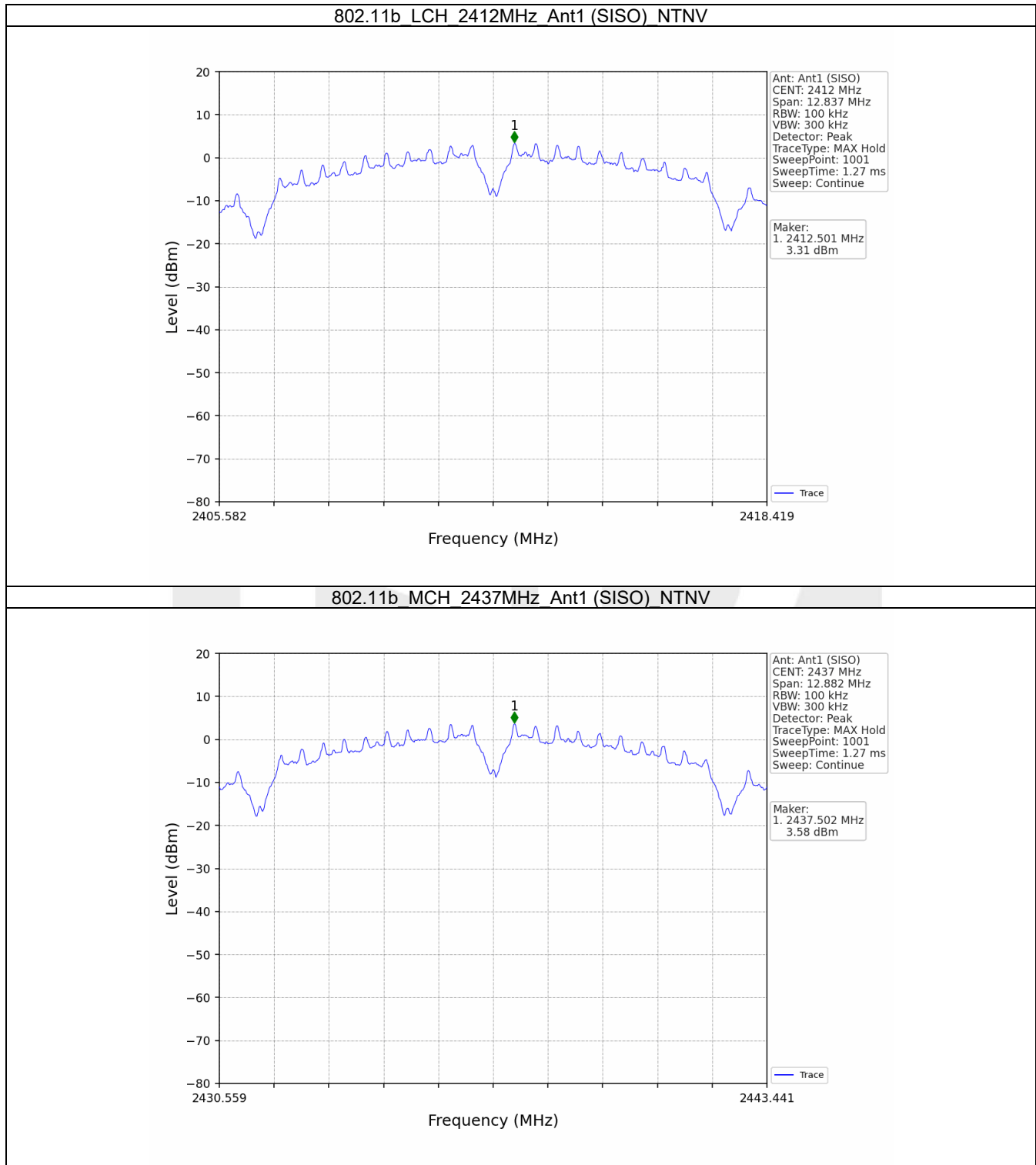
5. Unwanted Emissions In Non-restricted Frequency Bands

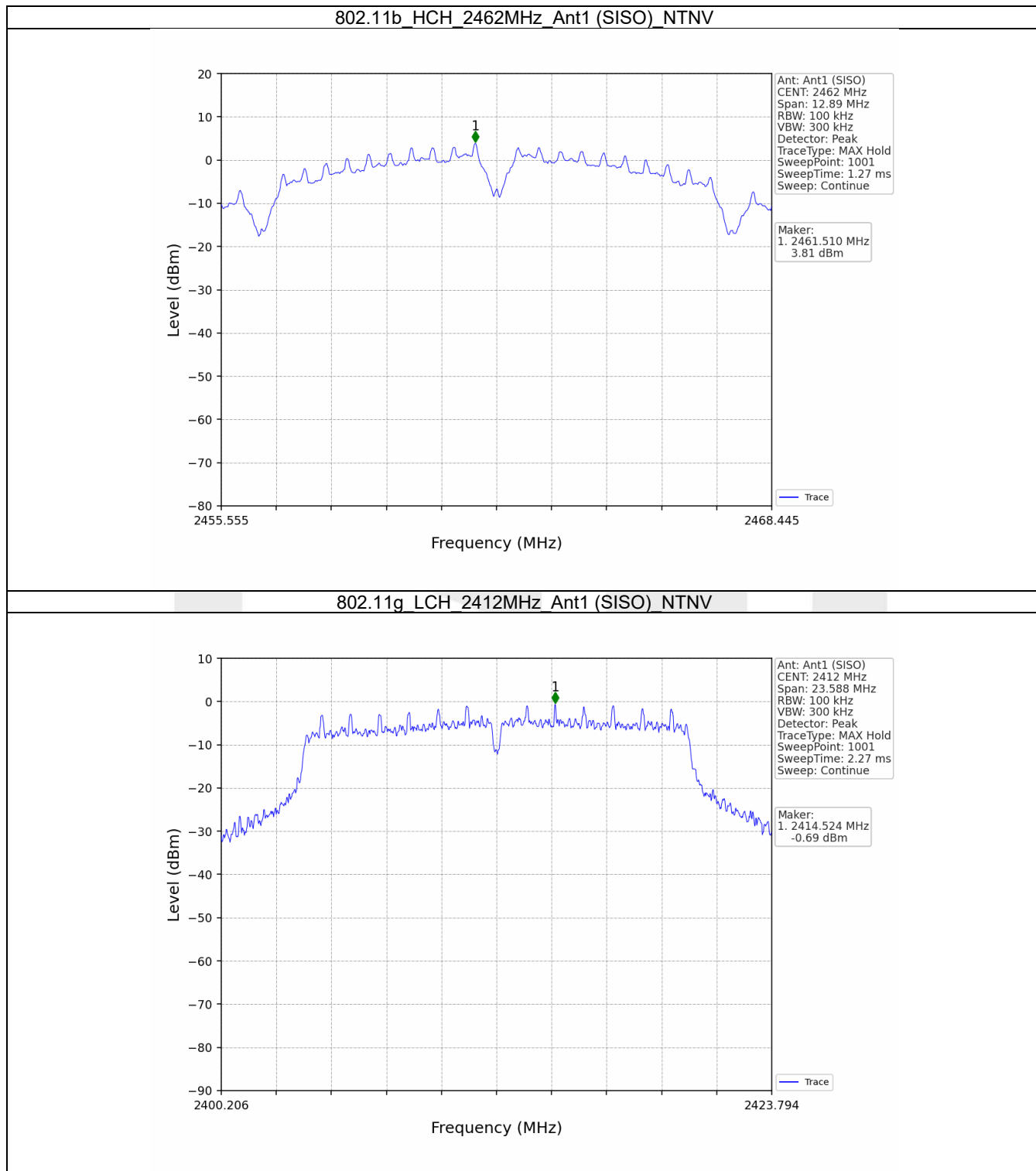
5.1 Ref

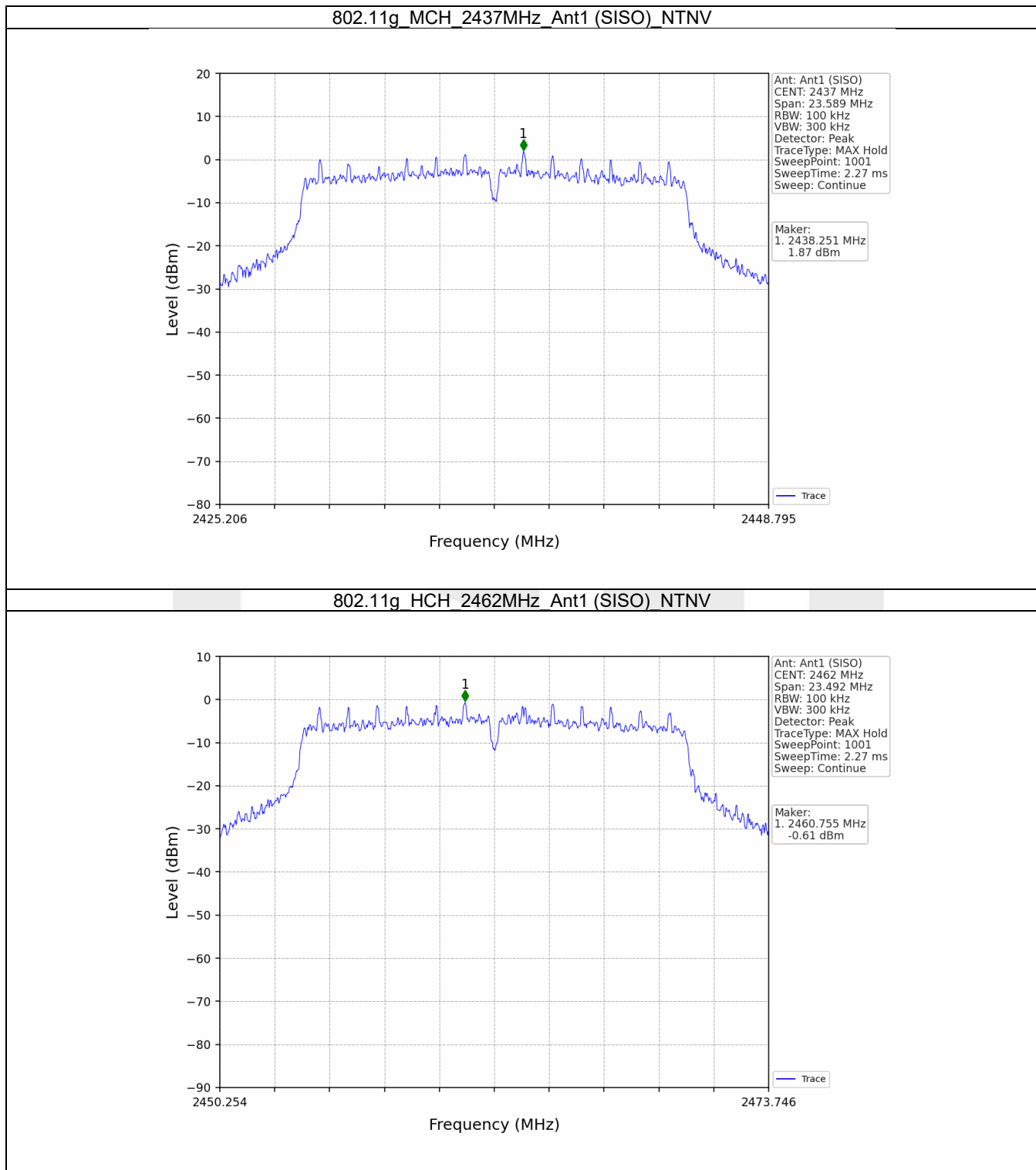
5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	3.31
		2437	1	3.58
		2462	1	3.81
802.11g	SISO	2412	1	-0.69
		2437	1	1.87
		2462	1	-0.61
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 Test Graph





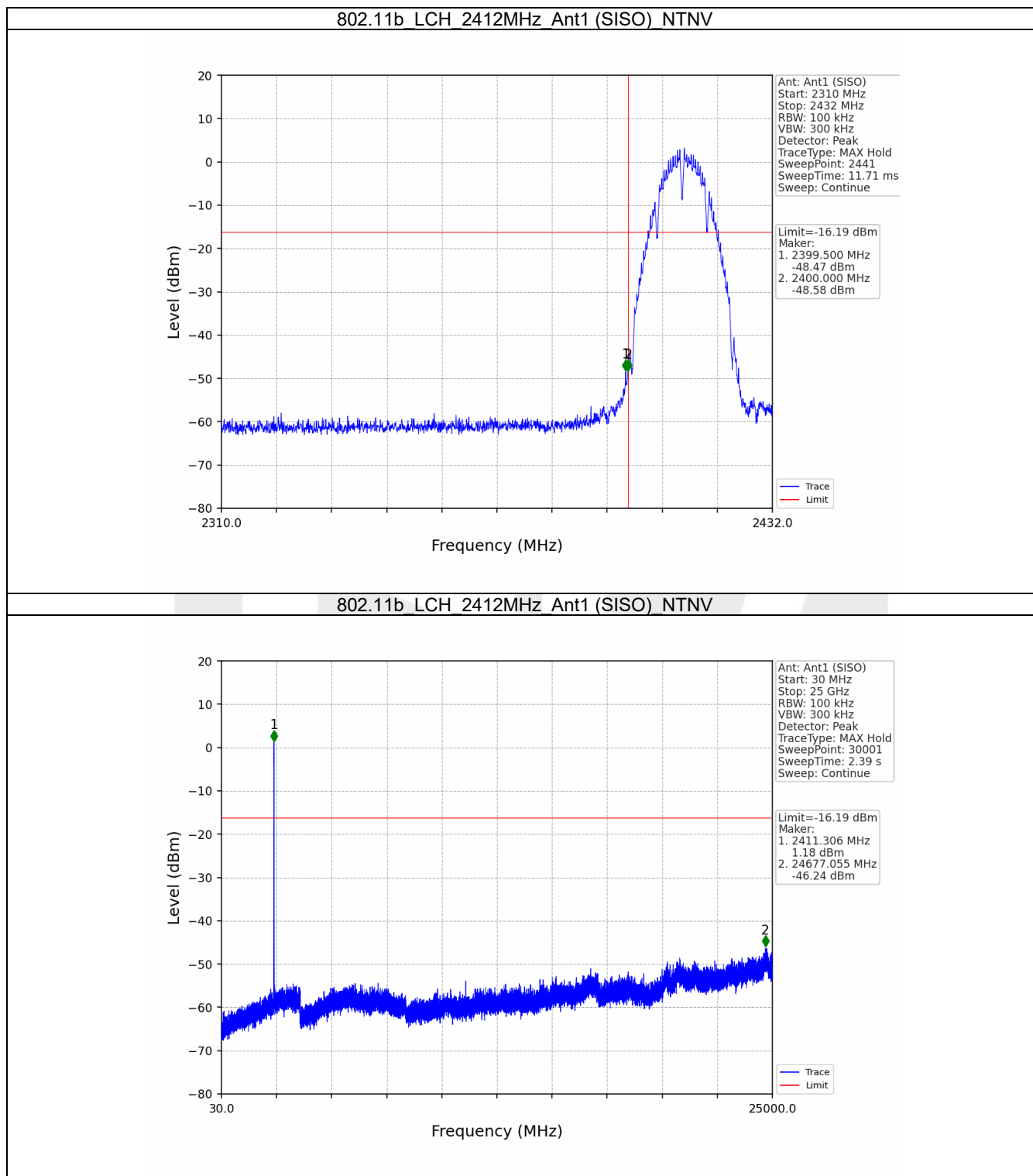


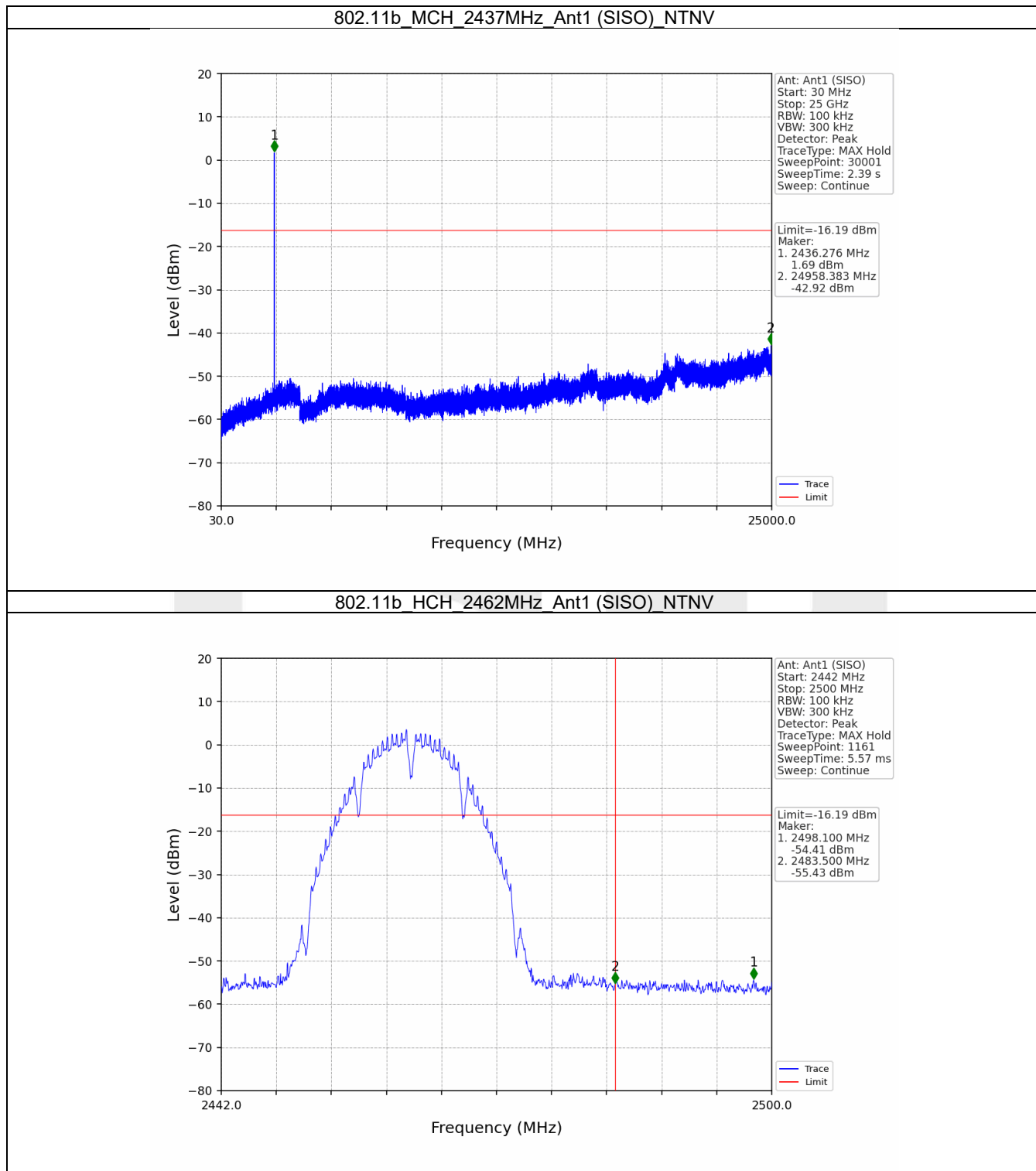
5.2 CSE

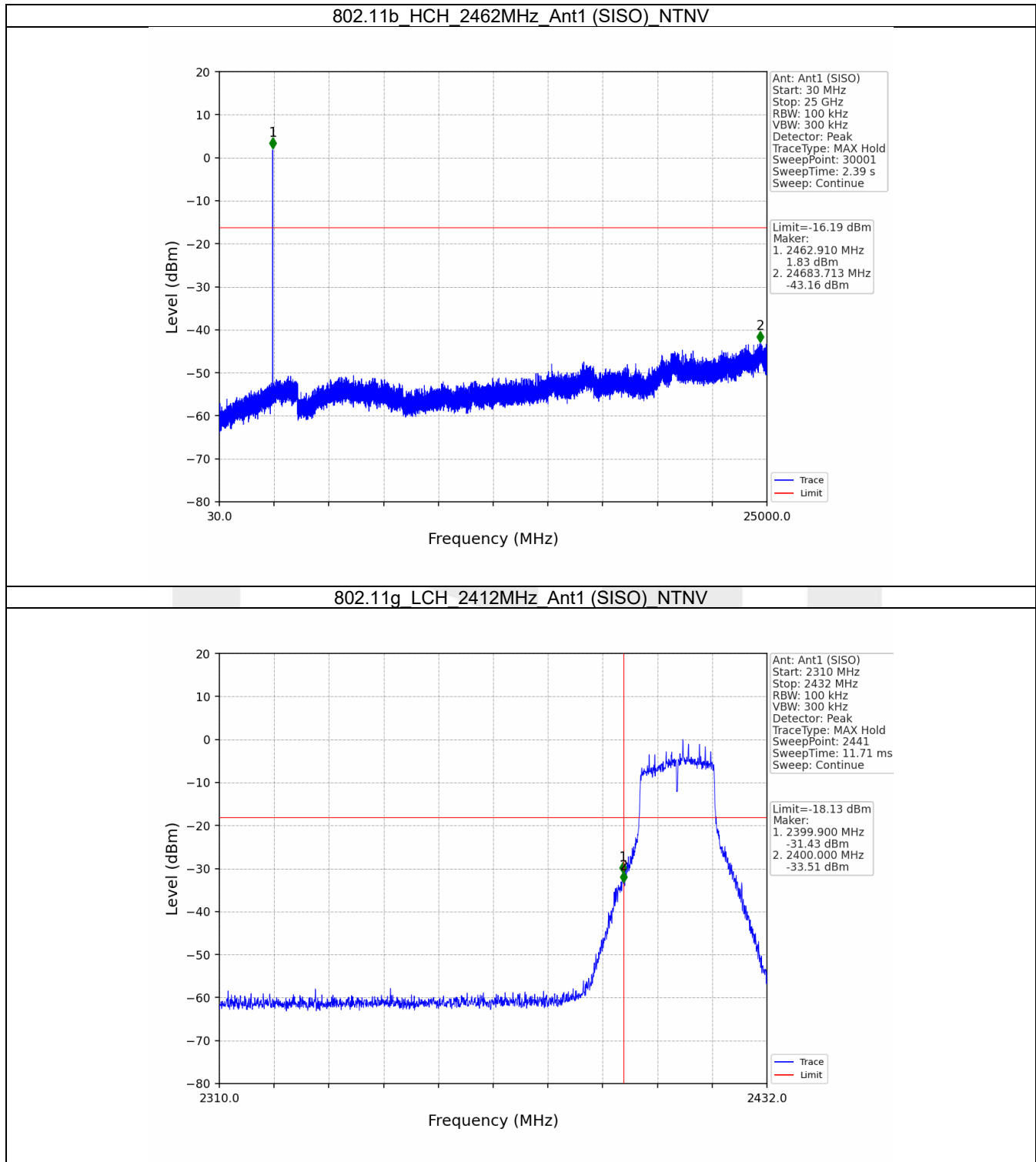
5.2.1 Test Result

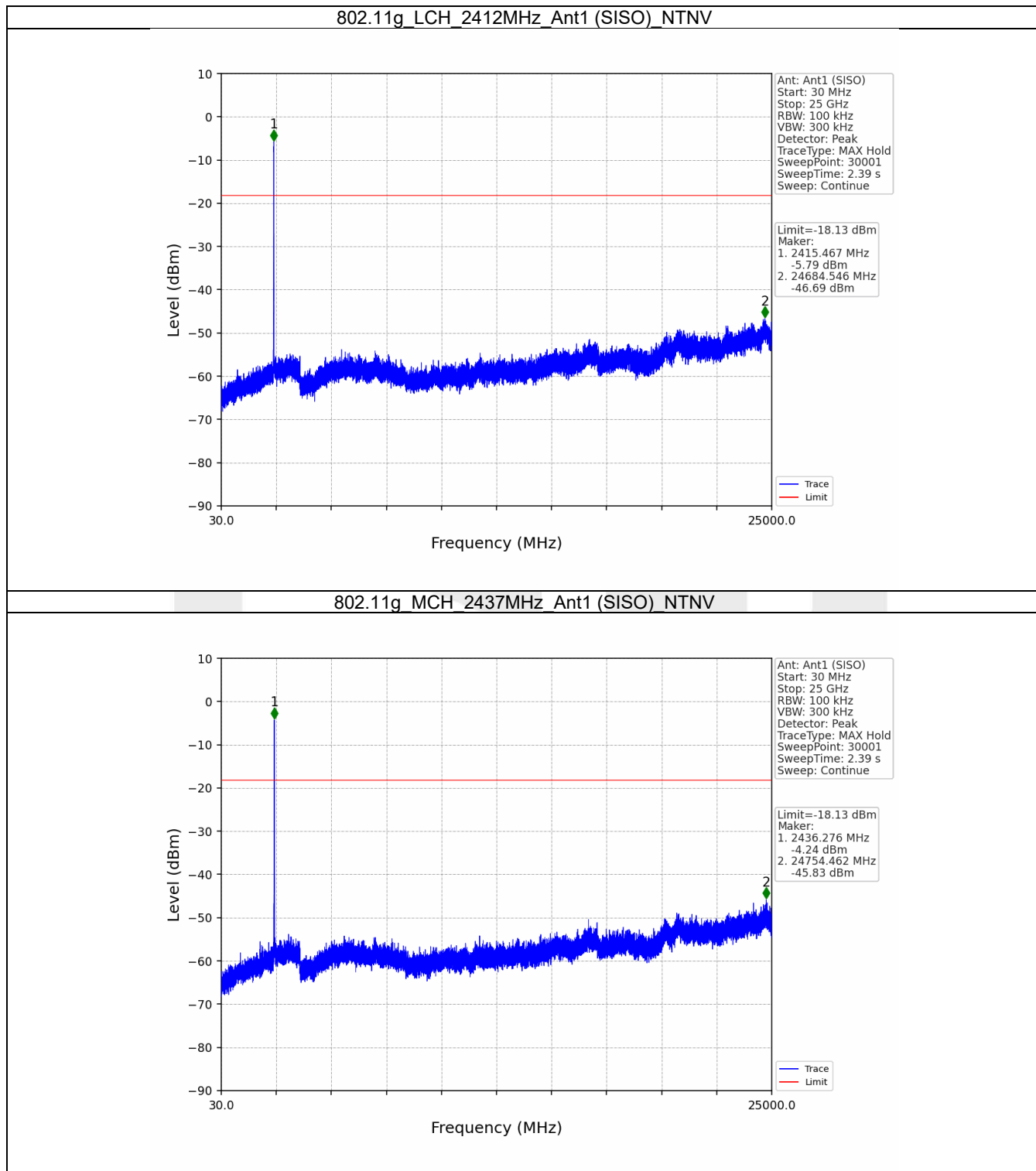
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	3.81	-16.19	Pass
		2437	1	3.81	-16.19	Pass
		2462	1	3.81	-16.19	Pass
802.11g	SISO	2412	1	1.87	-18.13	Pass
		2437	1	1.87	-18.13	Pass
		2462	1	1.87	-18.13	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.						

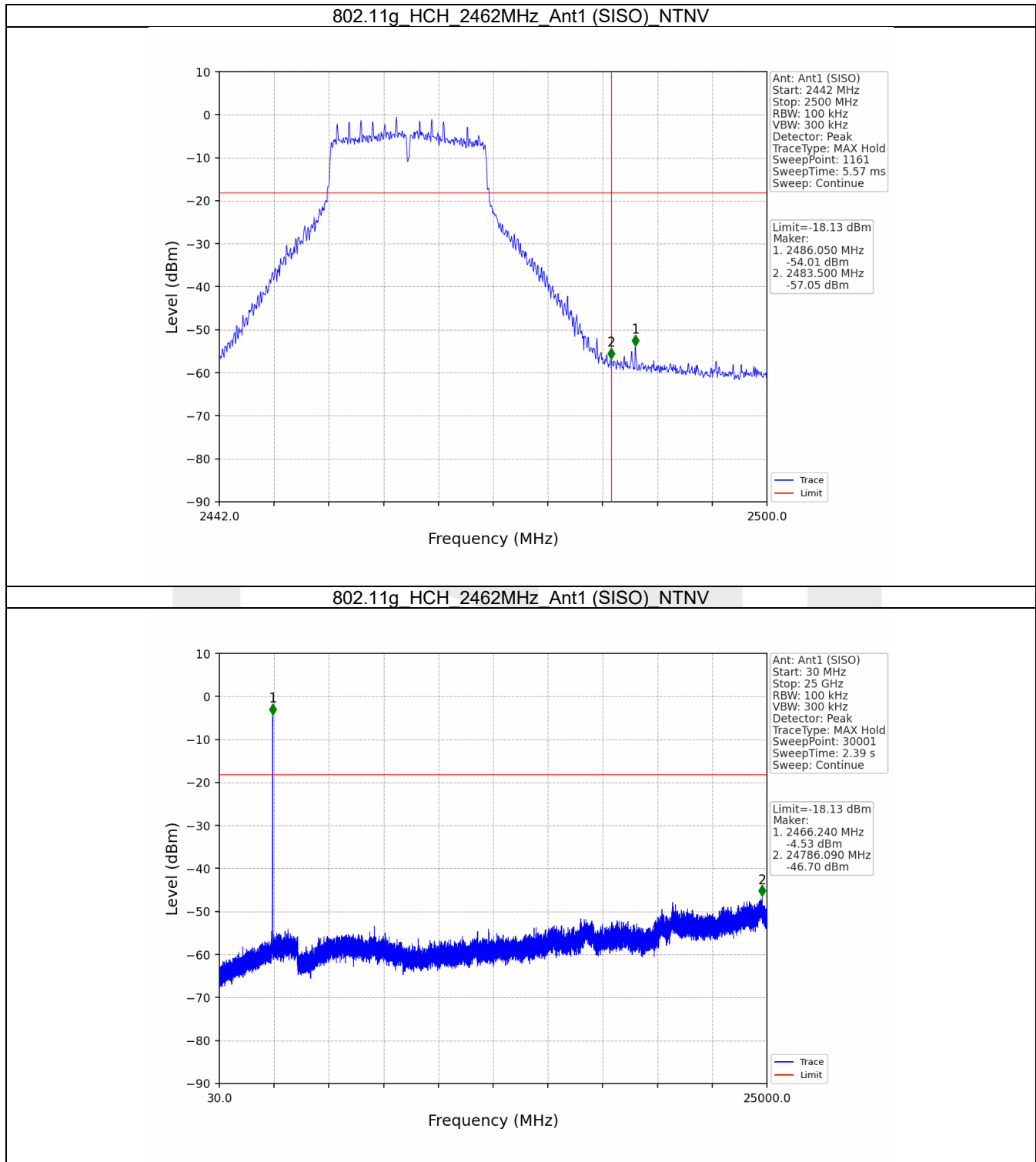
5.2.2 Test Graph











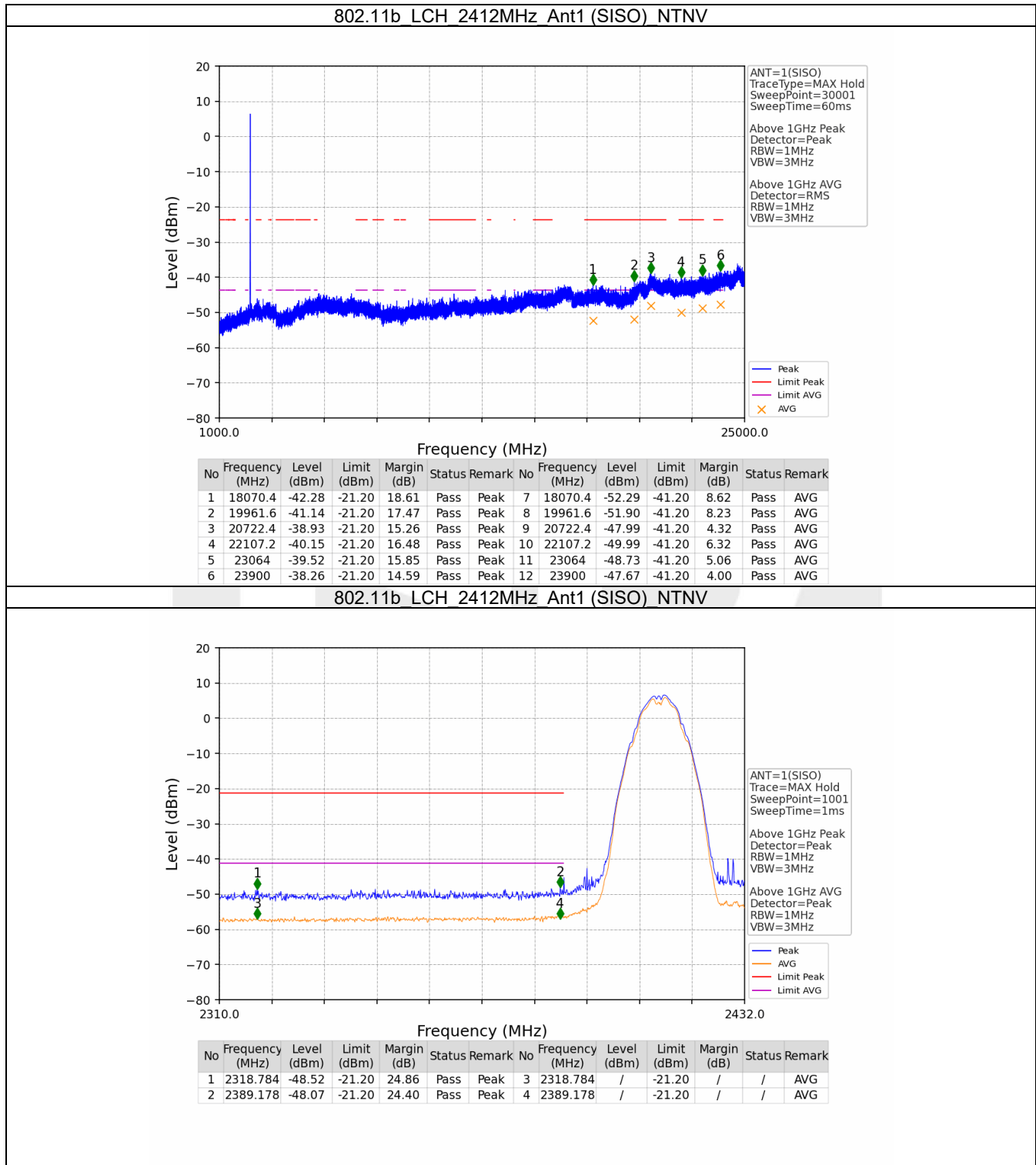
6. Unwanted Emissions In Restricted Frequency Bands

6.1 RSE

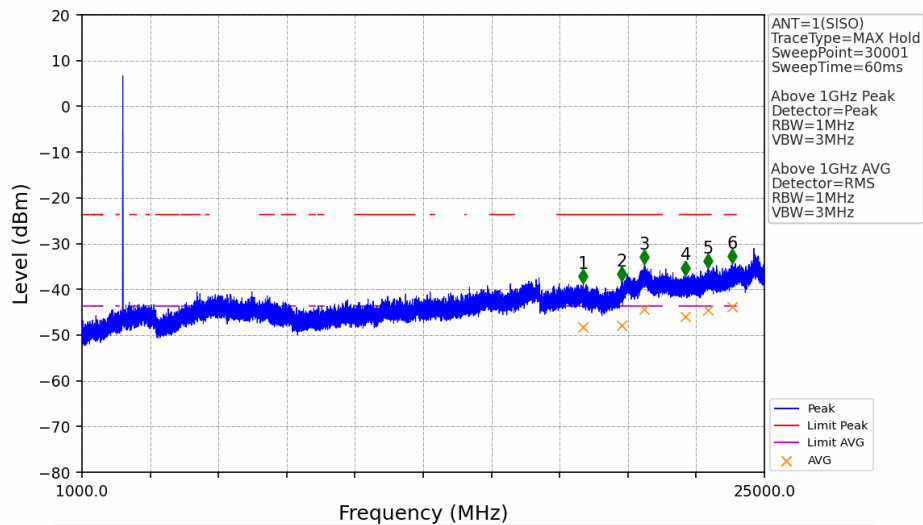
6.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Unwanted Emissions (dBm)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	Refer To Test Graph		Pass
		2437	1	Refer To Test Graph		Pass
		2462	1	Refer To Test Graph		Pass
802.11g	SISO	2412	1	Refer To Test Graph		Pass
		2437	1	Refer To Test Graph		Pass
		2462	1	Refer To Test Graph		Pass

6.1.2 Test Graph

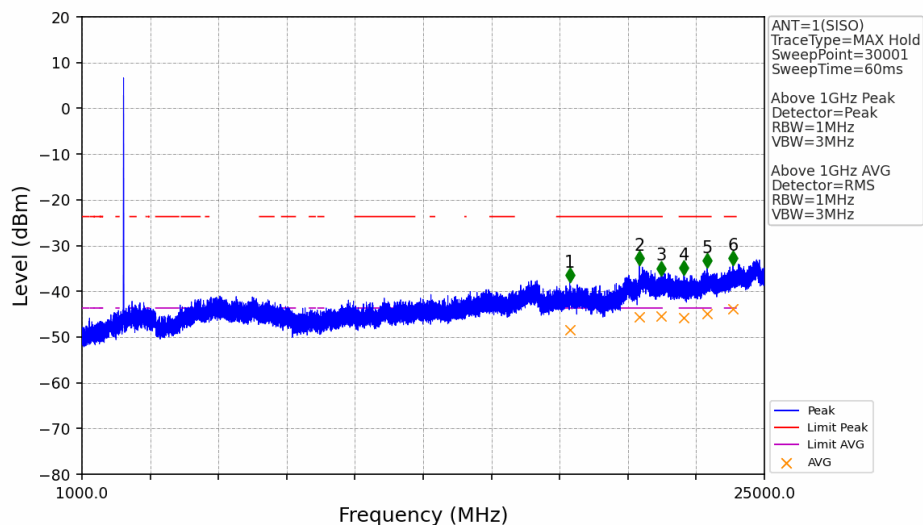


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



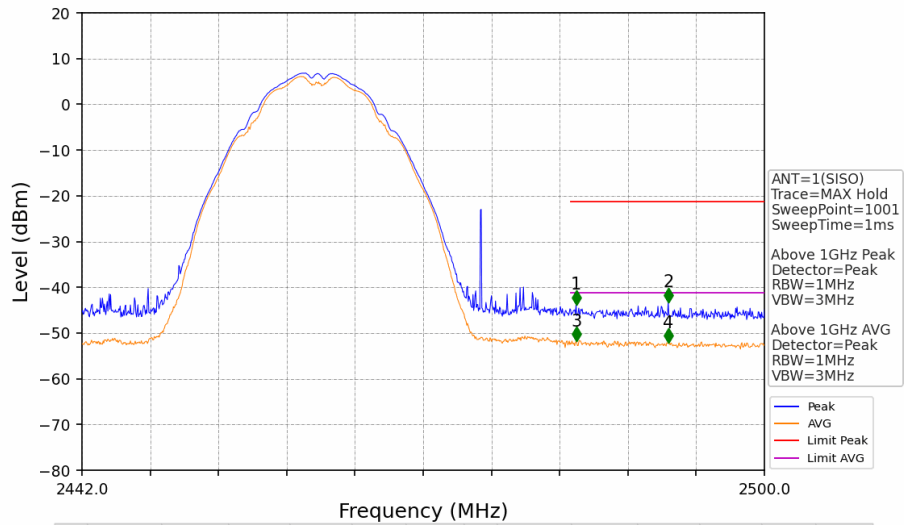
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	18628.8	-38.74	-21.20	15.07	Pass	Peak	7	18628.8	-48.32	-41.20	4.65	Pass	AVG
2	19981.6	-38.18	-21.20	14.51	Pass	Peak	8	19981.6	-47.95	-41.20	4.28	Pass	AVG
3	20781.6	-34.52	-21.20	10.86	Pass	Peak	9	20781.6	-44.36	-41.20	0.69	Pass	AVG
4	22231.2	-36.89	-21.20	13.22	Pass	Peak	10	22231.2	-45.94	-41.20	2.27	Pass	AVG
5	23019.2	-35.42	-21.20	11.75	Pass	Peak	11	23019.2	-44.62	-41.20	0.95	Pass	AVG
6	23874.4	-34.27	-21.20	10.60	Pass	Peak	12	23874.4	-43.80	-41.20	0.13	Pass	AVG

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



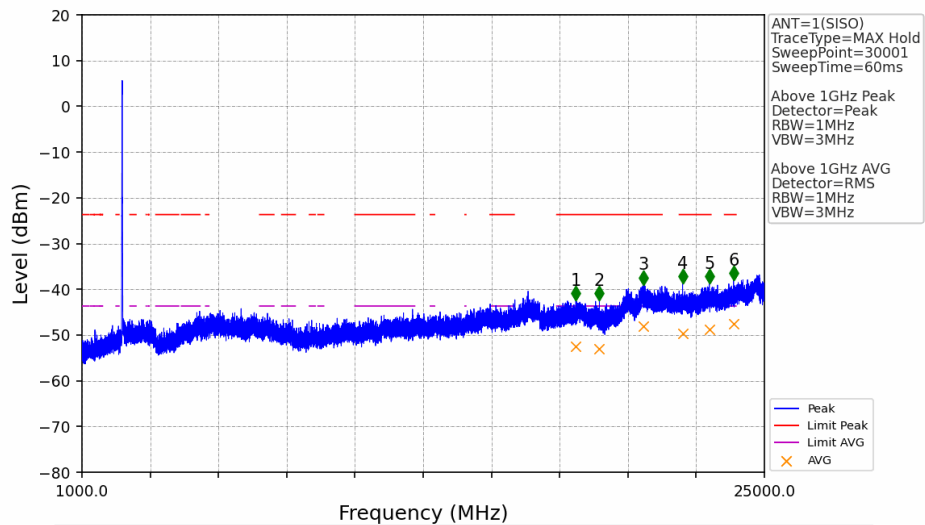
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	18152.8	-38.06	-21.20	14.39	Pass	Peak	7	18152.8	-48.36	-41.20	4.69	Pass	AVG
2	20605.6	-34.32	-21.20	10.65	Pass	Peak	8	20605.6	-45.63	-41.20	1.96	Pass	AVG
3	21366.4	-36.55	-21.20	12.88	Pass	Peak	9	21366.4	-45.47	-41.20	1.80	Pass	AVG
4	22167.2	-36.41	-21.20	12.74	Pass	Peak	10	22167.2	-45.82	-41.20	2.15	Pass	AVG
5	22977.6	-34.82	-21.20	11.15	Pass	Peak	11	22977.6	-44.88	-41.20	1.21	Pass	AVG
6	23894.4	-34.35	-21.20	10.68	Pass	Peak	12	23894.4	-43.77	-41.20	0.10	Pass	AVG

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



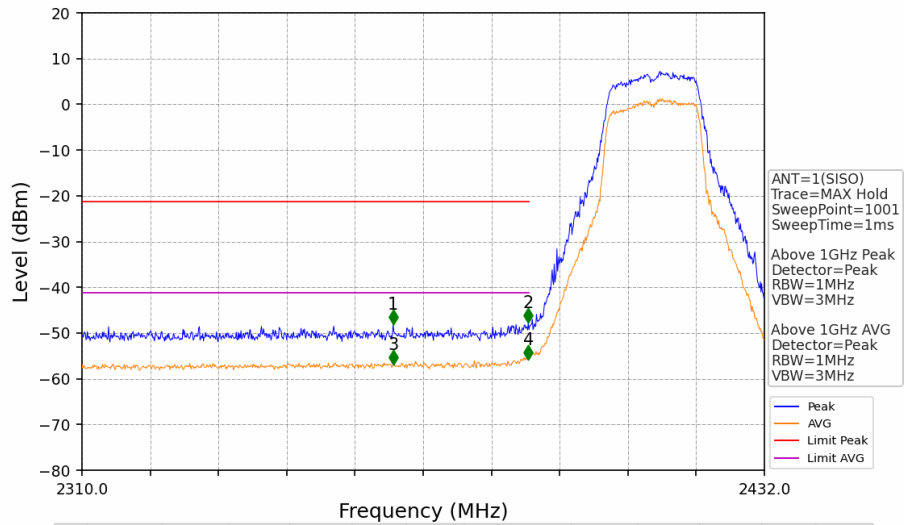
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2483.992	-43.78	-21.20	20.11	Pass	Peak	3	2483.992	/	-21.20	/	/	AVG
2	2491.822	-43.22	-21.20	19.55	Pass	Peak	4	2491.822	/	-21.20	/	/	AVG

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



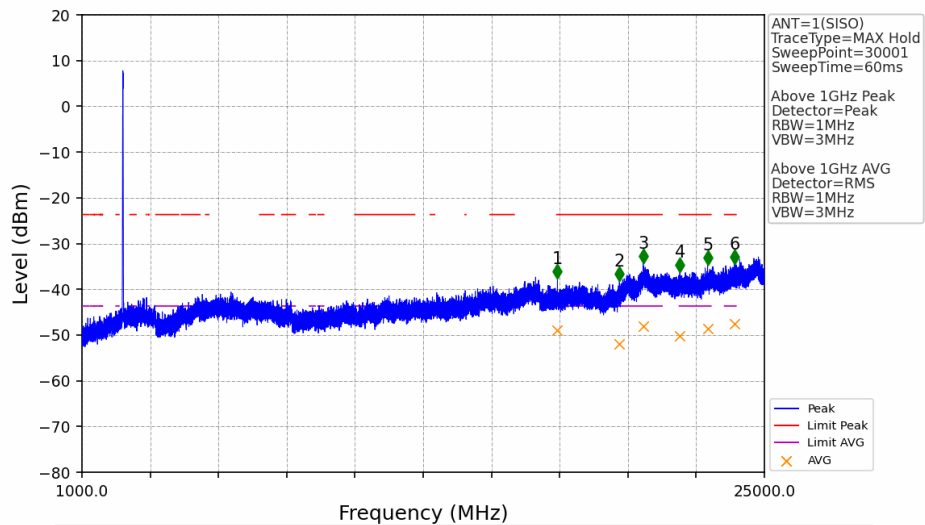
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	18369.6	-42.42	-21.20	18.75	Pass	Peak	7	18369.6	-52.40	-41.20	8.73	Pass	AVG
2	19197.6	-42.43	-21.20	18.76	Pass	Peak	8	19197.6	-53.01	-41.20	9.34	Pass	AVG
3	20747.2	-39.02	-21.20	15.35	Pass	Peak	9	20747.2	-48.16	-41.20	4.49	Pass	AVG
4	22122.4	-38.77	-21.20	15.10	Pass	Peak	10	22122.4	-49.66	-41.20	5.99	Pass	AVG
5	23062.4	-38.72	-21.20	15.05	Pass	Peak	11	23062.4	-48.76	-41.20	5.09	Pass	AVG
6	23913.6	-38.08	-21.20	14.40	Pass	Peak	12	23913.6	-47.59	-41.20	3.92	Pass	AVG

802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



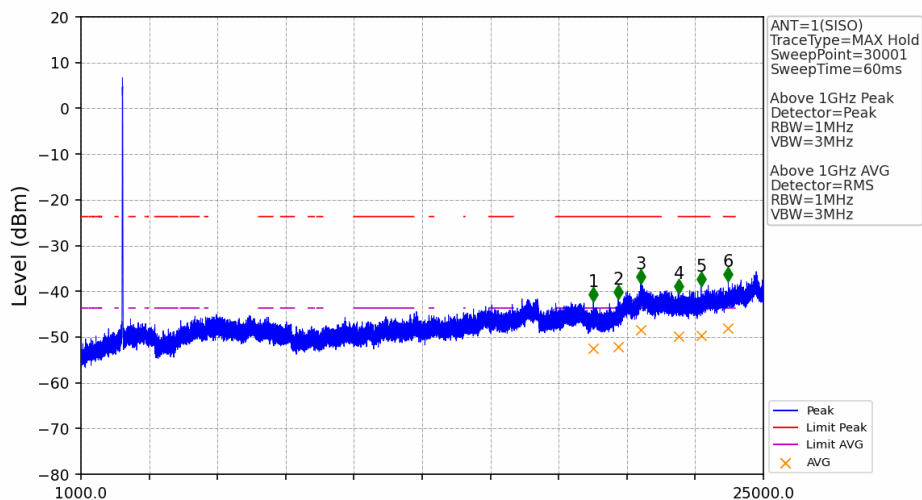
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2365.632	-48.04	-21.20	24.37	Pass	Peak	3	2365.632	/	-21.20	/	/	AVG
2	2389.788	-47.80	-21.20	24.13	Pass	Peak	4	2389.788	/	-21.20	/	/	AVG

802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



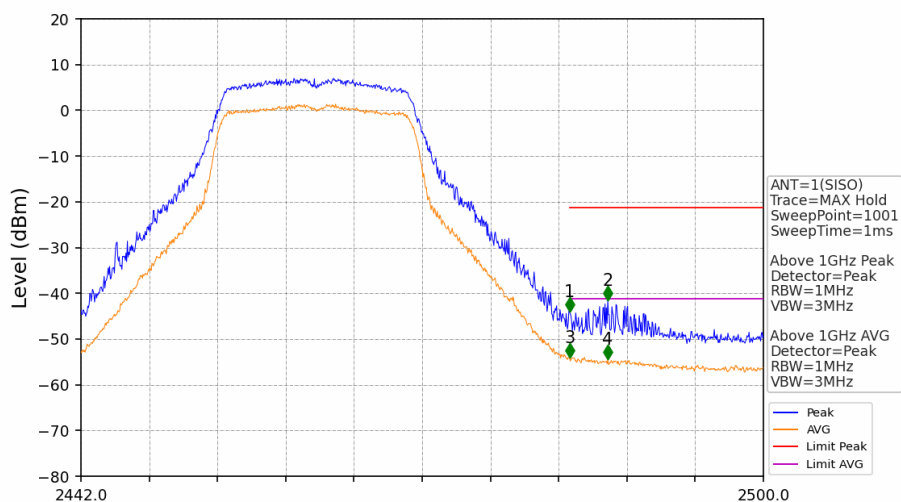
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	17723.2	-37.67	-21.20	14.00	Pass	Peak	7	17723.2	-48.87	-41.20	5.20	Pass	AVG
2	19901.6	-38.26	-21.20	14.59	Pass	Peak	8	19901.6	-52.04	-41.20	8.37	Pass	AVG
3	20734.4	-34.37	-21.20	10.70	Pass	Peak	9	20734.4	-48.16	-41.20	4.50	Pass	AVG
4	22026.4	-36.32	-21.20	12.65	Pass	Peak	10	22026.4	-50.11	-41.20	6.44	Pass	AVG
5	23001.6	-34.66	-21.20	10.99	Pass	Peak	11	23001.6	-48.59	-41.20	4.92	Pass	AVG
6	23952	-34.51	-21.20	10.84	Pass	Peak	12	23952	-47.60	-41.20	3.94	Pass	AVG

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	19020.8	-42.27	-21.20	18.60	Pass	Peak	7	19020.8	-52.49	-41.20	8.82	Pass	AVG
2	19895.2	-41.77	-21.20	18.10	Pass	Peak	8	19895.2	-52.15	-41.20	8.48	Pass	AVG
3	20685.6	-38.37	-21.20	14.70	Pass	Peak	9	20685.6	-48.35	-41.20	4.68	Pass	AVG
4	22031.2	-40.51	-21.20	16.84	Pass	Peak	10	22031.2	-49.80	-41.20	6.13	Pass	AVG
5	22809.6	-38.88	-21.20	15.21	Pass	Peak	11	22809.6	-49.62	-41.20	5.95	Pass	AVG
6	23765.6	-37.80	-21.20	14.13	Pass	Peak	12	23765.6	-48.12	-41.20	4.45	Pass	AVG

802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2483.528	-44.07	-21.20	20.40	Pass	Peak	3	2483.528	/	-21.20	/	/	AVG
2	2486.776	-41.59	-21.20	17.91	Pass	Peak	4	2486.776	/	-21.20	/	/	AVG

----- End of Report -----