

ANNEX D TEST DATA

For

Project No.:	8332EU012402W
Client:	Shenzhen Ihome IoT Technology Co., LTD
Product Name:	Smart Bird Feeder
Model No.:	A20S
FCC ID:	2BRGT-A20S
Technology:	WiFi 2.4G
Test Engineer:	<i>Mikoy zhu</i>
Test Date:	2025-08-03

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

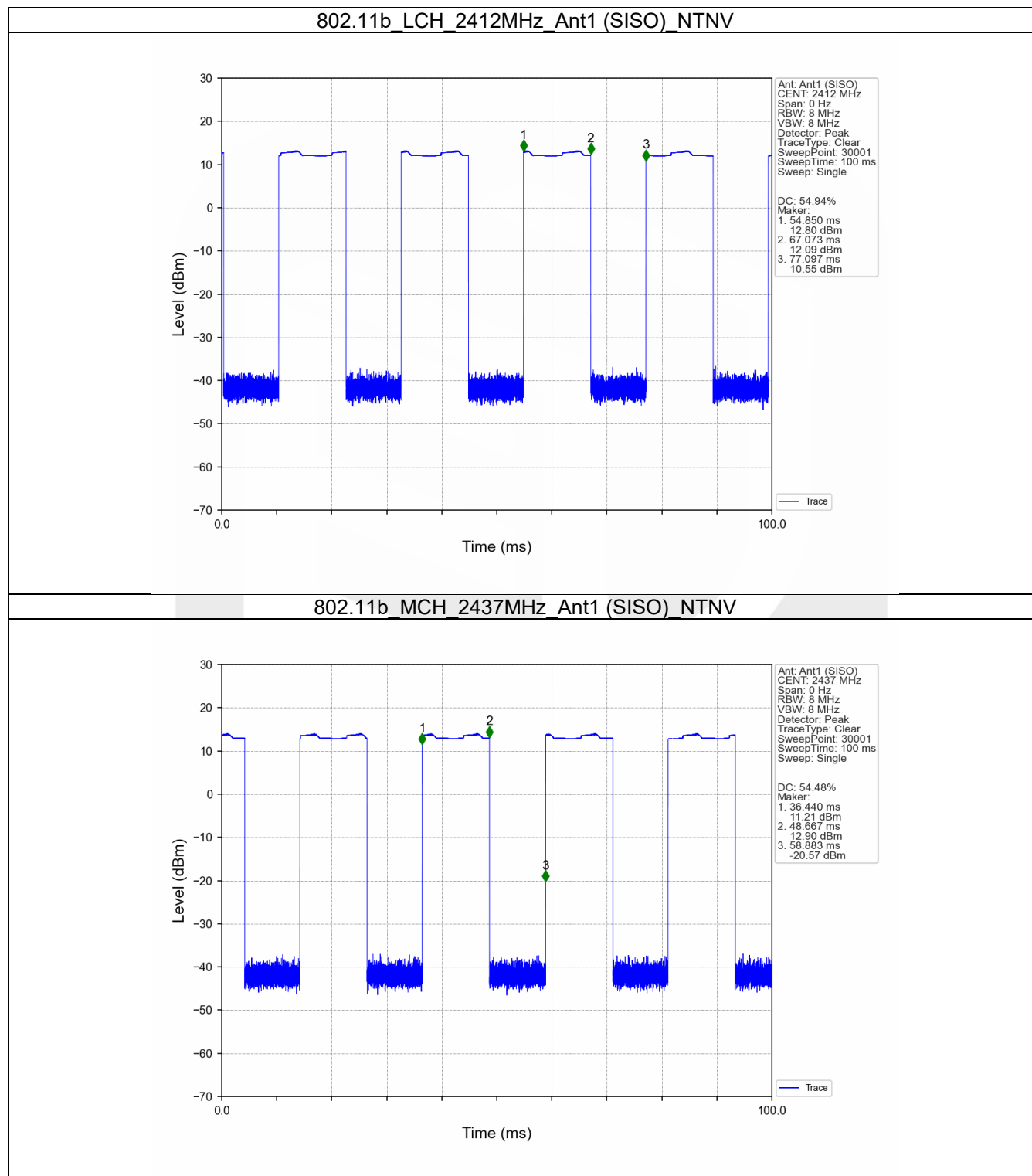
1.1 Test Result

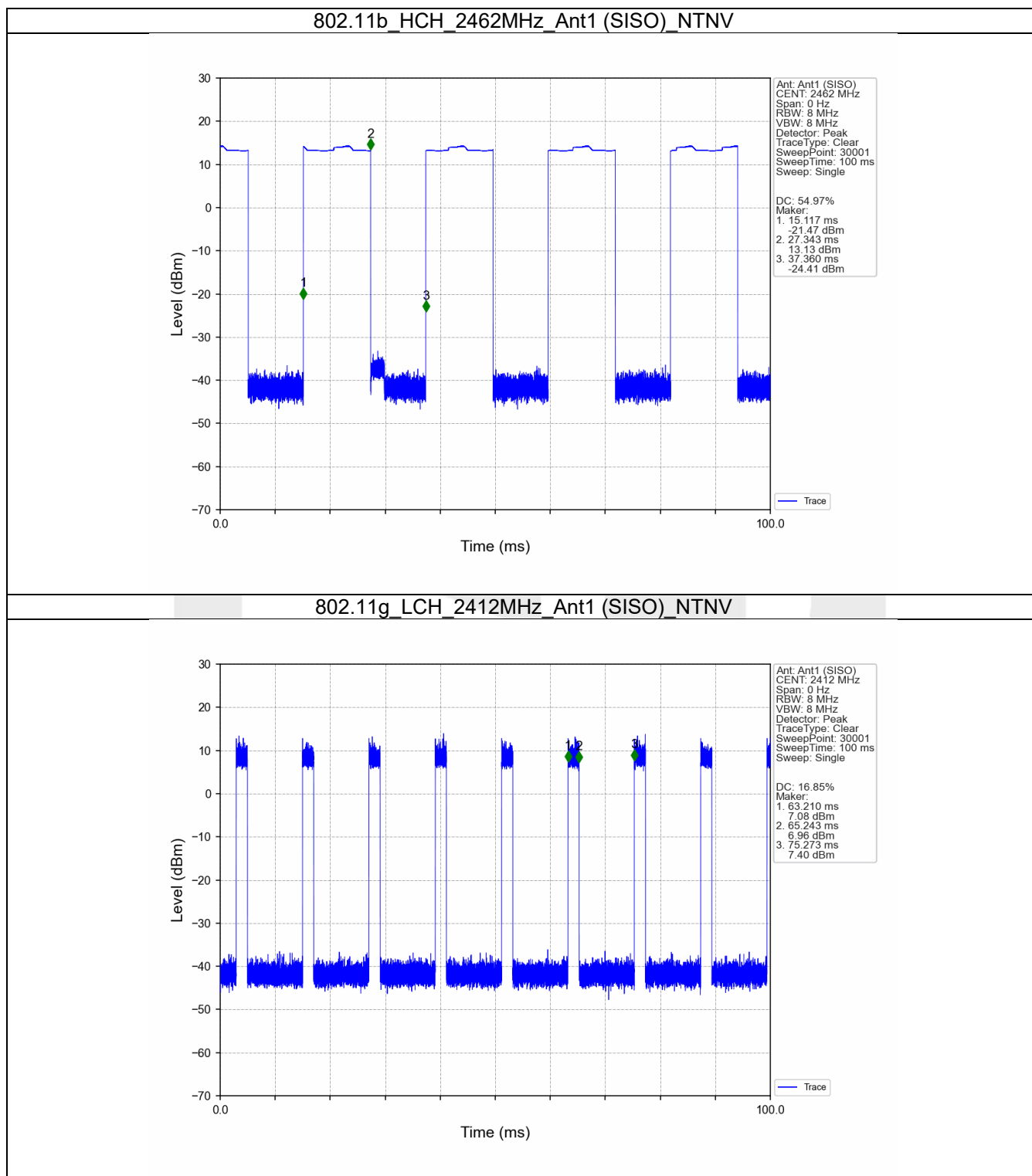
1.1.1 Ant1

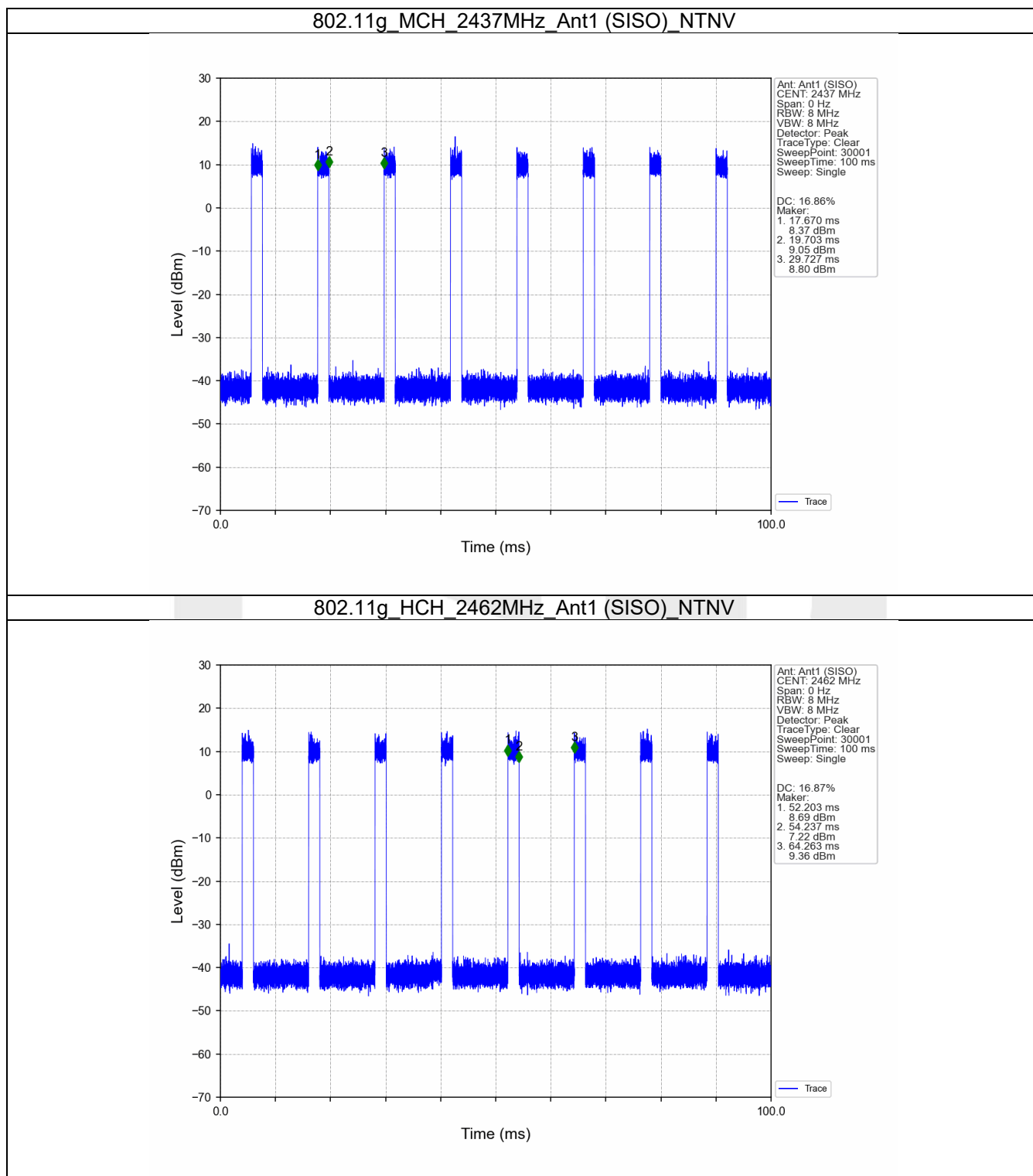
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.223	22.247	54.94	2.60	0.03
		2437	12.227	22.443	54.48	2.64	0.50
		2462	12.226	22.243	54.97	2.60	0.00
802.11g	SISO	2412	2.033	12.063	16.85	7.73	0.04
		2437	2.033	12.057	16.86	7.73	0.02
		2462	2.034	12.060	16.87	7.73	0.03
802.11n (HT20)	SISO	2412	1.894	11.924	15.88	7.99	0.04
		2437	1.893	11.923	15.88	7.99	0.04
		2462	1.893	11.923	15.88	7.99	0.04
802.11n (HT40)	SISO	2422	0.934	10.960	8.52	10.69	0.03
		2437	0.933	10.963	8.51	10.70	0.03
		2452	0.933	10.963	8.51	10.70	0.03

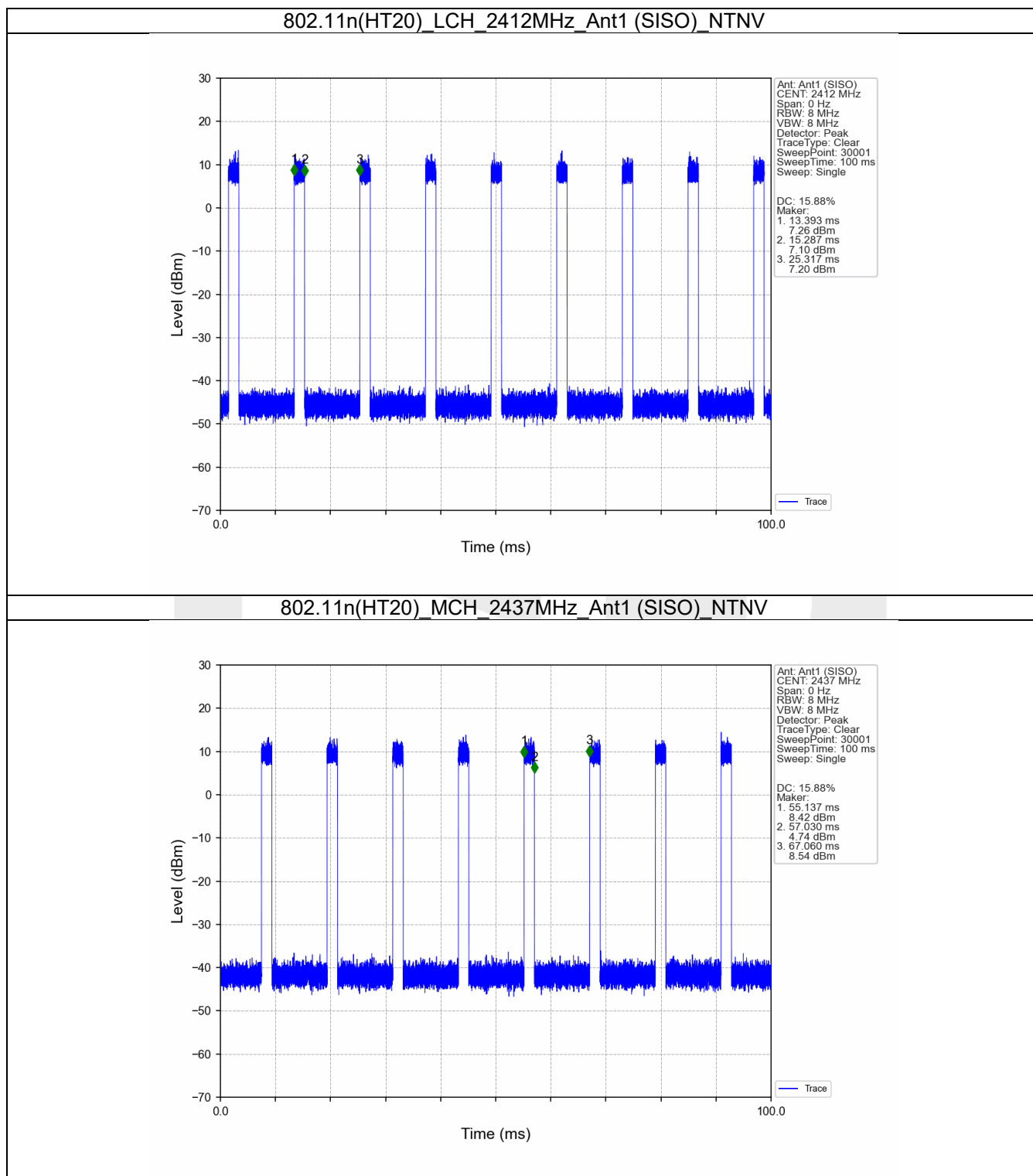
1.2 Test Graph

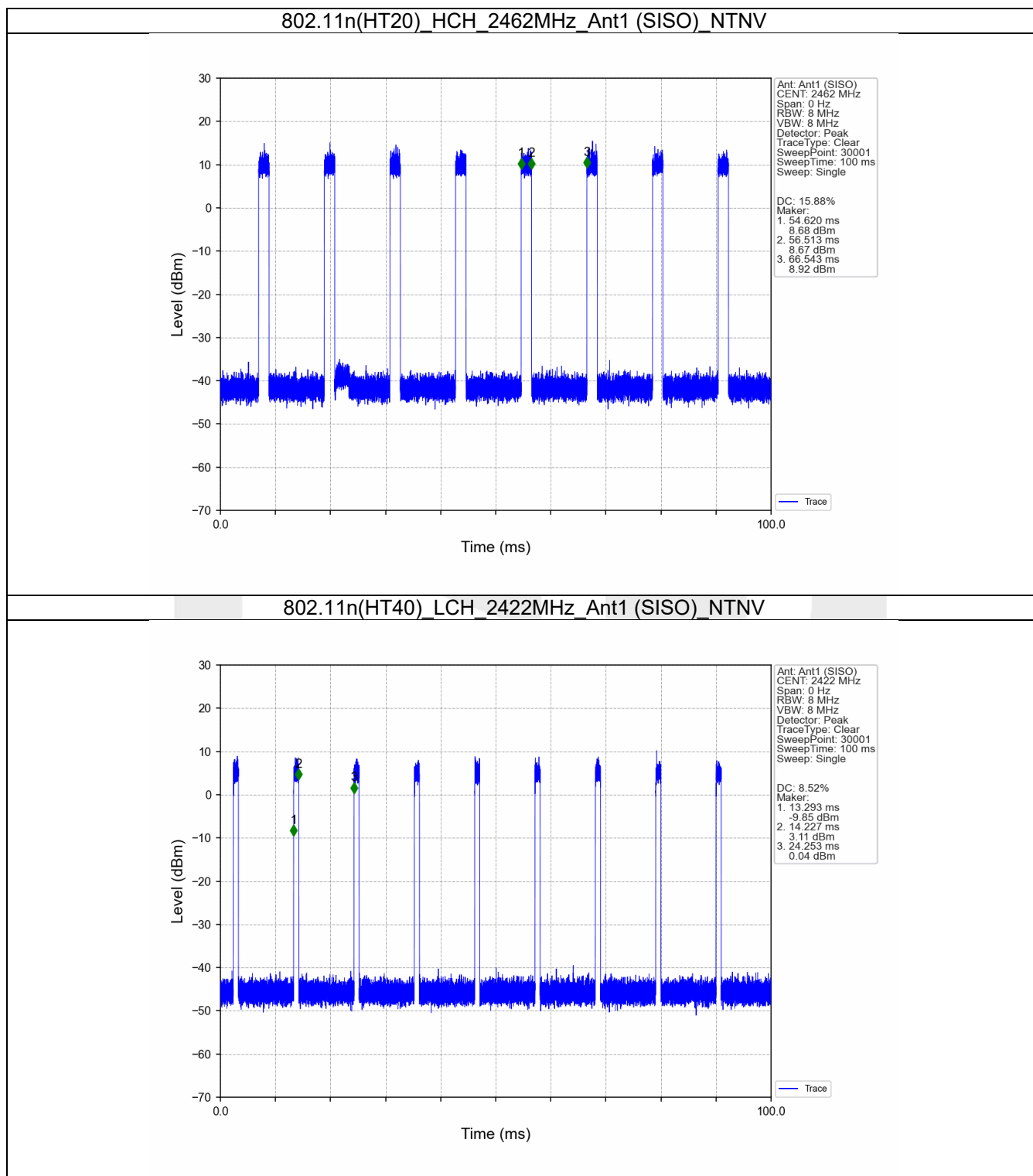
1.2.1 Ant1

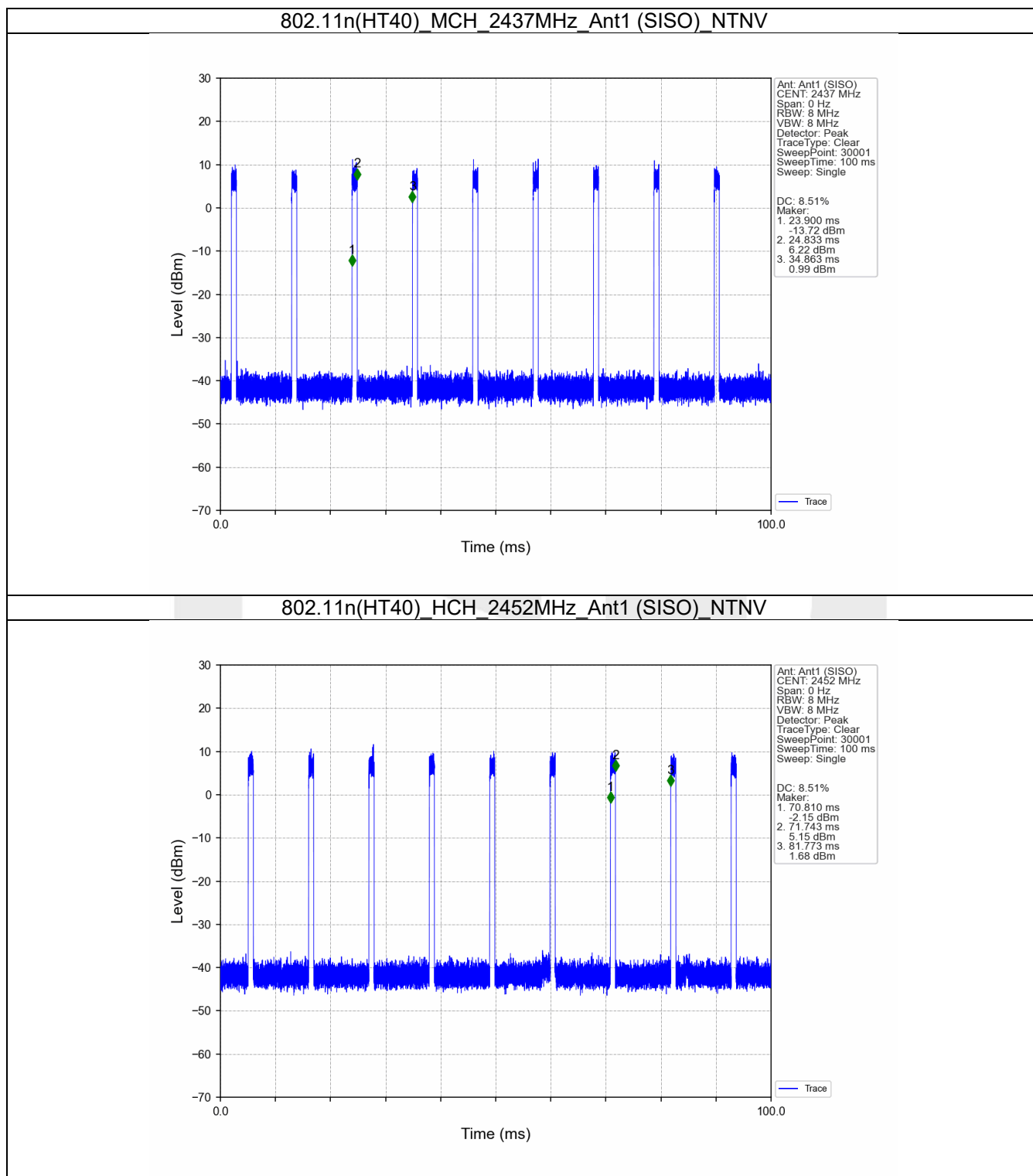












2. Bandwidth

2.1 Test Result

2.1.1 OBW

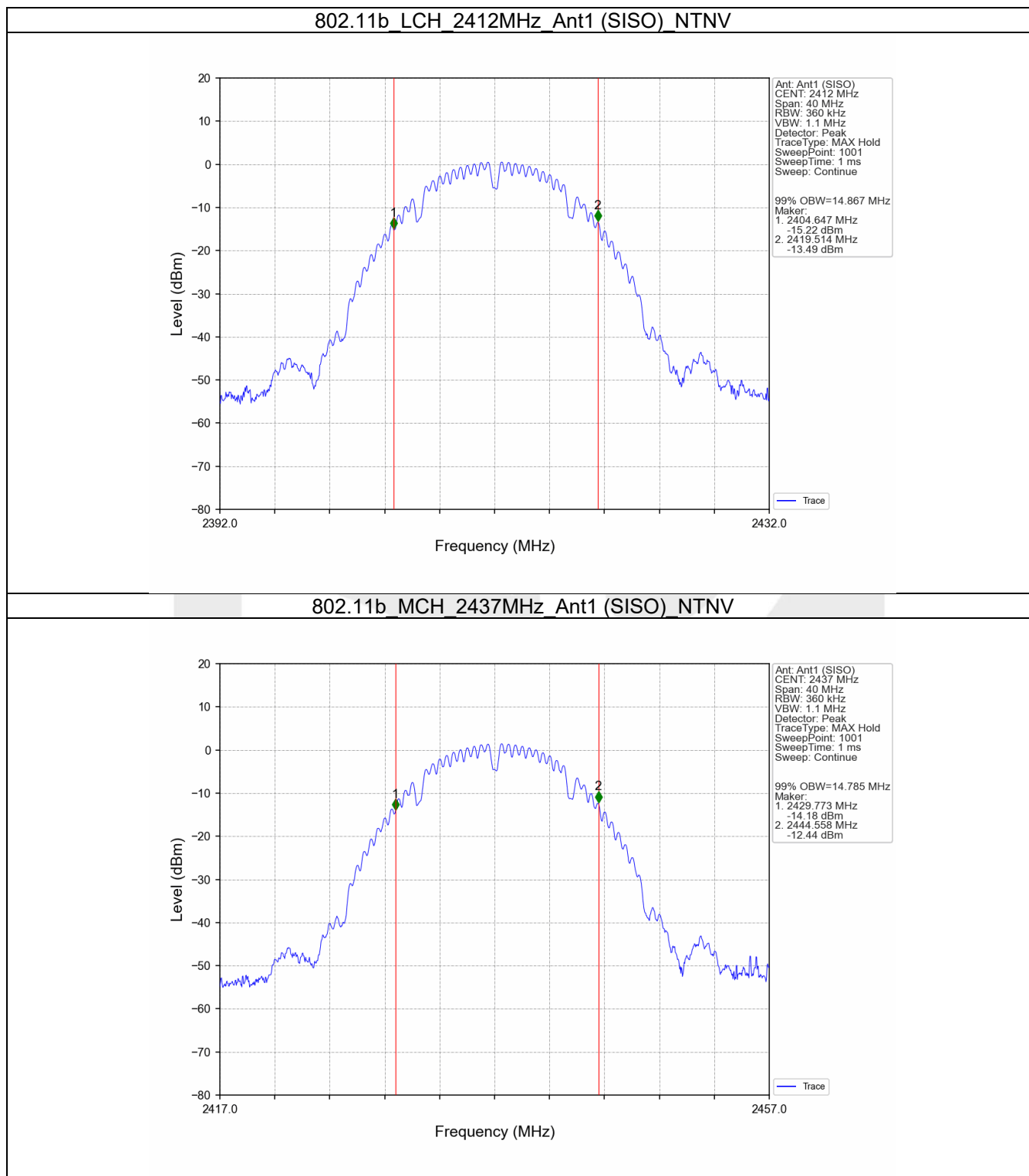
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.867	/	Pass
		2437	1	14.785	/	Pass
		2462	1	14.789	/	Pass
802.11g	SISO	2412	1	18.116	/	Pass
		2437	1	17.961	/	Pass
		2462	1	17.877	/	Pass
802.11n (HT20)	SISO	2412	1	19.087	/	Pass
		2437	1	18.973	/	Pass
		2462	1	19.117	/	Pass
802.11n (HT40)	SISO	2422	1	36.969	/	Pass
		2437	1	36.995	/	Pass
		2452	1	36.928	/	Pass

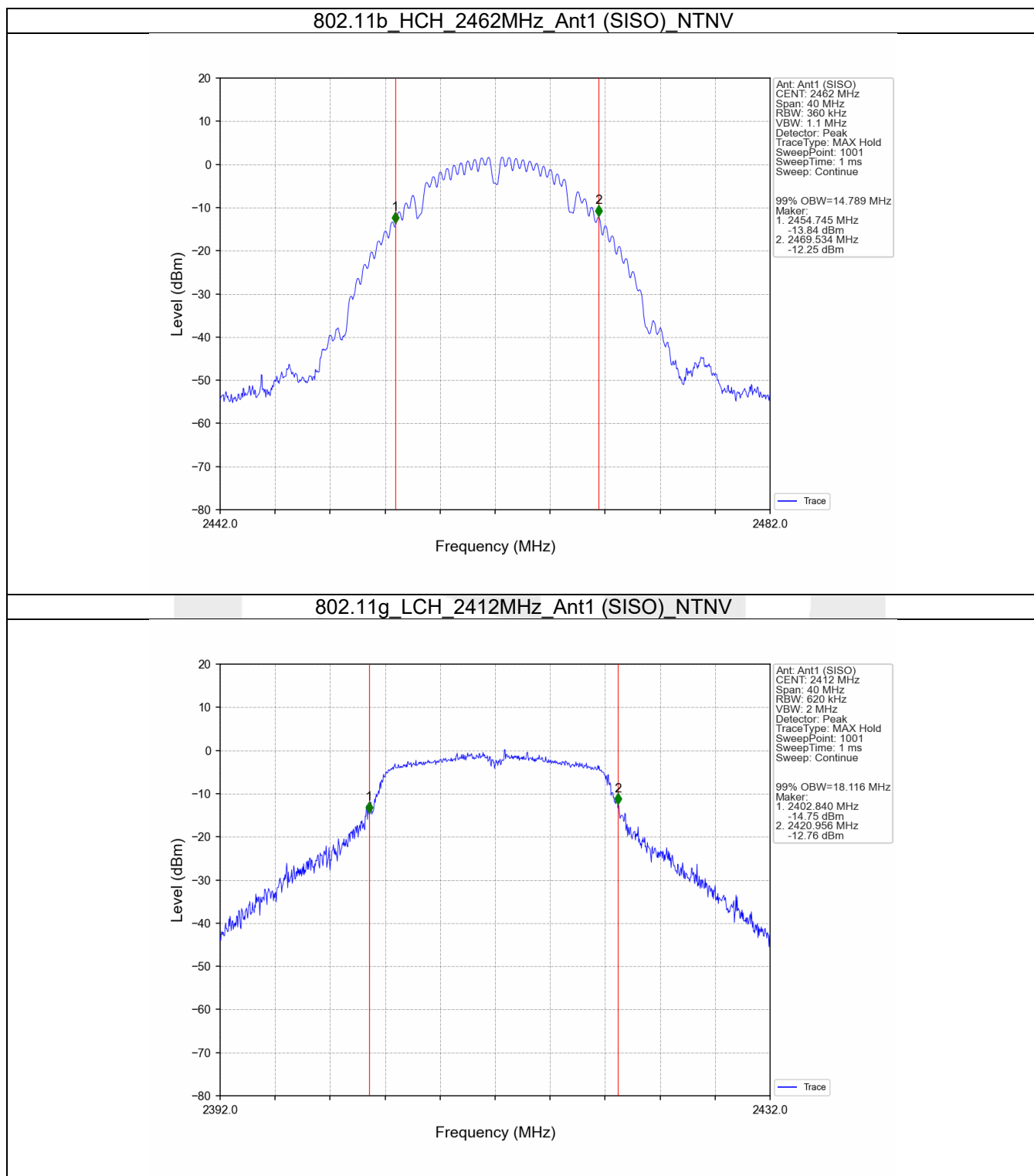
2.1.2 6dB BW

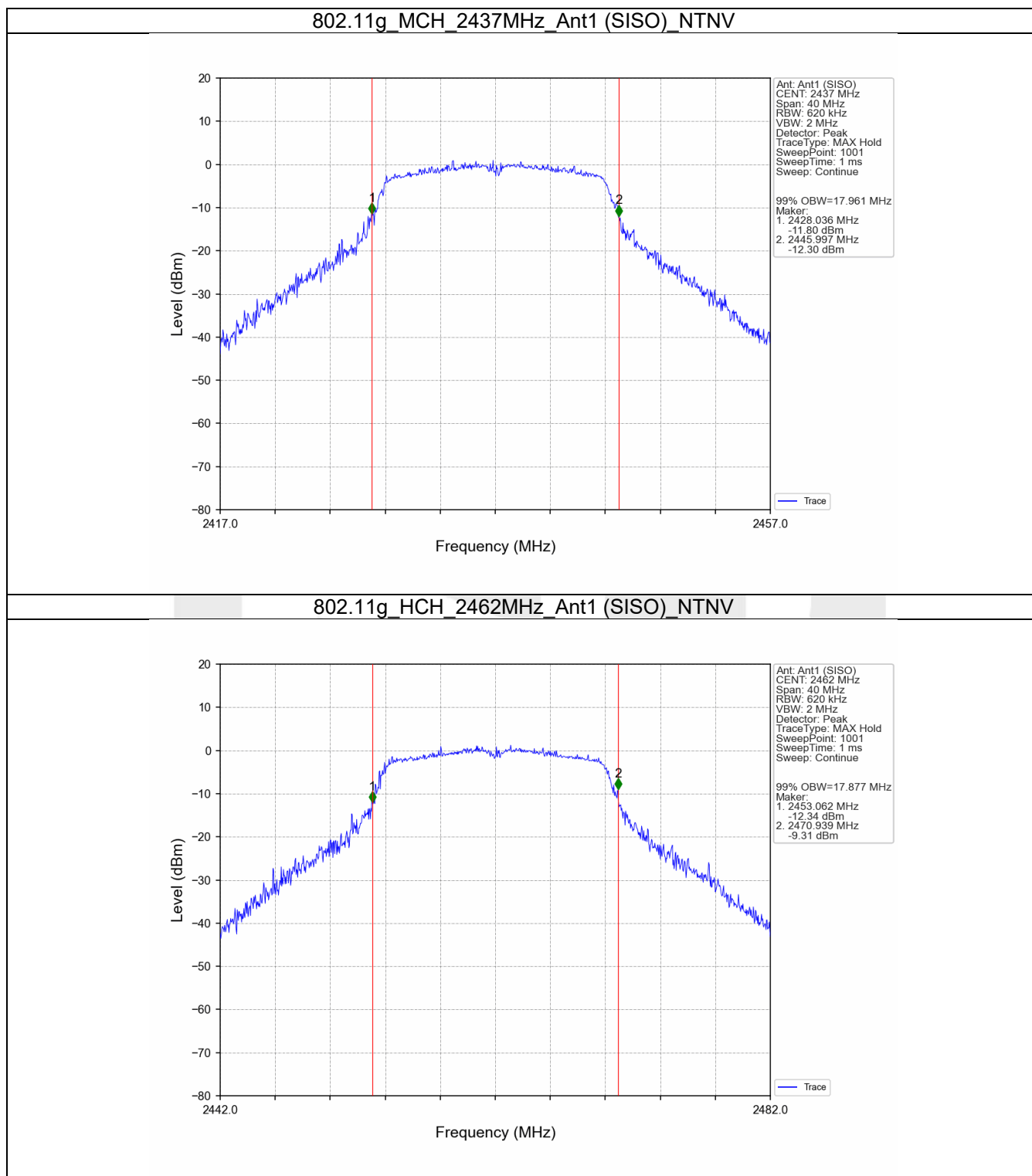
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.190	≥ 0.5	Pass
		2437	1	10.153	≥ 0.5	Pass
		2462	1	10.167	≥ 0.5	Pass
802.11g	SISO	2412	1	16.011	≥ 0.5	Pass
		2437	1	16.453	≥ 0.5	Pass
		2462	1	16.327	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.611	≥ 0.5	Pass
		2437	1	17.444	≥ 0.5	Pass
		2462	1	17.354	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.577	≥ 0.5	Pass
		2437	1	35.602	≥ 0.5	Pass
		2452	1	35.694	≥ 0.5	Pass

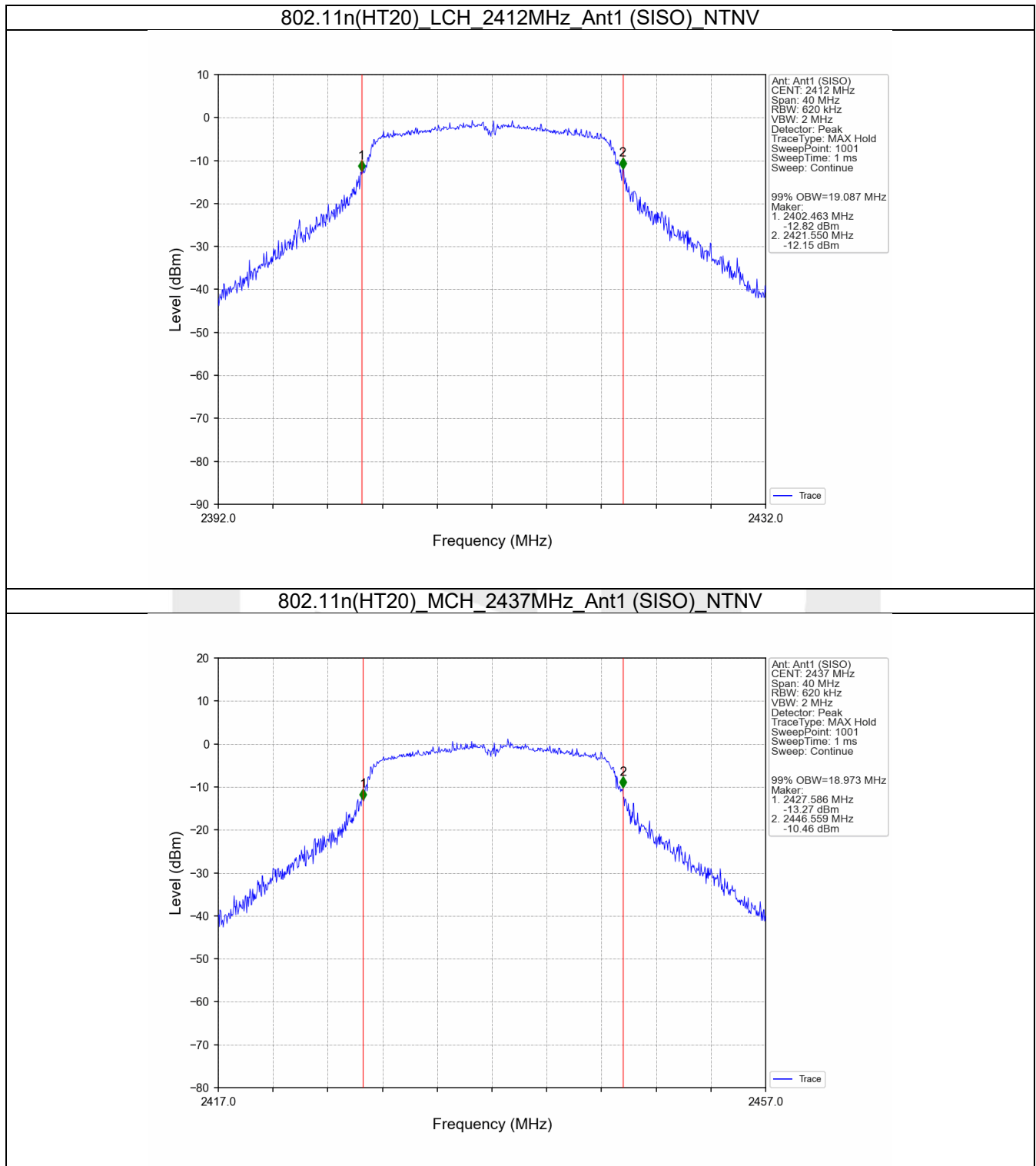
2.2 Test Graph

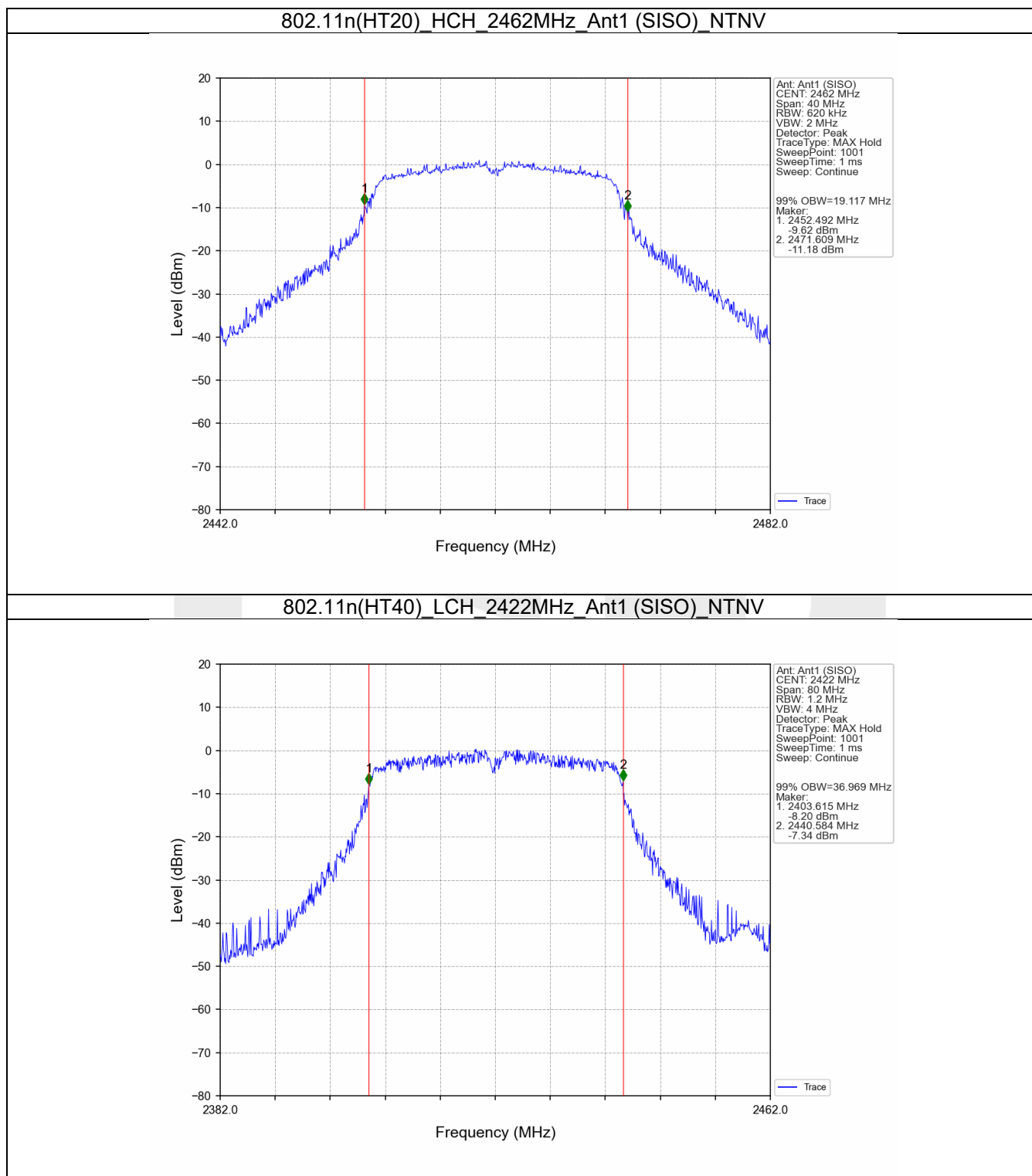
2.2.1 OBW

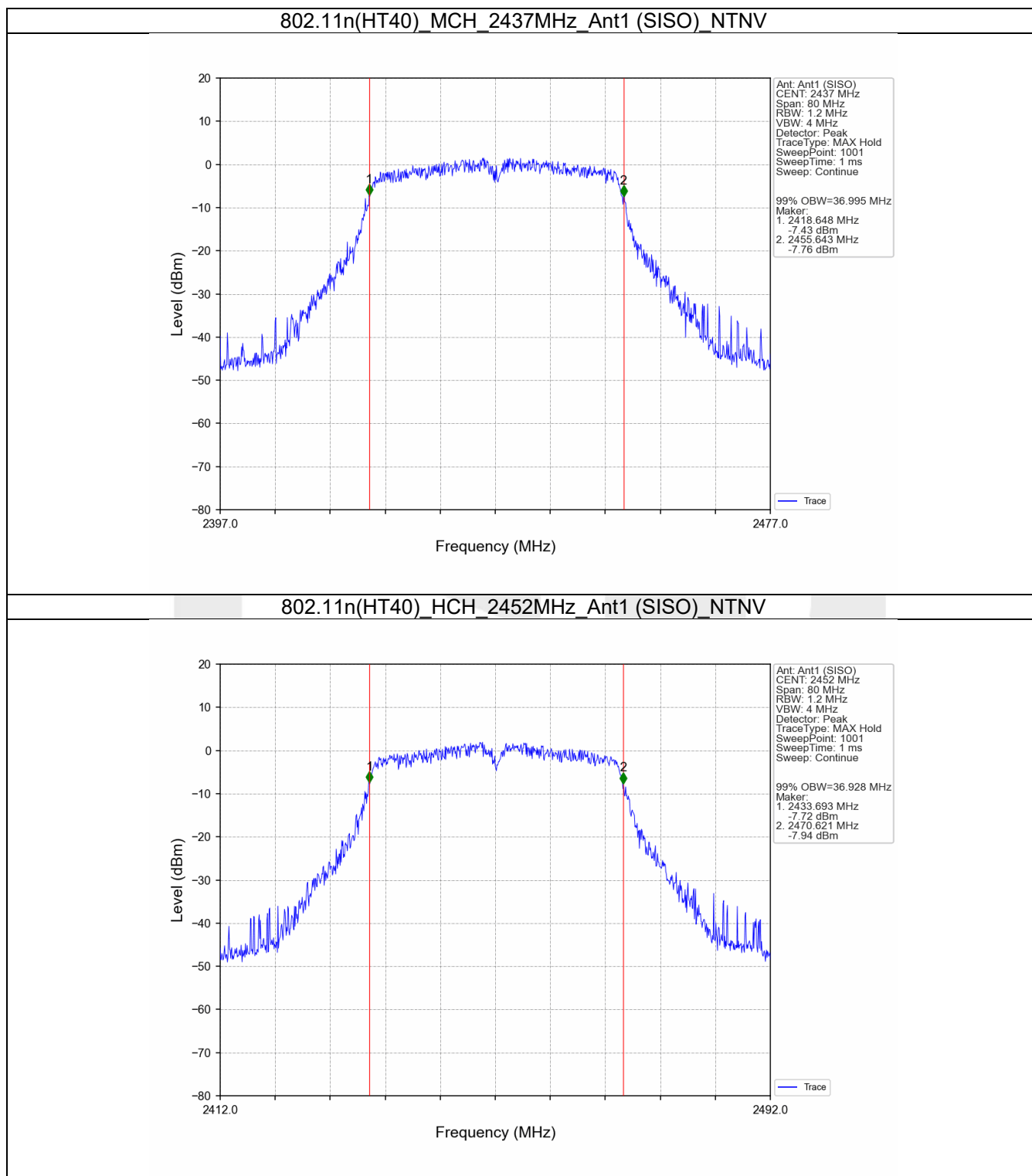




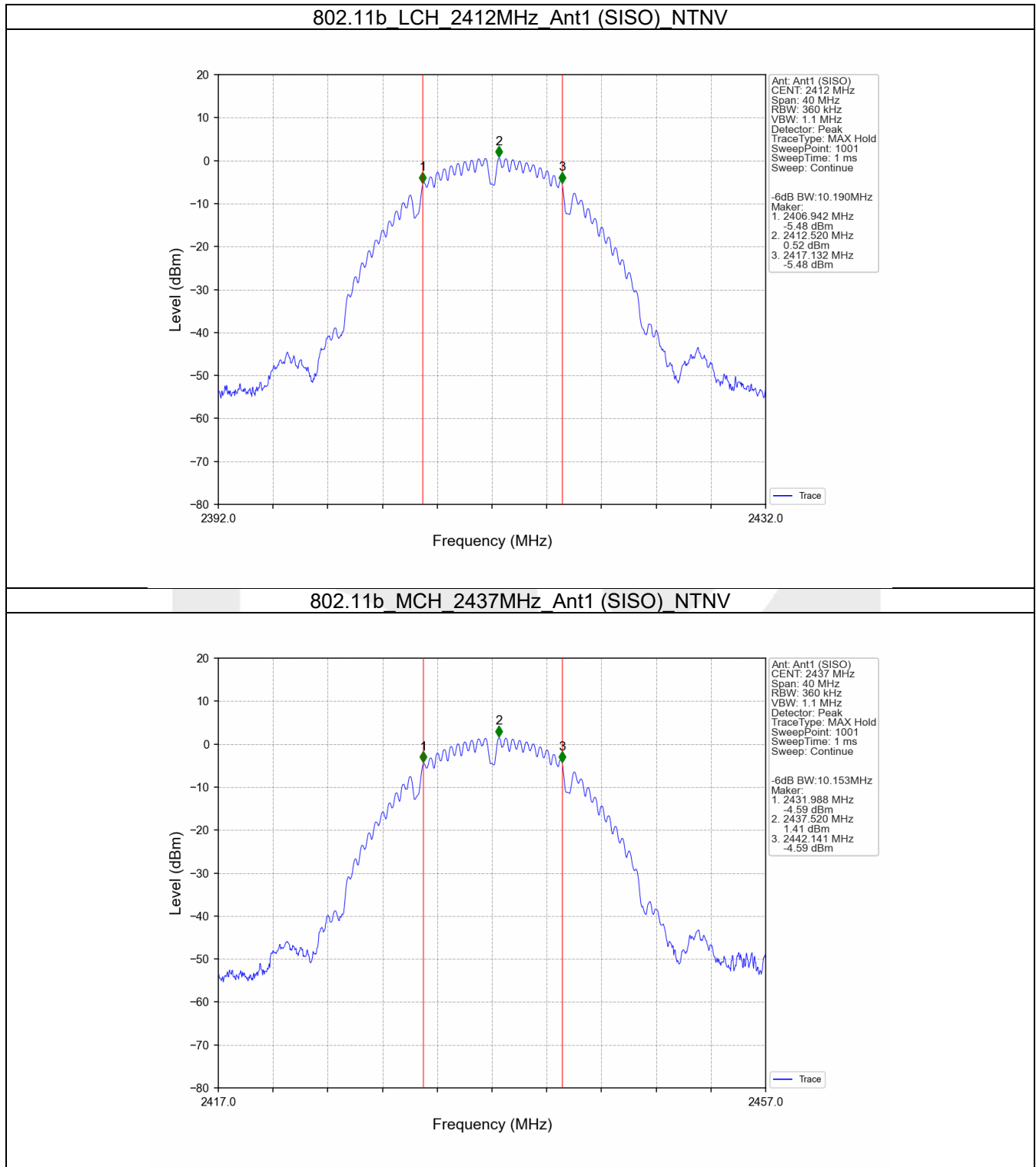


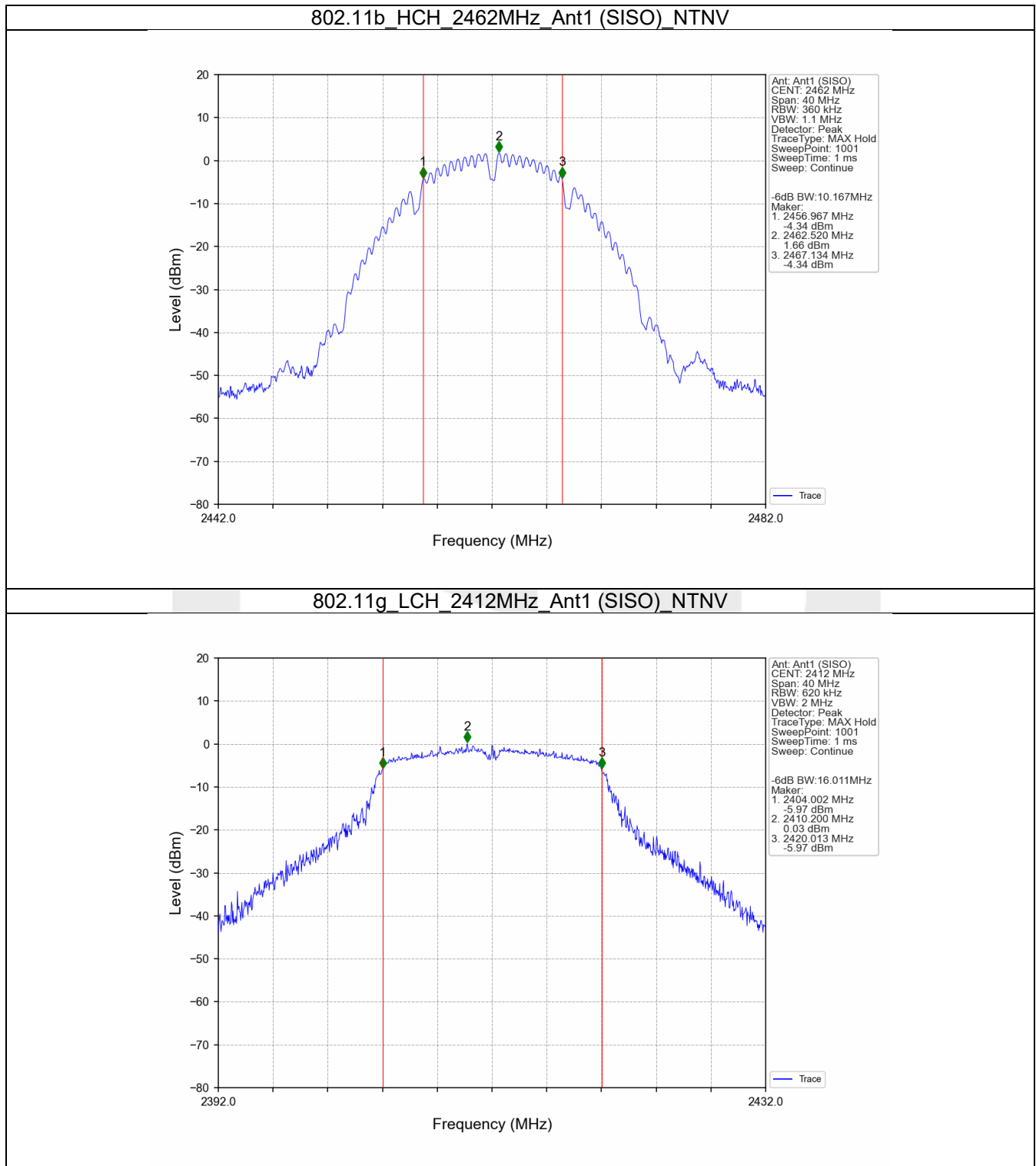


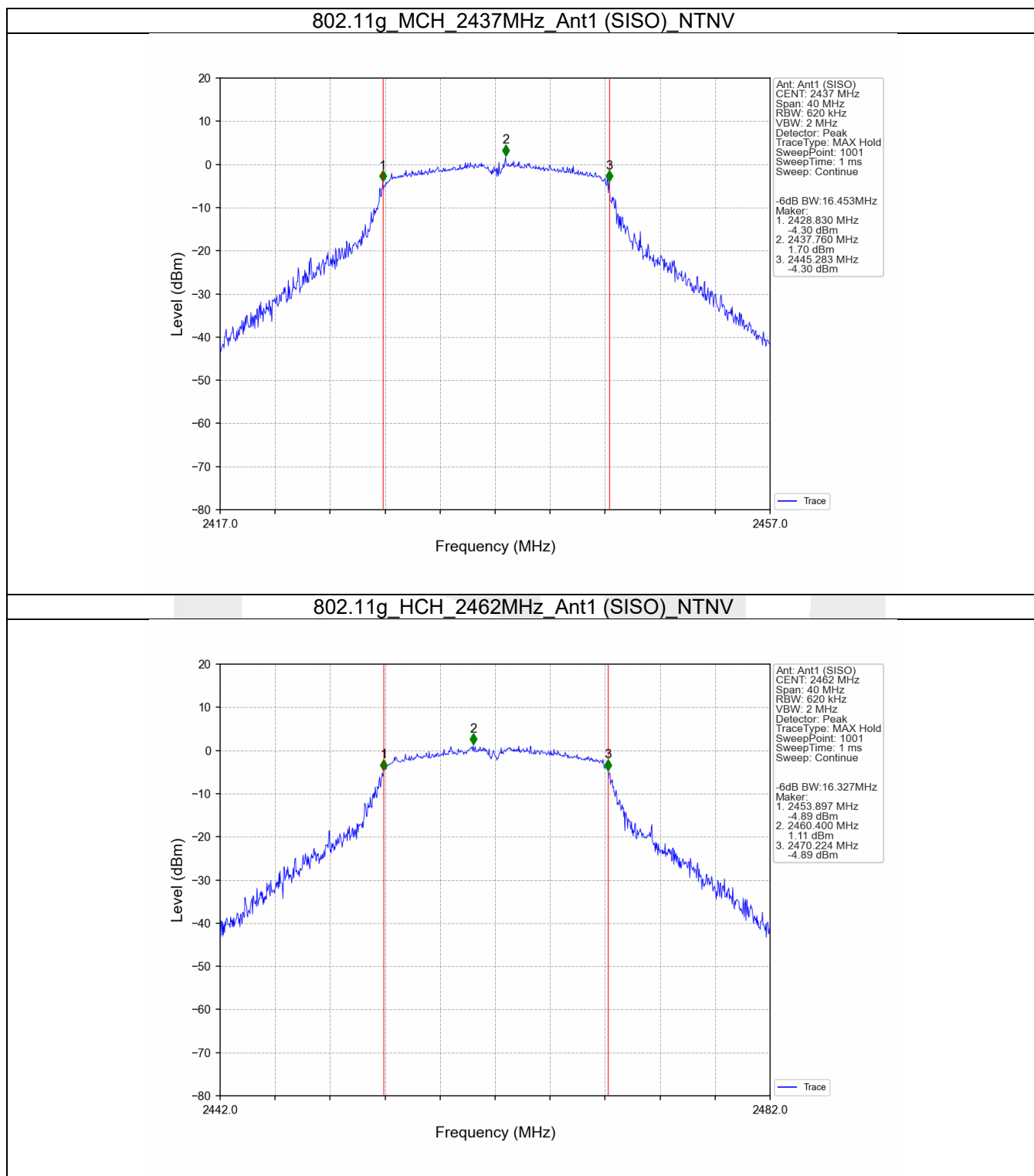


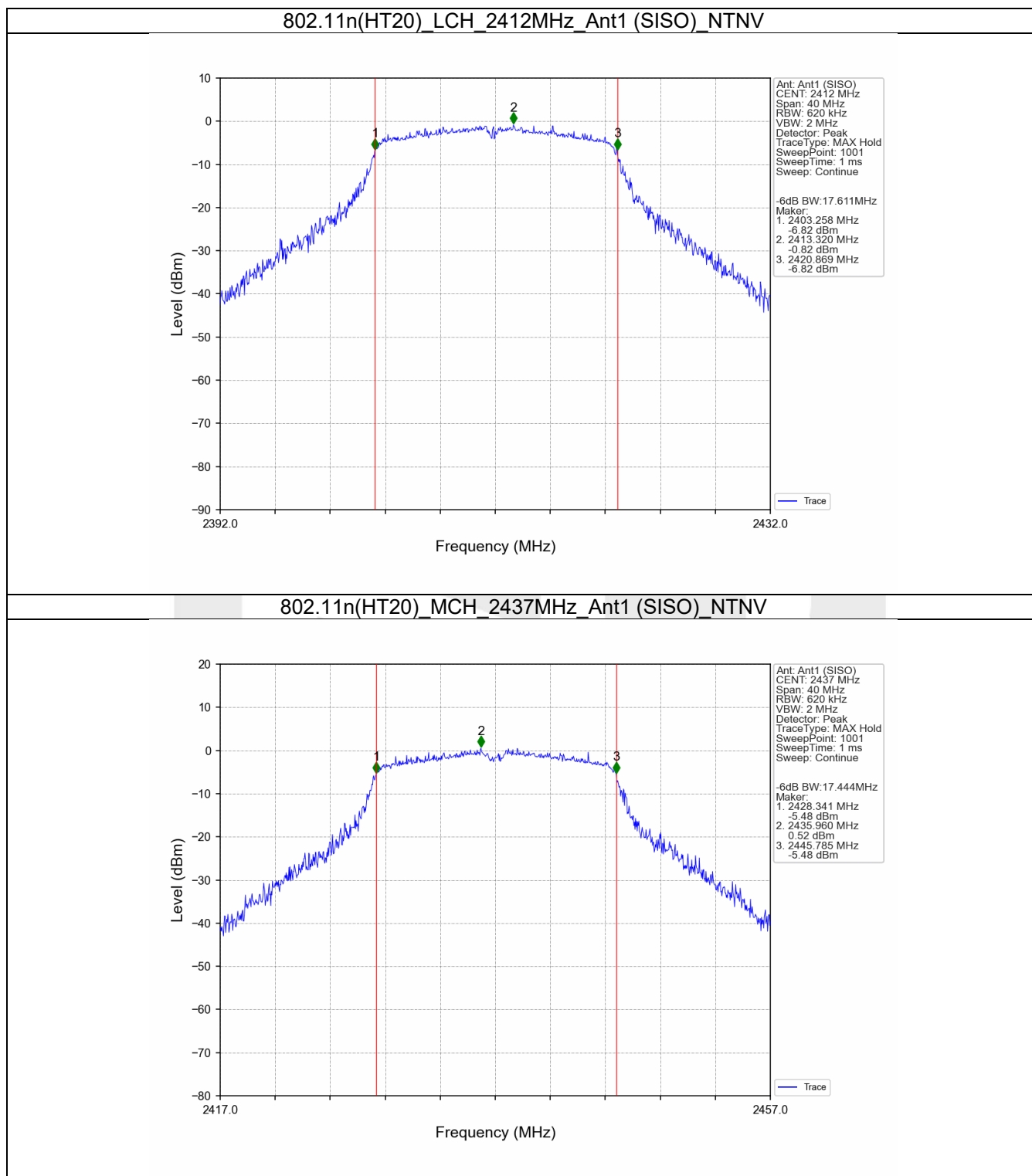


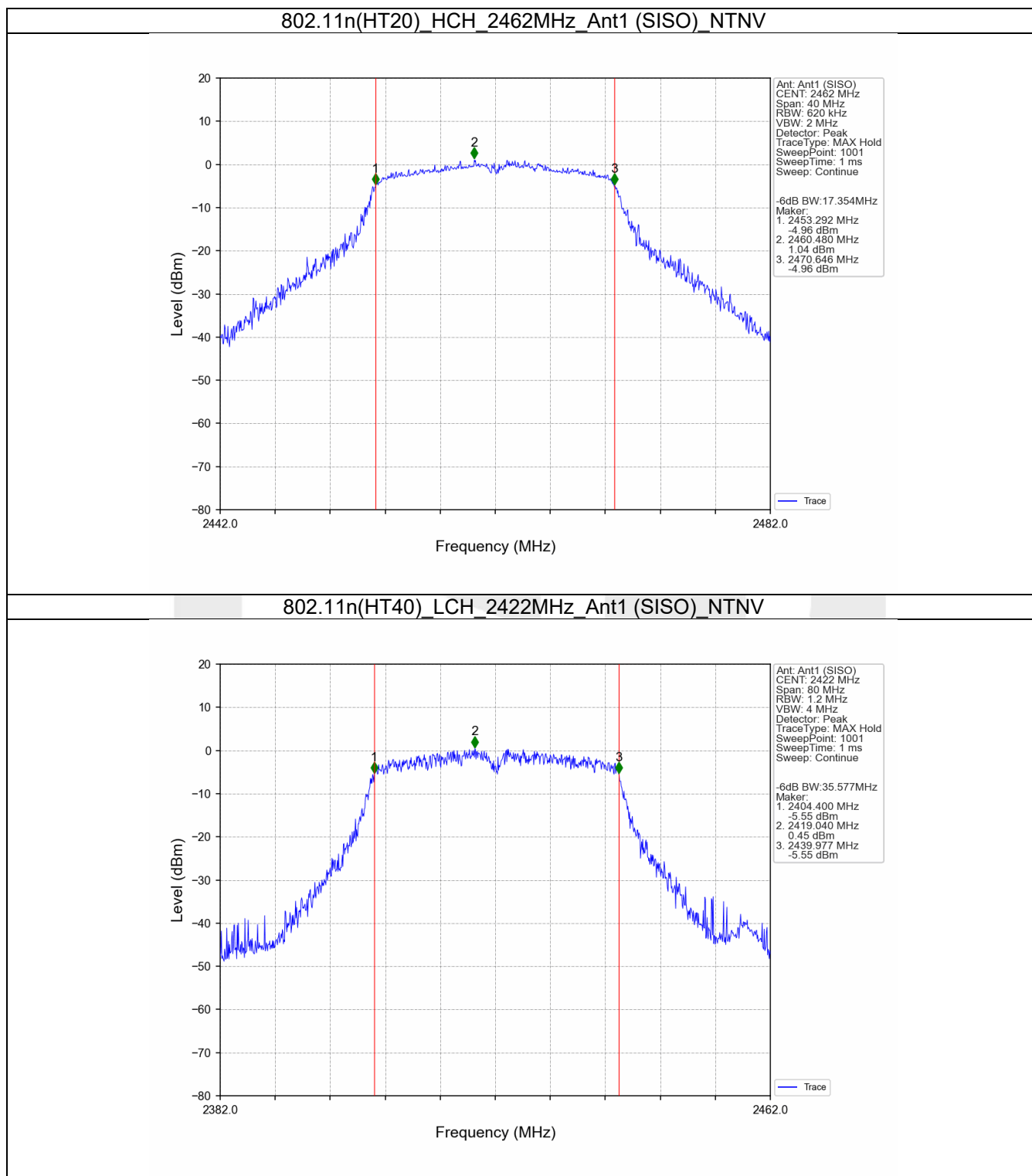
2.2.2 6dB BW

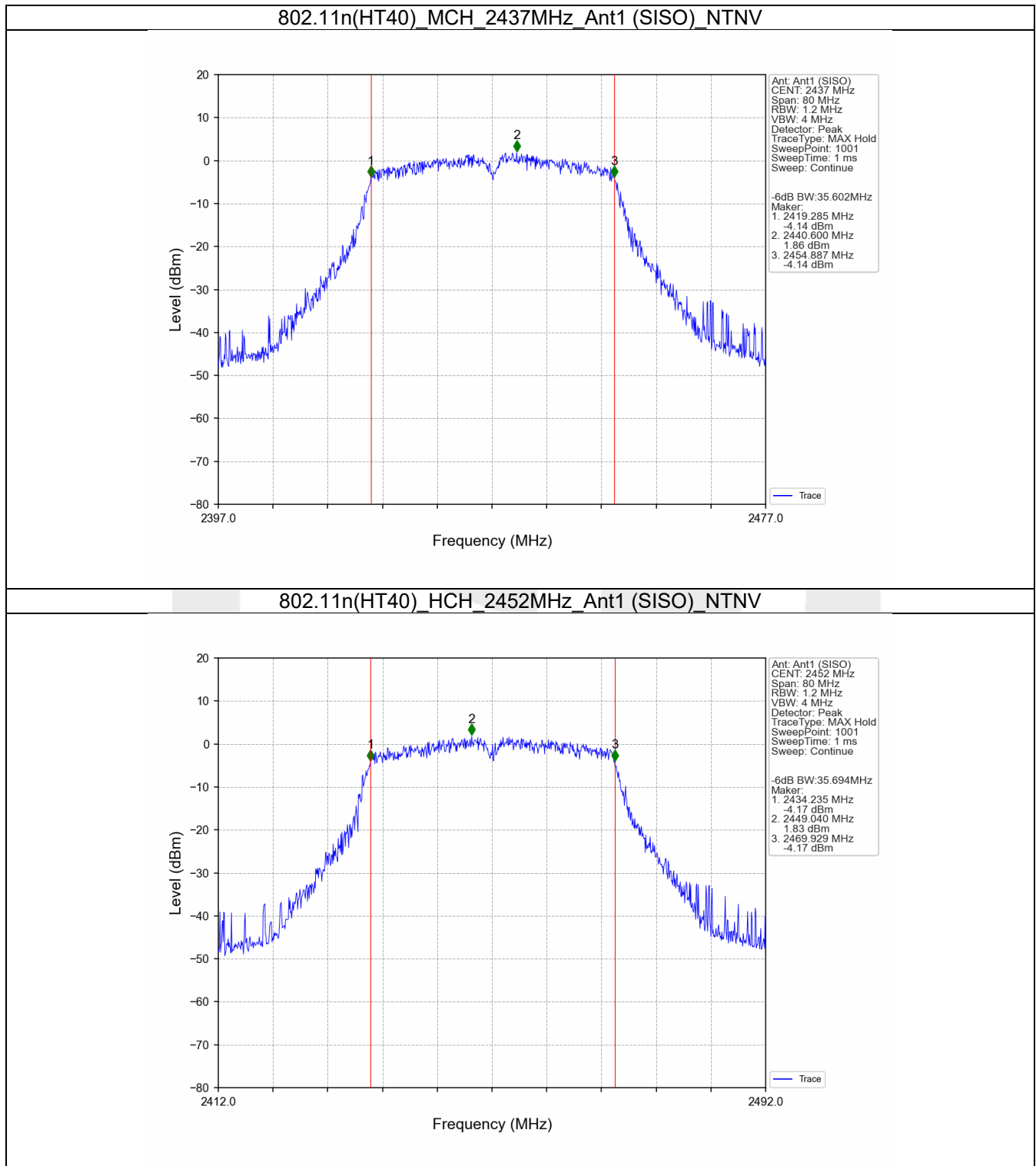












3. Maximum Conducted Output Power

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	11.63	<=30	Pass
		2437	12.48	<=30	Pass
		2462	12.73	<=30	Pass
802.11g	SISO	2412	12.36	<=30	Pass
		2437	13.60	<=30	Pass
		2462	13.96	<=30	Pass
802.11n (HT20)	SISO	2412	12.28	<=30	Pass
		2437	13.45	<=30	Pass
		2462	13.80	<=30	Pass
802.11n (HT40)	SISO	2422	11.90	<=30	Pass
		2437	13.12	<=30	Pass
		2452	13.38	<=30	Pass

4. Maximum Power Spectral Density

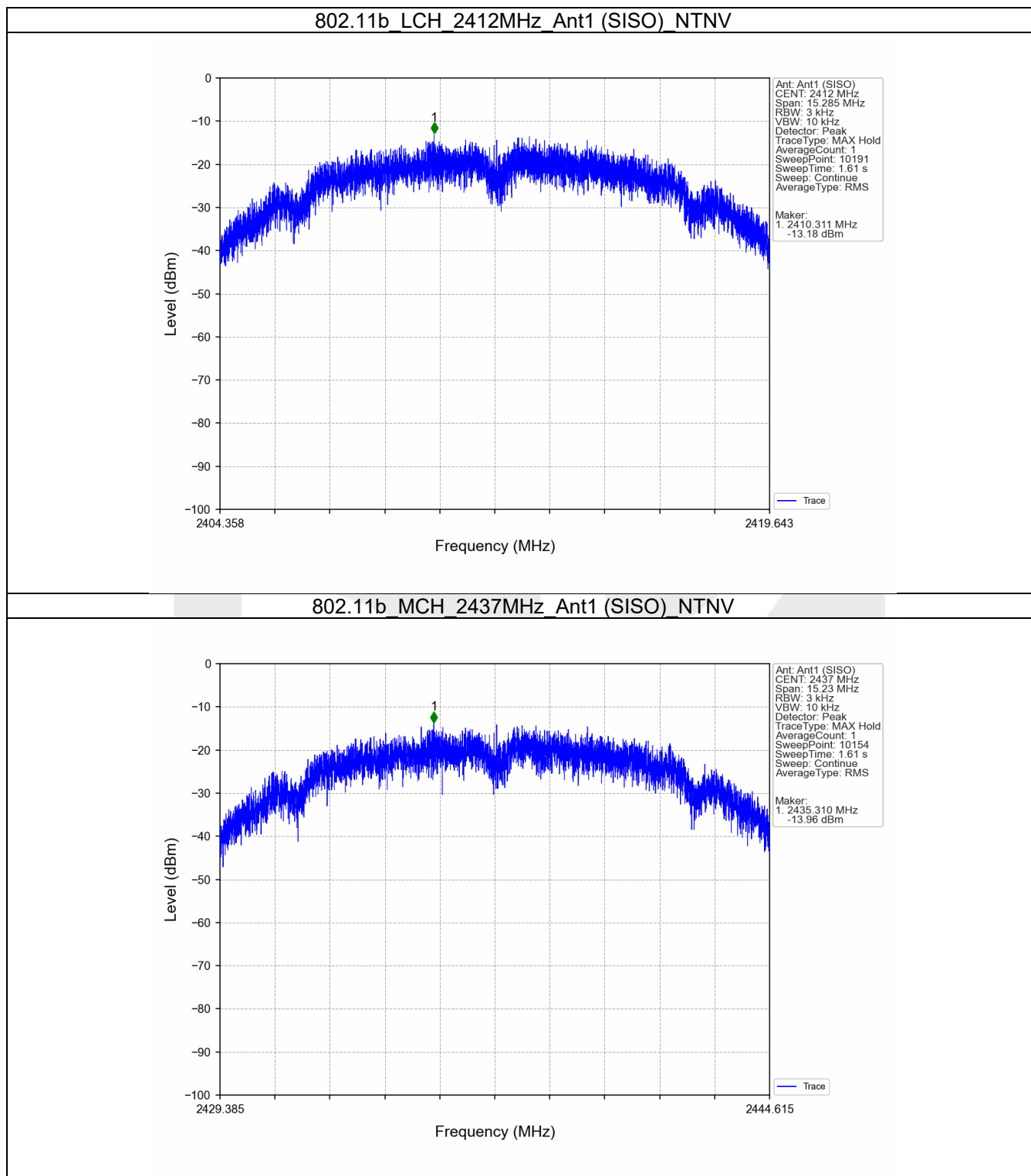
4.1 Test Result

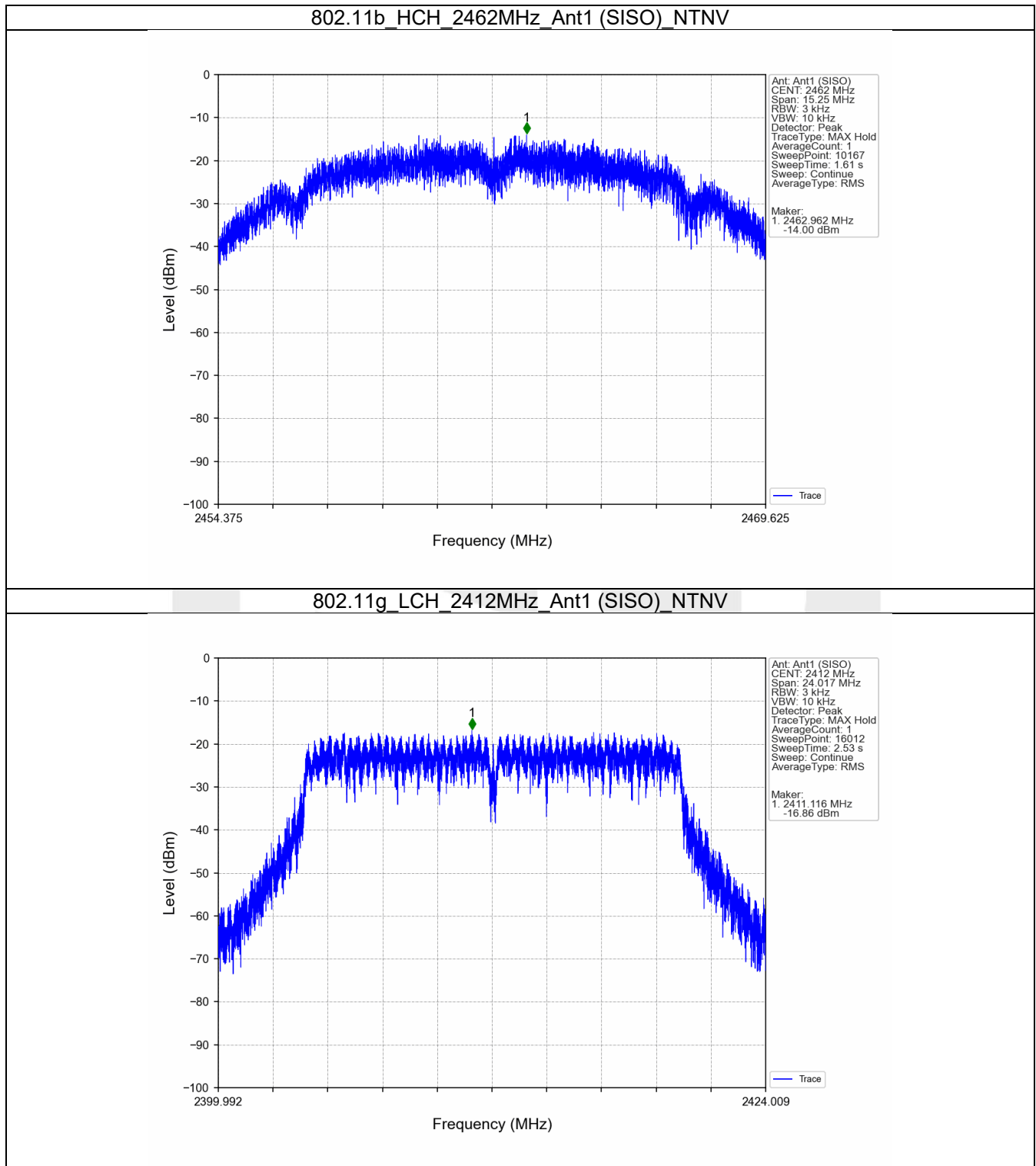
4.1.1 PSD

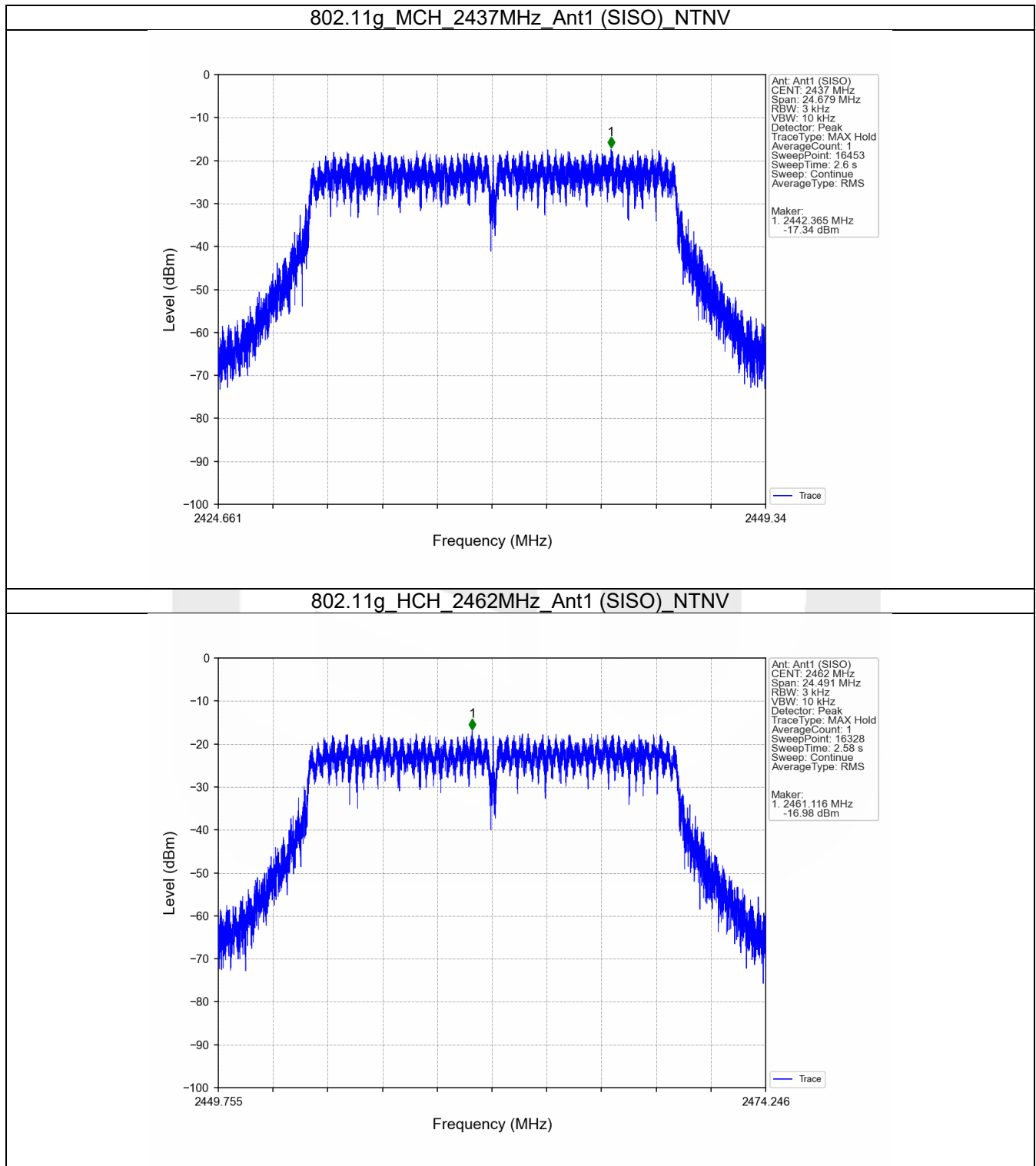
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-13.18	<=8	Pass
		2437	-13.96	<=8	Pass
		2462	-14.00	<=8	Pass
802.11g	SISO	2412	-16.86	<=8	Pass
		2437	-17.34	<=8	Pass
		2462	-16.98	<=8	Pass
802.11n (HT20)	SISO	2412	-16.95	<=8	Pass
		2437	-17.06	<=8	Pass
		2462	-16.86	<=8	Pass
802.11n (HT40)	SISO	2422	-19.63	<=8	Pass
		2437	-18.99	<=8	Pass
		2452	-19.61	<=8	Pass

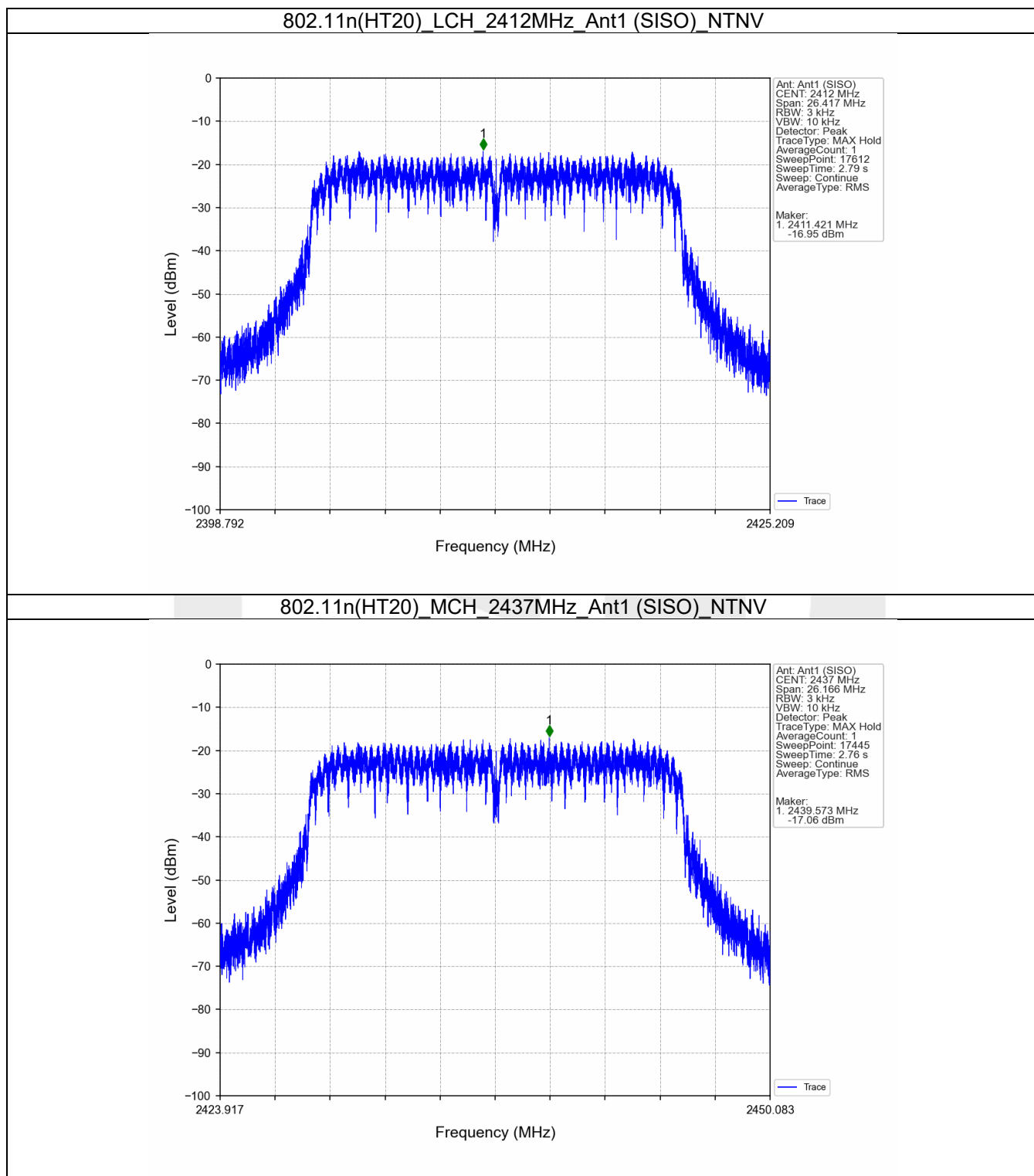
4.2 Test Graph

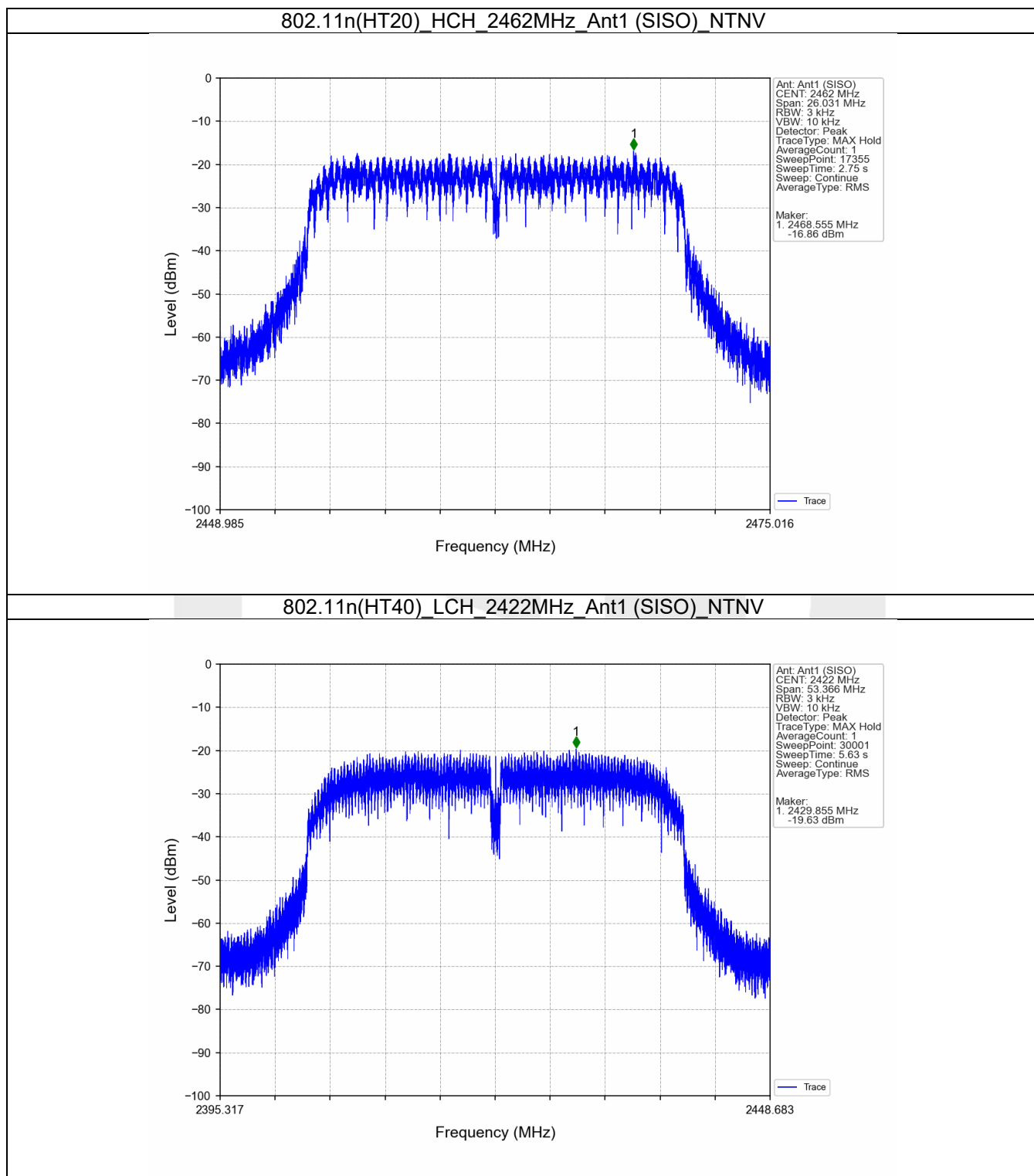
4.2.1 PSD

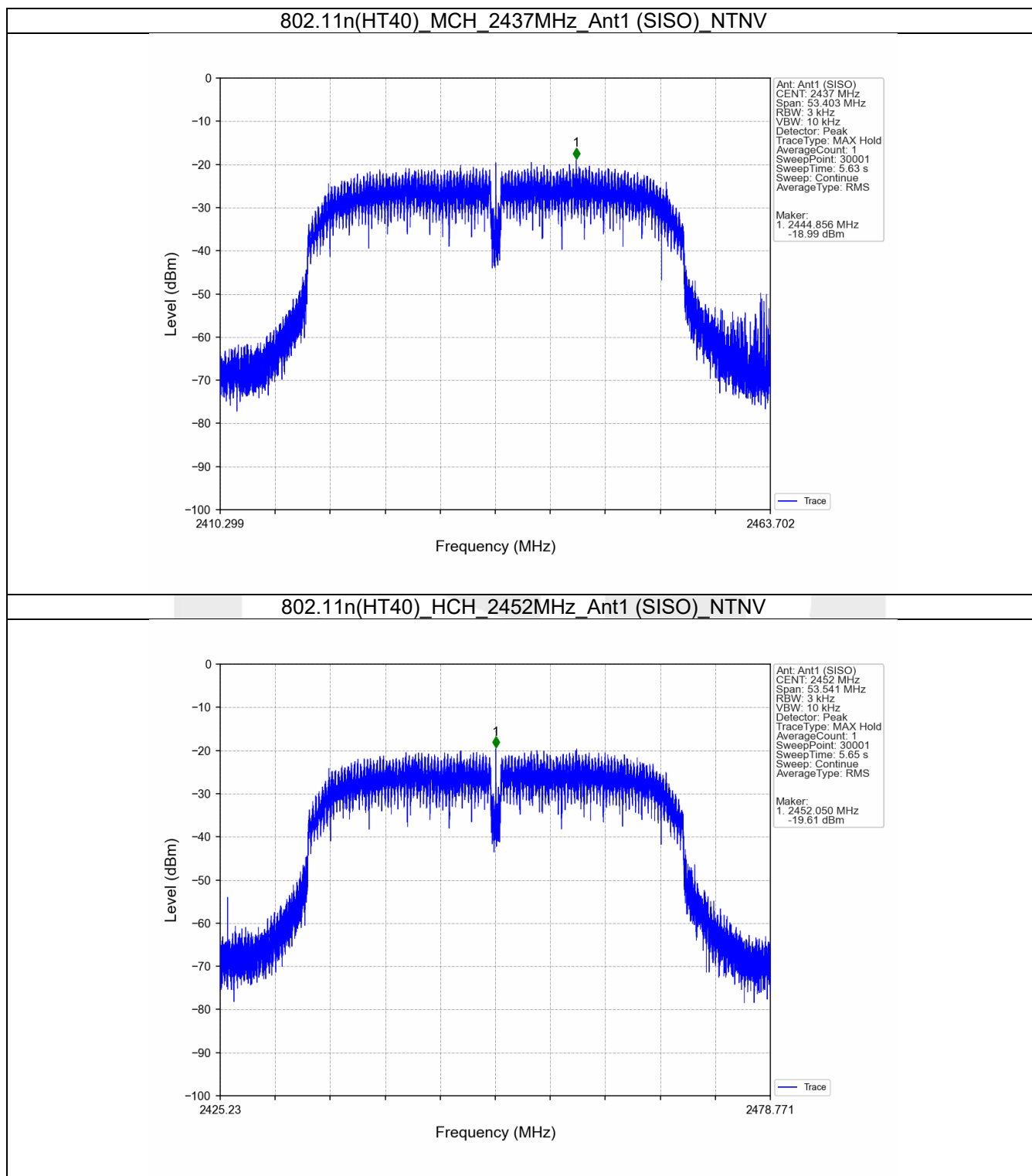












5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	0.42
		2437	1	1.23
		2462	1	1.48
802.11g	SISO	2412	1	-7.24
		2437	1	-5.26
		2462	1	-4.50
802.11n (HT20)	SISO	2412	1	-6.54
		2437	1	-4.18
		2462	1	-4.63
802.11n (HT40)	SISO	2422	1	-8.67
		2437	1	-8.34
		2452	1	-8.24

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.

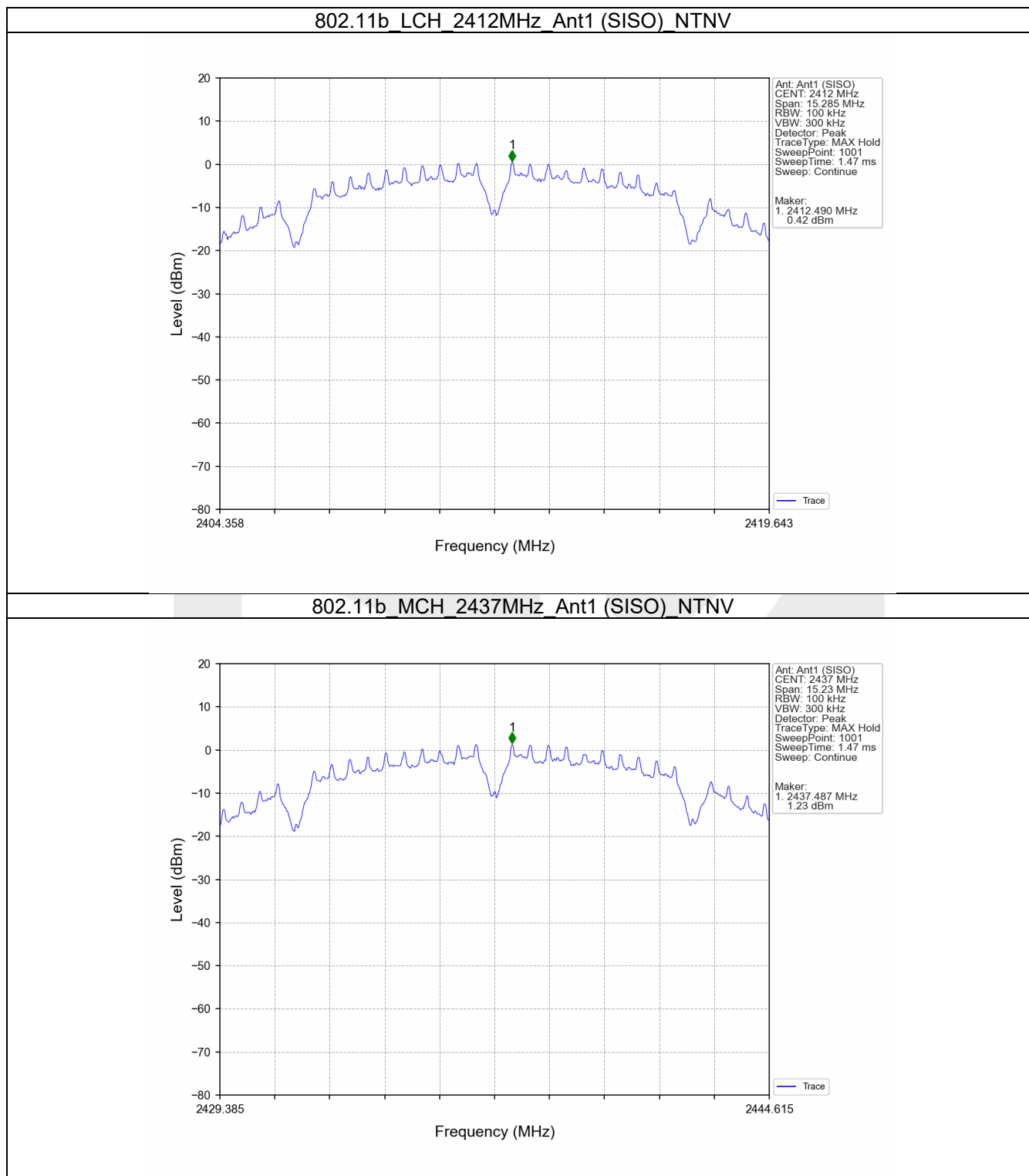
5.1.2 CSE

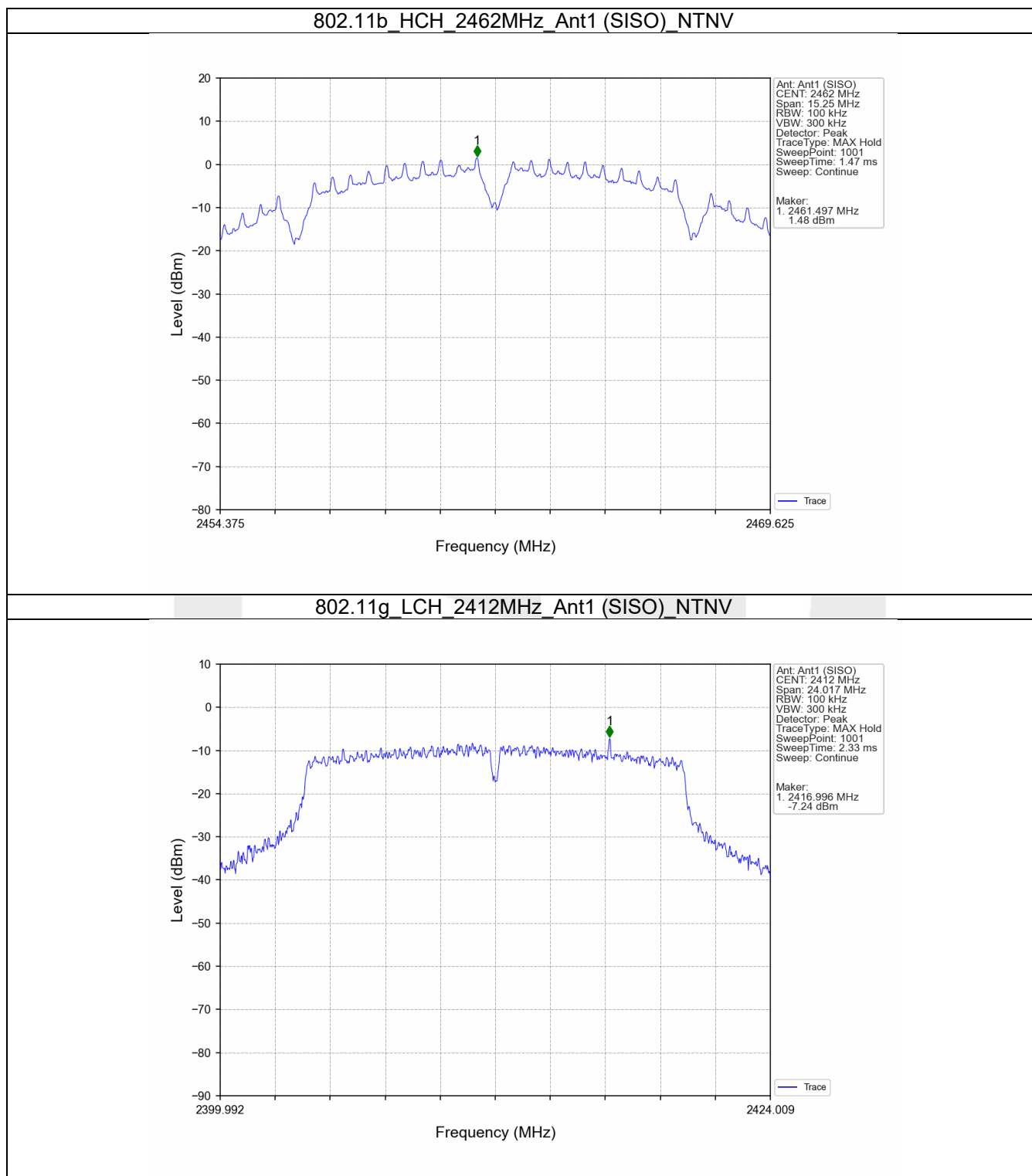
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	0.42	-19.58	Pass
		2437	1	1.23	-18.77	Pass
		2462	1	1.48	-18.52	Pass
802.11g	SISO	2412	1	-7.24	-27.24	Pass
		2437	1	-5.26	-25.26	Pass
		2462	1	-4.50	-24.50	Pass
802.11n (HT20)	SISO	2412	1	-6.54	-26.54	Pass
		2437	1	-4.18	-24.18	Pass
		2462	1	-4.63	-24.63	Pass
802.11n (HT40)	SISO	2422	1	-8.67	-28.67	Pass
		2437	1	-8.34	-28.34	Pass
		2452	1	-8.24	-28.24	Pass

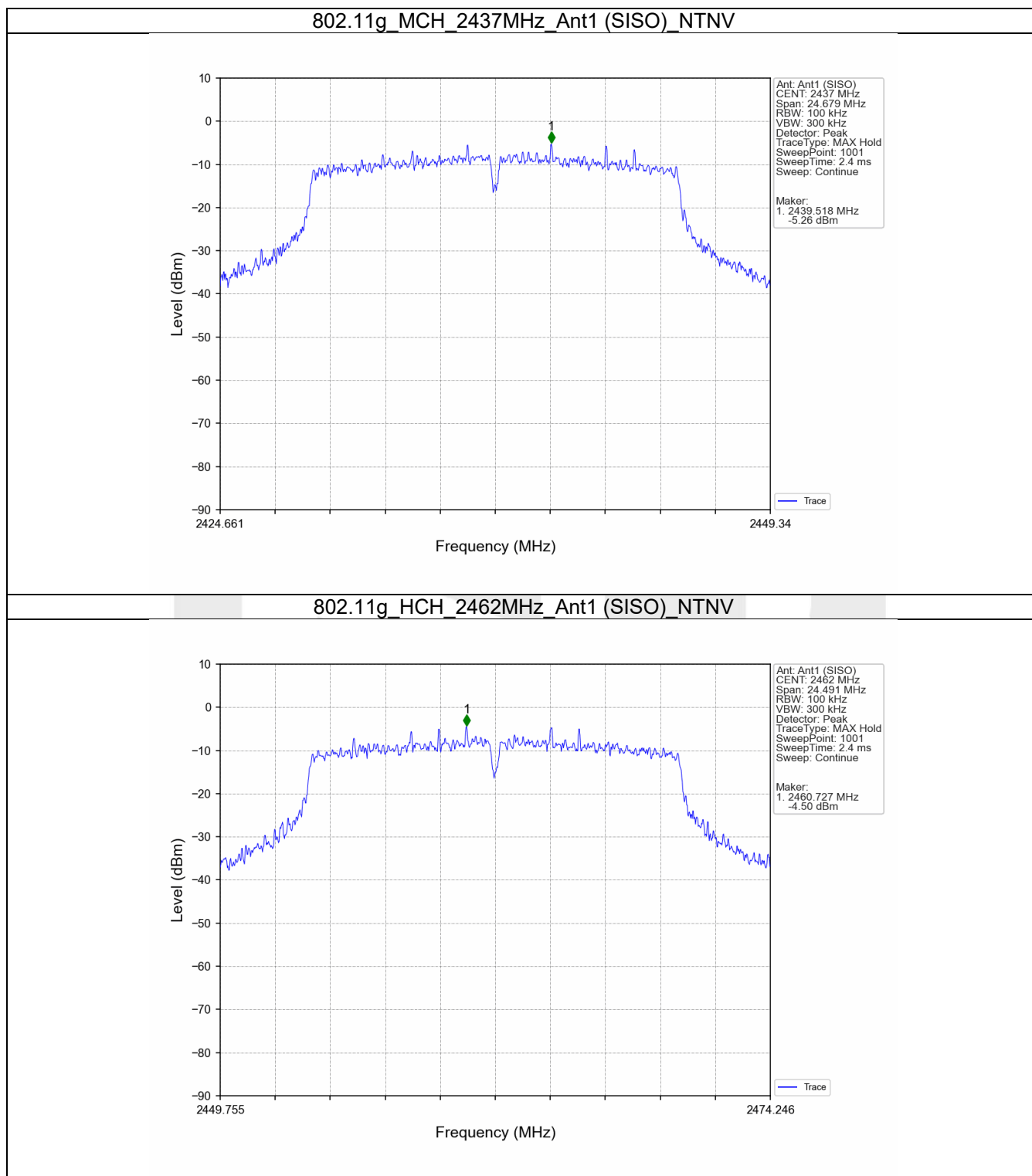
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

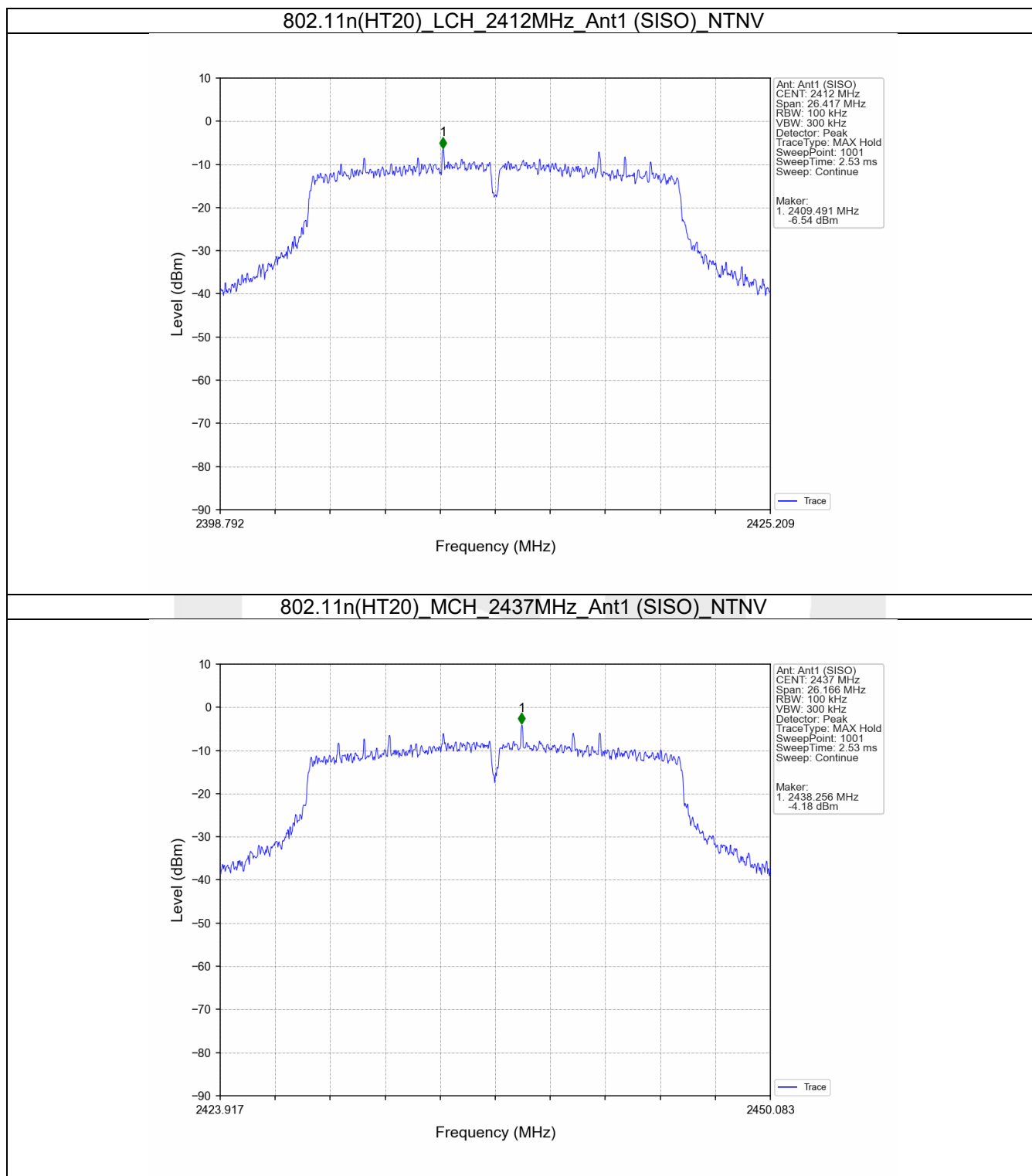
5.2 Test Graph

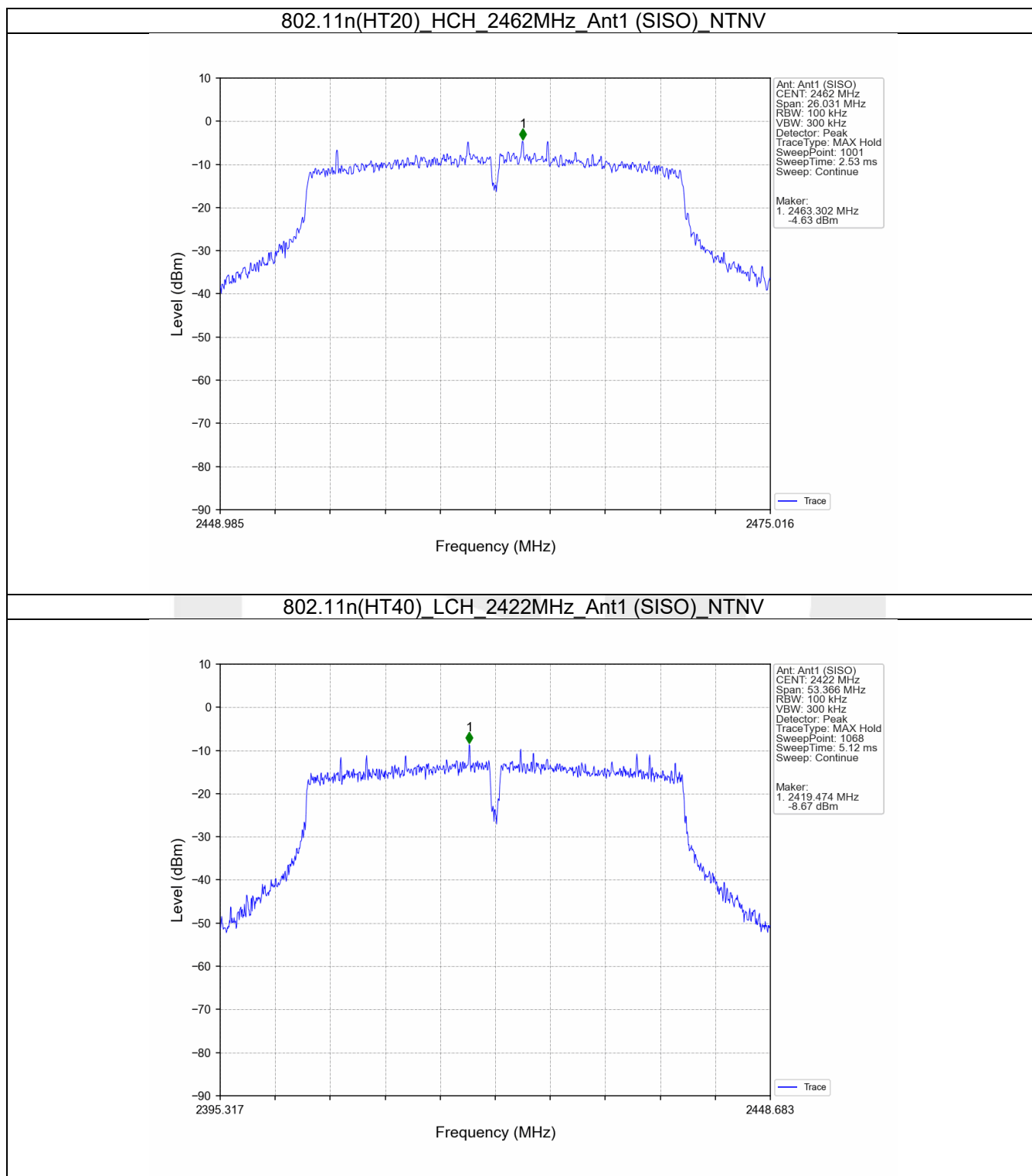
5.2.1 Ref

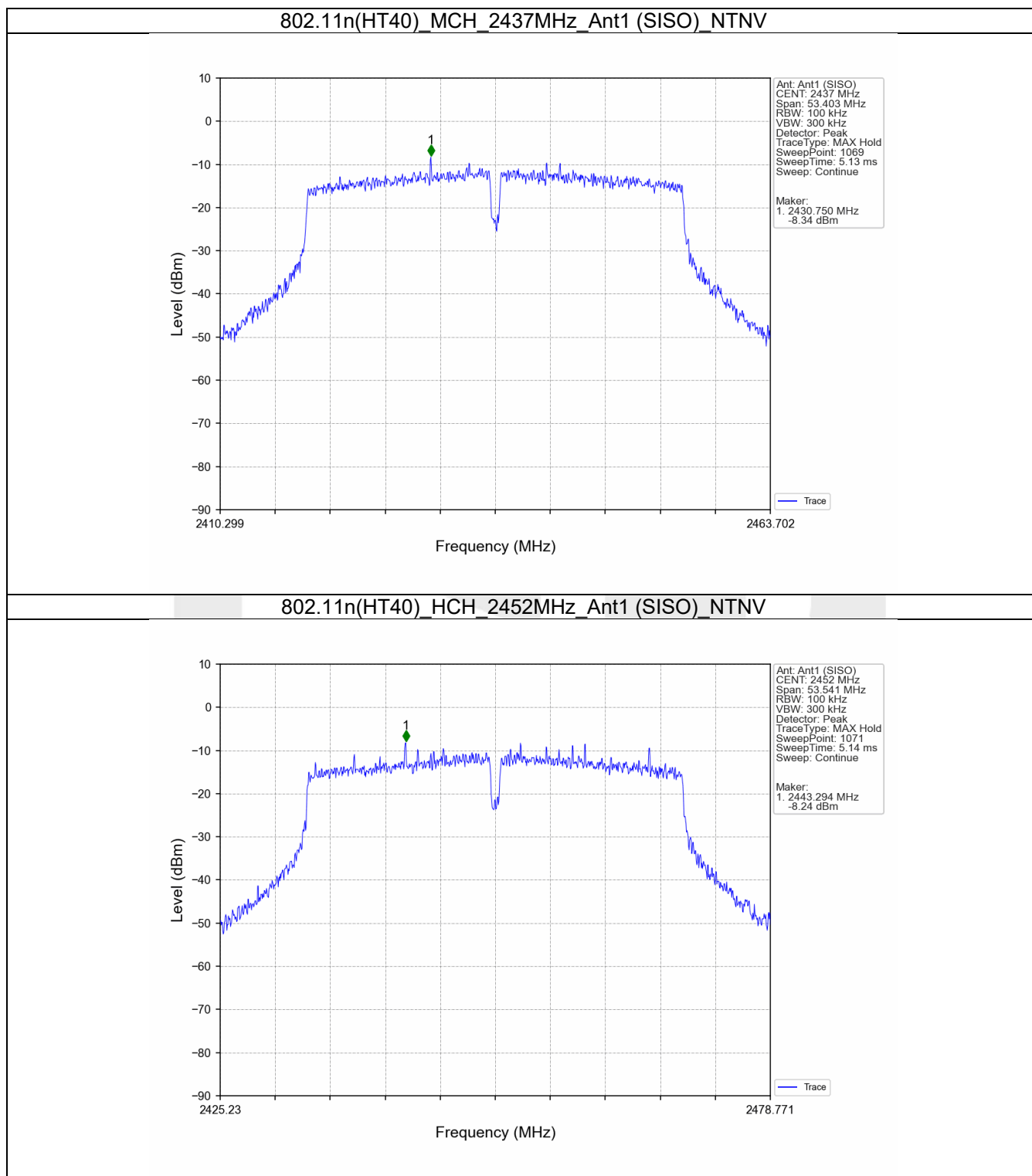




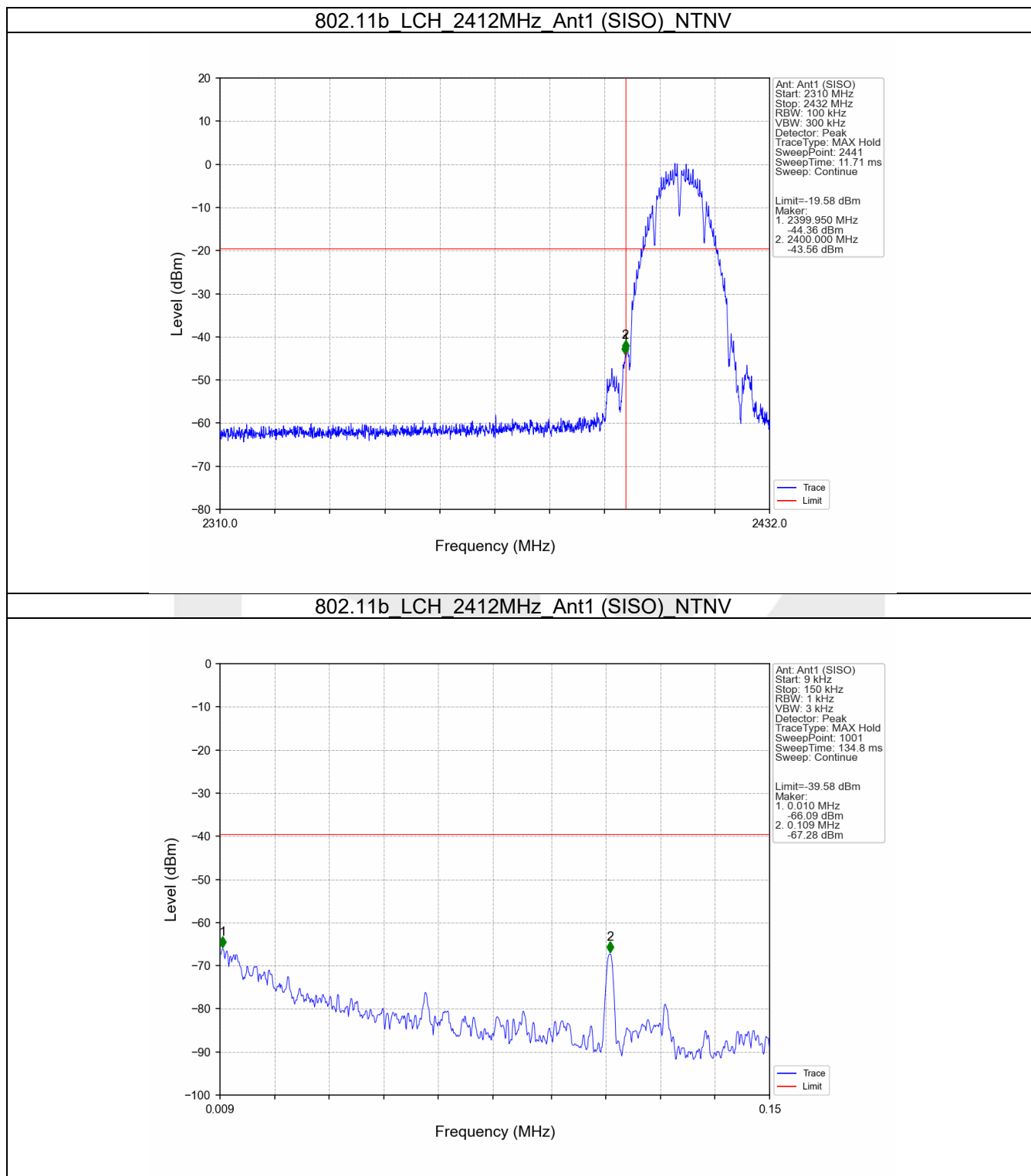


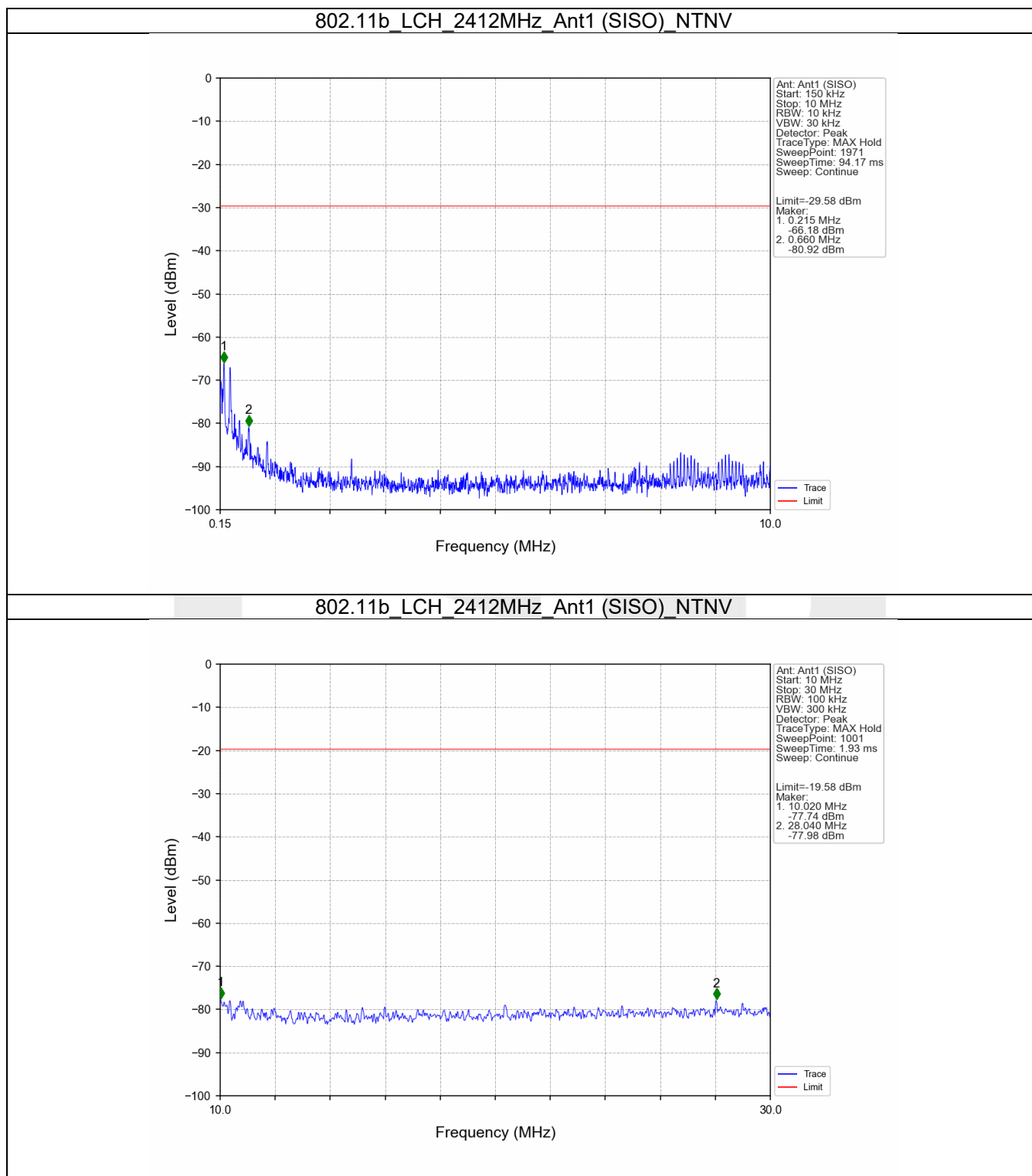


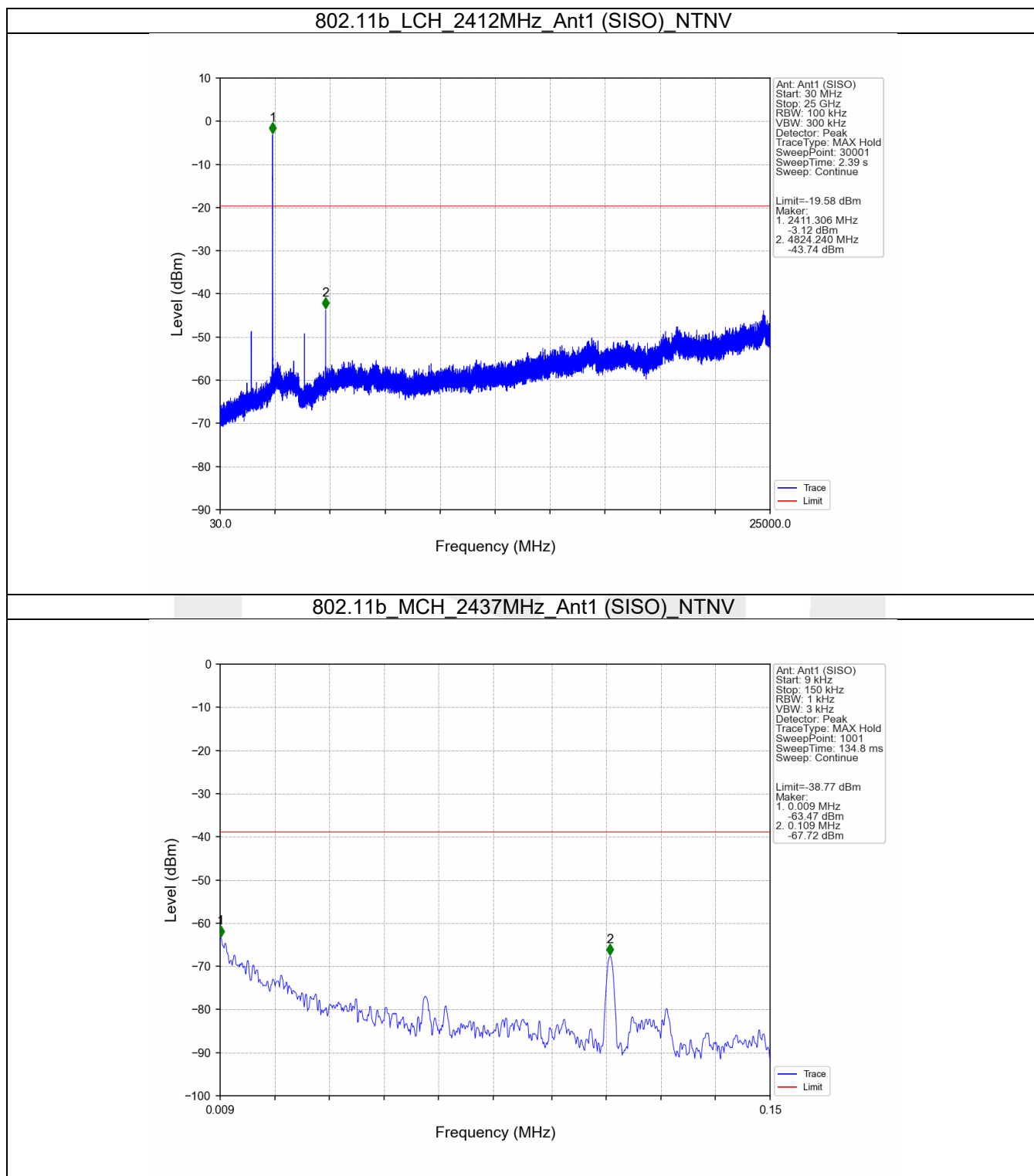


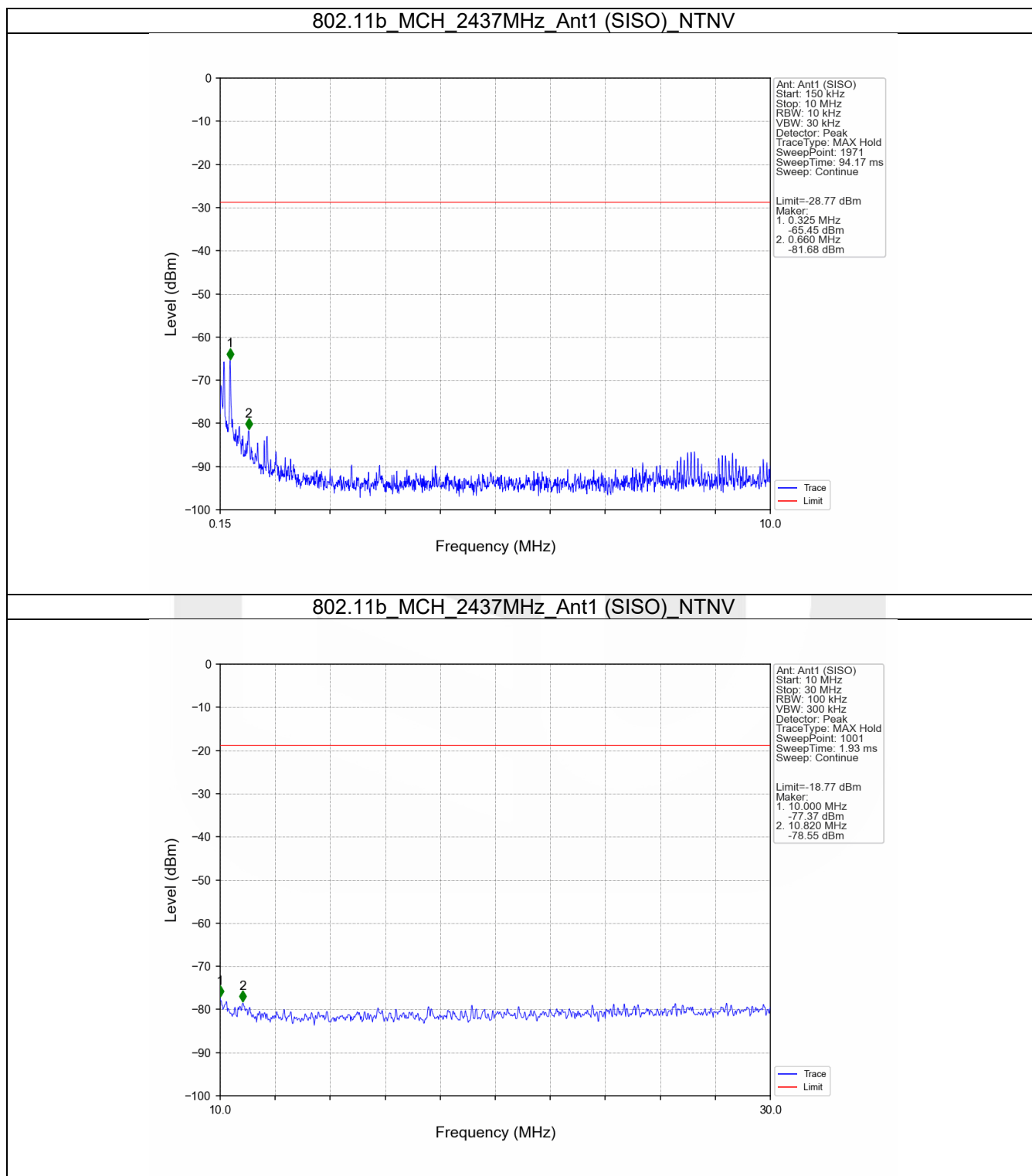


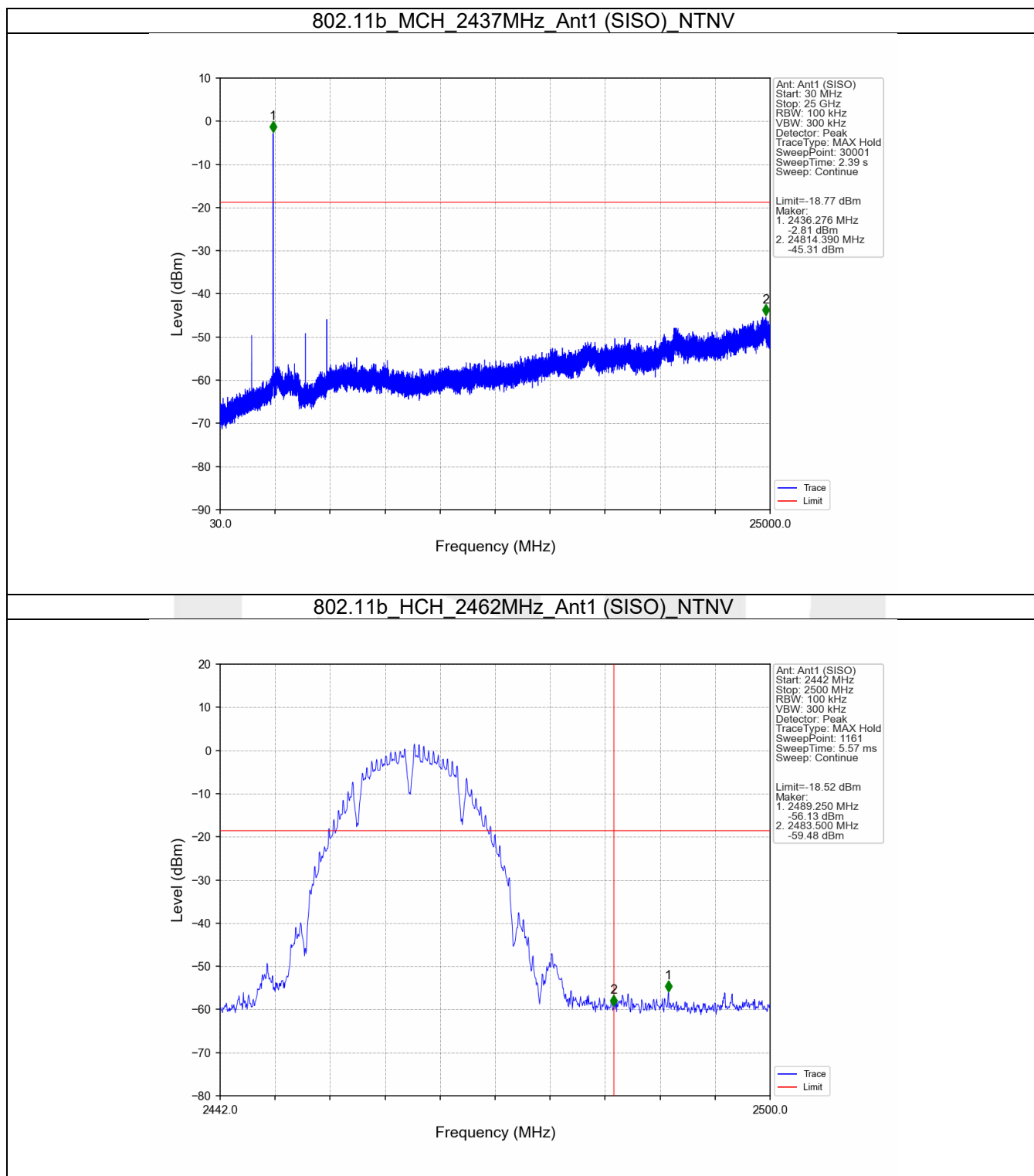
5.2.2 CSE

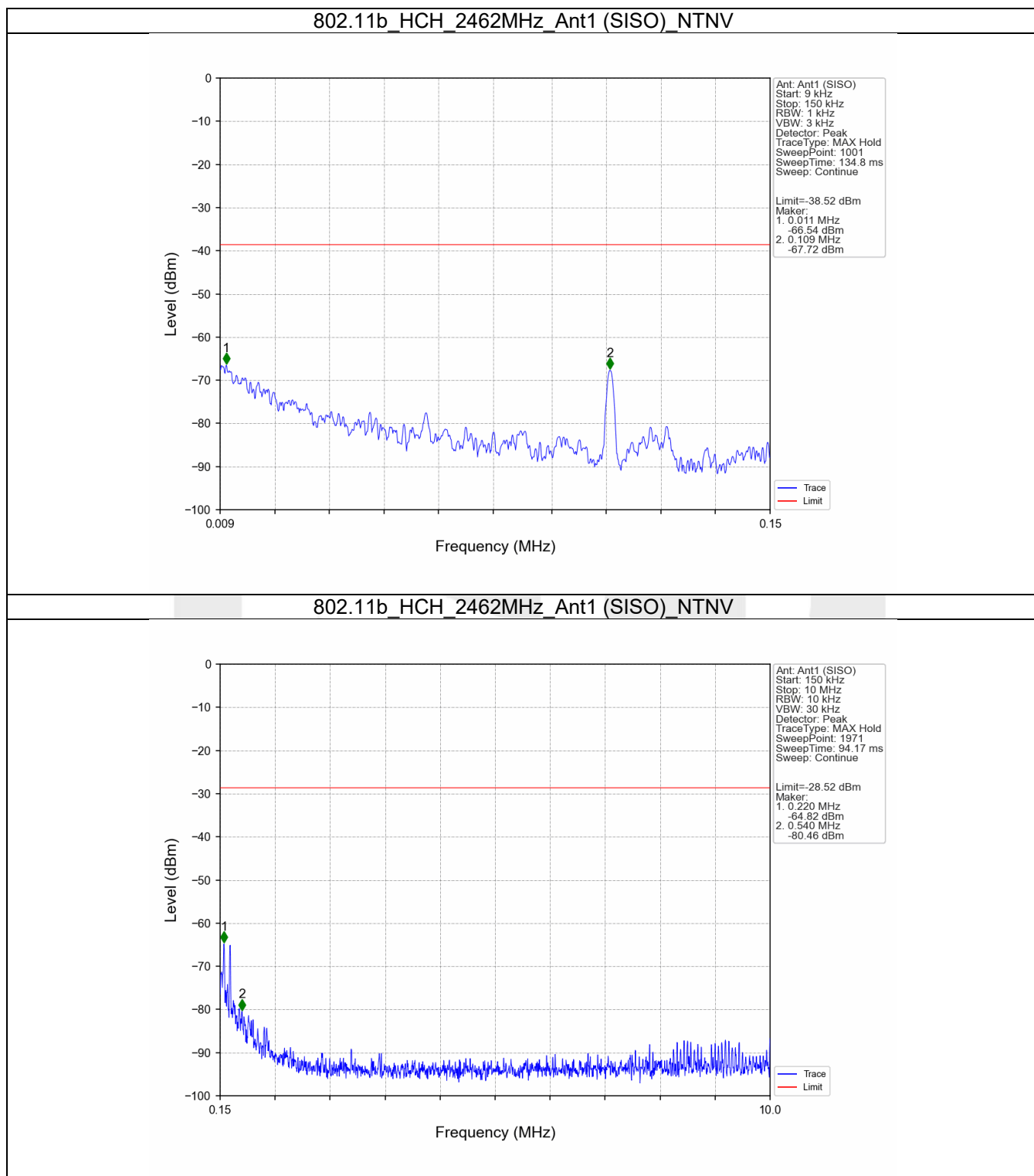


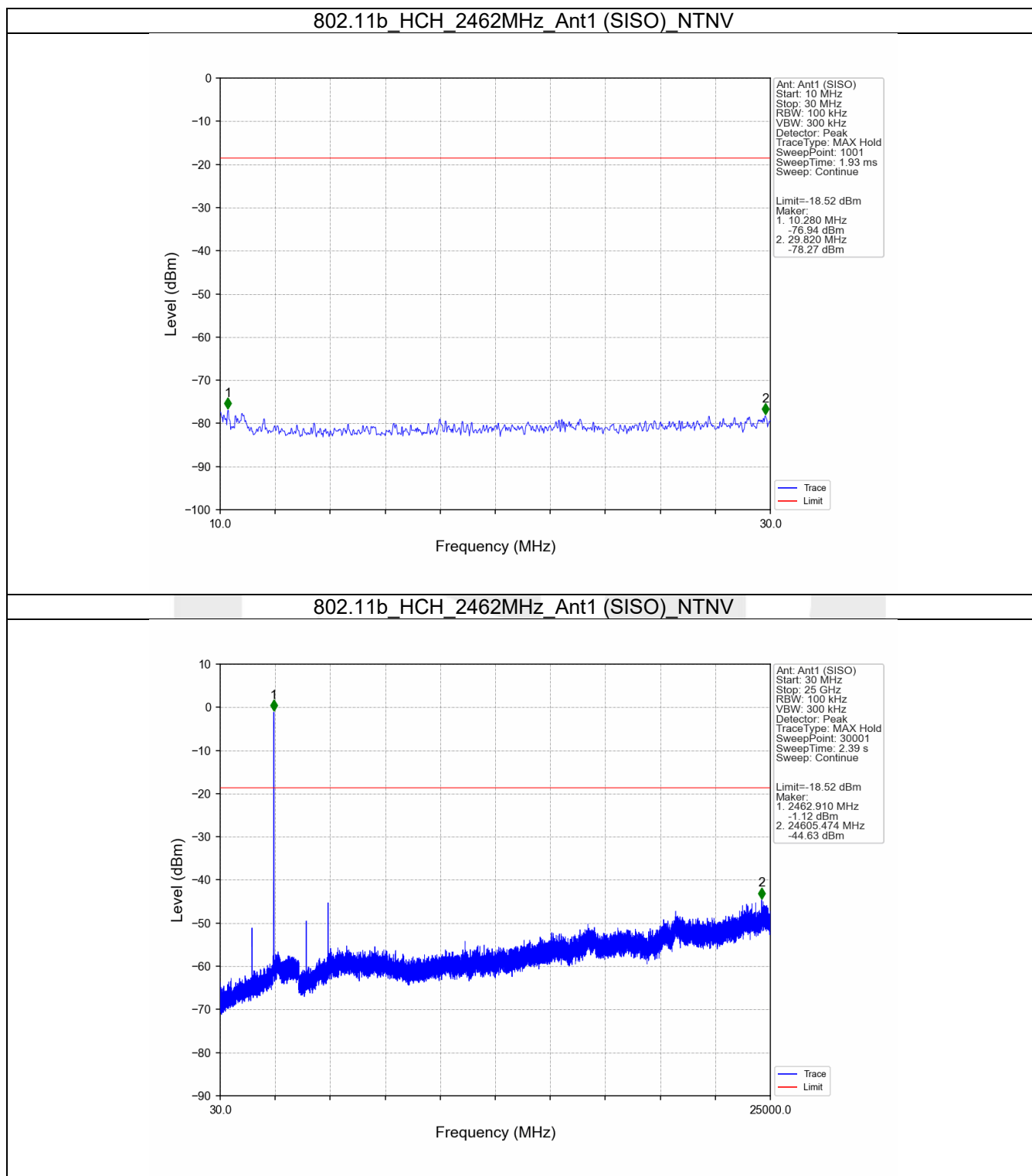


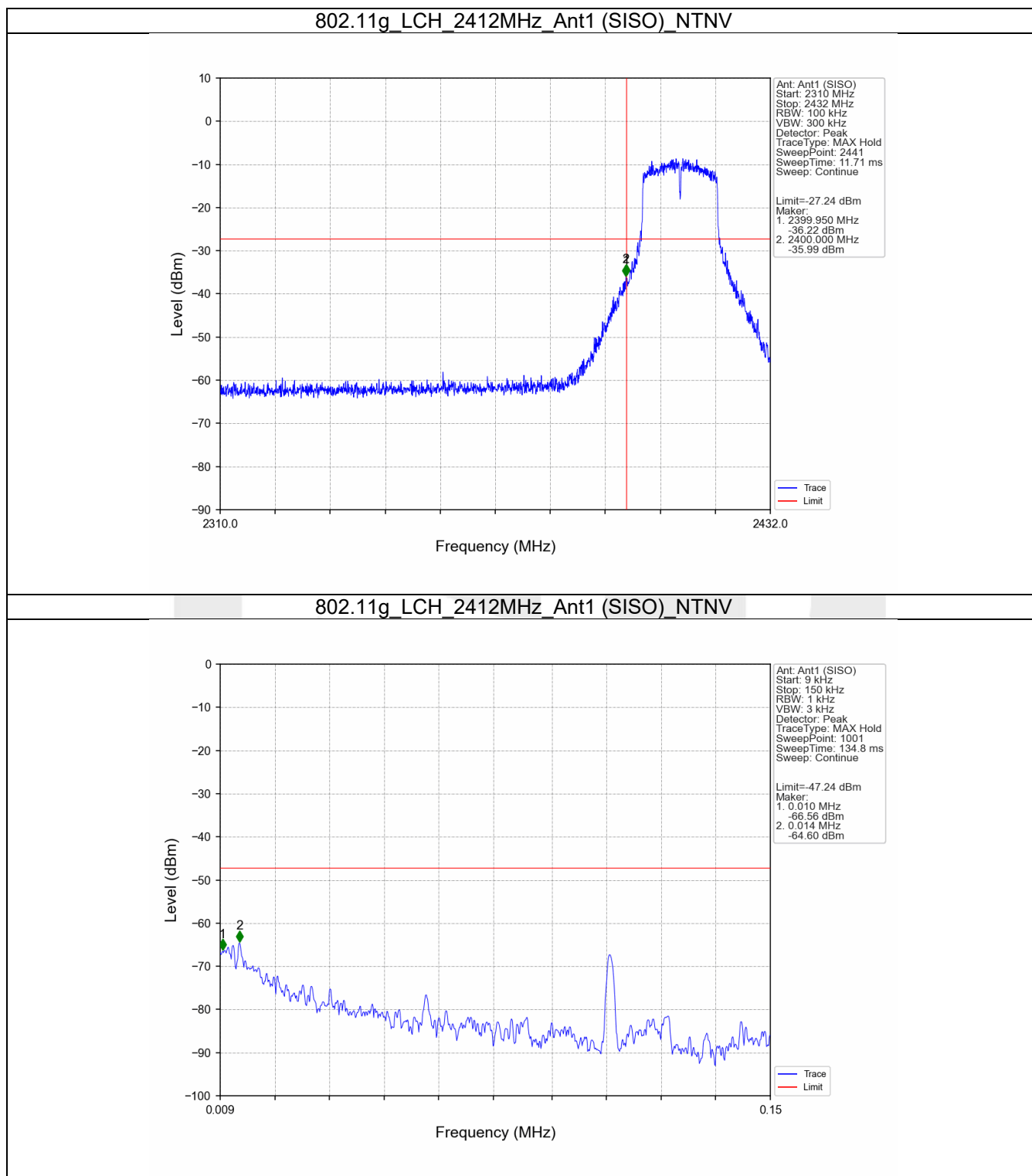


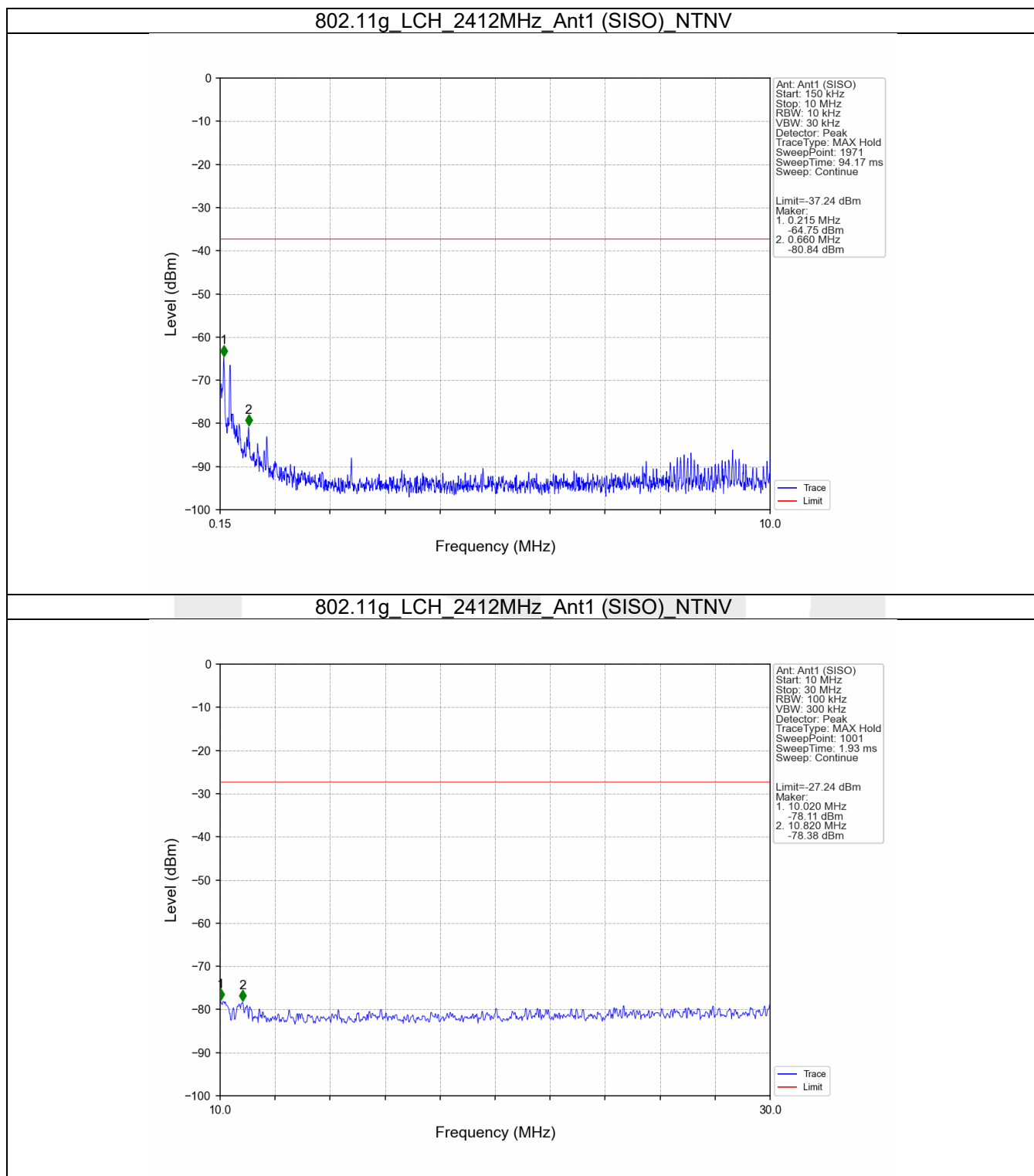


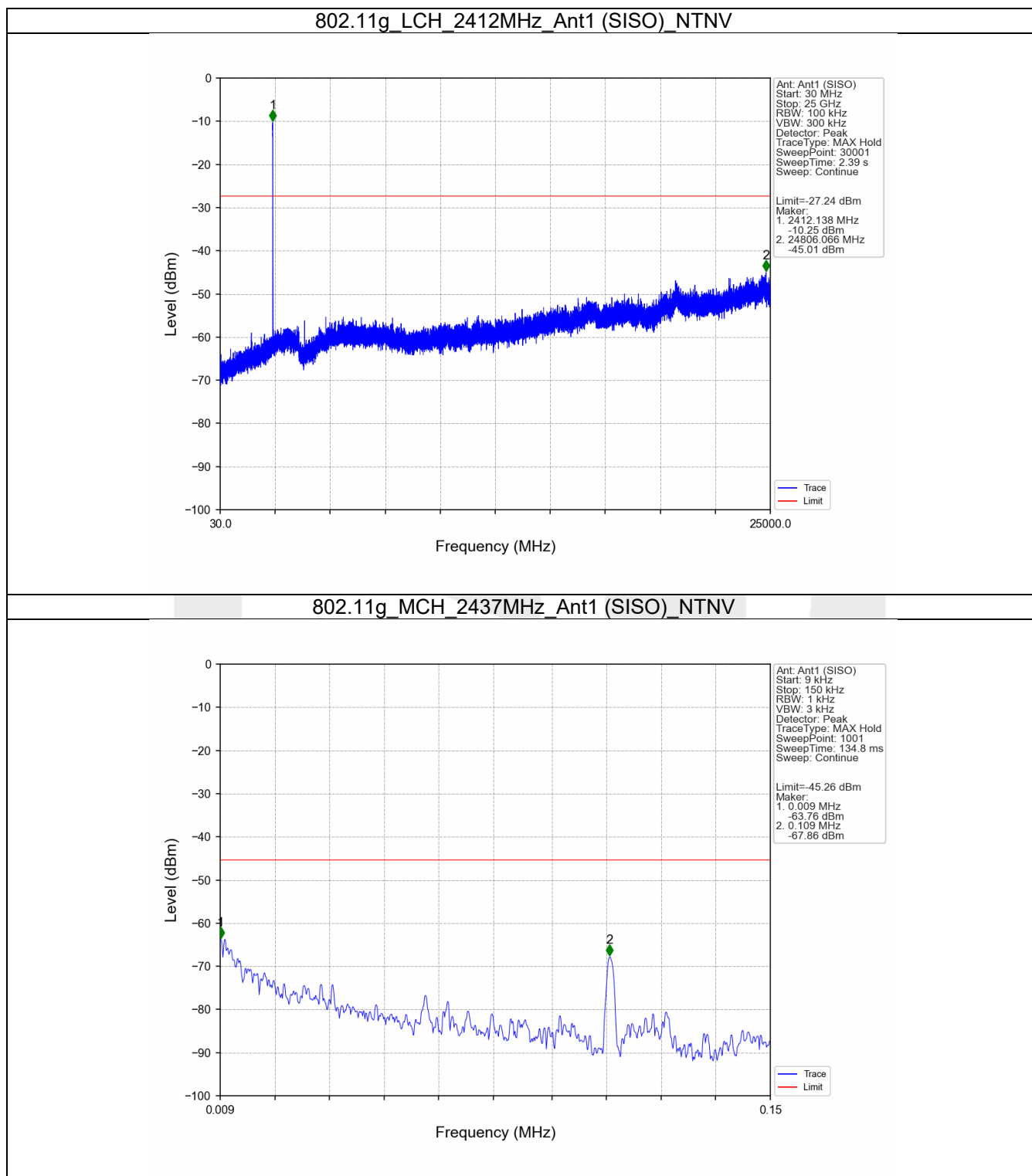


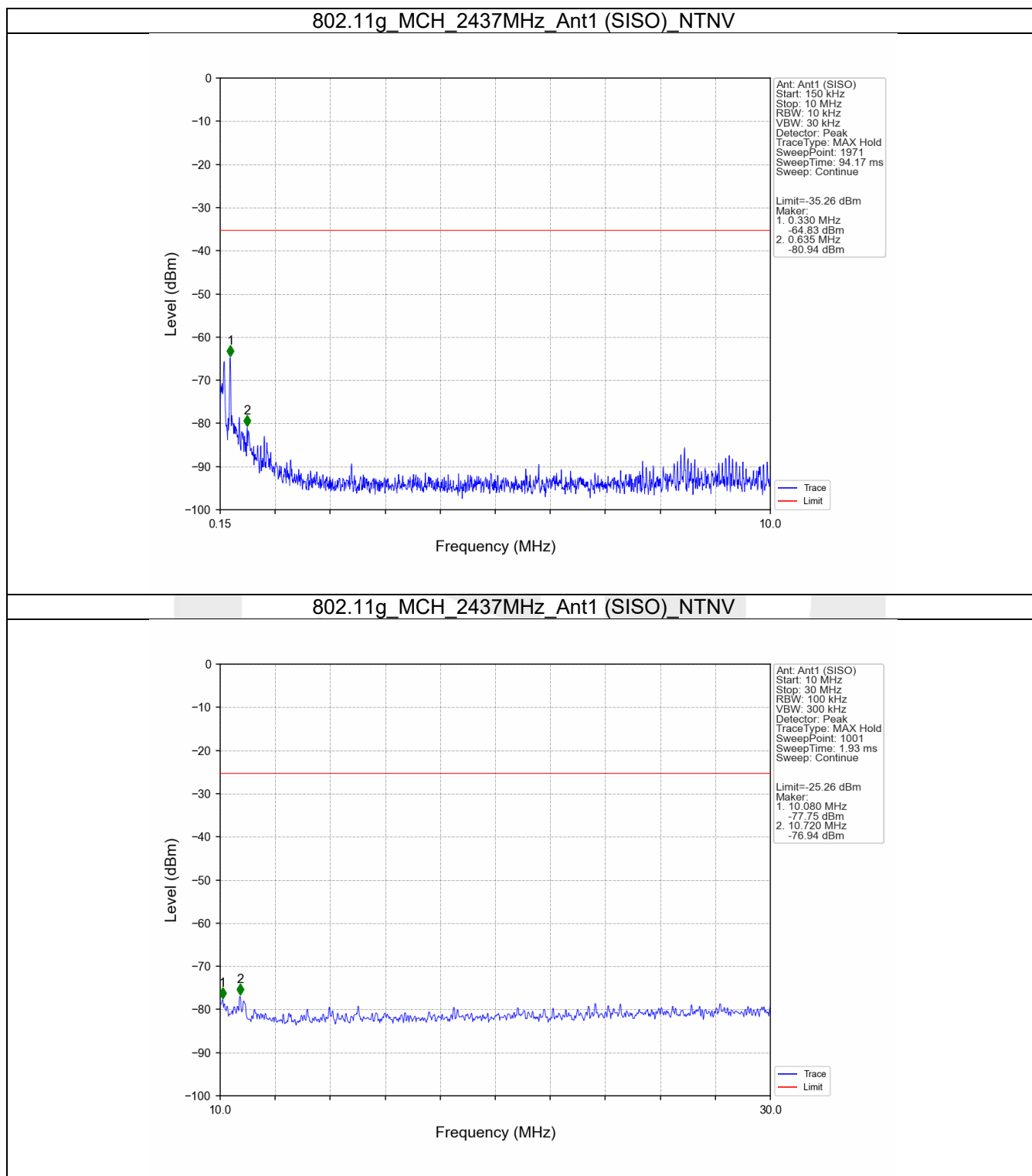


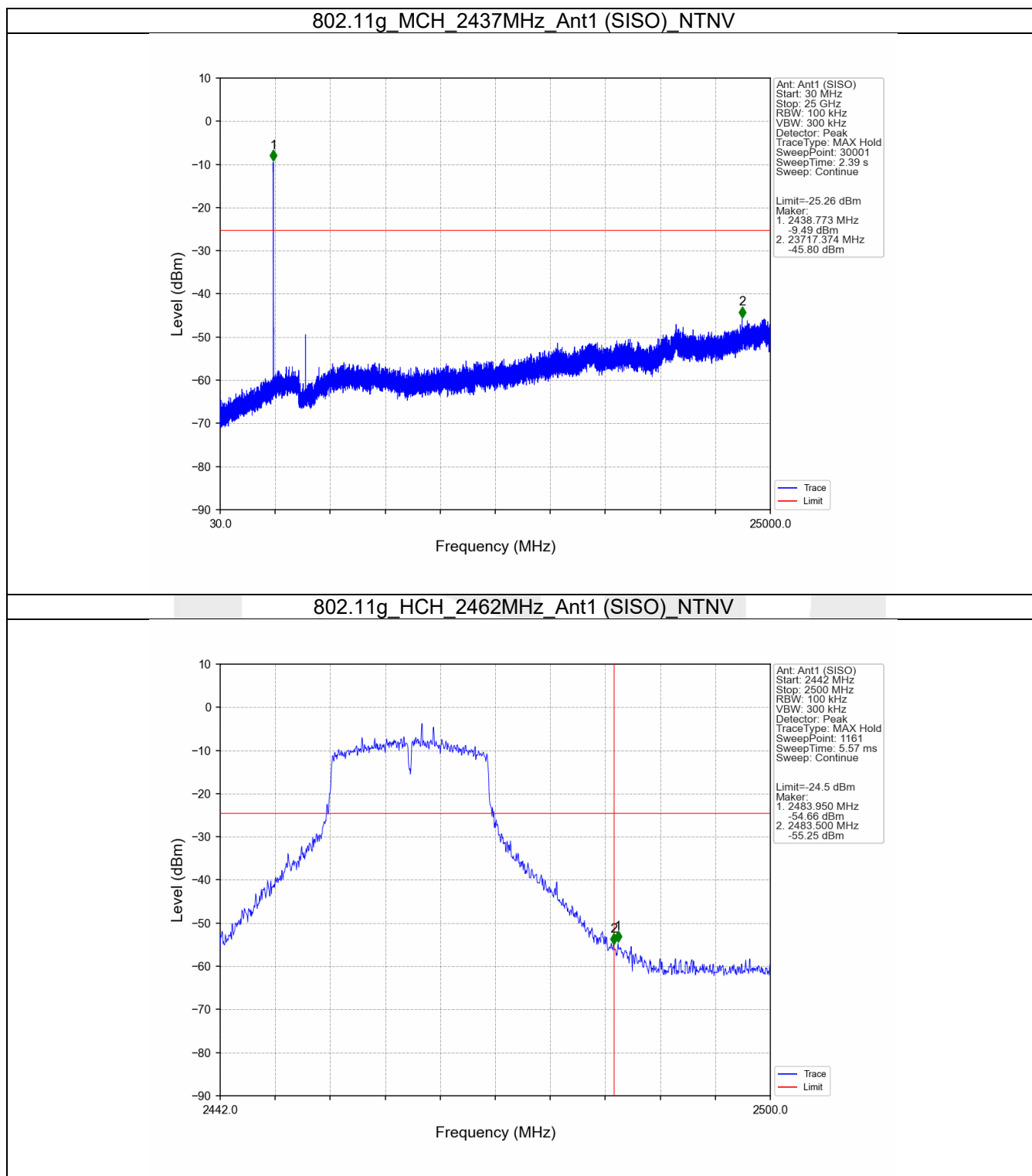


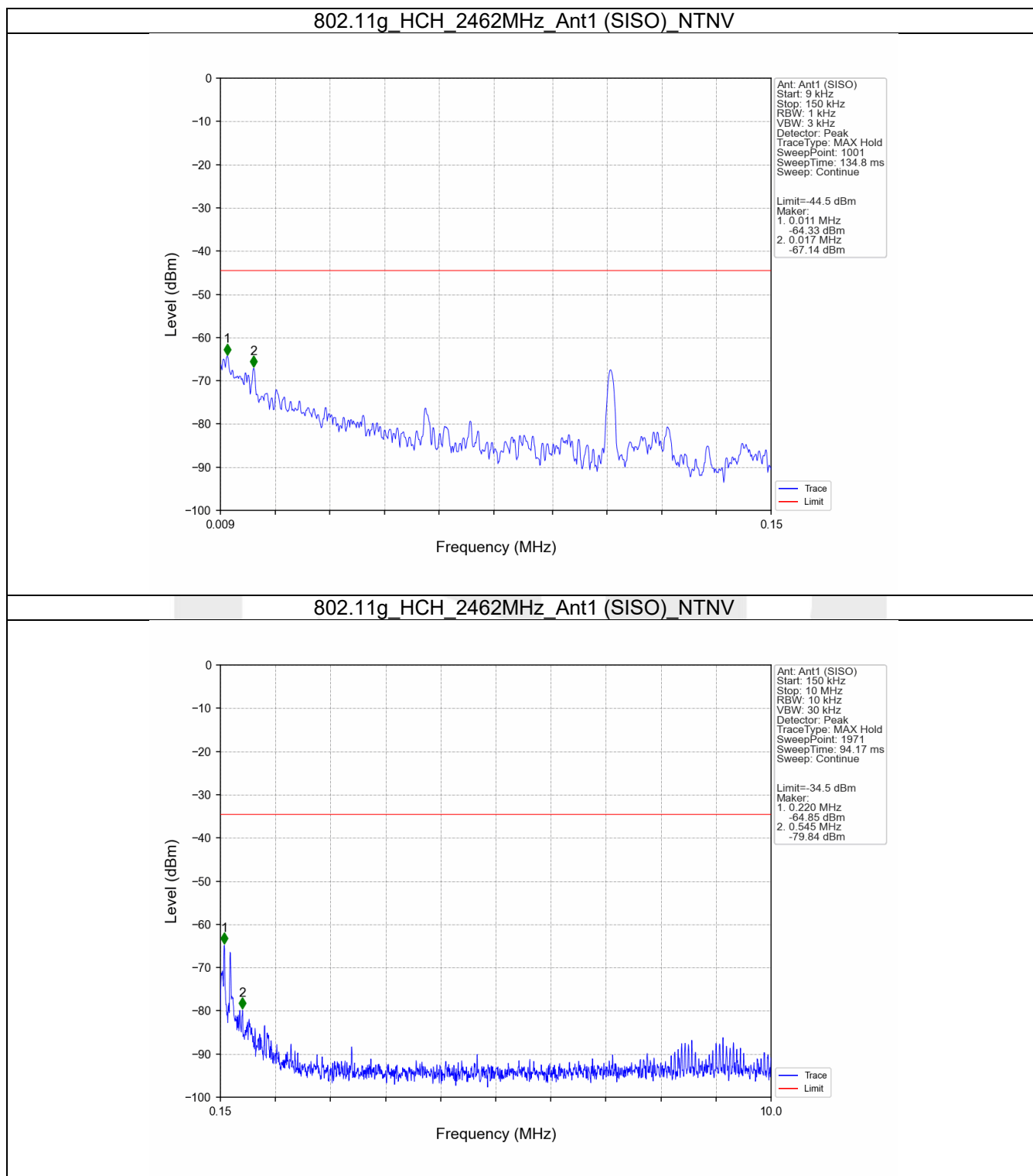


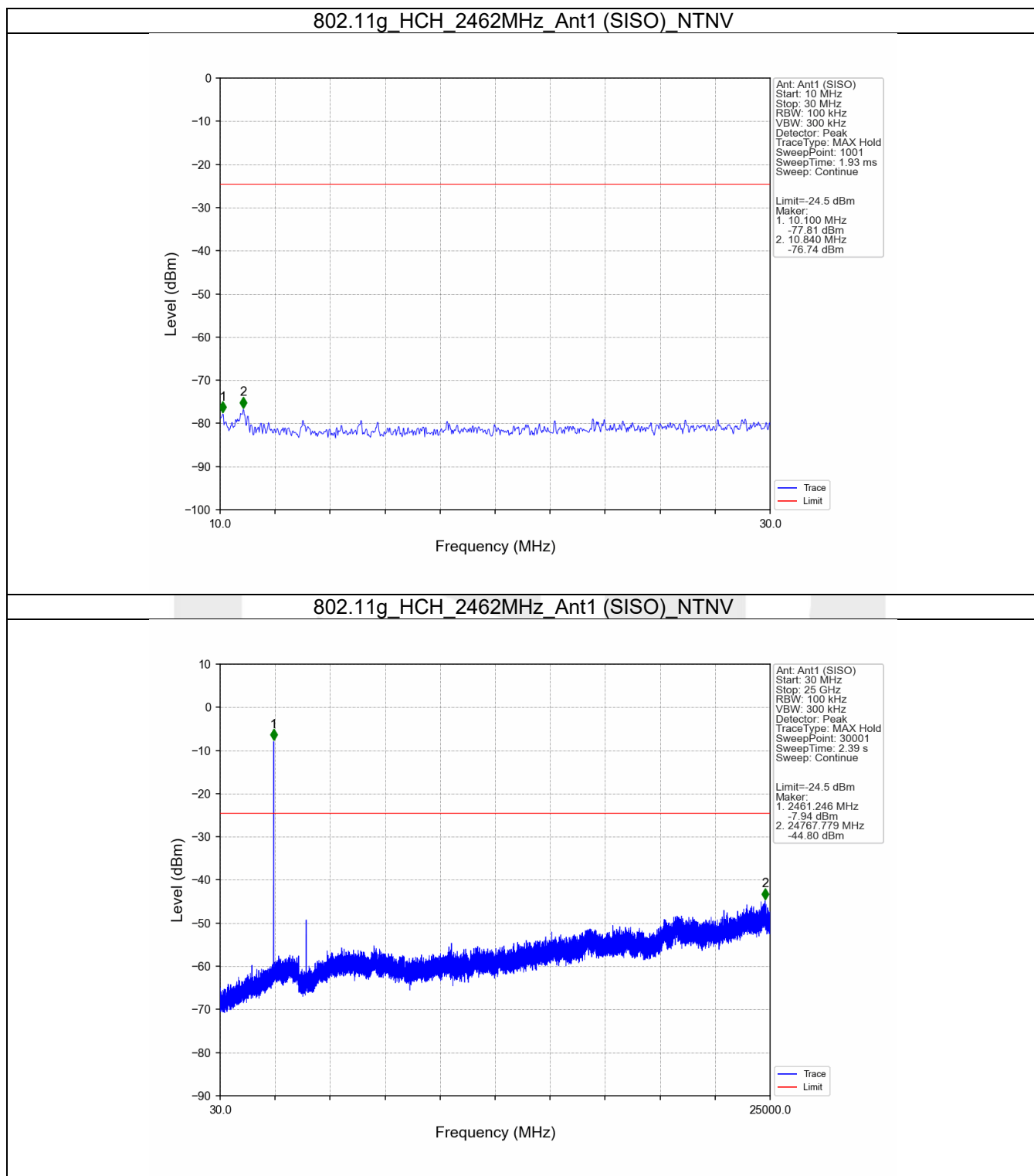


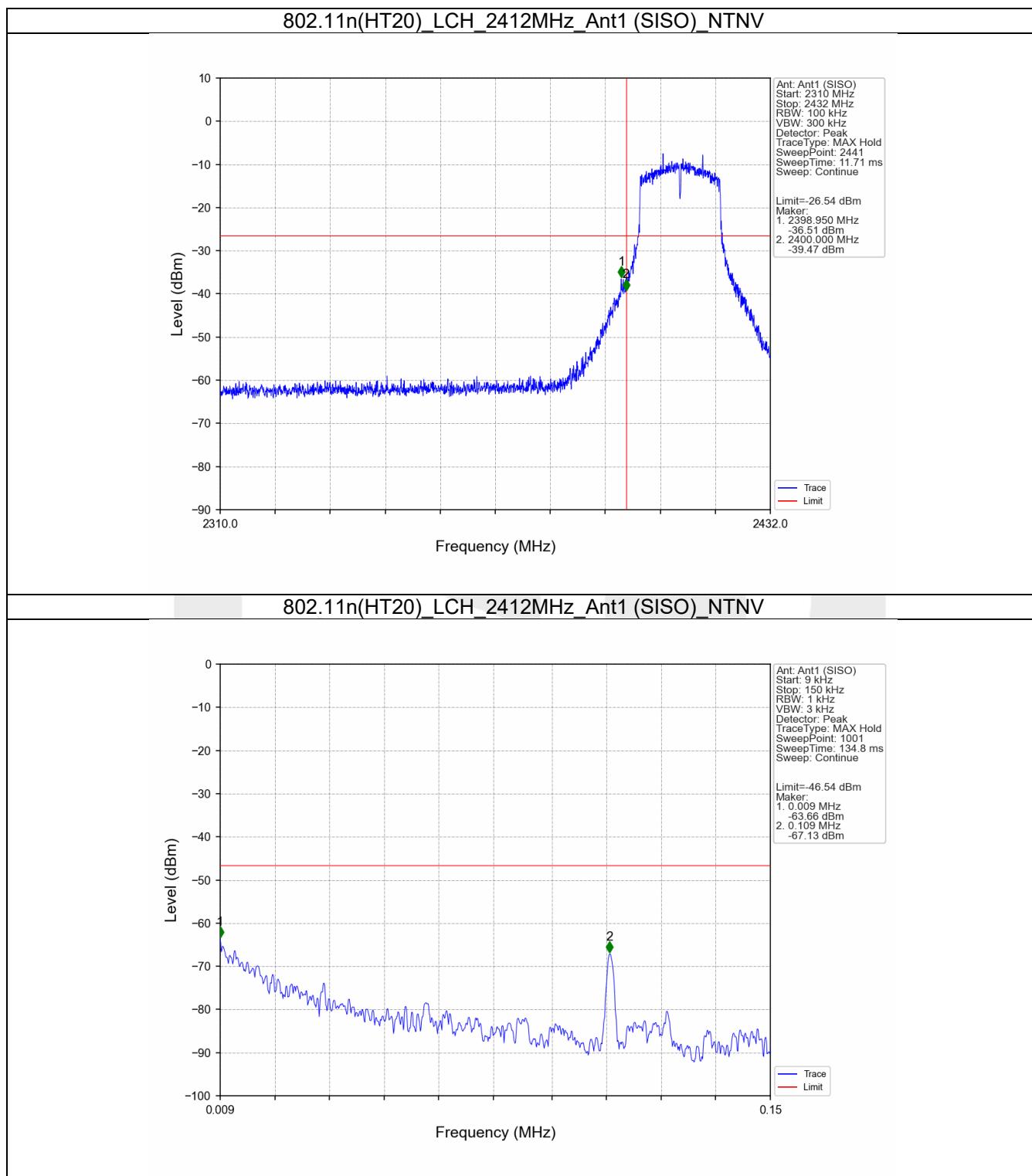


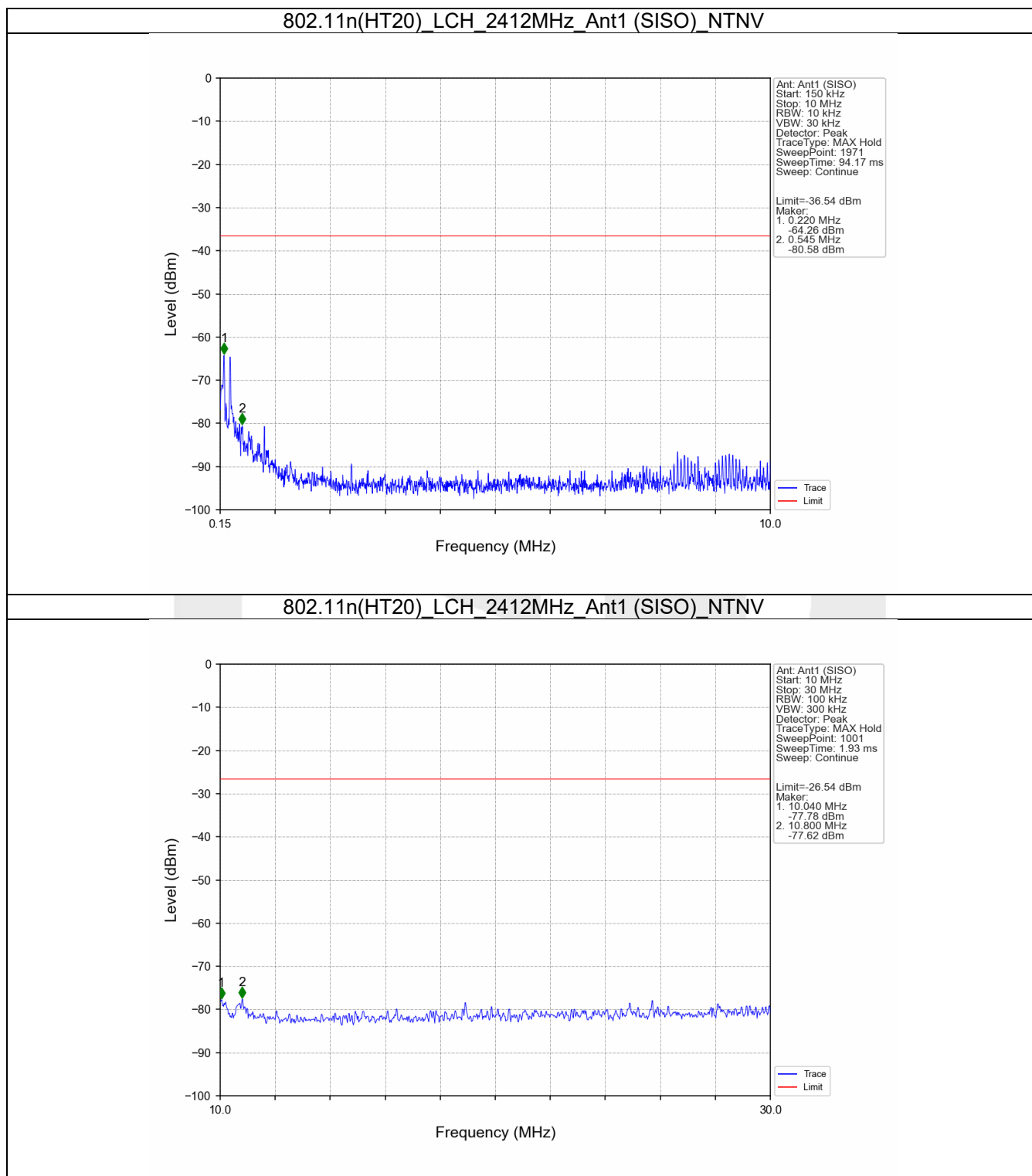


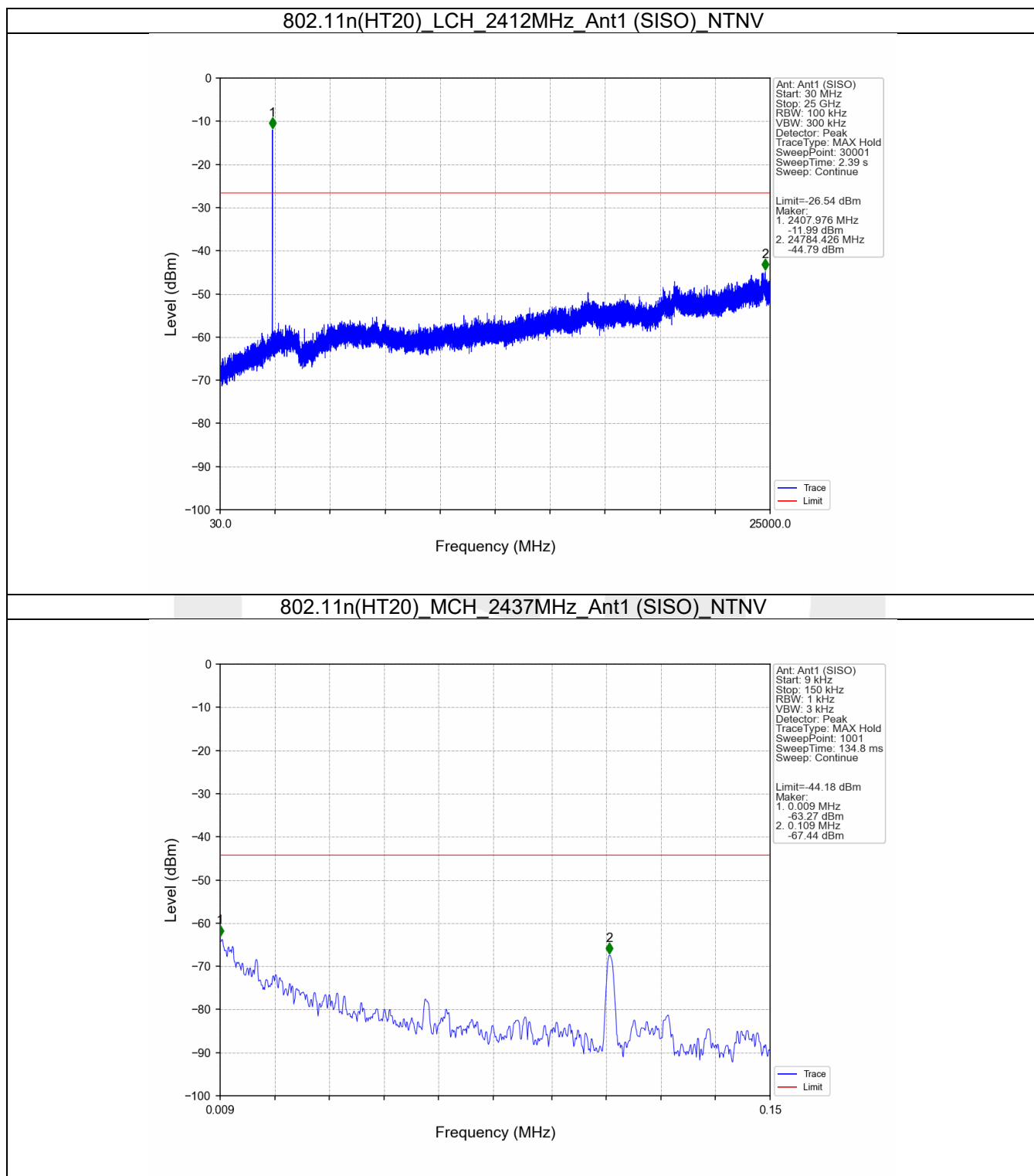


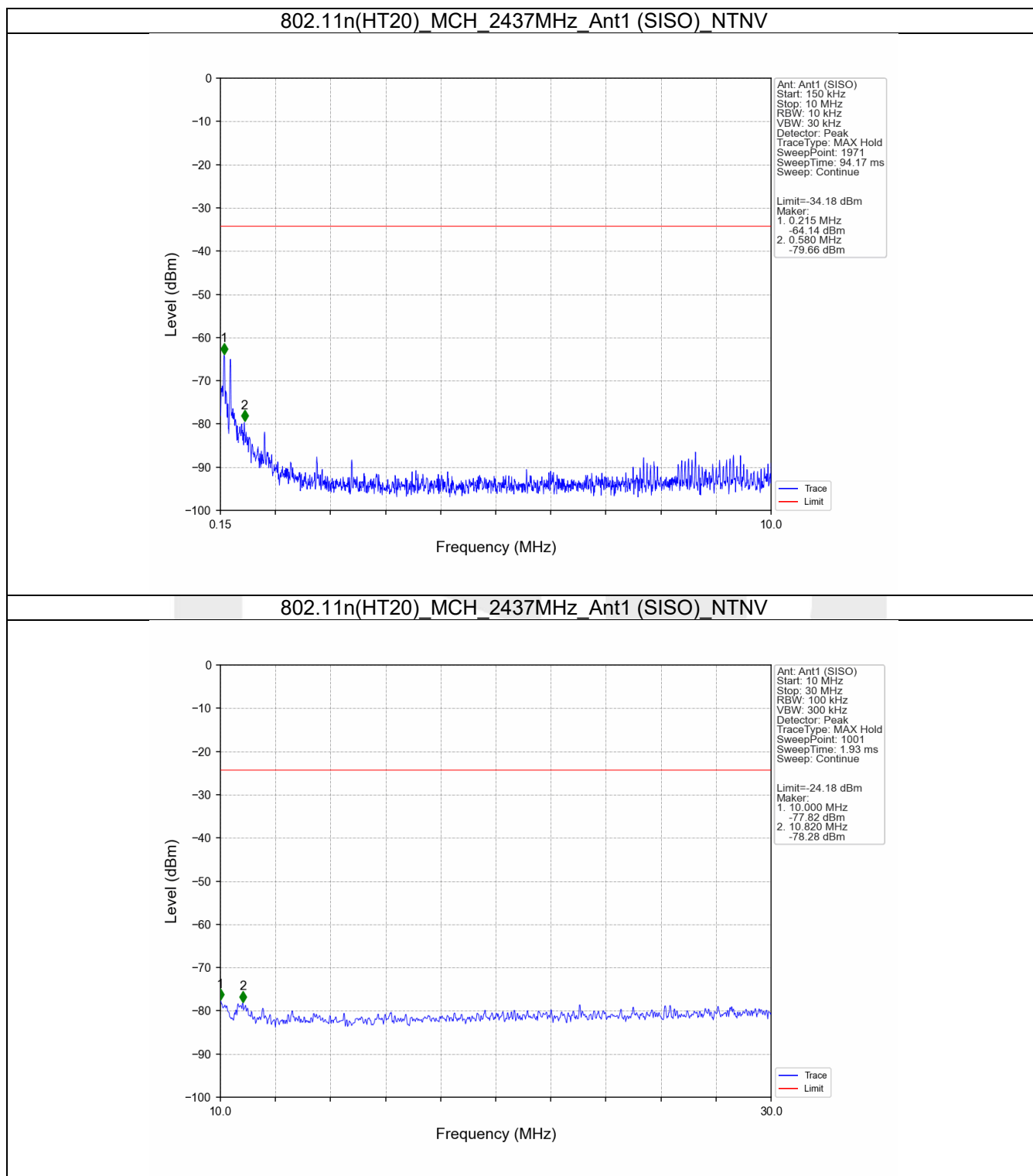


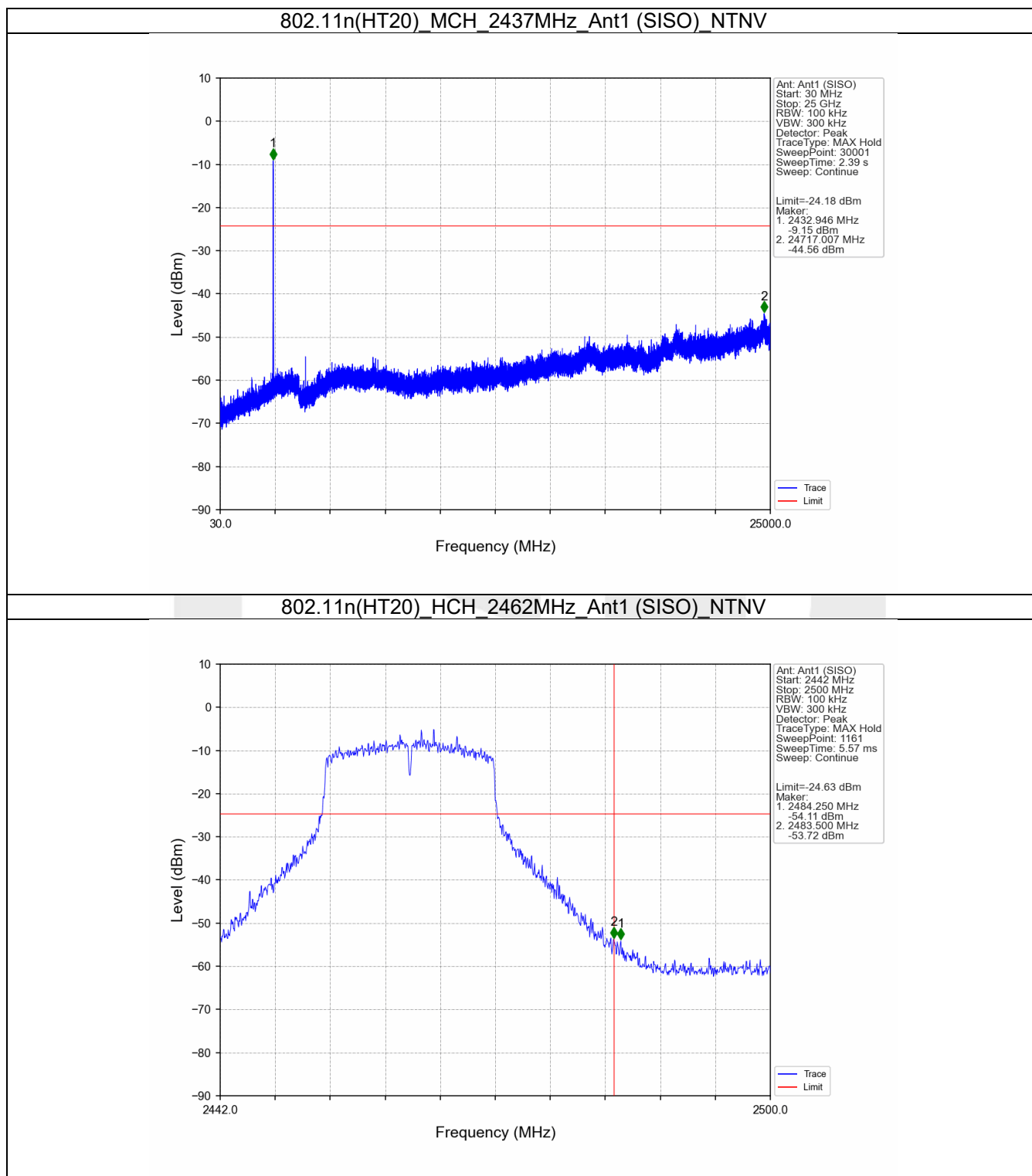


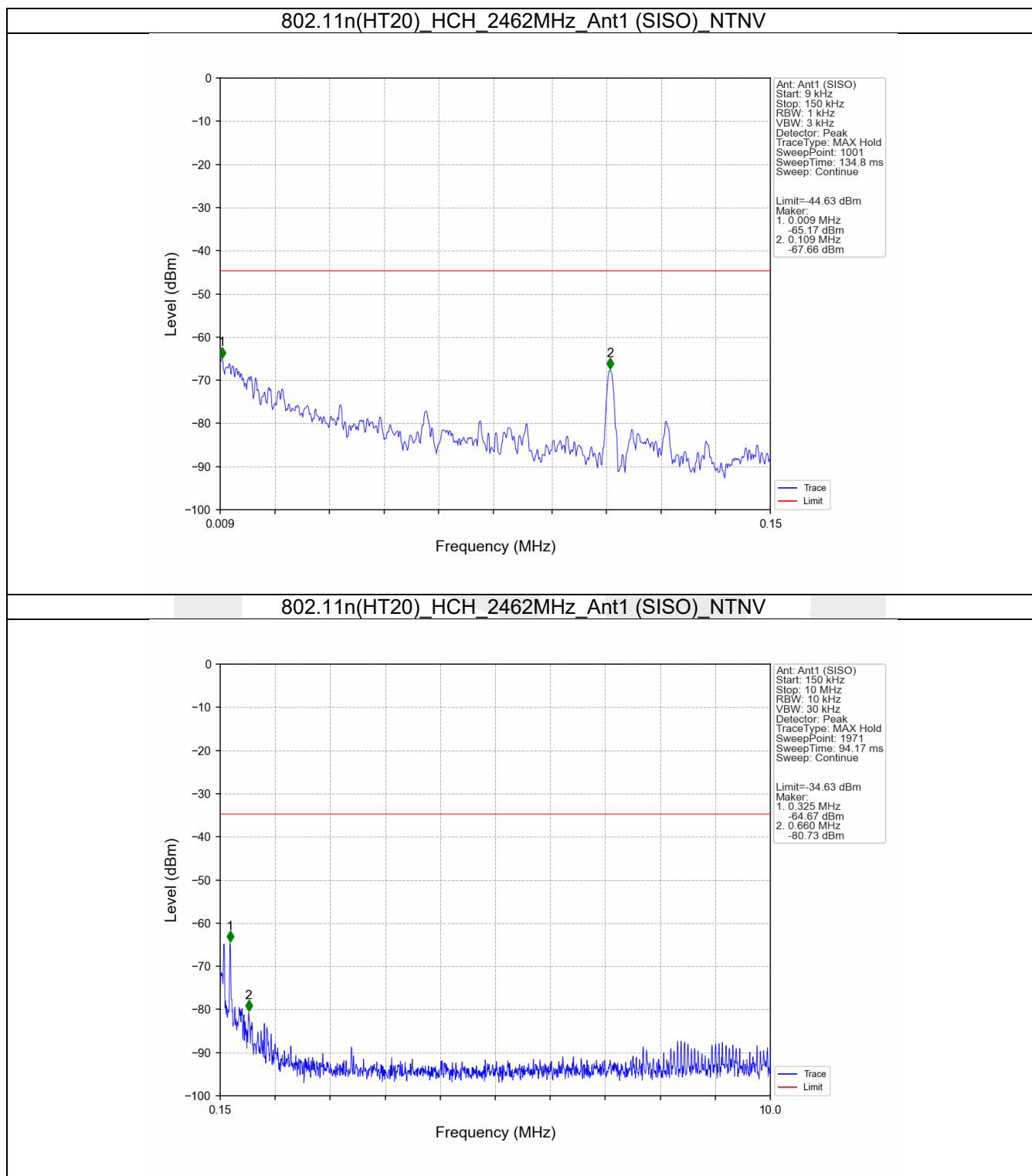


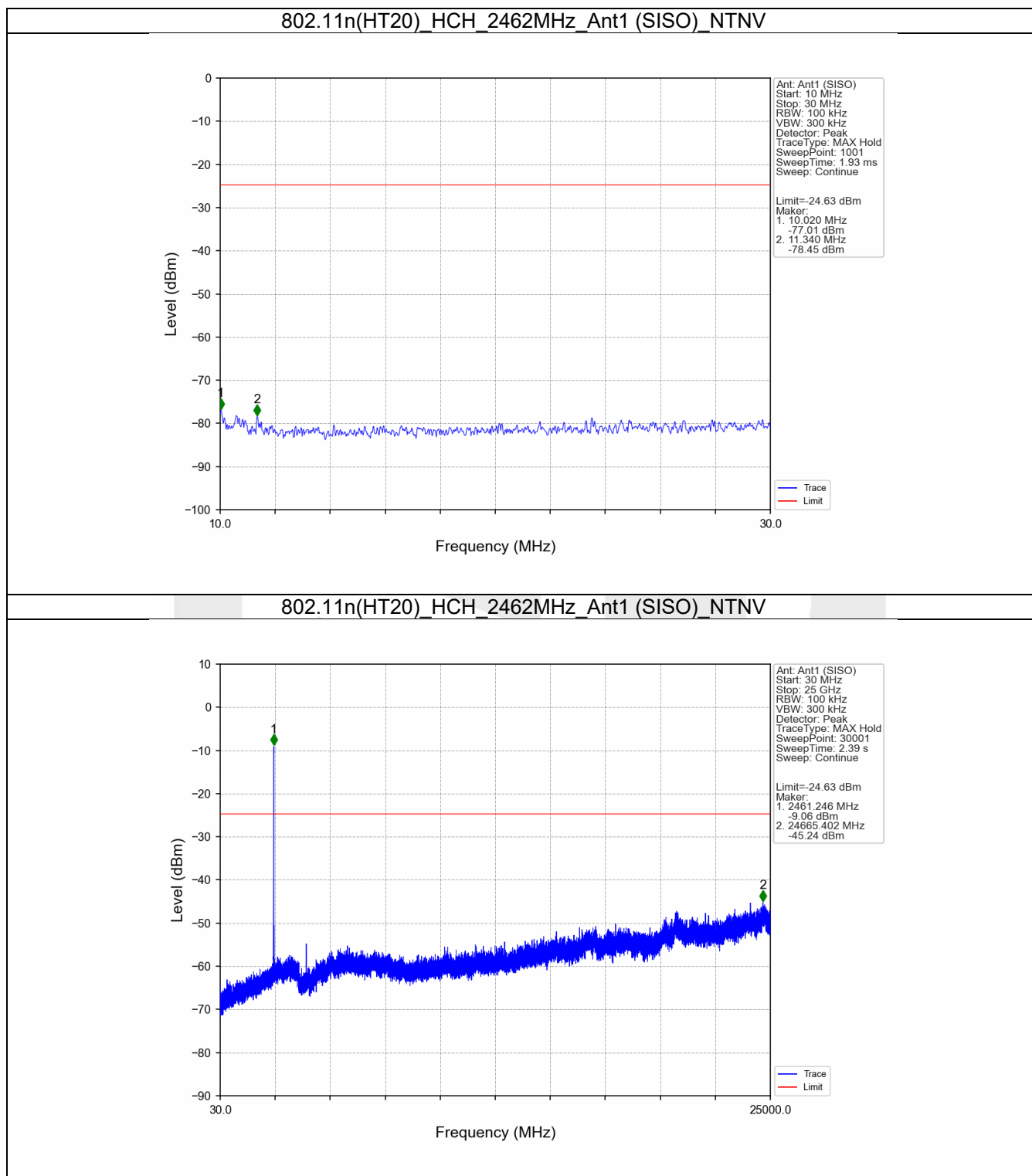


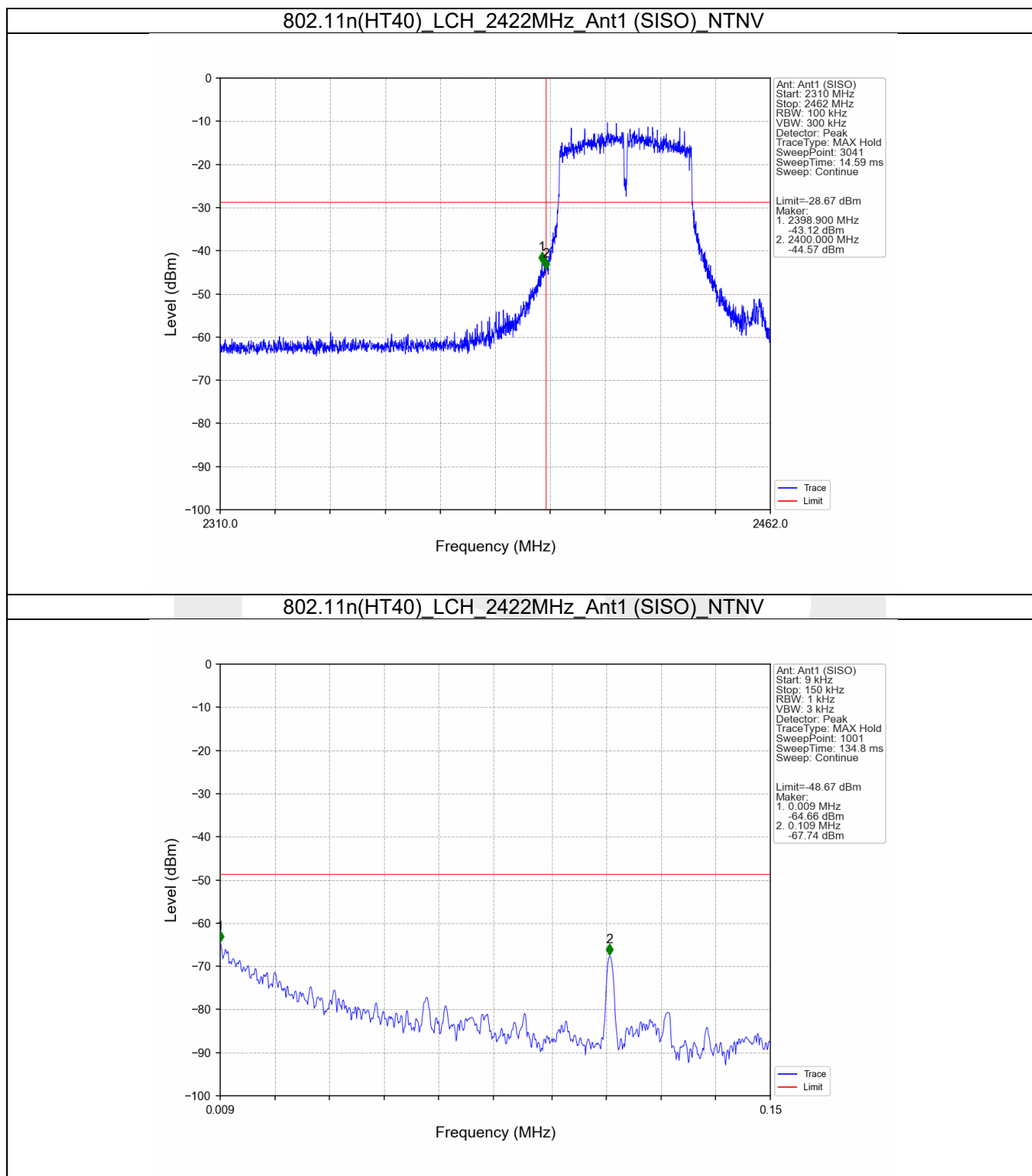


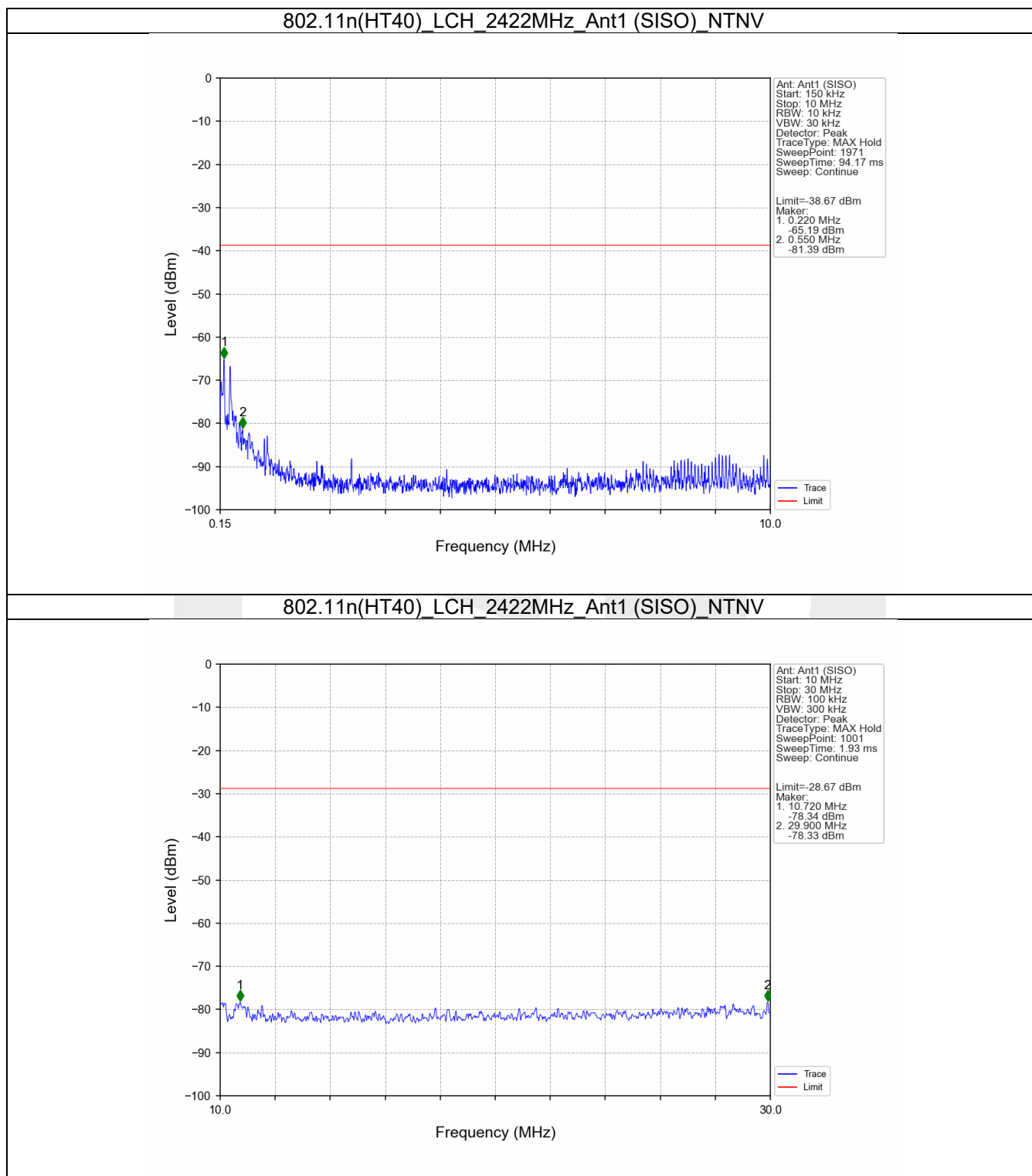


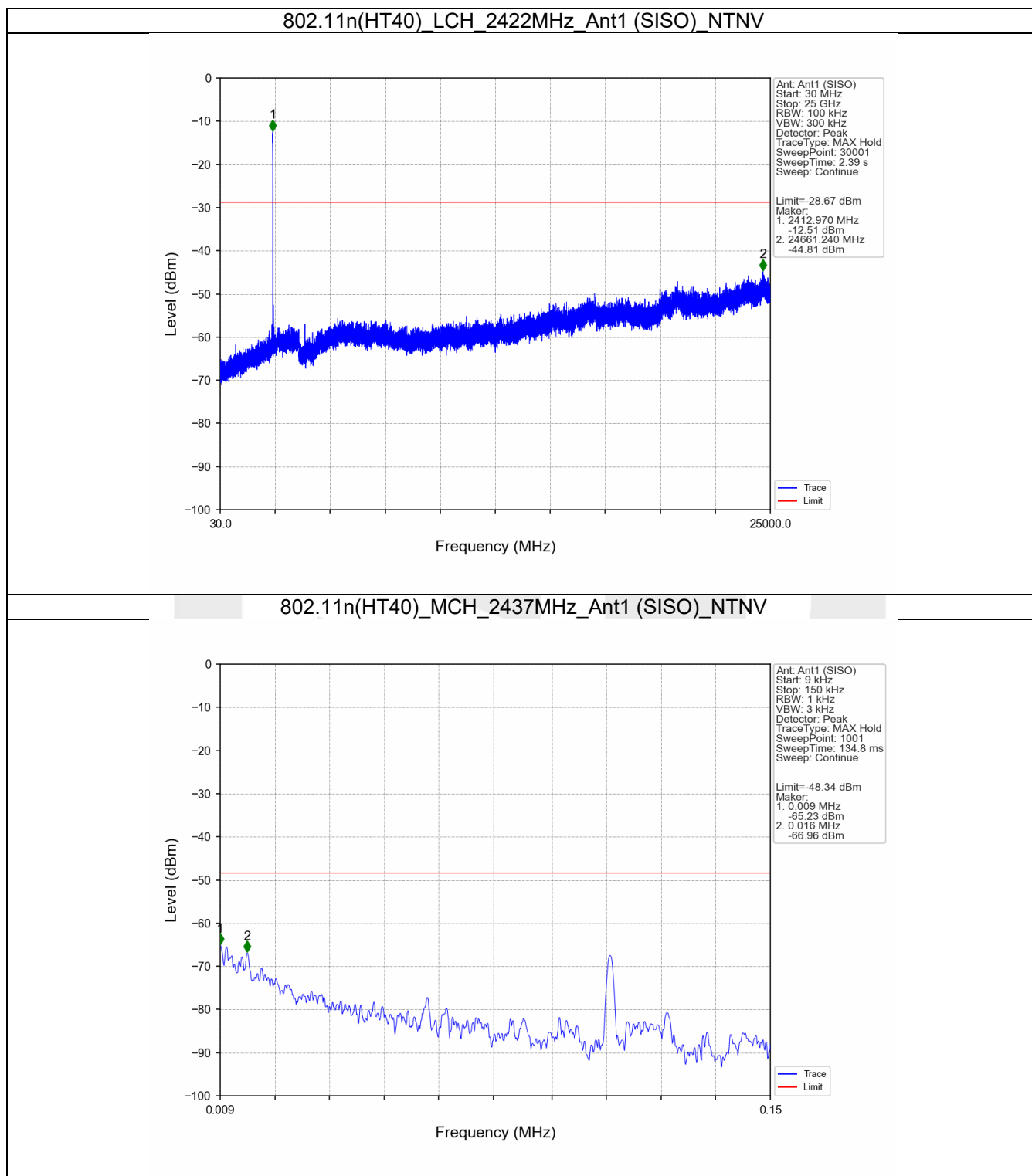


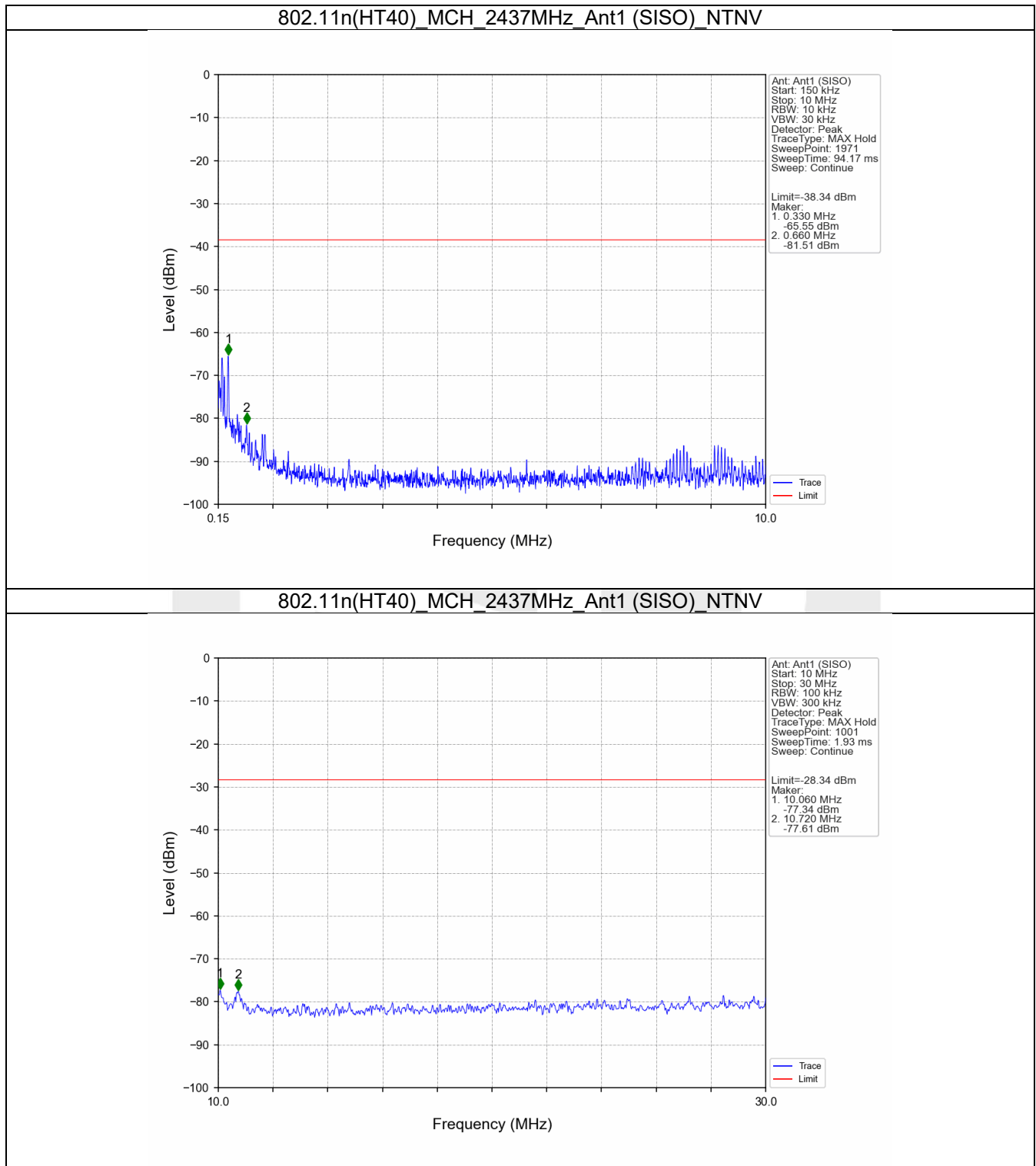


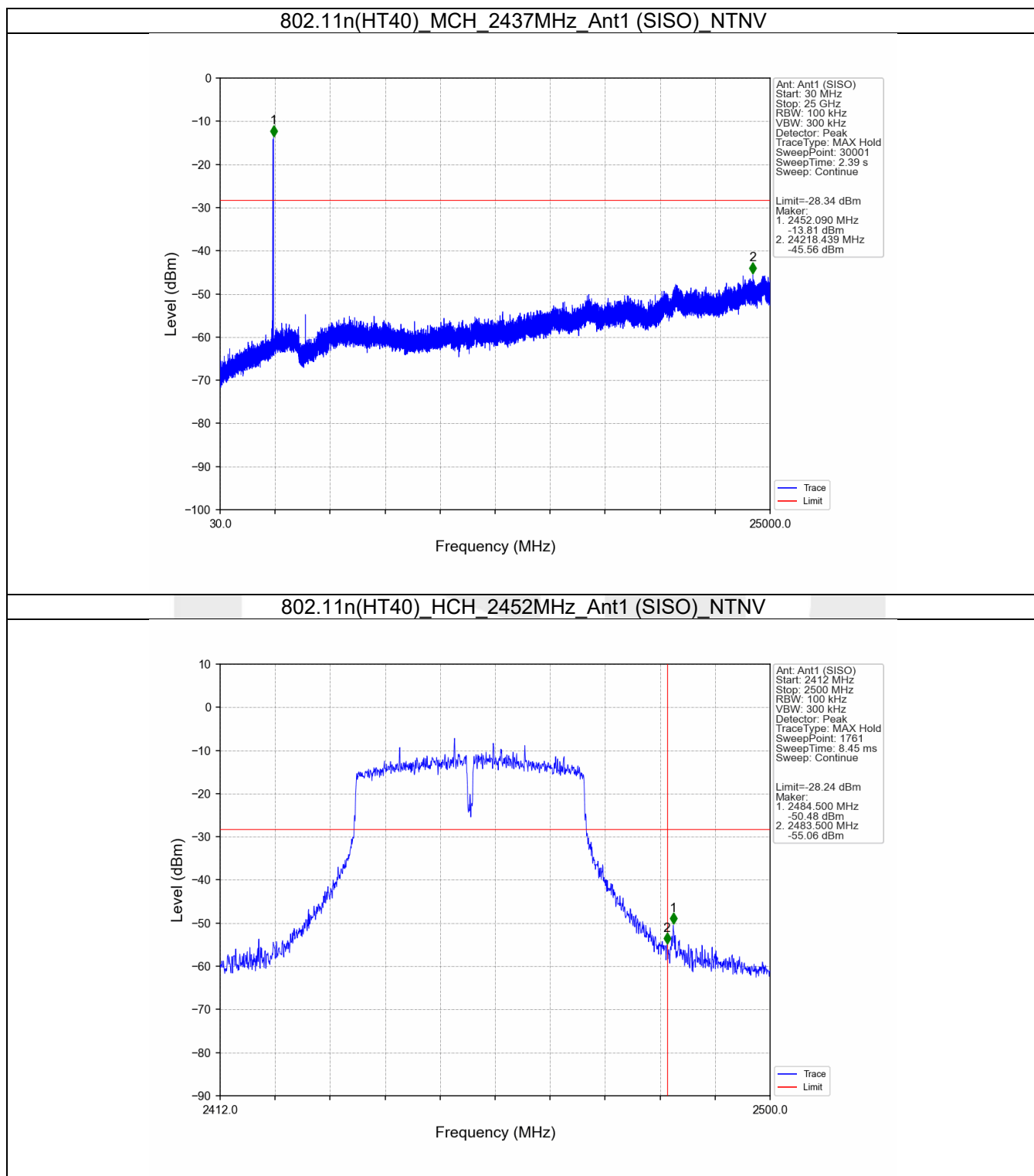


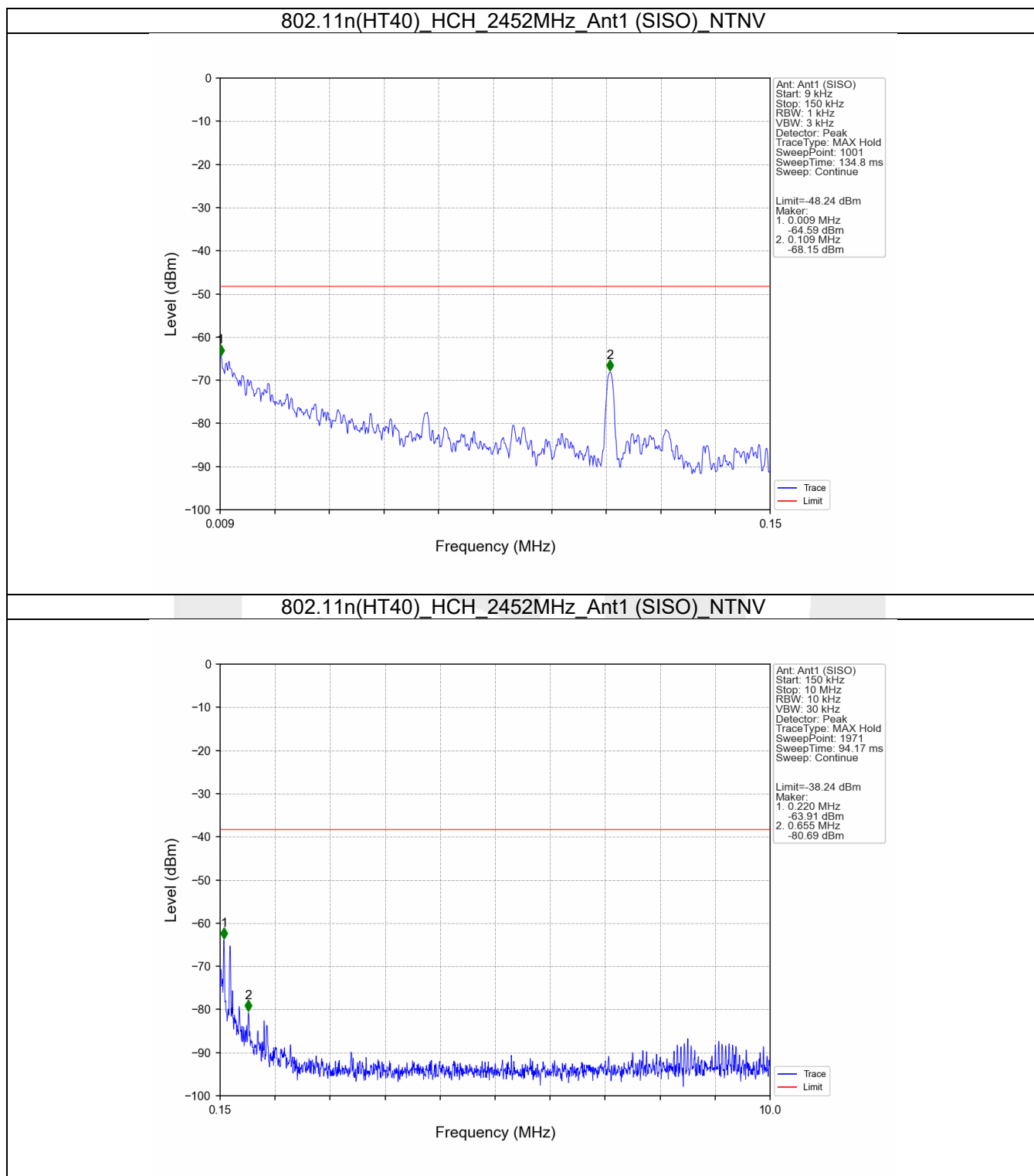


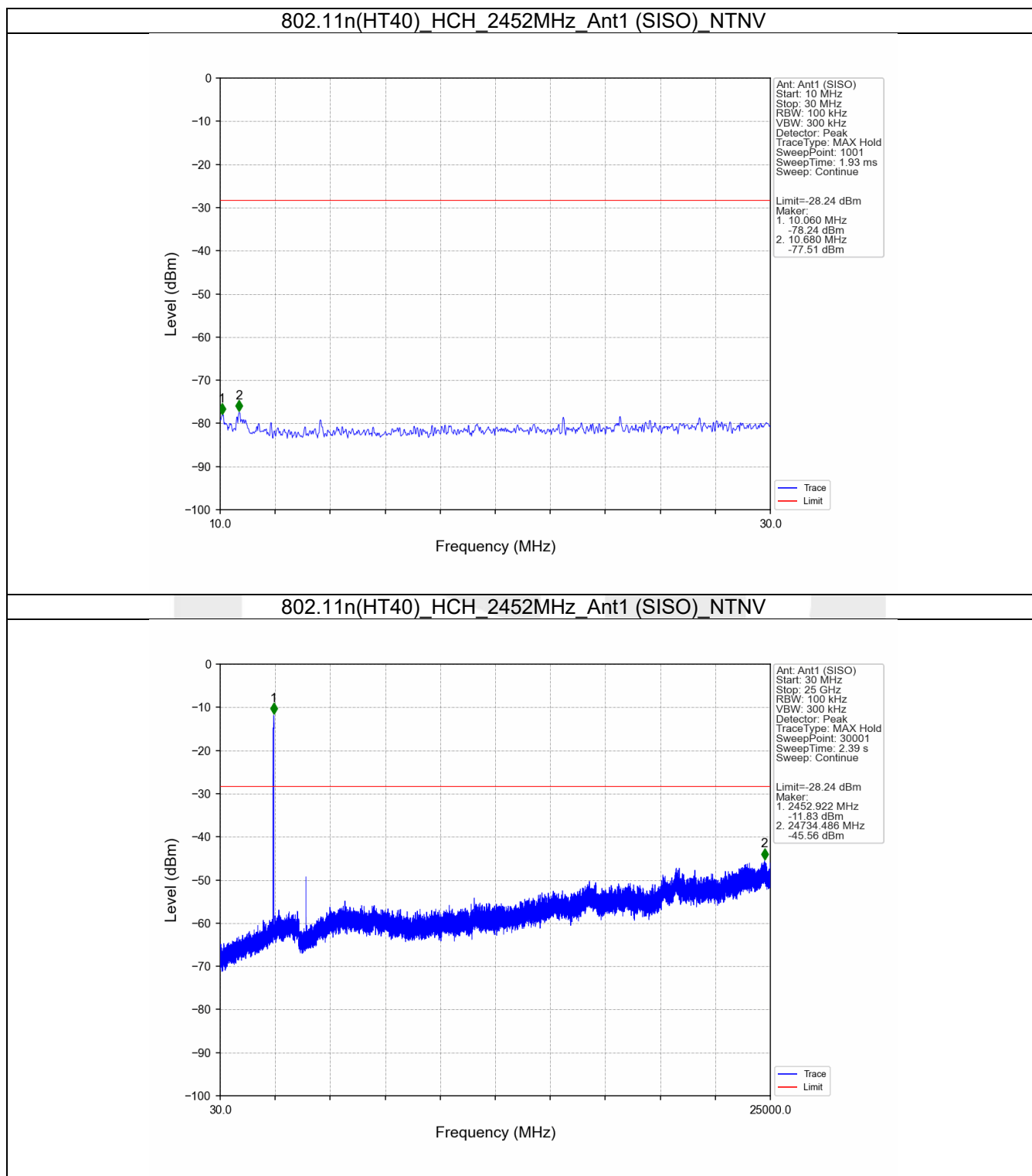












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