

Appendix RF test data for BLE

1. Duty Cycle

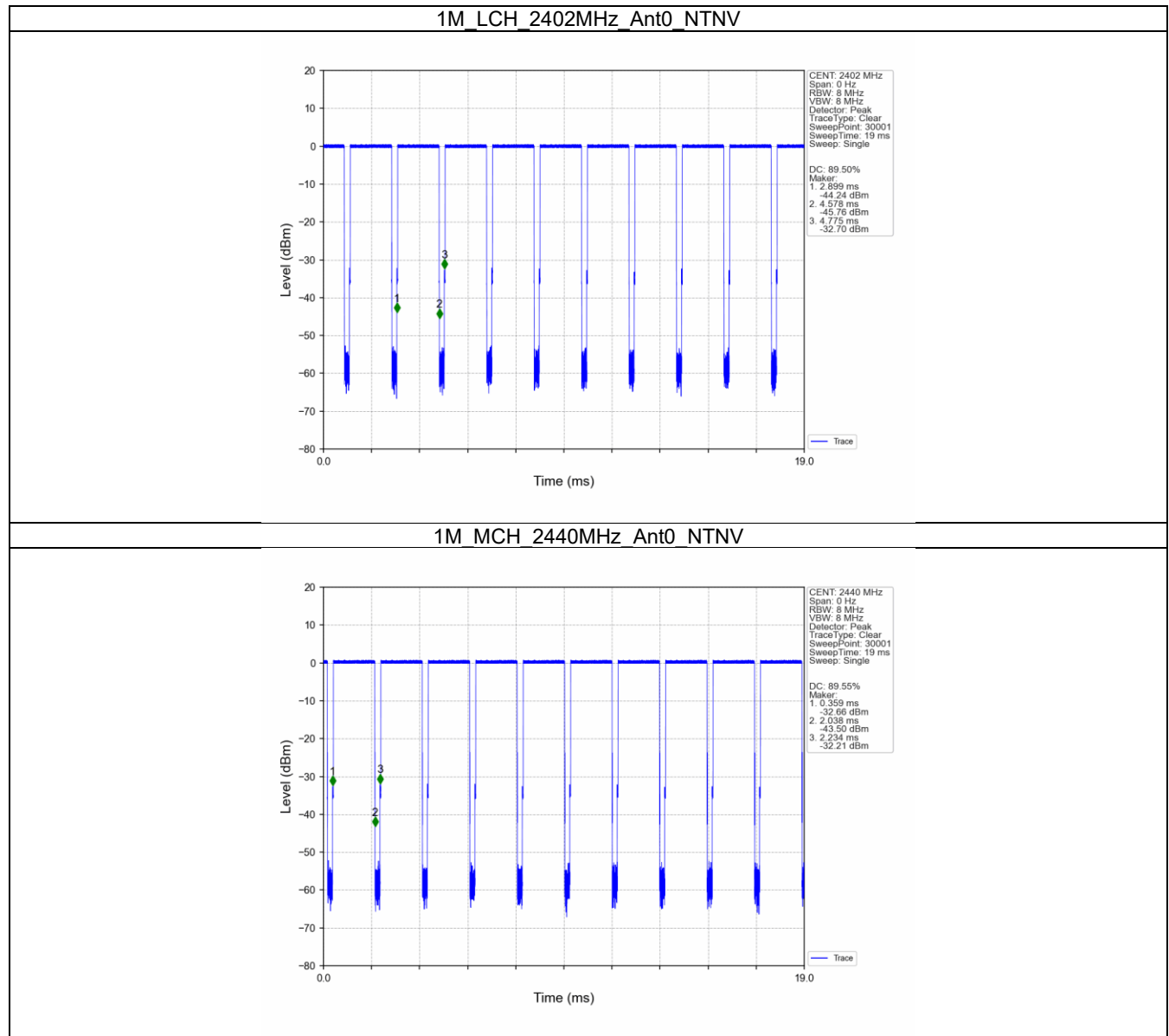
1.1 Test Result

1.1.1 Ant0

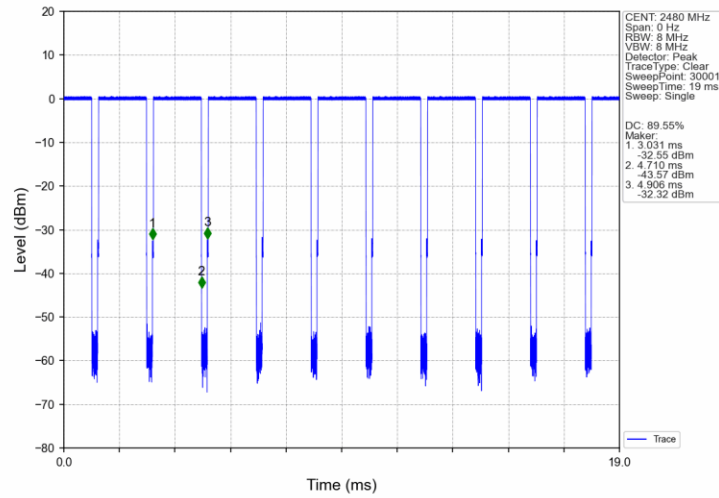
Ant0							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	1.679	1.876	89.50	0.48	0.03
		2440	1.679	1.875	89.55	0.48	0.03
		2480	1.679	1.875	89.55	0.48	0.03
2M	SISO	2402	0.866	1.250	69.28	1.59	0.01
		2440	0.866	1.251	69.22	1.60	0.03
		2480	0.865	1.250	69.20	1.60	0.03

1.2 Test Graph

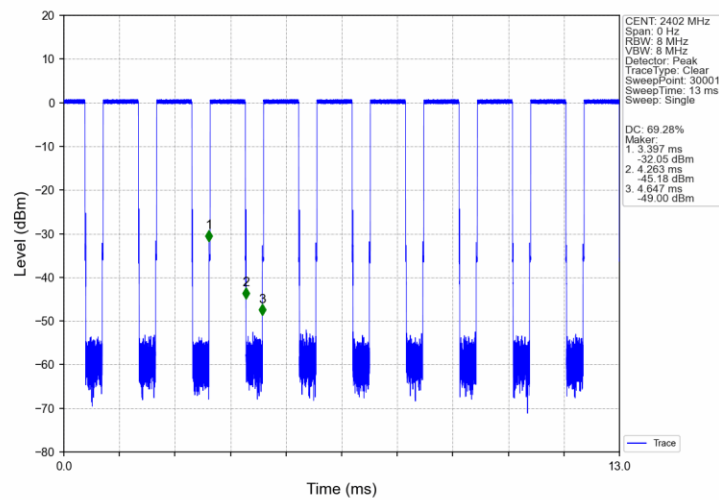
1.2.1 Ant0



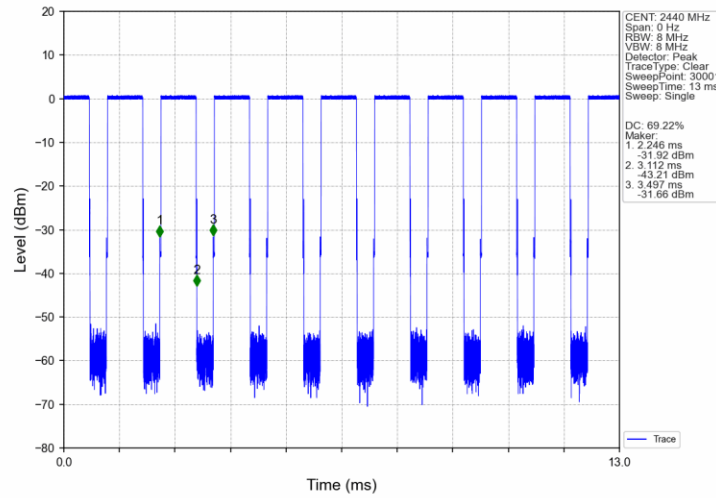
1M_HCH_2480MHz_Ant0_NTNV



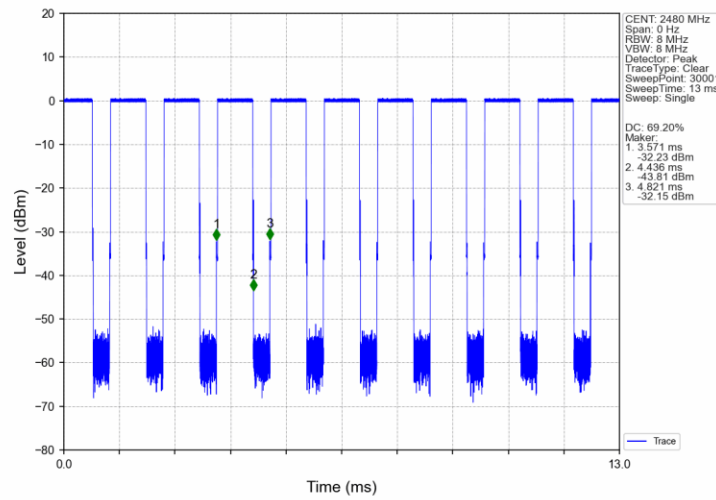
2M_LCH_2402MHz_Ant0_NTNV



2M_MCH_2440MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

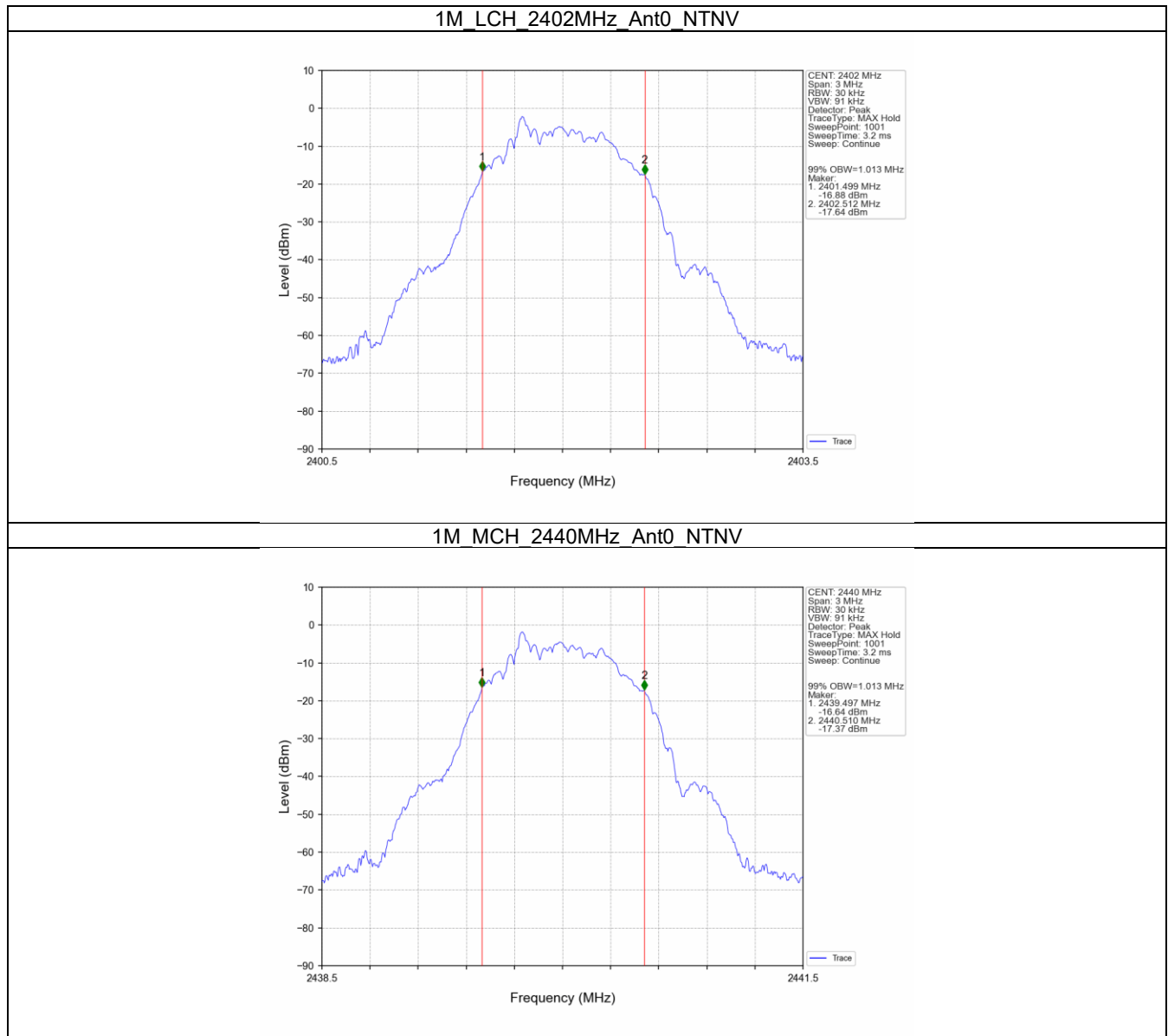
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	0	1.013	/	Pass
		2440	0	1.013	/	Pass
		2480	0	1.014	/	Pass
2M	SISO	2402	0	2.026	/	Pass
		2440	0	2.031	/	Pass
		2480	0	2.030	/	Pass

2.1.2 6dB BW

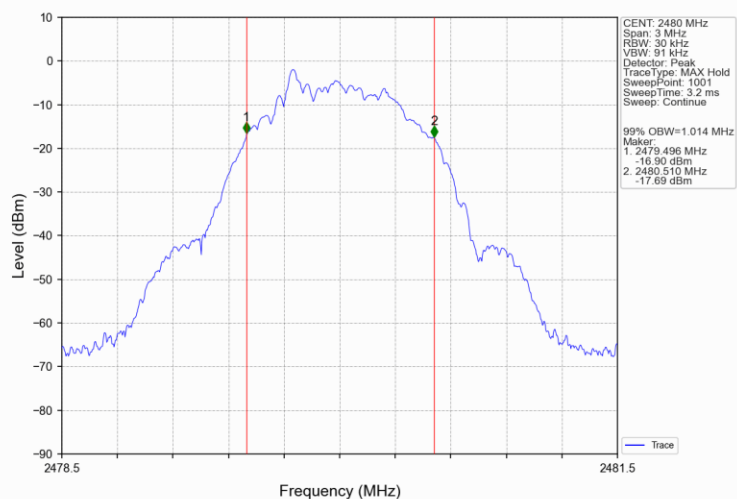
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	0	0.669	≥ 0.5	Pass
		2440	0	0.665	≥ 0.5	Pass
		2480	0	0.665	≥ 0.5	Pass
2M	SISO	2402	0	1.179	≥ 0.5	Pass
		2440	0	1.177	≥ 0.5	Pass
		2480	0	1.172	≥ 0.5	Pass

2.2 Test Graph

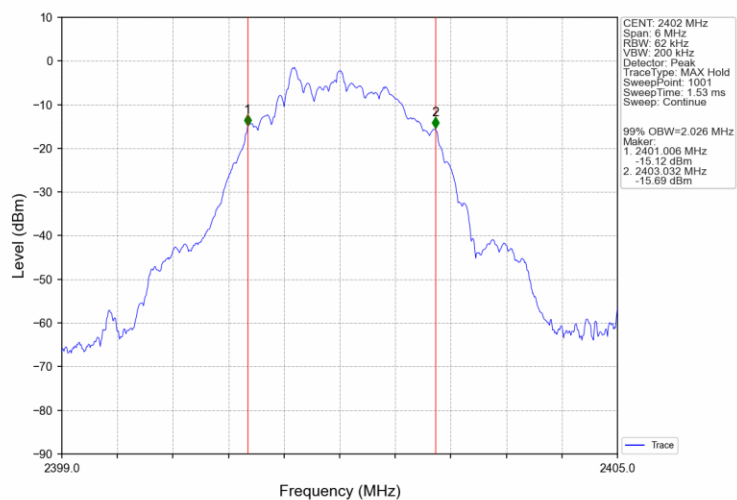
2.2.1 OBW



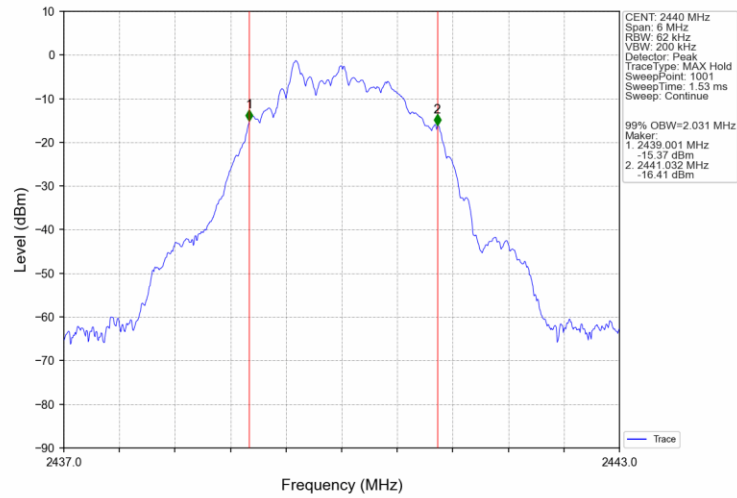
1M_HCH_2480MHz_Ant0_NTNV



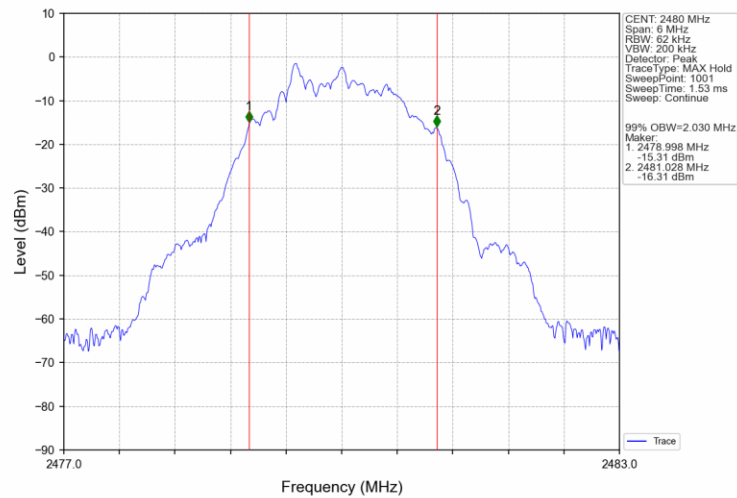
2M_LCH_2402MHz_Ant0_NTNV



2M_MCH_2440MHz_Ant0_NTNV

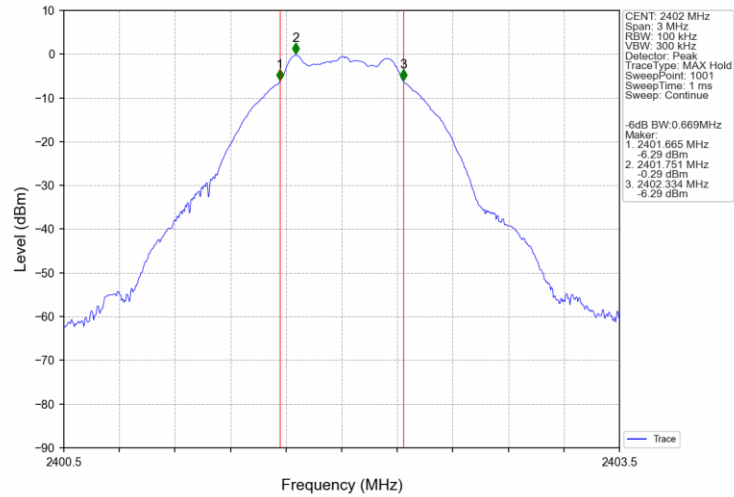


2M_HCH_2480MHz_Ant0_NTNV

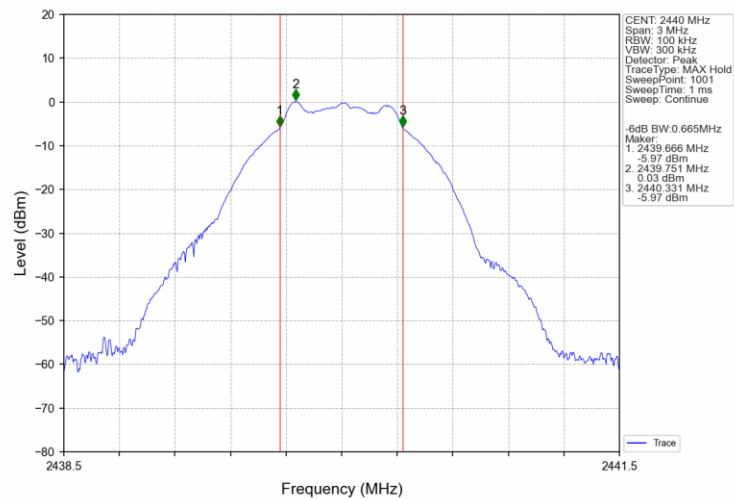


2.2.2 6dB BW

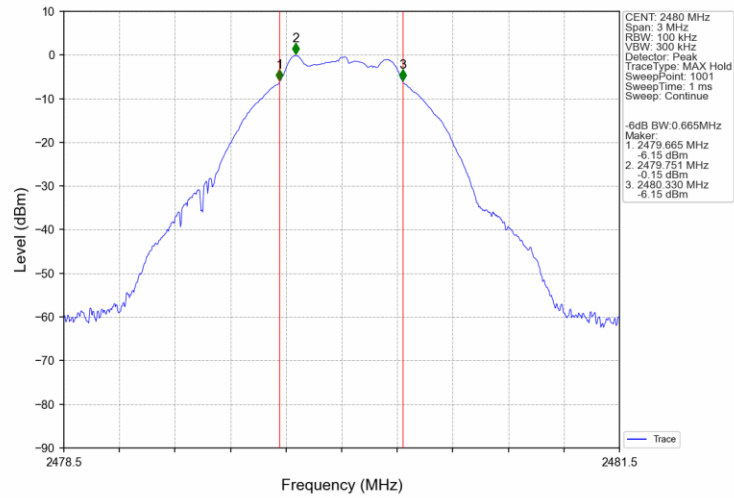
1M_LCH_2402MHz_Ant0_NTNV



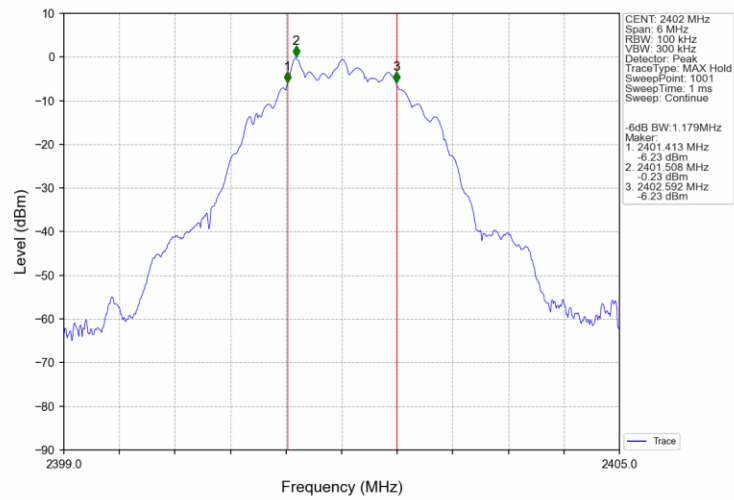
1M_MCH_2440MHz_Ant0_NTNV



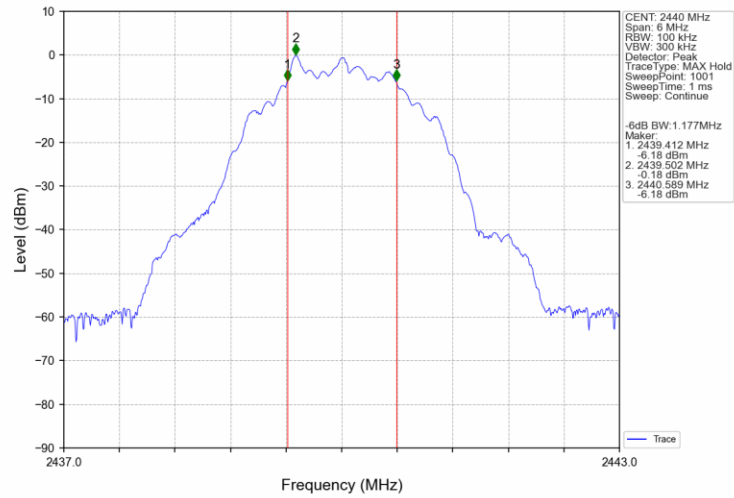
1M_HCH_2480MHz_Ant0_NTNV



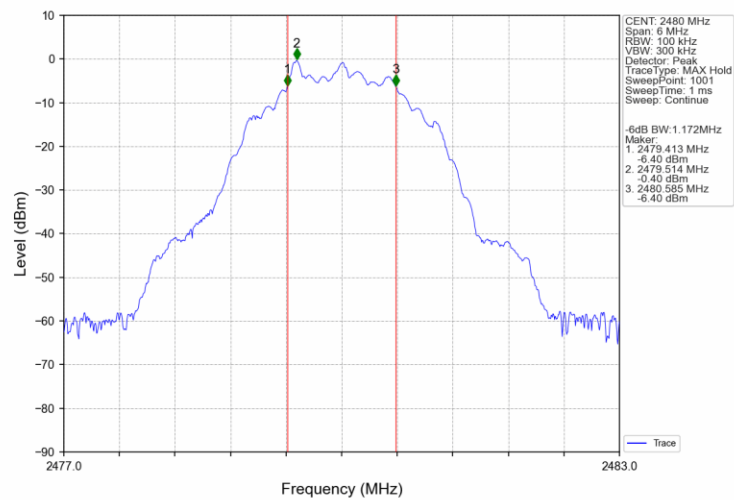
2M_LCH_2402MHz_Ant0_NTNV



2M_MCH_2440MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

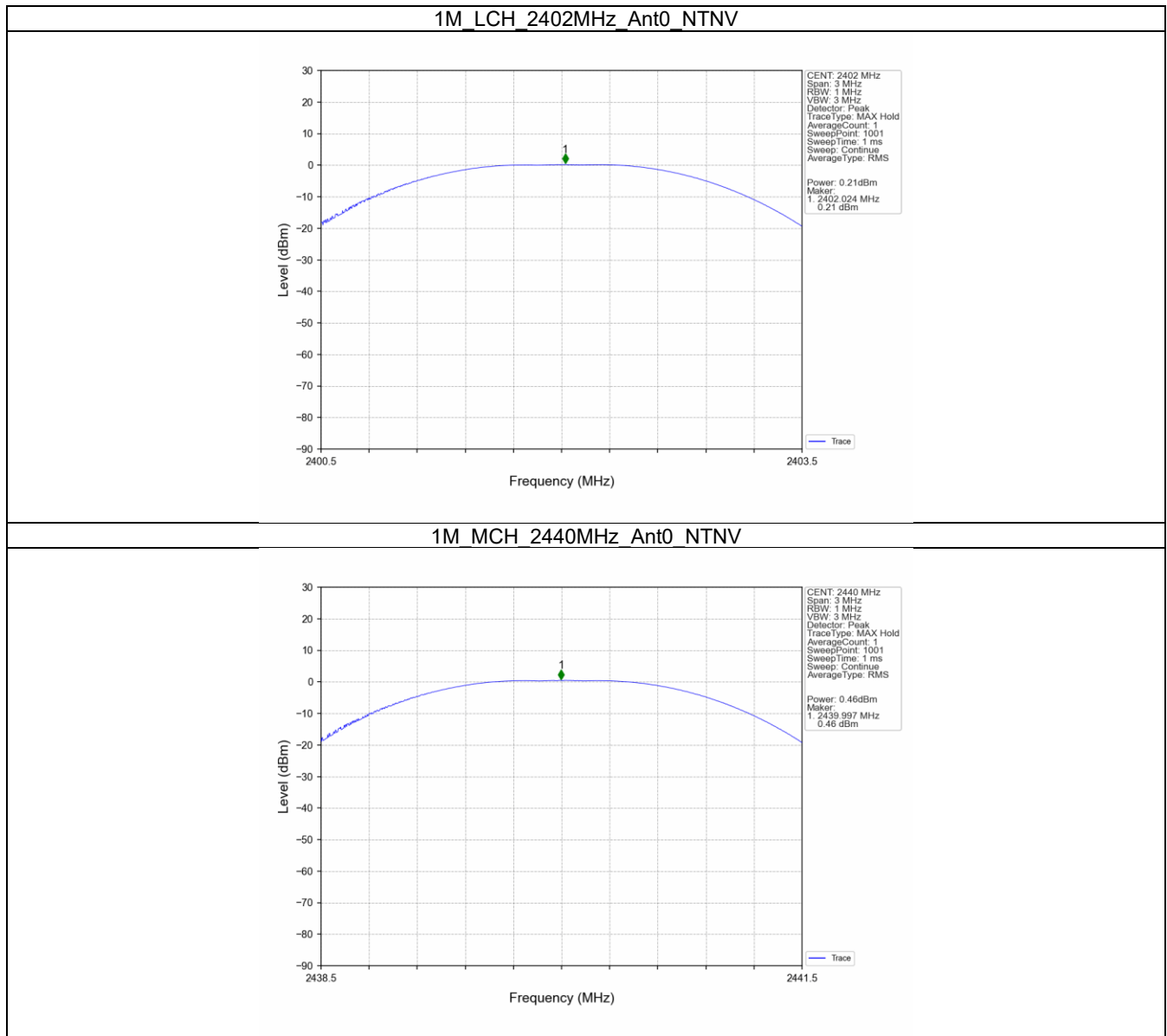
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT0	Limit	
1M	SISO	2402	0.21	<=30	Pass
		2440	0.46	<=30	Pass
		2480	0.26	<=30	Pass
2M	SISO	2402	0.57	<=30	Pass
		2440	0.51	<=30	Pass
		2480	0.31	<=30	Pass

Note1: Antenna Gain: Ant0: 0.00dBi;

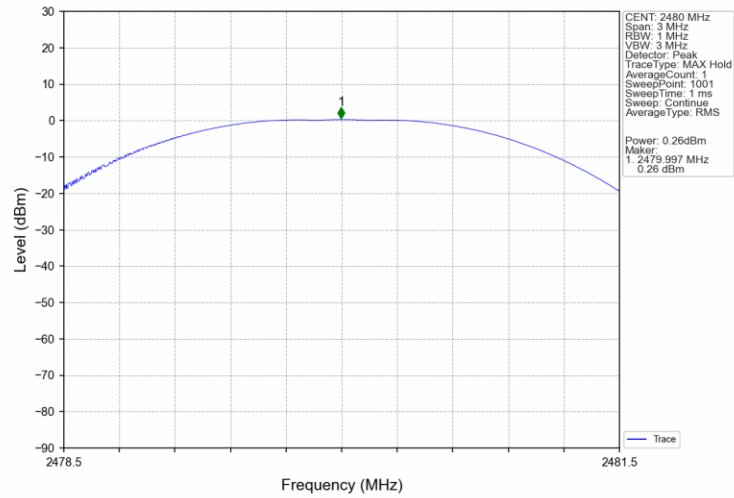
3.2 Test Graph

3.2.1 Power

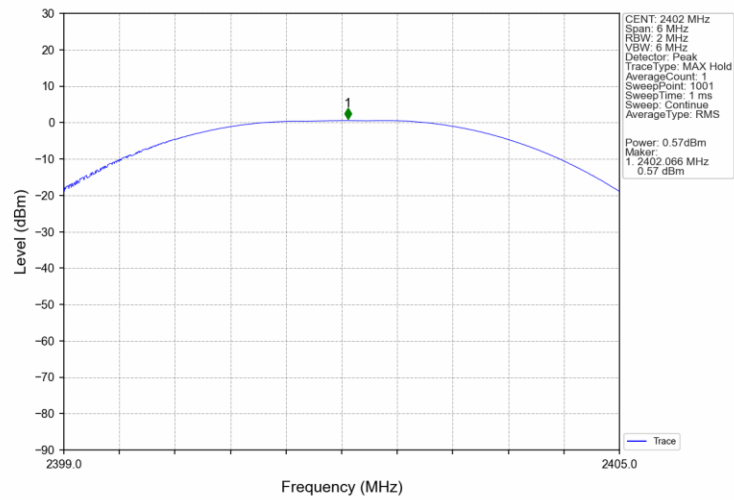




1M_HCH_2480MHz_Ant0_NTNV

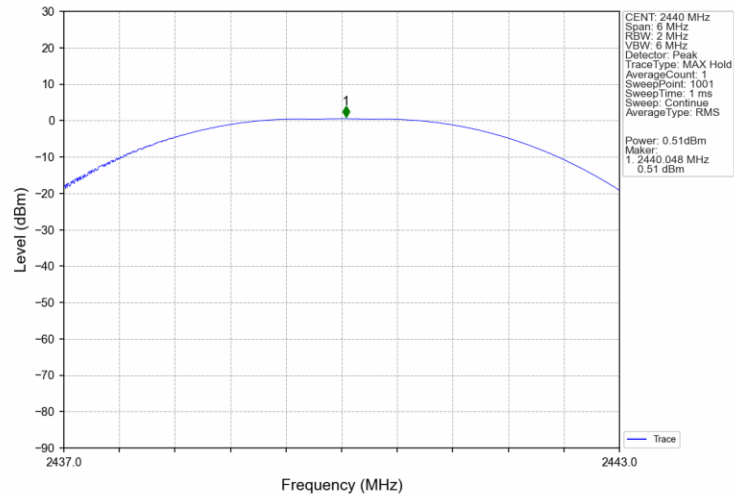


2M_LCH_2402MHz_Ant0_NTNV

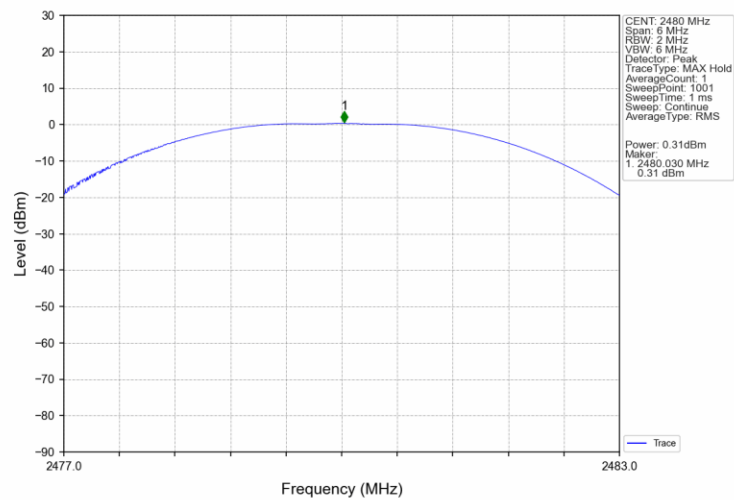




2M_MCH_2440MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

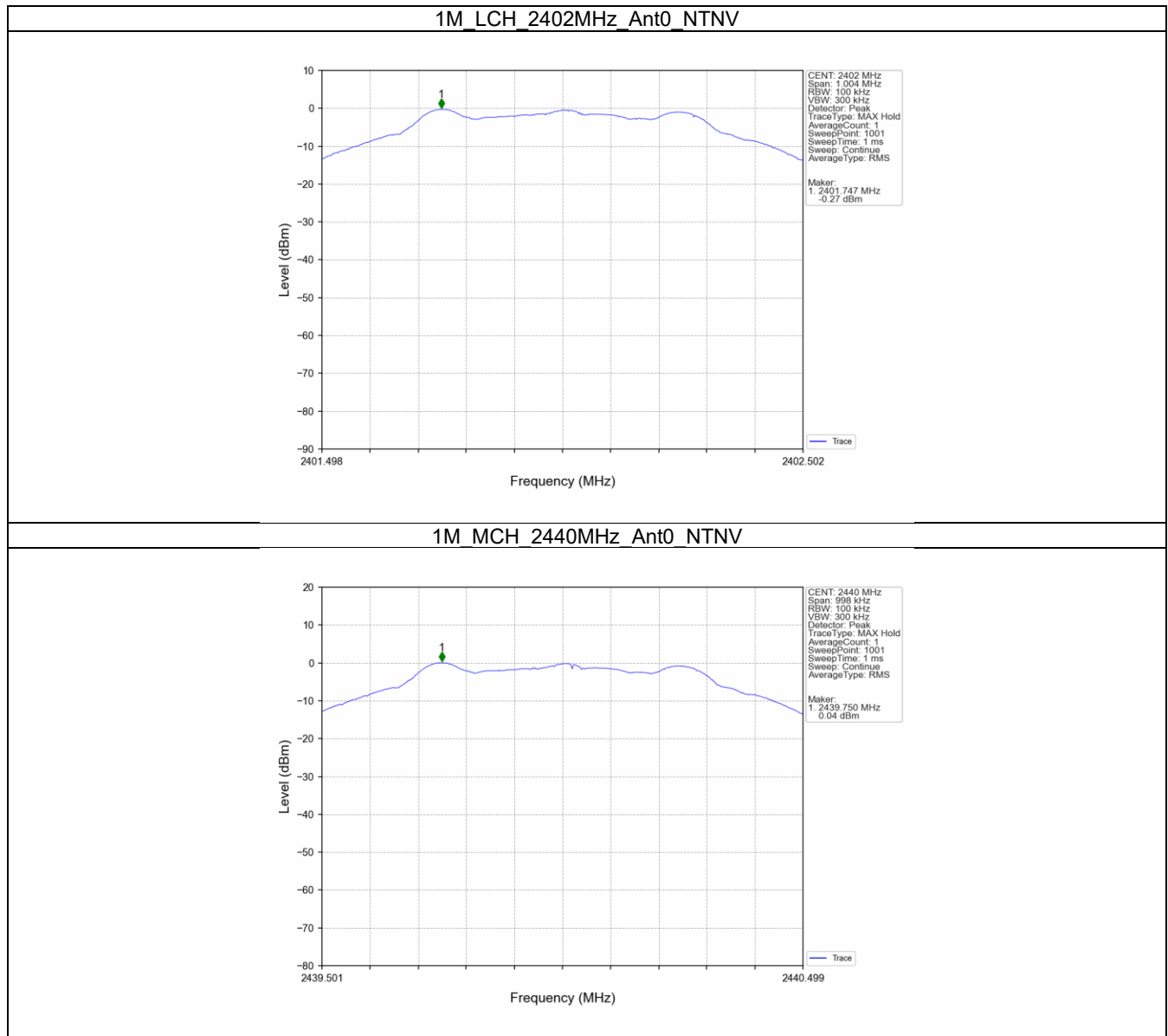
4.1.1 PSD

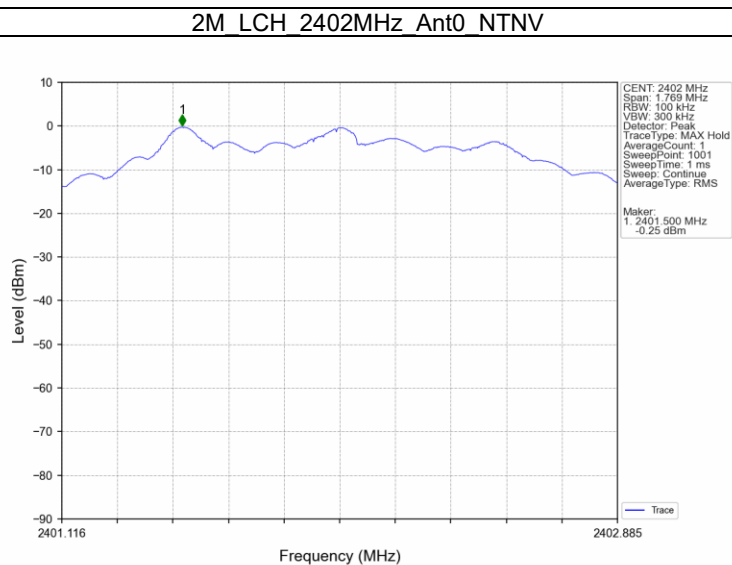
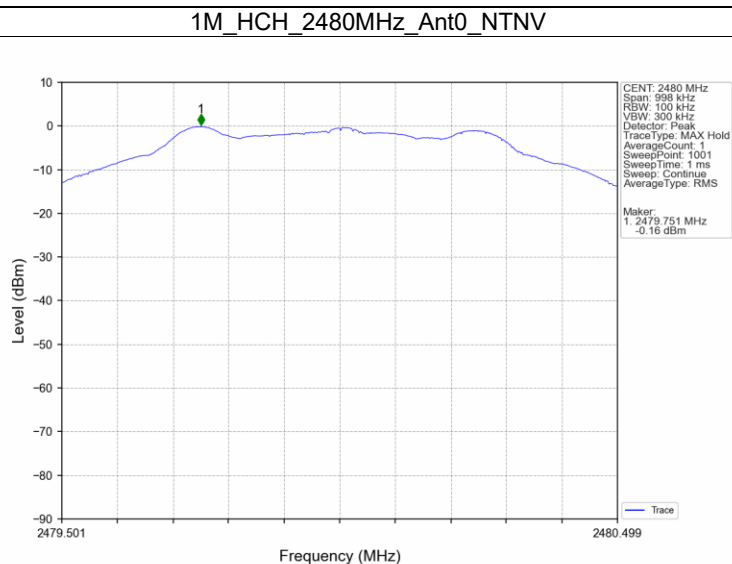
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT0	Limit	
1M	SISO	2402	-0.27	<=8	Pass
		2440	0.04	<=8	Pass
		2480	-0.16	<=8	Pass
2M	SISO	2402	-0.25	<=8	Pass
		2440	-0.20	<=8	Pass
		2480	-0.32	<=8	Pass

Note1: Antenna Gain: Ant0: 0.00dBi;

4.2 Test Graph

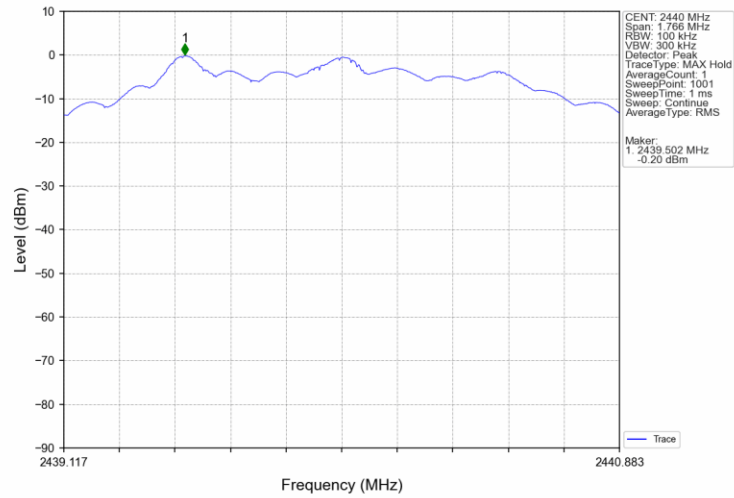
4.2.1 PSD



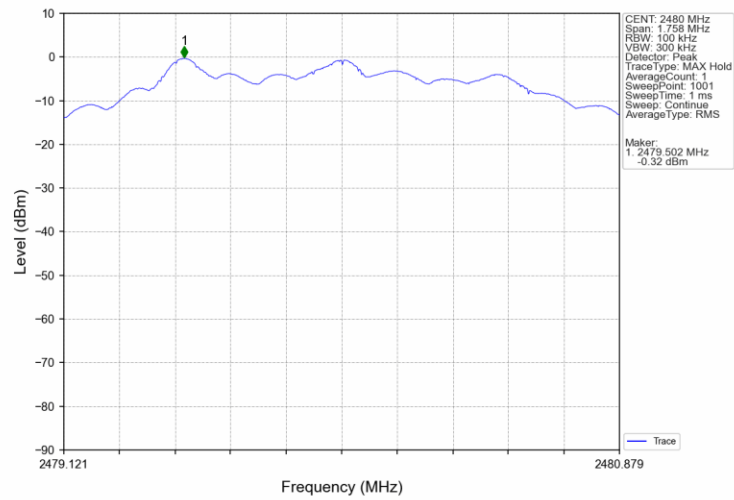




2M_MCH_2440MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_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)
1M	SISO	2402	0	-0.27
		2440	0	0.02
		2480	0	-0.15
2M	SISO	2402	0	-0.26
		2440	0	-0.22
		2480	0	-0.35

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.

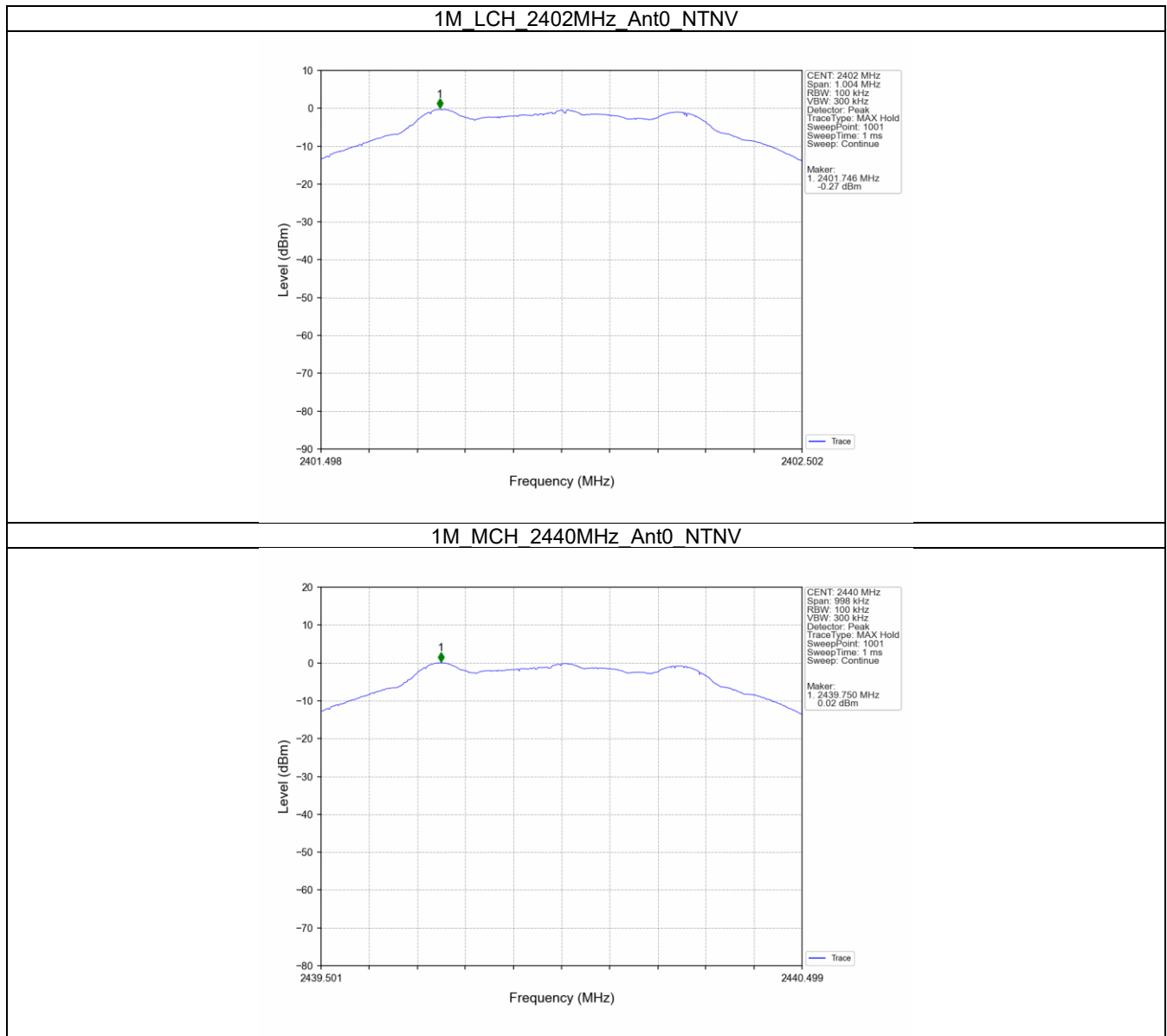
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	0	-0.27	-20.27	Pass
		2440	0	0.02	-19.98	Pass
		2480	0	-0.15	-20.15	Pass
2M	SISO	2402	0	-0.26	-20.26	Pass
		2440	0	-0.22	-20.22	Pass
		2480	0	-0.35	-20.35	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.

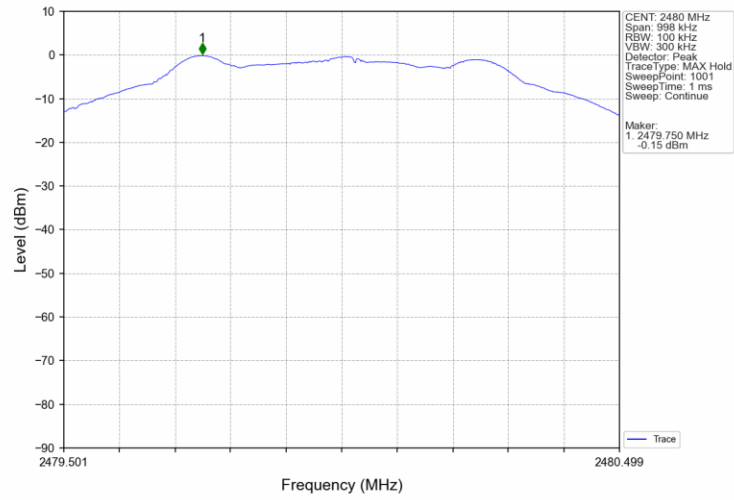
5.2 Test Graph

5.2.1 Ref

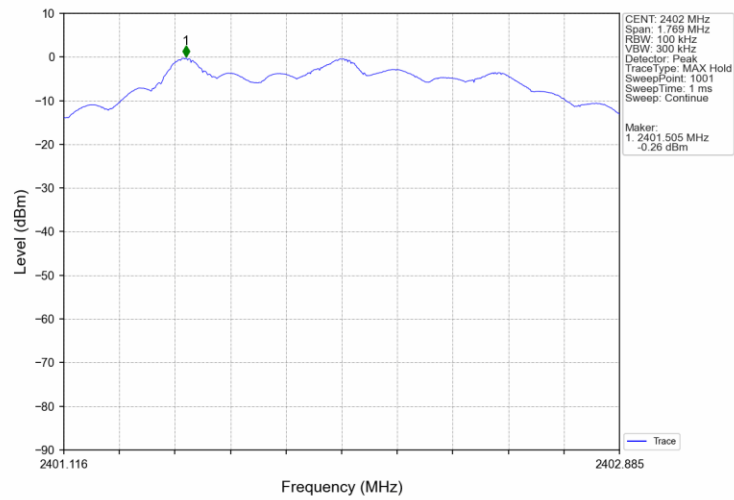




1M_HCH_2480MHz_Ant0_NTNV

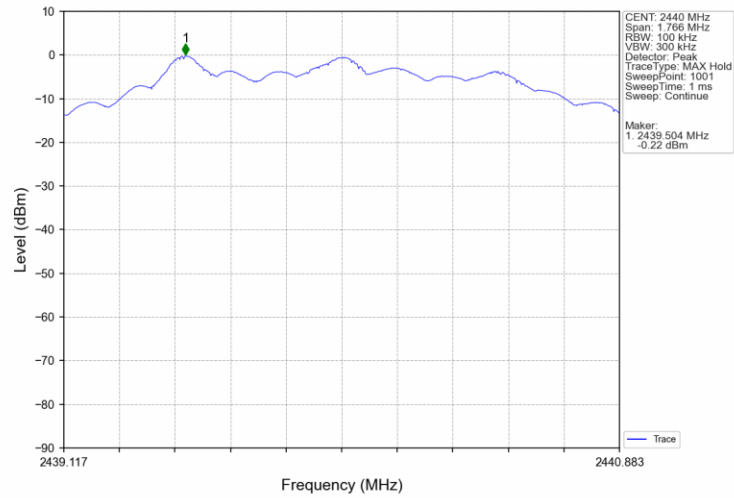


2M_LCH_2402MHz_Ant0_NTNV

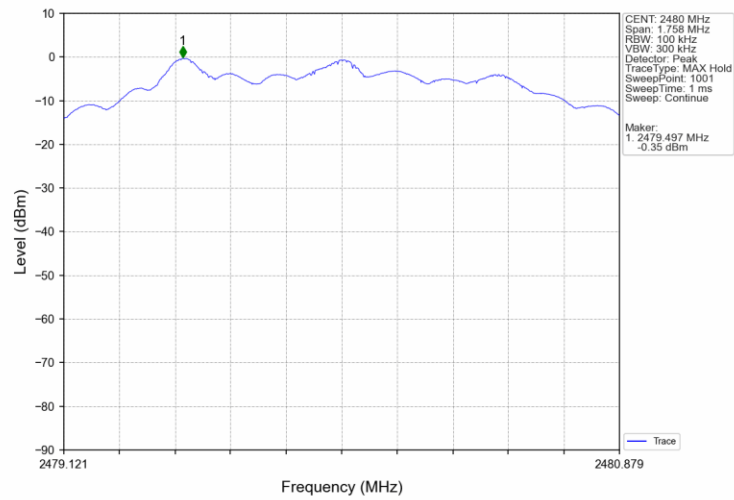




2M_MCH_2440MHz_Ant0_NTNV

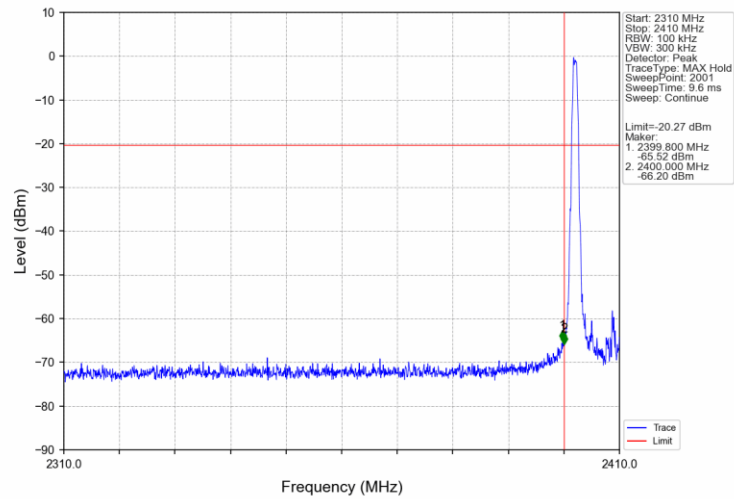


2M_HCH_2480MHz_Ant0_NTNV

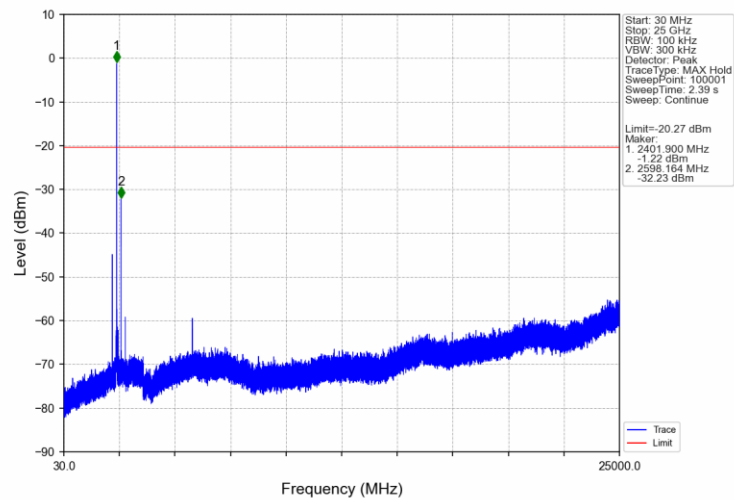


5.2.2 CSE

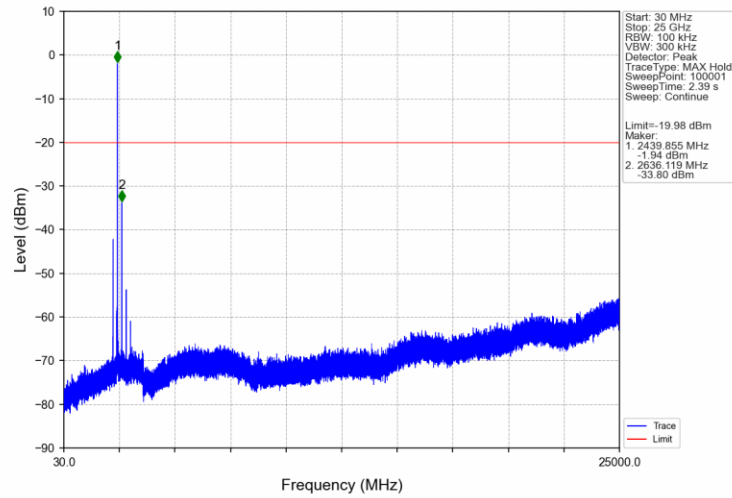
1M_LCH_2402MHz_Ant0_NTNV



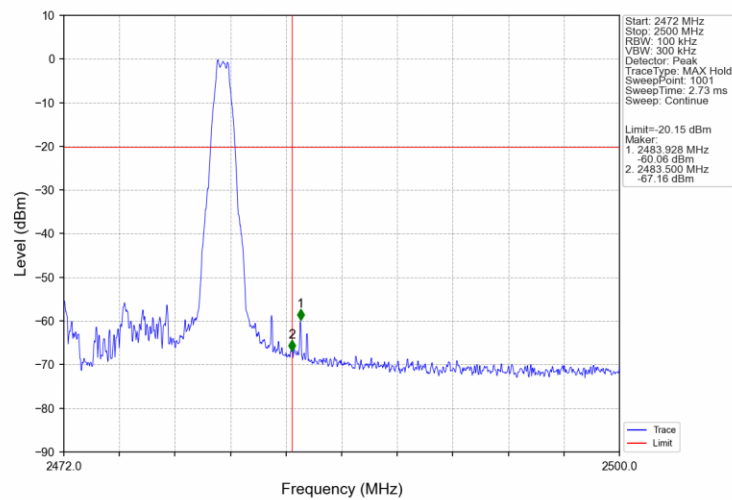
1M_LCH_2402MHz_Ant0_NTNV



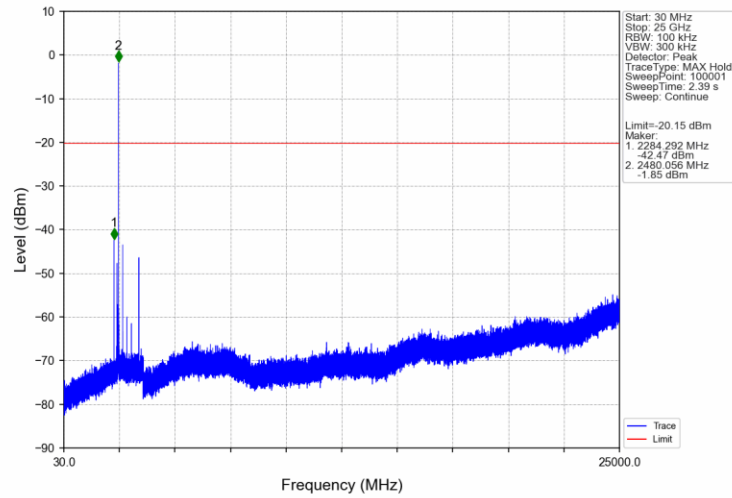
1M_MCH_2440MHz_Ant0_NTNV



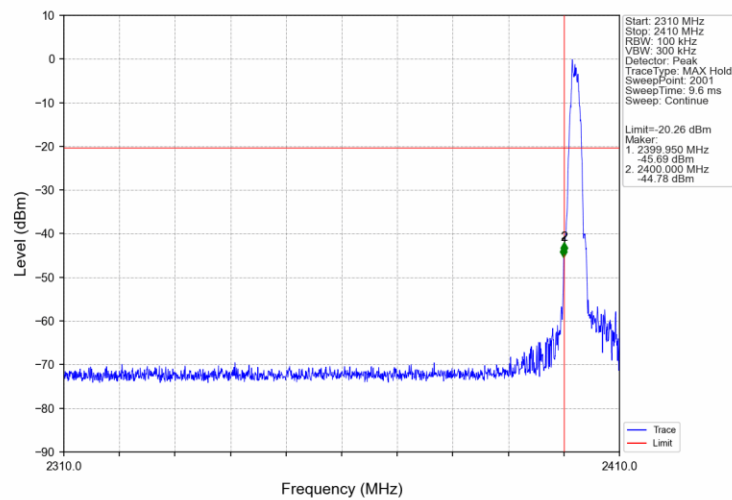
1M_HCH_2480MHz_Ant0_NTNV



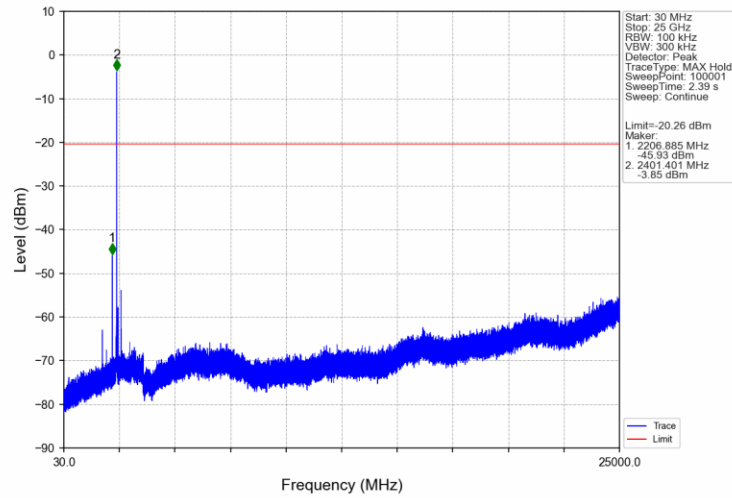
1M_HCH_2480MHz_Ant0_NTNV



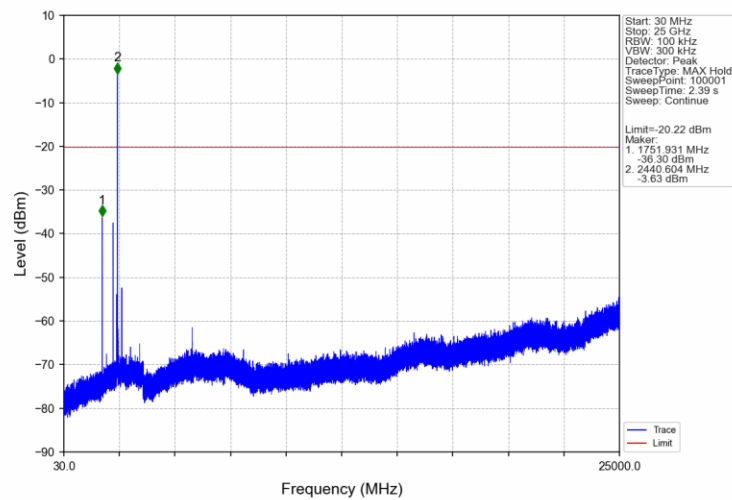
2M_LCH_2402MHz_Ant0_NTNV



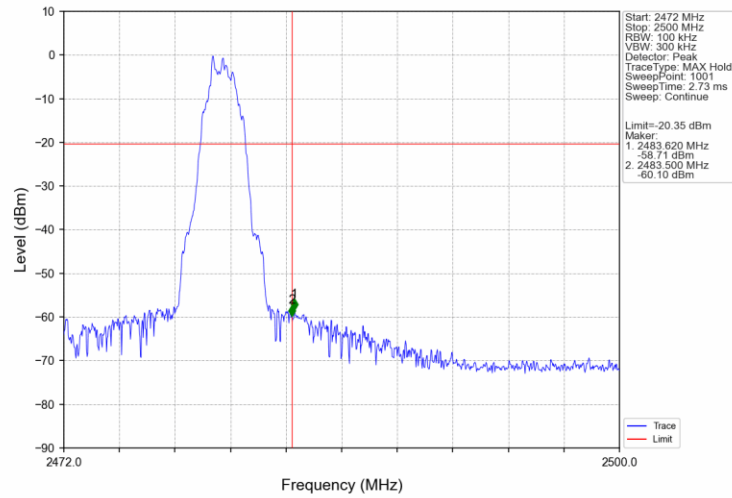
2M_LCH_2402MHz_Ant0_NTNV



2M_MCH_2440MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_NTNV



2M_HCH_2480MHz_Ant0_NTNV

