ANNEX D TEST DATA

For

Project No.:	8225EU012305W
Client:	SHENZHEN ELECTRON TECHNOLOGY CO.,LTD.
Product Description:	Android Tablet
Model No.:	WF4305T
FCC ID:	2ABC5-E0052
Technology:	Bluetooth BDR+EDR
Test Engineer:	Mikey zhu
Test Date:	2024-01-25

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Carrier Frequency Separation	Pass
Number of Hopping Frequencies	Pass
Time of Occupancy (Dwell Time)	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass

1. Duty Cycle

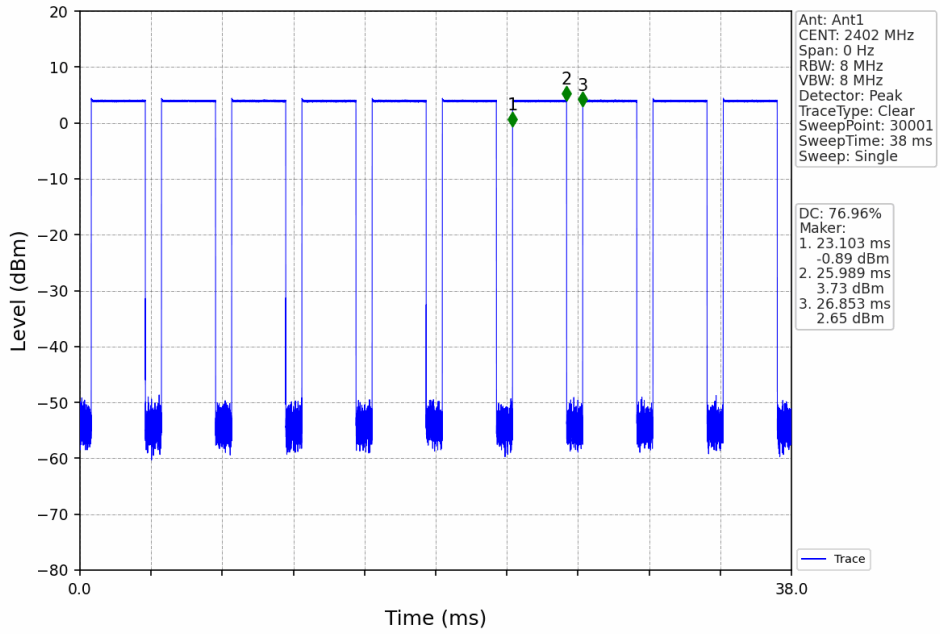
1.1 Ant2

1.1.1 Test Result

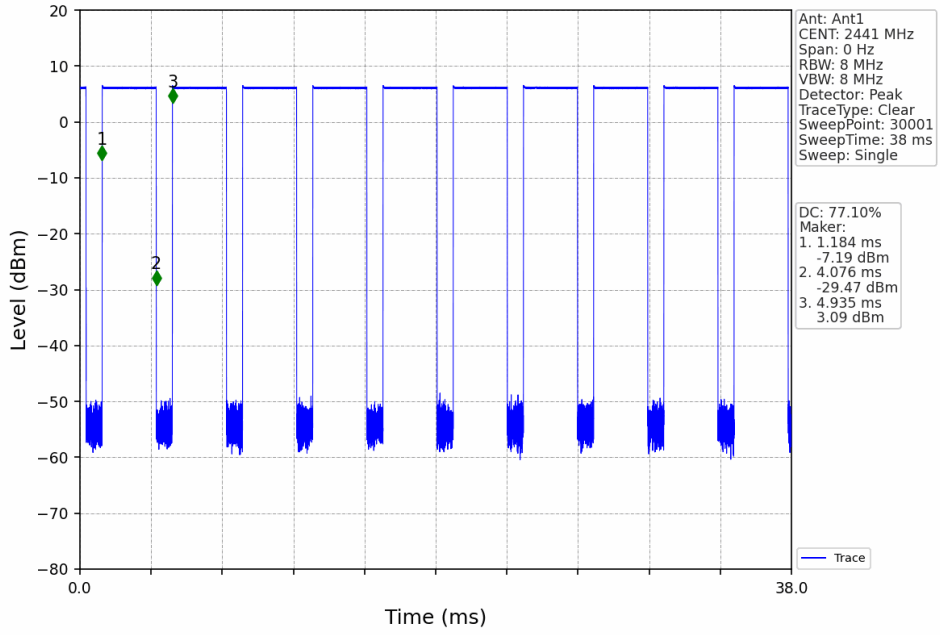
Ant2								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.886	3.750	76.96	1.14	0.03
		2441	DH5	2.892	3.751	77.10	1.13	0.03
		2480	DH5	2.887	3.751	76.97	1.14	0.03
Pi/4DQPSK	SISO	2402	2DH5	2.888	3.751	76.99	1.14	0.03
		2441	2DH5	2.893	3.751	77.13	1.13	0.03
		2480	2DH5	2.888	3.751	76.99	1.14	0.03
8DPSK	SISO	2402	3DH5	2.887	3.751	76.97	1.14	0.03
		2441	3DH5	2.892	3.751	77.10	1.13	0.04
		2480	3DH5	2.886	3.749	76.98	1.14	0.01

1.1.2 Test Graph

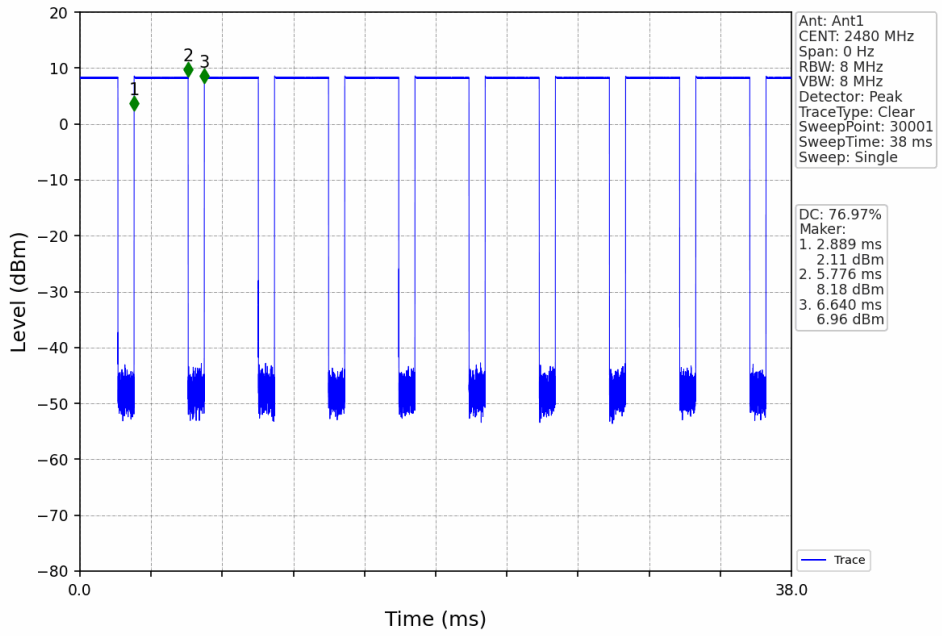
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



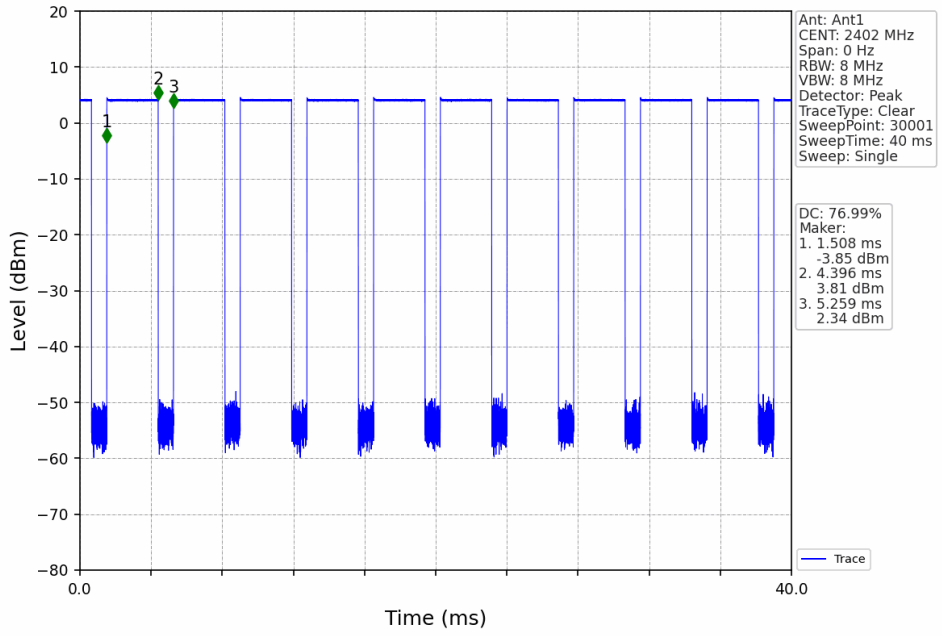
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



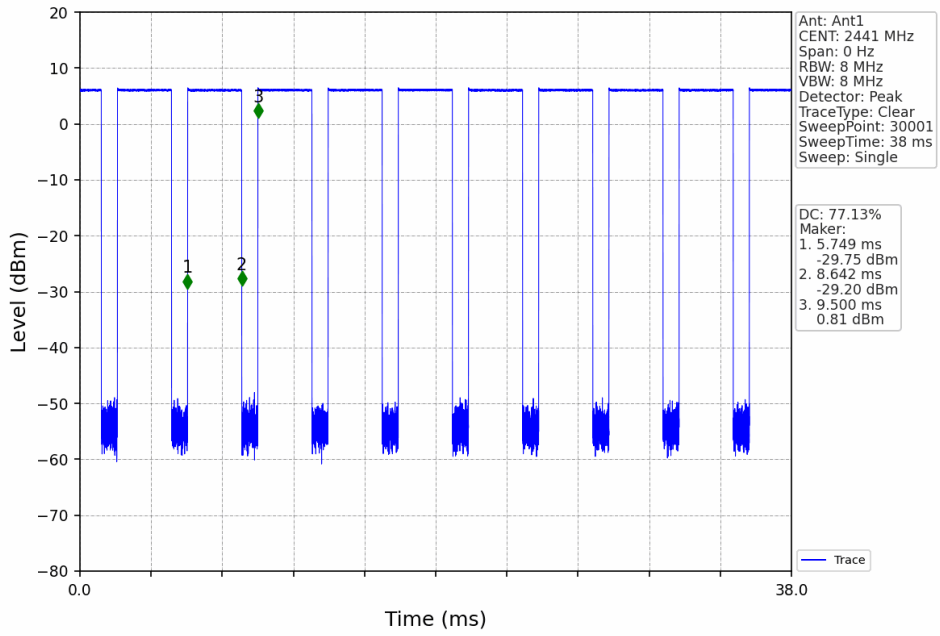
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



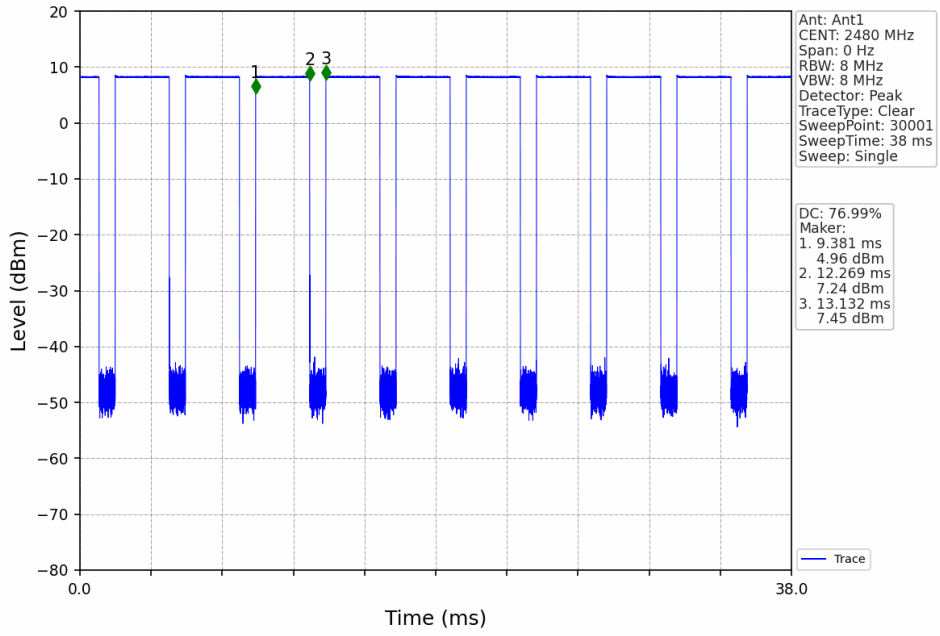
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



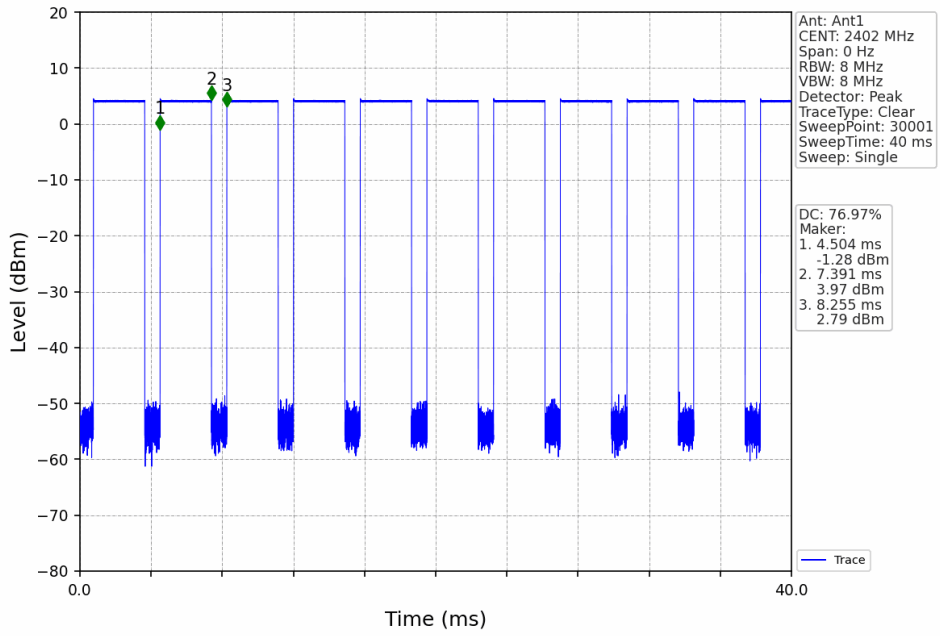
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



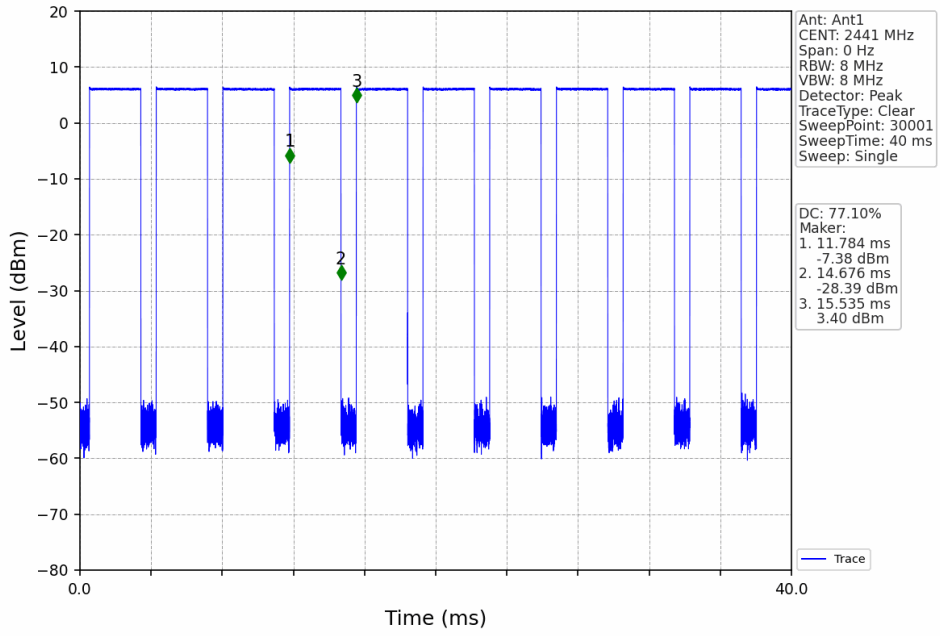
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



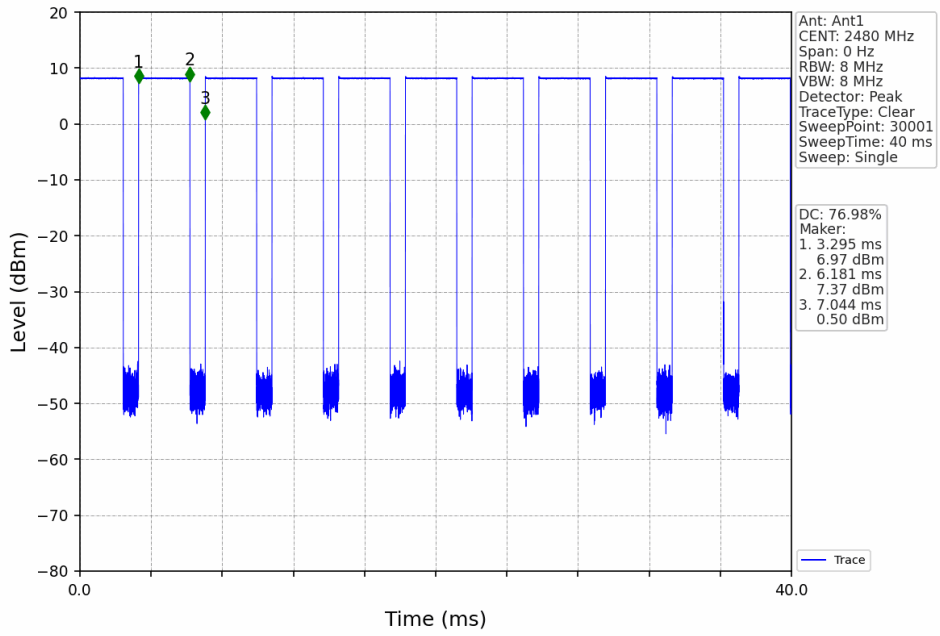
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



2. Bandwidth

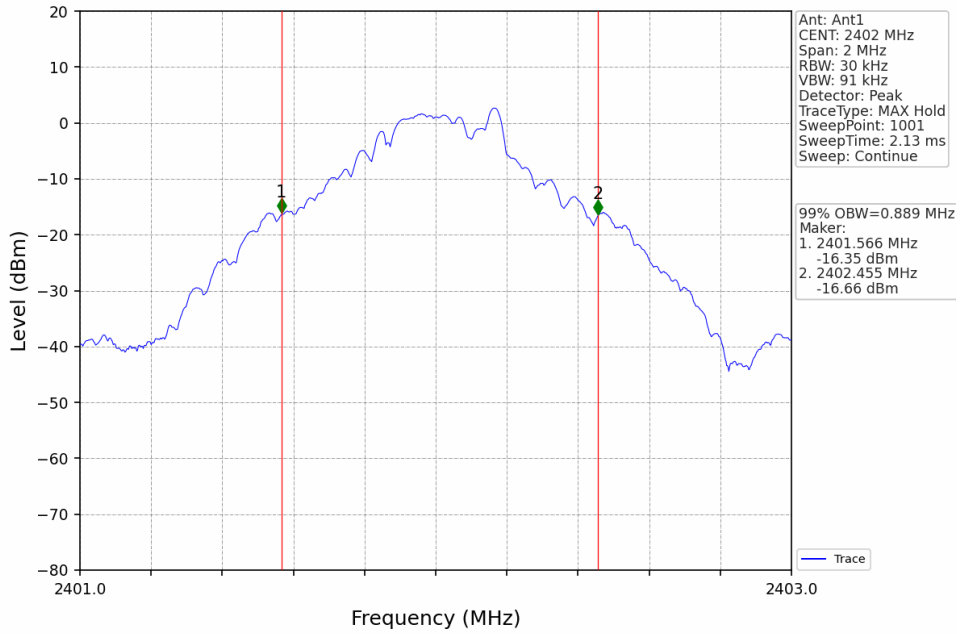
2.1 OBW

2.1.1 Test Result

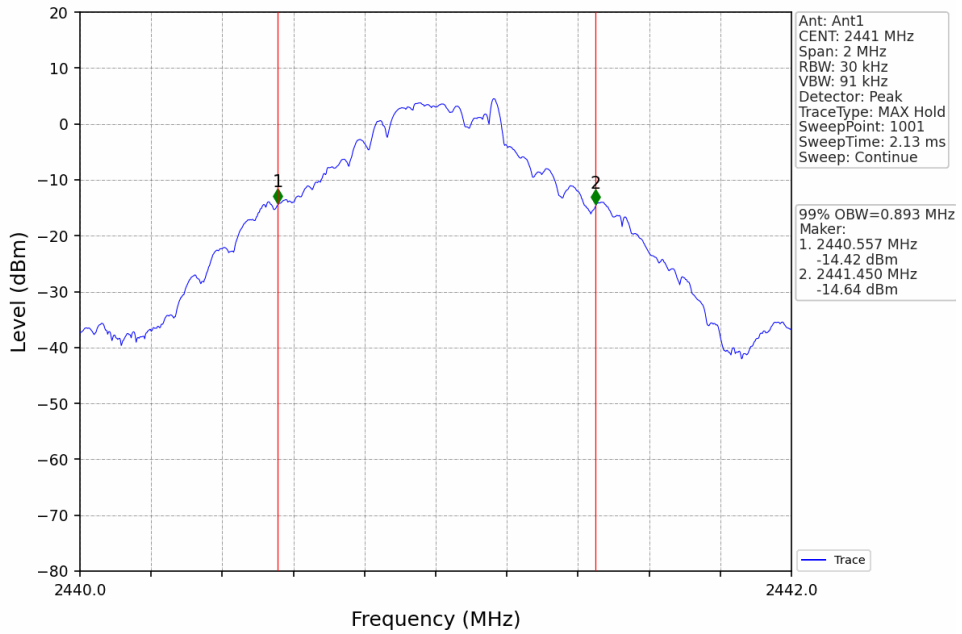
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	2	0.889	Pass
		2441	DH5	2	0.893	Pass
		2480	DH5	2	0.889	Pass
Pi/4DQPSK	SISO	2402	2DH5	2	0.930	Pass
		2441	2DH5	2	0.927	Pass
		2480	2DH5	2	0.926	Pass
8DPSK	SISO	2402	3DH5	2	0.914	Pass
		2441	3DH5	2	0.914	Pass
		2480	3DH5	2	0.915	Pass

2.1.2 Test Graph

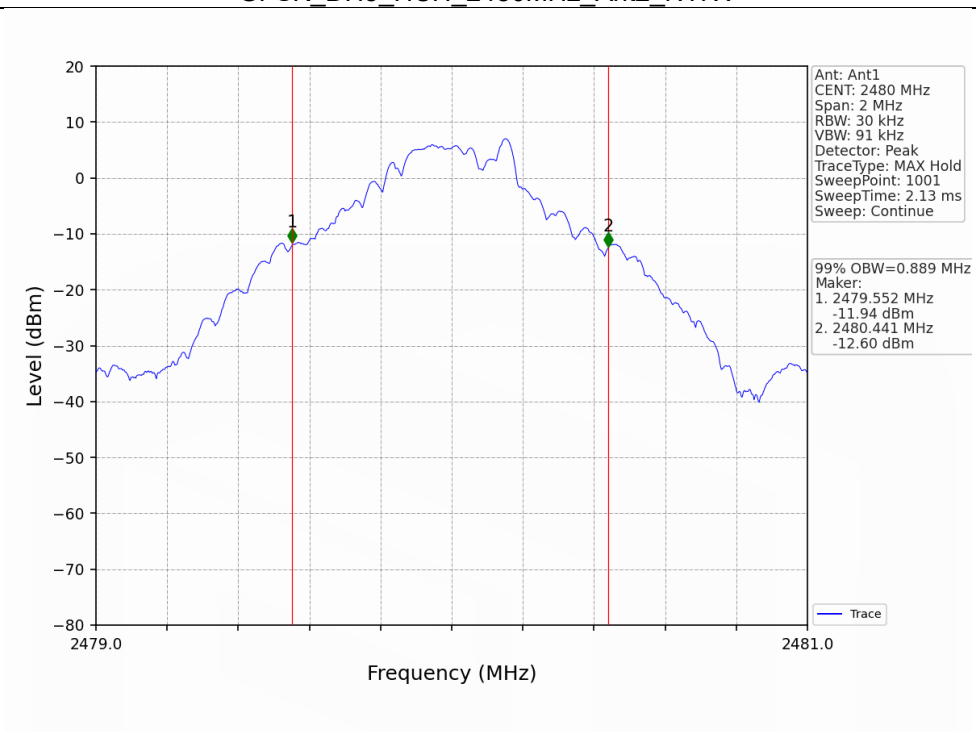
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



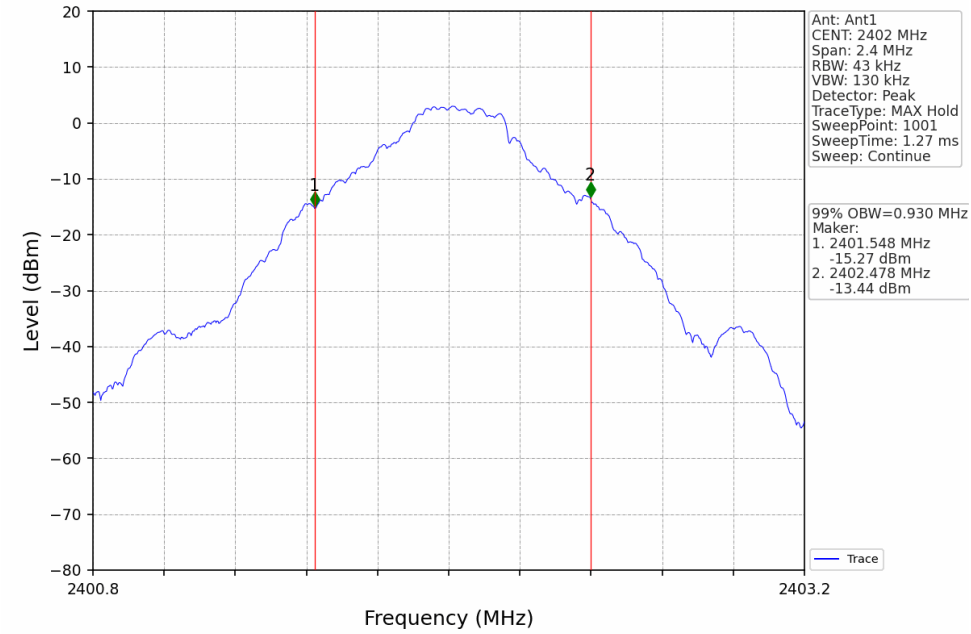
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



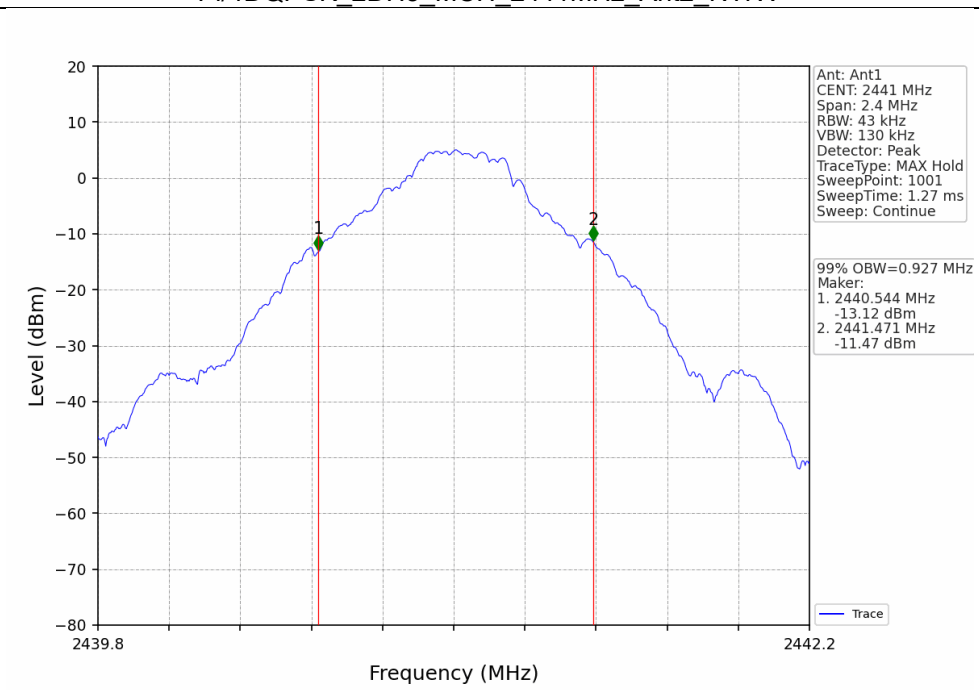
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



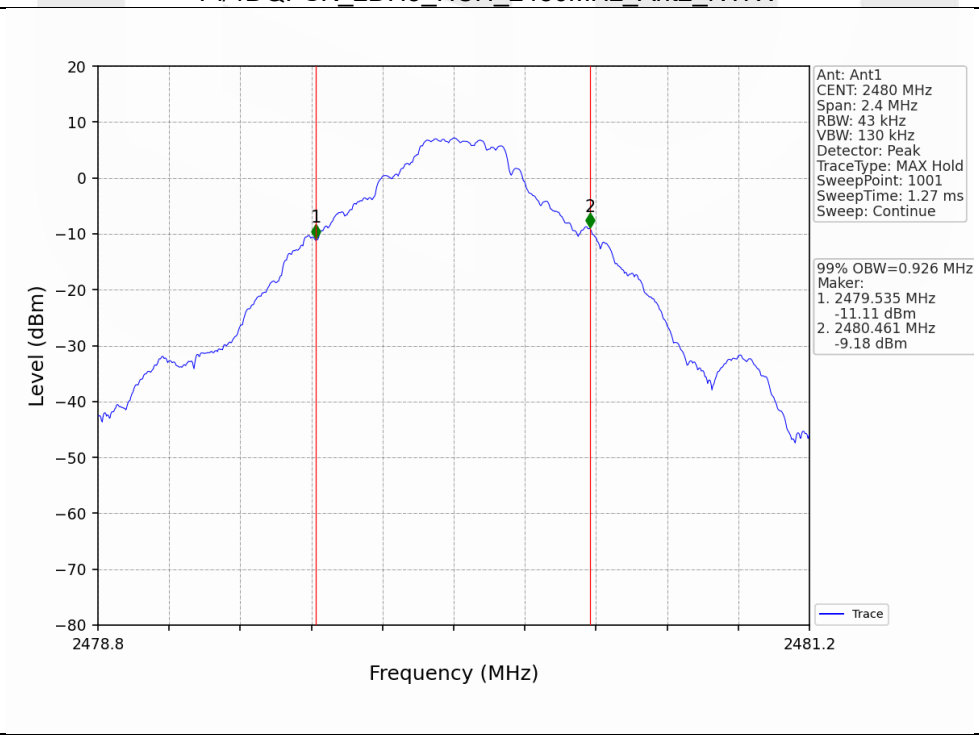
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



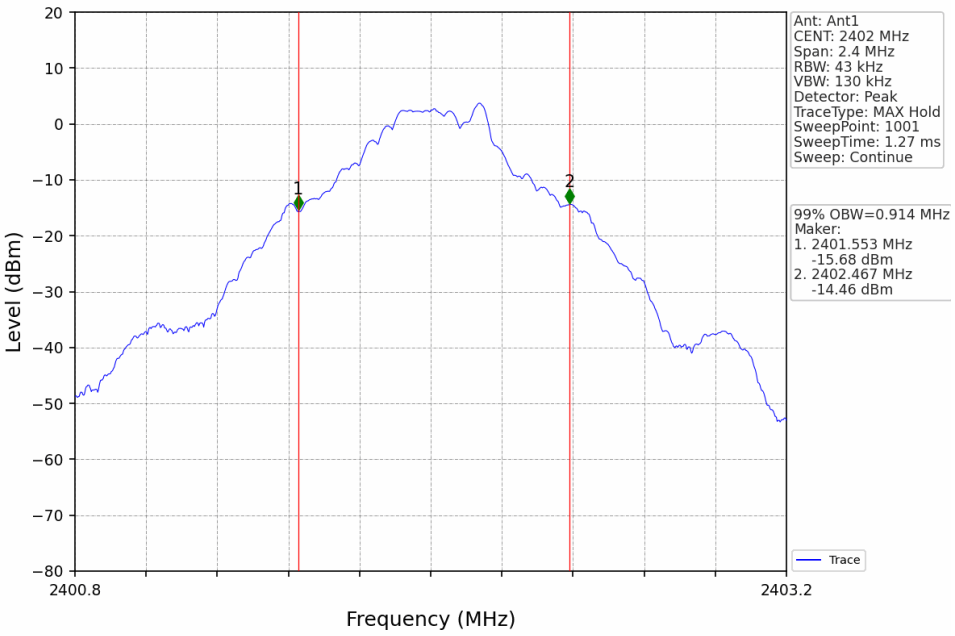
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



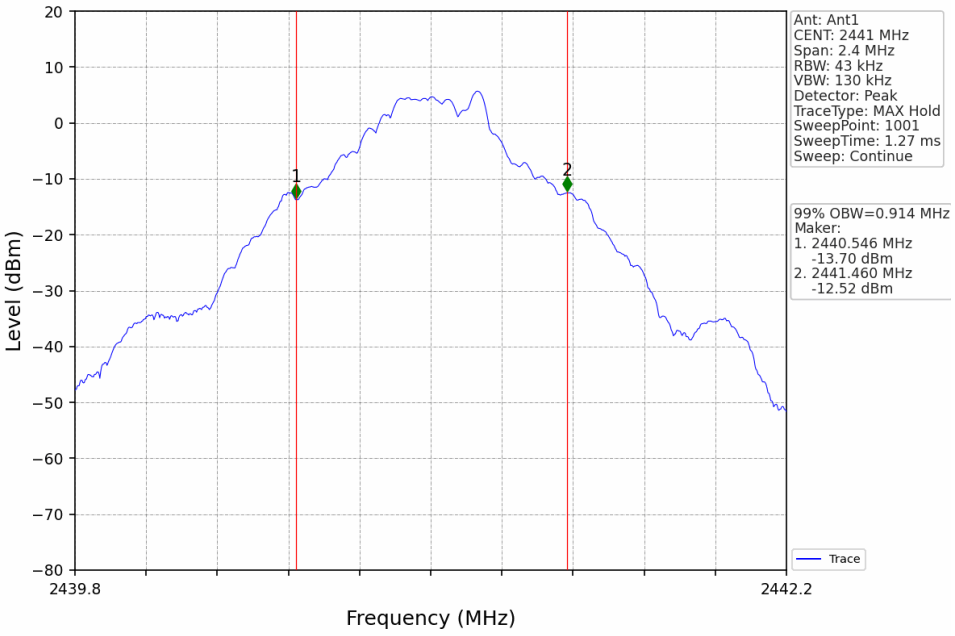
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



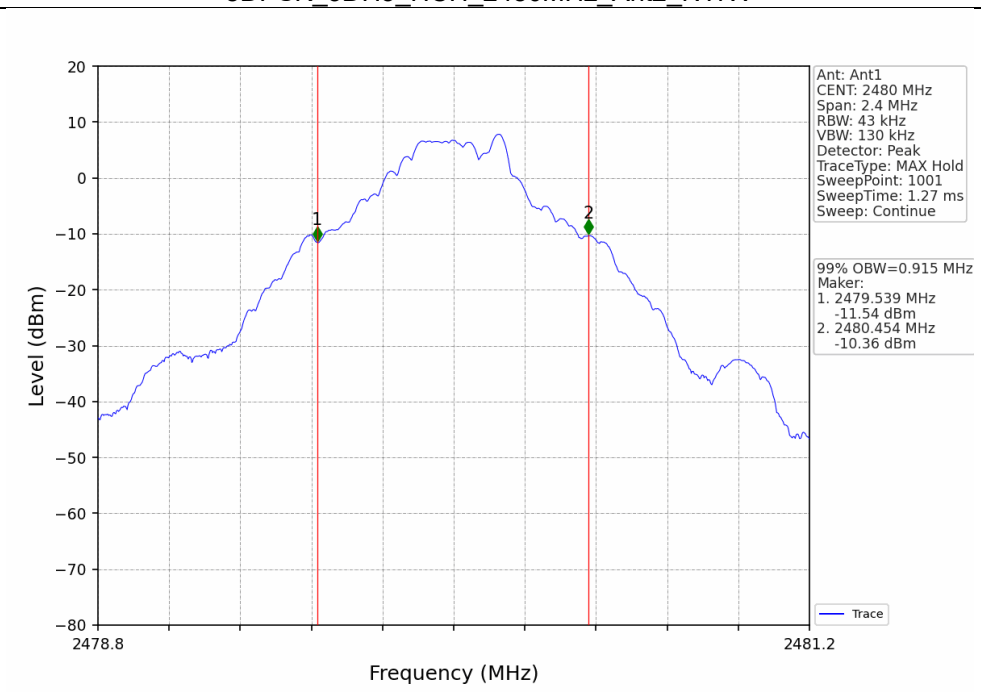
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



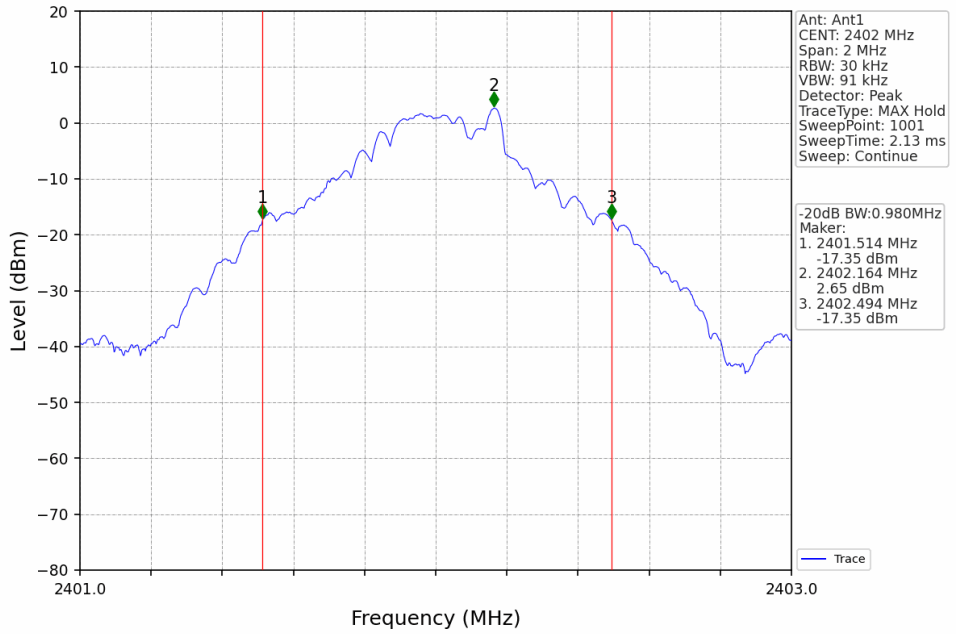
2.2 20dB BW

2.2.1 Test Result

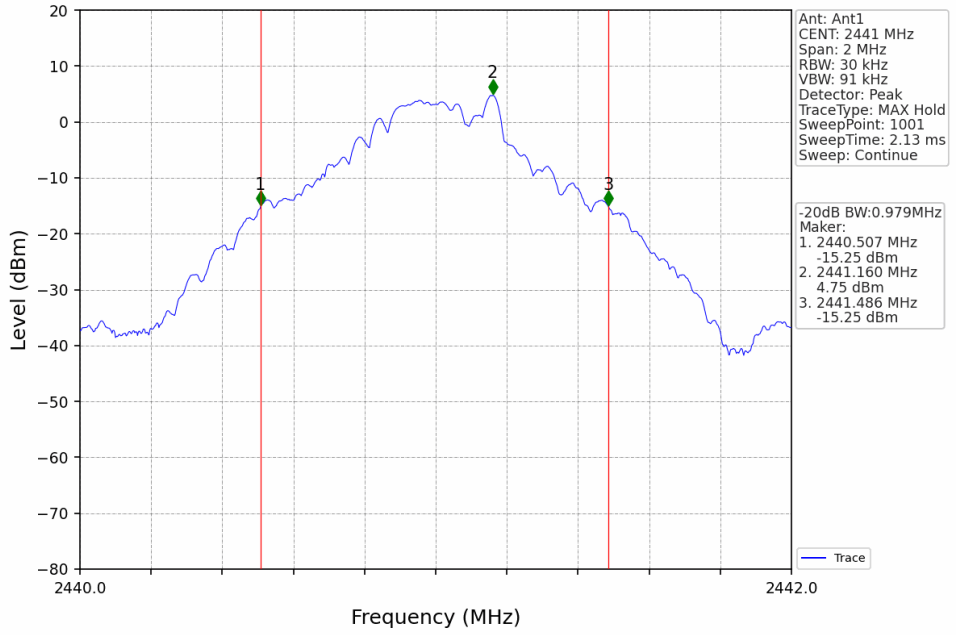
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	2	0.980	Pass
		2441	DH5	2	0.979	Pass
		2480	DH5	2	0.974	Pass
Pi/4DQPSK	SISO	2402	2DH5	2	1.061	Pass
		2441	2DH5	2	1.056	Pass
		2480	2DH5	2	1.062	Pass
8DPSK	SISO	2402	3DH5	2	1.034	Pass
		2441	3DH5	2	1.043	Pass
		2480	3DH5	2	1.036	Pass

2.2.2 Test Graph

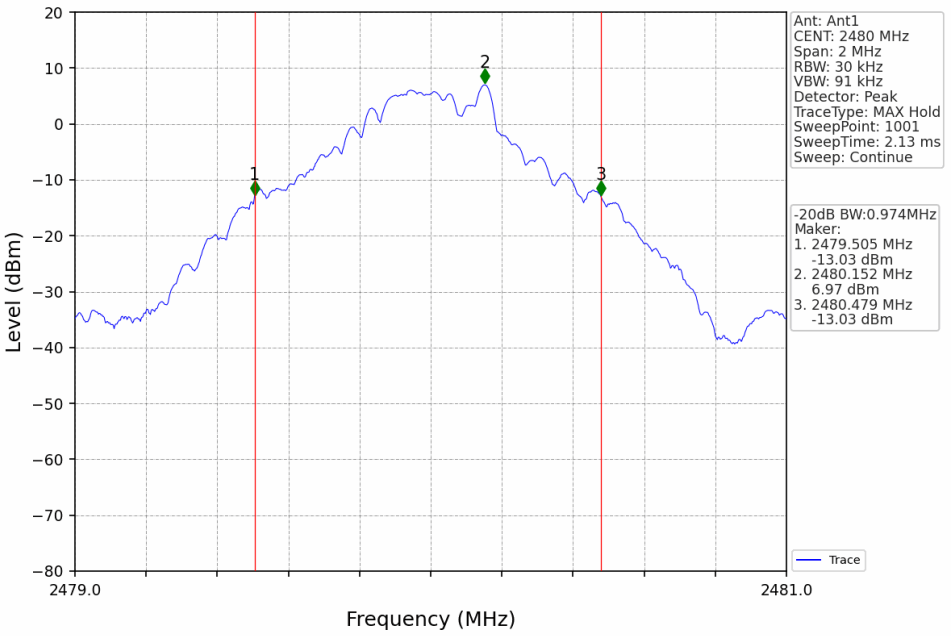
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



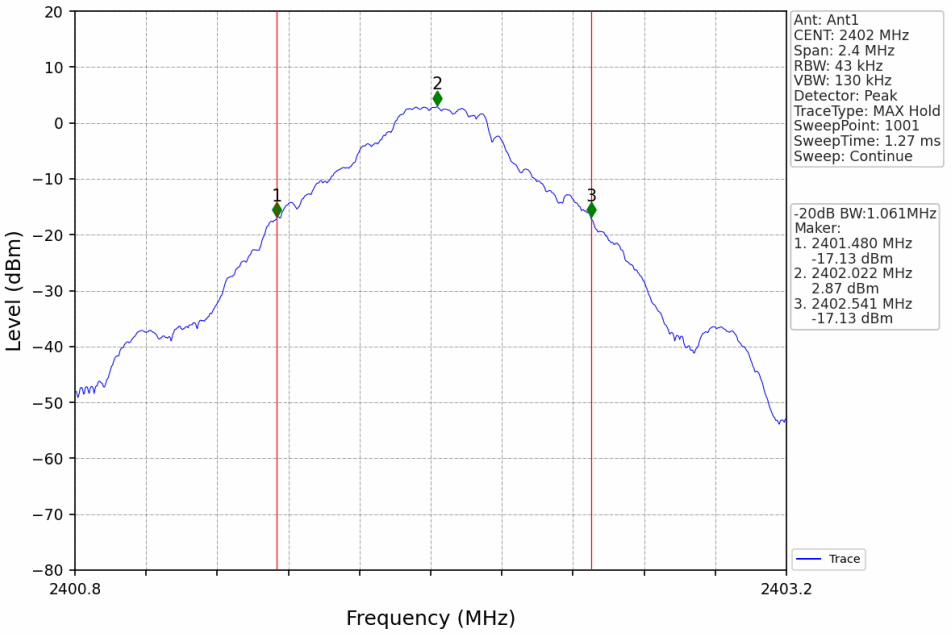
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



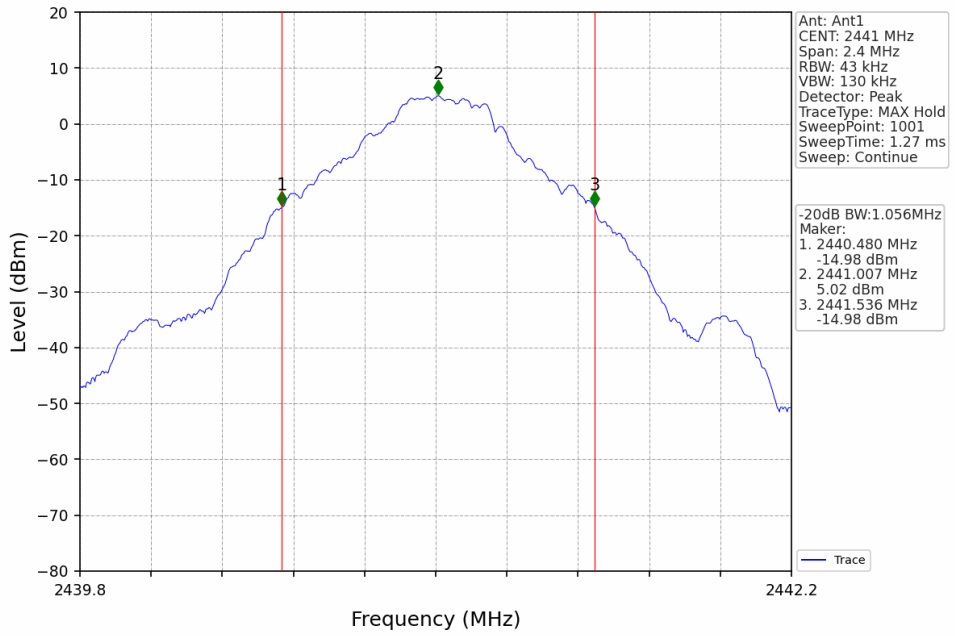
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



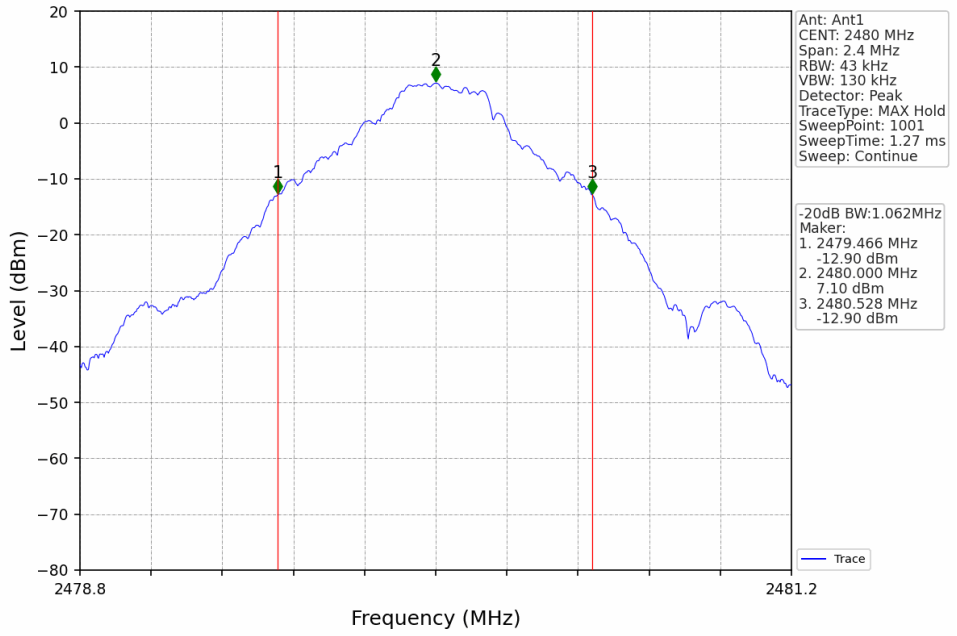
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



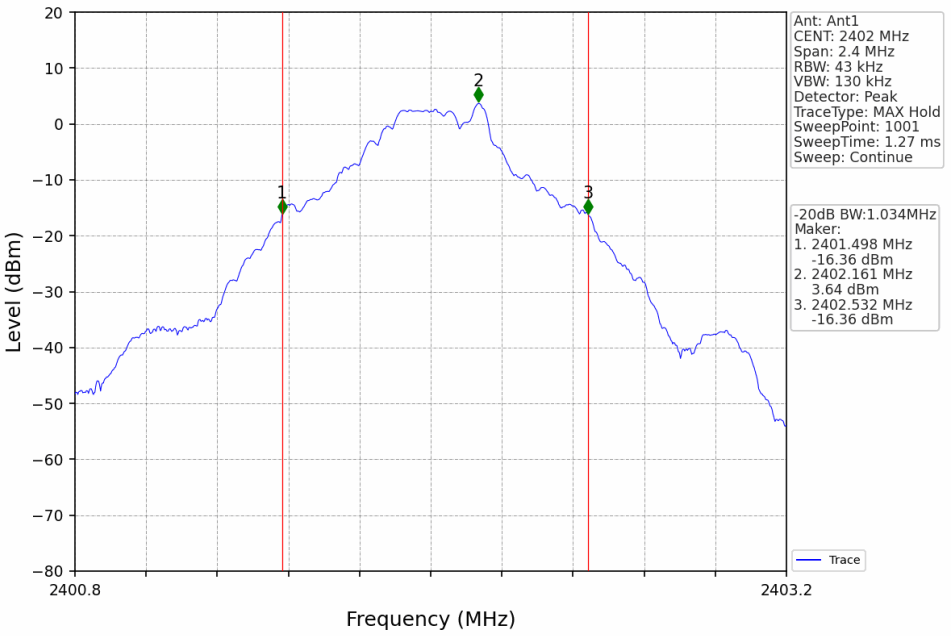
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



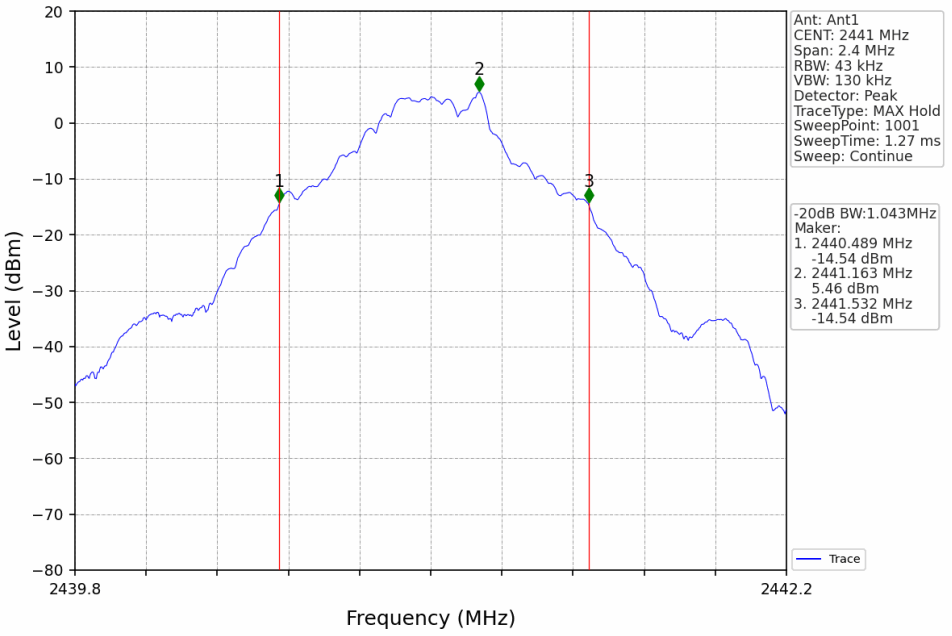
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



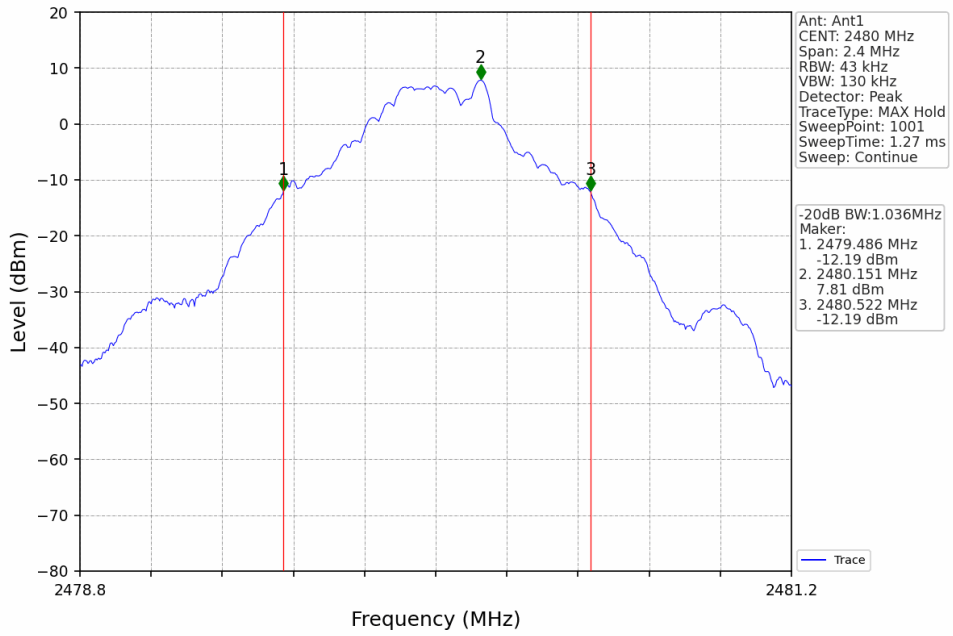
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



3. Maximum Conducted Output Power

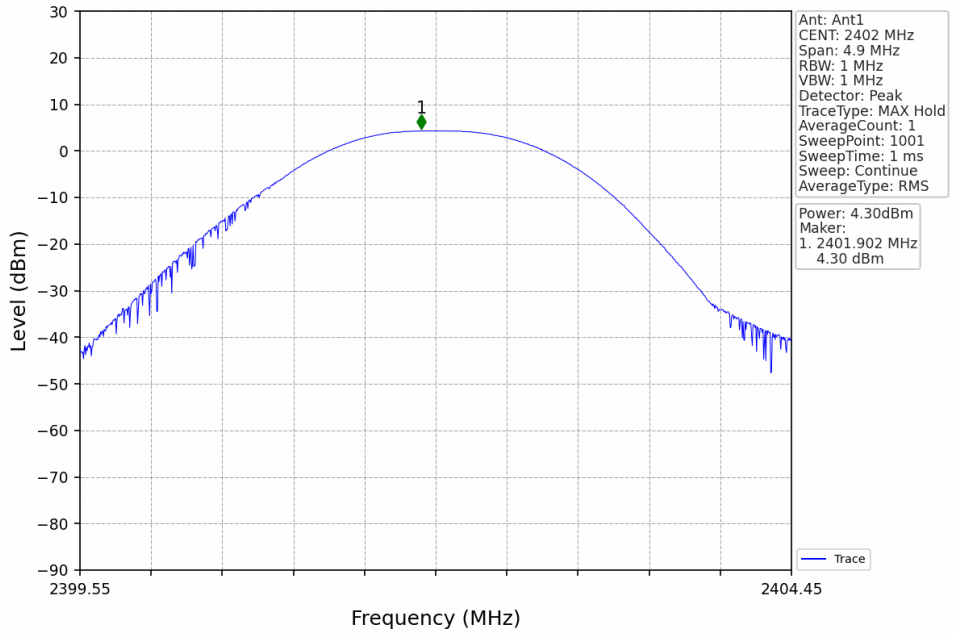
3.1 Power

3.1.1 Test Result

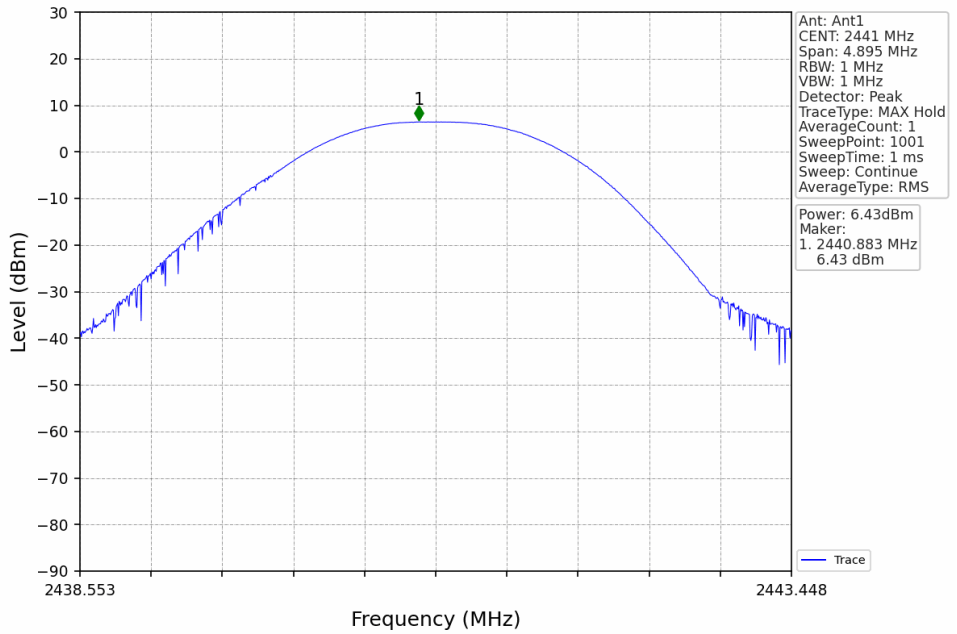
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT2	Limit	
GFSK	SISO	2402	DH5	4.30	<=30	Pass
		2441	DH5	6.43	<=30	Pass
		2480	DH5	8.50	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	4.55	<=20.97	Pass
		2441	2DH5	6.48	<=20.97	Pass
		2480	2DH5	8.53	<=20.97	Pass
8DPSK	SISO	2402	3DH5	4.52	<=20.97	Pass
		2441	3DH5	6.44	<=20.97	Pass
		2480	3DH5	8.50	<=20.97	Pass

3.1.2 Test Graph

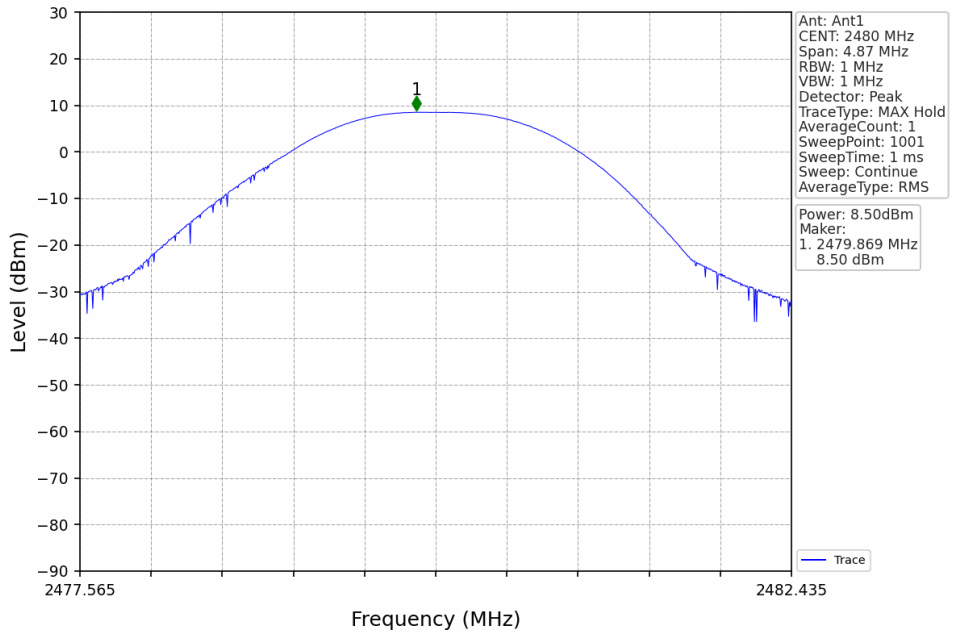
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



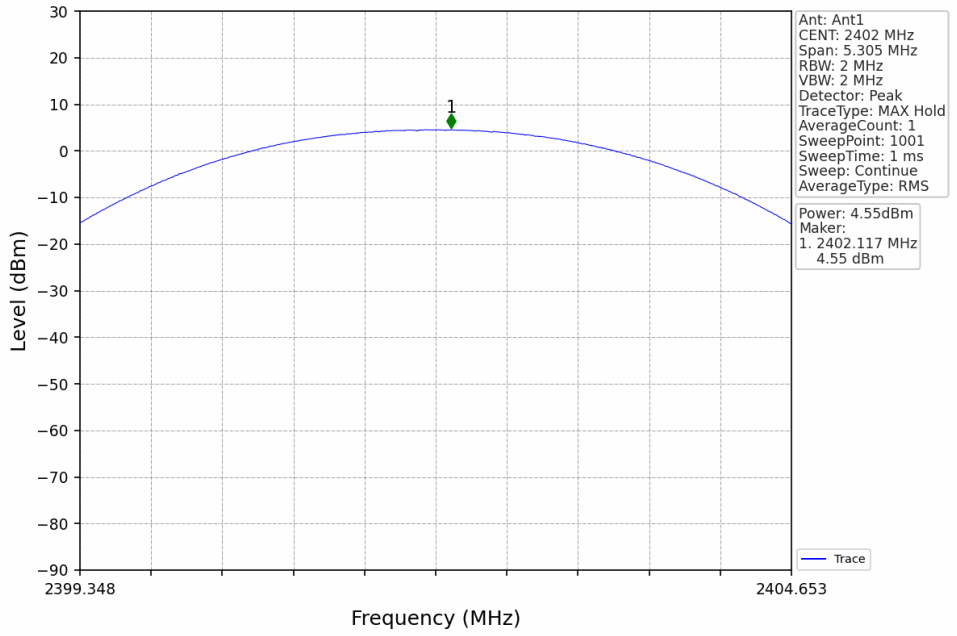
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



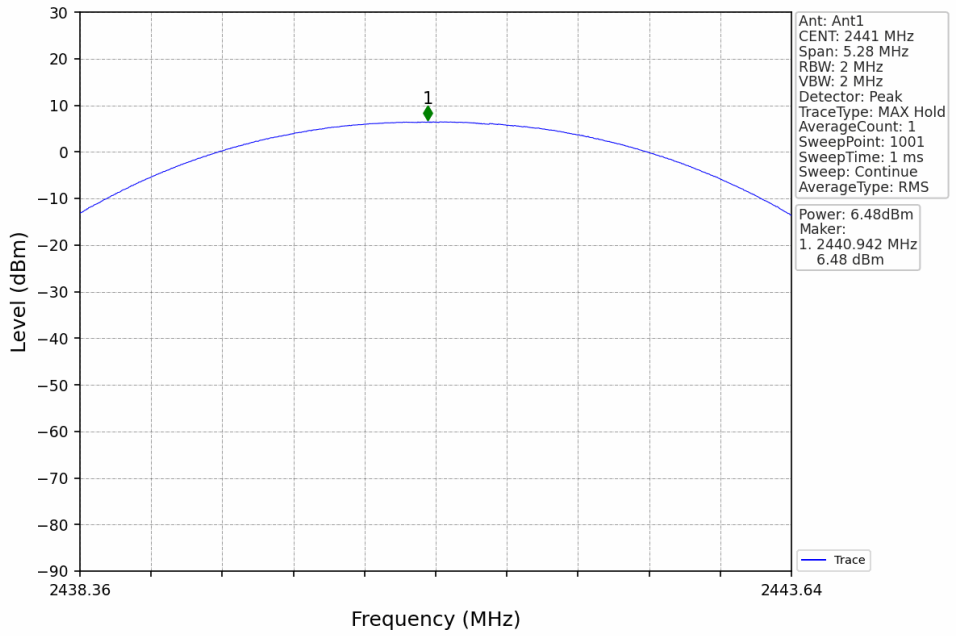
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



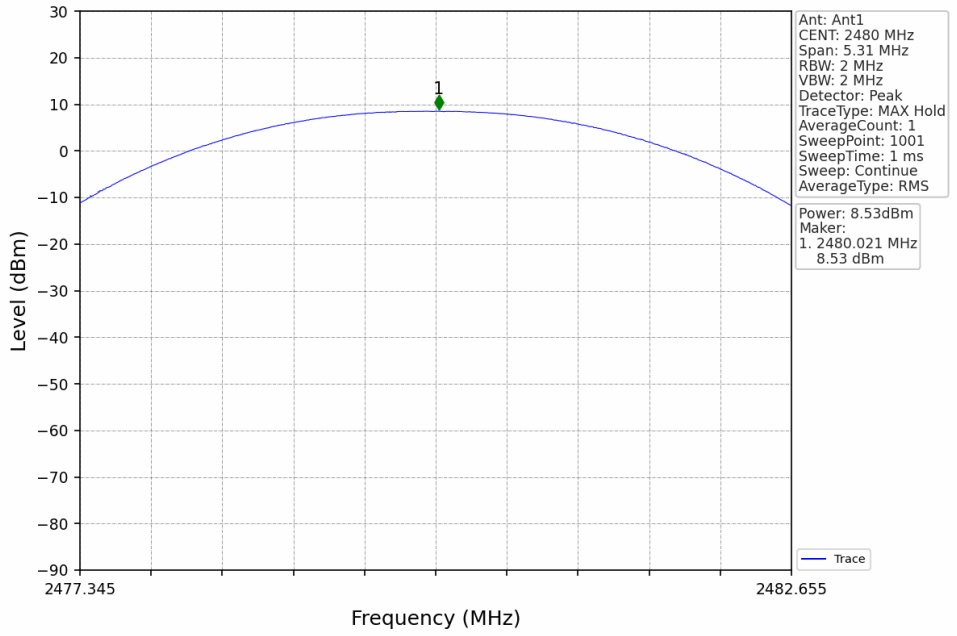
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



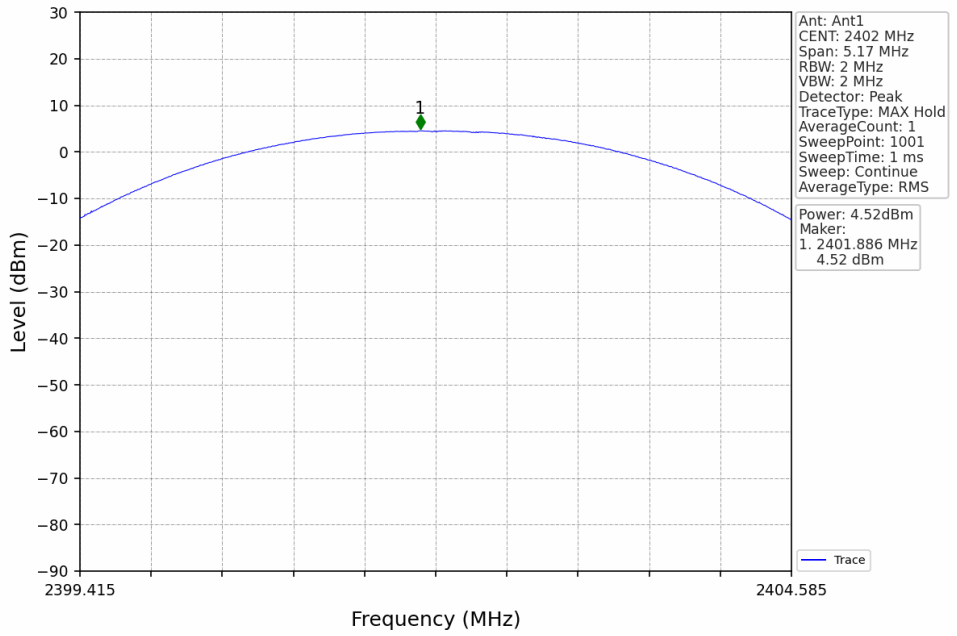
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



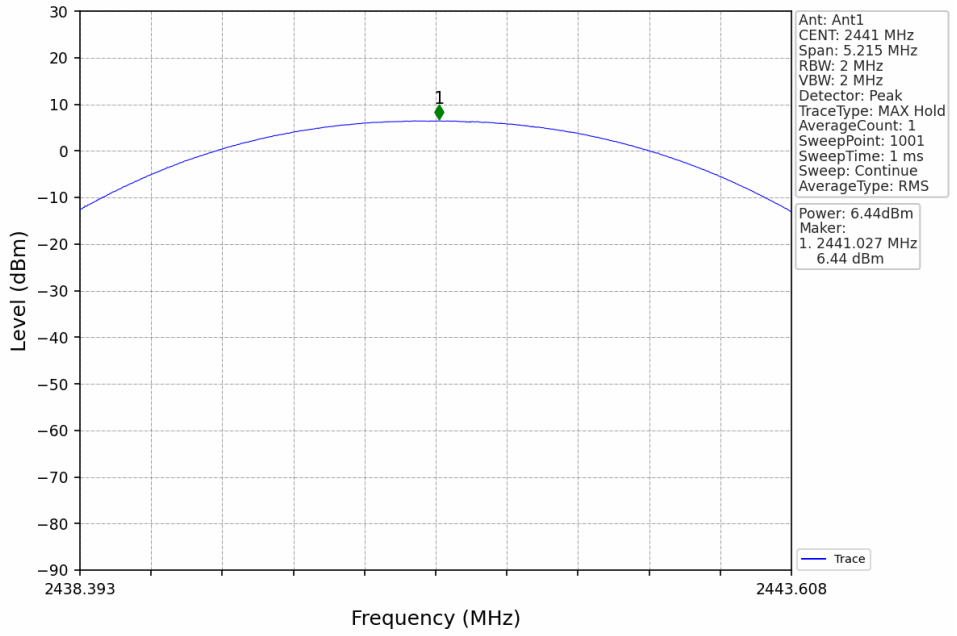
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



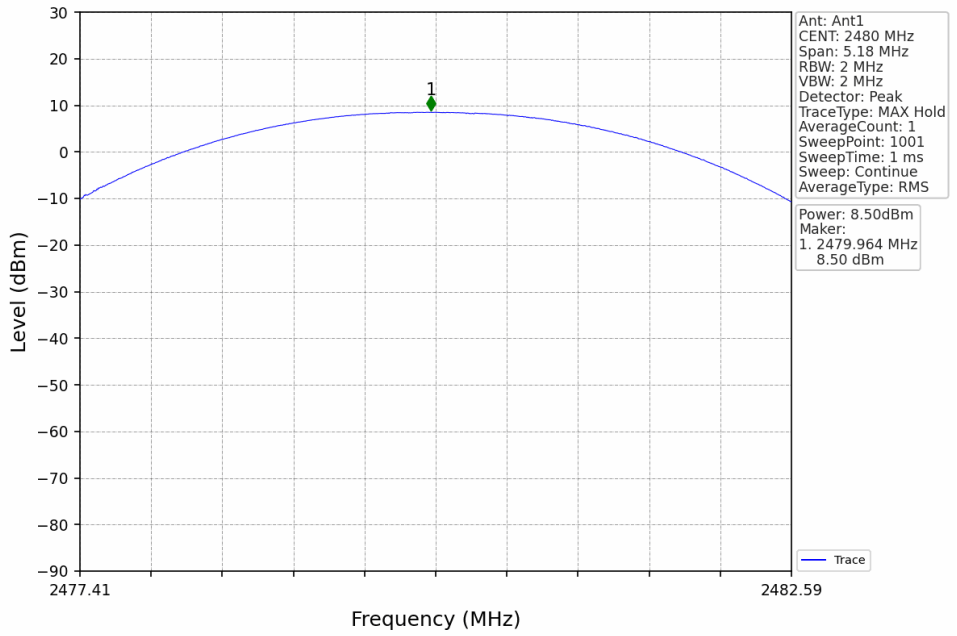
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



4. Carrier Frequency Separation

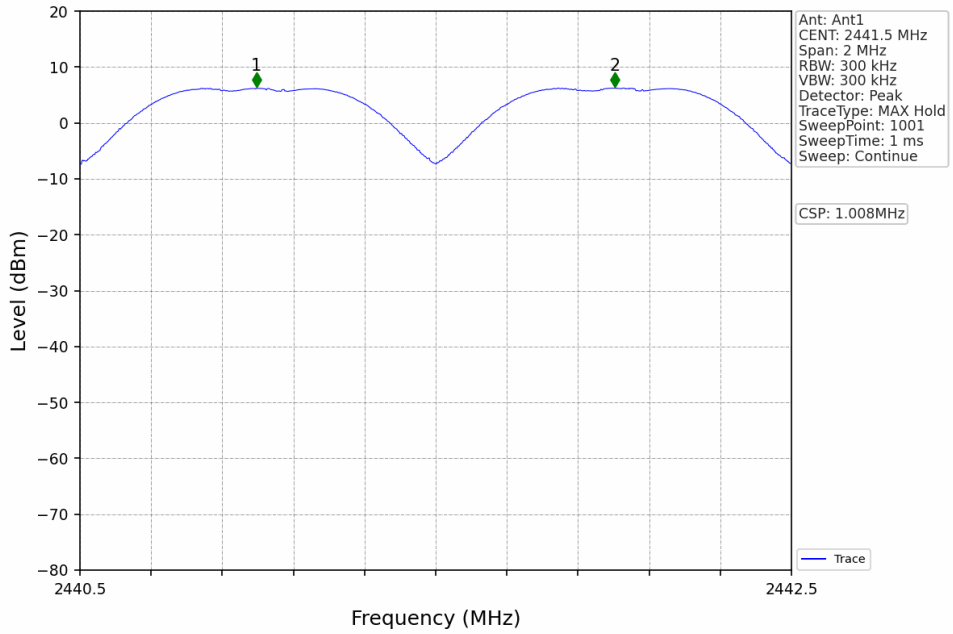
4.1 Ant2

4.1.1 Test Result

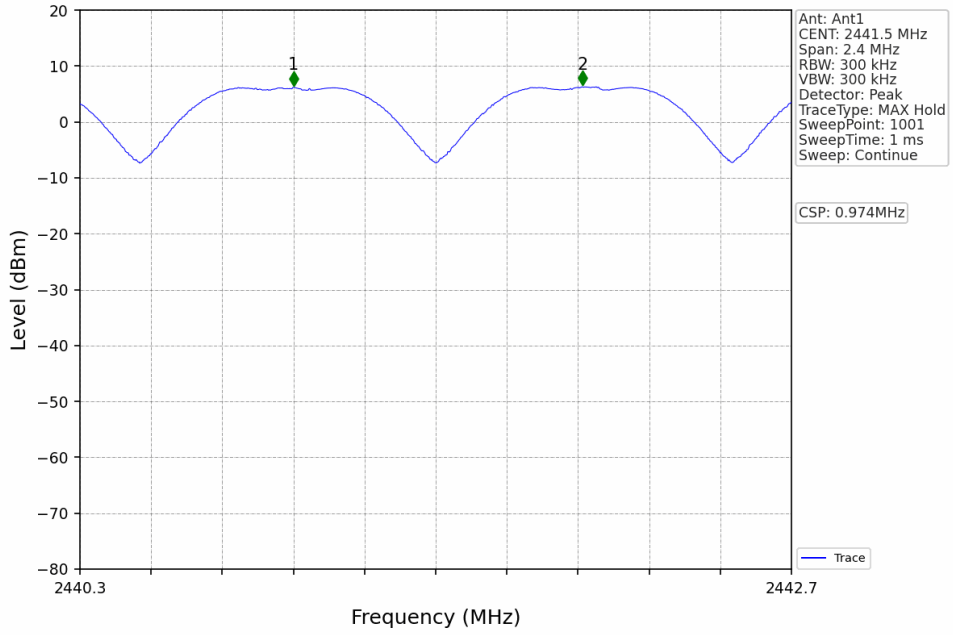
Ant2							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.008	0.980	>=0.98	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	0.974	1.062	>=0.708	Pass
8DPSK	SISO	HOPP	3DH5	0.991	1.043	>=0.695	Pass

4.1.2 Test Graph

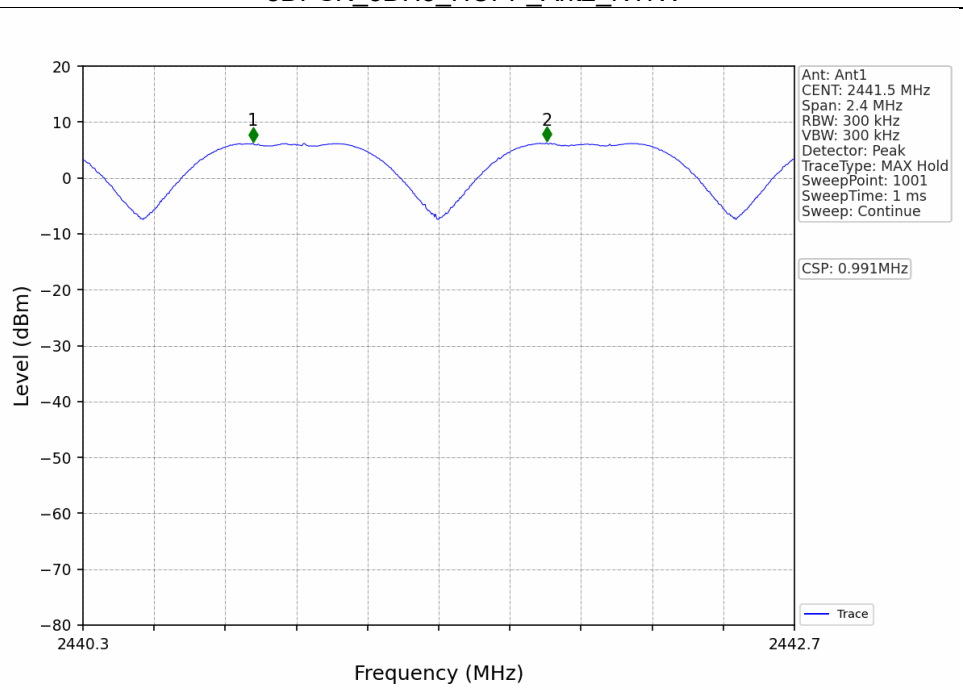
GFSK_DH5_HOPP_Ant2_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



5. Number of Hopping Frequencies

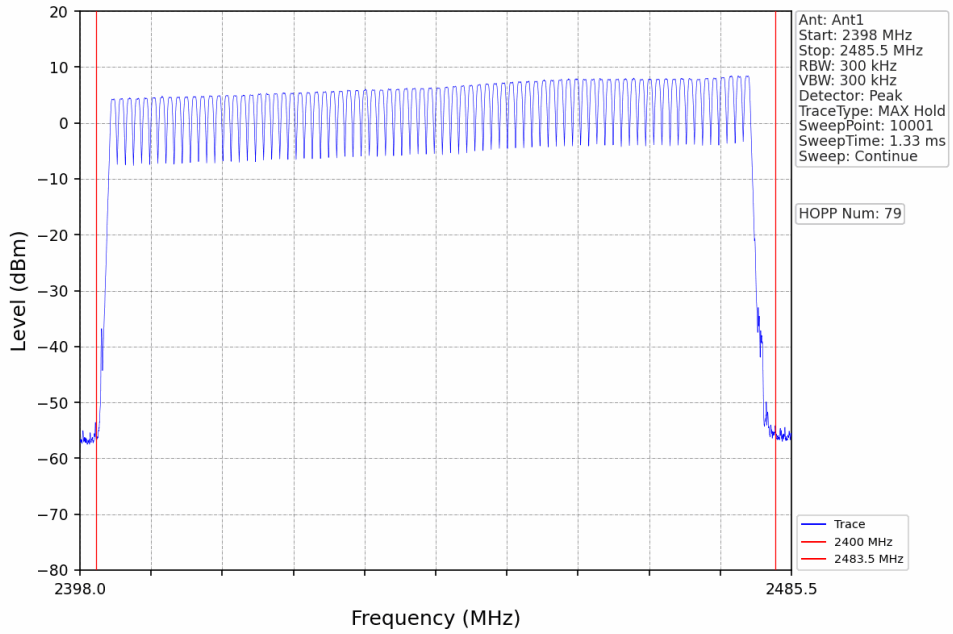
5.1 HoppNum

5.1.1 Test Result

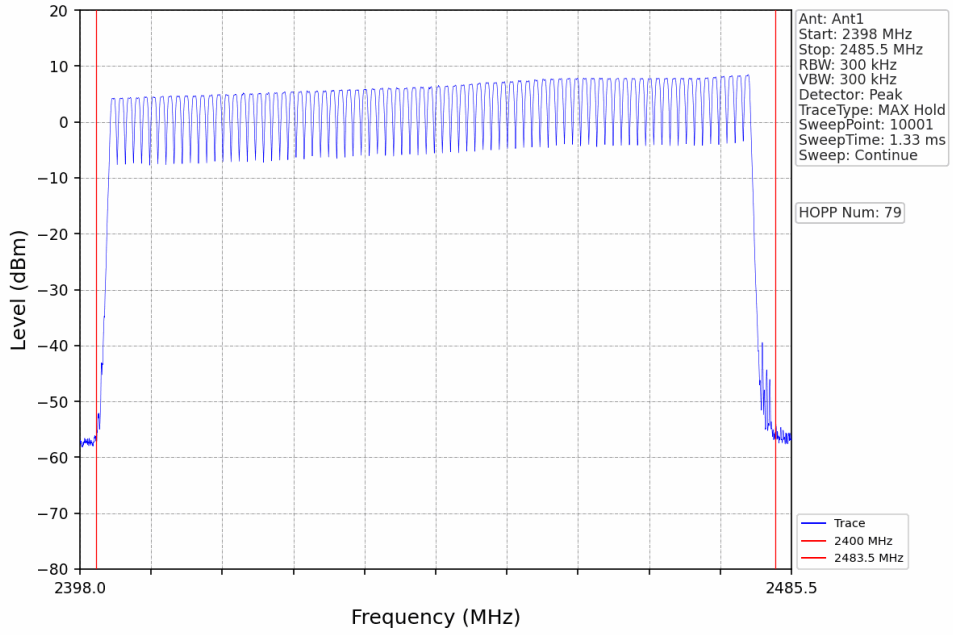
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT2	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

5.1.2 Test Graph

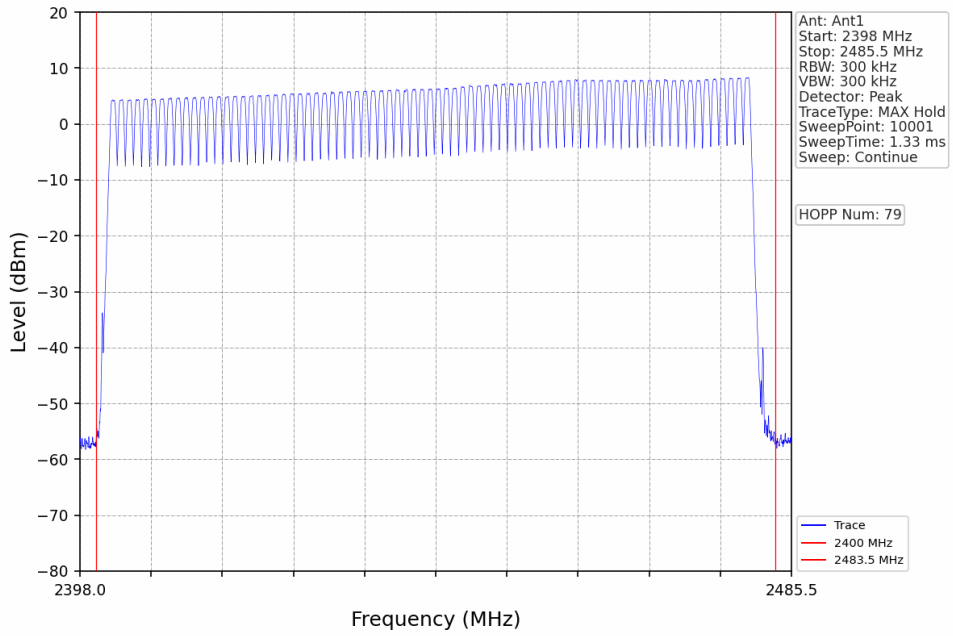
GFSK_DH5_HOPP_Ant2_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



6. Time of Occupancy (Dwell Time)

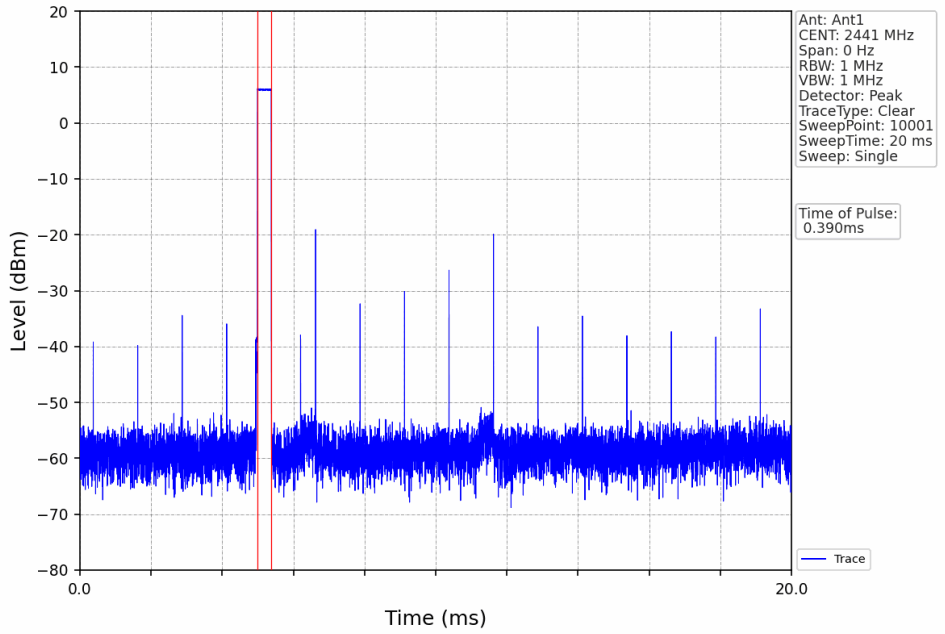
6.1 Ant2

6.1.1 Test Result

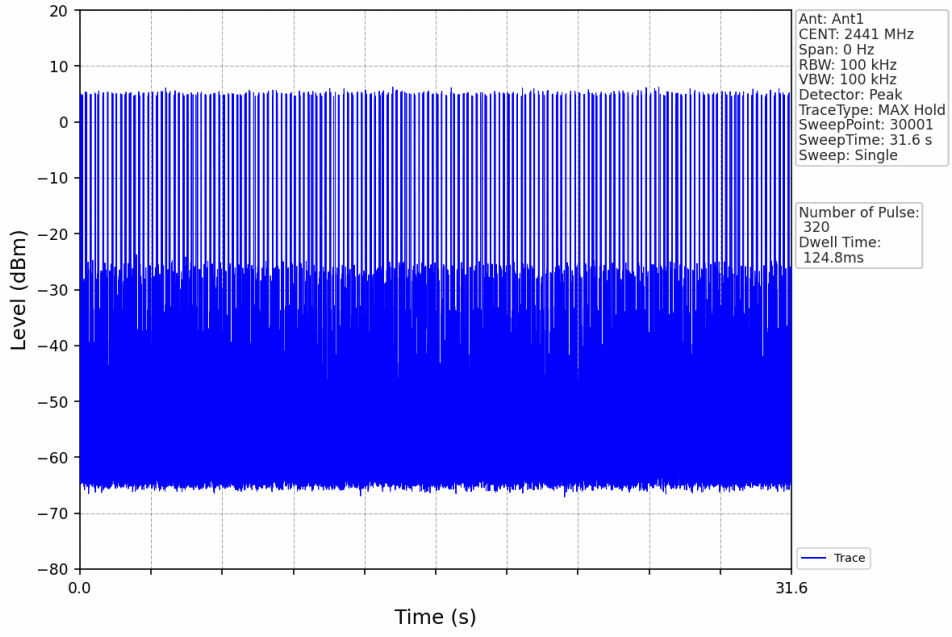
Ant2									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.390	31.600	320	124.800	<=400	Pass
			DH3	1.646	31.600	155	255.130	<=400	Pass
			DH5	2.896	31.600	98	283.808	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.386	31.600	320	123.520	<=400	Pass
			2DH3	1.652	31.600	160	264.320	<=400	Pass
			2DH5	2.896	31.600	112	324.352	<=400	Pass
8DPSK	SISO	HOPP	3DH1	2.892	31.600	115	332.580	<=400	Pass
			3DH3	1.646	31.600	156	256.776	<=400	Pass
			3DH5	2.896	31.600	107	309.872	<=400	Pass

6.1.2 Test Graph

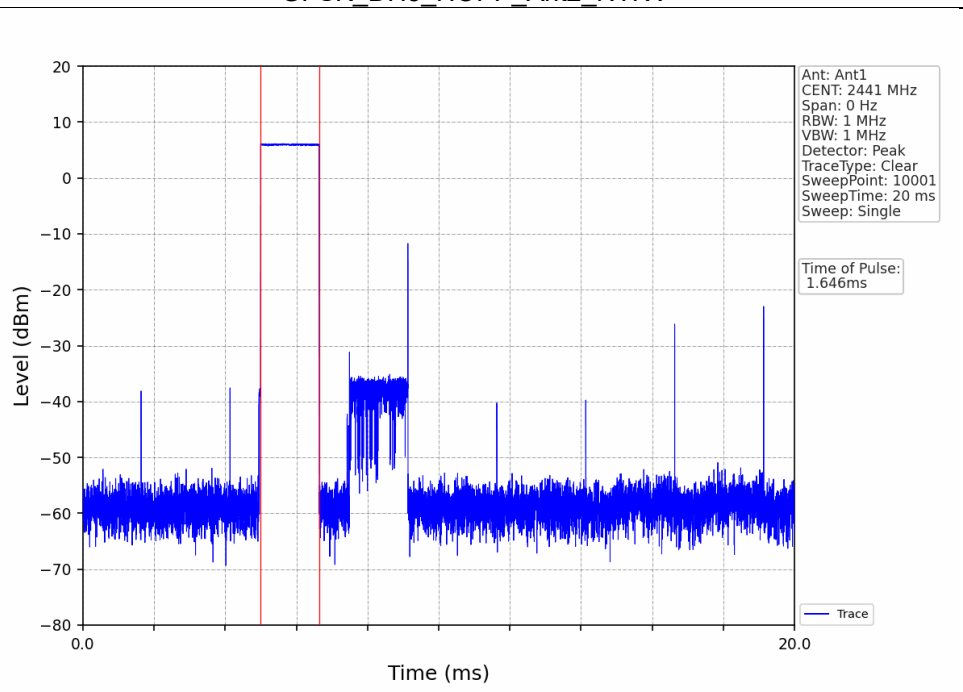
GFSK_DH1_HOPP_Ant2_NTNV



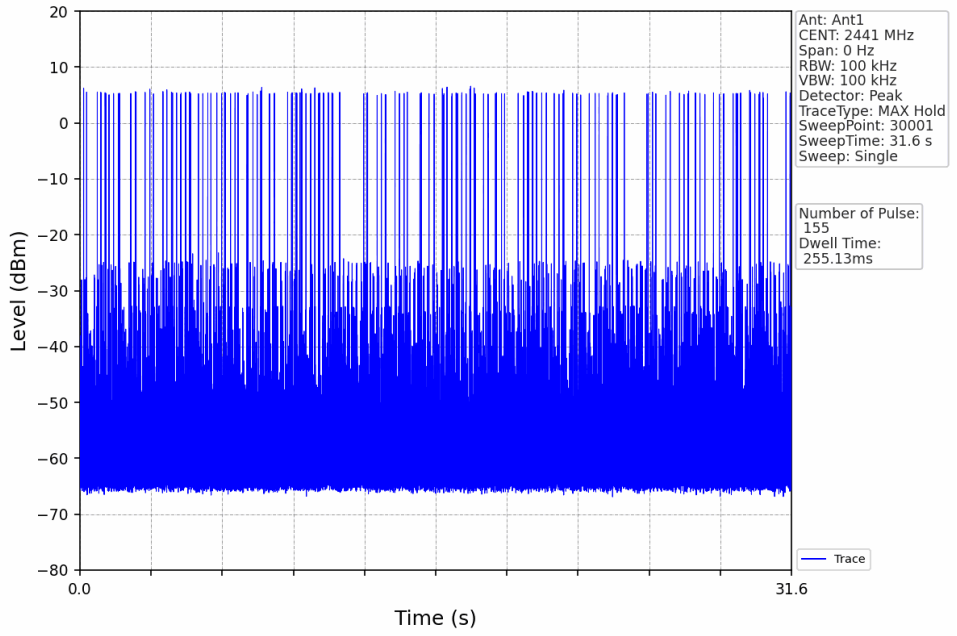
GFSK_DH1_HOPP_Ant2_NTNV



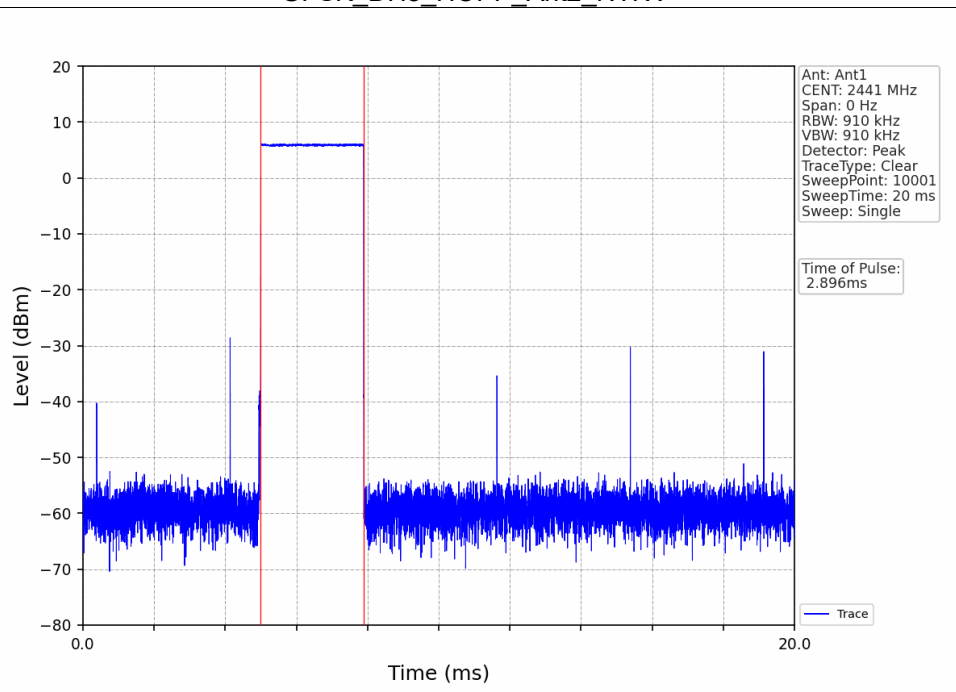
GFSK_DH3_HOPP_Ant2_NTNV



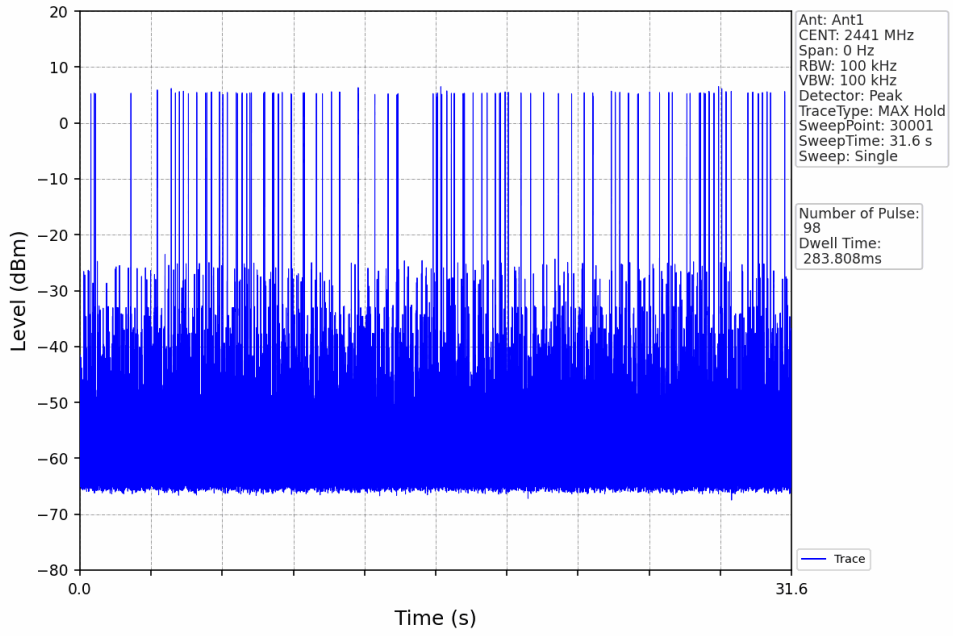
GFSK_DH3_HOPP_Ant2_NTNV



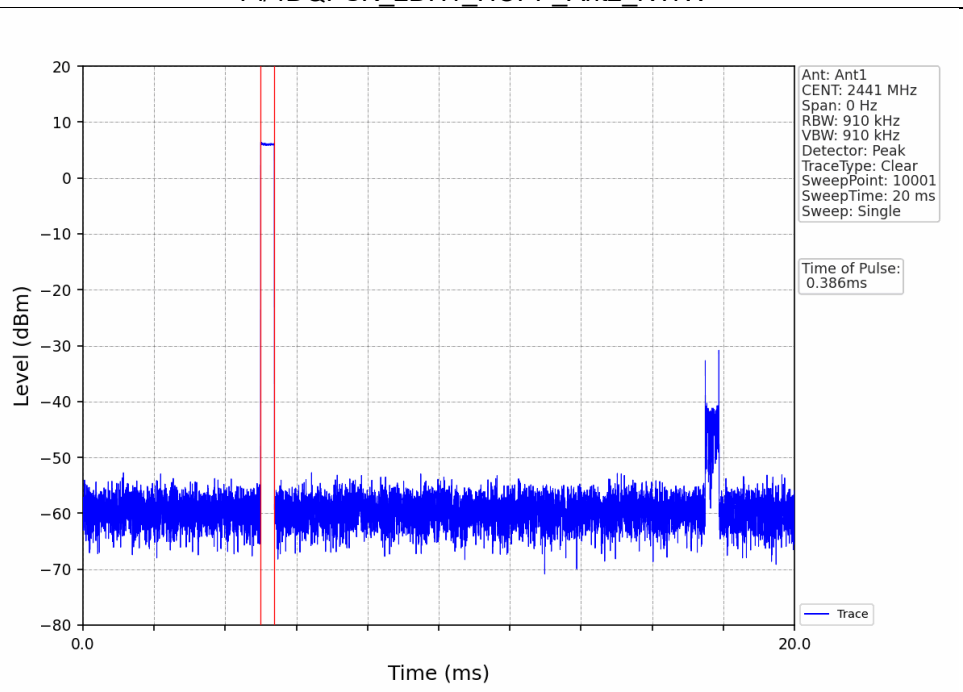
GFSK_DH5_HOPP_Ant2_NTNV



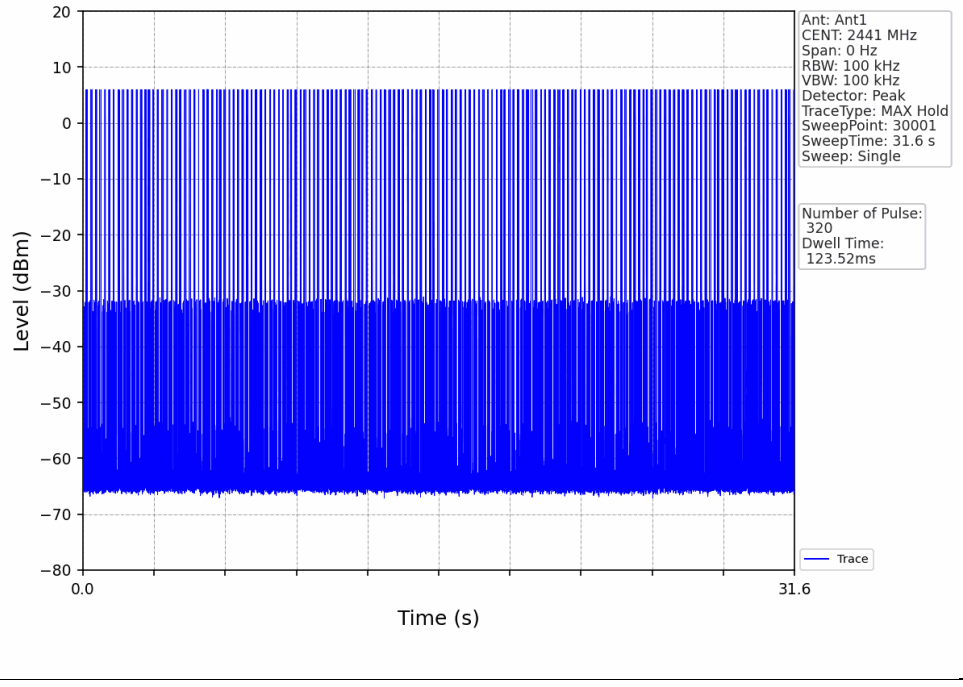
GFSK_DH5_HOPP_Ant2_NTNV



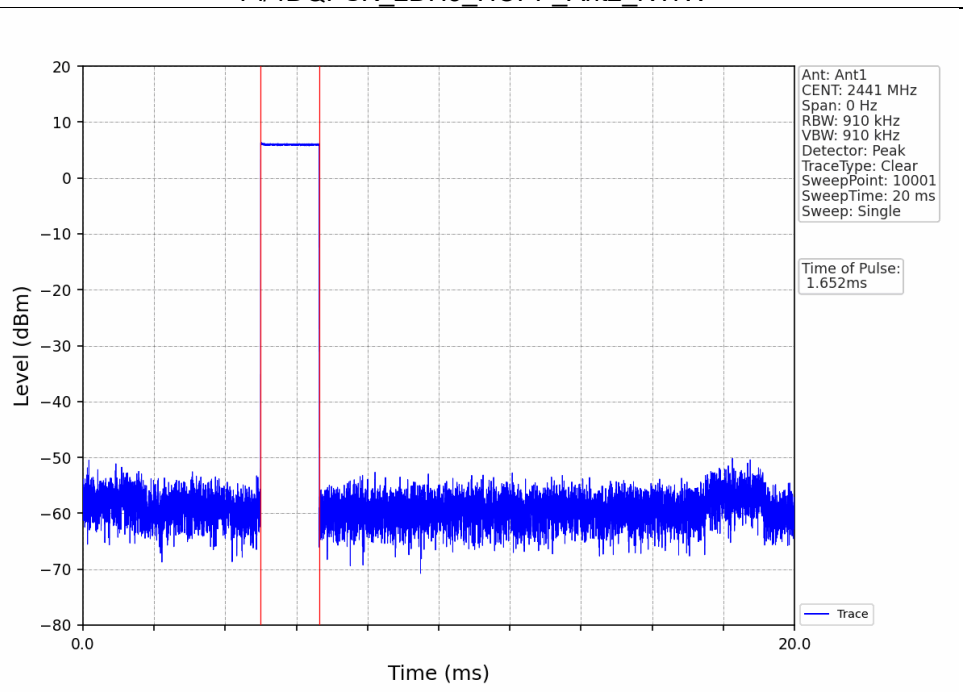
Pi/4DQPSK_2DH1_HOPP_Ant2_NTNV



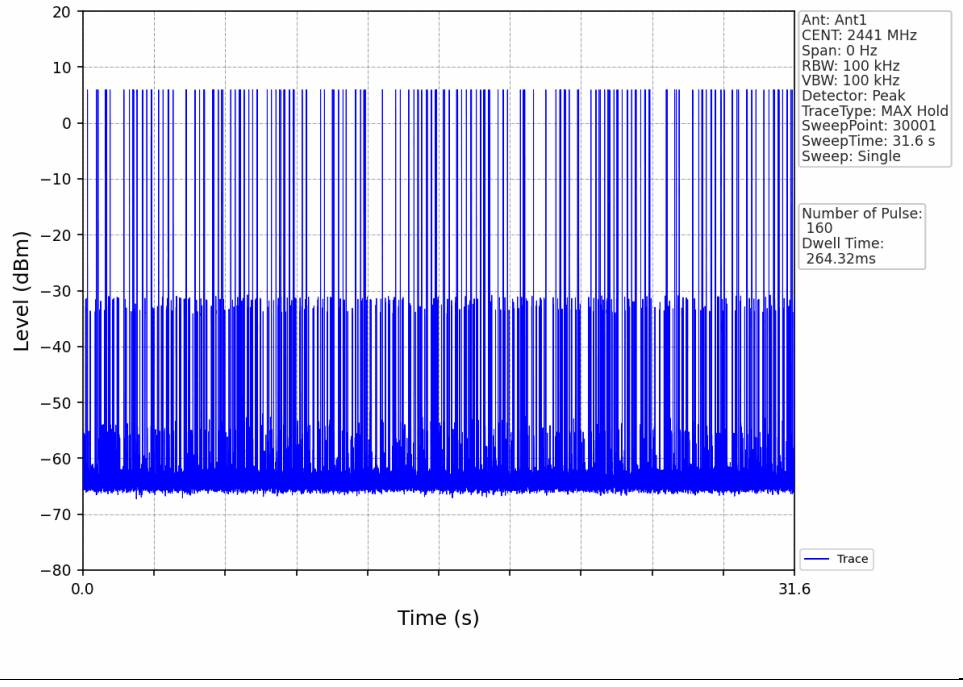
Pi/4DQPSK_2DH1_HOPP_Ant2_NTNV



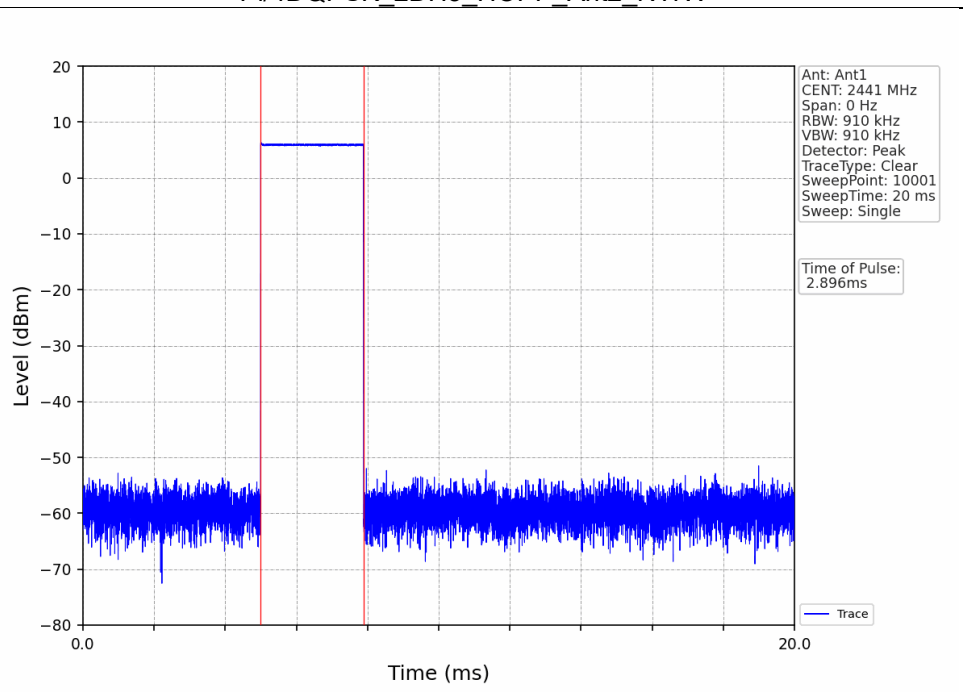
Pi/4DQPSK_2DH3_HOPP_Ant2_NTNV



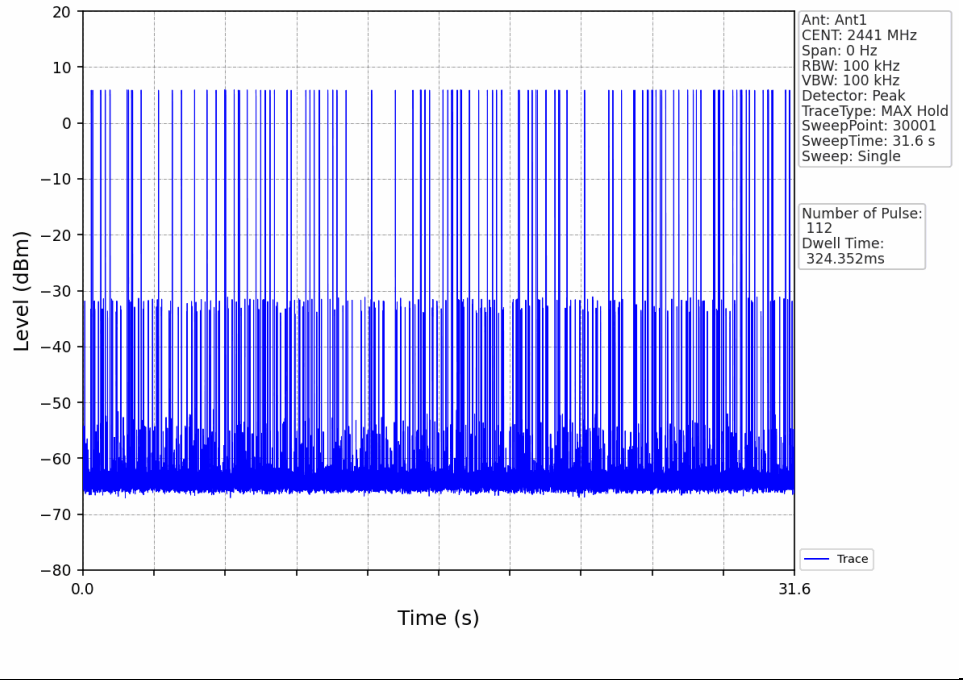
Pi/4DQPSK_2DH3_HOPP_Ant2_NTNV



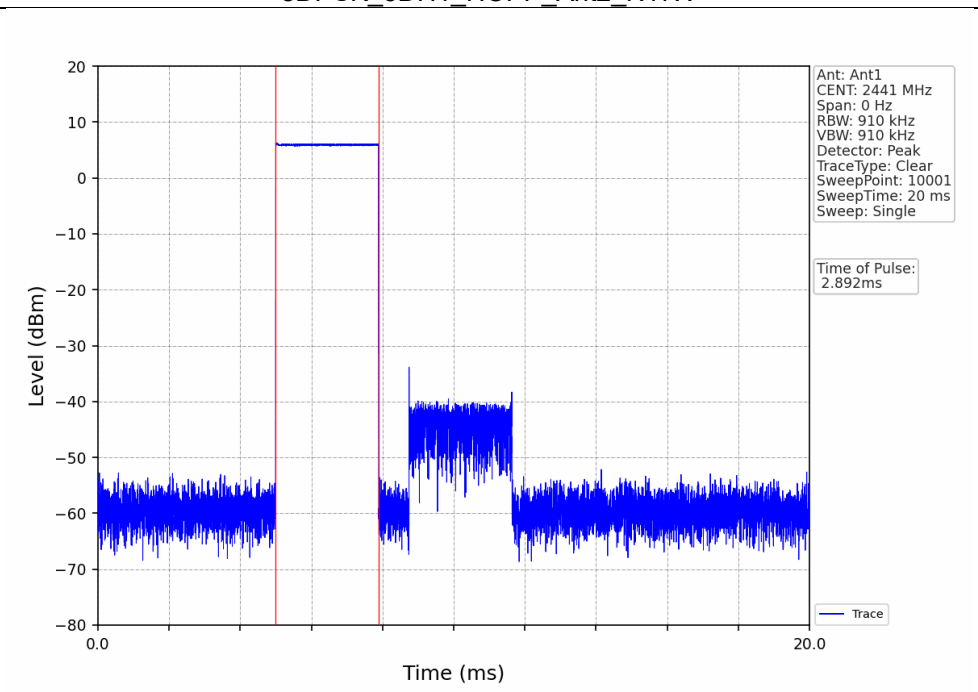
Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



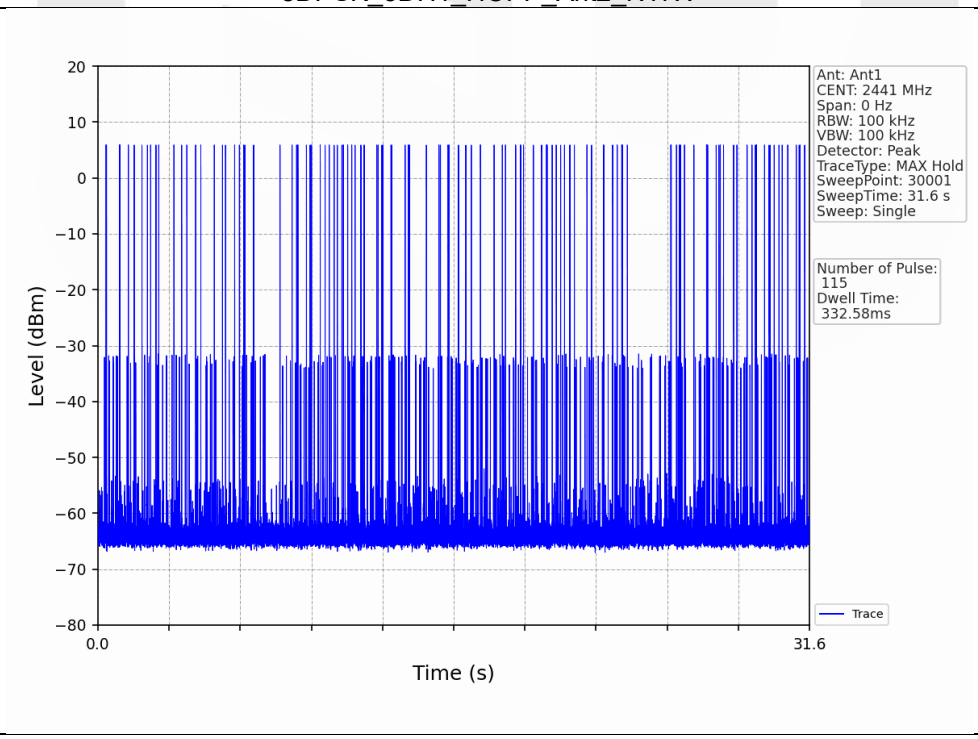
Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



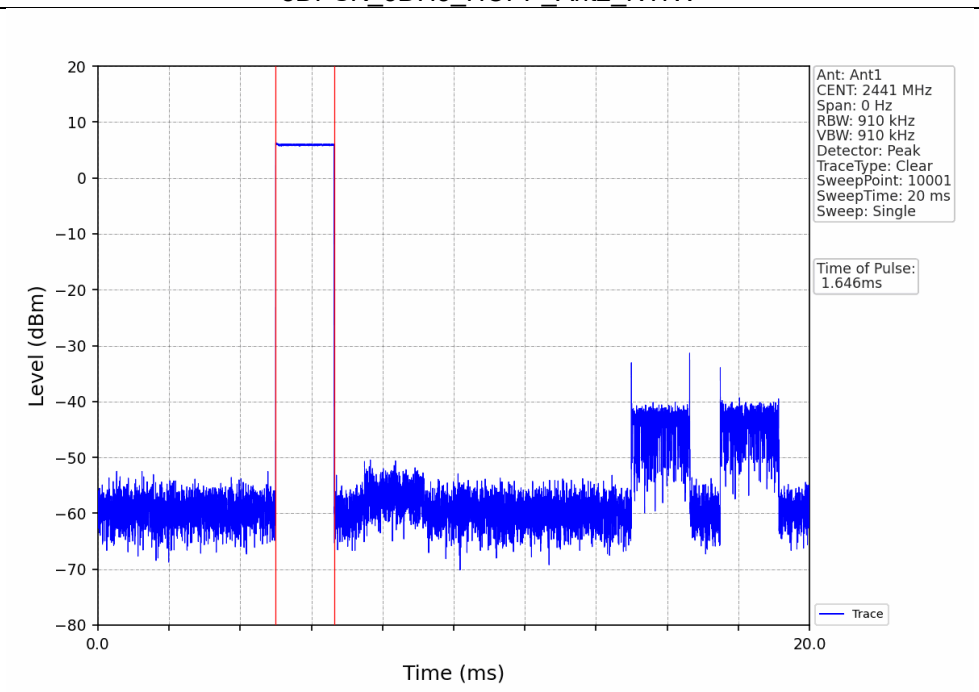
8DPSK_3DH1_HOPP_Ant2_NTNV



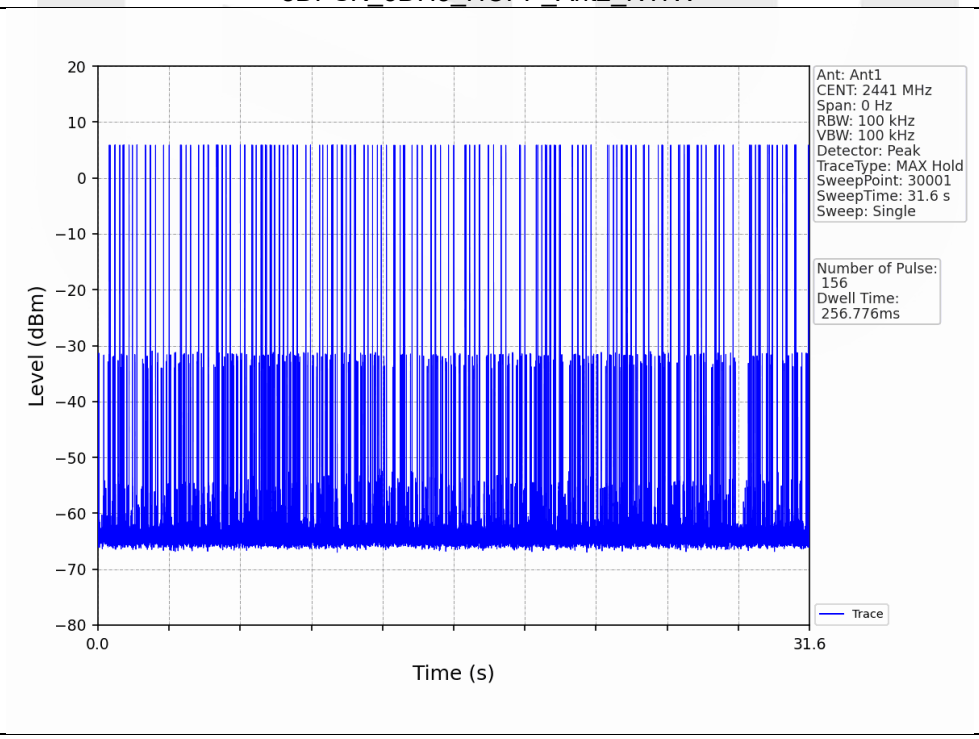
8DPSK_3DH1_HOPP_Ant2_NTNV



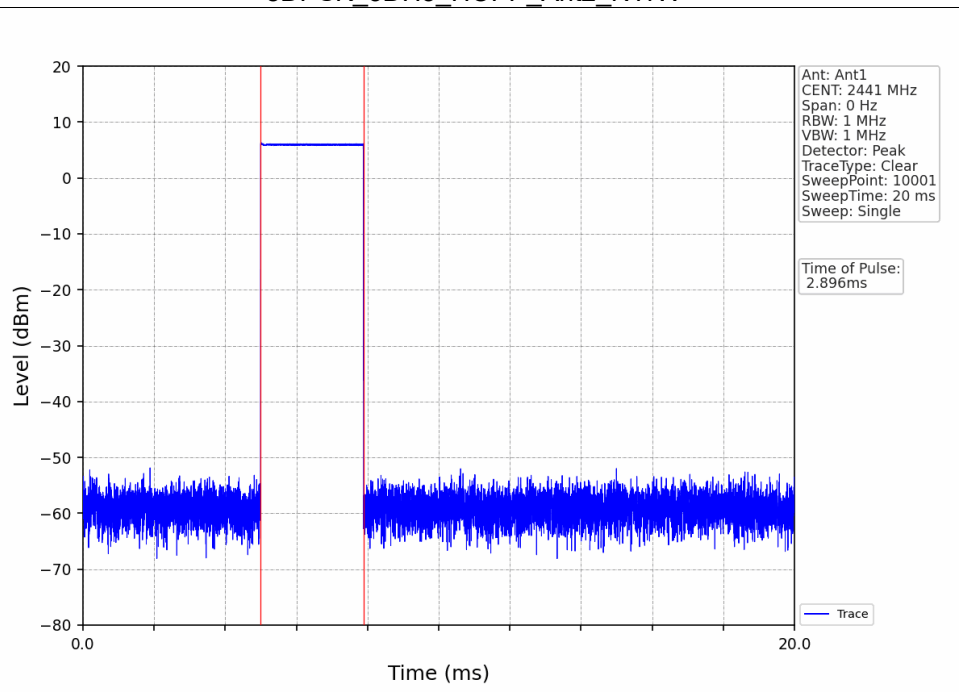
8DPSK_3DH3_HOPP_Ant2_NTNV



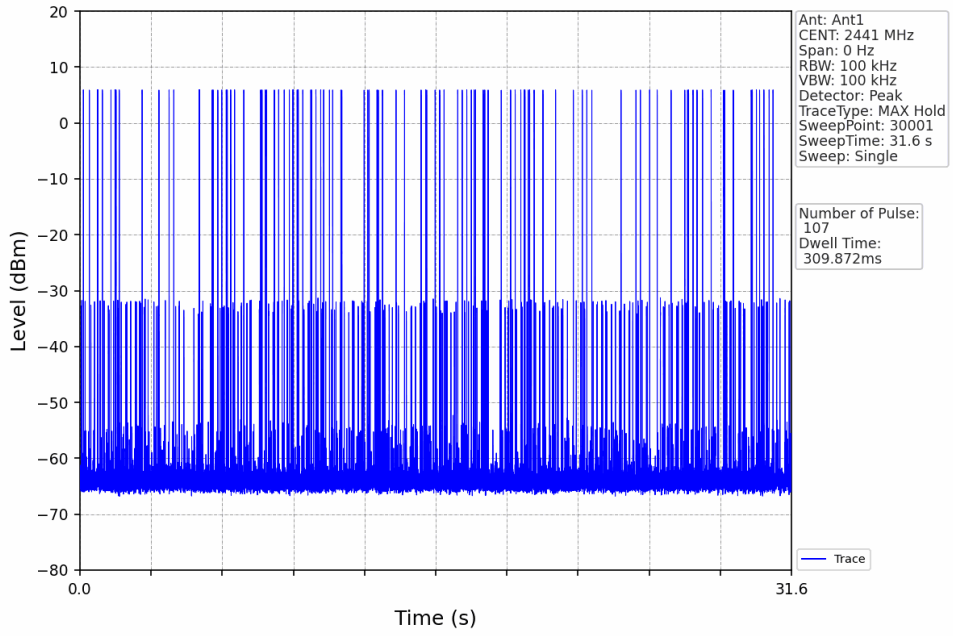
8DPSK_3DH3_HOPP_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



7. Unwanted Emissions In Non-restricted Frequency Bands

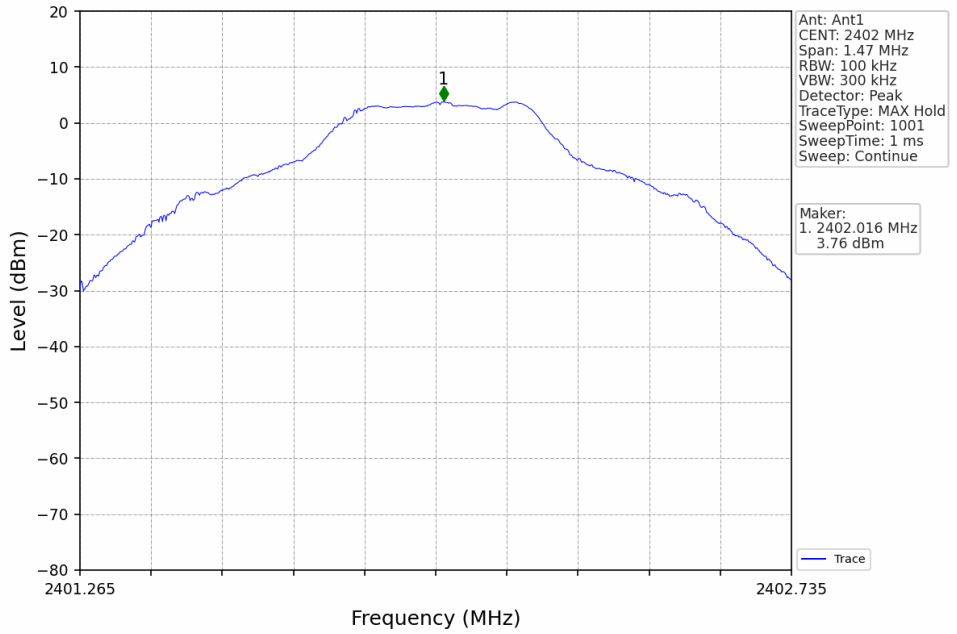
7.1 Ref

7.1.1 Test Result

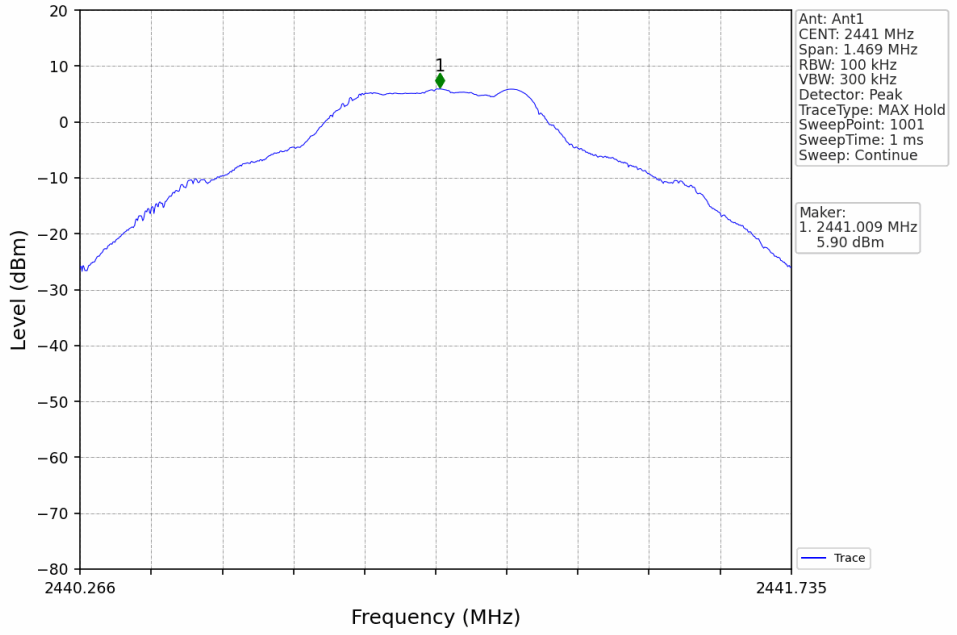
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	2	3.76
		2441	DH5	2	5.90
		2480	DH5	2	8.03
Pi/4DQPSK	SISO	2402	2DH5	2	3.93
		2441	2DH5	2	5.81
		2480	2DH5	2	8.00
8DPSK	SISO	2402	3DH5	2	3.93
		2441	3DH5	2	5.83
		2480	3DH5	2	7.98
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.					

7.1.2 Test Graph

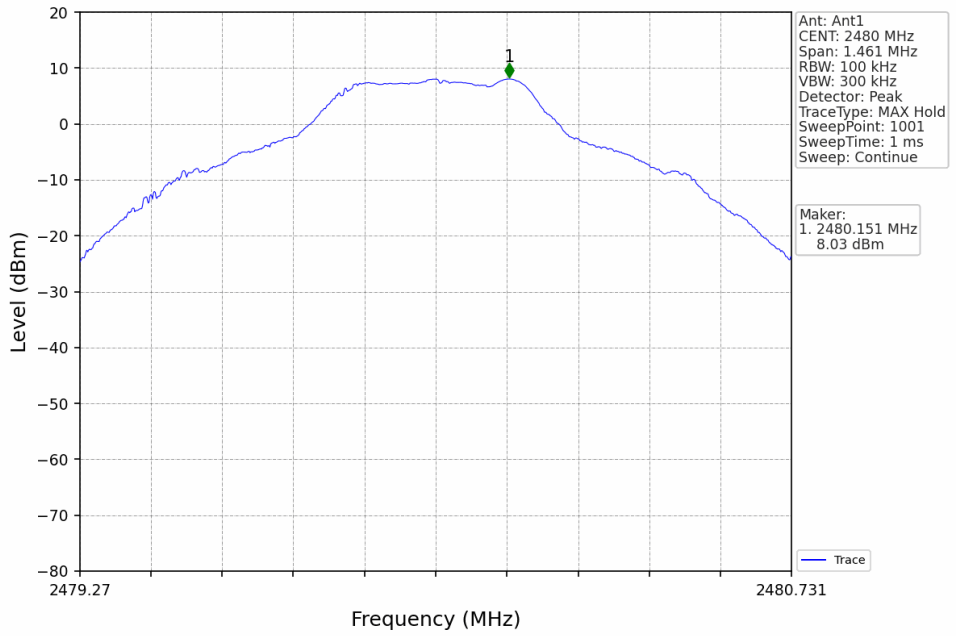
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



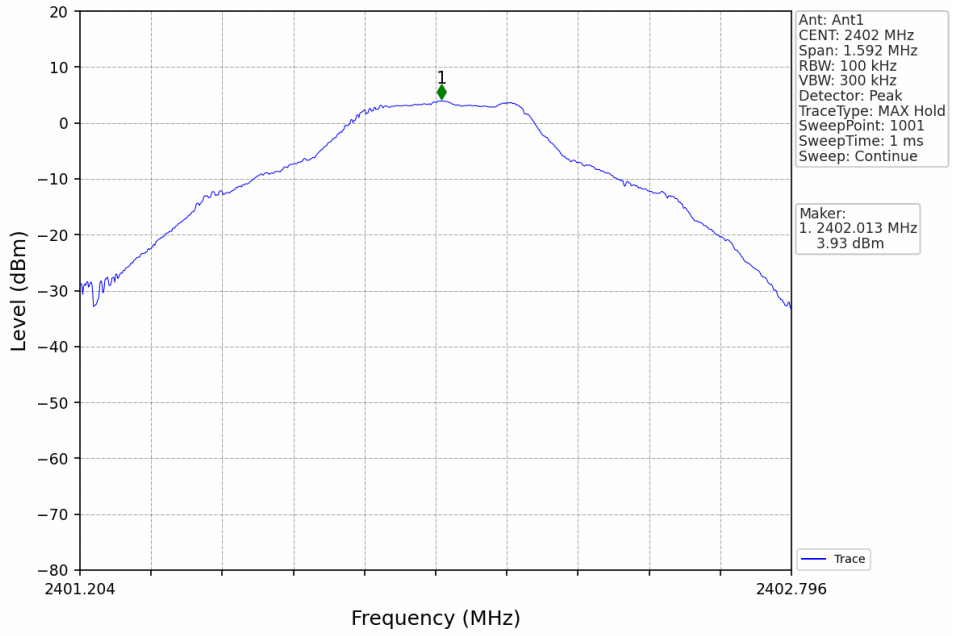
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



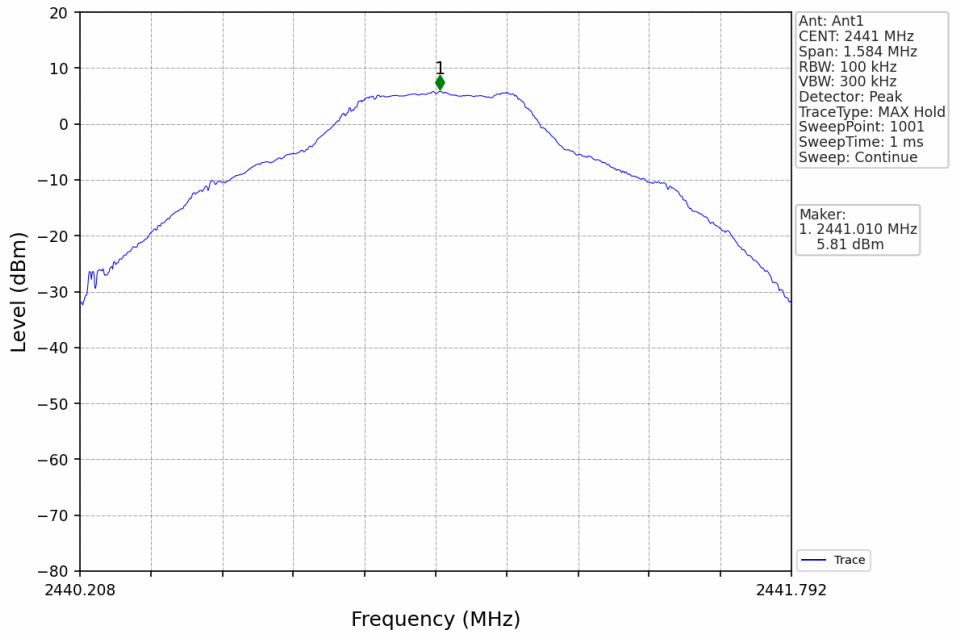
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



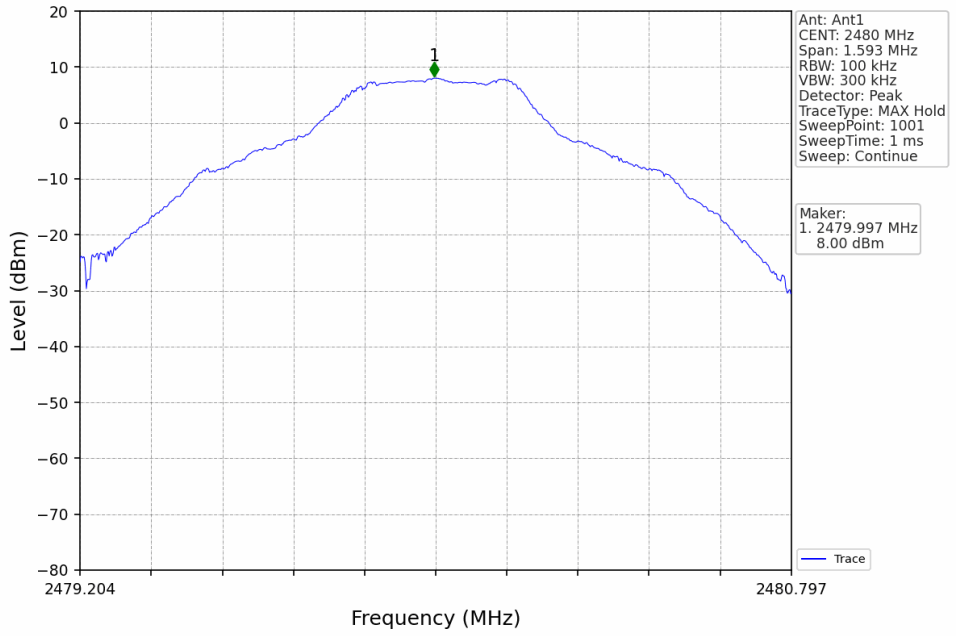
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



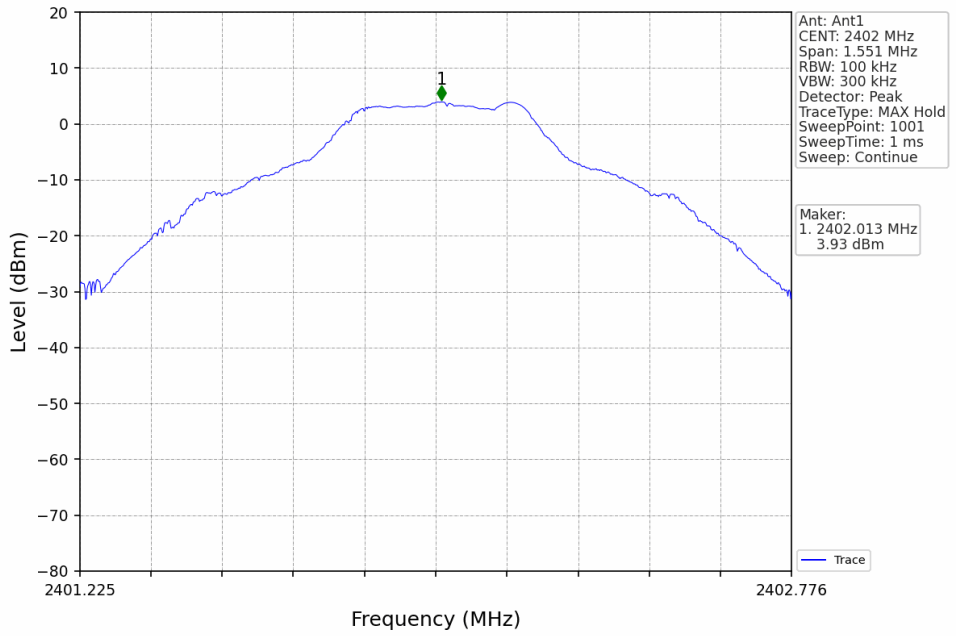
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



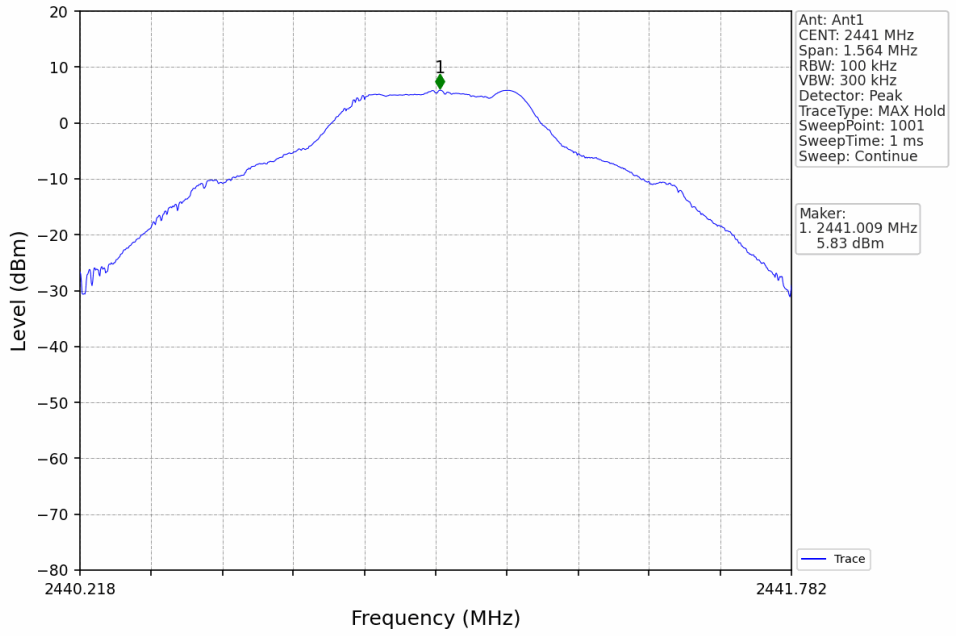
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



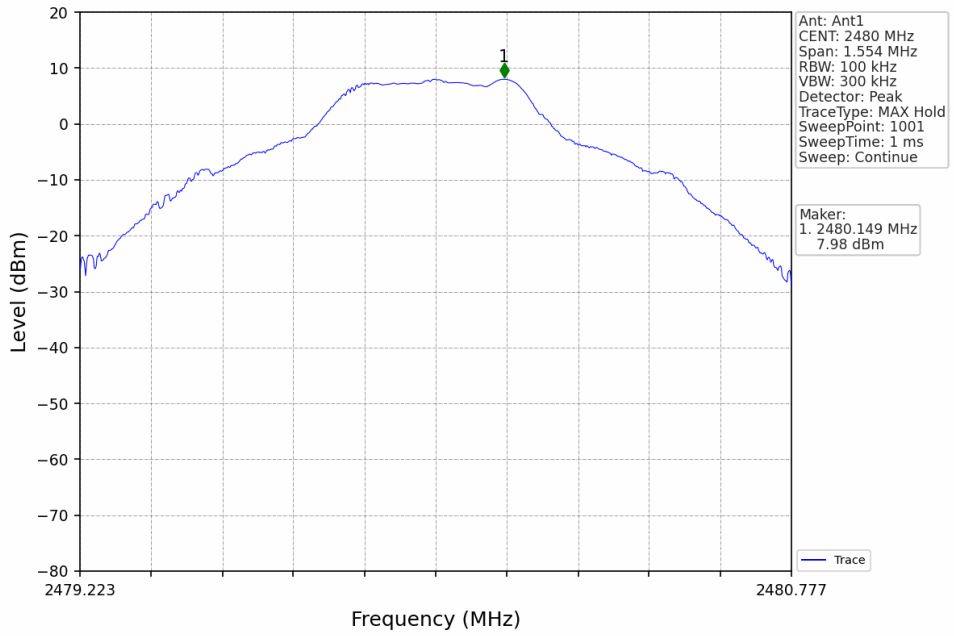
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



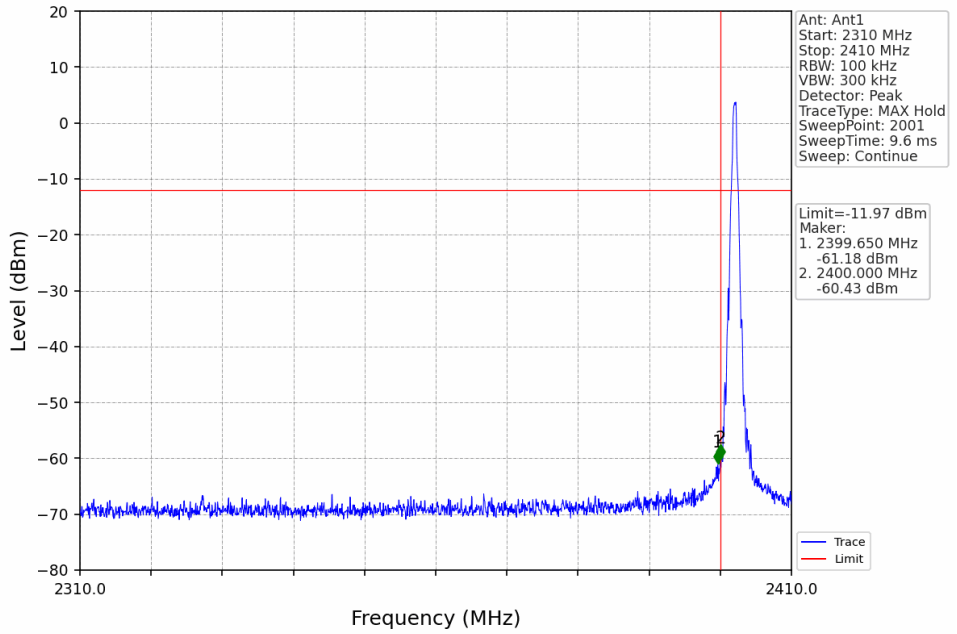
7.2 CSE

7.2.1 Test Result

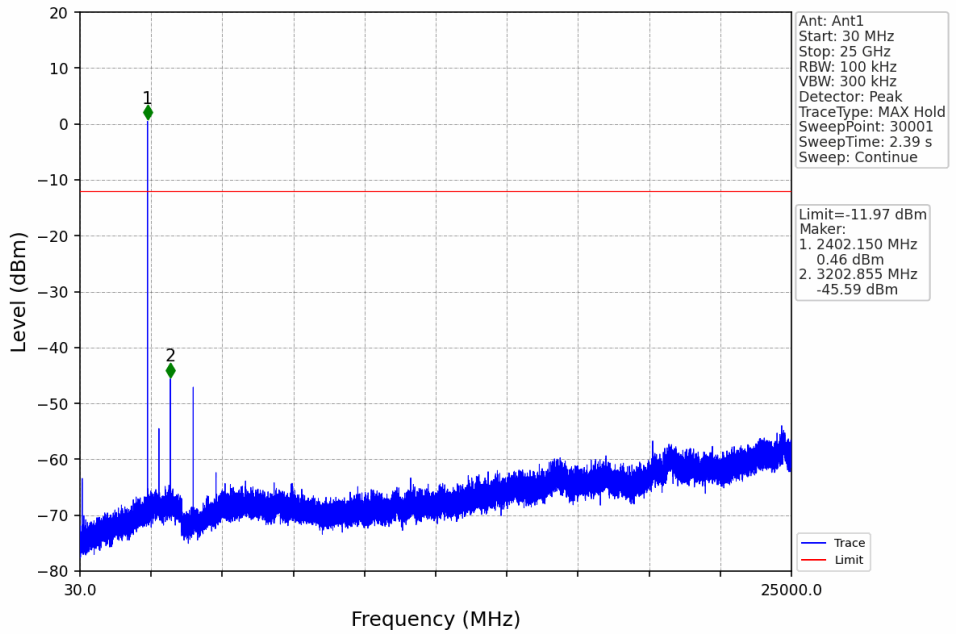
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	2	8.03	-11.97	Pass
		2441	DH5	2	8.03	-11.97	Pass
		2480	DH5	2	8.03	-11.97	Pass
		HOPP	DH5	2	8.03	-11.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	2	8.00	-12.00	Pass
		2441	2DH5	2	8.00	-12.00	Pass
		2480	2DH5	2	8.00	-12.00	Pass
		HOPP	2DH5	2	8.00	-12.00	Pass
8DPSK	SISO	2402	3DH5	2	7.98	-12.02	Pass
		2441	3DH5	2	7.98	-12.02	Pass
		2480	3DH5	2	7.98	-12.02	Pass
		HOPP	3DH5	2	7.98	-12.02	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.							

7.2.2 Test Graph

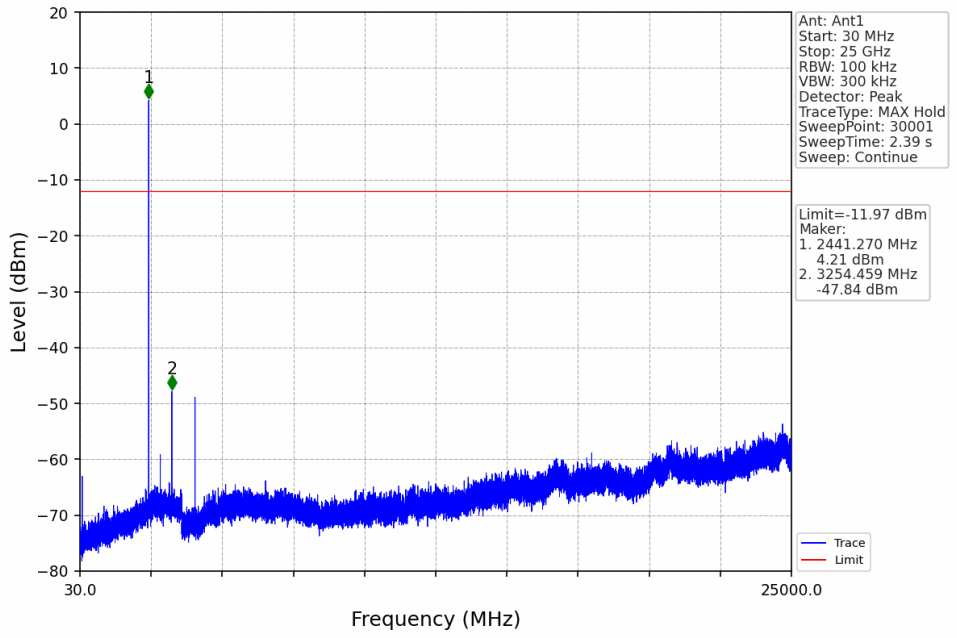
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



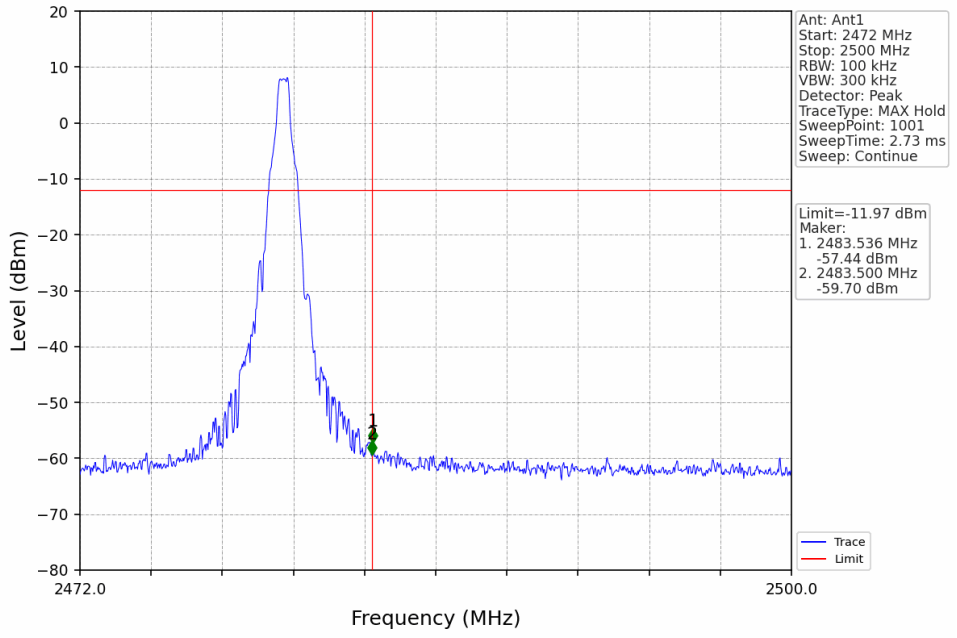
GFSK_DH5_LCH_2402MHz_Ant2_NTNV



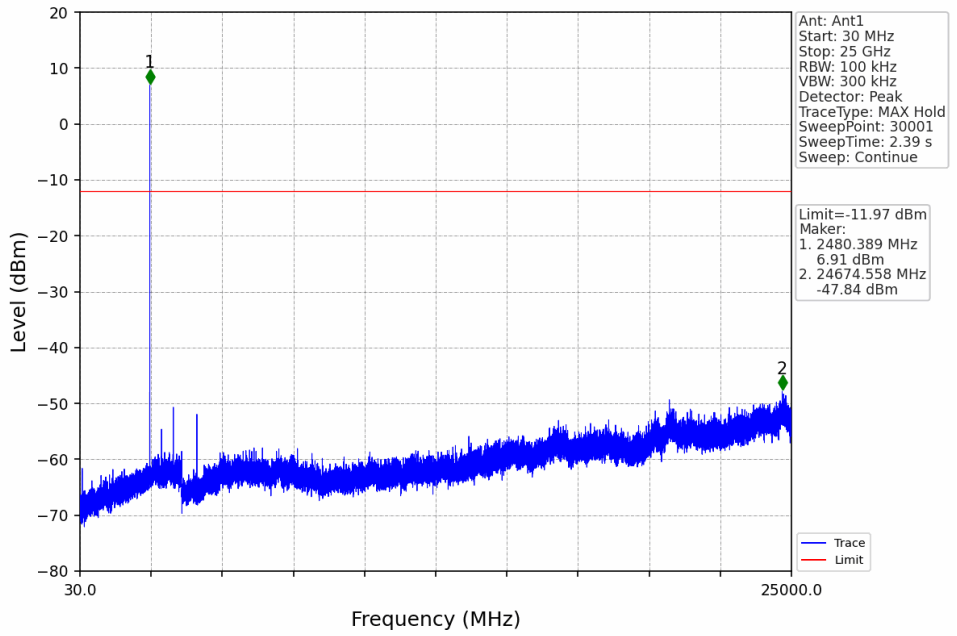
GFSK_DH5_MCH_2441MHz_Ant2_NTNV



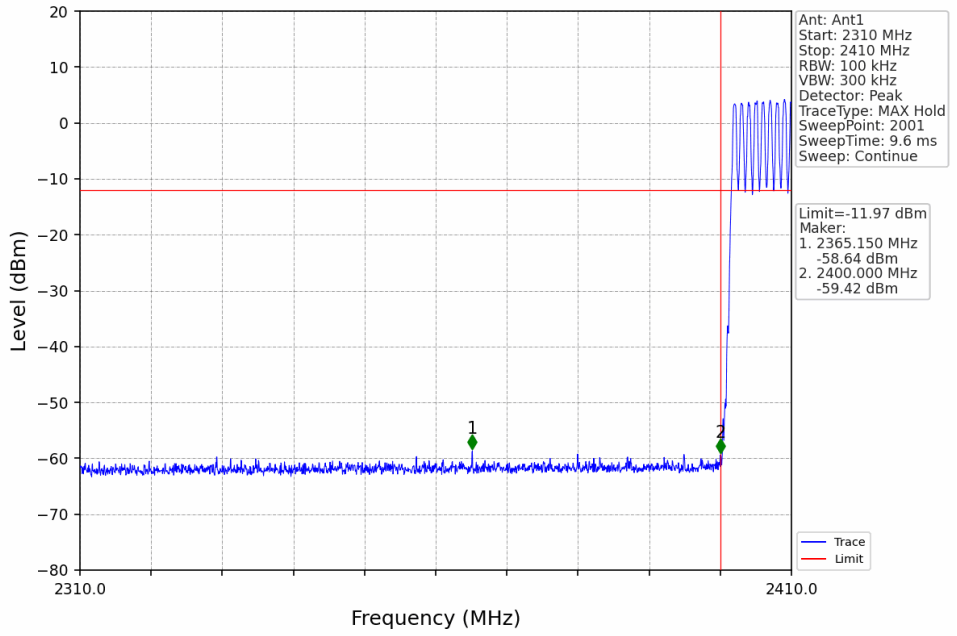
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



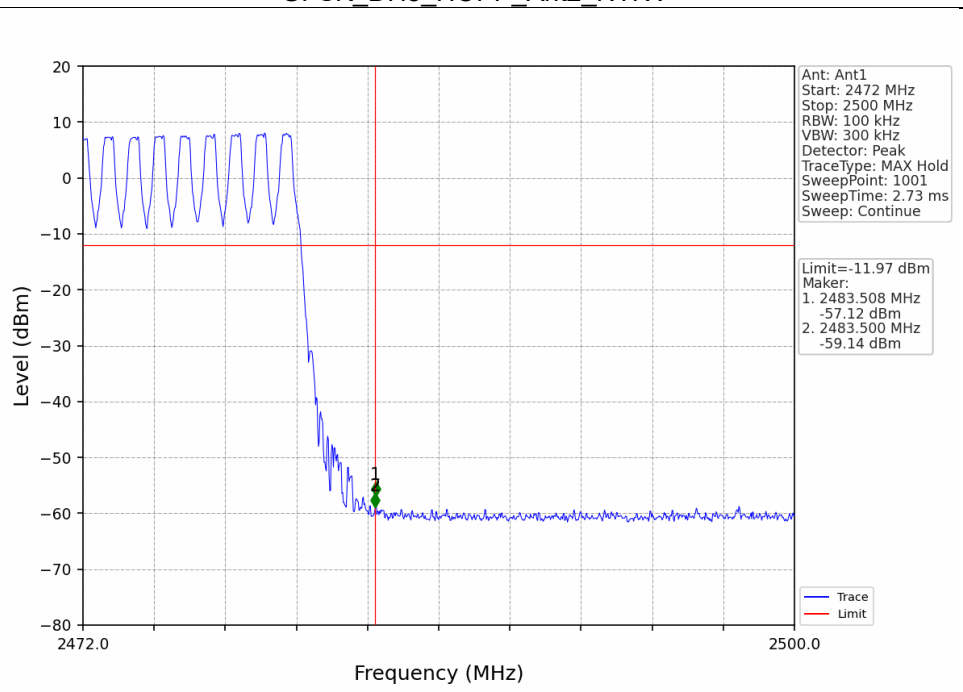
GFSK_DH5_HCH_2480MHz_Ant2_NTNV



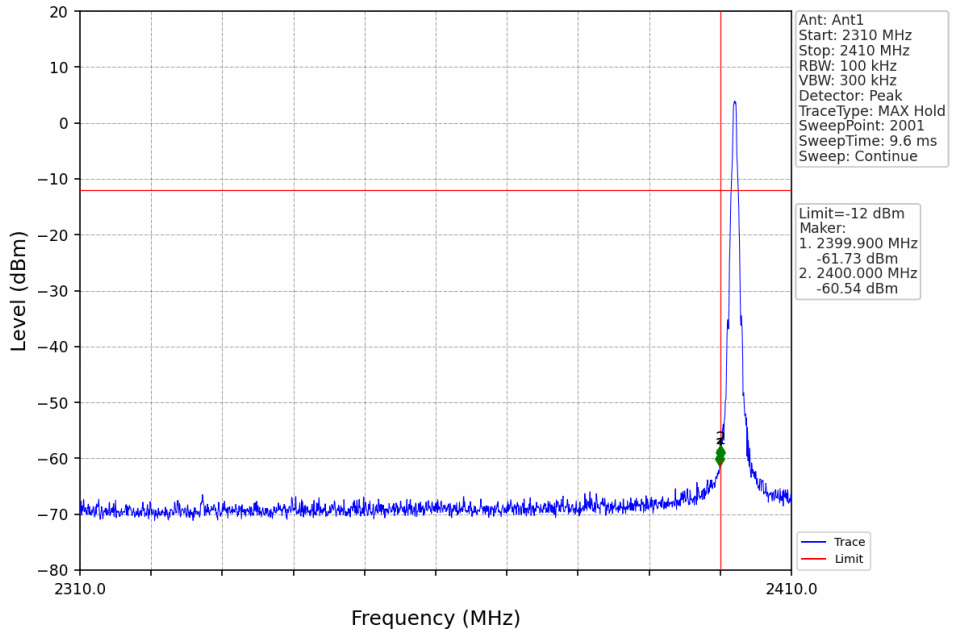
GFSK_DH5_HOPP_Ant2_NTNV



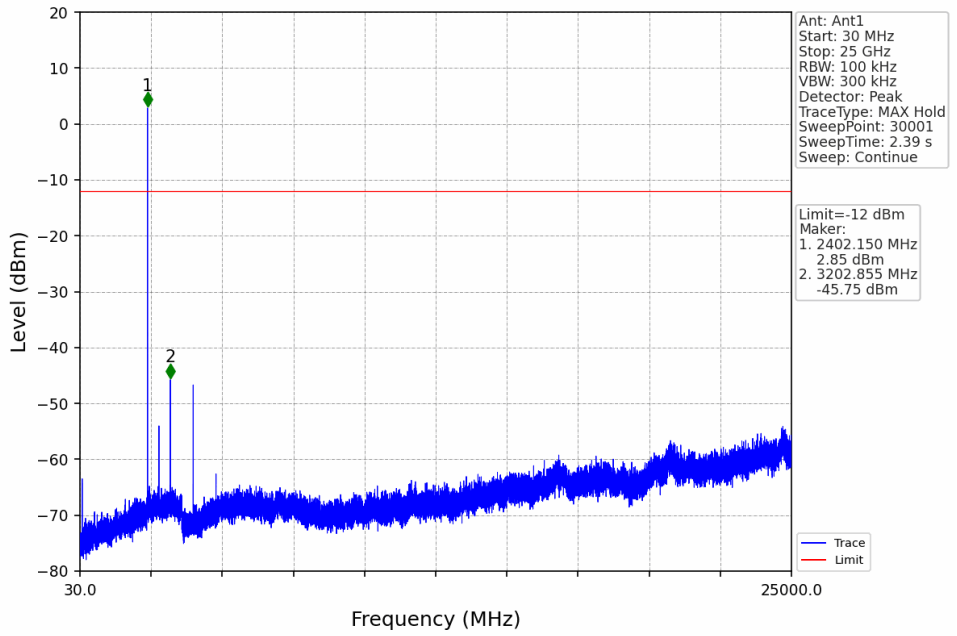
GFSK_DH5_HOPP_Ant2_NTNV



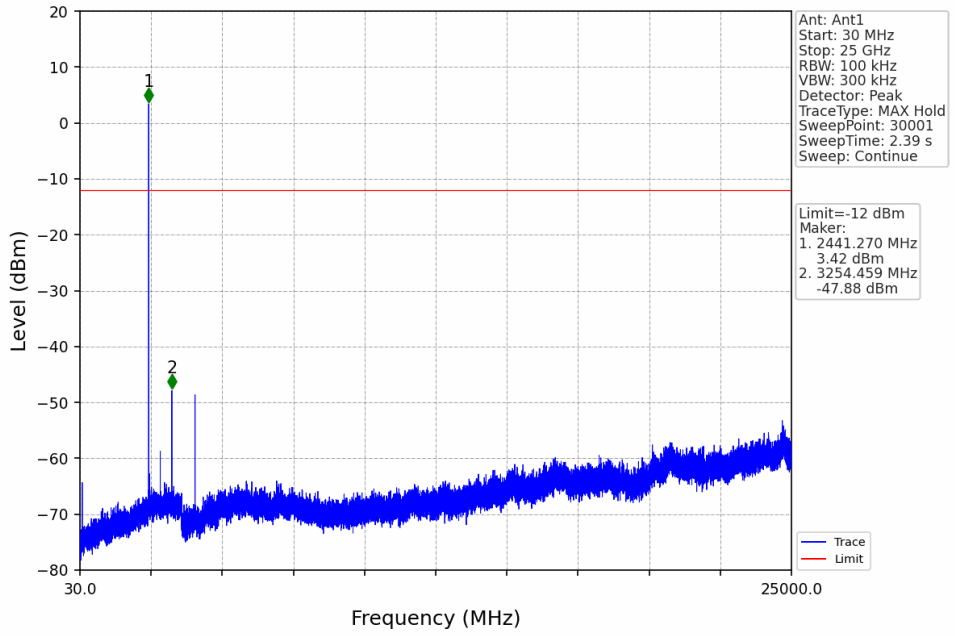
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



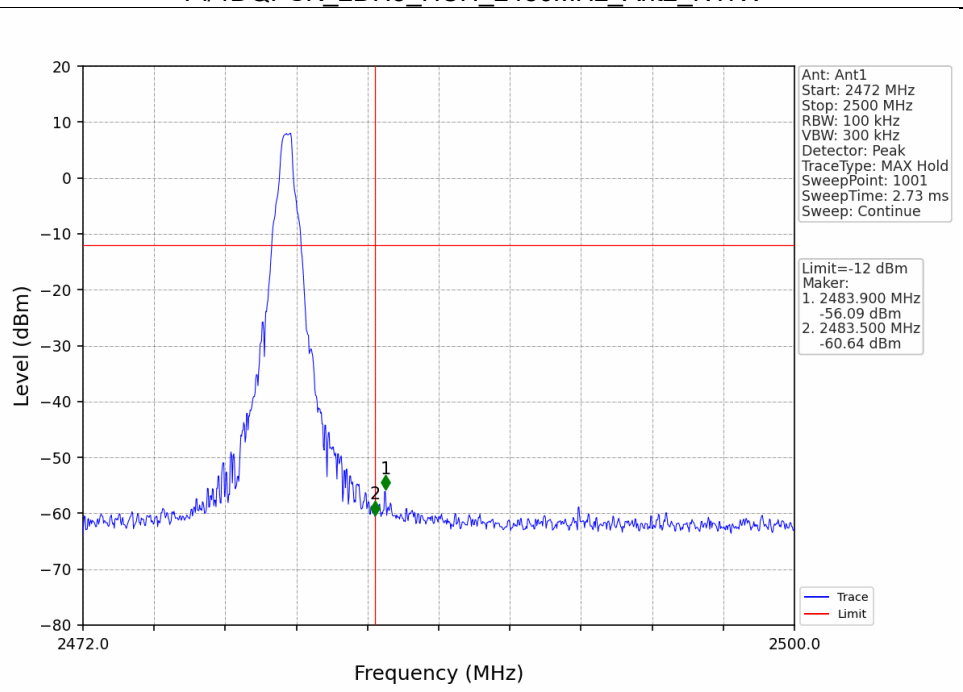
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant2_NTNV



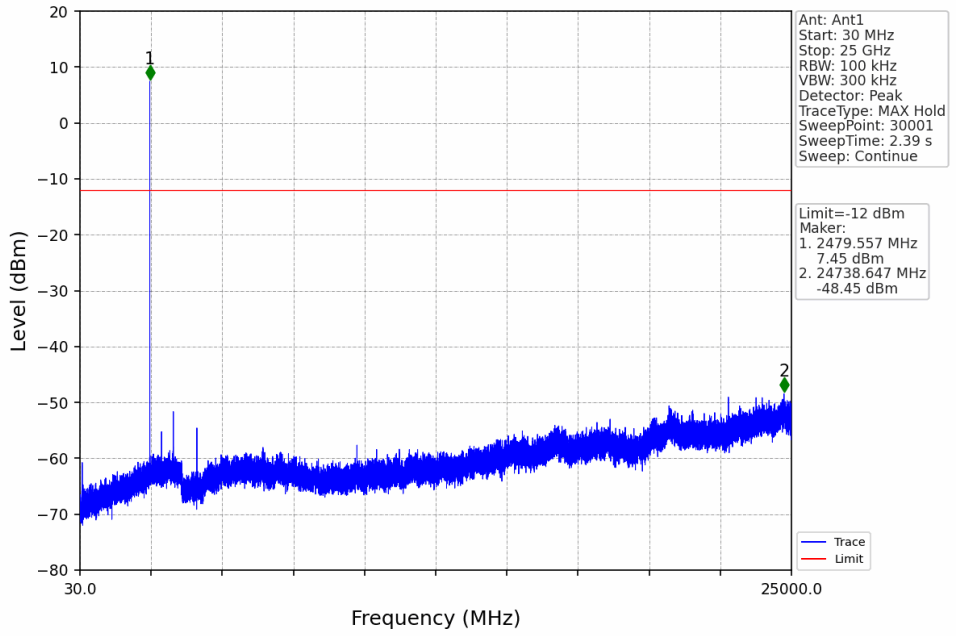
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant2_NTNV



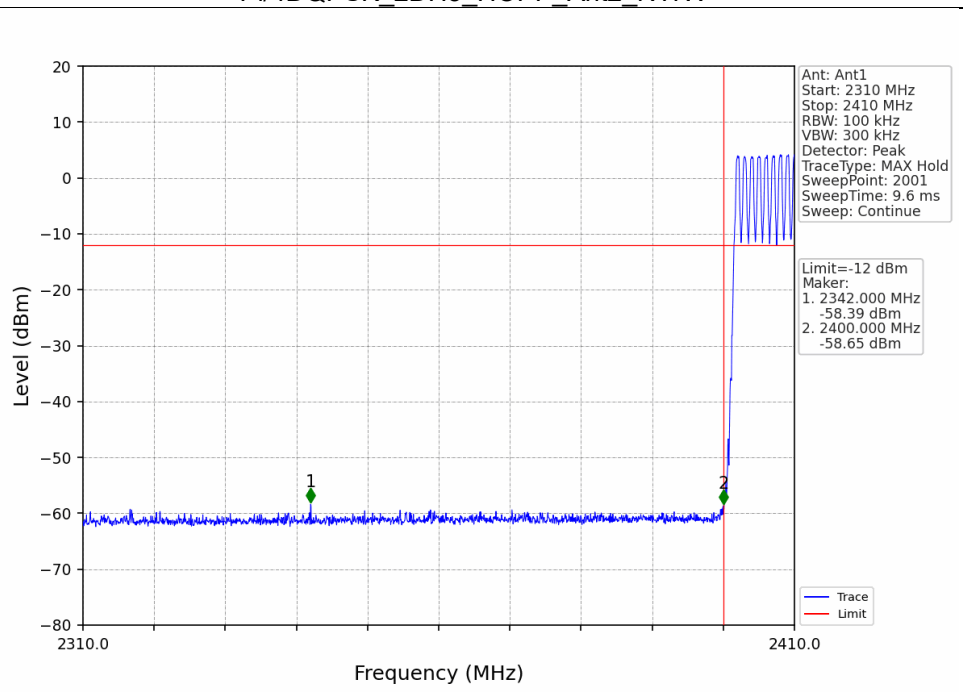
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



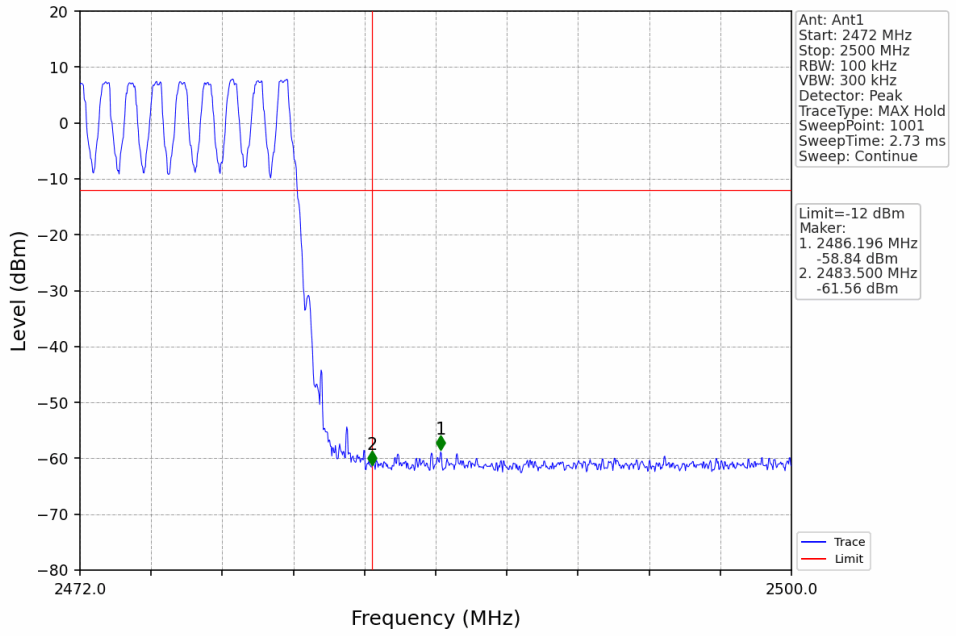
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant2_NTNV



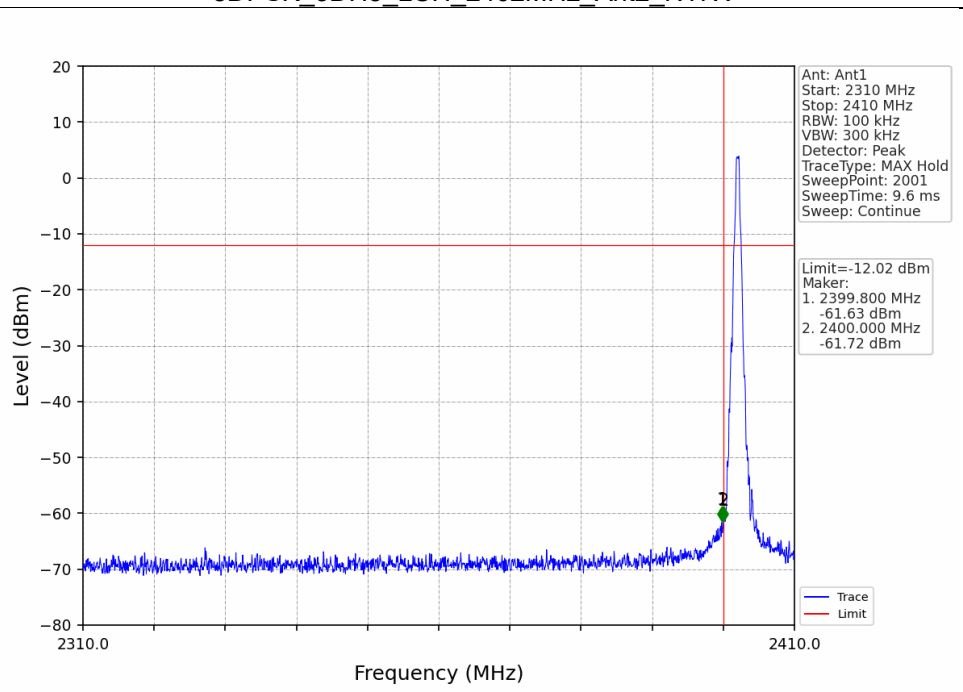
Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



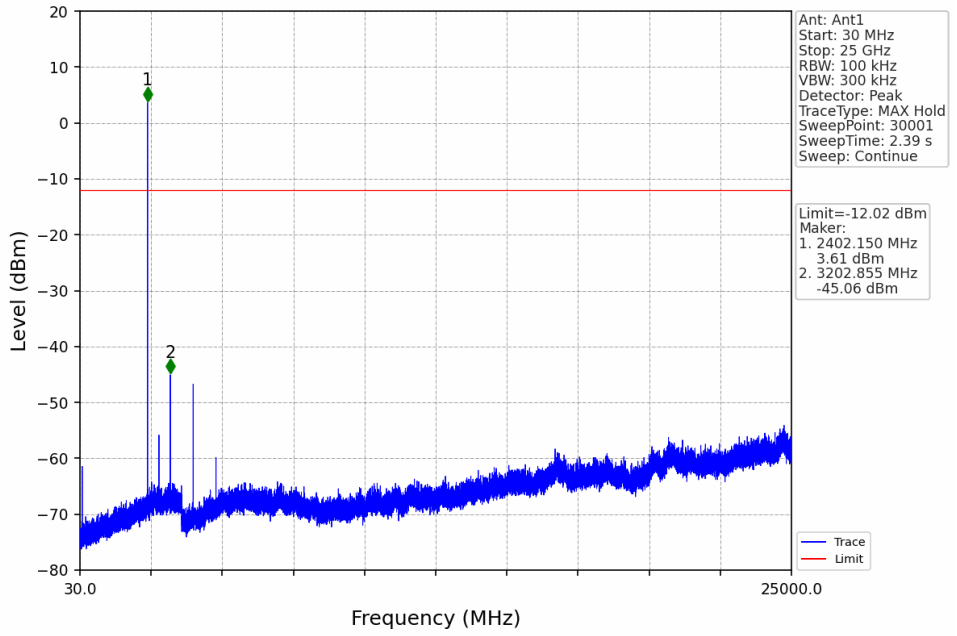
Pi/4DQPSK_2DH5_HOPP_Ant2_NTNV



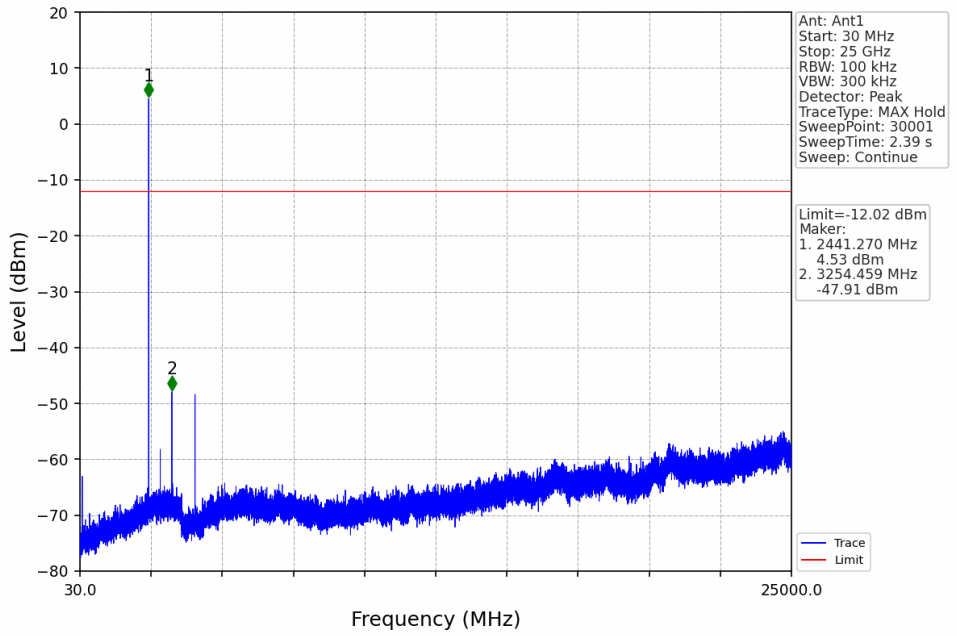
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



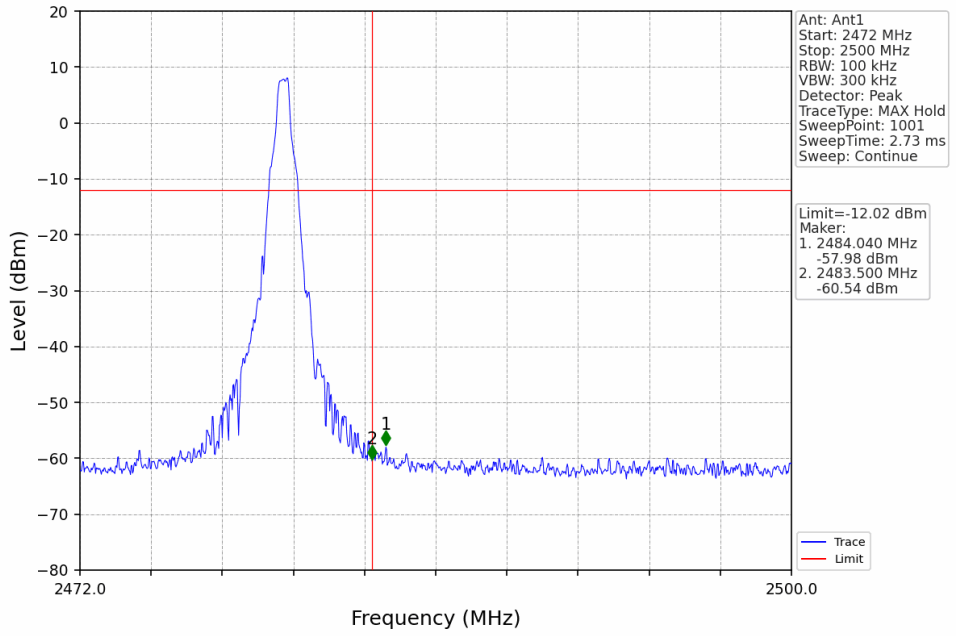
8DPSK_3DH5_LCH_2402MHz_Ant2_NTNV



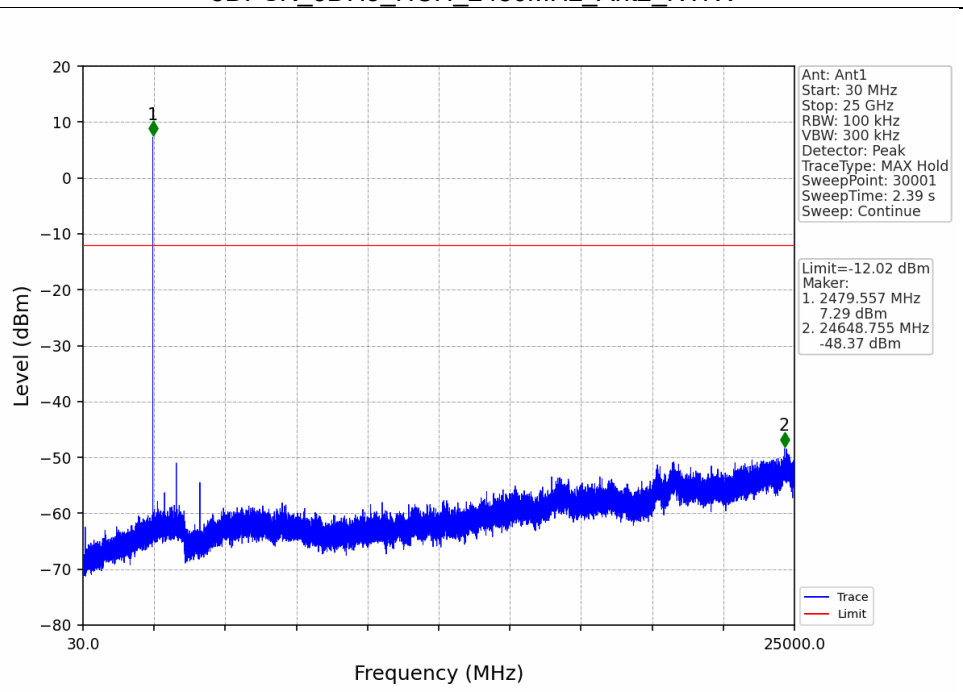
8DPSK_3DH5_MCH_2441MHz_Ant2_NTNV



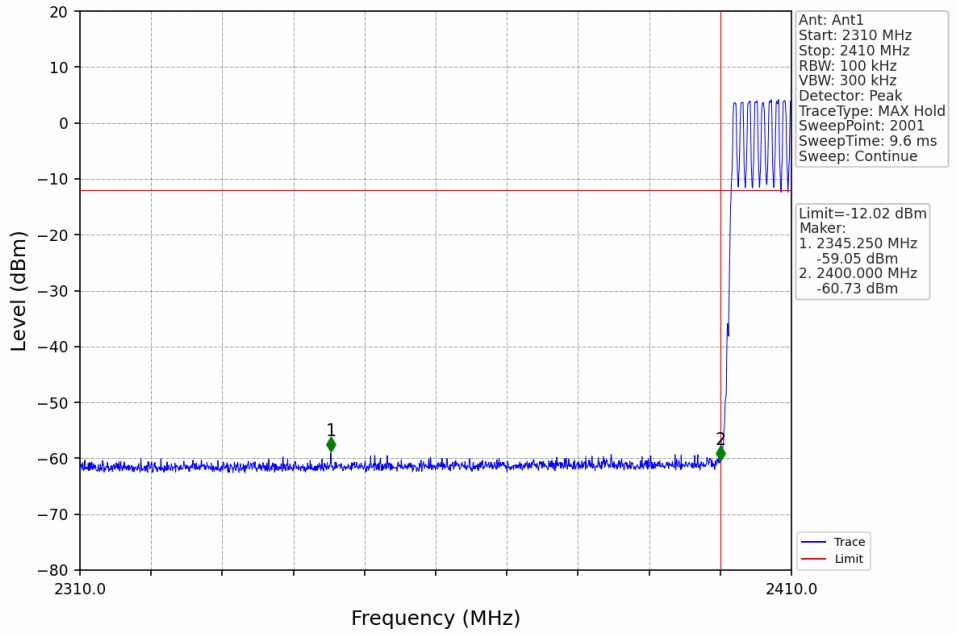
8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



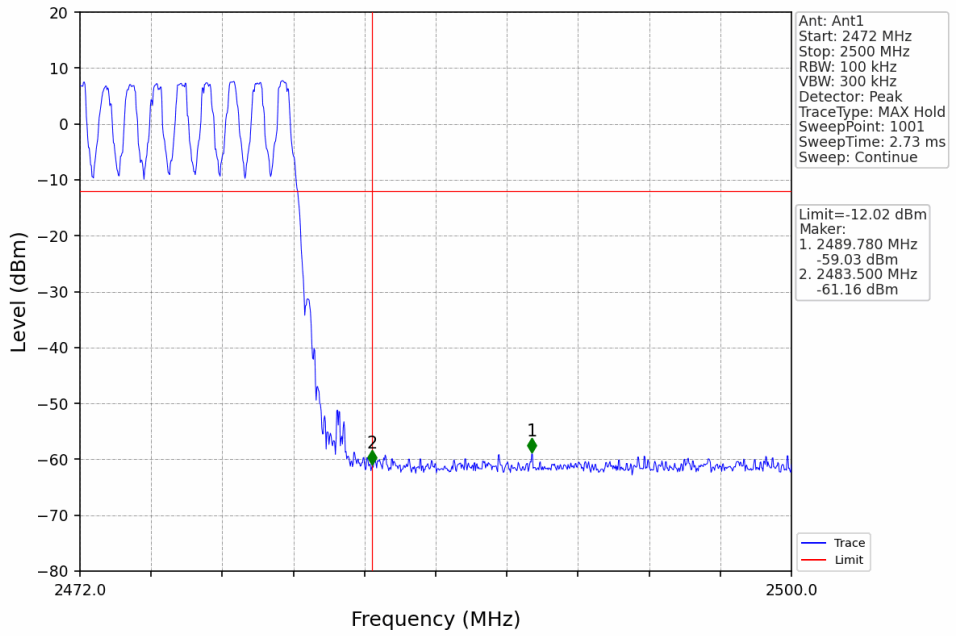
8DPSK_3DH5_HCH_2480MHz_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



8DPSK_3DH5_HOPP_Ant2_NTNV



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