ANNEX D TEST DATA

For

Project No.:	8225EU011002W
Client:	Shenzhen Oceantech Electronics Co.,ltd
Product Description:	IJOY ROGUE - PORTABLE BLUETOOTH SPEAKER
Model No.:	OS-925
FCC ID:	2A6QJ-IJ10257-AMZN
Technology:	Bluetooth BDR&EDR
Test Engineer:	Mikey zhu
Test Date:	2024-01-16

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

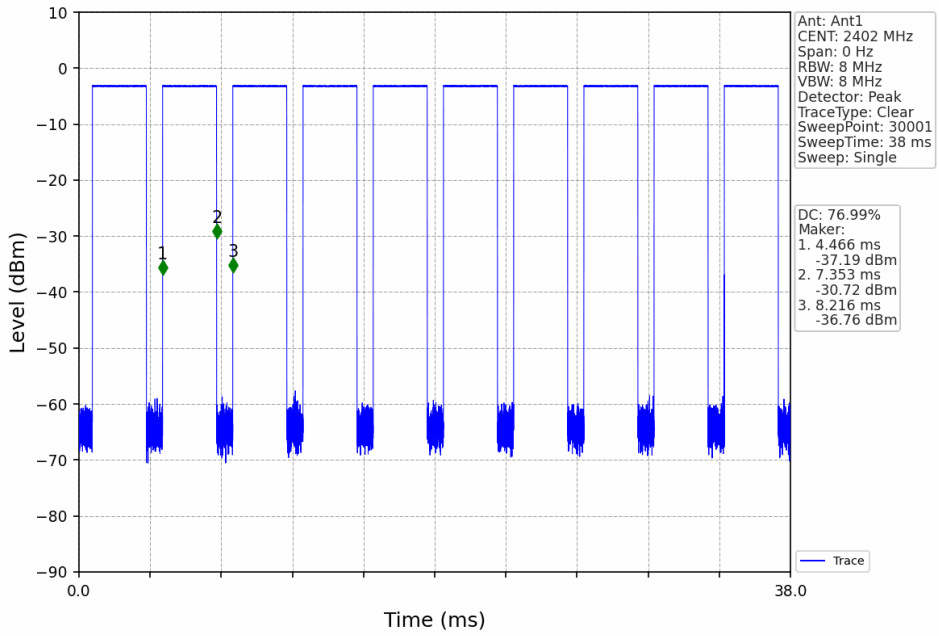
1.1 Ant1

1.1.1 Test Result

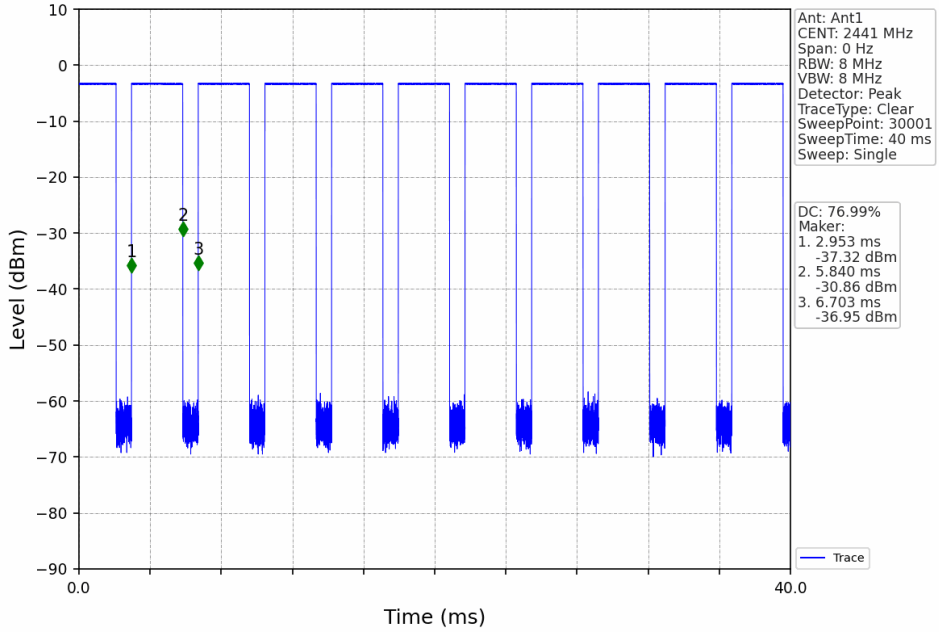
Ant1								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.887	3.750	76.99	1.14	0.01
		2441	DH5	2.887	3.750	76.99	1.14	0.01
		2480	DH5	2.881	3.751	76.81	1.15	0.03
π/4DQPSK	SISO	2402	2DH5	2.892	3.749	77.14	1.13	0.04
		2441	2DH5	2.885	3.749	76.95	1.14	0.03
		2480	2DH5	2.892	3.749	77.14	1.13	0.04
8DPSK	SISO	2402	3DH5	2.894	3.749	77.19	1.12	0.01
		2441	3DH5	2.888	3.751	76.99	1.14	0.04
		2480	3DH5	2.894	3.749	77.19	1.12	0.01

1.1.2 Test Graph

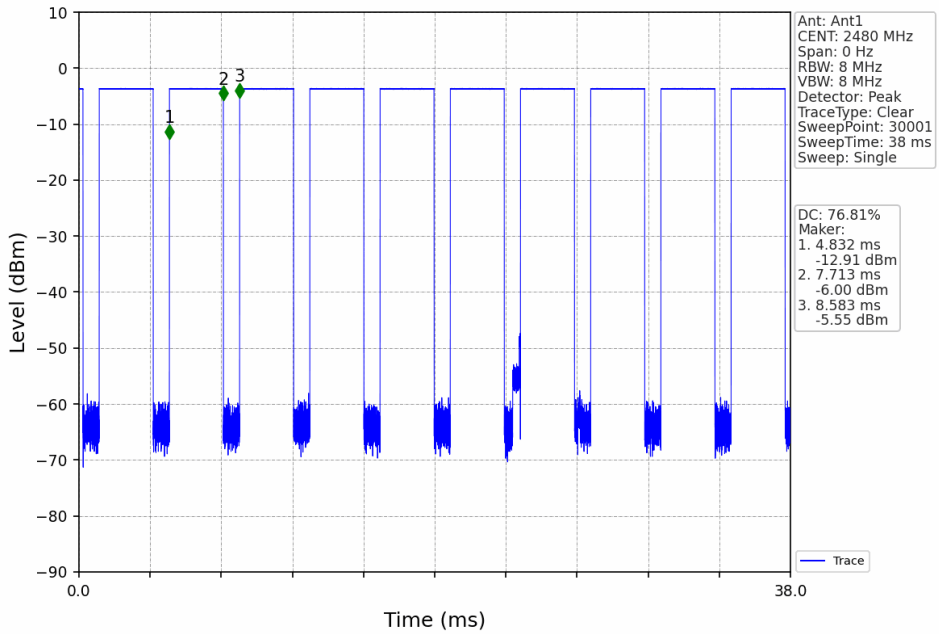
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



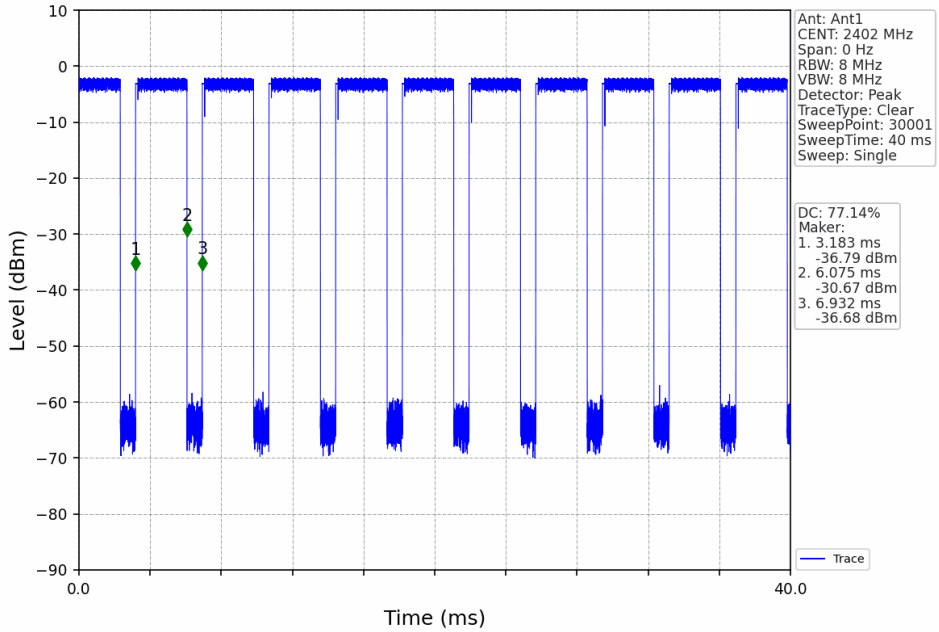
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



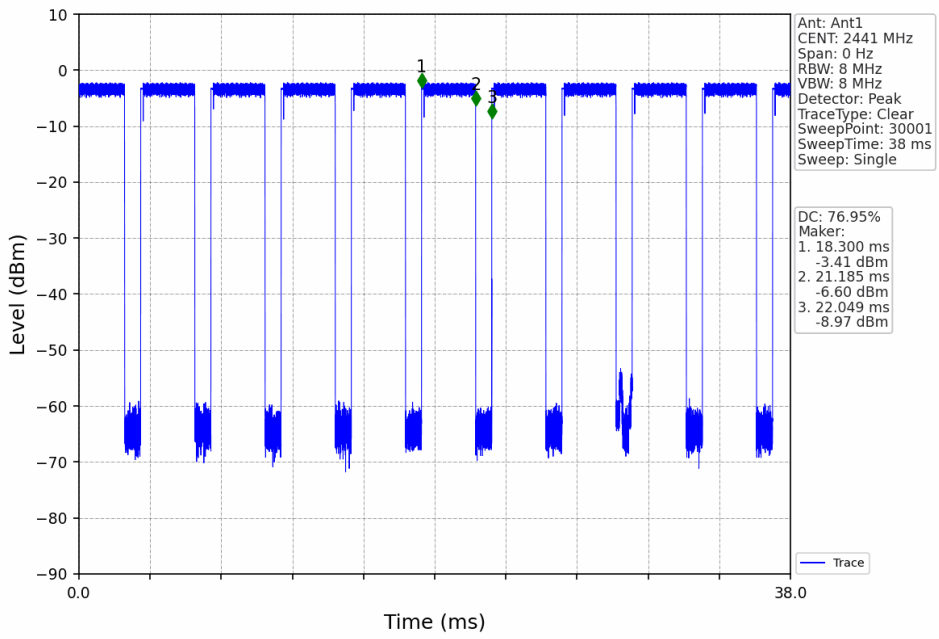
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



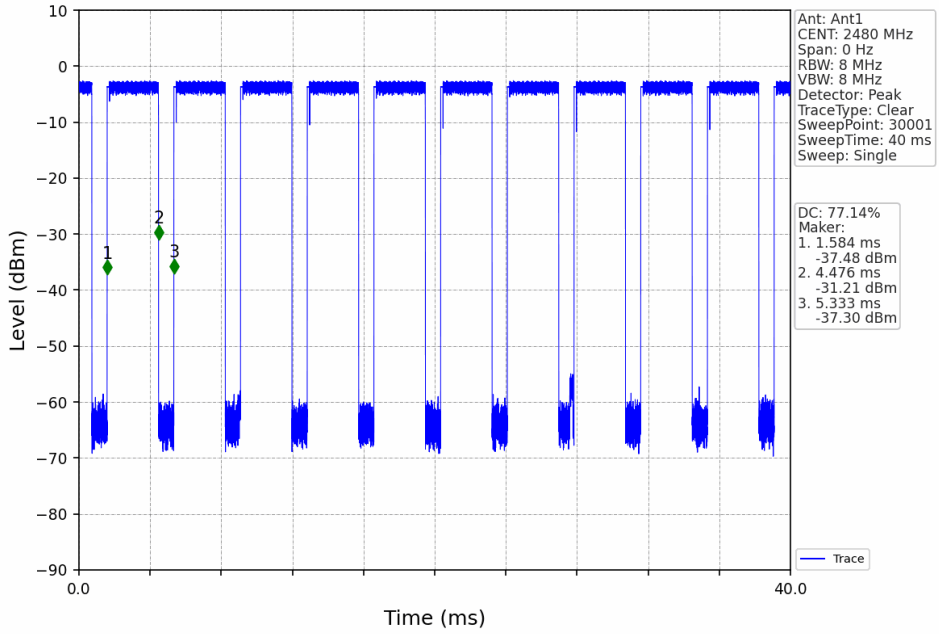
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



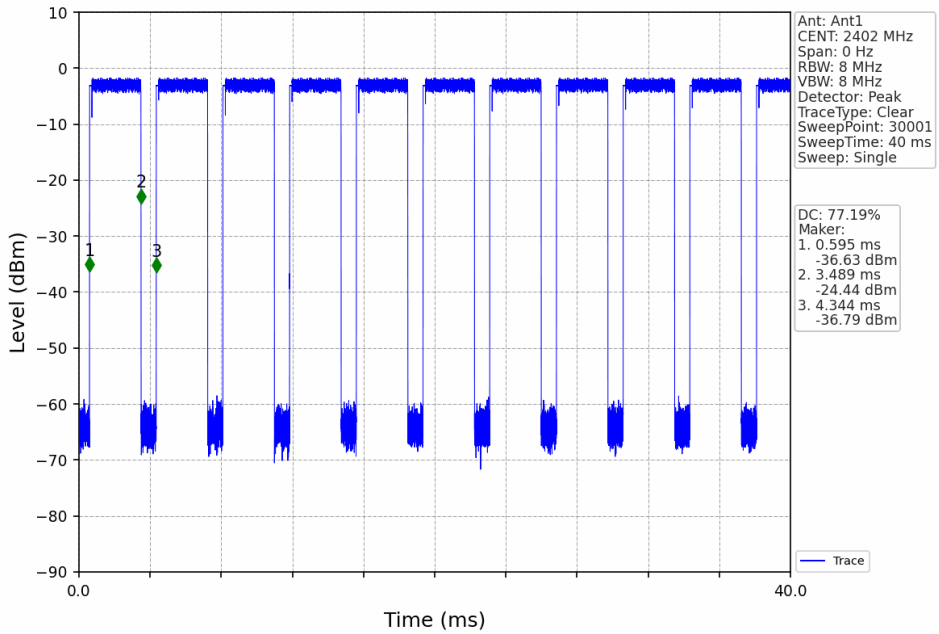
π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



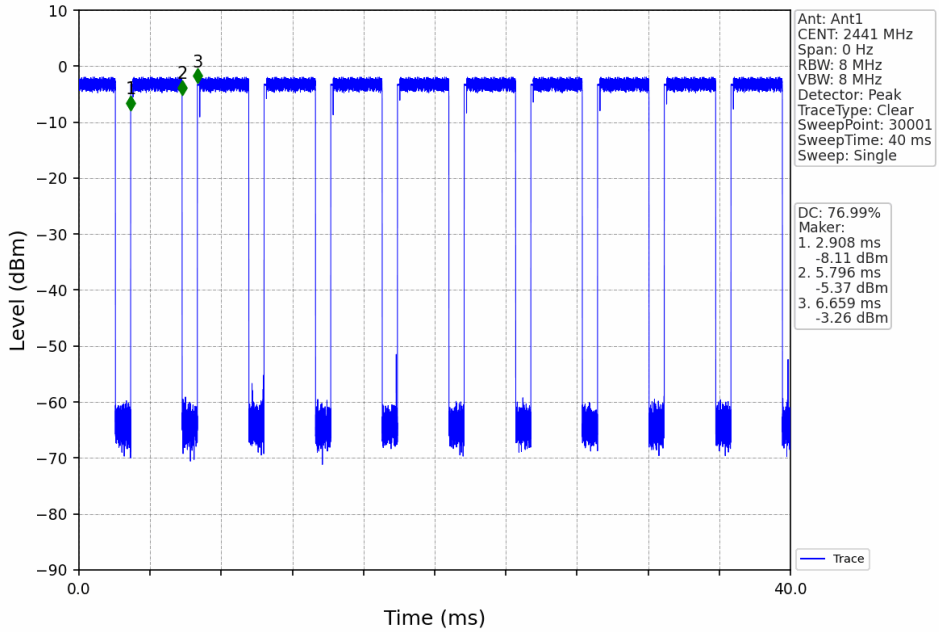
π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



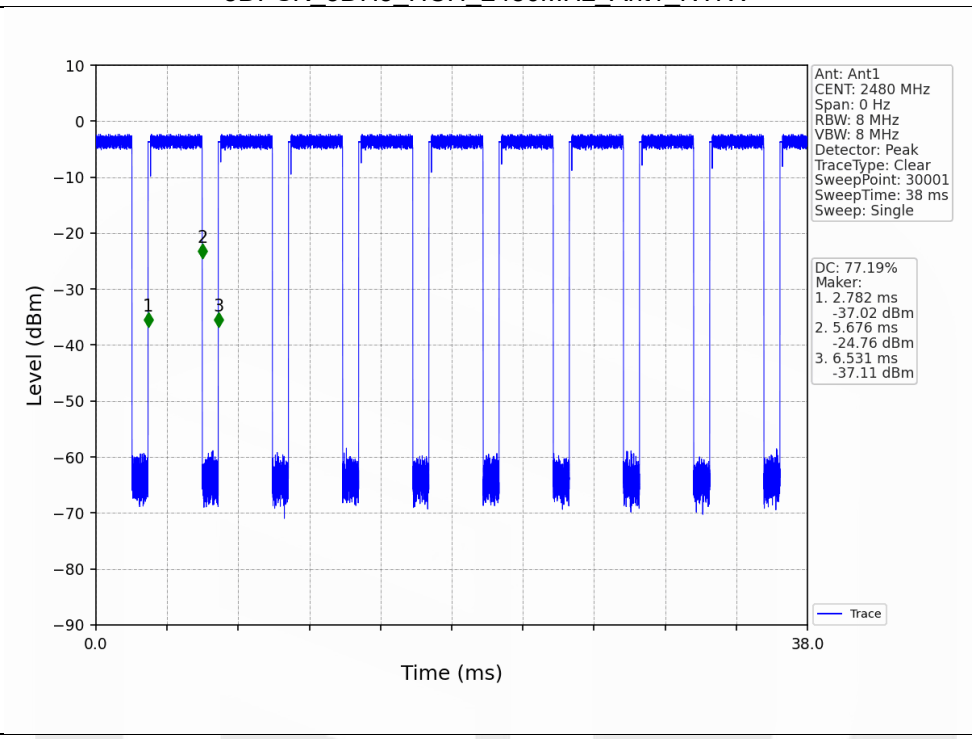
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



2. Bandwidth

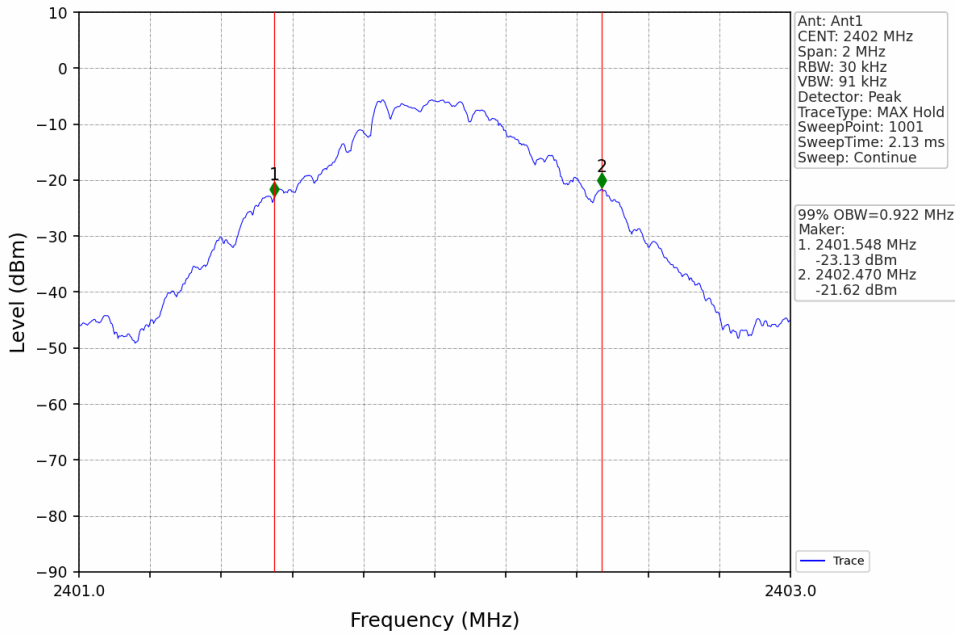
2.1 OBW

2.1.1 Test Result

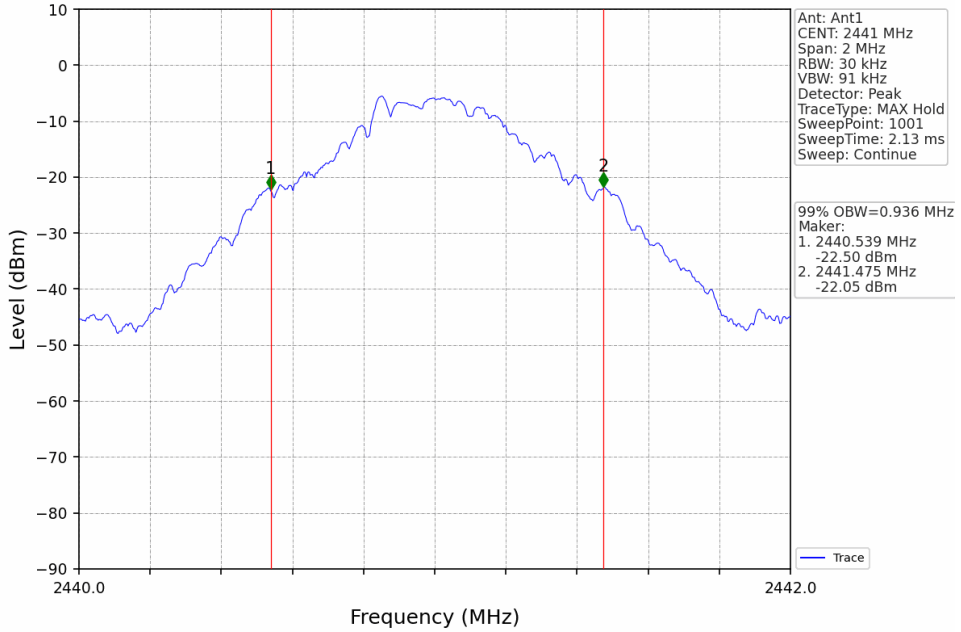
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	1	0.922	Pass
		2441	DH5	1	0.936	Pass
		2480	DH5	1	0.944	Pass
π/4DQPSK	SISO	2402	2DH5	1	1.200	Pass
		2441	2DH5	1	1.212	Pass
		2480	2DH5	1	1.213	Pass
8DPSK	SISO	2402	3DH5	1	1.198	Pass
		2441	3DH5	1	1.199	Pass
		2480	3DH5	1	1.197	Pass

2.1.2 Test Graph

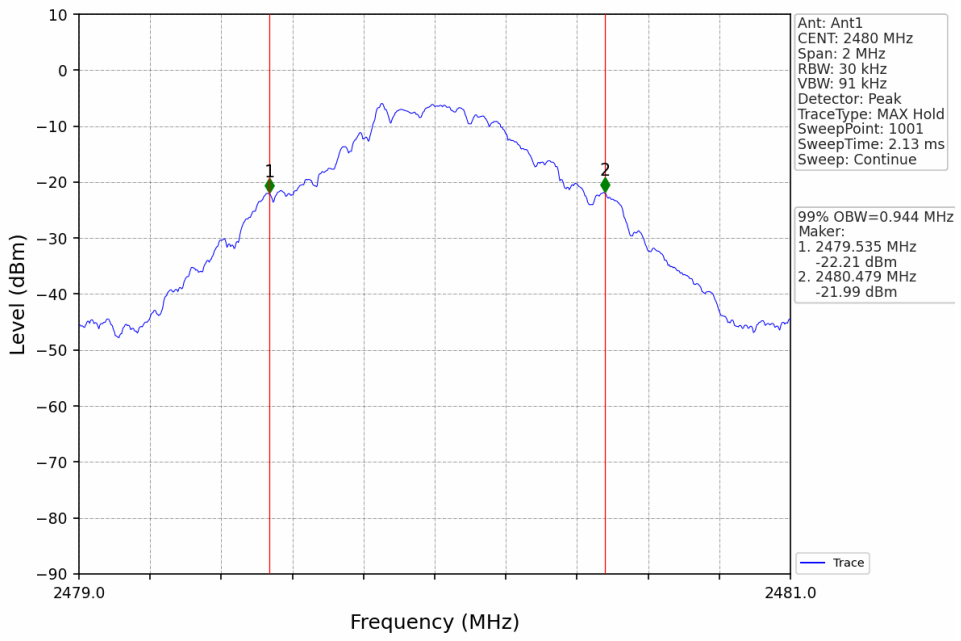
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



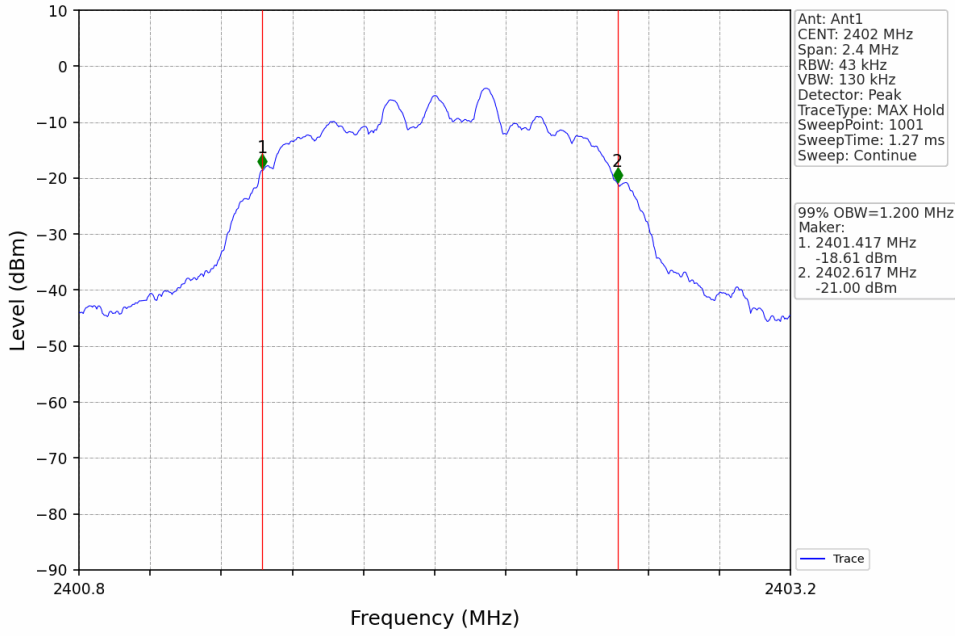
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



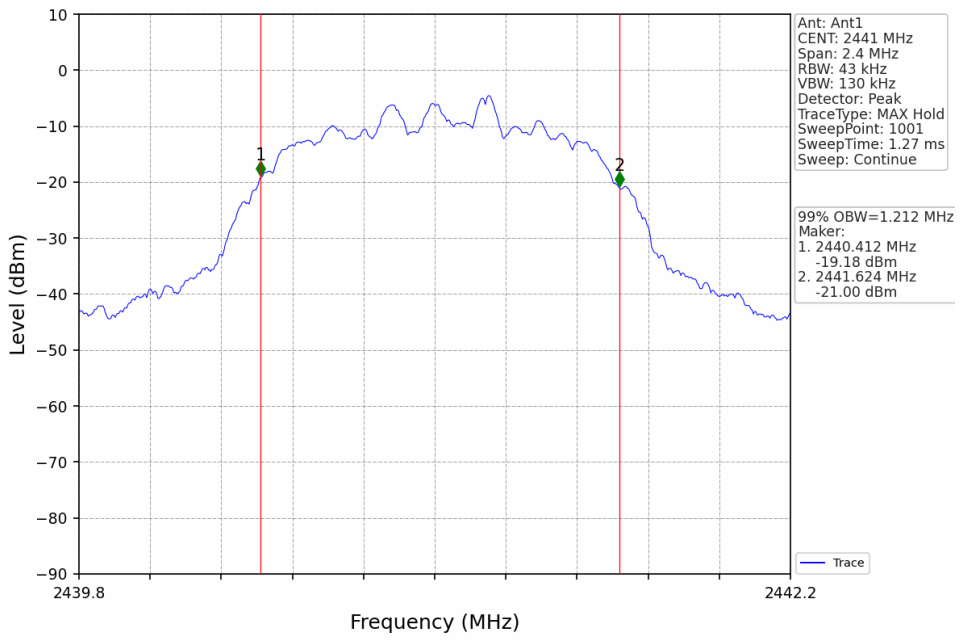
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



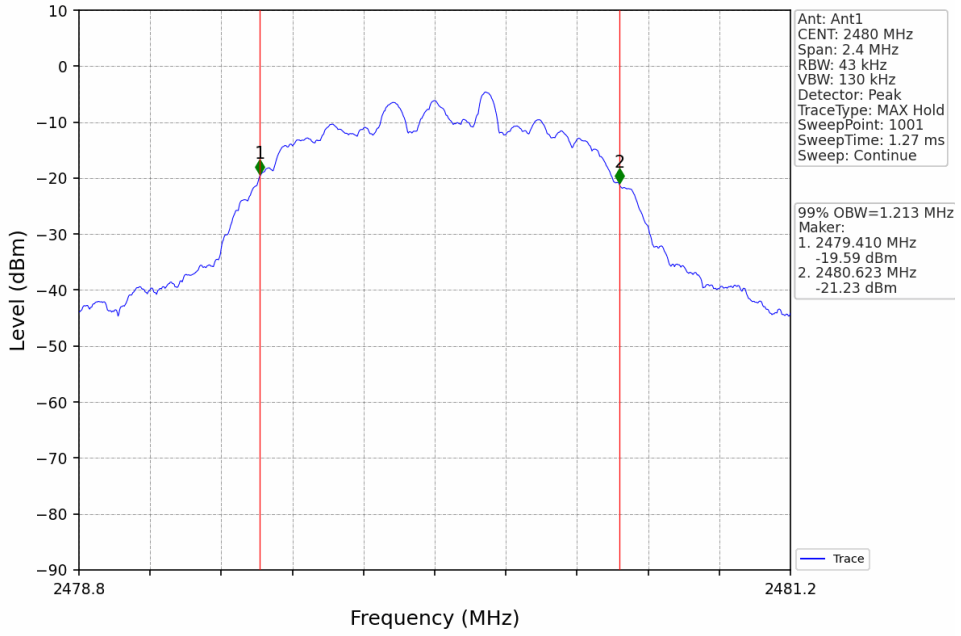
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



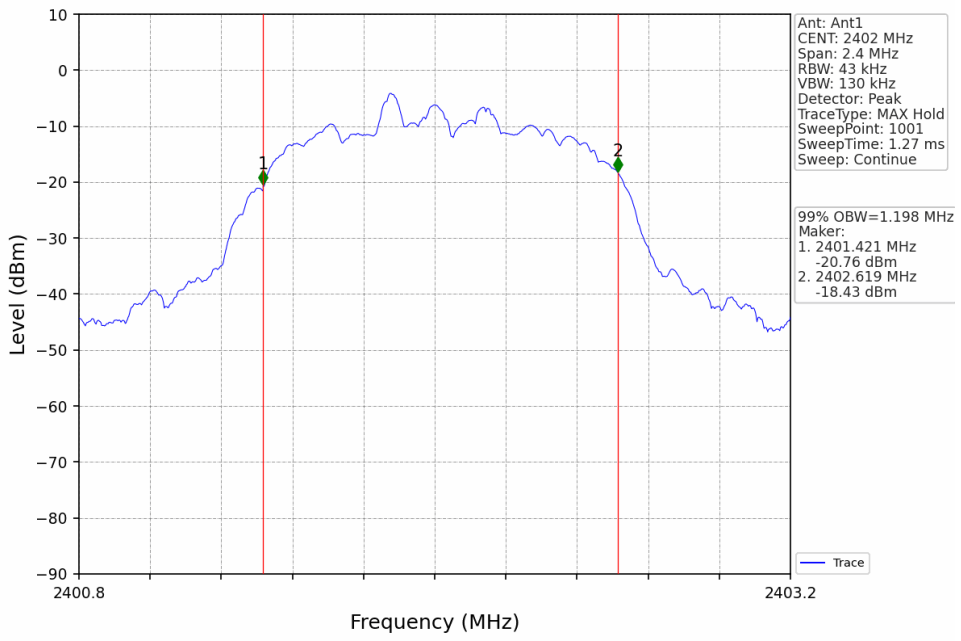
π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



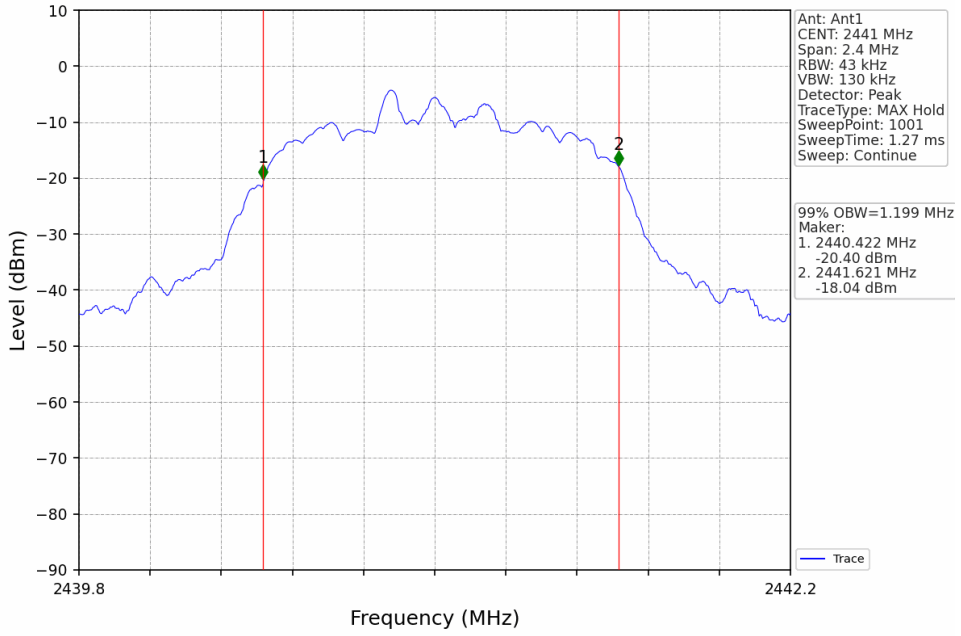
π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



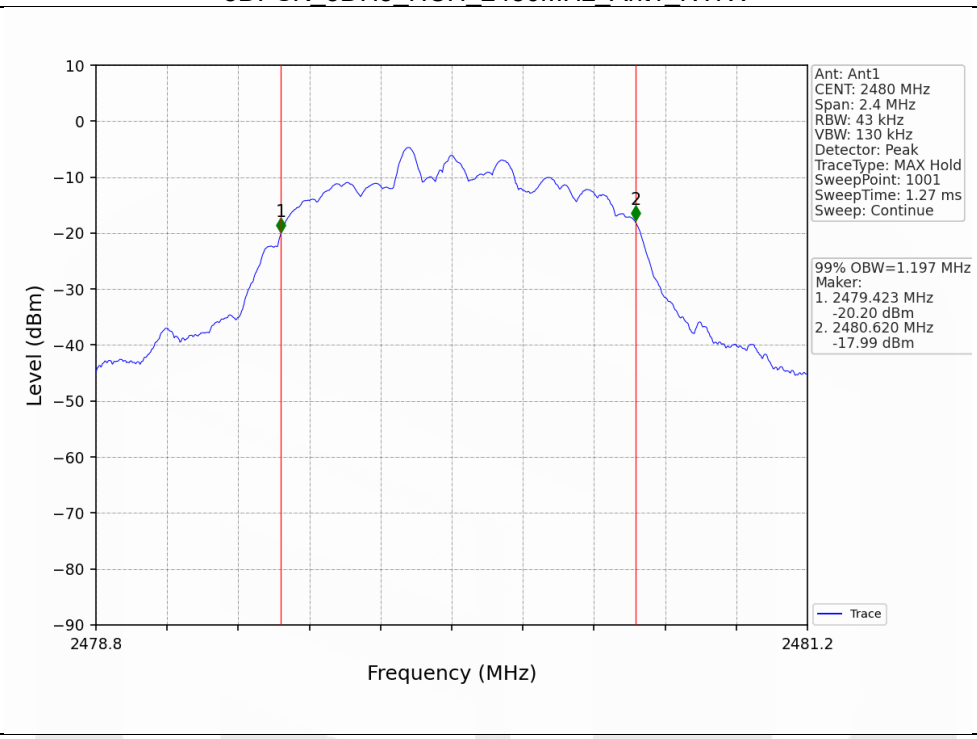
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



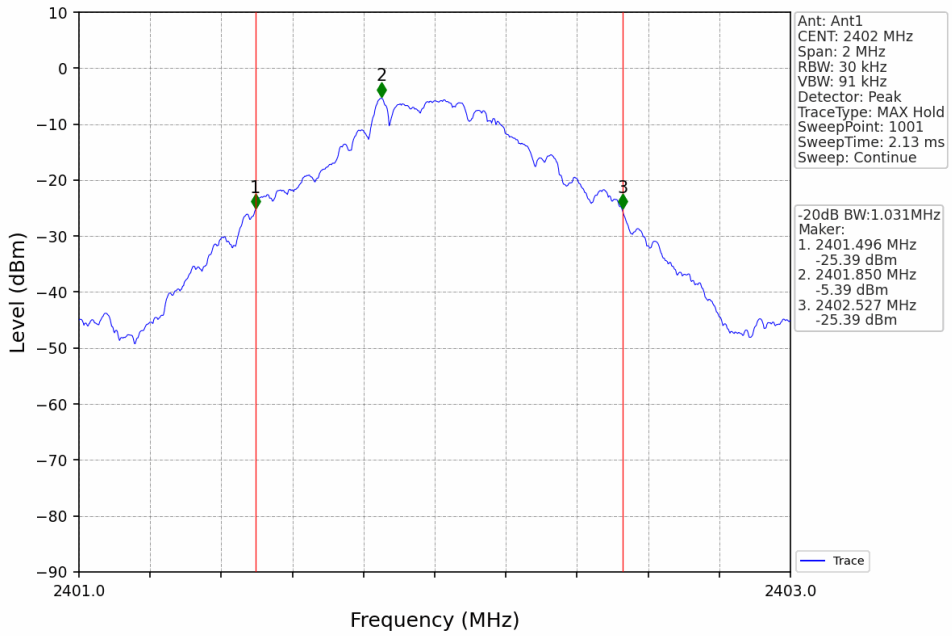
2.2 20dB BW

2.2.1 Test Result

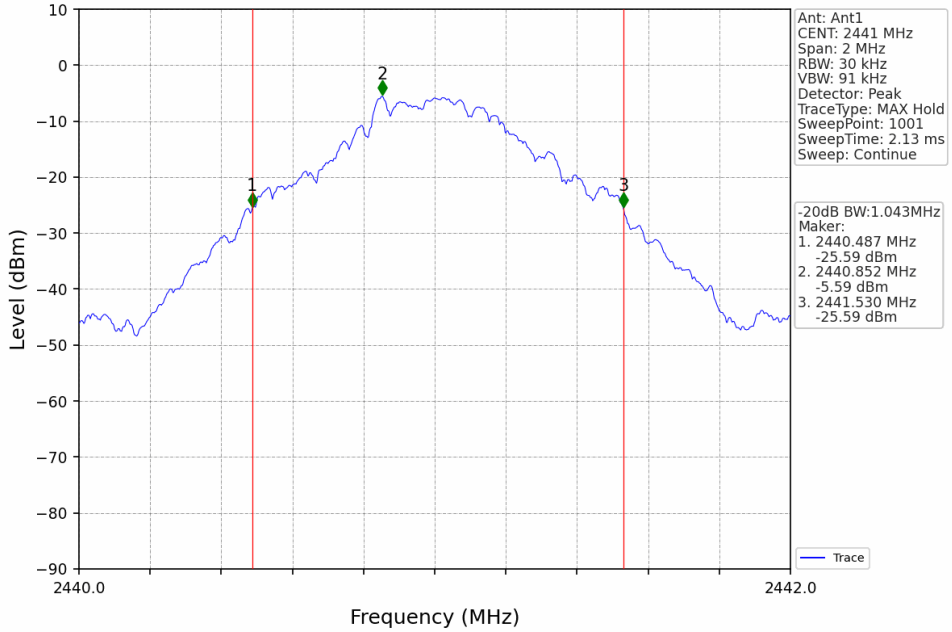
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	1	1.031	Pass
		2441	DH5	1	1.043	Pass
		2480	DH5	1	1.051	Pass
π/4DQPSK	SISO	2402	2DH5	1	1.334	Pass
		2441	2DH5	1	1.339	Pass
		2480	2DH5	1	1.342	Pass
8DPSK	SISO	2402	3DH5	1	1.311	Pass
		2441	3DH5	1	1.308	Pass
		2480	3DH5	1	1.307	Pass

2.2.2 Test Graph

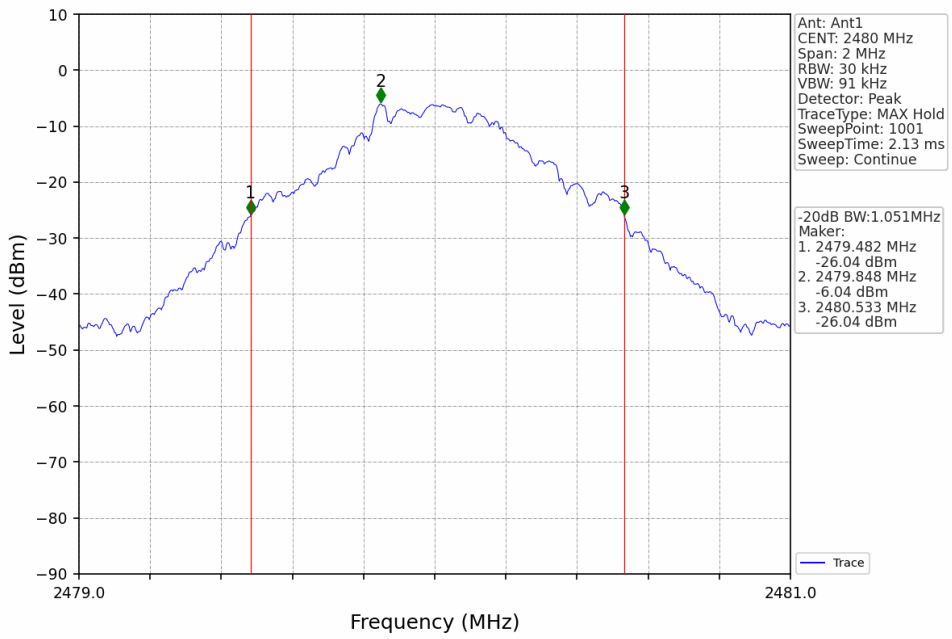
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



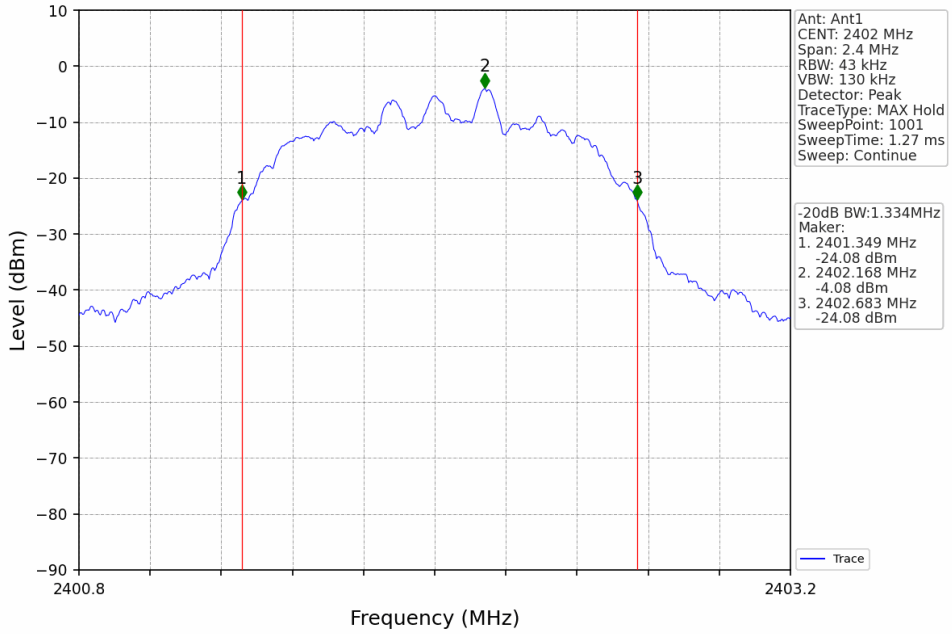
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



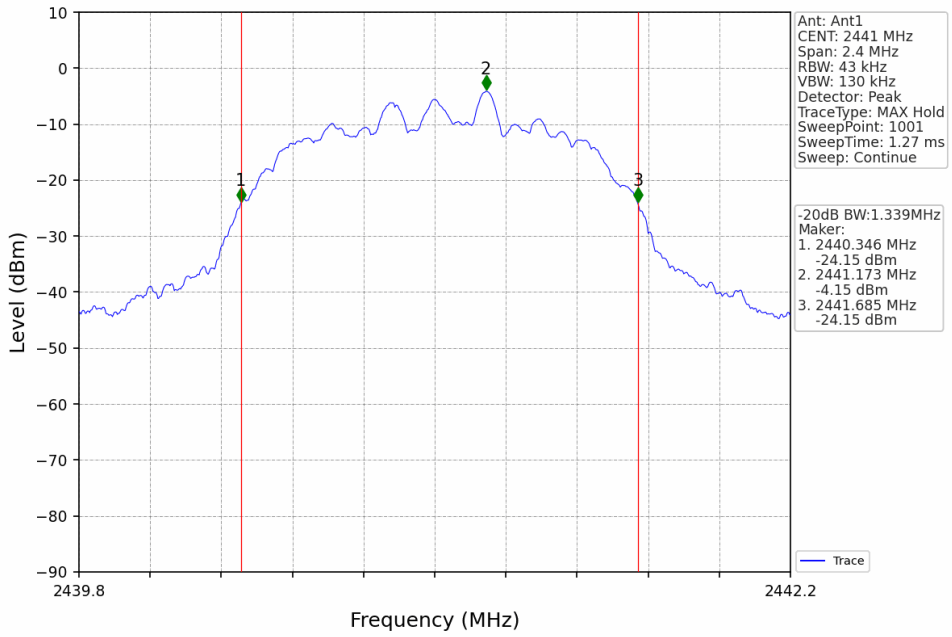
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



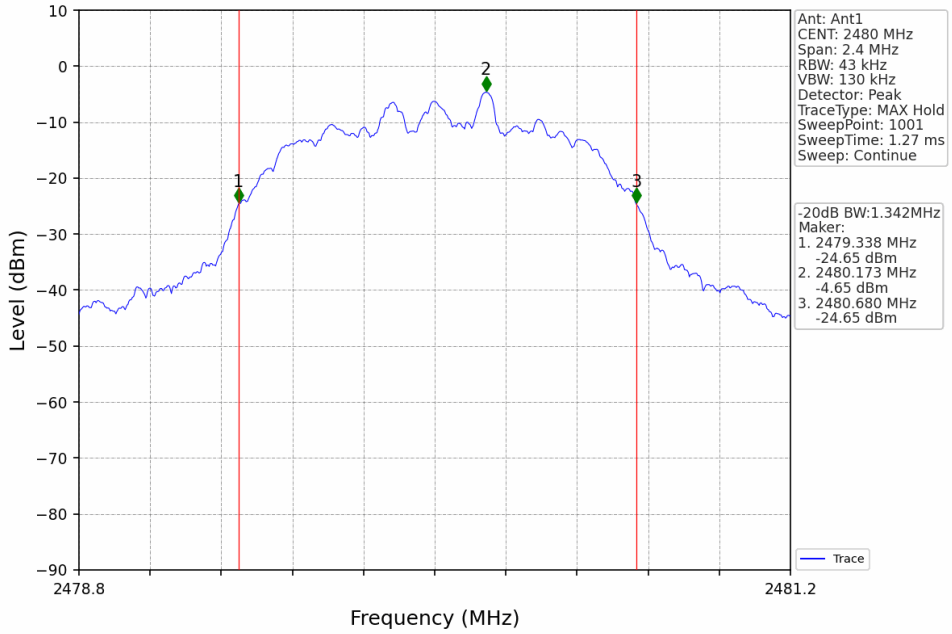
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



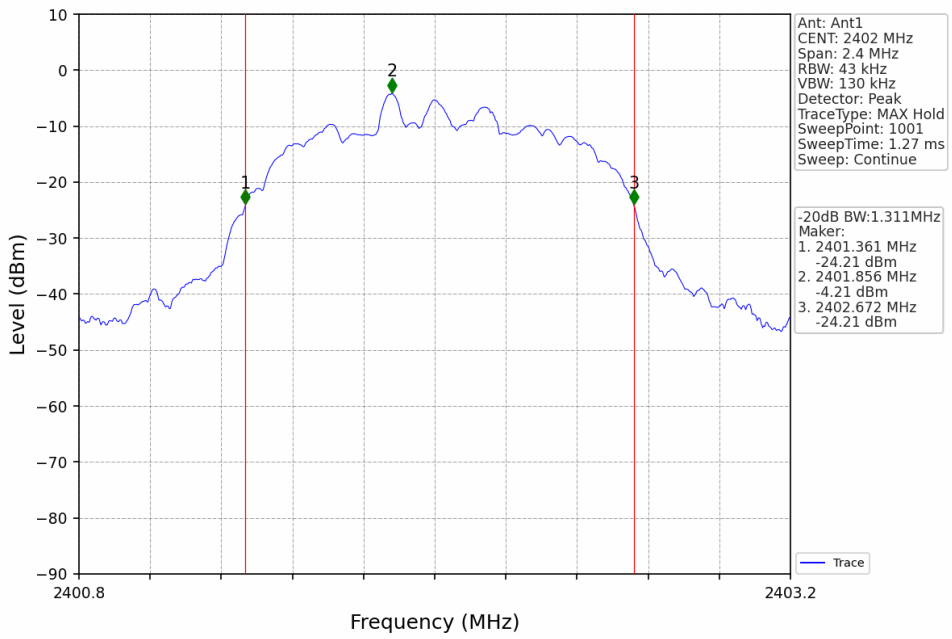
π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



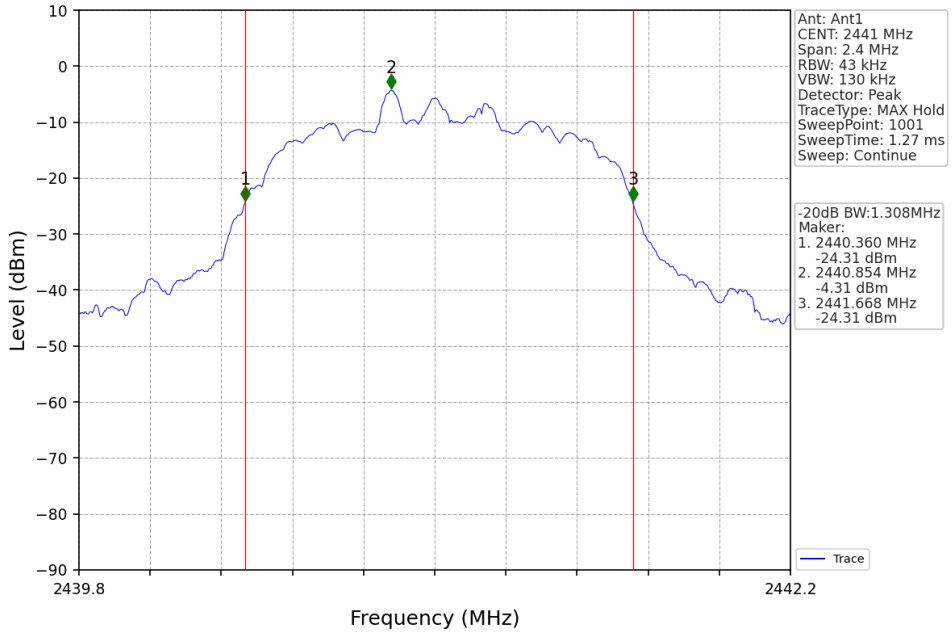
π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



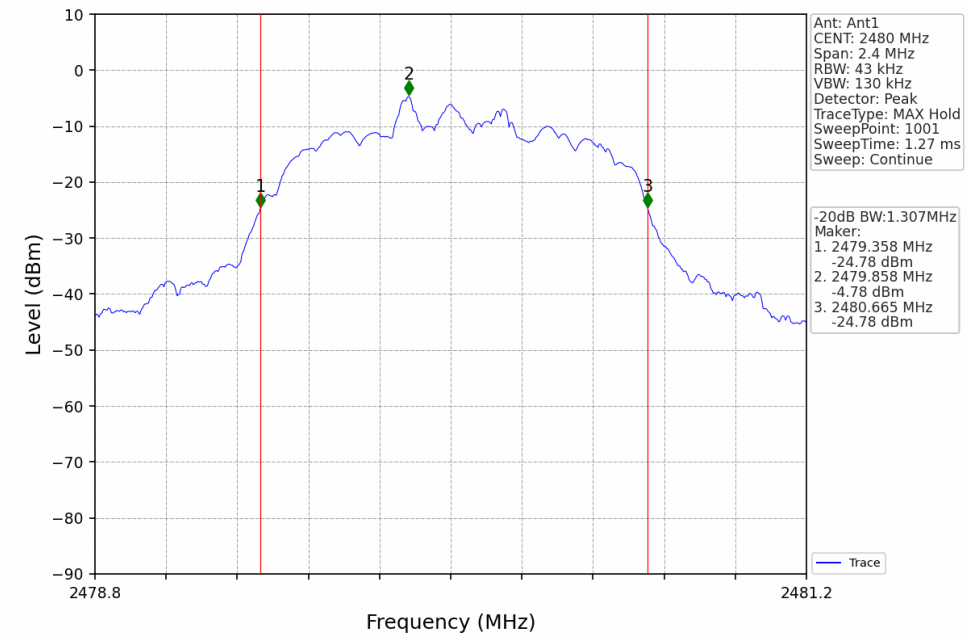
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

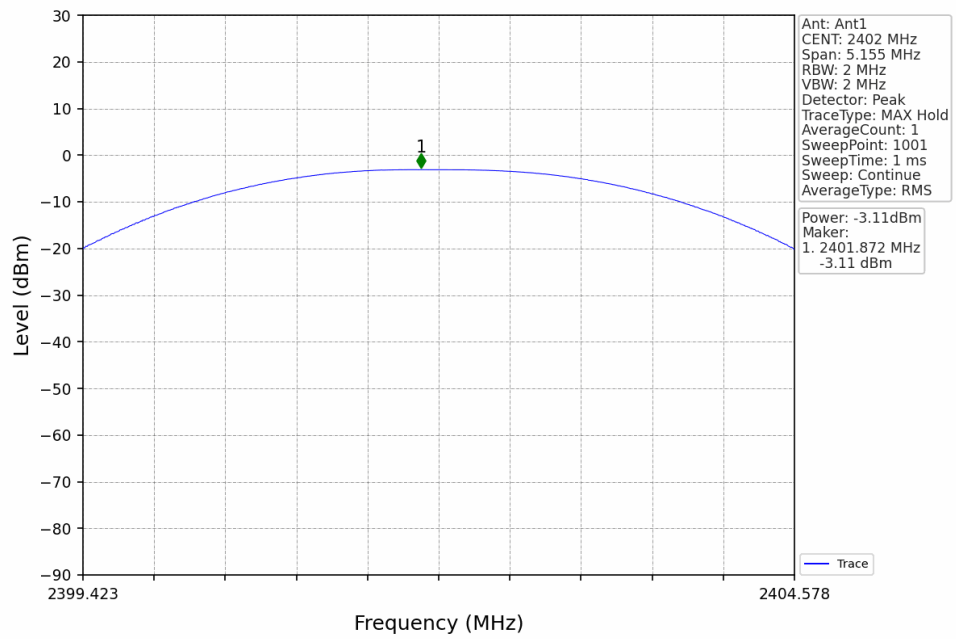
3.1 Power

3.1.1 Test Result

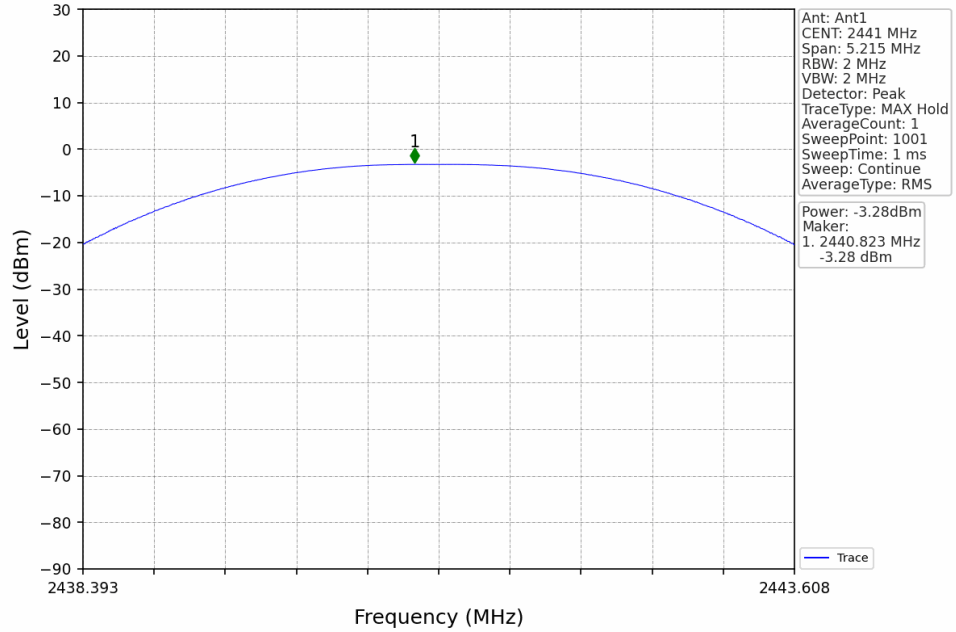
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-3.11	<=20.97	Pass
		2441	DH5	-3.28	<=20.97	Pass
		2480	DH5	-3.62	<=20.97	Pass
π/4DQPSK	SISO	2402	2DH5	-2.24	<=20.97	Pass
		2441	2DH5	-2.40	<=20.97	Pass
		2480	2DH5	-2.80	<=20.97	Pass
8DPSK	SISO	2402	3DH5	-1.87	<=20.97	Pass
		2441	3DH5	-2.03	<=20.97	Pass
		2480	3DH5	-2.38	<=20.97	Pass

3.1.2 Test Graph

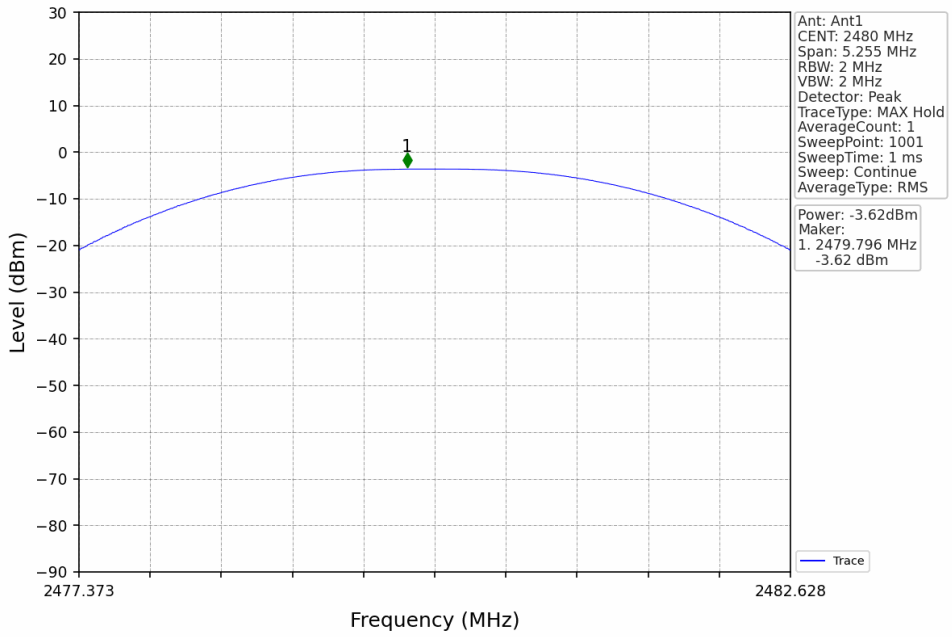
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



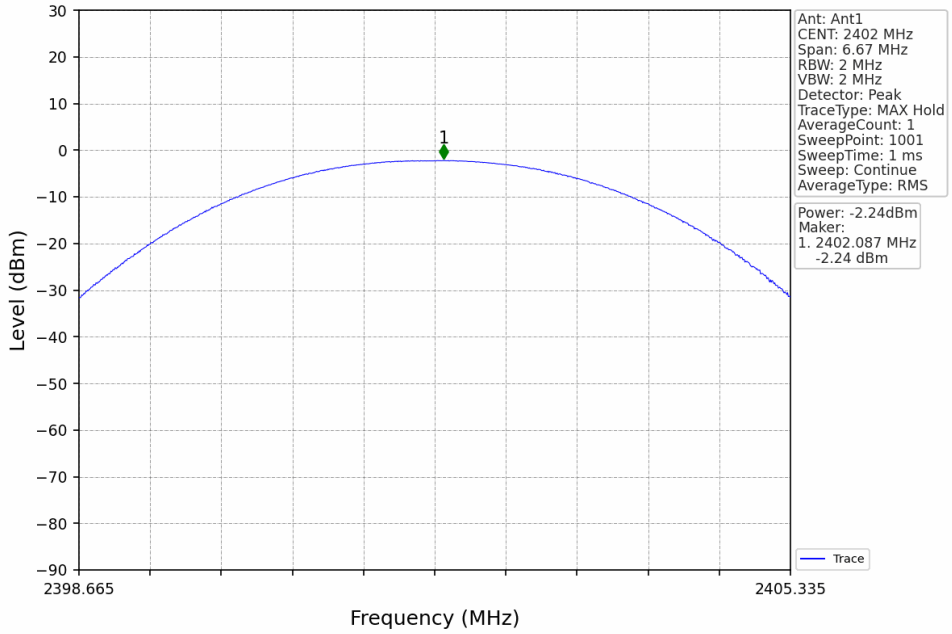
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



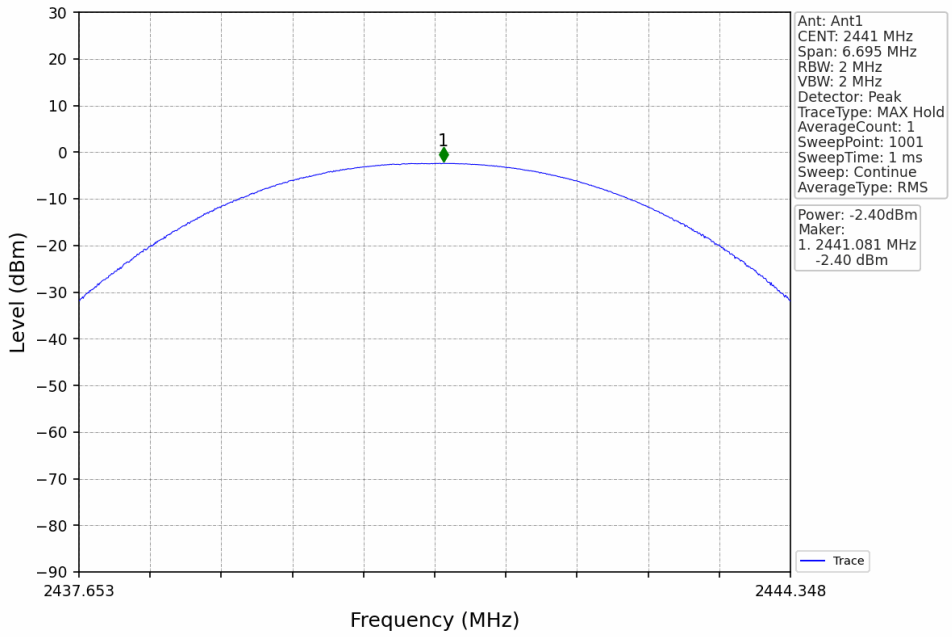
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



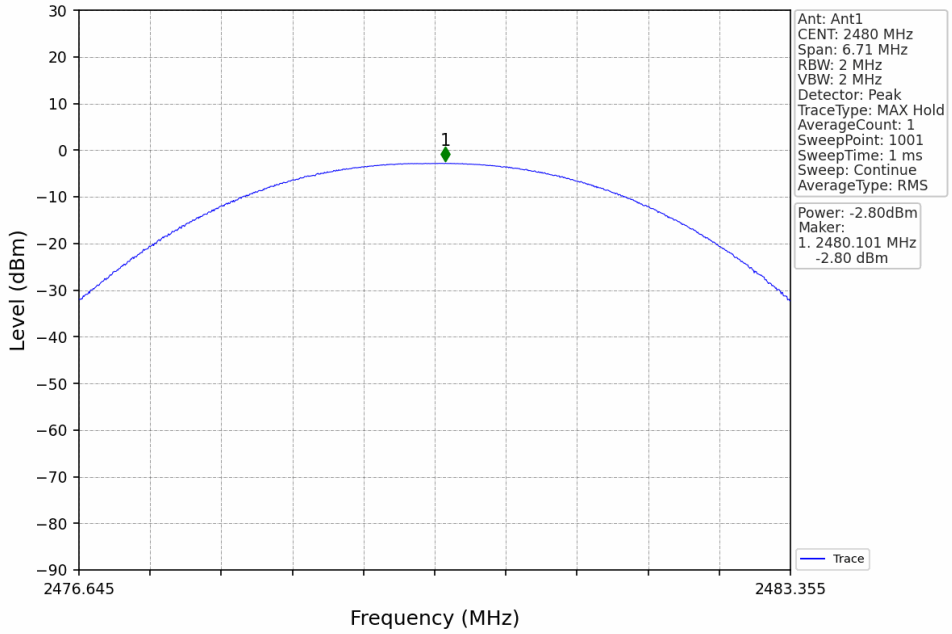
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



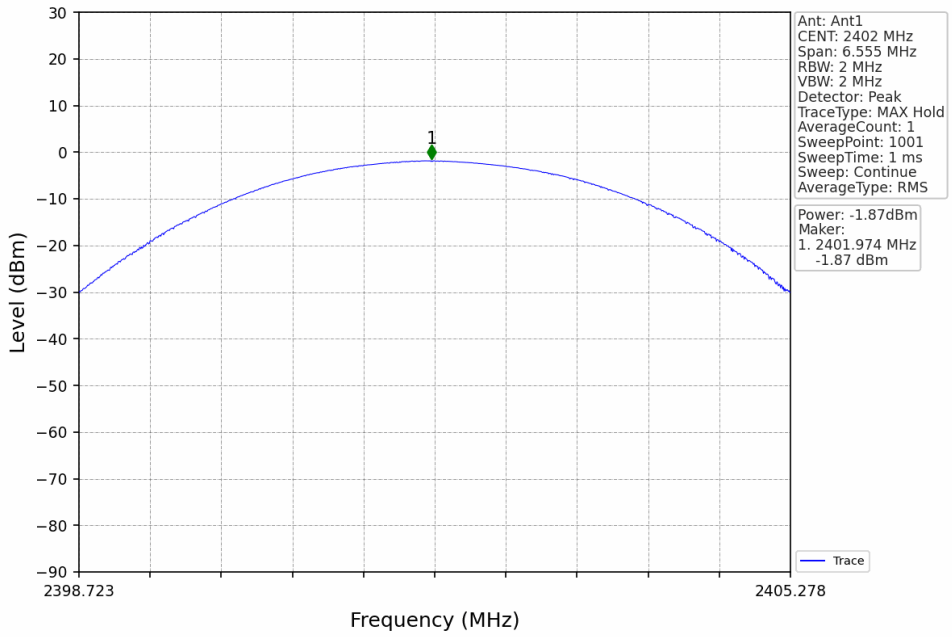
π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



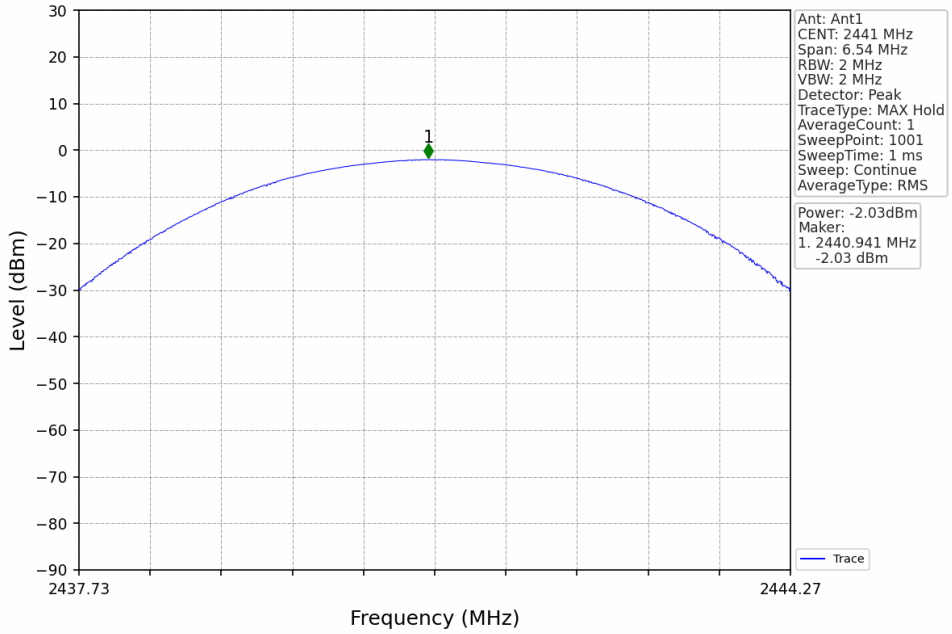
π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



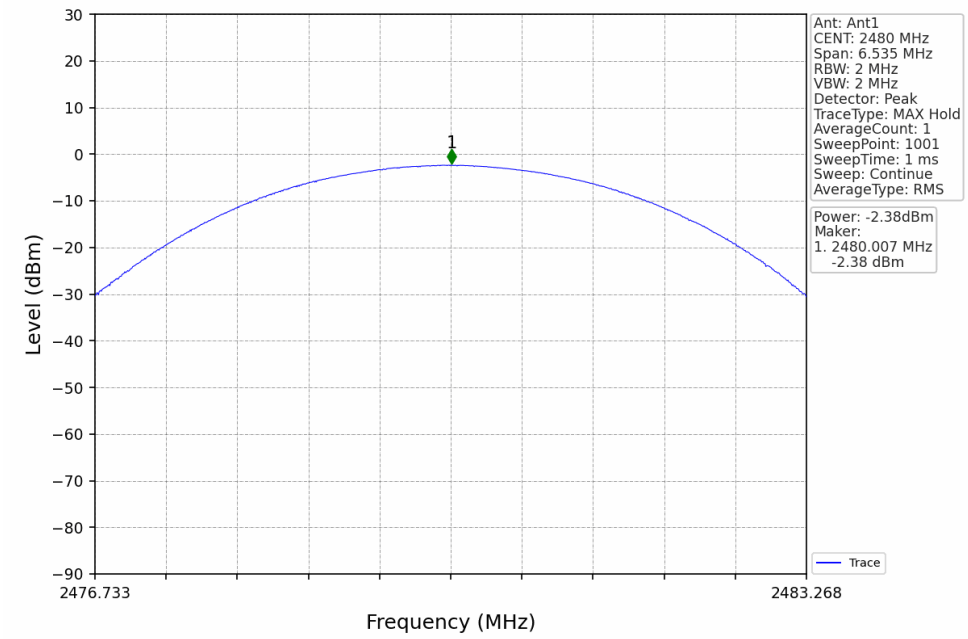
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



4. Carrier Frequency Separation

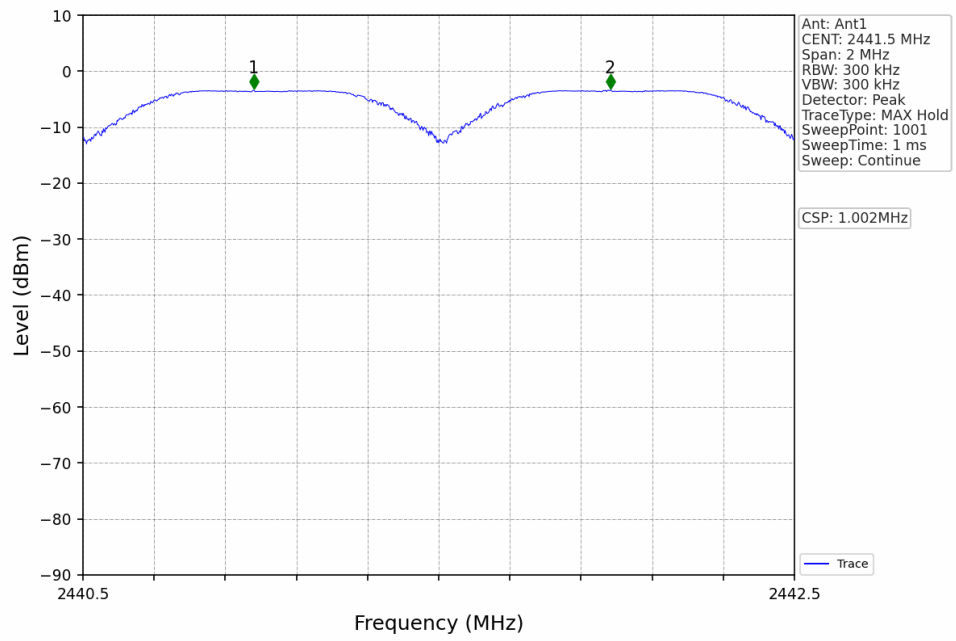
4.1 Ant1

4.1.1 Test Result

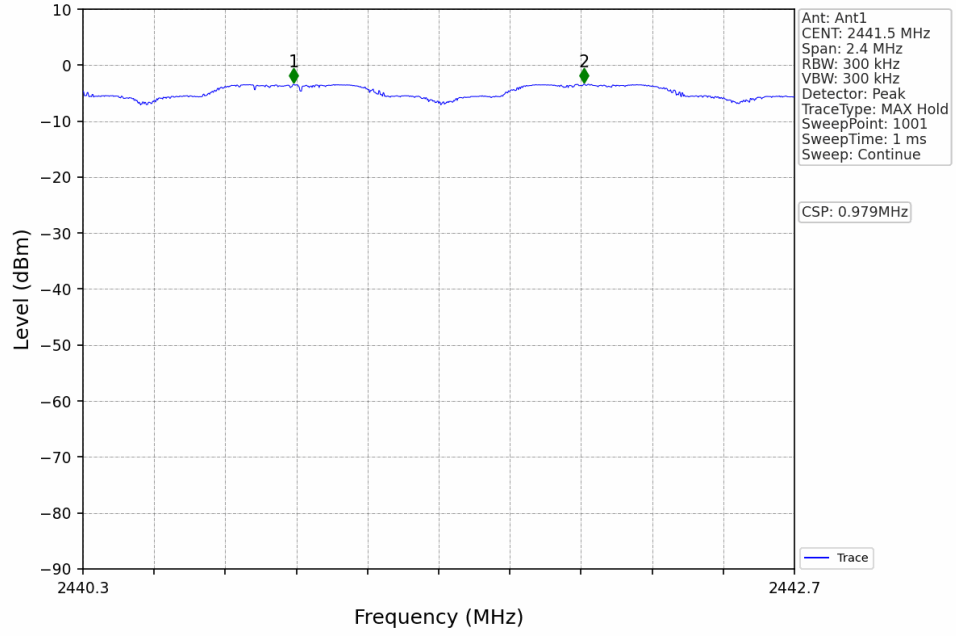
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.002	1.051	>=0.701	Pass
π/4DQPSK	SISO	HOPP	2DH5	0.979	1.342	>=0.895	Pass
8DPSK	SISO	HOPP	3DH5	1.001	1.311	>=0.874	Pass

4.1.2 Test Graph

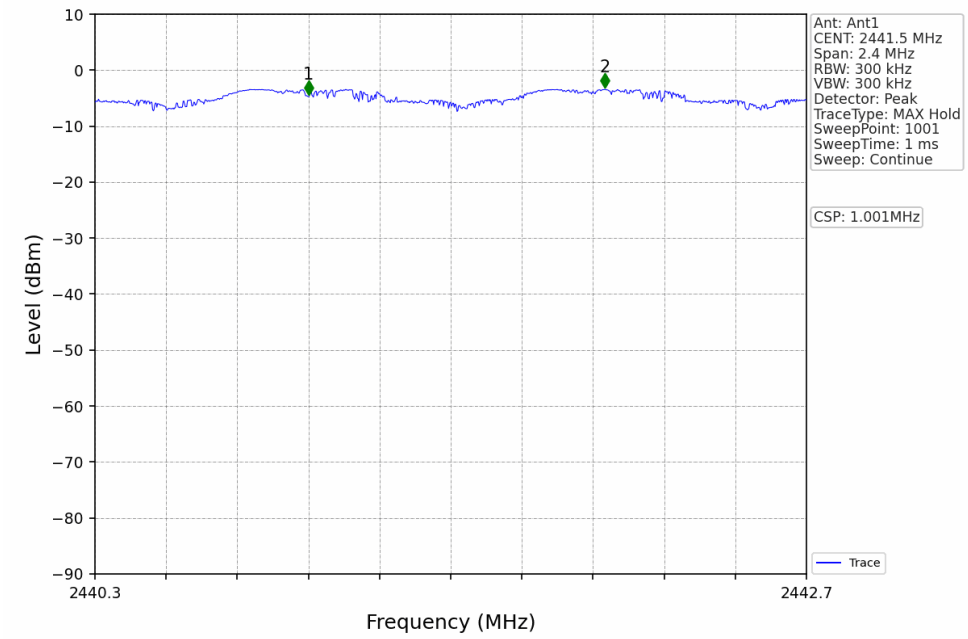
GFSK_DH5_HOPP_Ant1_NTNV



π/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



5. Number of Hopping Frequencies

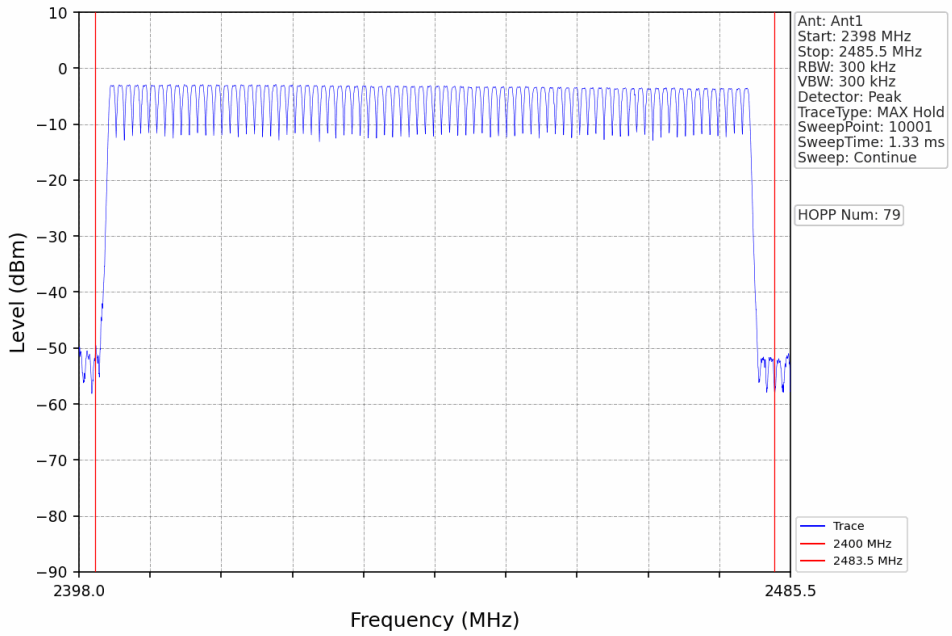
5.1 HoppNum

5.1.1 Test Result

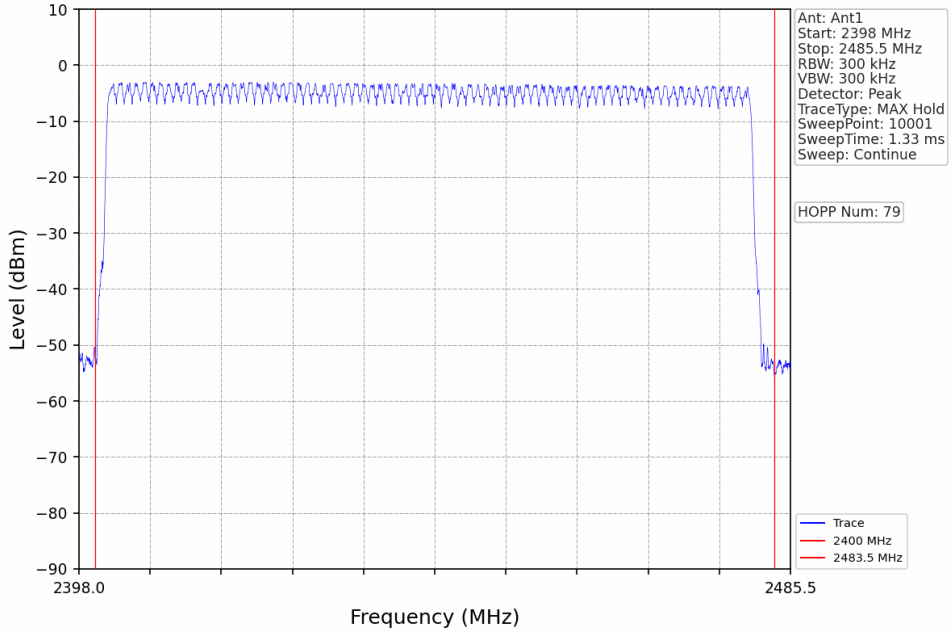
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
π/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

5.1.2 Test Graph

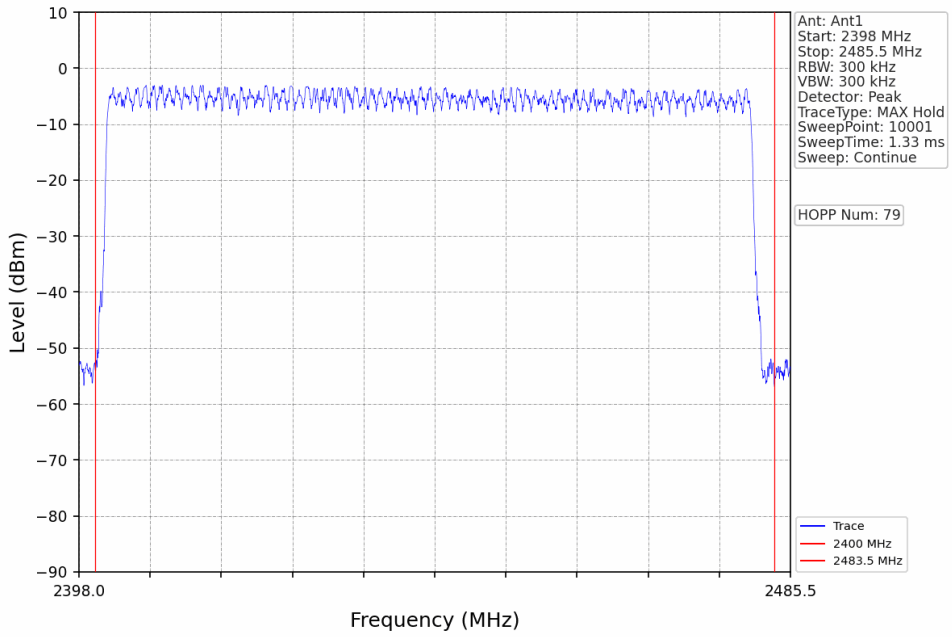
GFSK_DH5_HOPP_Ant1_NTNV



π/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Time of Occupancy (Dwell Time)

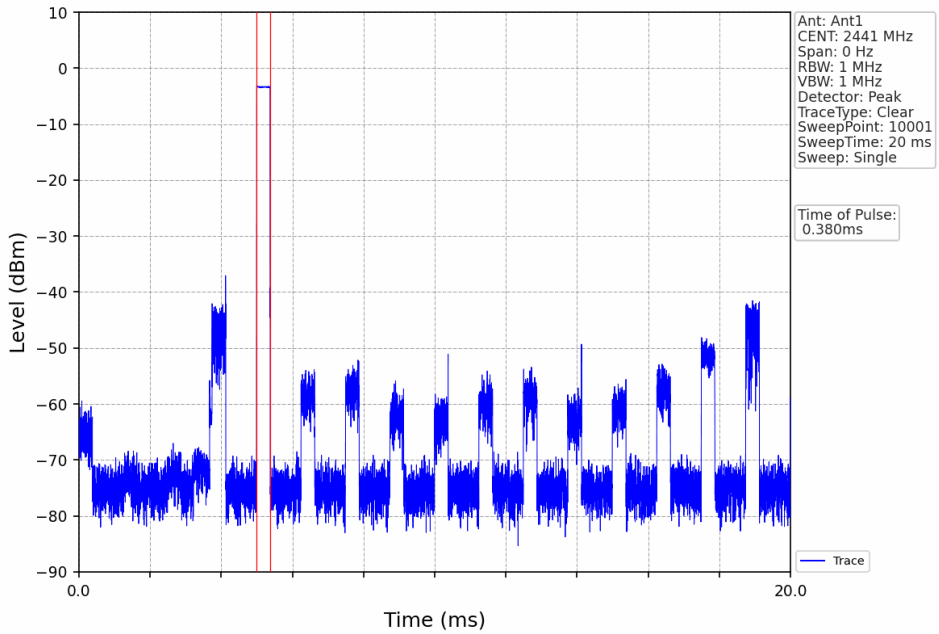
6.1 Ant1

6.1.1 Test Result

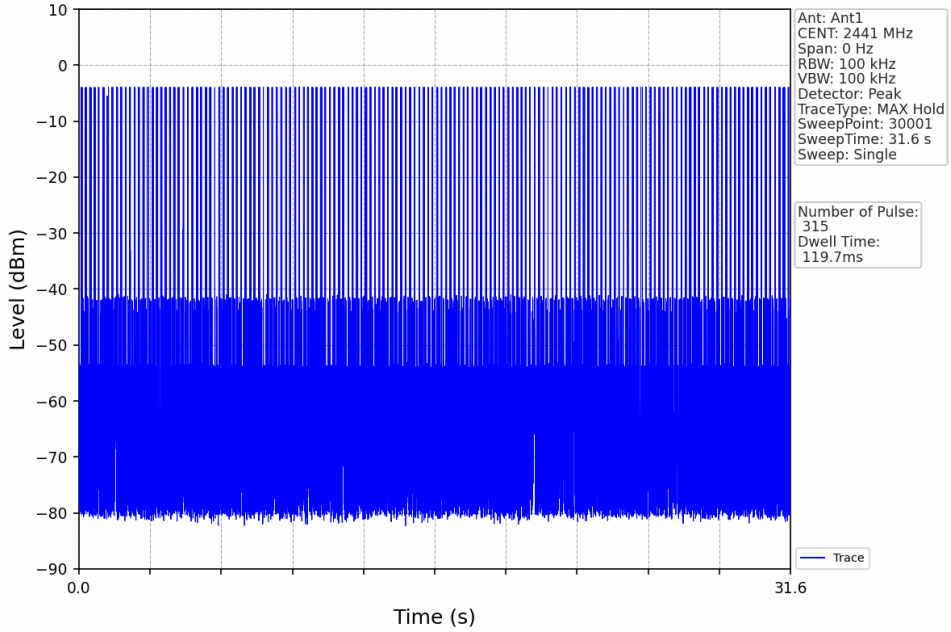
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.380	31.600	315	119.700	<=400	Pass
			DH3	1.642	31.600	156	256.152	<=400	Pass
			DH5	2.890	31.600	107	309.230	<=400	Pass
π/4DQPSK	SISO	HOPP	2DH1	0.390	31.600	319	124.410	<=400	Pass
			2DH3	1.646	31.600	161	265.006	<=400	Pass
			2DH5	2.890	31.600	107	309.230	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.390	31.600	317	123.630	<=400	Pass
			3DH3	1.640	31.600	161	264.040	<=400	Pass
			3DH5	2.896	31.600	114	330.144	<=400	Pass

6.1.2 Test Graph

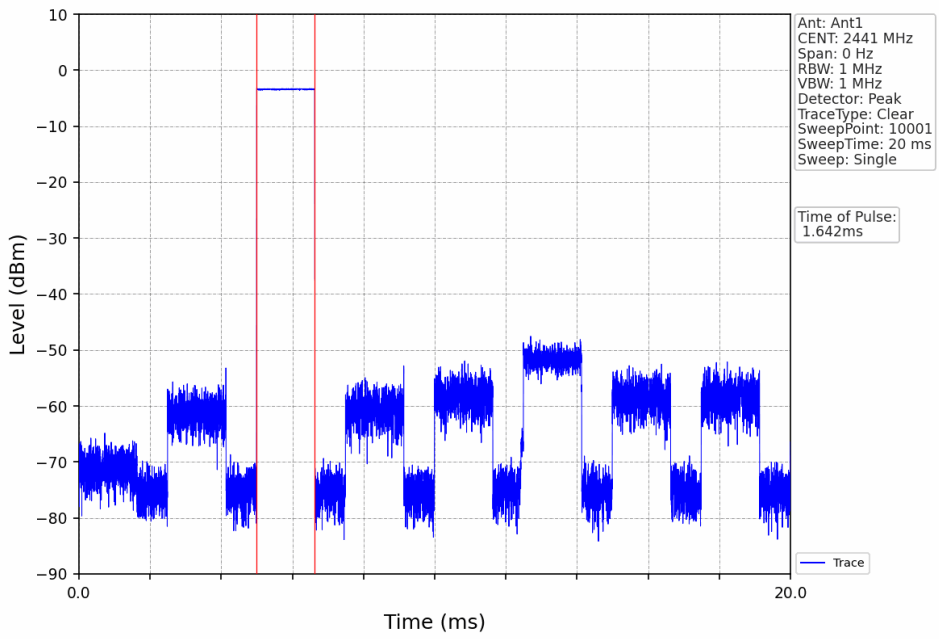
GFSK_DH1_HOPP_Ant1_NTNV



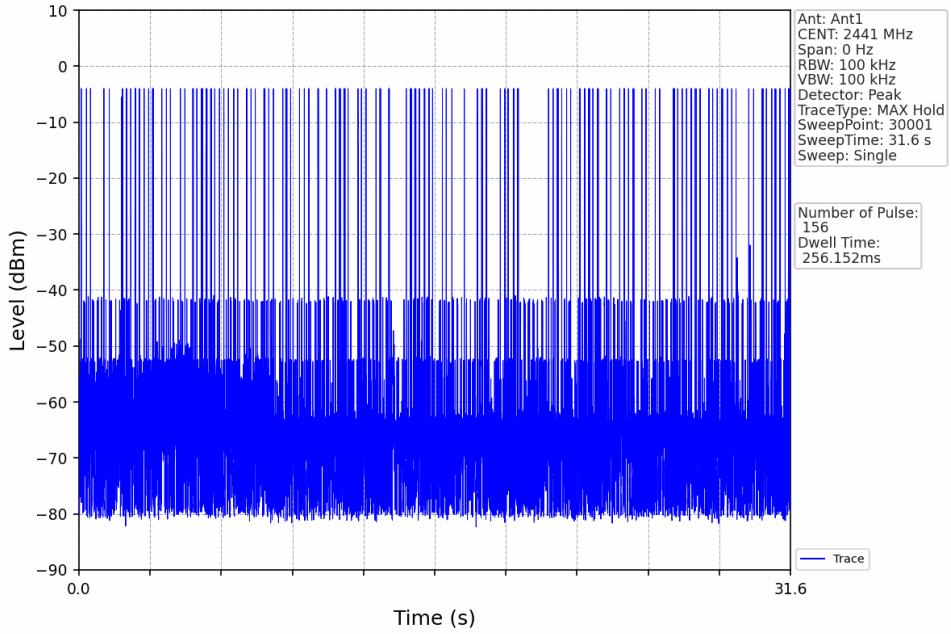
GFSK_DH1_HOPP_Ant1_NTNV



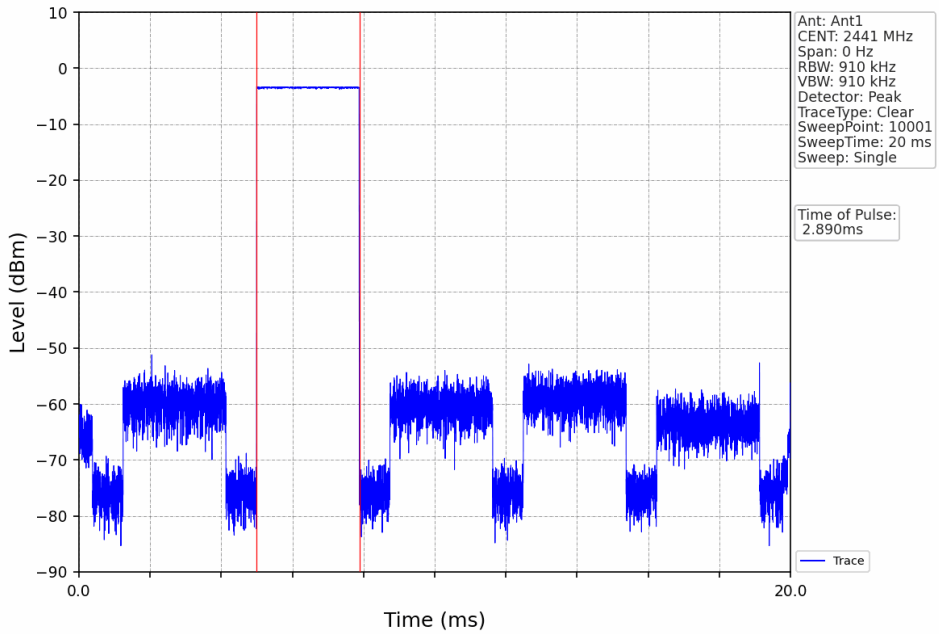
GFSK_DH3_HOPP_Ant1_NTNV



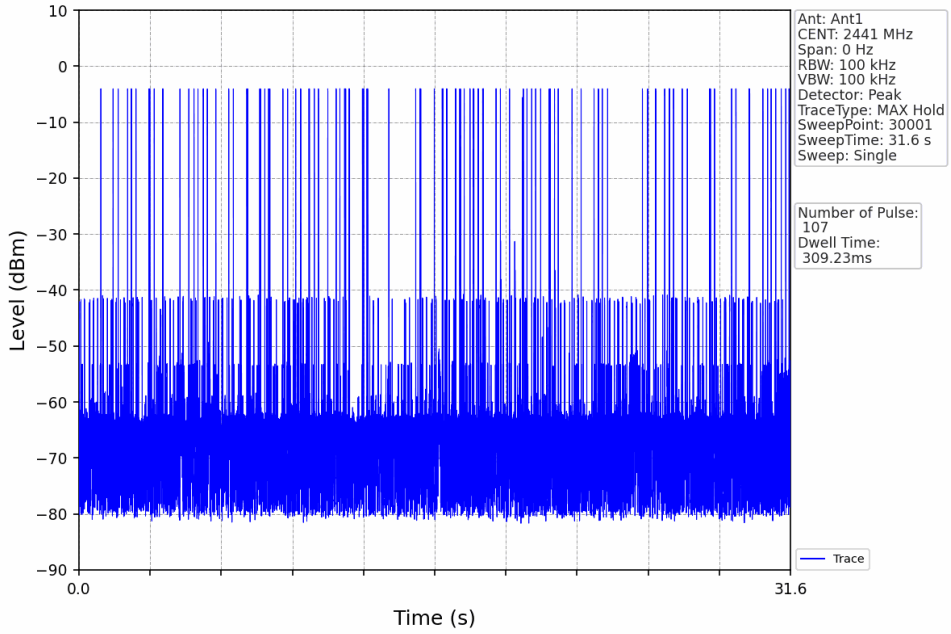
GFSK_DH3_HOPP_Ant1_NTNV



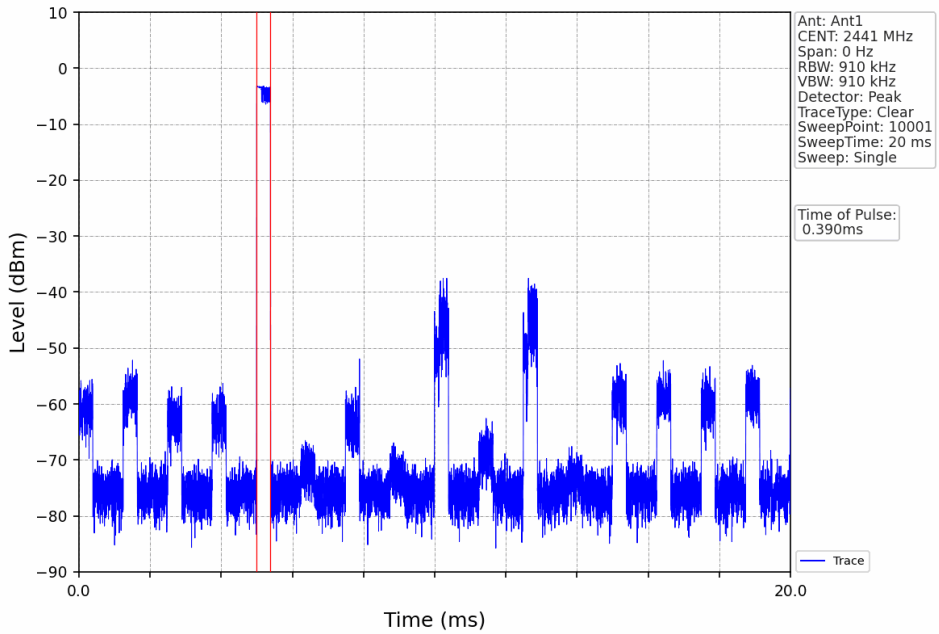
GFSK_DH5_HOPP_Ant1_NTNV



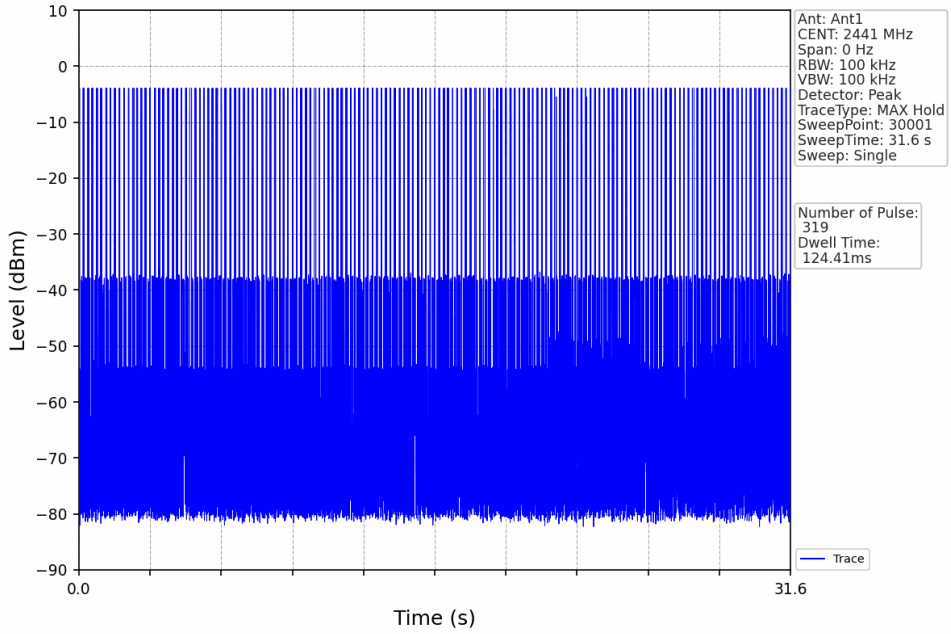
GFSK_DH5_HOPP_Ant1_NTNV



π/4DQPSK_2DH1_HOPP_Ant1_NTNV



π/4DQPSK_2DH1_HOPP_Ant1_NTNV



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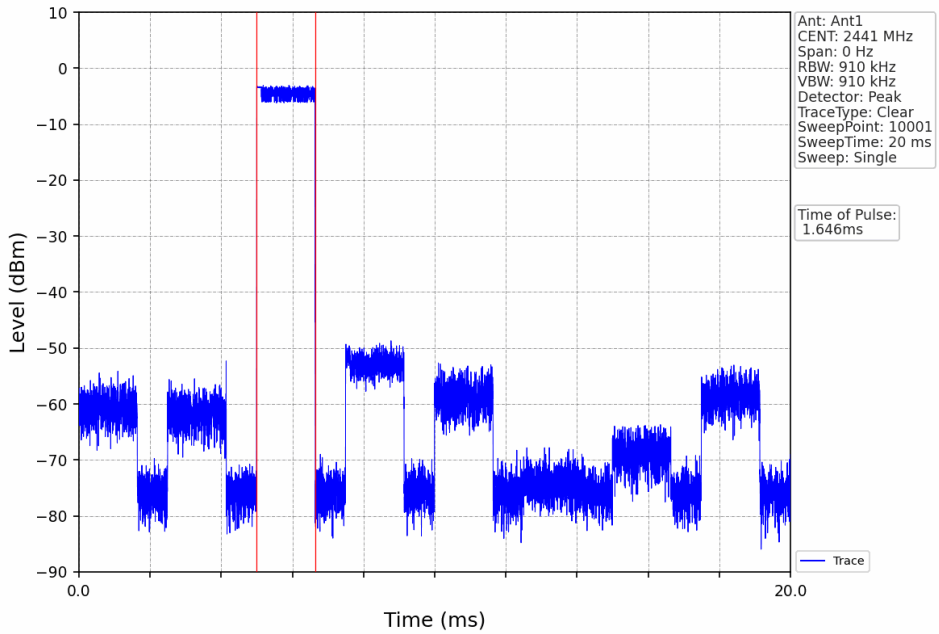
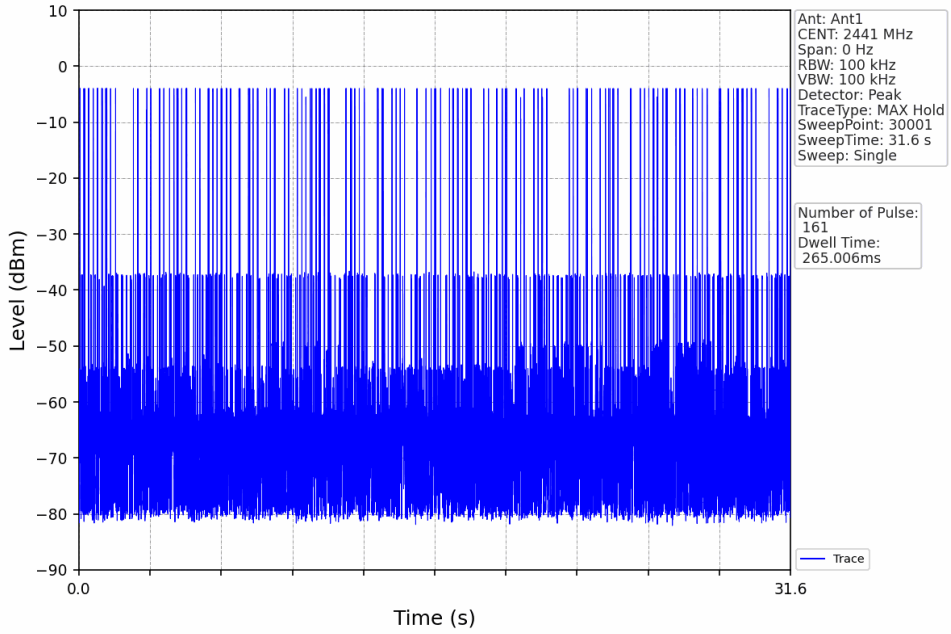


π/4DQPSK_2DH3_HOPP_Ant1_NTNV



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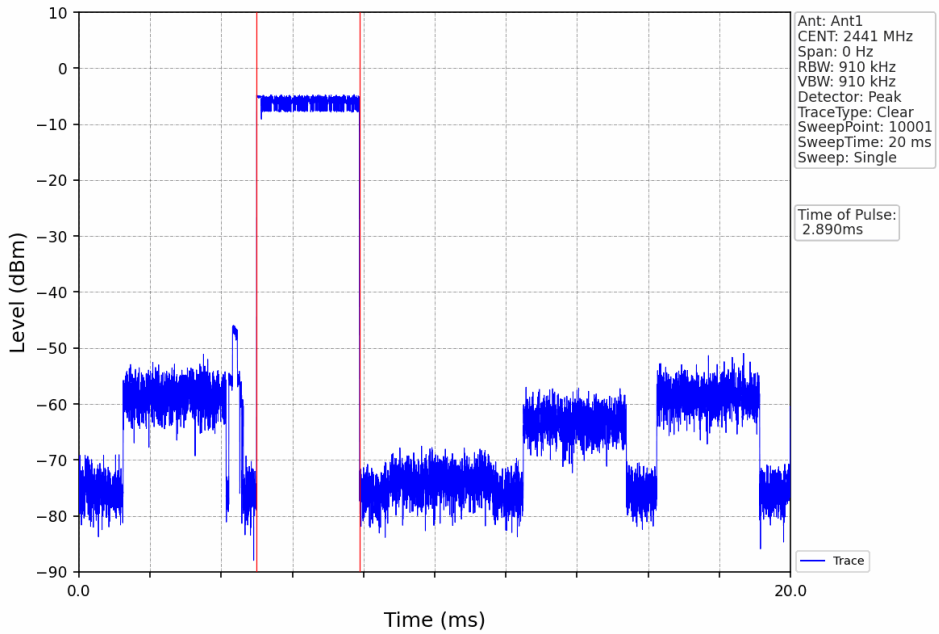

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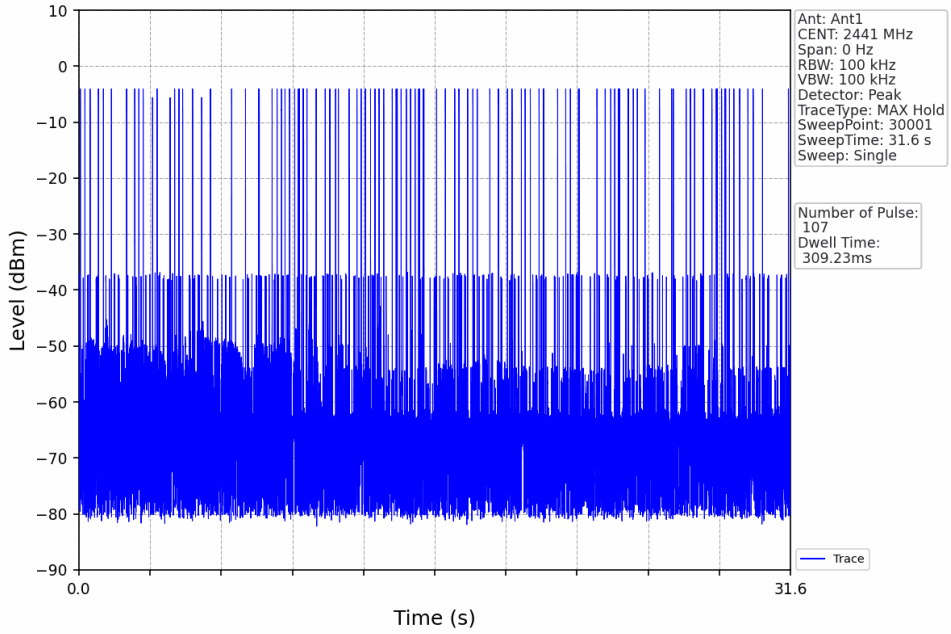
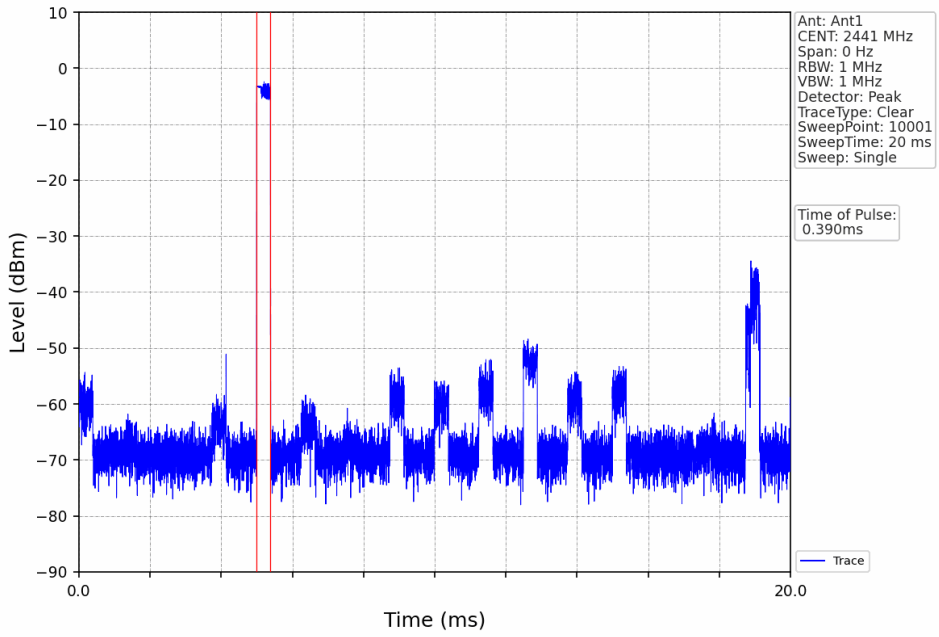


8DPSK_3DH1_HOPP_Ant1_NTNV



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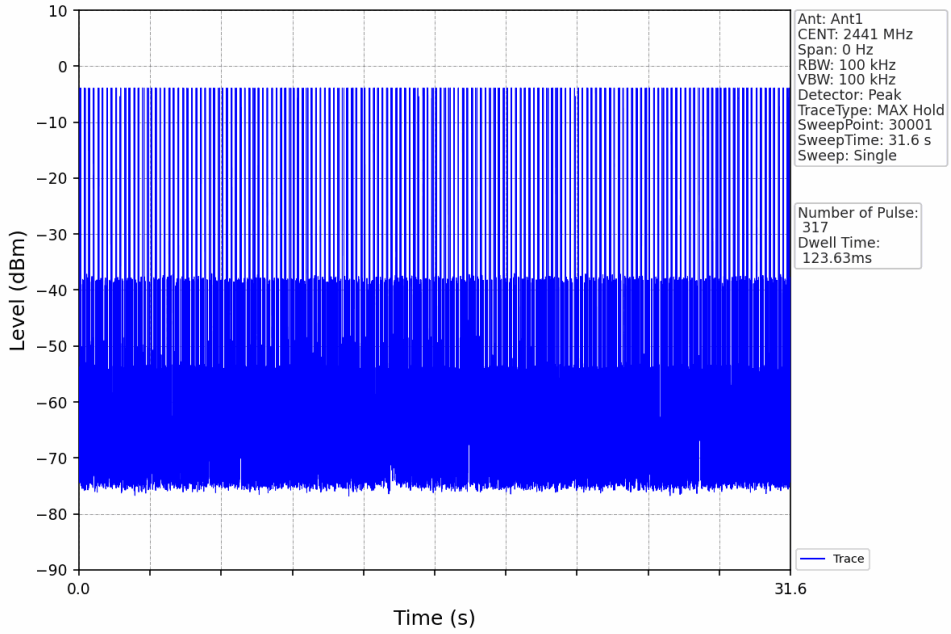
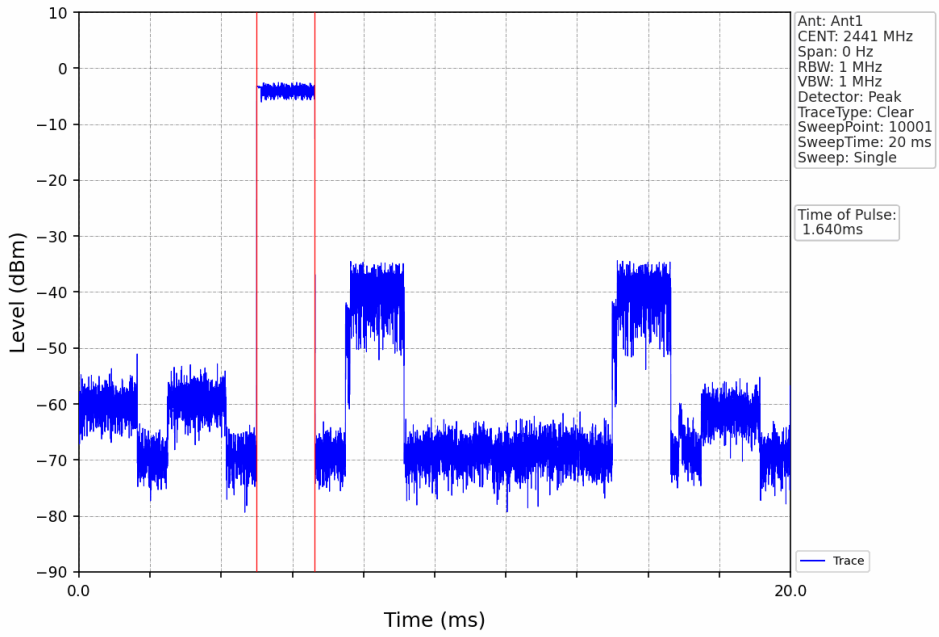


8DPSK_3DH3_HOPP_Ant1_NTNV



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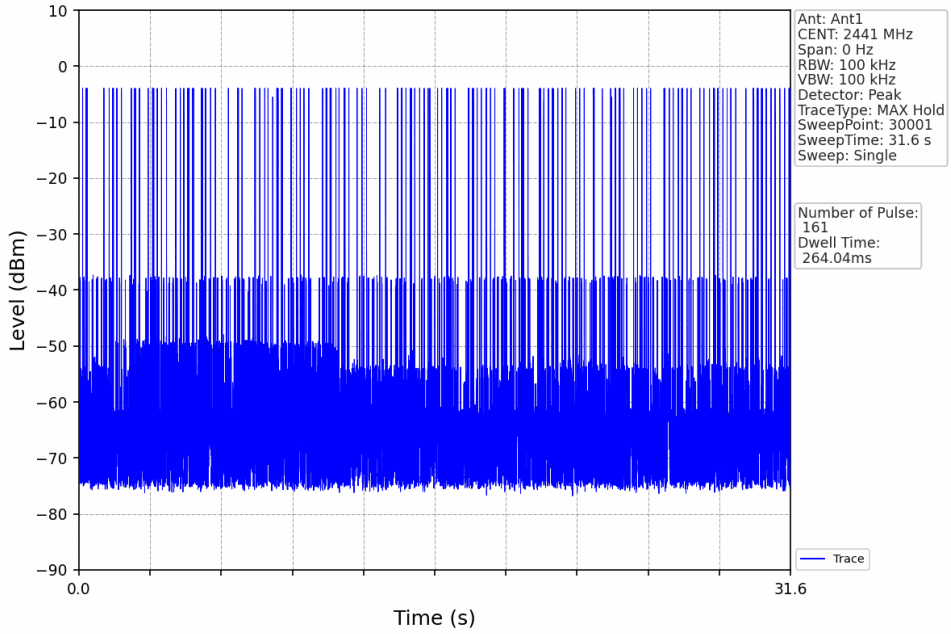
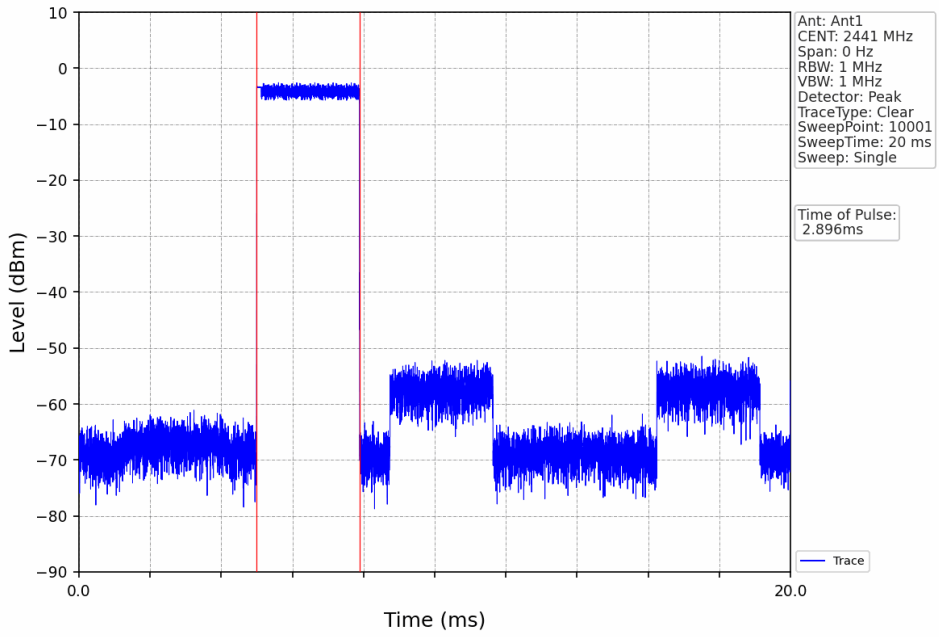
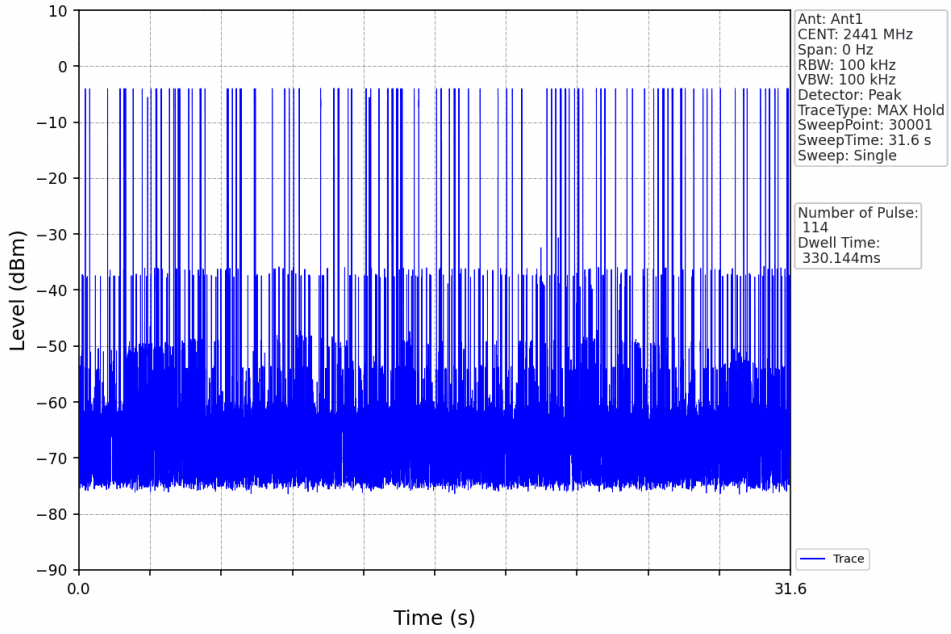


8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



7. Unwanted Emissions In Non-restricted Frequency Bands

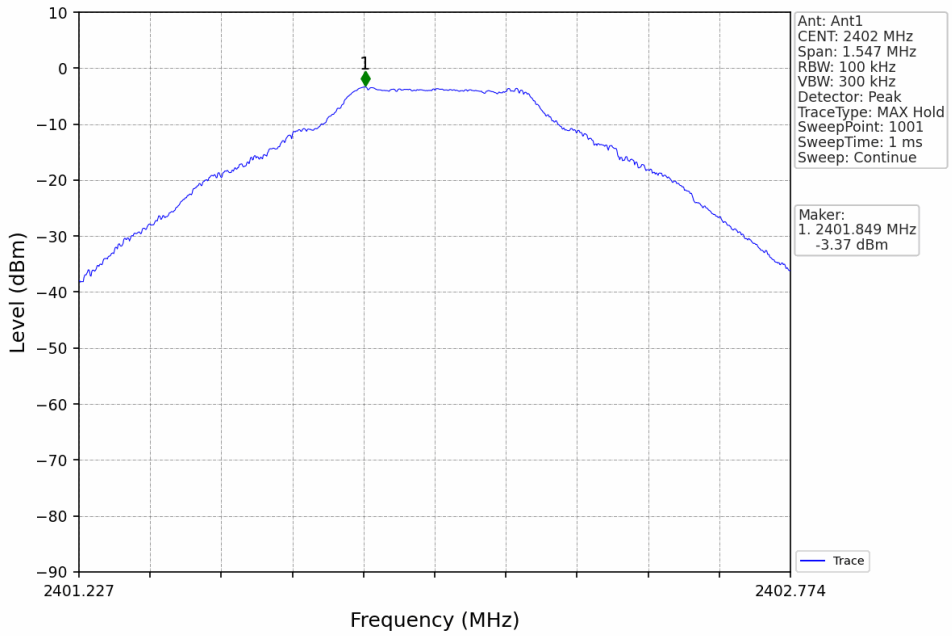
7.1 Ref

7.1.1 Test Result

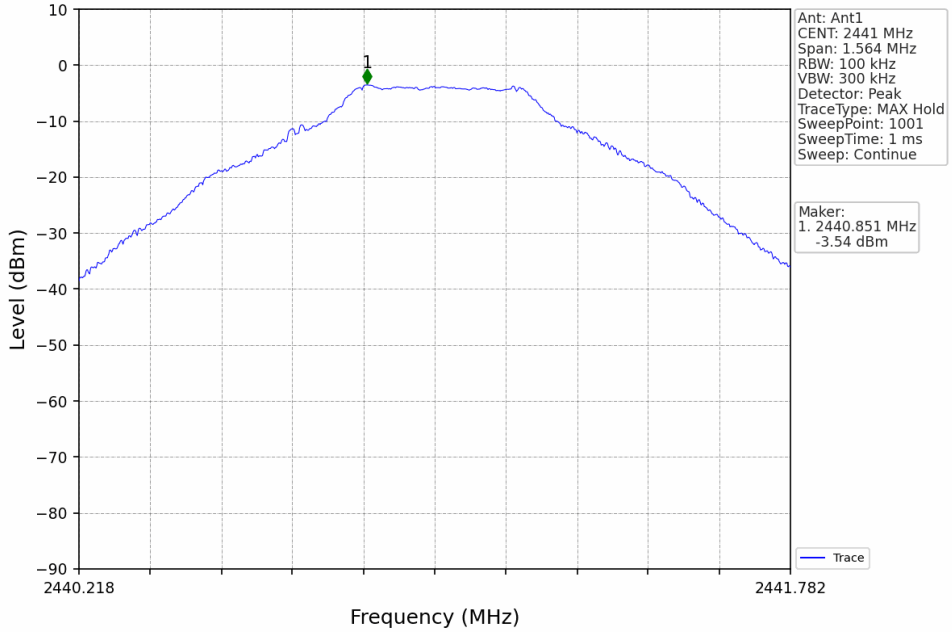
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-3.37
		2441	DH5	1	-3.54
		2480	DH5	1	-3.92
π/4DQPSK	SISO	2402	2DH5	1	-3.31
		2441	2DH5	1	-3.51
		2480	2DH5	1	-3.95
8DPSK	SISO	2402	3DH5	1	-3.30
		2441	3DH5	1	-3.48
		2480	3DH5	1	-3.84
Note1: Refer to FCC Part 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

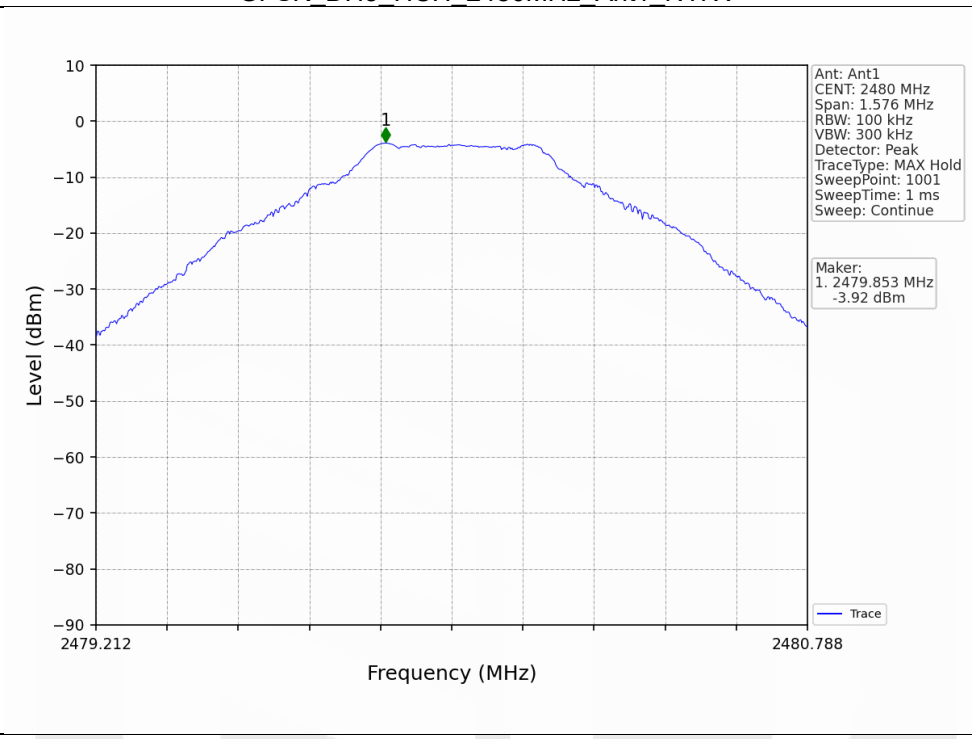
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



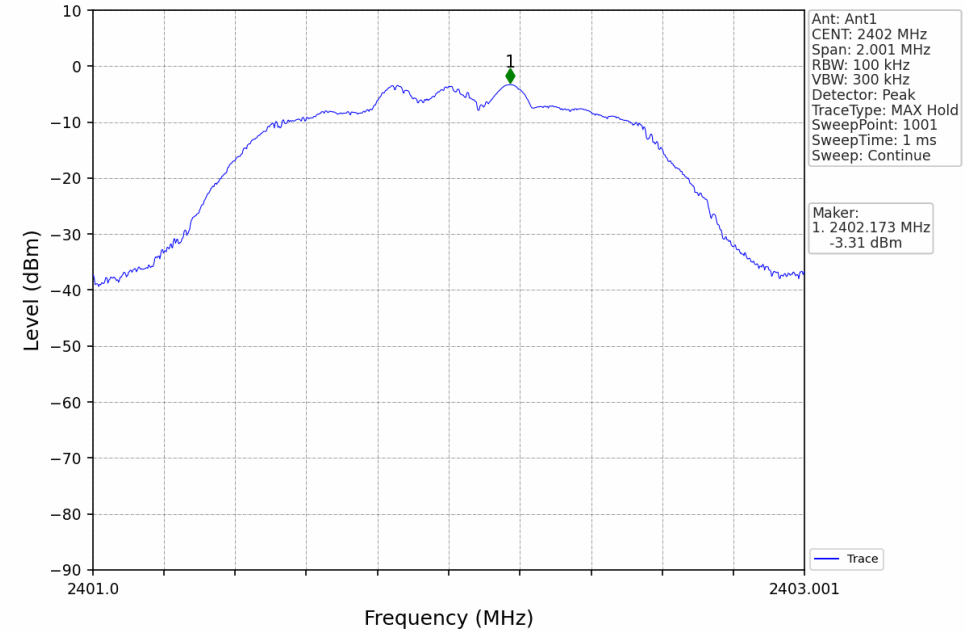
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



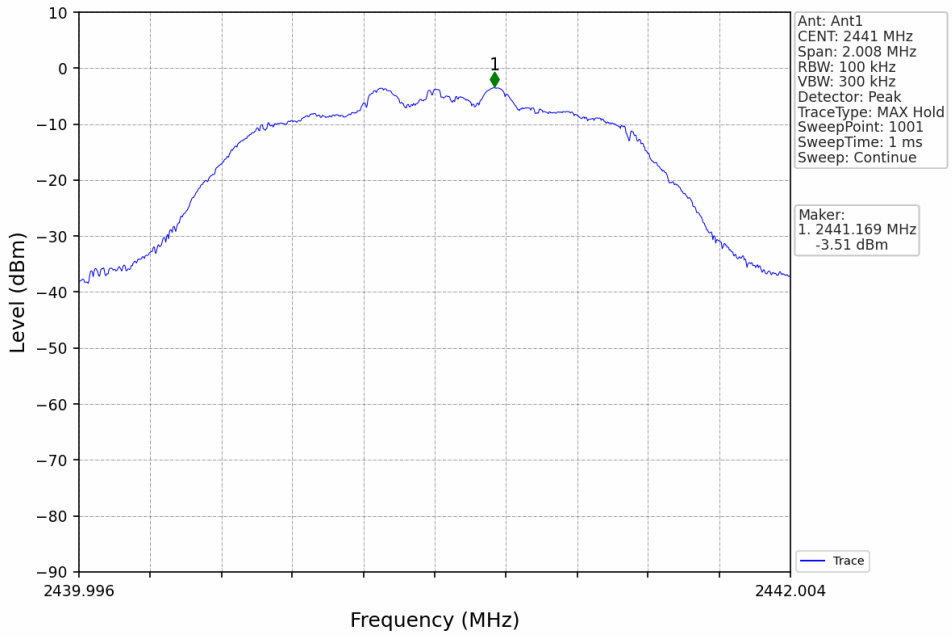
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



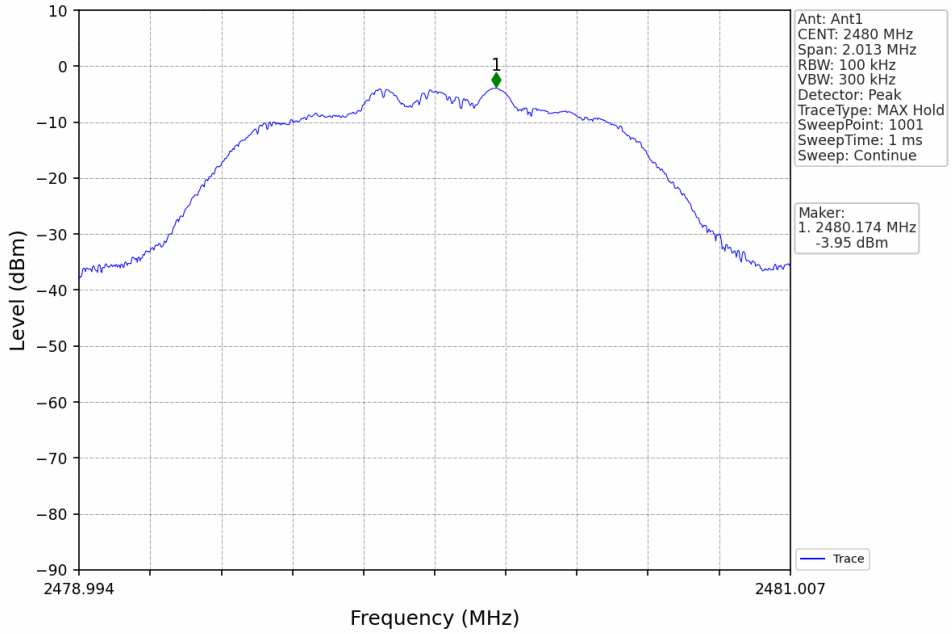
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



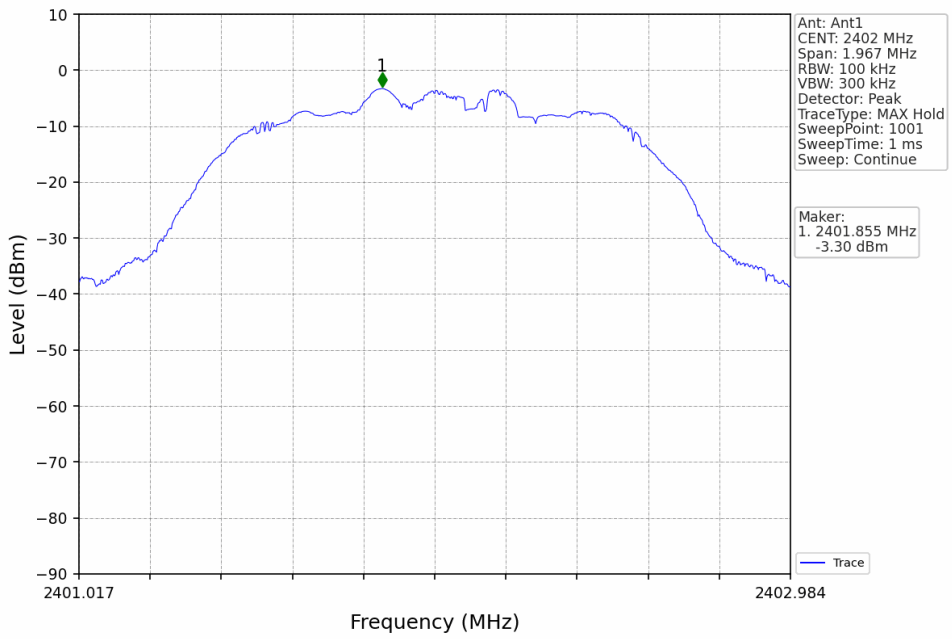
π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



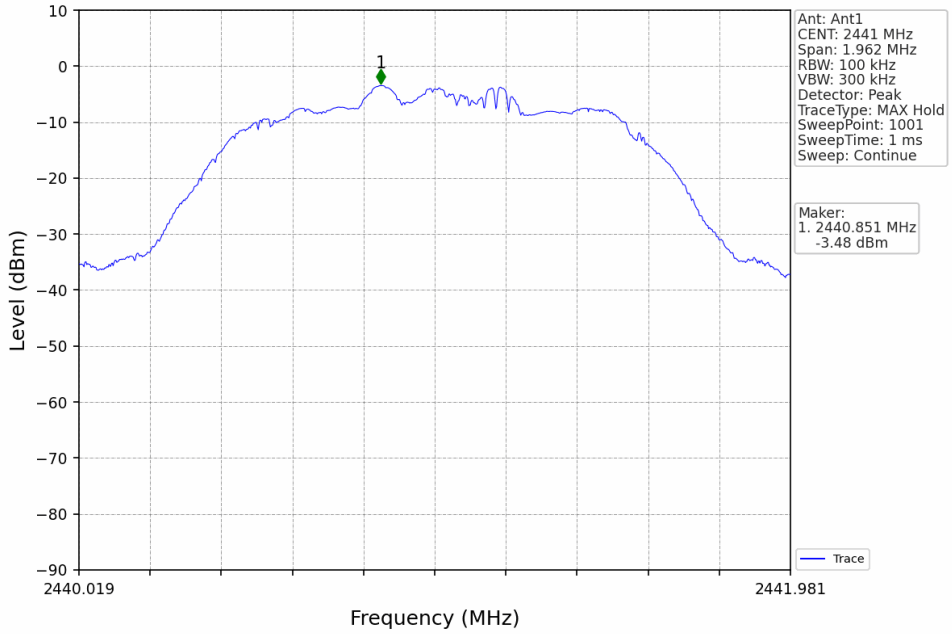
π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



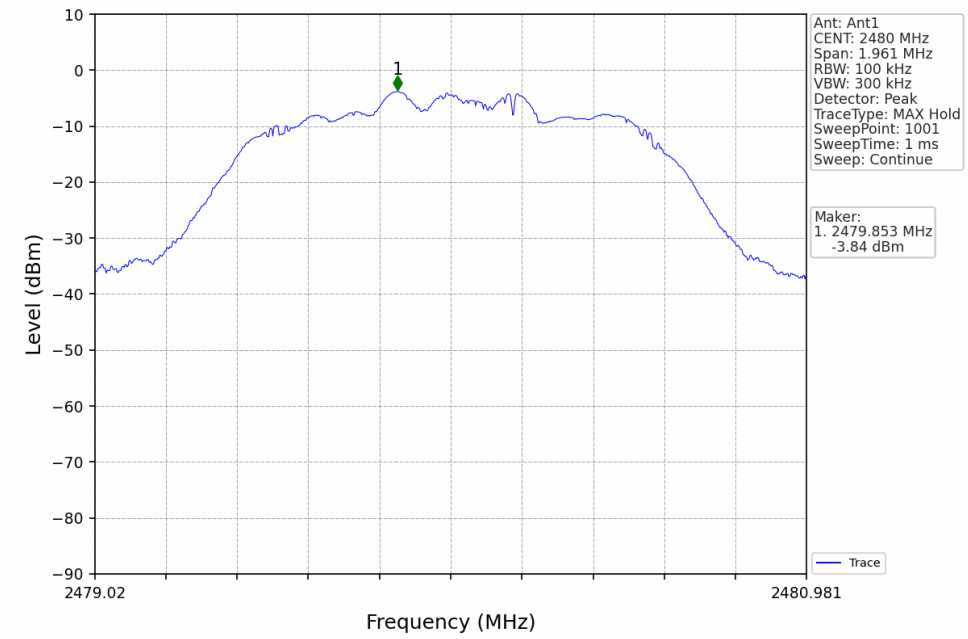
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



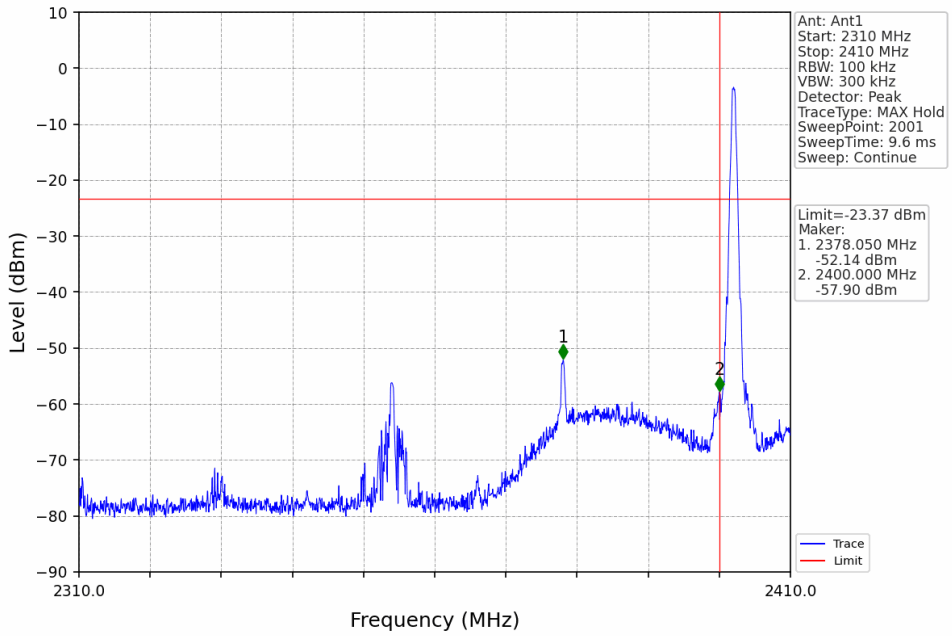
7.2 CSE

7.2.1 Test Result

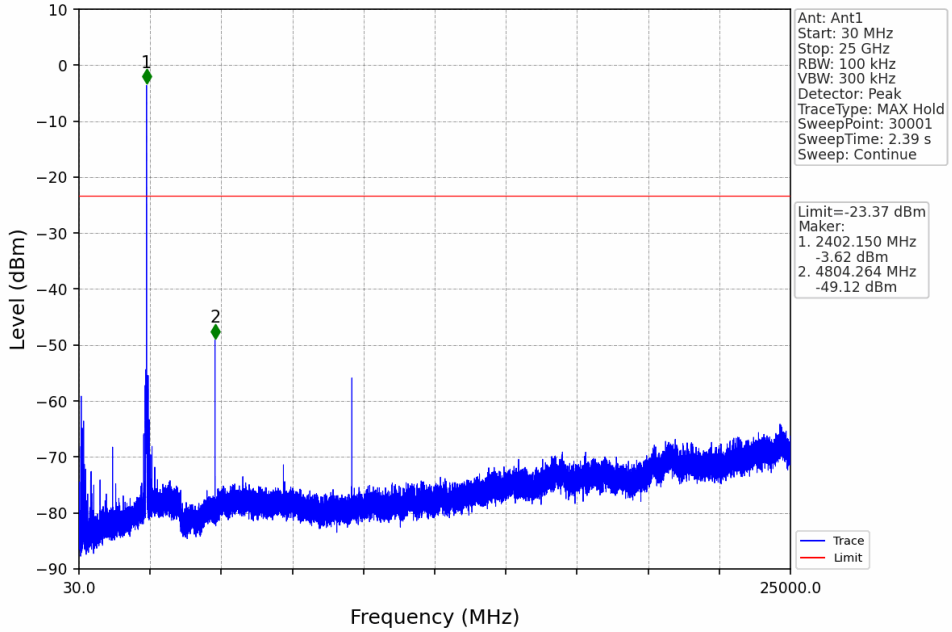
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-3.37	-23.37	Pass
		2441	DH5	1	-3.37	-23.37	Pass
		2480	DH5	1	-3.37	-23.37	Pass
		HOPP	DH5	1	-3.37	-23.37	Pass
π/4DQPSK	SISO	2402	2DH5	1	-3.31	-23.31	Pass
		2441	2DH5	1	-3.31	-23.31	Pass
		2480	2DH5	1	-3.31	-23.31	Pass
		HOPP	2DH5	1	-3.31	-23.31	Pass
8DPSK	SISO	2402	3DH5	1	-3.30	-23.30	Pass
		2441	3DH5	1	-3.30	-23.30	Pass
		2480	3DH5	1	-3.30	-23.30	Pass
		HOPP	3DH5	1	-3.30	-23.30	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

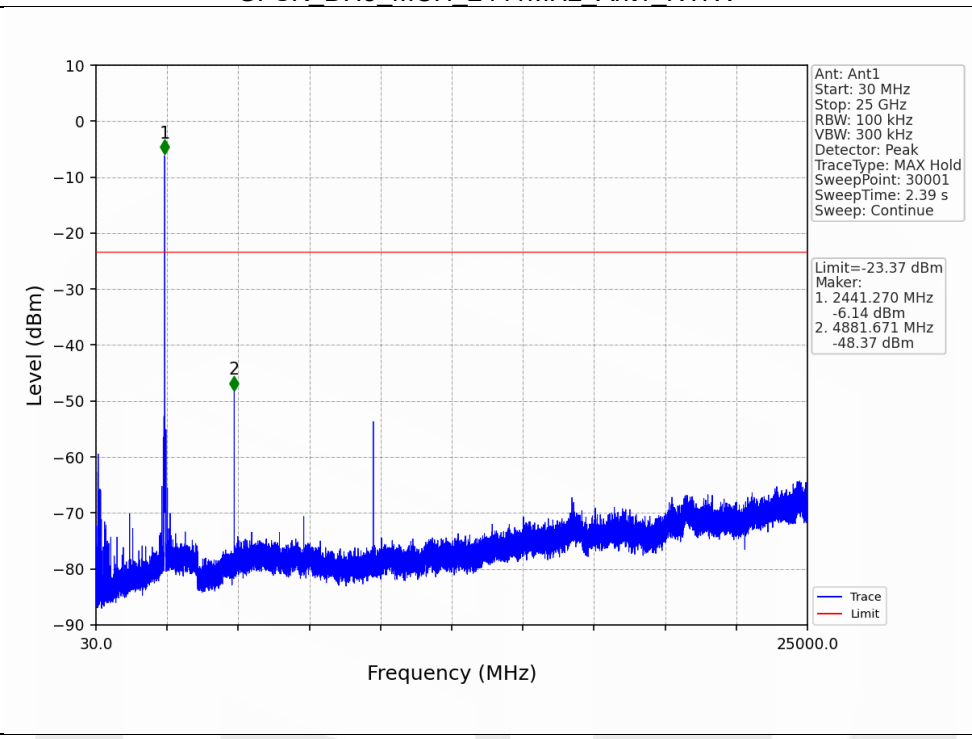
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



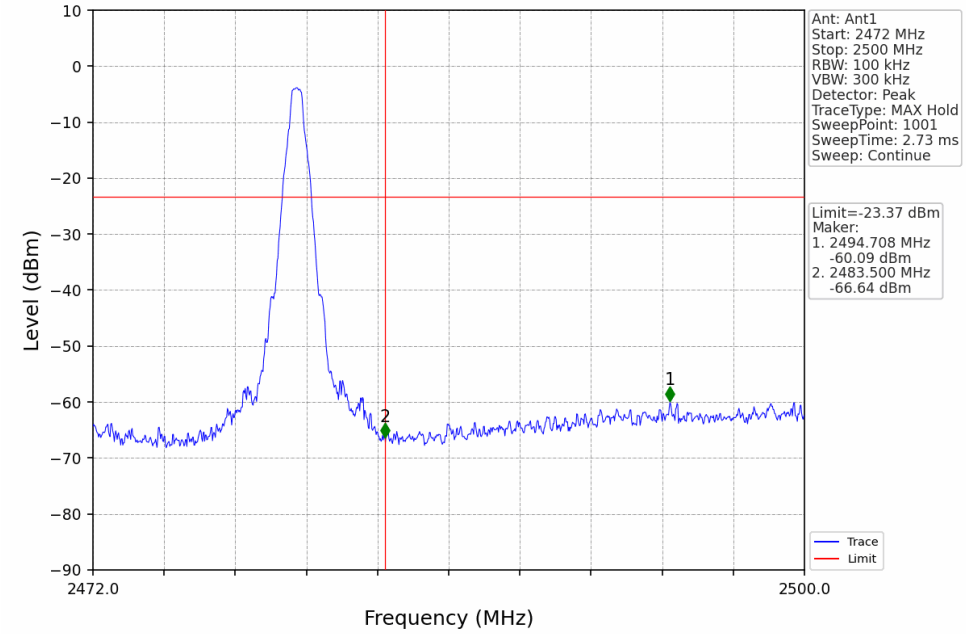
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



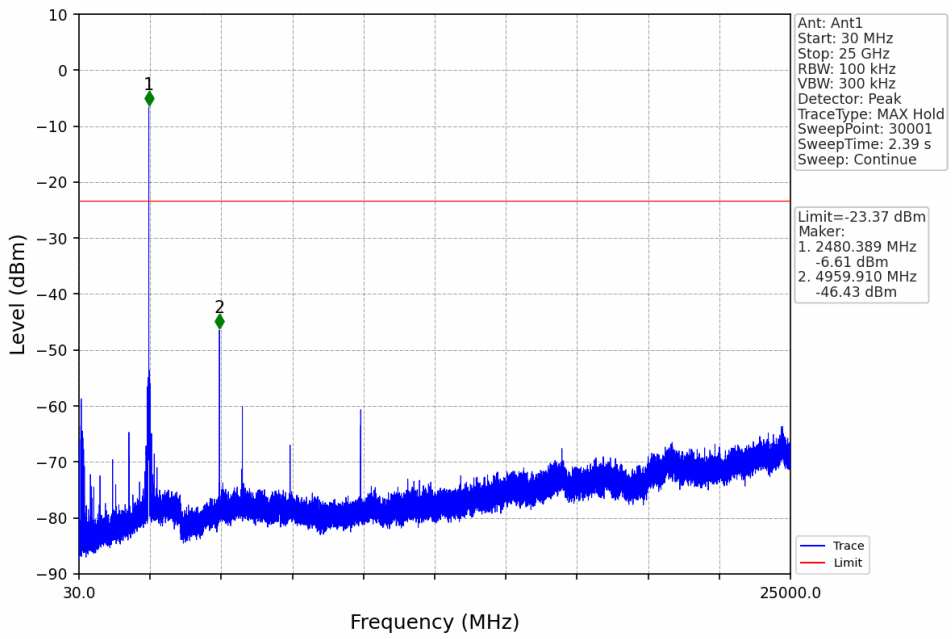
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



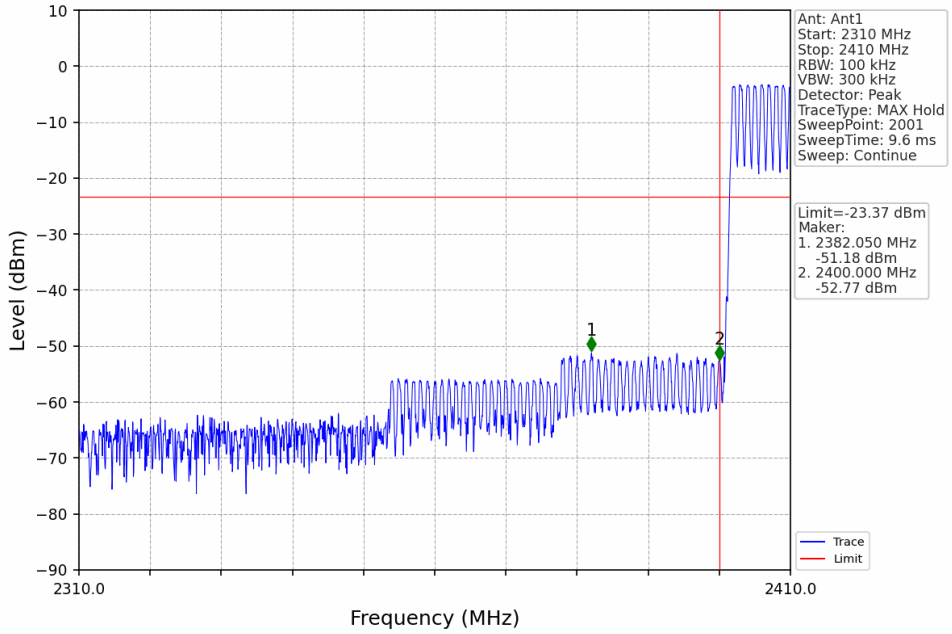
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



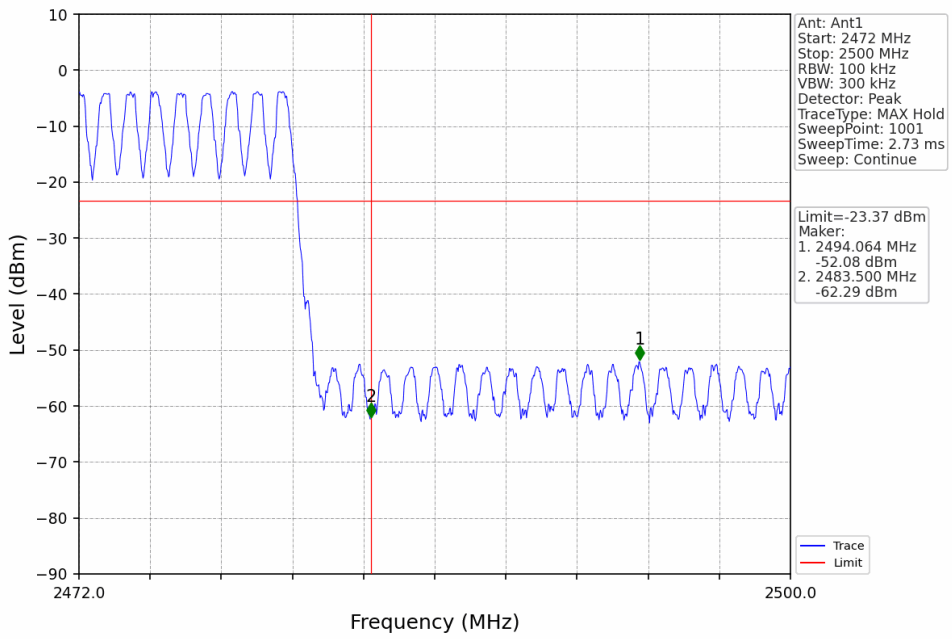
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



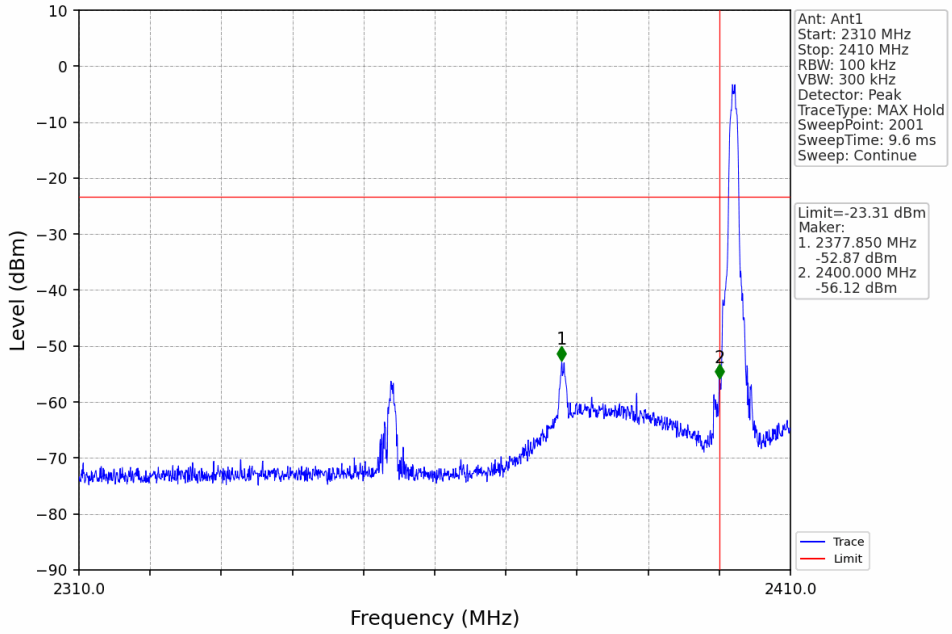
GFSK_DH5_HOPP_Ant1_NTNV



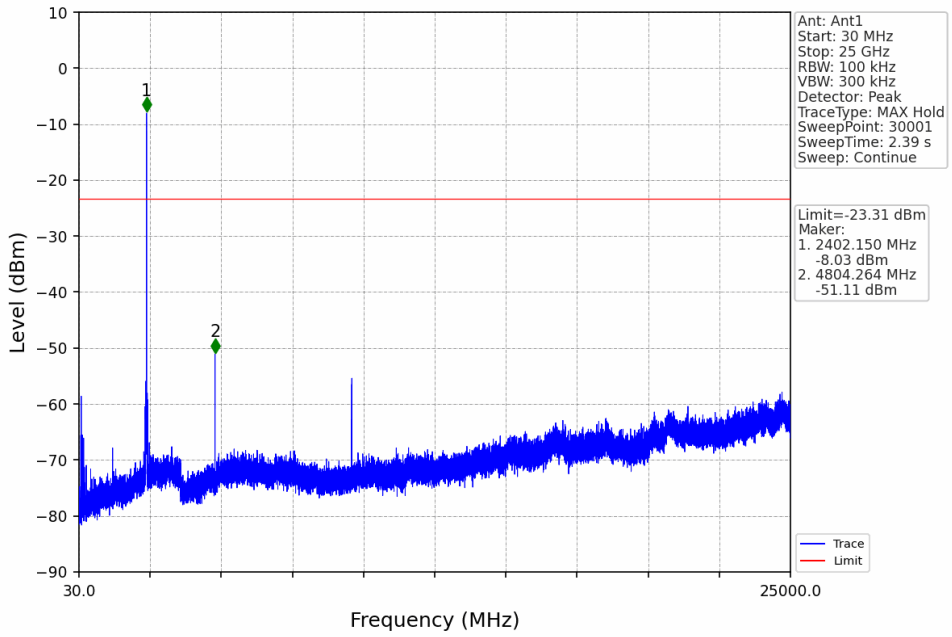
GFSK_DH5_HOPP_Ant1_NTNV



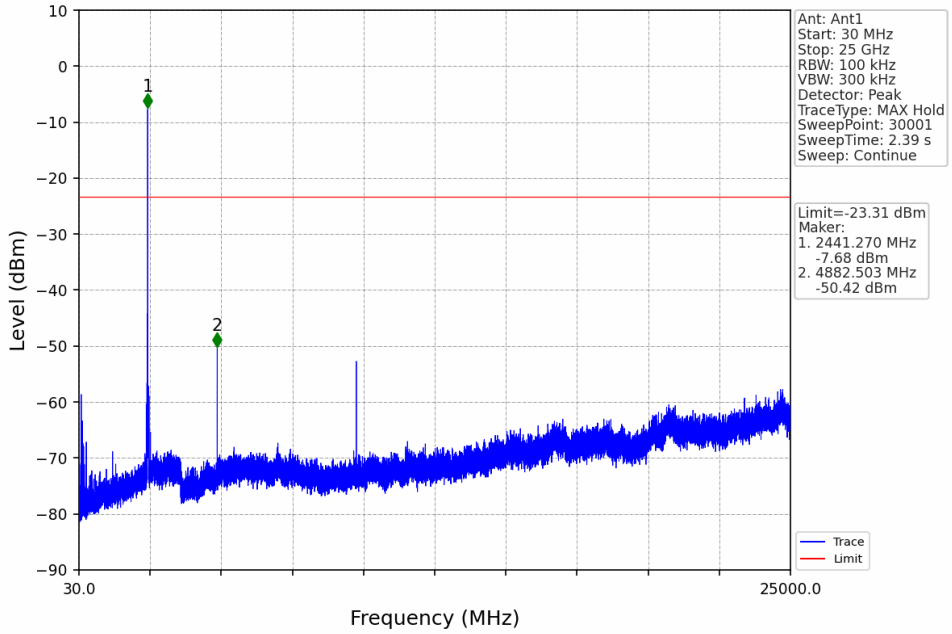
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



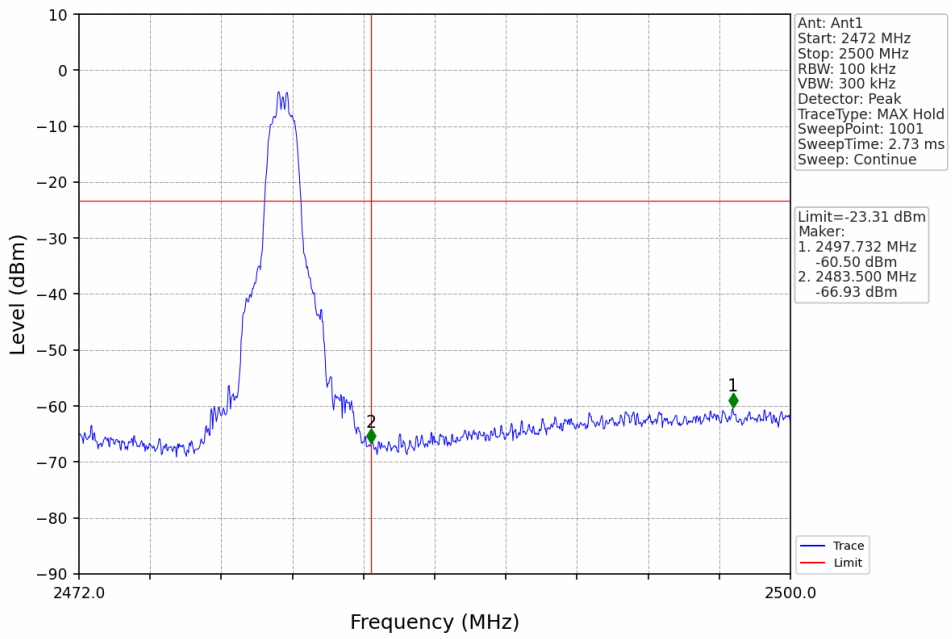
π/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



π/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



π/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



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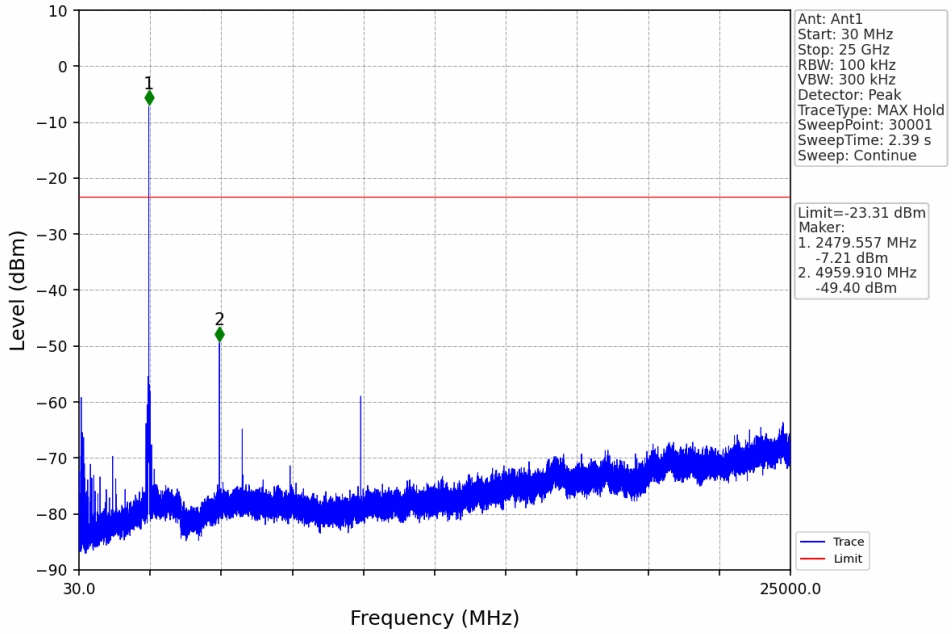
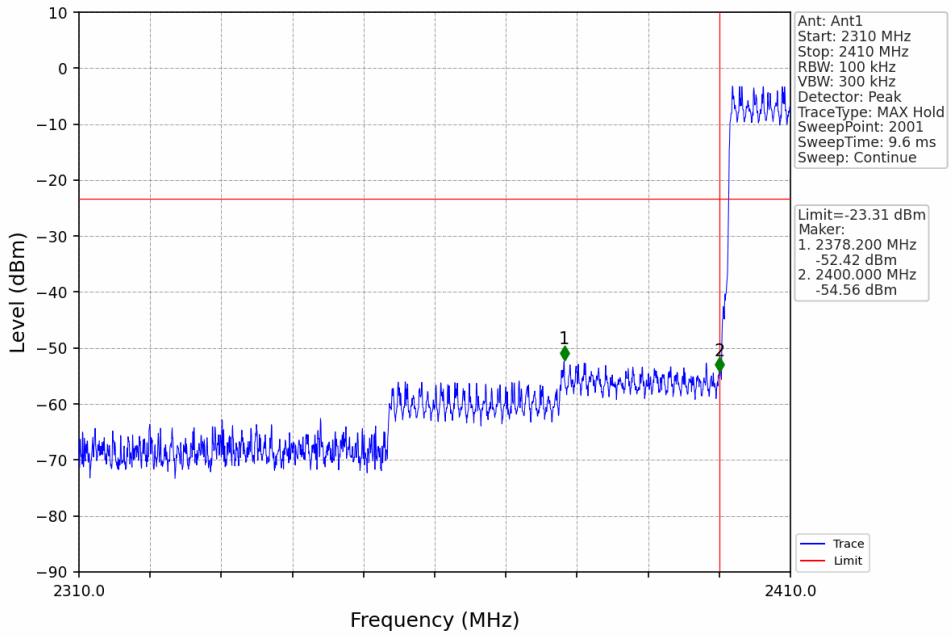


π/4DQPSK_2DH5_HOPP_Ant1_NTNV



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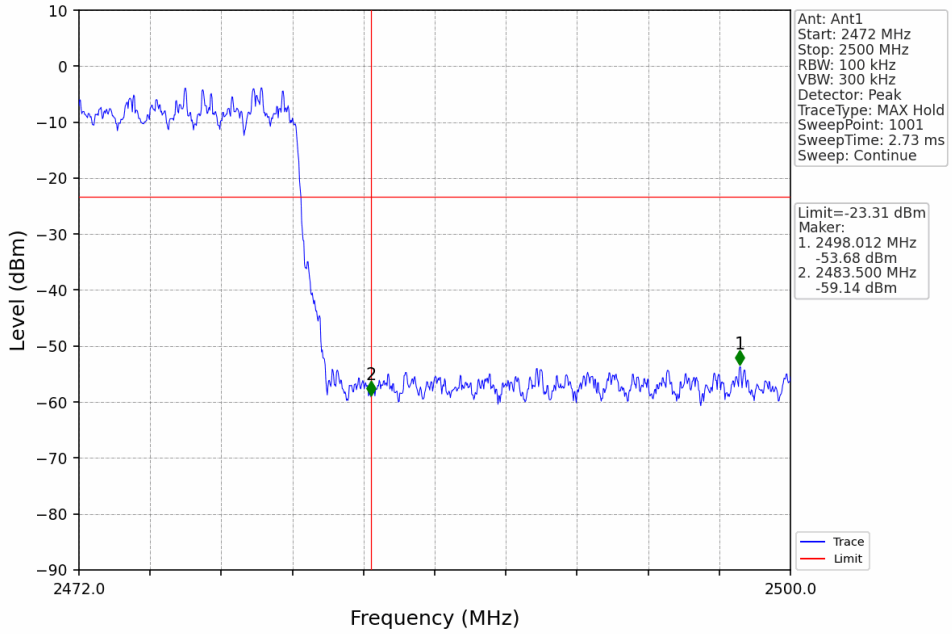

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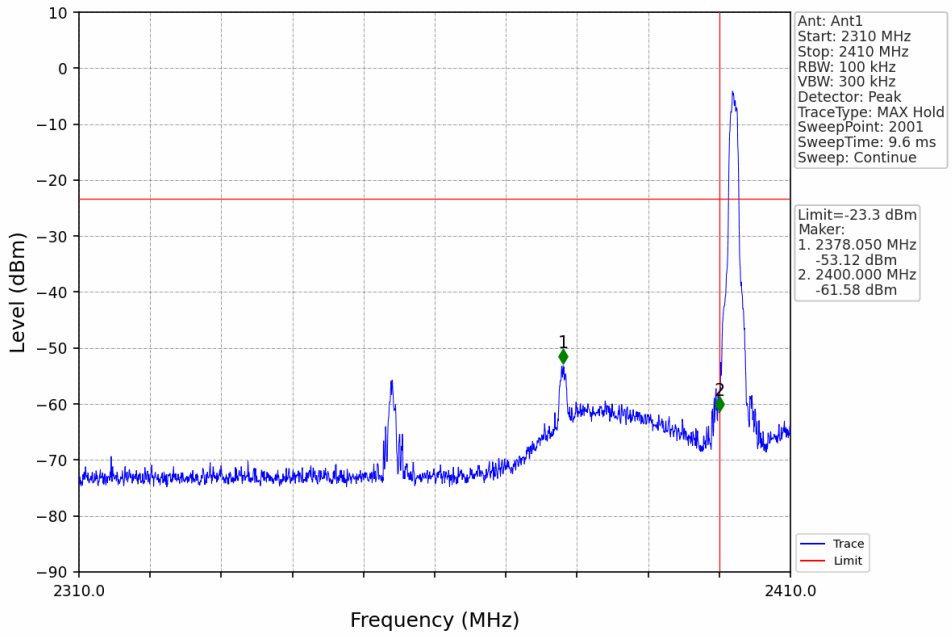

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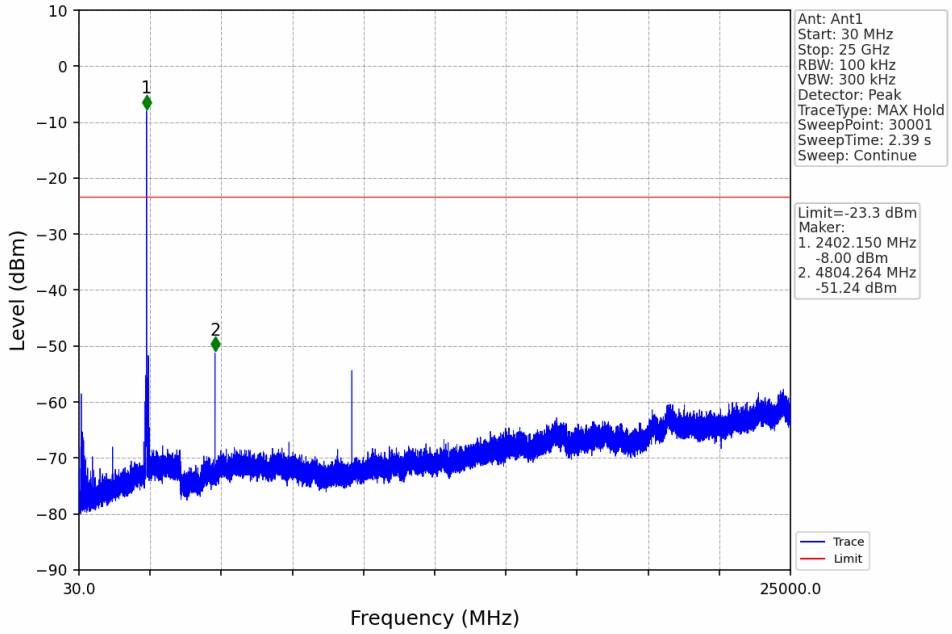

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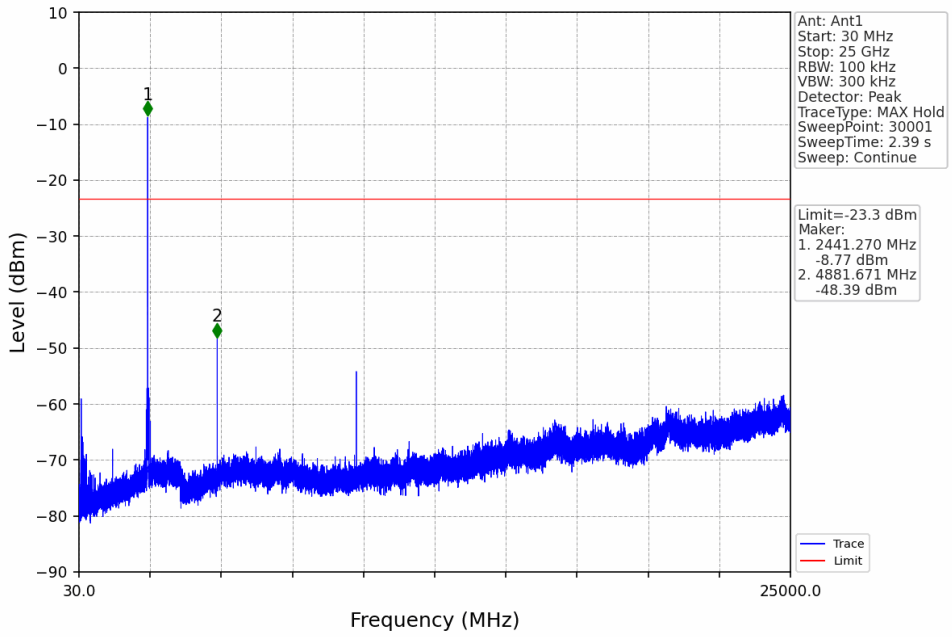

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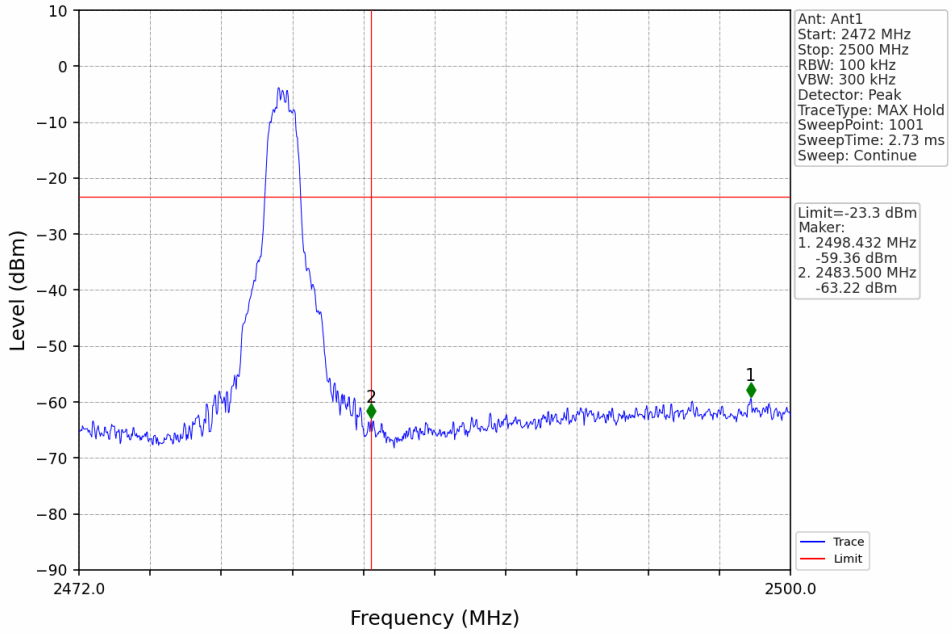

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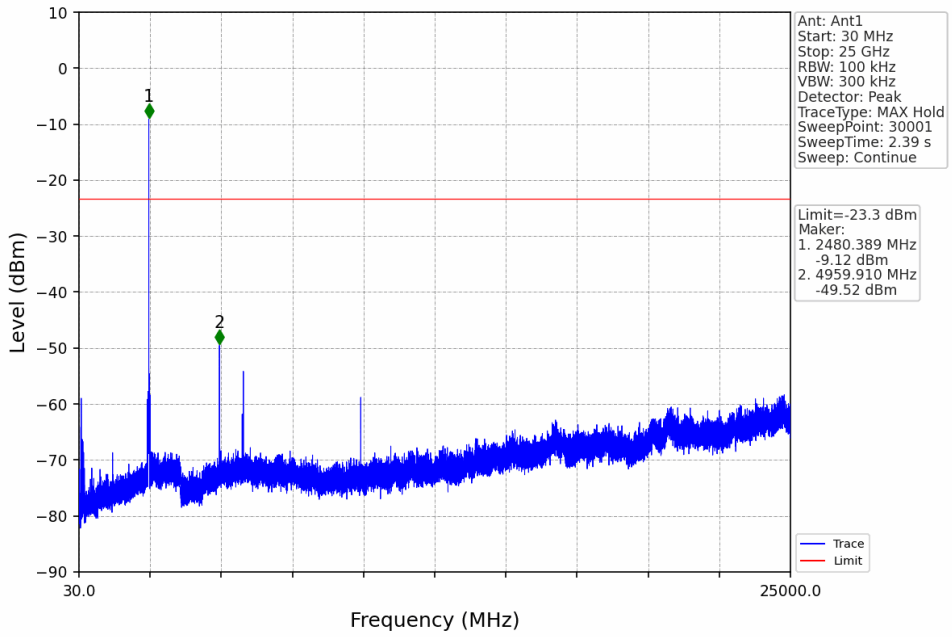

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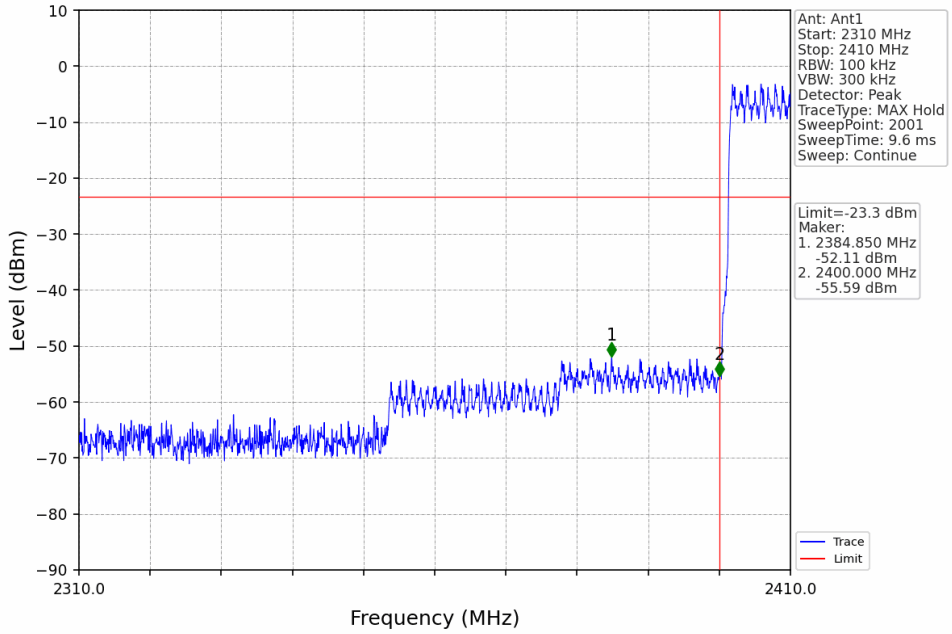

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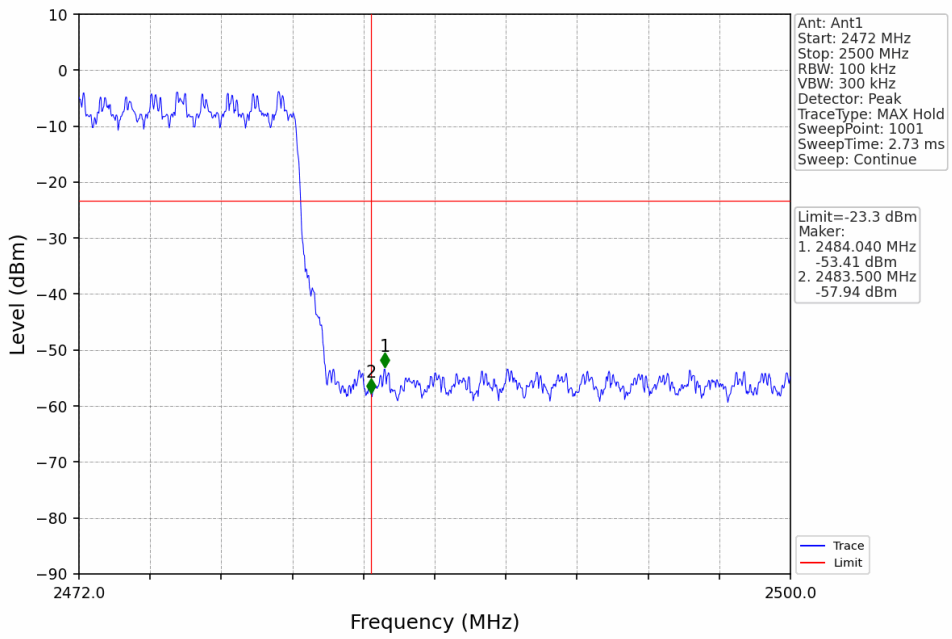

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