1. Bandwidth

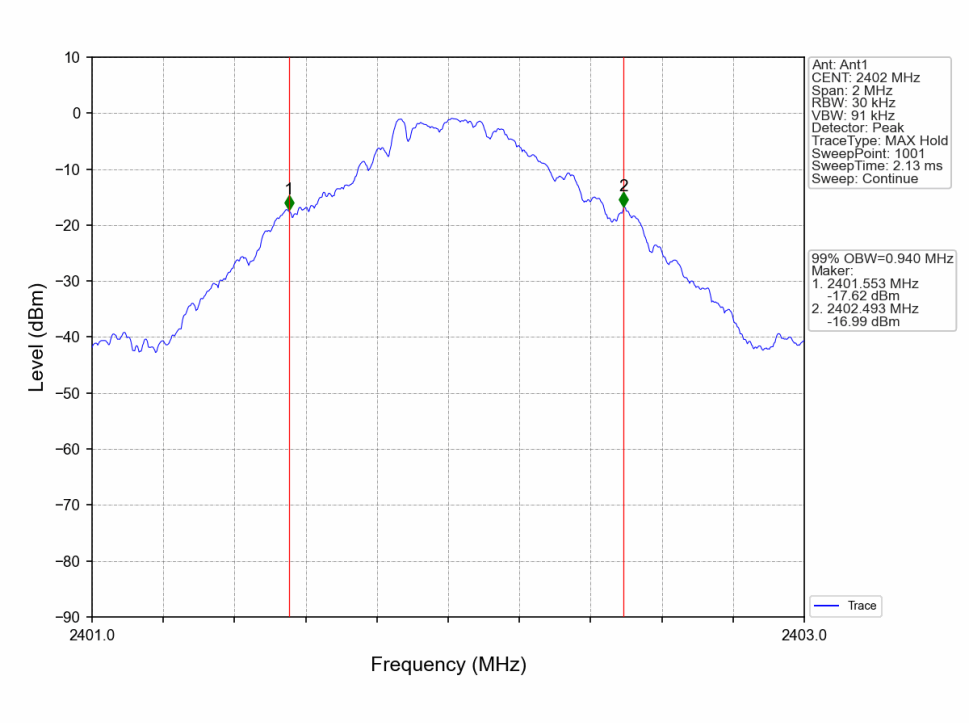
1.1 OBW

1.1.1 Test Result

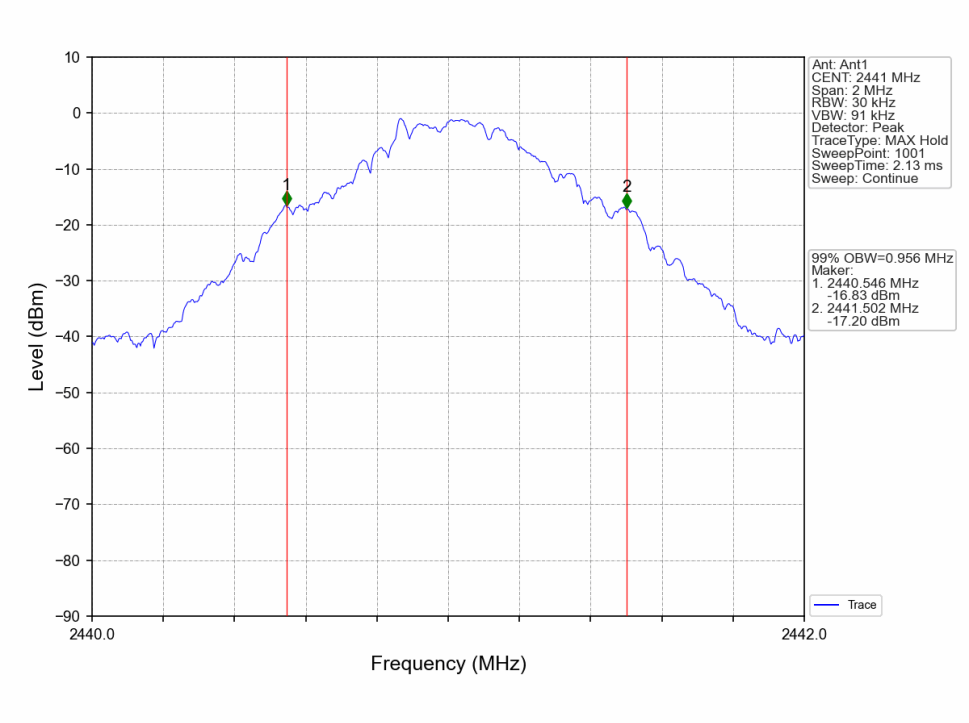
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	1	0.940	Pass
		2441	DH5	1	0.956	Pass
		2480	DH5	1	0.961	Pass
π/4-DQPSK	SISO	2402	2DH5	1	1.208	Pass
		2441	2DH5	1	1.218	Pass
		2480	2DH5	1	1.232	Pass
8-DPSK	SISO	2402	3DH5	1	1.211	Pass
		2441	3DH5	1	1.218	Pass
		2480	3DH5	1	1.221	Pass

1.1.2 Test Graph

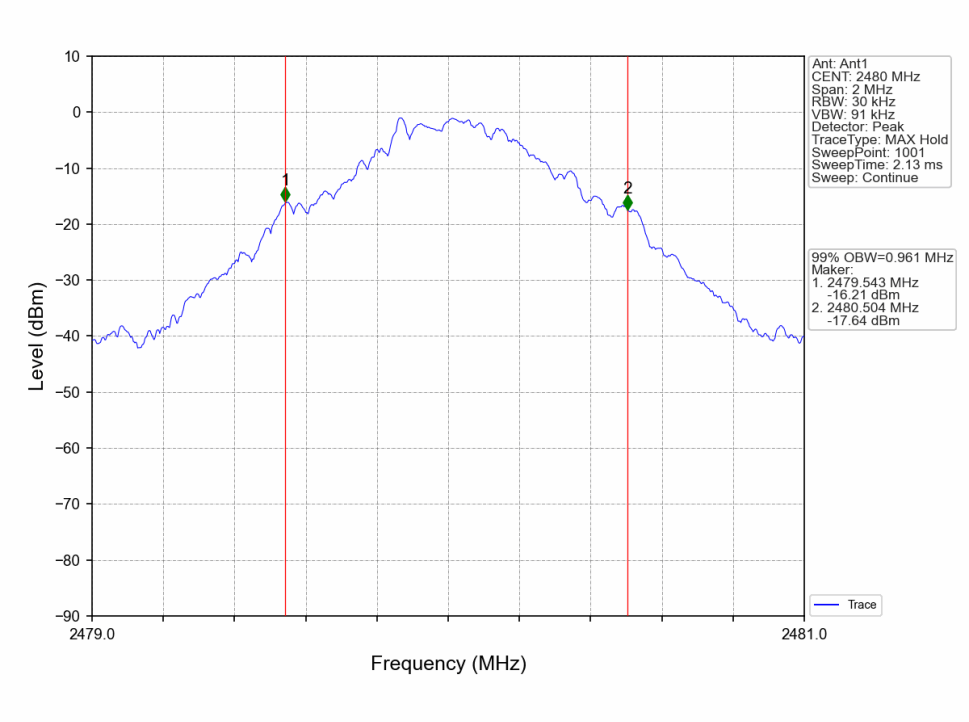
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



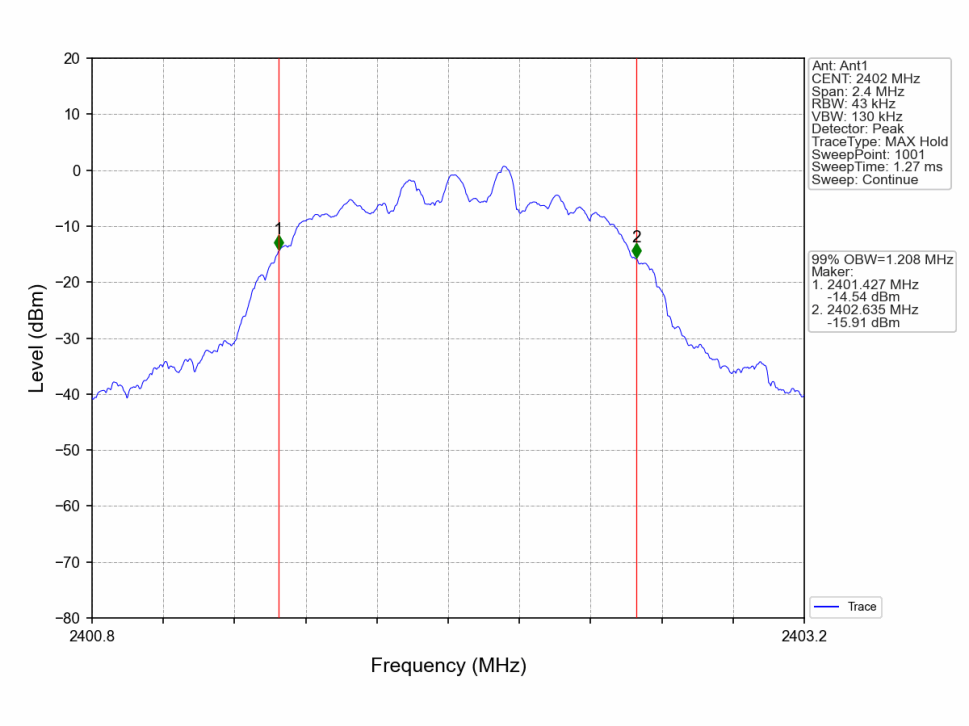
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



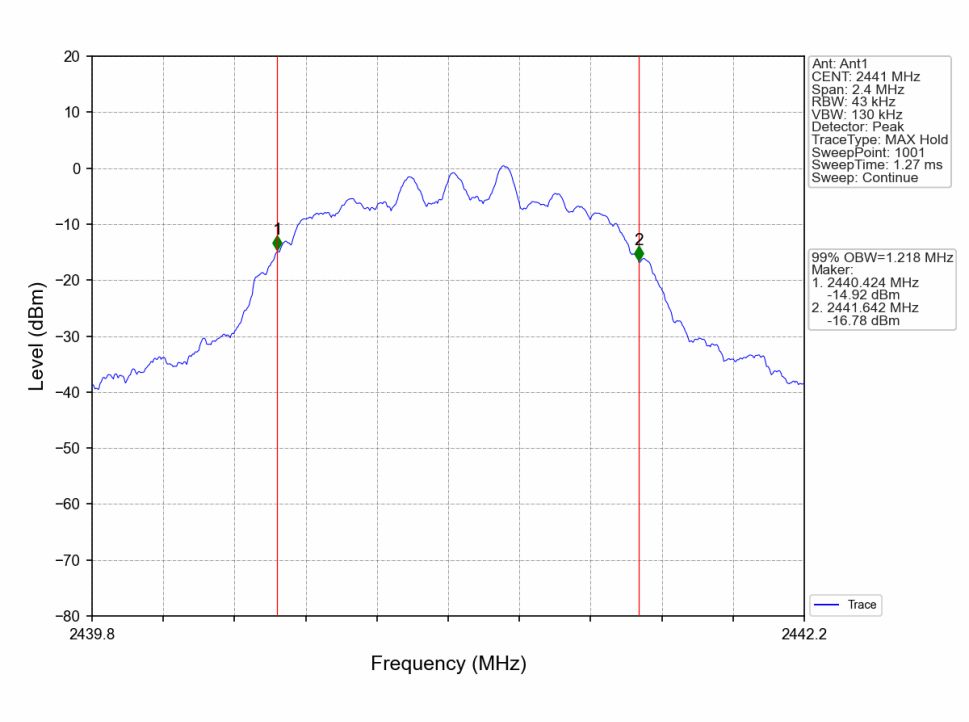
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



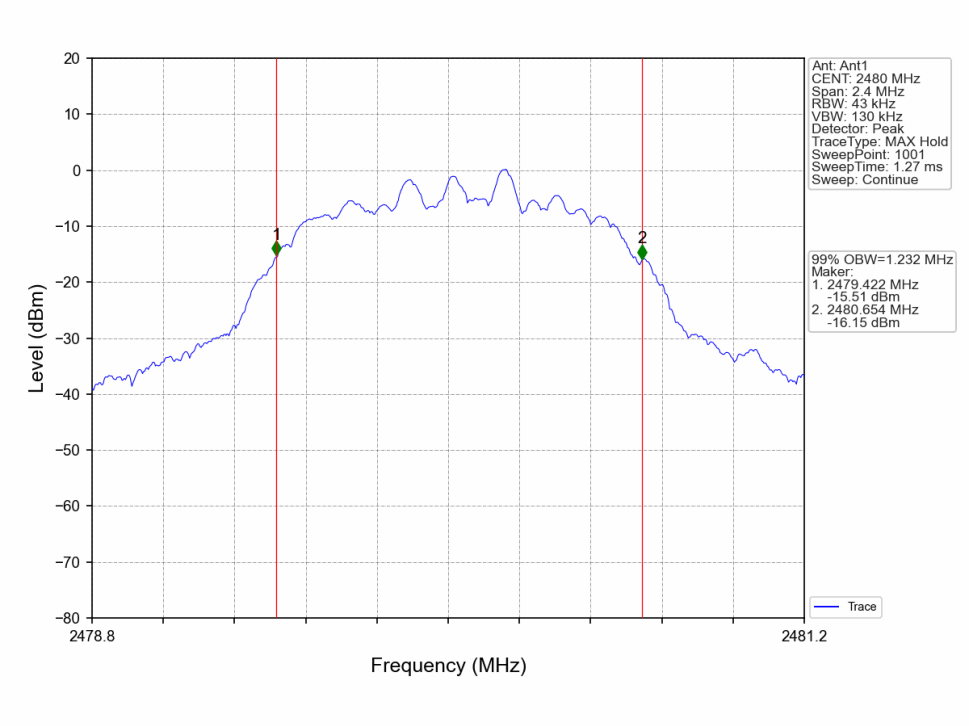
π/4-DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



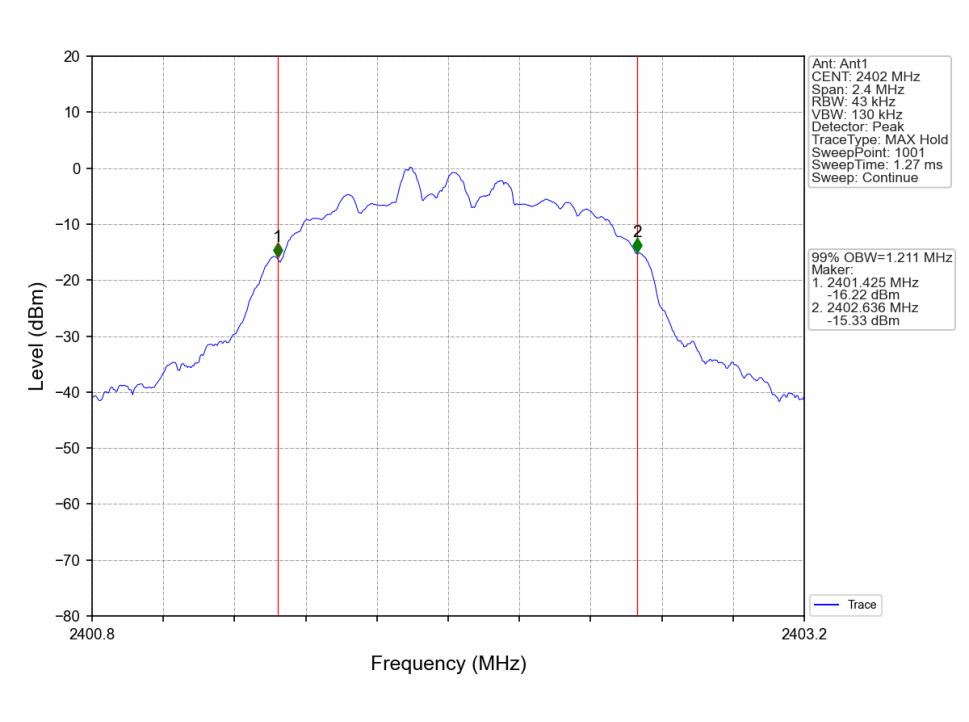
π/4-DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



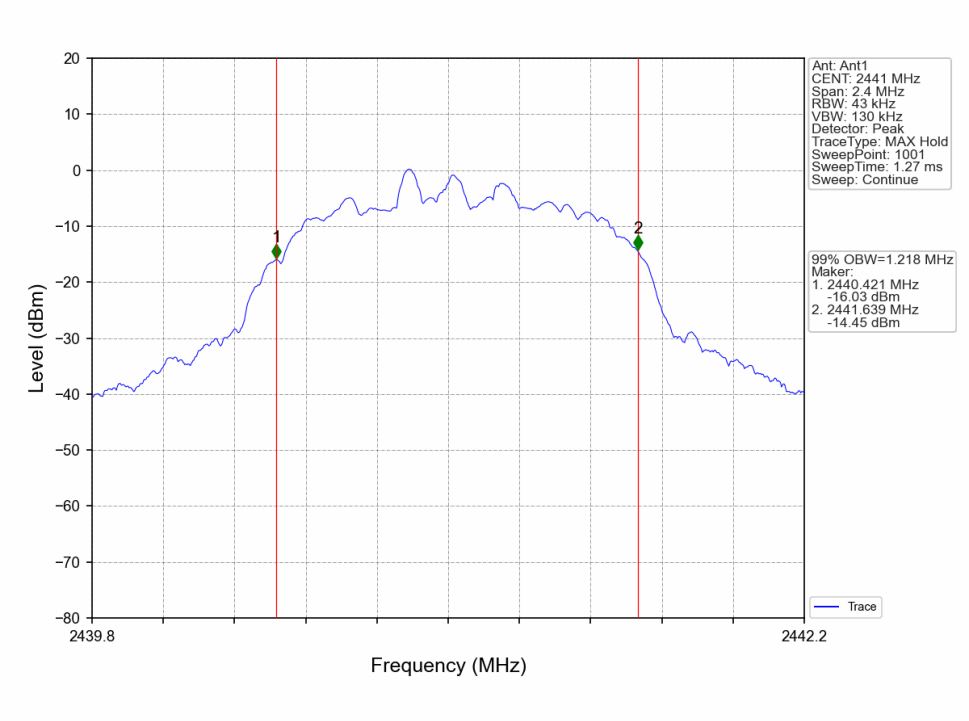
π/4-DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



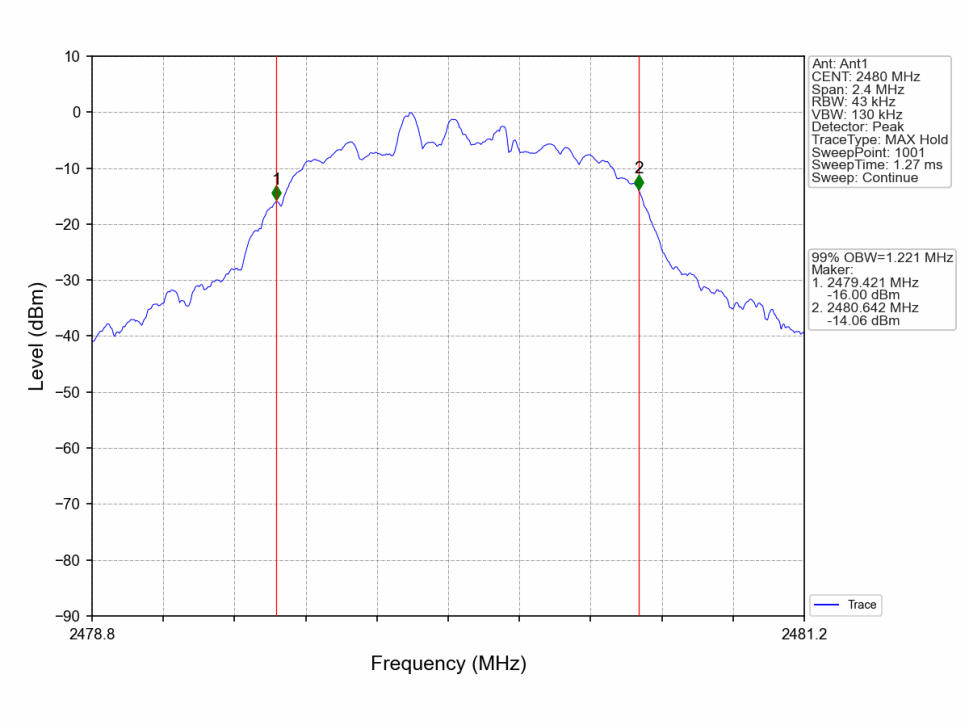
8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8-DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



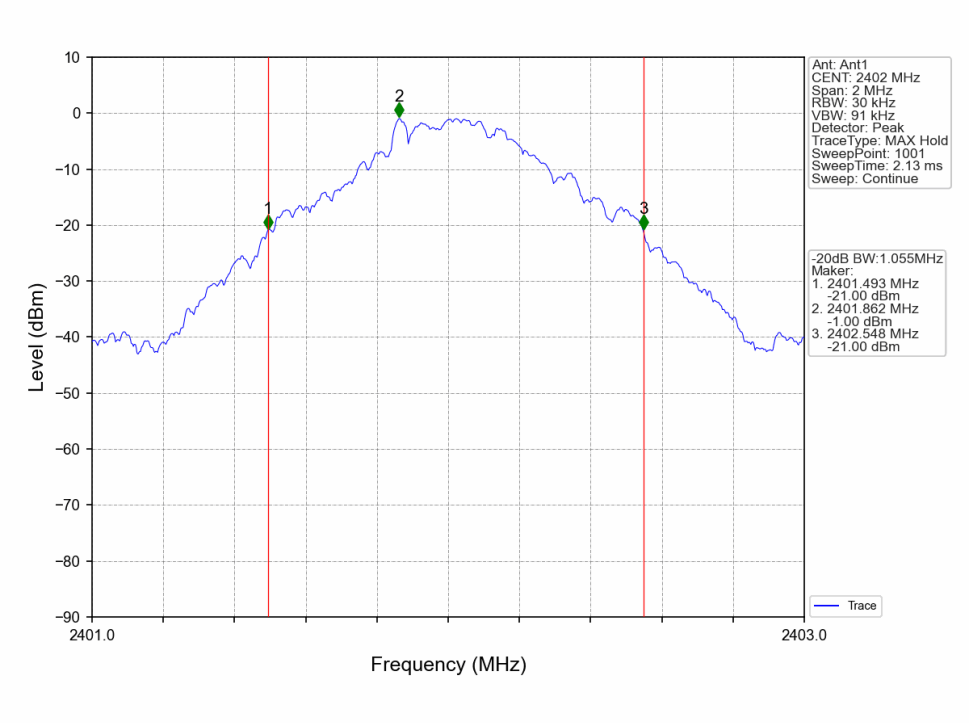
1.2 20dB BW

1.2.1 Test Result

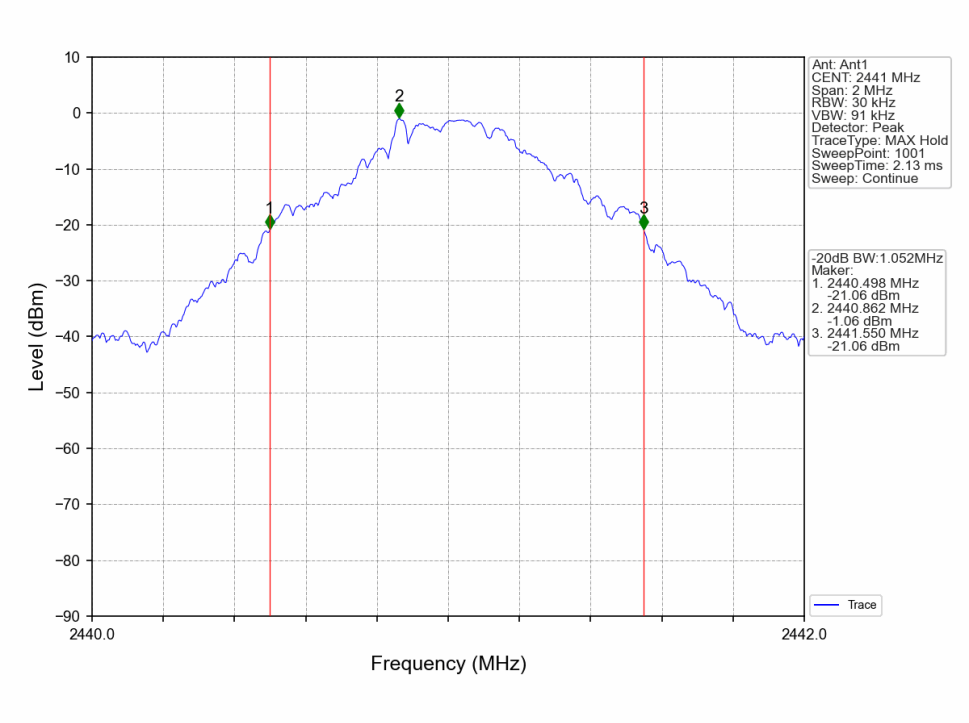
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	1	1.055	Pass
		2441	DH5	1	1.052	Pass
		2480	DH5	1	1.064	Pass
π/4-DQPSK	SISO	2402	2DH5	1	1.328	Pass
		2441	2DH5	1	1.330	Pass
		2480	2DH5	1	1.343	Pass
8-DPSK	SISO	2402	3DH5	1	1.324	Pass
		2441	3DH5	1	1.322	Pass
		2480	3DH5	1	1.314	Pass

1.2.2 Test Graph

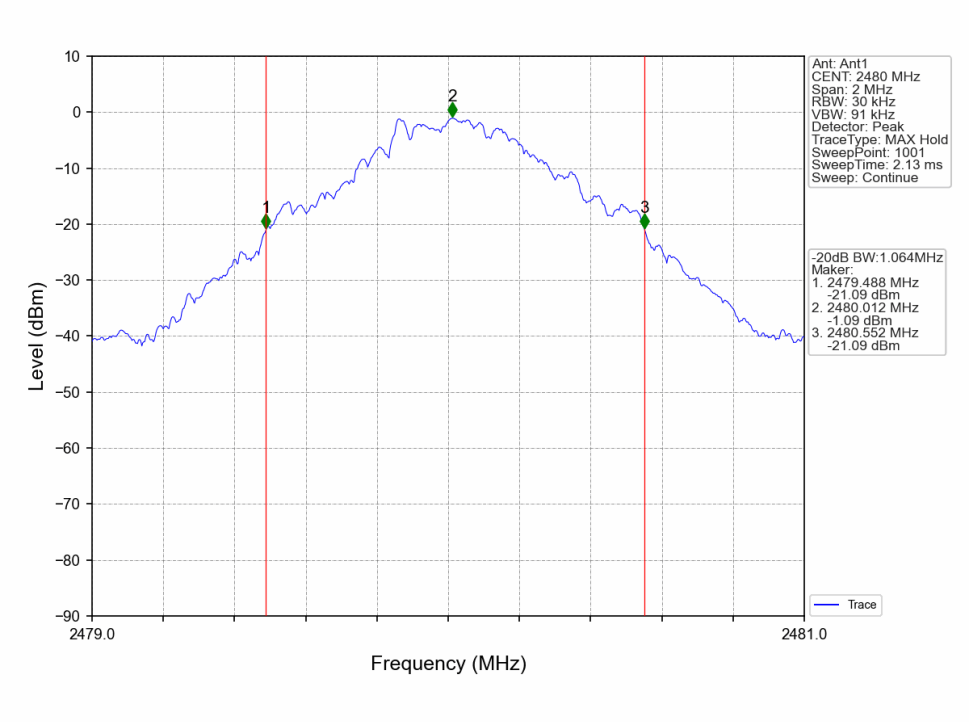
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



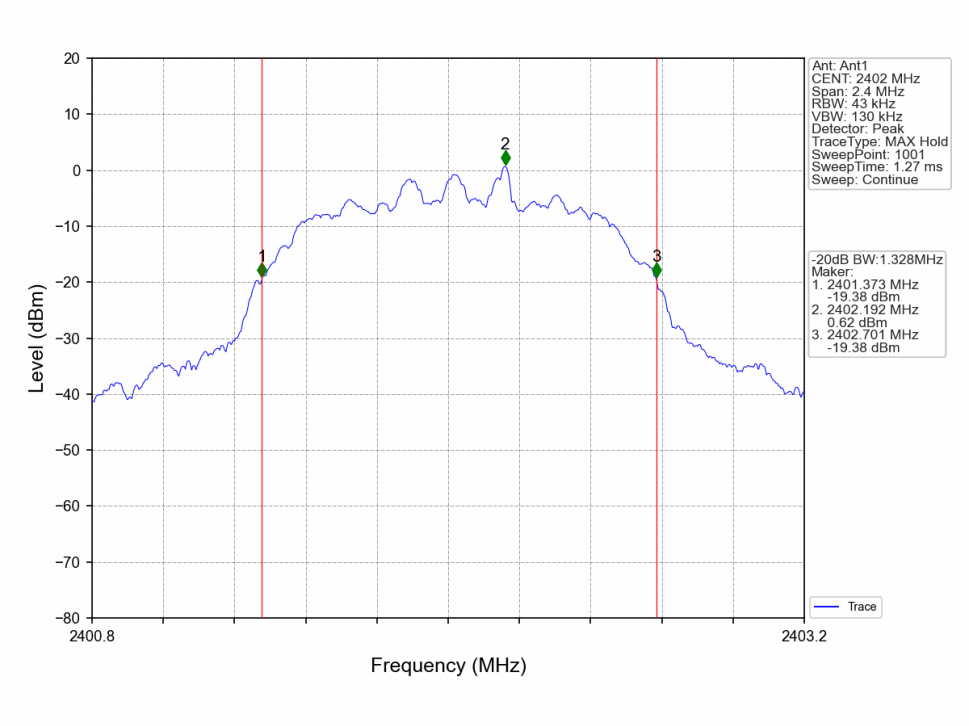
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



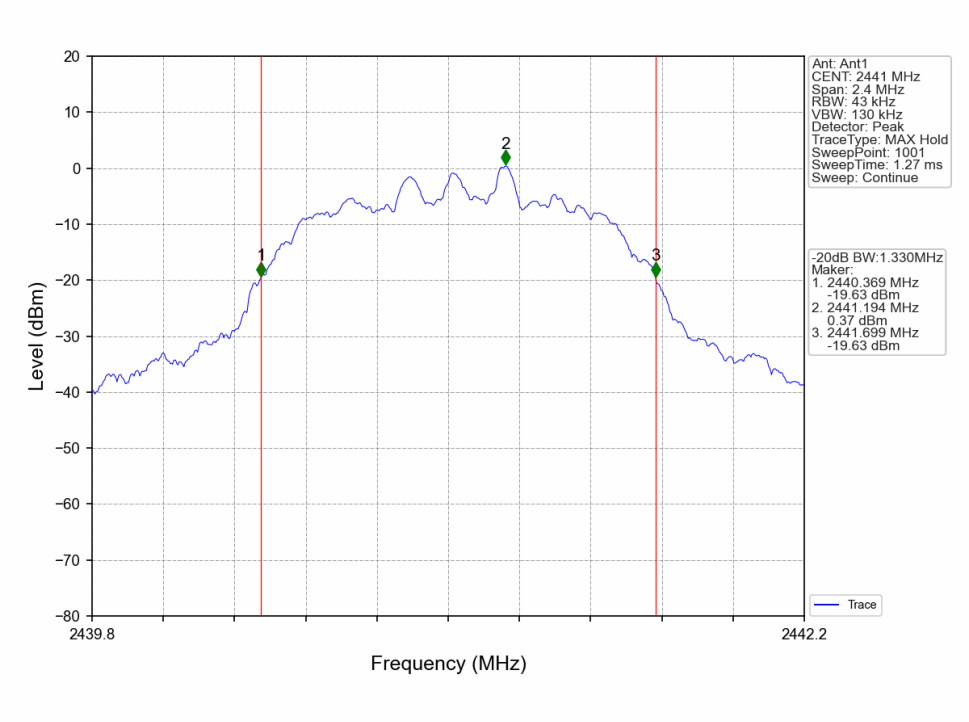
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



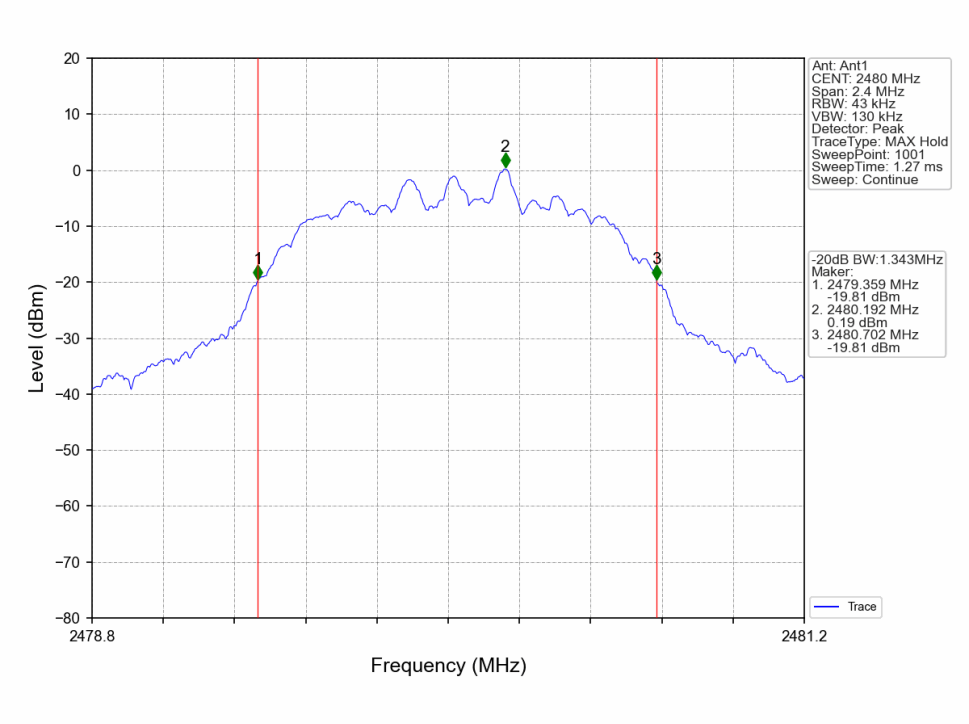
π/4-DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



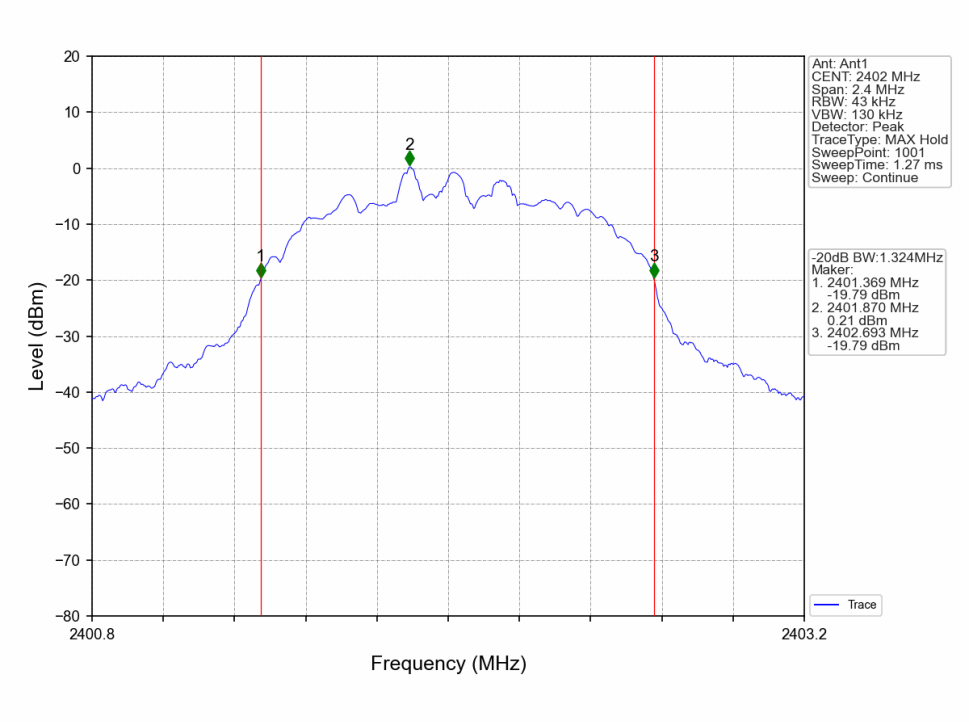
π/4-DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



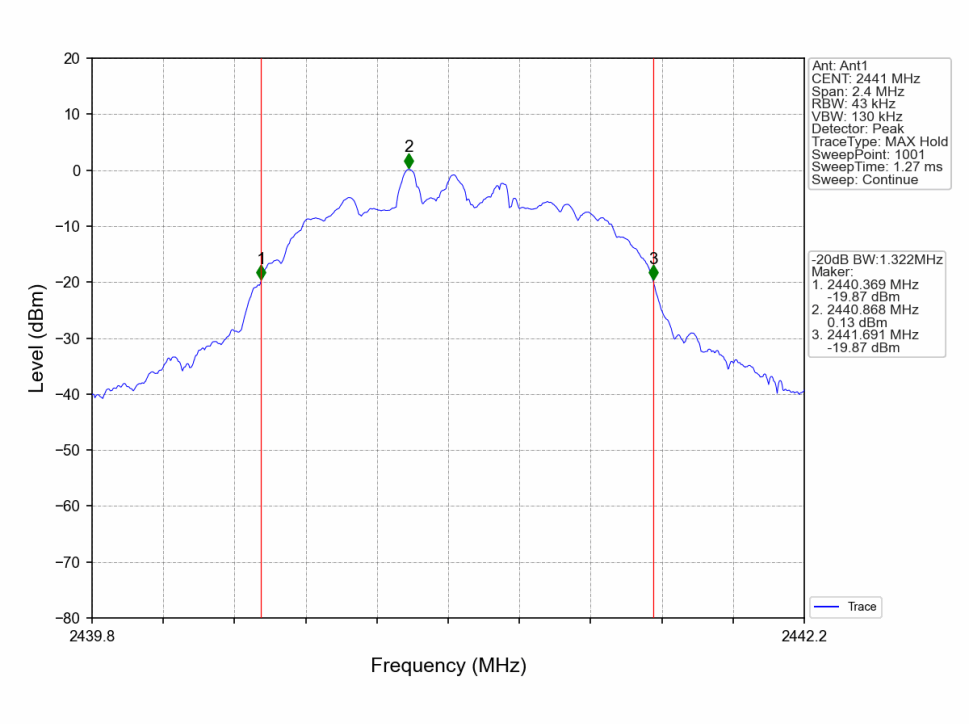
π/4-DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



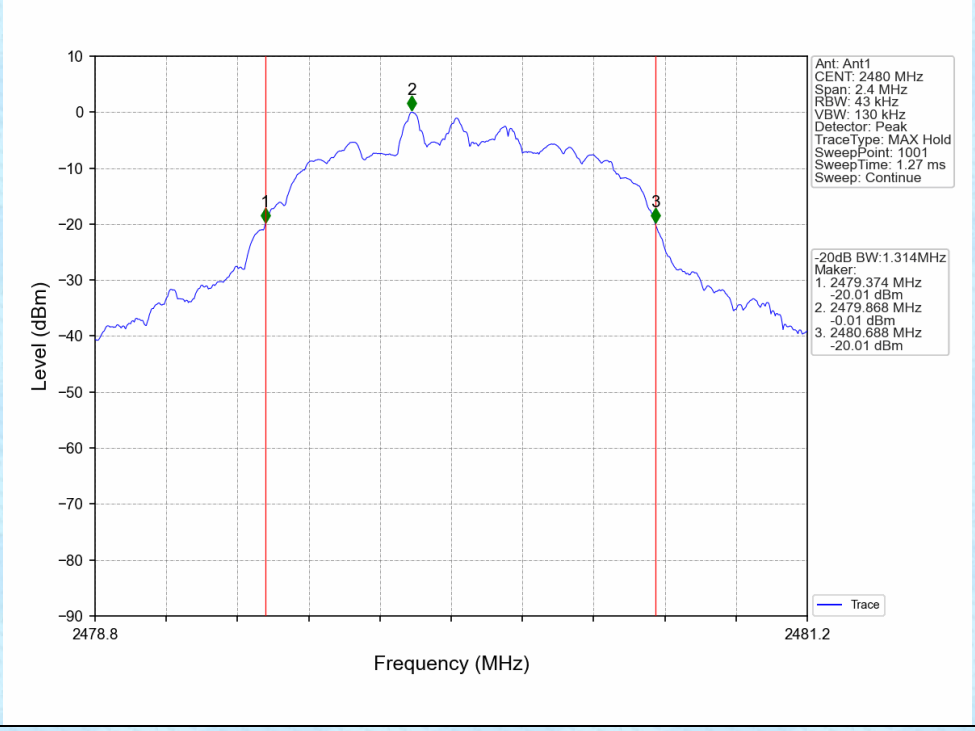
8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8-DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



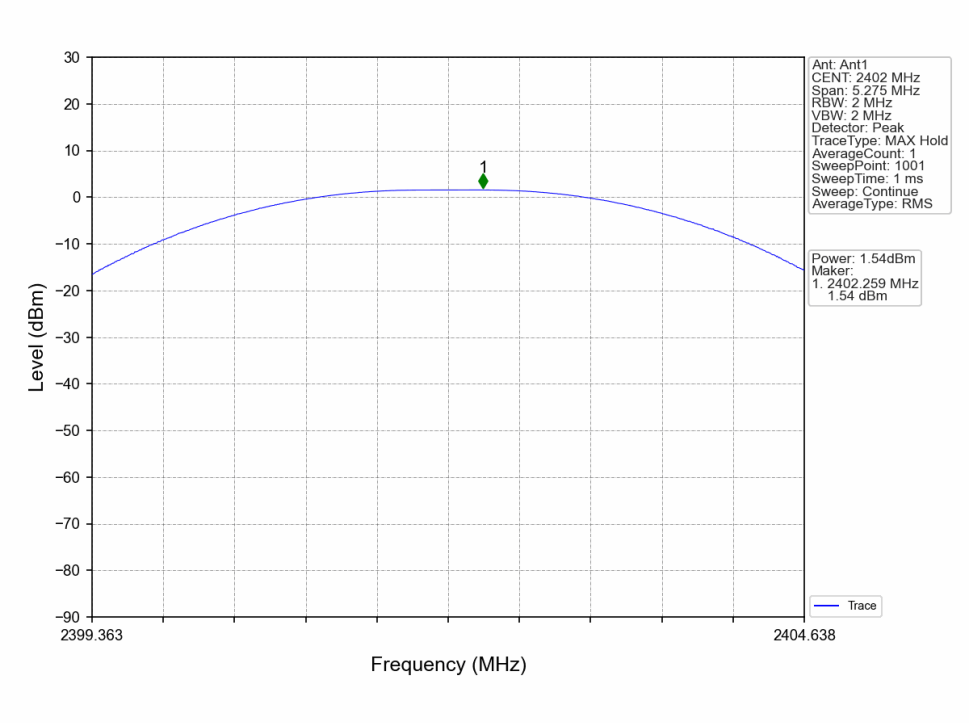
2. Maximum Conducted Output Power

2.1 Test Result

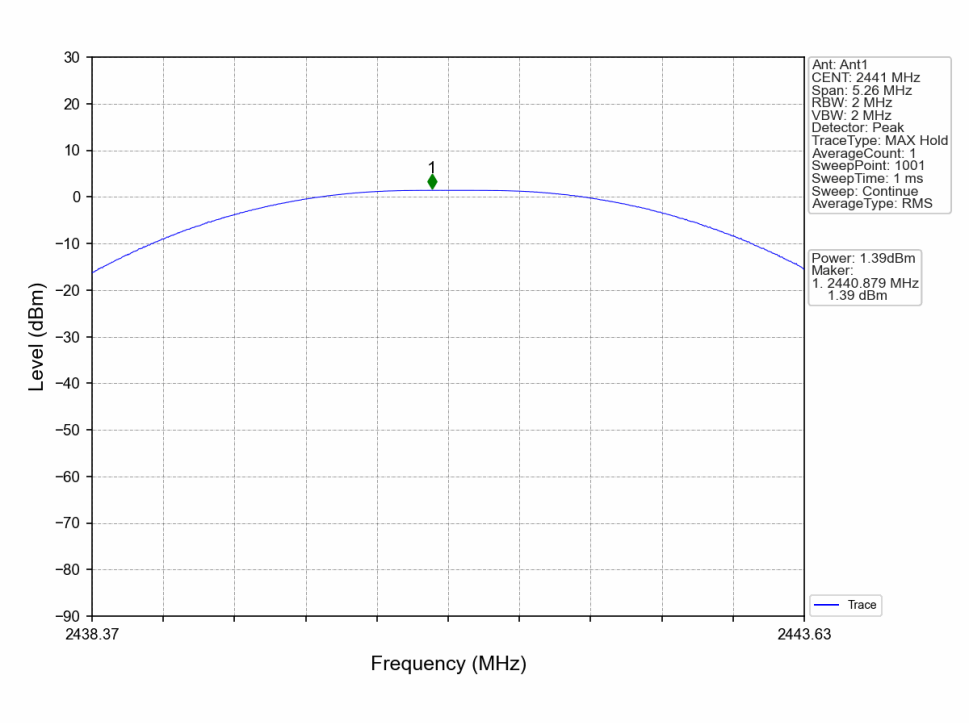
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	1.54	<=20.97	Pass
		2441	DH5	1.39	<=20.97	Pass
		2480	DH5	1.22	<=20.97	Pass
π/4-DQPSK	SISO	2402	2DH5	2.34	<=20.97	Pass
		2441	2DH5	2.21	<=20.97	Pass
		2480	2DH5	2.06	<=20.97	Pass
8-DPSK	SISO	2402	3DH5	2.72	<=20.97	Pass
		2441	3DH5	2.59	<=20.97	Pass
		2480	3DH5	2.42	<=20.97	Pass

2.2 Test Graph

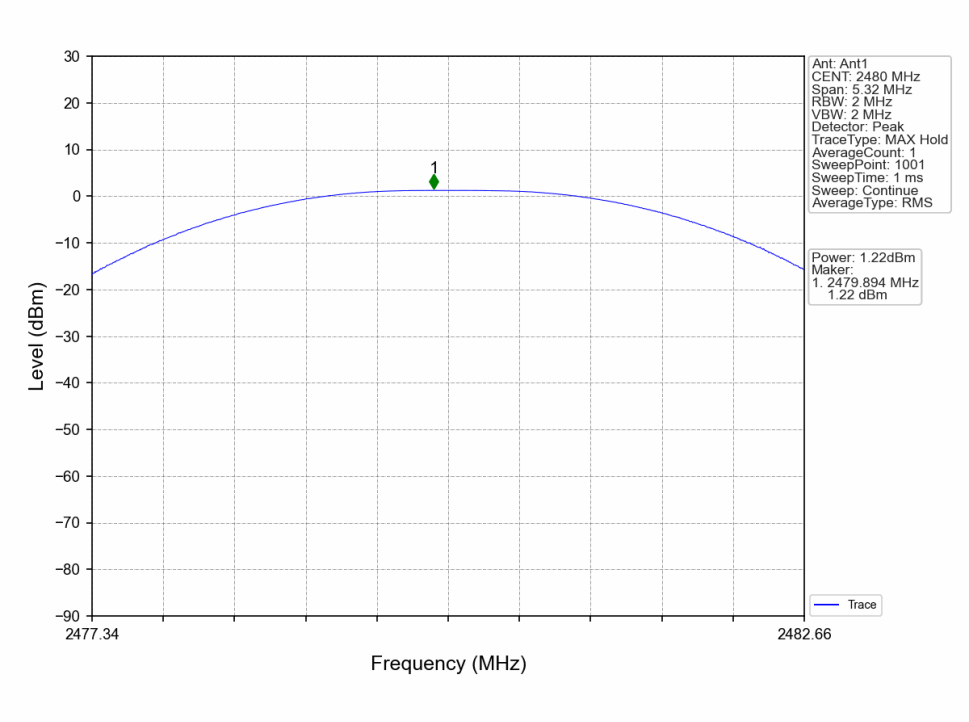
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



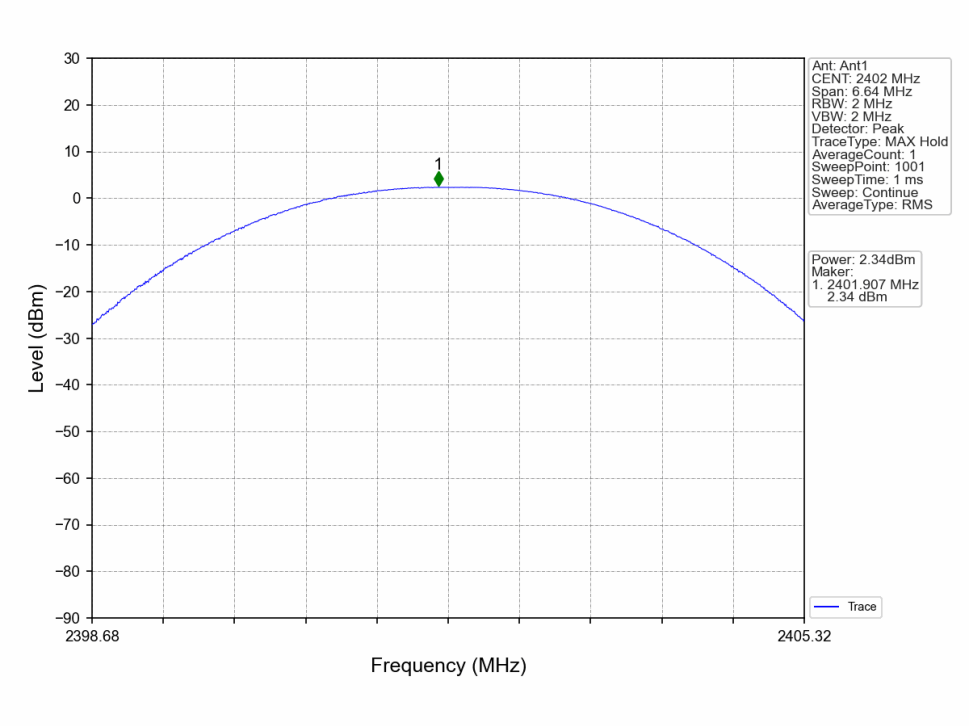
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



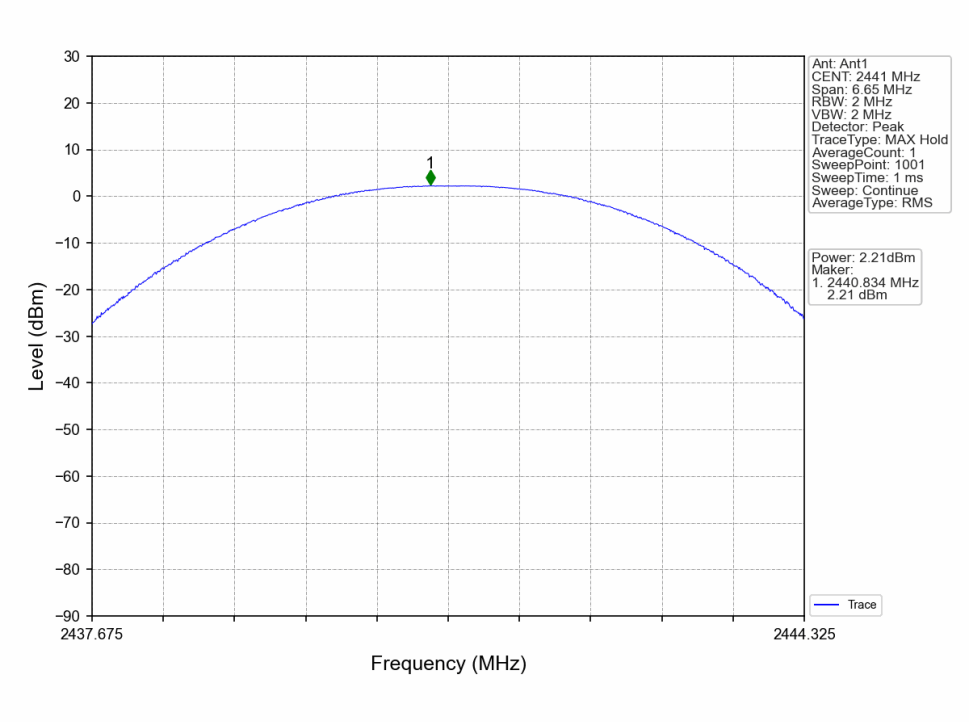
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



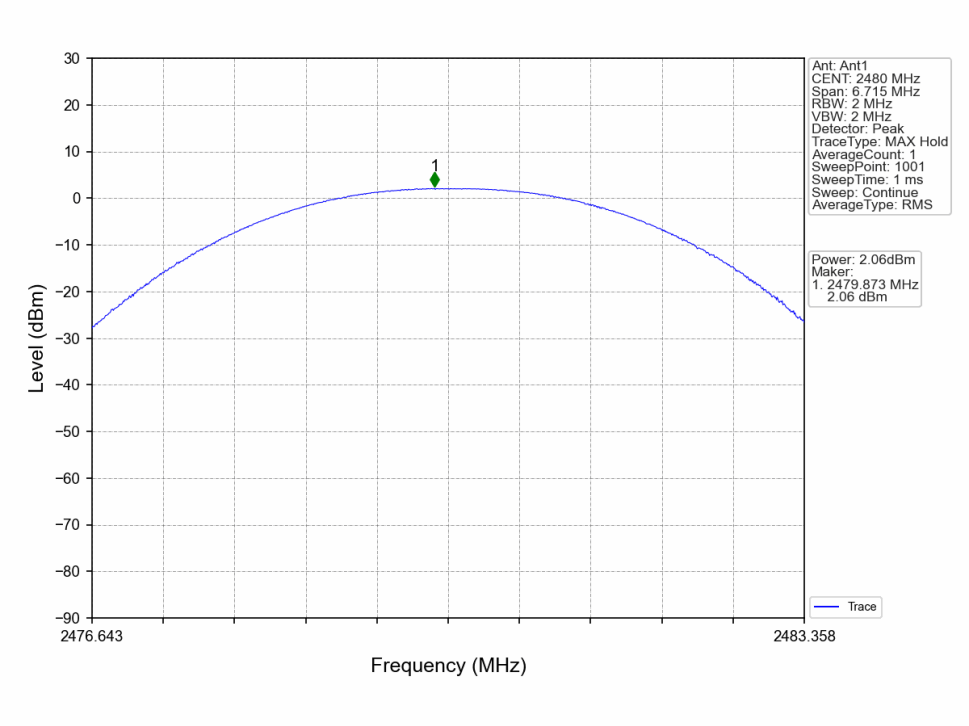
π/4-DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



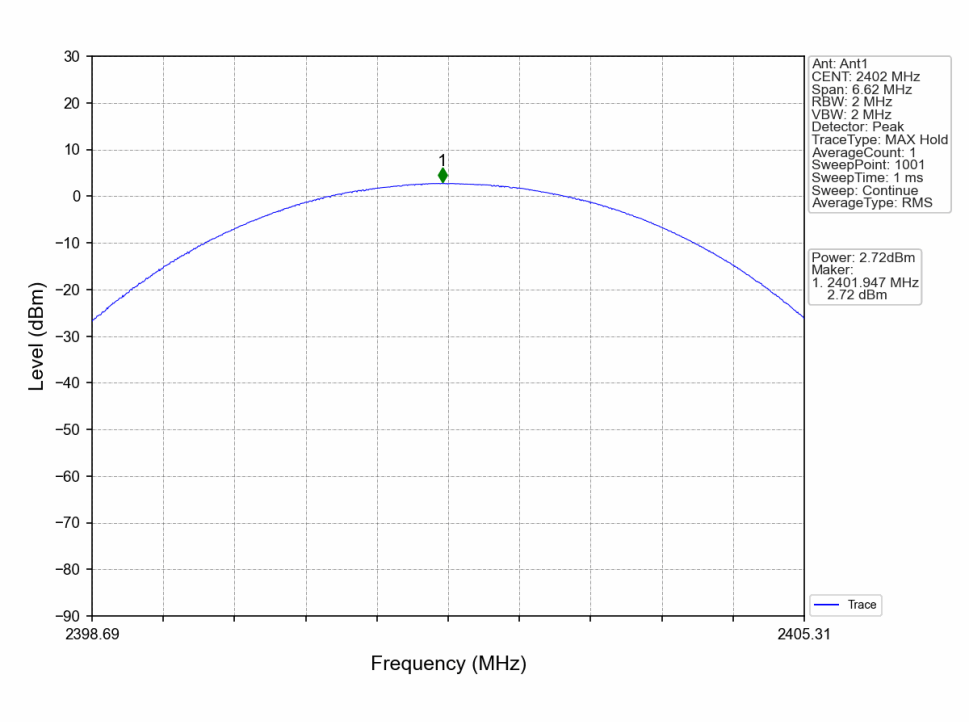
π/4-DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



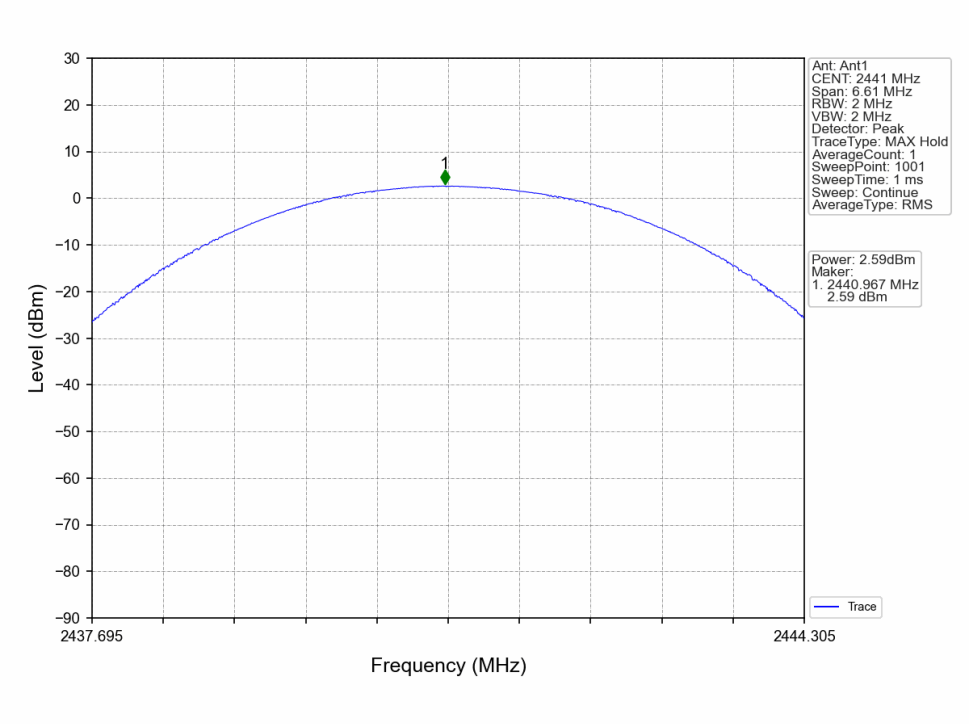
π/4-DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



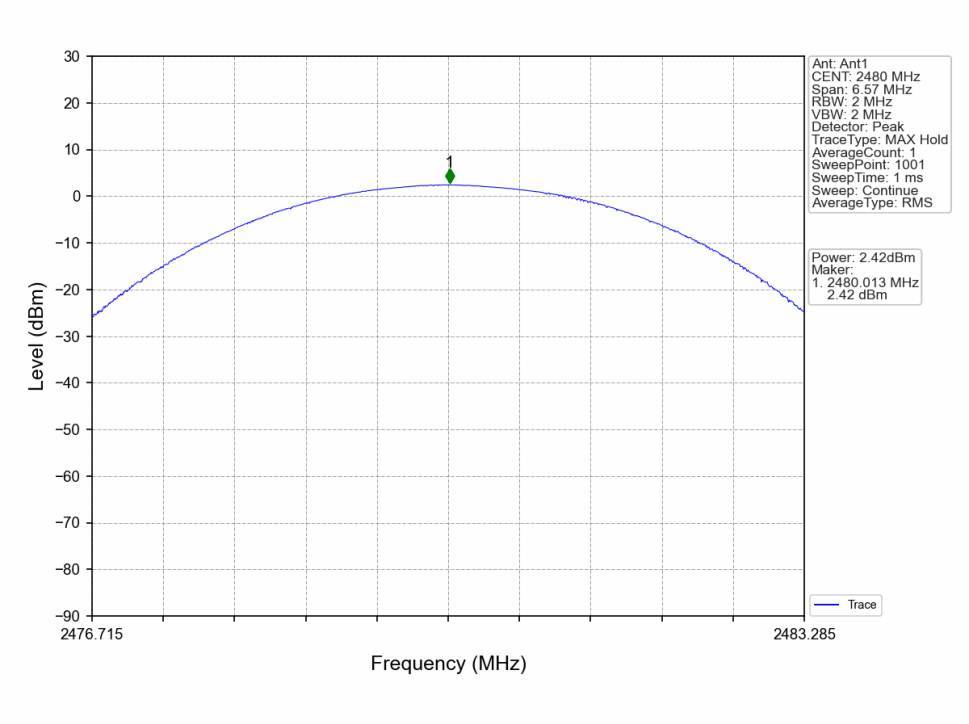
8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8-DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



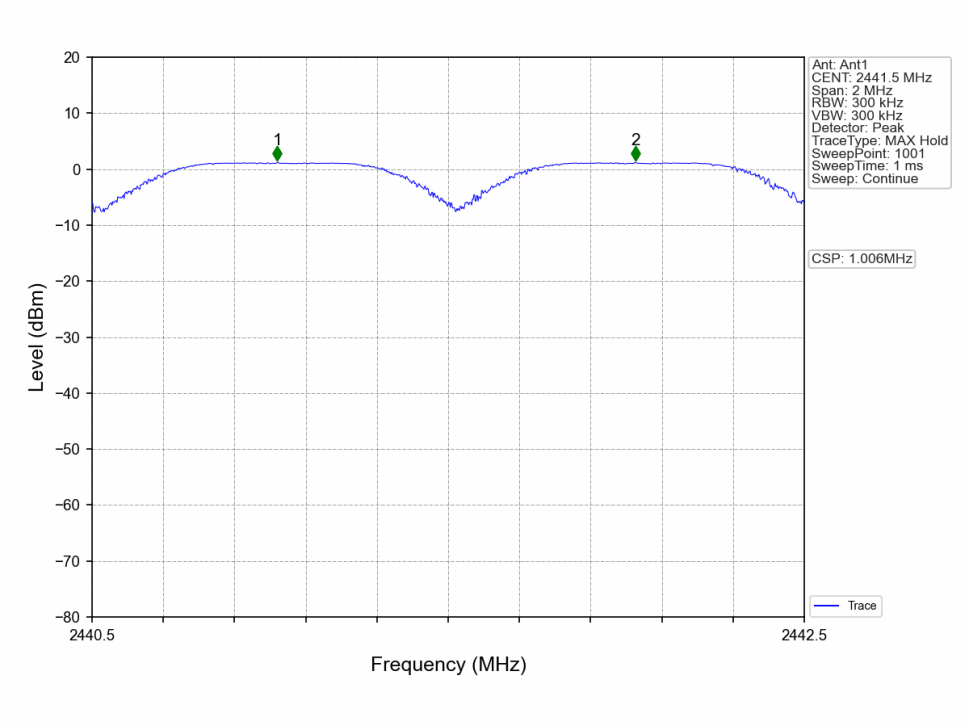
3. Carrier Frequency Separation

3.1 Test Result

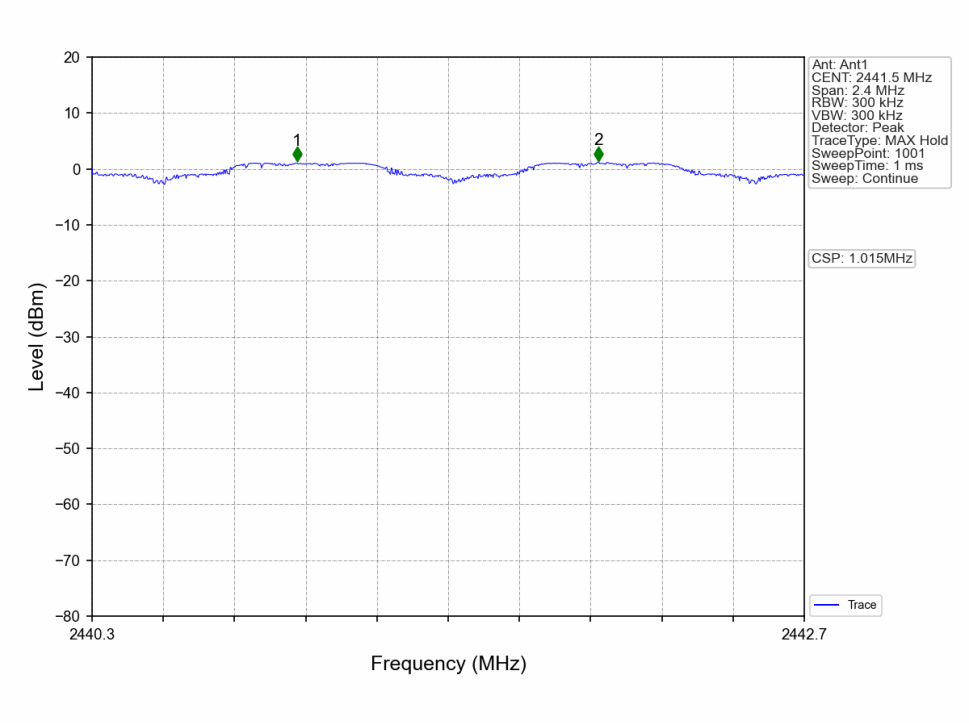
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.006	1.064	>=0.709	Pass
π/4-DQPSK	SISO	HOPP	2DH5	1.015	1.343	>=0.895	Pass
8-DPSK	SISO	HOPP	3DH5	0.991	1.324	>=0.883	Pass

3.2 Test Graph

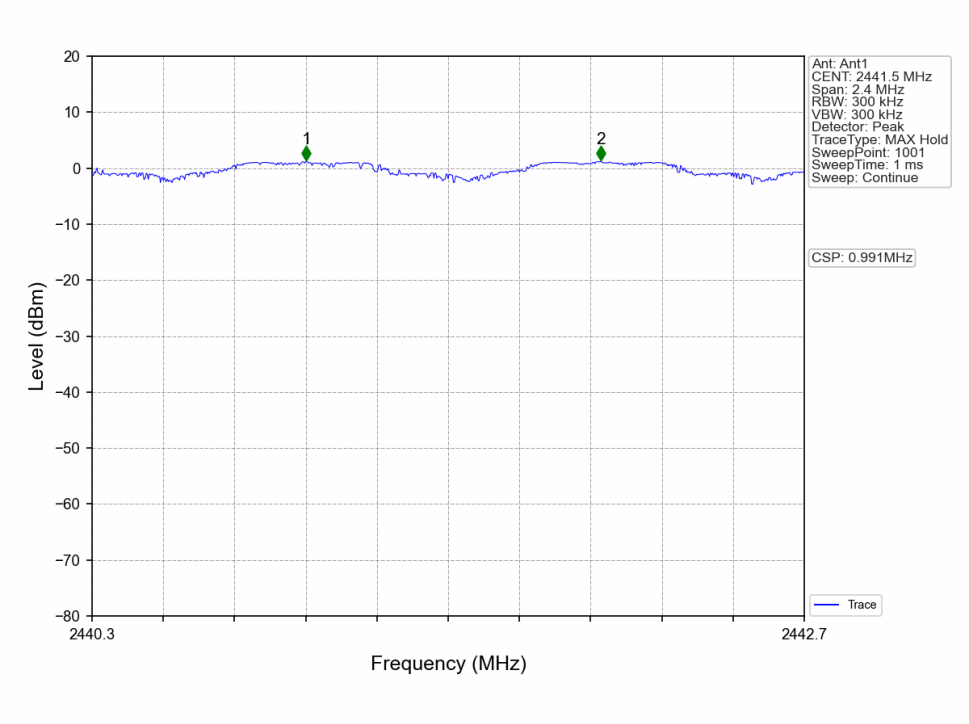
GFSK_DH5_HOPP_Ant1_NTNV



π/4-DQPSK_2DH5_HOPP_Ant1_NTNV



8-DPSK_3DH5_HOPP_Ant1_NTNV



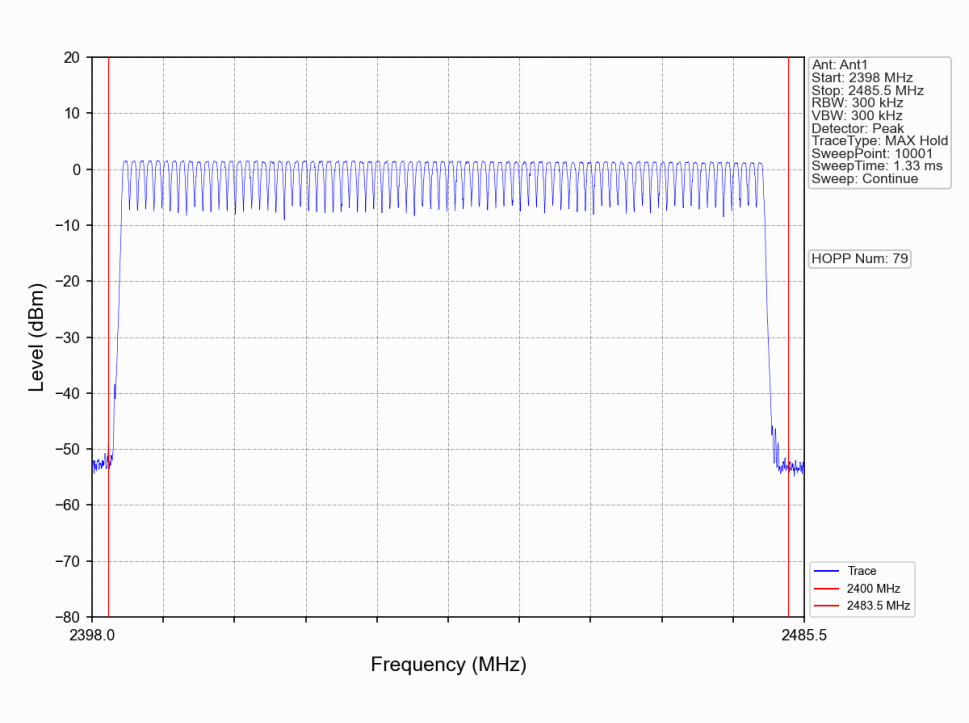
4. Number of Hopping Frequencies

4.1 Test Result

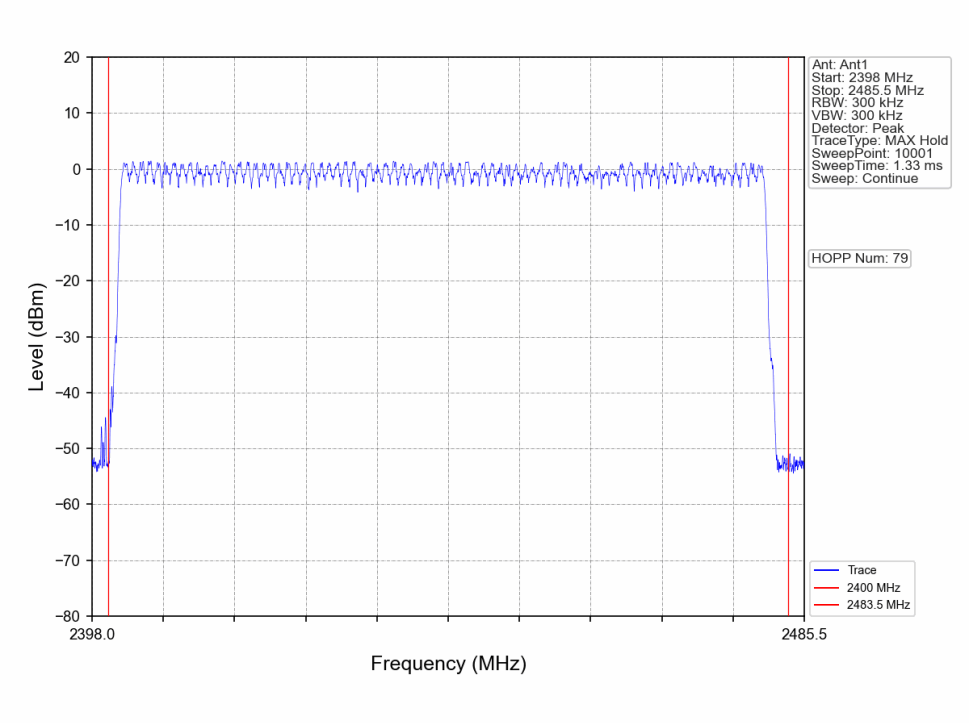
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
π/4-DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8-DPSK	SISO	HOPP	3DH5	79	>=15	Pass

4.2 Test Graph

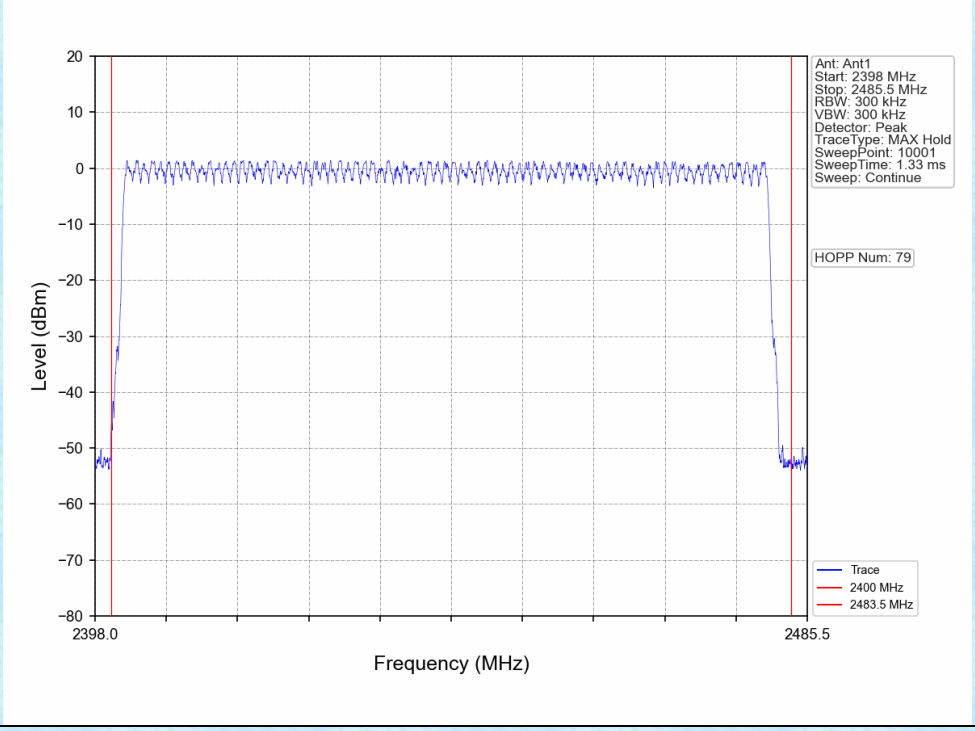
GFSK_DH5_HOPP_Ant1_NTNV



π/4-DQPSK_2DH5_HOPP_Ant1_NTNV



8-DPSK_3DH5_HOPP_Ant1_NTNV



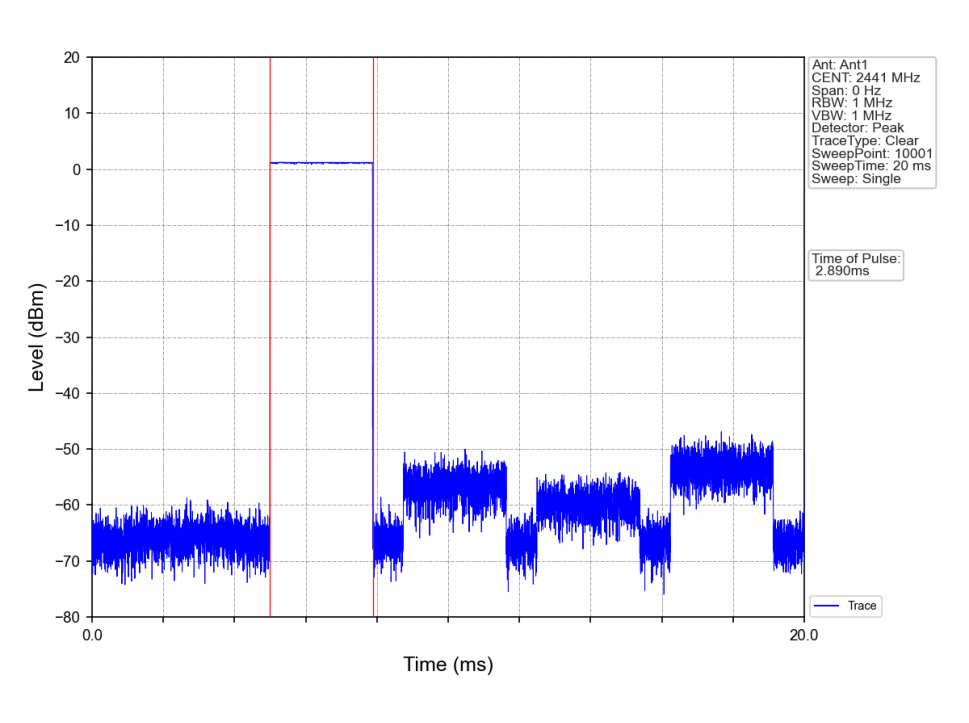
5. Time of Occupancy (Dwell Time)

5.1 Test Result

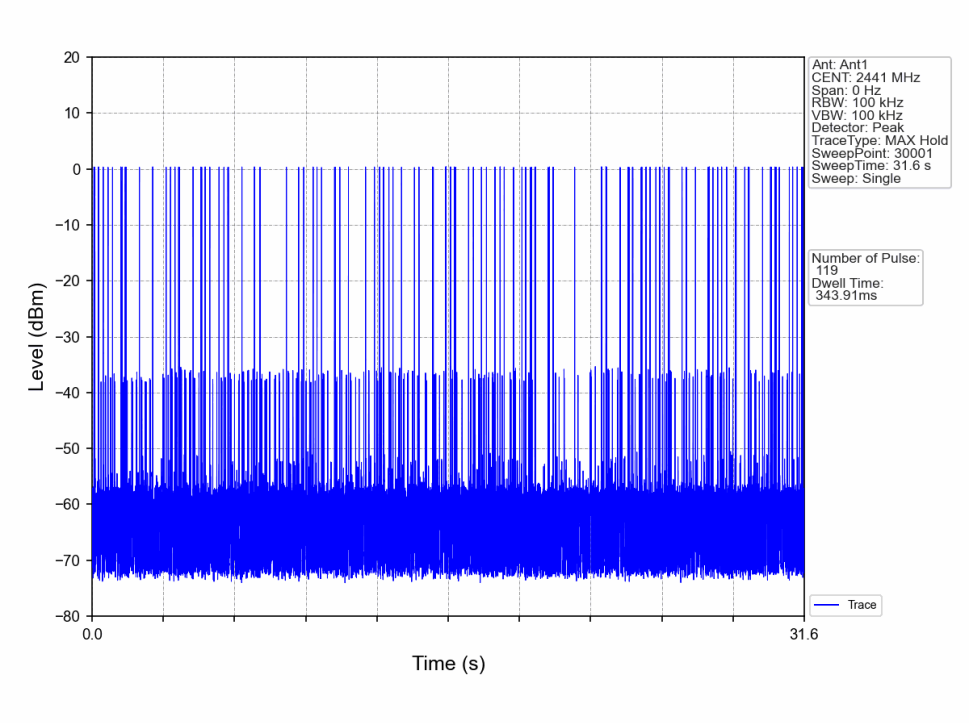
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	2.890	31.600	119	343.910	<=400	Pass
			DH3	2.886	31.600	108	311.688	<=400	Pass
			DH5	2.890	31.600	101	291.890	<=400	Pass
π/4-DQPSK	SISO	HOPP	2DH1	0.390	31.600	320	124.800	<=400	Pass
			2DH3	1.642	31.600	156	256.152	<=400	Pass
			2DH5	2.896	31.600	109	315.664	<=400	Pass
8-DPSK	SISO	HOPP	3DH1	0.392	31.600	318	124.656	<=400	Pass
			3DH3	1.648	31.600	161	265.328	<=400	Pass
			3DH5	2.898	31.600	105	304.290	<=400	Pass

5.2 Test Graph

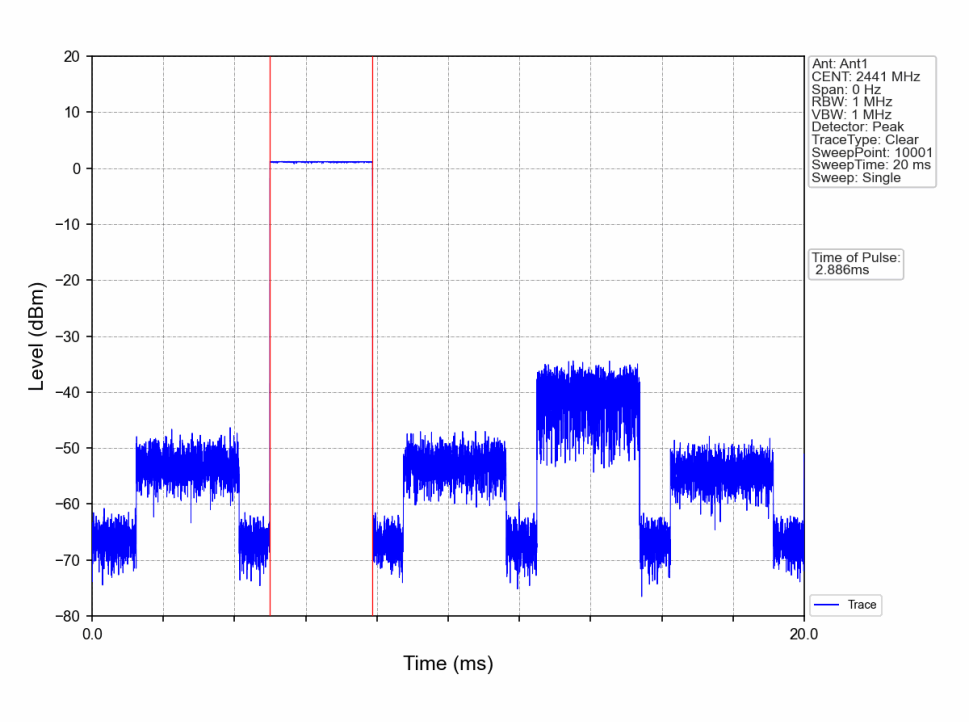
GFSK_DH1_HOPP_Ant1_NTNV



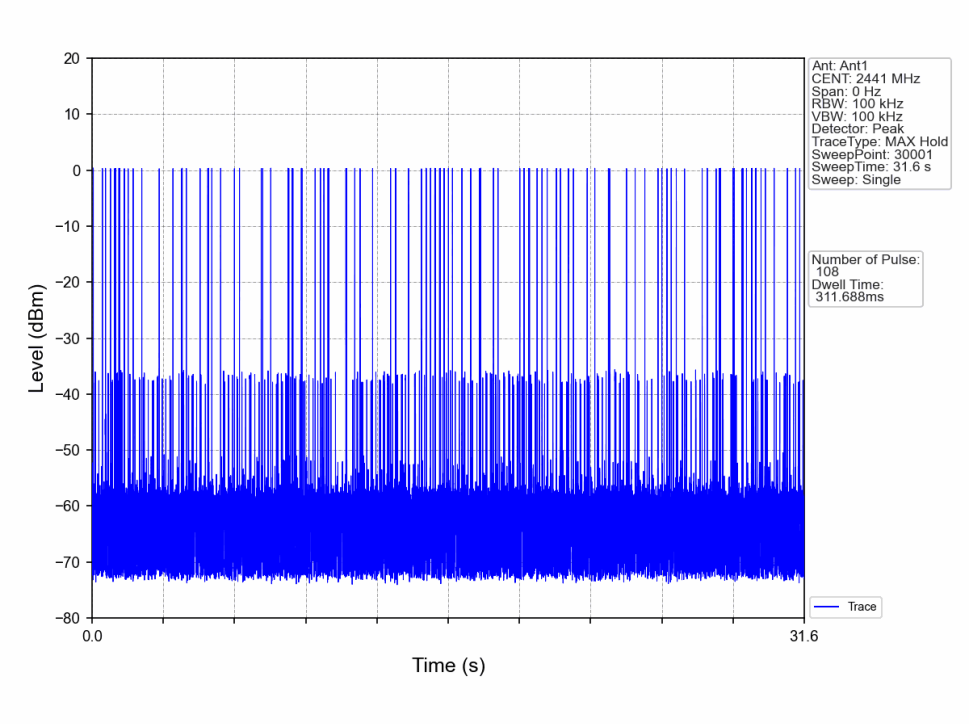
GFSK_DH1_HOPP_Ant1_NTNV



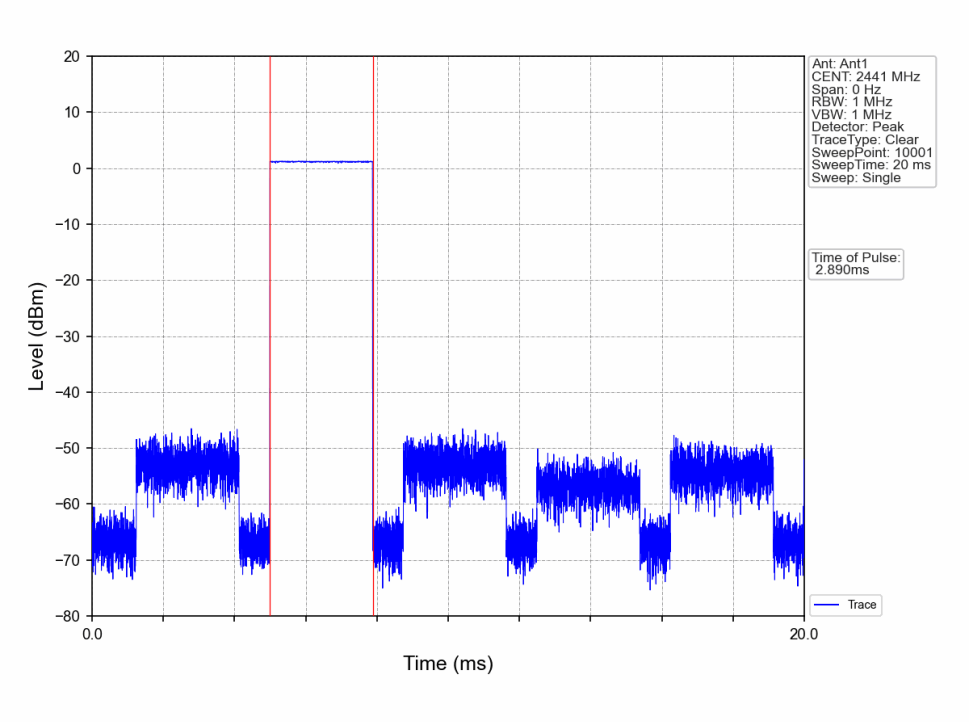
GFSK_DH3_HOPP_Ant1_NTNV



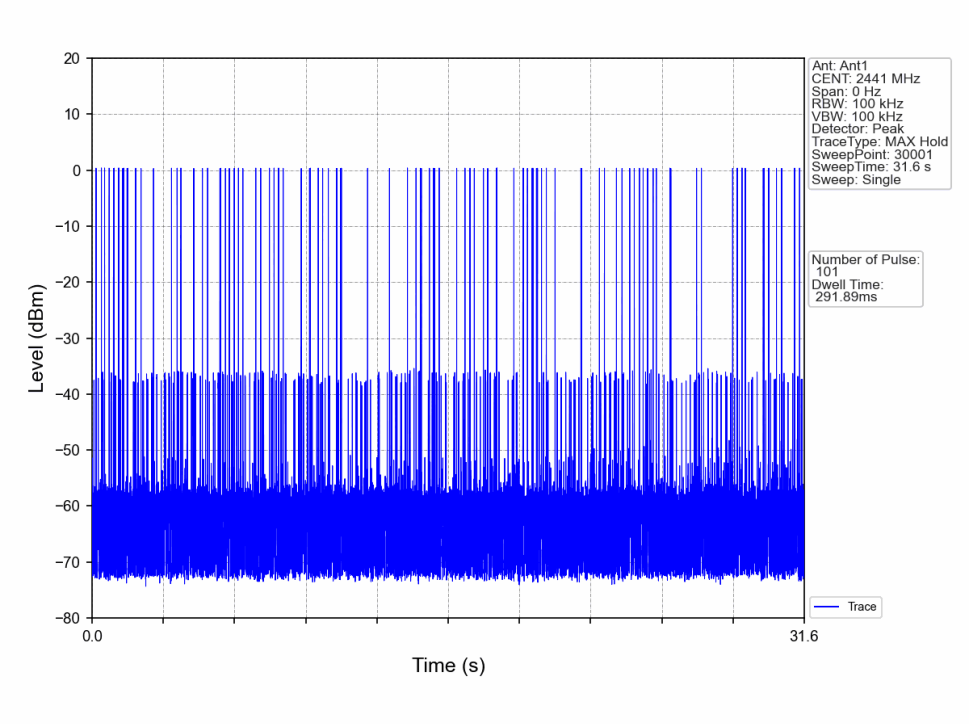
GFSK_DH3_HOPP_Ant1_NTNV



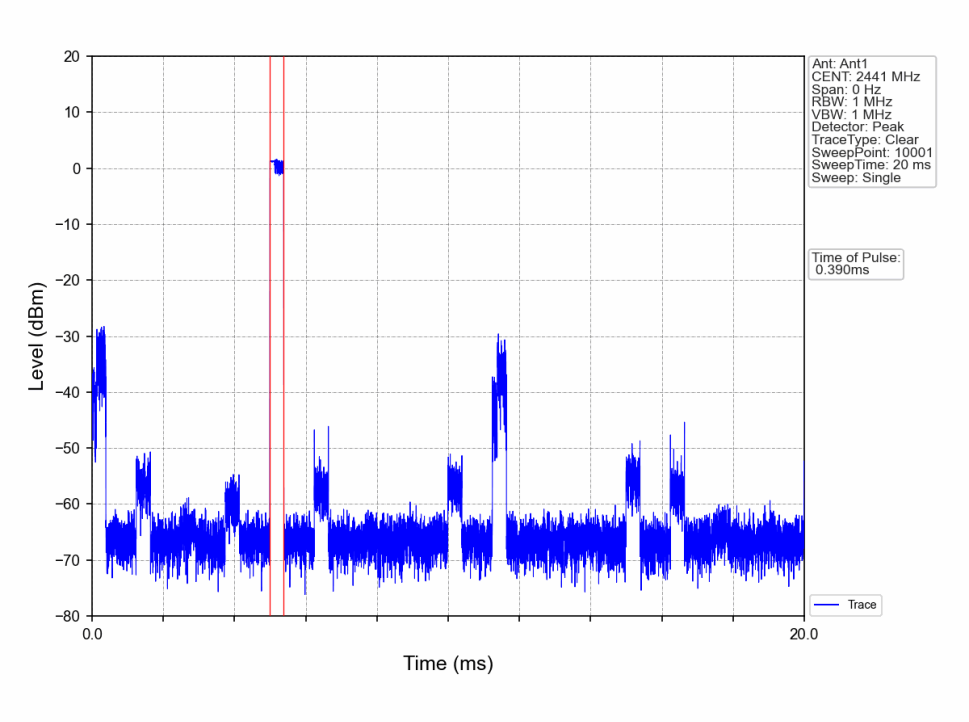
GFSK_DH5_HOPP_Ant1_NTNV



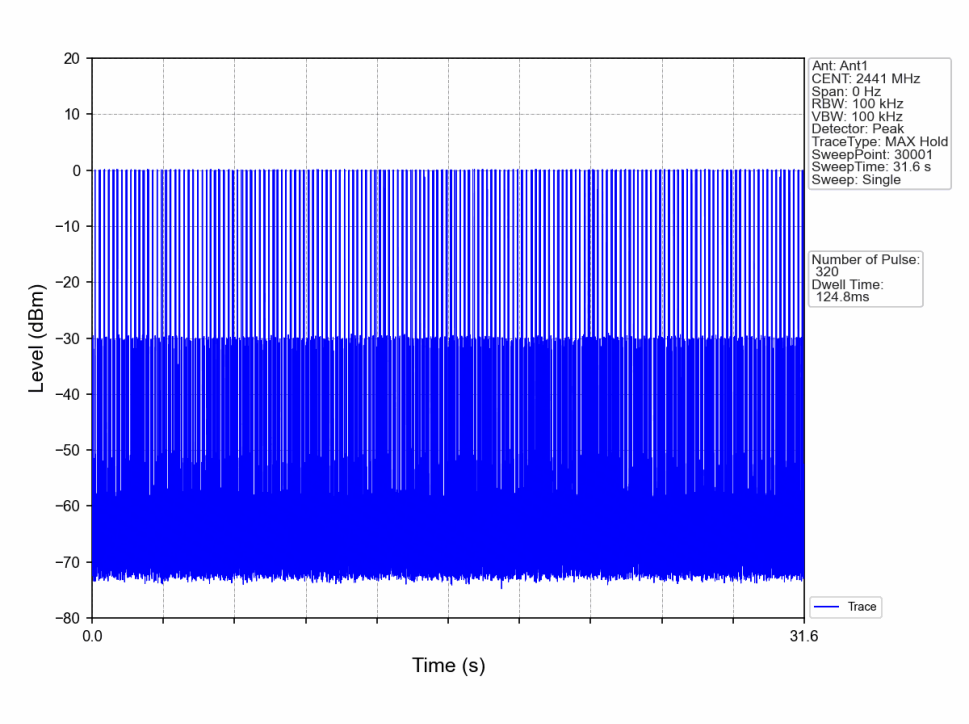
GFSK_DH5_HOPP_Ant1_NTNV



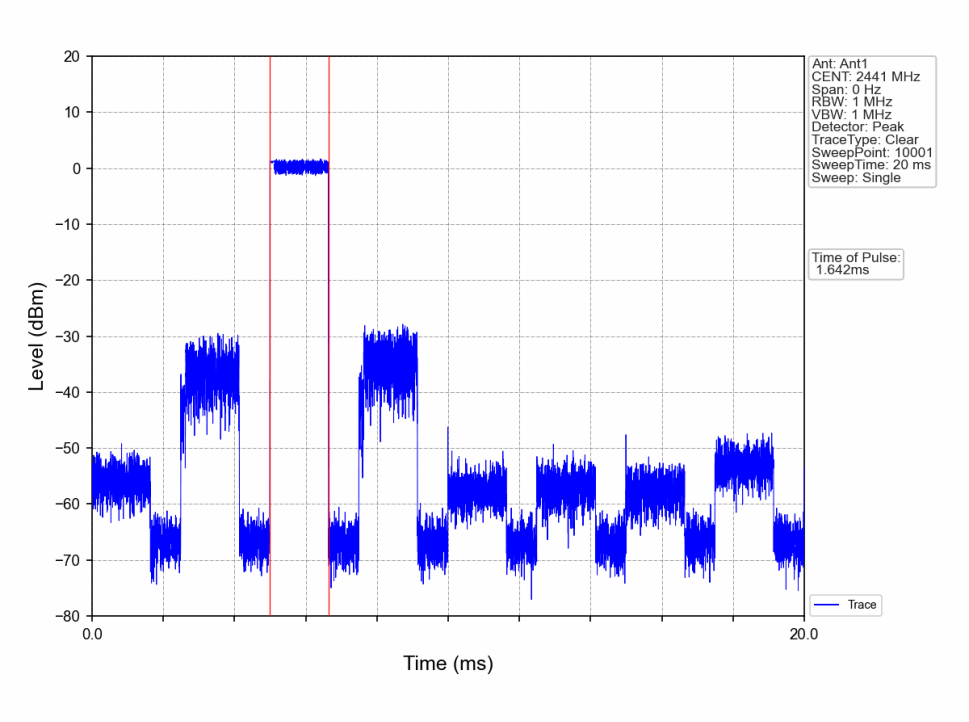
π/4-DQPSK_2DH1_HOPP_Ant1_NTNV



π/4-DQPSK_2DH1_HOPP_Ant1_NTNV



π/4-DQPSK_2DH3_HOPP_Ant1_NTNV



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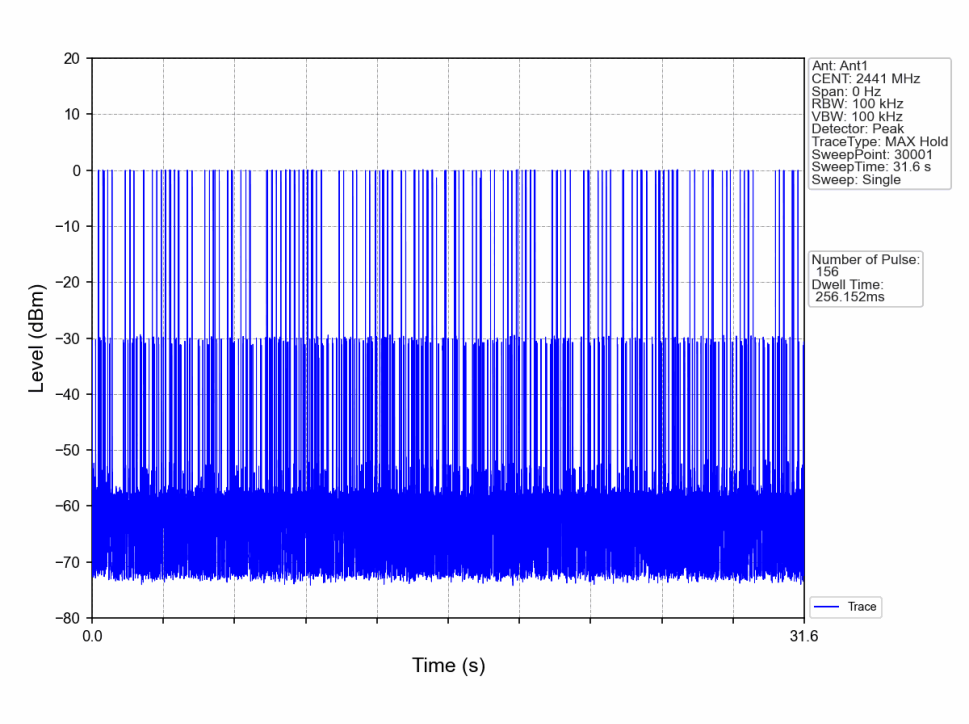

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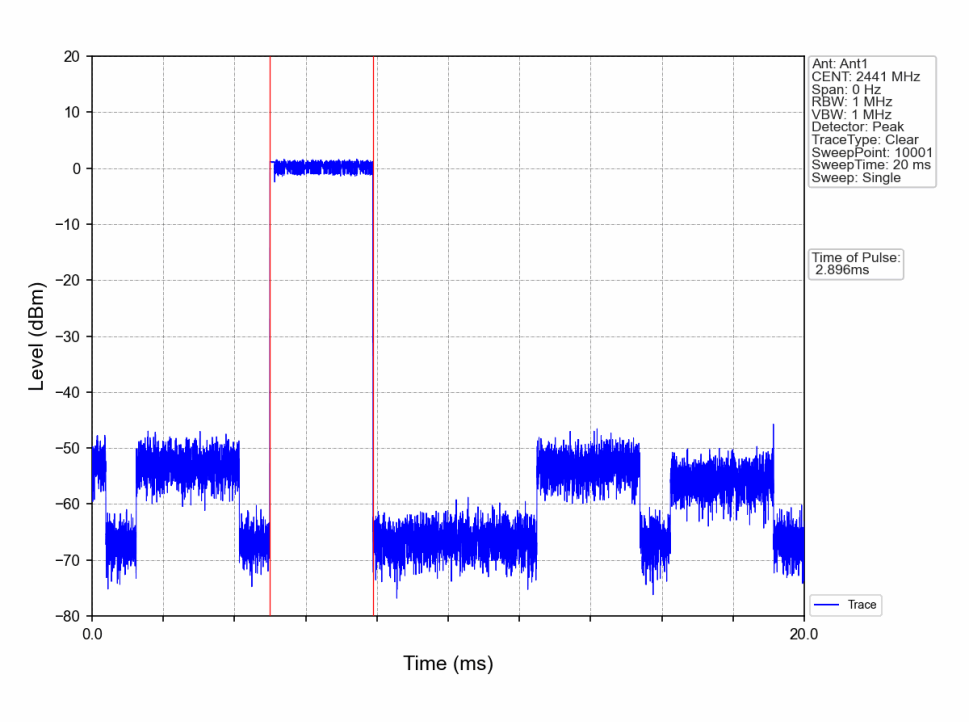

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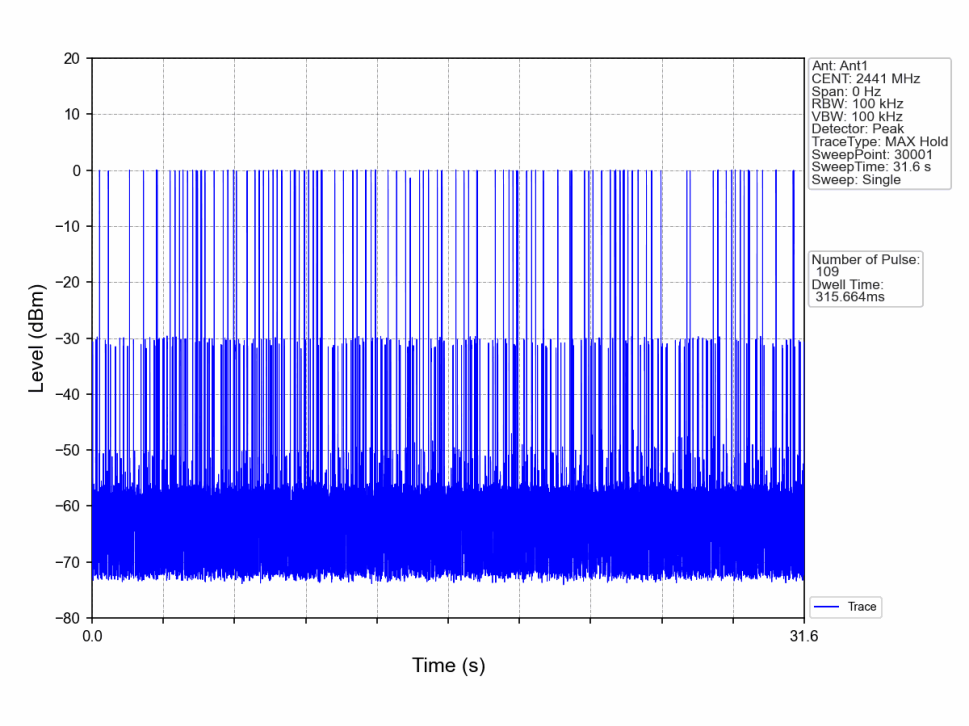
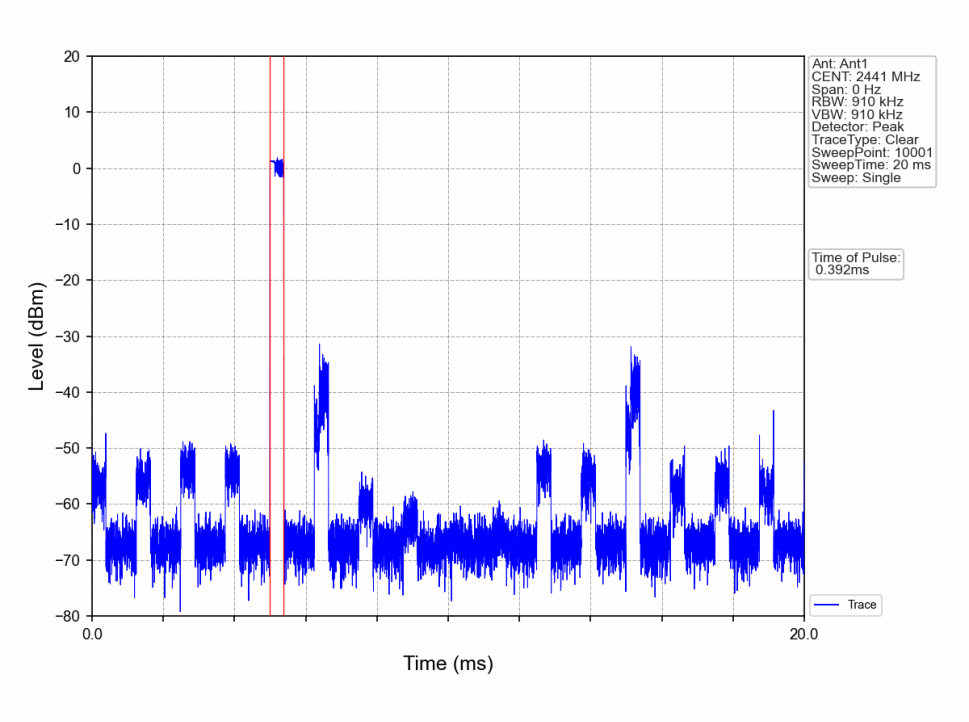


8-DPSK_3DH1_HOPP_Ant1_NTNV



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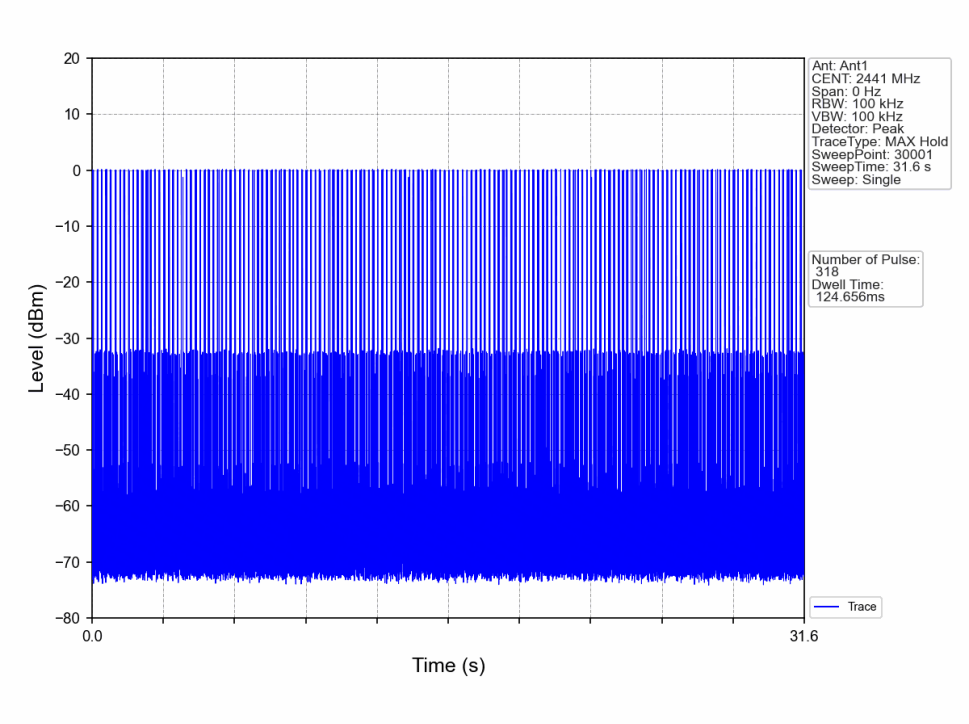

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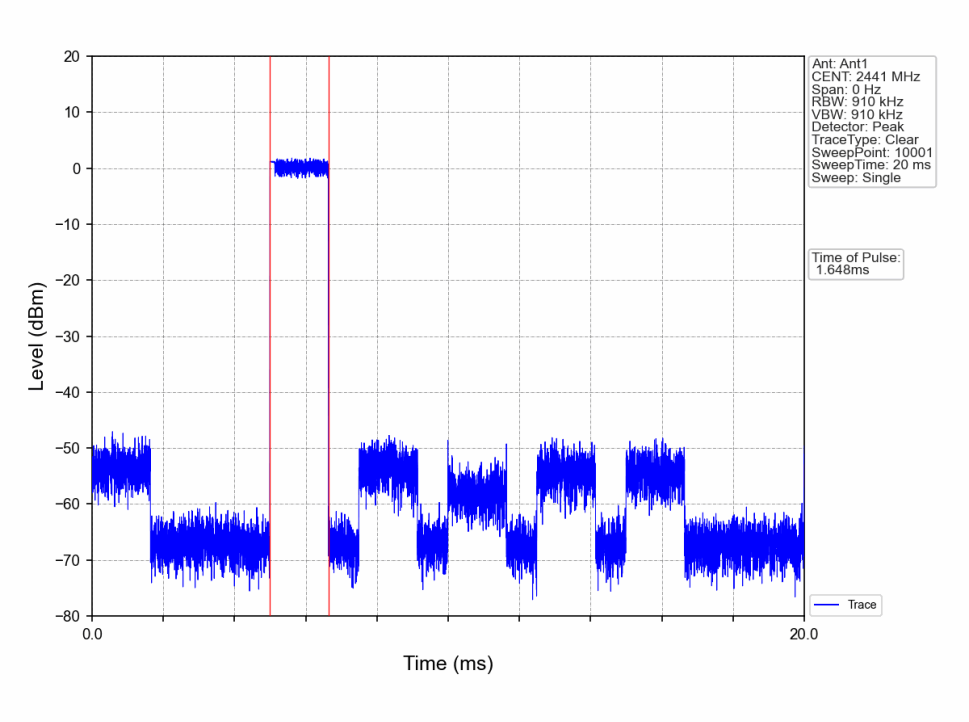

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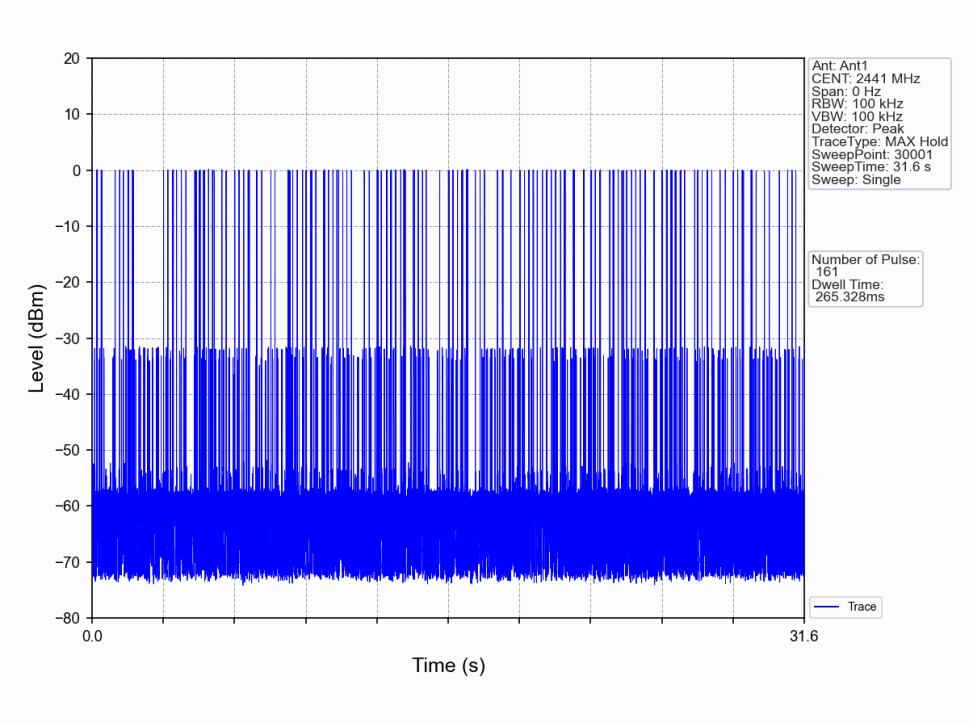
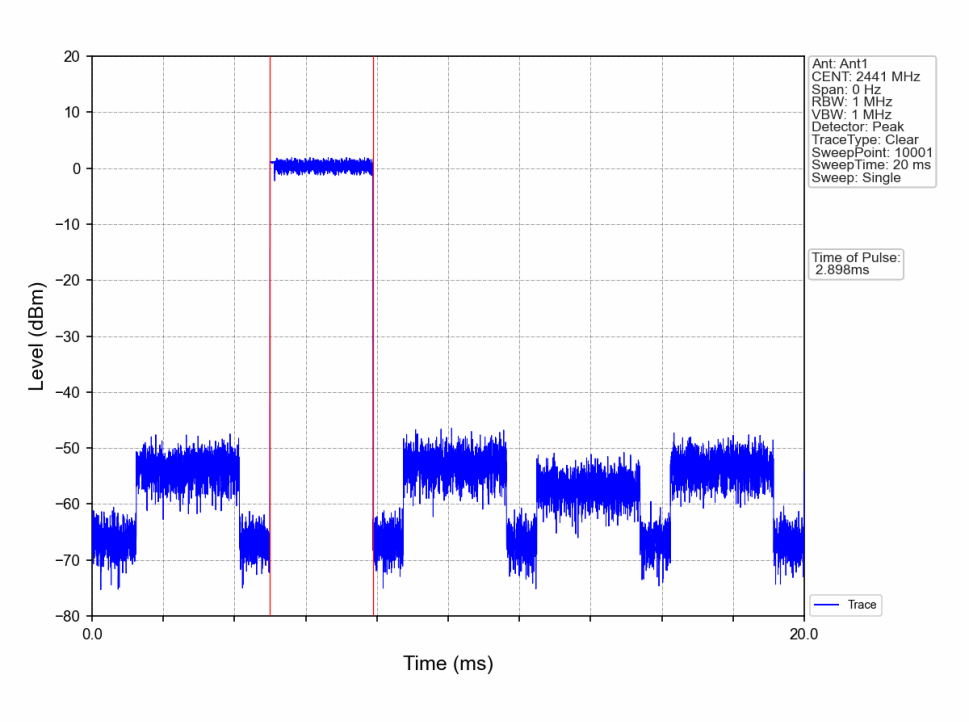
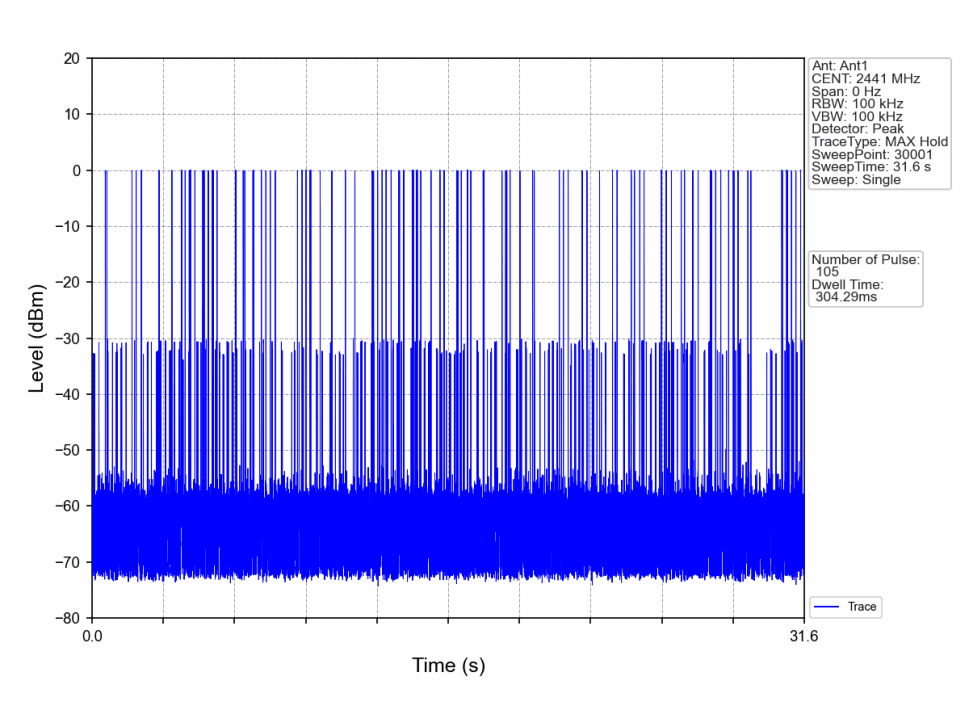


8-DPSK_3DH5_HOPP_Ant1_NTNV



8-DPSK_3DH5_HOPP_Ant1_NTNV



6. Unwanted Emissions In Non-restricted Frequency Bands

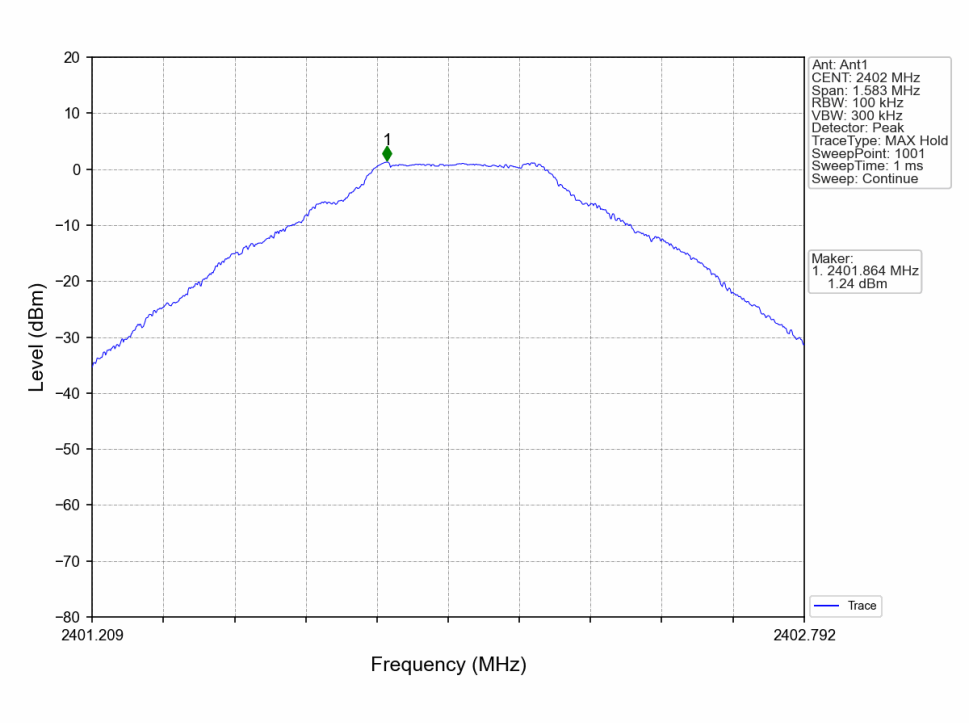
6.1 Ref

6.1.1 Test Result

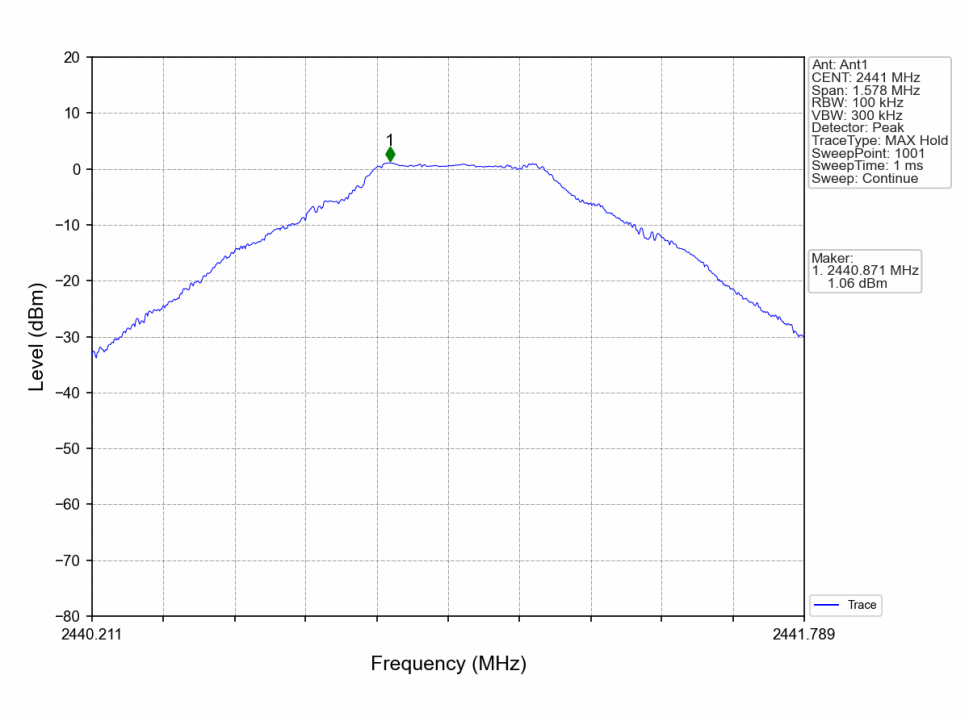
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	1.24
		2441	DH5	1	1.06
		2480	DH5	1	0.84
π/4-DQPSK	SISO	2402	2DH5	1	1.23
		2441	2DH5	1	1.06
		2480	2DH5	1	0.78
8-DPSK	SISO	2402	3DH5	1	1.20
		2441	3DH5	1	1.01
		2480	3DH5	1	0.76
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.					

6.1.2 Test Graph

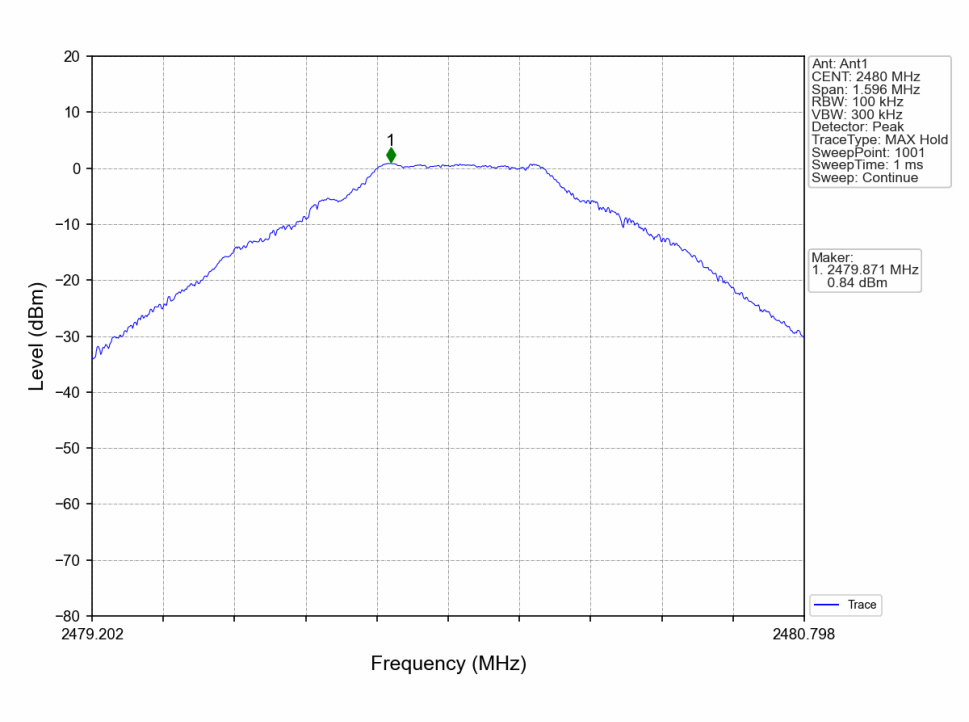
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



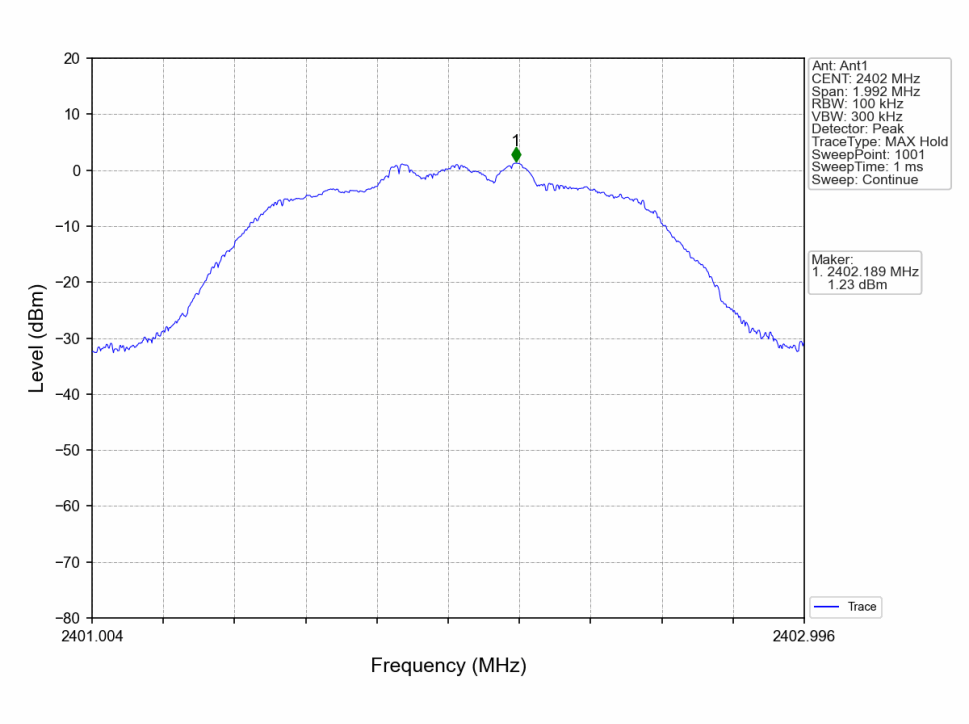
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



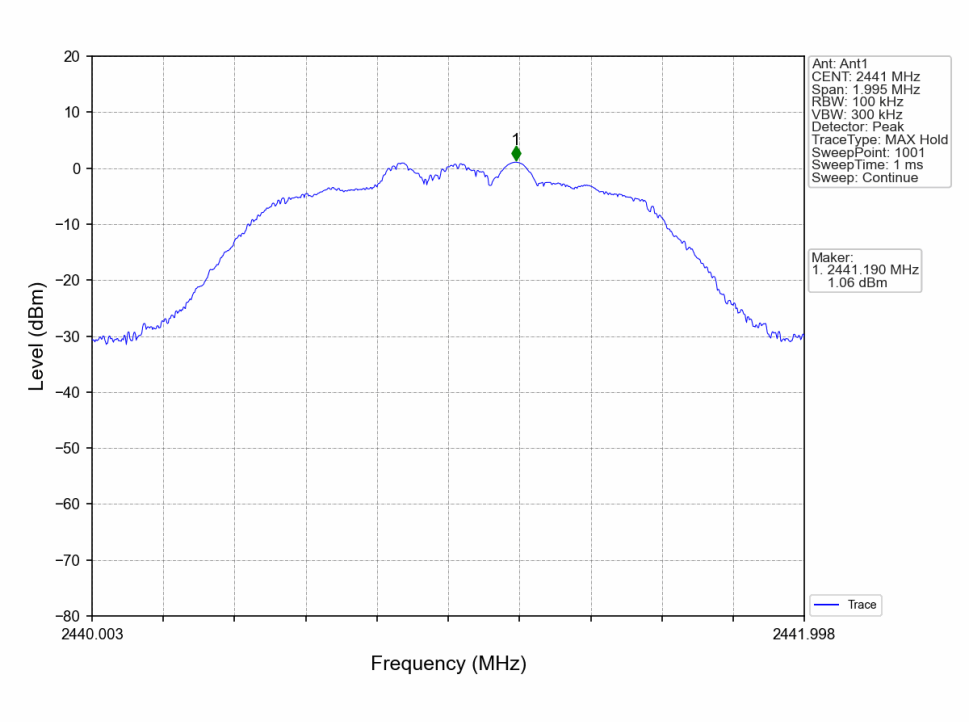
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



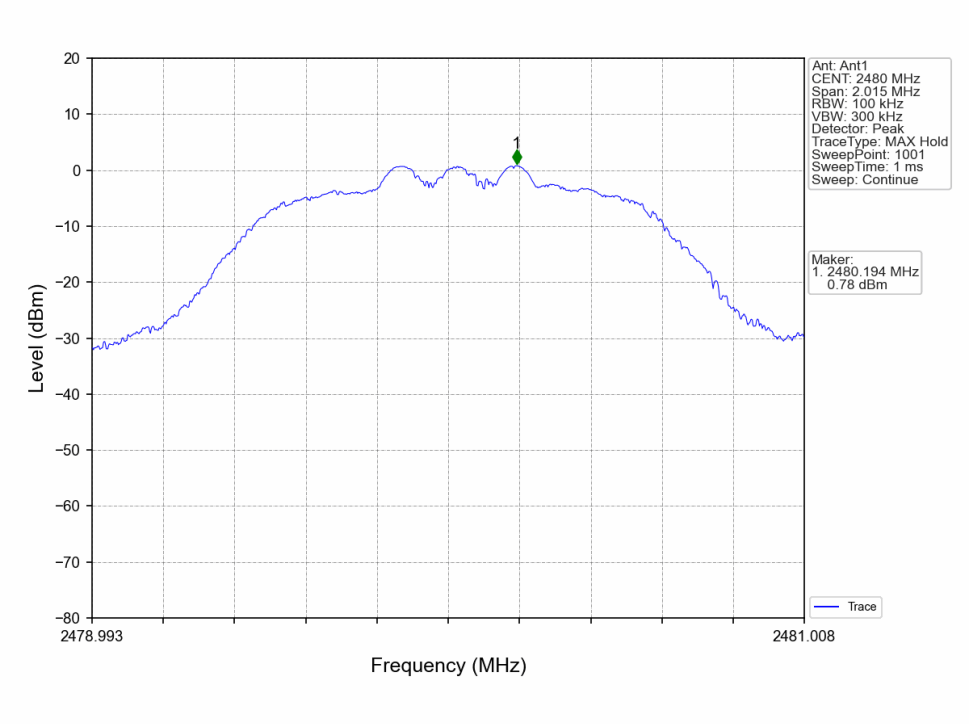
π/4-DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



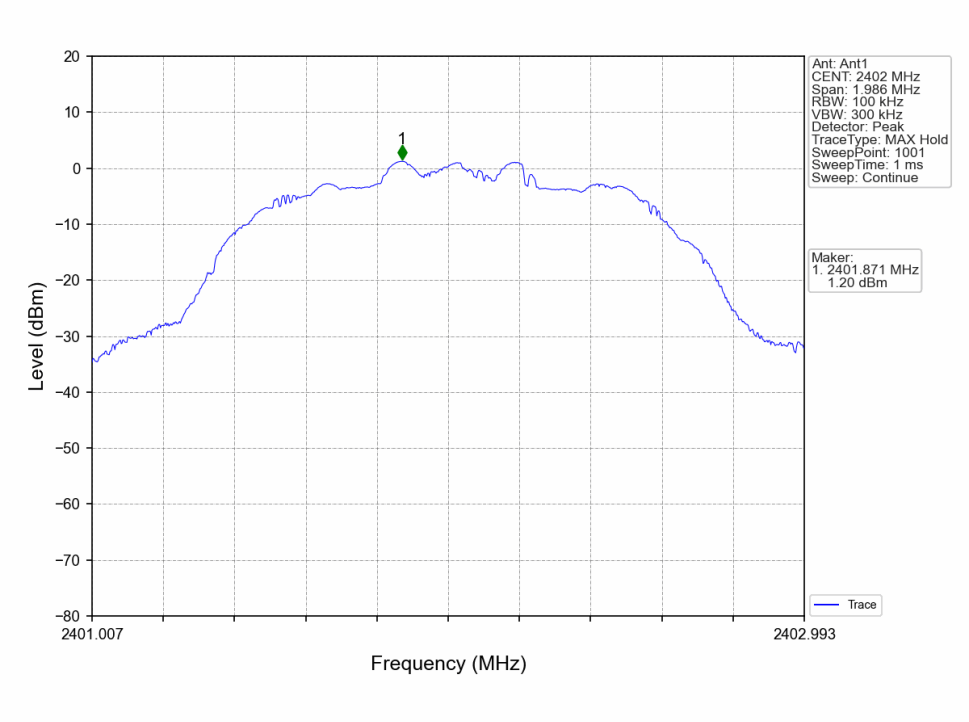
π/4-DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



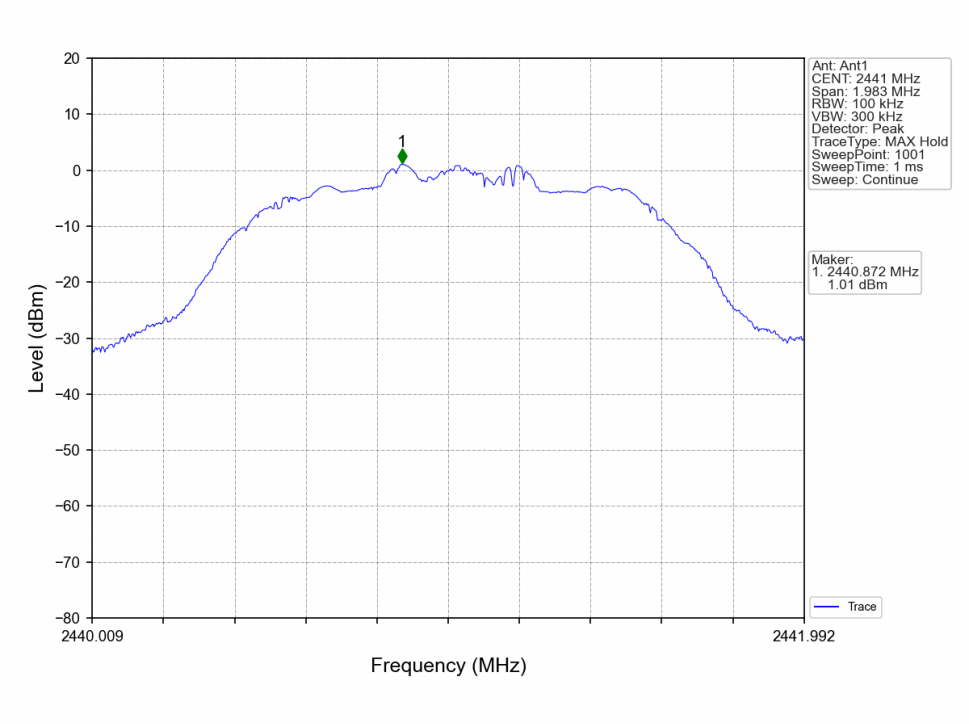
π/4-DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



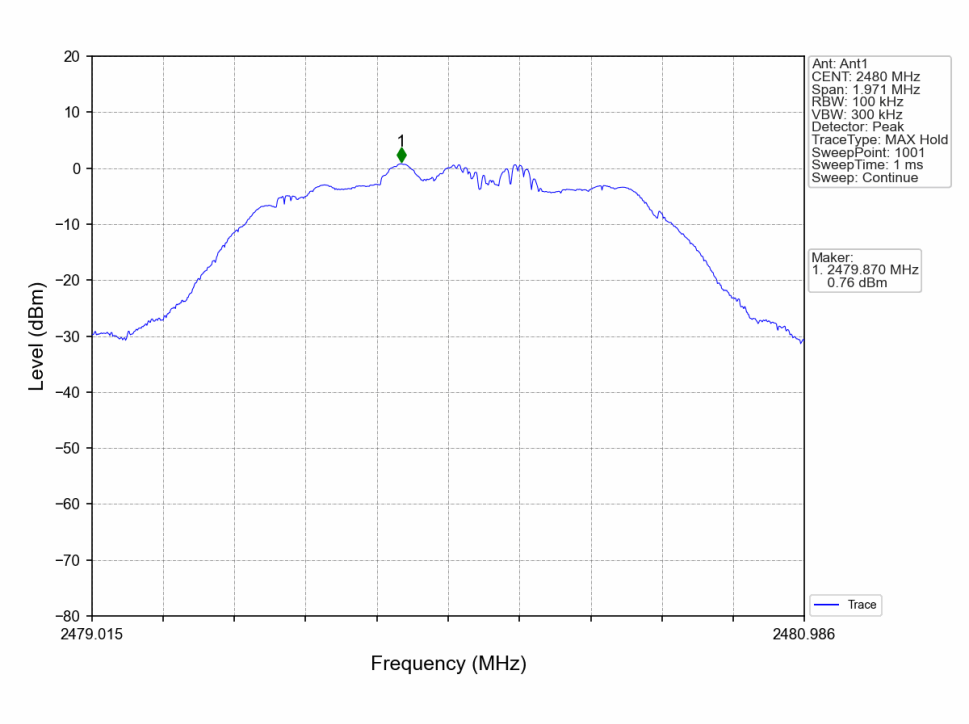
8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8-DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



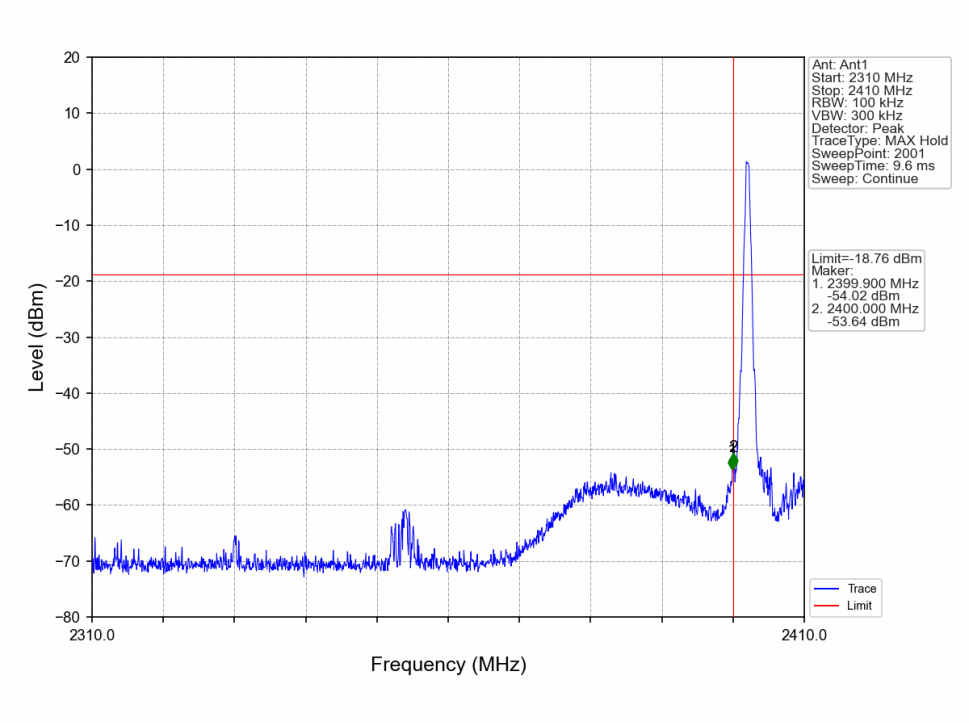
6.2 CSE

6.2.1 Test Result

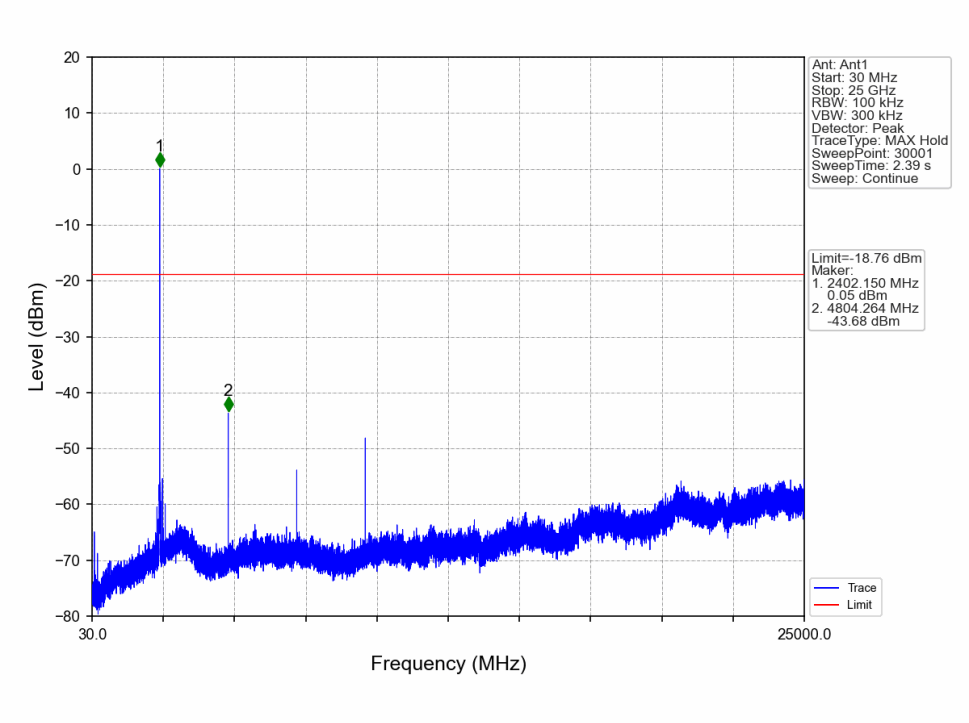
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	1.24	-18.76	Pass
		2441	DH5	1	1.24	-18.76	Pass
		2480	DH5	1	1.24	-18.76	Pass
		HOPP	DH5	1	1.24	-18.76	Pass
π/4-DQPSK	SISO	2402	2DH5	1	1.23	-18.77	Pass
		2441	2DH5	1	1.23	-18.77	Pass
		2480	2DH5	1	1.23	-18.77	Pass
		HOPP	2DH5	1	1.23	-18.77	Pass
8-DPSK	SISO	2402	3DH5	1	1.20	-18.80	Pass
		2441	3DH5	1	1.20	-18.80	Pass
		2480	3DH5	1	1.20	-18.80	Pass
		HOPP	3DH5	1	1.20	-18.80	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.							

6.2.2 Test Graph

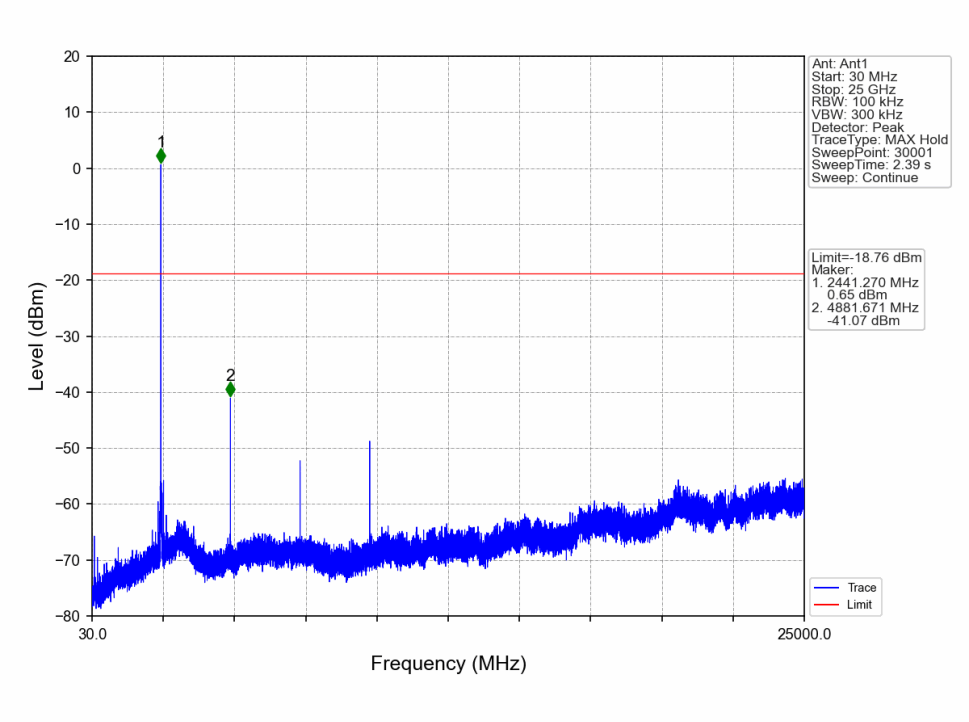
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



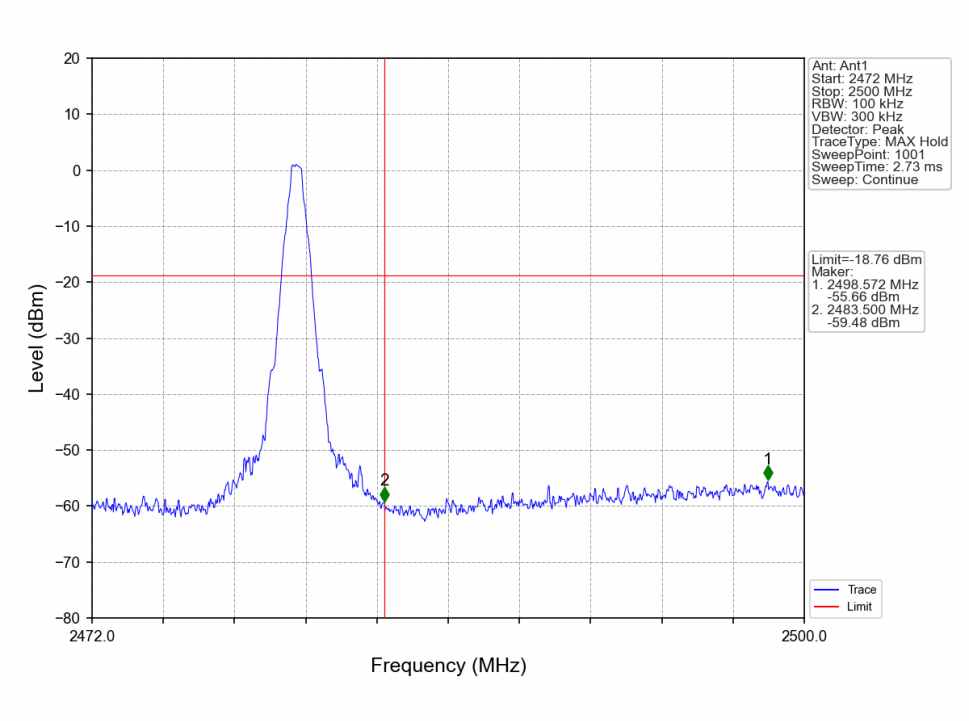
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



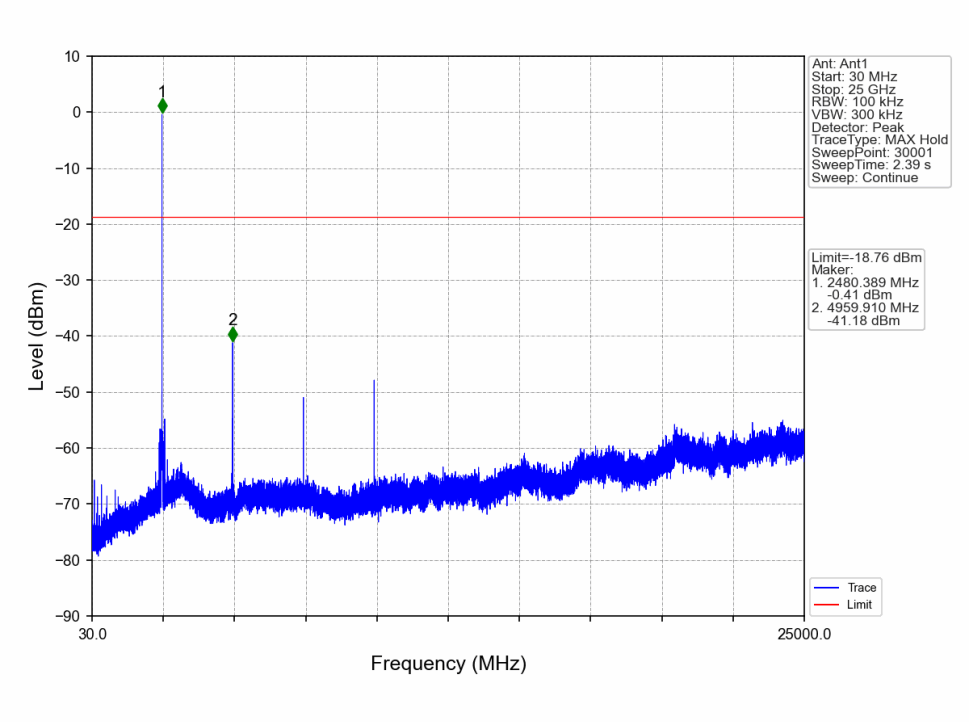
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



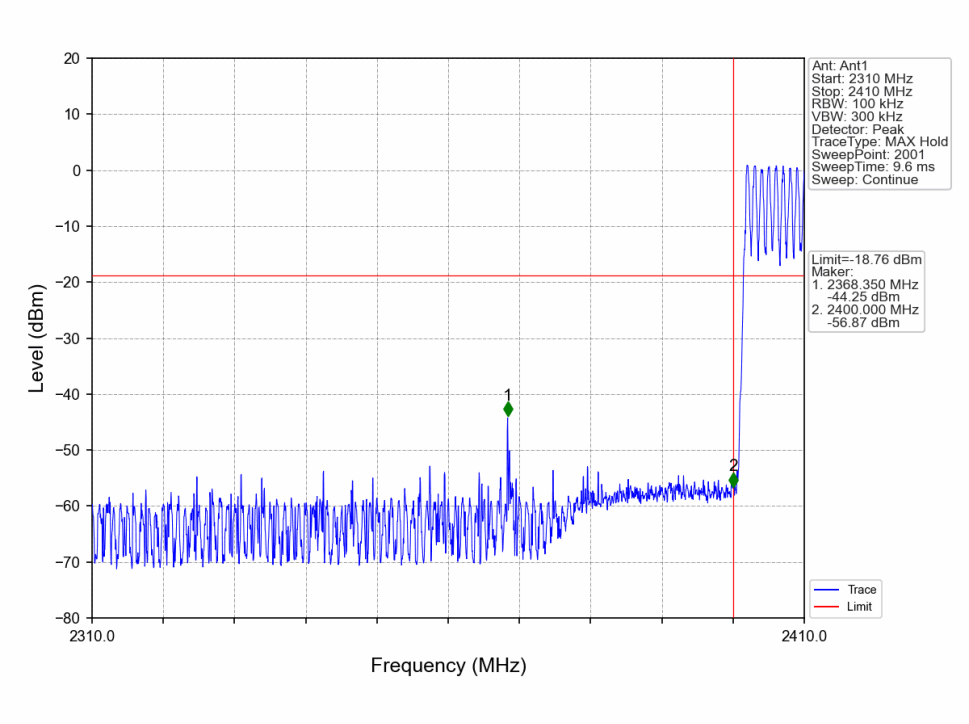
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



GFSK_DH5_HCH_2480MHz_Ant1_NTNV



GFSK_DH5_HOPP_Ant1_NTNV



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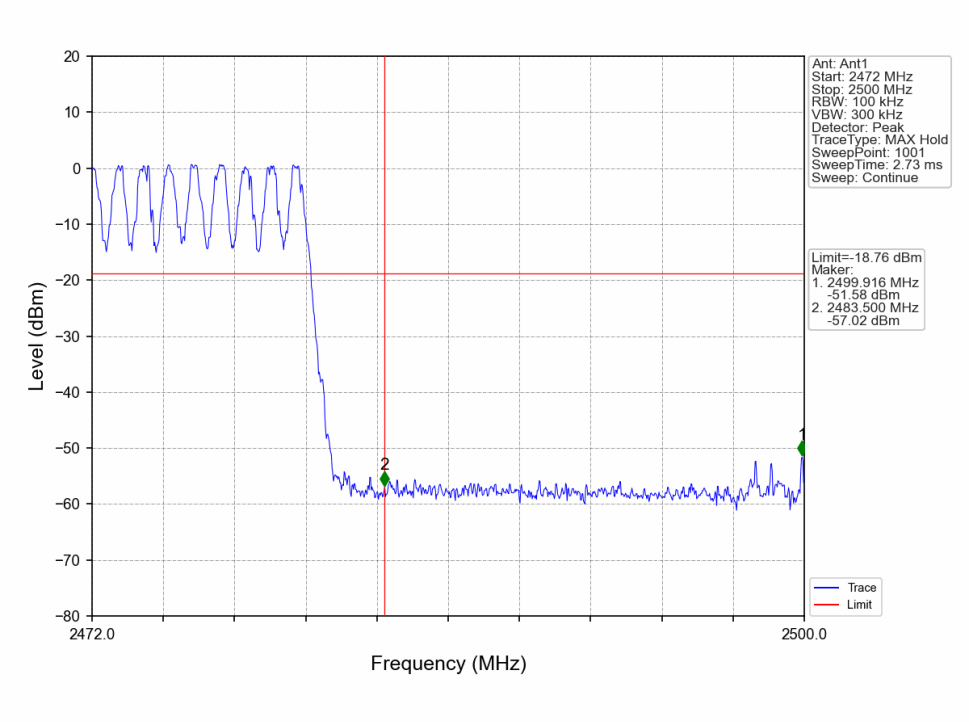
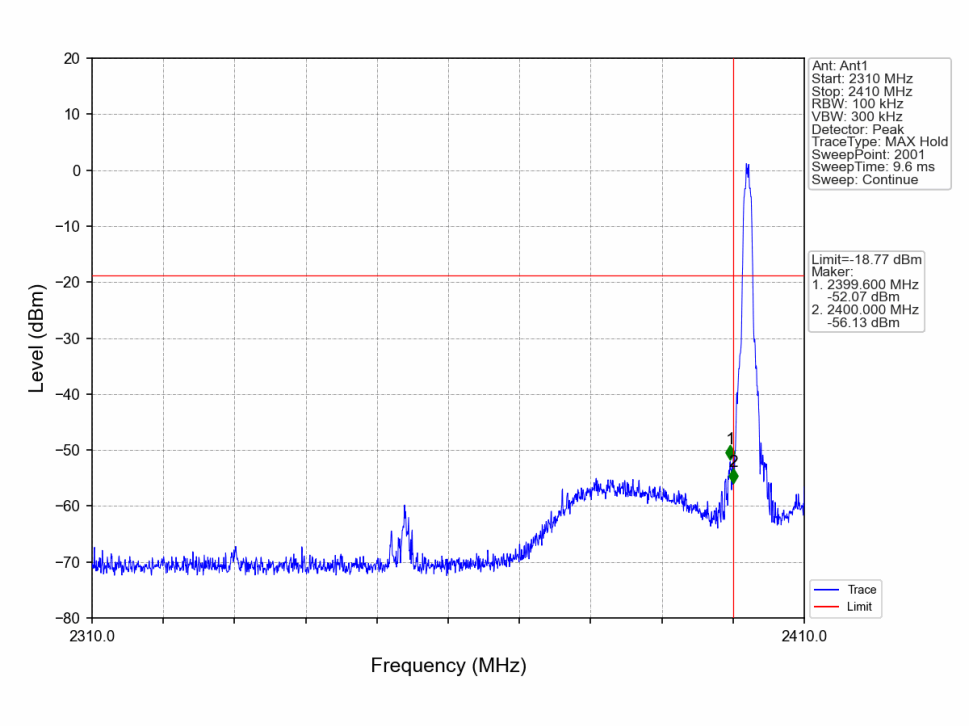


π/4-DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



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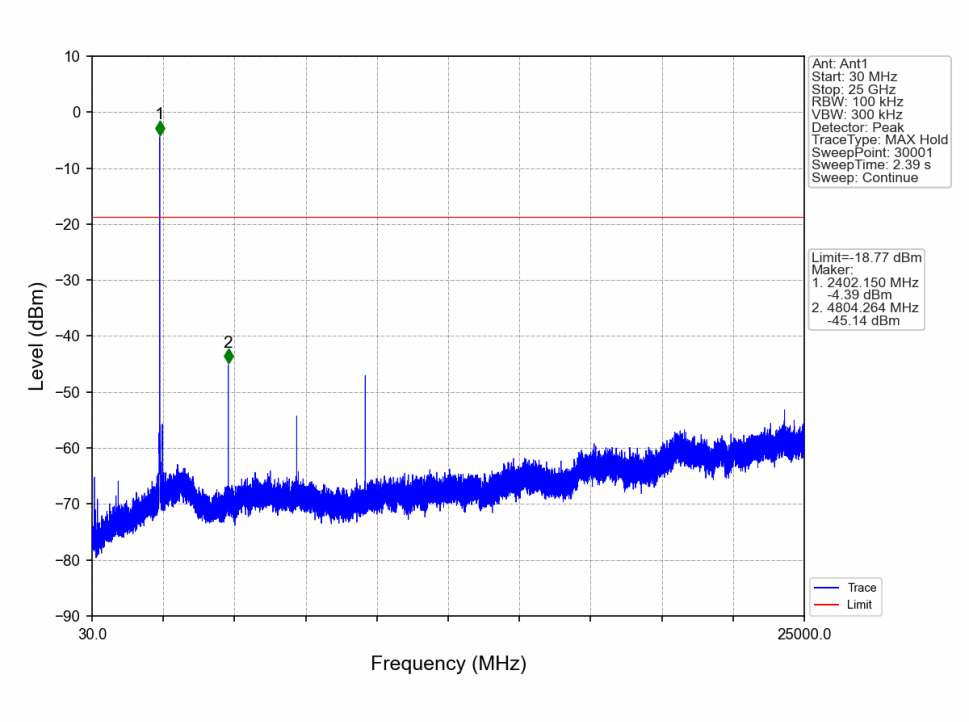

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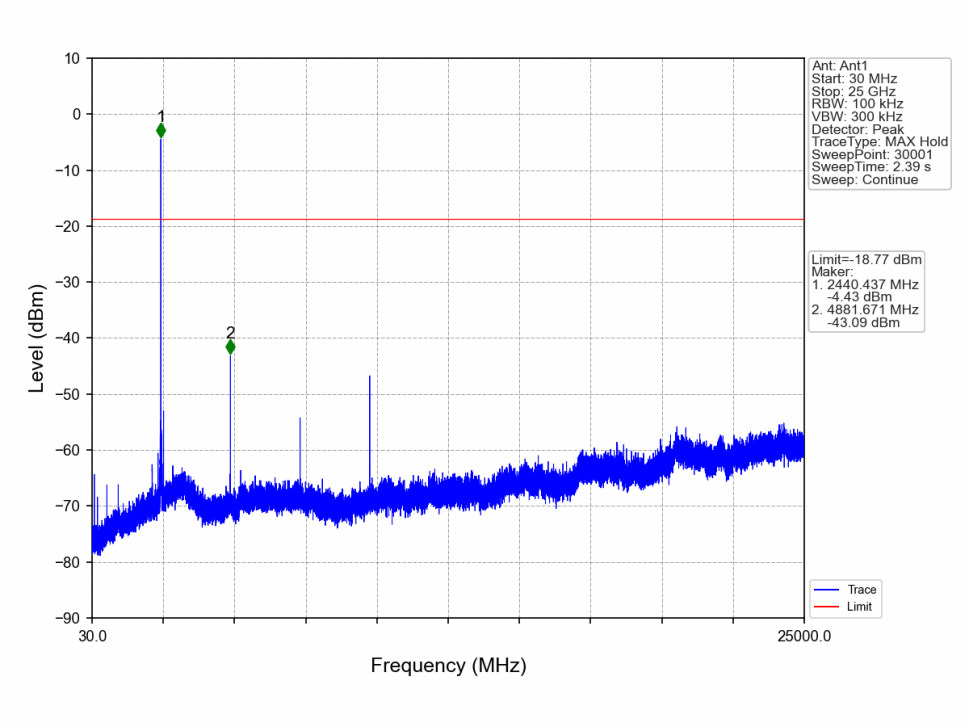

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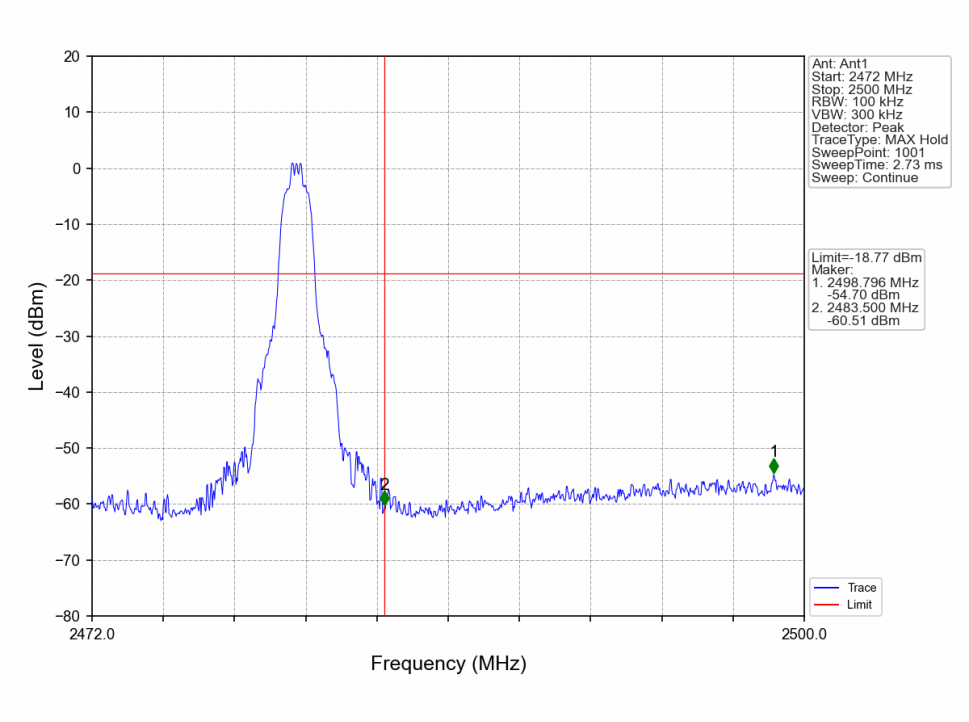

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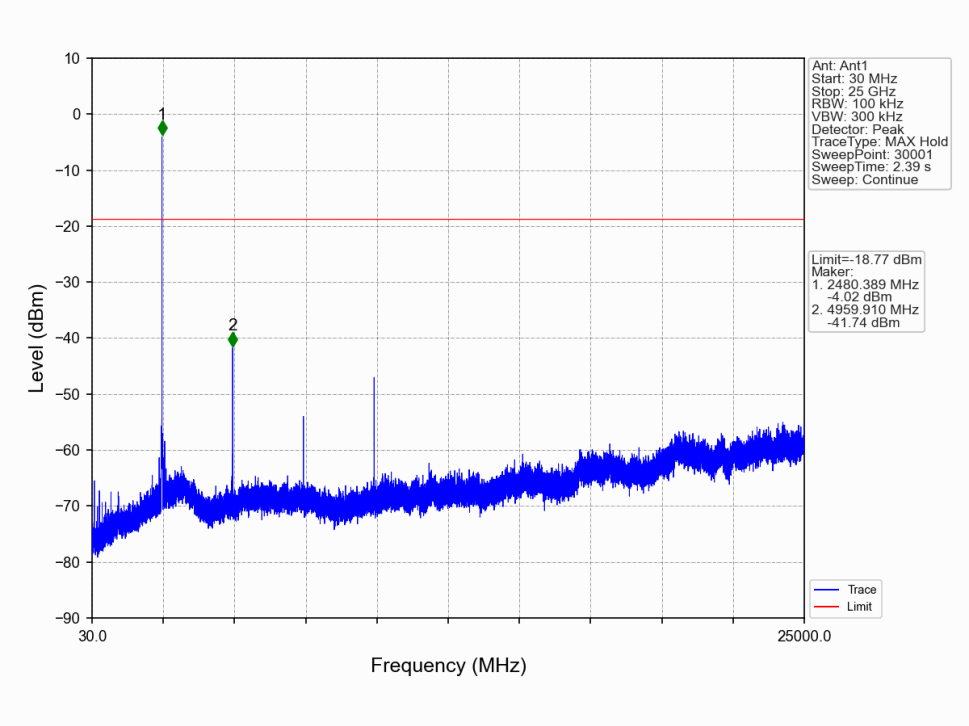

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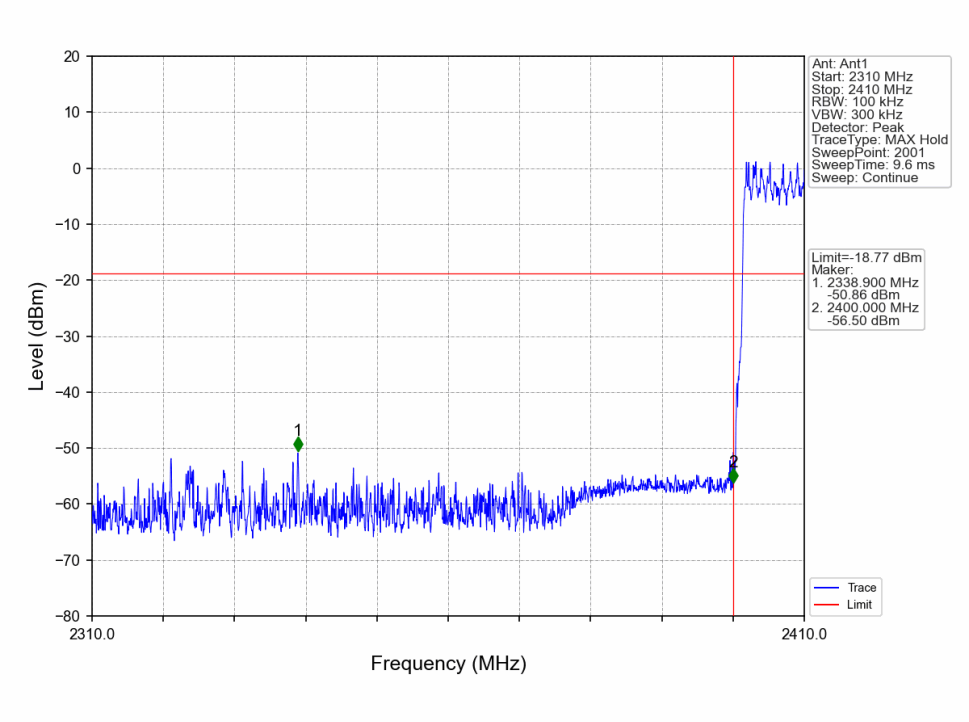

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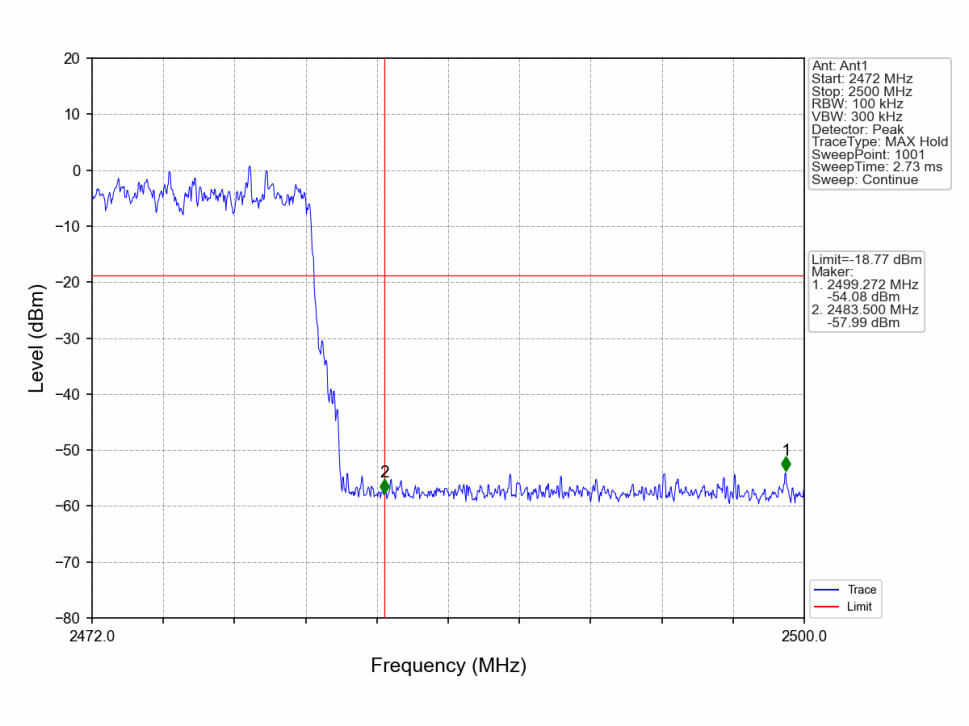
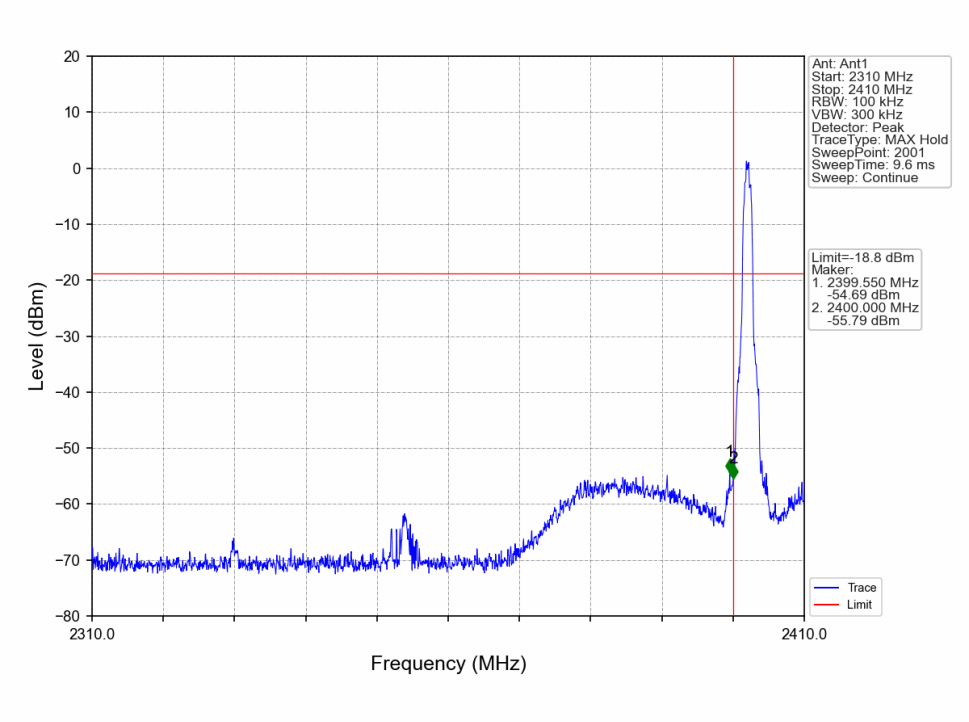
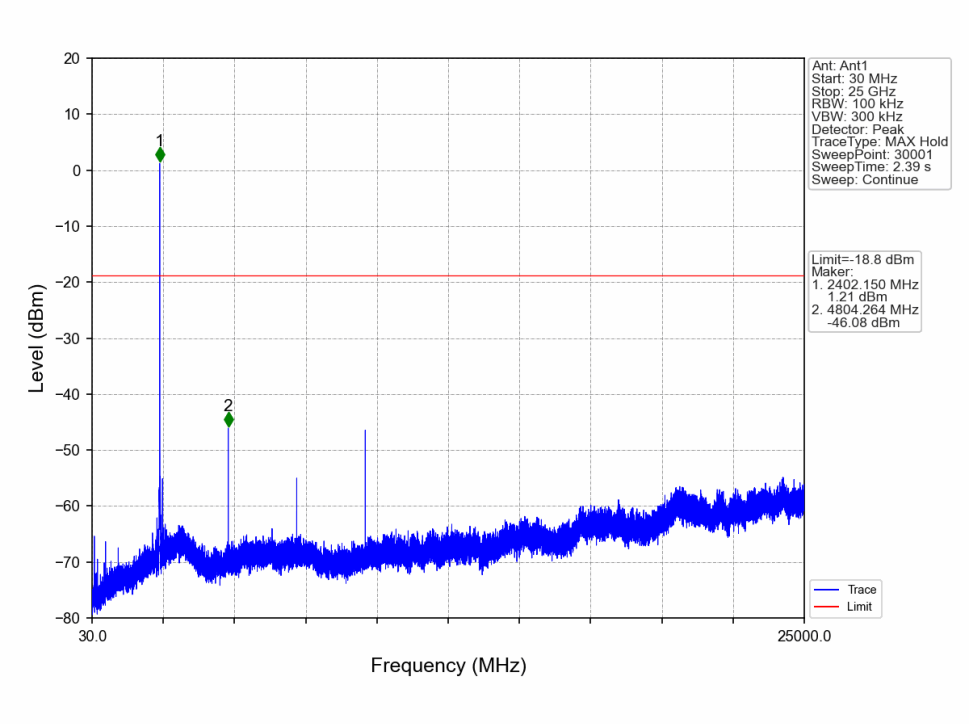


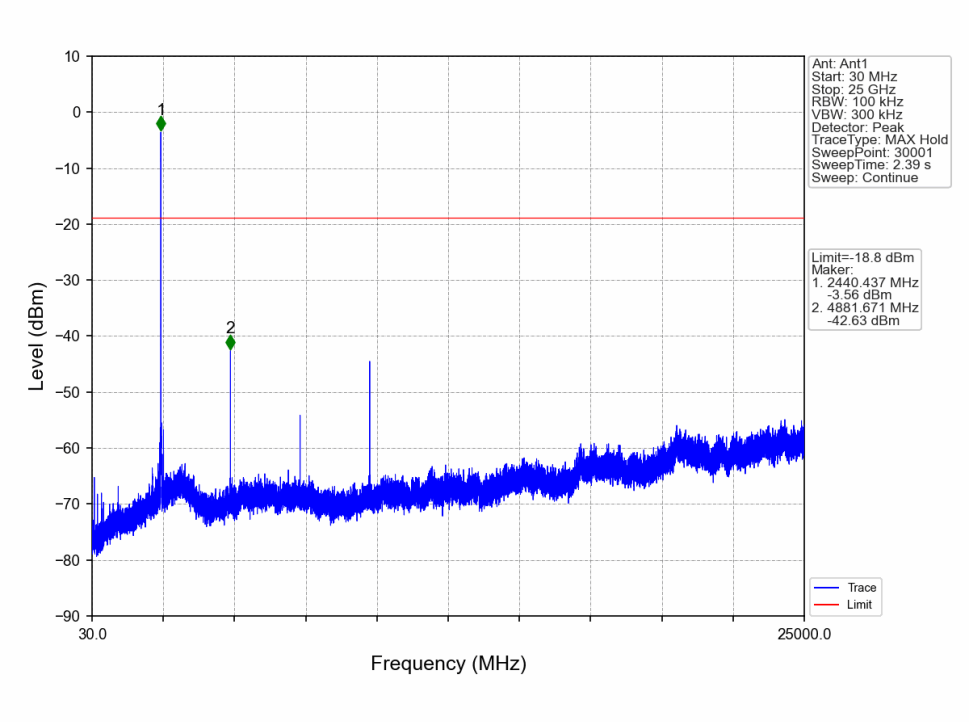
8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8-DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



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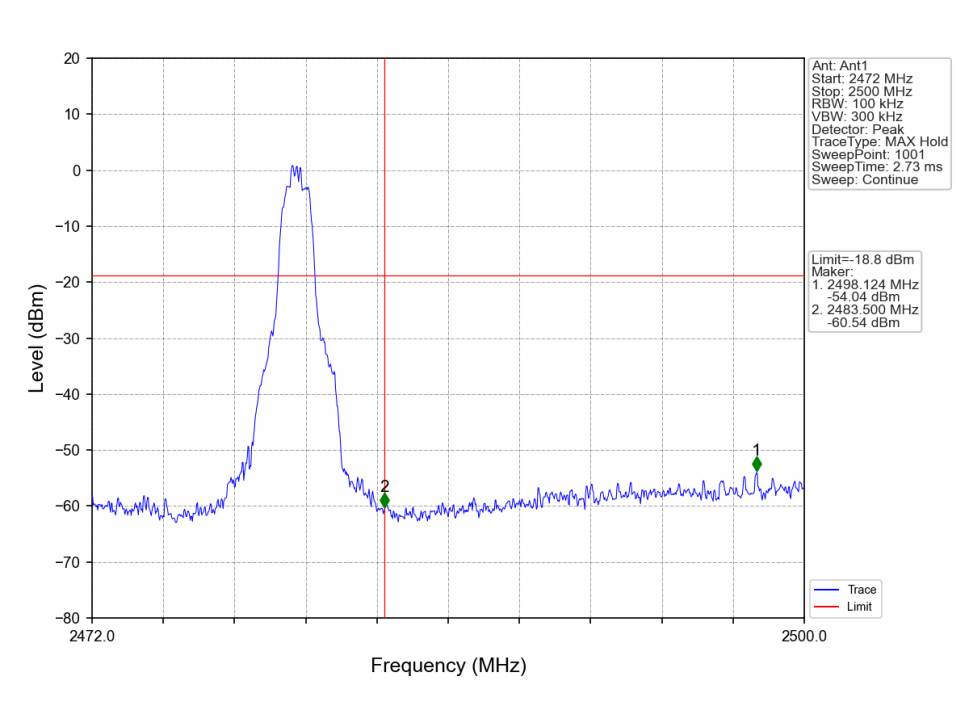

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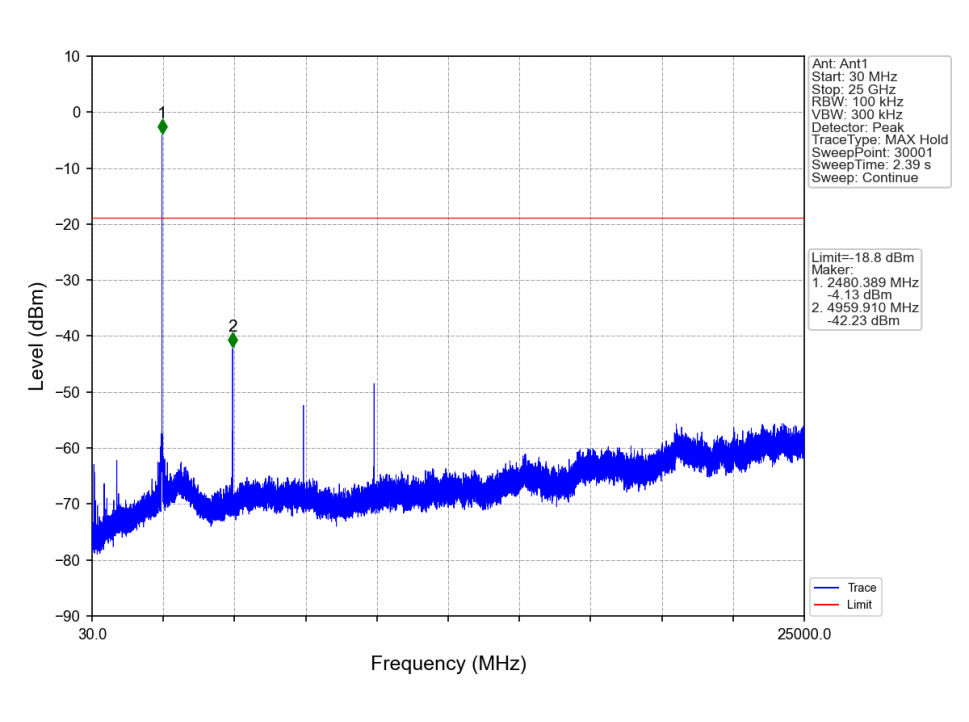
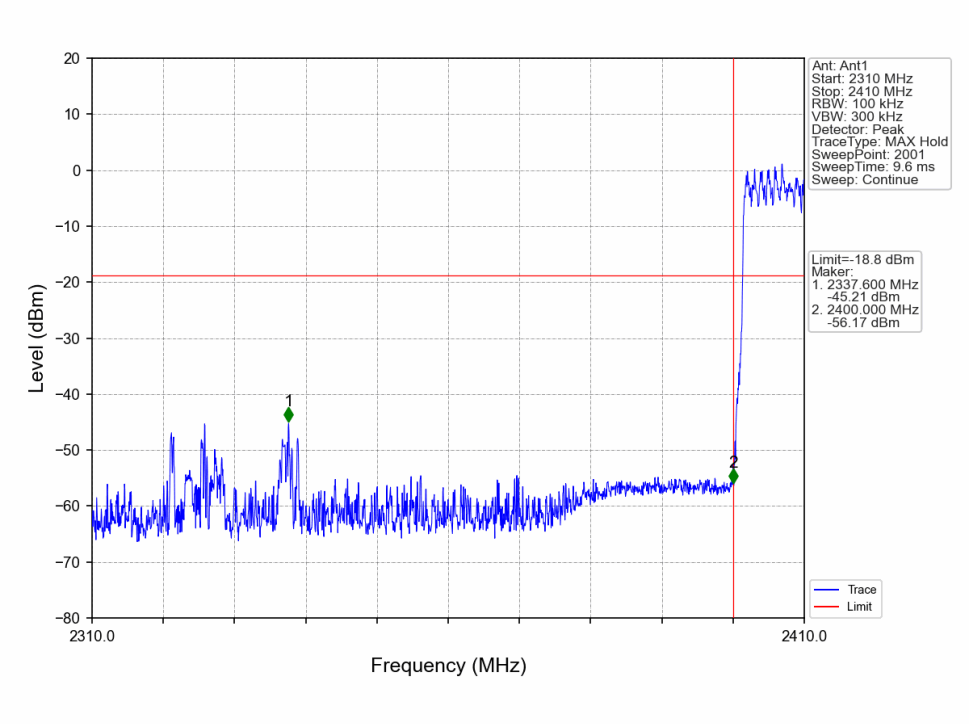


8-DPSK_3DH5_HOPP_Ant1_NTNV



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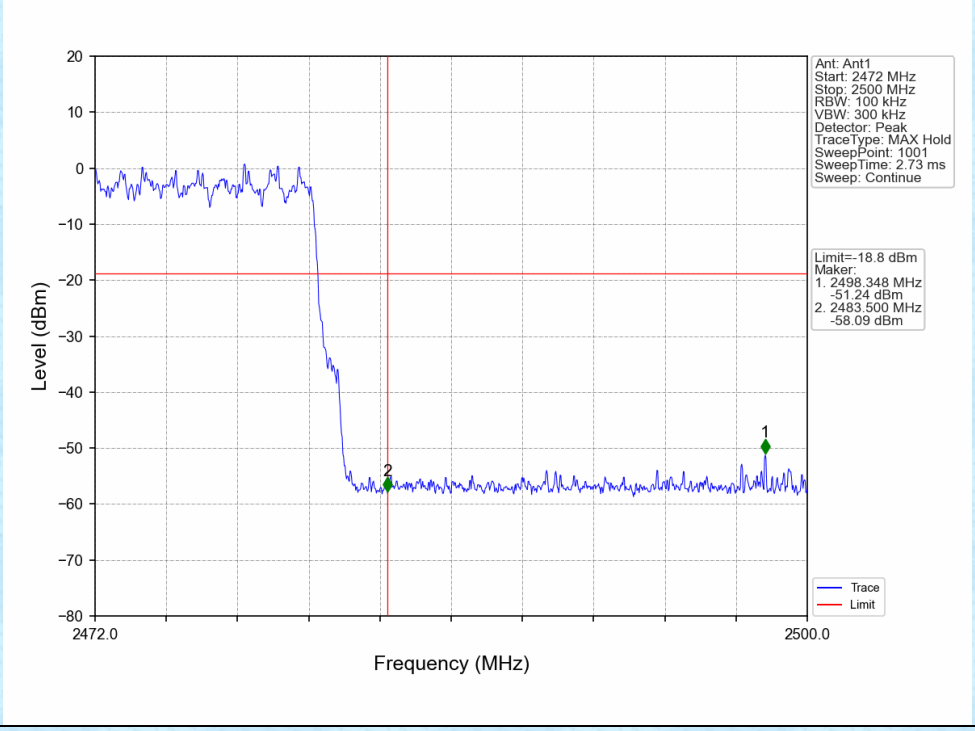

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