

Appendix RF test data for BT

1. Duty Cycle

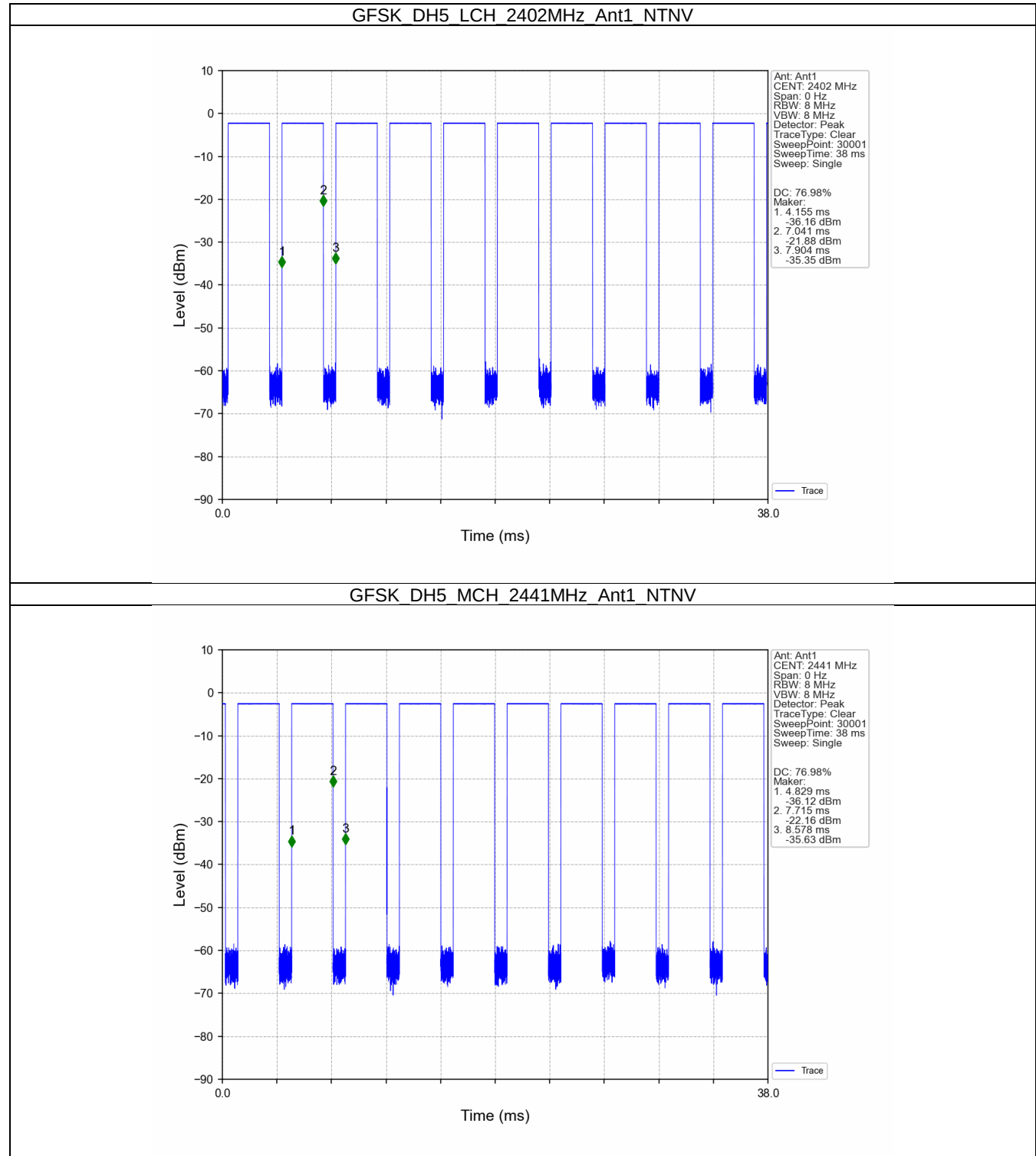
1.1 Test Result

1.1.1 Ant1

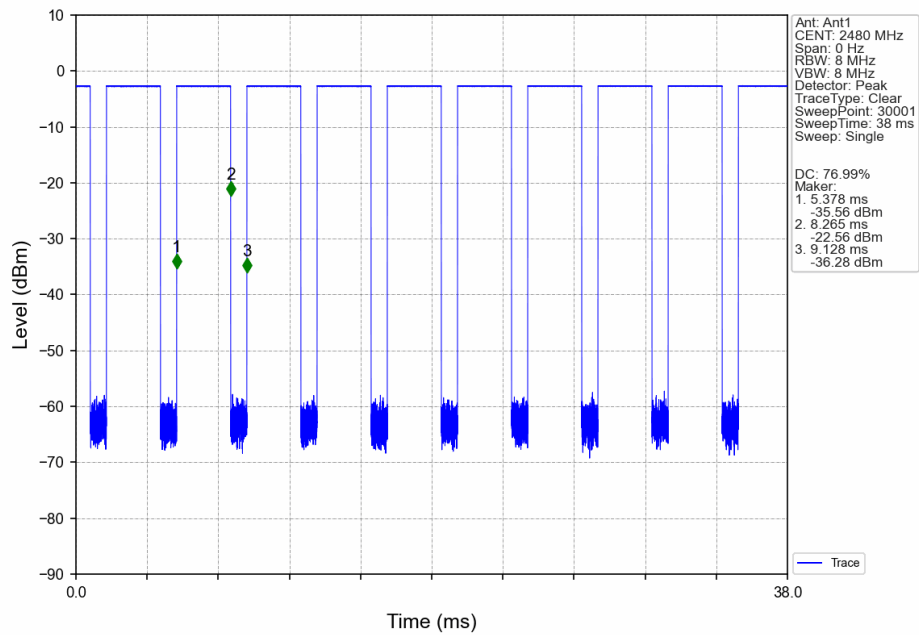
Ant1								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.886	3.749	76.98	1.14	0.01
		2441	DH5	2.886	3.749	76.98	1.14	0.01
		2480	DH5	2.887	3.750	76.99	1.14	0.01
Pi/4DQPSK	SISO	2402	2DH5	2.887	3.750	76.99	1.14	0.03
		2441	2DH5	2.893	3.751	77.13	1.13	0.03
		2480	2DH5	2.886	3.750	76.96	1.14	0.01
8DPSK	SISO	2402	3DH5	2.888	3.749	77.03	1.13	0.01
		2441	3DH5	2.895	3.750	77.20	1.12	0.01
		2480	3DH5	2.888	3.750	77.01	1.13	0.03

1.2 Test Graph

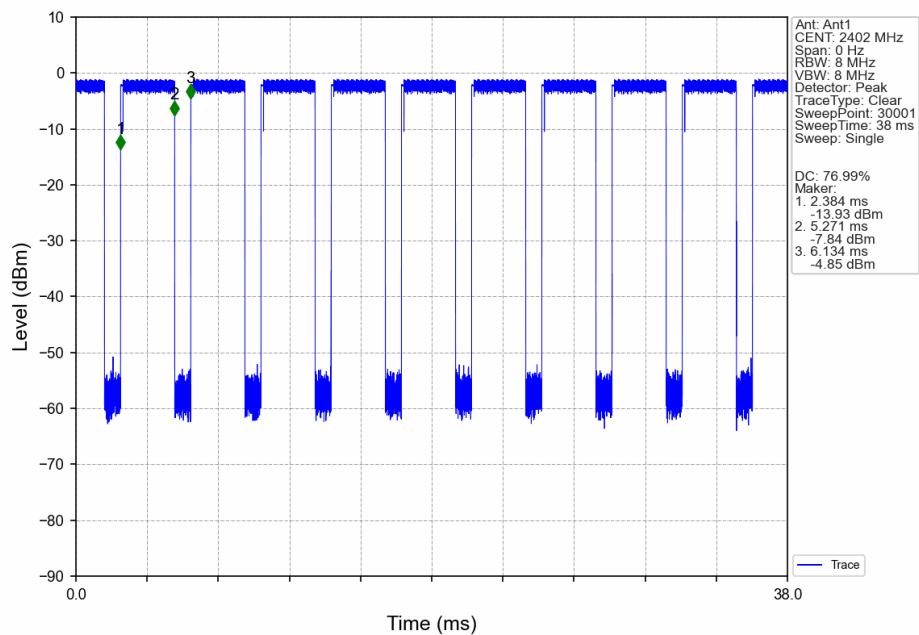
1.2.1 Ant1



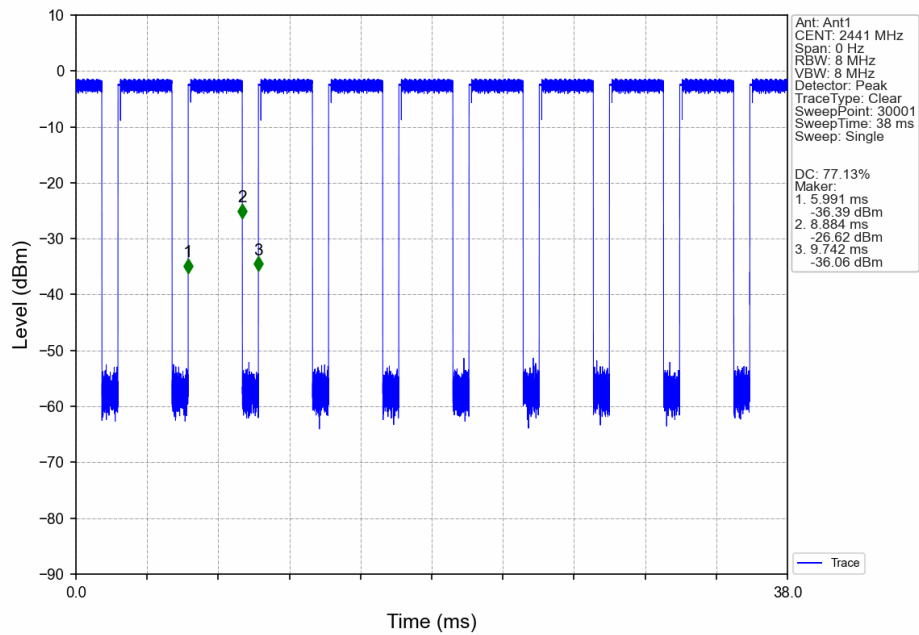
GFSK DH5 HCH 2480MHz Ant1 NTN



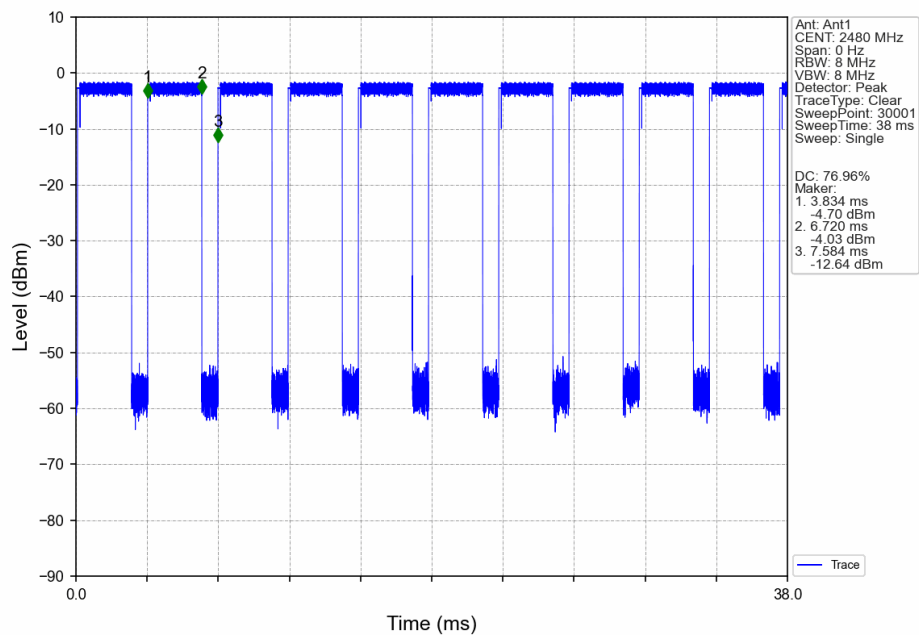
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



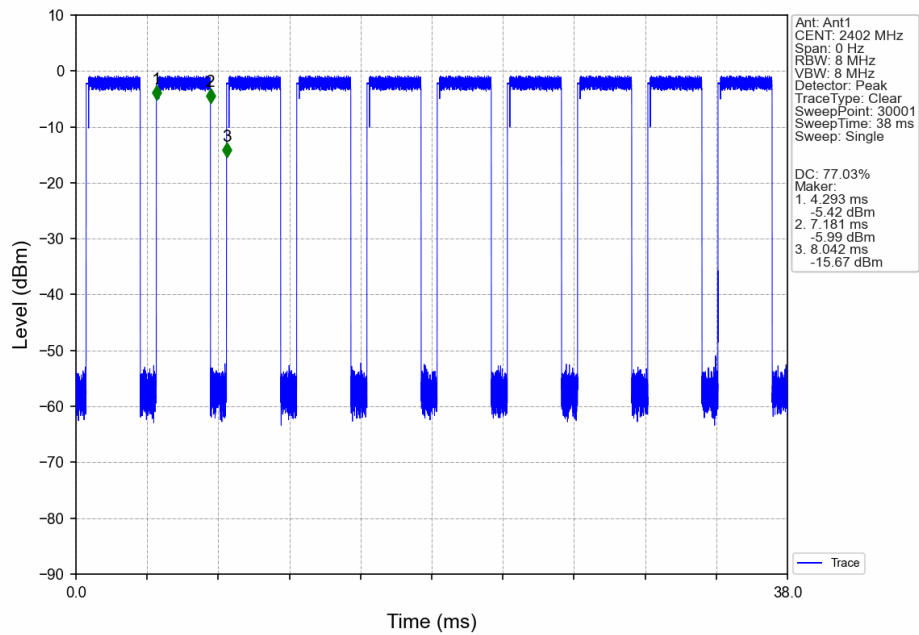
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



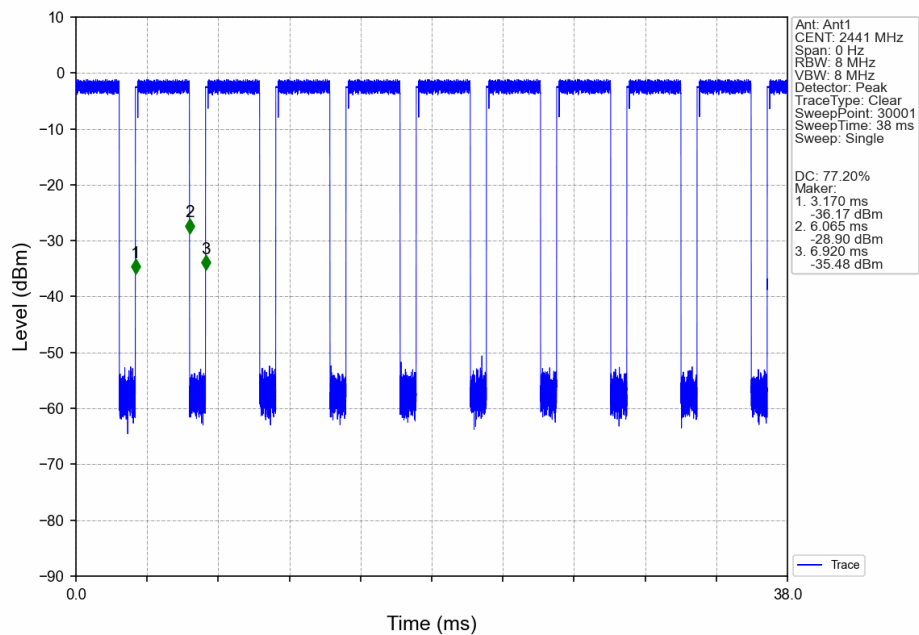
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



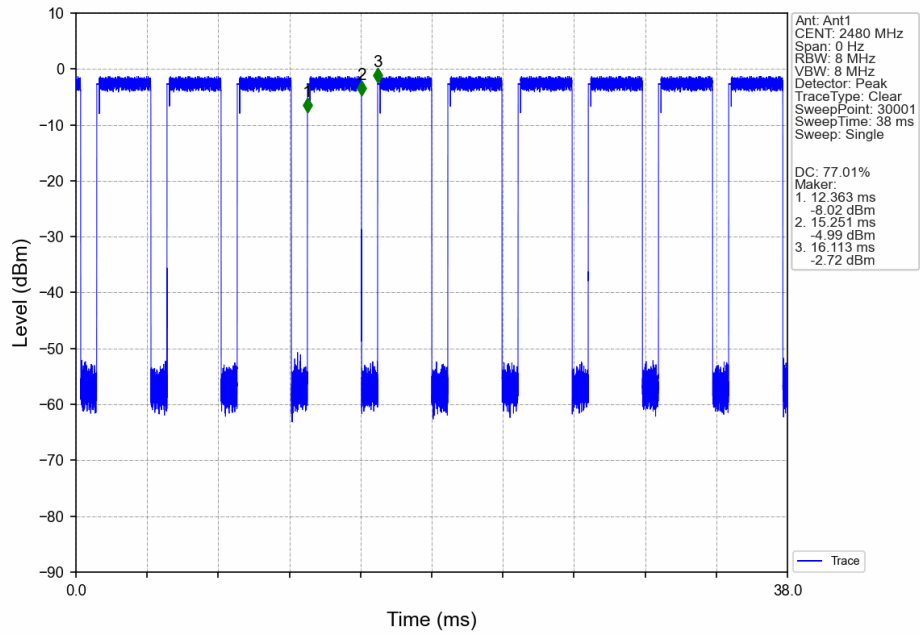
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

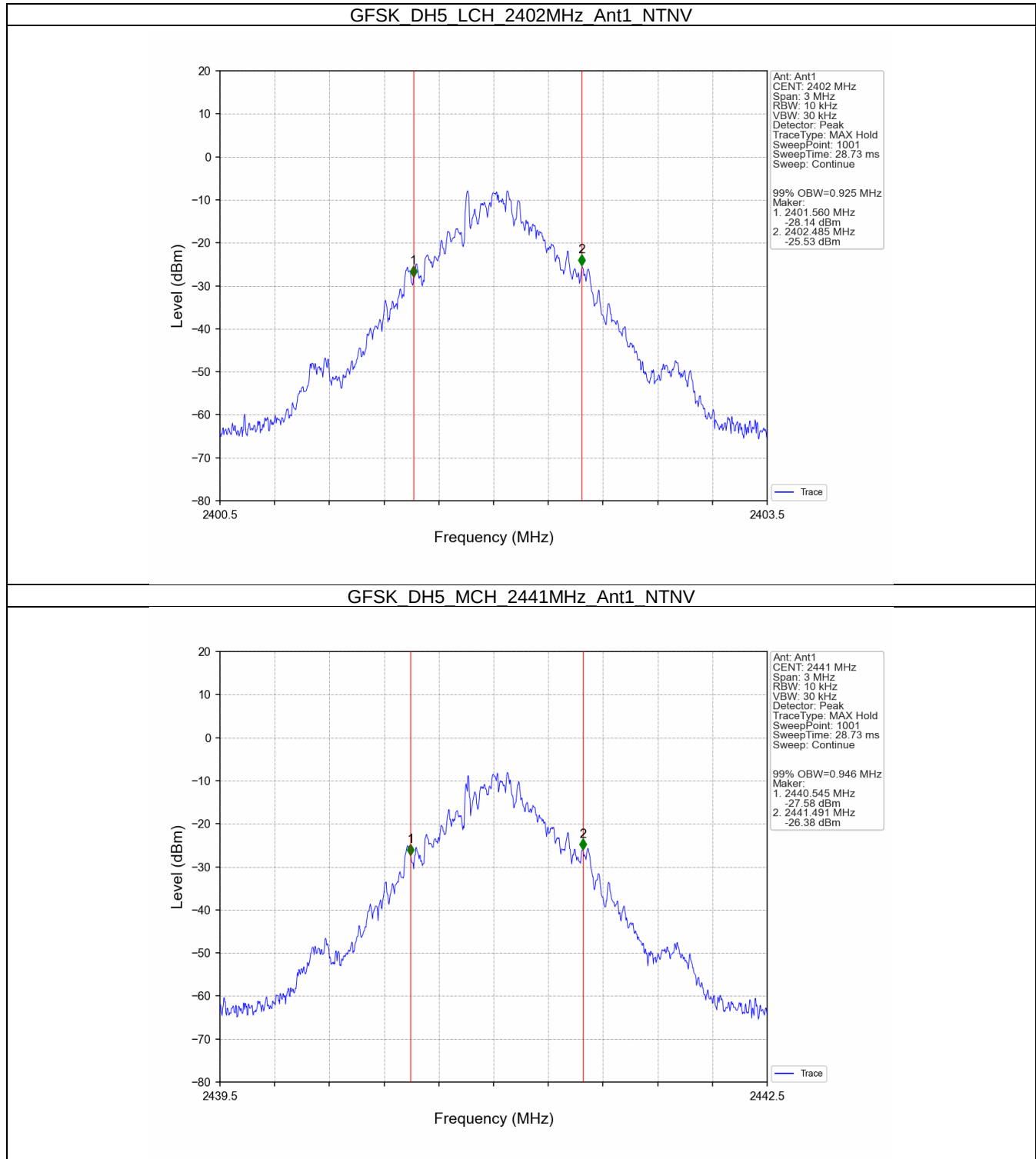
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.925	/	Pass
		2441	DH5	1	0.946	/	Pass
		2480	DH5	1	0.950	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.203	/	Pass
		2441	2DH5	1	1.212	/	Pass
		2480	2DH5	1	1.216	/	Pass
8DPSK	SISO	2402	3DH5	1	1.208	/	Pass
		2441	3DH5	1	1.207	/	Pass
		2480	3DH5	1	1.209	/	Pass

2.1.2 20dB BW

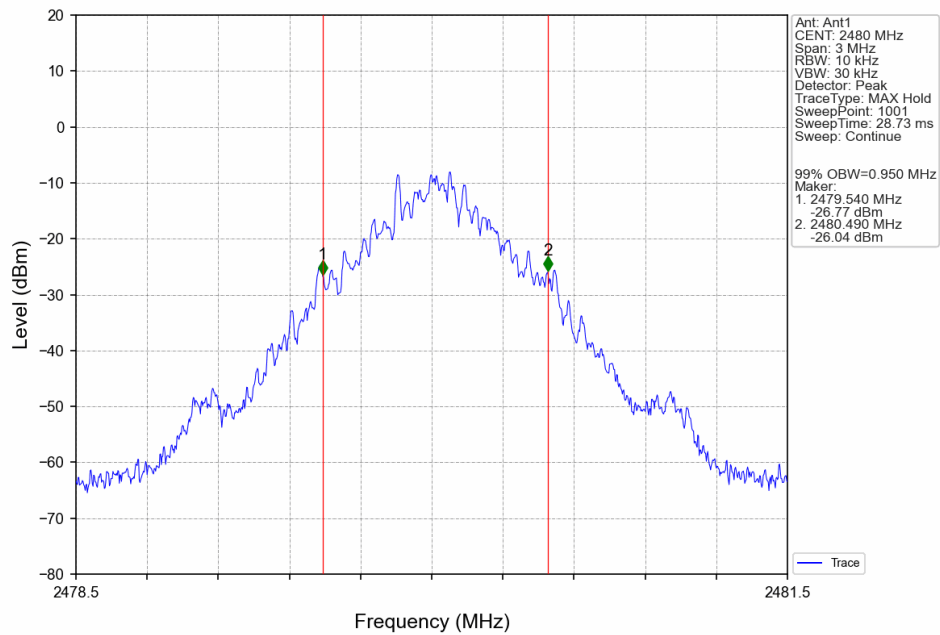
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	1.019	/	Pass
		2441	DH5	1	1.022	/	Pass
		2480	DH5	1	1.025	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.313	/	Pass
		2441	2DH5	1	1.317	/	Pass
		2480	2DH5	1	1.331	/	Pass
8DPSK	SISO	2402	3DH5	1	1.285	/	Pass
		2441	3DH5	1	1.266	/	Pass
		2480	3DH5	1	1.266	/	Pass

2.2 Test Graph

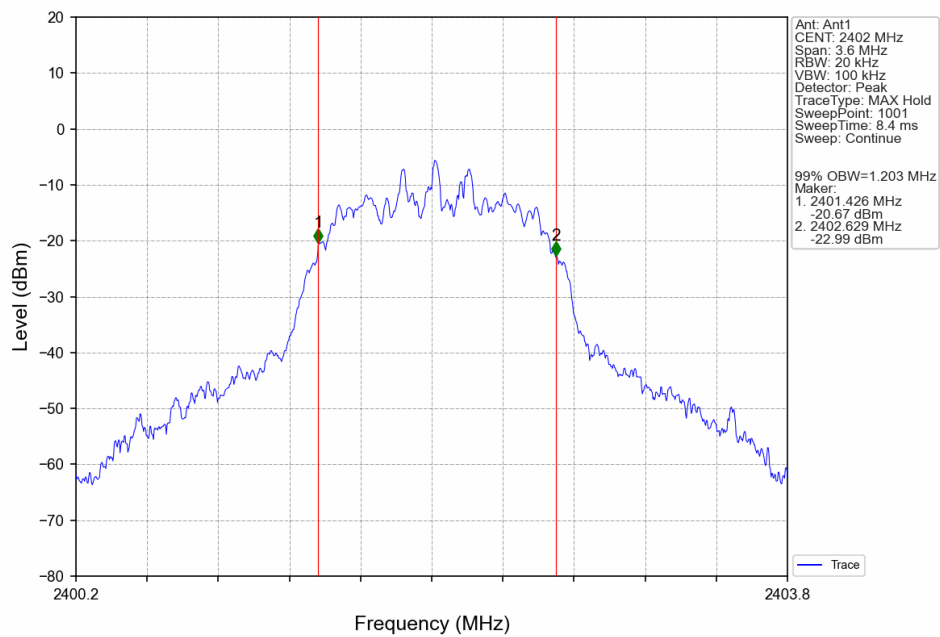
2.2.1 OBW



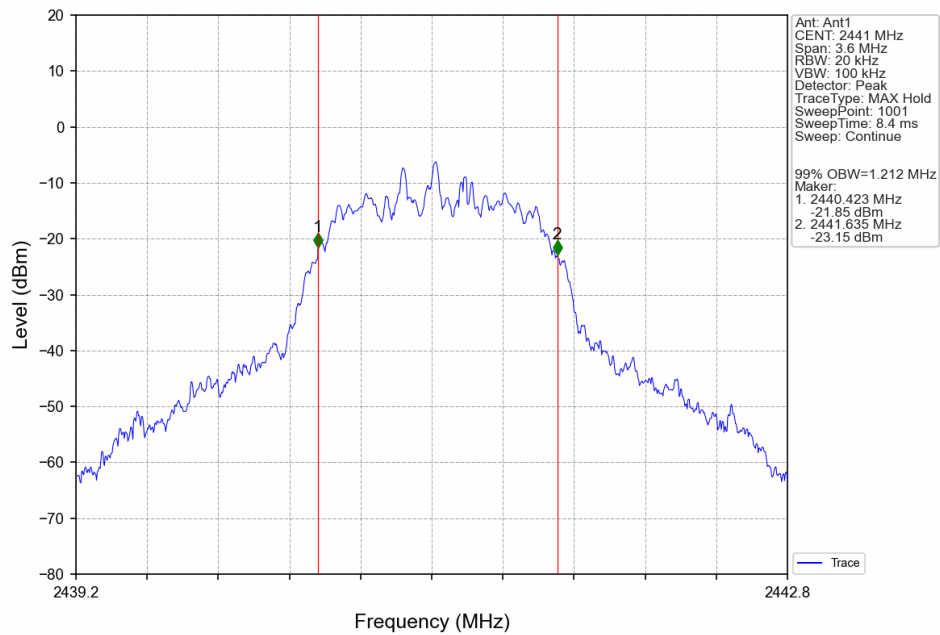
GFSK DH5 HCH 2480MHz Ant1 NTNV



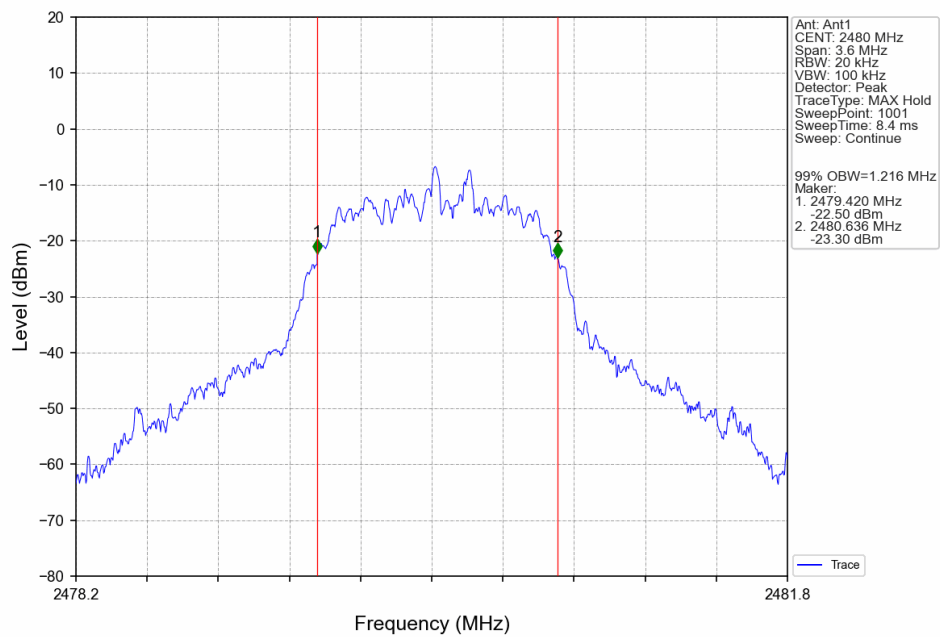
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTNV



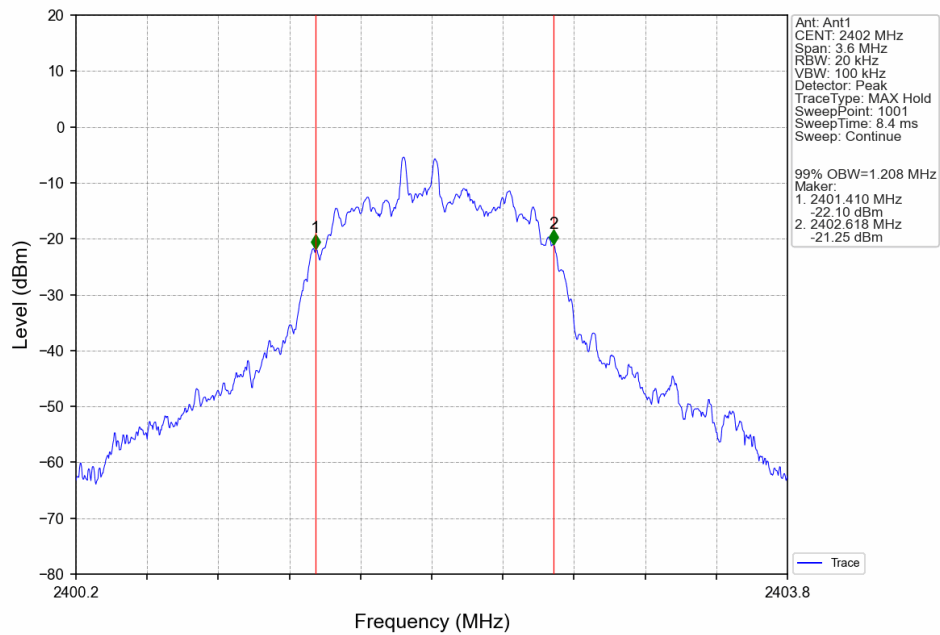
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



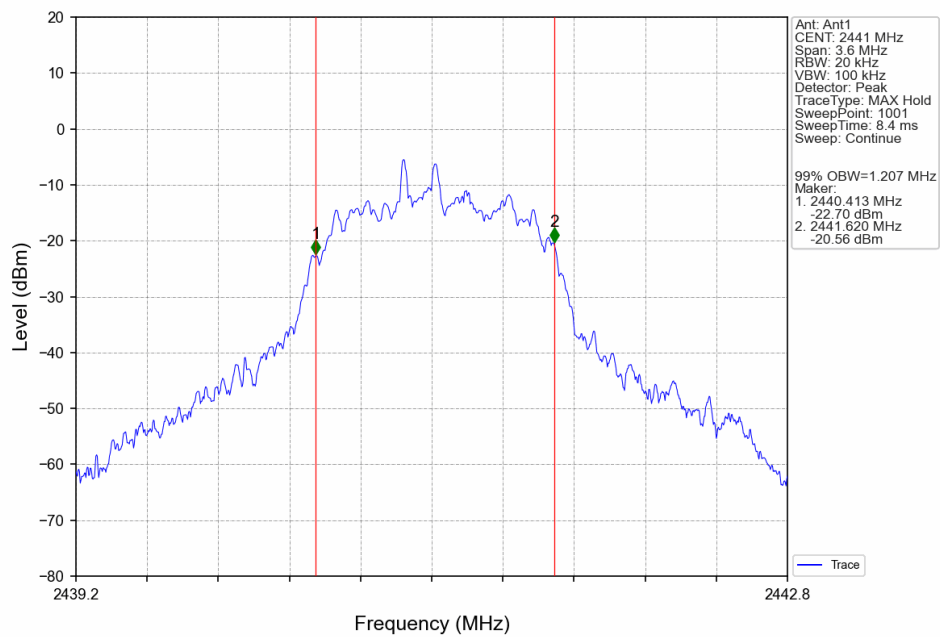
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



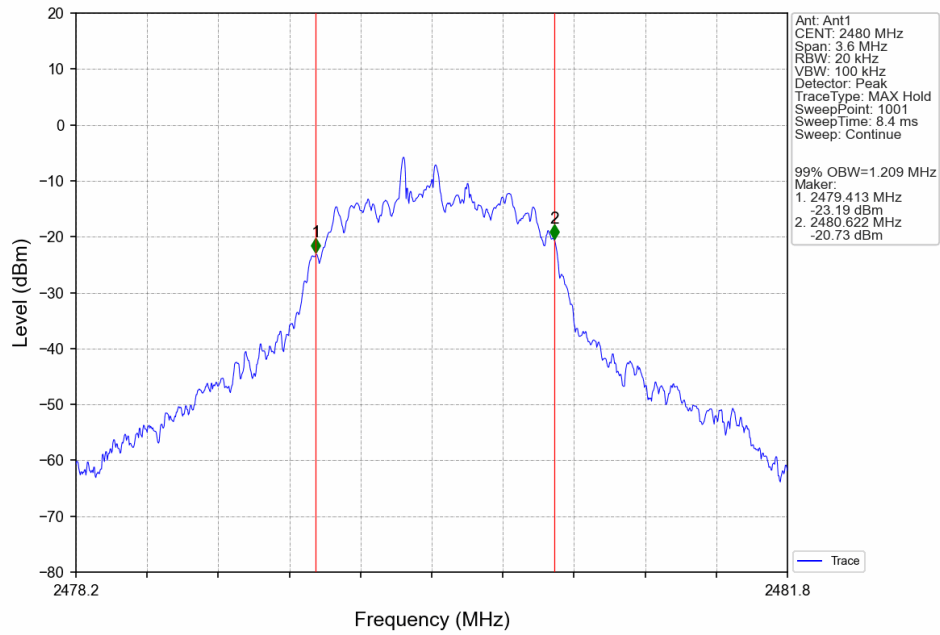
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



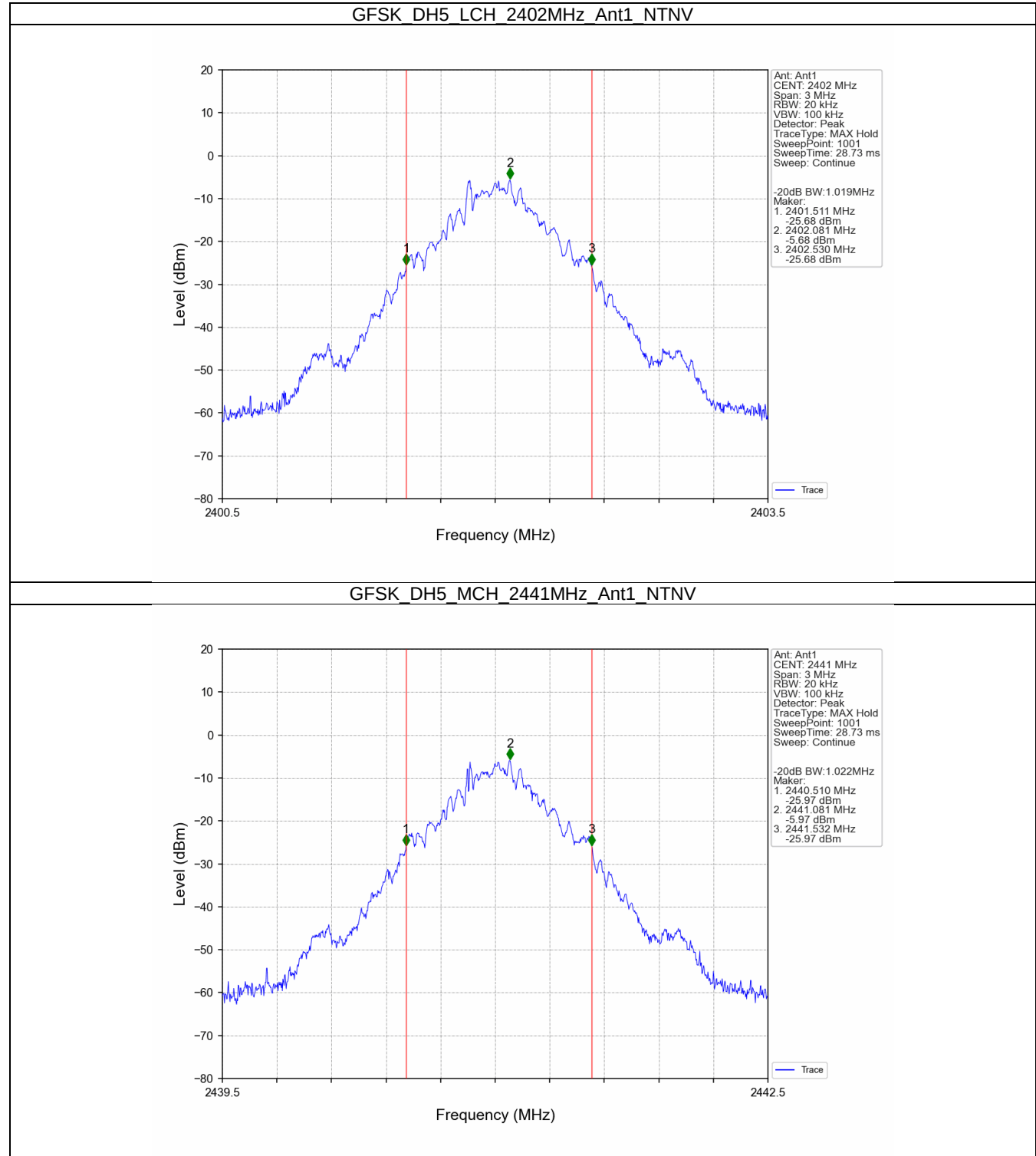
8DPSK 3DH5 MCH 2441MHz Ant1 NTN



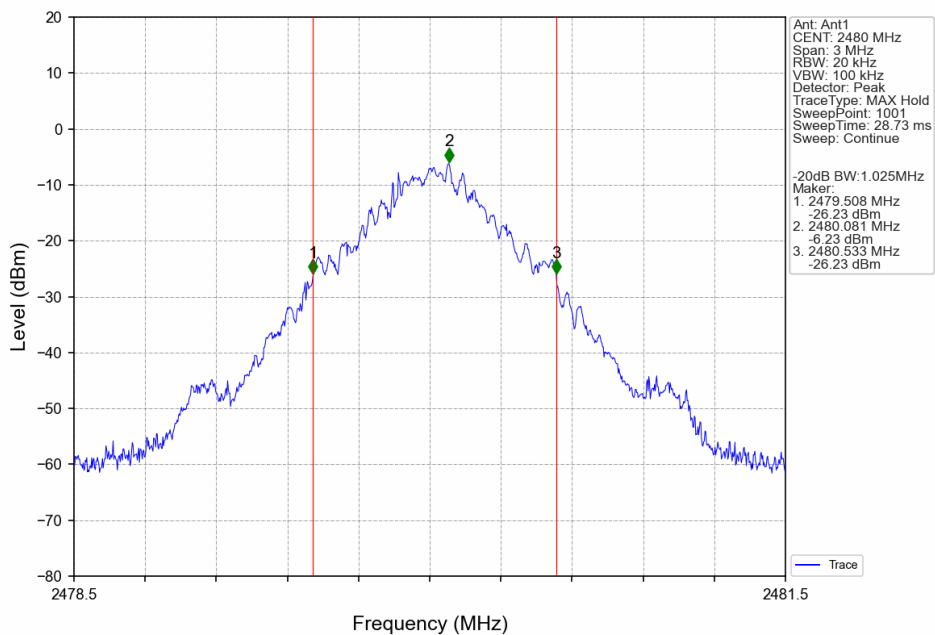
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



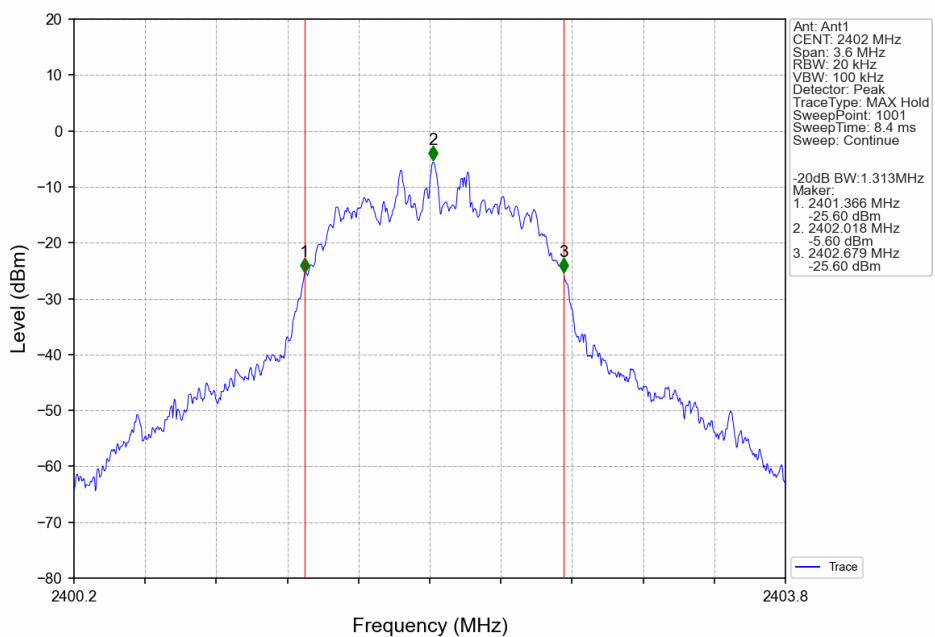
2.2.2 20dB BW



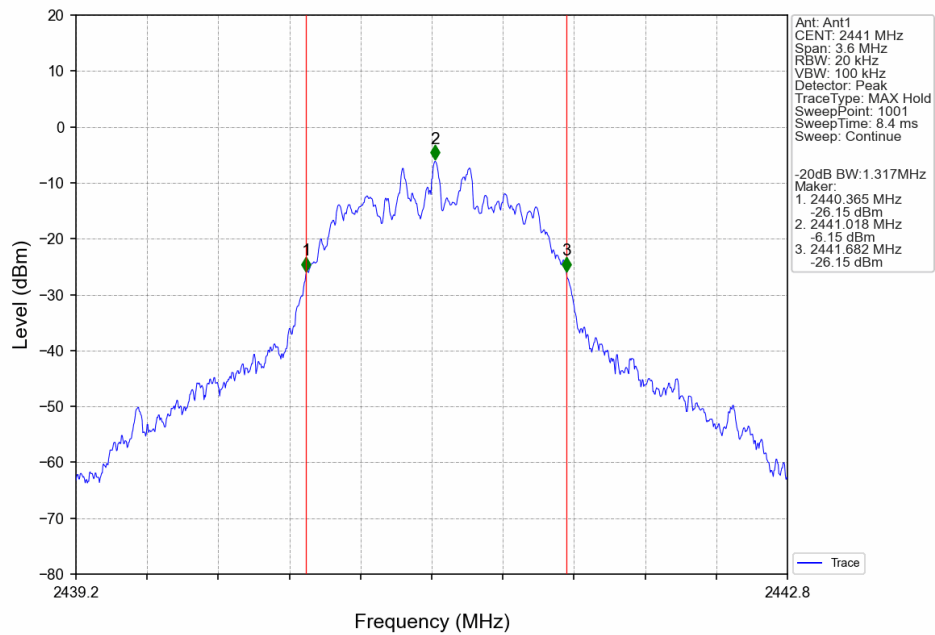
GFSK DH5 HCH 2480MHz Ant1 NTN



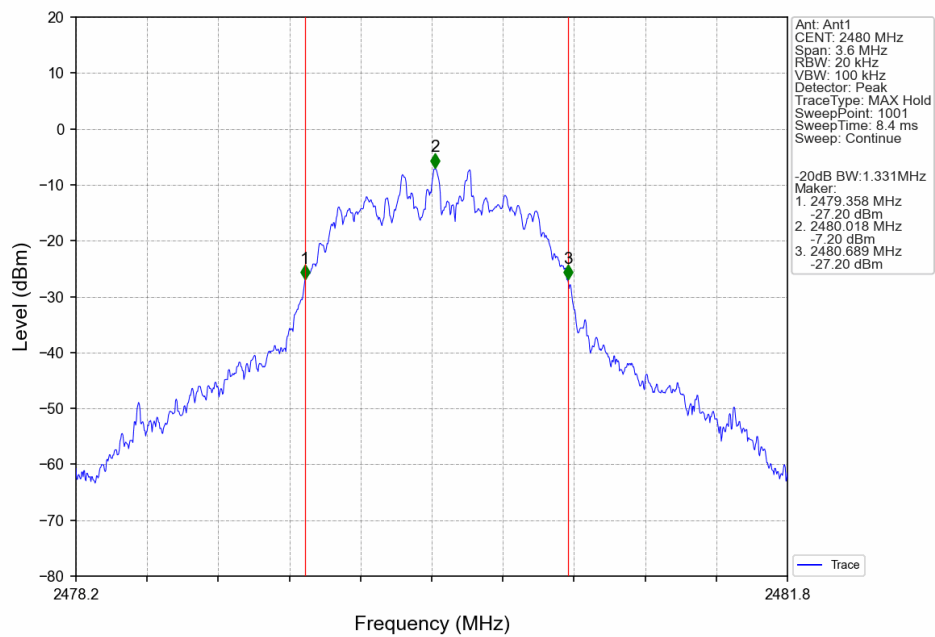
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



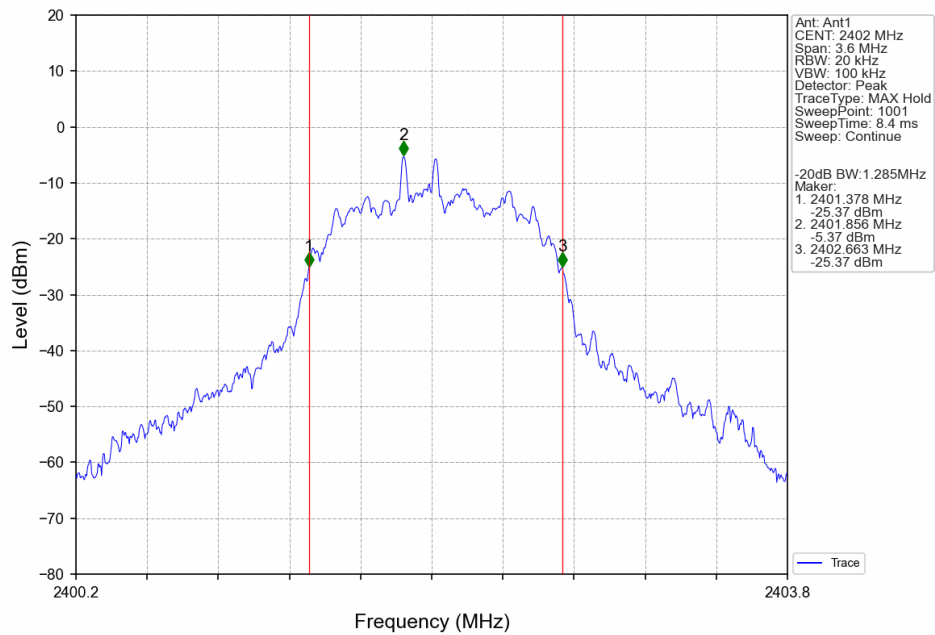
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



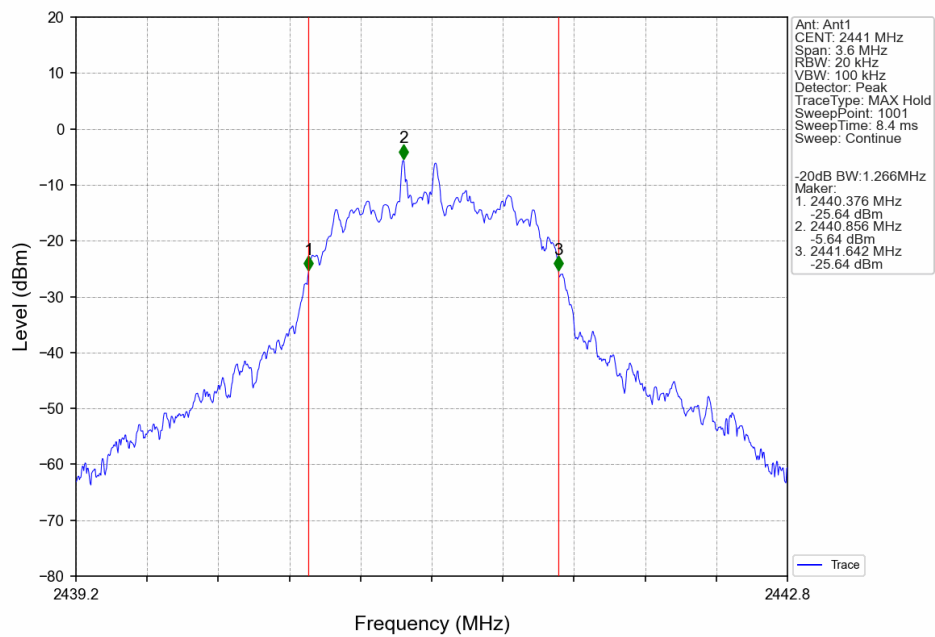
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



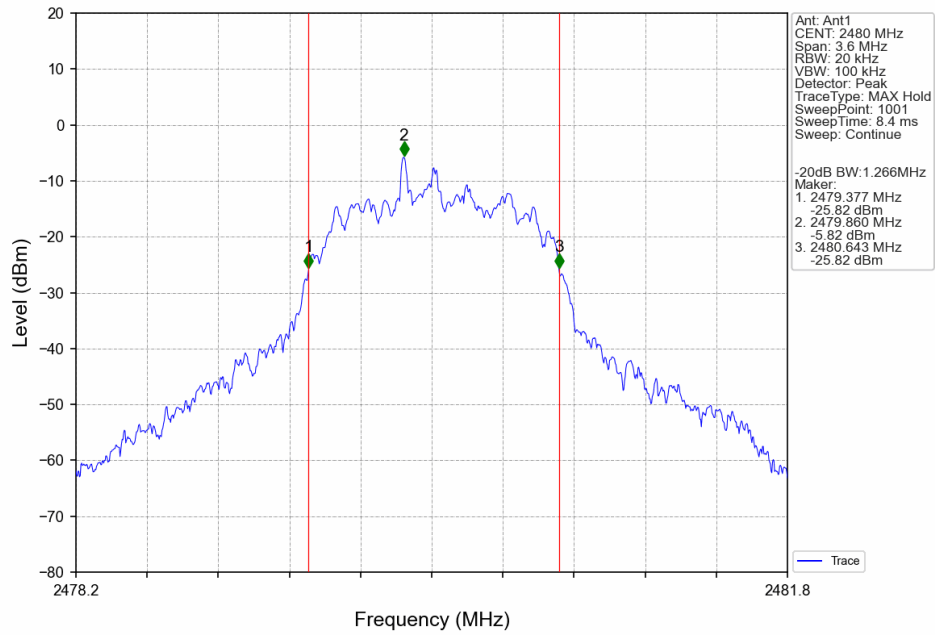
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



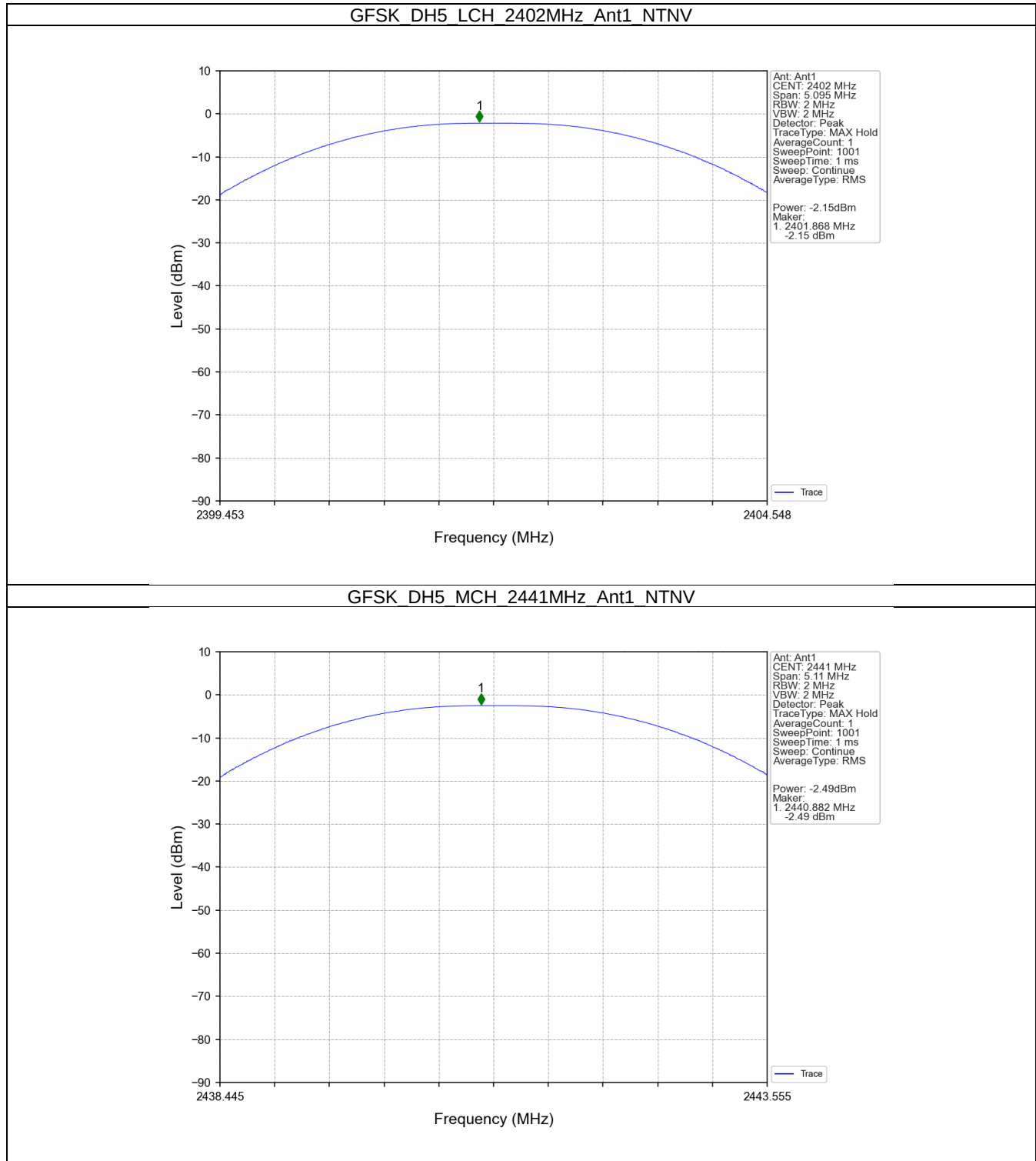
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



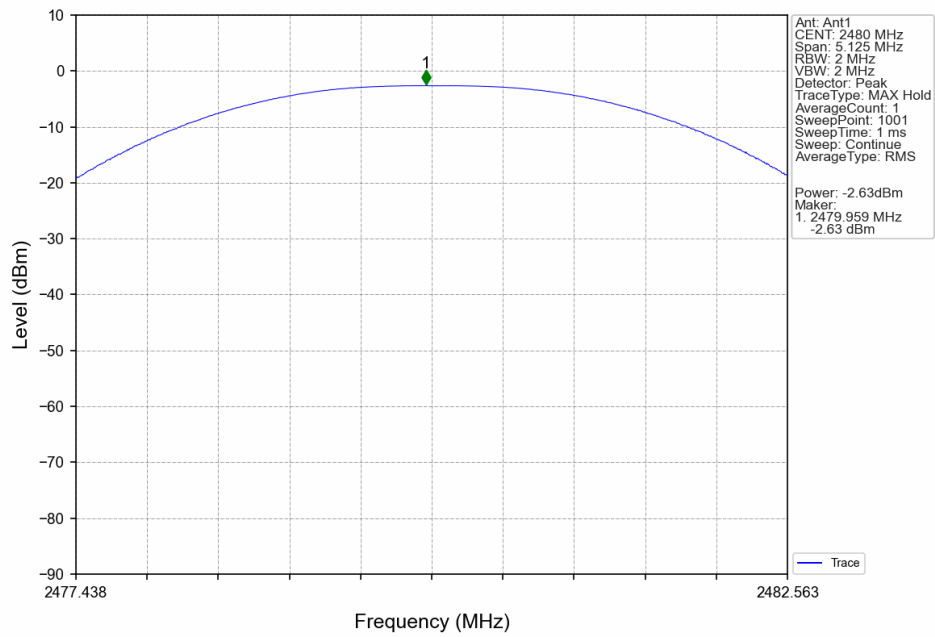
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-2.15	<=20.97	Pass
		2441	DH5	-2.49	<=20.97	Pass
		2480	DH5	-2.63	<=20.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	-1.37	<=20.97	Pass
		2441	2DH5	-1.63	<=20.97	Pass
		2480	2DH5	-1.81	<=20.97	Pass
8DPSK	SISO	2402	3DH5	-1.00	<=20.97	Pass
		2441	3DH5	-1.25	<=20.97	Pass
		2480	3DH5	-1.44	<=20.97	Pass
Note1: Antenna Gain: Ant1: -0.68dBi;						

3.2 Test Graph

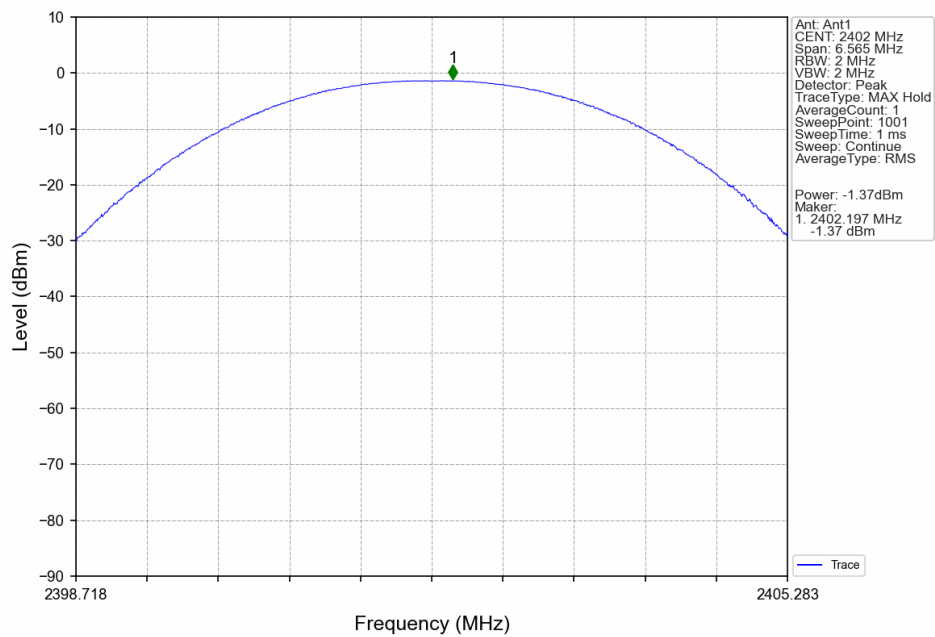
3.2.1 Power



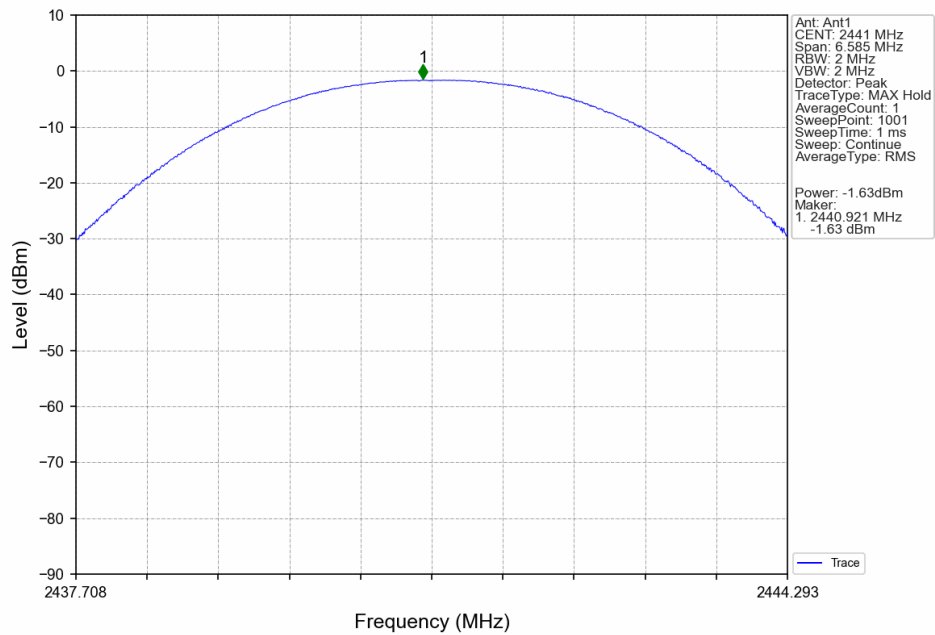
GFSK DH5 HCH 2480MHz Ant1 NTN



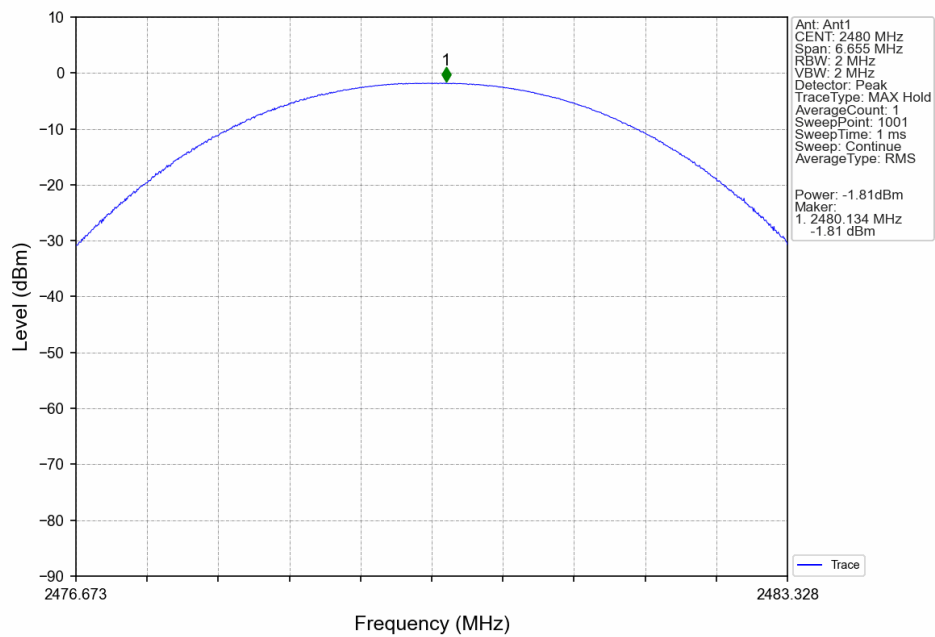
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



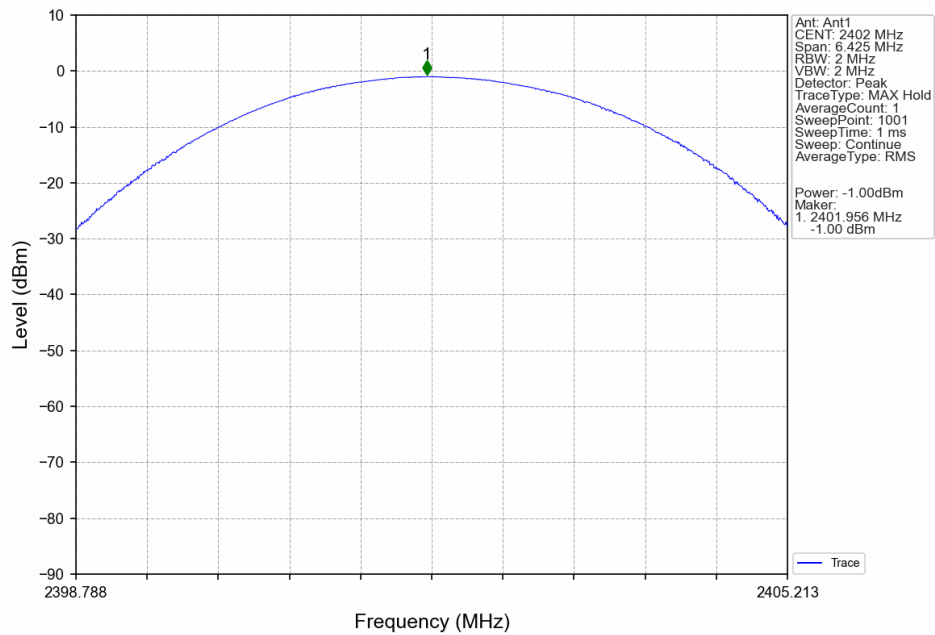
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTNV



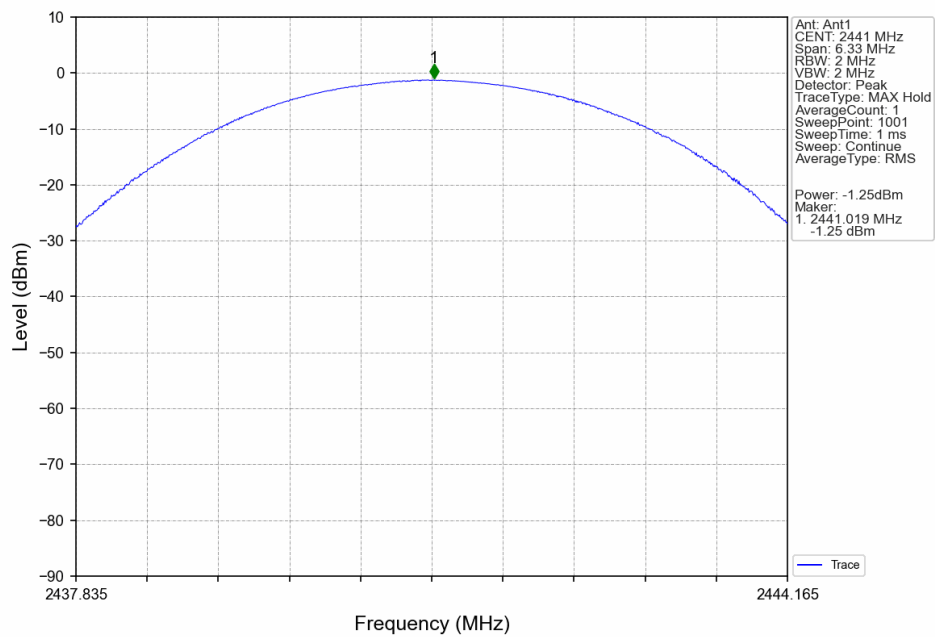
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTNV



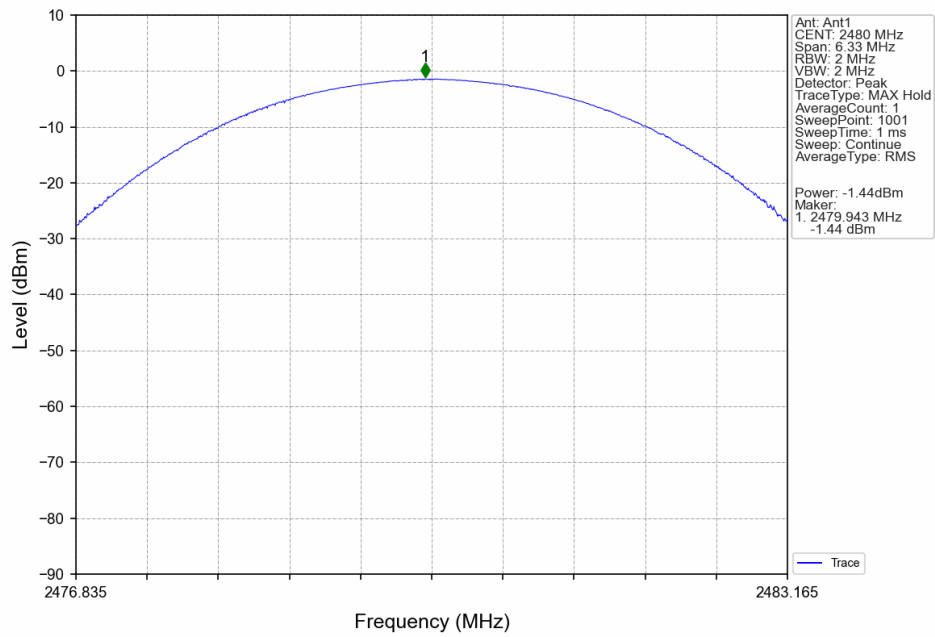
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



4. Carrier Frequency Separation

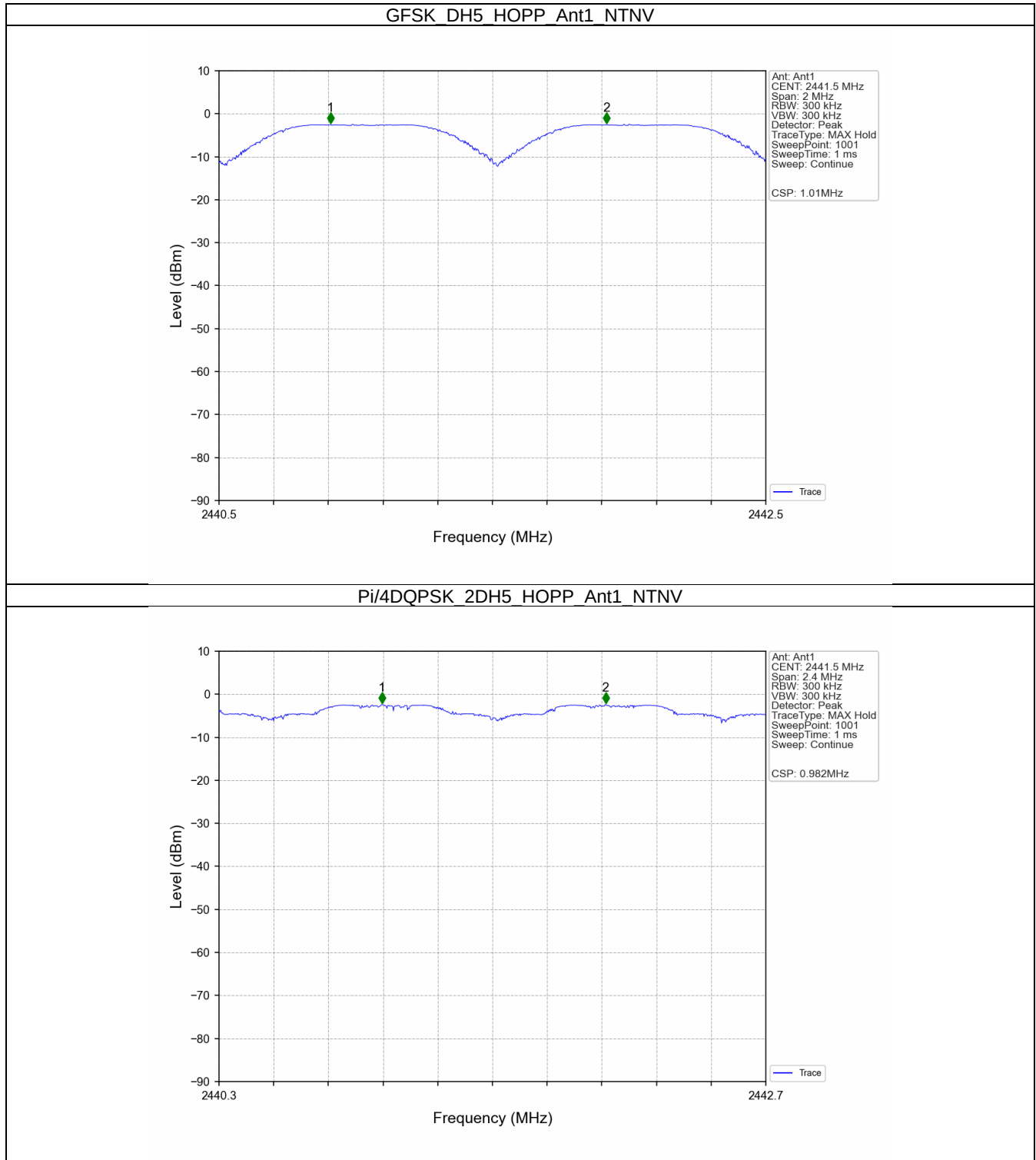
4.1 Test Result

4.1.1 Ant1

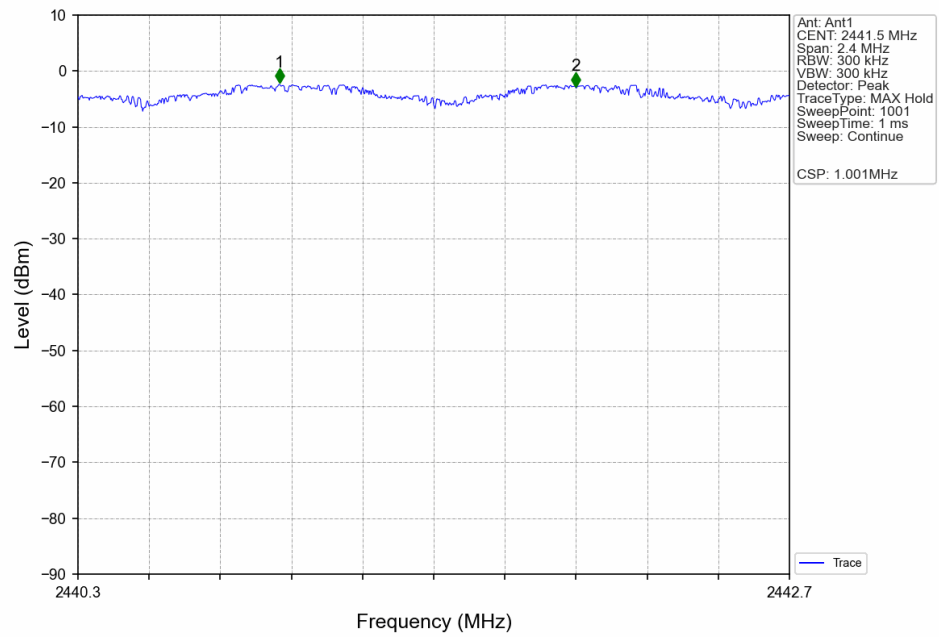
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.010	1.025	≥ 0.683	Pass
PI/4DQPSK	SISO	HOPP	2DH5	0.982	1.331	≥ 0.887	Pass
8DPSK	SISO	HOPP	3DH5	1.001	1.285	≥ 0.857	Pass

4.2 Test Graph

4.2.1 Ant1



8DPSK 3DH5 HOPP Ant1 NTN



5. Number of Hopping Frequencies

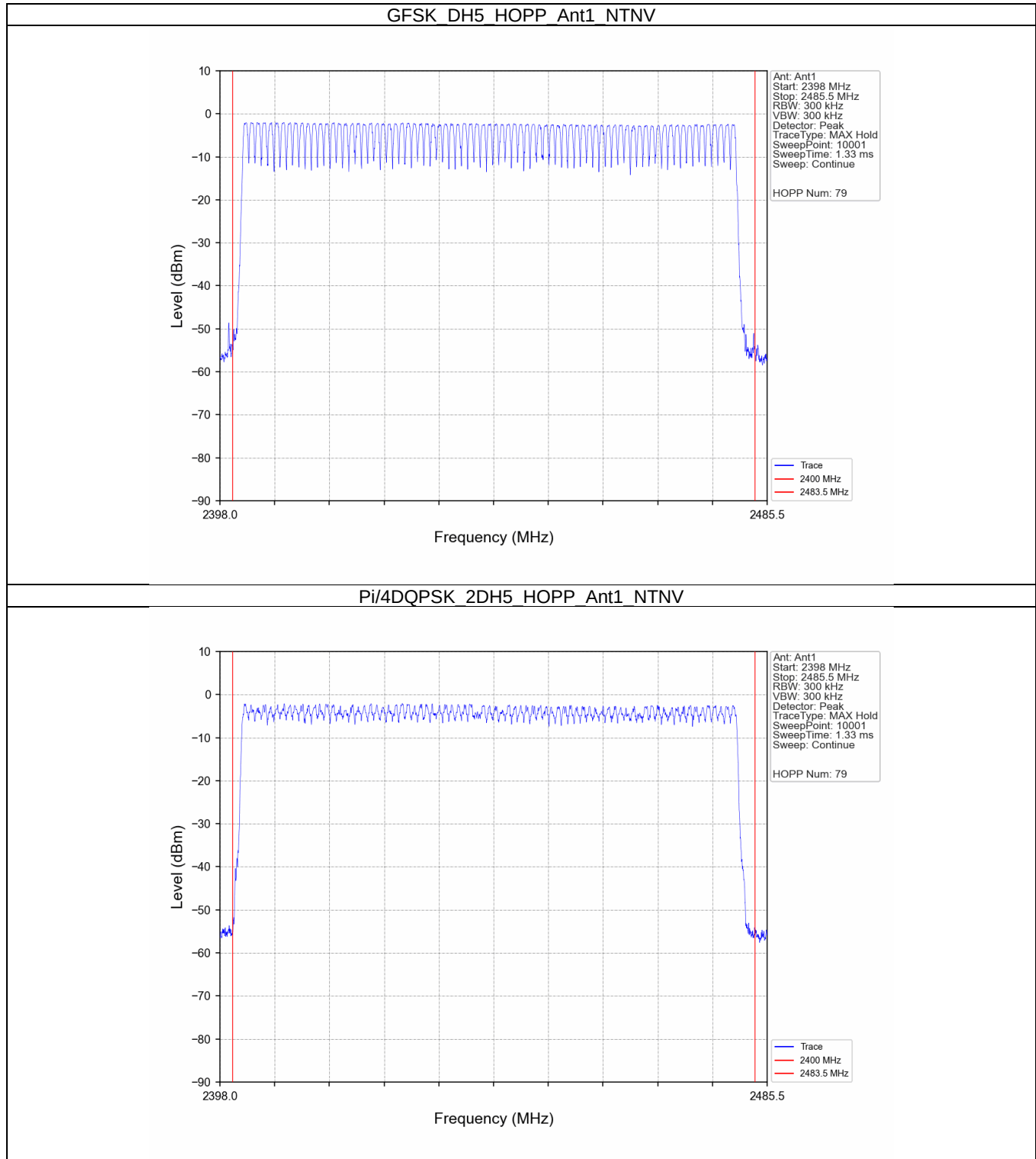
5.1 Test Result

5.1.1 HoppNum

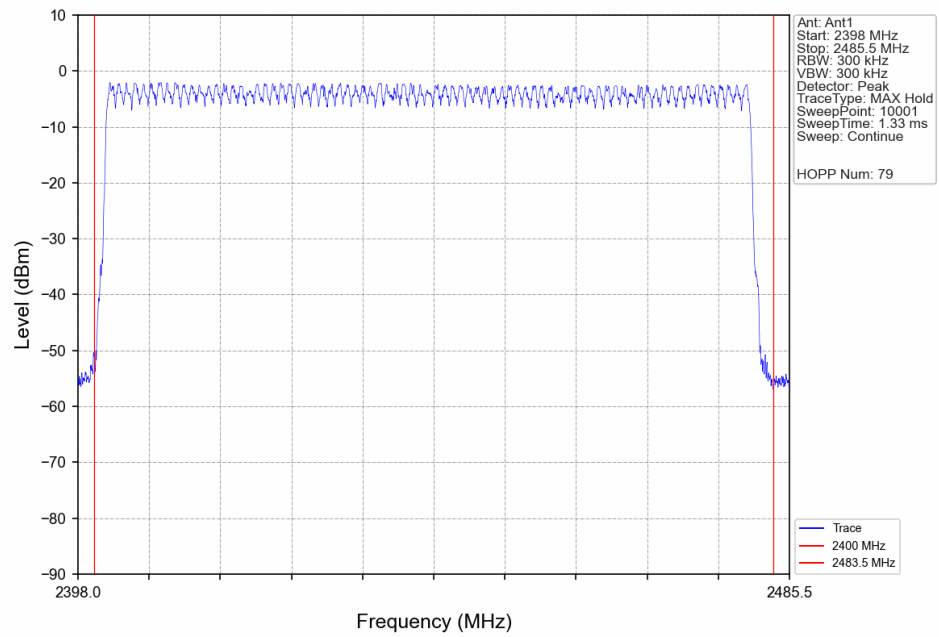
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	≥ 15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	≥ 15	Pass
8DPSK	SISO	HOPP	3DH5	79	≥ 15	Pass

5.2 Test Graph

5.2.1 HoppNum



8DPSK 3DH5 HOPP Ant1 NTN



6. Time of Occupancy (Dwell Time)

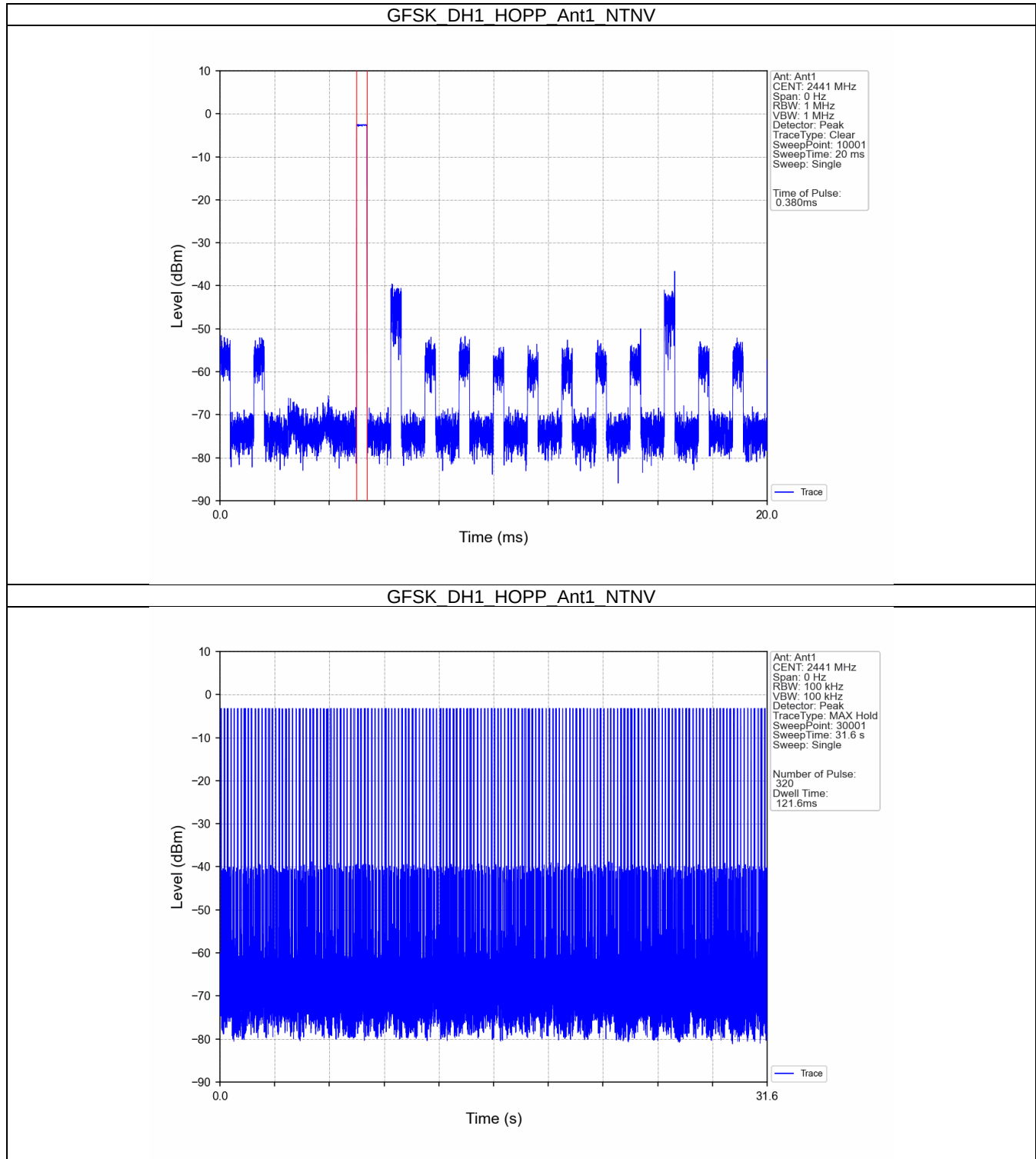
6.1 Test Result

6.1.1 Ant1

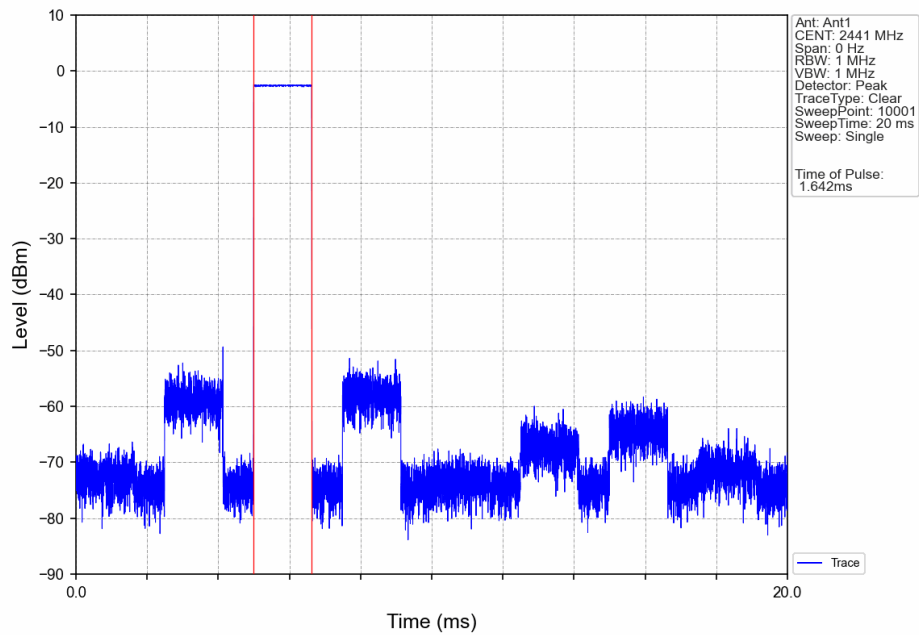
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.380	31.600	320	121.600	<=400	Pass
			DH3	1.642	31.600	156	256.152	<=400	Pass
			DH5	2.882	31.600	111	319.902	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.396	31.600	319	126.324	<=400	Pass
			2DH3	1.650	31.600	163	268.950	<=400	Pass
			2DH5	2.896	31.600	119	344.624	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.390	31.600	320	124.800	<=400	Pass
			3DH3	1.646	31.600	161	265.006	<=400	Pass
			3DH5	2.892	31.600	109	315.228	<=400	Pass

6.2 Test Graph

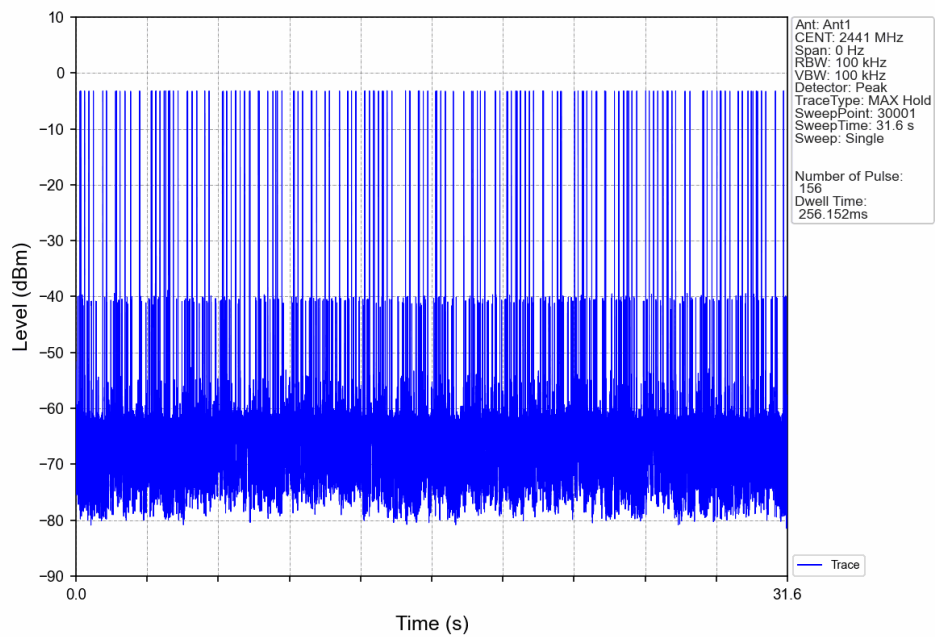
6.2.1 Ant1



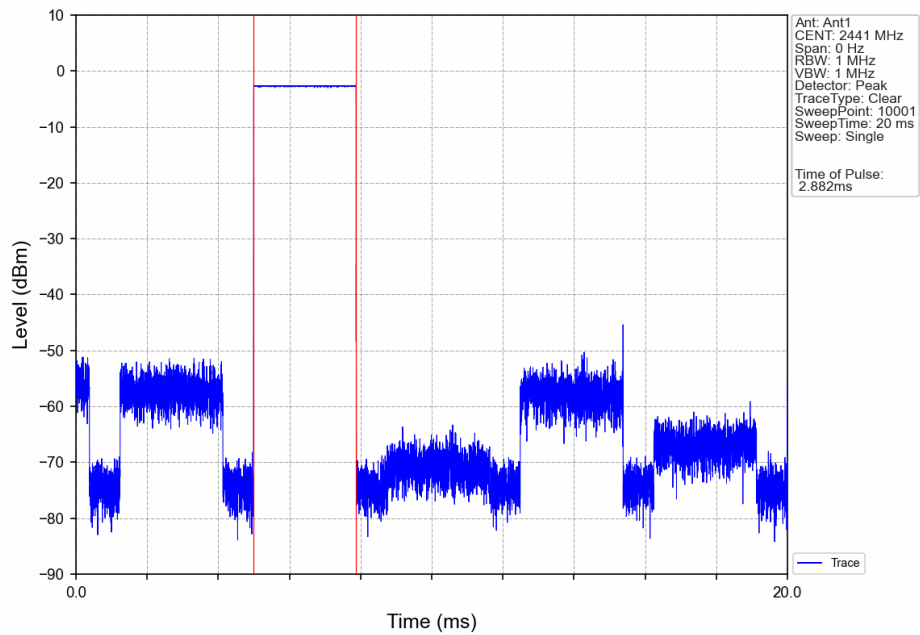
GFSK DH3 HOPP Ant1 NTN



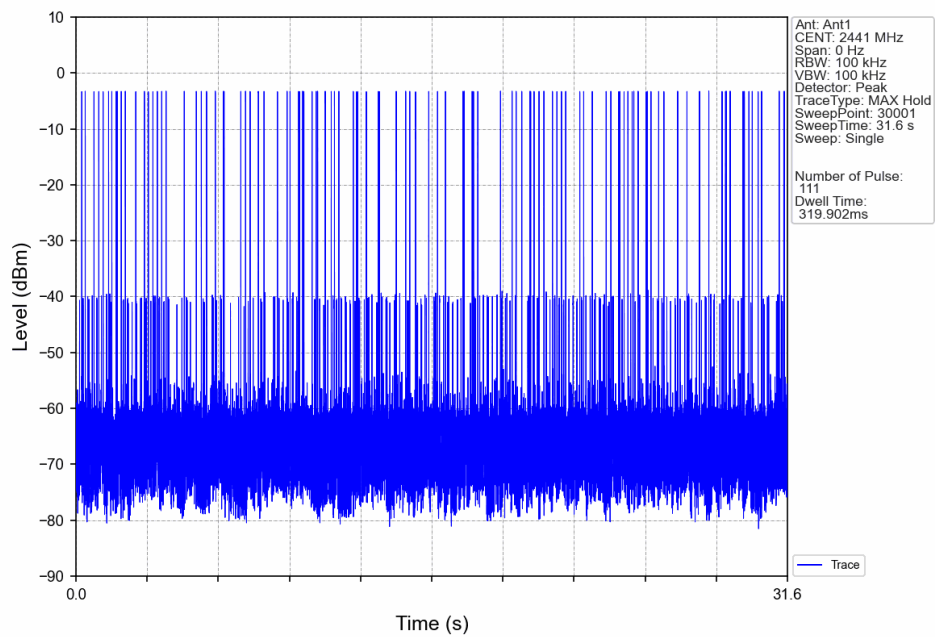
GFSK DH3 HOPP Ant1 NTN



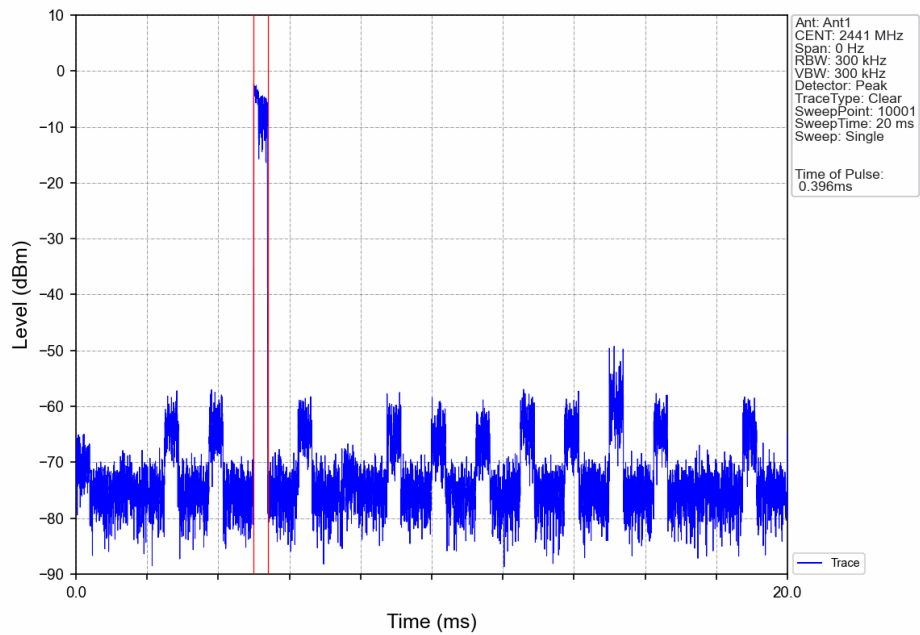
GFSK DH5 HOPP Ant1 NTNv



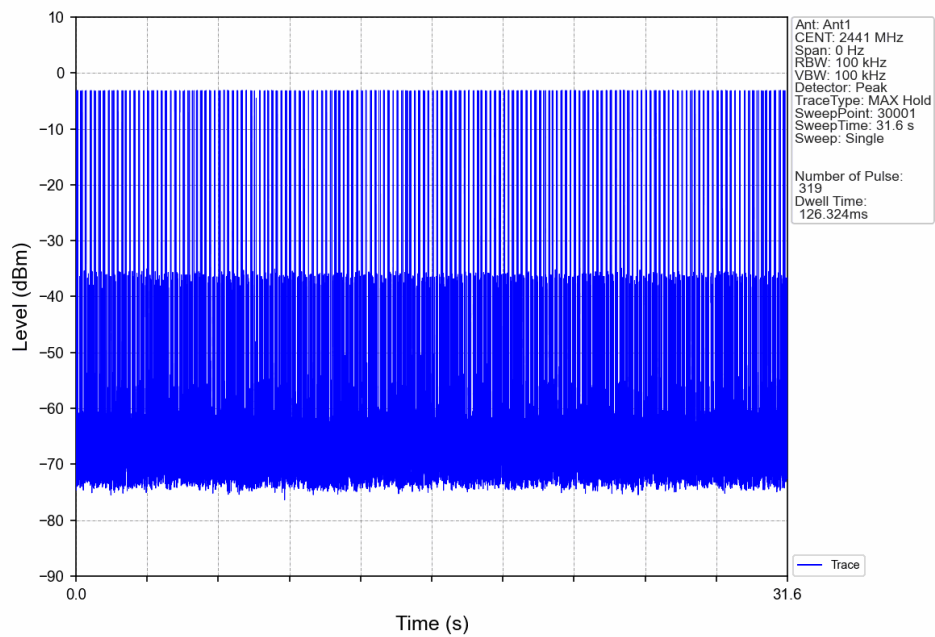
GFSK DH5 HOPP Ant1 NTNv



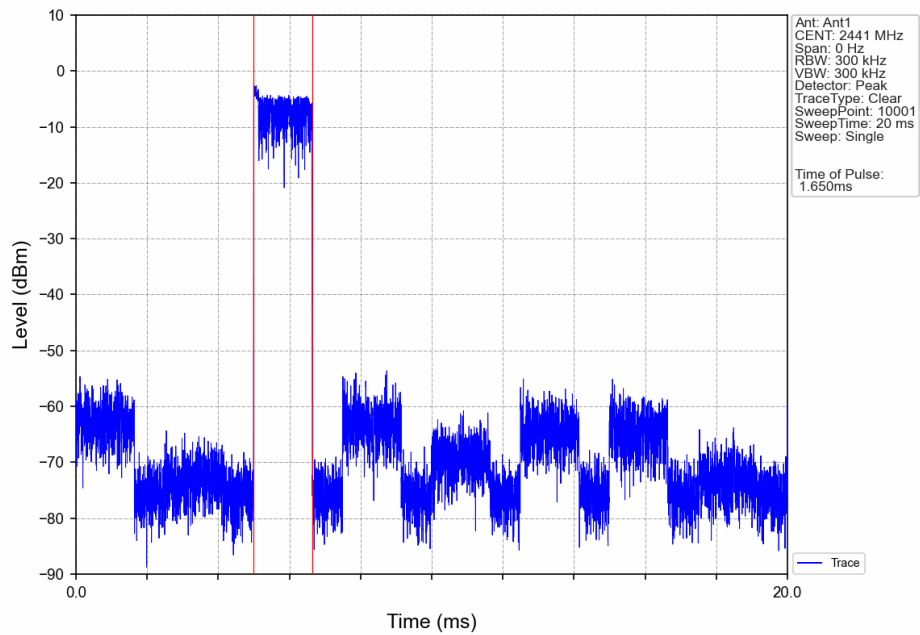
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



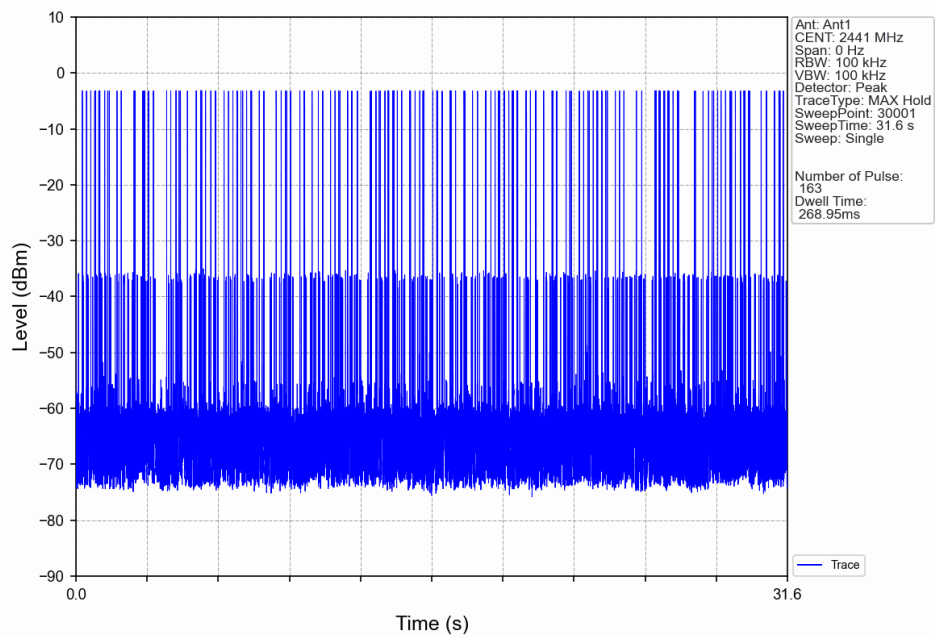
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



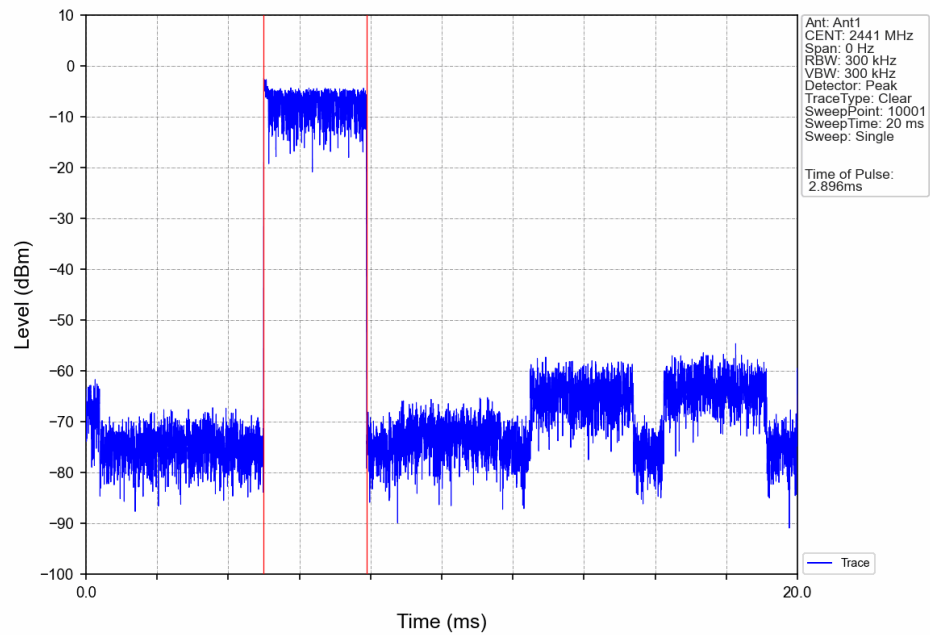
Pi/4DQPSK 2DH3 HOPP Ant1 NTN



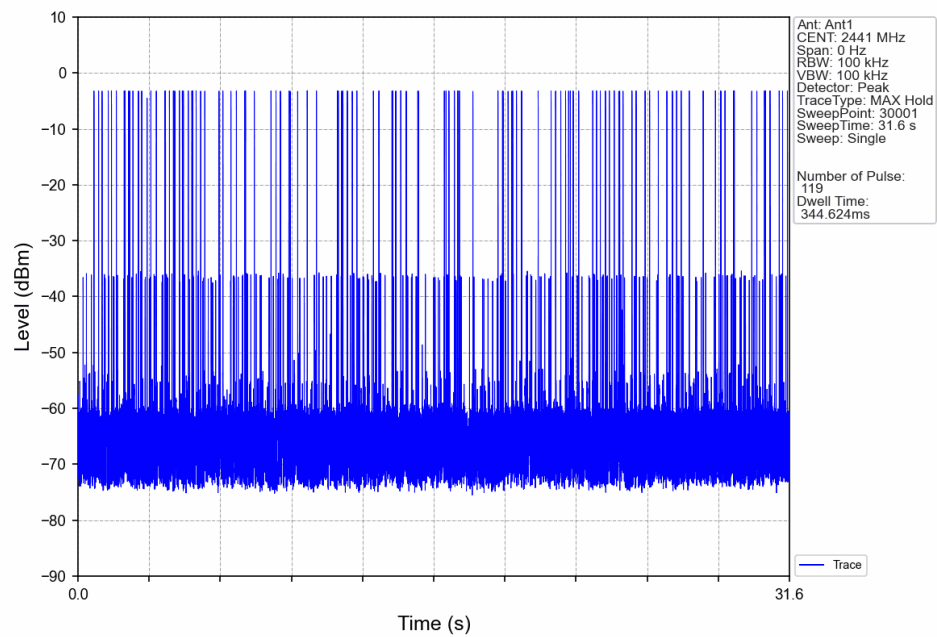
Pi/4DQPSK 2DH3 HOPP Ant1 NTN



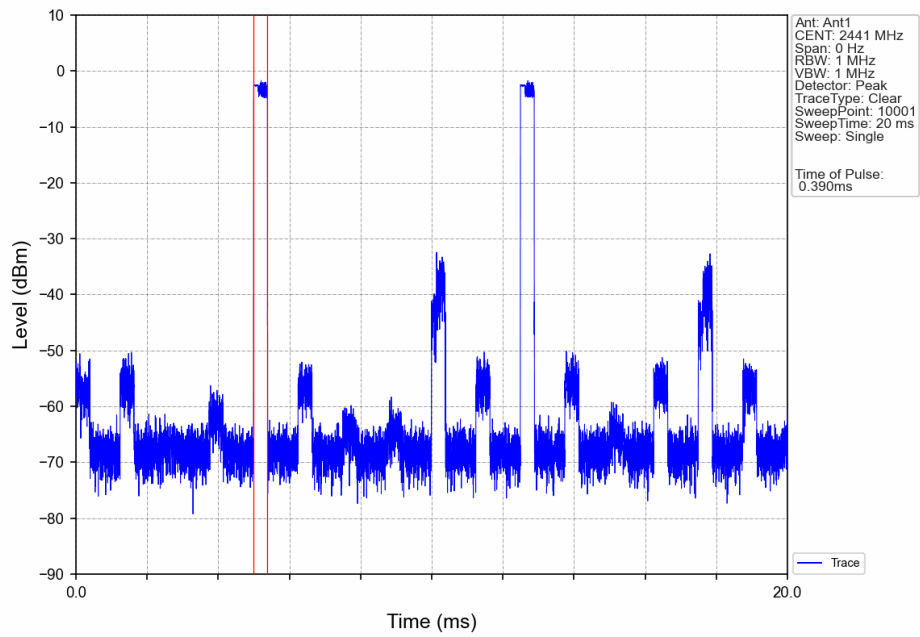
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



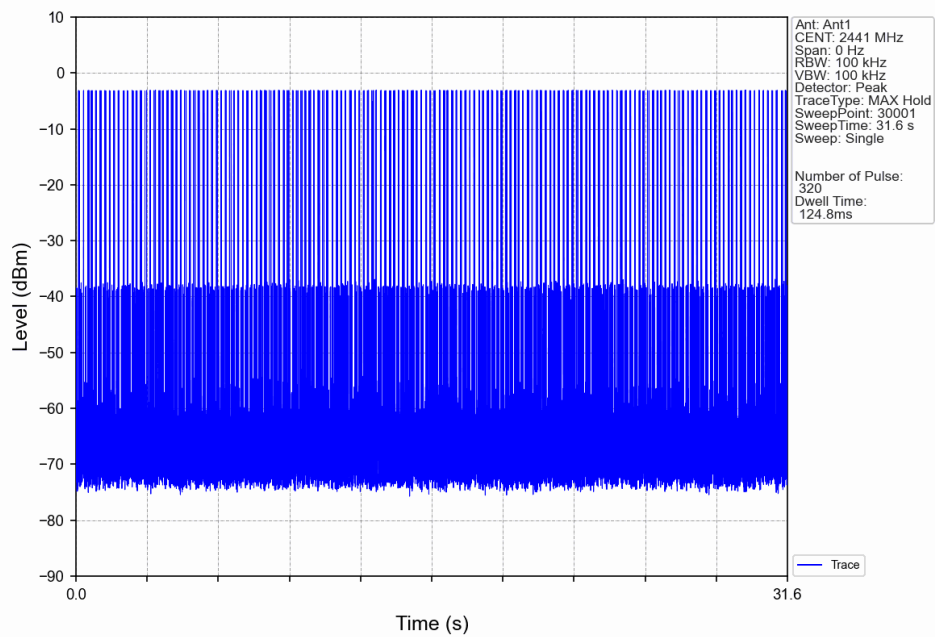
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



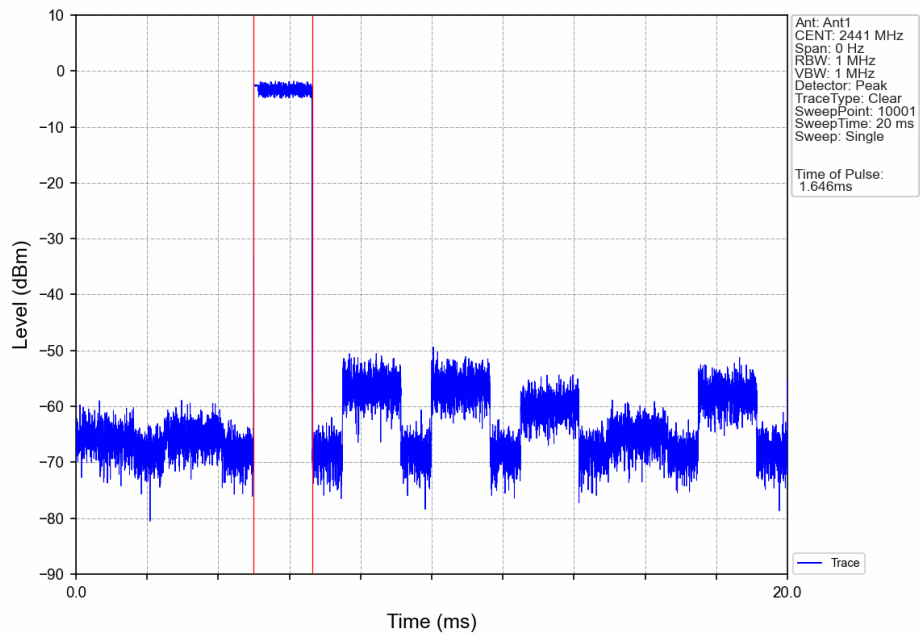
8DPSK 3DH1 HOPP Ant1 NTNV



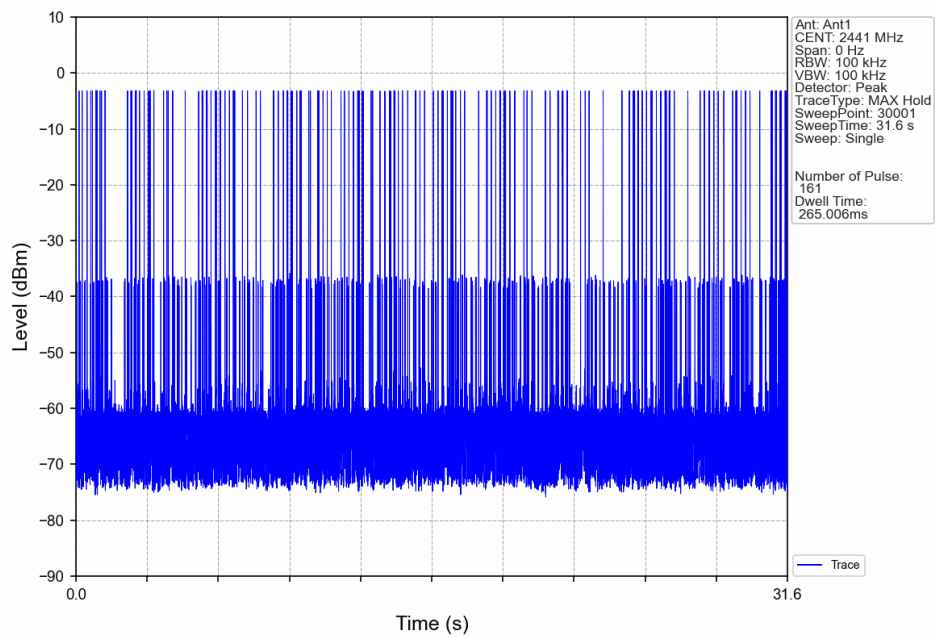
8DPSK 3DH1 HOPP Ant1 NTNV



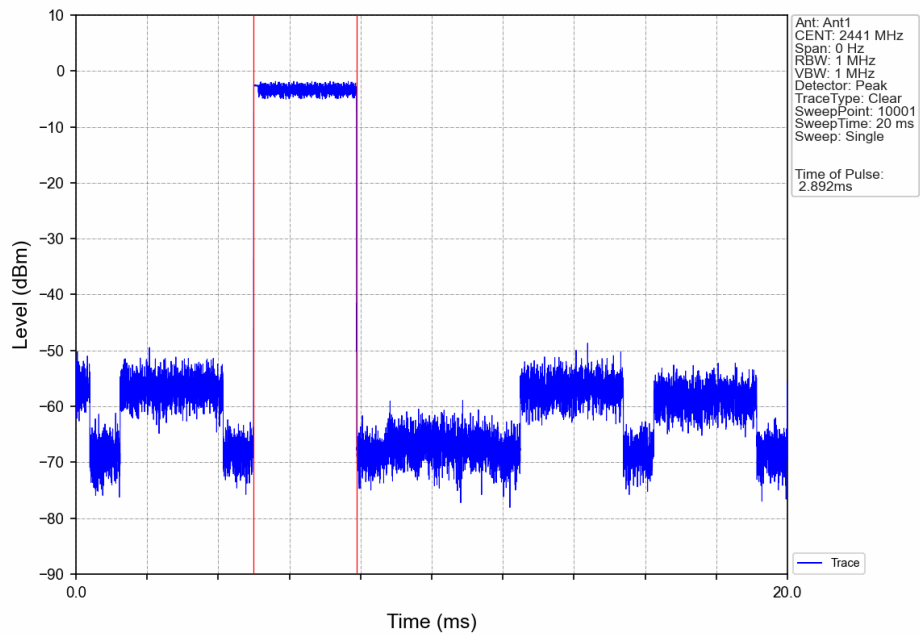
8DPSK 3DH3 HOPP Ant1 NTN



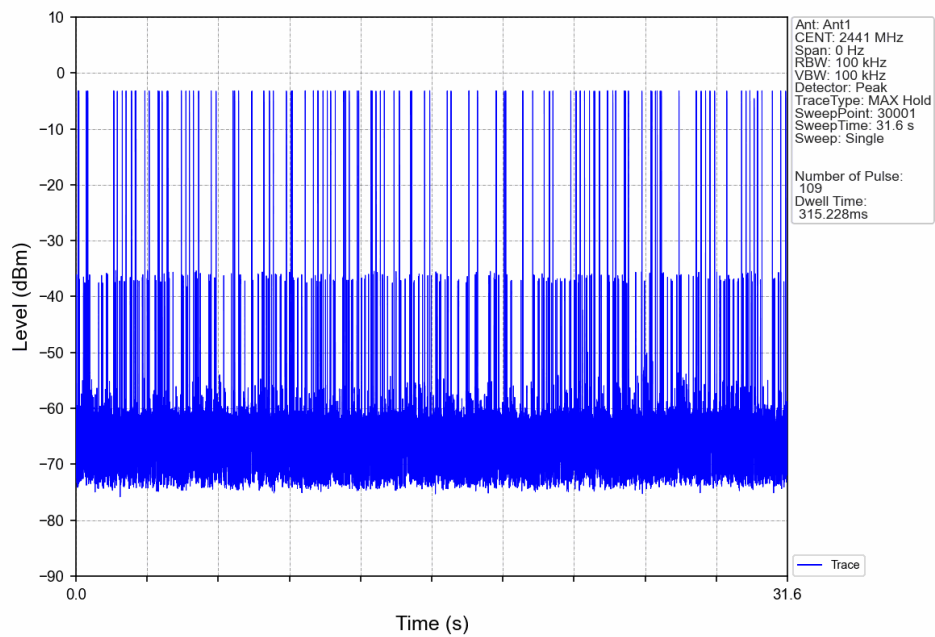
8DPSK 3DH3 HOPP Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTNV



8DPSK 3DH5 HOPP Ant1 NTNV



7. Unwanted Emissions In Non-restricted Frequency Bands

7.1 Test Result

7.1.1 Ref

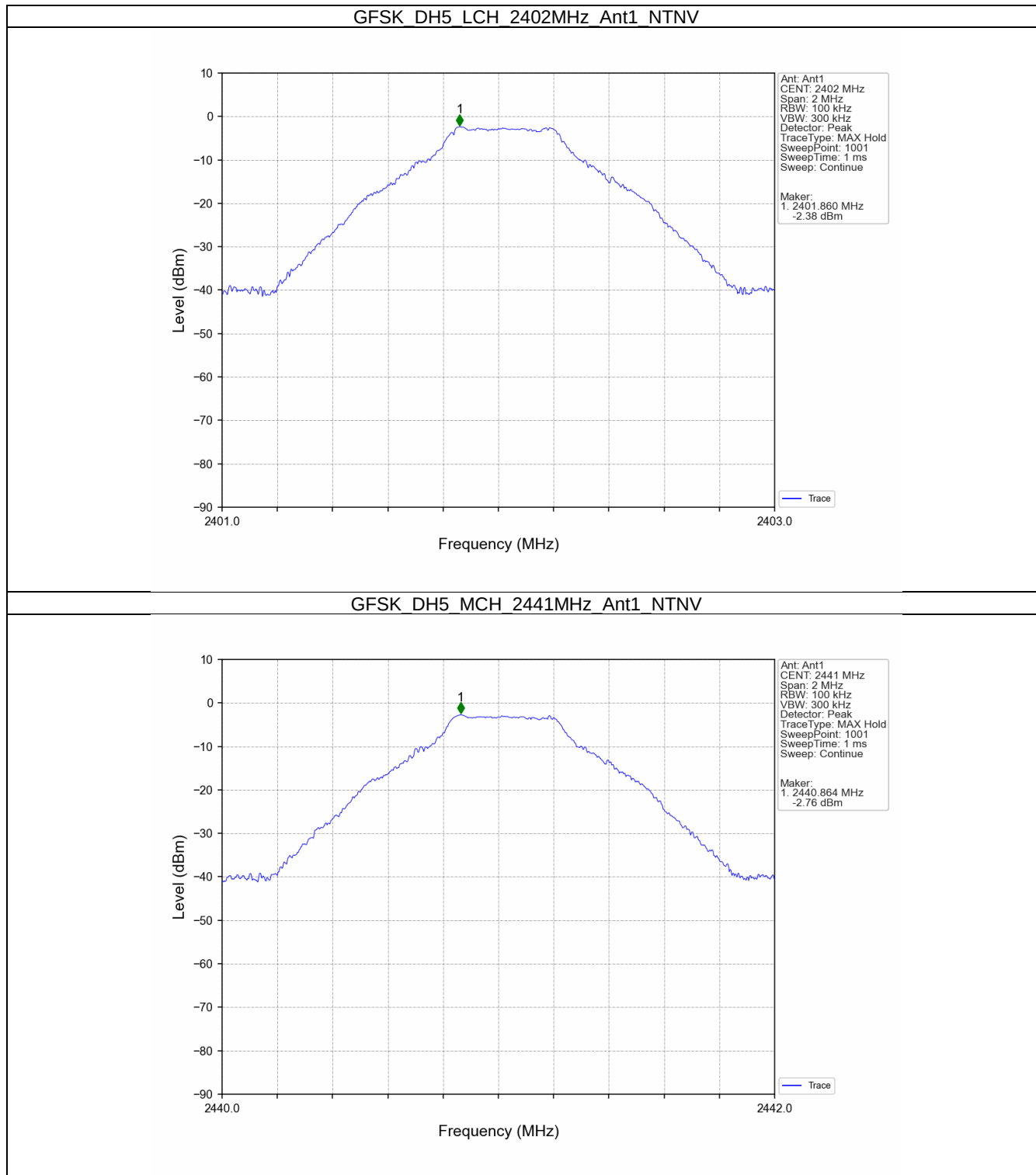
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-2.38
		2441	DH5	1	-2.76
		2480	DH5	1	-2.90
		HOPP	DH5	1	-2.41
					-2.41
Pi/4DQPSK	SISO	2402	2DH5	1	-2.40
		2441	2DH5	1	-2.69
		2480	2DH5	1	-2.90
		HOPP	2DH5	1	-2.57
					-2.57
8DPSK	SISO	2402	3DH5	1	-2.40
		2441	3DH5	1	-2.74
		2480	3DH5	1	-3.08
		HOPP	3DH5	1	-2.32
					-2.32

7.1.2 CSE

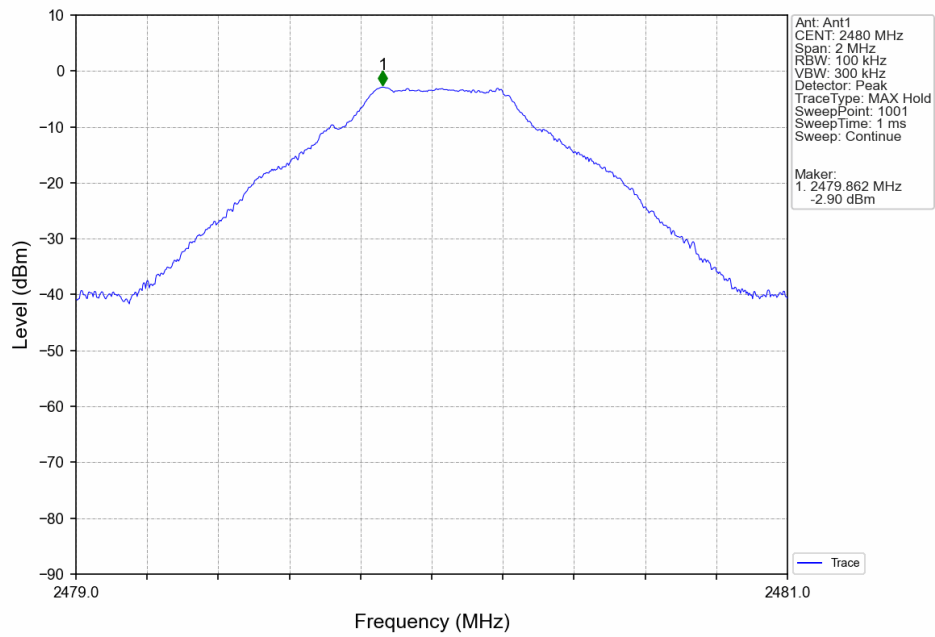
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-2.38	-22.38	Pass
		2441	DH5	1	-2.76	-22.76	Pass
		2480	DH5	1	-2.90	-22.90	Pass
		HOPP	DH5	1	-2.41	-22.41	Pass
					-2.41	-22.41	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-2.40	-22.40	Pass
		2441	2DH5	1	-2.69	-22.69	Pass
		2480	2DH5	1	-2.90	-22.90	Pass
		HOPP	2DH5	1	-2.57	-22.57	Pass
					-2.57	-22.57	Pass
8DPSK	SISO	2402	3DH5	1	-2.40	-22.40	Pass
		2441	3DH5	1	-2.74	-22.74	Pass
		2480	3DH5	1	-3.08	-23.08	Pass
		HOPP	3DH5	1	-2.32	-22.32	Pass
					-2.32	-22.32	Pass

7.2 Test Graph

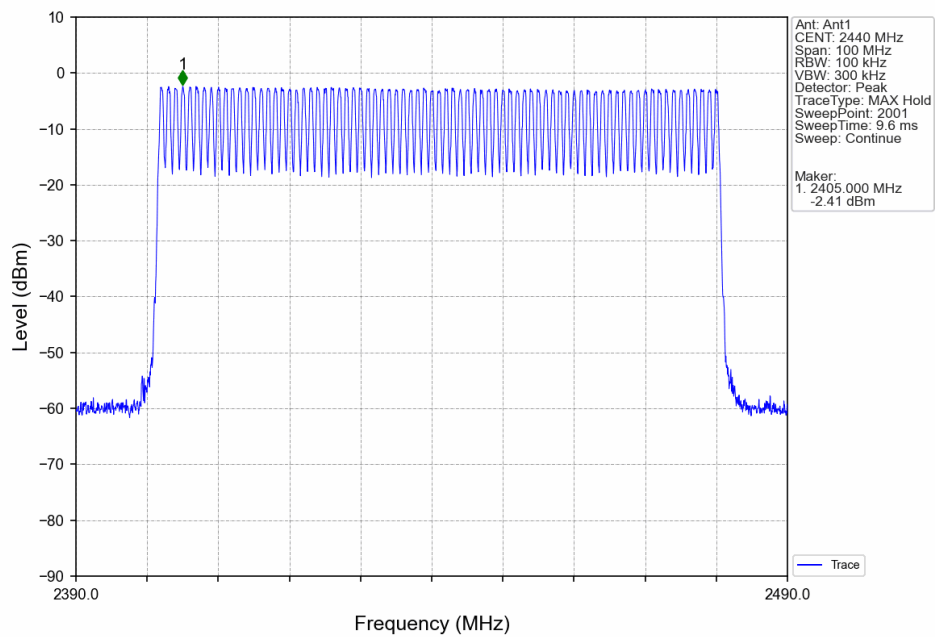
7.2.1 Ref



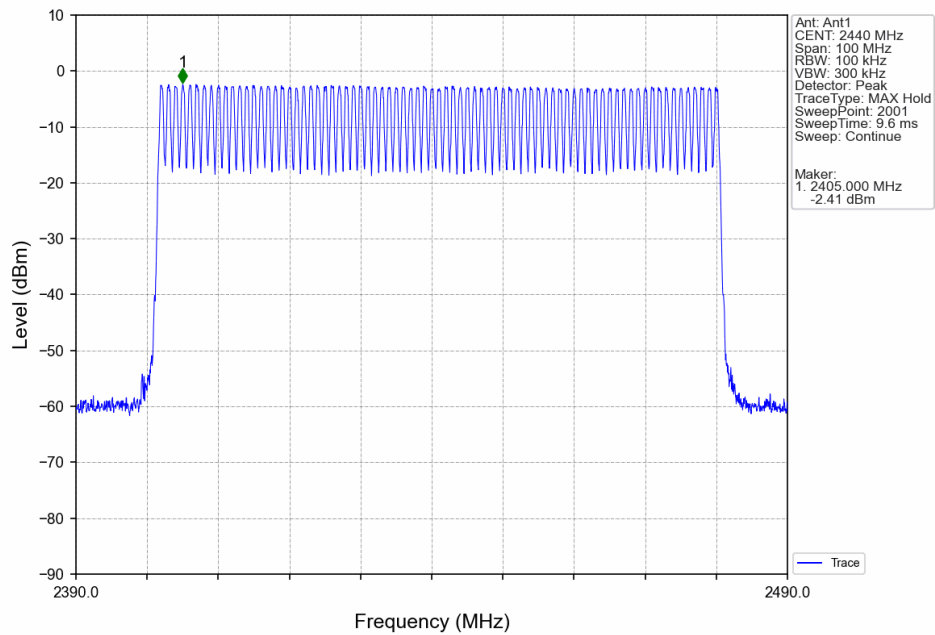
GFSK DH5 HCH 2480MHz Ant1 NTNV



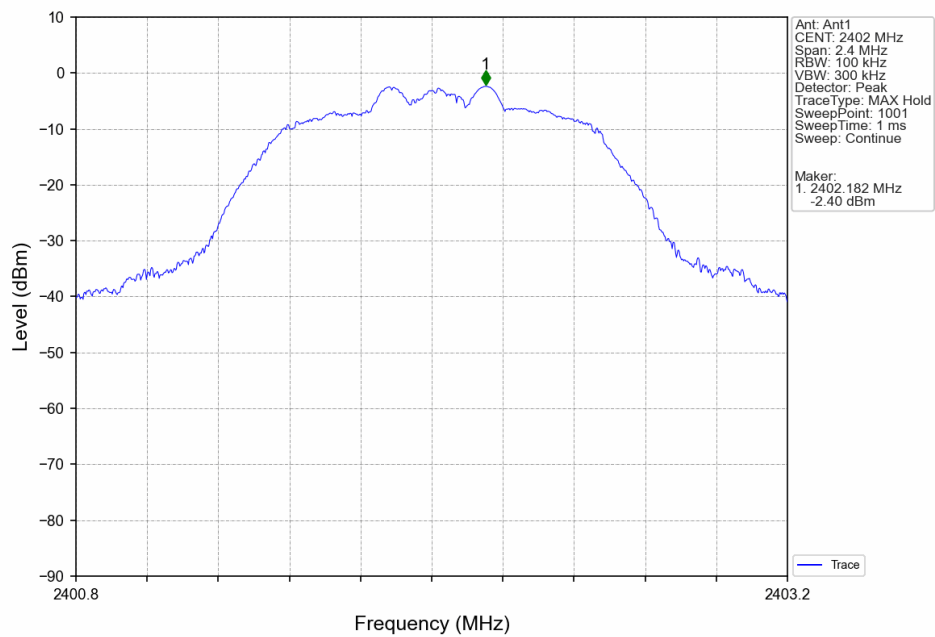
GFSK DH5 HOPP Ant1 NTNV



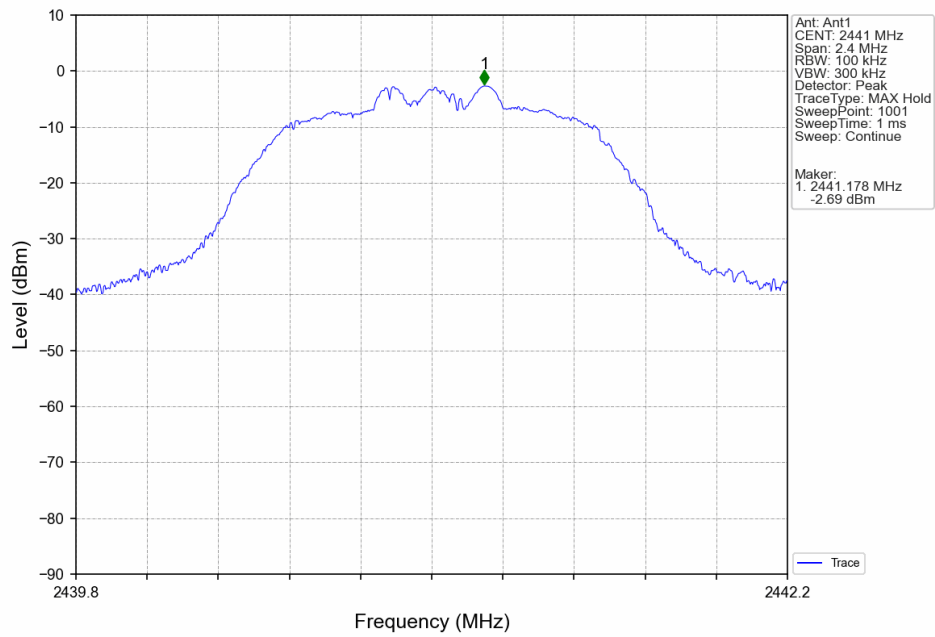
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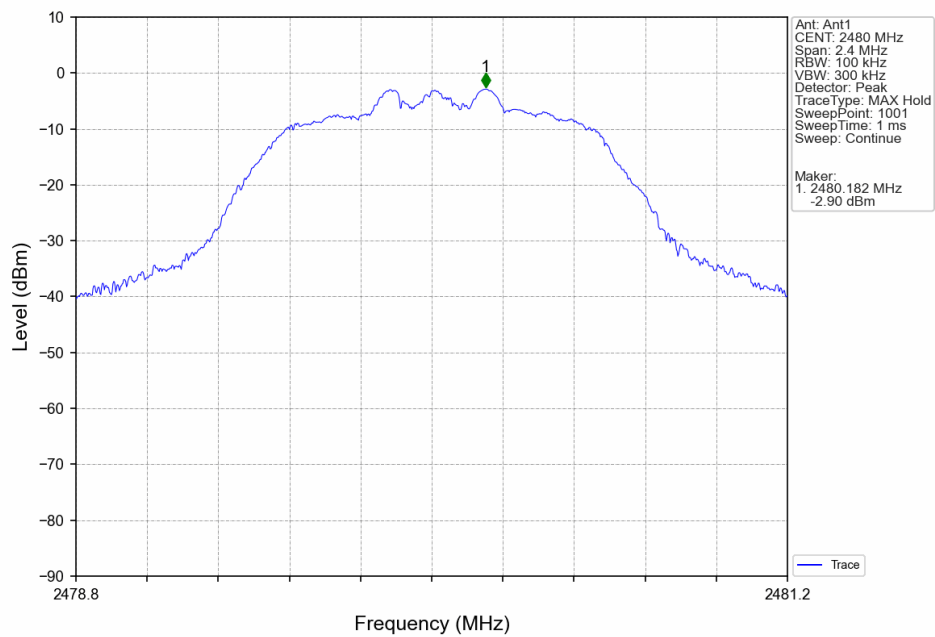
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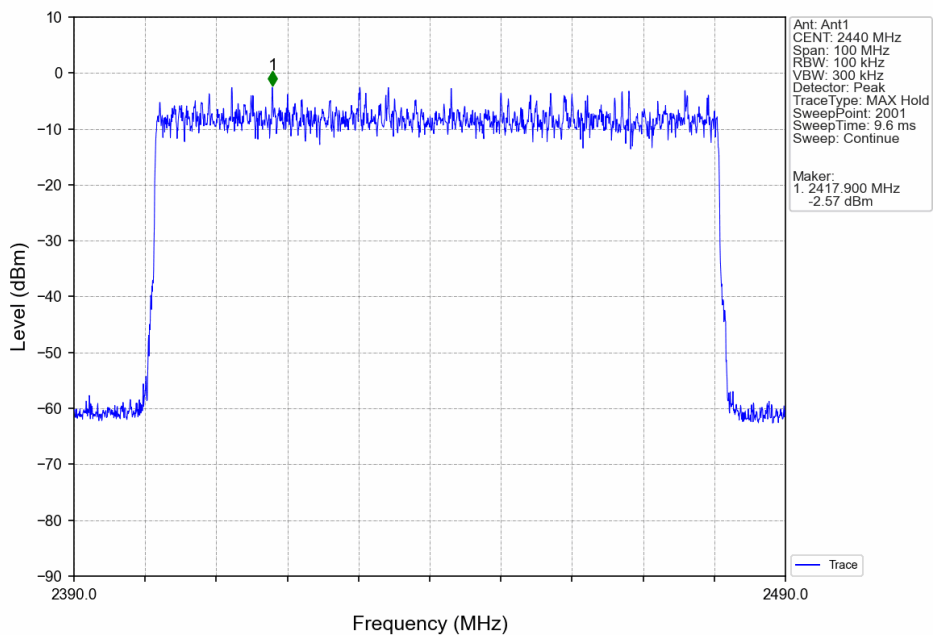
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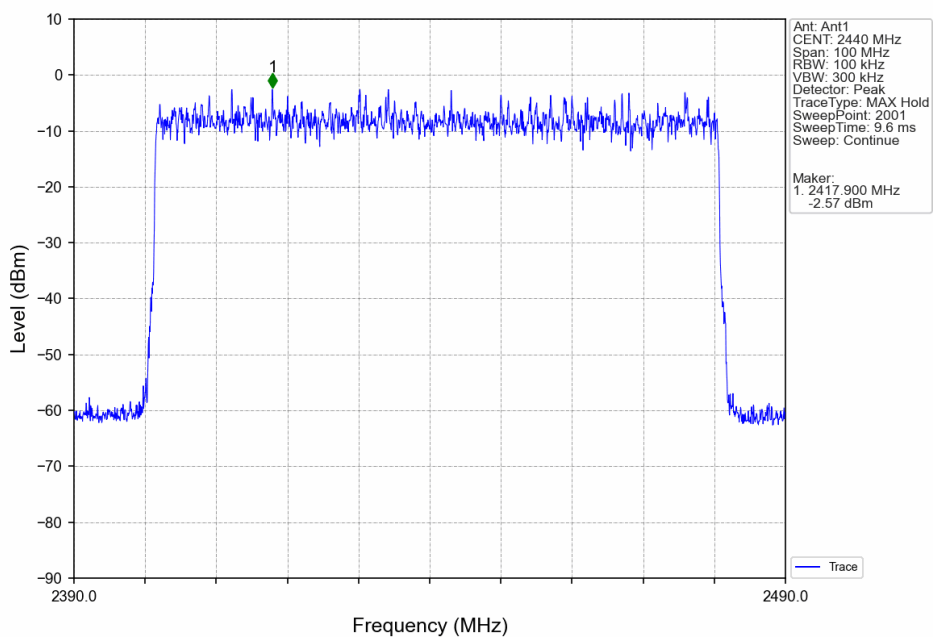
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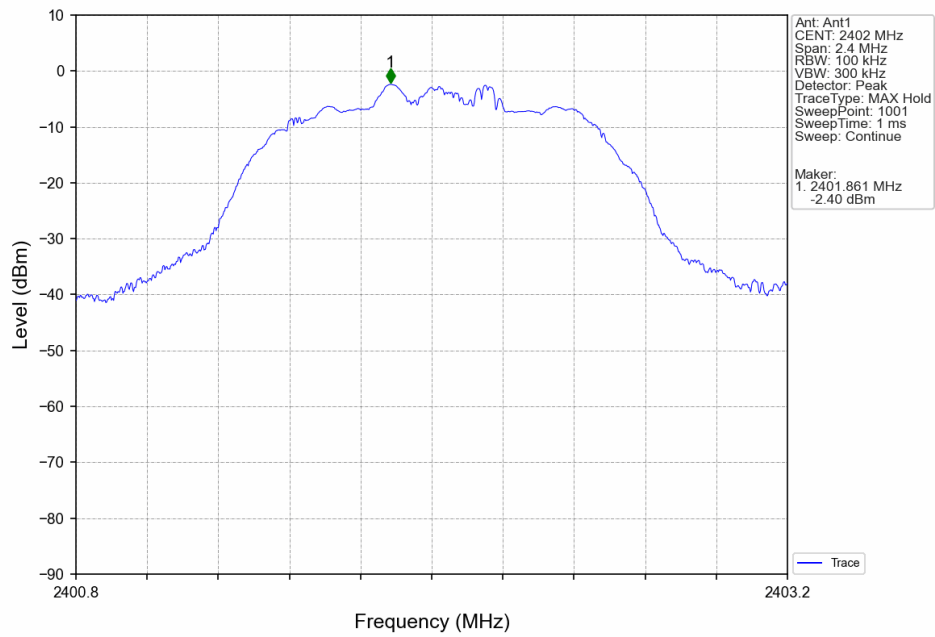
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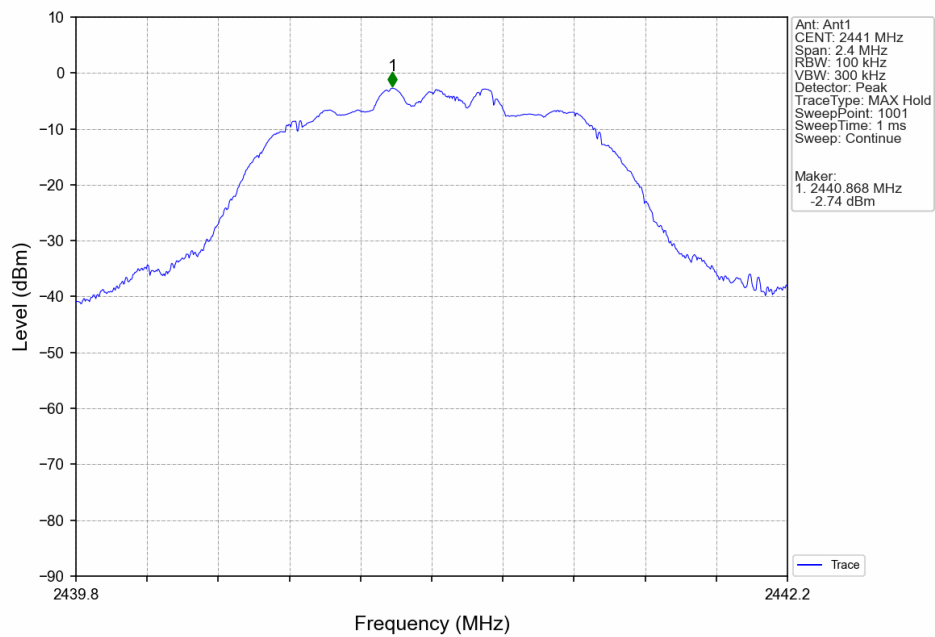
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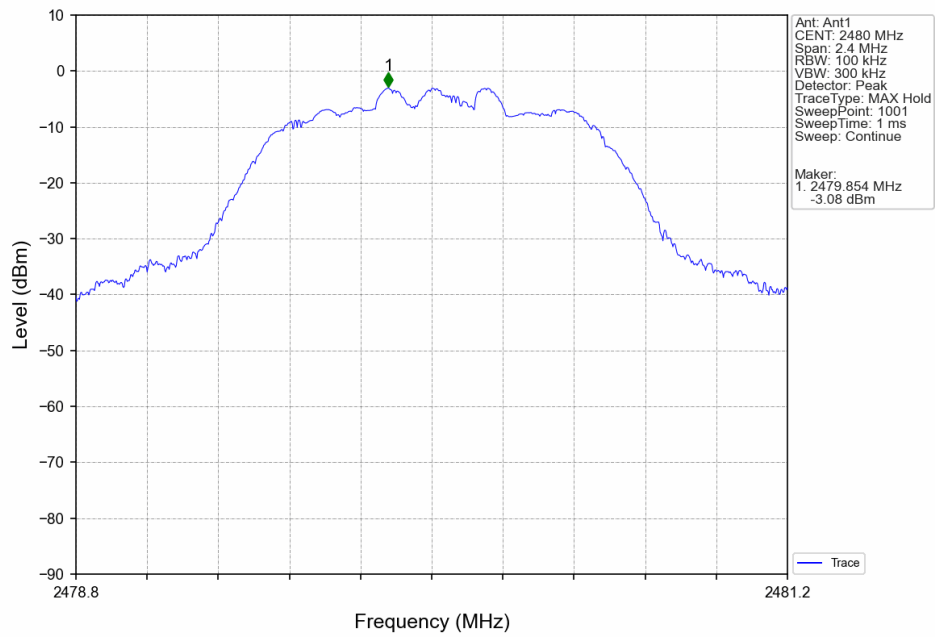
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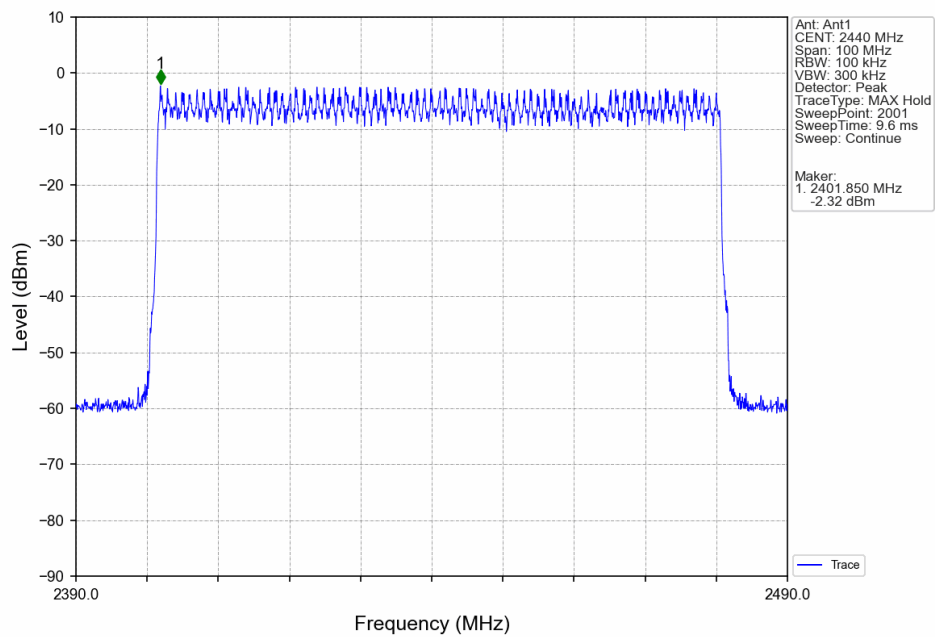
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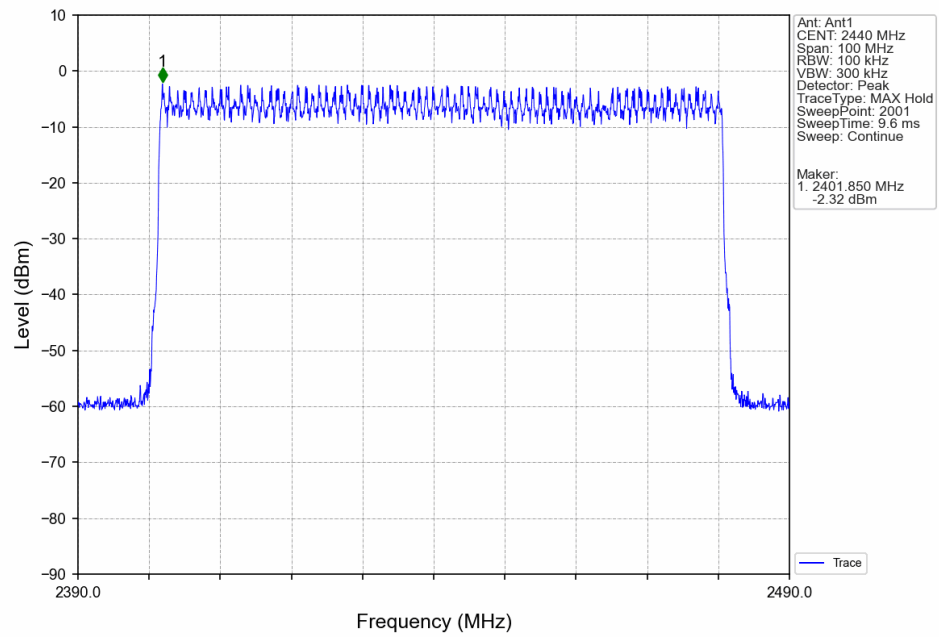
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8DPSK 3DH5 HOPP Ant1 NTN

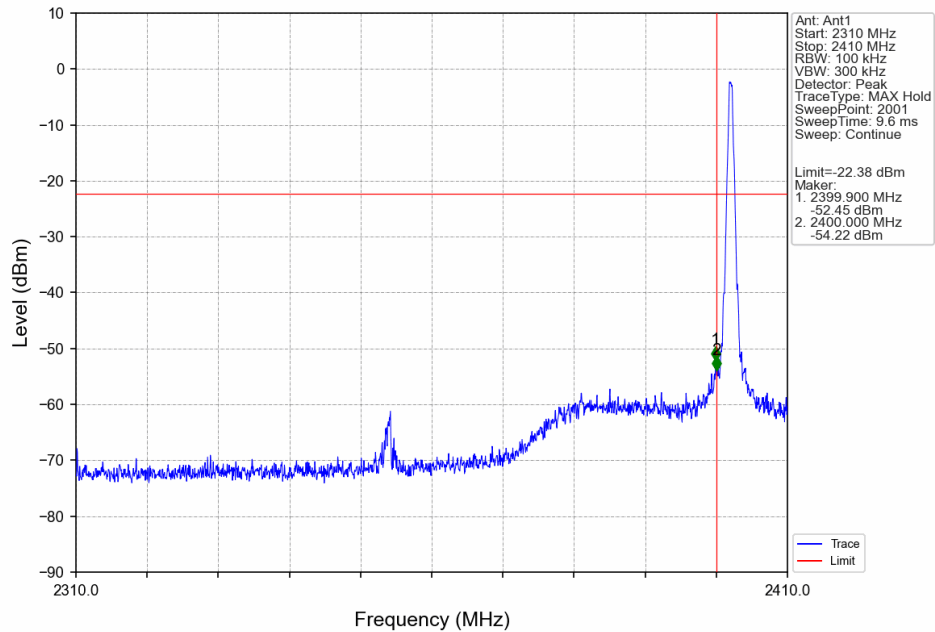


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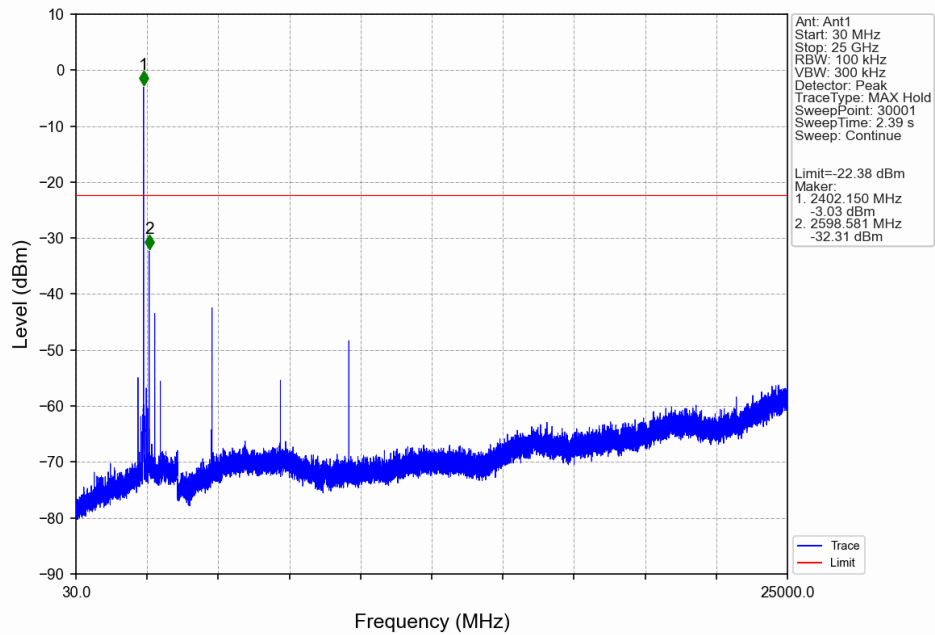


7.2.2 CSE

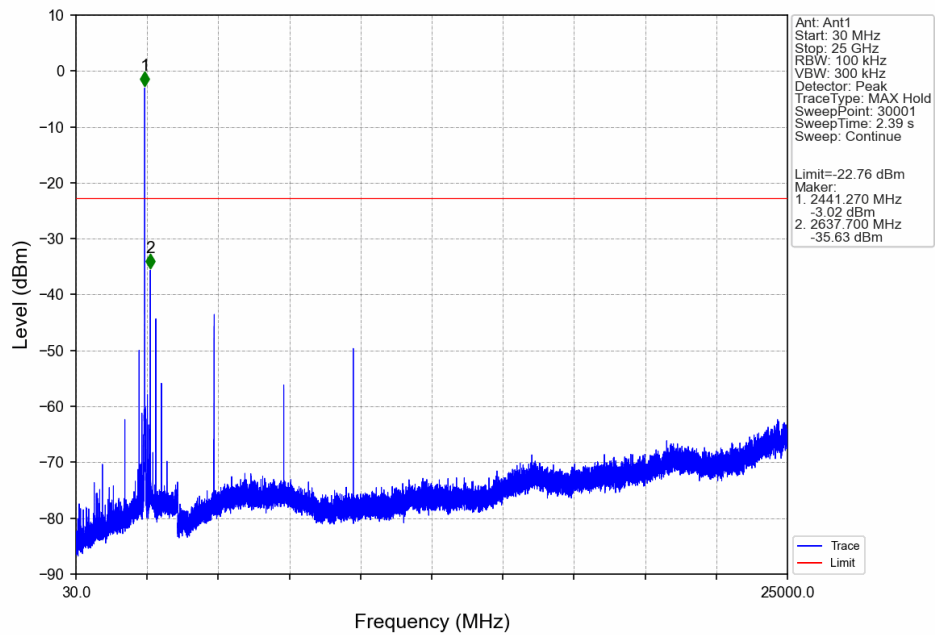
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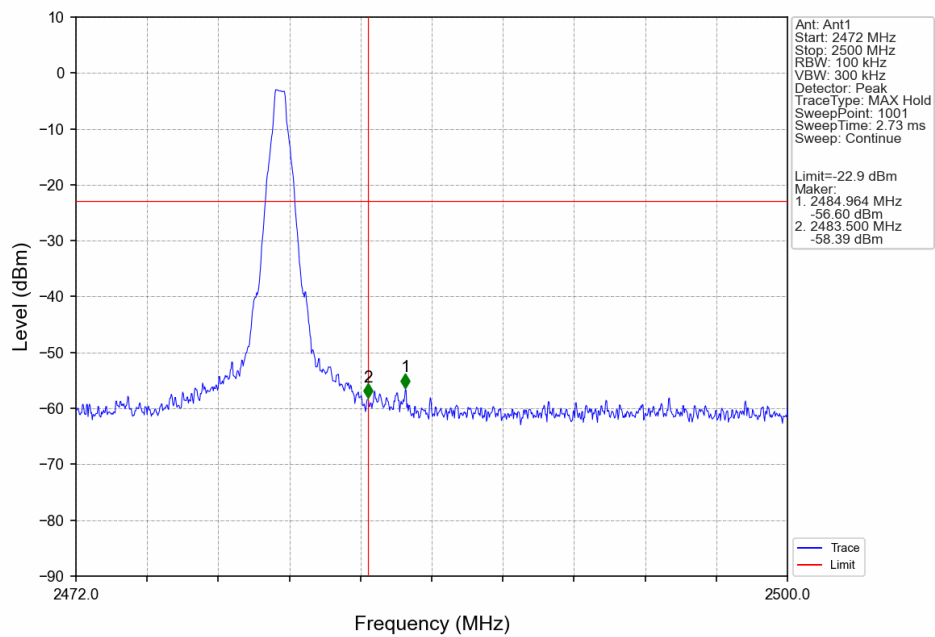
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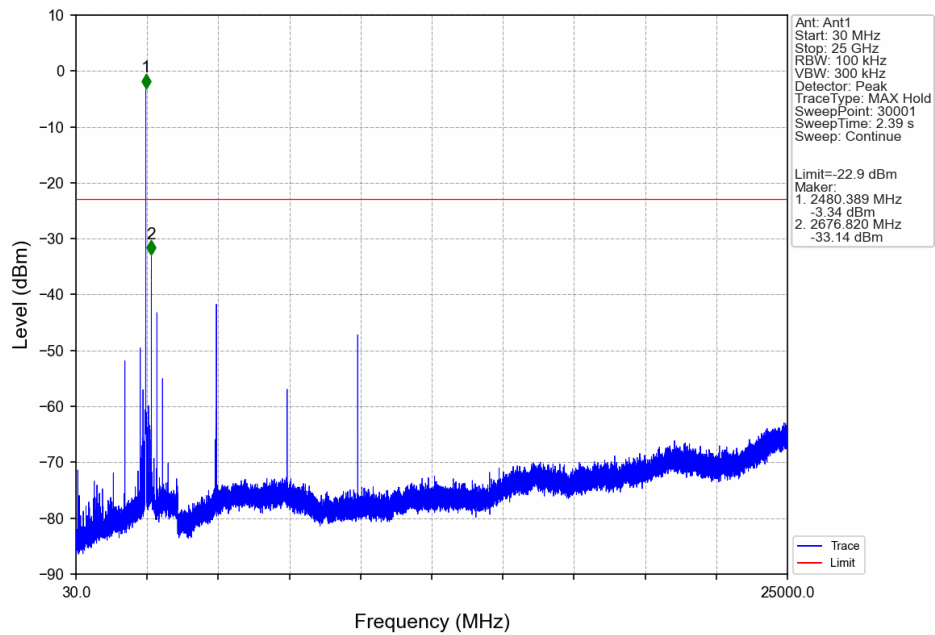
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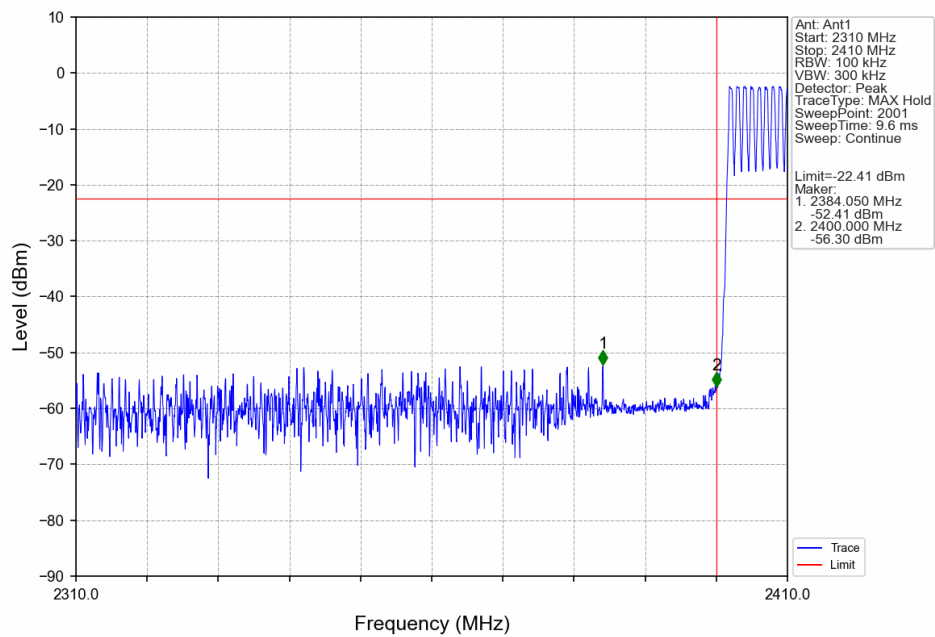
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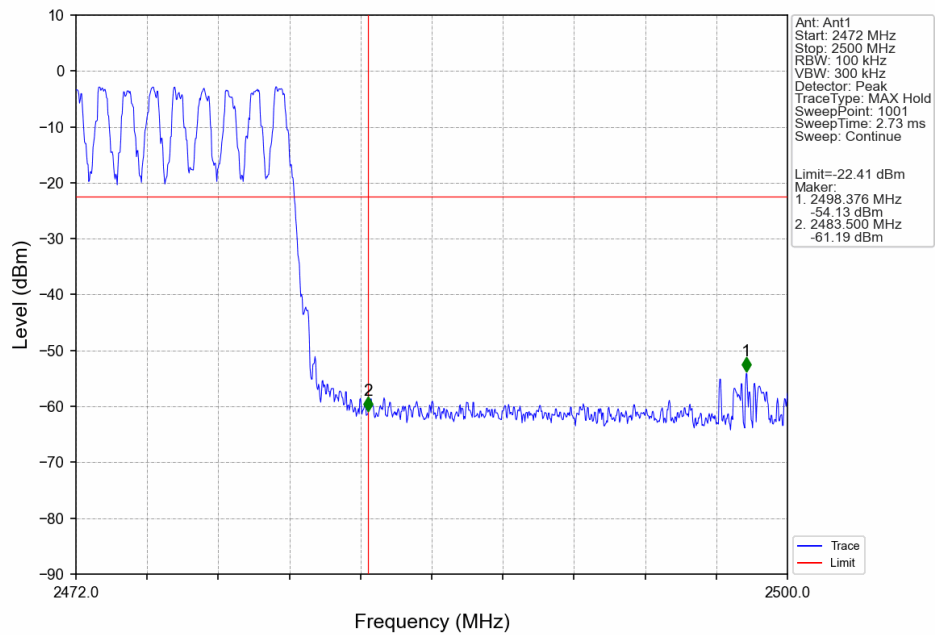
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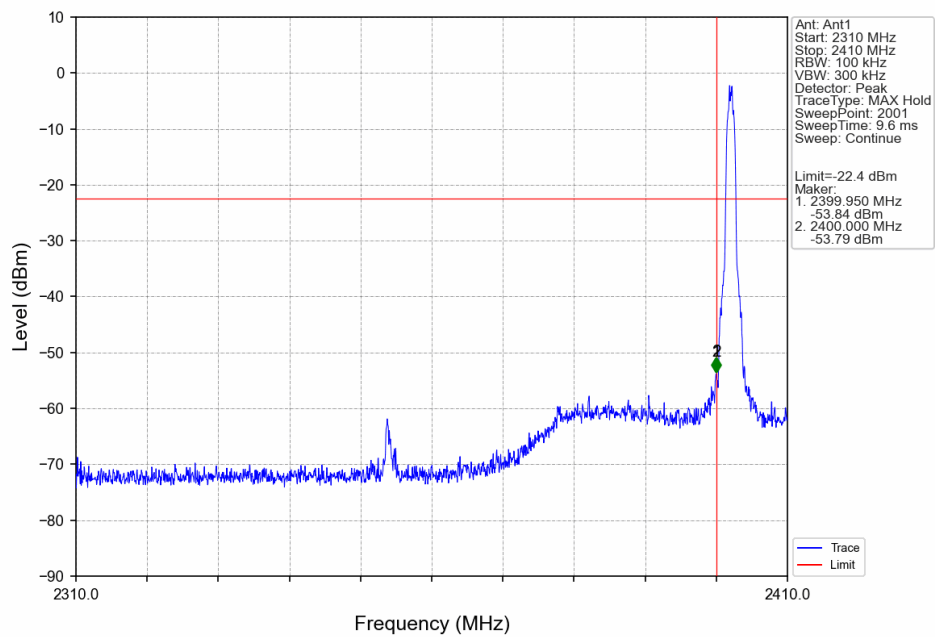
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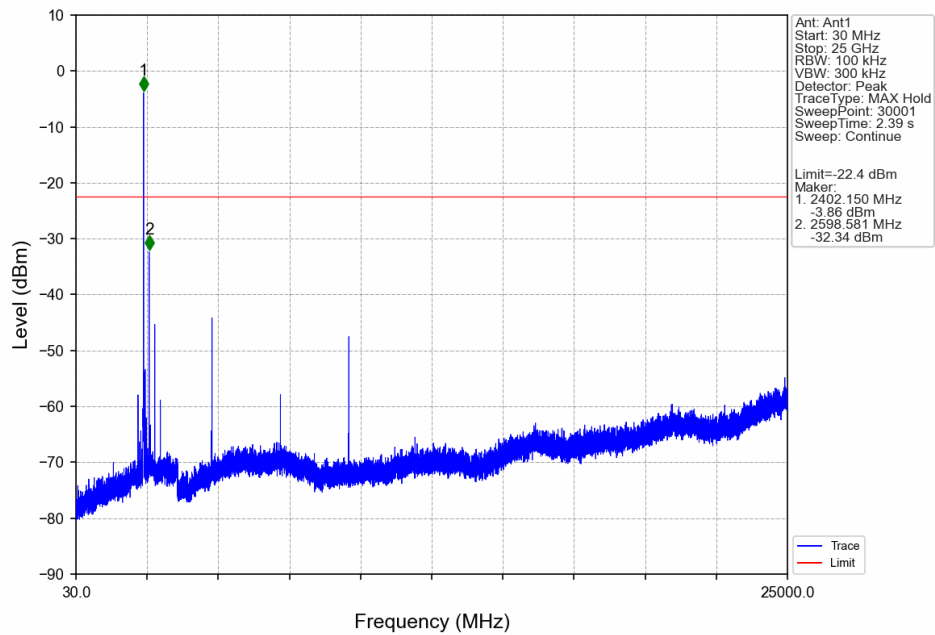
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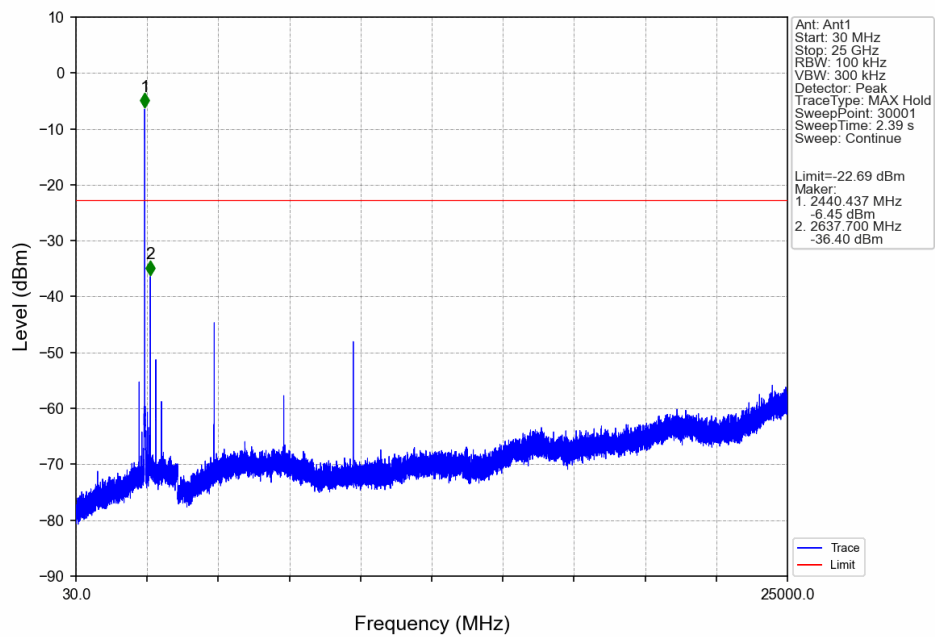
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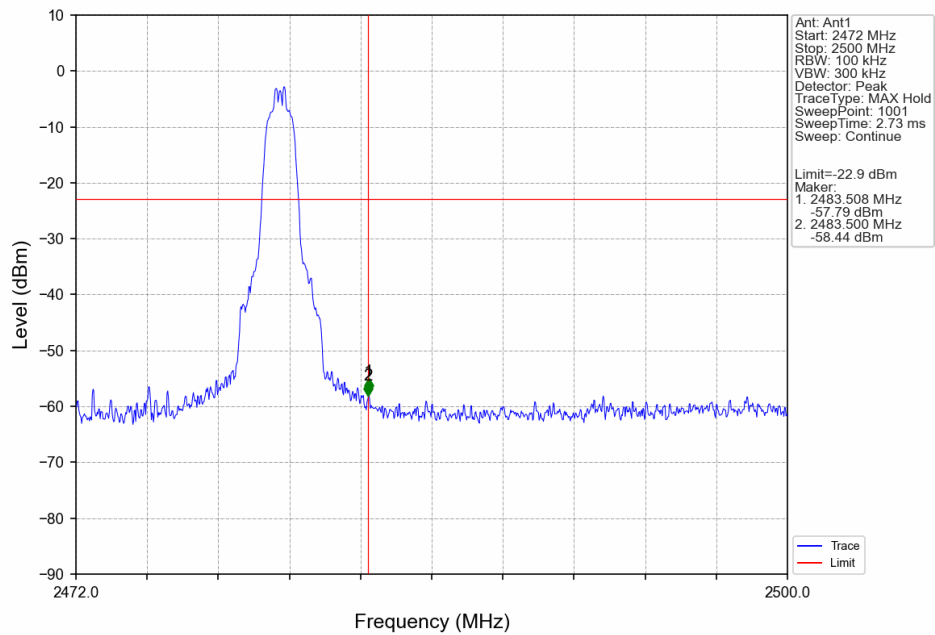
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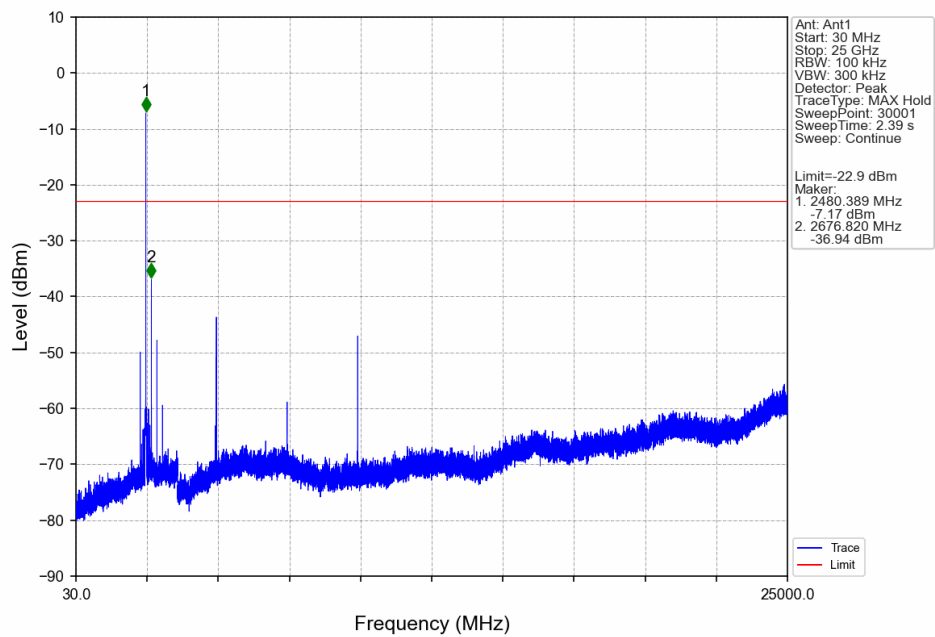
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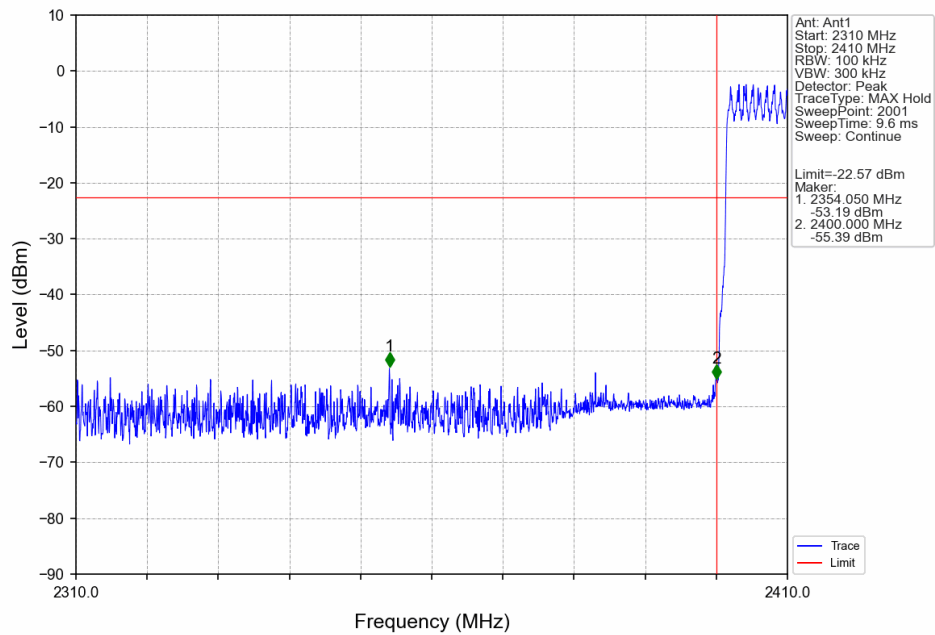
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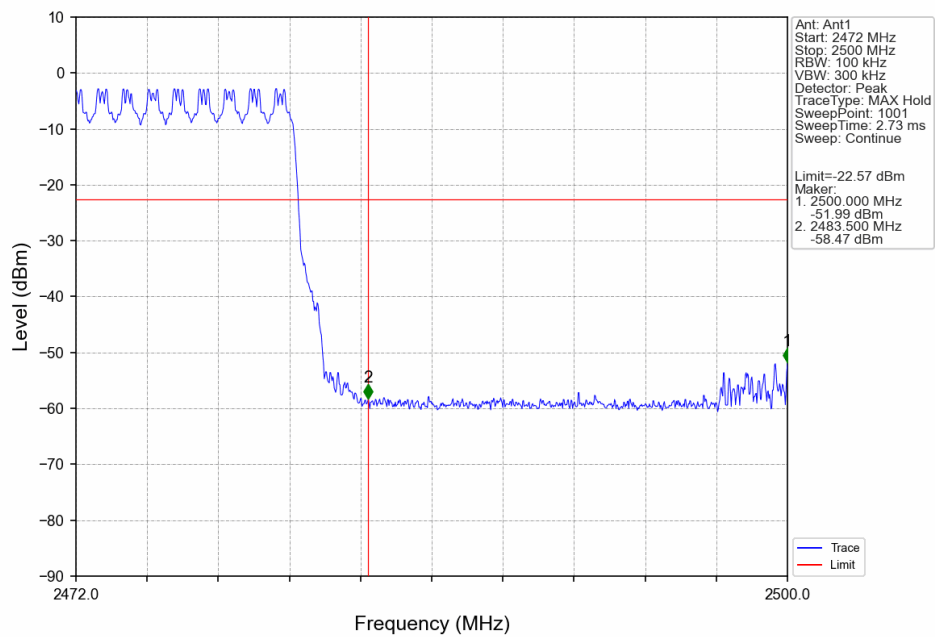
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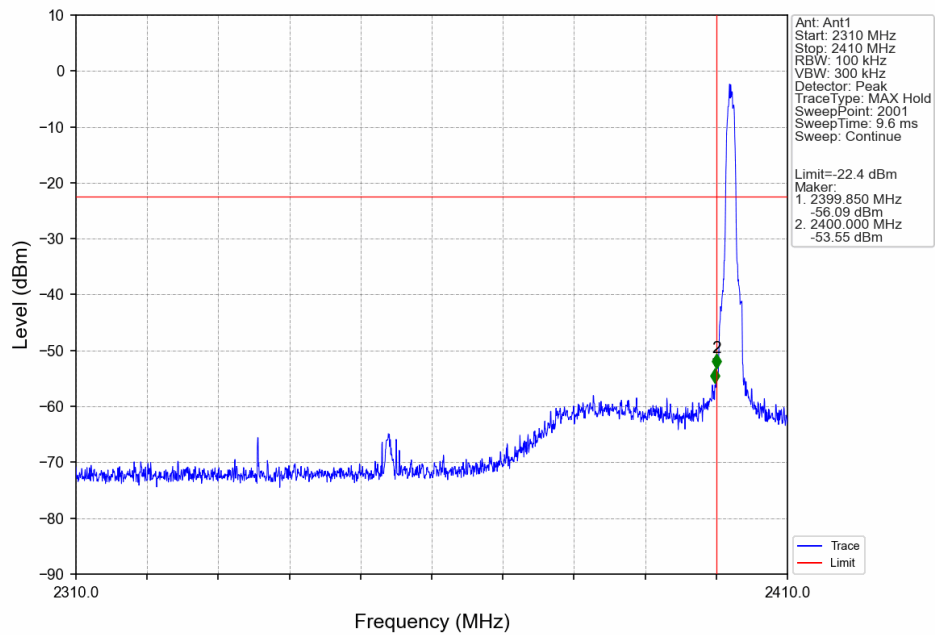
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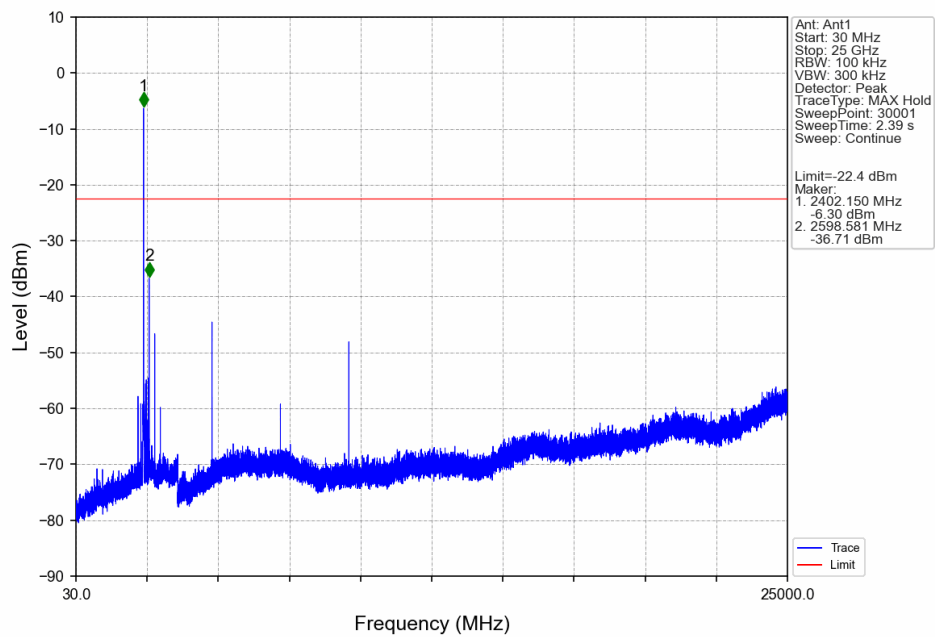
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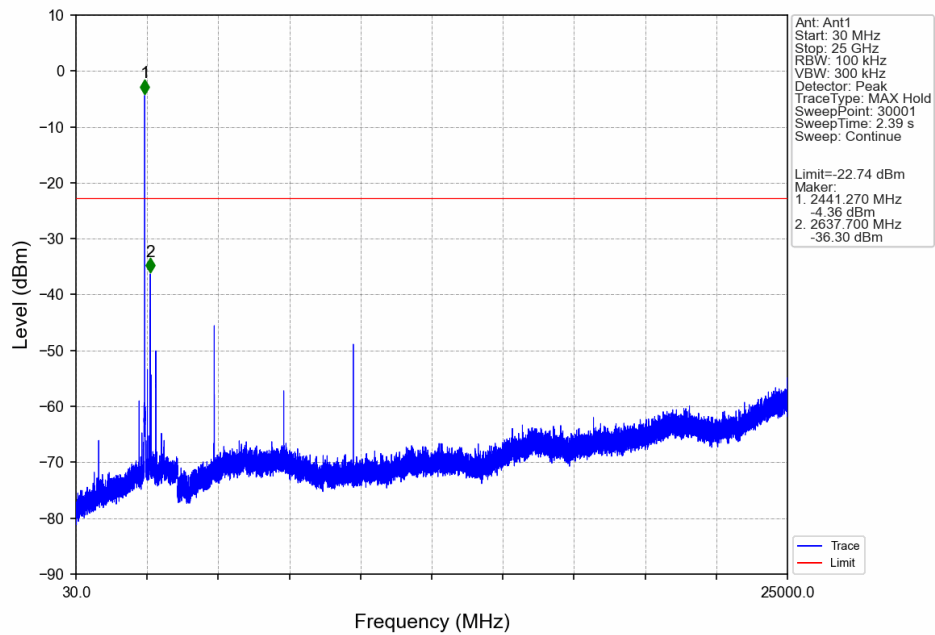
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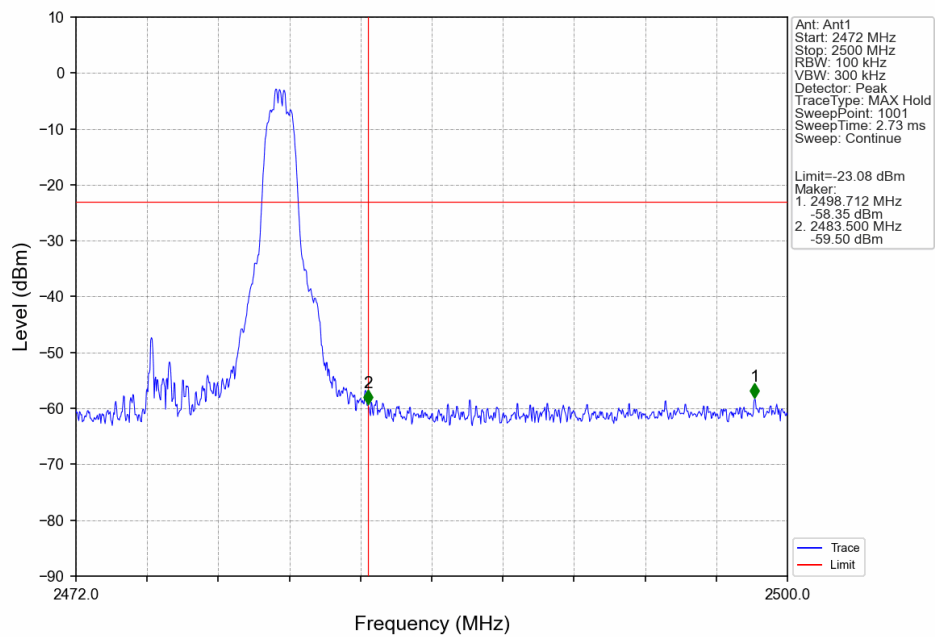
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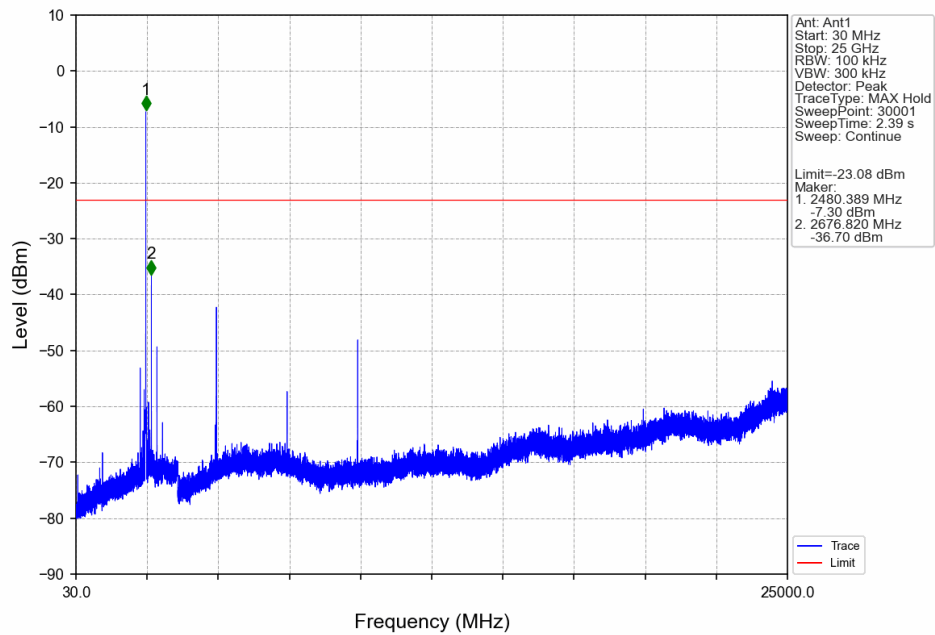
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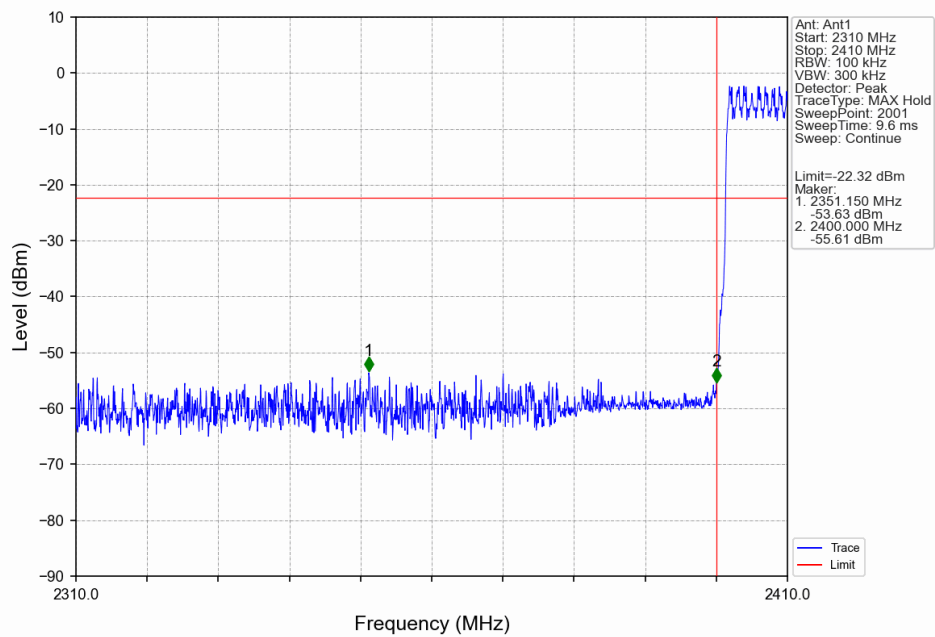
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTNV

