

10 Appendix

1. Bandwidth

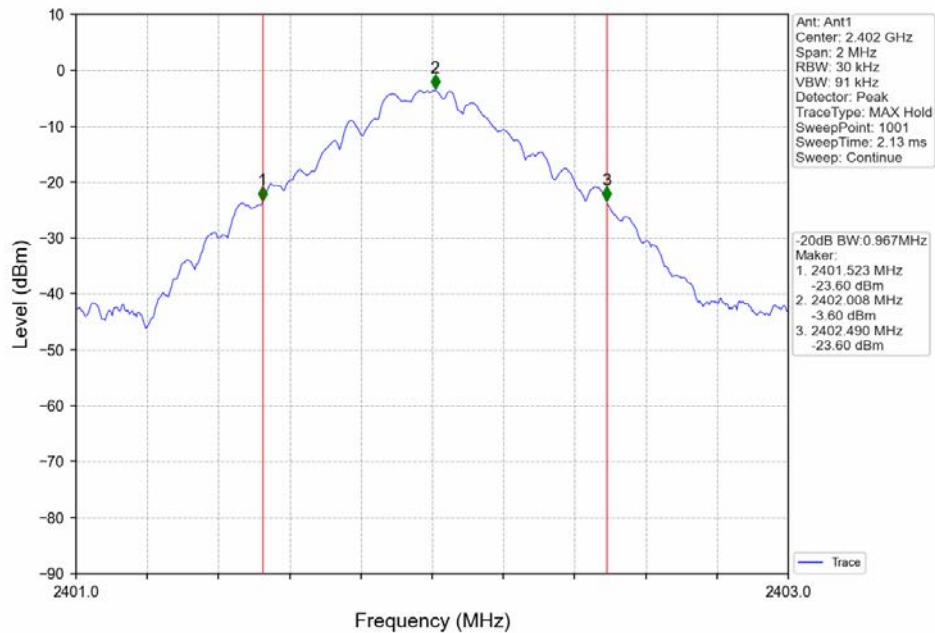
1.1 20dB BW

1.1.1 Test Result

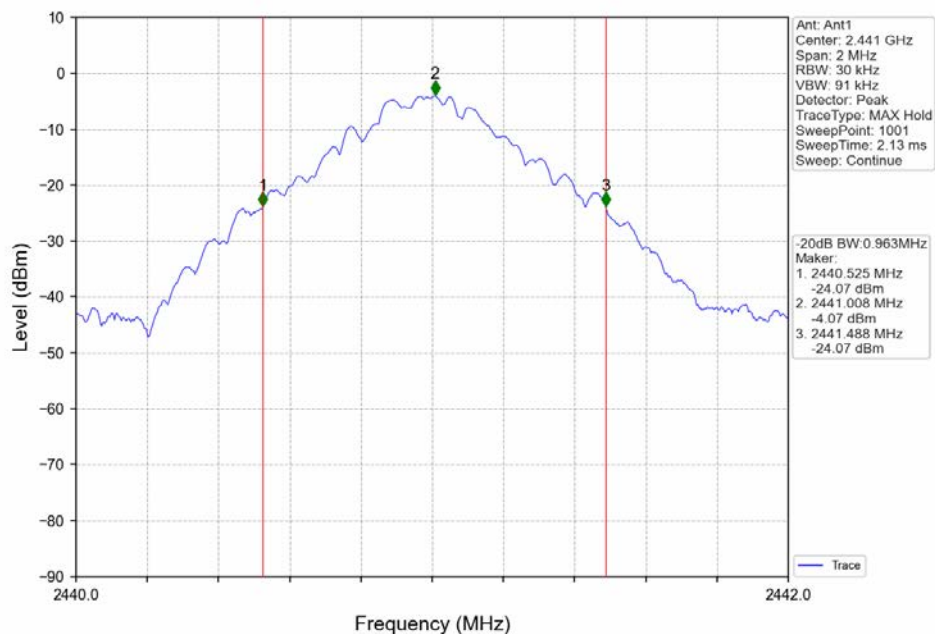
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.967	Pass
		2441	DH5	1	0.963	Pass
		2480	DH5	1	0.968	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.312	Pass
		2441	2DH5	1	1.297	Pass
		2480	2DH5	1	1.295	Pass
8DPSK	SISO	2402	3DH5	1	1.312	Pass
		2441	3DH5	1	1.312	Pass
		2480	3DH5	1	1.311	Pass

1.1.2 Test Graph

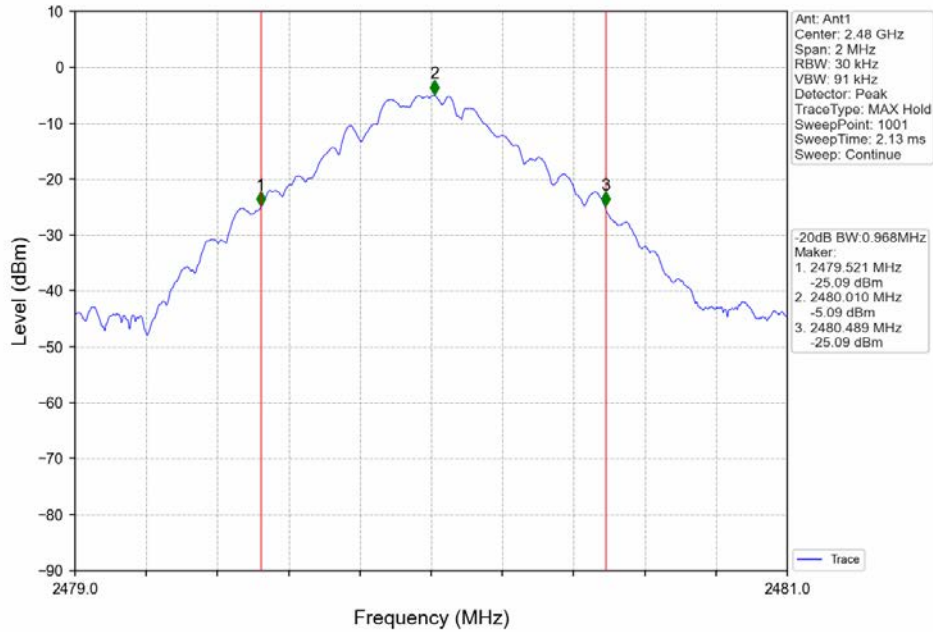
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



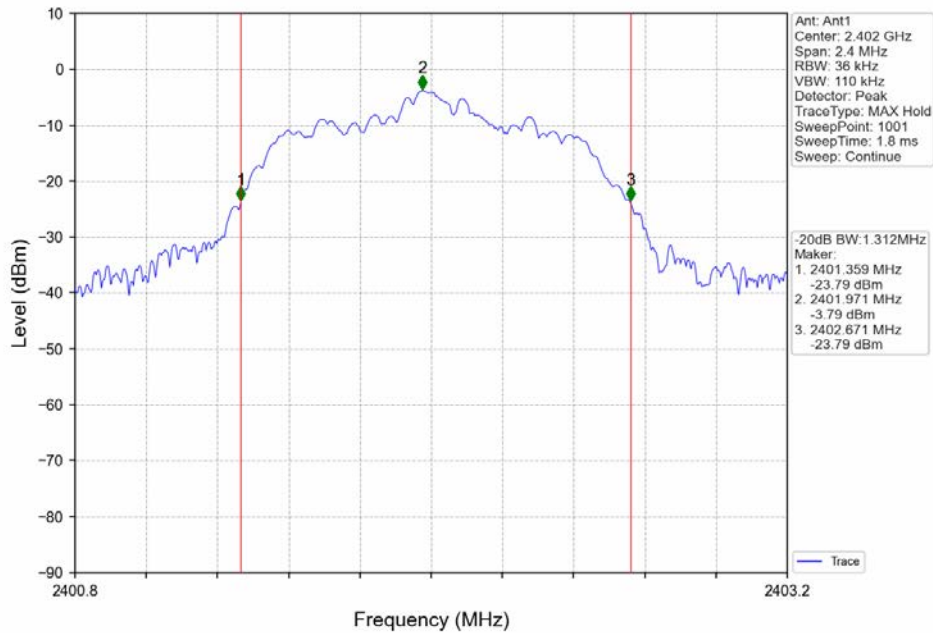
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



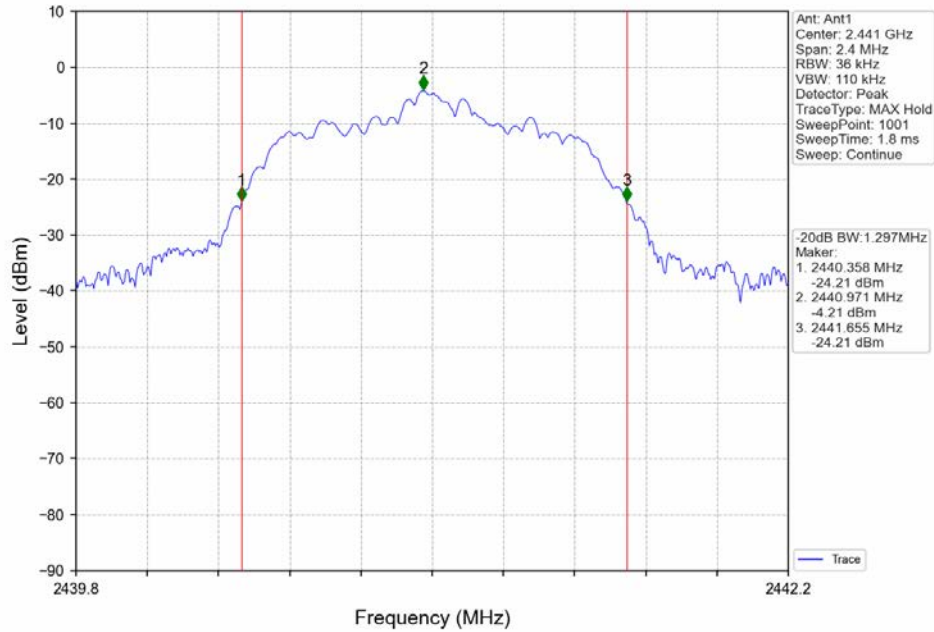
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



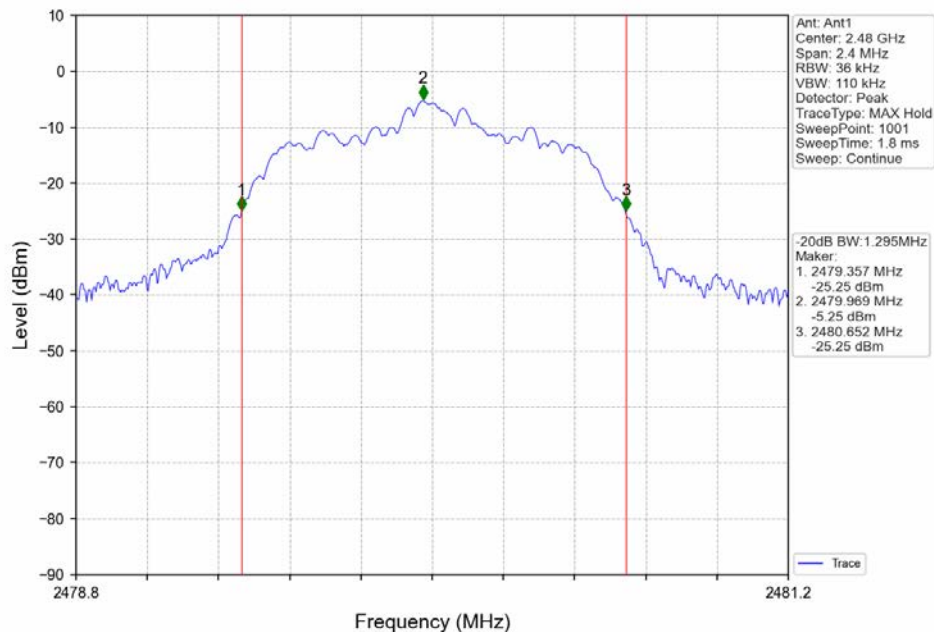
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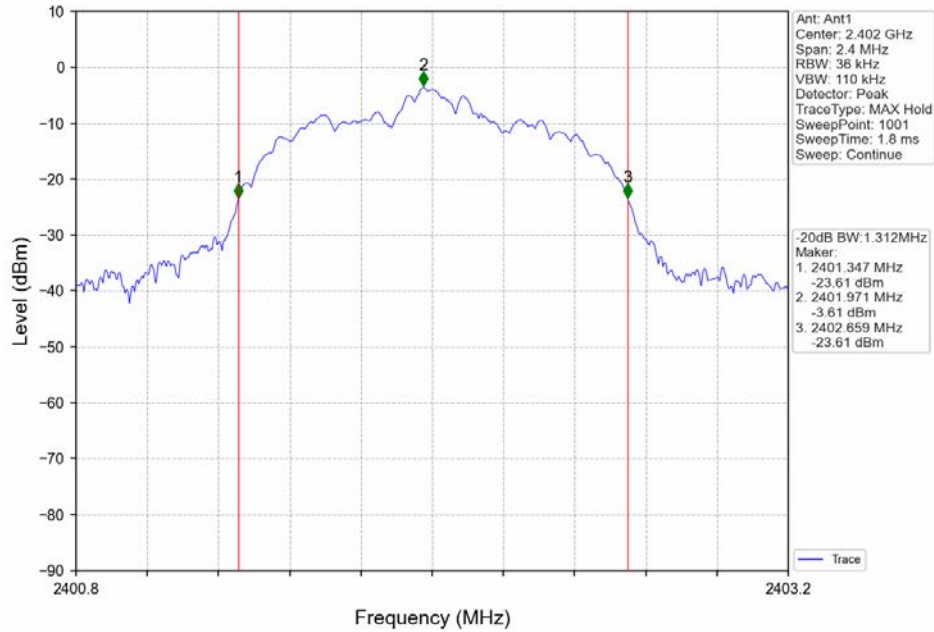
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



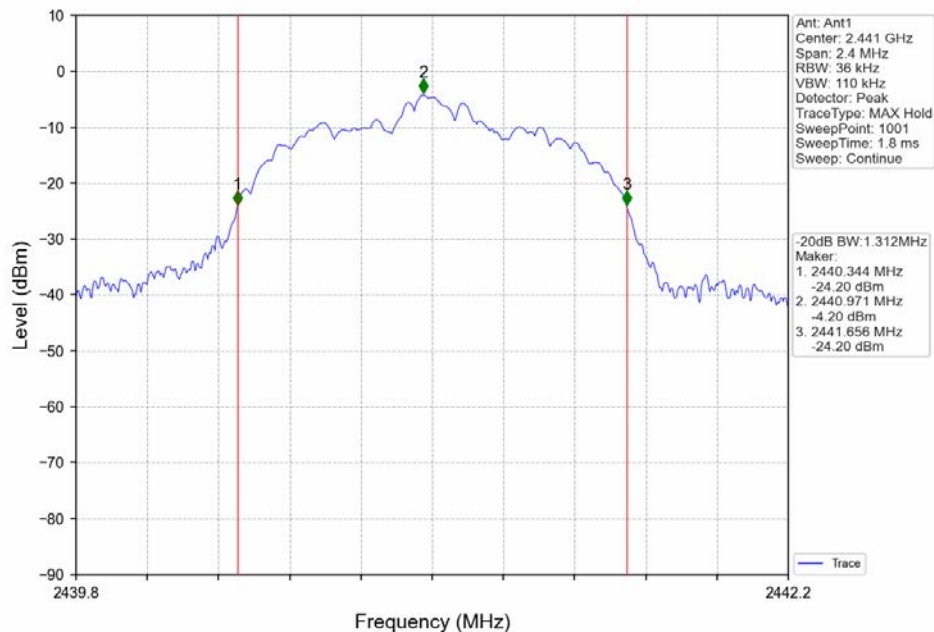
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



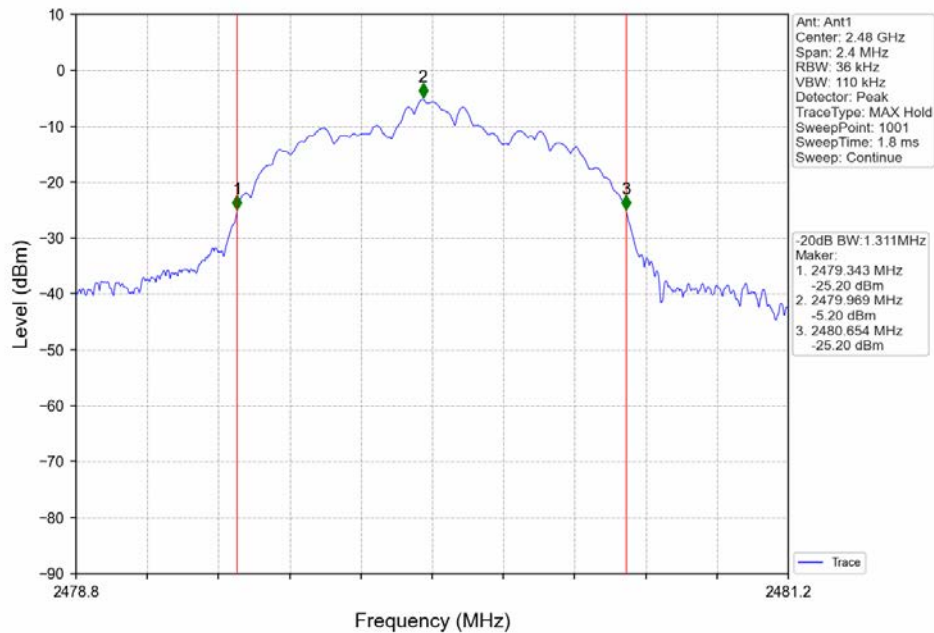
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



2. Maximum Conducted Output Power

2.1 Power

2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-0.91	<=30	Pass
		2441	DH5	-1.42	<=30	Pass
		2480	DH5	-2.40	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	-0.51	<=20.97	Pass
		2441	2DH5	-0.99	<=20.97	Pass
		2480	2DH5	-1.98	<=20.97	Pass
8DPSK	SISO	2402	3DH5	-0.07	<=20.97	Pass
		2441	3DH5	-0.61	<=20.97	Pass
		2480	3DH5	-1.54	<=20.97	Pass

3. Carrier Frequency Separation

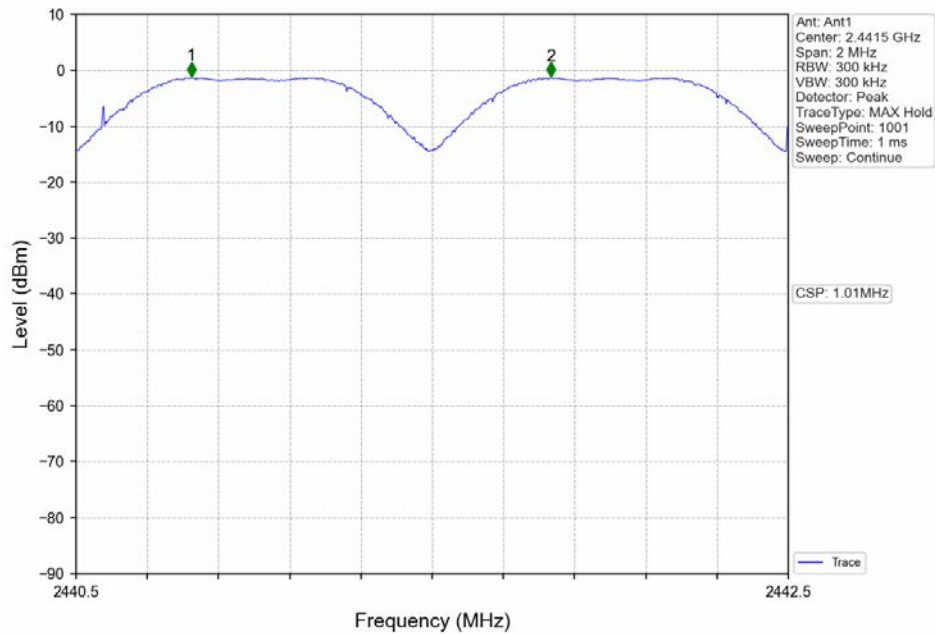
3.1 Ant1

3.1.1 Test Result

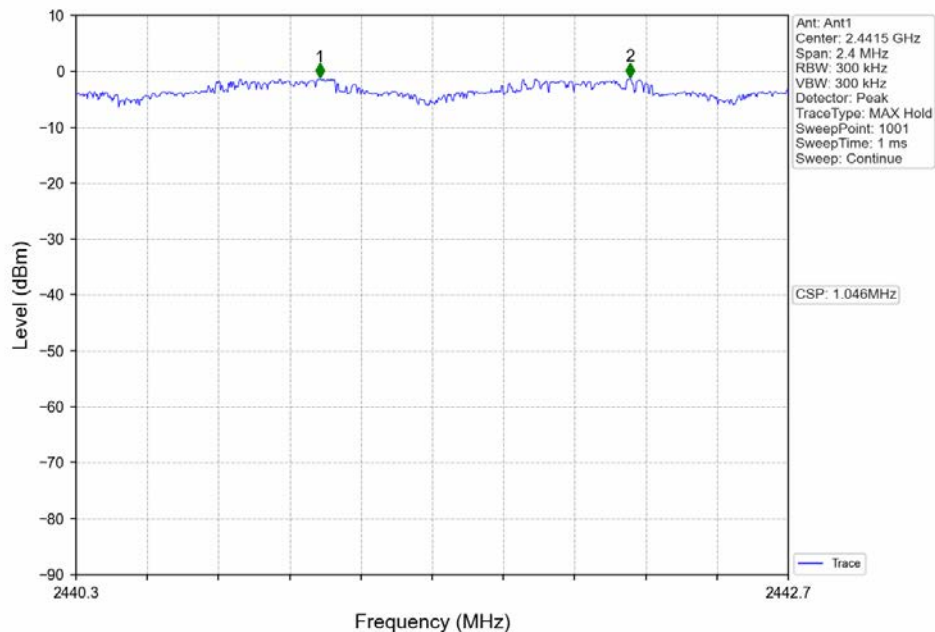
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.010	0.968	>=0.968	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.046	1.312	>=0.875	Pass
8DPSK	SISO	HOPP	3DH5	0.989	1.312	>=0.875	Pass

3.1.2 Test Graph

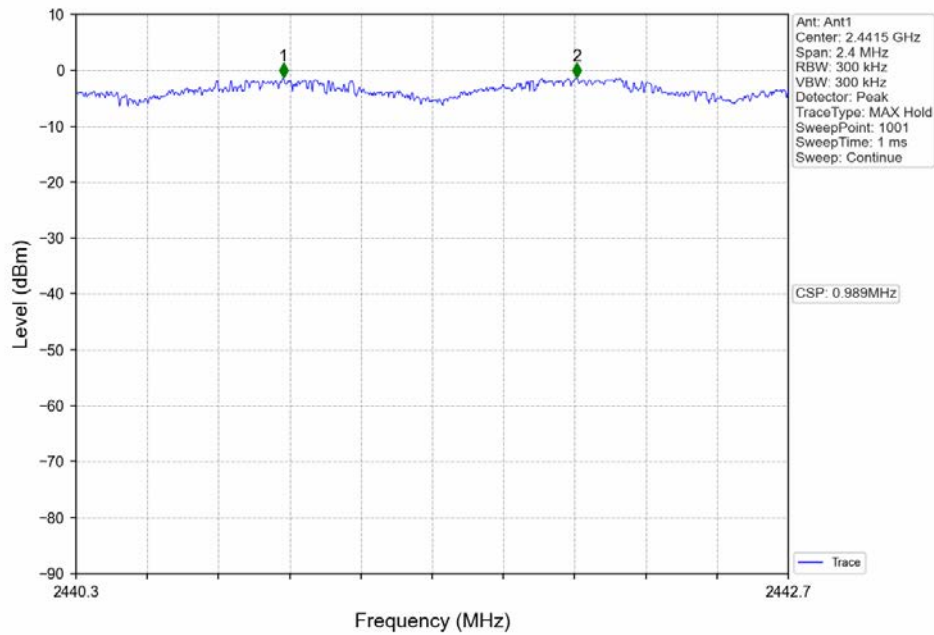
GFSK_DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



4. Number of Hopping Frequencies

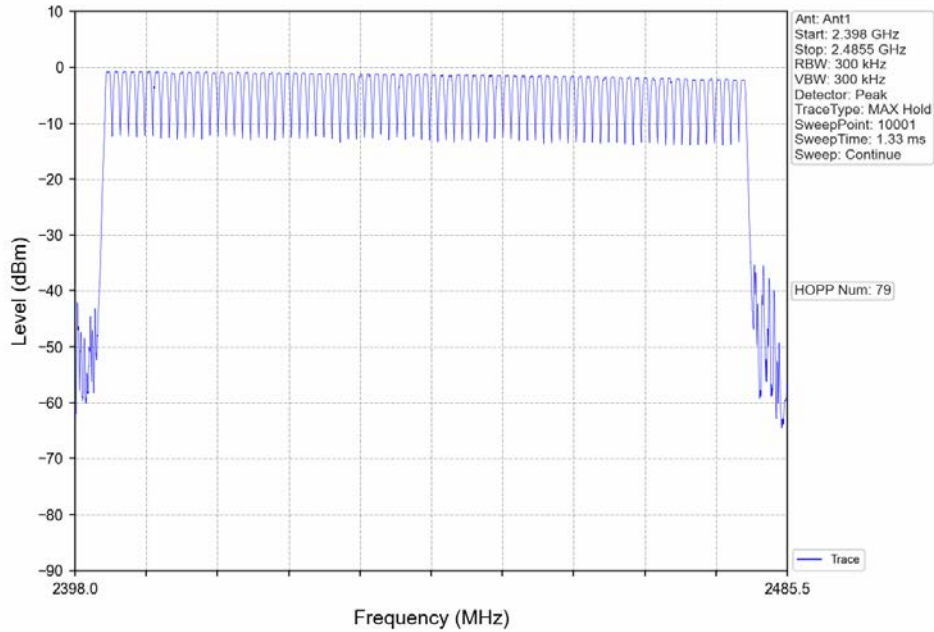
4.1 HoppNum

4.1.1 Test Result

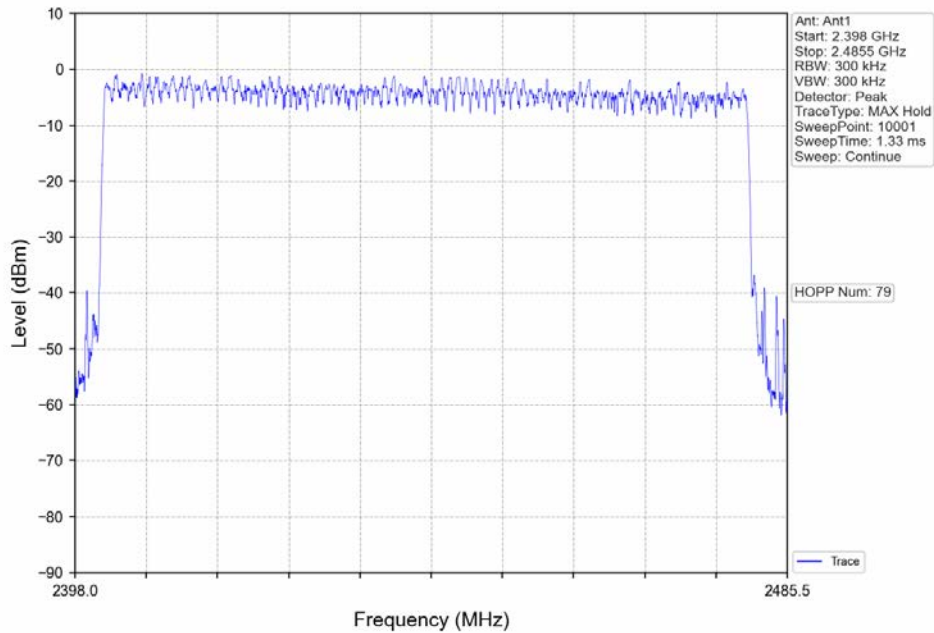
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	≥ 15	Pass
PI/4DQPSK	SISO	HOPP	2DH5	79	≥ 15	Pass
8DPSK	SISO	HOPP	3DH5	79	≥ 15	Pass

4.1.2 Test Graph

GFSK_DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV

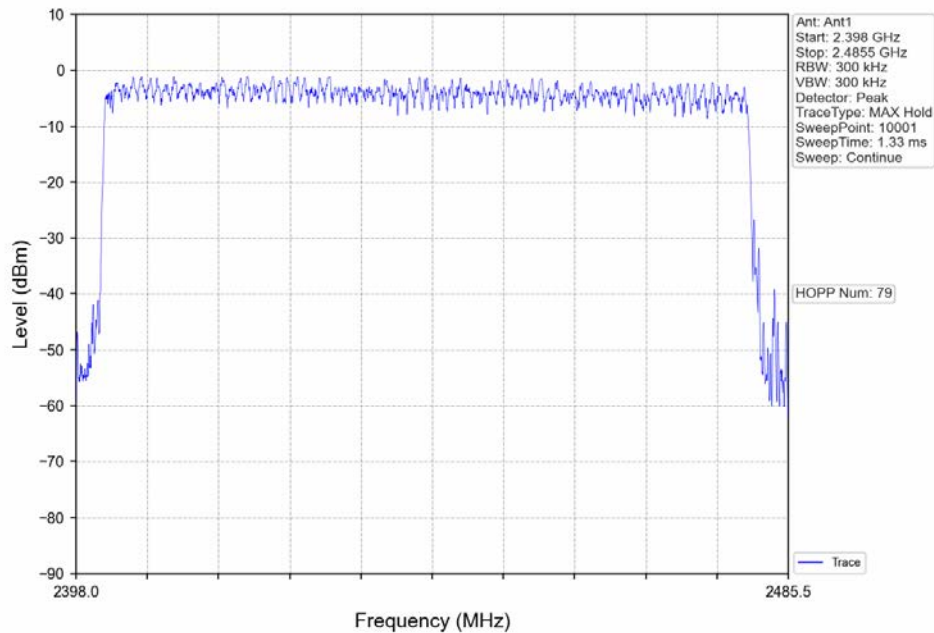


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8DPSK_3DH5_HOPP_Ant1_NTNV



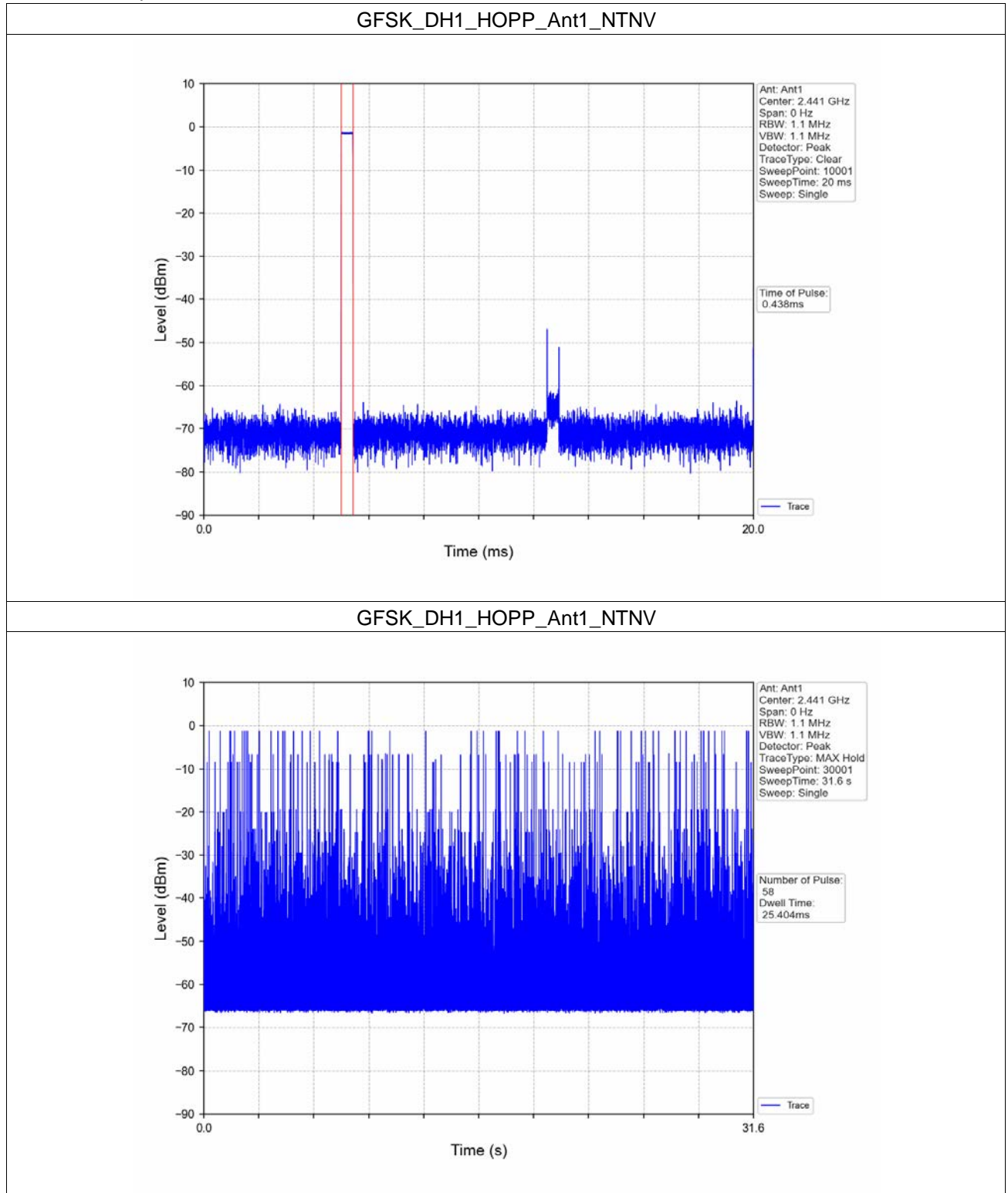
5. Time of Occupancy (Dwell Time)

5.1 Ant1

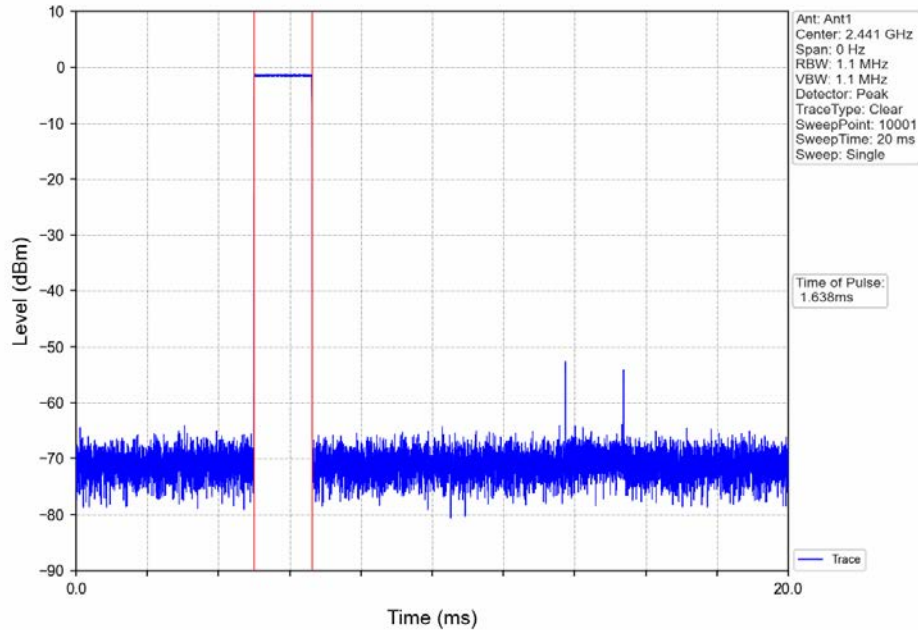
5.1.1 Test Result

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	0.438	31.600	58	25.404	<=400	Pass
			DH3	1.638	31.600	39	63.882	<=400	Pass
			DH5	2.834	31.600	35	99.190	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.498	31.600	47	23.406	<=400	Pass
			2DH3	1.698	31.600	48	81.504	<=400	Pass
			2DH5	2.900	31.600	34	98.600	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.426	31.600	49	20.874	<=400	Pass
			3DH3	1.678	31.600	38	63.764	<=400	Pass
			3DH5	2.772	31.600	44	121.968	<=400	Pass

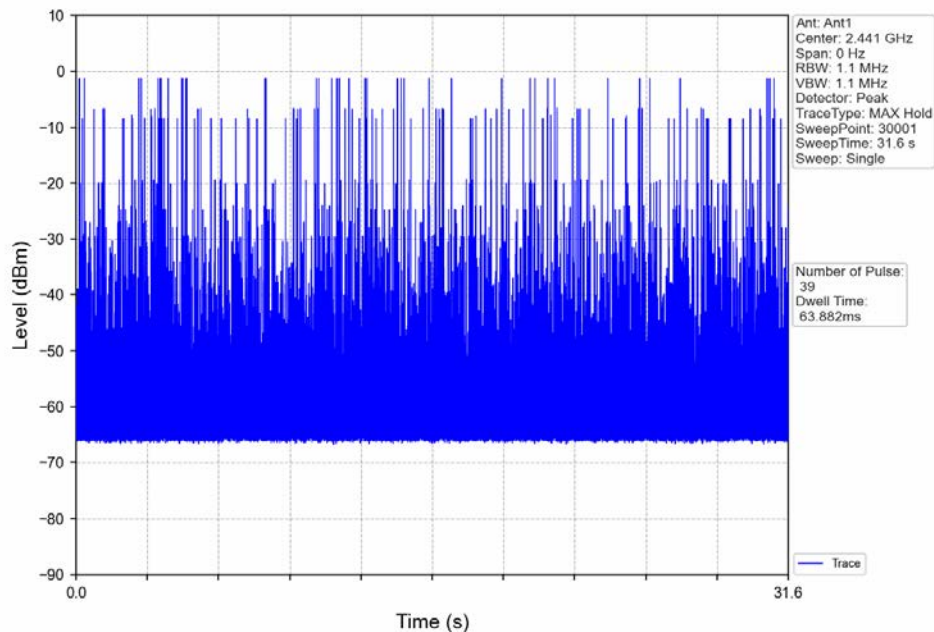
5.1.2 Test Graph



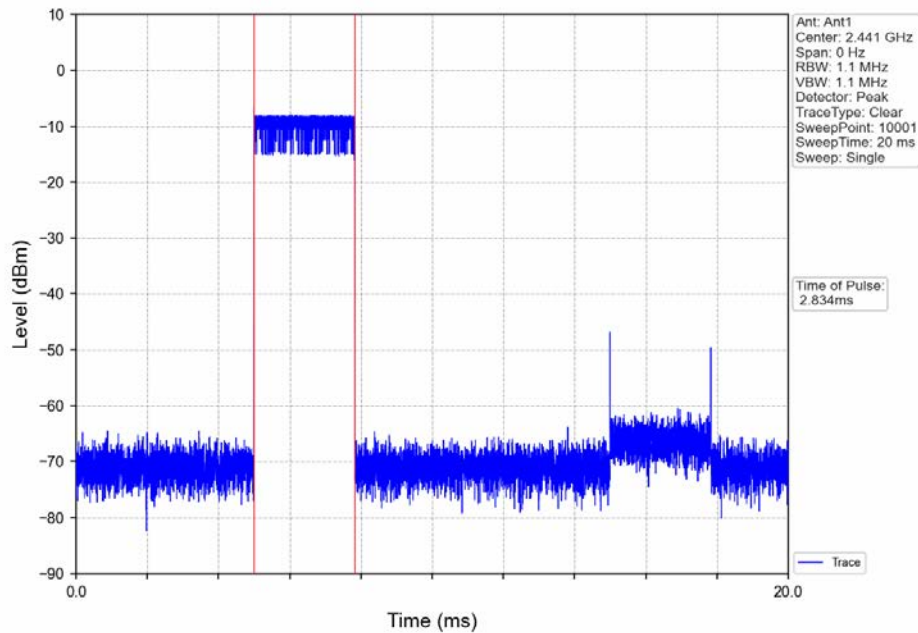
GFSK_DH3_HOPP_Ant1_NTNV



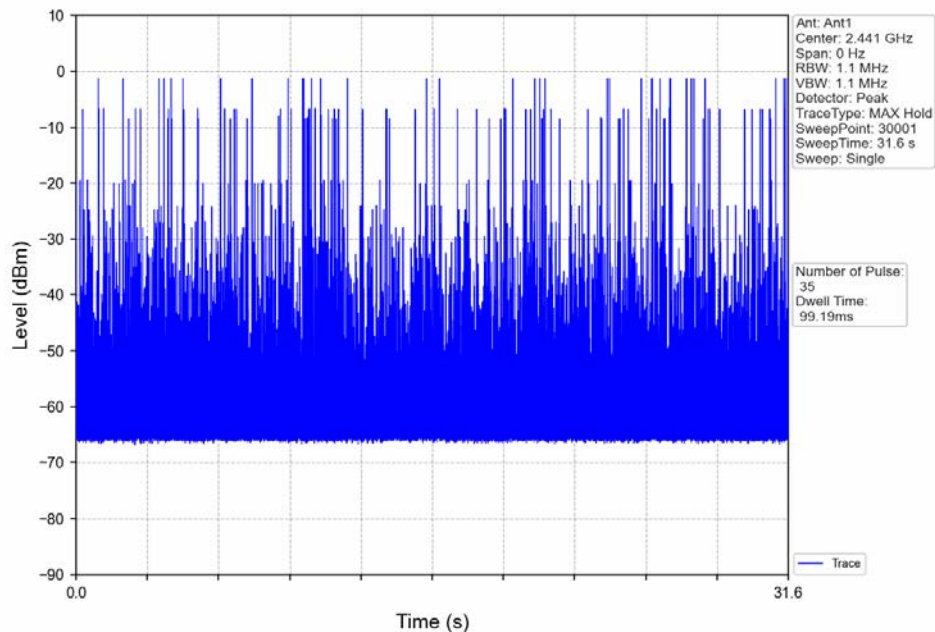
GFSK_DH3_HOPP_Ant1_NTNV



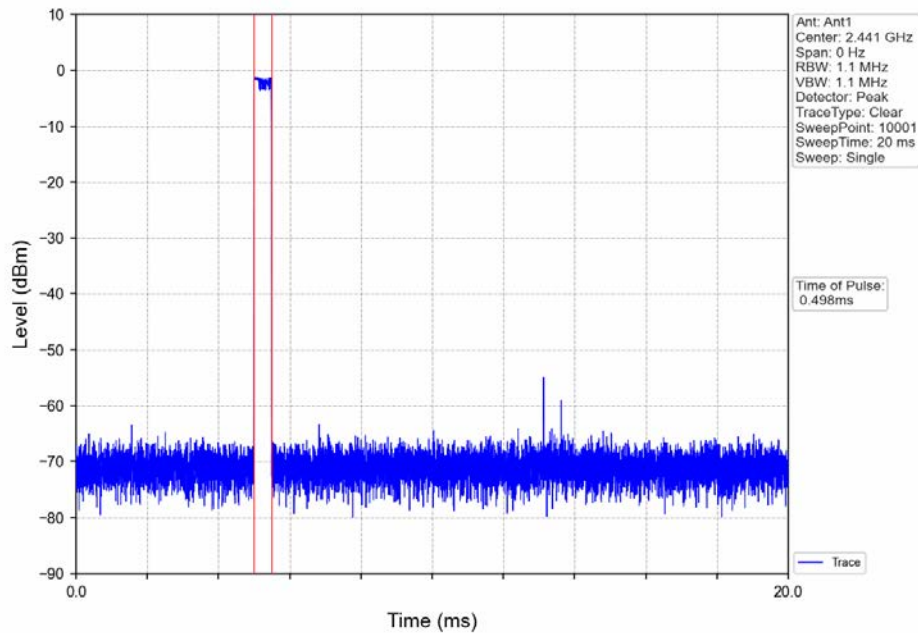
GFSK_DH5_HOPP_Ant1_NTNV



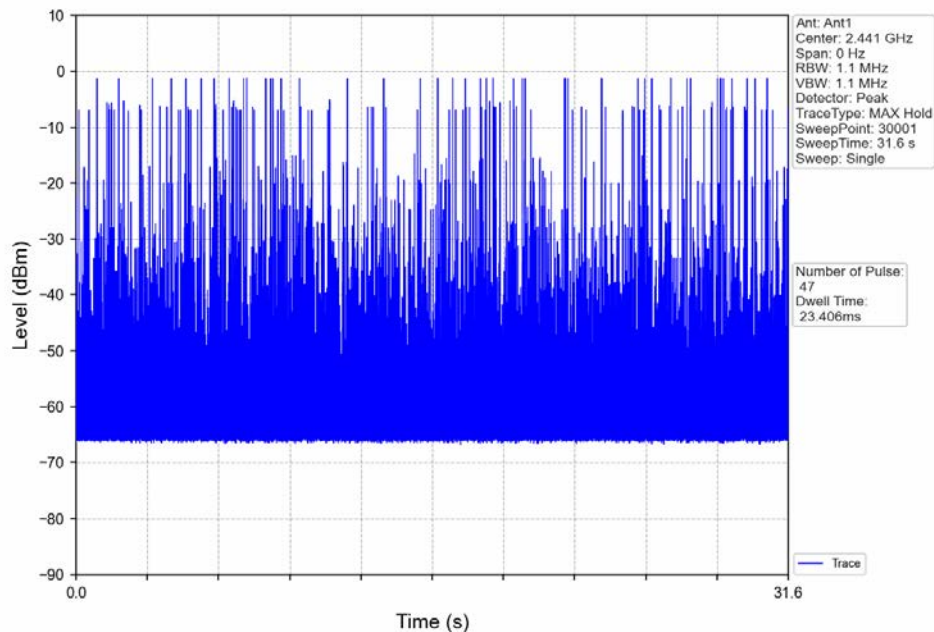
GFSK_DH5_HOPP_Ant1_NTNV



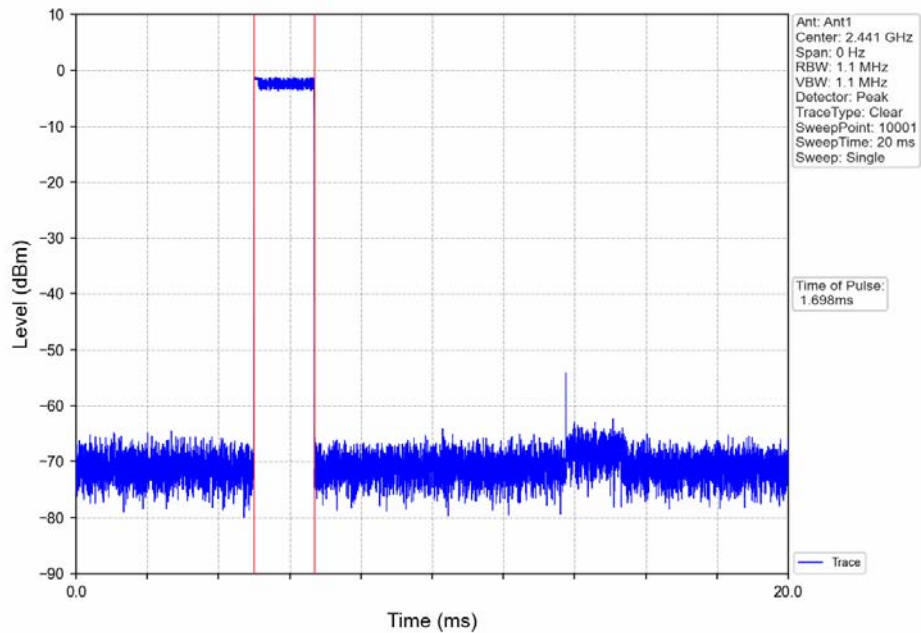
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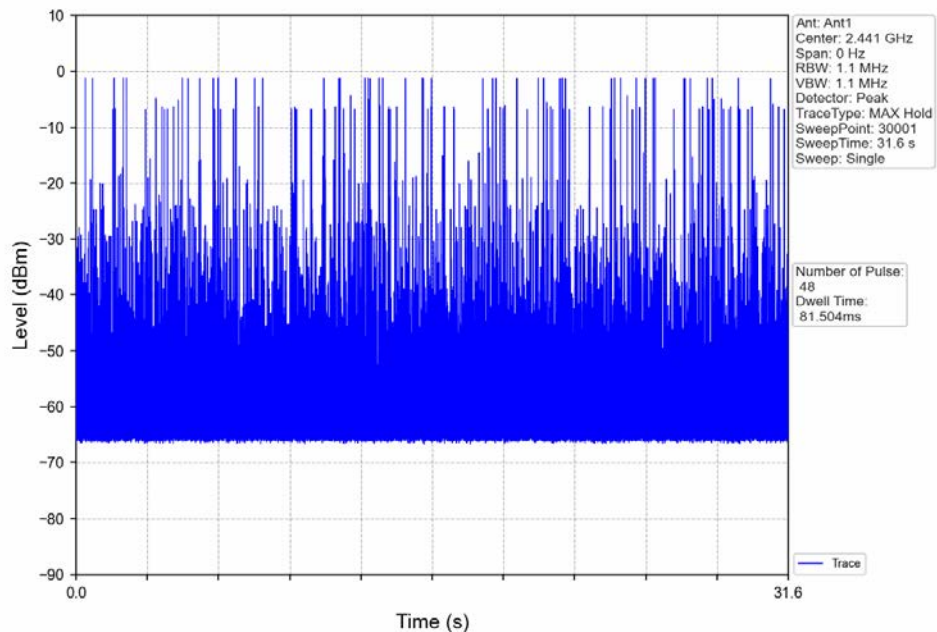
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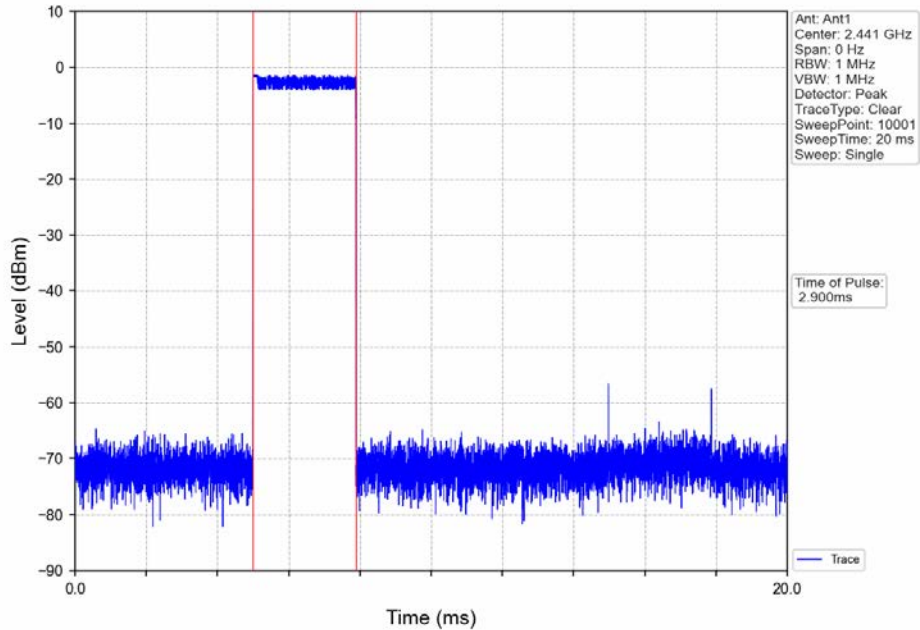
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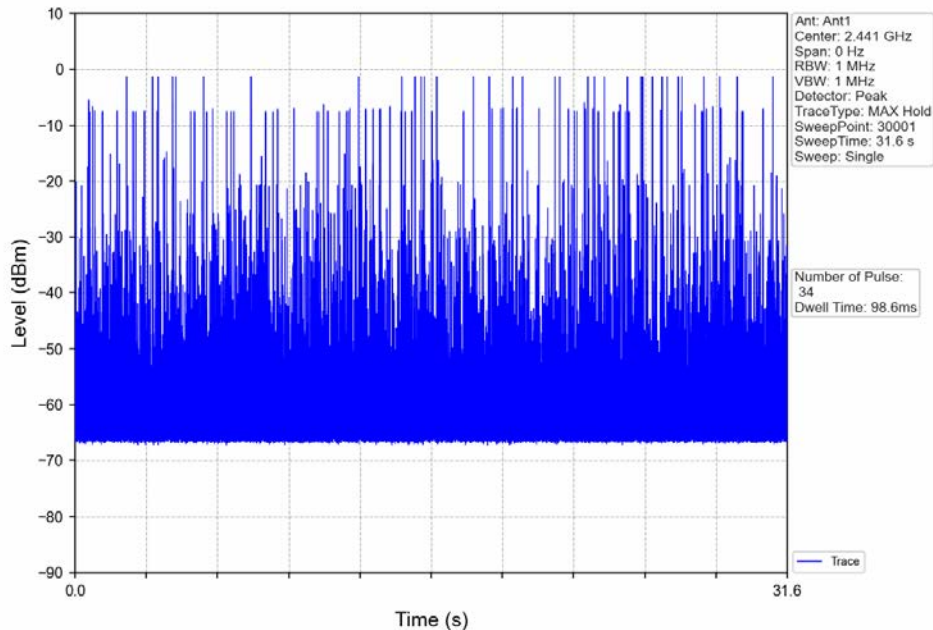
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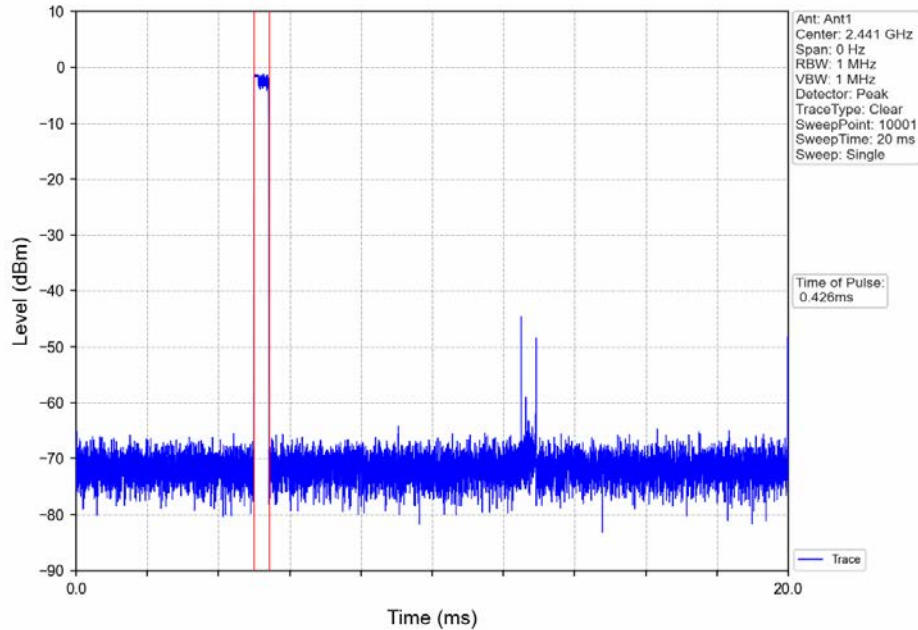
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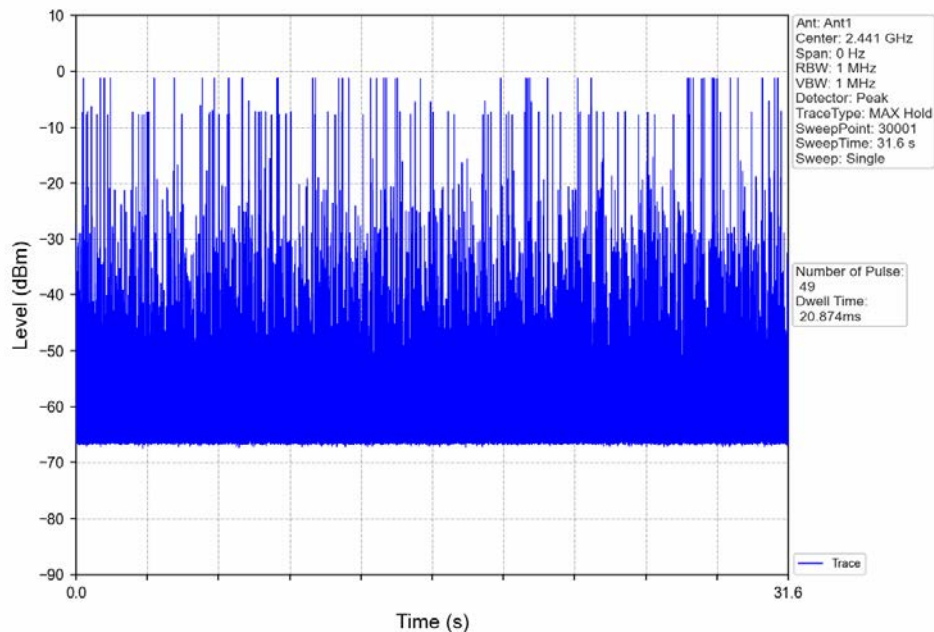
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



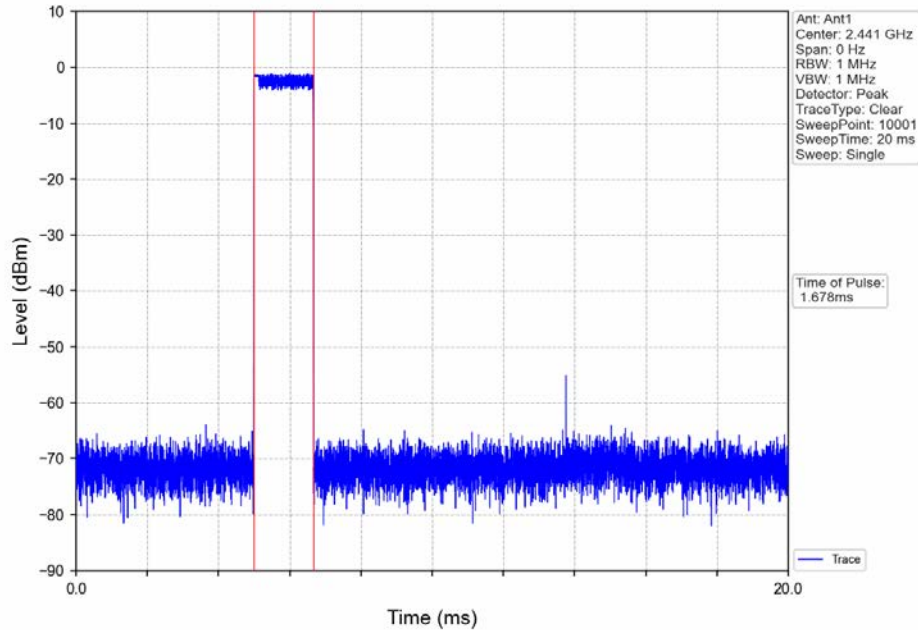
8DPSK_3DH1_HOPP_Ant1_NTNV



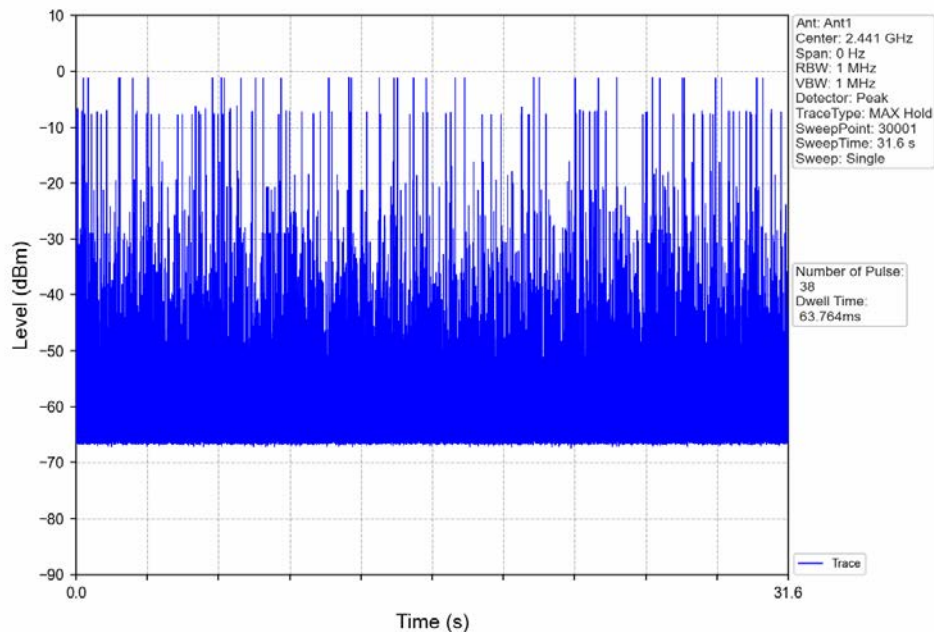
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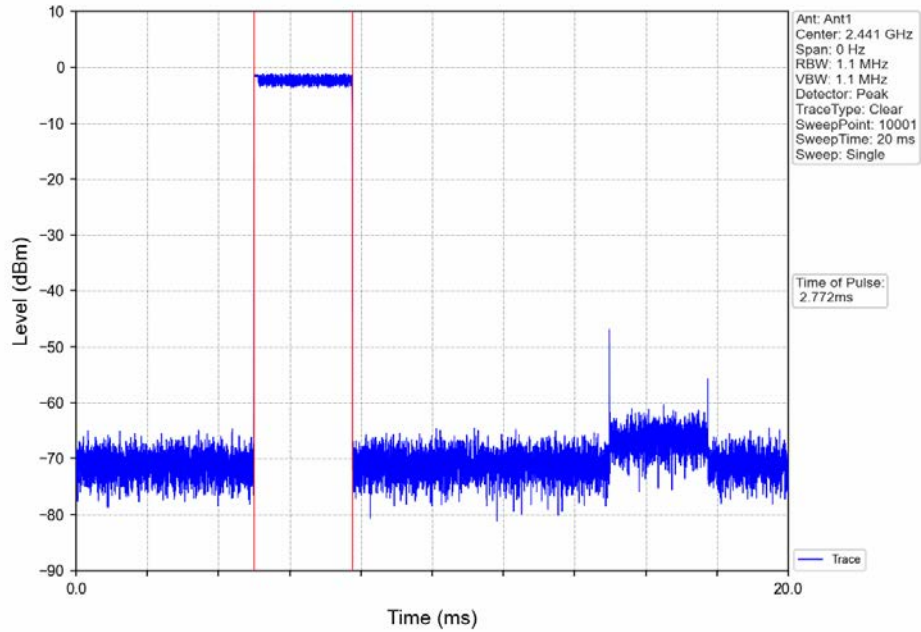
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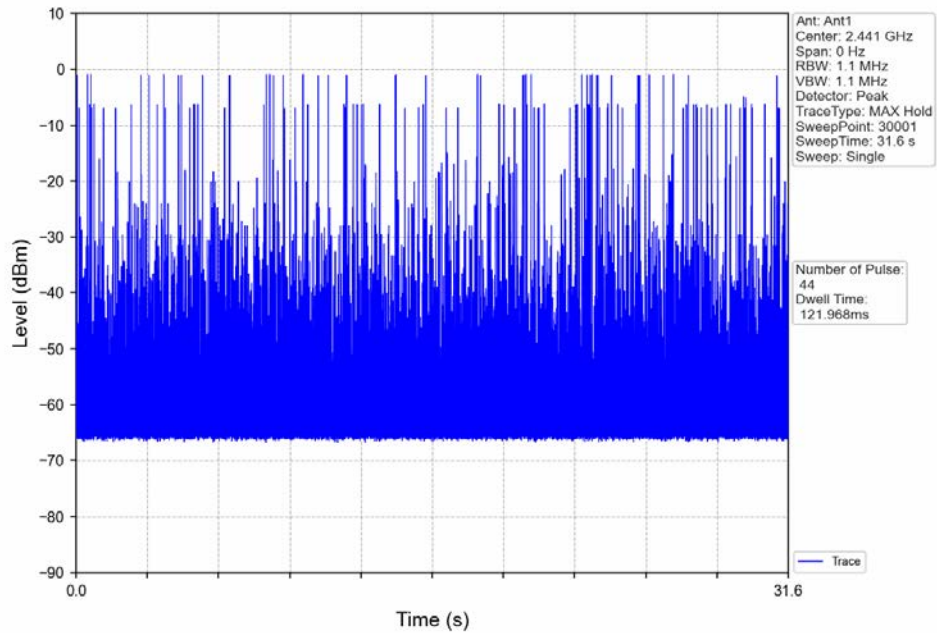
8DPSK_3DH3_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Ref

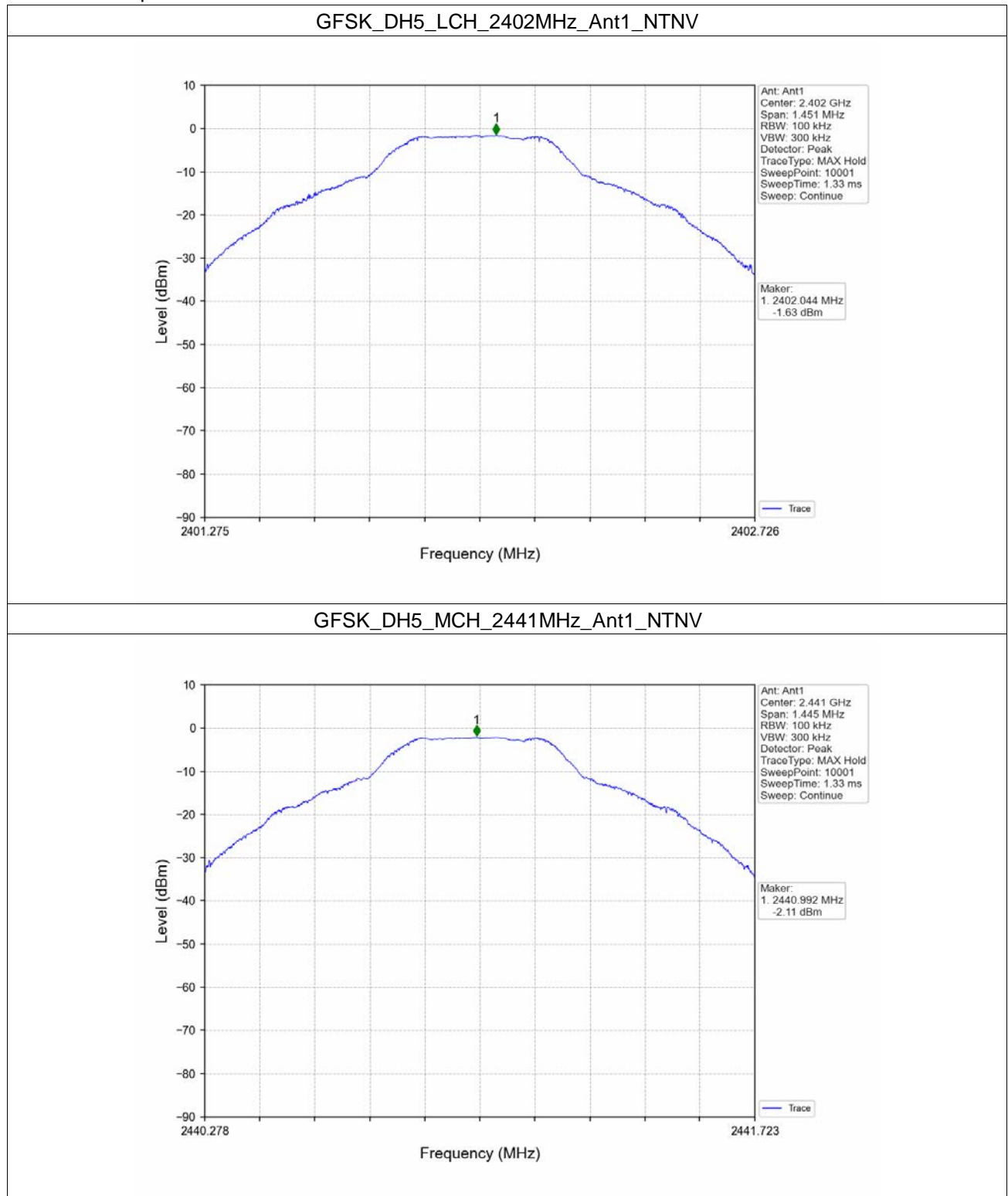
6.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-1.63
		2441	DH5	1	-2.11
		2480	DH5	1	-3.06
Pi/4DQPSK	SISO	2402	2DH5	1	-1.85
		2441	2DH5	1	-2.40
		2480	2DH5	1	-3.42
8DPSK	SISO	2402	3DH5	1	-1.79
		2441	3DH5	1	-2.36
		2480	3DH5	1	-3.41

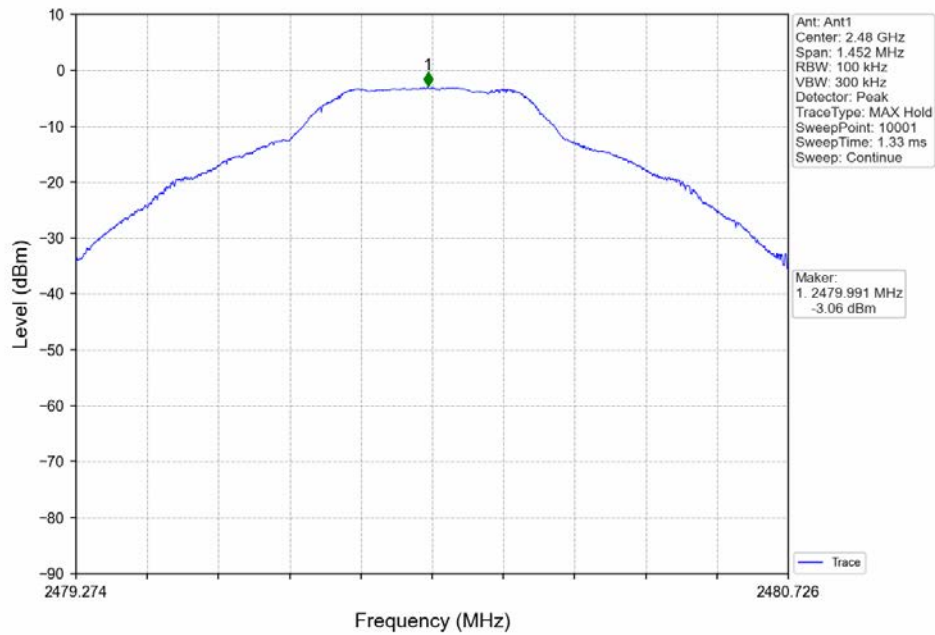
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

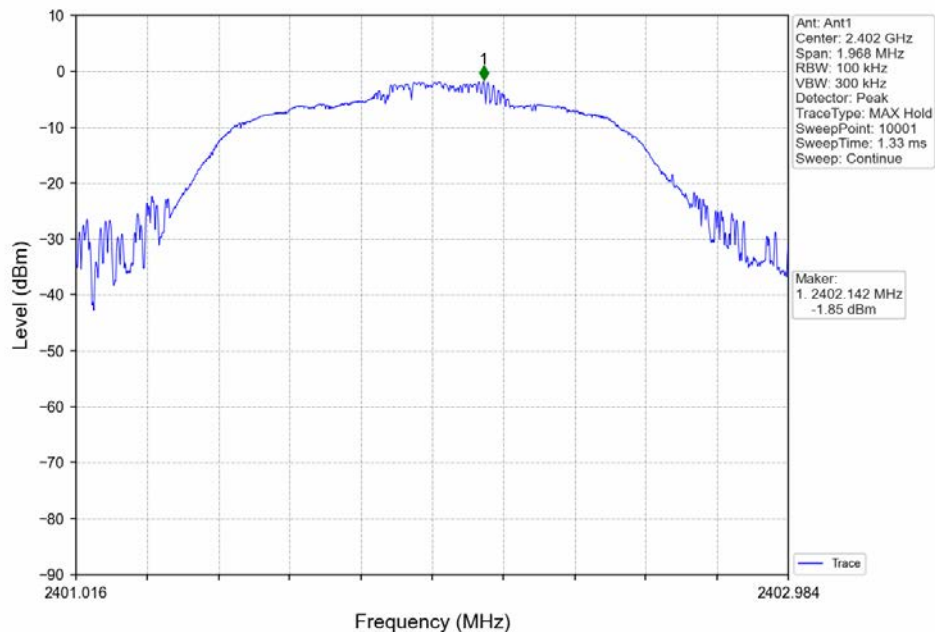
6.1.2 Test Graph



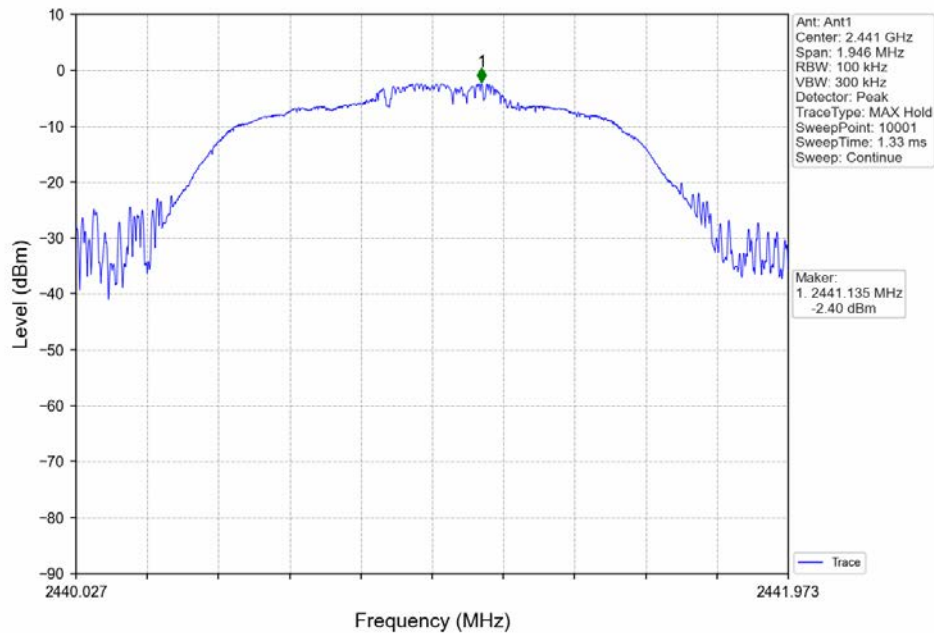
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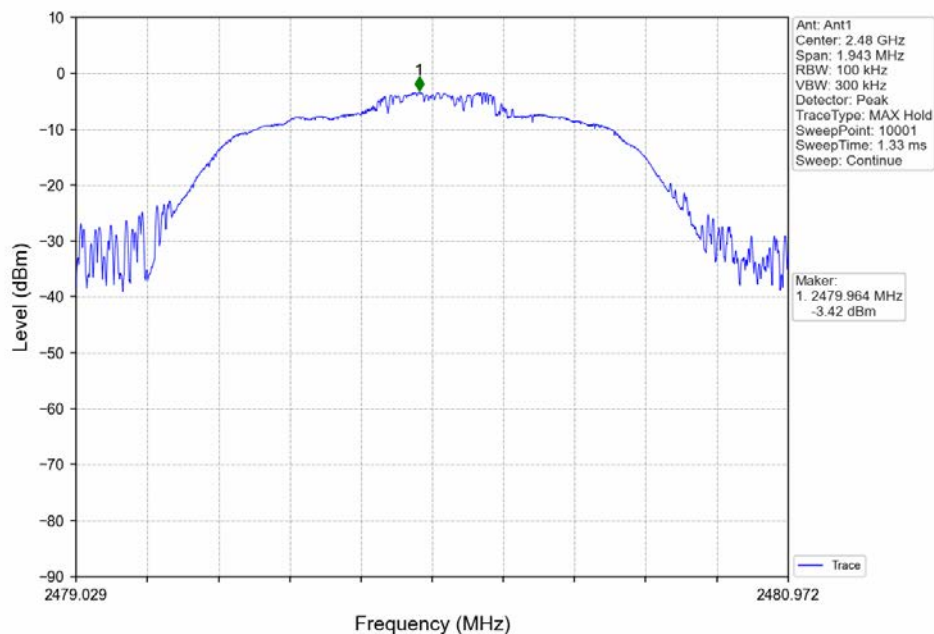
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



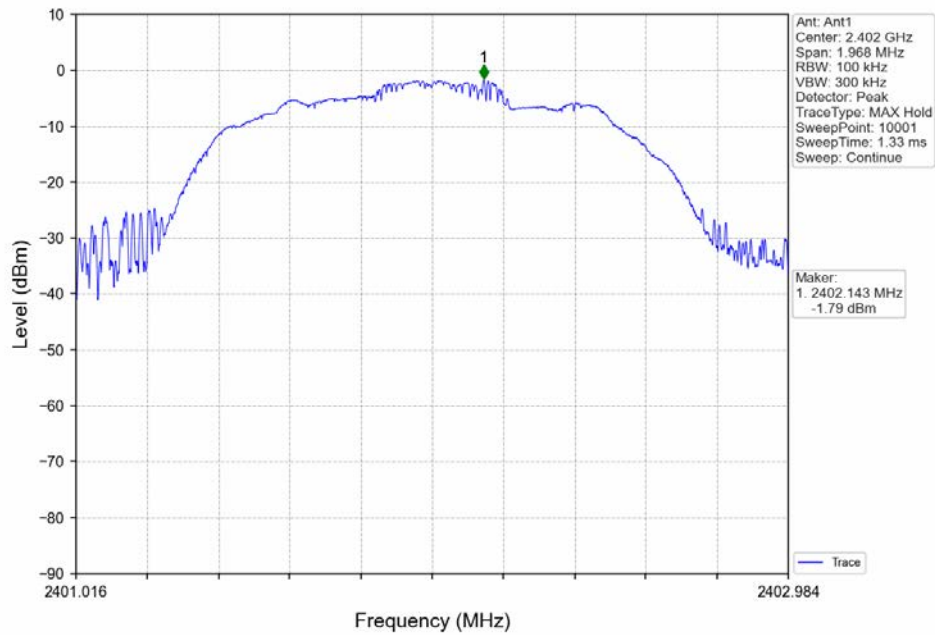
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



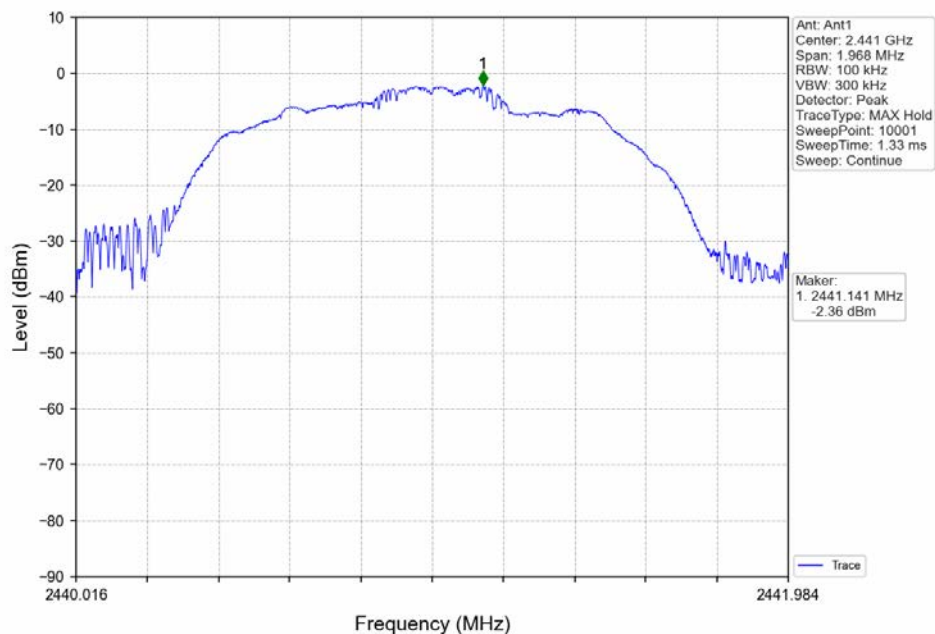
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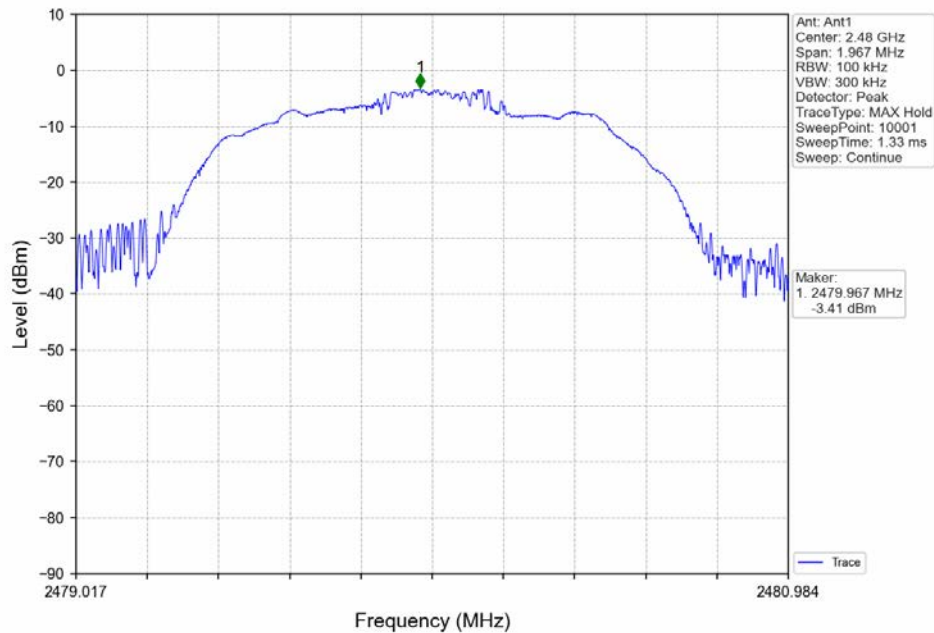
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



6.2 CSE

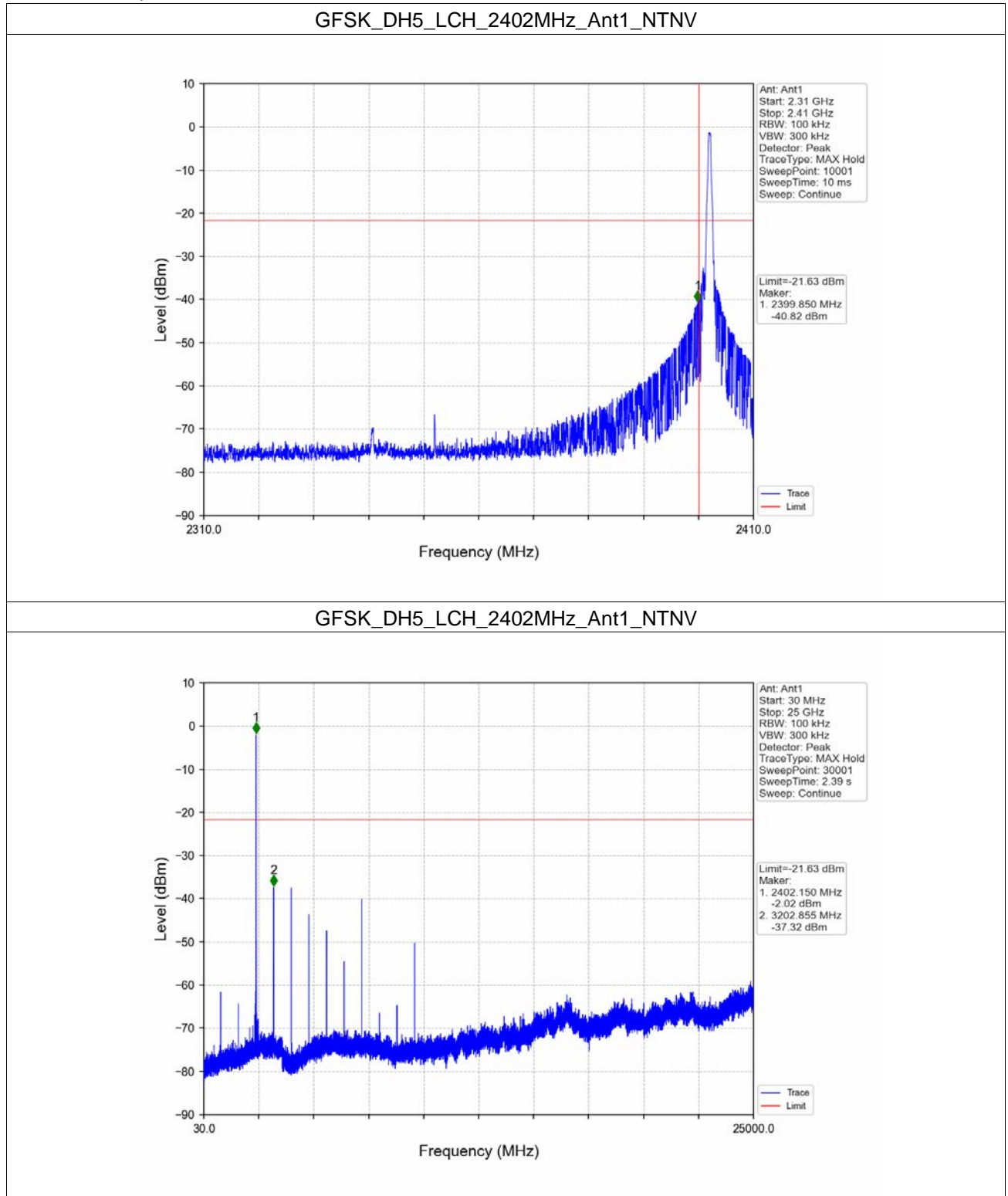
6.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-1.63	-21.63	Pass
		2441	DH5	1	-1.63	-21.63	Pass
		2480	DH5	1	-1.63	-21.63	Pass
		HOPP	DH5	1	-1.63	-21.63	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-1.85	-21.85	Pass
		2441	2DH5	1	-1.85	-21.85	Pass
		2480	2DH5	1	-1.85	-21.85	Pass
		HOPP	2DH5	1	-1.85	-21.85	Pass
8DPSK	SISO	2402	3DH5	1	-1.79	-21.79	Pass
		2441	3DH5	1	-1.79	-21.79	Pass
		2480	3DH5	1	-1.79	-21.79	Pass
		HOPP	3DH5	1	-1.79	-21.79	Pass

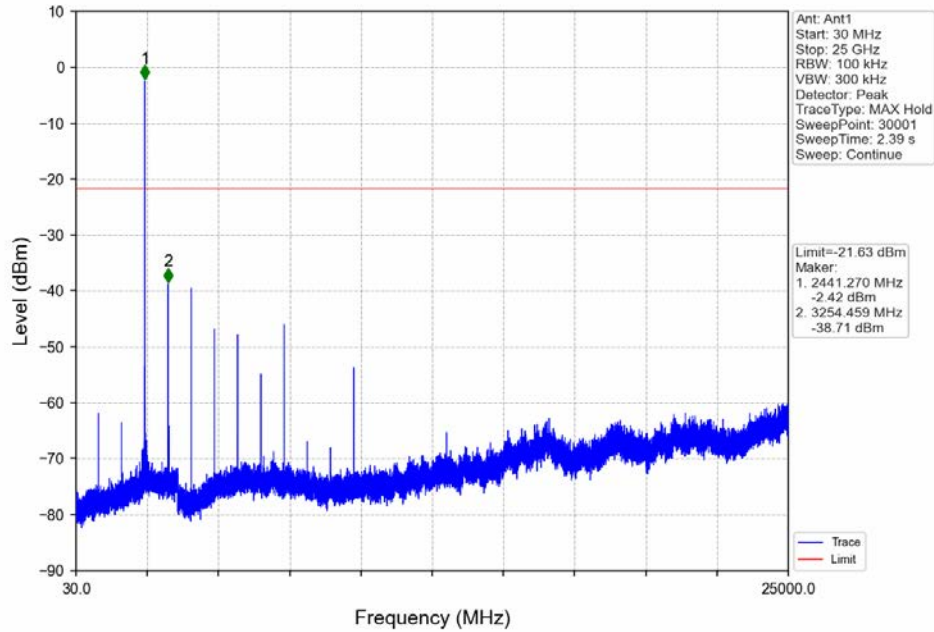
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

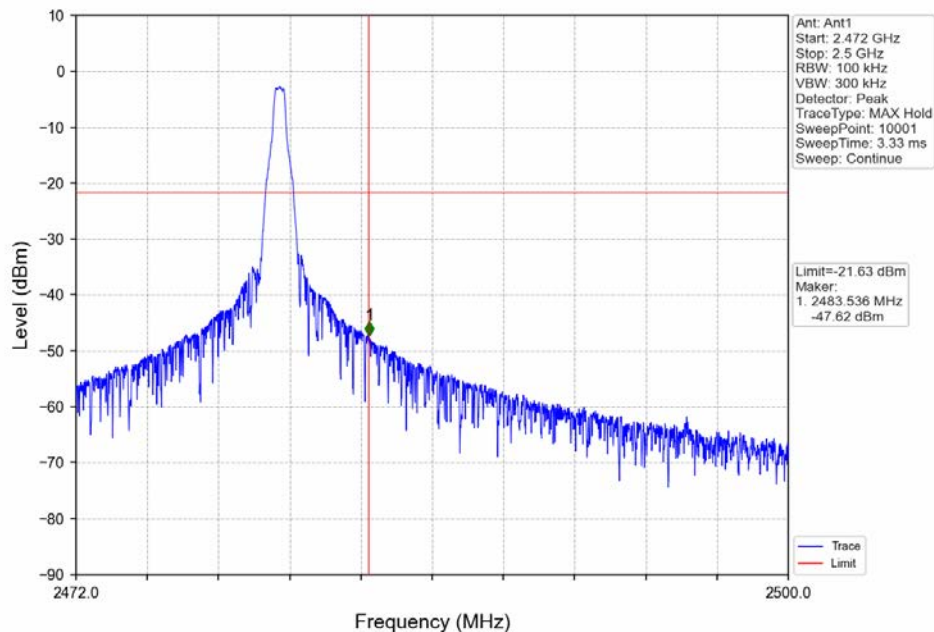
6.2.2 Test Graph



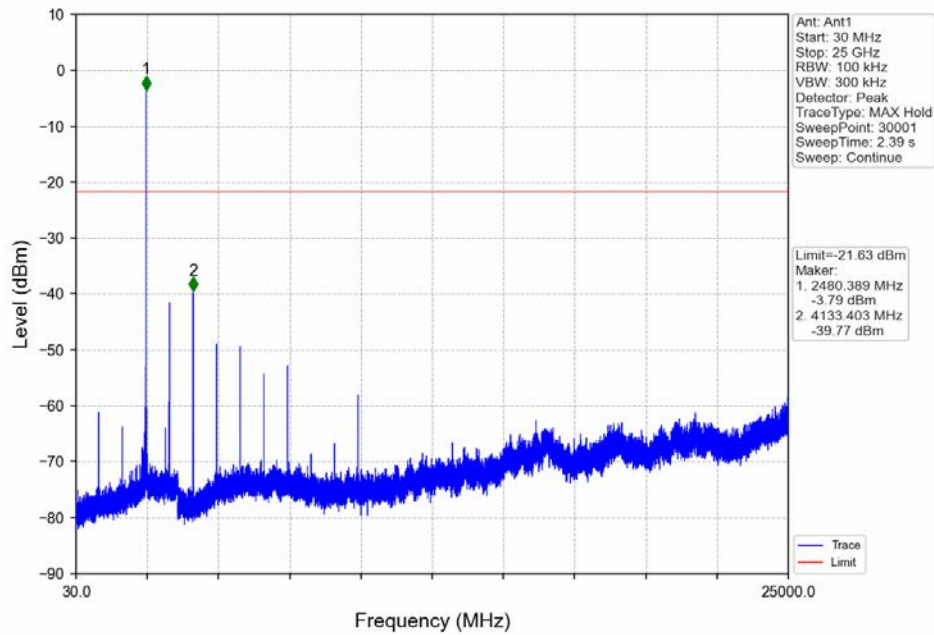
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



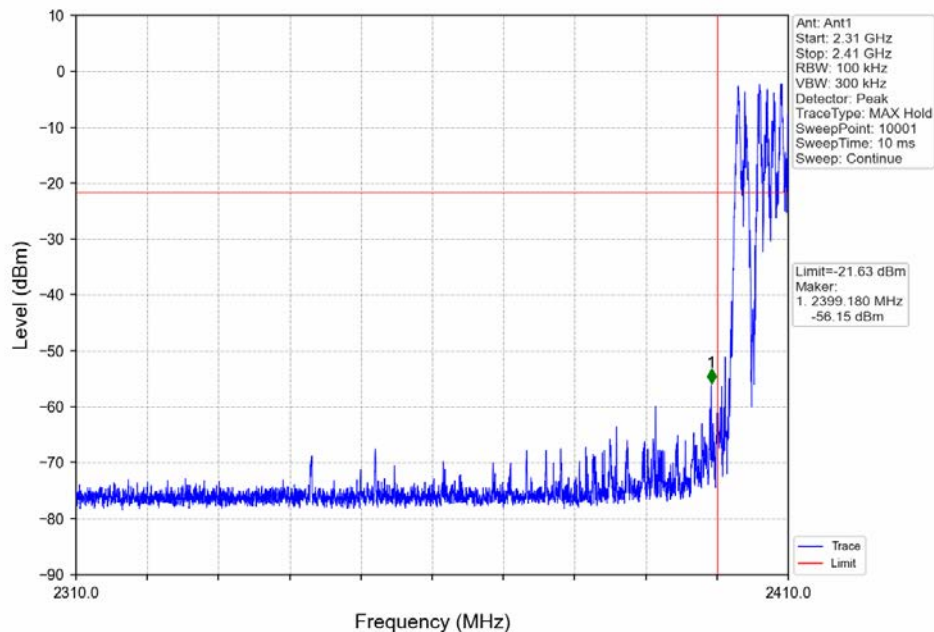
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



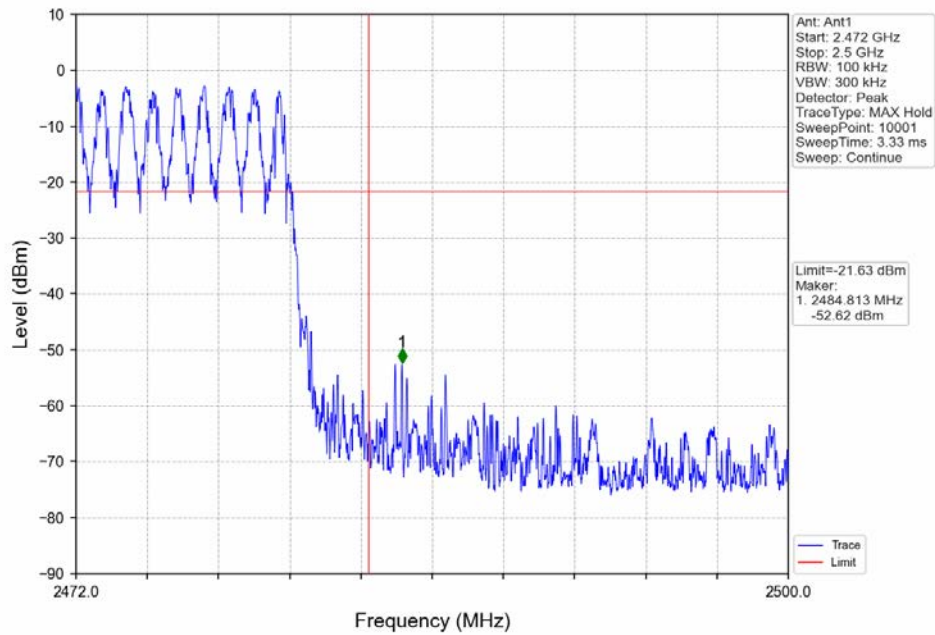
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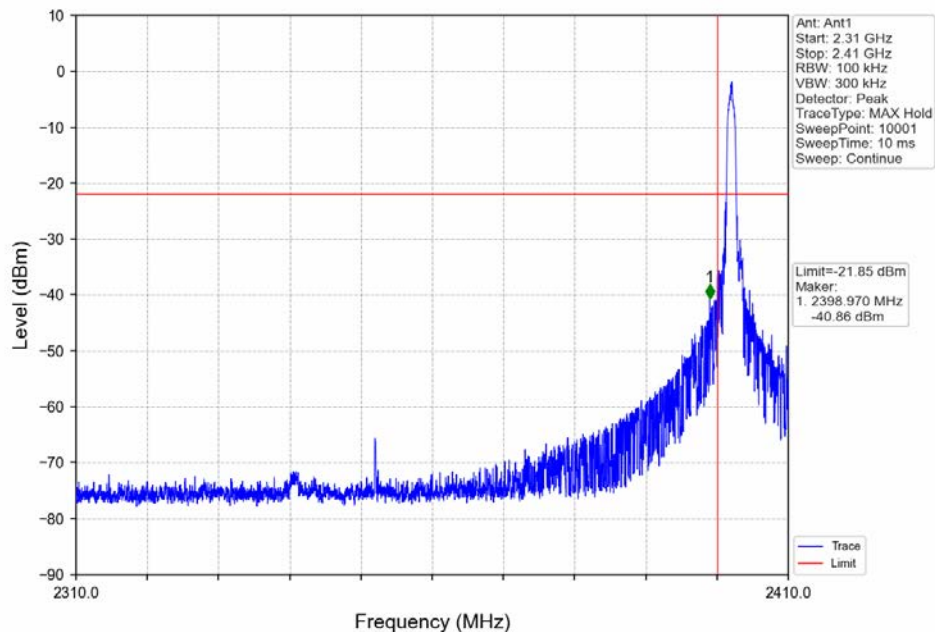
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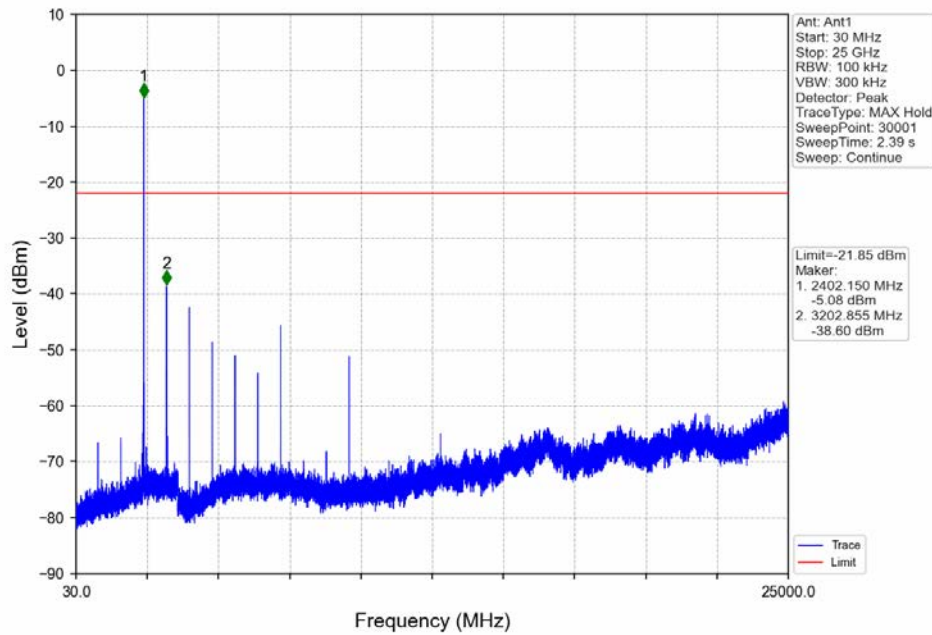
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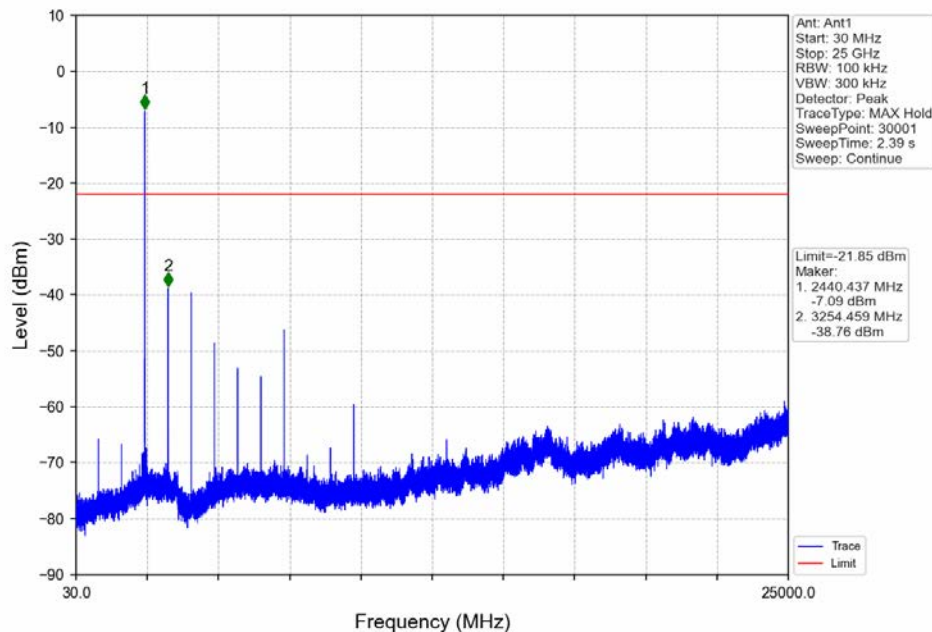
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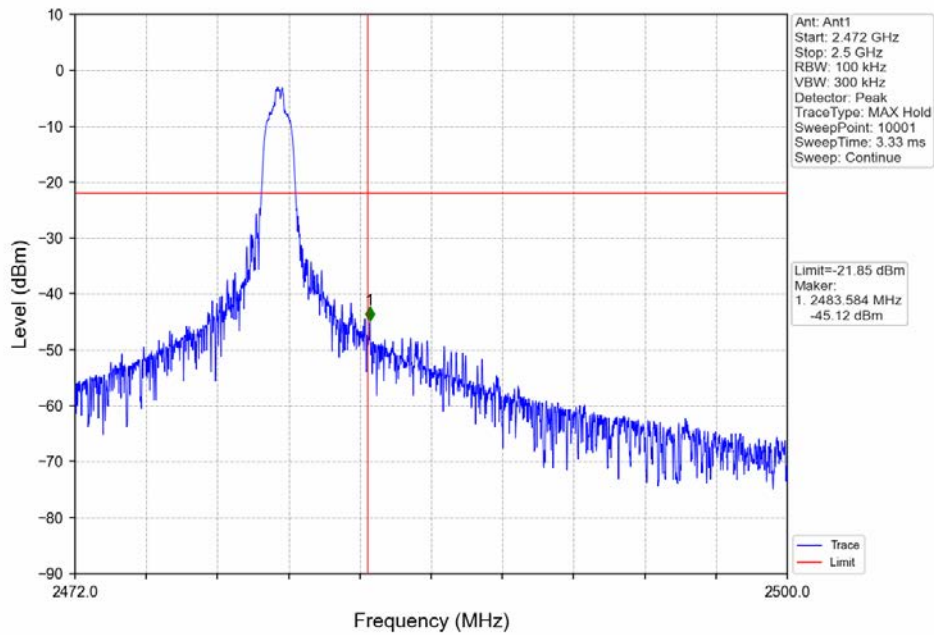
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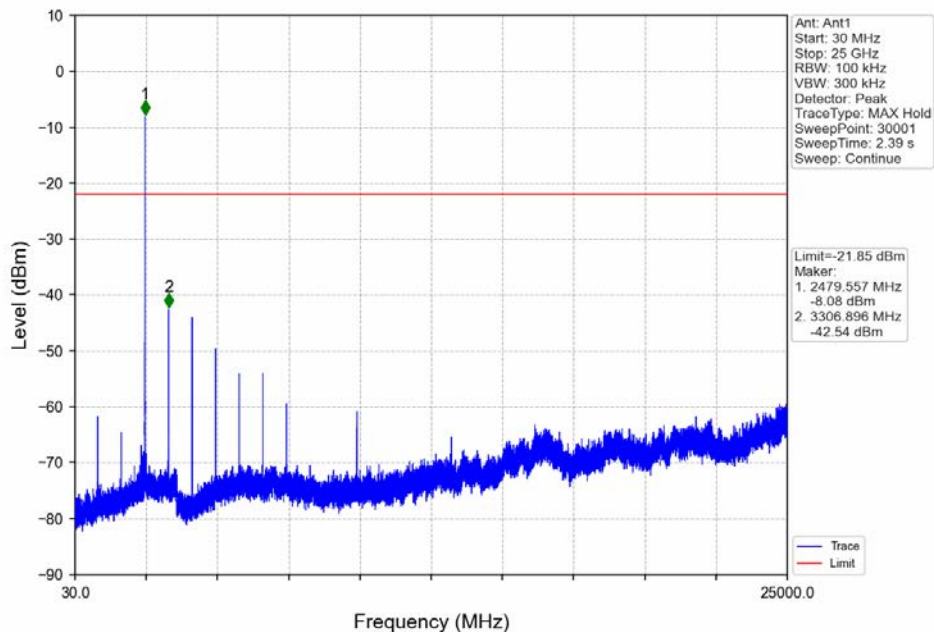
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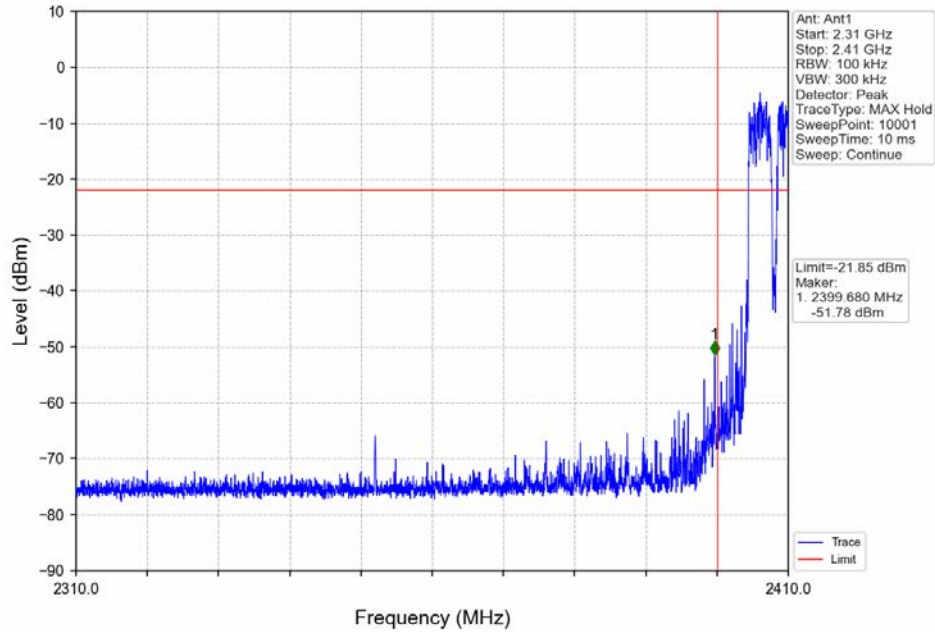
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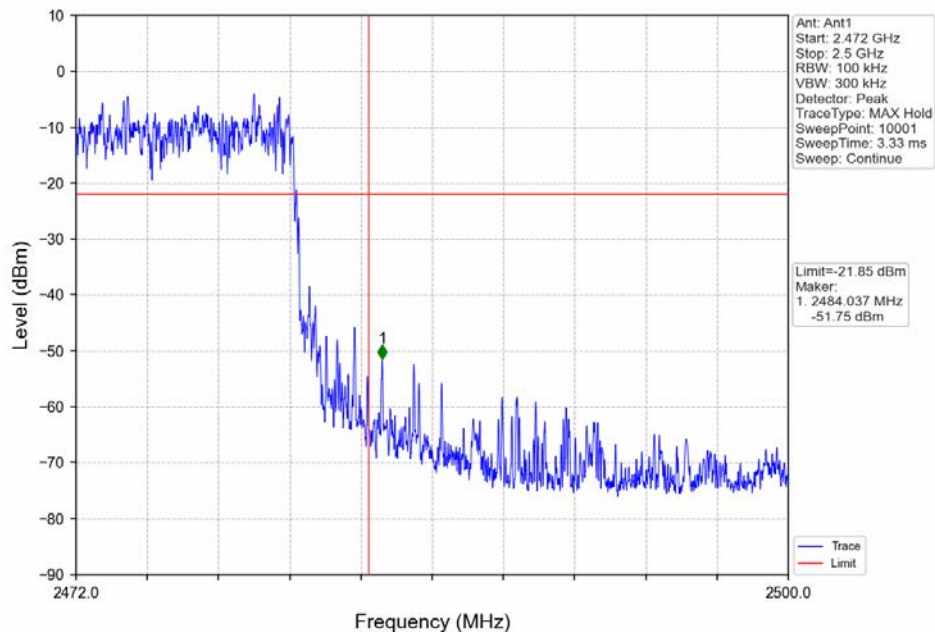
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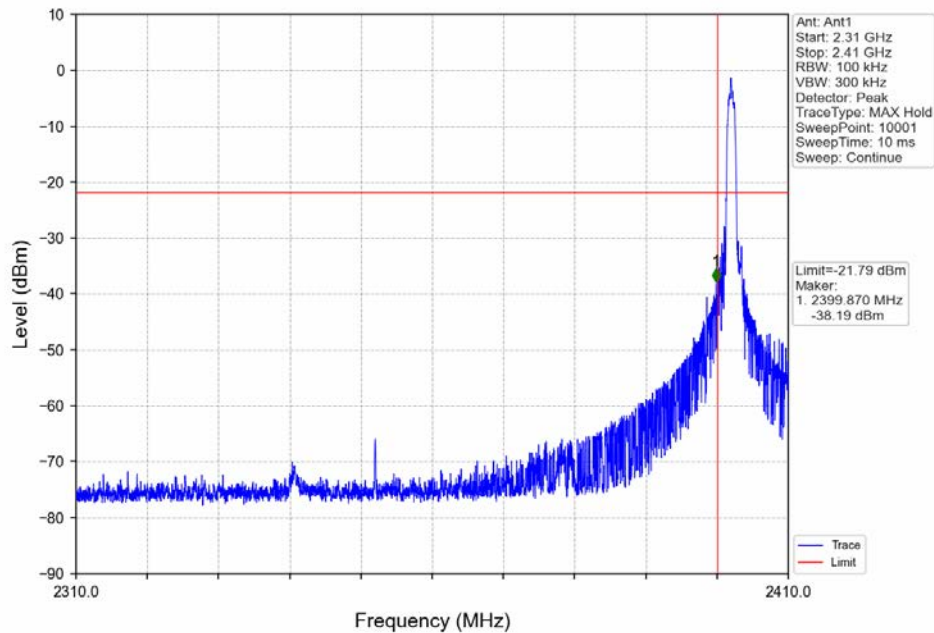
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



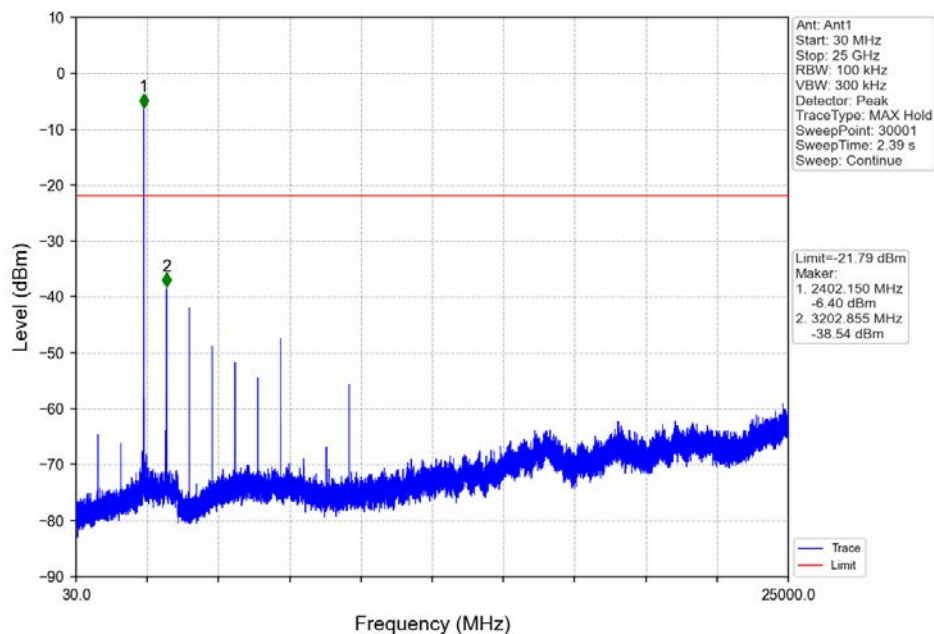
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



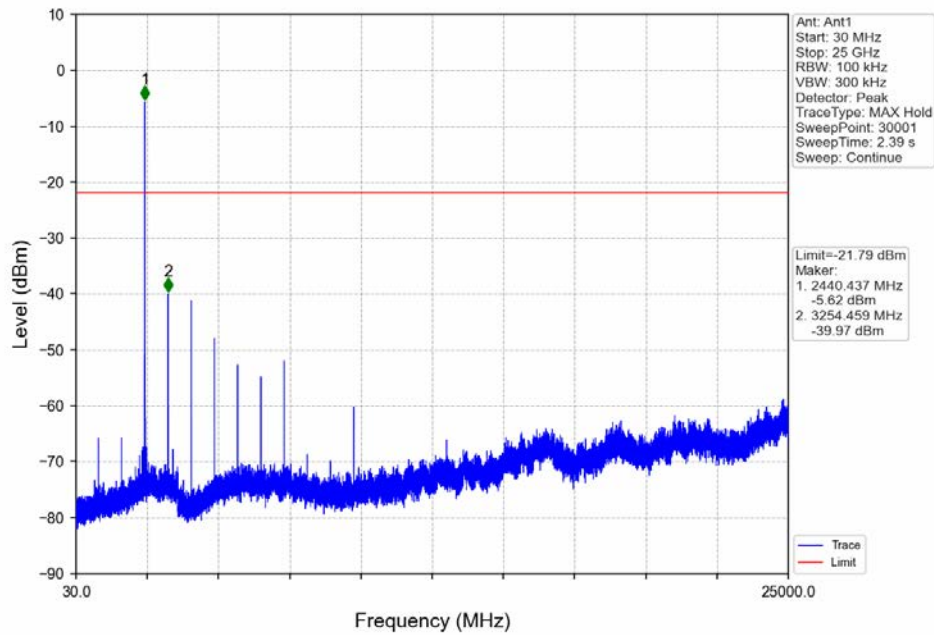
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



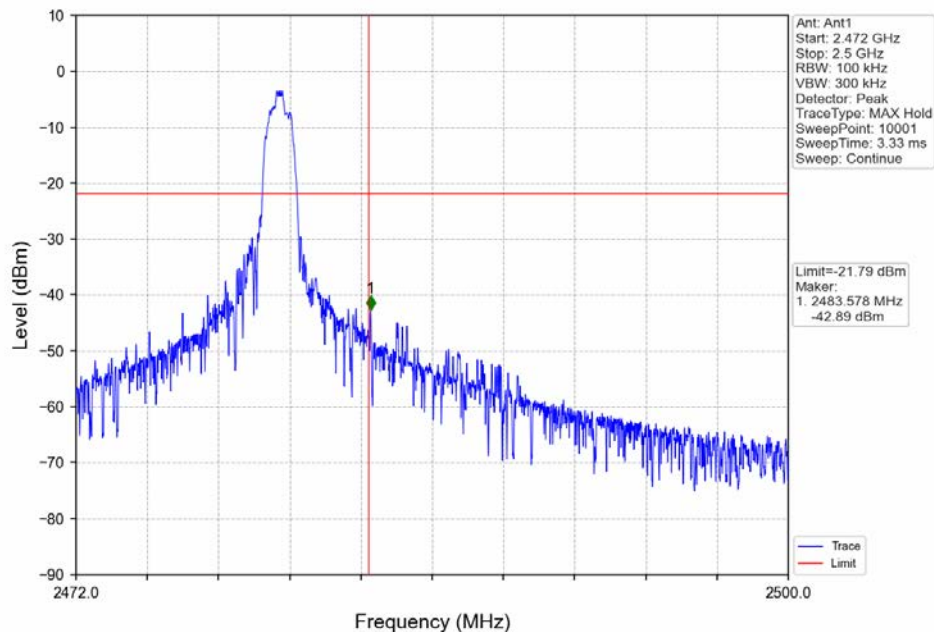
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



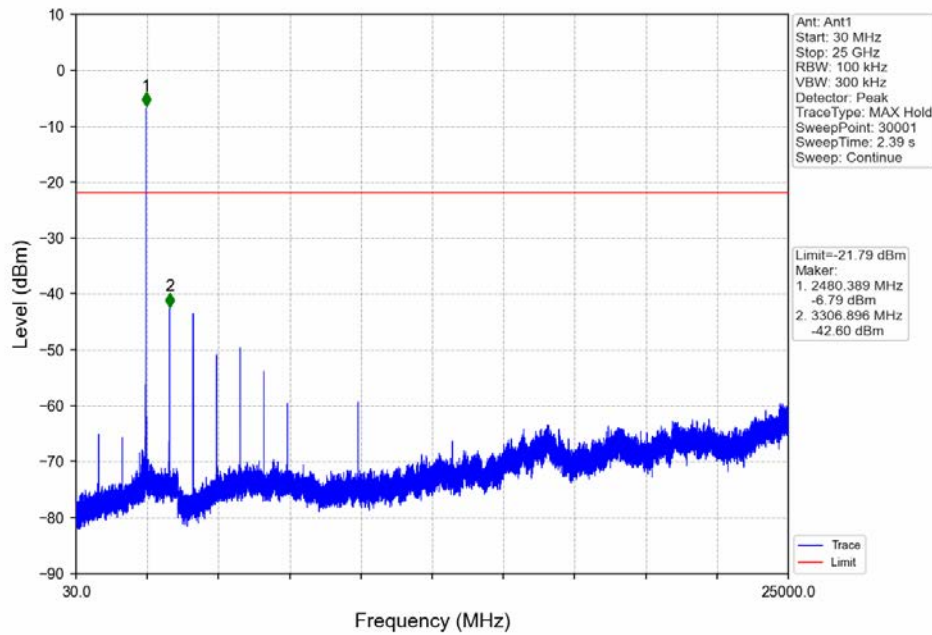
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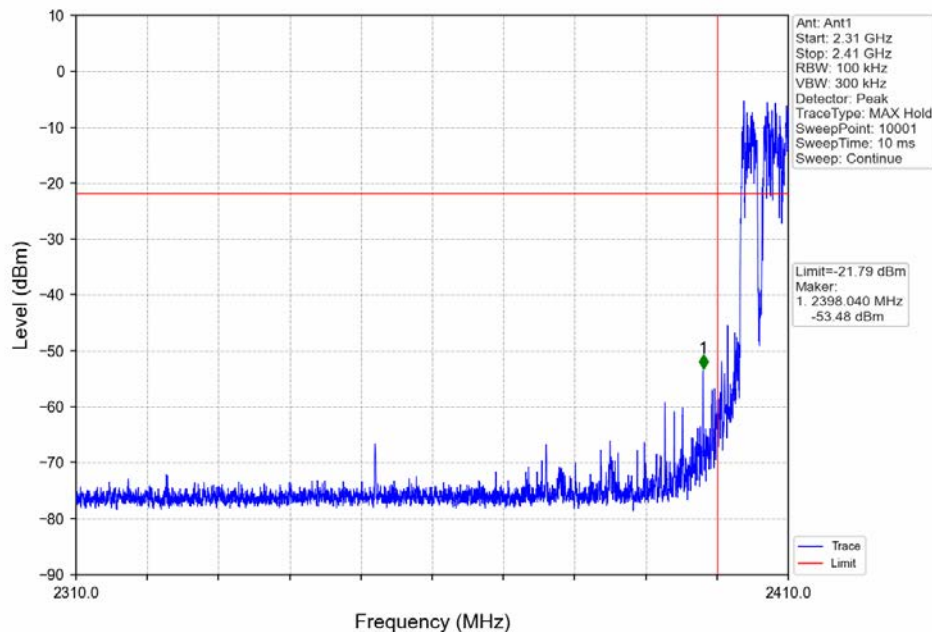
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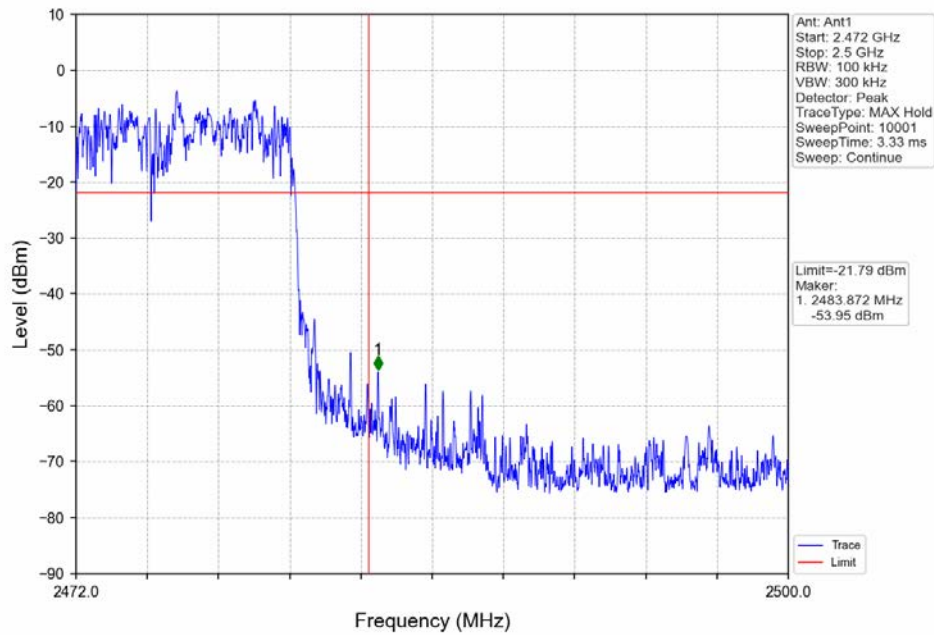
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



- End of the Report -