

ANNEX TEST DATA EDR

FCC ID: 2BXHJ-TKXLSBLK

Applicant: Shenzhen TOPI Electronic Technology Co. , Ltd

Address: TOP Industrial Park,No.44 Hexiu West Road,Baoan District,Shenzhen, China

Manufacturer: Shenzhen TOPI Electronic Technology Co. , Ltd

Address: TOP Industrial Park,No.44 Hexiu West Road,Baoan District,Shenzhen, China

Product Name: ALL-IN-ONE KARAOKE

Trade Mark: N/A

Model Number: TKXLSBLK, TP-L8

Date of Receipt: Jul. 29, 2026

Test Date: Jul. 29, 2026 – Aug. 09, 2026

Date of Report: Aug. 09, 2026

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China

Applicable Standards: FCC PART 15 C 15.247
ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

Test Result: Pass

Report Number: DLE-260729022R

1. Bandwidth

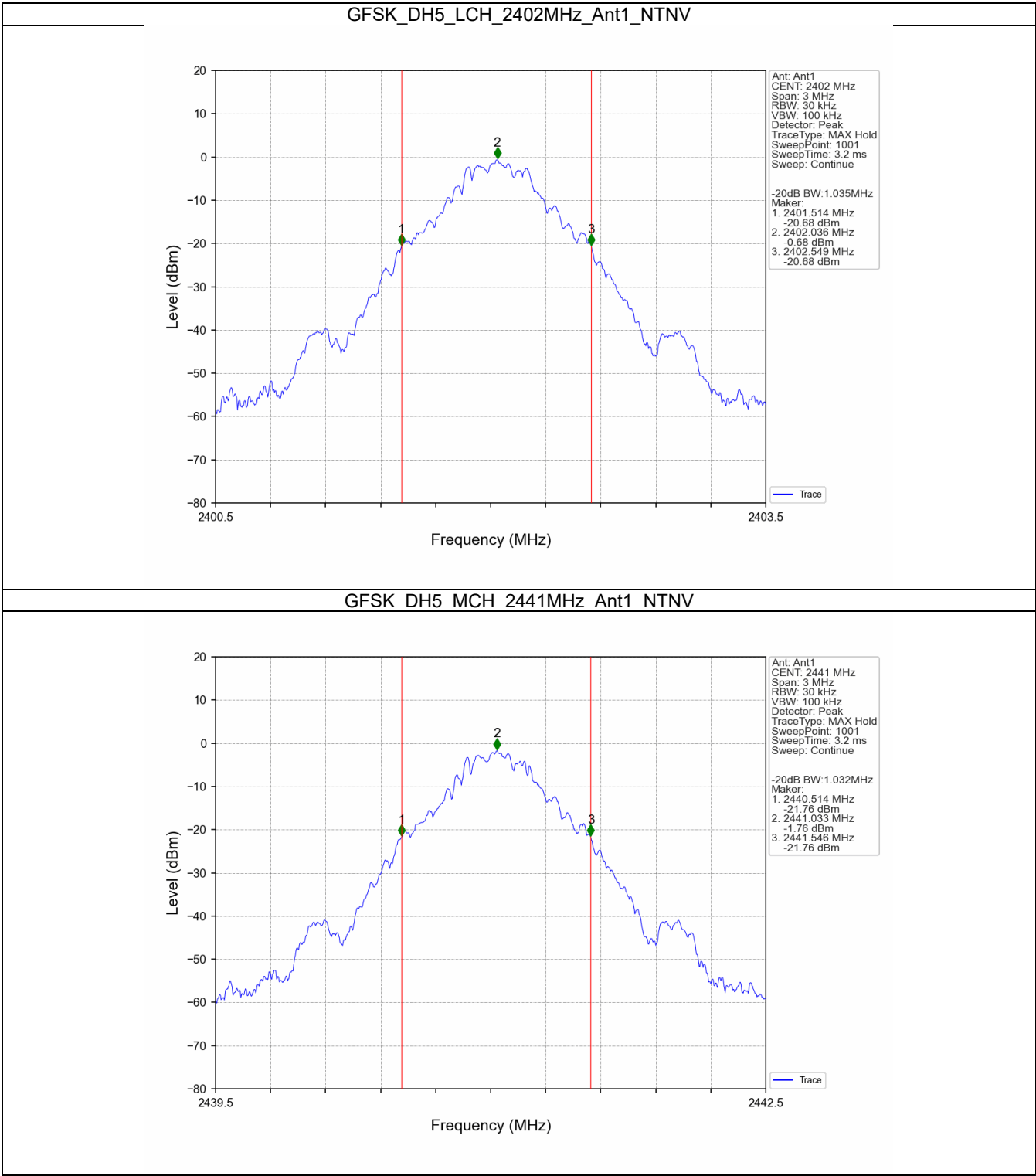
1.1 Test Result

1.1.1 20dB BW

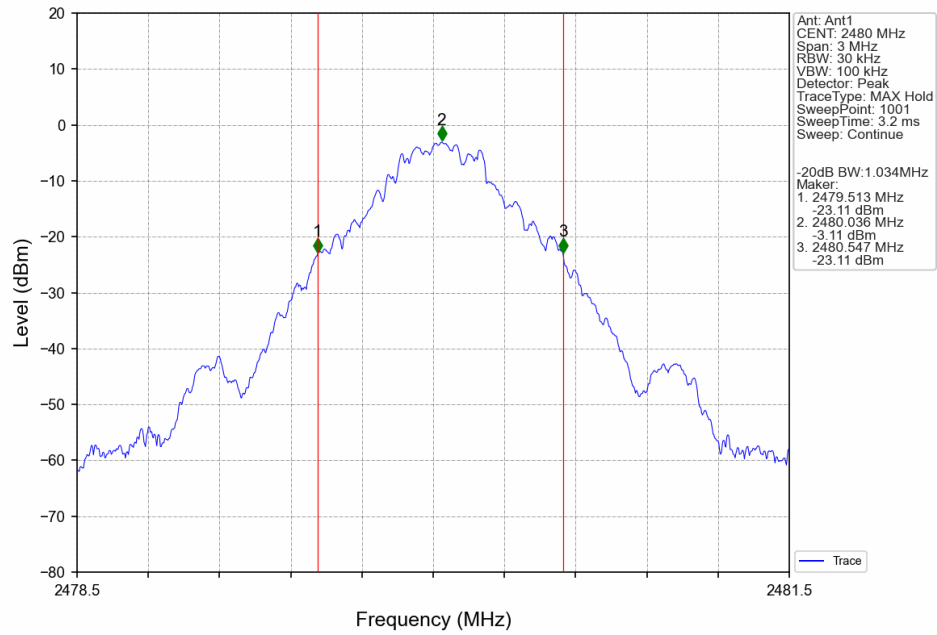
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	1.035	/	Pass
		2441	DH5	1	1.032	/	Pass
		2480	DH5	1	1.034	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.316	/	Pass
		2441	2DH5	1	1.317	/	Pass
		2480	2DH5	1	1.316	/	Pass
8DPSK	SISO	2402	3DH5	1	1.306	/	Pass
		2441	3DH5	1	1.304	/	Pass
		2480	3DH5	1	1.303	/	Pass

1.2 Test Graph

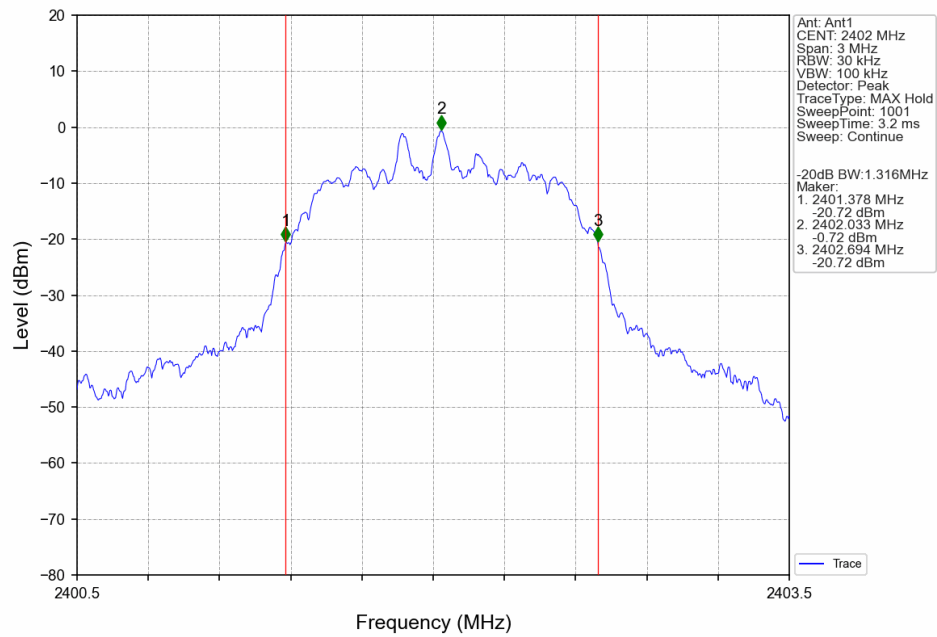
1.2.1 20dB BW



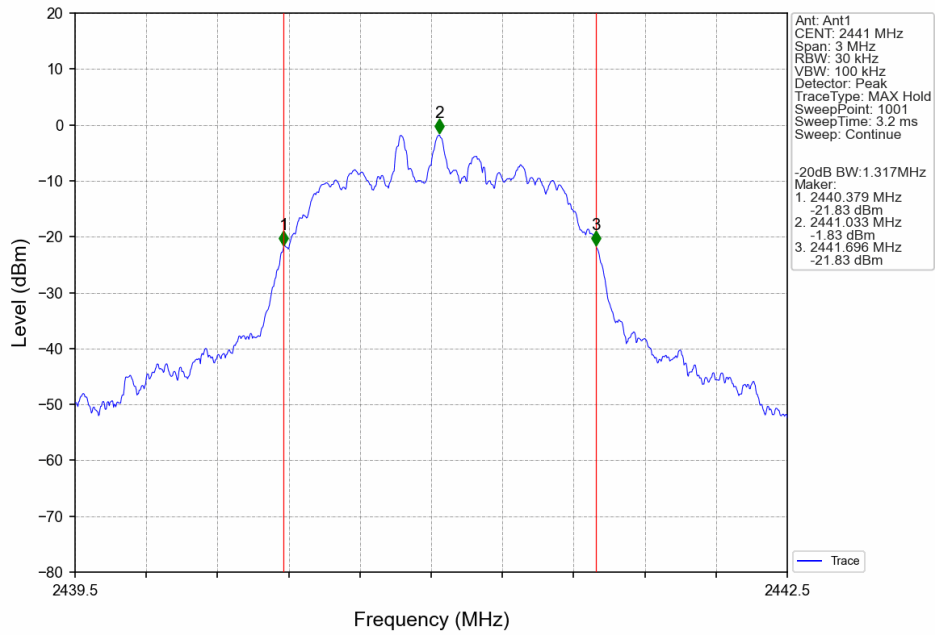
GFSK DH5 HCH 2480MHz Ant1 NTV



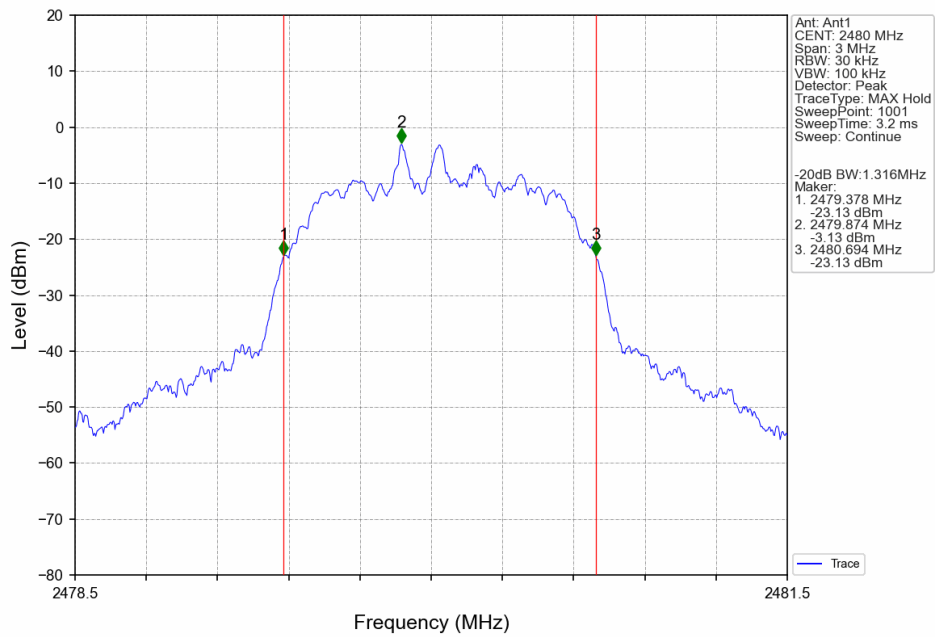
PI/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



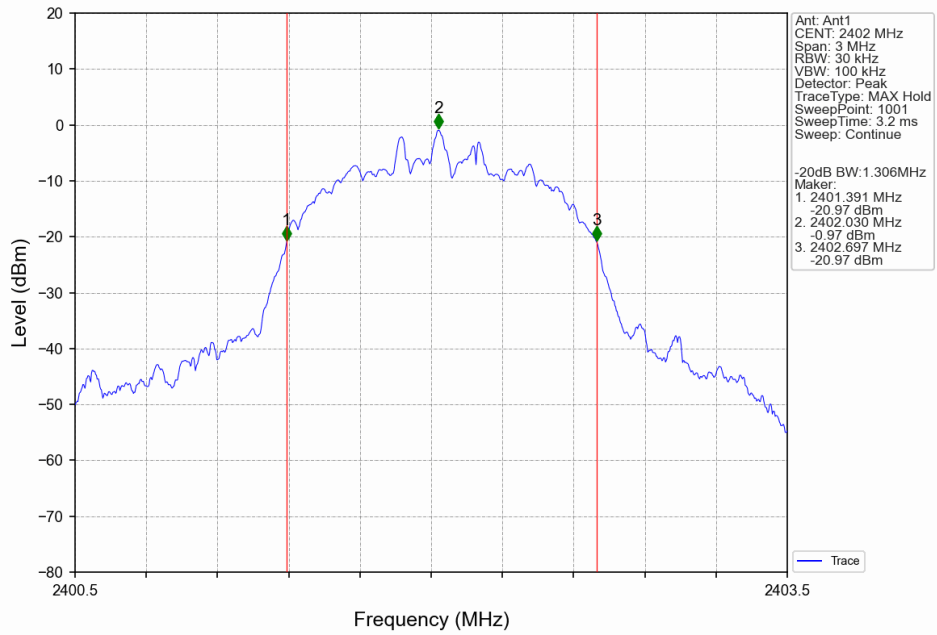
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



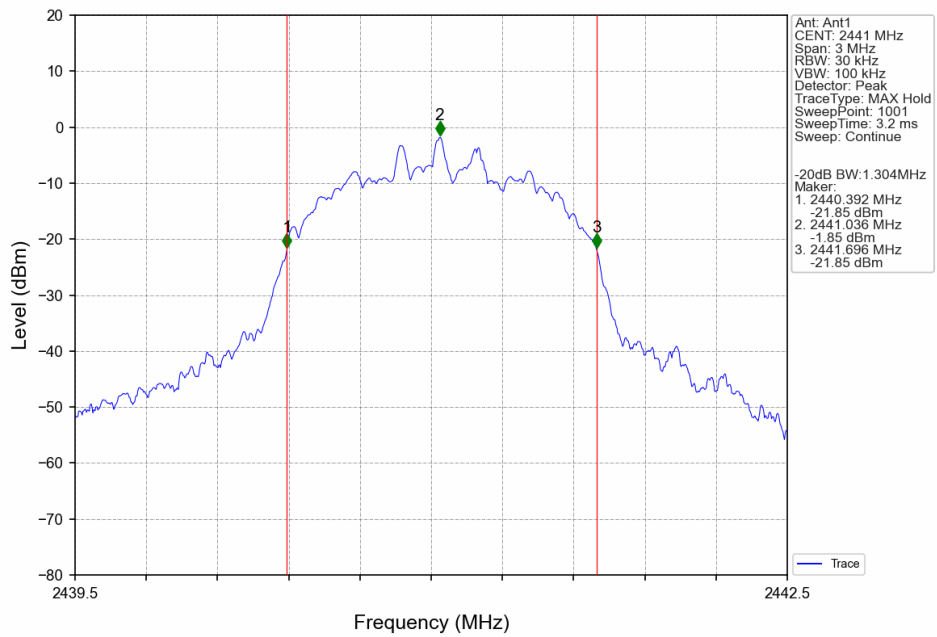
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



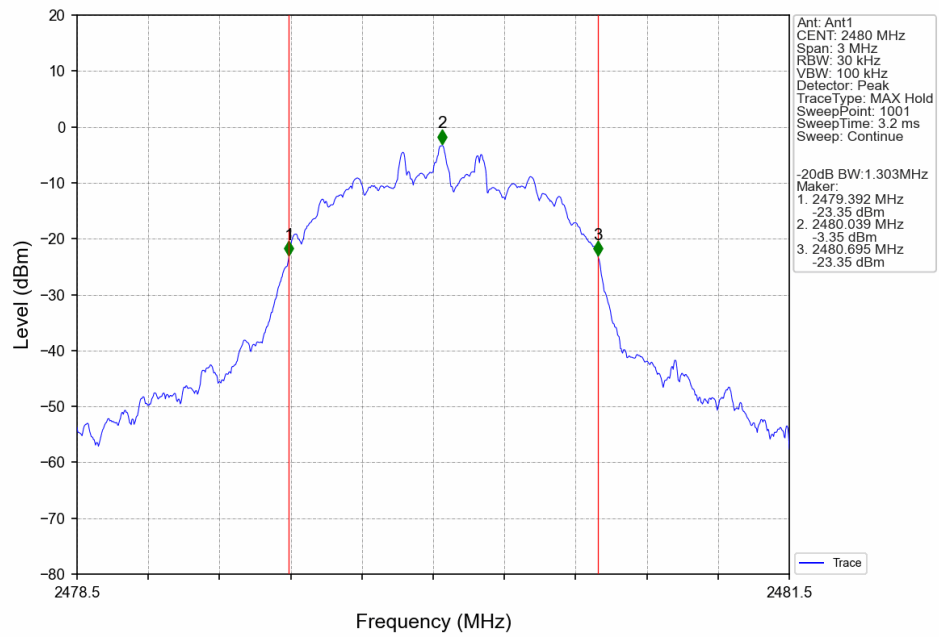
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



2. Maximum Conducted Output Power

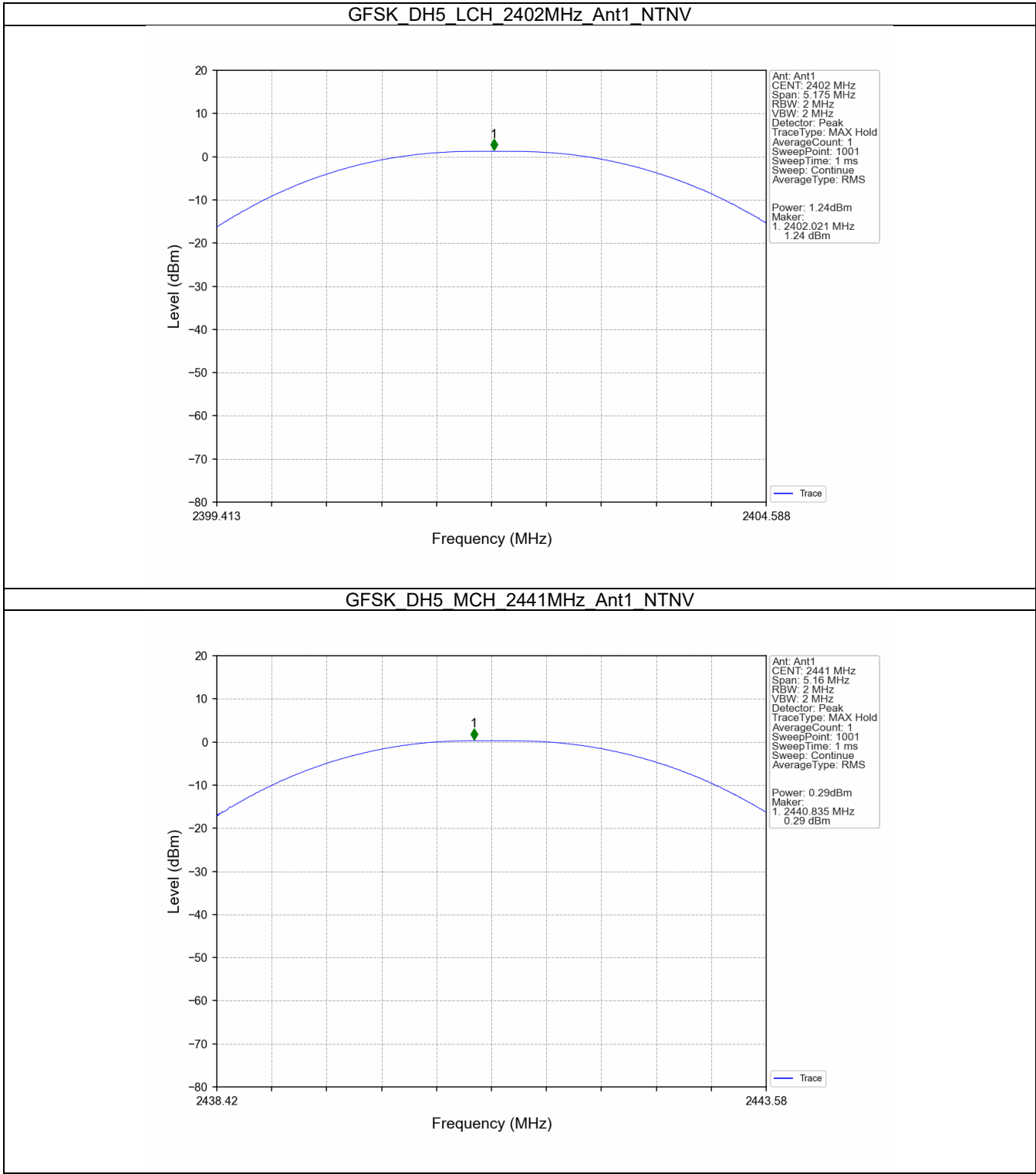
2.1 Test Result

2.1.1 Power

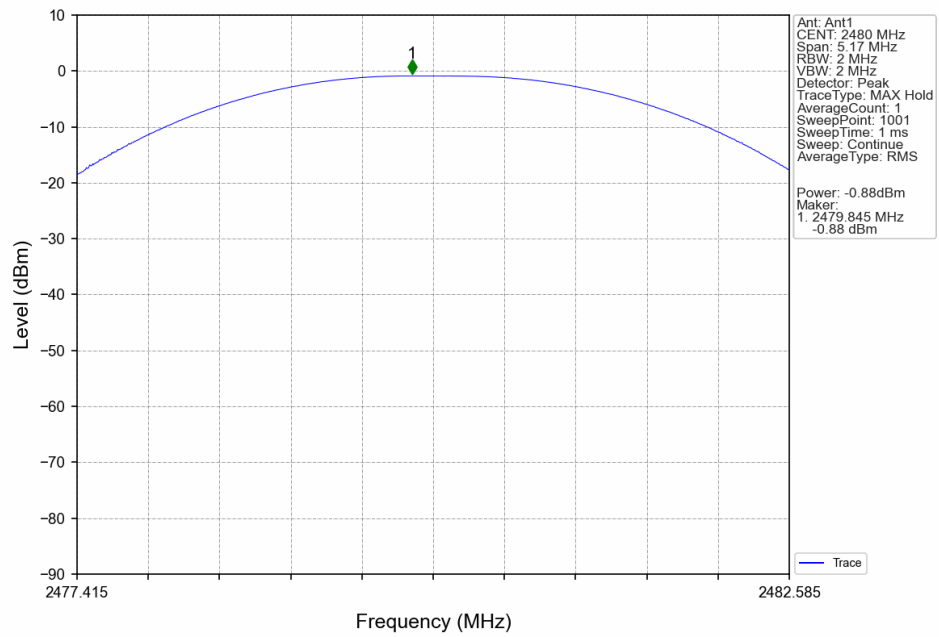
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	1.24	≤ 20.97	Pass
		2441	DH5	0.29	≤ 20.97	Pass
		2480	DH5	-0.88	≤ 20.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	2.04	≤ 20.97	Pass
		2441	2DH5	1.14	≤ 20.97	Pass
		2480	2DH5	-0.08	≤ 20.97	Pass
8DPSK	SISO	2402	3DH5	2.39	≤ 20.97	Pass
		2441	3DH5	1.48	≤ 20.97	Pass
		2480	3DH5	0.26	≤ 20.97	Pass

2.2 Test Graph

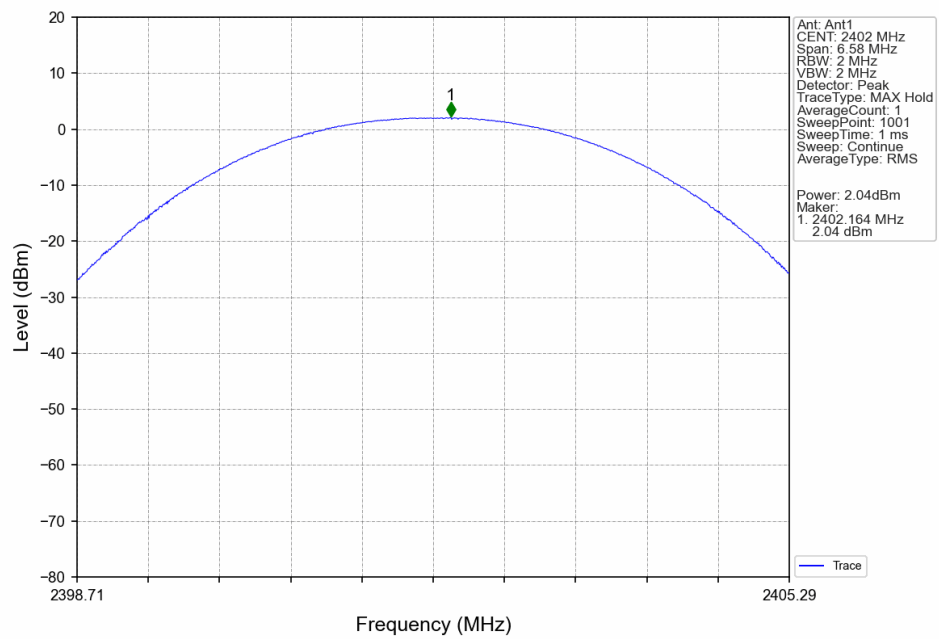
2.2.1 Power



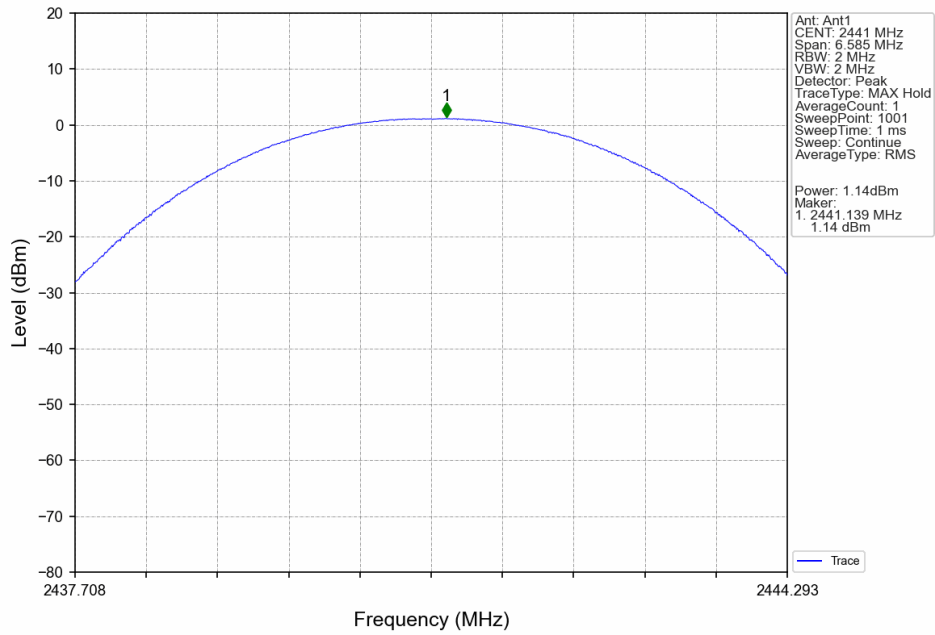
GFSK DH5 HCH 2480MHz Ant1 NTV



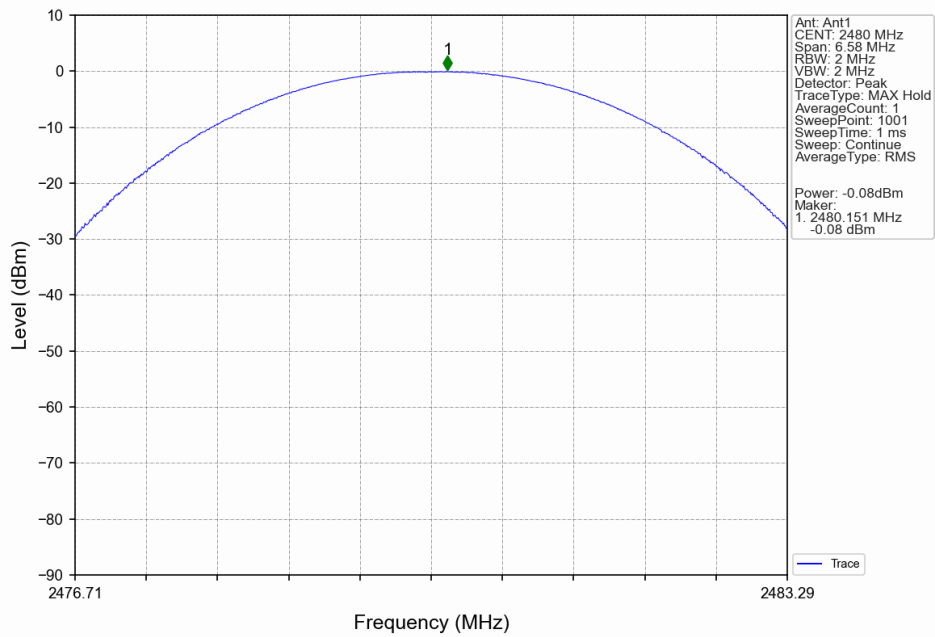
PI/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



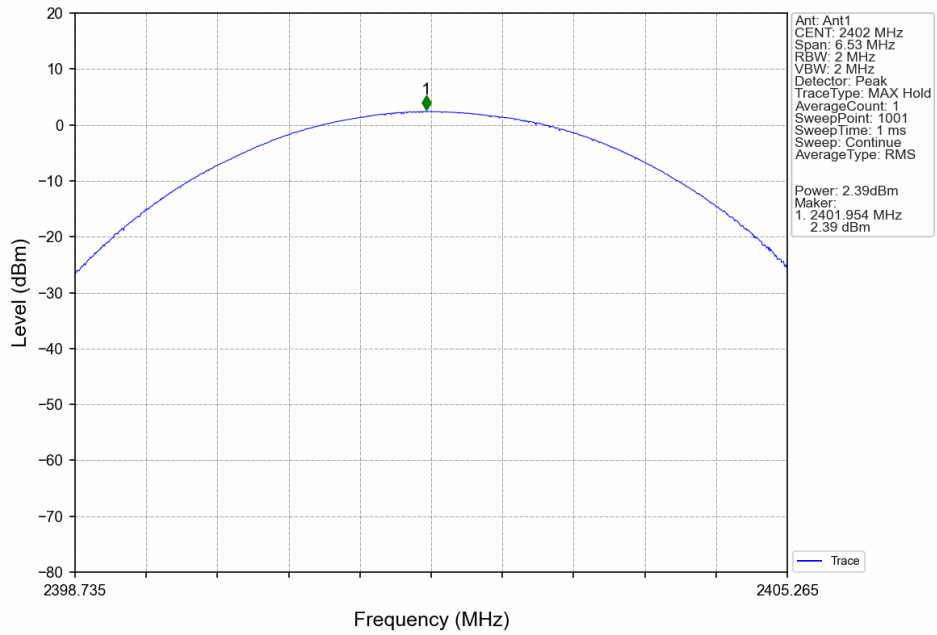
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



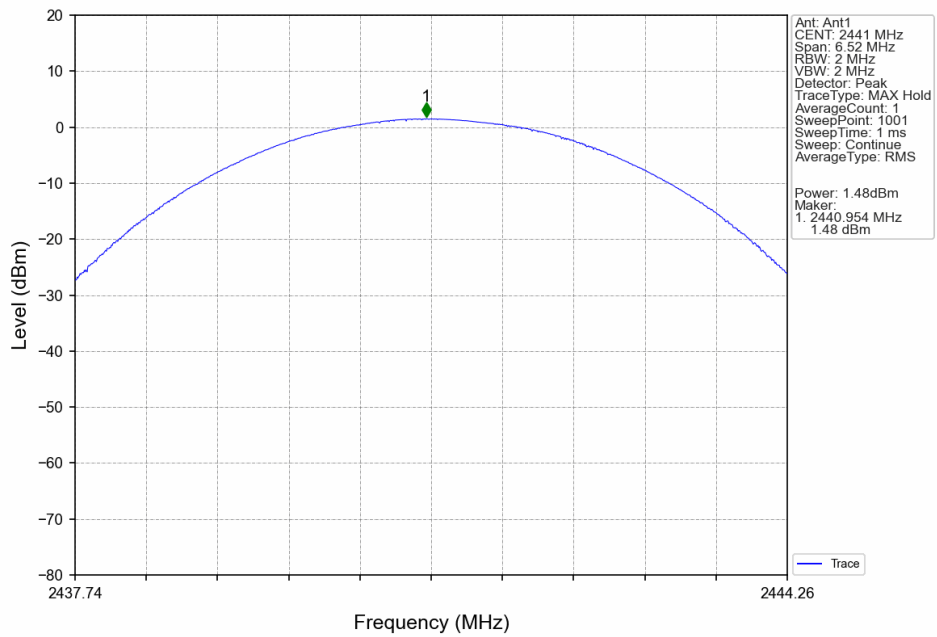
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



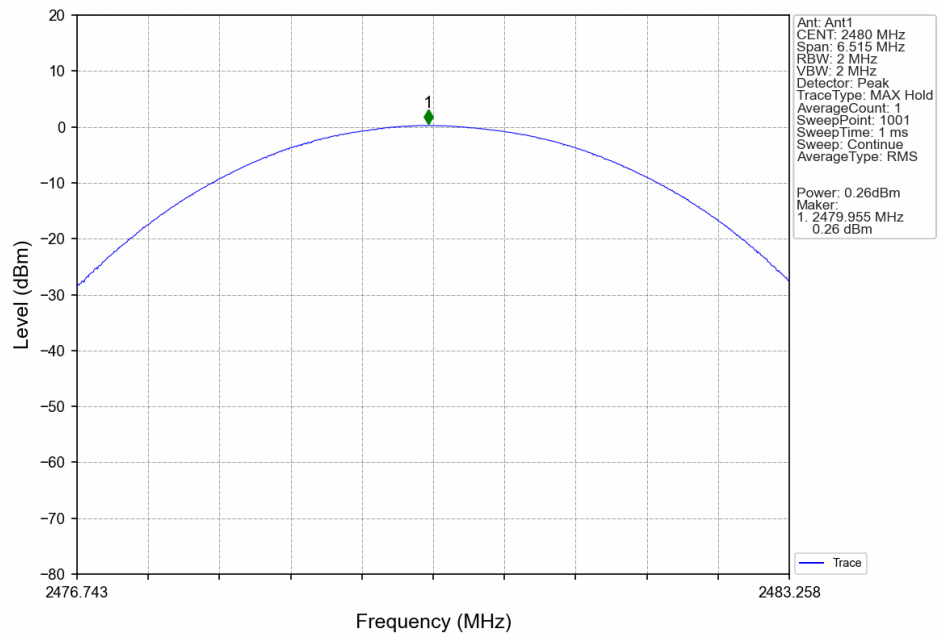
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



3. Carrier Frequency Separation

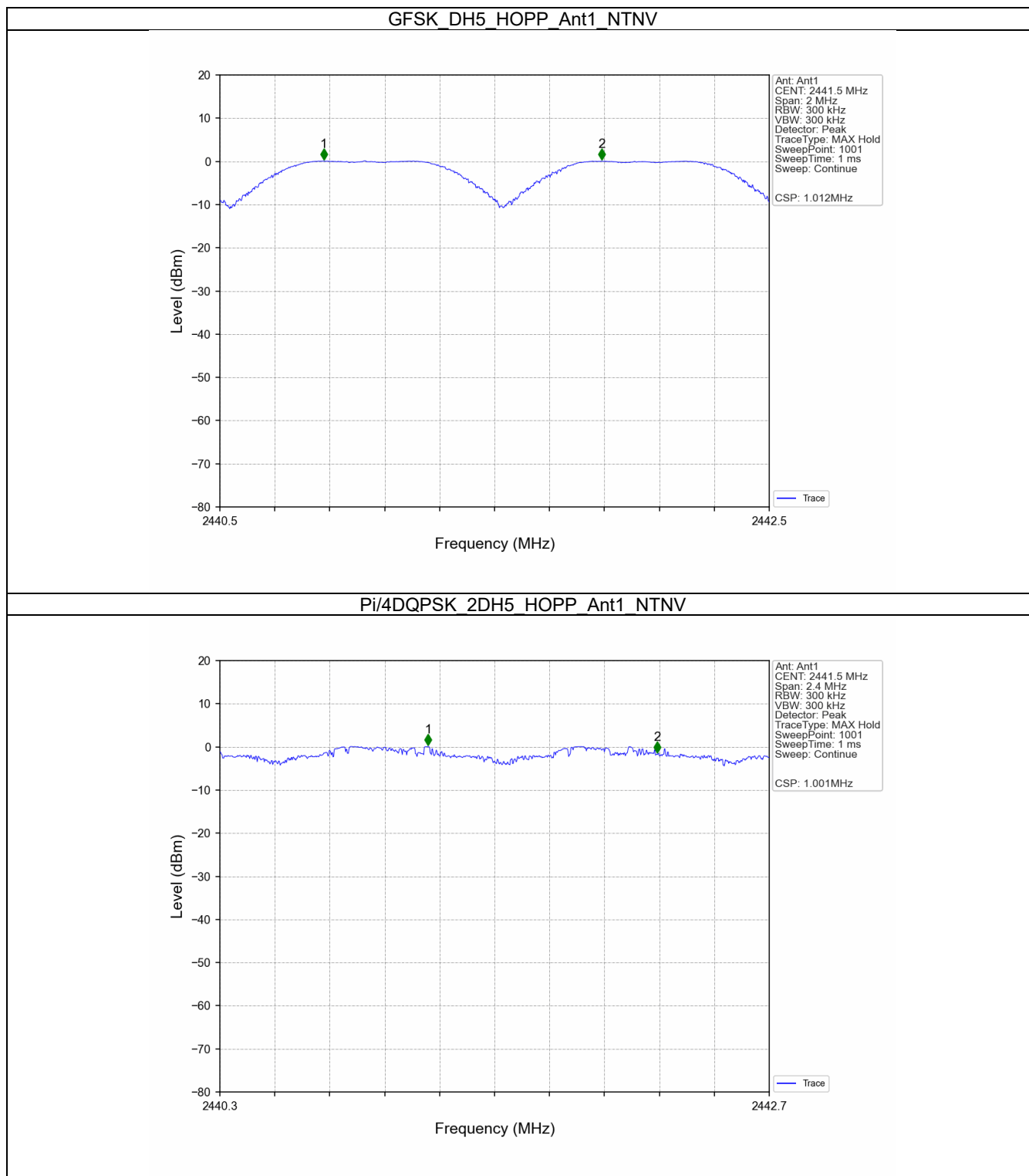
3.1 Test Result

3.1.1 Ant1

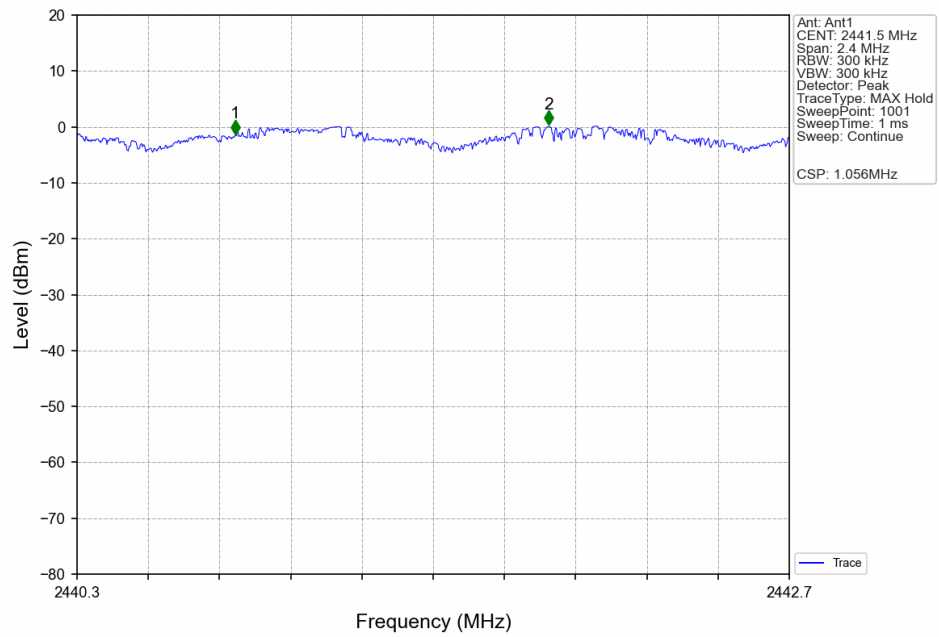
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.012	1.035	≥ 0.69	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.001	1.317	≥ 0.878	Pass
8DPSK	SISO	HOPP	3DH5	1.056	1.306	≥ 0.871	Pass

3.2 Test Graph

3.2.1 Ant1



8DPSK 3DH5 HOPP Ant1 NTNV



4. Number of Hopping Frequencies

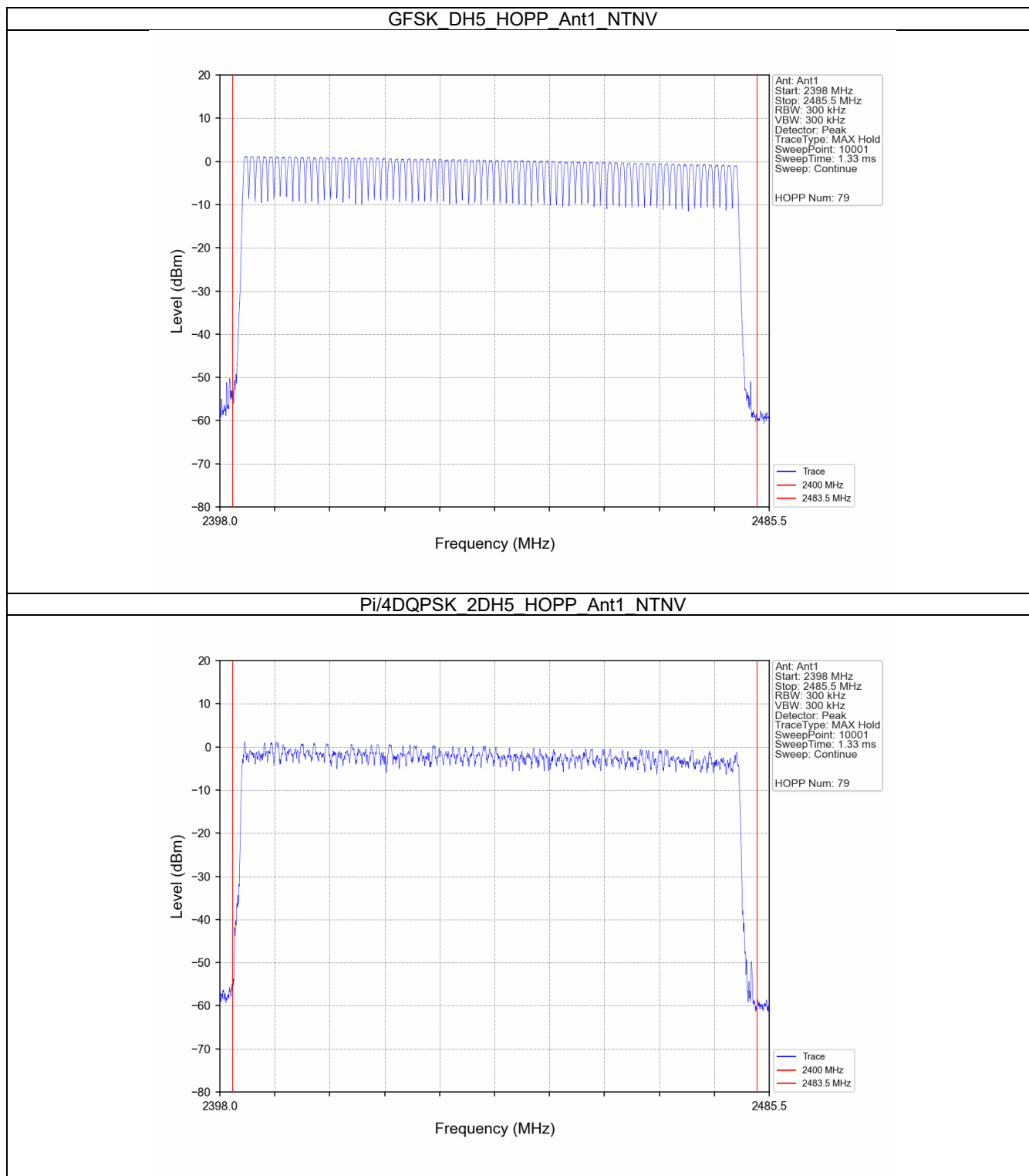
4.1 Test Result

4.1.1 HoppNum

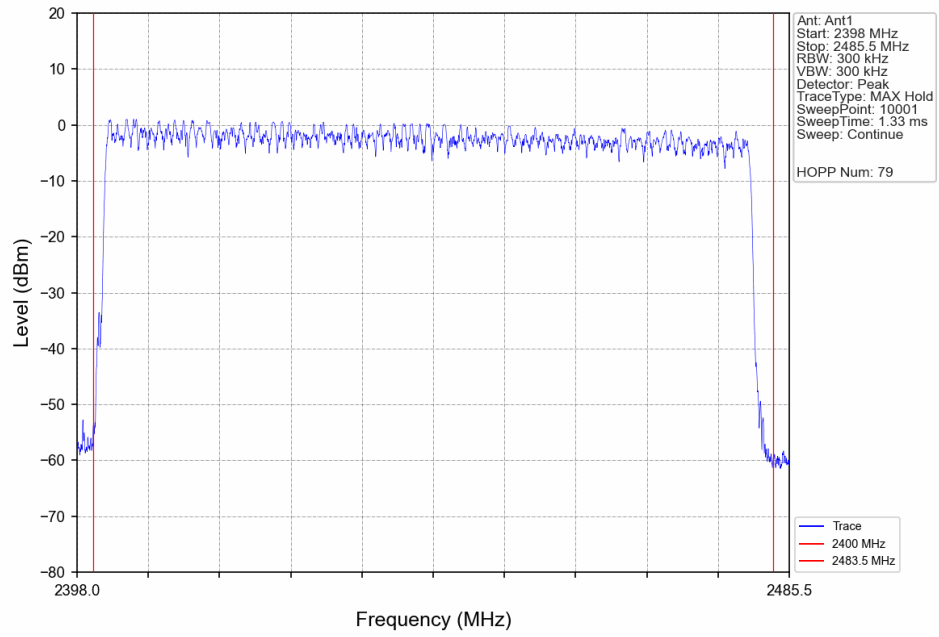
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

4.2 Test Graph

4.2.1 HoppNum



8DPSK 3DH5 HOPP Ant1 NTN



5. Time of Occupancy (Dwell Time)

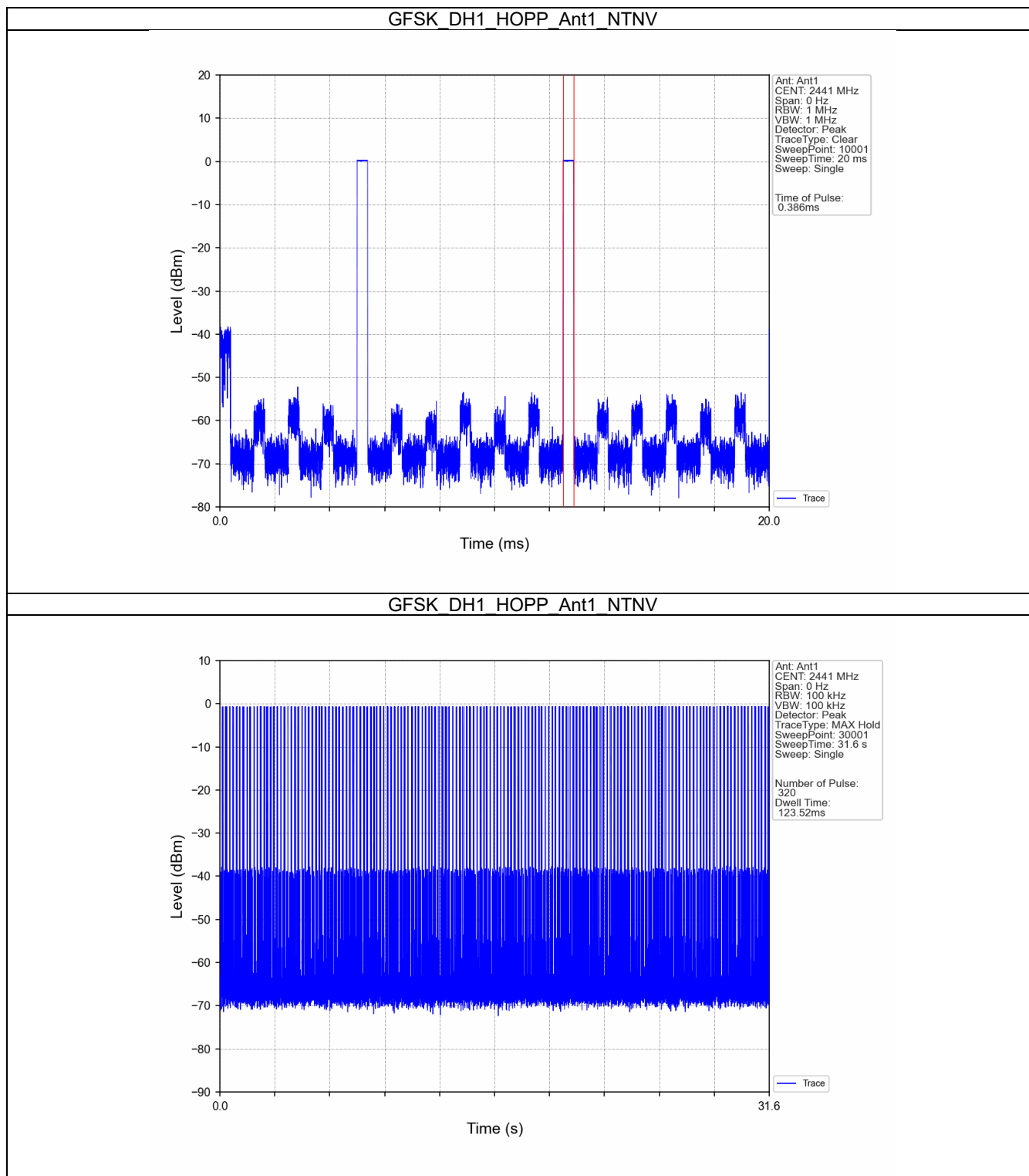
5.1 Test Result

5.1.1 Ant1

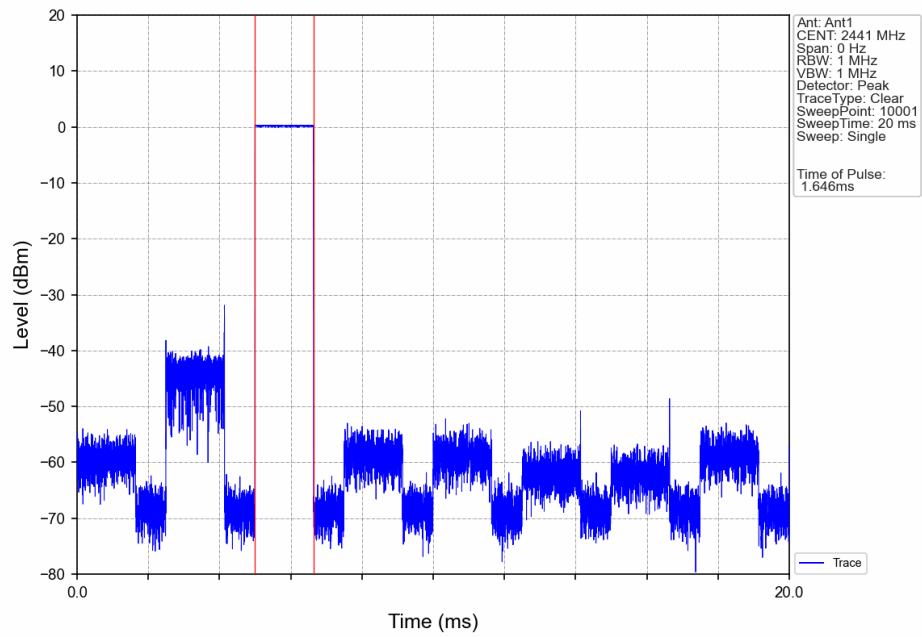
Ant1									
Mode	Tx Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.386	31.600	320	123.520	<=400	Pass
			DH3	1.646	31.600	157	258.422	<=400	Pass
			DH5	2.890	31.600	107	309.230	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.402	31.600	320	128.640	<=400	Pass
			2DH3	1.646	31.600	156	256.776	<=400	Pass
			2DH5	2.900	31.600	111	321.900	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.396	31.600	320	126.720	<=400	Pass
			3DH3	1.652	31.600	158	261.016	<=400	Pass
			3DH5	2.902	31.600	113	327.926	<=400	Pass

5.2 Test Graph

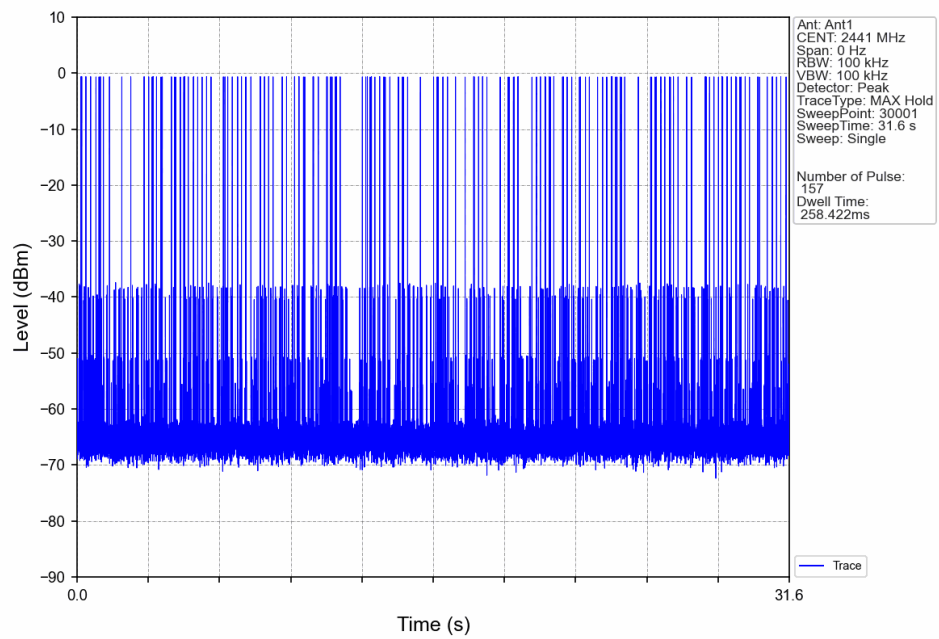
5.2.1 Ant1



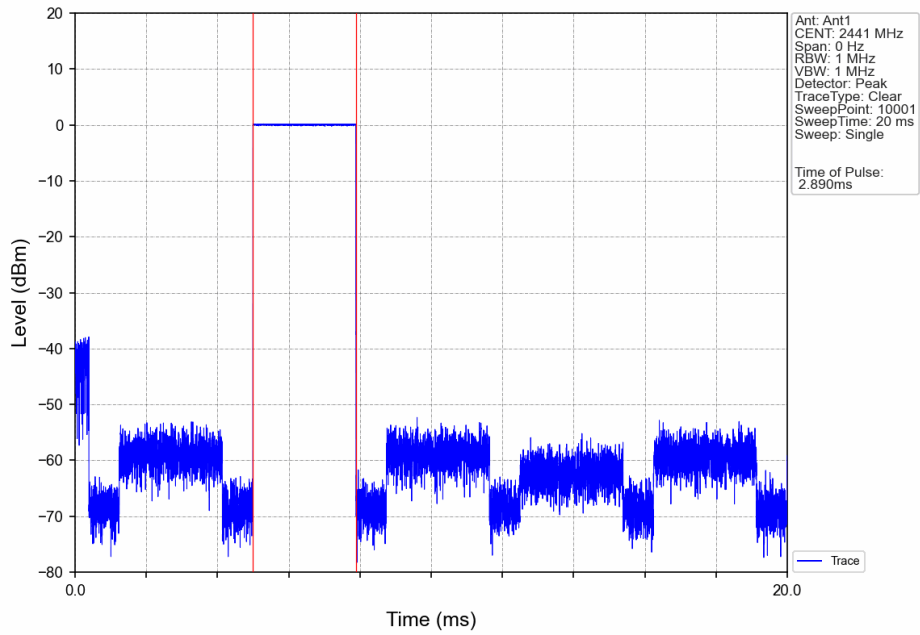
GFSK DH3 HOPP Ant1 NTN



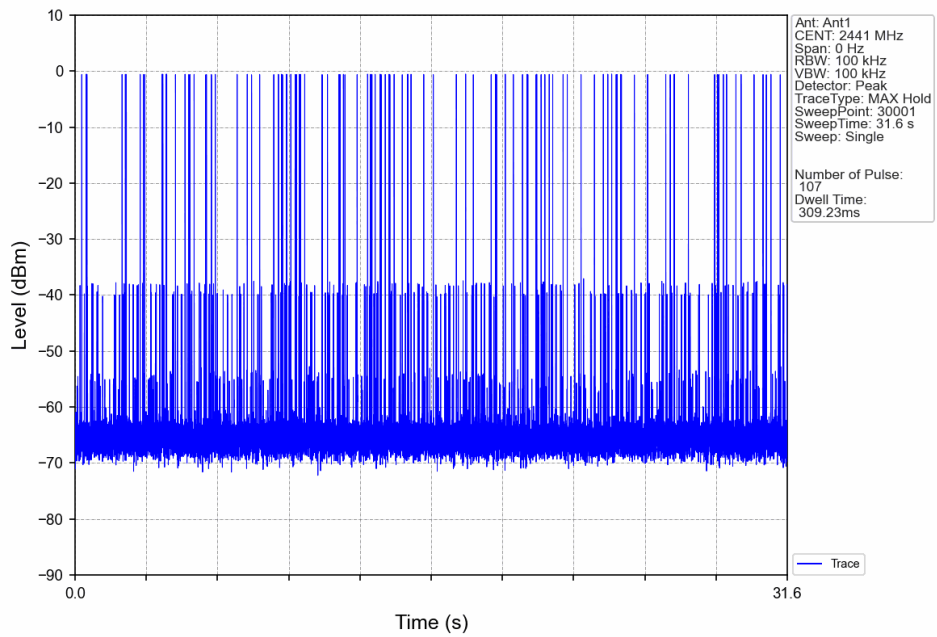
GFSK_DH3_HOPP_Ant1_NTNV



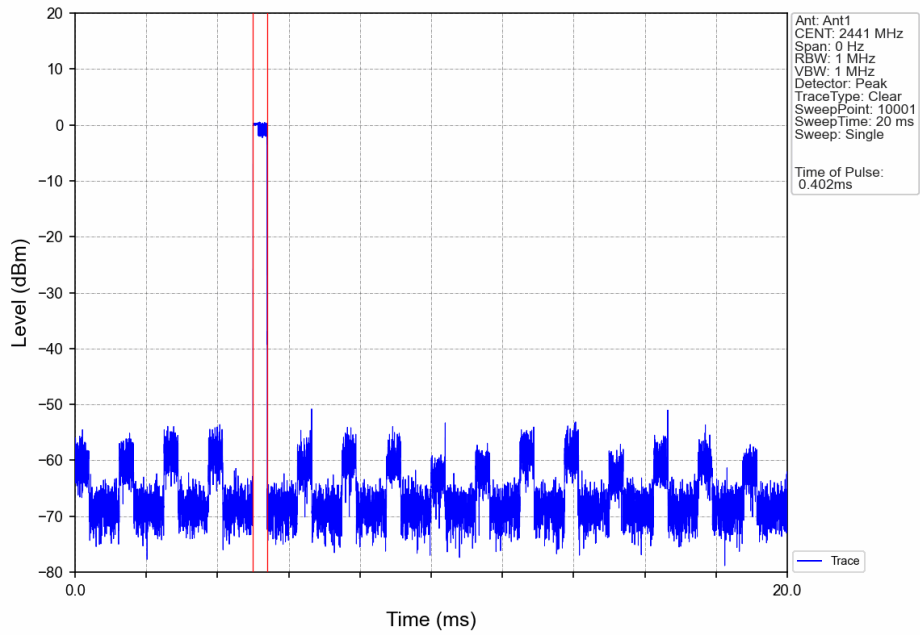
GFSK DH5 HOPP Ant1 NTN



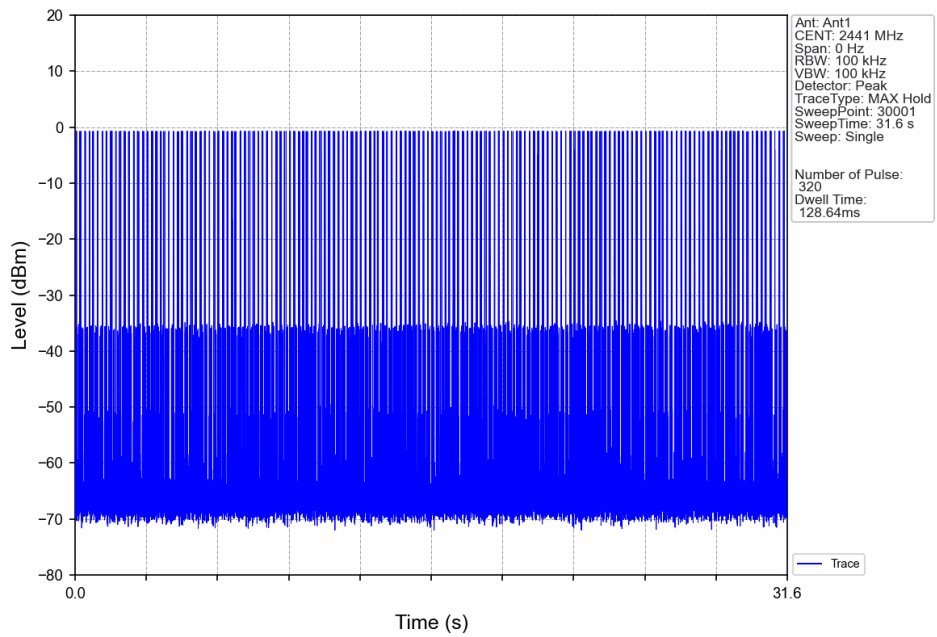
GFSK_DH5_HOPP_Ant1_NTNV



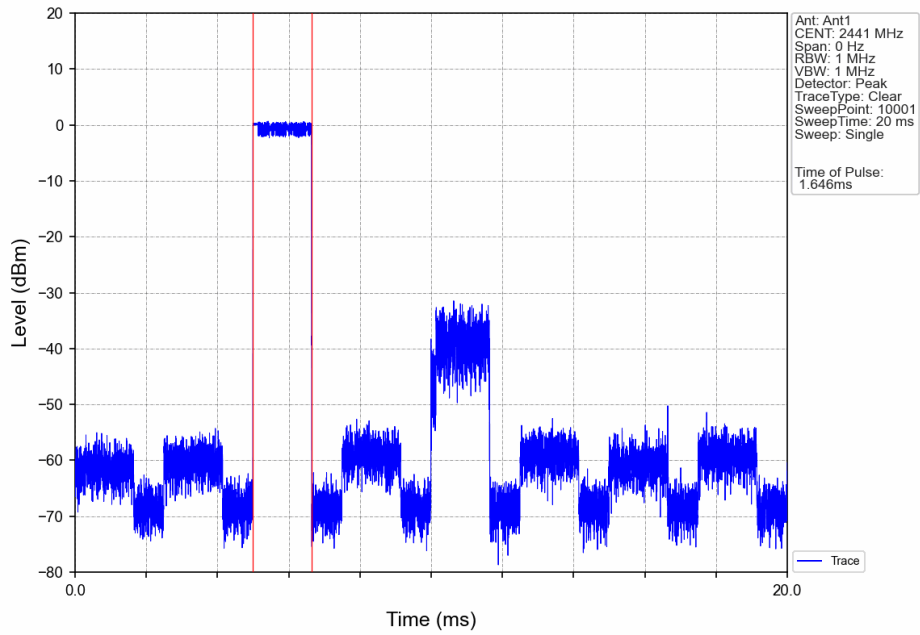
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



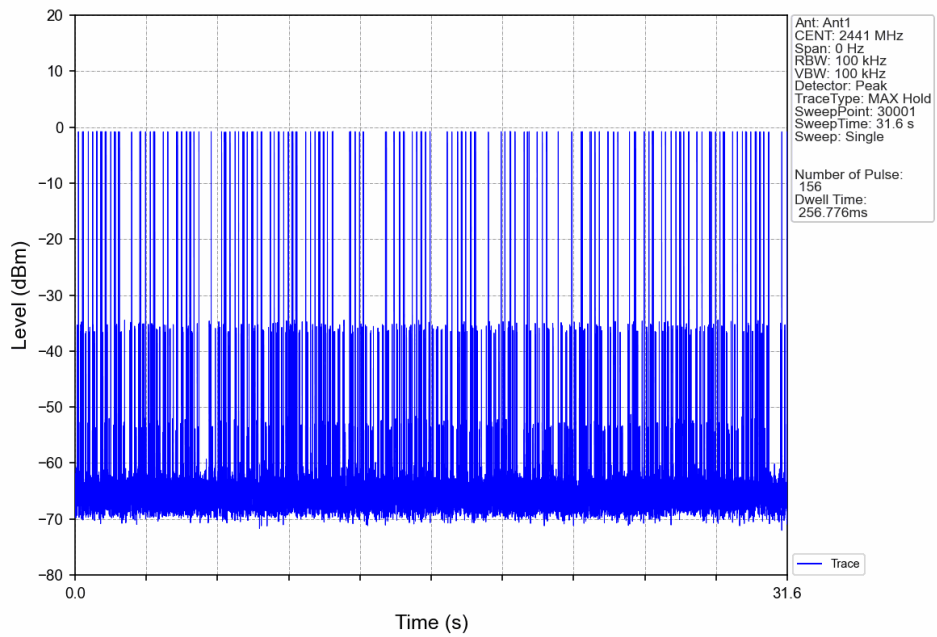
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



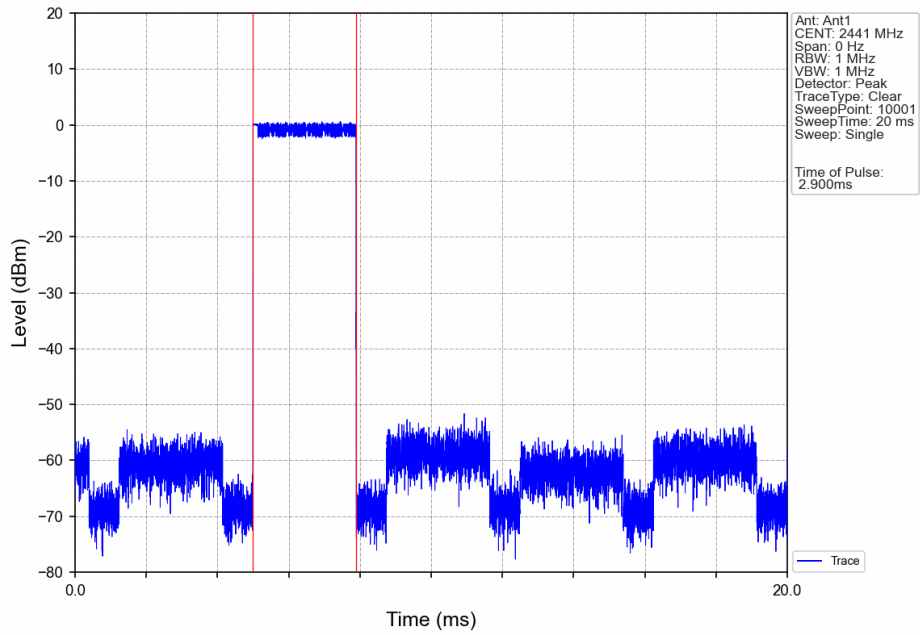
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



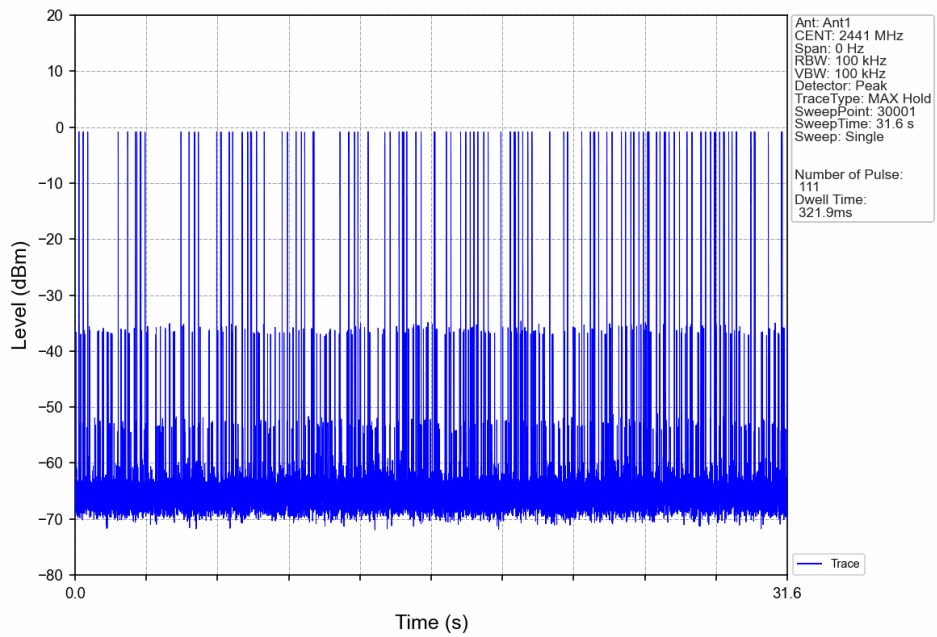
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



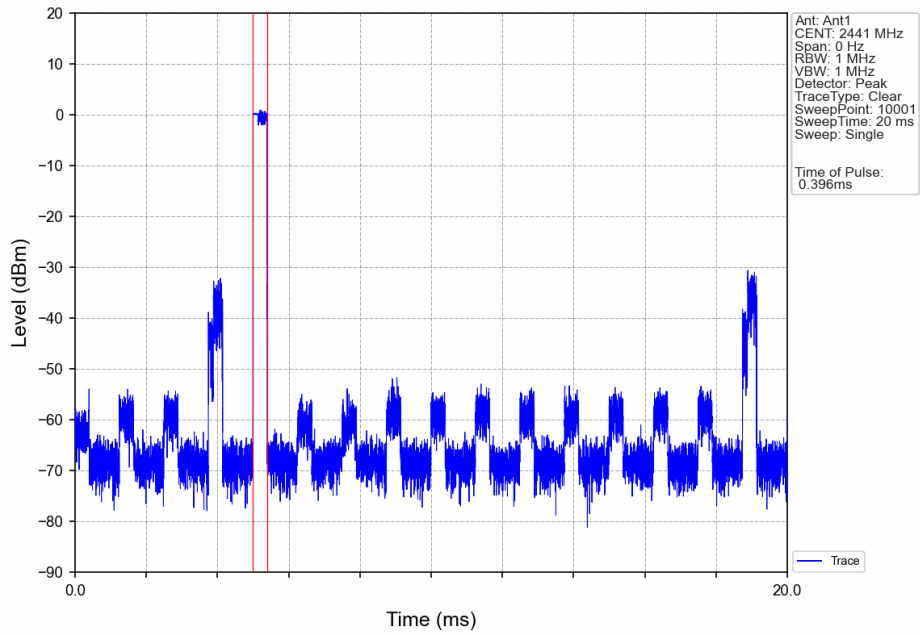
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



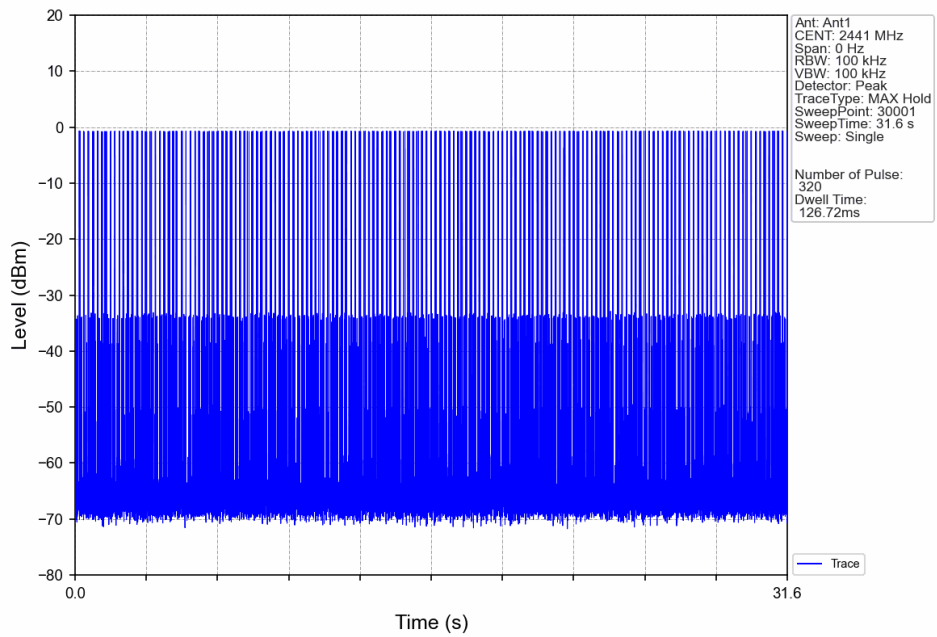
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



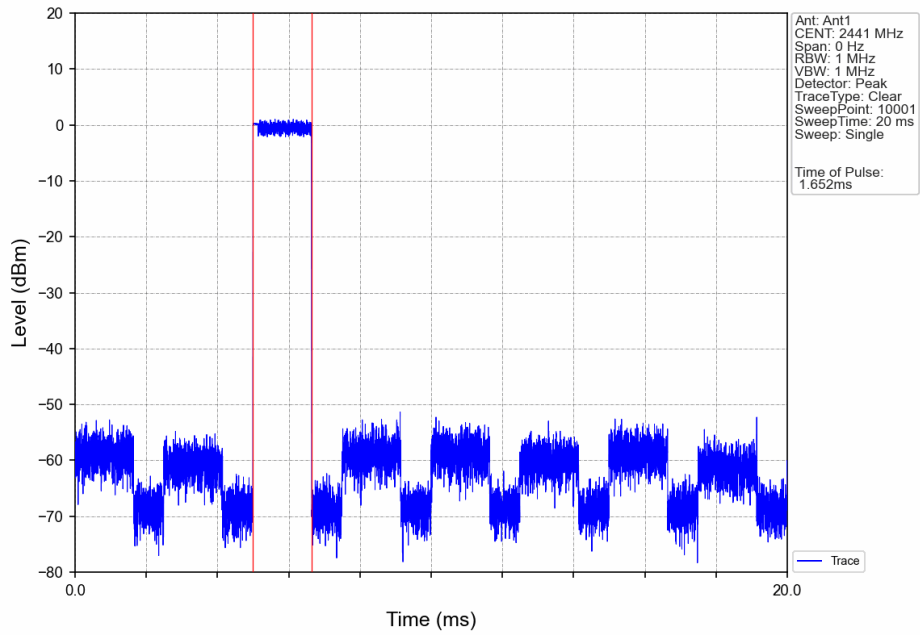
8DPSK 3DH1 HOPP Ant1 NTNV



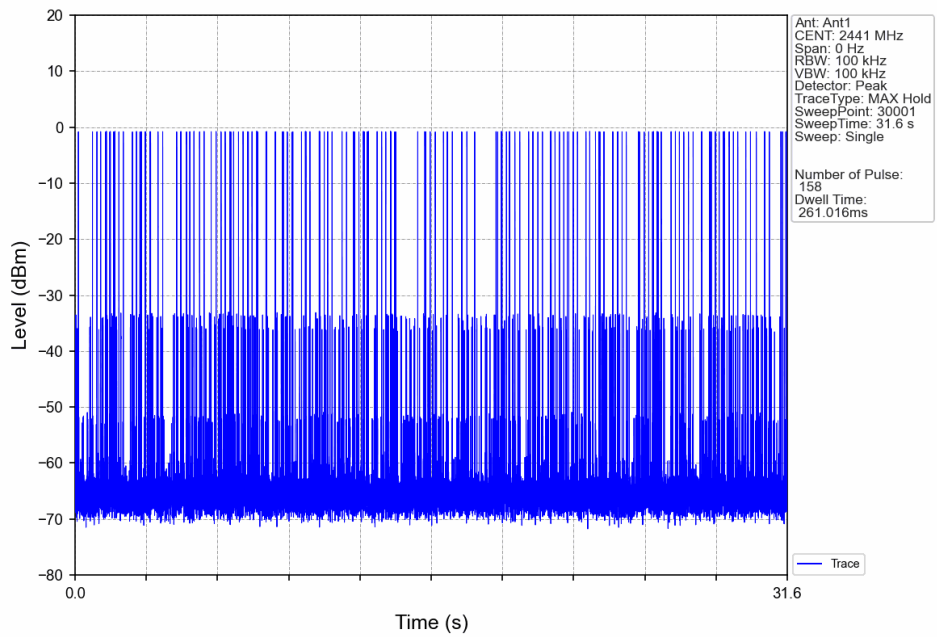
8DPSK_3DH1_HOPP_Ant1_NTNV



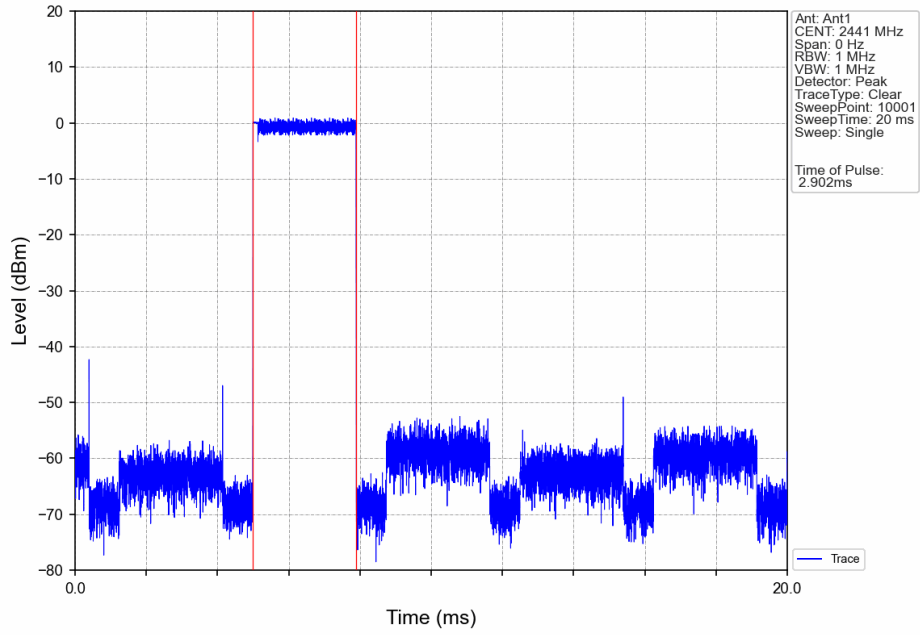
8DPSK 3DH3 HOPP Ant1 NTN



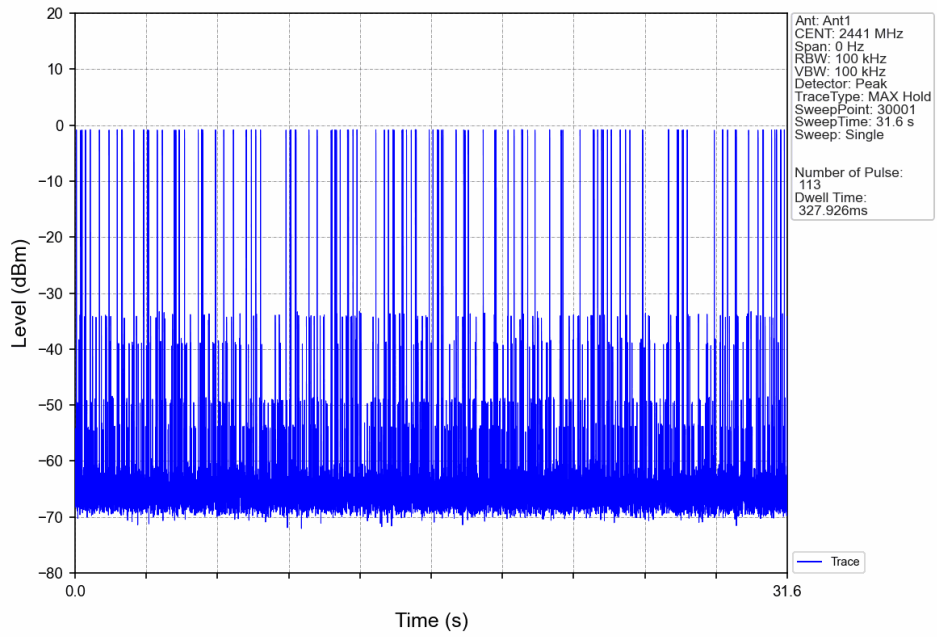
8DPSK_3DH3_HOPP_Ant1_NTN



8DPSK 3DH5 HOPP Ant1 NTN



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Test Result

6.1.1 Ref

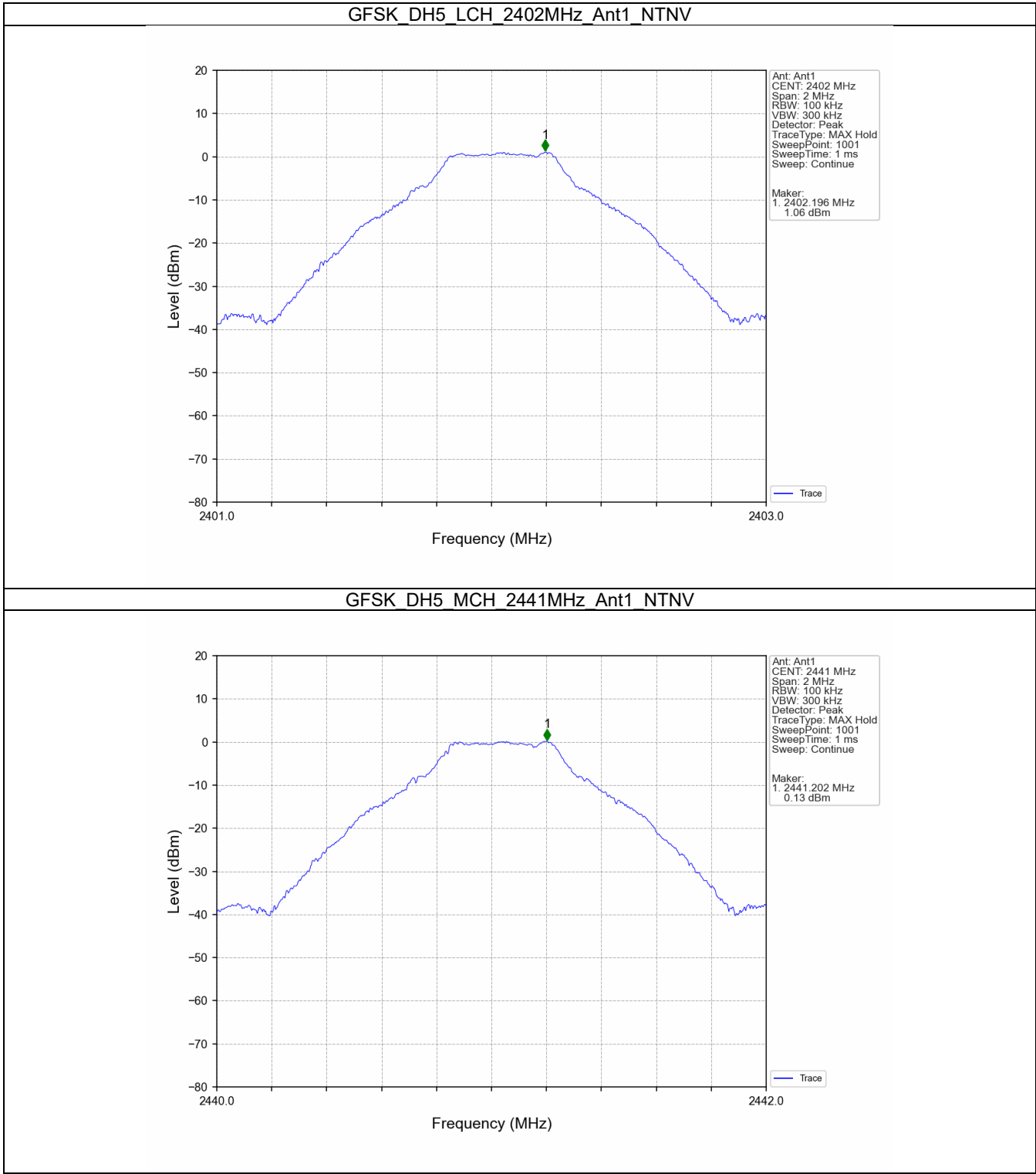
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	1.06
		2441	DH5	1	0.13
		2480	DH5	1	-1.06
		HOPP	DH5	1	1.02
					1.02
Pi/4DQPSK	SISO	2402	2DH5	1	0.94
		2441	2DH5	1	0.16
		2480	2DH5	1	-1.03
		HOPP	2DH5	1	0.86
					0.86
8DPSK	SISO	2402	3DH5	1	1.02
		2441	3DH5	1	0.04
		2480	3DH5	1	-1.11
		HOPP	3DH5	1	0.74
					0.74

6.1.2 CSE

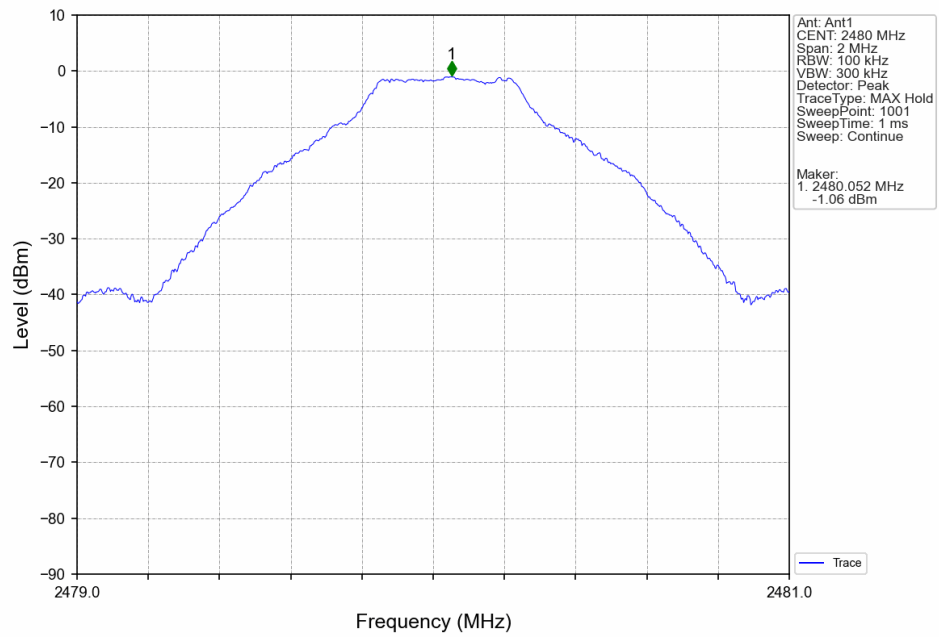
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	1.06	-18.94	Pass
		2441	DH5	1	0.13	-19.87	Pass
		2480	DH5	1	-1.06	-21.06	Pass
		HOPP	DH5	1	1.02	-18.98	Pass
					1.02	-18.98	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	0.94	-19.06	Pass
		2441	2DH5	1	0.16	-19.84	Pass
		2480	2DH5	1	-1.03	-21.03	Pass
		HOPP	2DH5	1	0.86	-19.14	Pass
					0.86	-19.14	Pass
8DPSK	SISO	2402	3DH5	1	1.02	-18.98	Pass
		2441	3DH5	1	0.04	-19.96	Pass
		2480	3DH5	1	-1.11	-21.11	Pass
		HOPP	3DH5	1	0.74	-19.26	Pass
					0.74	-19.26	Pass

6.2 Test Graph

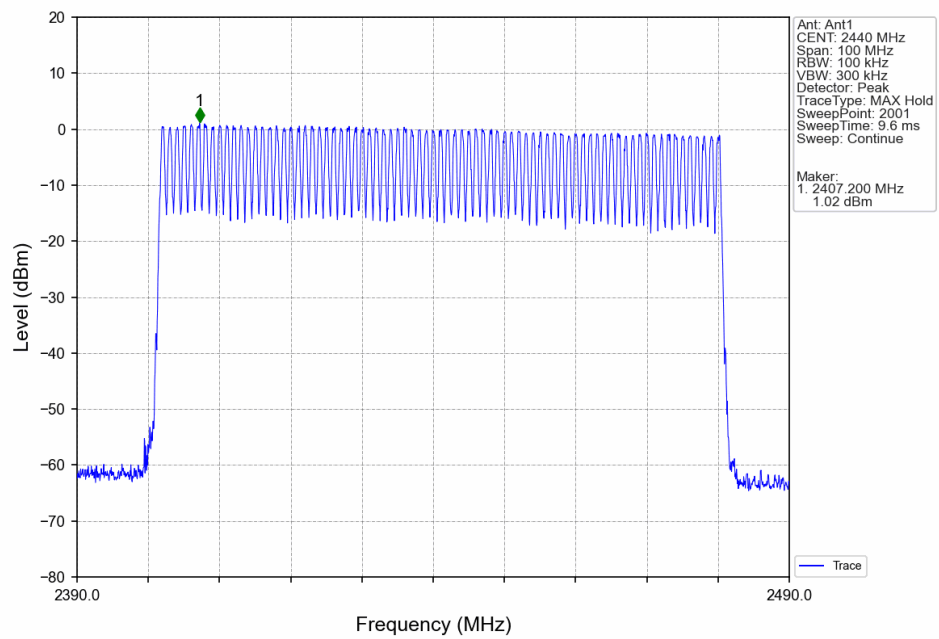
6.2.1 Ref



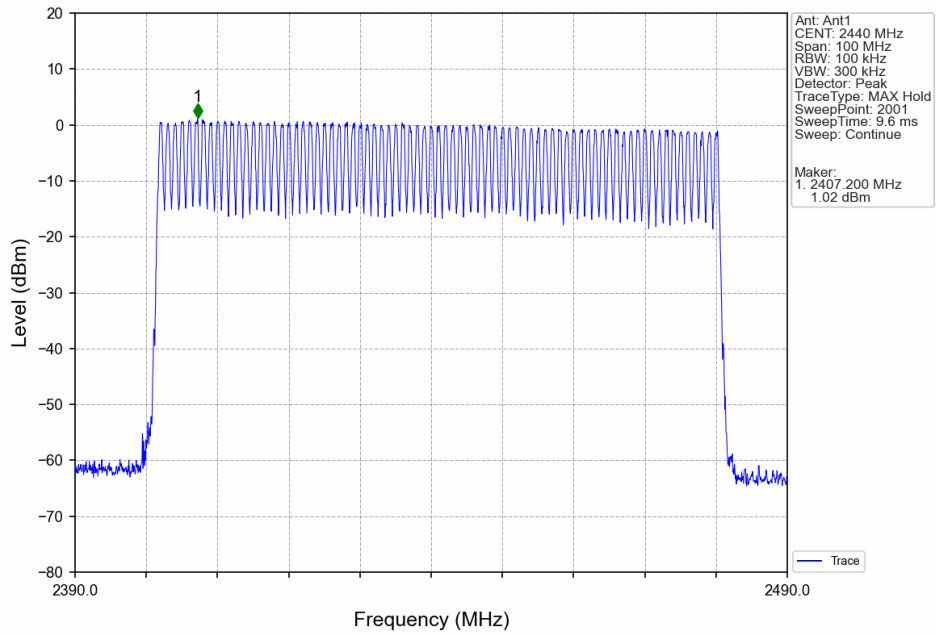
GFSK DH5 HCH 2480MHz Ant1 NTN



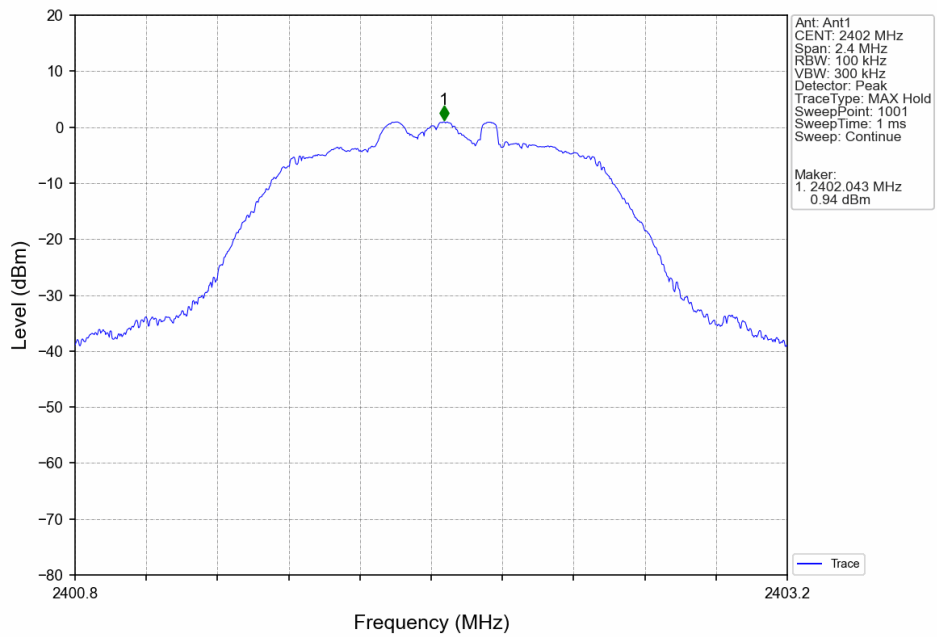
GFSK_DH5_HOPP_Ant1_NTNV



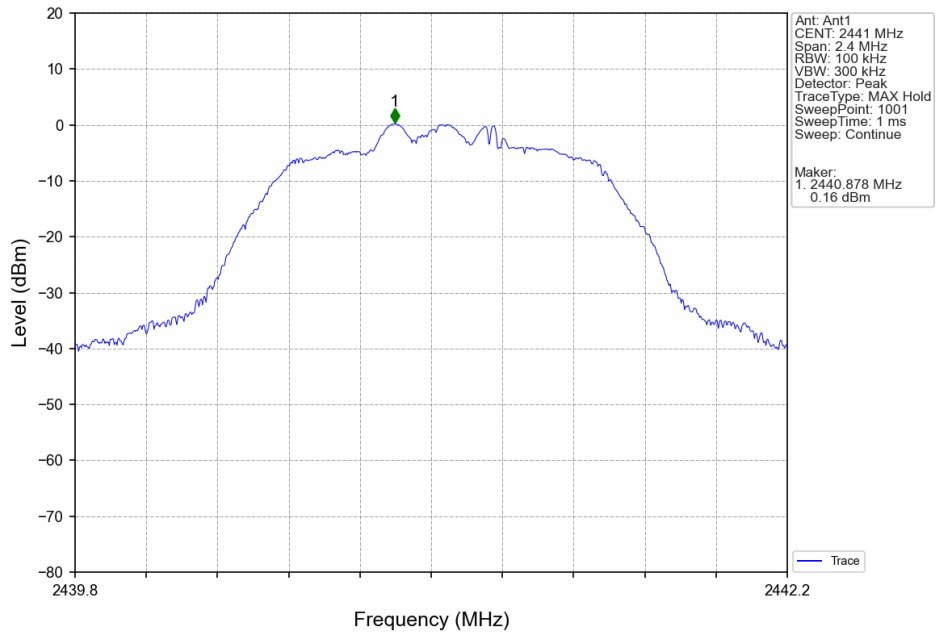
GFSK DH5 HOPP Ant1 NTN



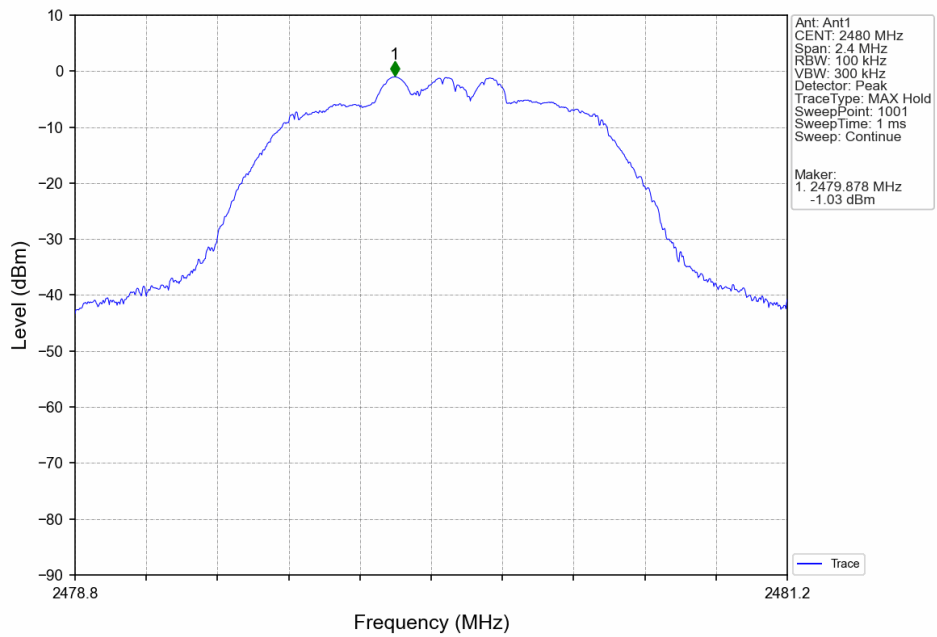
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1 NTN



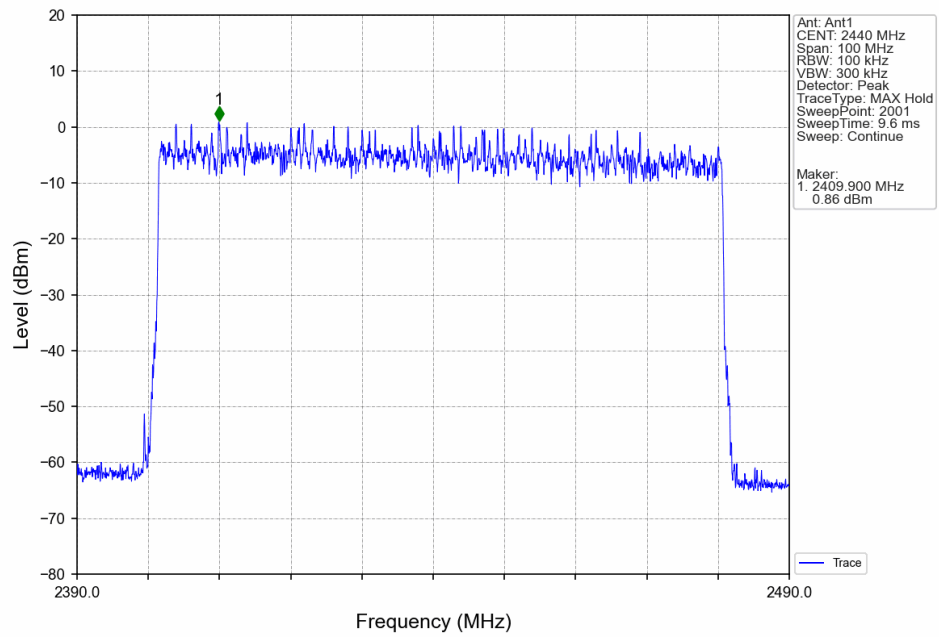
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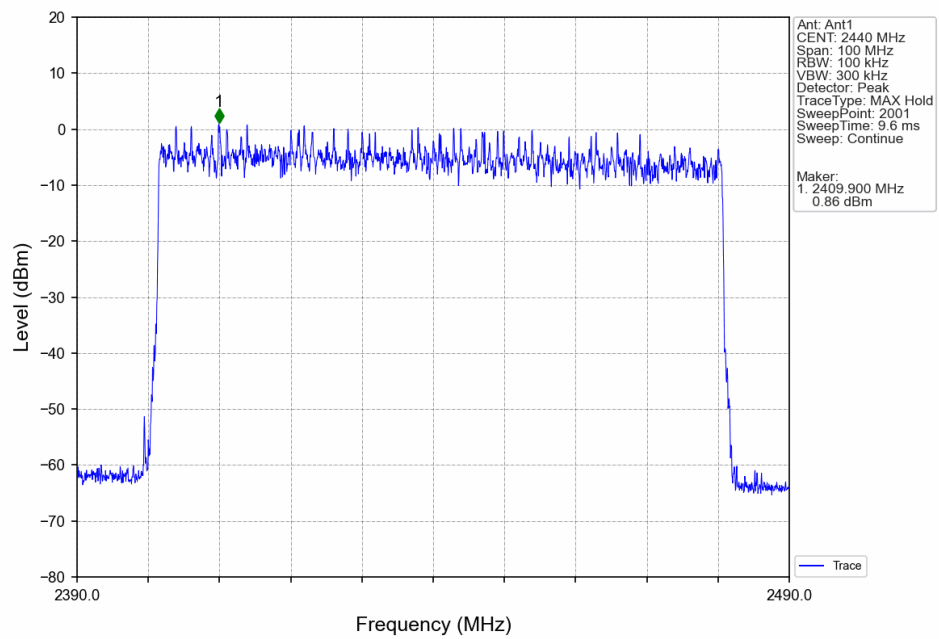
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



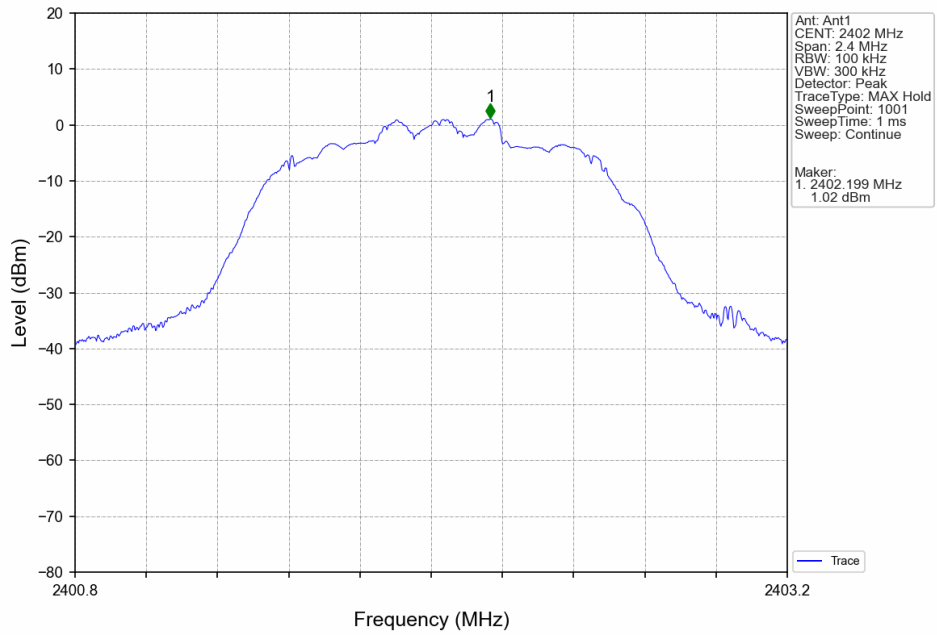
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



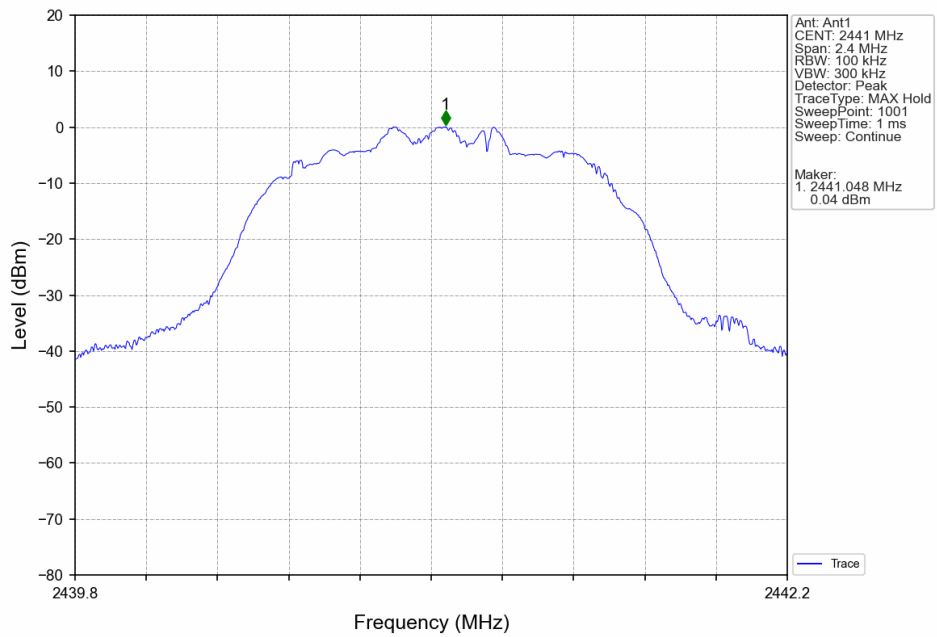
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



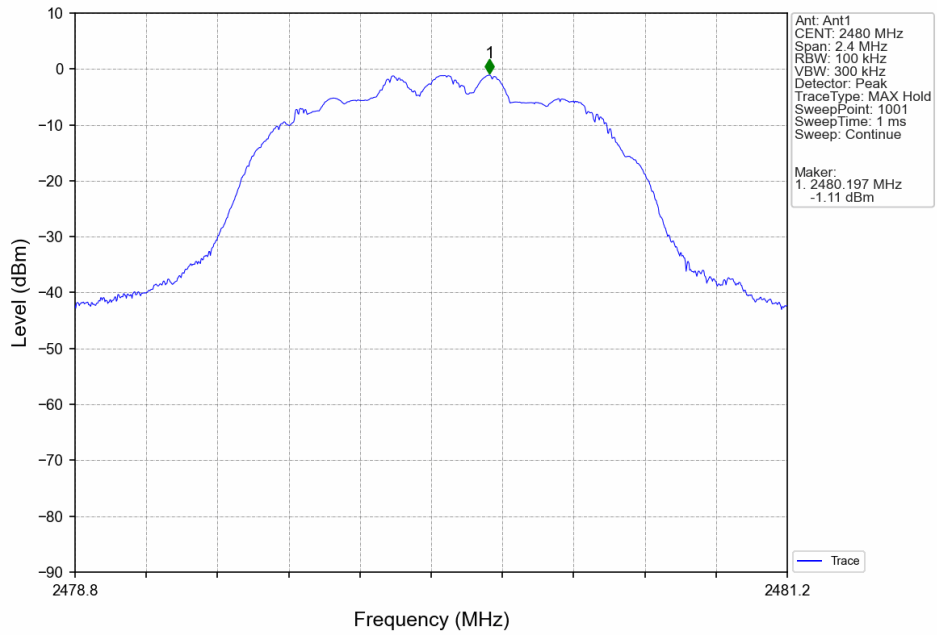
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



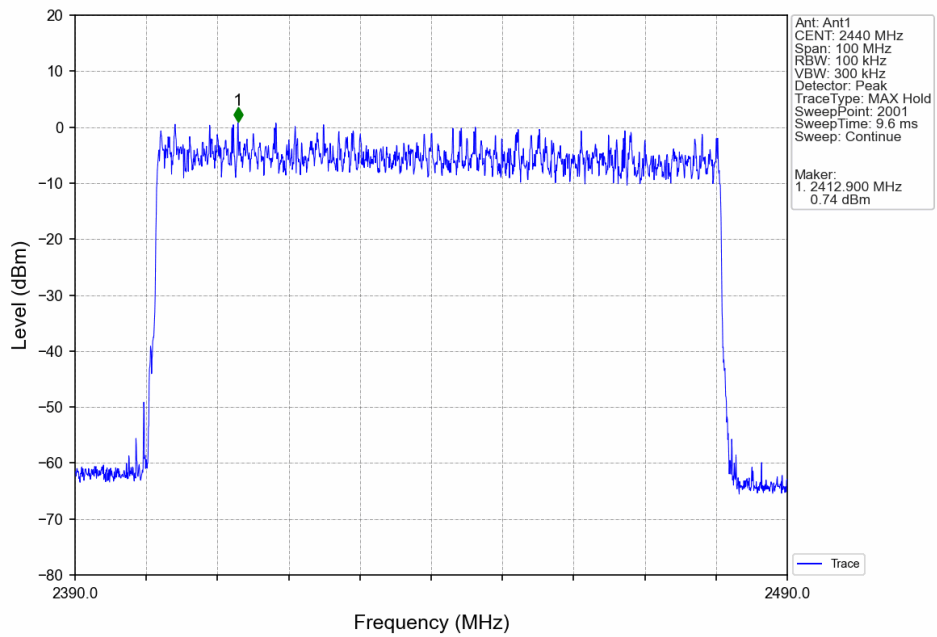
8DPSK 3DH5 MCH 2441MHz Ant1 NTN



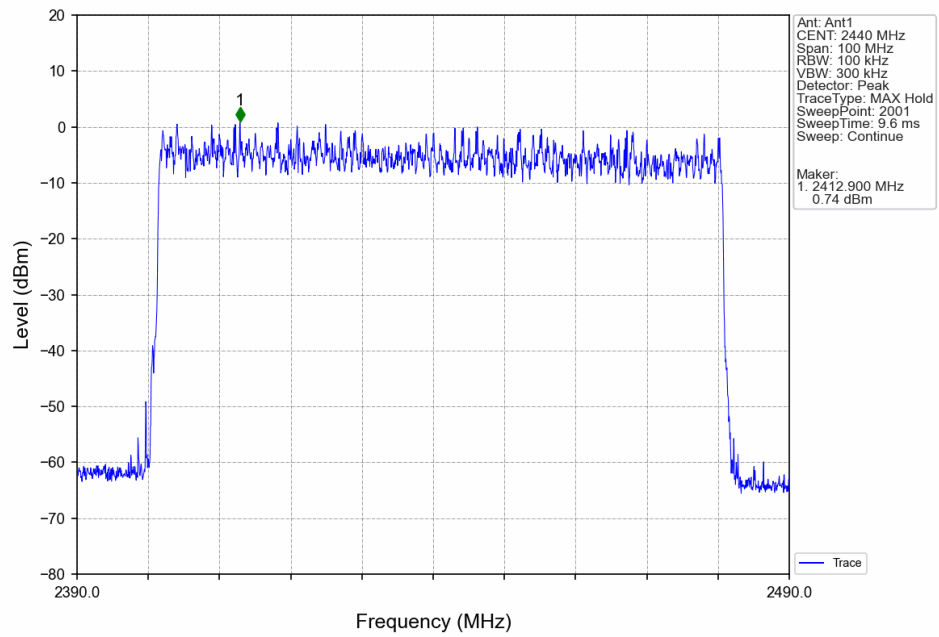
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



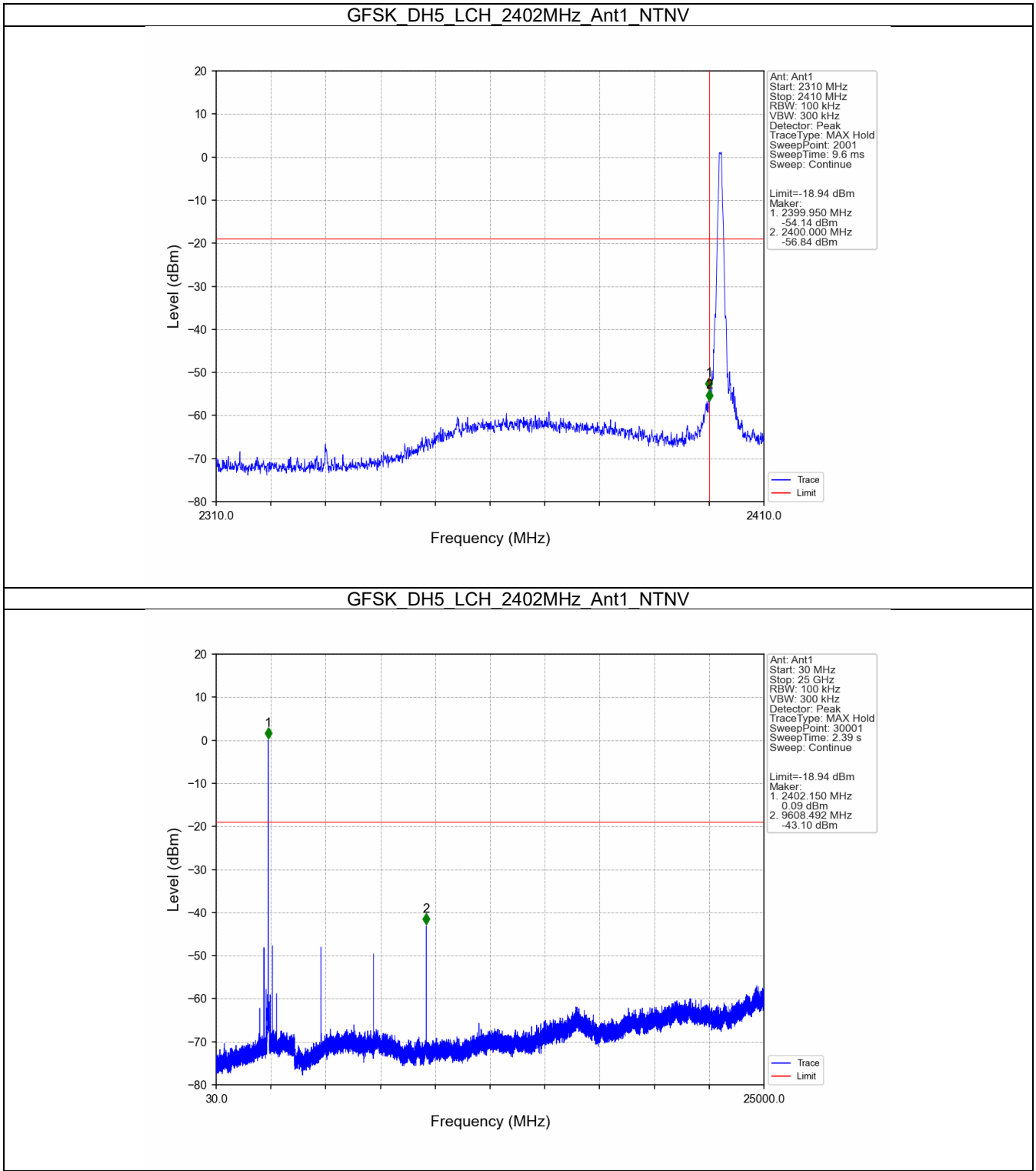
8DPSK_3DH5_HOPP_Ant1_NTN



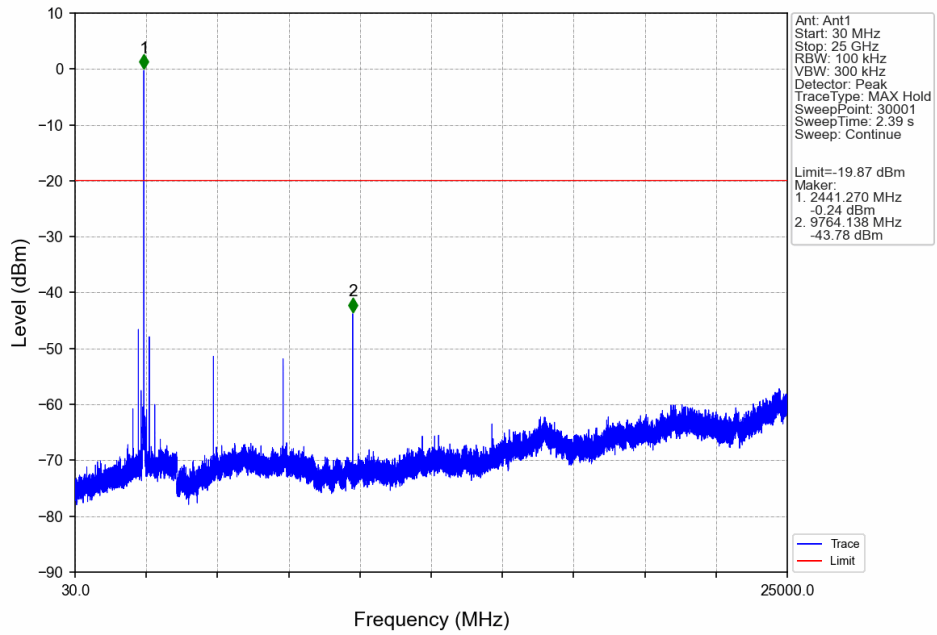
8DPSK 3DH5 HOPP Ant1 NTNV



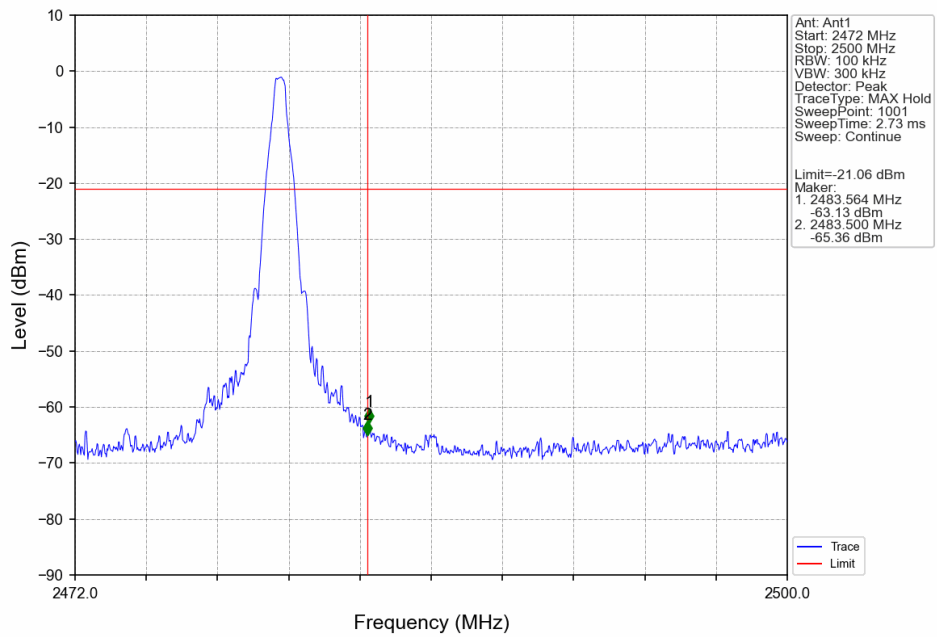
6.2.2 CSE



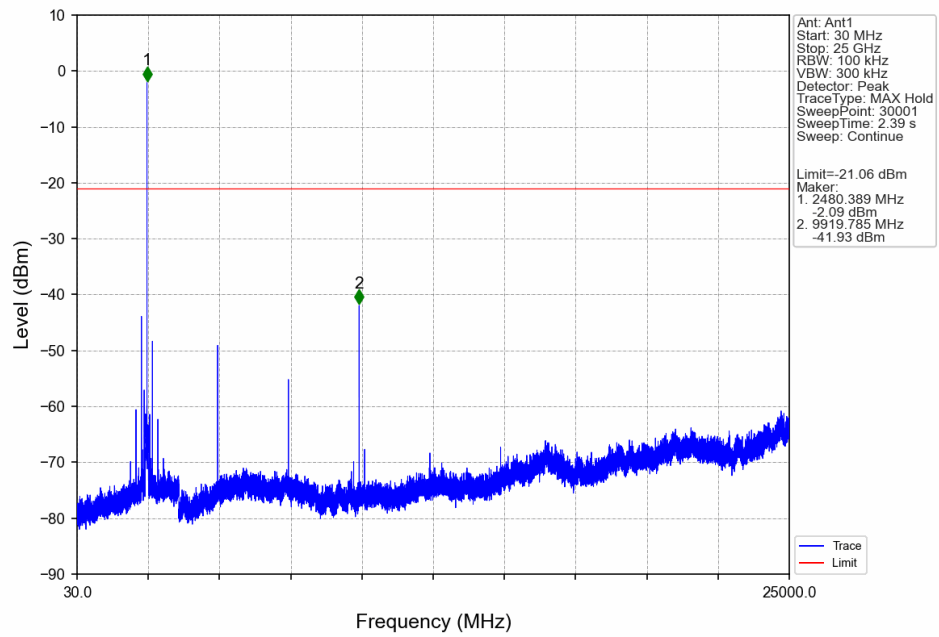
GFSK DH5 MCH 2441MHz Ant1 NTNV



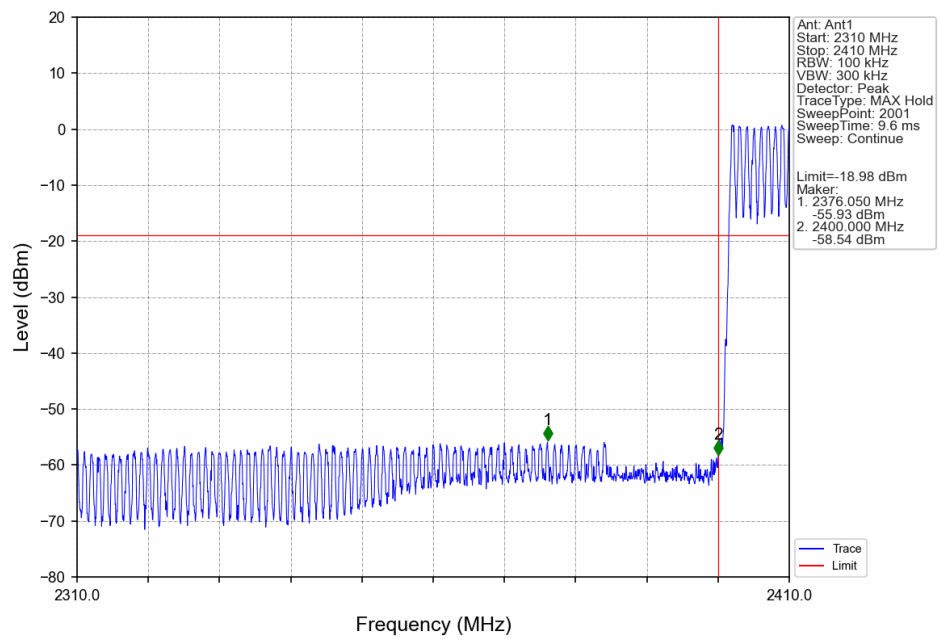
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



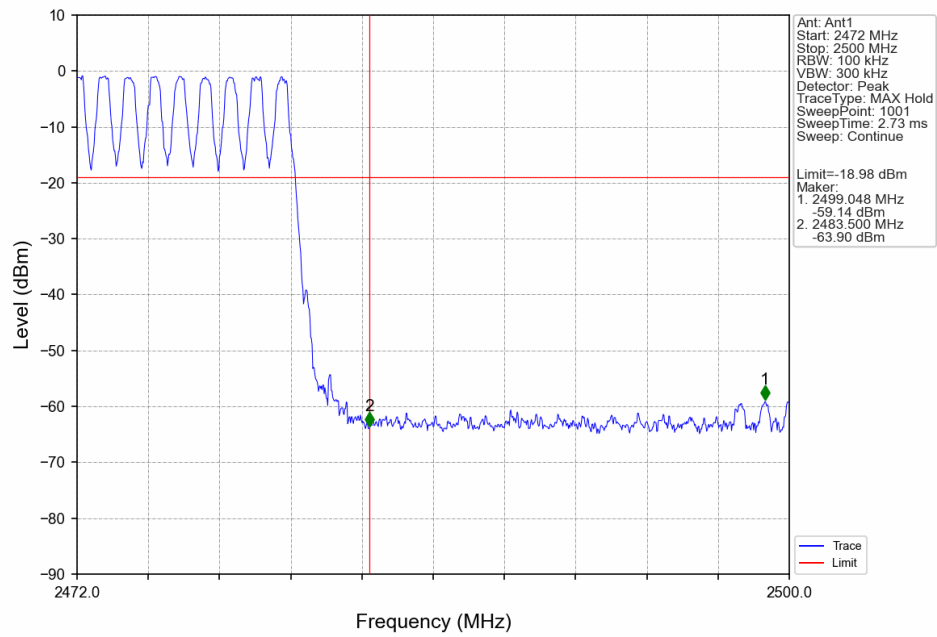
GFSK DH5 HCH 2480MHz Ant1 NTN



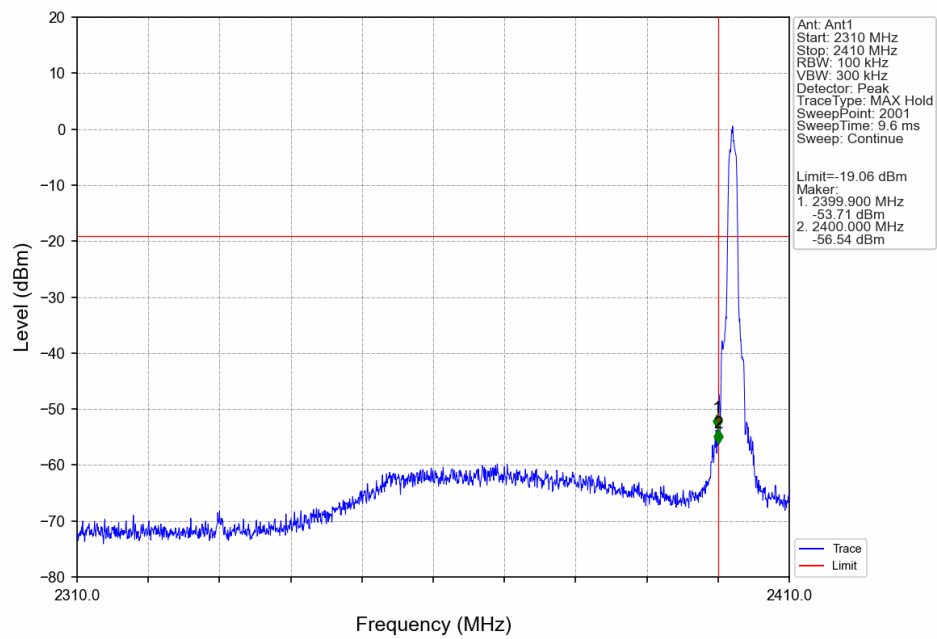
GFSK_DH5_HOPP_Ant1_NTNV



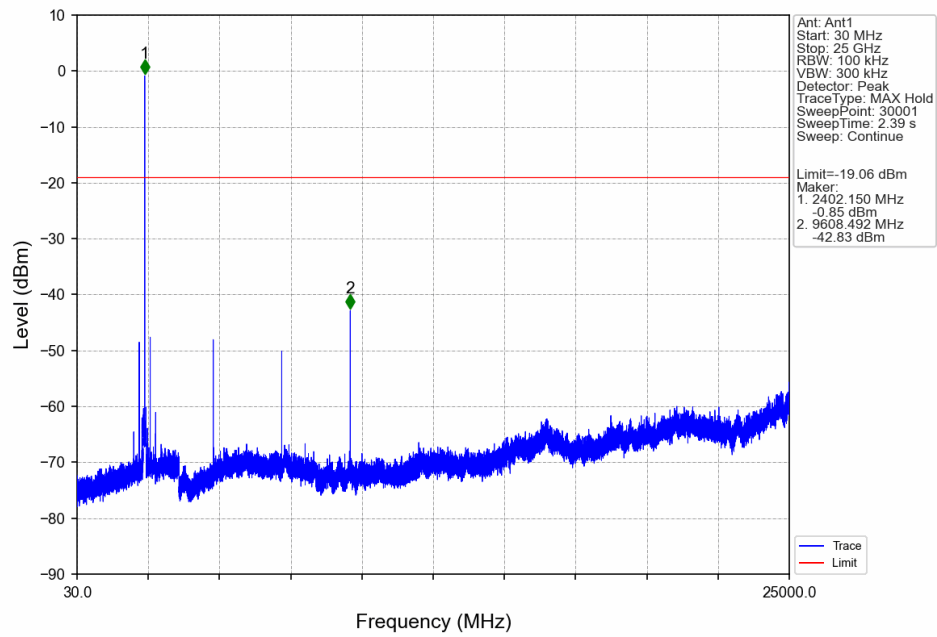
GFSK DH5 HOPP Ant1 NTN



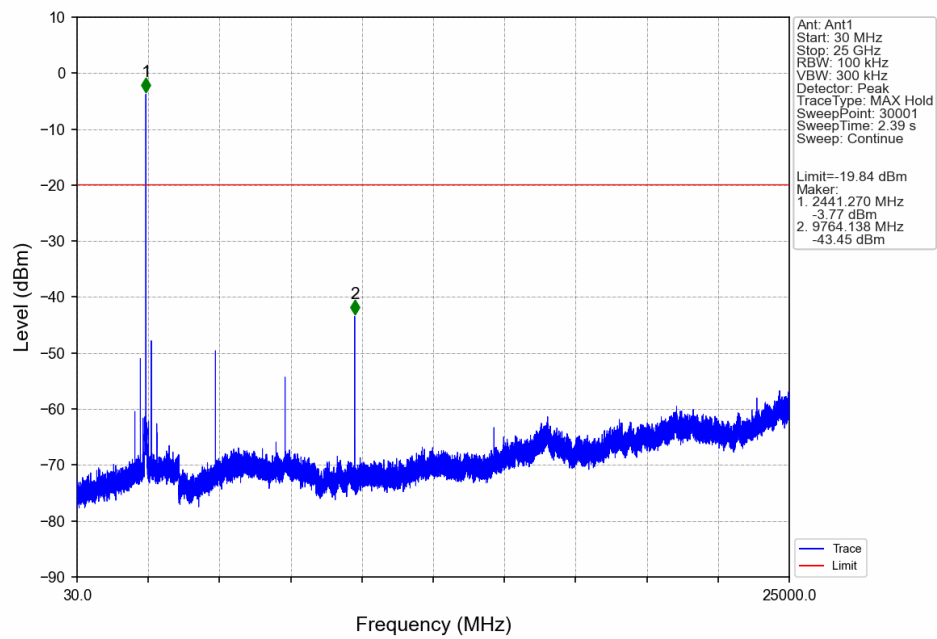
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1 NTN



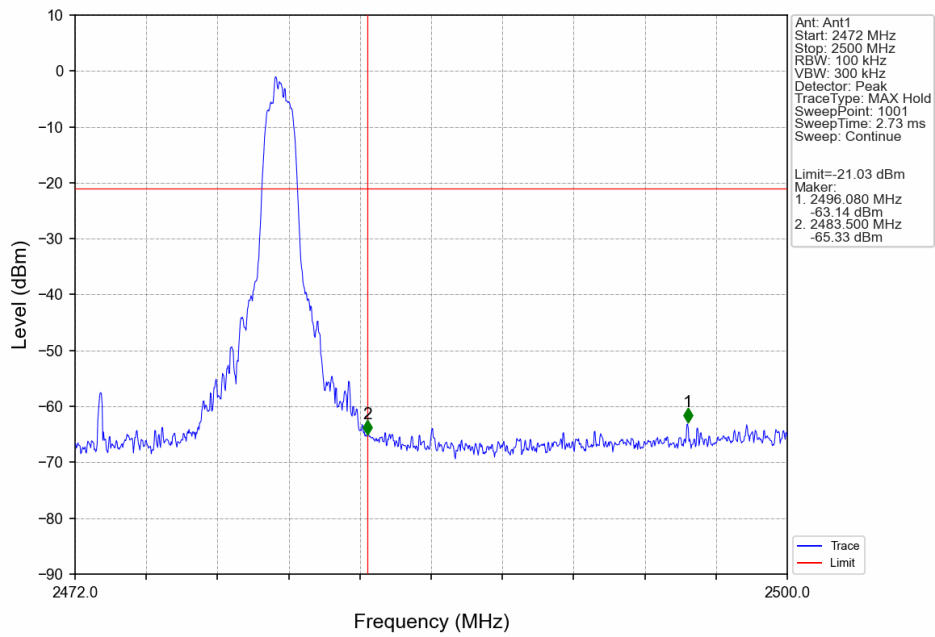
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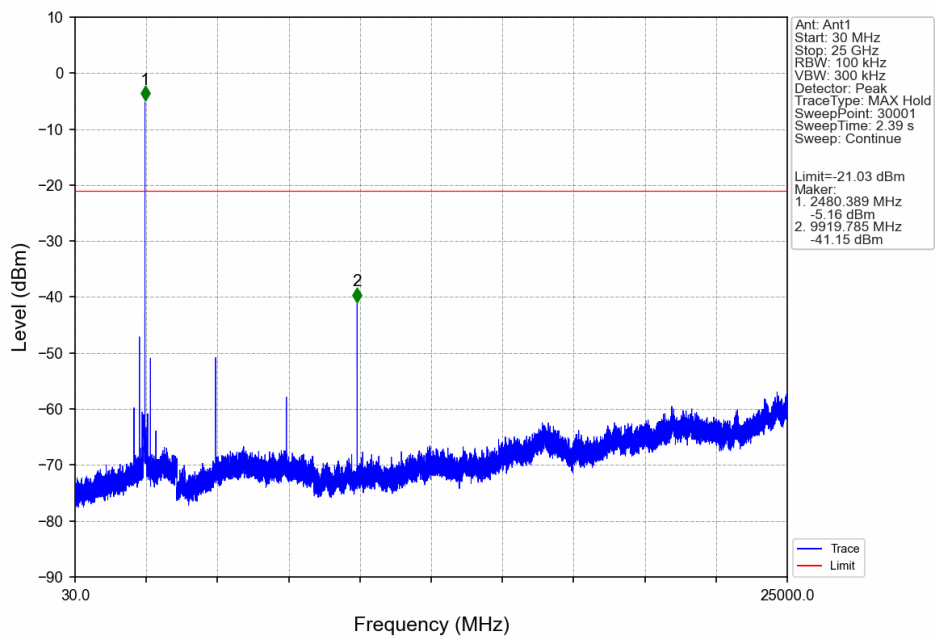
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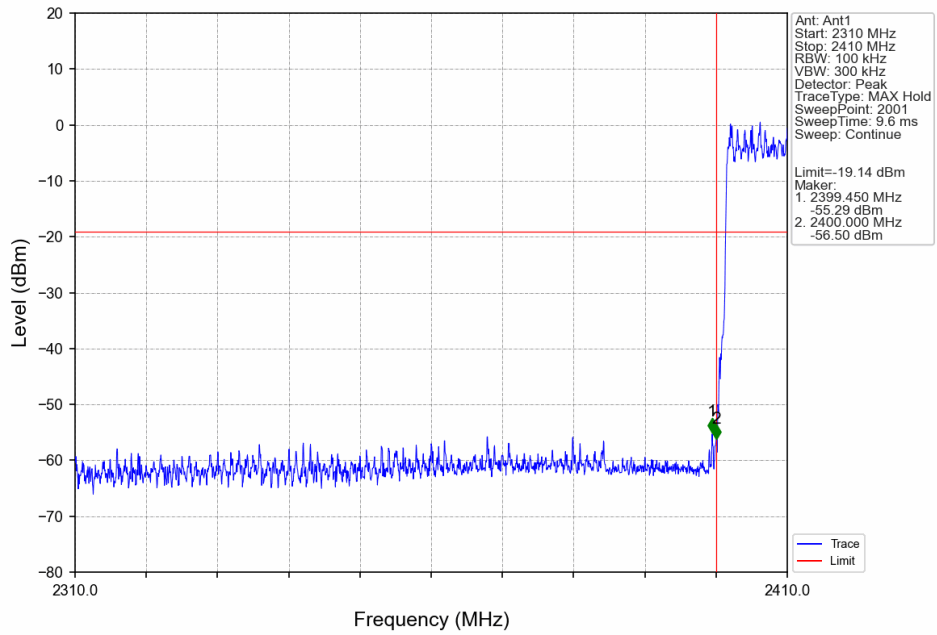
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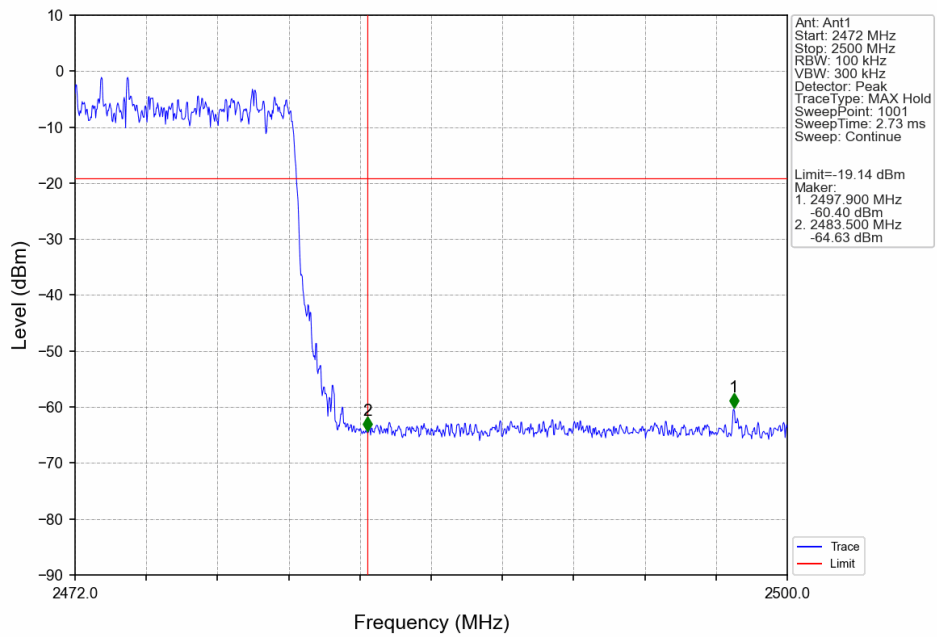
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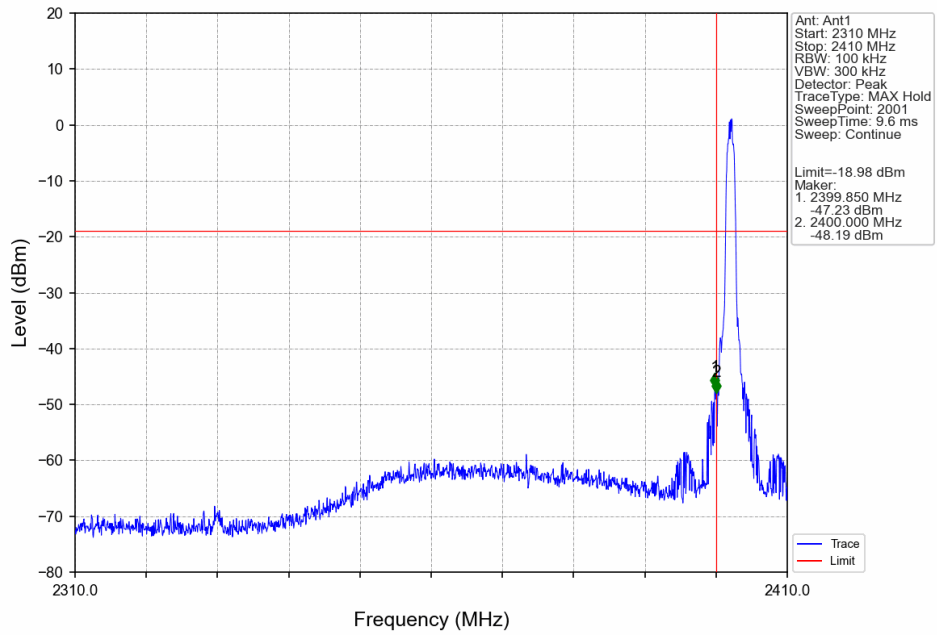
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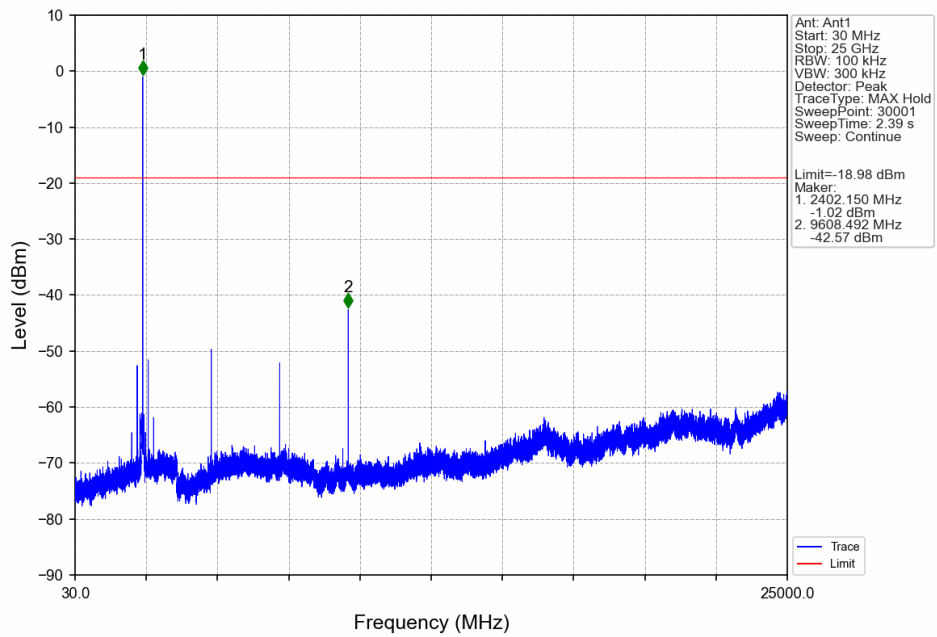
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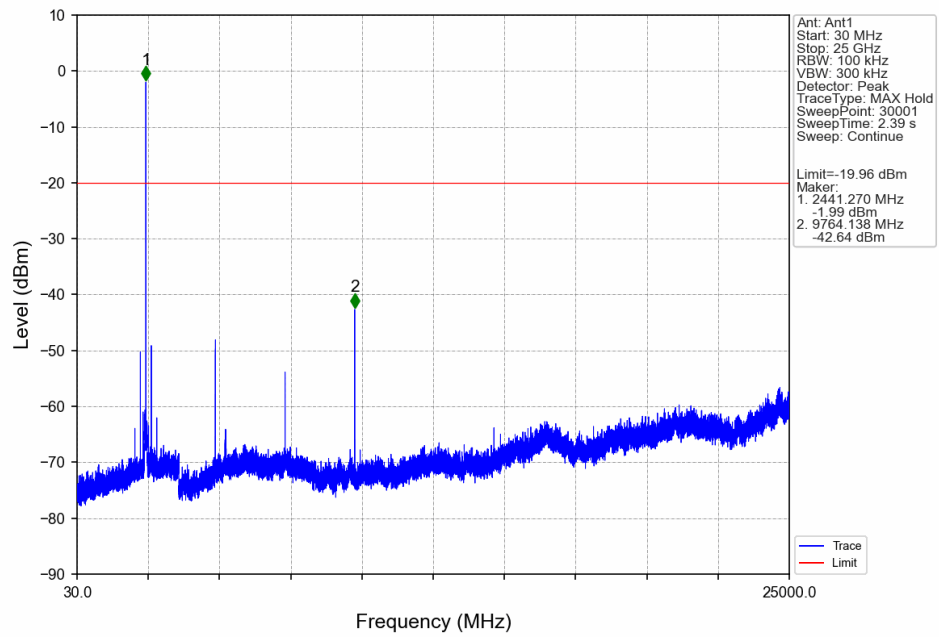
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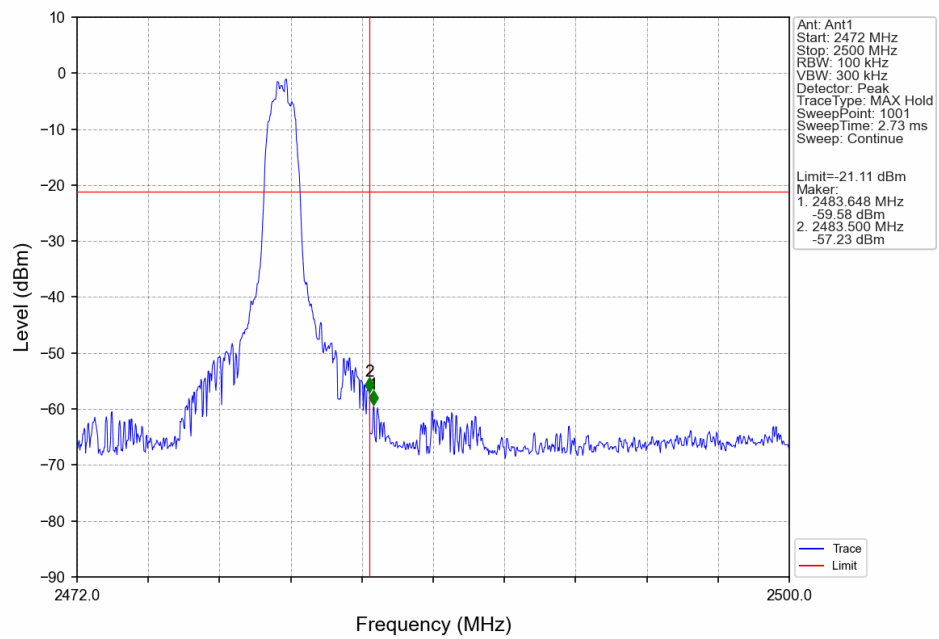
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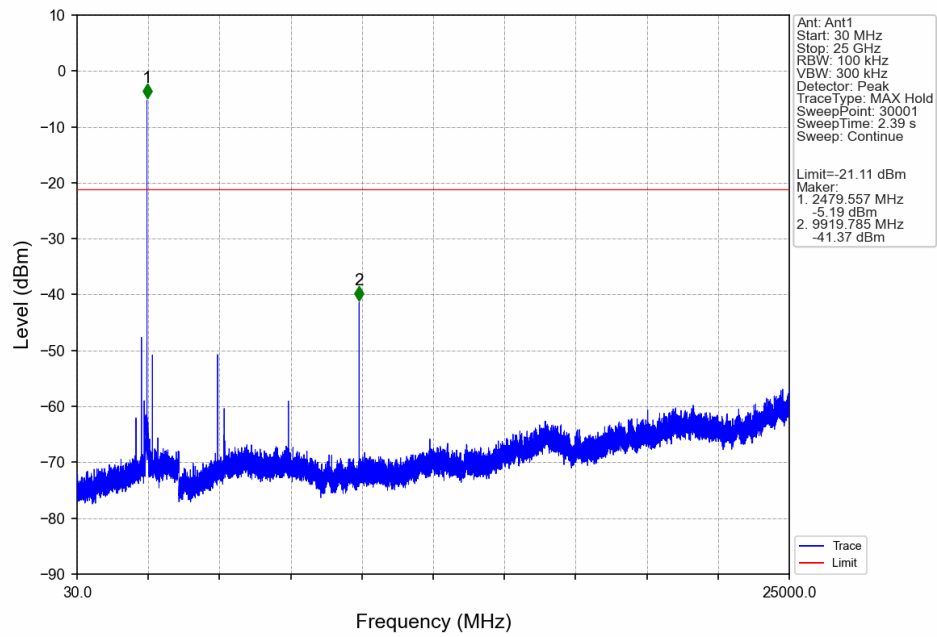
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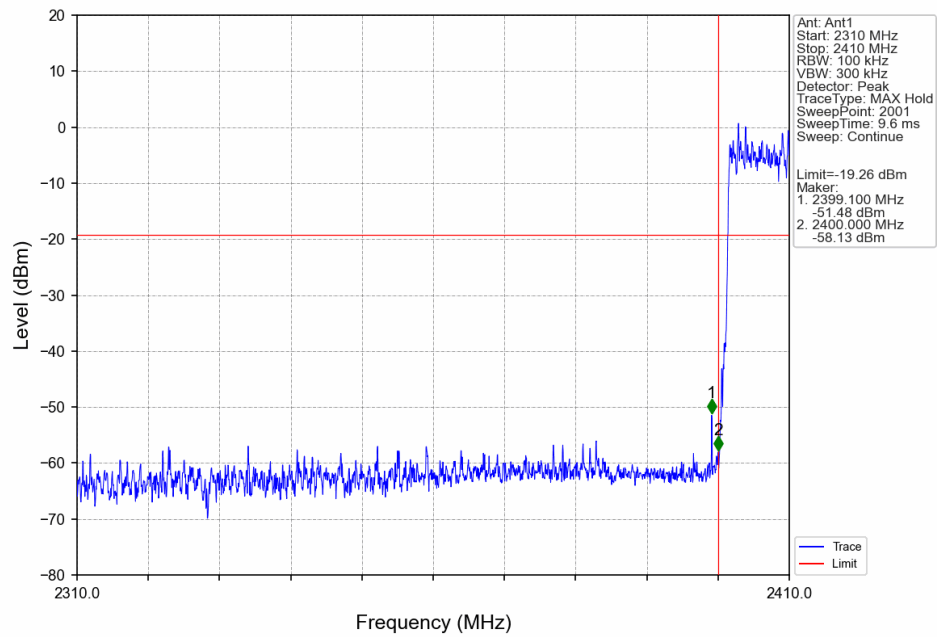
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTN



8DPSK 3DH5 HOPP Ant1 NTN

