

ANNEX D

Test Report

For

Project No.:	8135EU122703W
Client:	Shantou AIRUIKA Electronics Co., LTD
Manufacturer:	Shantou AIRUIKA Electronics Co., LTD
Product Description:	Bluetooth Headset / SMS-T27
Test Engineer:	<i>Mikey zhu</i>
Test Date:	2024-01-02

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

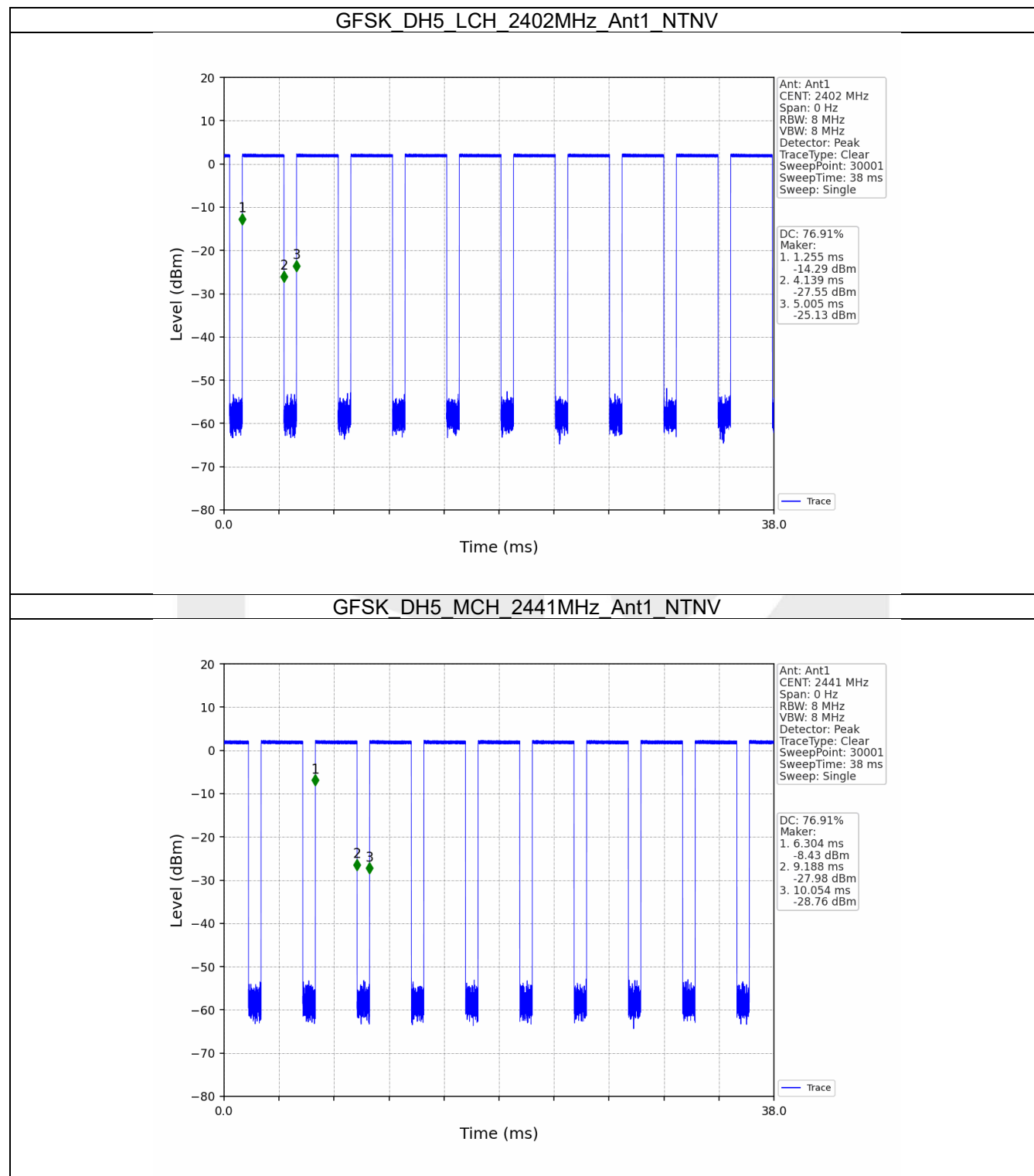
1. Duty Cycle

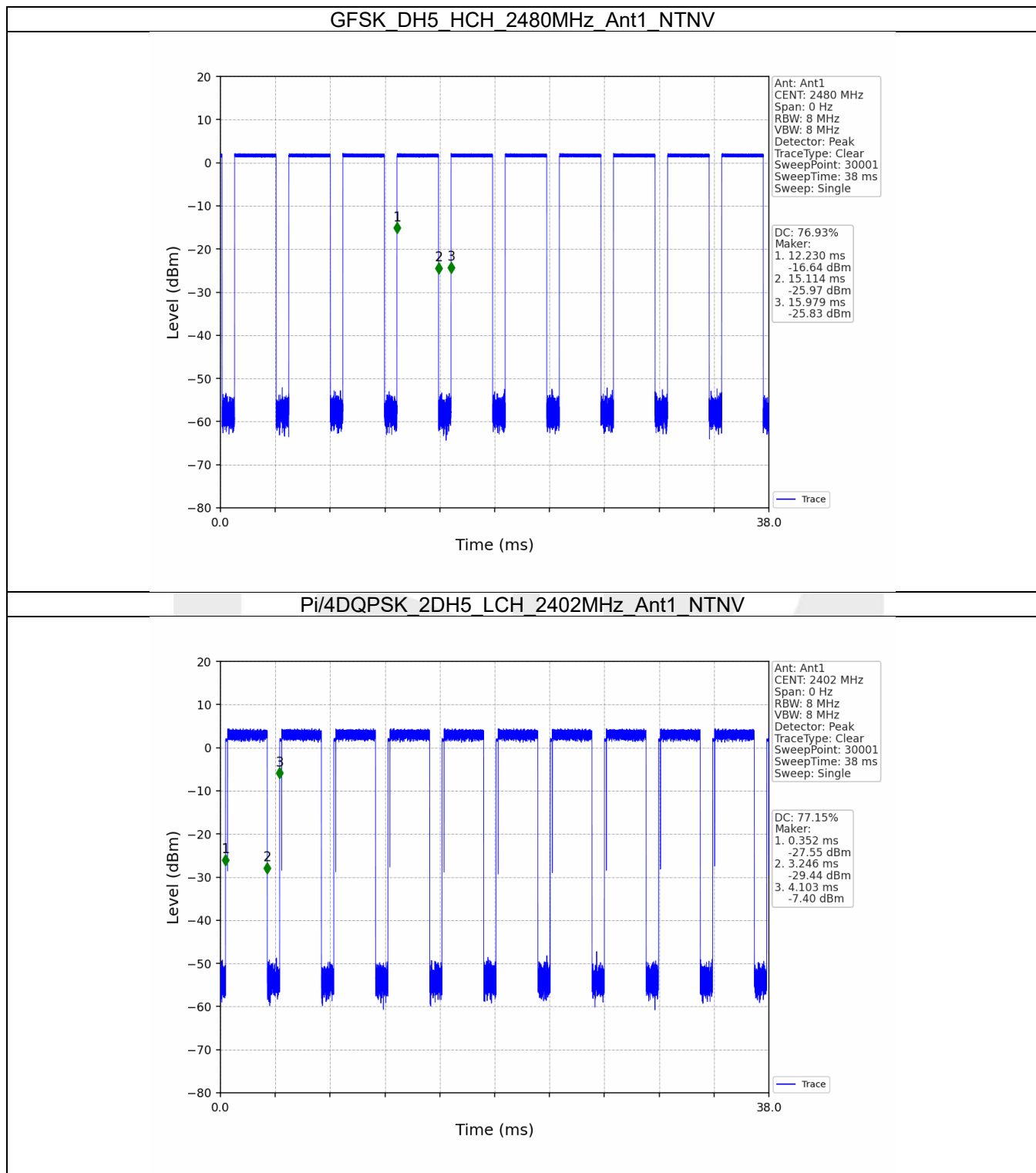
1.1 Ant1

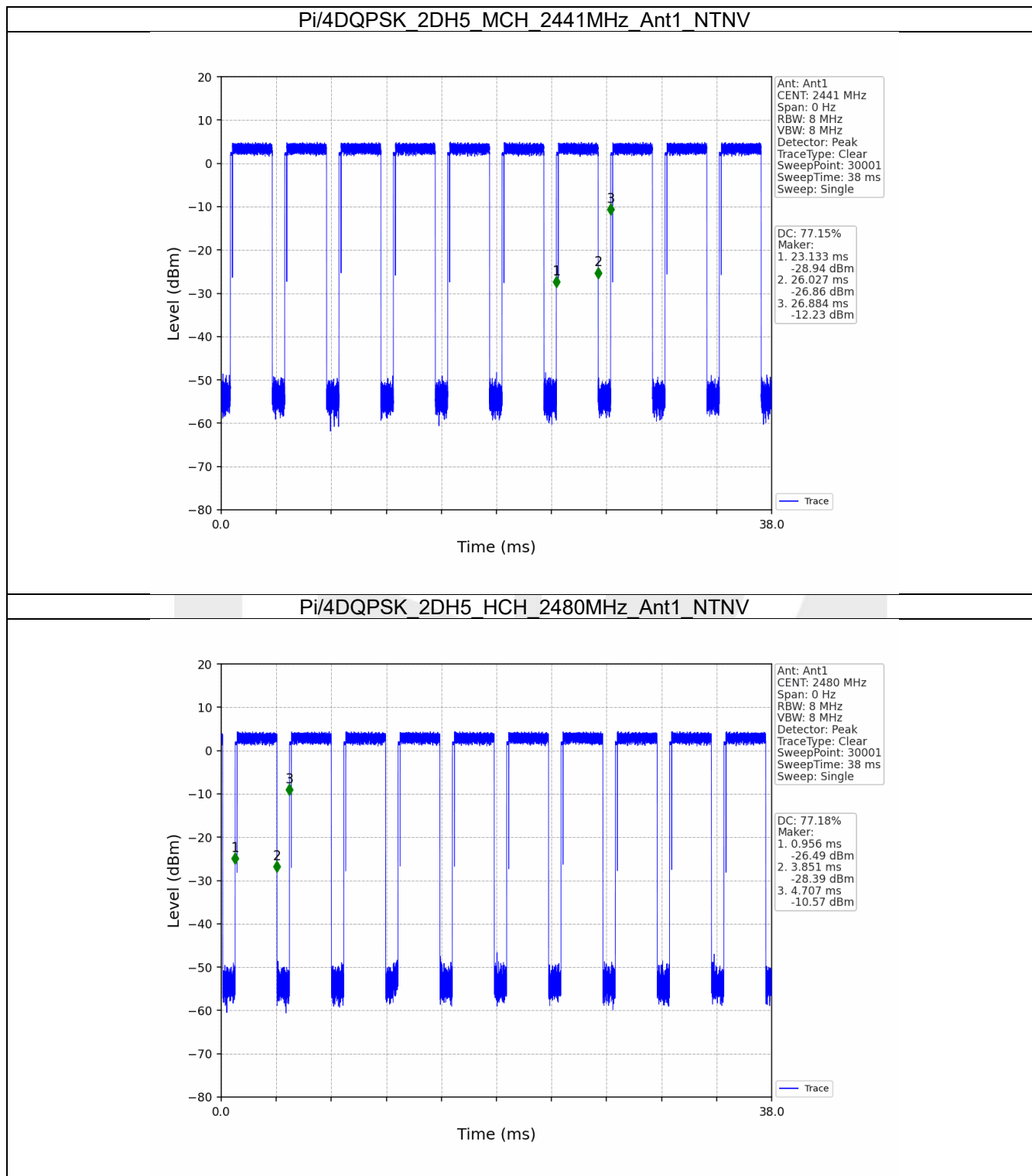
1.1.1 Test Result

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	2.884	3.750	76.91	1.14	0.03
		2441	DH5	2.884	3.750	76.91	1.14	0.03
		2480	DH5	2.884	3.749	76.93	1.14	0.03
Pi/4DQPSK	SISO	2402	2DH5	2.894	3.751	77.15	1.13	0.03
		2441	2DH5	2.894	3.751	77.15	1.13	0.03
		2480	2DH5	2.895	3.751	77.18	1.12	0.03

1.1.2 Test Graph







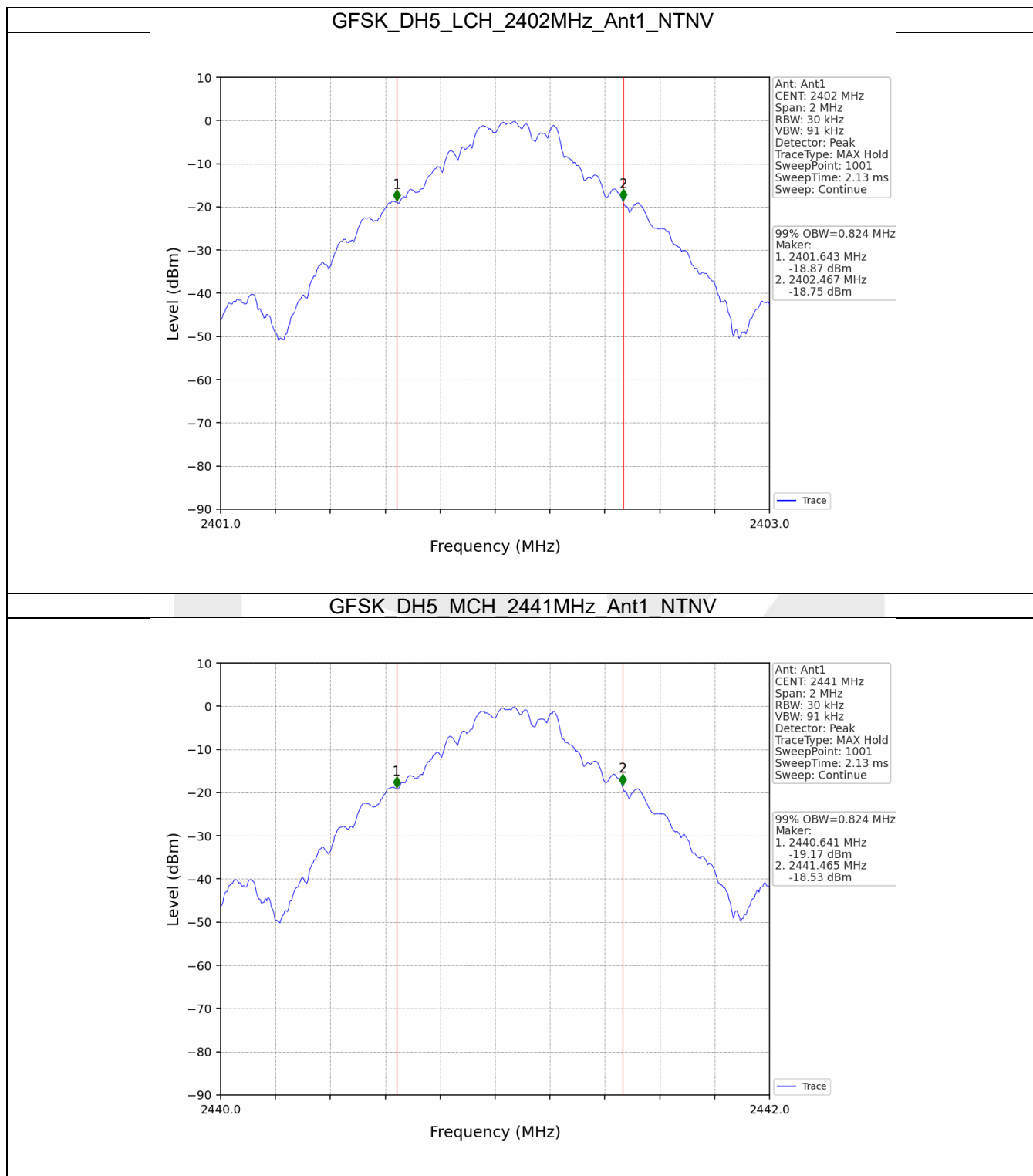
2. Bandwidth

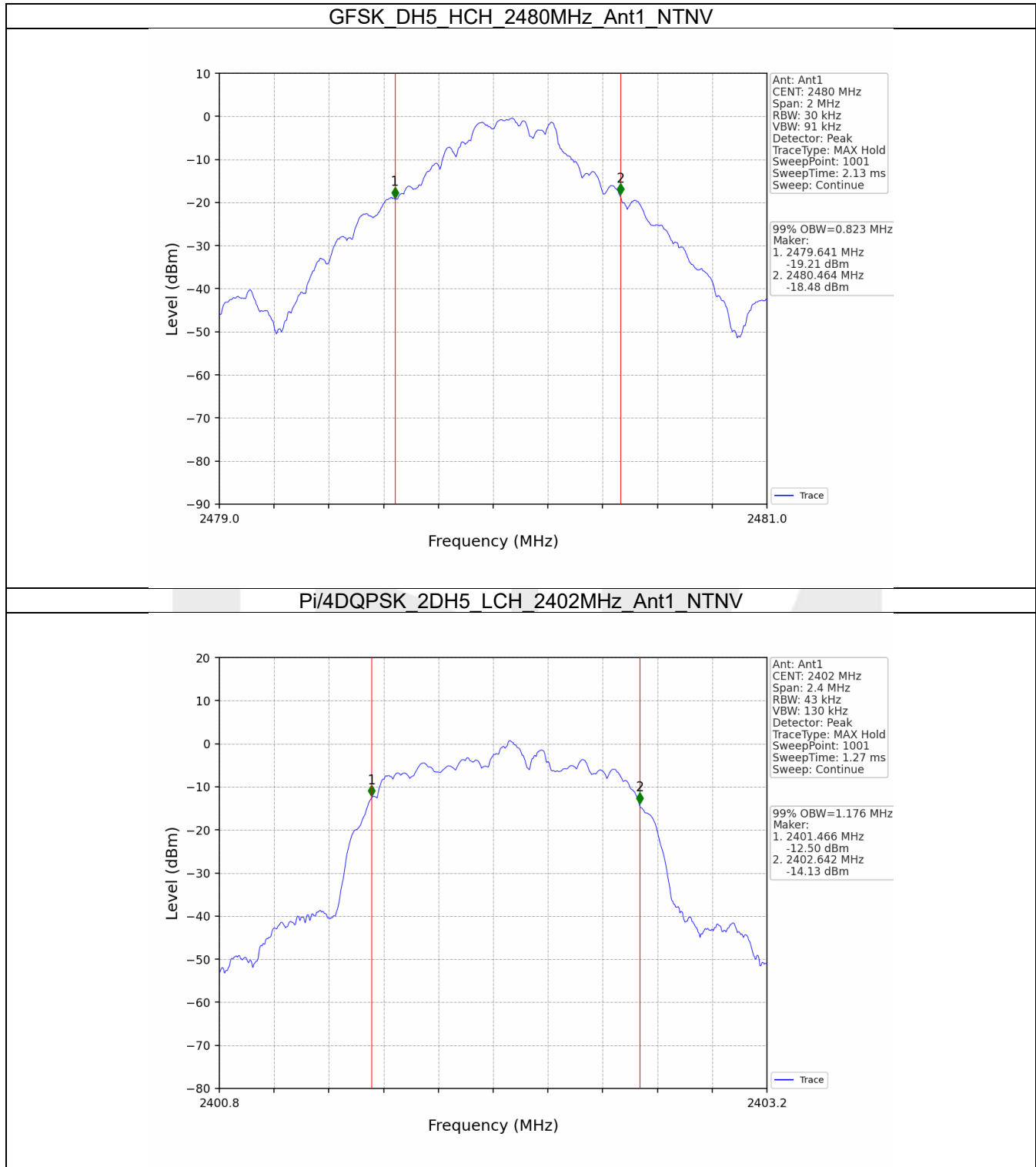
2.1 OBW

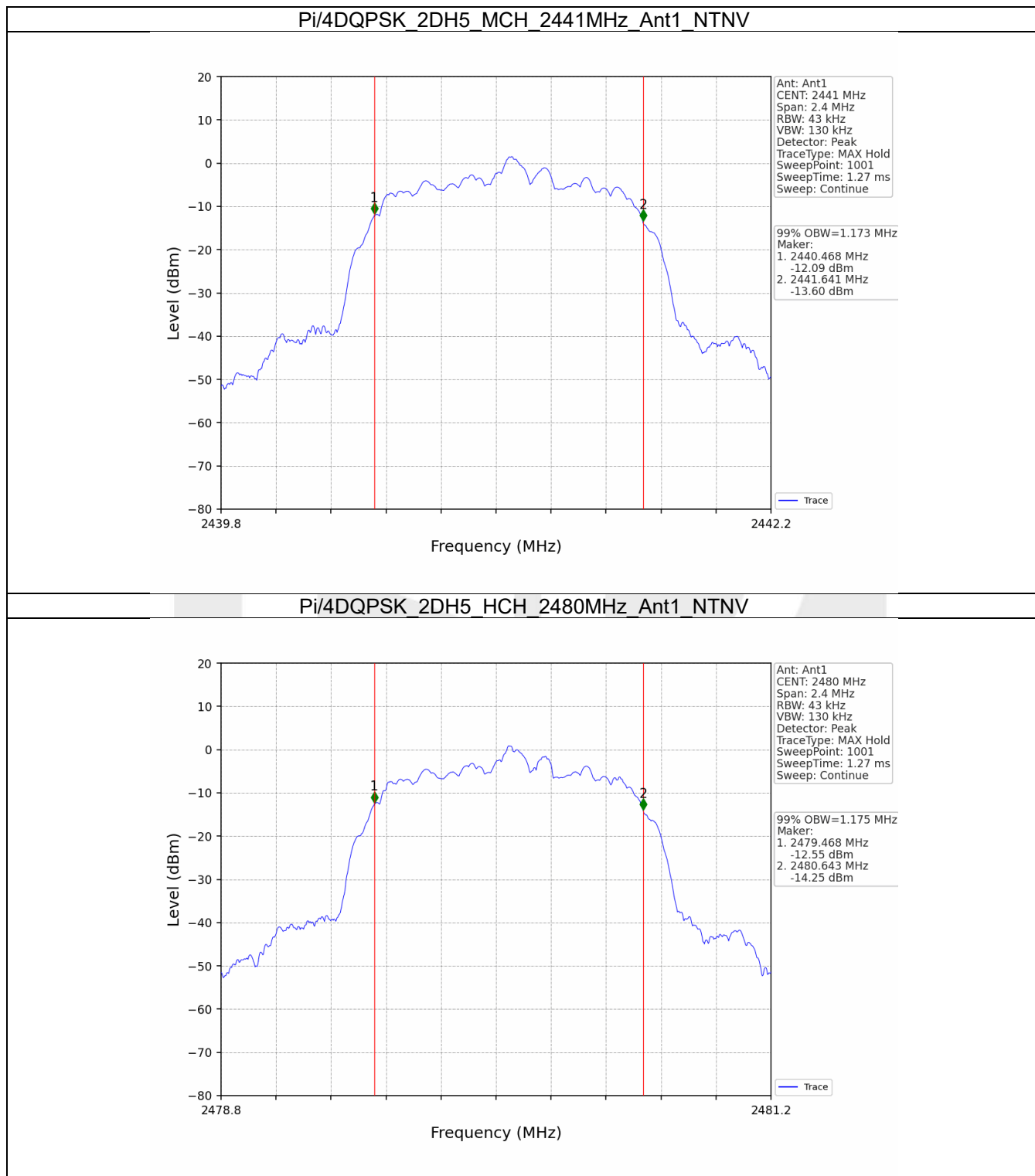
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.824	Pass
		2441	DH5	1	0.824	Pass
		2480	DH5	1	0.823	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.176	Pass
		2441	2DH5	1	1.173	Pass
		2480	2DH5	1	1.175	Pass

2.1.2 Test Graph





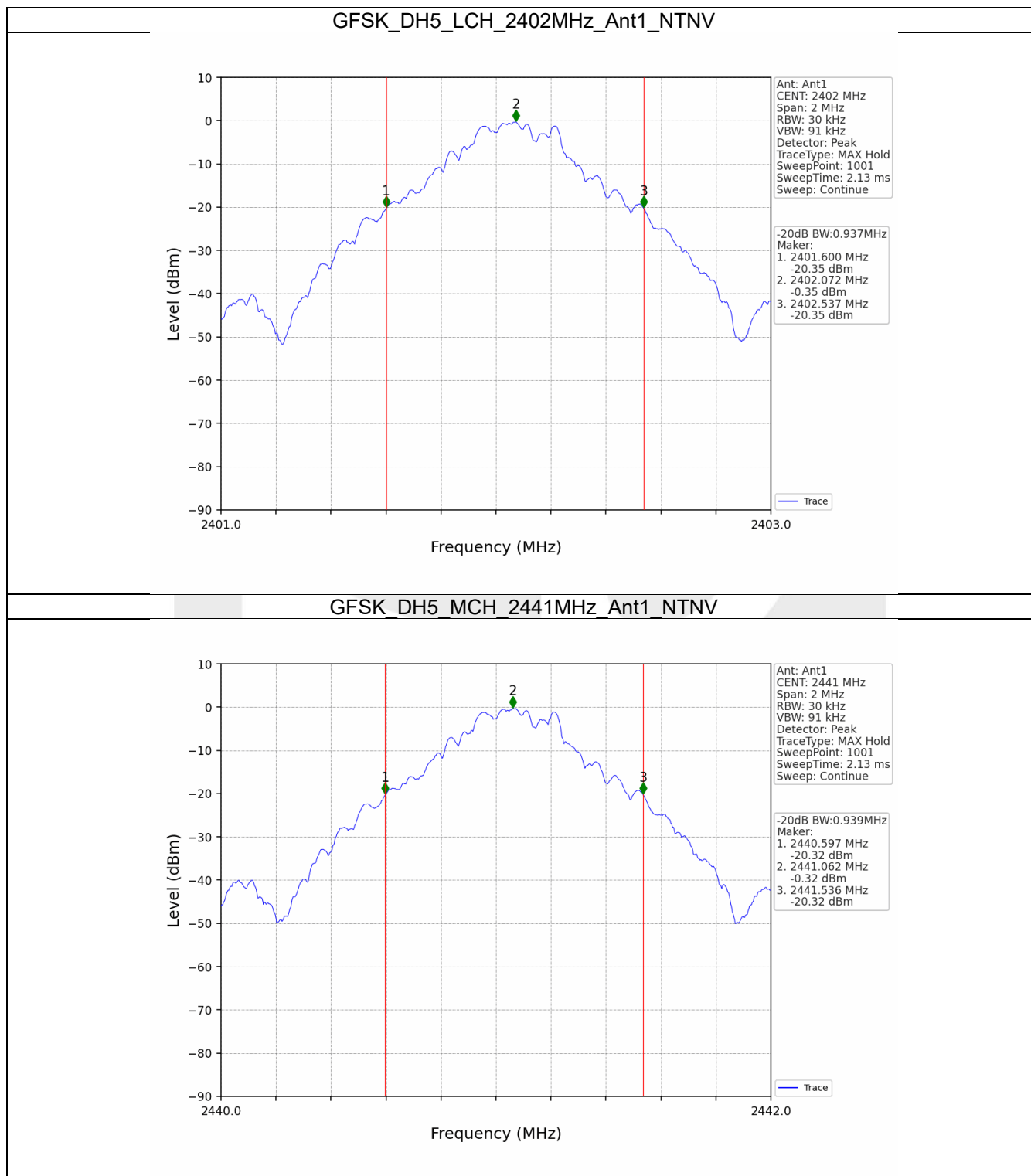


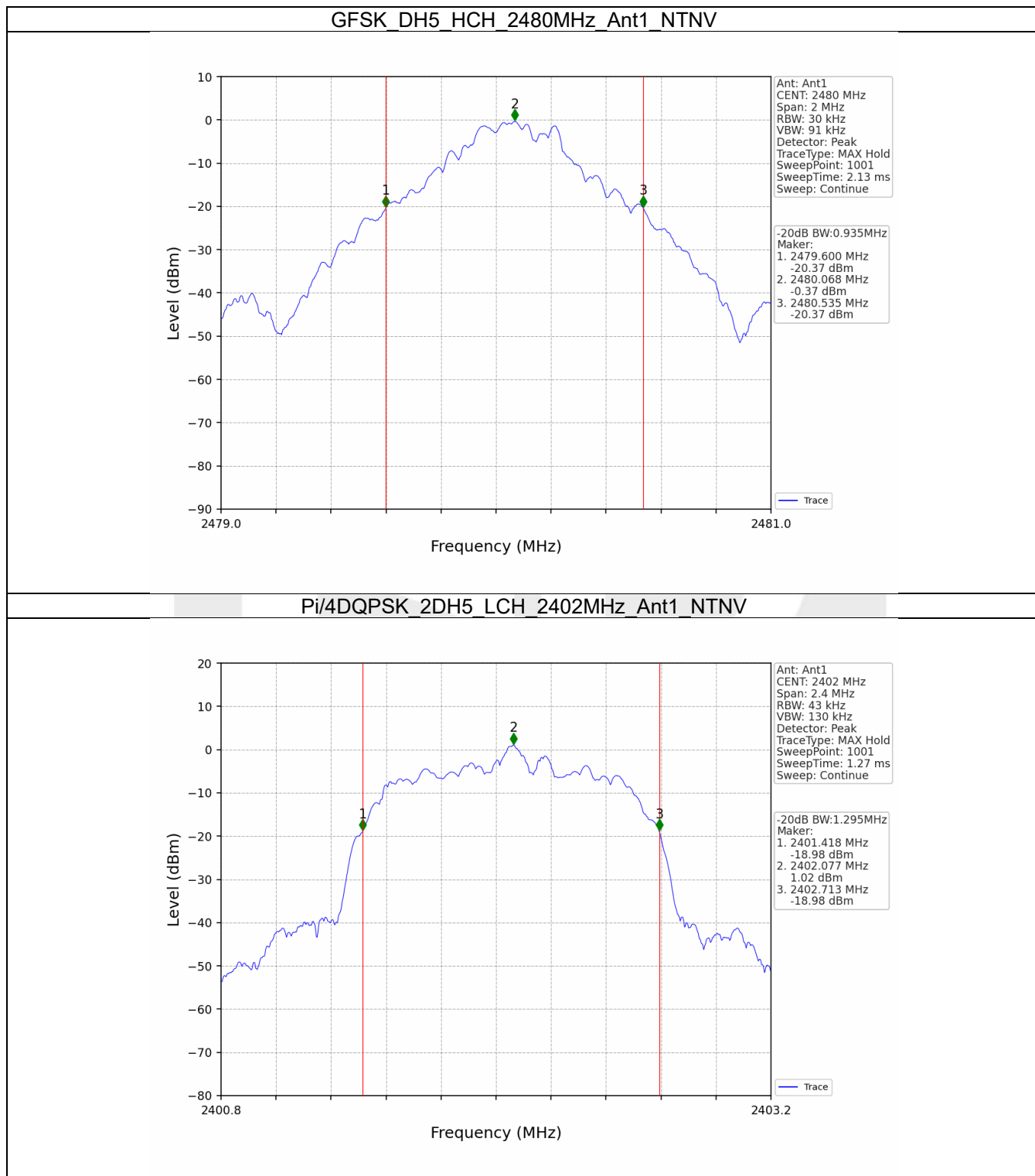
2.2 20dB BW

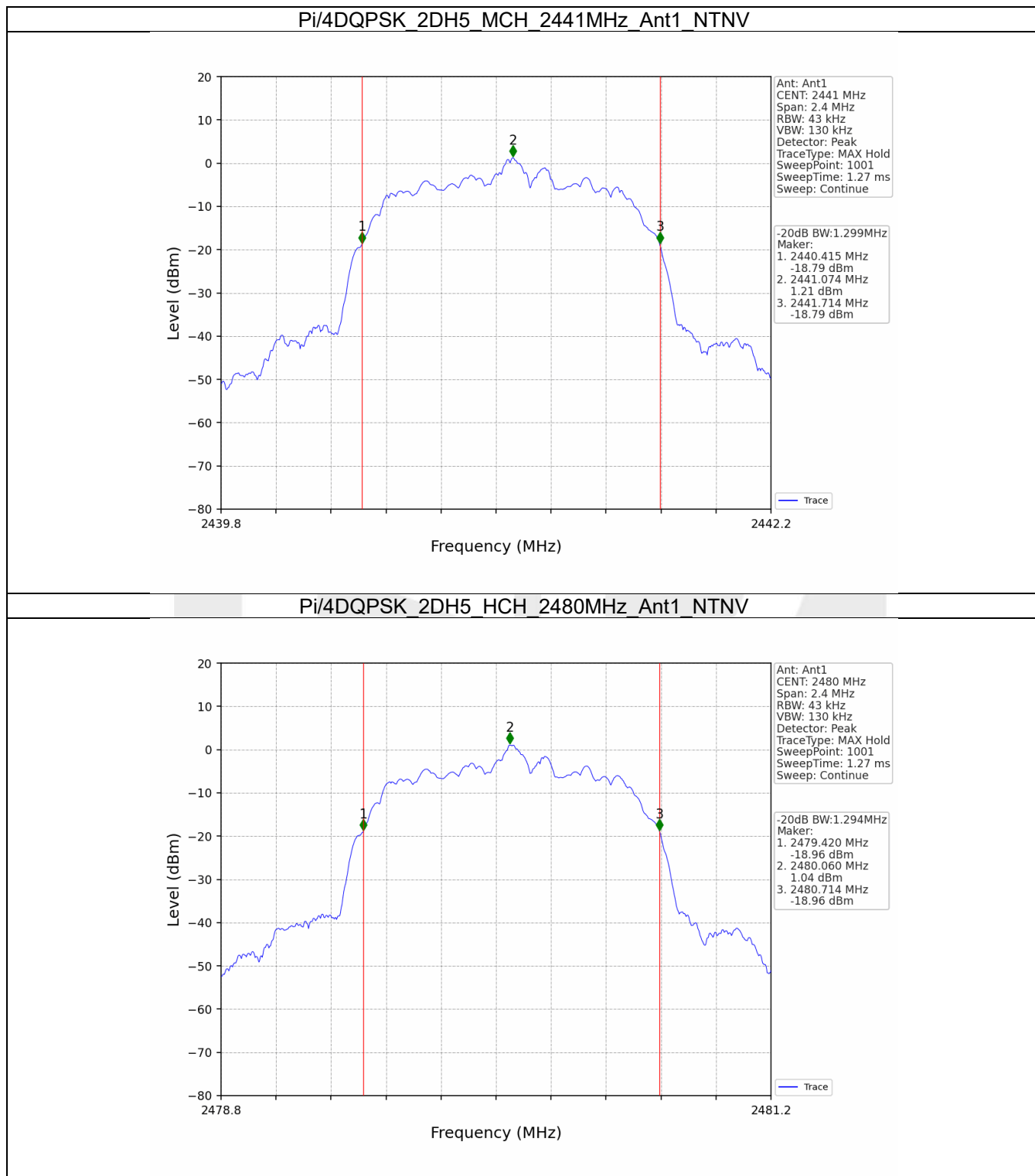
2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.937	Pass
		2441	DH5	1	0.939	Pass
		2480	DH5	1	0.935	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.295	Pass
		2441	2DH5	1	1.299	Pass
		2480	2DH5	1	1.294	Pass

2.2.2 Test Graph







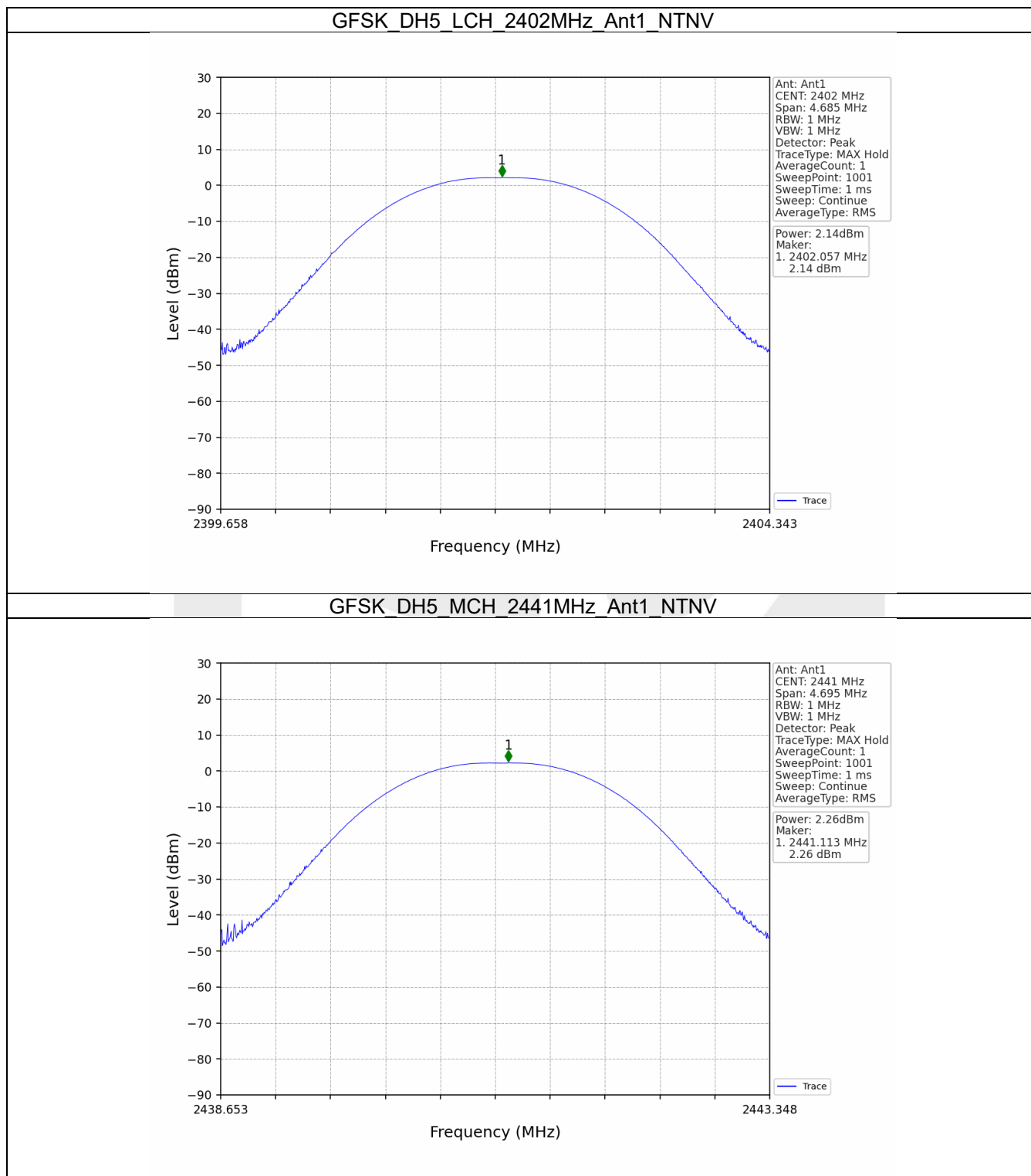
3. Maximum Conducted Output Power

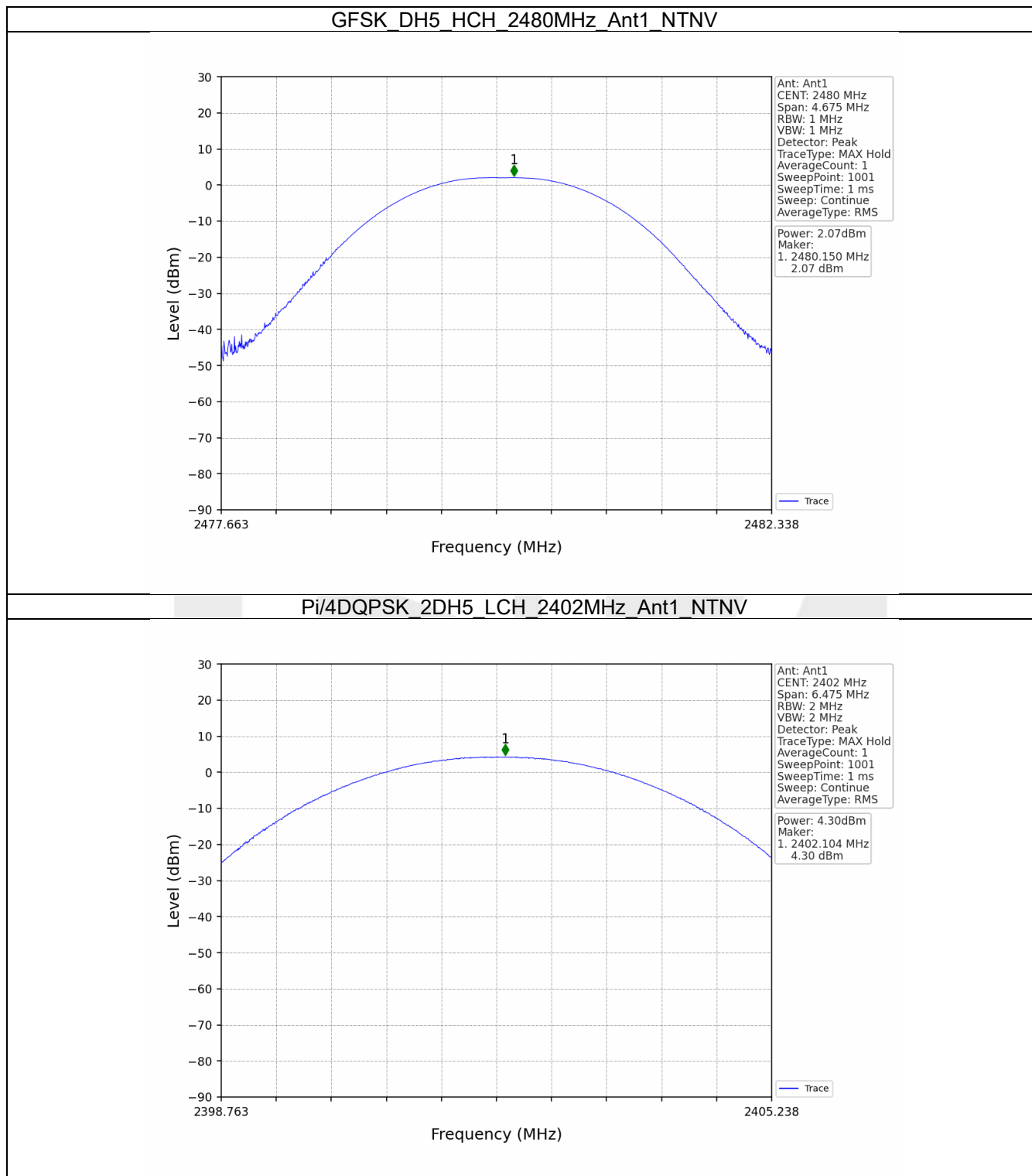
3.1 Power

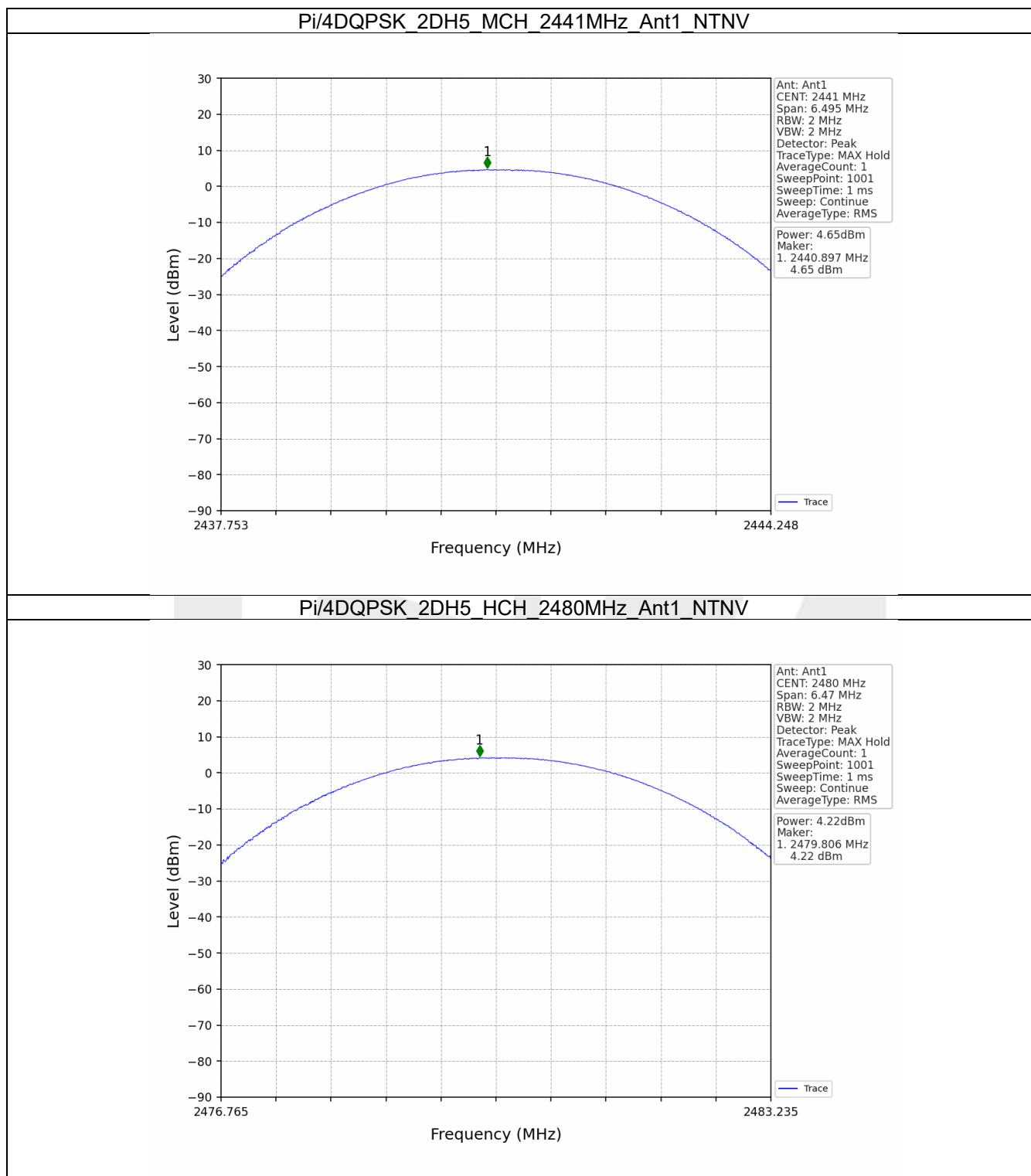
3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	2.14	≤ 30	Pass
		2441	DH5	2.26	≤ 30	Pass
		2480	DH5	2.07	≤ 30	Pass
Pi/4DQPSK	SISO	2402	2DH5	4.30	≤ 20.97	Pass
		2441	2DH5	4.65	≤ 20.97	Pass
		2480	2DH5	4.22	≤ 20.97	Pass

3.1.2 Test Graph







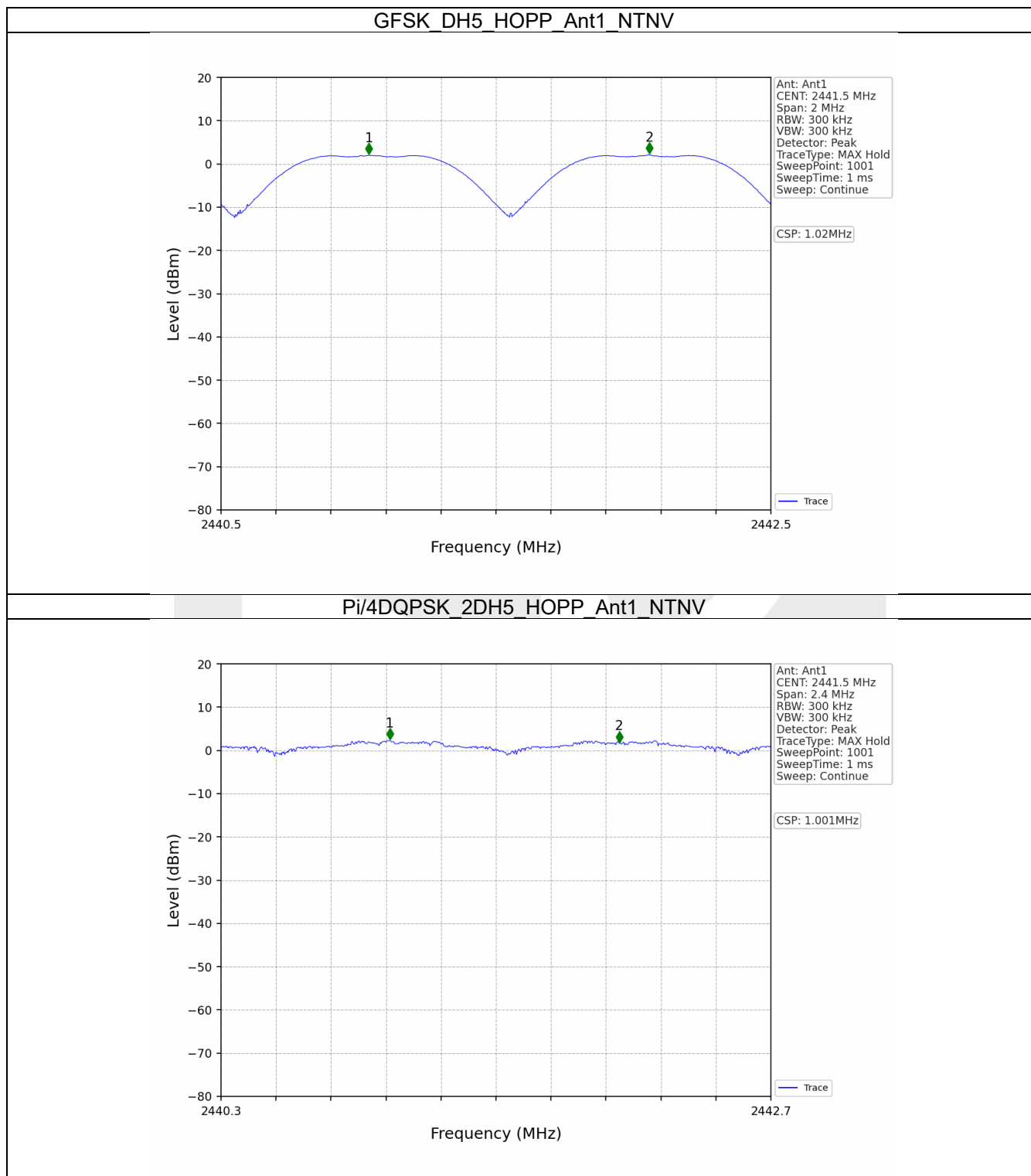
4. Carrier Frequency Separation

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	1.020	0.939	≥ 0.939	Pass
PI/4DQPSK	SISO	HOPP	2DH5	1.001	1.299	≥ 0.866	Pass

4.1.2 Test Graph



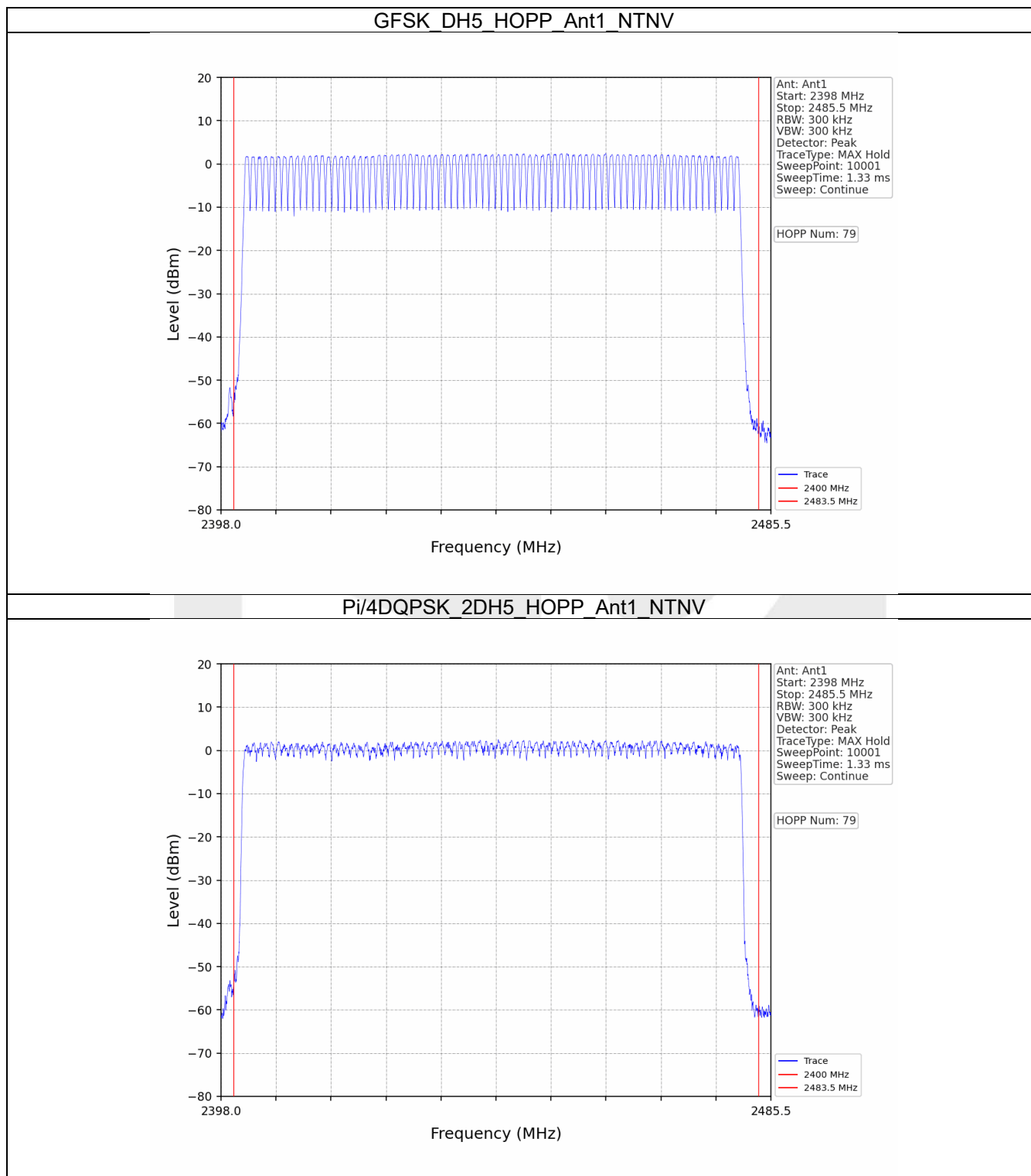
5. Number of Hopping Frequencies

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
PI/4DQPSK	SISO	HOPP	2DH5	79	≥ 15	Pass

5.1.2 Test Graph



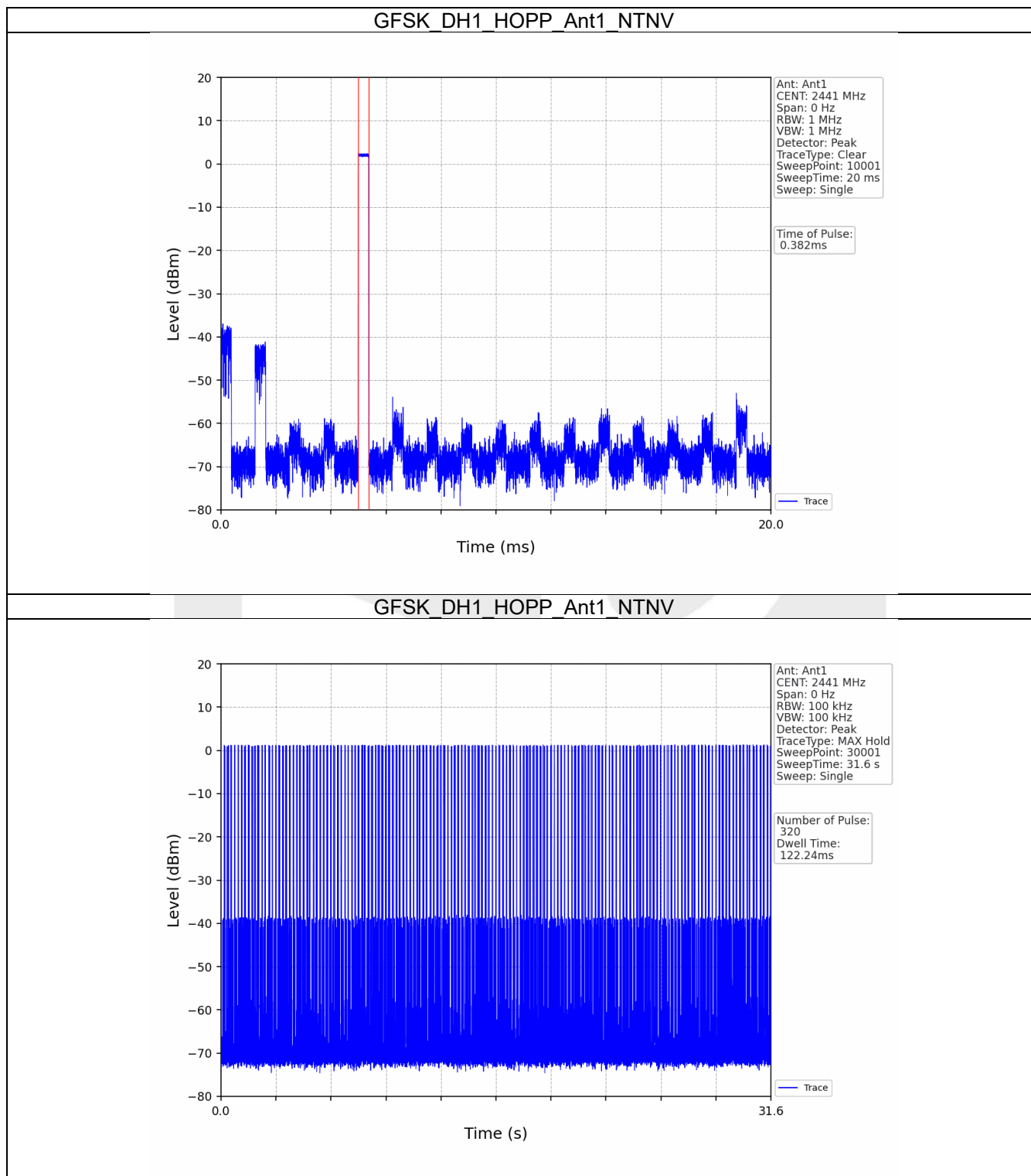
6. Time of Occupancy (Dwell Time)

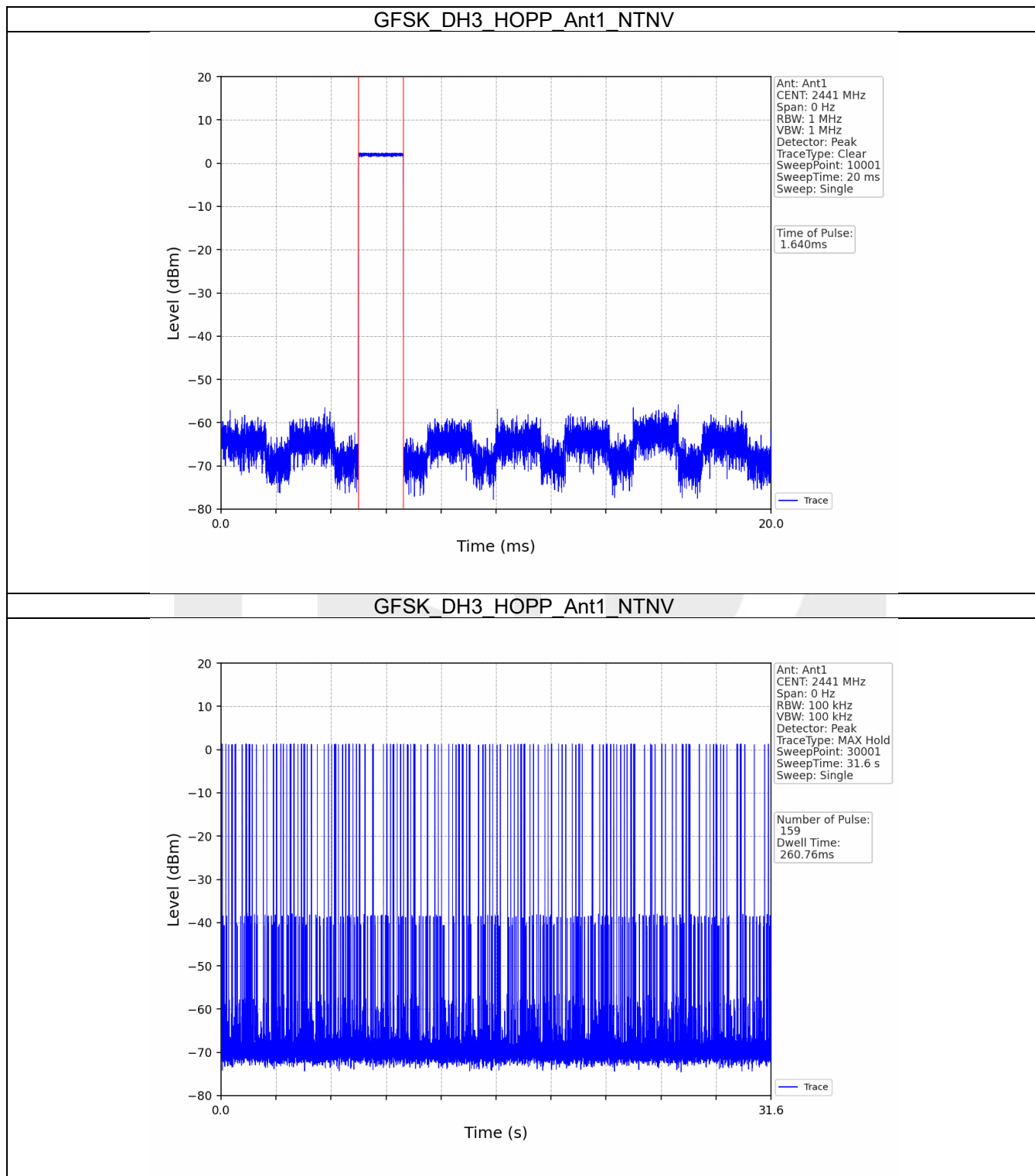
6.1 Ant1

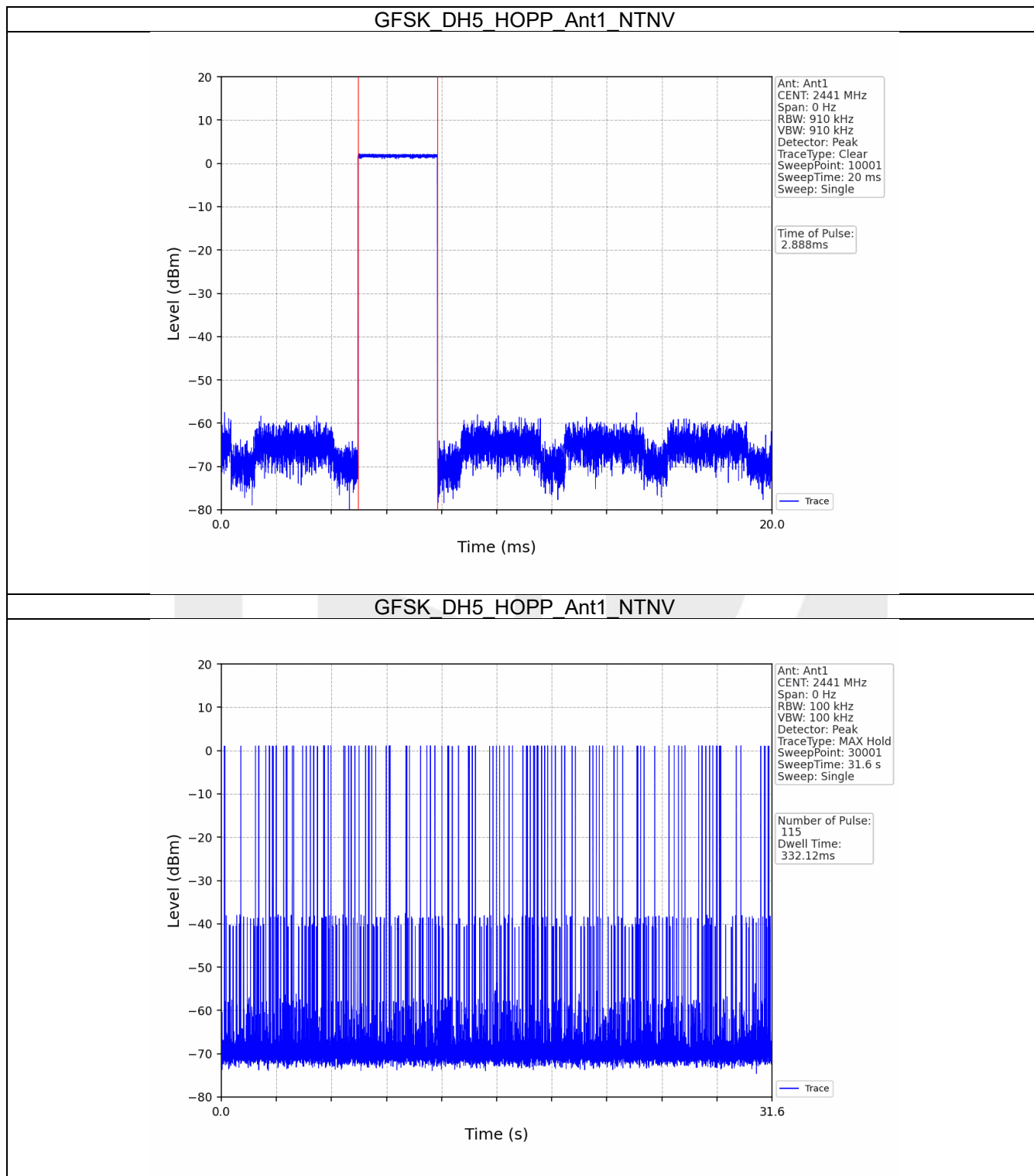
6.1.1 Test Result

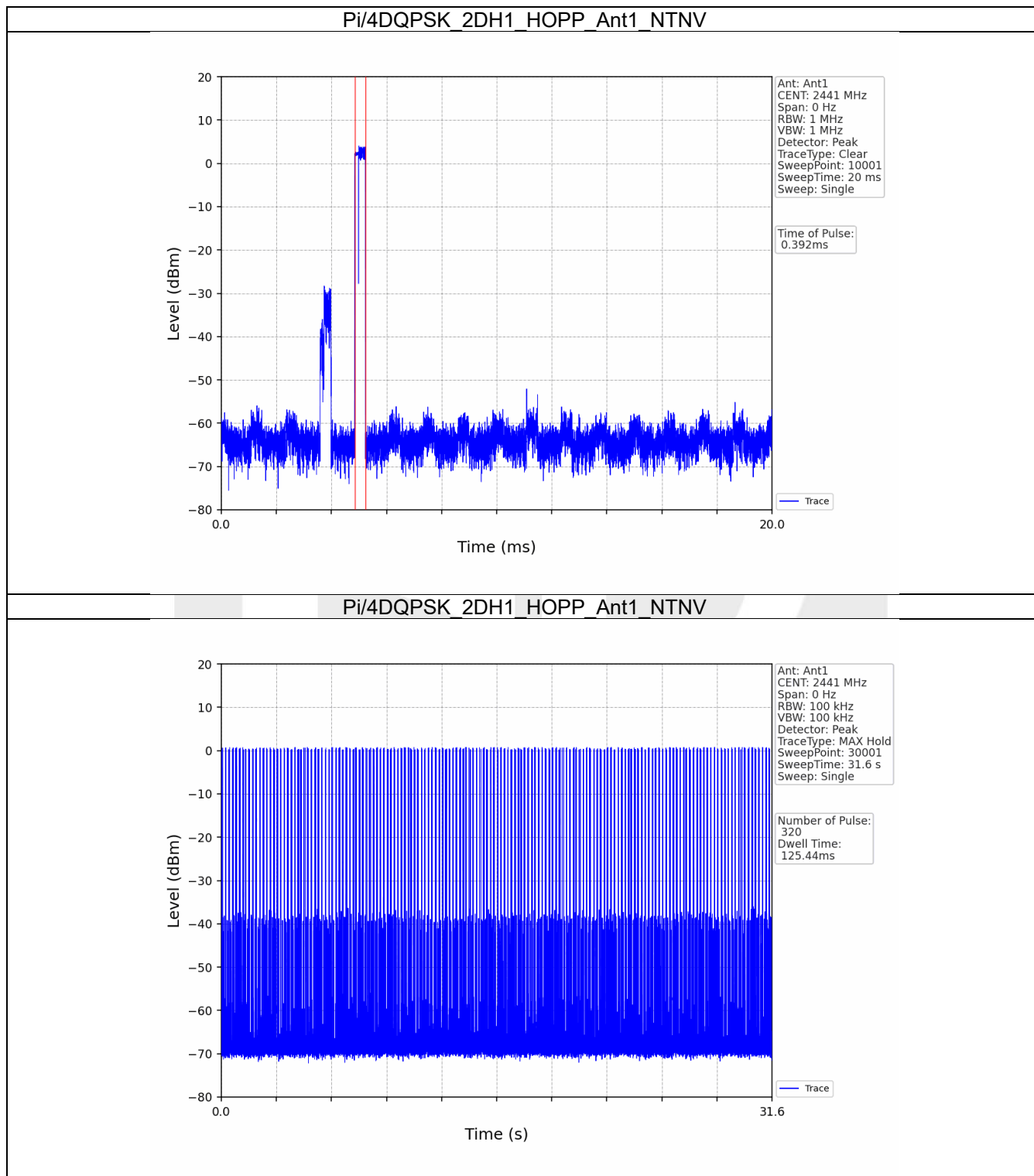
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.382	31.600	320	122.240	<=400	Pass
			DH3	1.640	31.600	159	260.760	<=400	Pass
			DH5	2.888	31.600	115	332.120	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.392	31.600	320	125.440	<=400	Pass
			2DH3	1.650	31.600	158	260.700	<=400	Pass
			2DH5	2.898	31.600	120	347.760	<=400	Pass

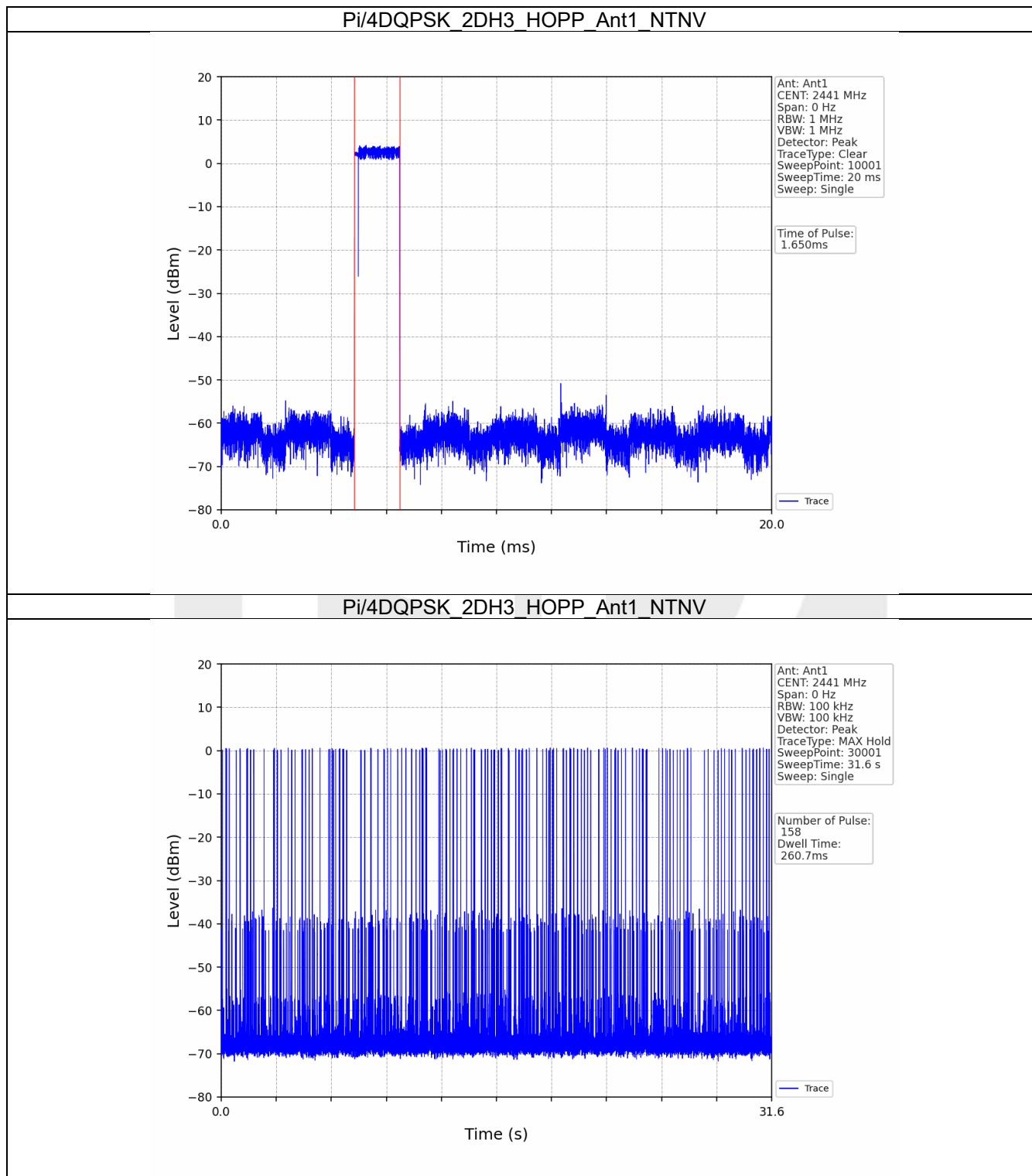
6.1.2 Test Graph

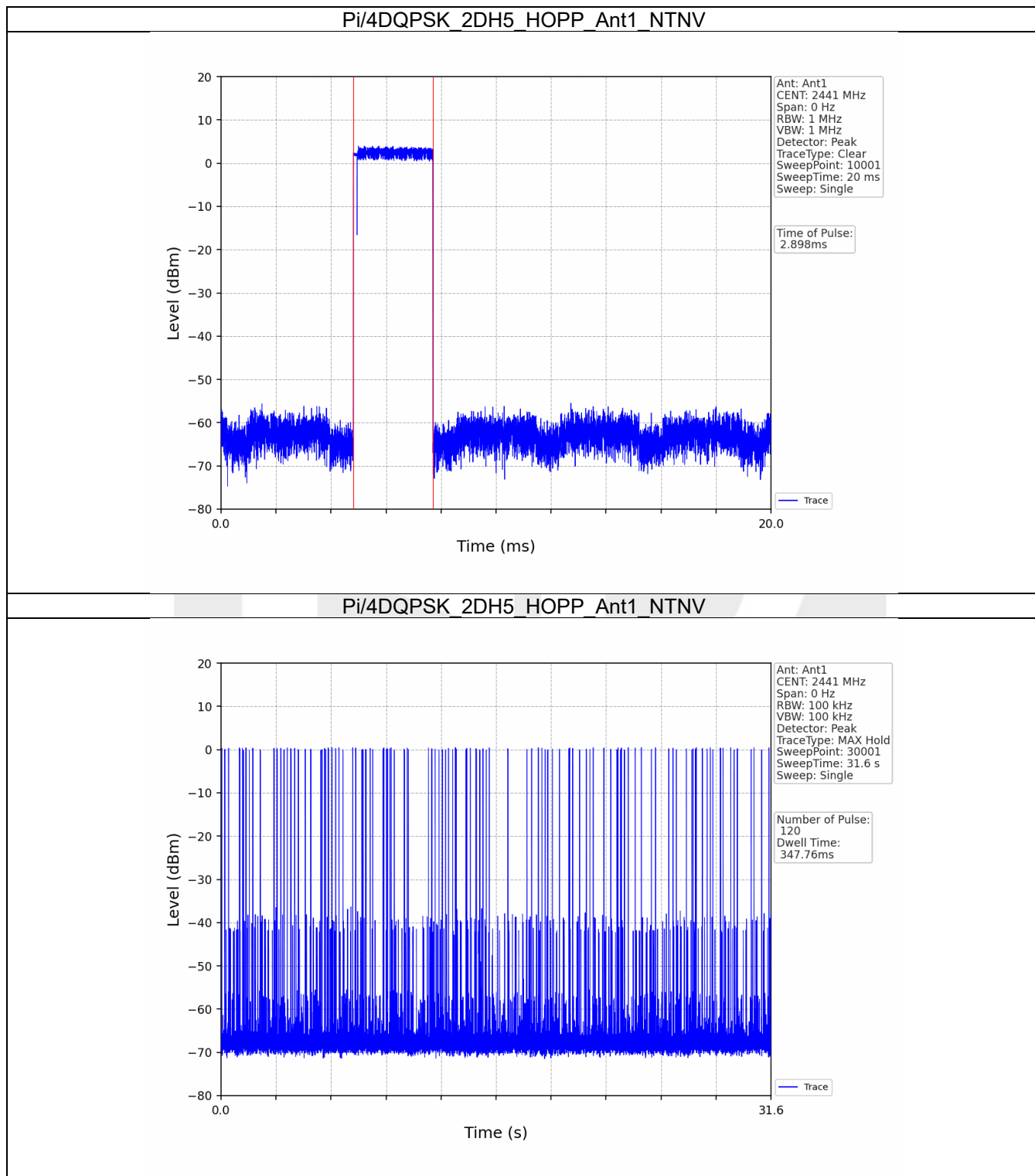












7. Unwanted Emissions In Non-restricted Frequency Bands

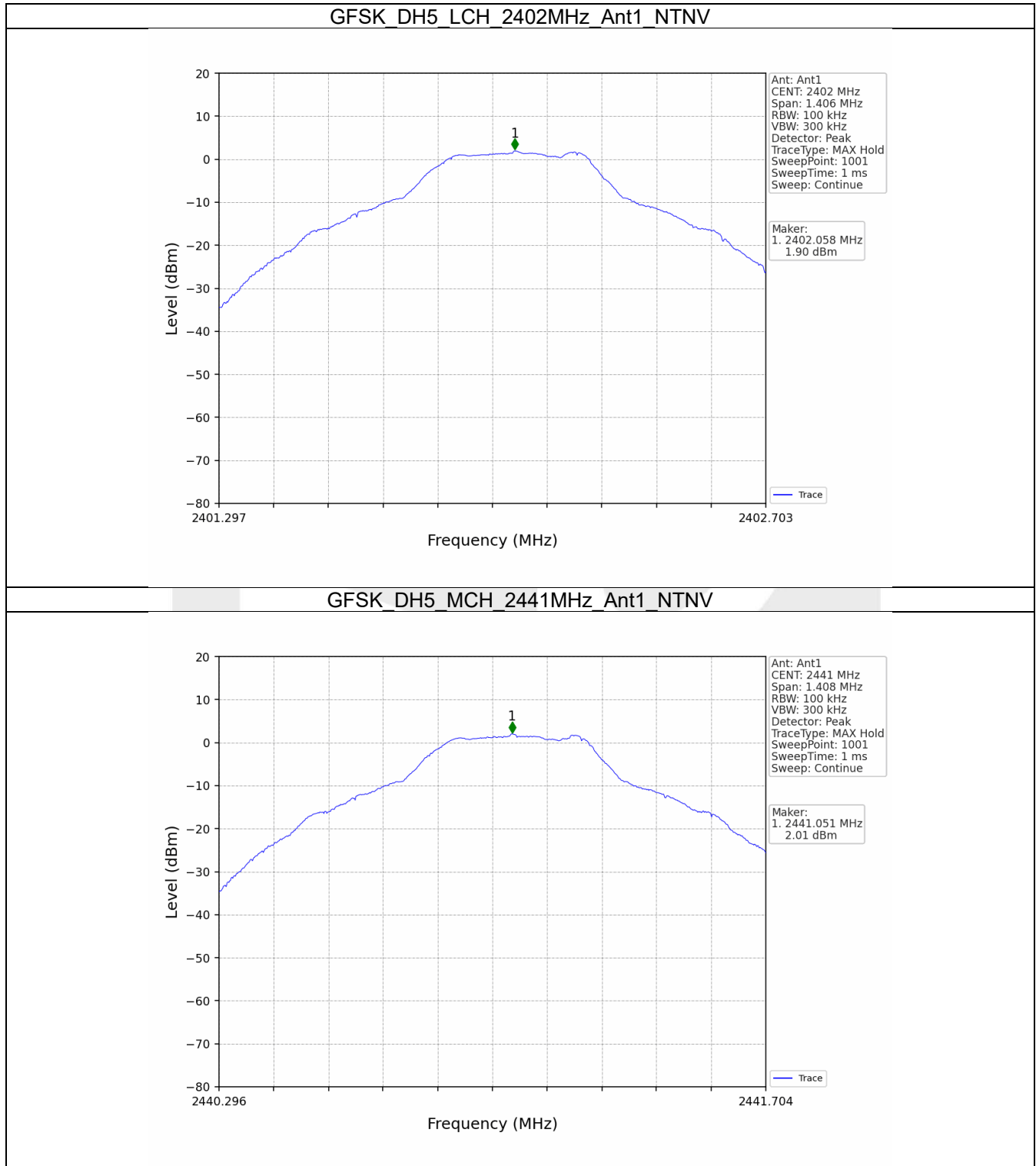
7.1 Ref

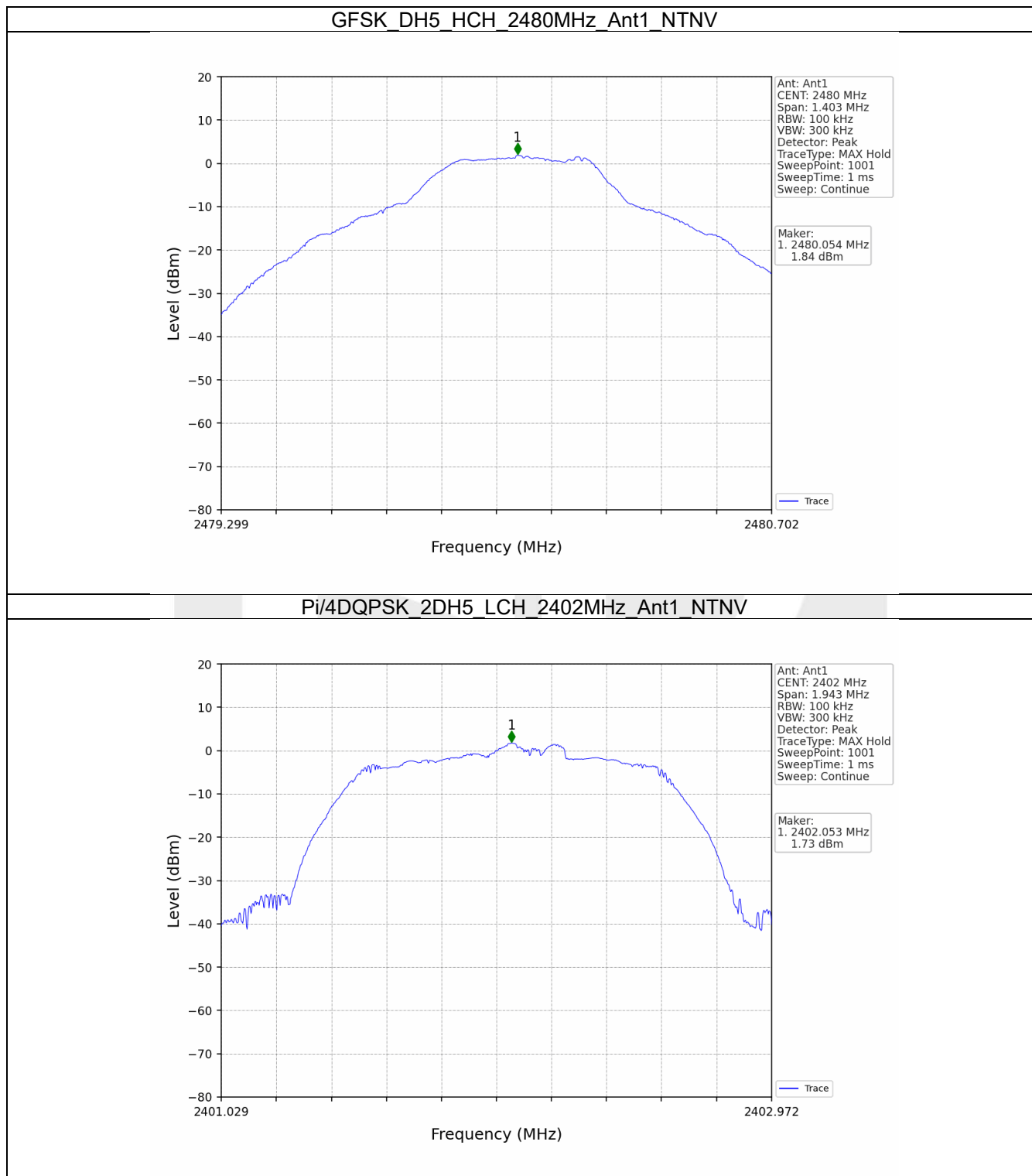
7.1.1 Test Result

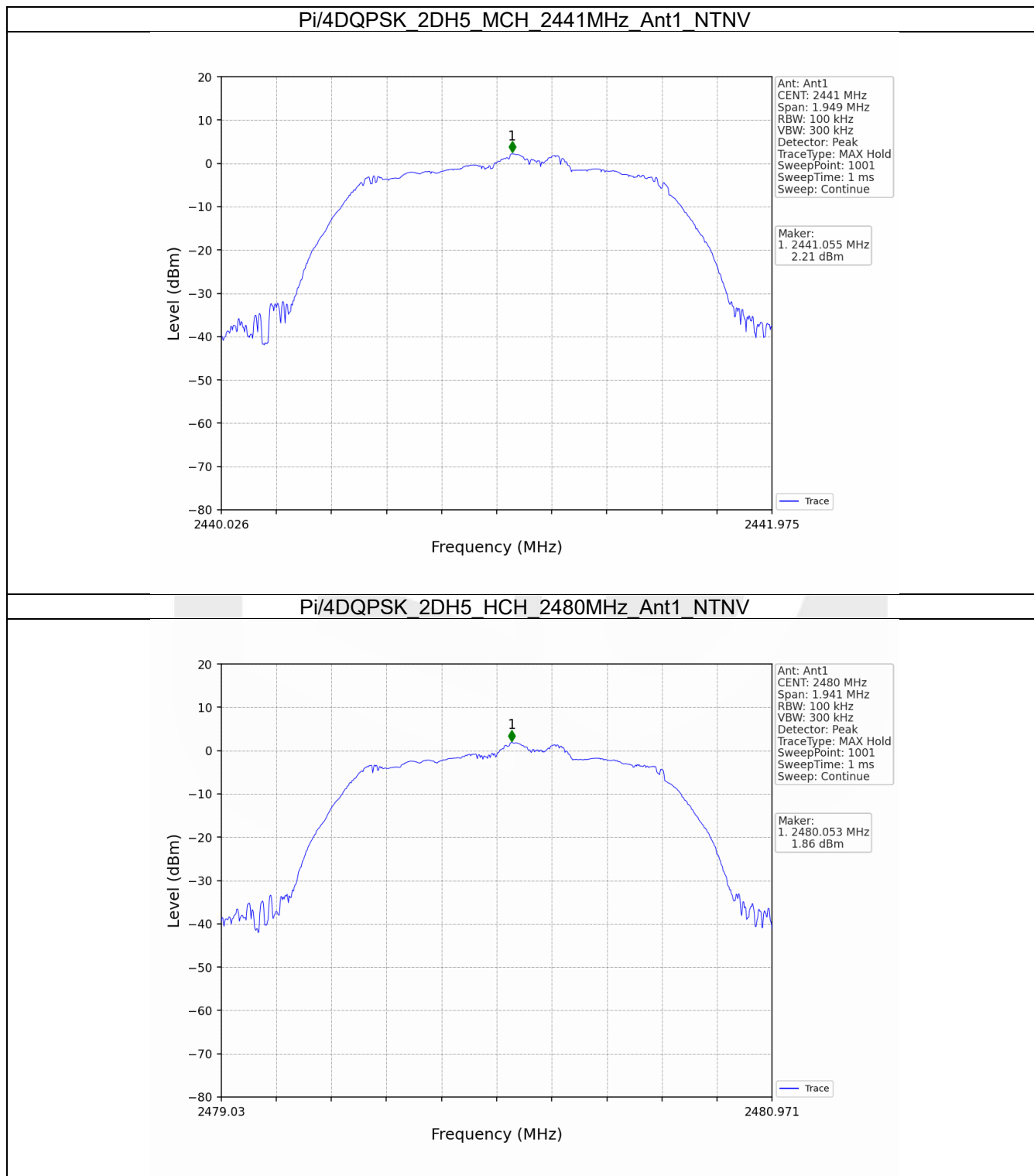
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	1.90
		2441	DH5	1	2.01
		2480	DH5	1	1.84
Pi/4DQPSK	SISO	2402	2DH5	1	1.73
		2441	2DH5	1	2.21
		2480	2DH5	1	1.86

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





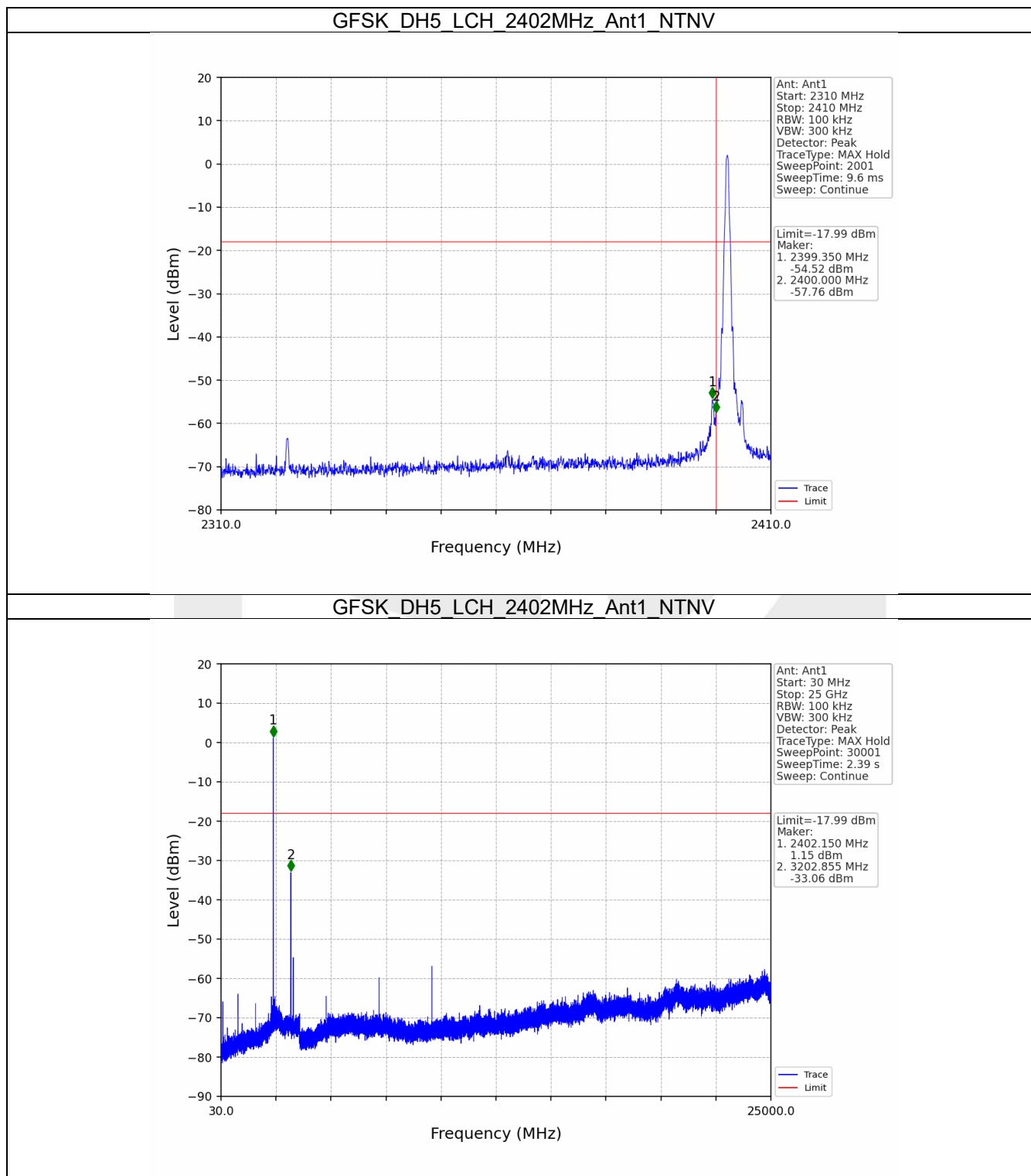


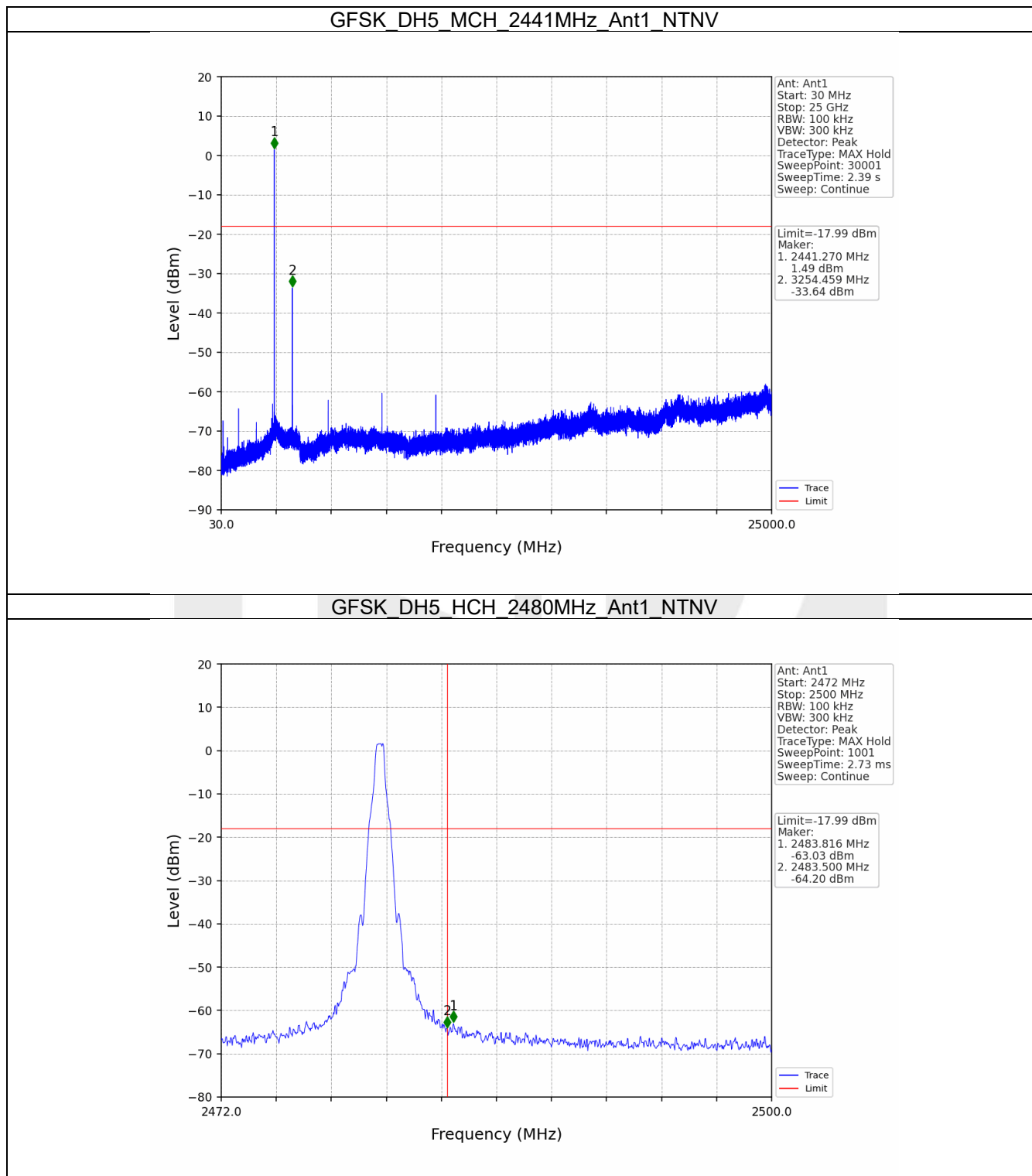
7.2 CSE

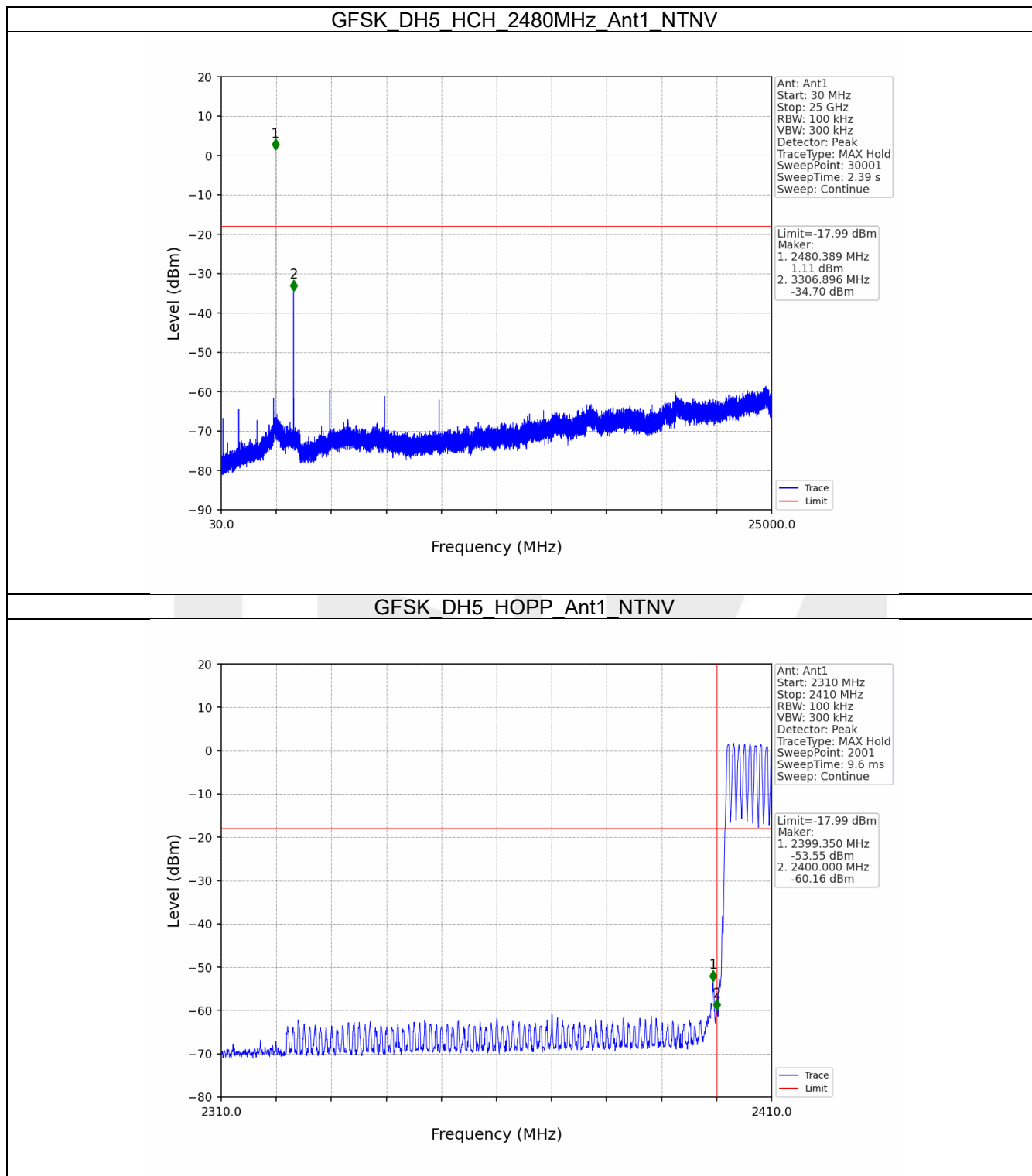
7.2.1 Test Result

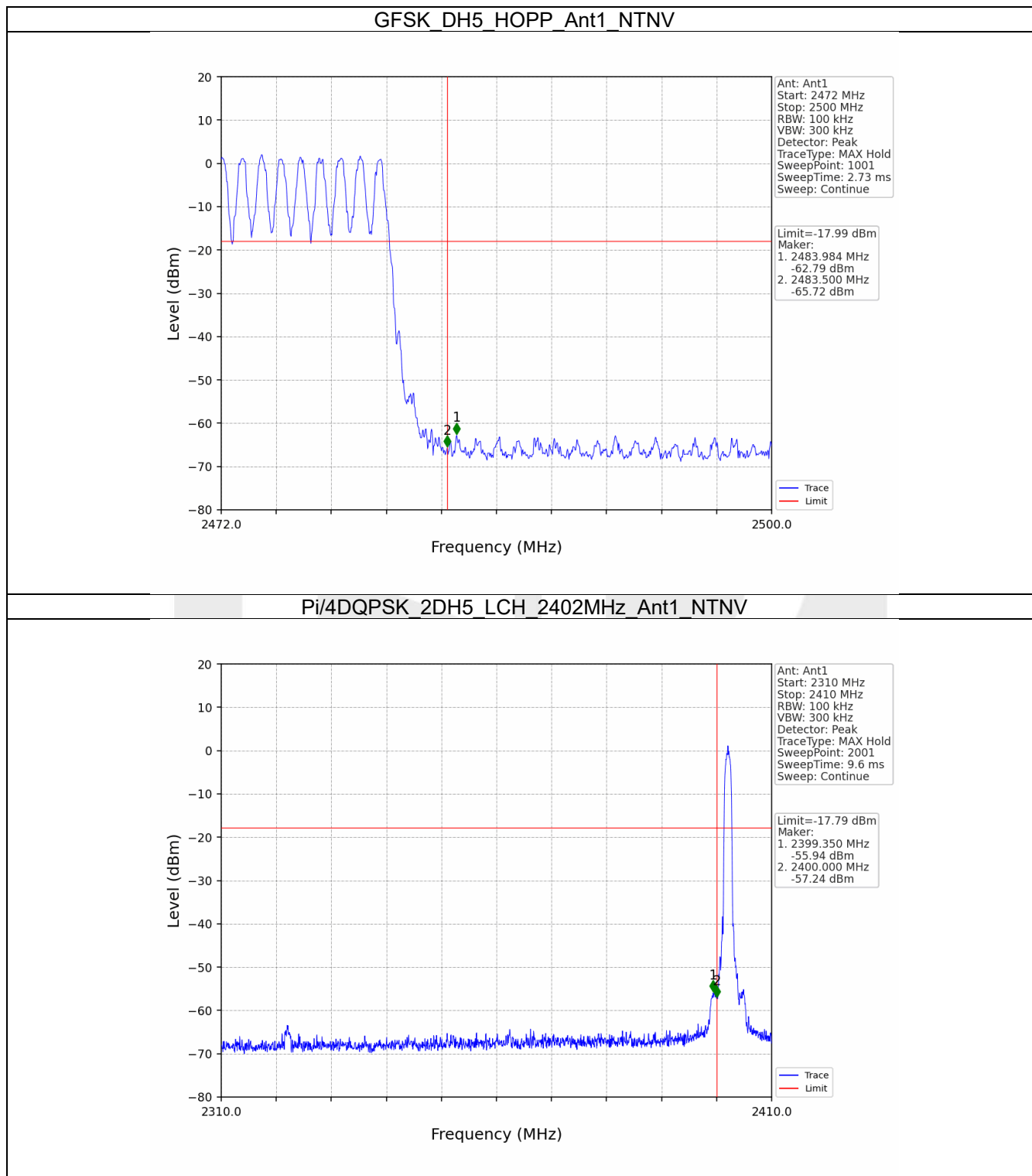
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	2.01	-17.99	Pass
		2441	DH5	1	2.01	-17.99	Pass
		2480	DH5	1	2.01	-17.99	Pass
		HOPP	DH5	1	2.01	-17.99	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	2.21	-17.79	Pass
		2441	2DH5	1	2.21	-17.79	Pass
		2480	2DH5	1	2.21	-17.79	Pass
		HOPP	2DH5	1	2.21	-17.79	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.							

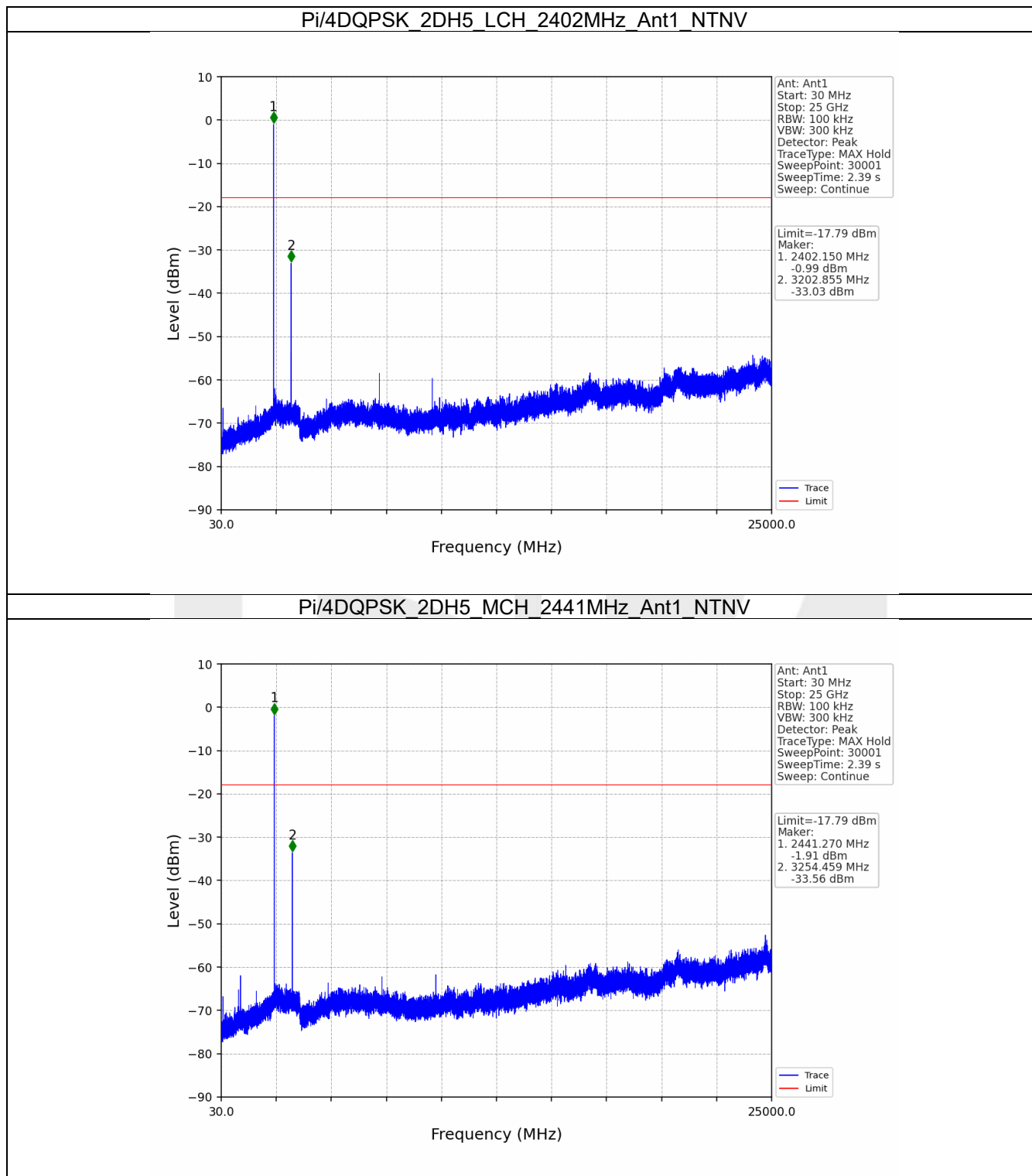
7.2.2 Test Graph

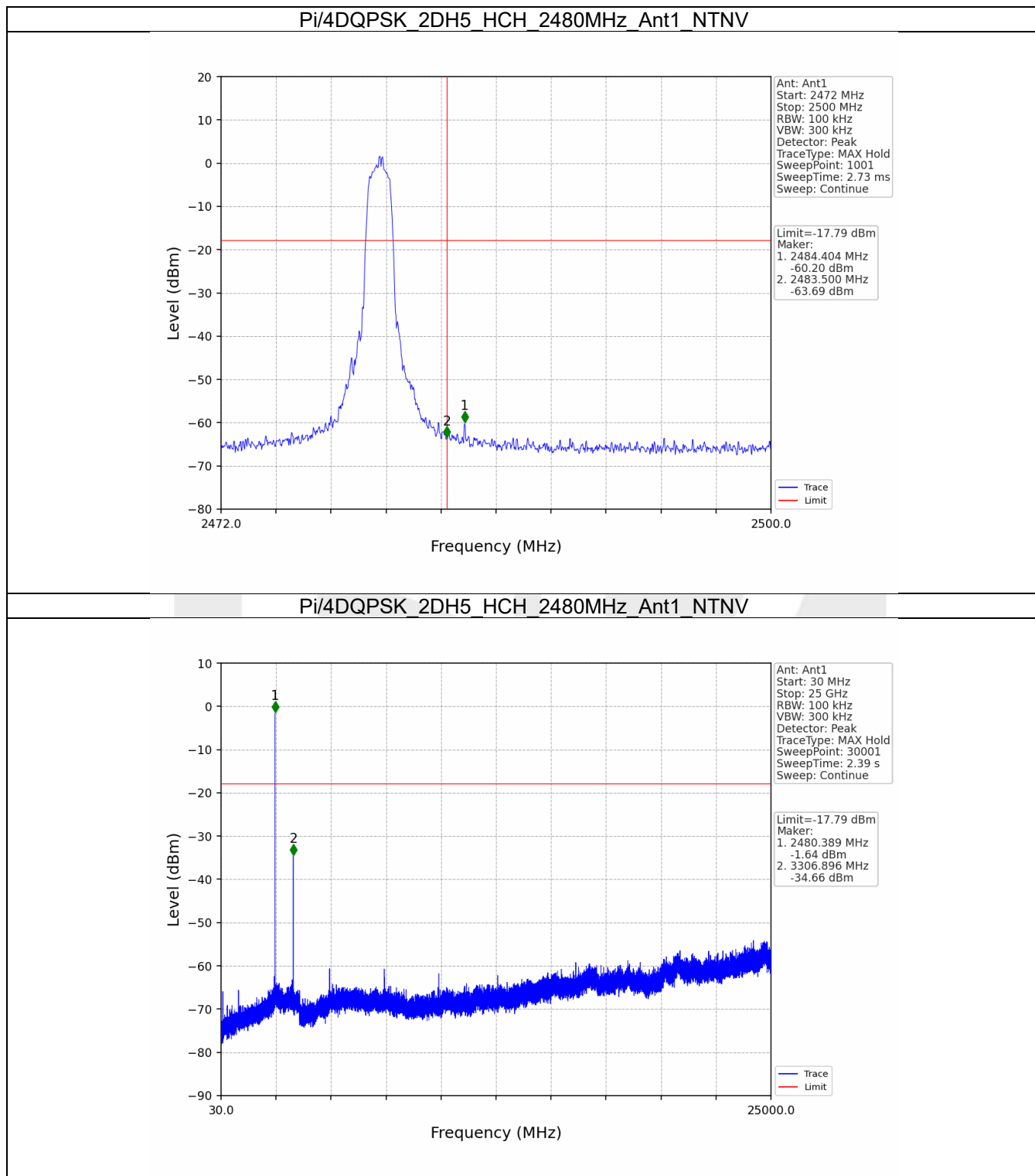


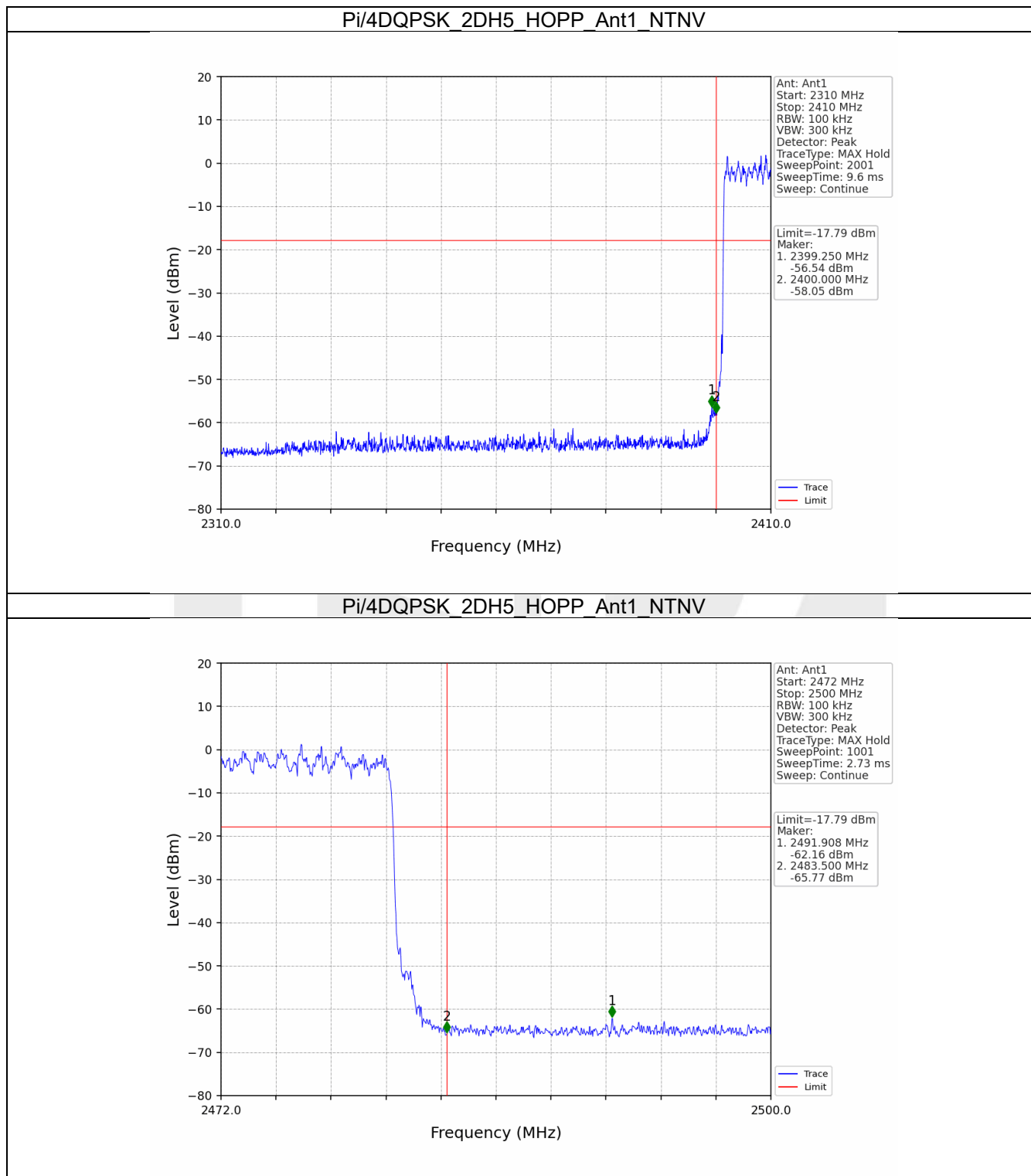












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