

ANNEX D TEST DATA

For

Project No.:	8132EU012601W
Client:	Dongshun Tech Development Limited
Product Name:	Portable Indoor/Outdoor Bluetooth Speaker
Model No.:	MI-S305B
FCC ID:	2AMPL-MI-S305B
Technology:	Bluetooth BDR&EDR
Test Engineer:	<i>Mikoy zhu</i>
Test Date:	2023-10-17

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



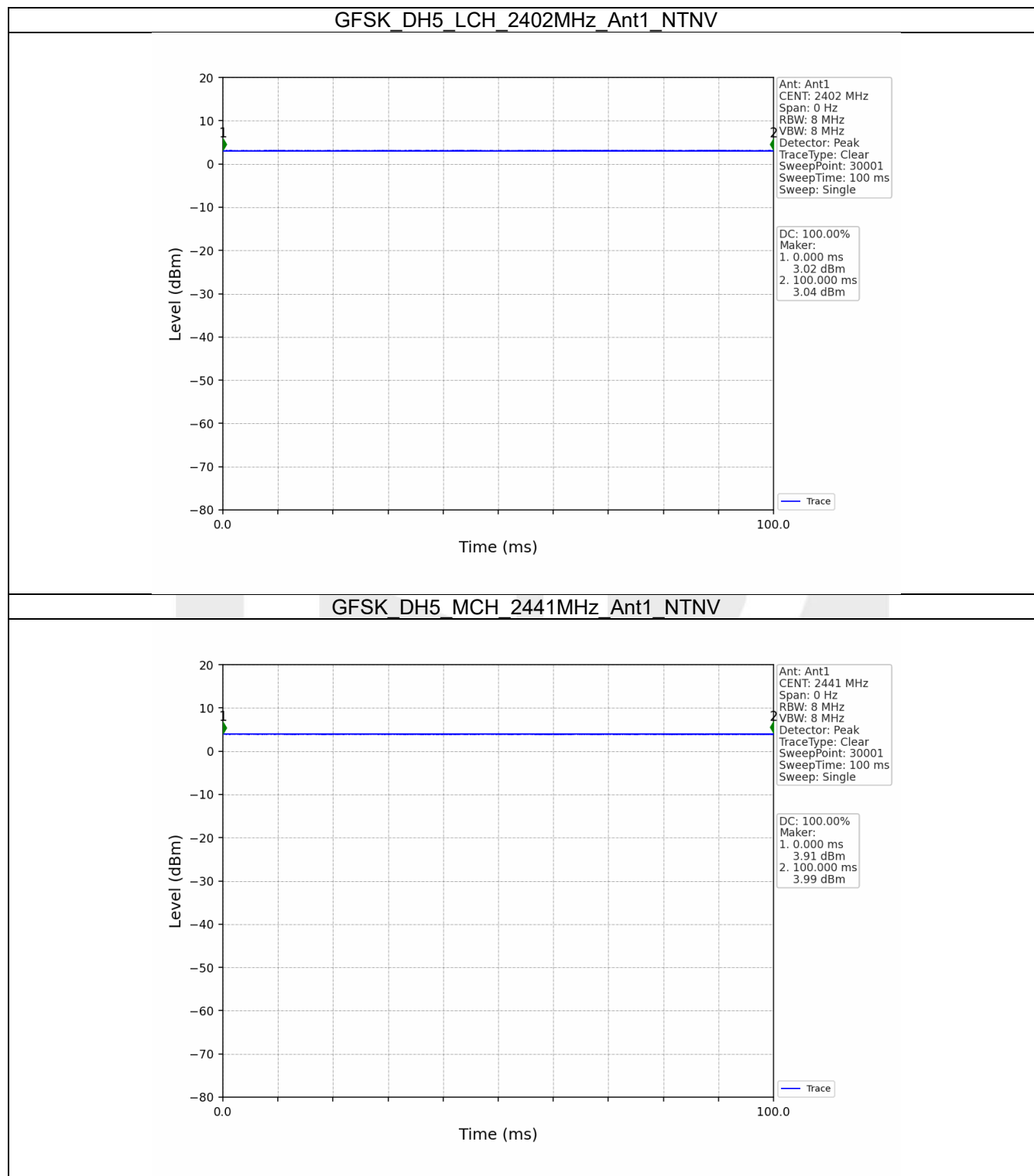
1. Duty Cycle

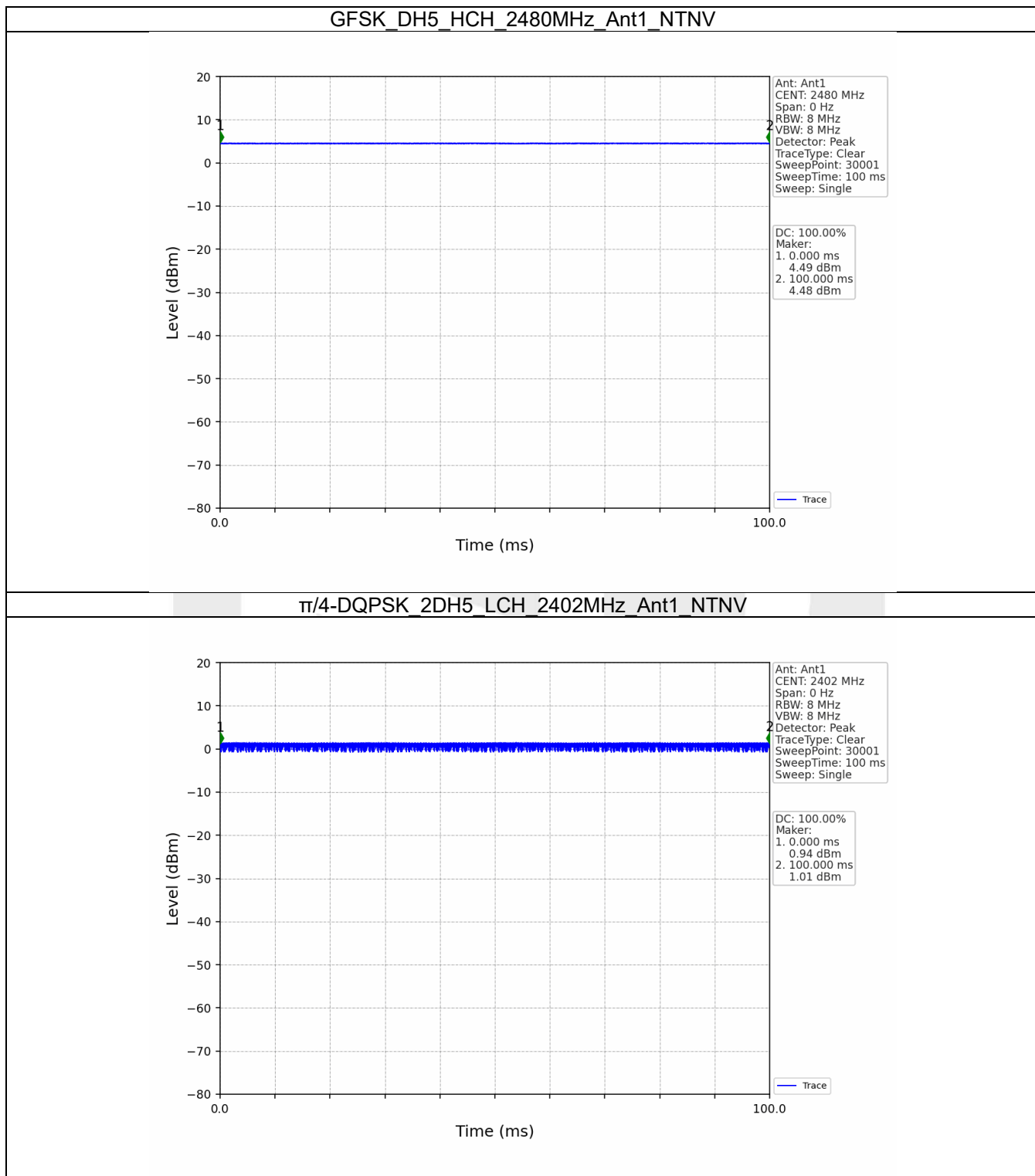
1.1 Ant1

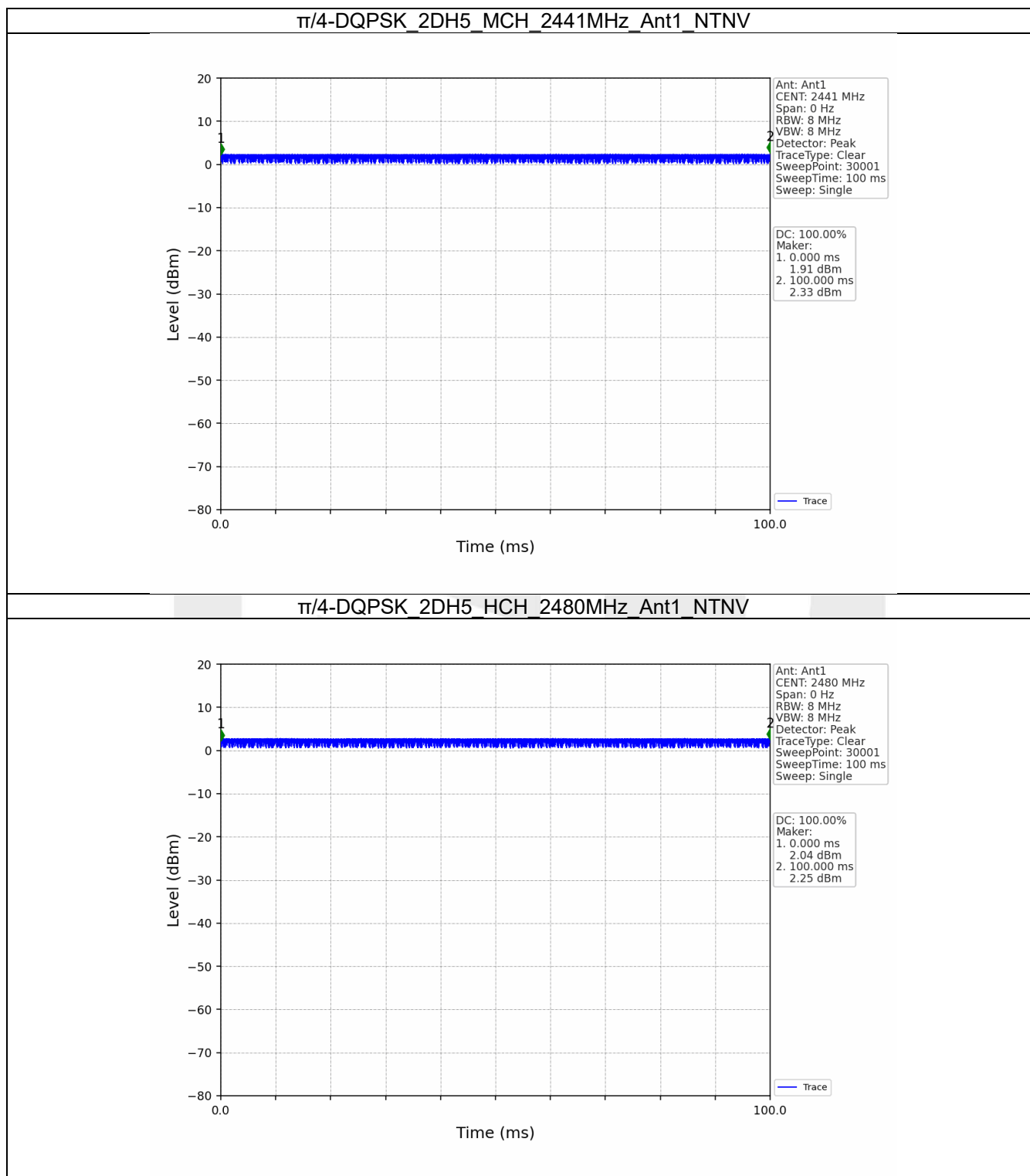
1.1.1 Test Result

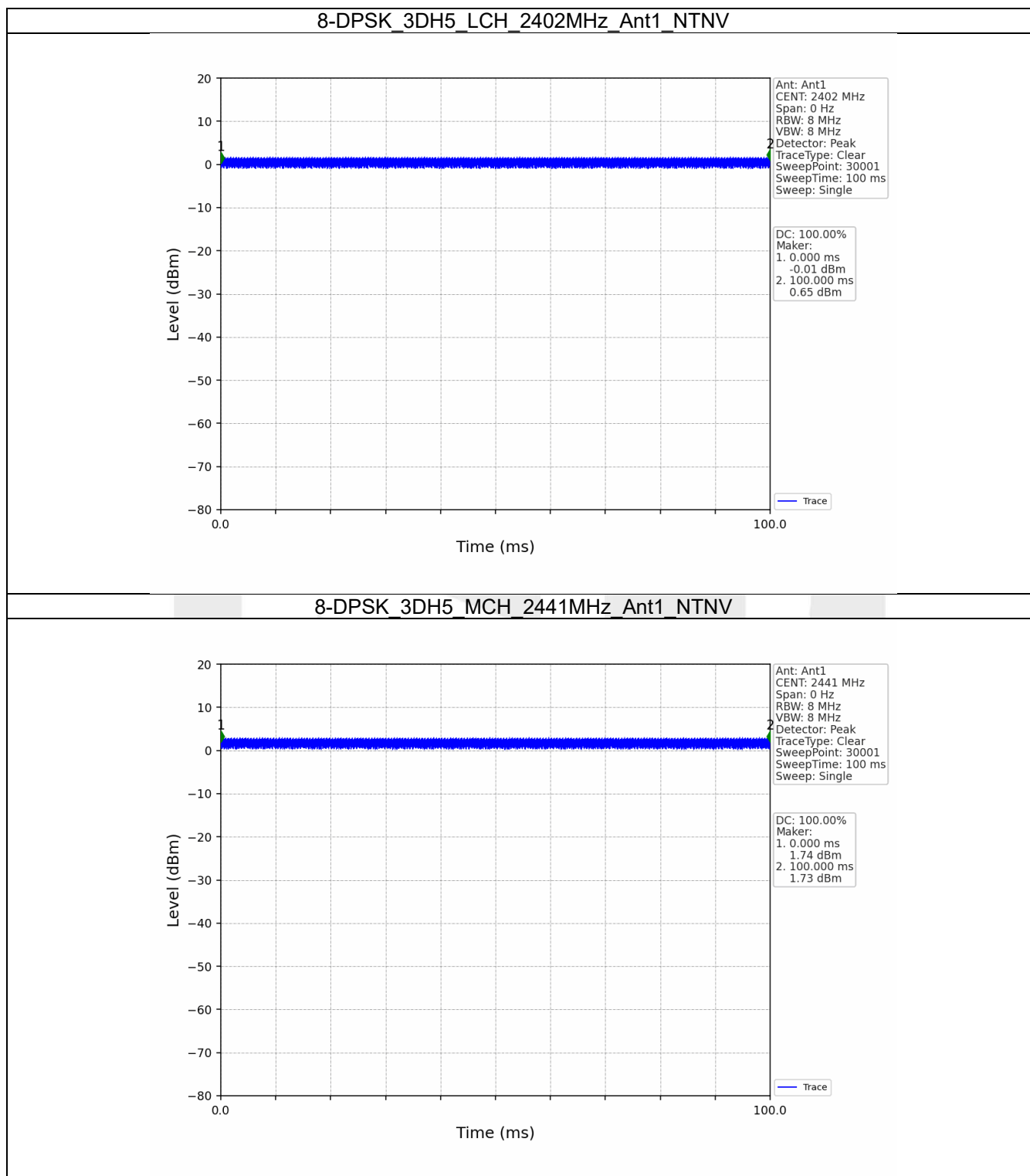
Ant1								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	100.000	100.000	100.00	0.00	0.00
		2441	DH5	100.000	100.000	100.00	0.00	0.00
		2480	DH5	100.000	100.000	100.00	0.00	0.00
$\pi/4$ -DQPSK	SISO	2402	2DH5	100.000	100.000	100.00	0.00	0.00
		2441	2DH5	100.000	100.000	100.00	0.00	0.00
		2480	2DH5	100.000	100.000	100.00	0.00	0.00
8-DPSK	SISO	2402	3DH5	100.000	100.000	100.00	0.00	0.00
		2441	3DH5	100.000	100.000	100.00	0.00	0.00
		2480	3DH5	100.000	100.000	100.00	0.00	0.00

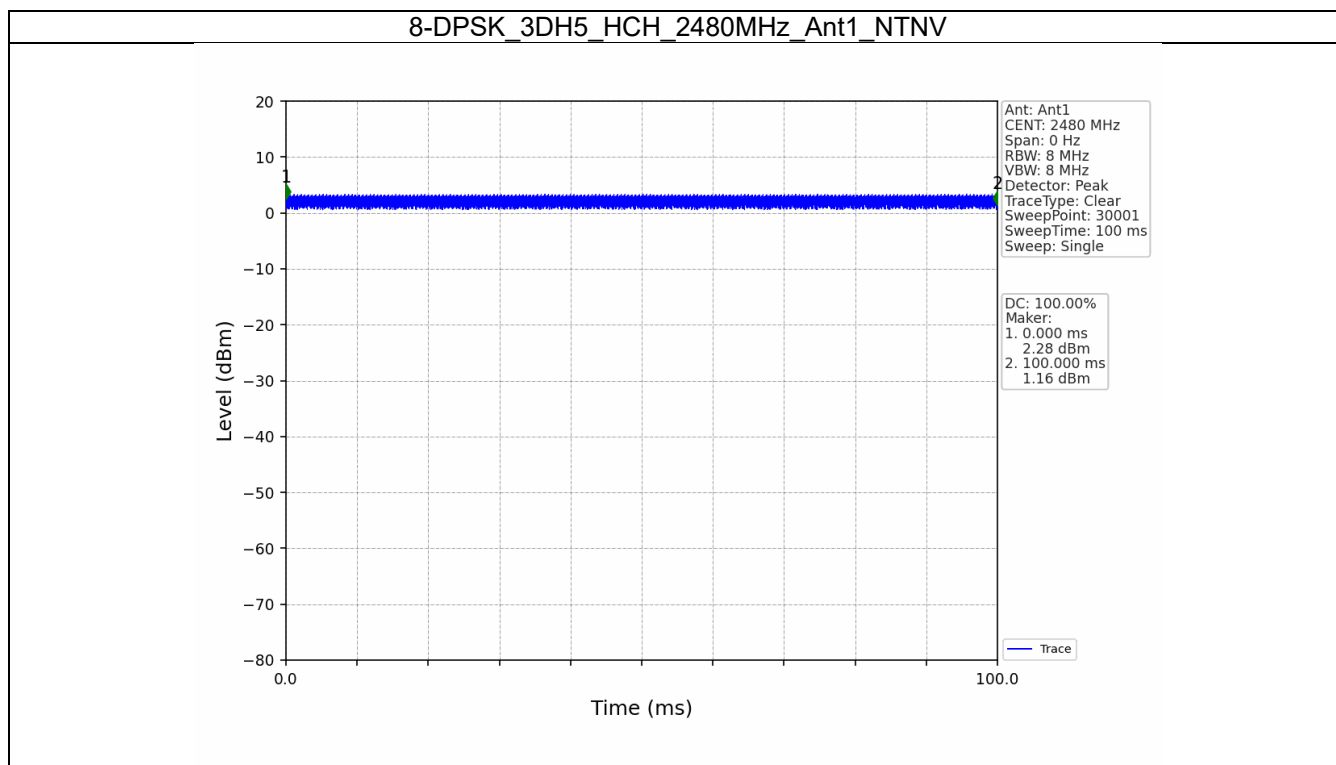
1.1.2 Test Graph











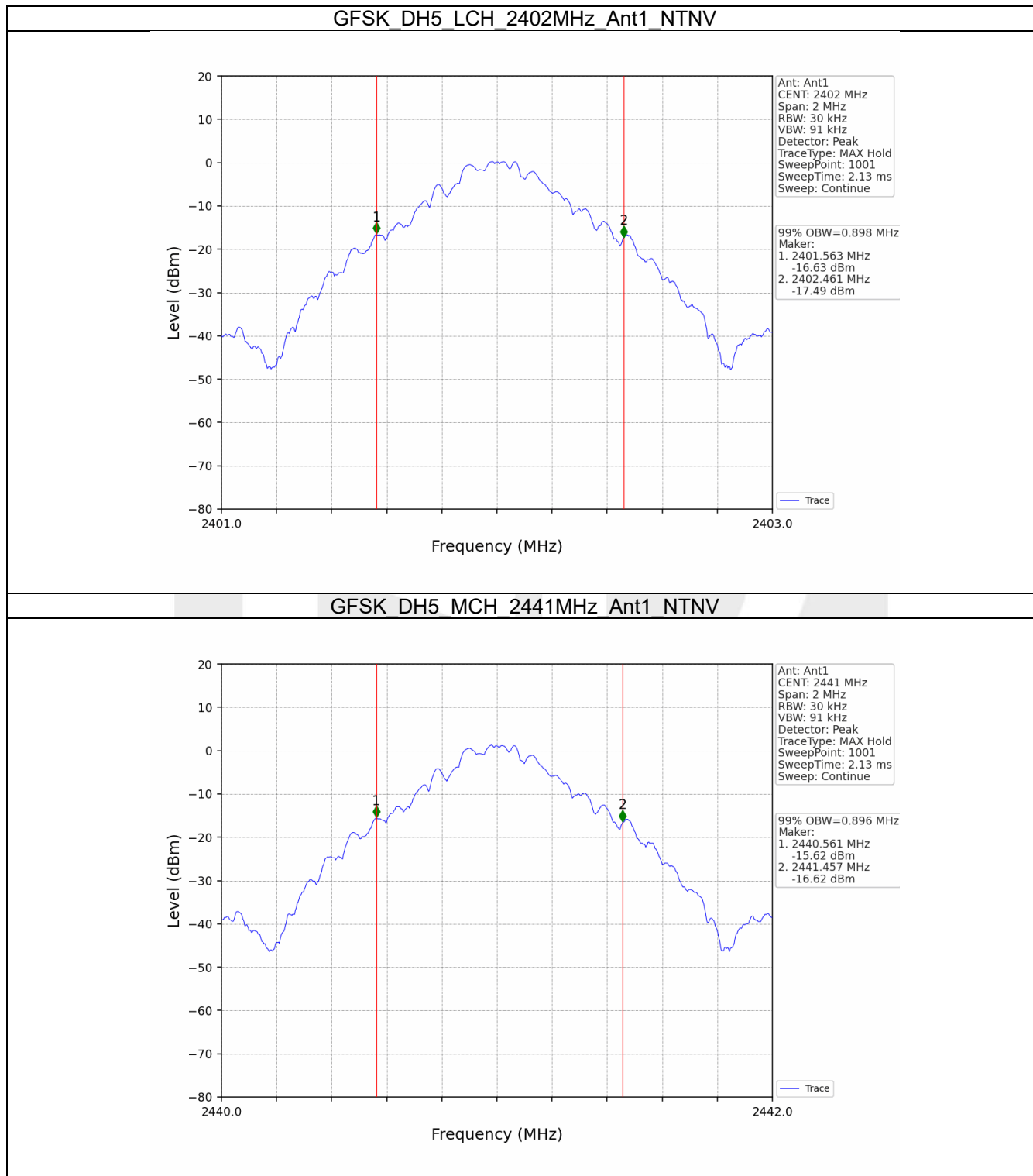
2. Bandwidth

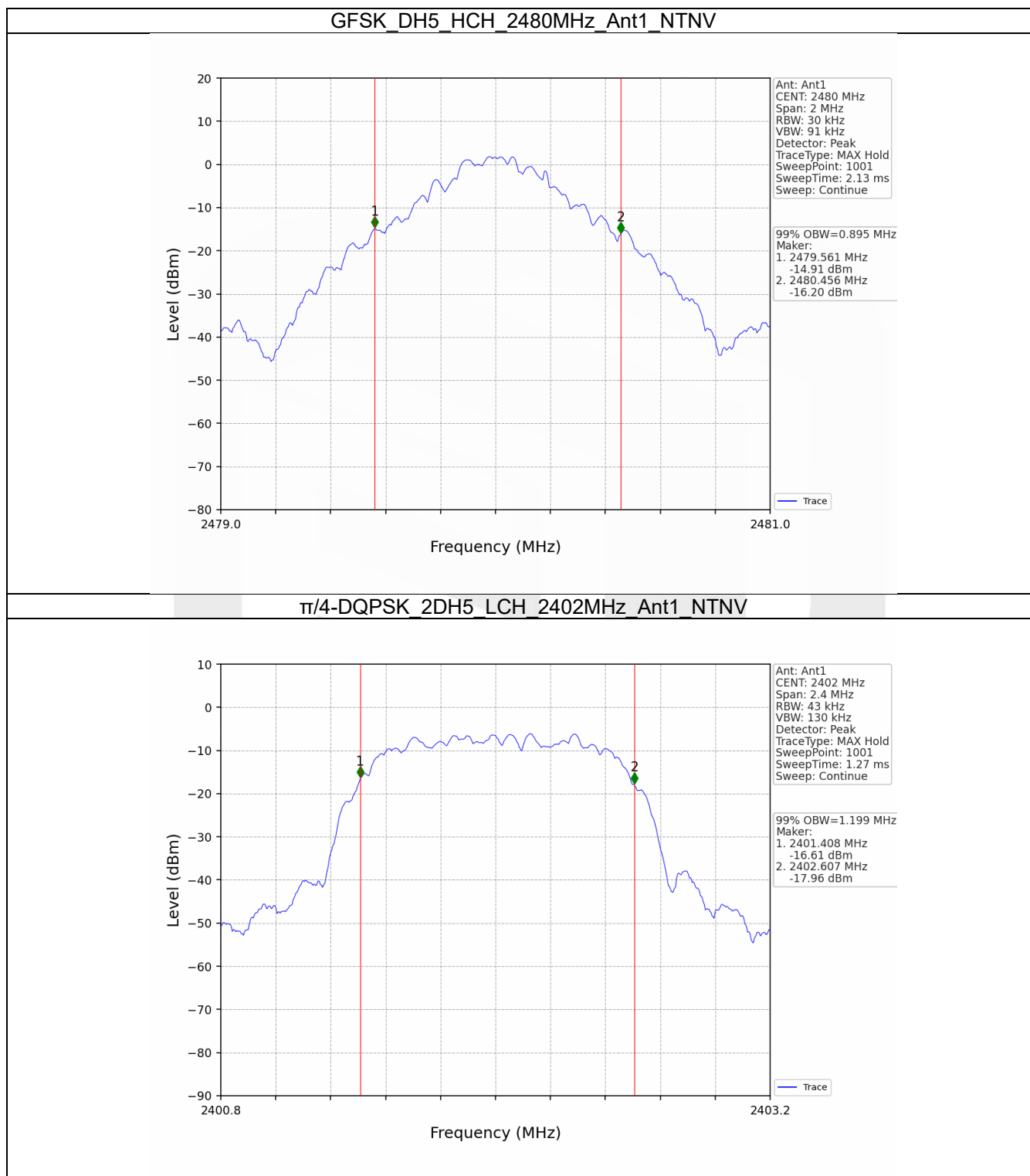
2.1 OBW

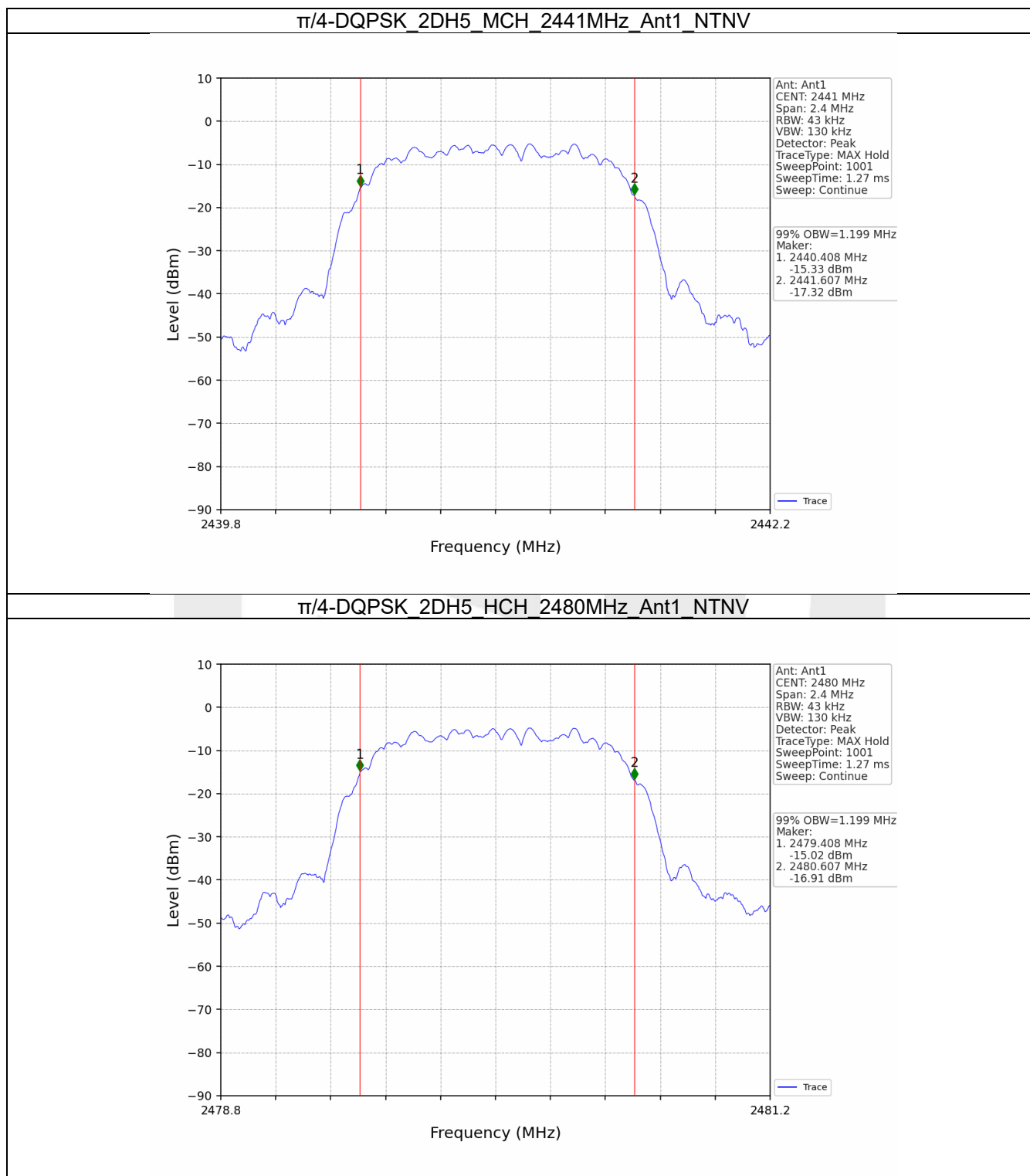
2.1.1 Test Result

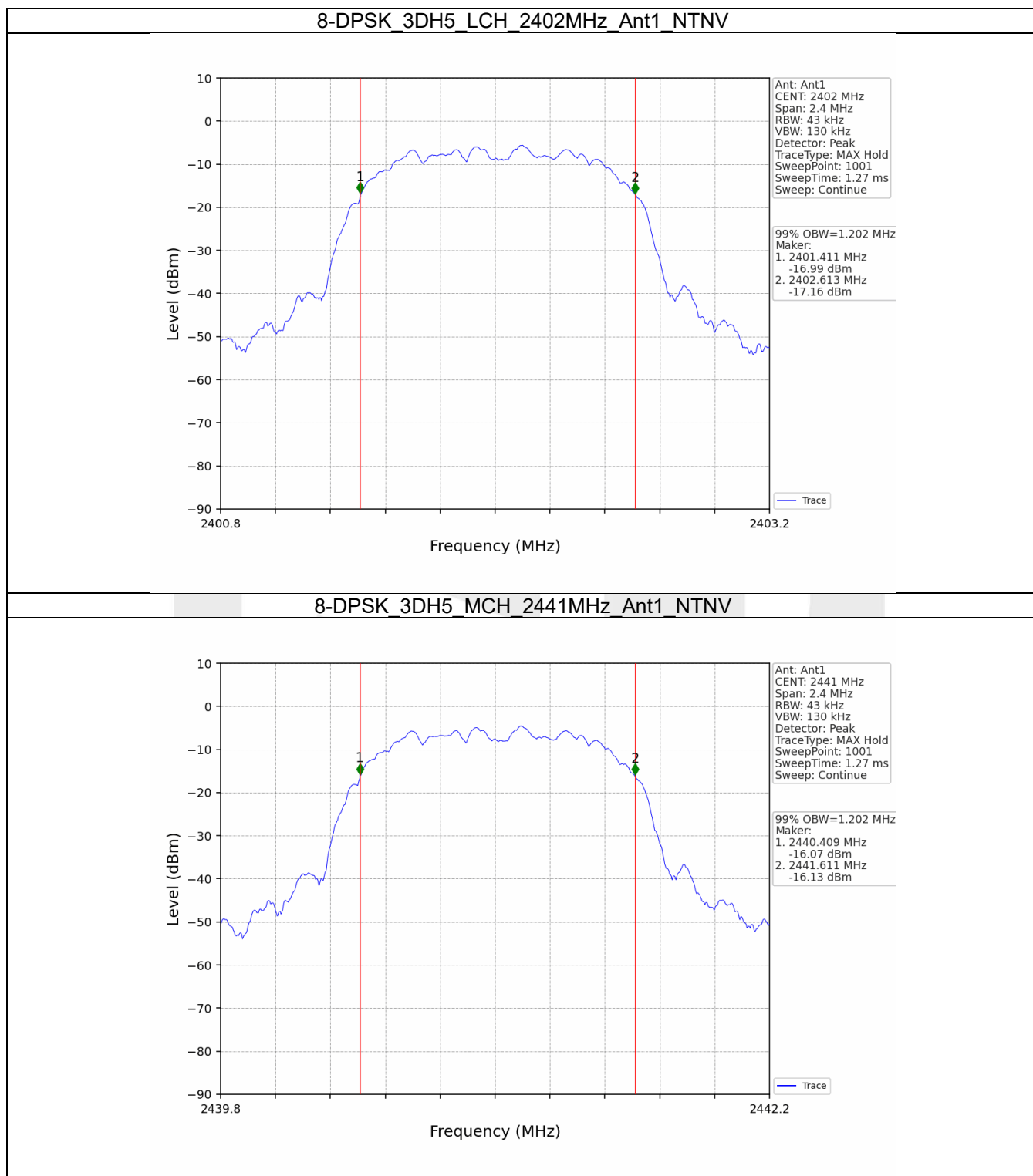
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.898	Pass
		2441	DH5	1	0.896	Pass
		2480	DH5	1	0.895	Pass
$\pi/4$ -DQPSK	SISO	2402	2DH5	1	1.199	Pass
		2441	2DH5	1	1.199	Pass
		2480	2DH5	1	1.199	Pass
8-DPSK	SISO	2402	3DH5	1	1.202	Pass
		2441	3DH5	1	1.202	Pass
		2480	3DH5	1	1.202	Pass

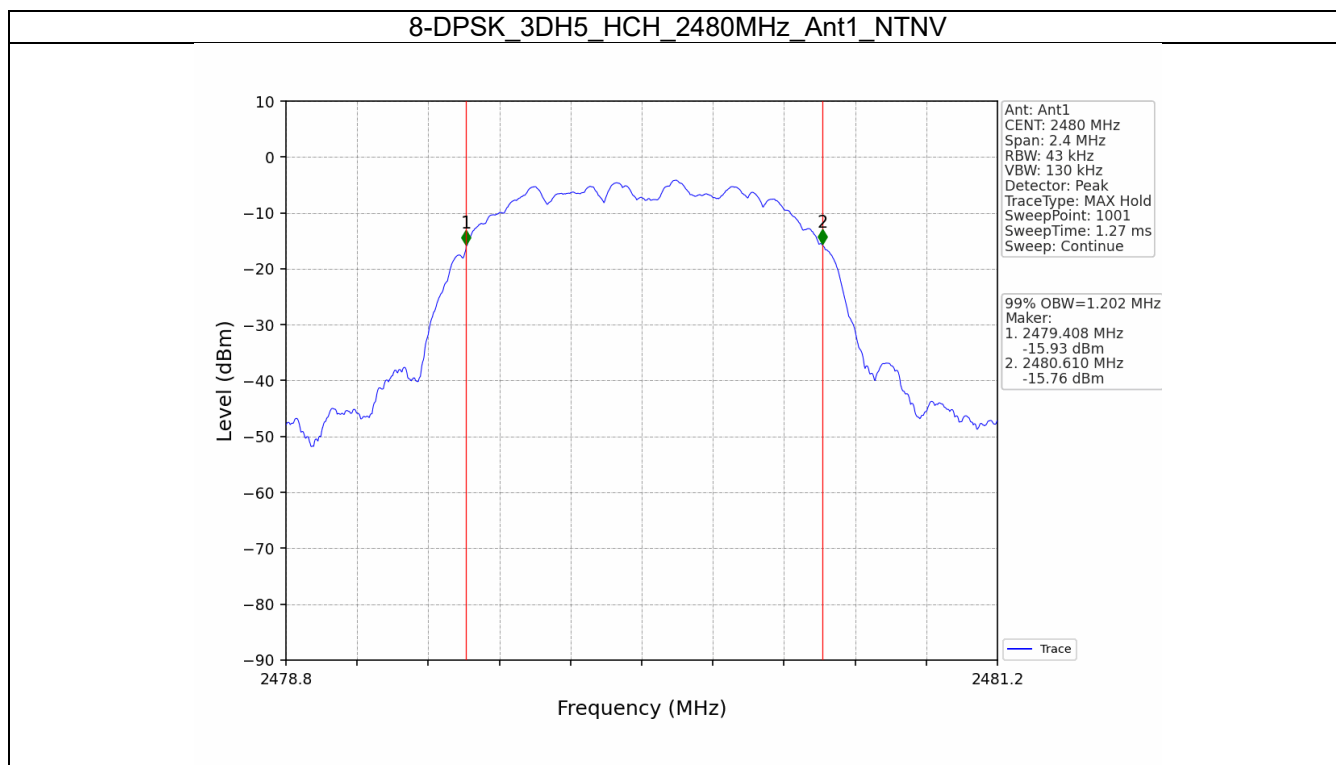
2.1.2 Test Graph









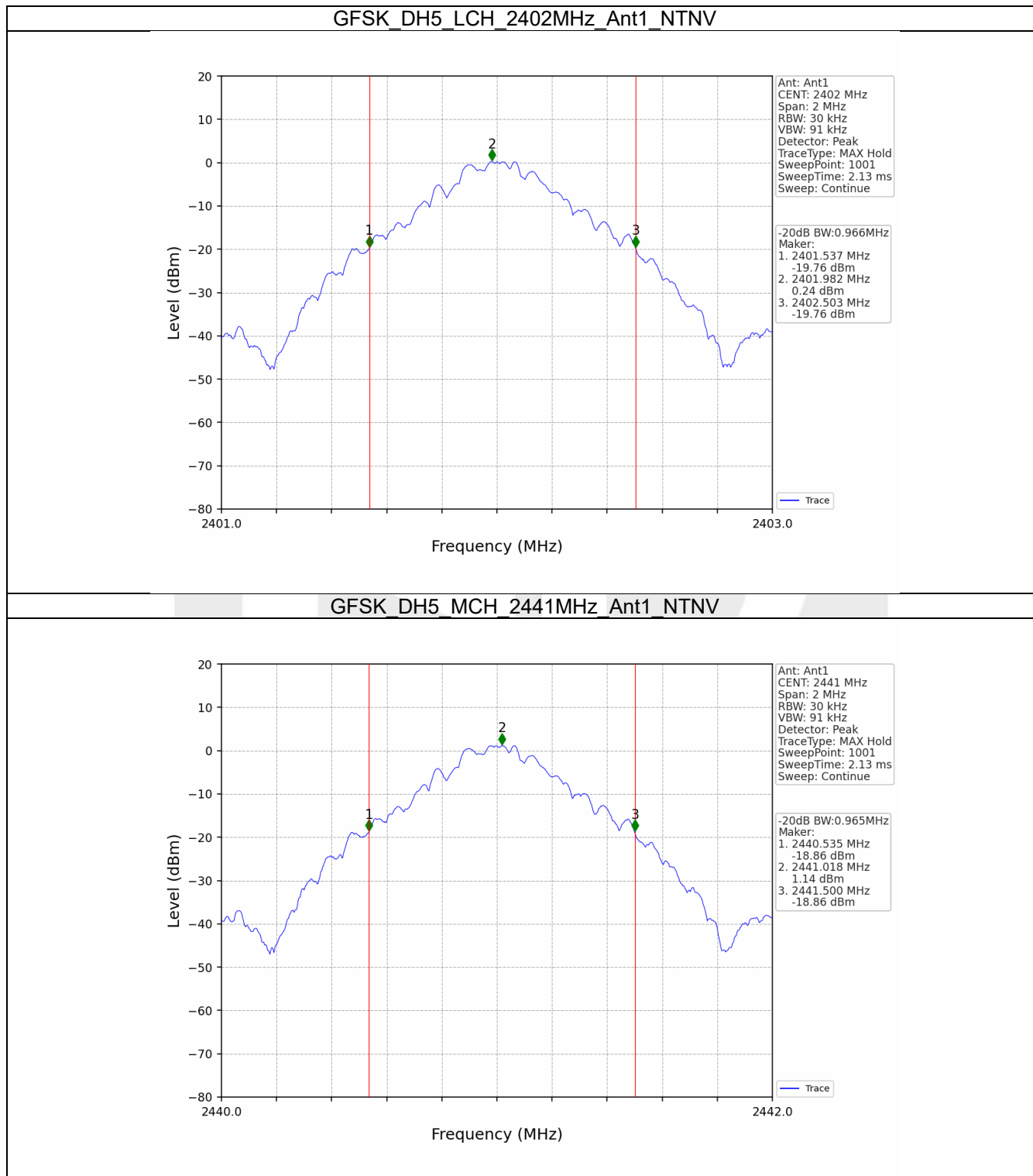


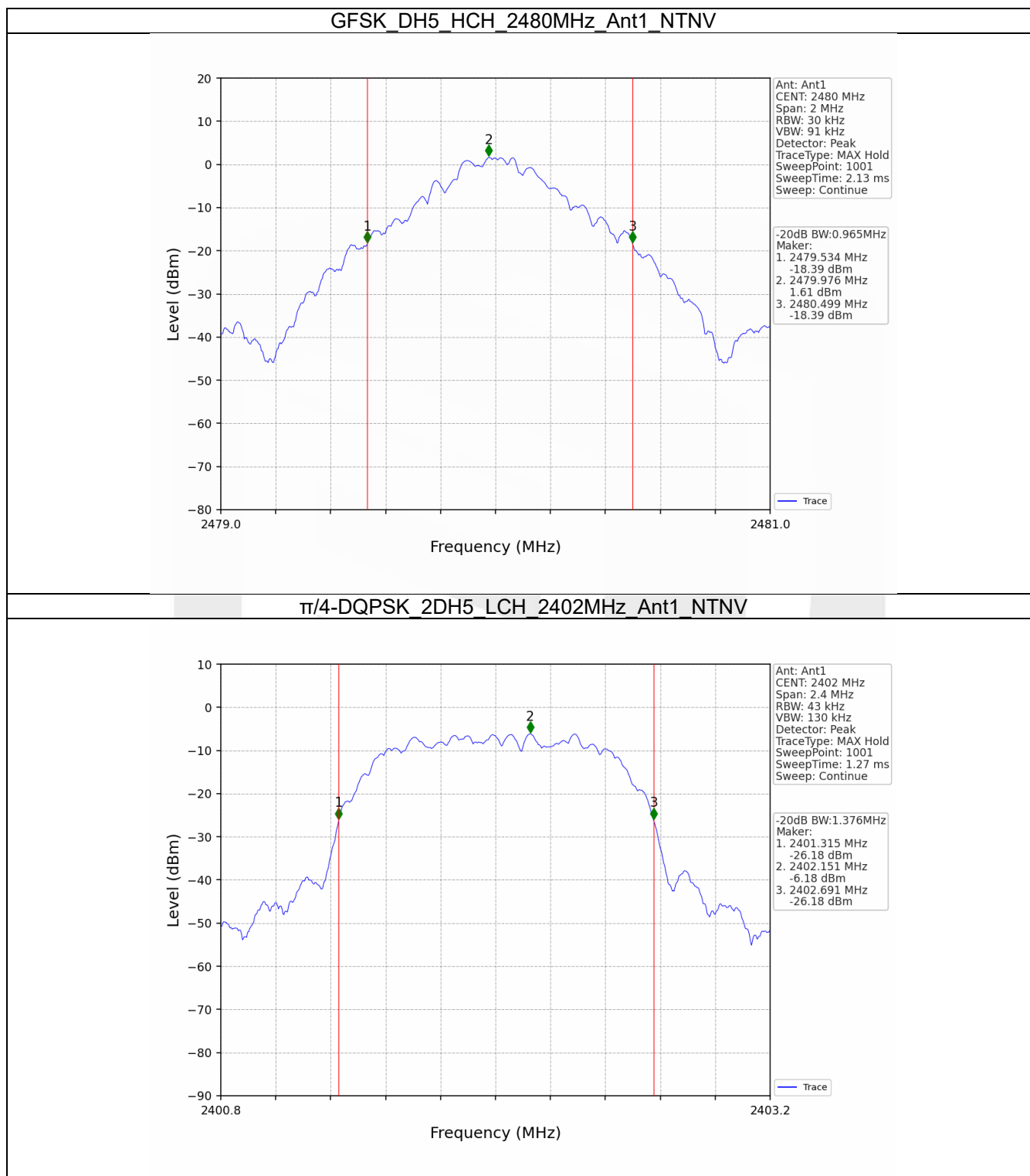
2.2 20dB BW

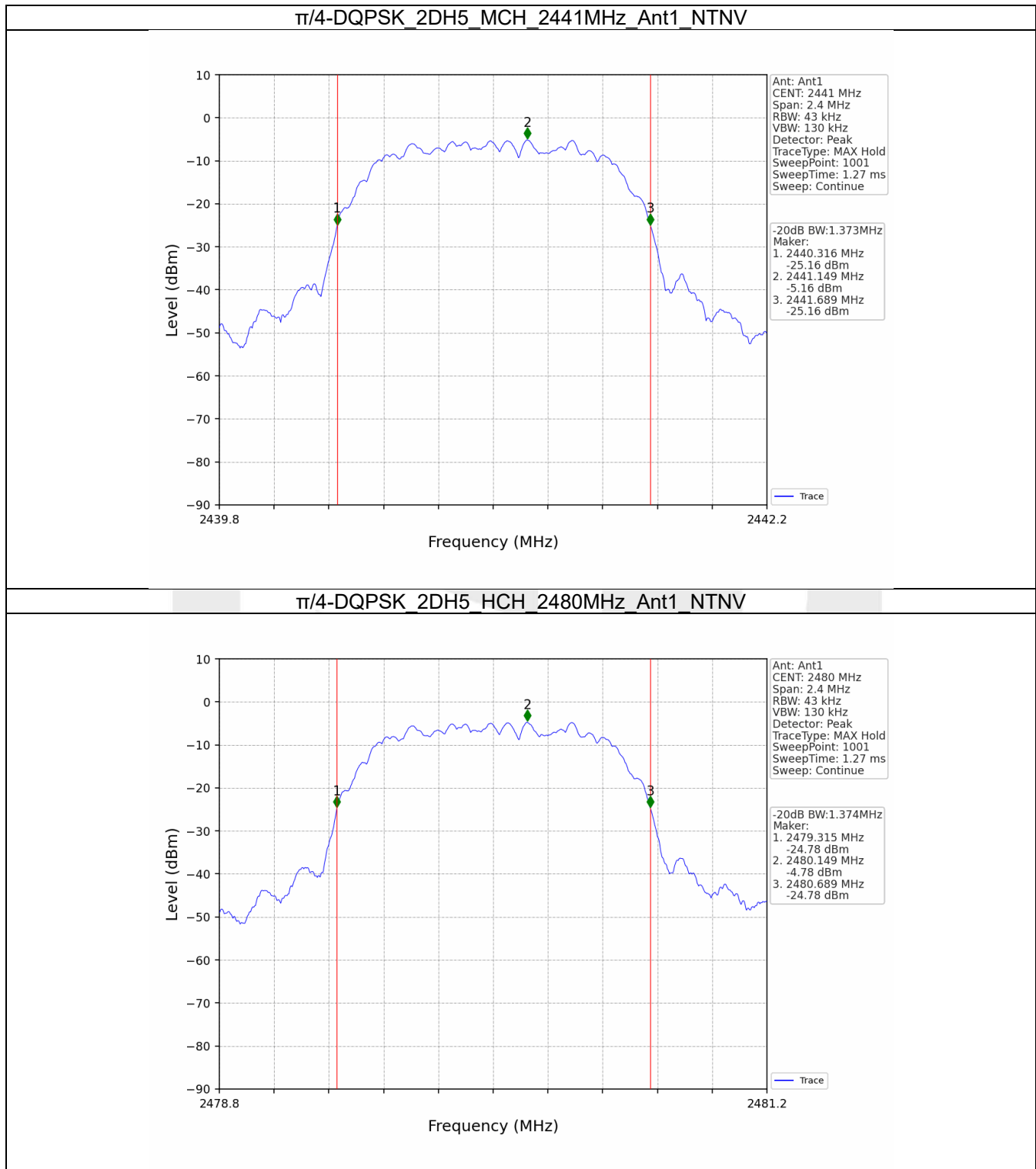
2.2.1 Test Result

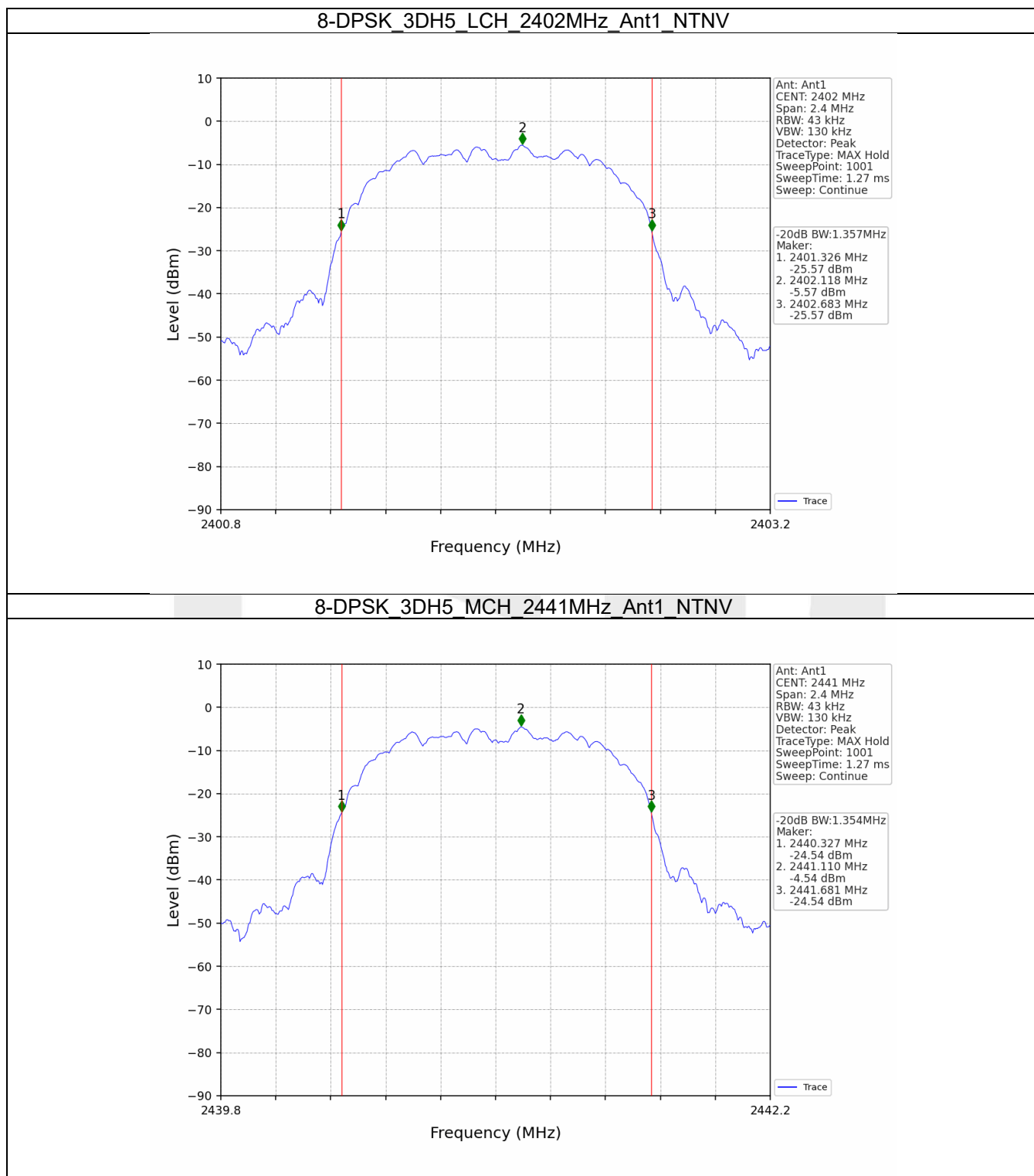
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.966	Pass
		2441	DH5	1	0.965	Pass
		2480	DH5	1	0.965	Pass
$\pi/4$ -DQPSK	SISO	2402	2DH5	1	1.376	Pass
		2441	2DH5	1	1.373	Pass
		2480	2DH5	1	1.374	Pass
8-DPSK	SISO	2402	3DH5	1	1.357	Pass
		2441	3DH5	1	1.354	Pass
		2480	3DH5	1	1.354	Pass

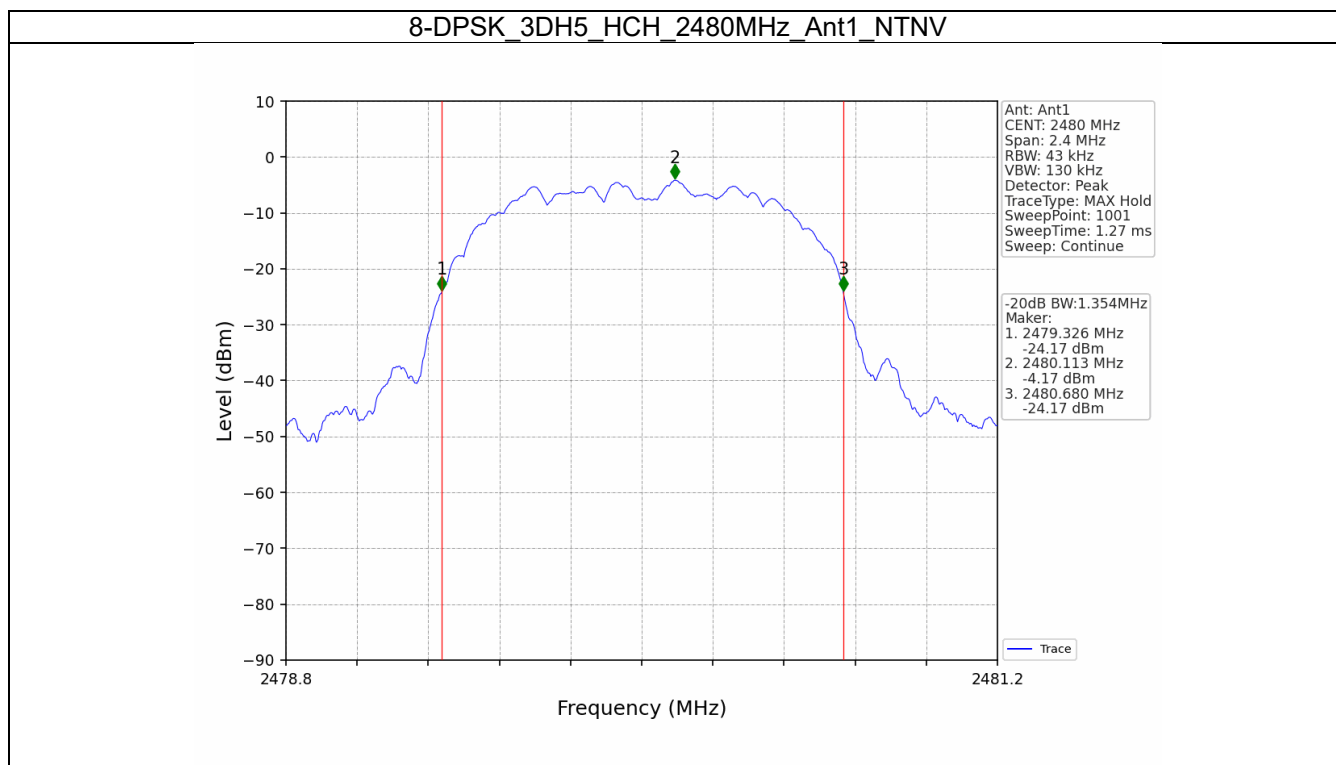
2.2.2 Test Graph











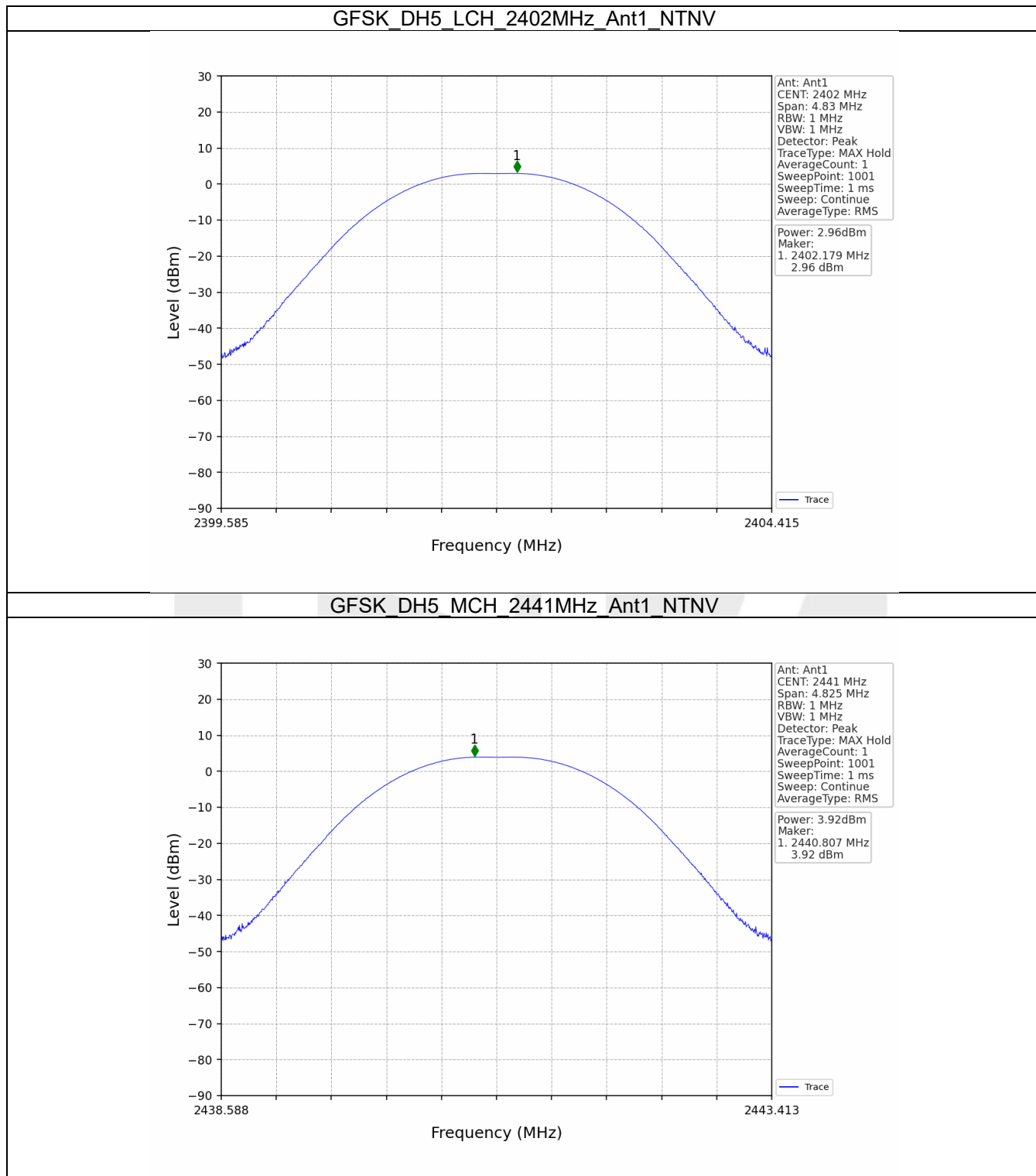
3. Maximum Conducted Output Power

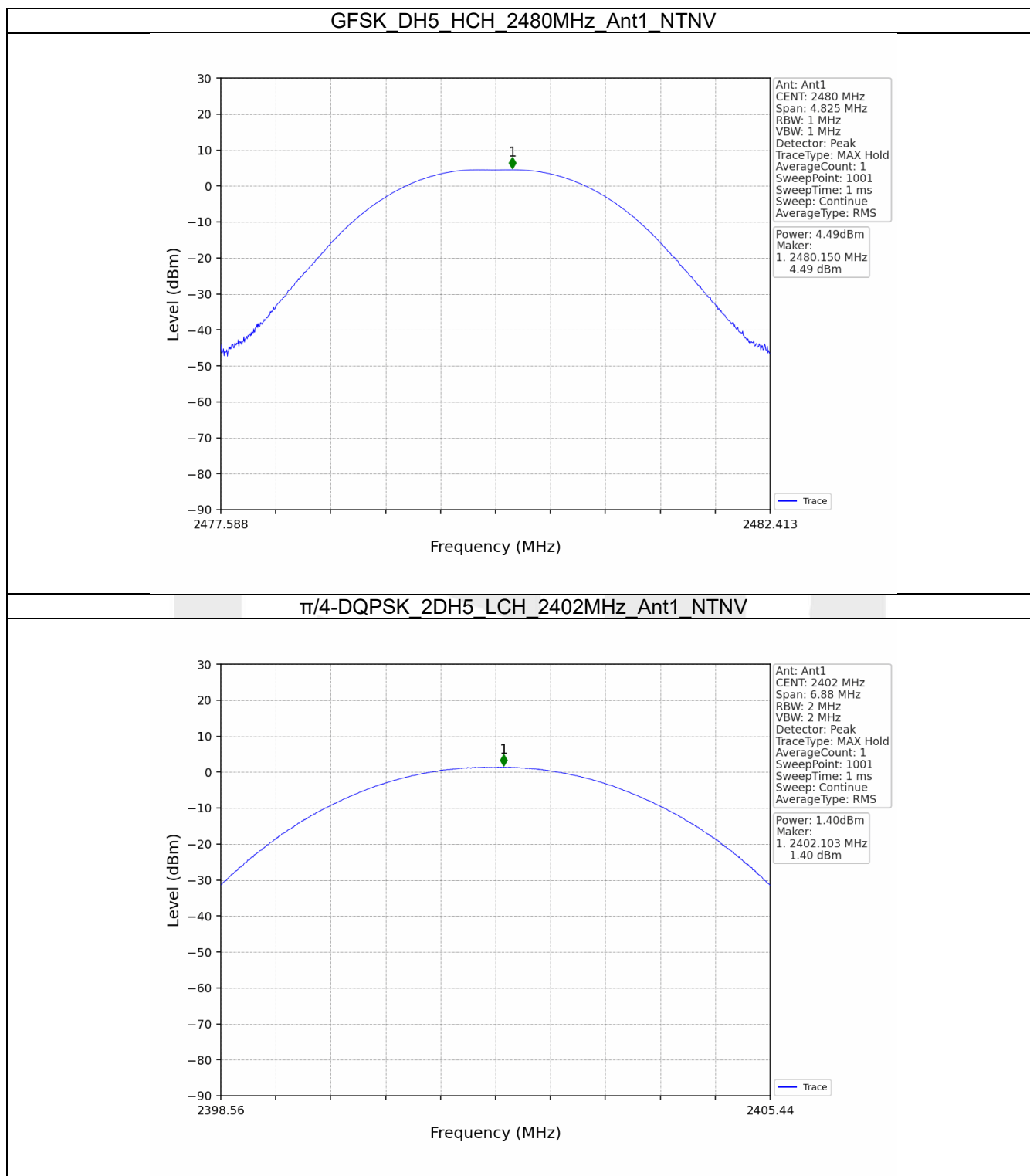
3.1 Power

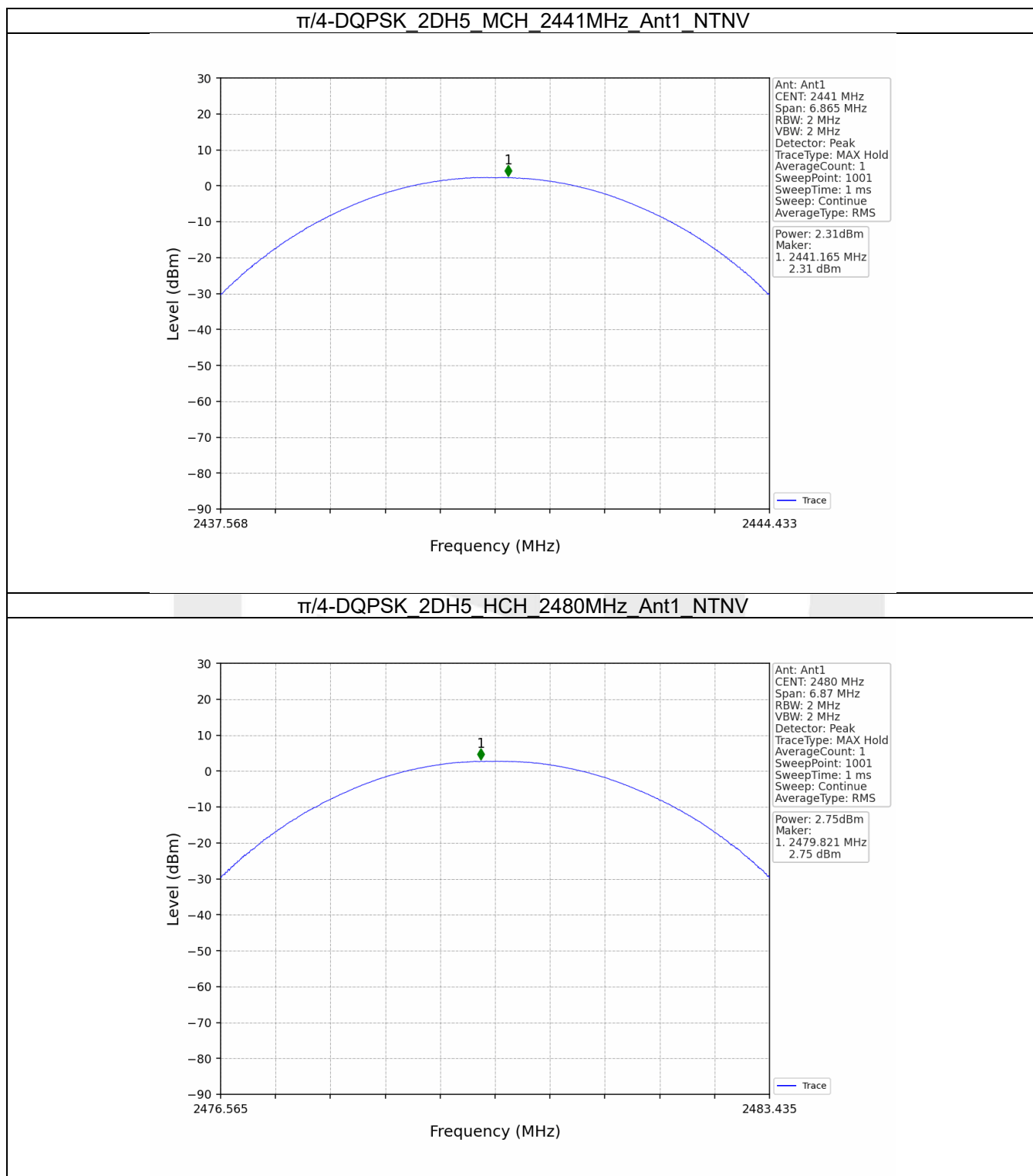
3.1.1 Test Result

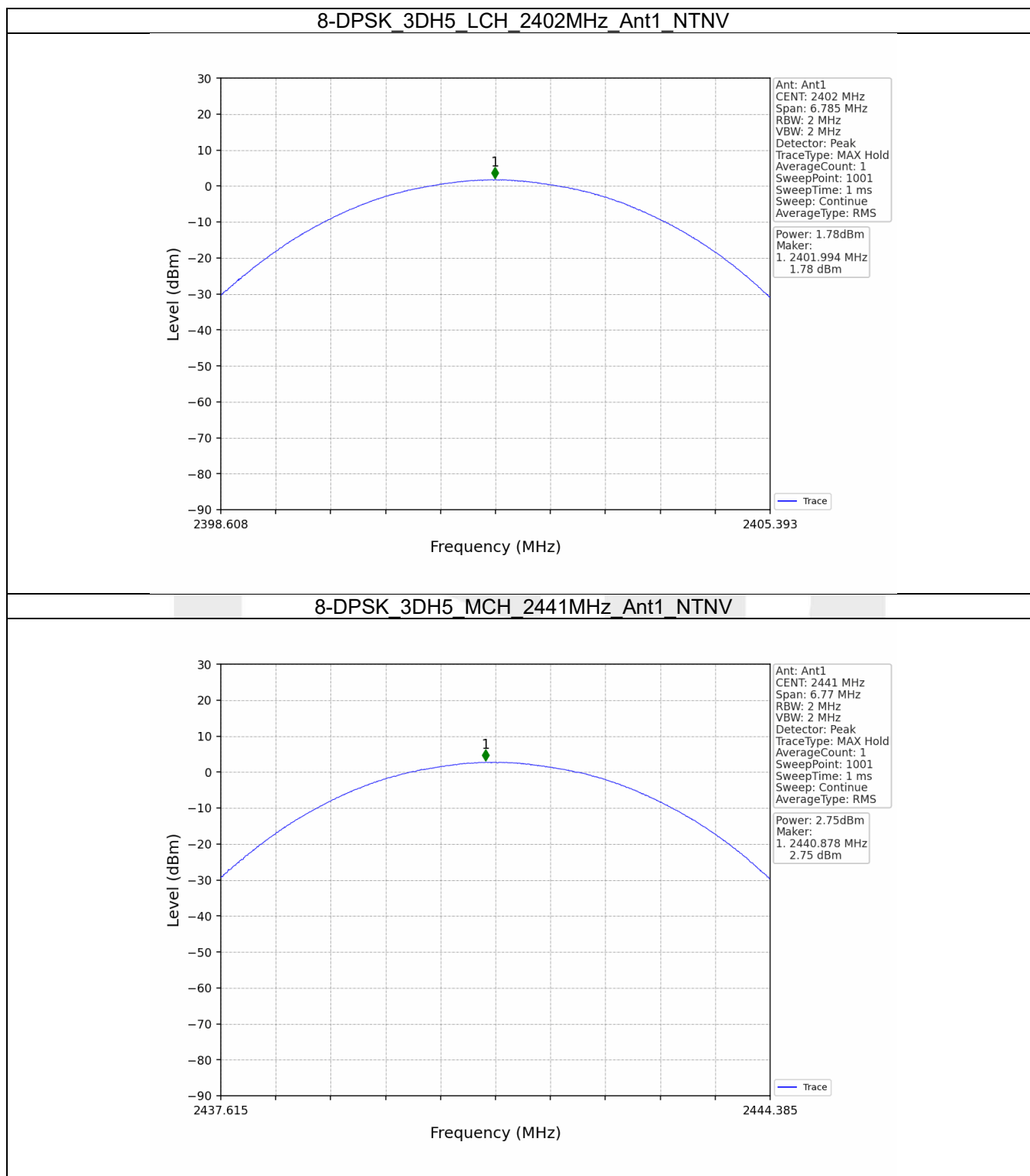
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	2.96	≤ 30	Pass
		2441	DH5	3.92	≤ 30	Pass
		2480	DH5	4.49	≤ 30	Pass
$\pi/4$ -DQPSK	SISO	2402	2DH5	1.40	≤ 20.97	Pass
		2441	2DH5	2.31	≤ 20.97	Pass
		2480	2DH5	2.75	≤ 20.97	Pass
8-DPSK	SISO	2402	3DH5	1.78	≤ 20.97	Pass
		2441	3DH5	2.75	≤ 20.97	Pass
		2480	3DH5	3.19	≤ 20.97	Pass

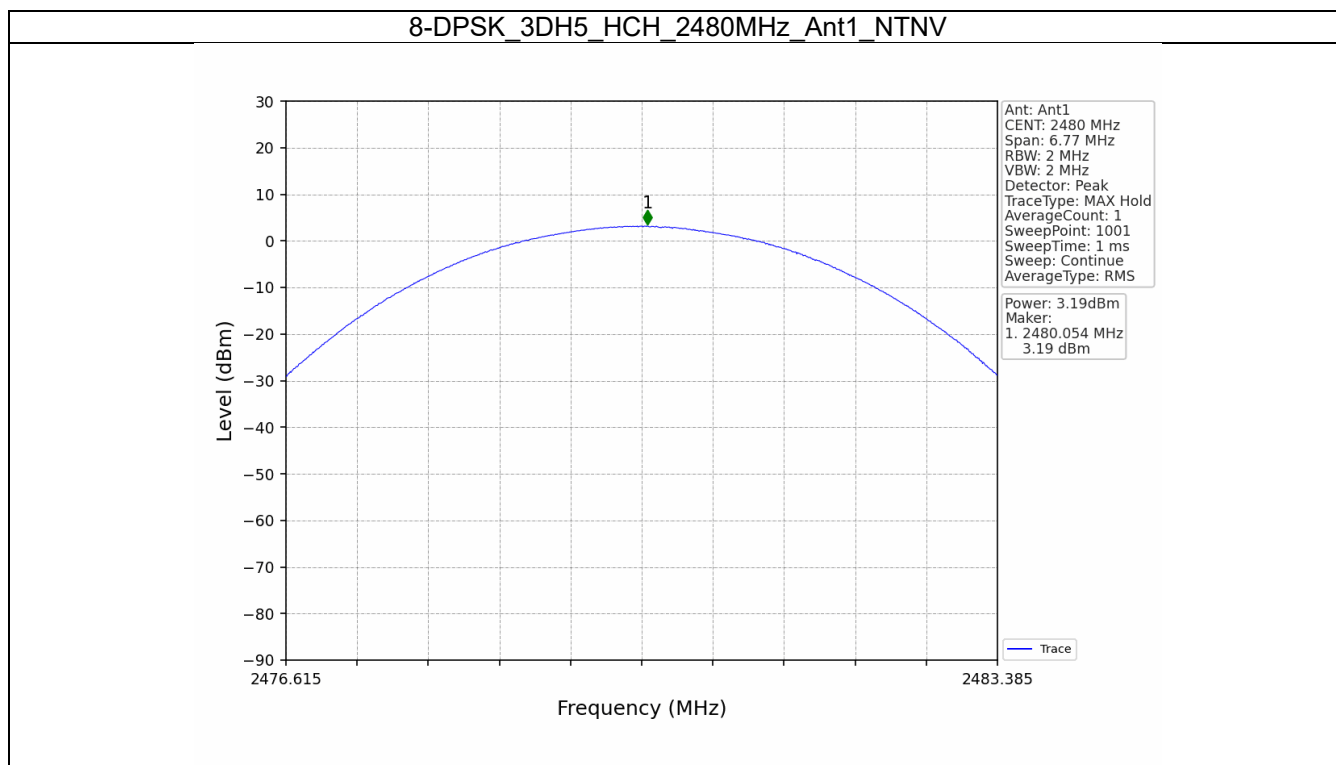
3.1.2 Test Graph











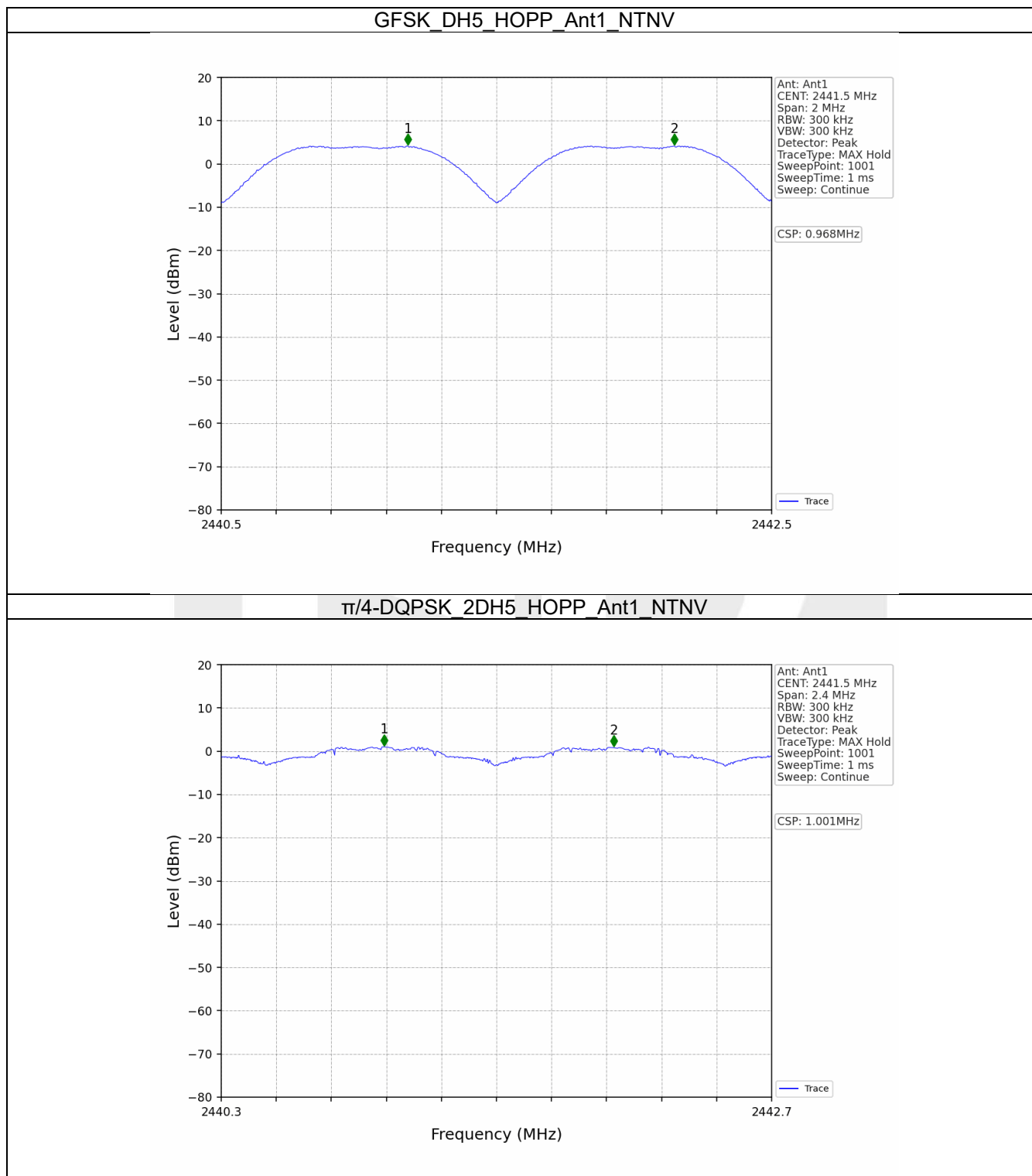
4. Carrier Frequency Separation

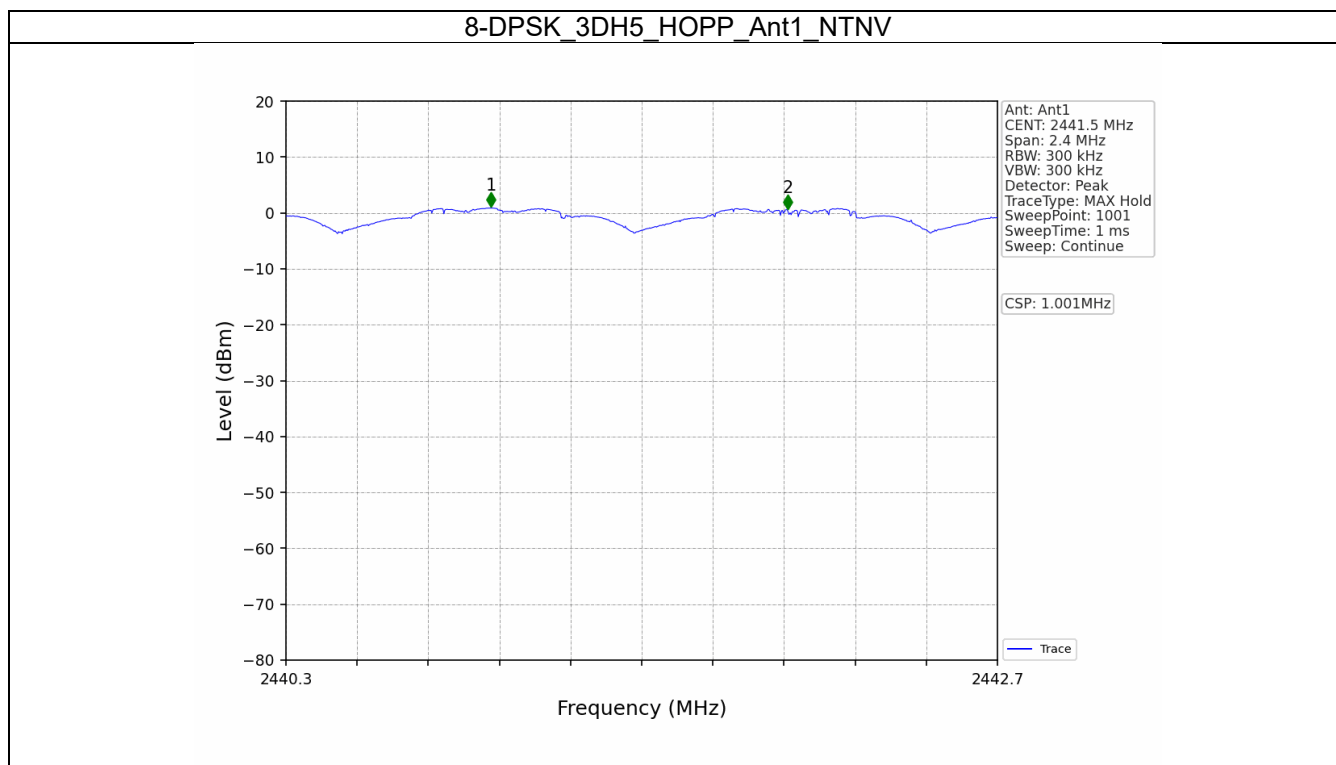
4.1 Ant1

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	0.968	0.966	≥ 0.966	Pass
$\pi/4$ -DQPSK	SISO	HOPP	2DH5	1.001	1.376	≥ 0.917	Pass
8-DPSK	SISO	HOPP	3DH5	1.001	1.357	≥ 0.905	Pass

4.1.2 Test Graph





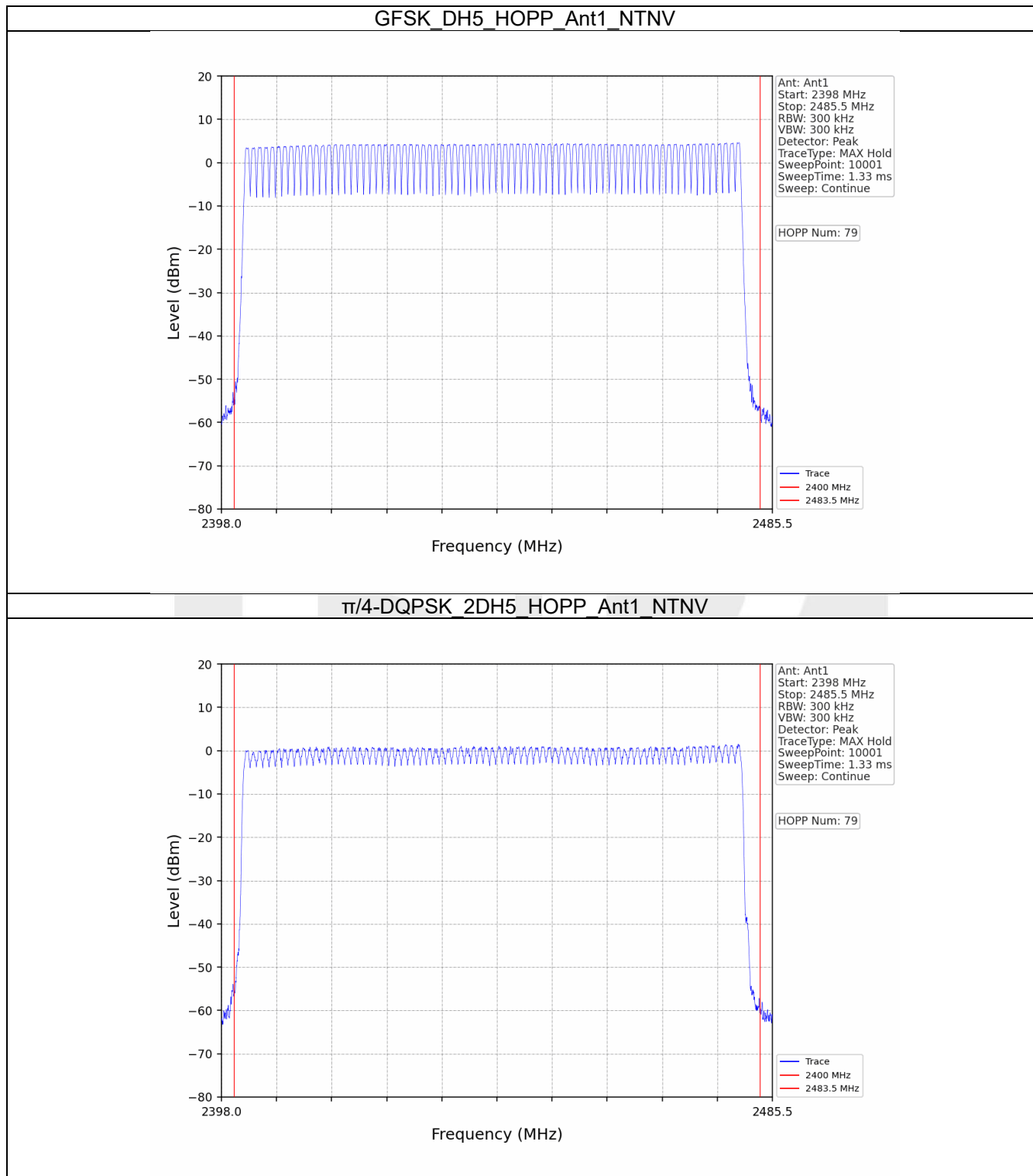
5. Number of Hopping Frequencies

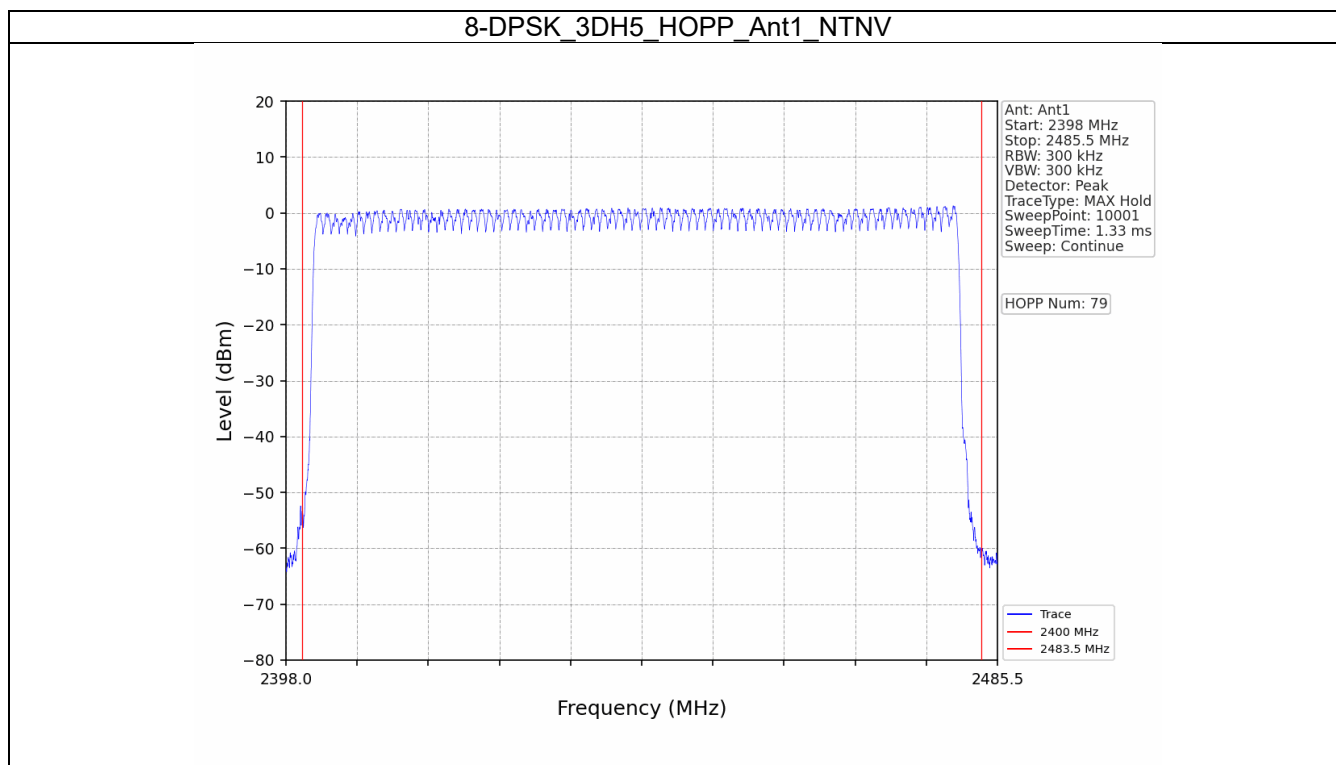
5.1 HoppNum

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
$\pi/4$ -DQPSK	SISO	HOPP	2DH5	79	≥ 15	Pass
8-DPSK	SISO	HOPP	3DH5	79	≥ 15	Pass

5.1.2 Test Graph





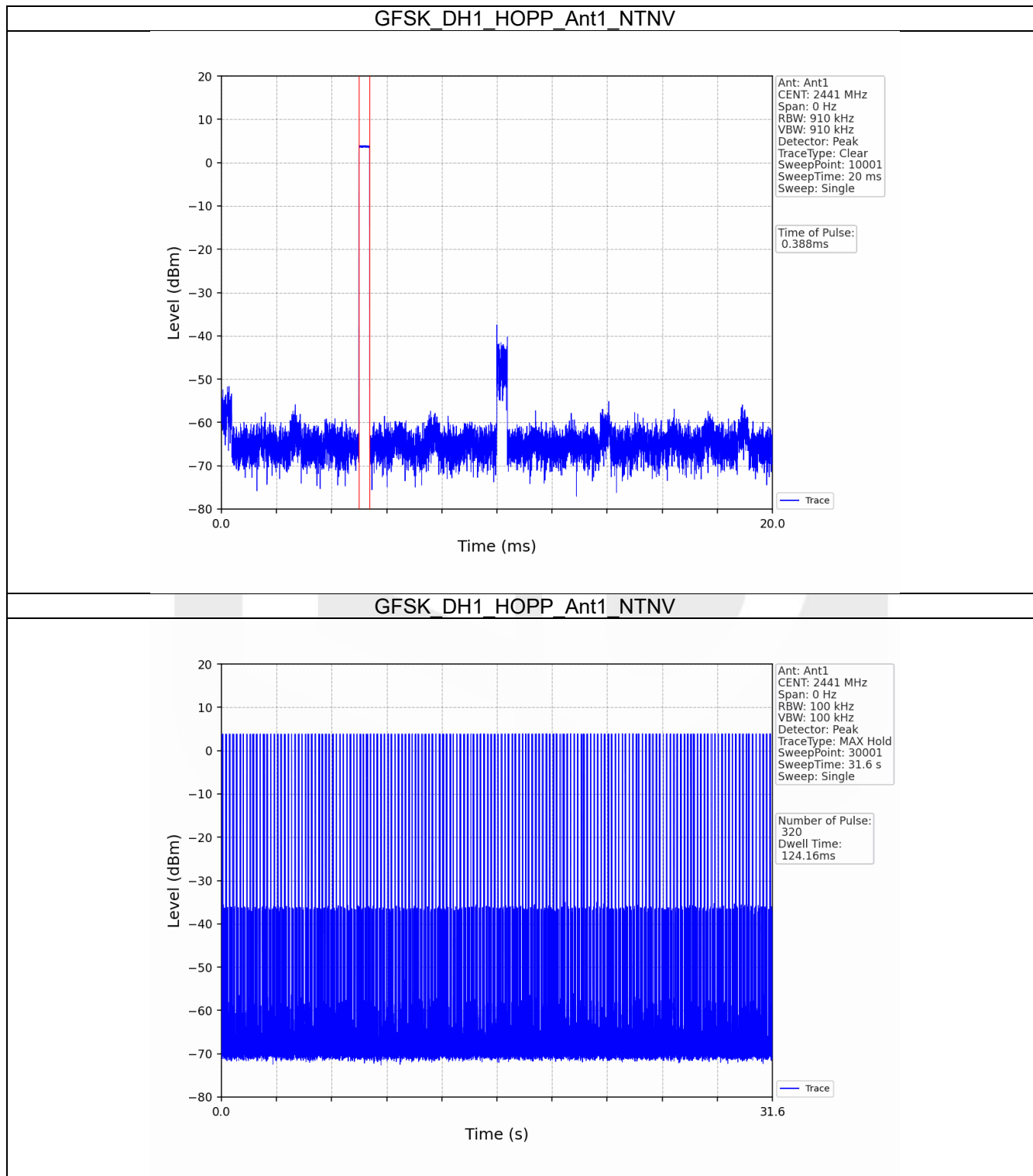
6. Time of Occupancy (Dwell Time)

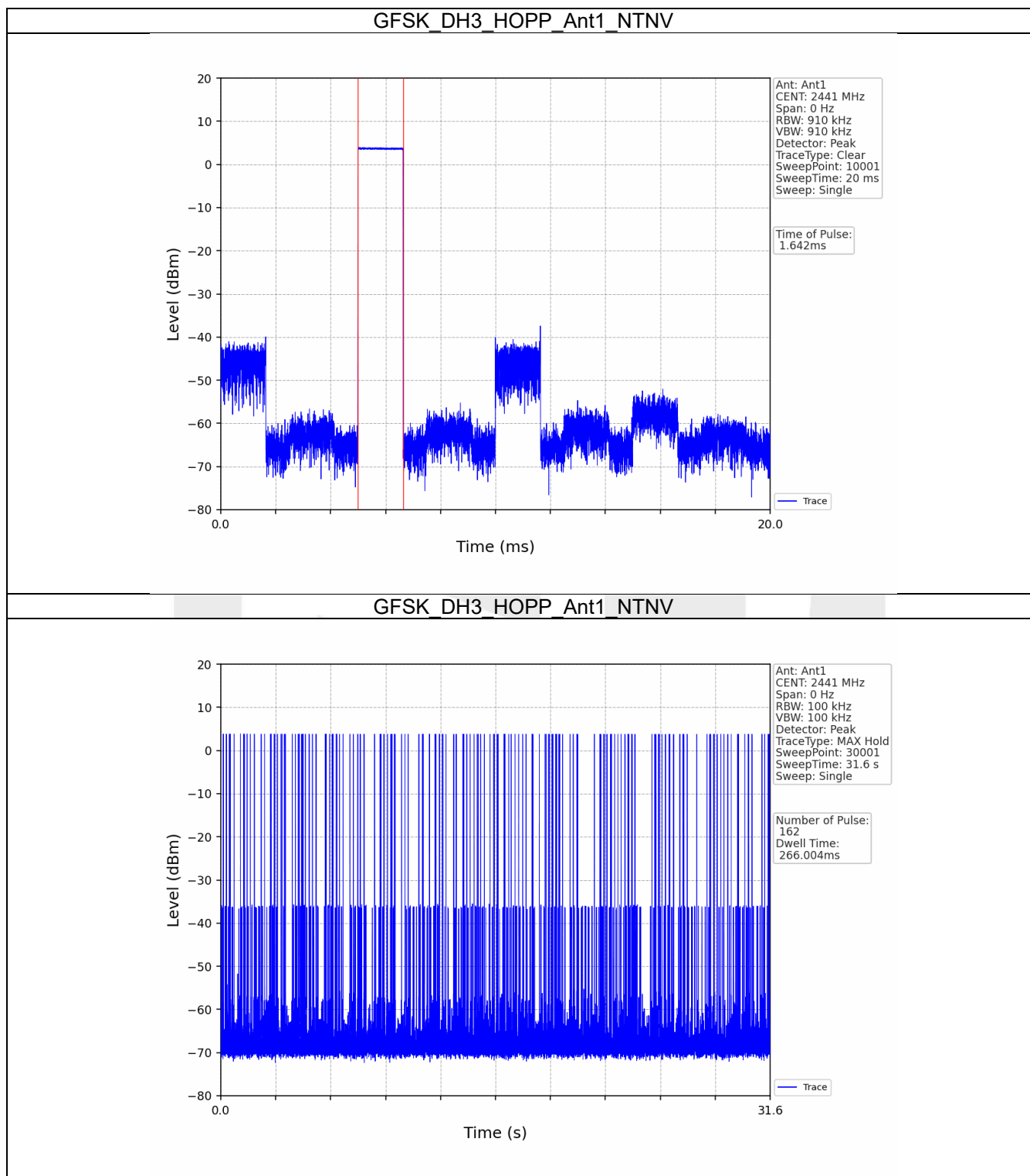
6.1 Ant1

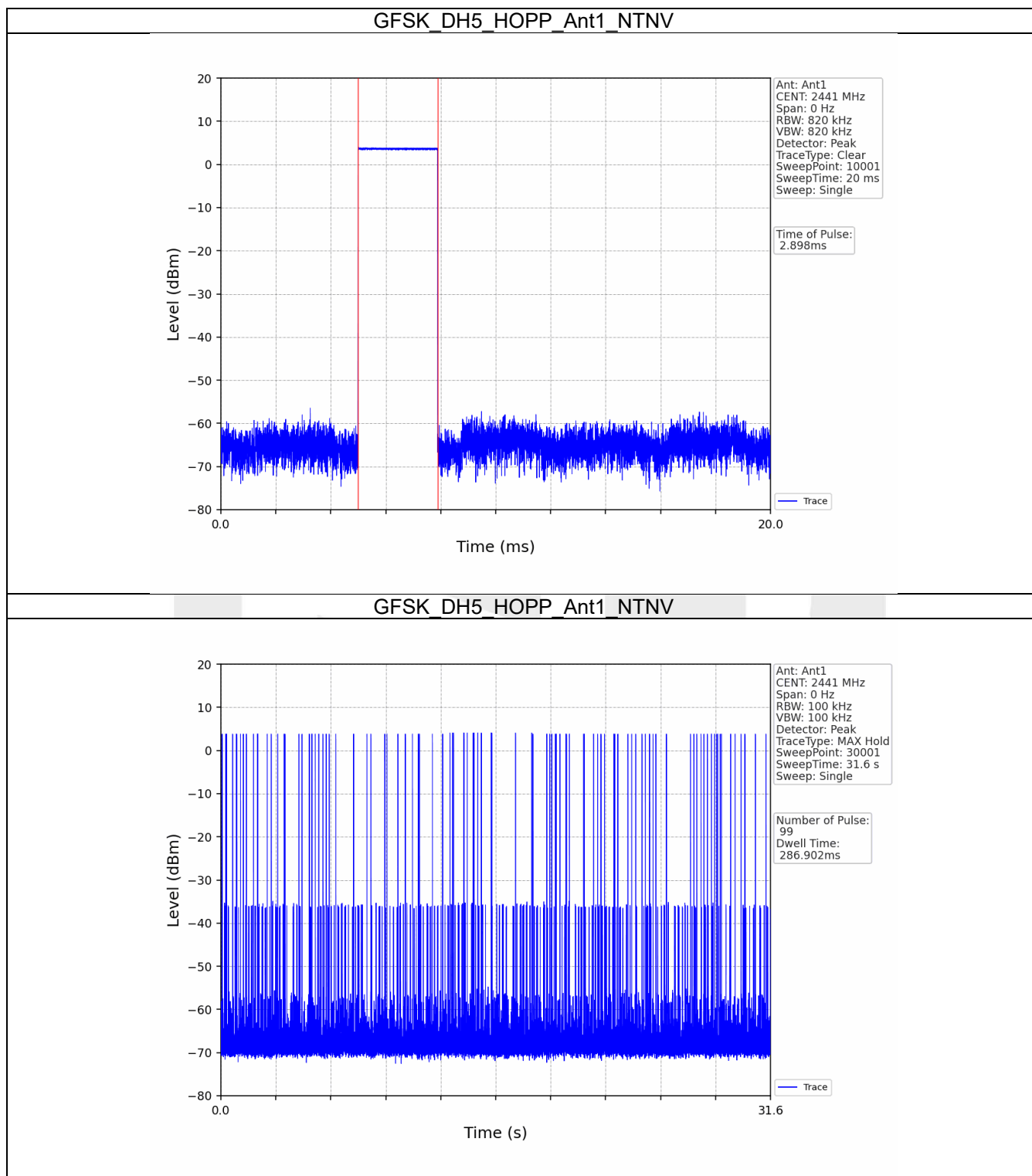
6.1.1 Test Result

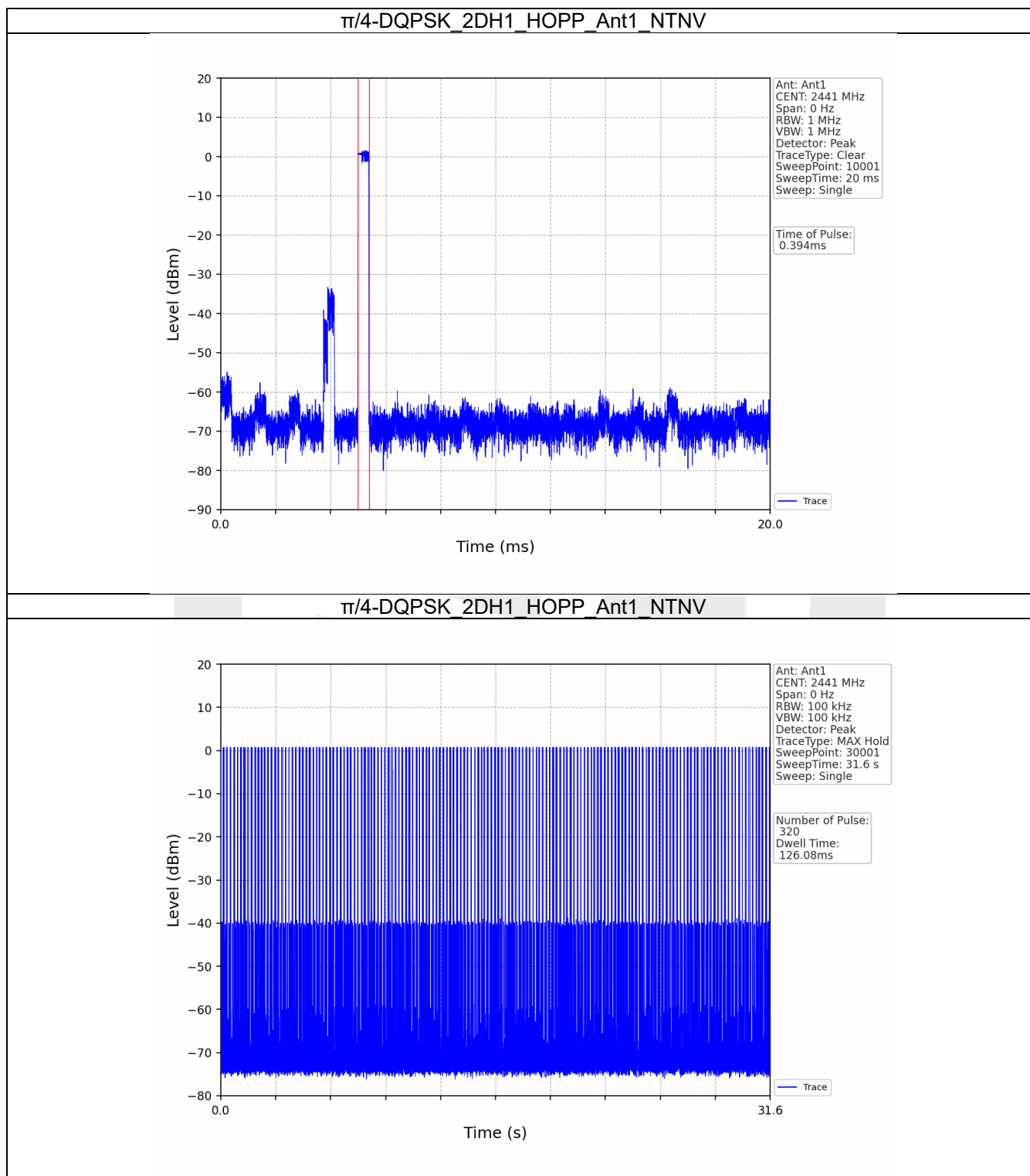
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.388	31.600	320	124.160	<=400	Pass
			DH3	1.642	31.600	162	266.004	<=400	Pass
			DH5	2.898	31.600	99	286.902	<=400	Pass
$\pi/4$ -DQPSK	SISO	HOPP	2DH1	0.394	31.600	320	126.080	<=400	Pass
			2DH3	1.648	31.600	166	273.568	<=400	Pass
			2DH5	2.896	31.600	107	309.872	<=400	Pass
8-DPSK	SISO	HOPP	3DH1	0.396	31.600	320	126.720	<=400	Pass
			3DH3	1.656	31.600	154	255.024	<=400	Pass
			3DH5	2.906	31.600	103	299.318	<=400	Pass

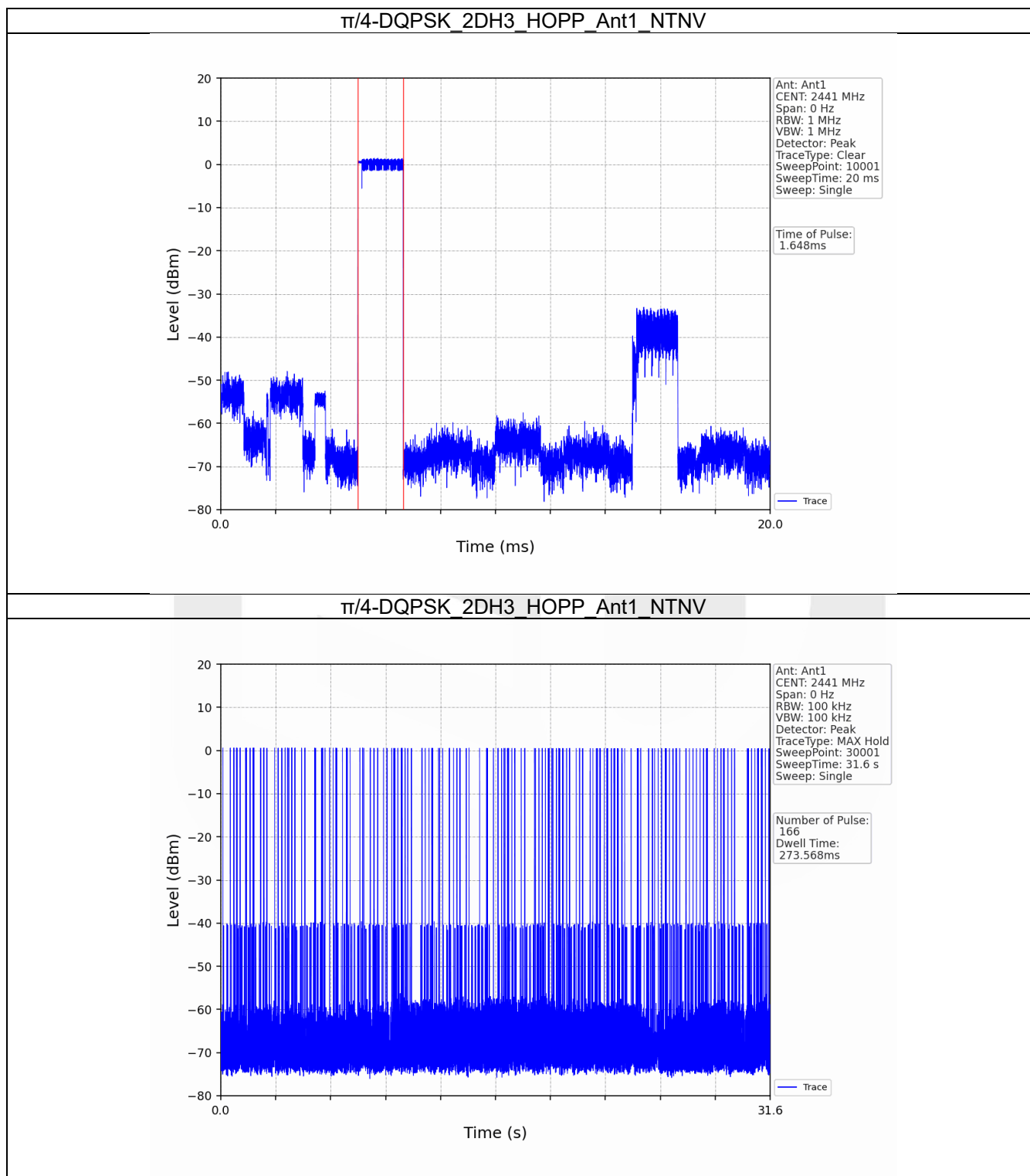
6.1.2 Test Graph

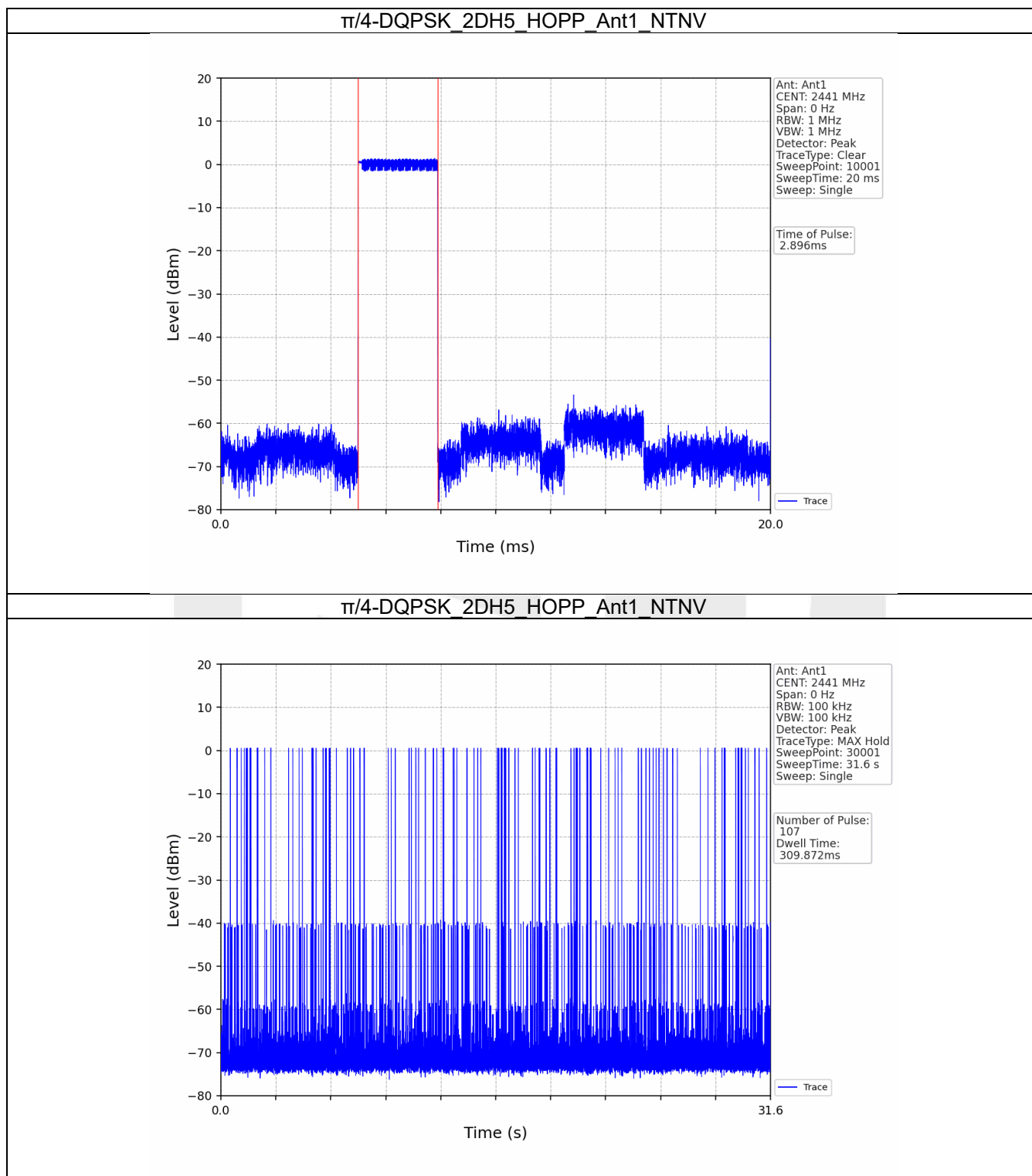


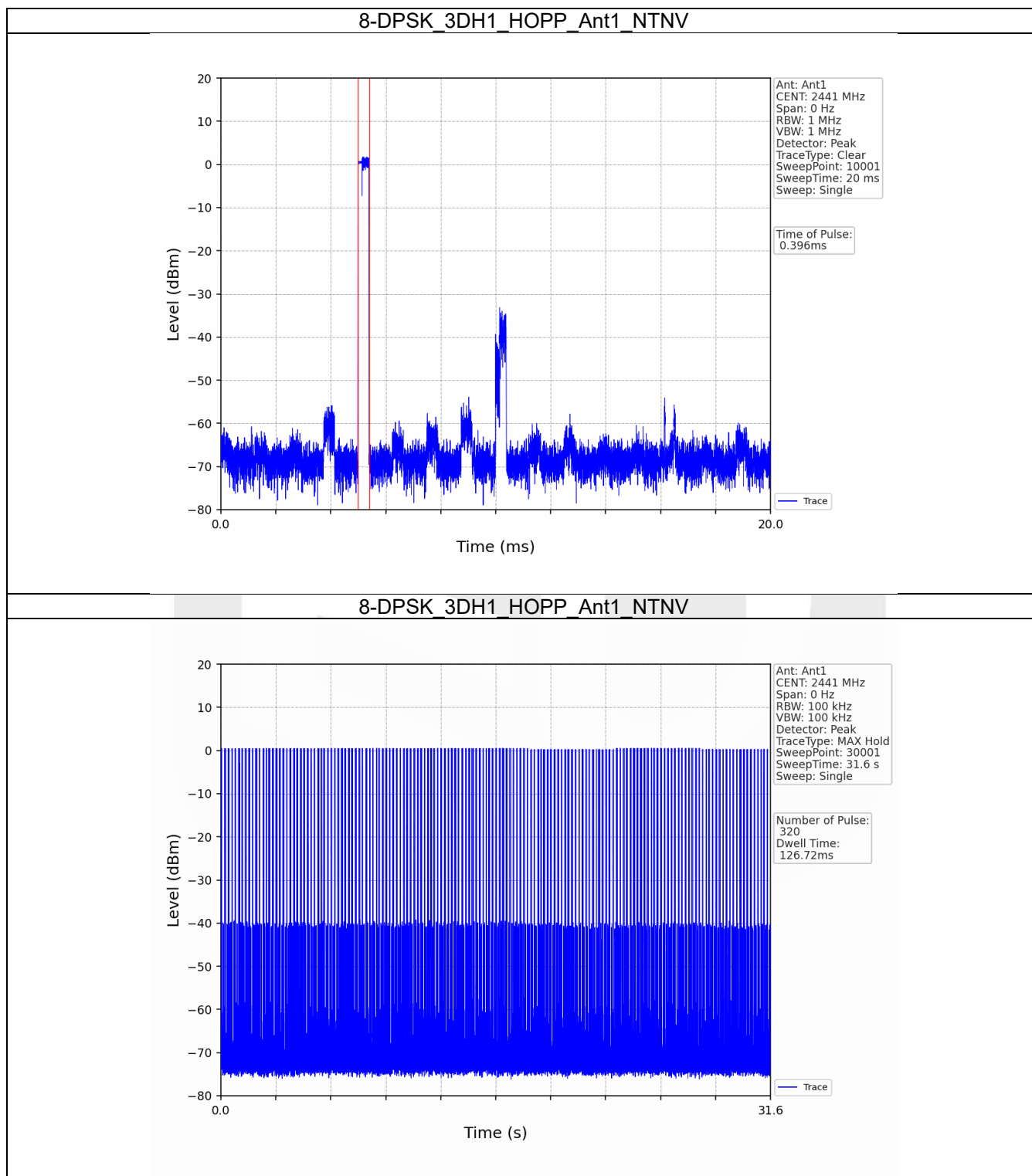


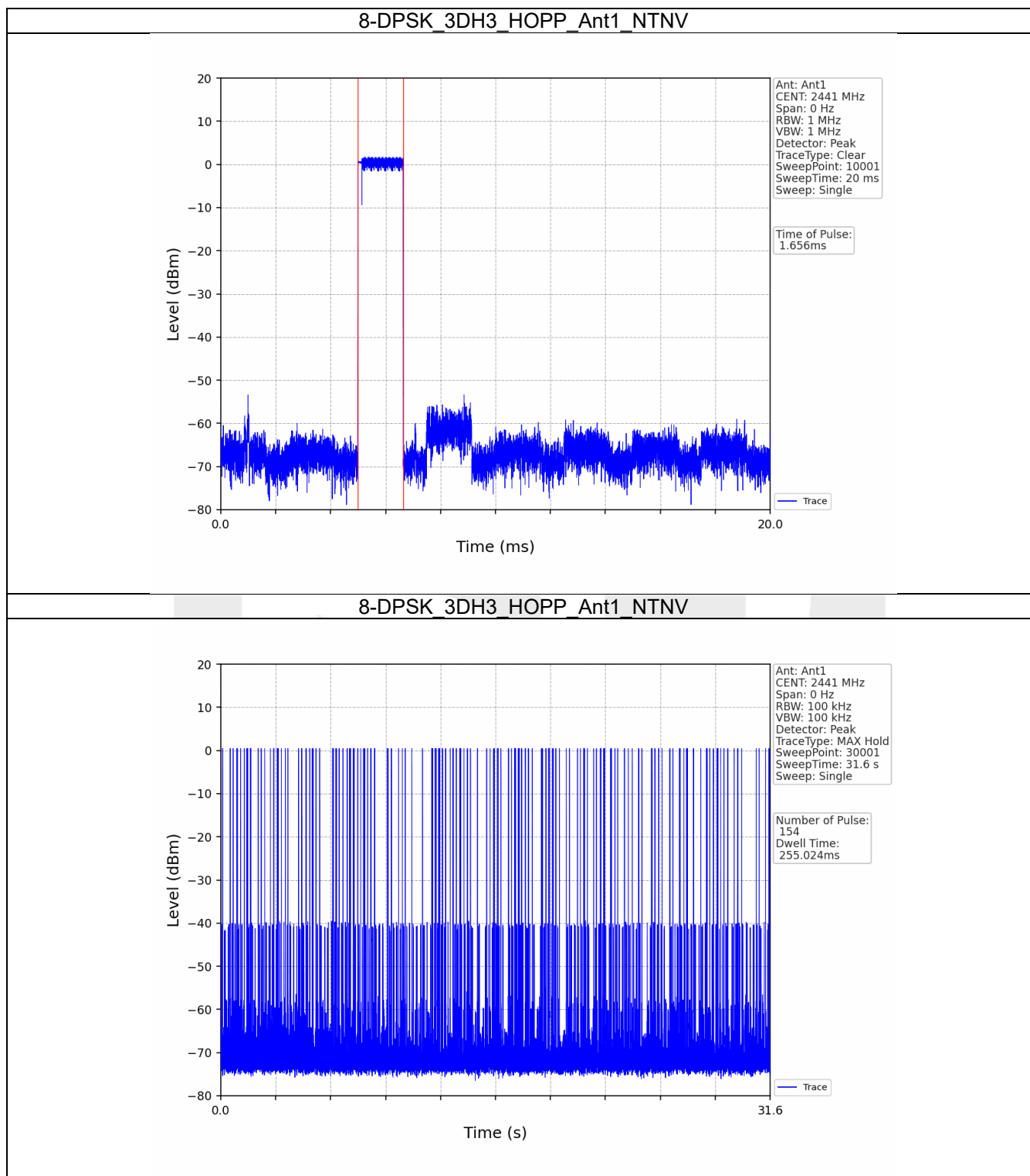


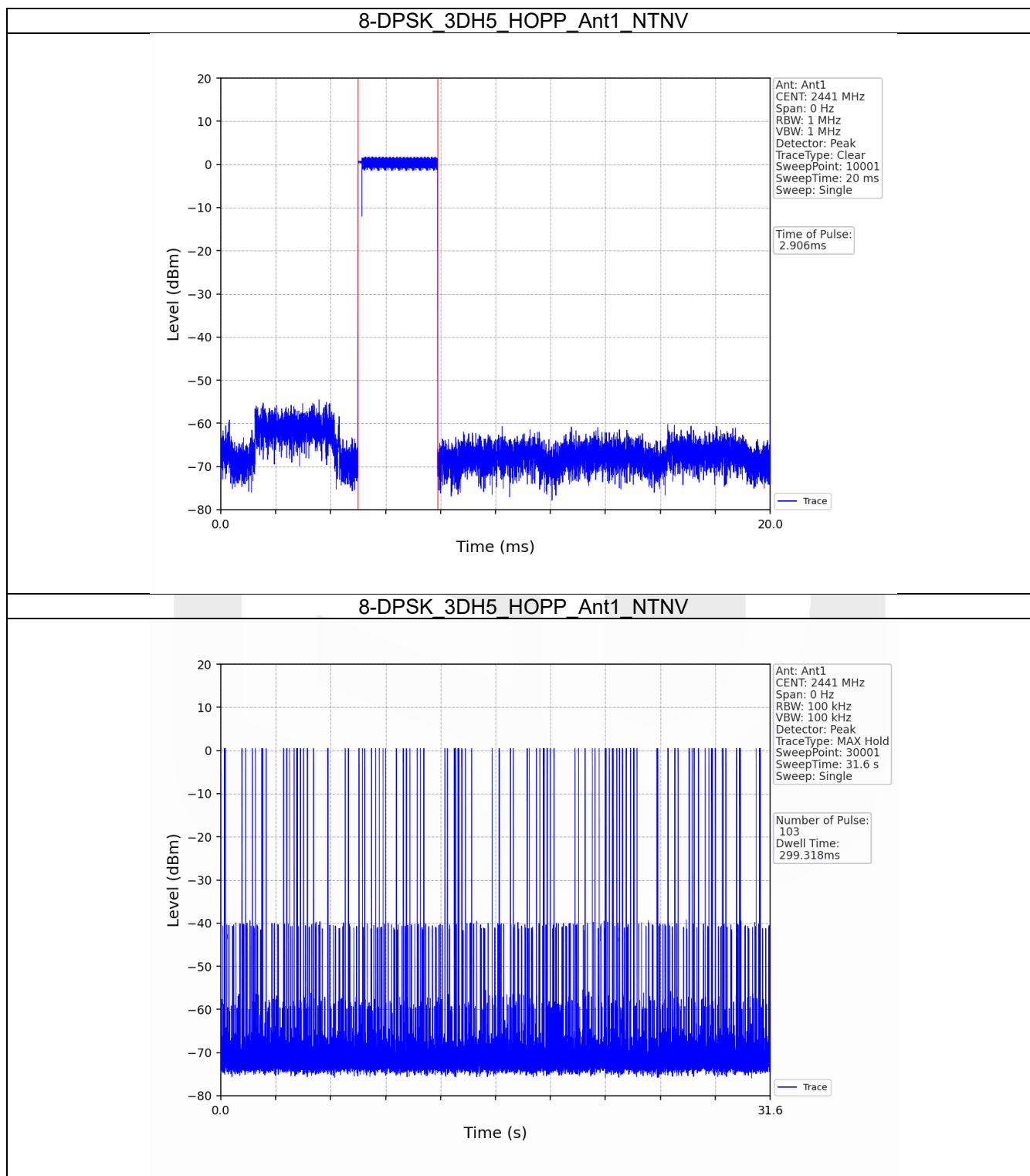












7. Unwanted Emissions In Non-restricted Frequency Bands

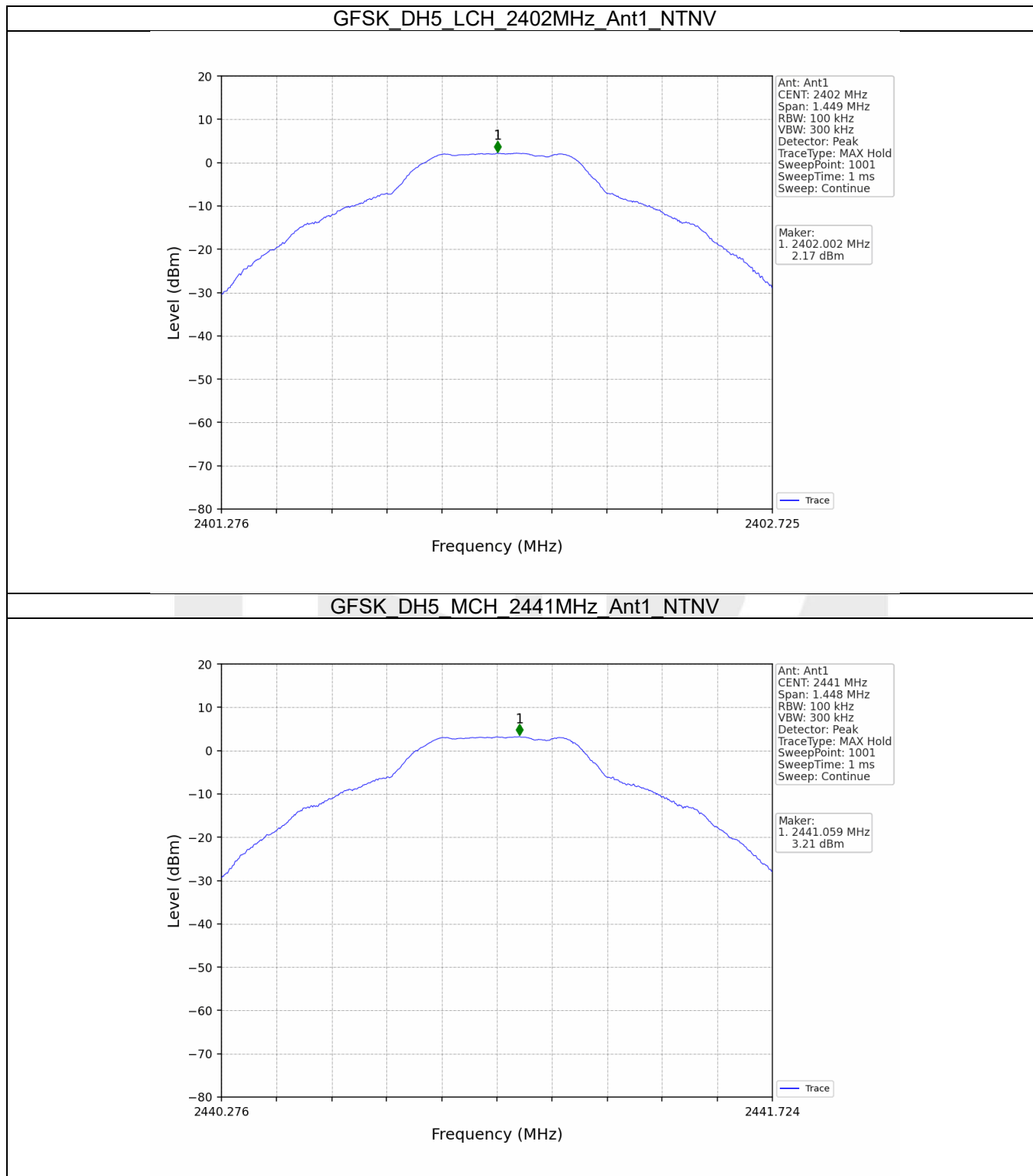
7.1 Ref

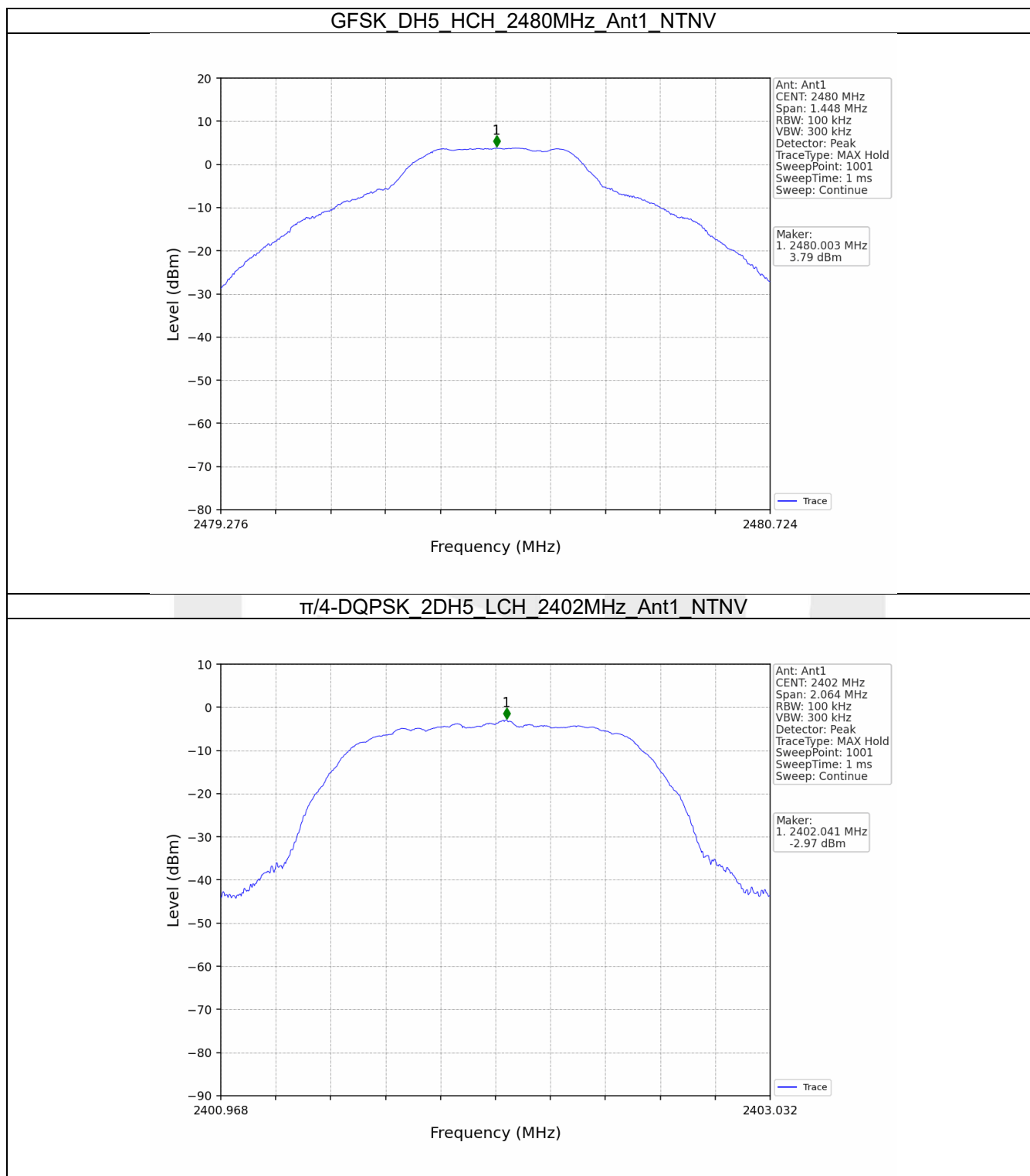
7.1.1 Test Result

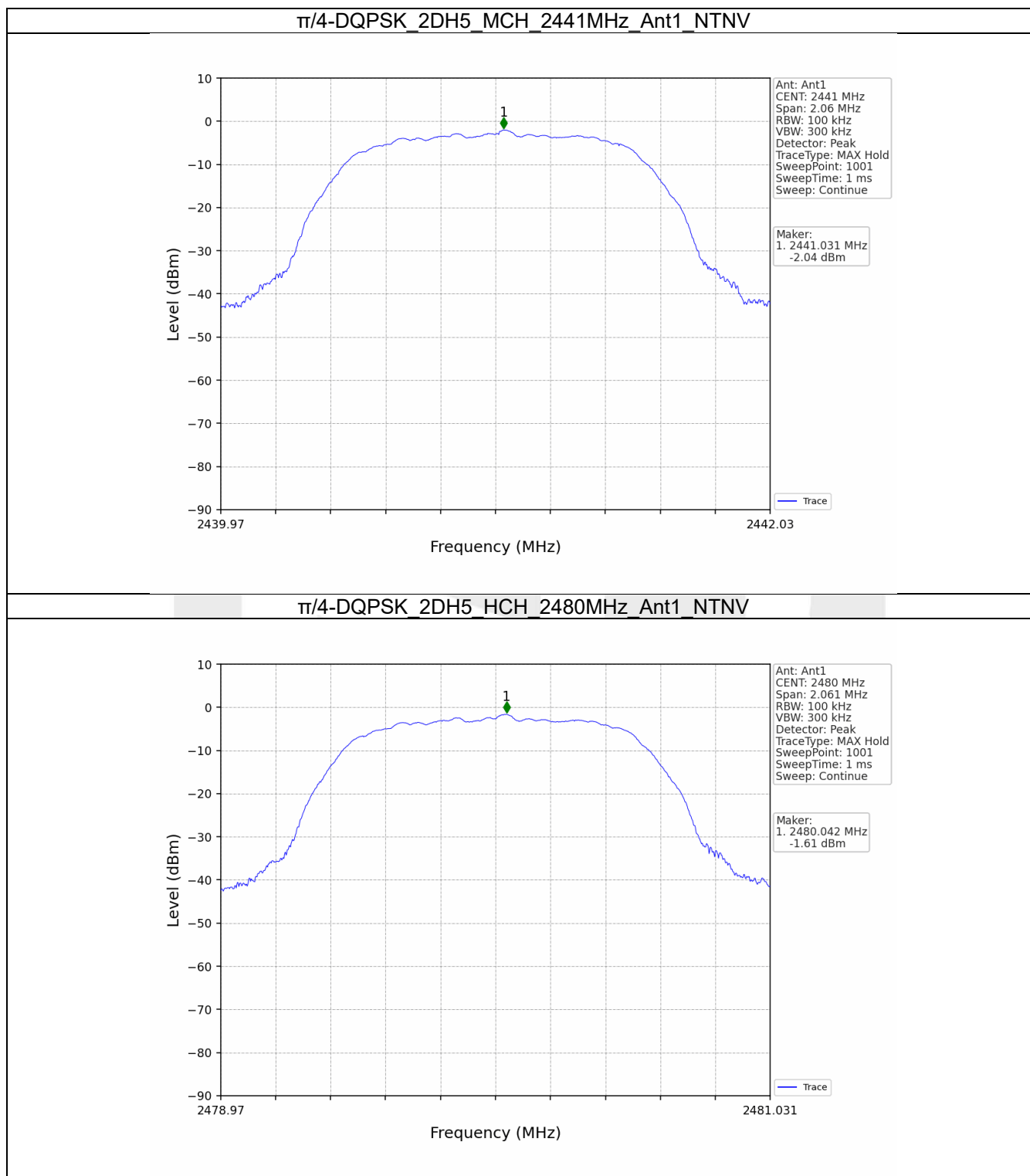
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	2.17
		2441	DH5	1	3.21
		2480	DH5	1	3.79
$\pi/4$ -DQPSK	SISO	2402	2DH5	1	-2.97
		2441	2DH5	1	-2.04
		2480	2DH5	1	-1.61
8-DPSK	SISO	2402	3DH5	1	-3.26
		2441	3DH5	1	-2.26
		2480	3DH5	1	-1.88

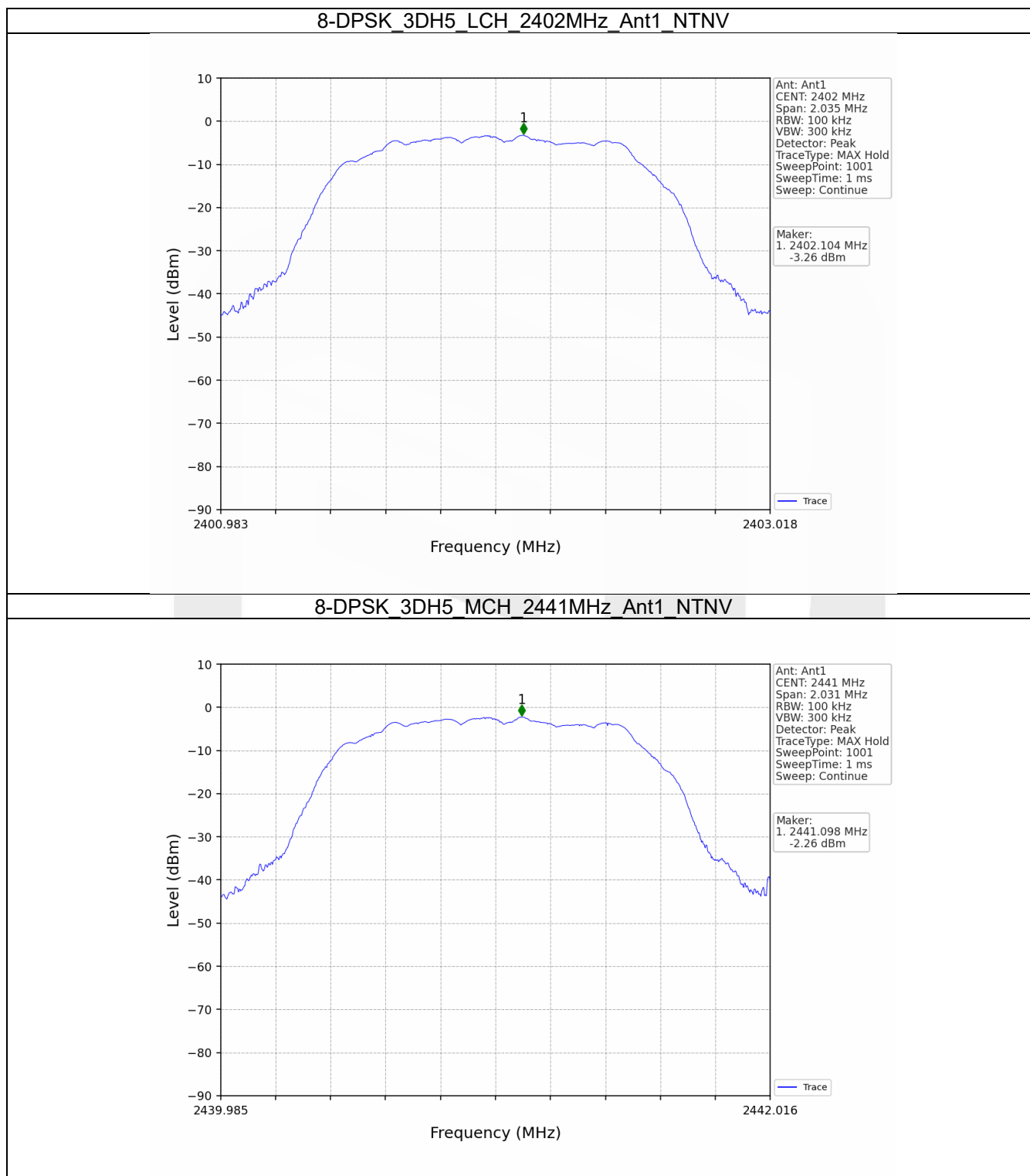
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

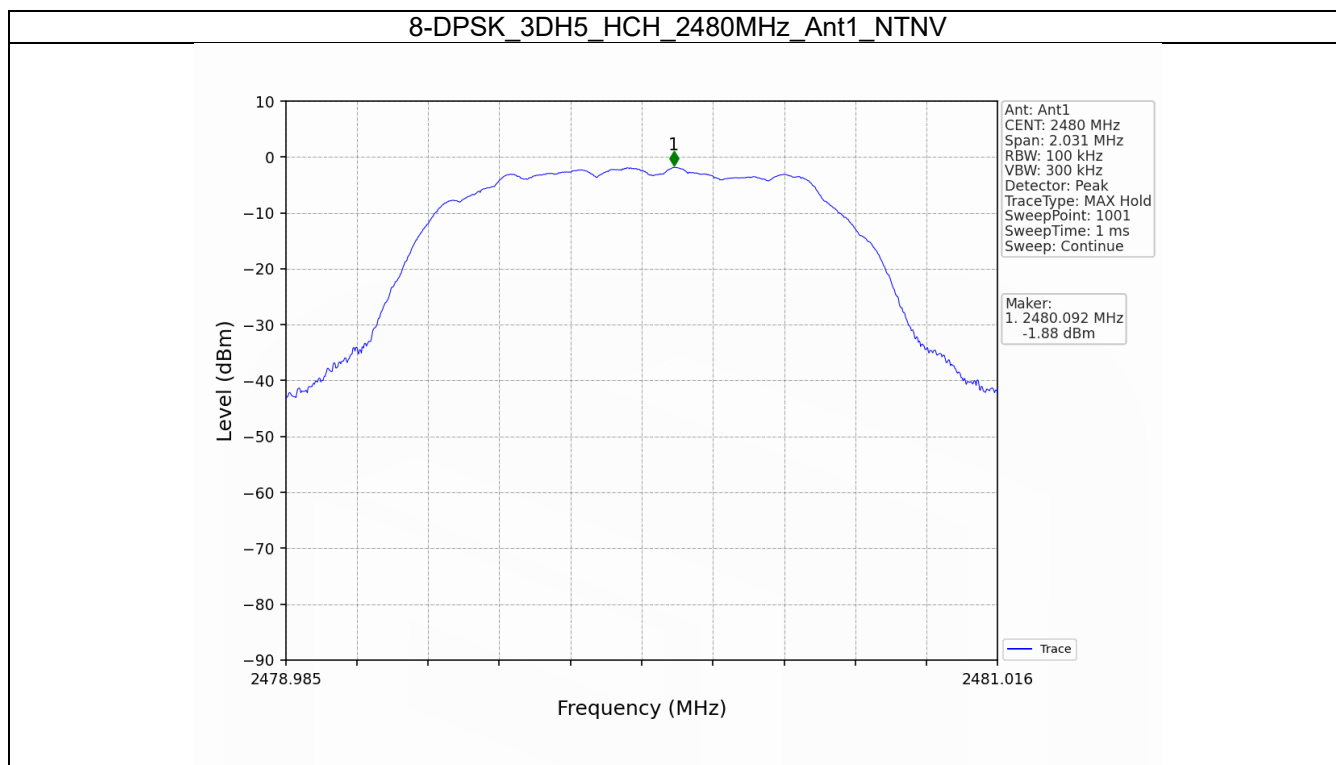
7.1.2 Test Graph











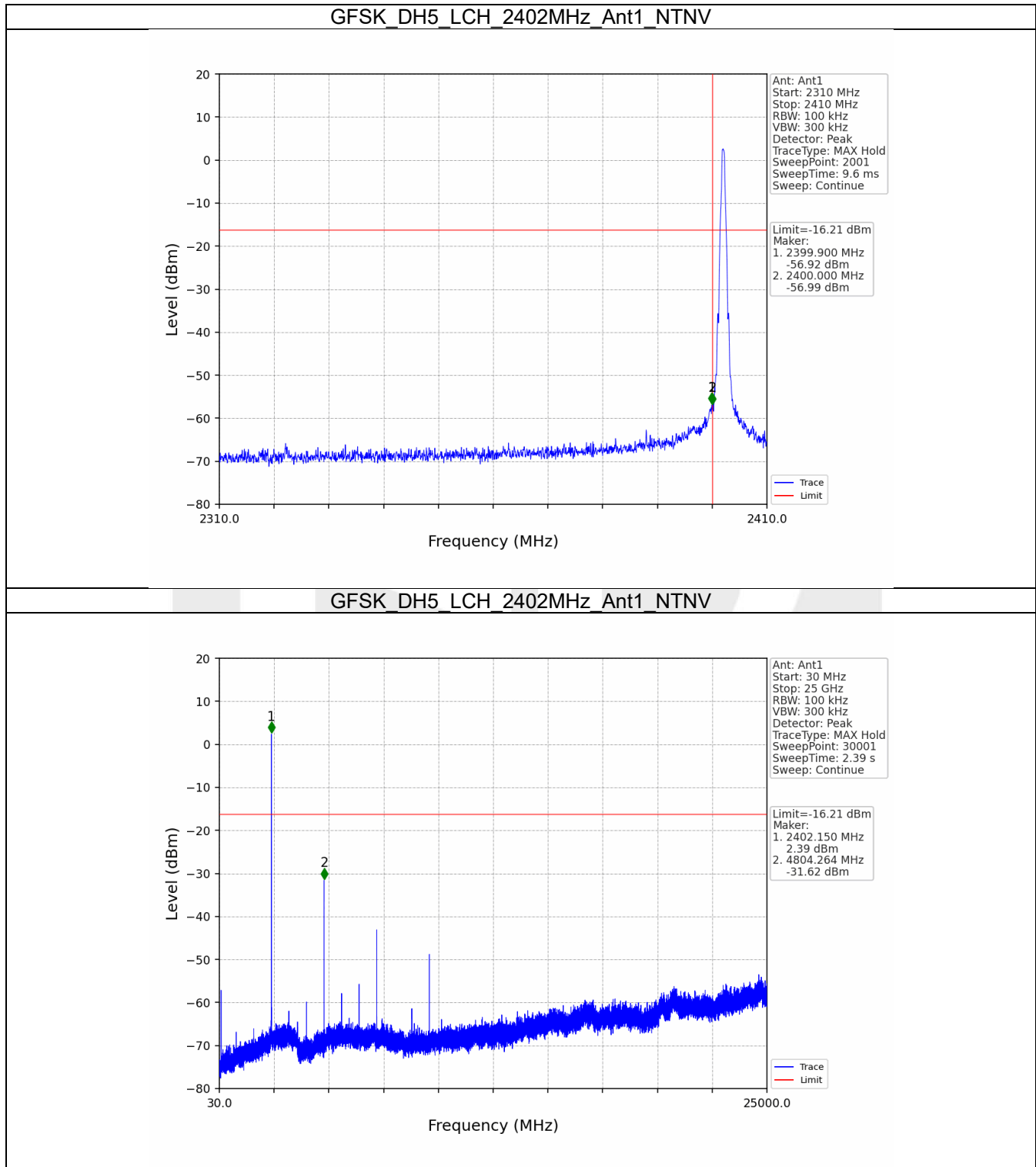
7.2 CSE

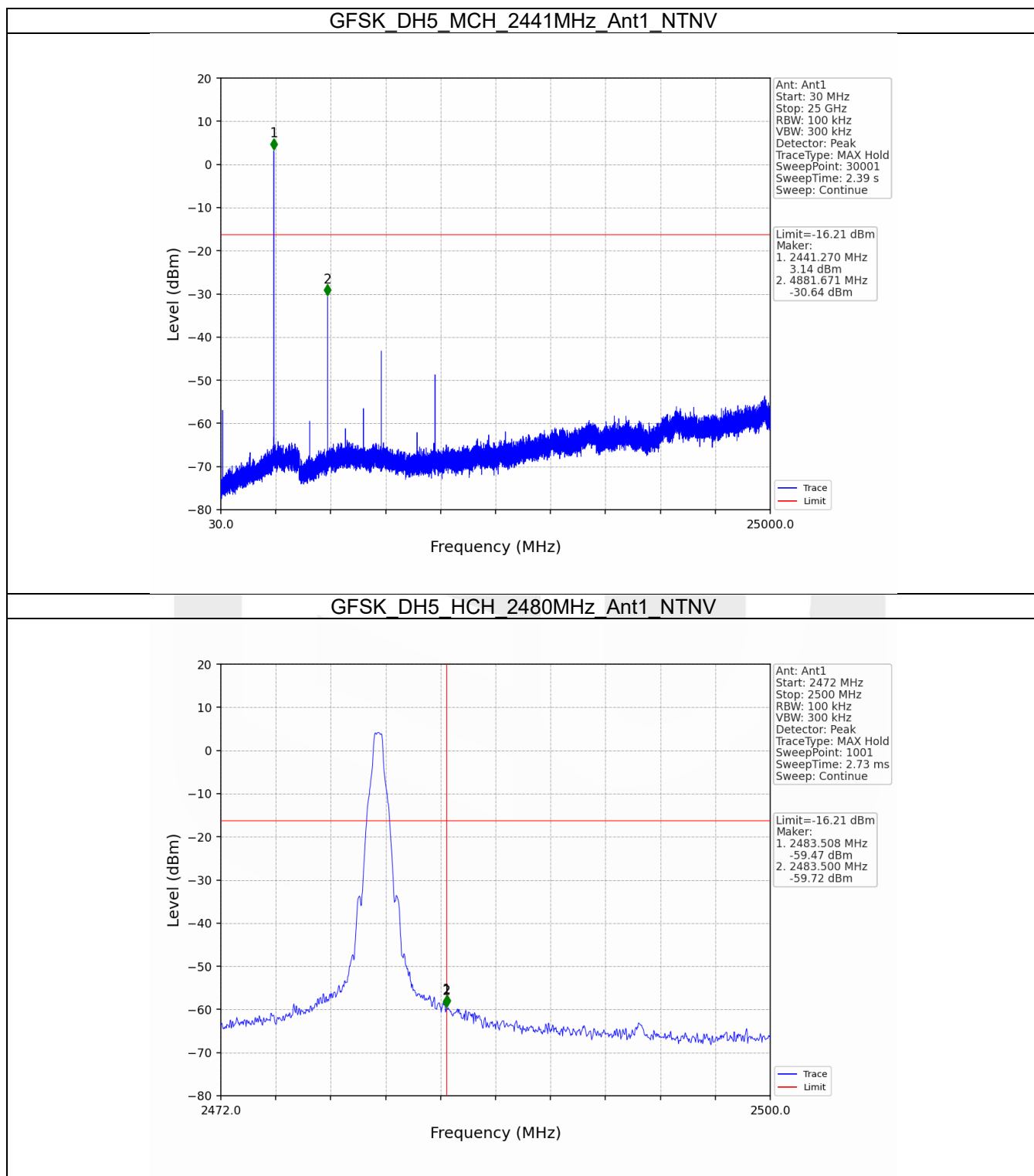
7.2.1 Test Result

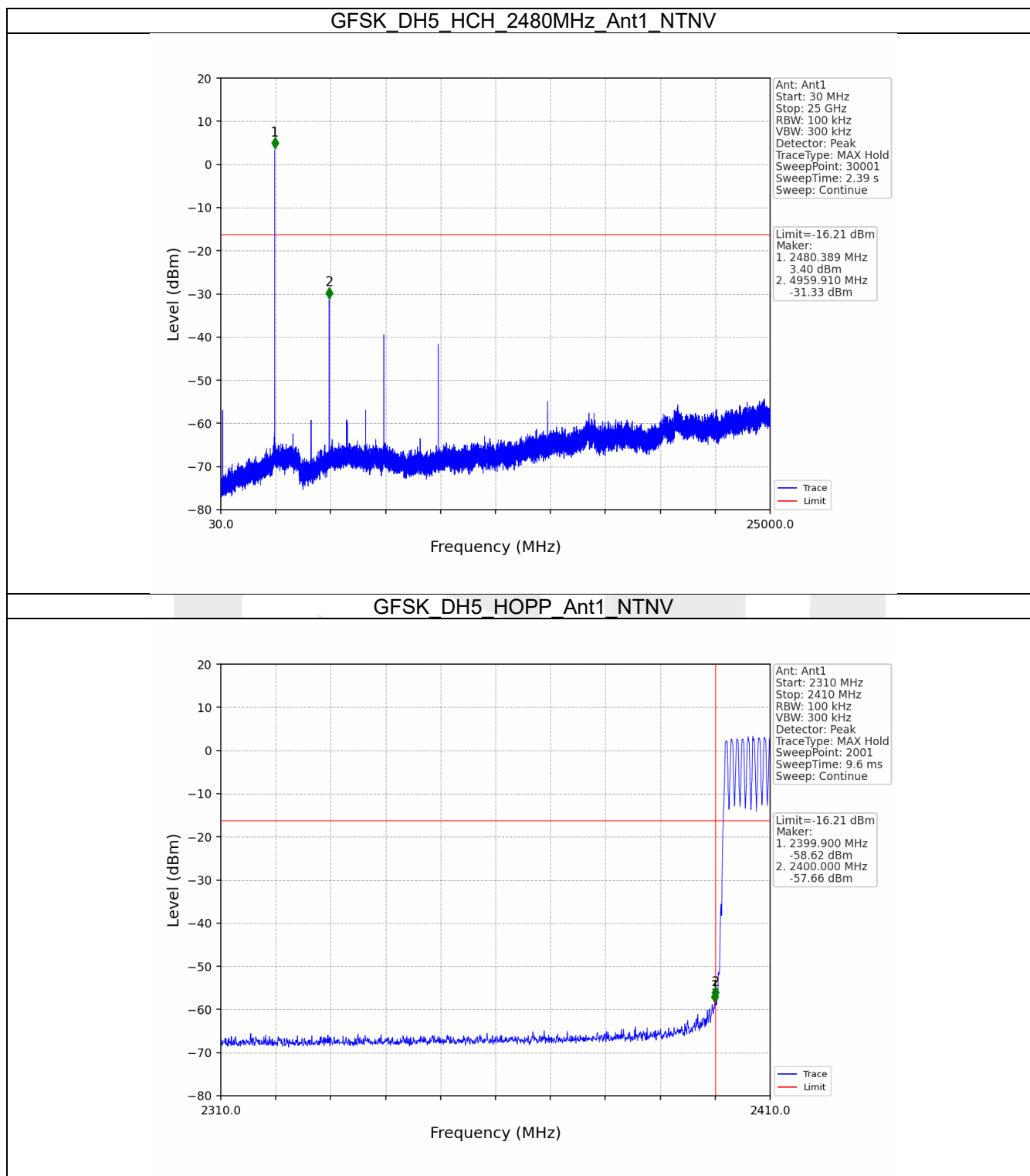
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	3.79	-16.21	Pass
		2441	DH5	1	3.79	-16.21	Pass
		2480	DH5	1	3.79	-16.21	Pass
		HOPP	DH5	1	3.79	-16.21	Pass
$\pi/4$ -DQPSK	SISO	2402	2DH5	1	-1.61	-21.61	Pass
		2441	2DH5	1	-1.61	-21.61	Pass
		2480	2DH5	1	-1.61	-21.61	Pass
		HOPP	2DH5	1	-1.61	-21.61	Pass
8-DPSK	SISO	2402	3DH5	1	-1.88	-21.88	Pass
		2441	3DH5	1	-1.88	-21.88	Pass
		2480	3DH5	1	-1.88	-21.88	Pass
		HOPP	3DH5	1	-1.88	-21.88	Pass

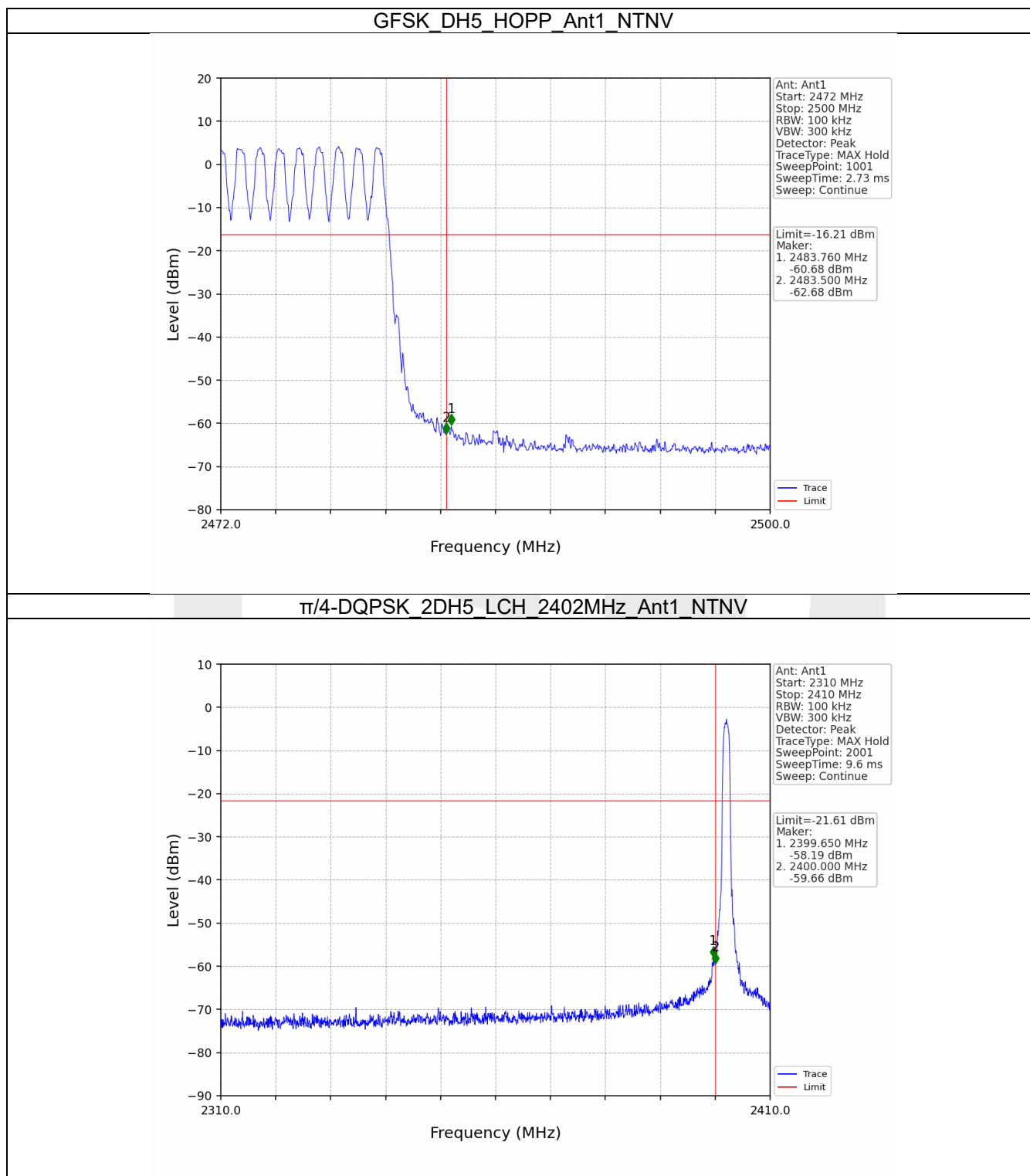
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

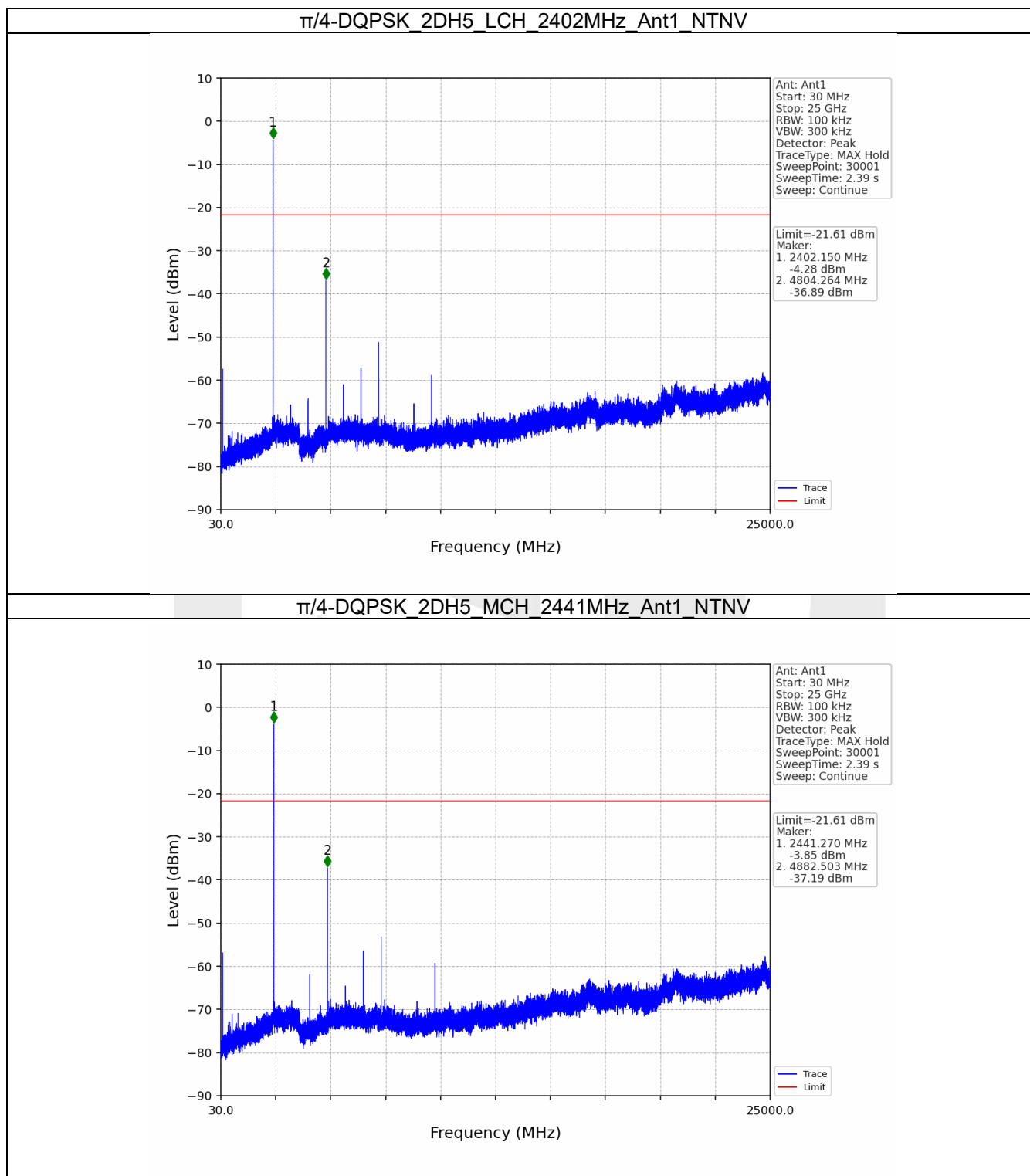
7.2.2 Test Graph

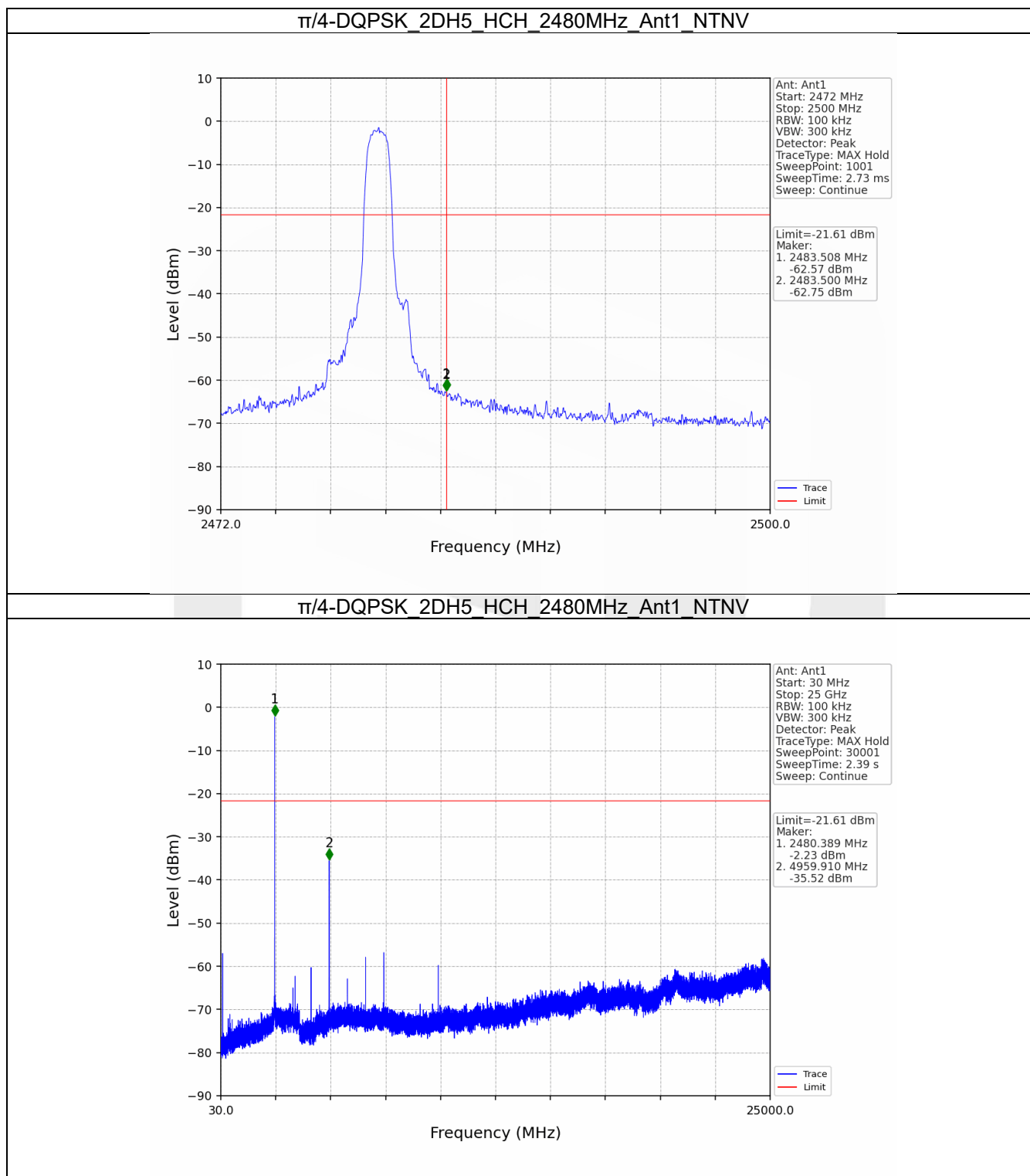


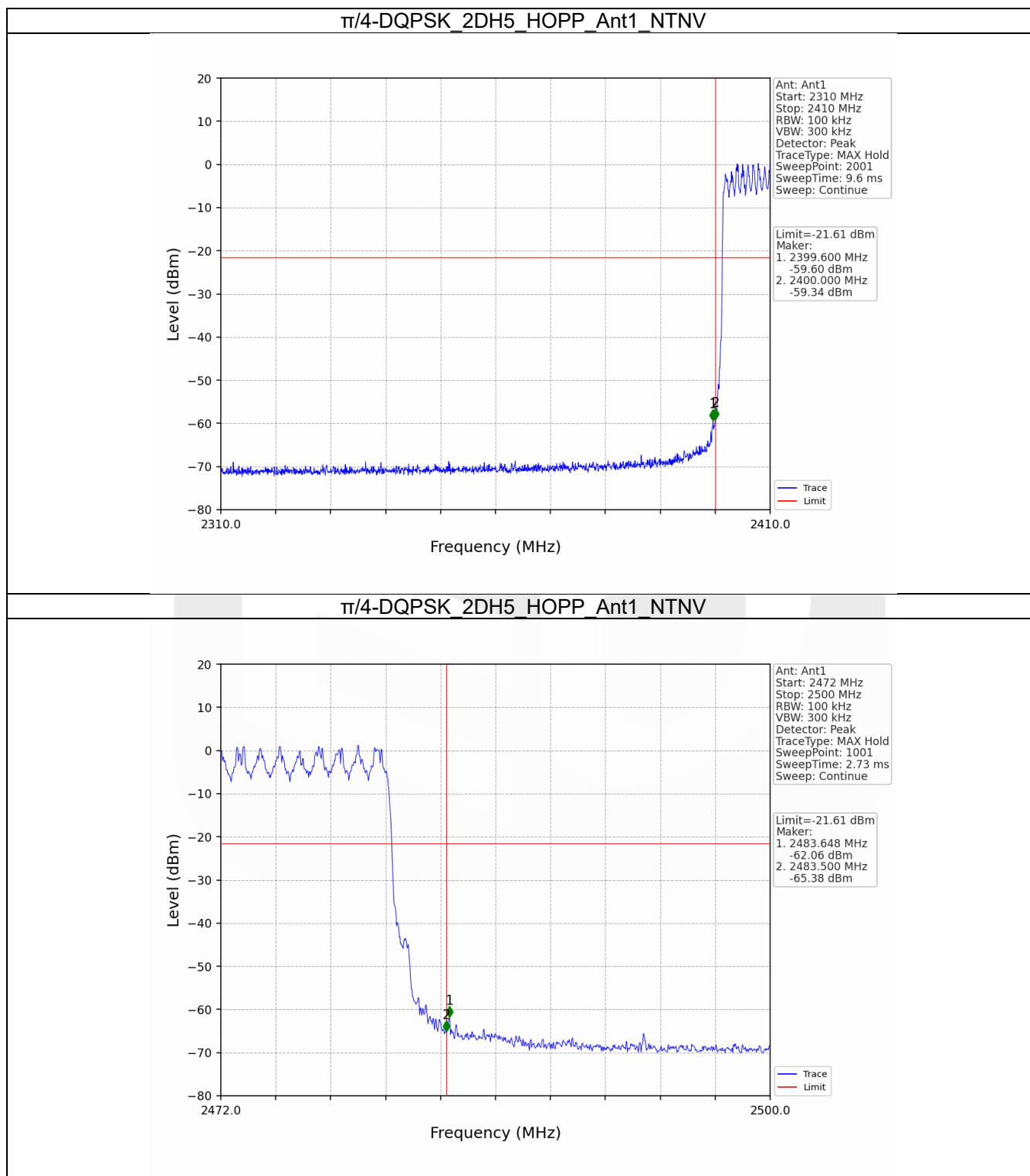


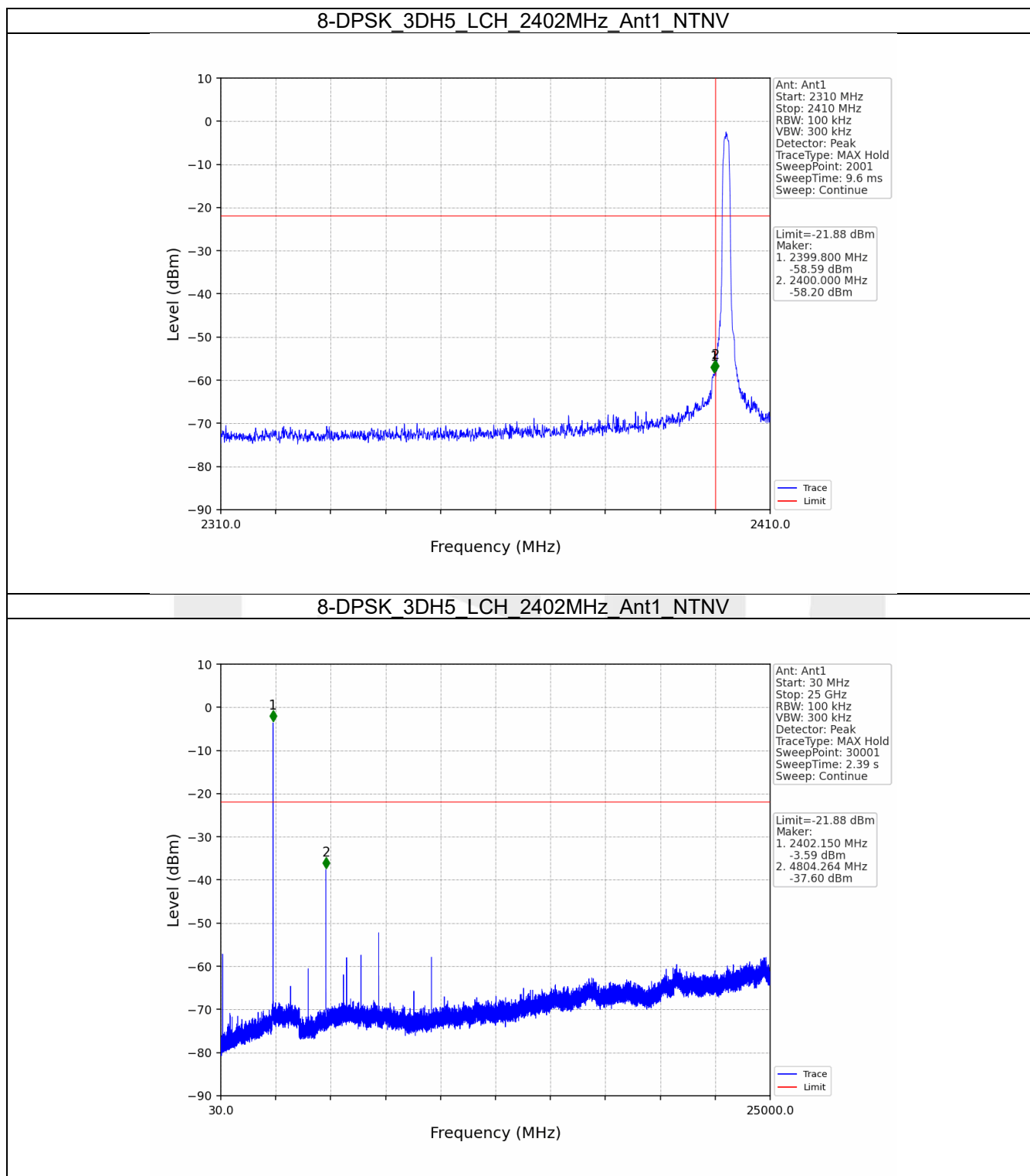


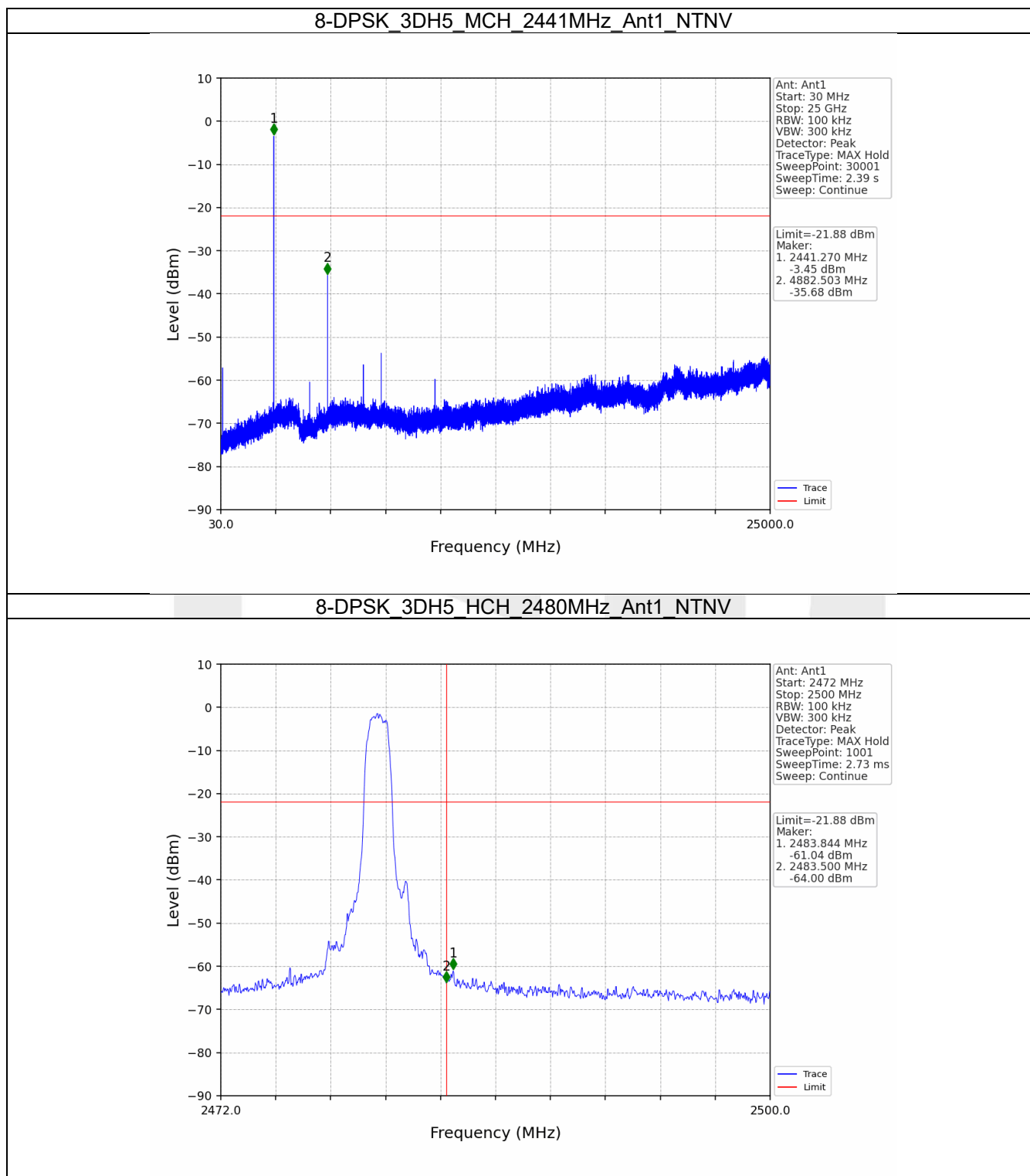


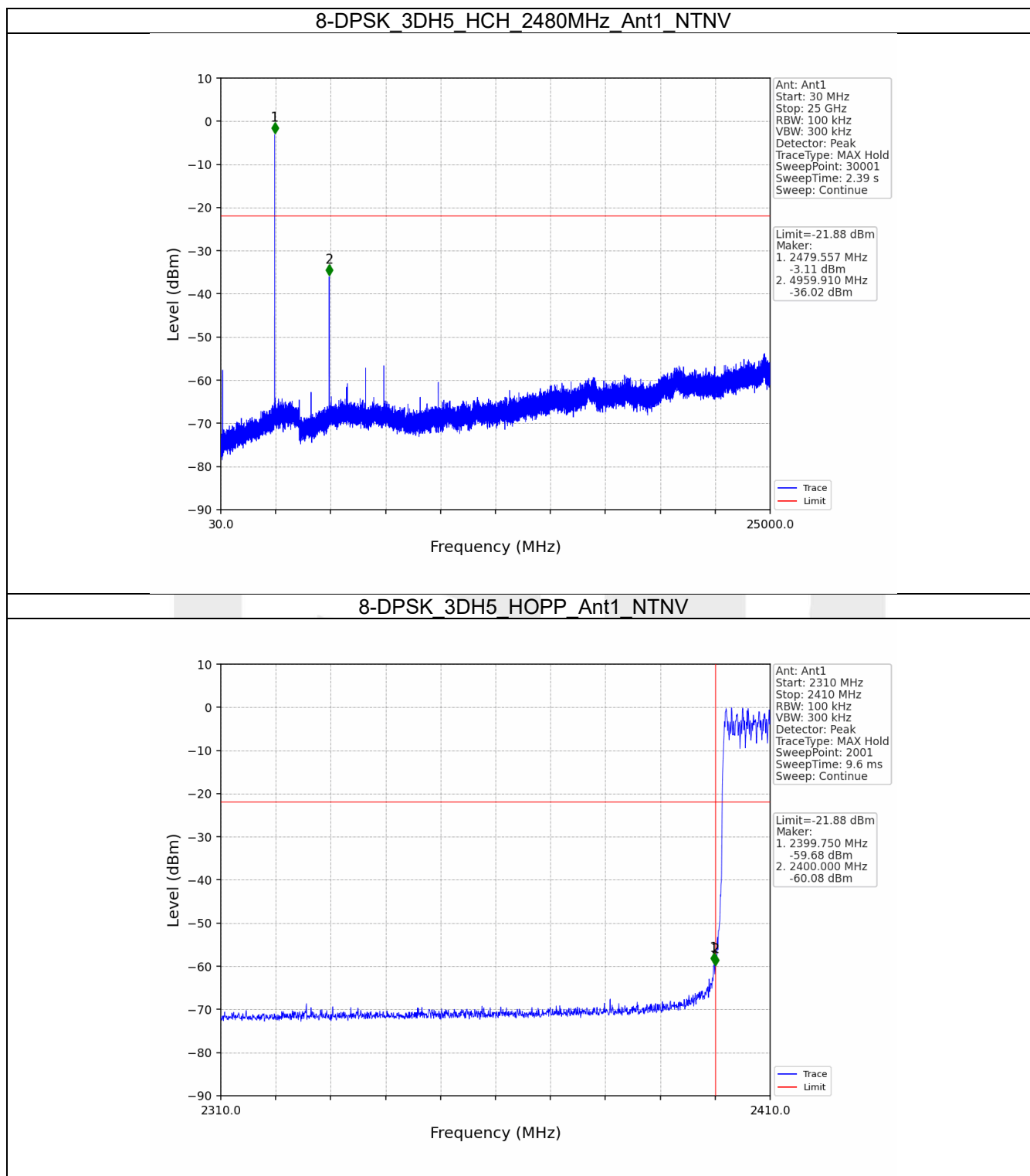


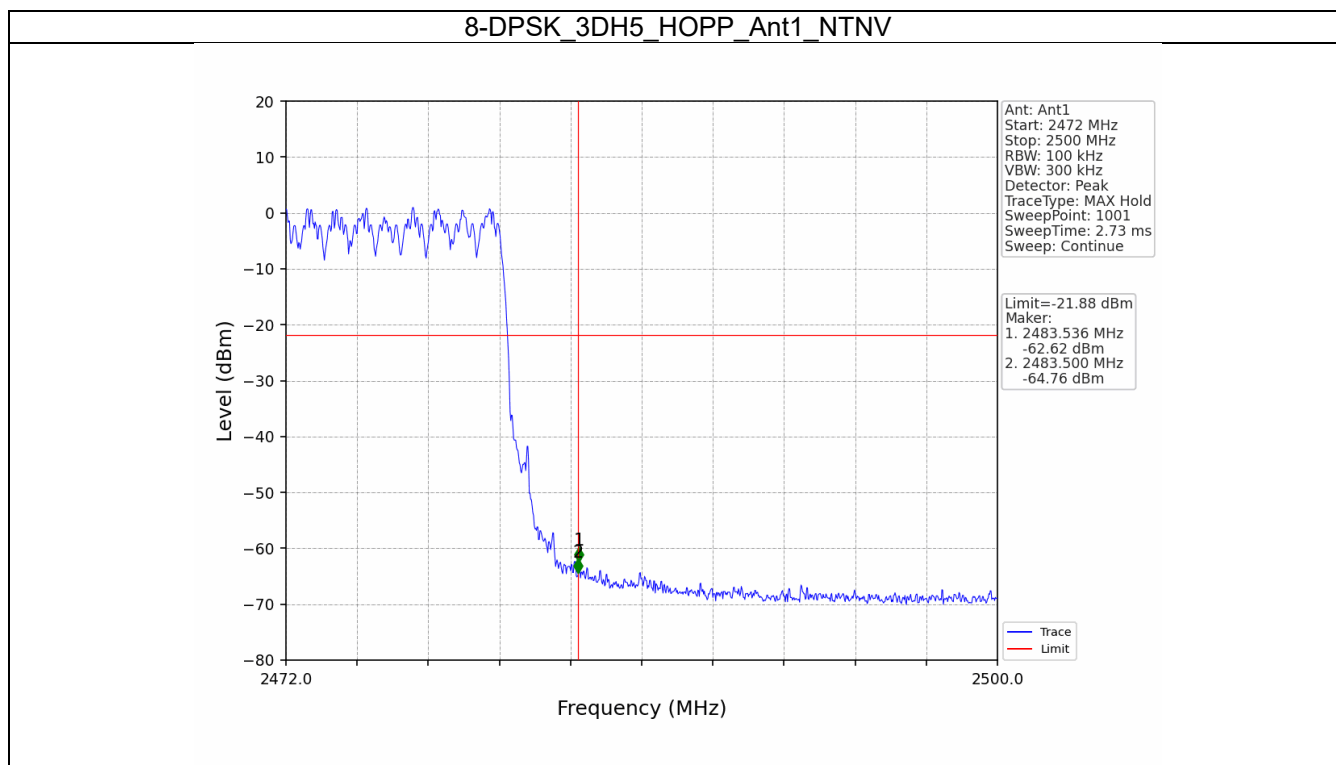












----- End of Report -----