

Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Wireless Speaker

Trade Mark: ELECTRO

Test Model: ELLC-MINMAX-1

FCC ID: 2BB37-ELLC-MINMAX-1

Environmental Conditions

Temperature:	22.5
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Tony lu
Supervised by:	Max zhang
NOTE	N/A

1. Bandwidth

1.1 Test Result

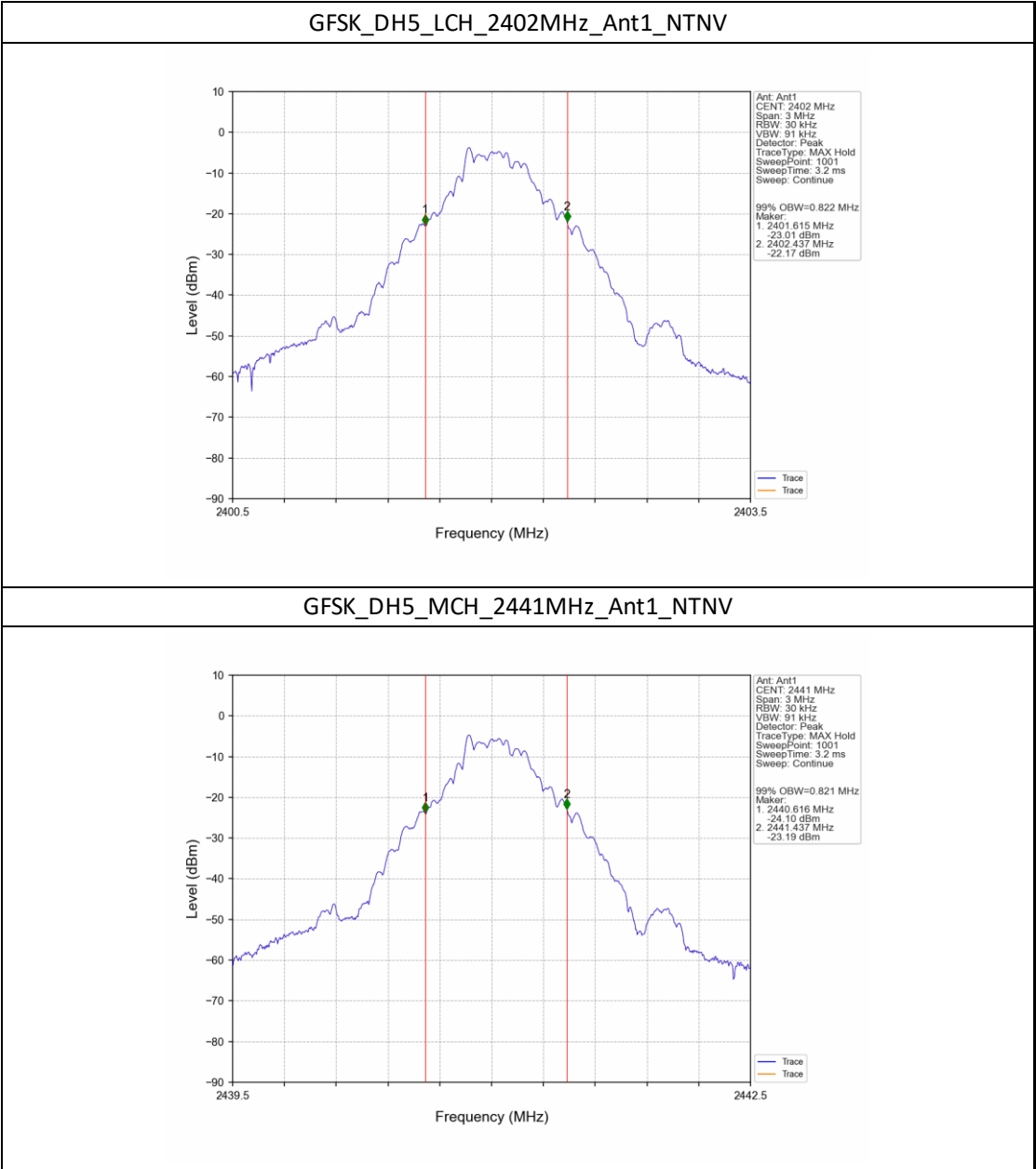
1.1.1 OBW

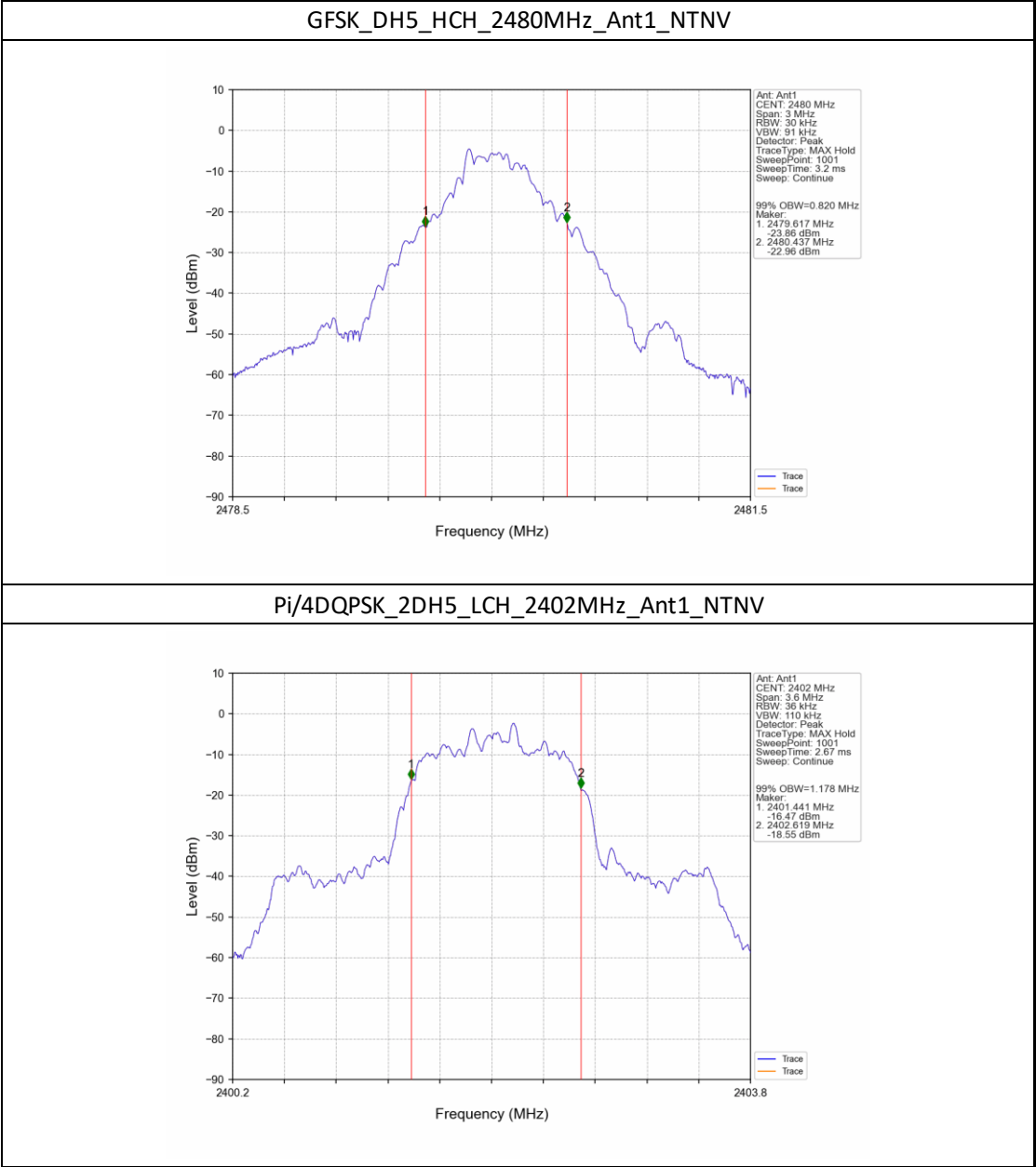
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.822	/	Pass
		2441	DH5	1	0.821	/	Pass
		2480	DH5	1	0.820	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.178	/	Pass
		2441	2DH5	1	1.180	/	Pass
		2480	2DH5	1	1.171	/	Pass
8DPSK	SISO	2402	3DH5	1	1.178	/	Pass
		2441	3DH5	1	1.179	/	Pass
		2480	3DH5	1	1.175	/	Pass

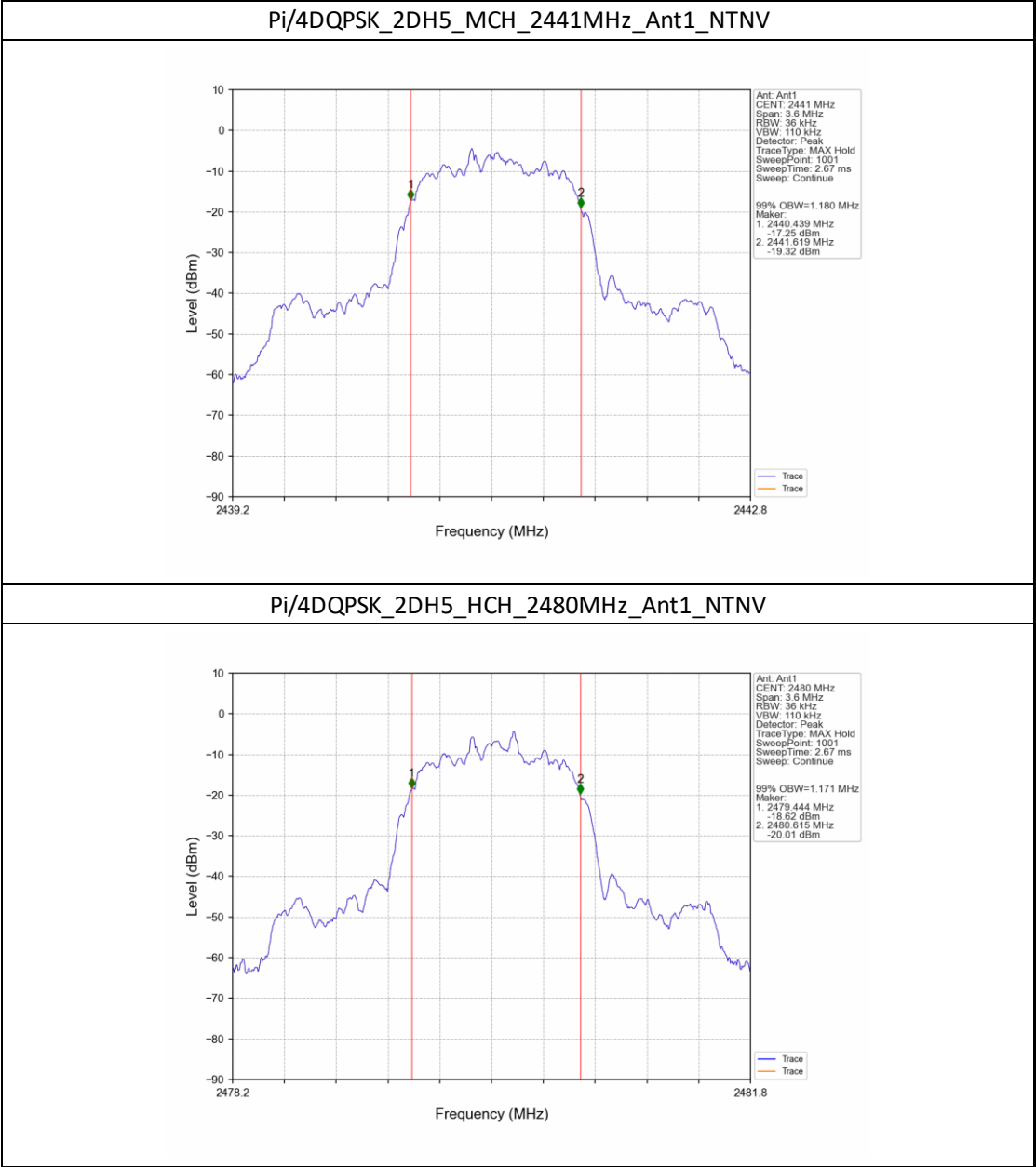
1.1.2 20dB BW

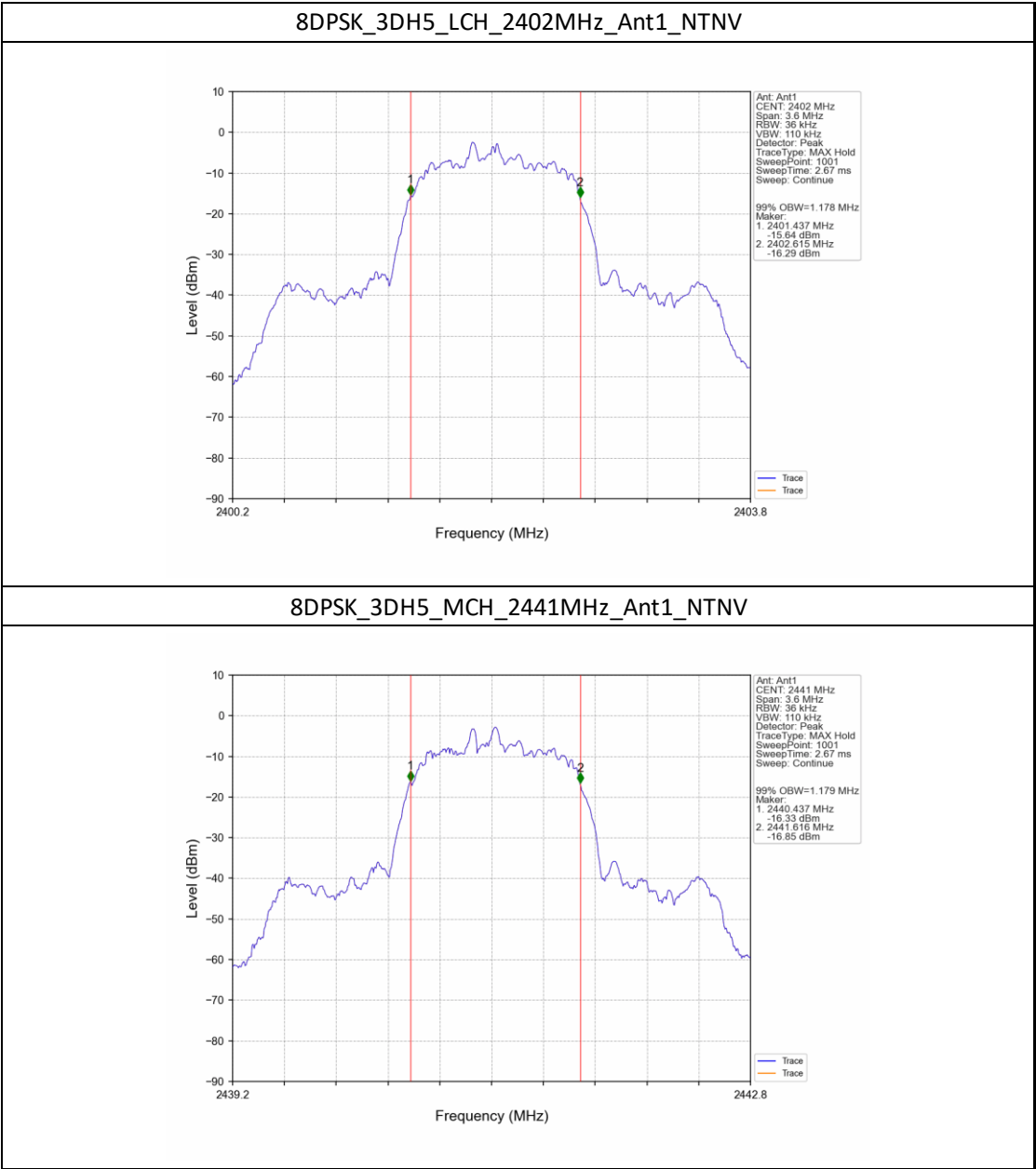
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.934	/	Pass
		2441	DH5	1	0.934	/	Pass
		2480	DH5	1	0.935	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.291	/	Pass
		2441	2DH5	1	1.293	/	Pass
		2480	2DH5	1	1.290	/	Pass
8DPSK	SISO	2402	3DH5	1	1.299	/	Pass
		2441	3DH5	1	1.299	/	Pass
		2480	3DH5	1	1.299	/	Pass

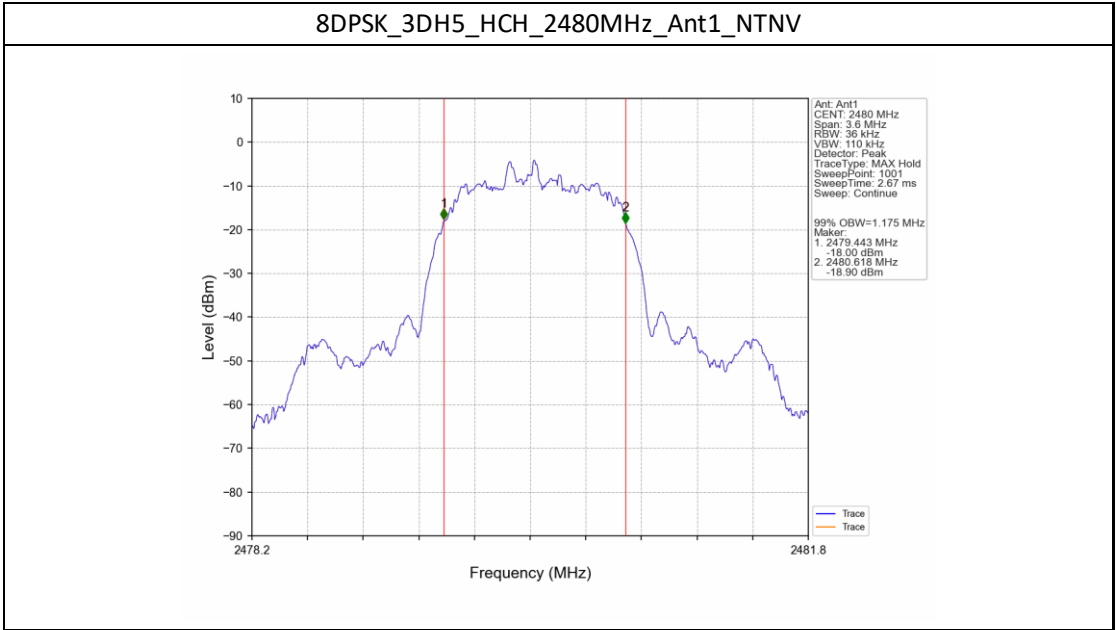
1.2 Test Graph
1.2.1 OBW



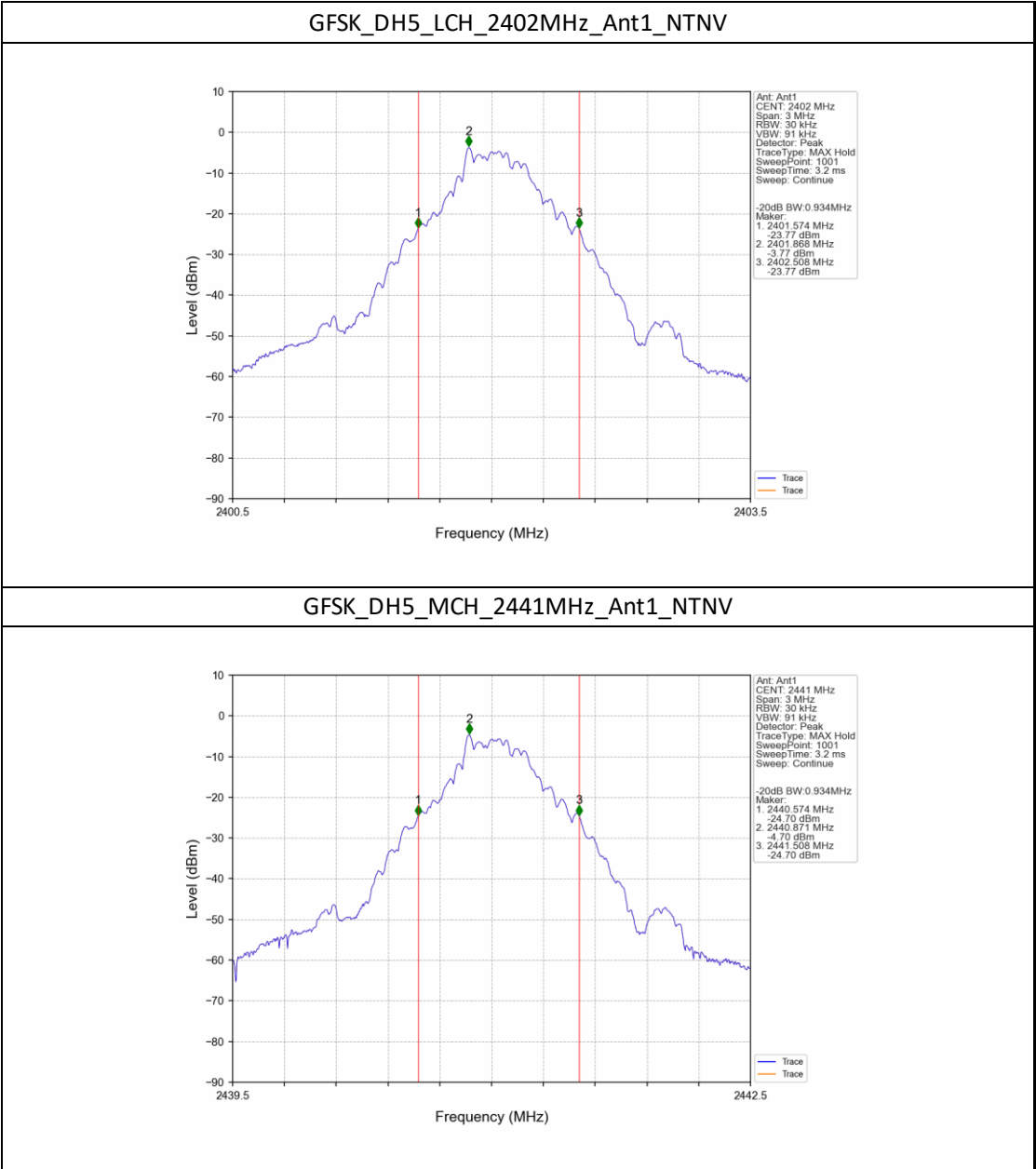


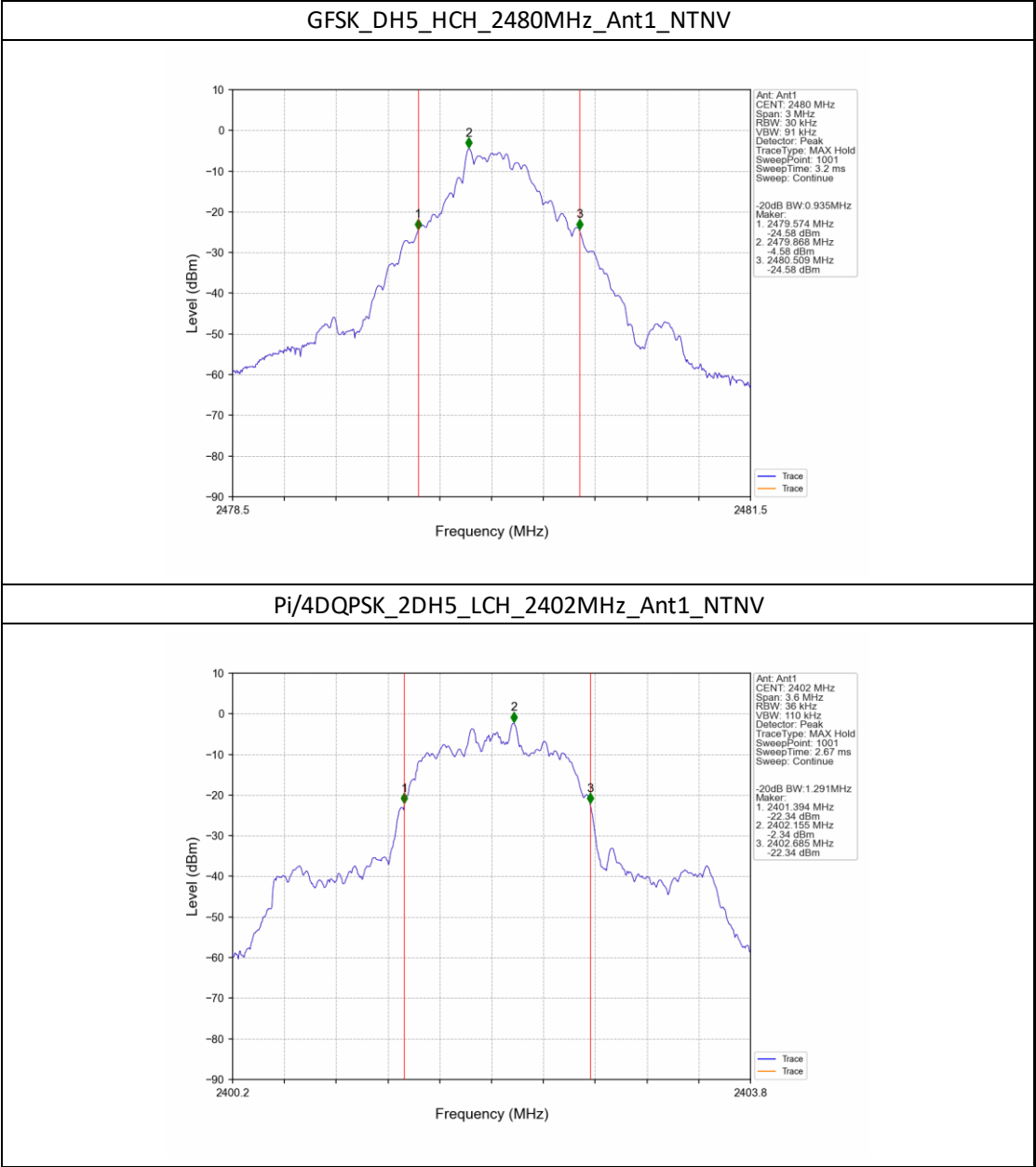


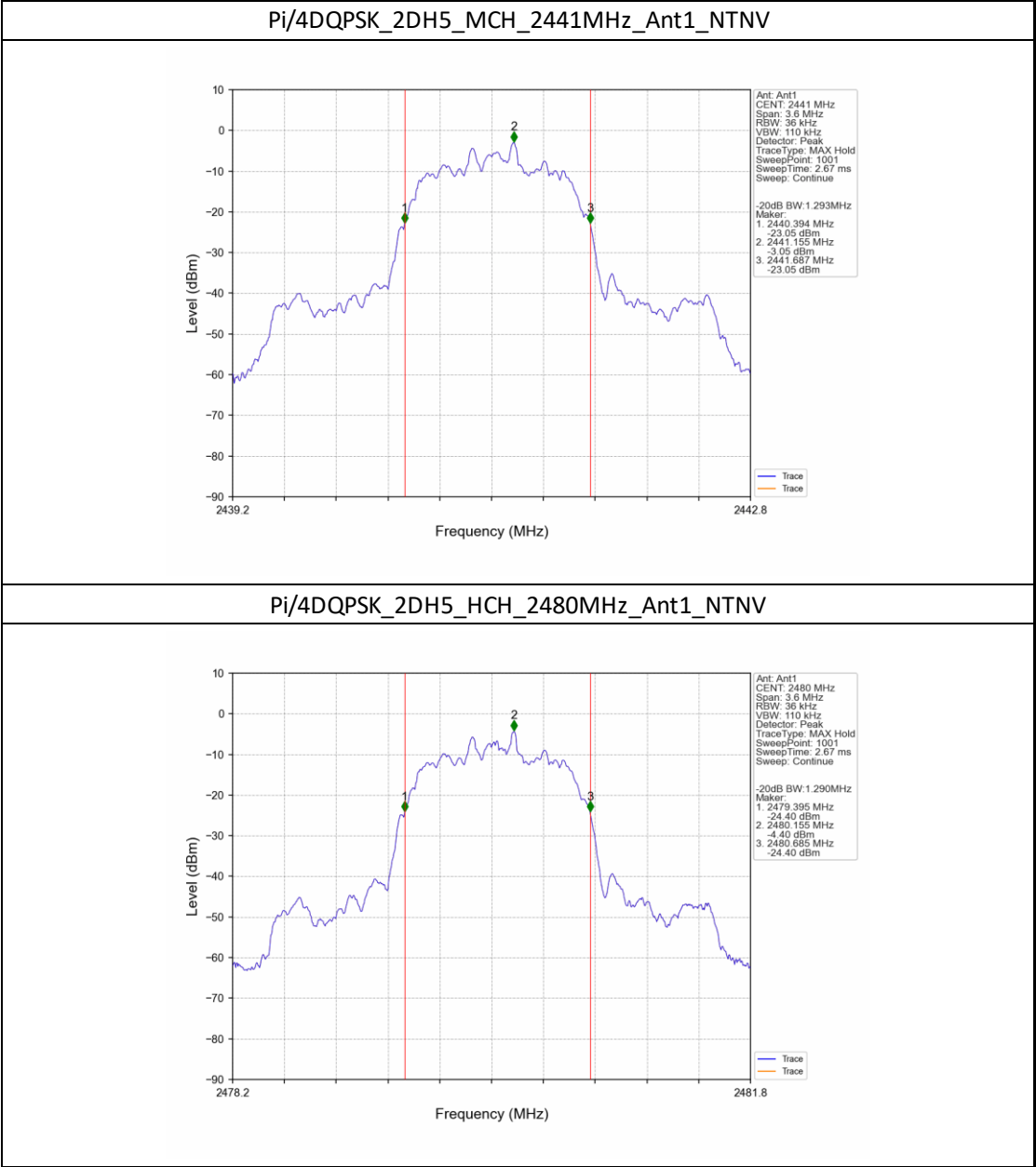


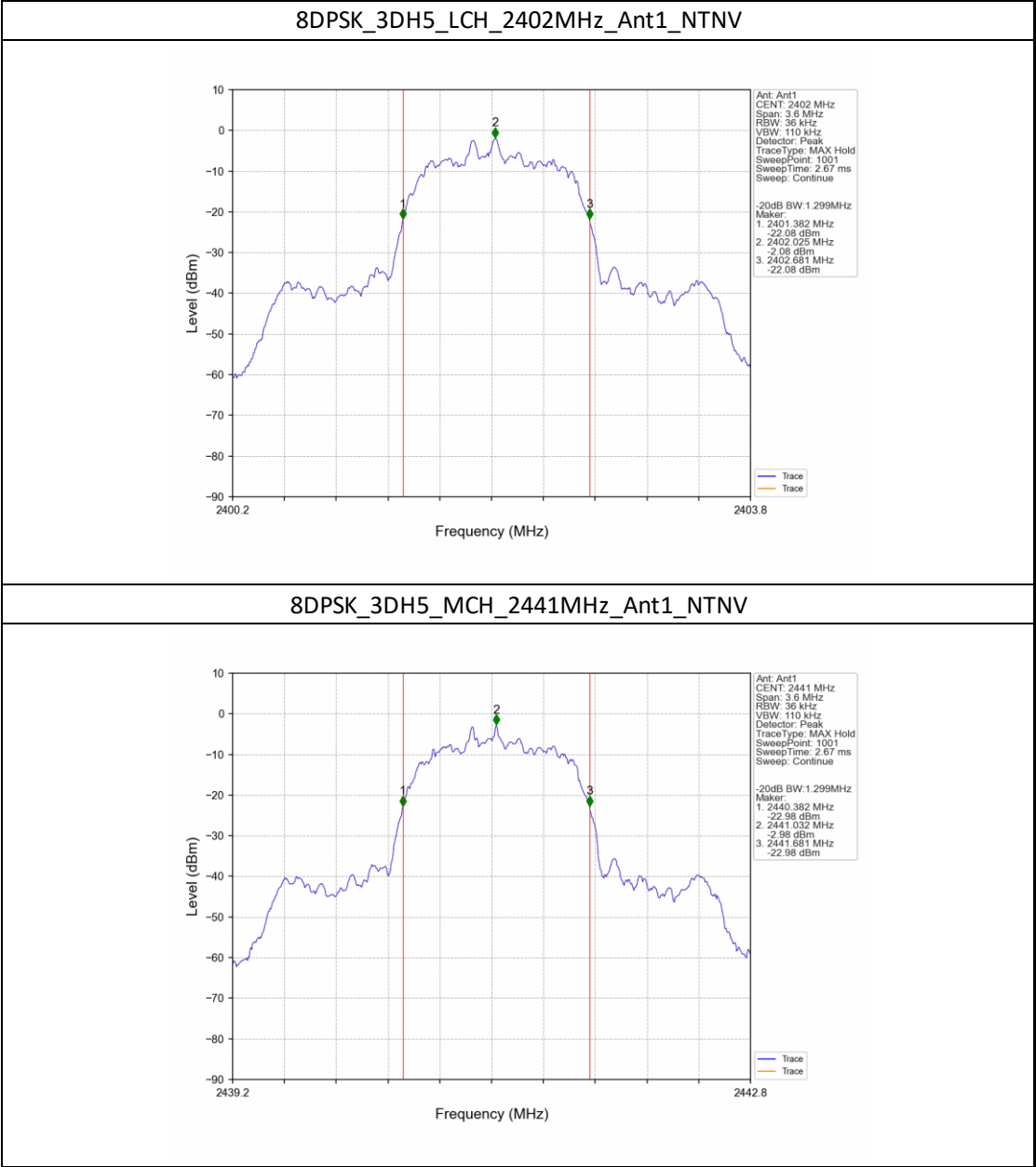


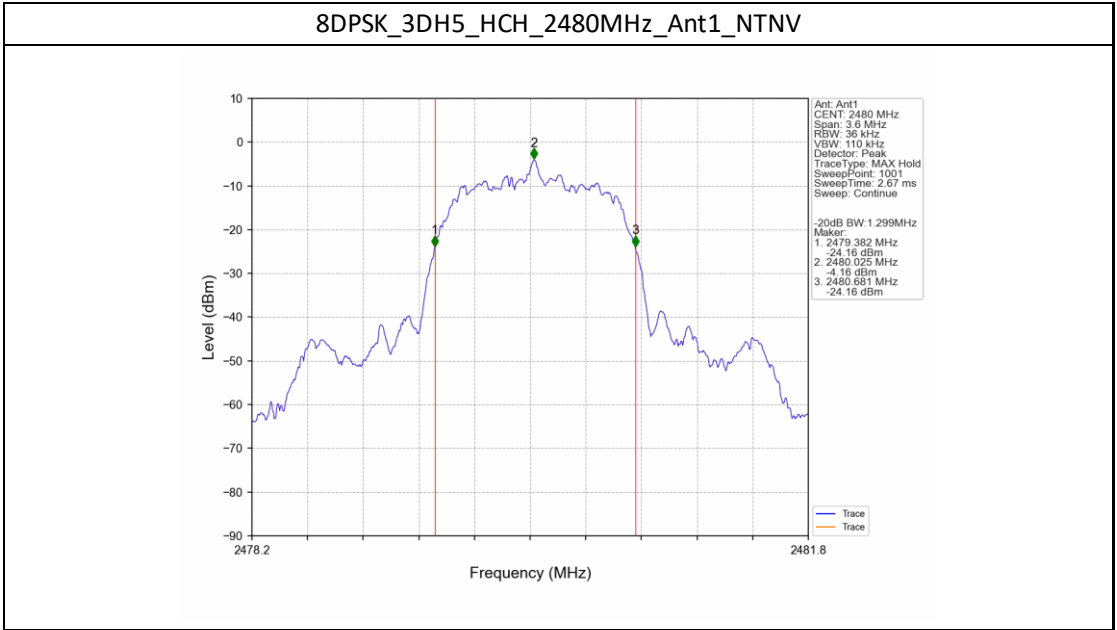
1.2.2 20dB BW











2. Maximum Conducted Output Power

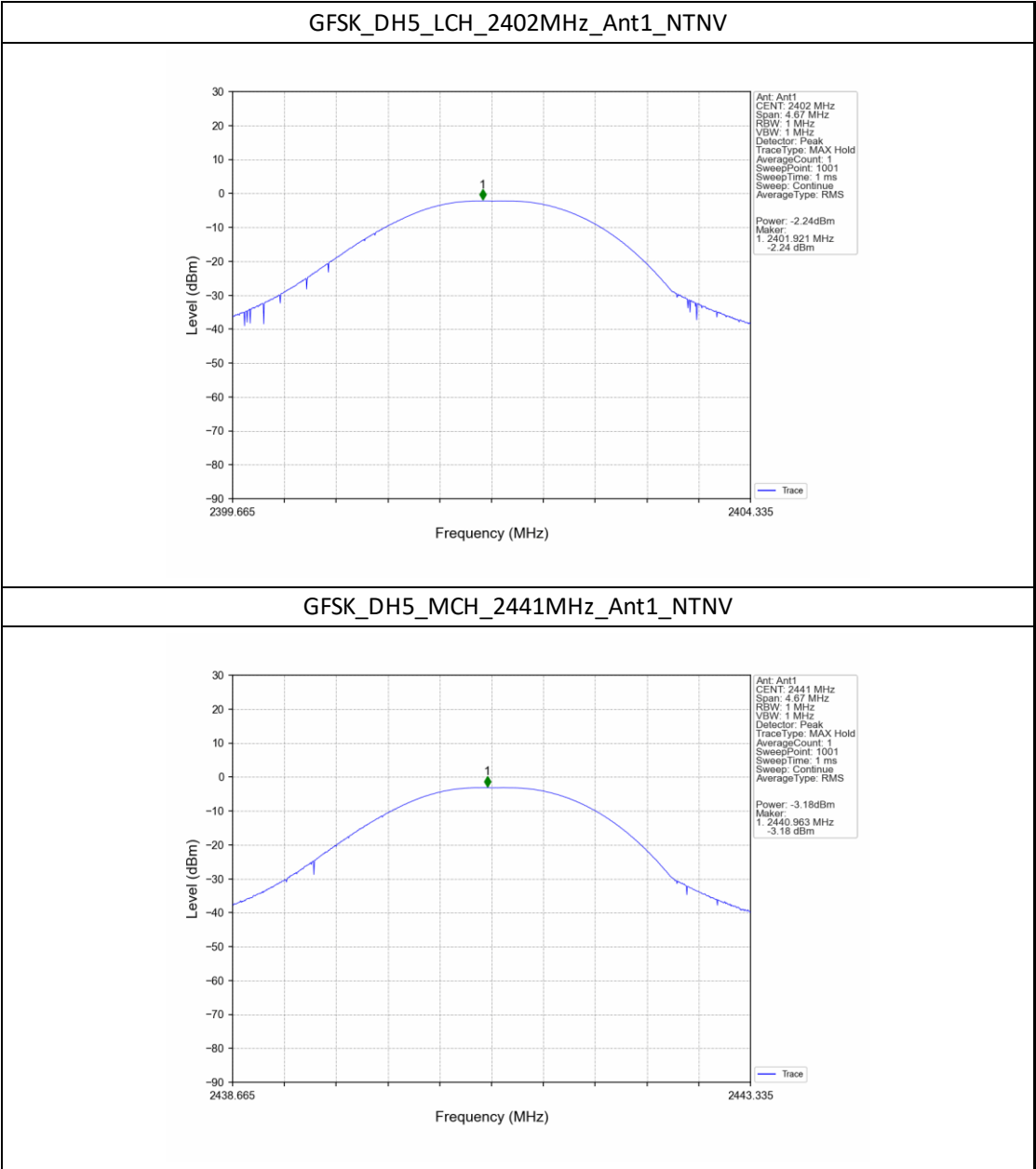
2.1 Test Result

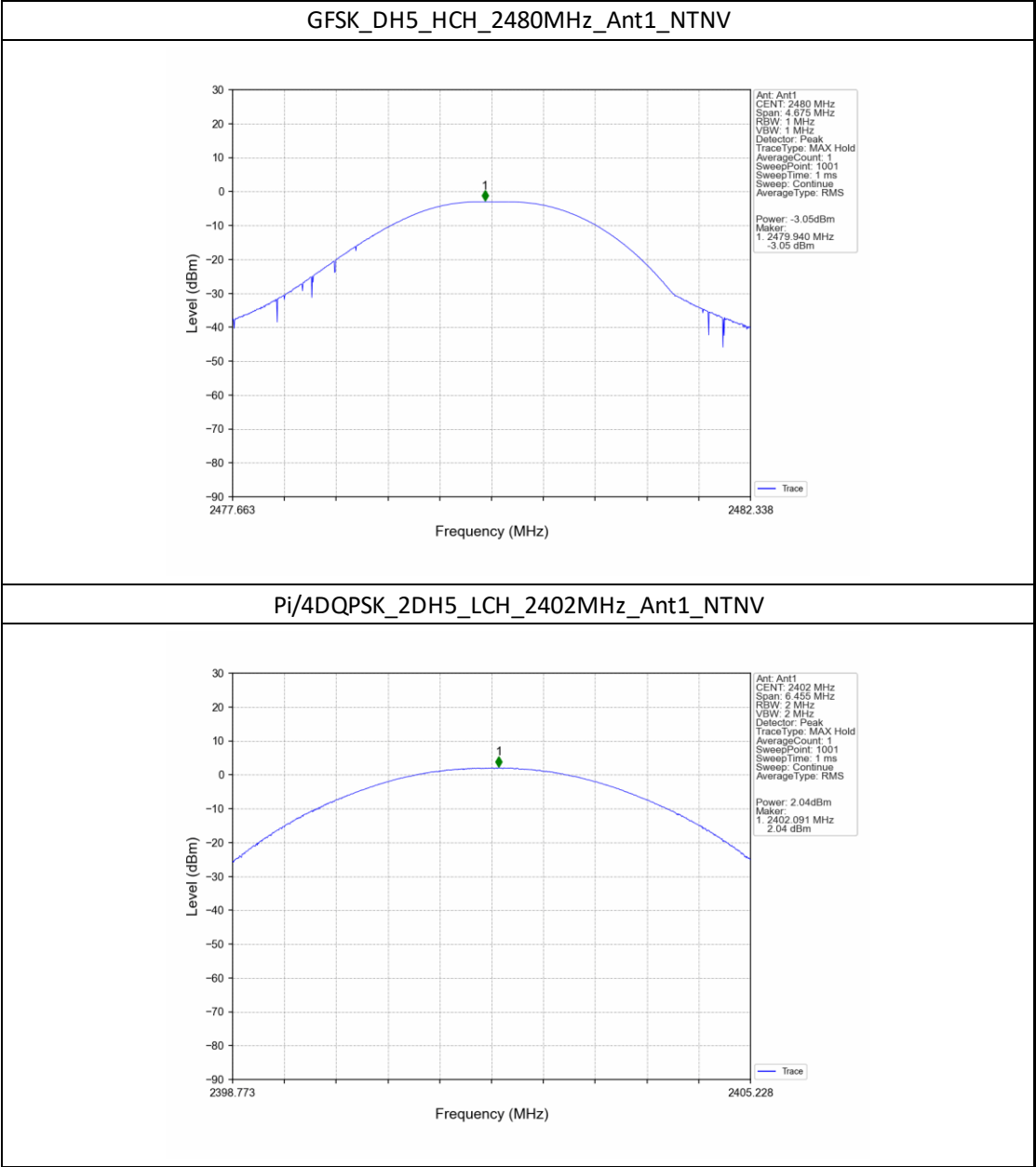
2.1.1 Power

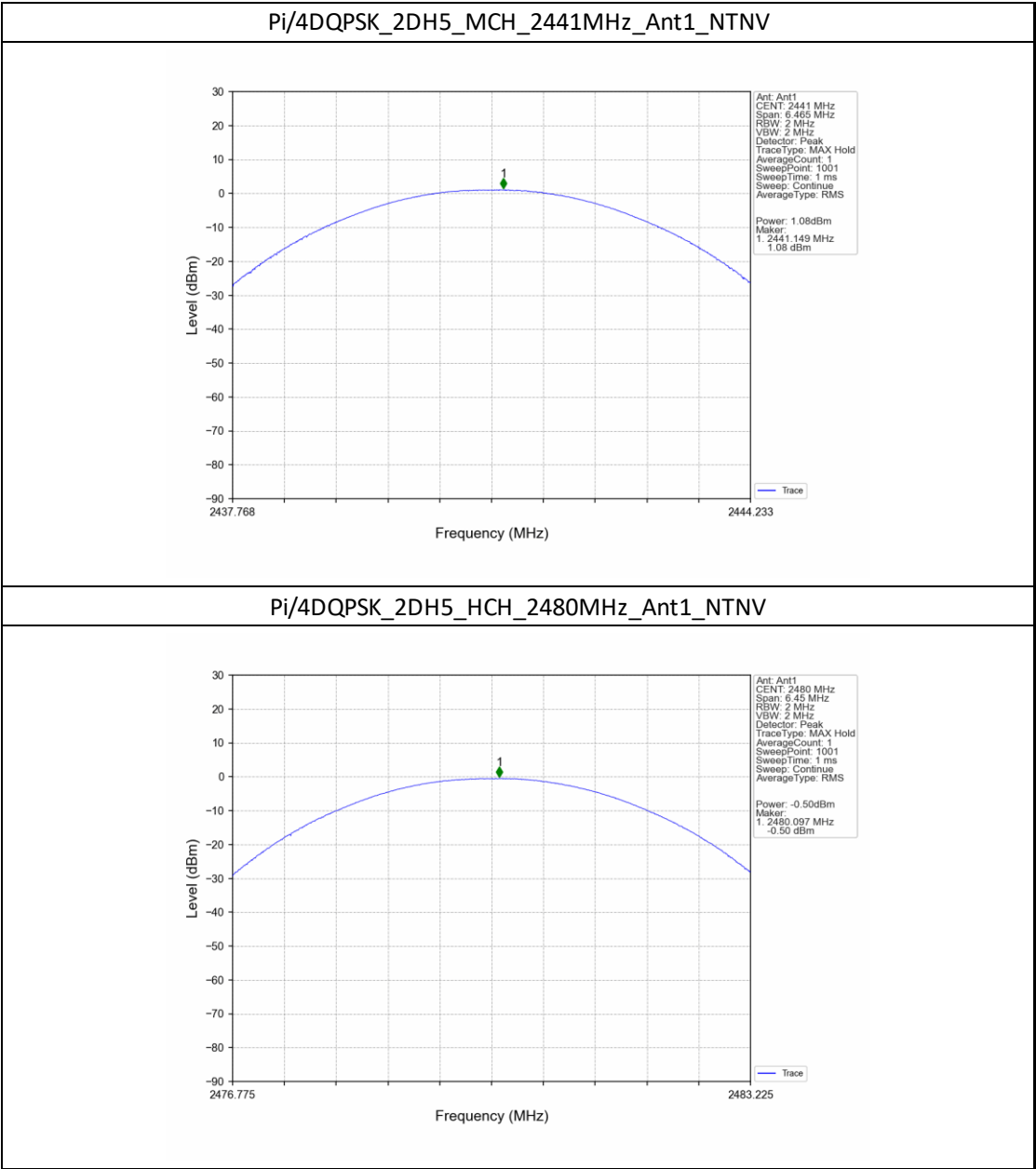
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-2.24	<=30	Pass
		2441	DH5	-3.18	<=30	Pass
		2480	DH5	-3.05	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	2.04	<=20.97	Pass
		2441	2DH5	1.08	<=20.97	Pass
		2480	2DH5	-0.50	<=20.97	Pass
8DPSK	SISO	2402	3DH5	2.69	<=20.97	Pass
		2441	3DH5	1.66	<=20.97	Pass
		2480	3DH5	0.08	<=20.97	Pass
Note1: Antenna Gain: Ant1: -0.68dBi;						

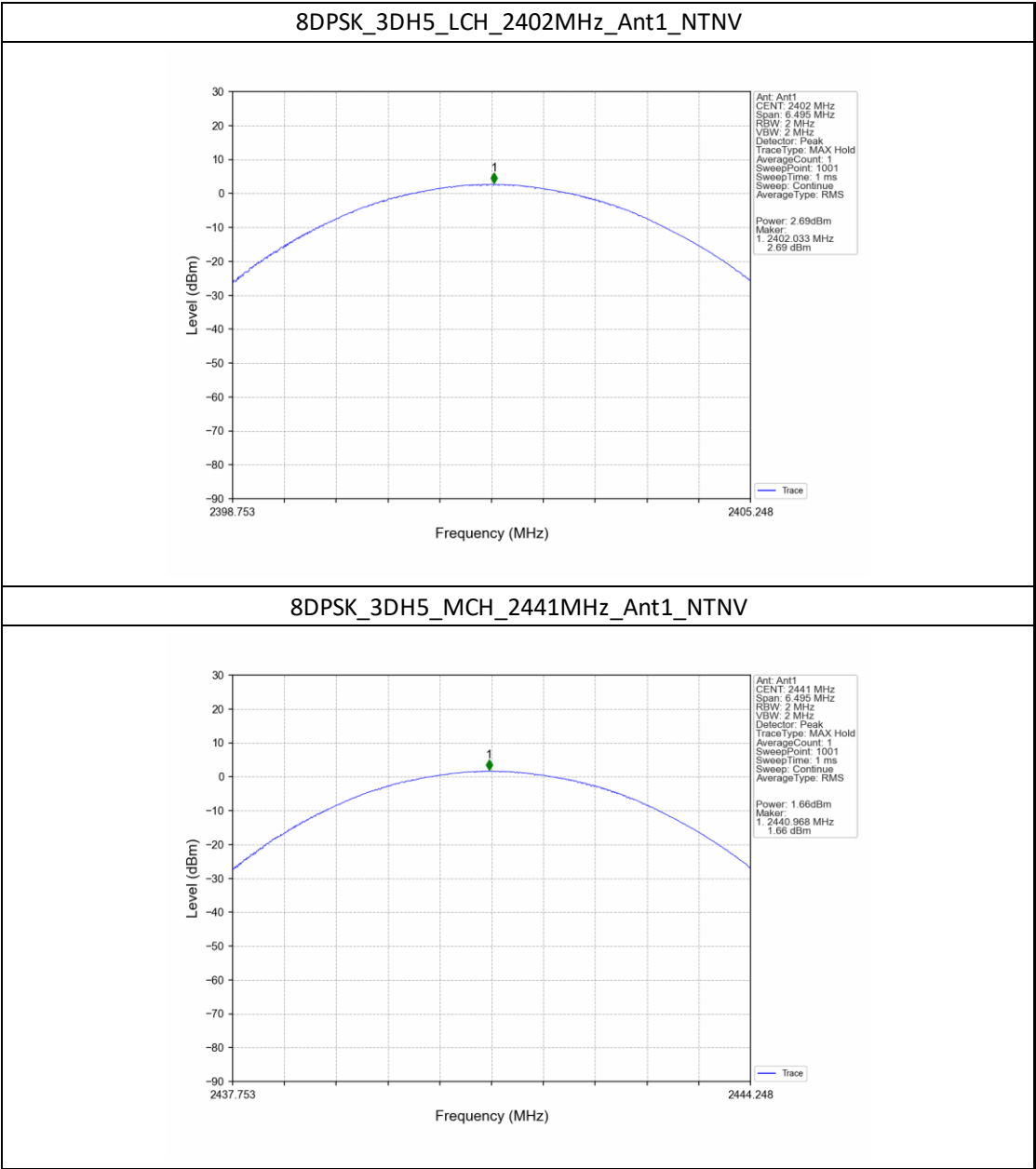
2.2 Test Graph

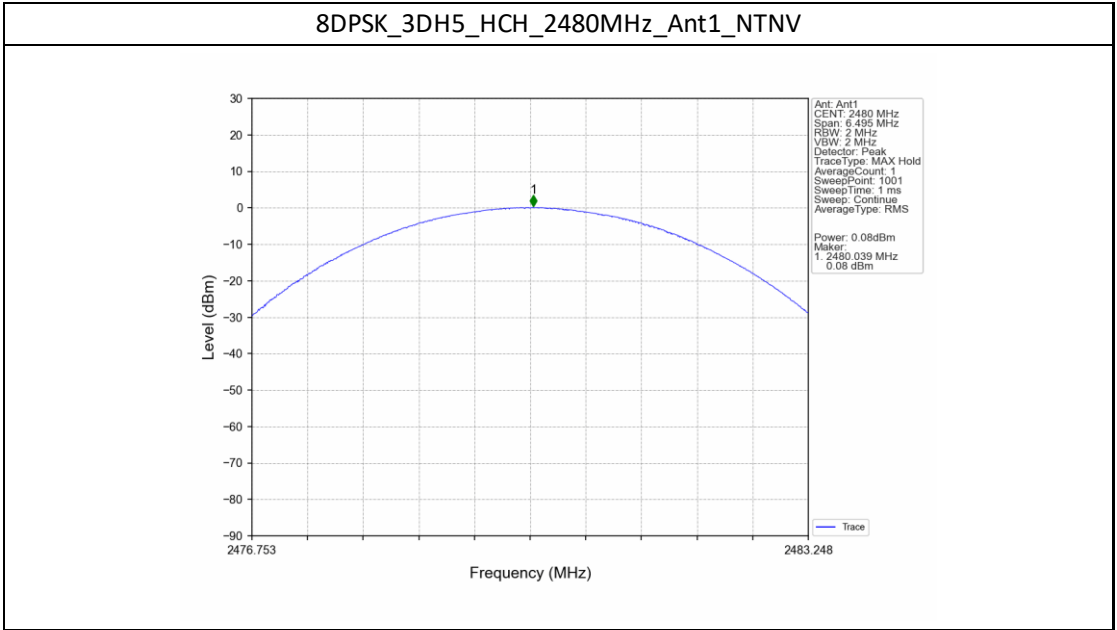
2.2.1 Power











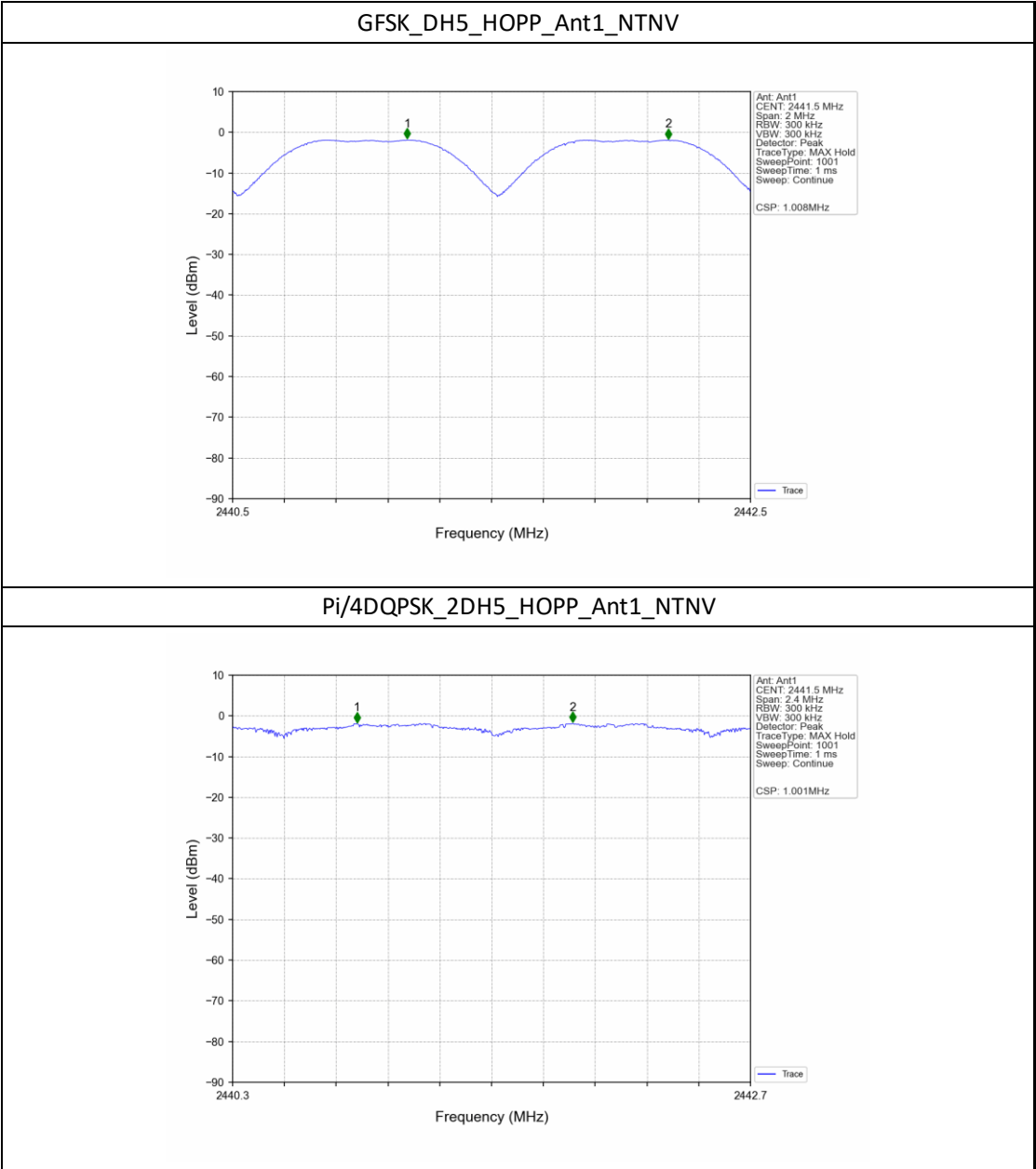
3. Carrier Frequency Separation

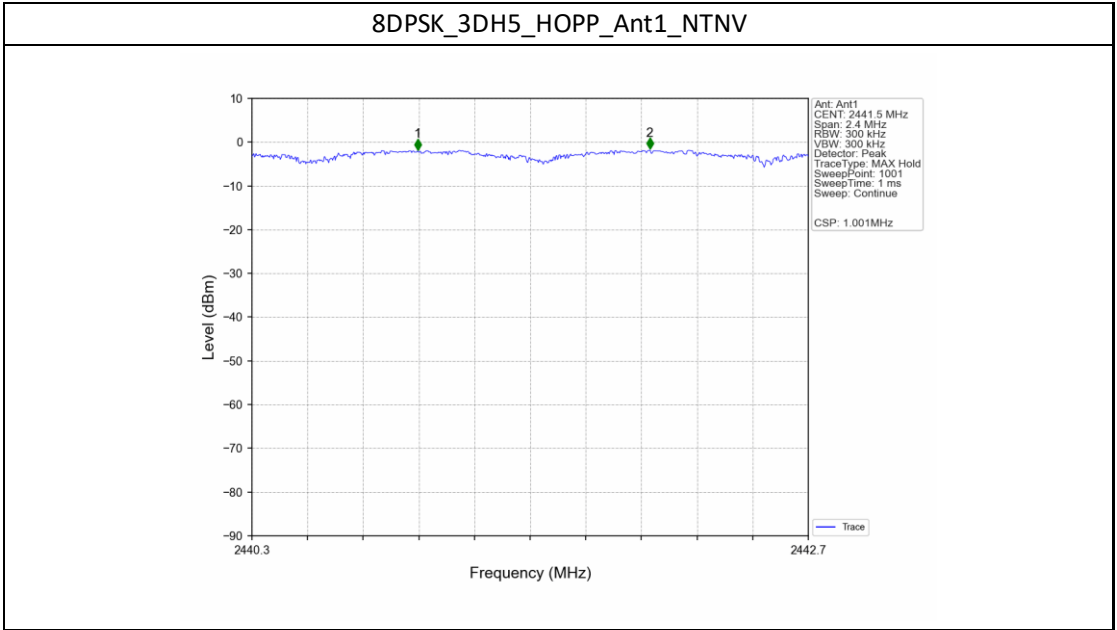
3.1 Test Result

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	1.008	0.935	≥ 0.935	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.001	1.293	≥ 0.862	Pass
8DPSK	SISO	HOPP	3DH5	1.001	1.299	≥ 0.866	Pass

3.2 Test Graph
3.2.1 Ant1





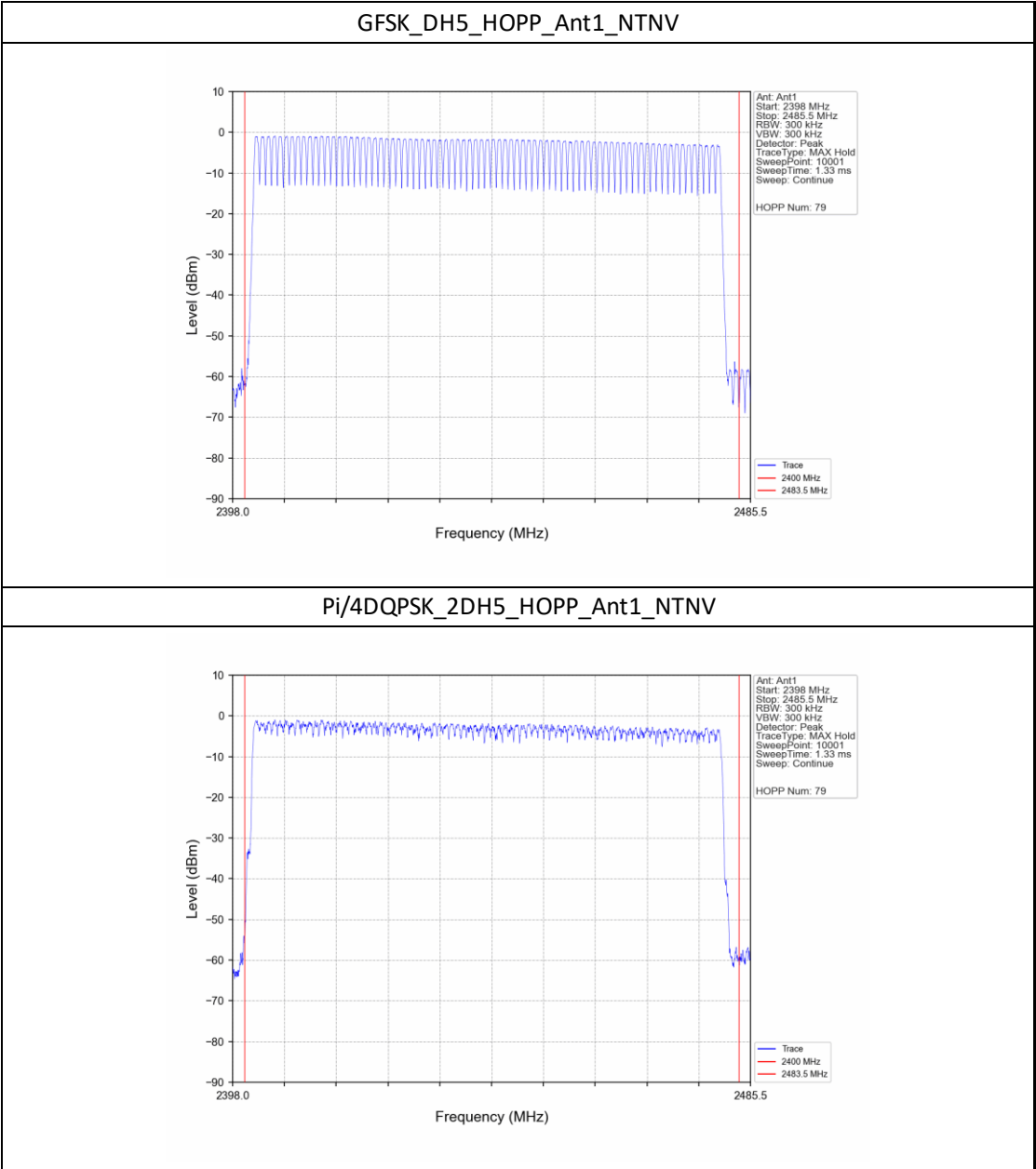
4. Number of Hopping Frequencies

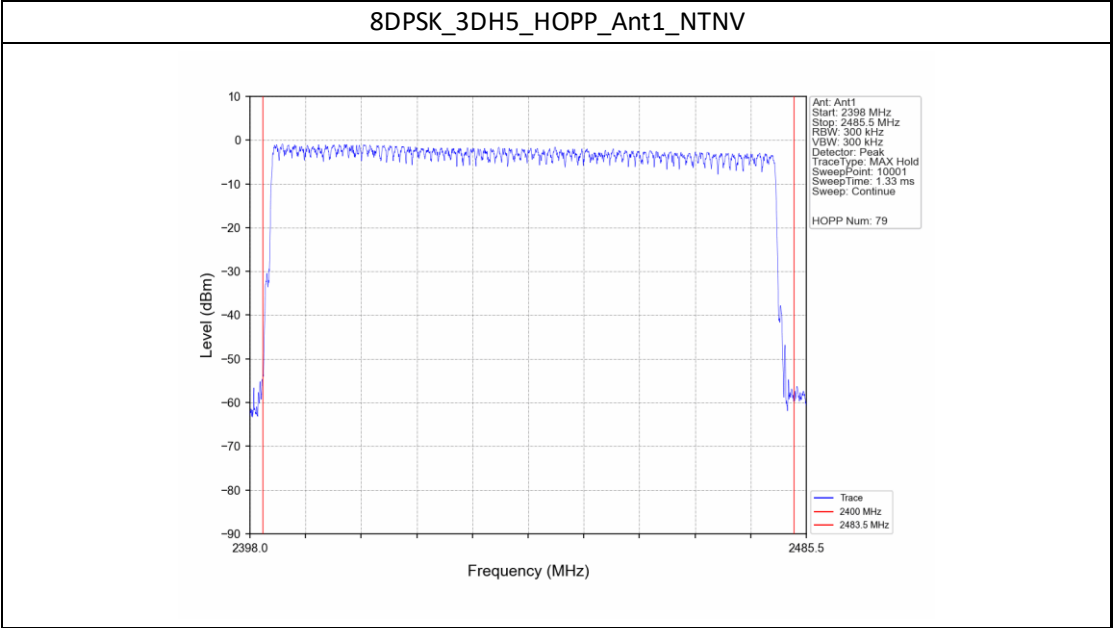
4.1 Test Result

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





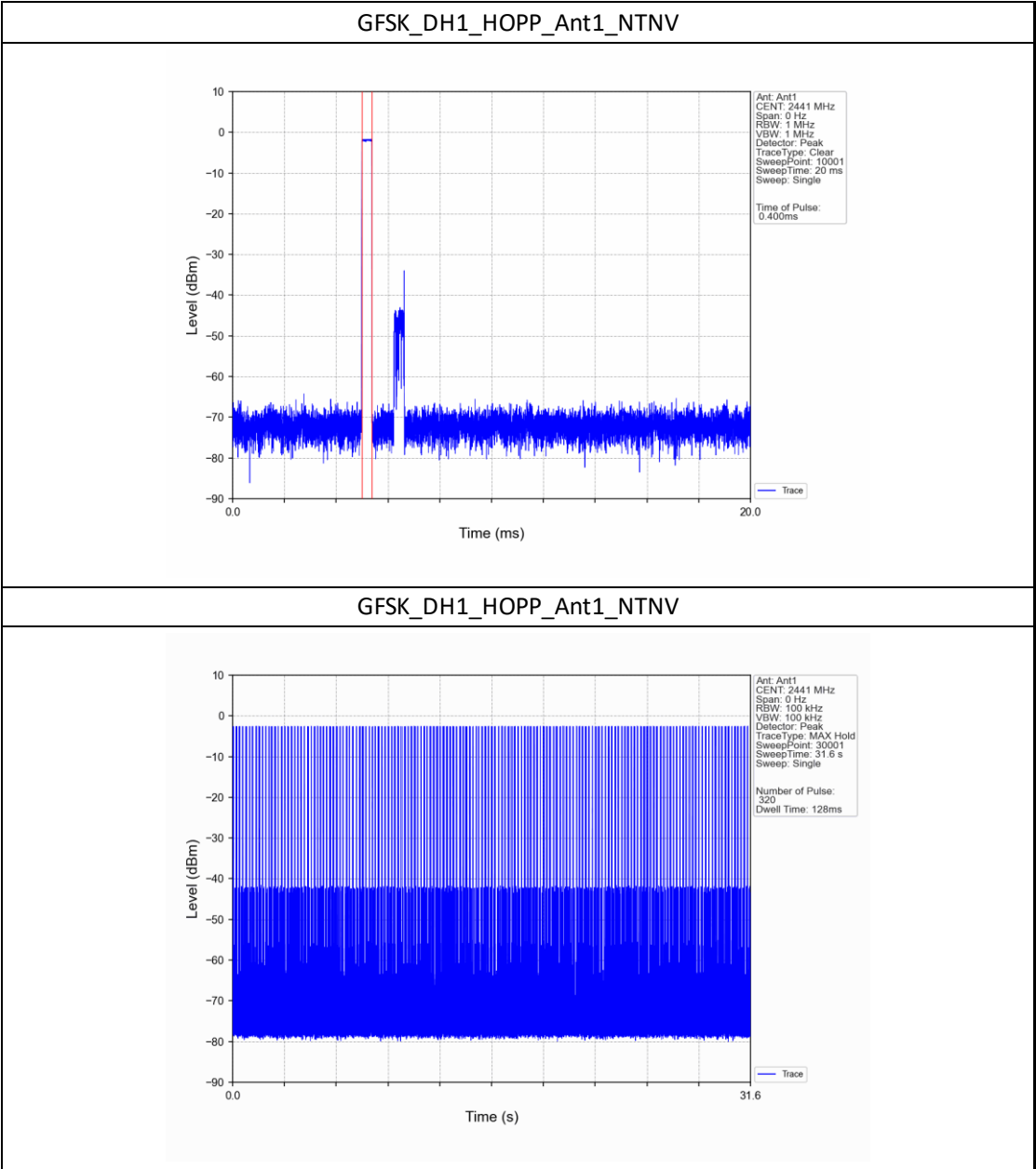
5. Time of Occupancy (Dwell Time)

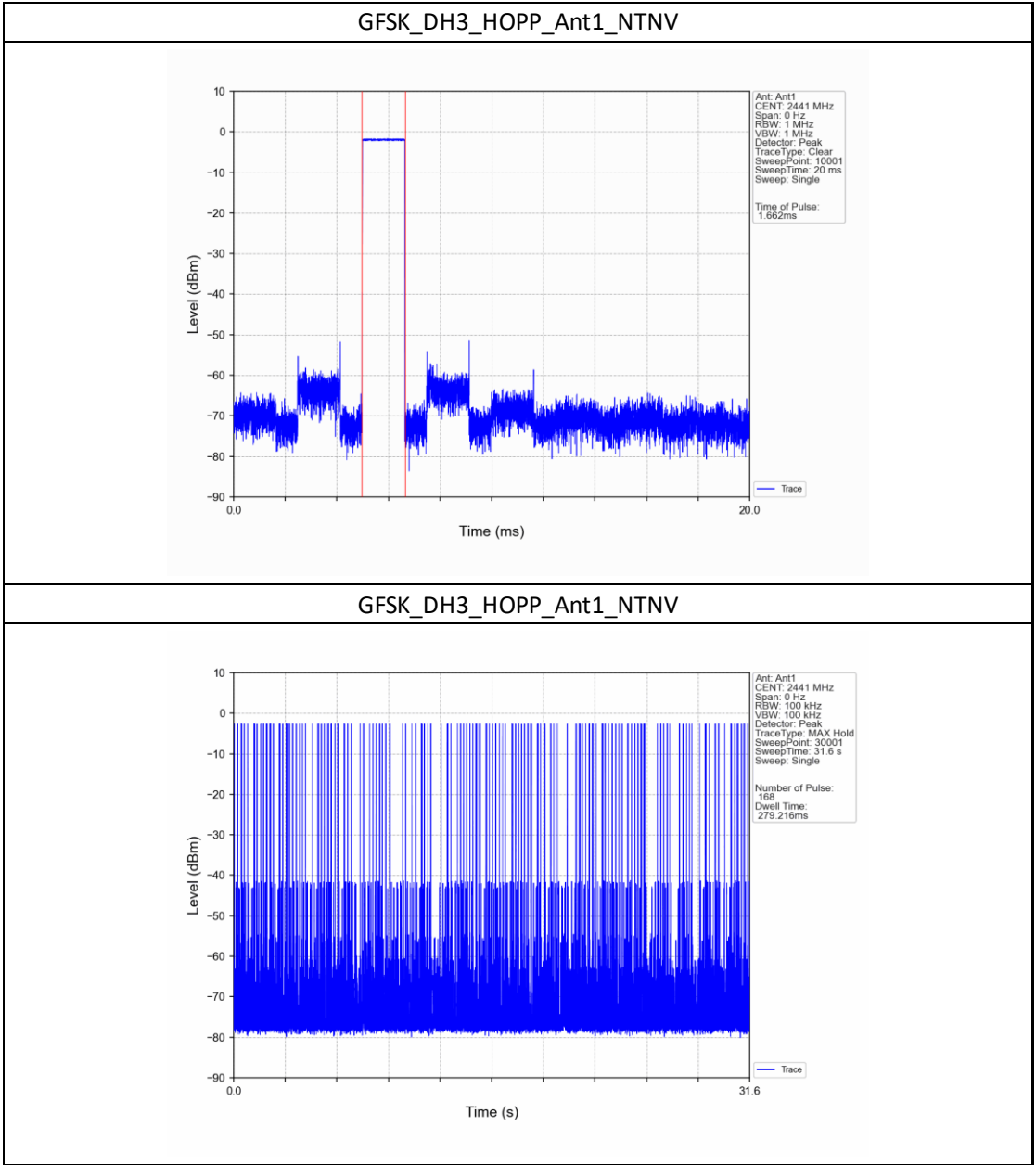
5.1 Test Result

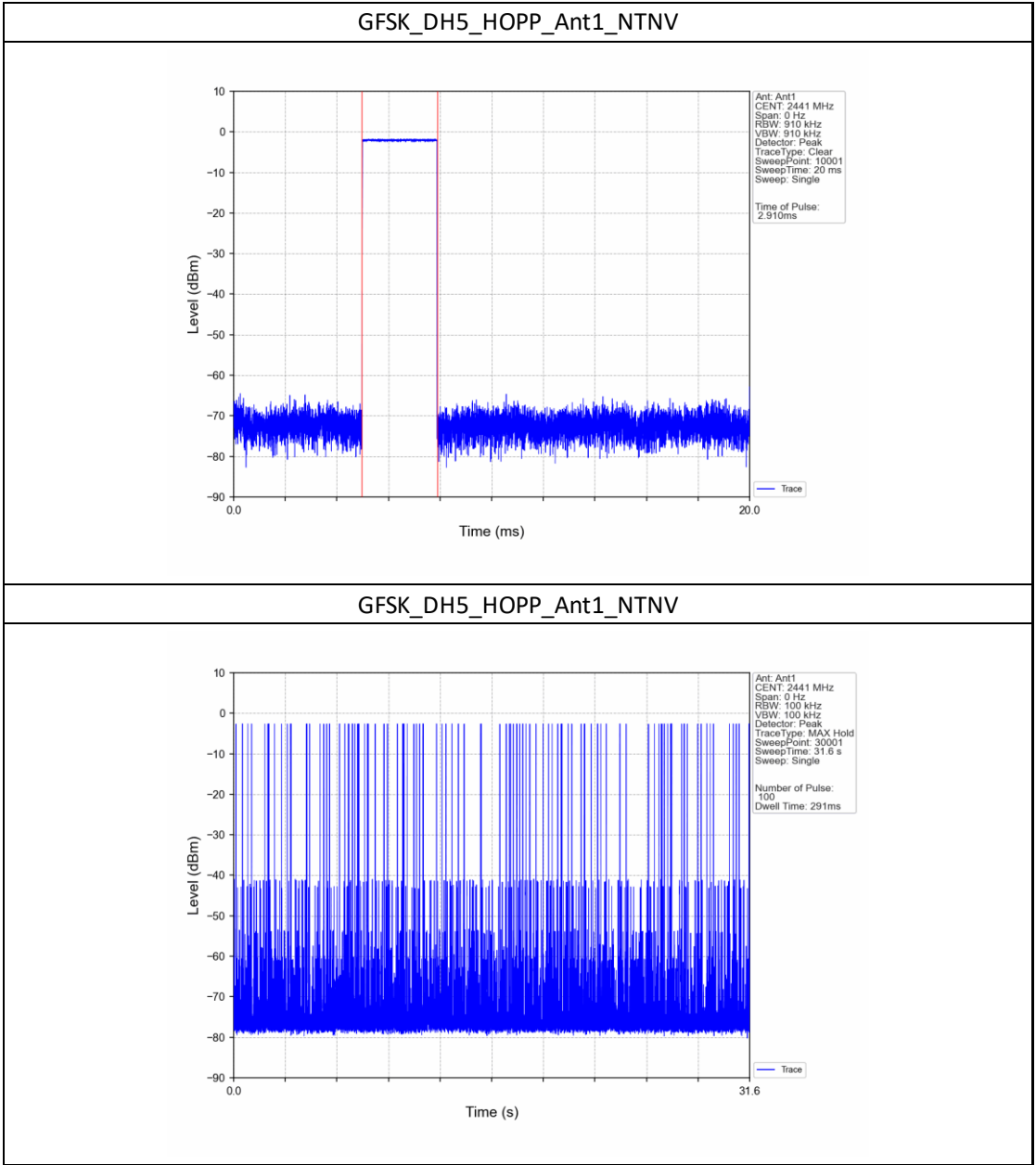
5.1.1 Ant1

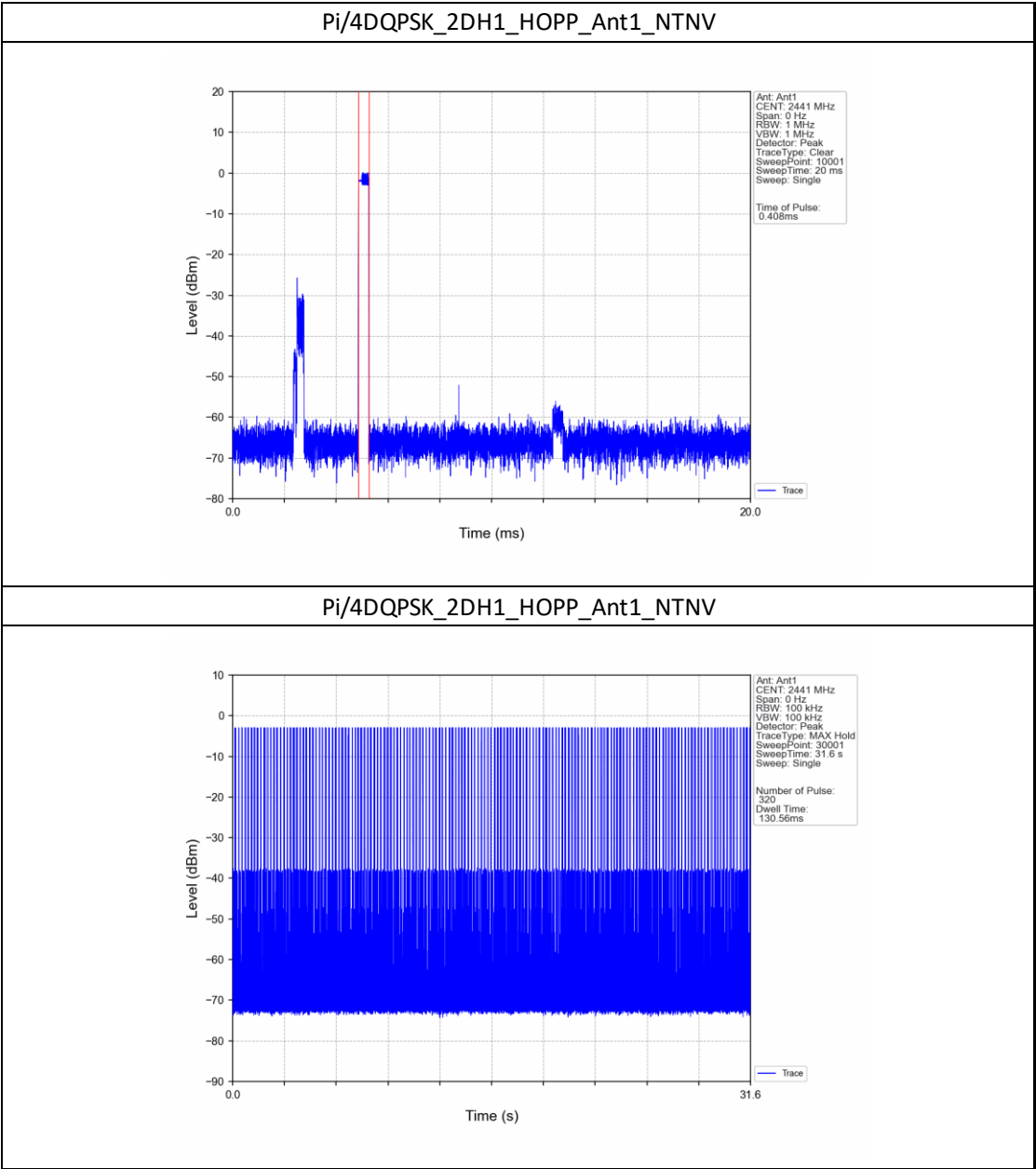
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.400	31.600	320	128.000	<=400	Pass
			DH3	1.662	31.600	168	279.216	<=400	Pass
			DH5	2.910	31.600	100	291.000	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.408	31.600	320	130.560	<=400	Pass
			2DH3	1.662	31.600	158	262.596	<=400	Pass
			2DH5	2.916	31.600	103	300.348	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.412	31.600	320	131.840	<=400	Pass
			3DH3	1.668	31.600	157	261.876	<=400	Pass
			3DH5	2.918	31.600	102	297.636	<=400	Pass

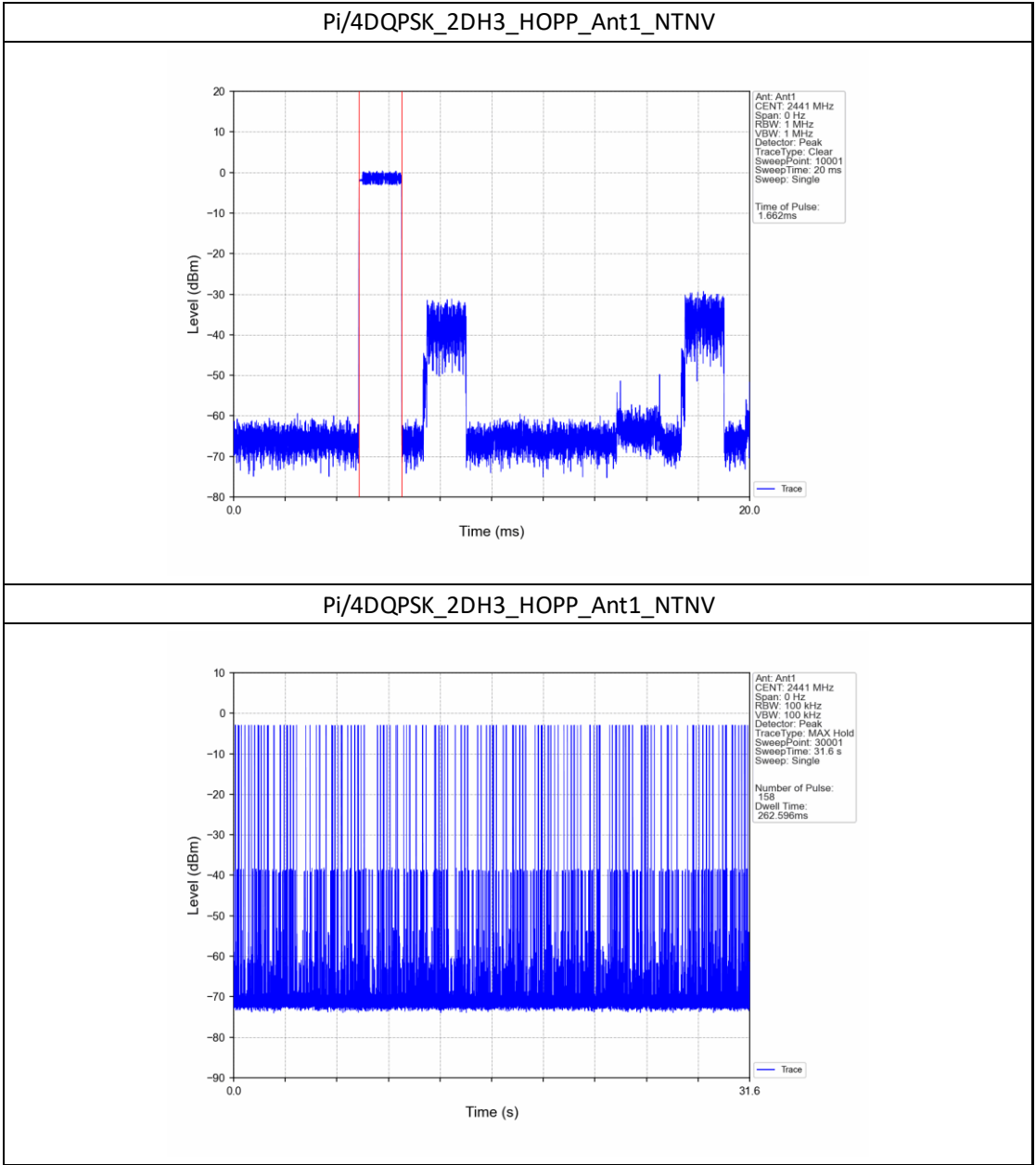
5.2 Test Graph
5.2.1 Ant1

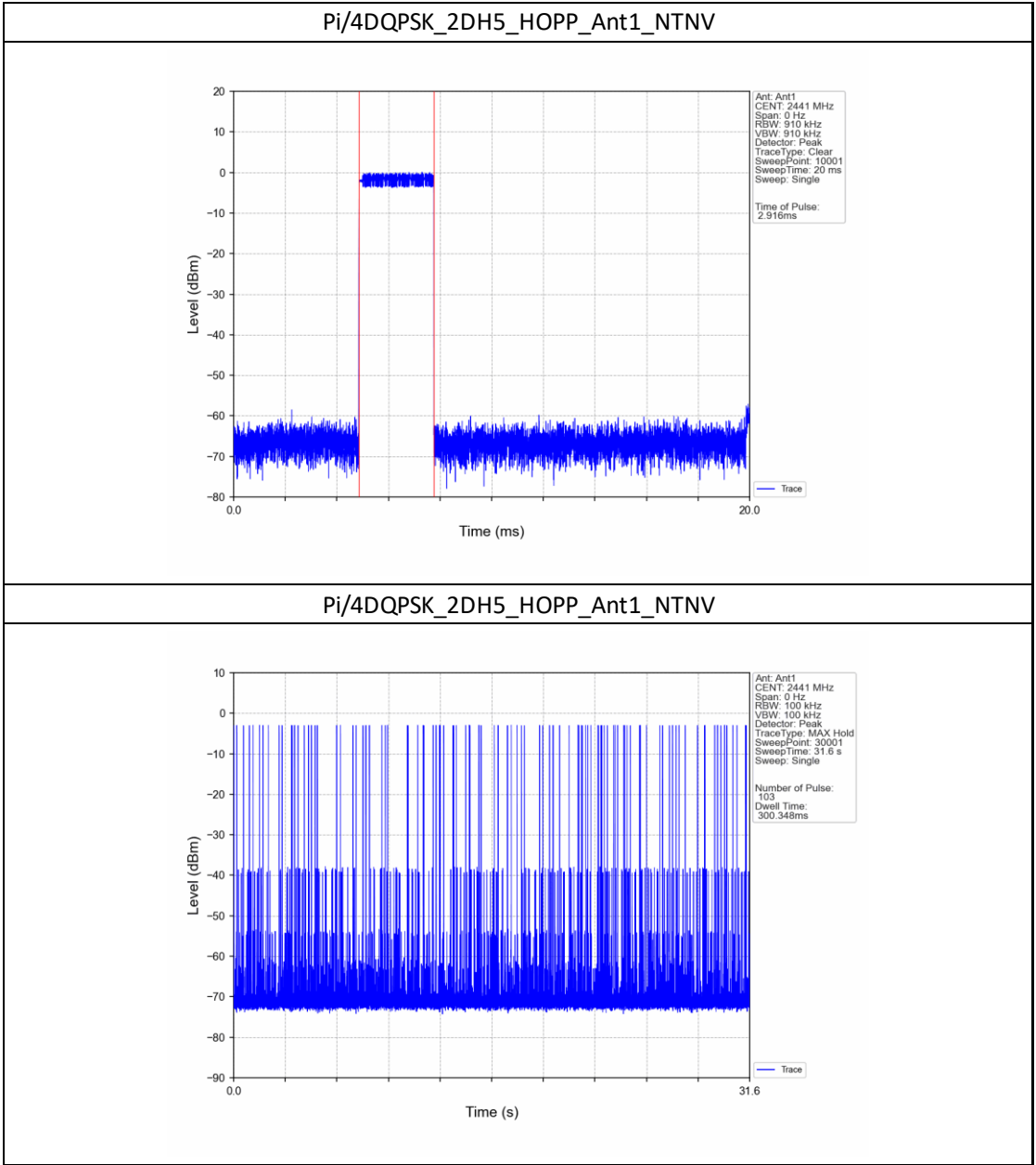


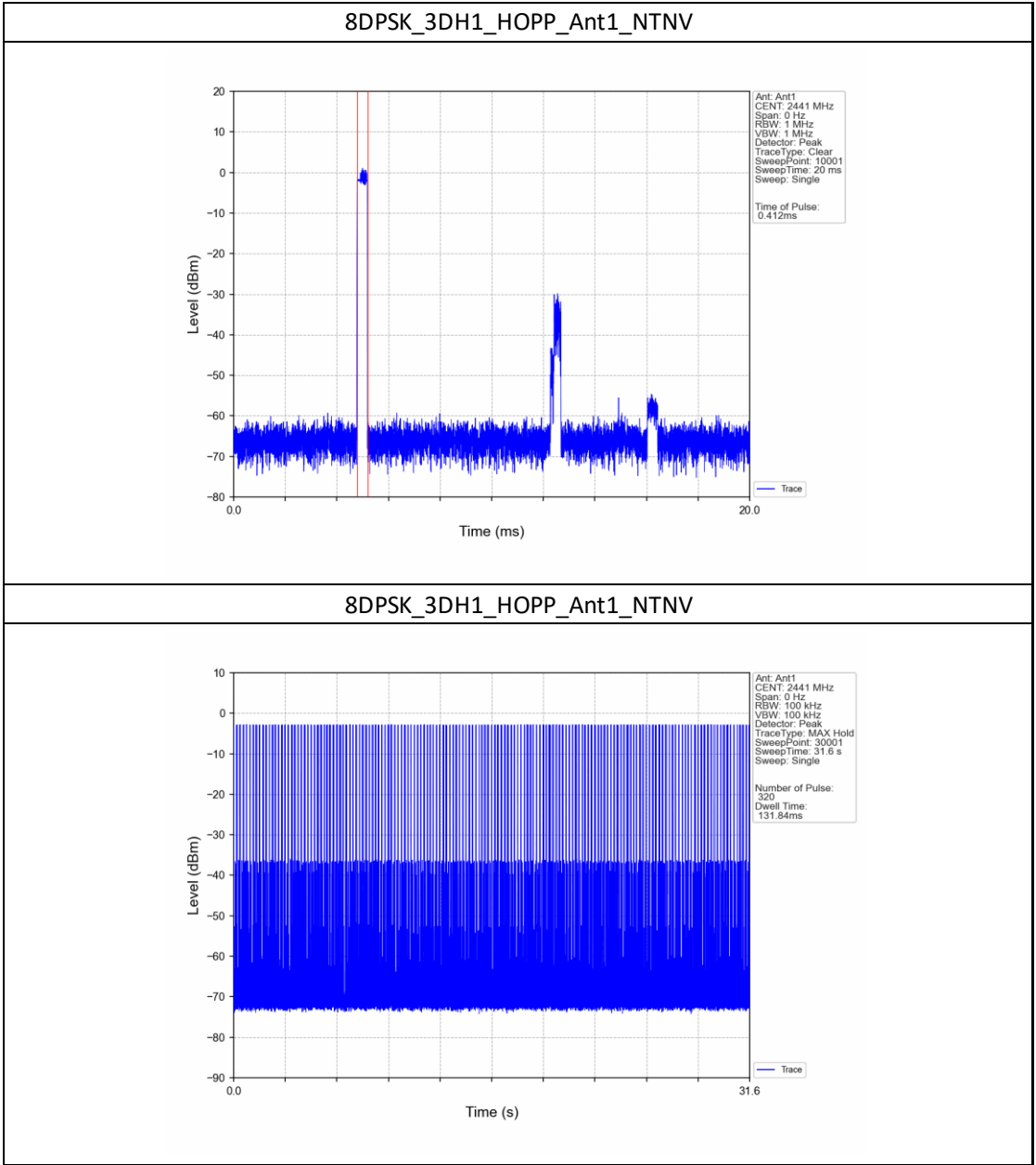


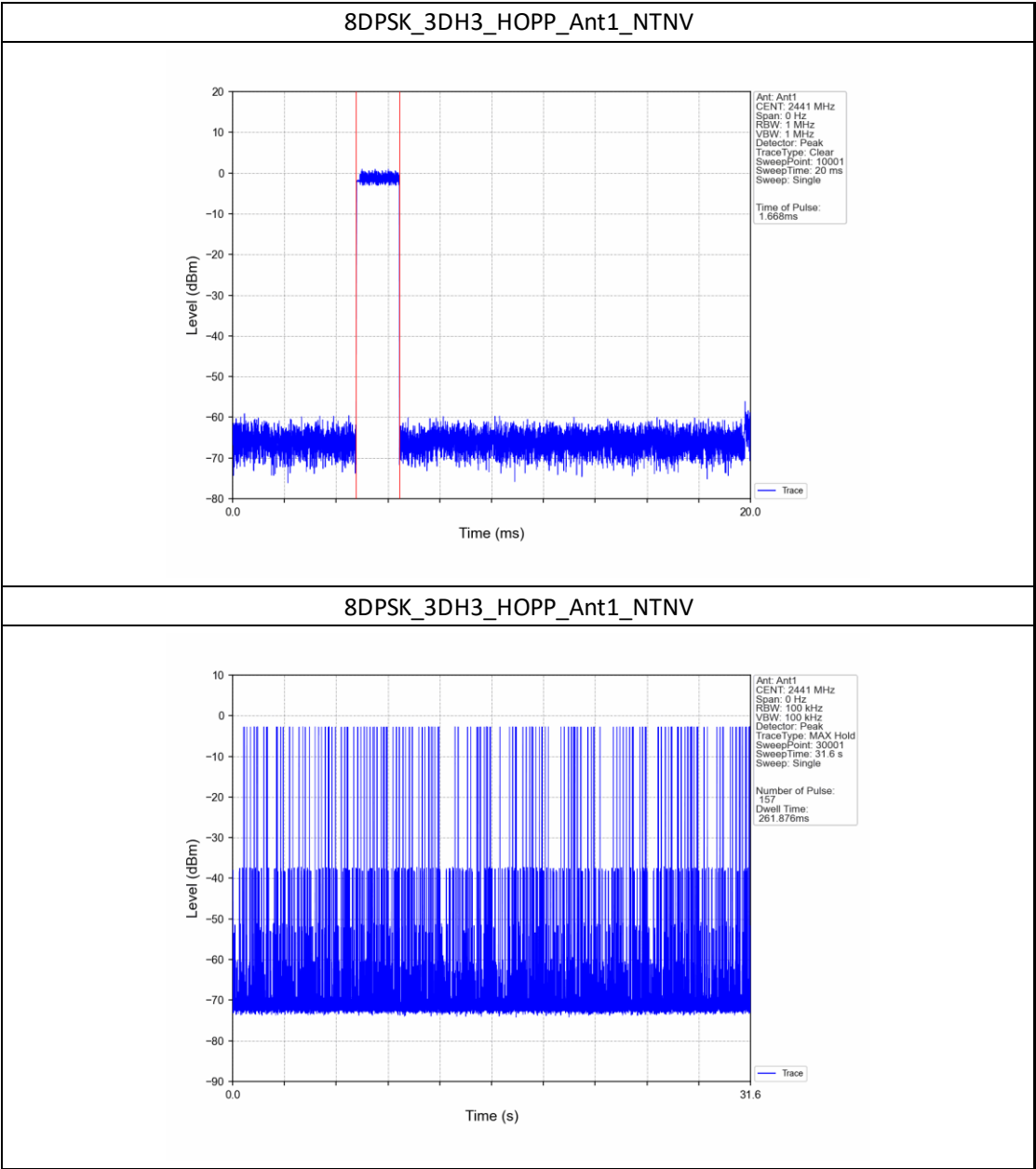


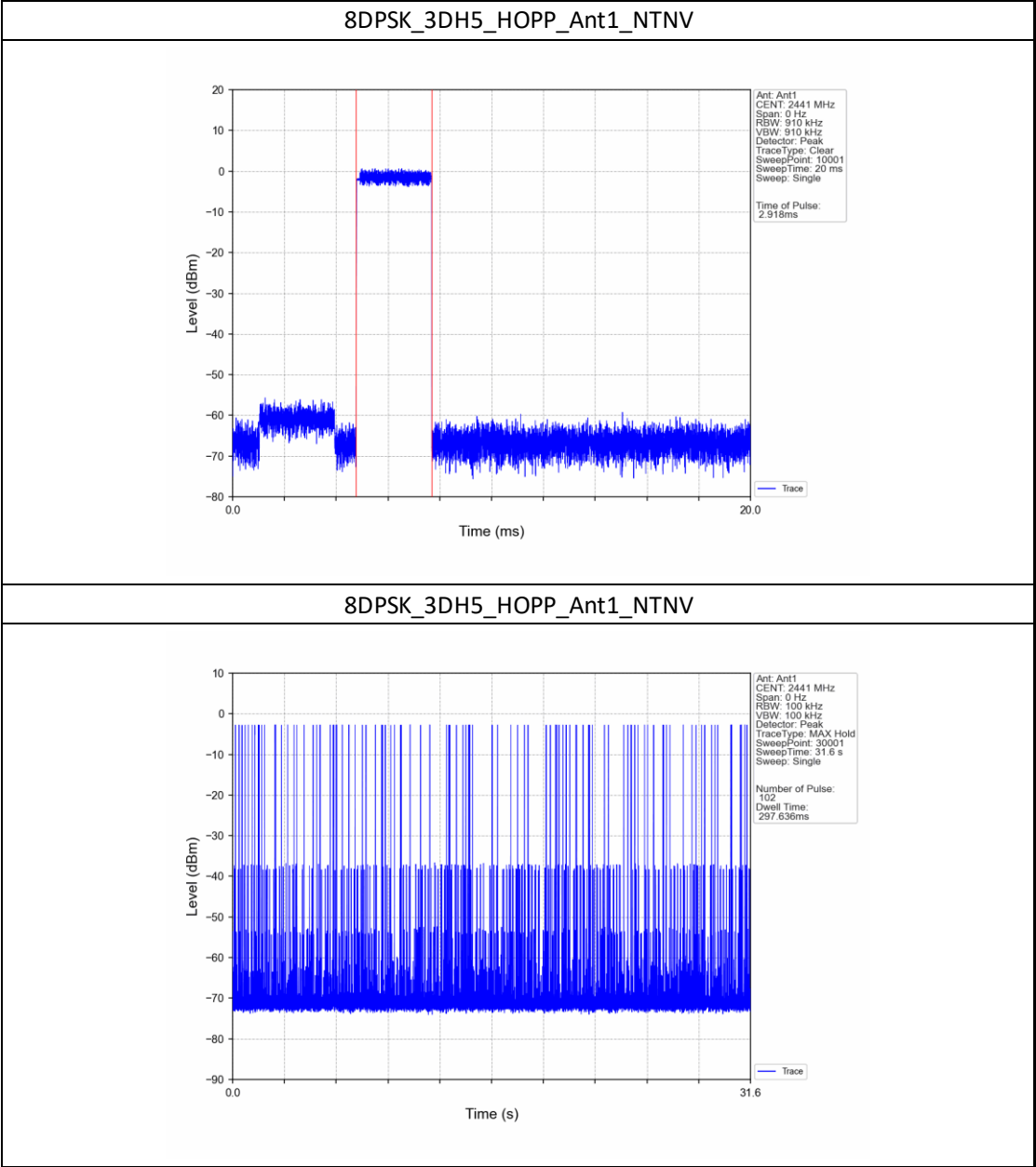












6. Unwanted Emissions In Non-restricted Frequency Bands

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	-2.49
		2441	DH5	1	-3.38
		2480	DH5	1	-3.25
Pi/4DQPSK	SISO	2402	2DH5	1	-1.18
		2441	2DH5	1	-2.10
		2480	2DH5	1	-3.27
8DPSK	SISO	2402	3DH5	1	-1.16
		2441	3DH5	1	-1.87
		2480	3DH5	1	-3.19

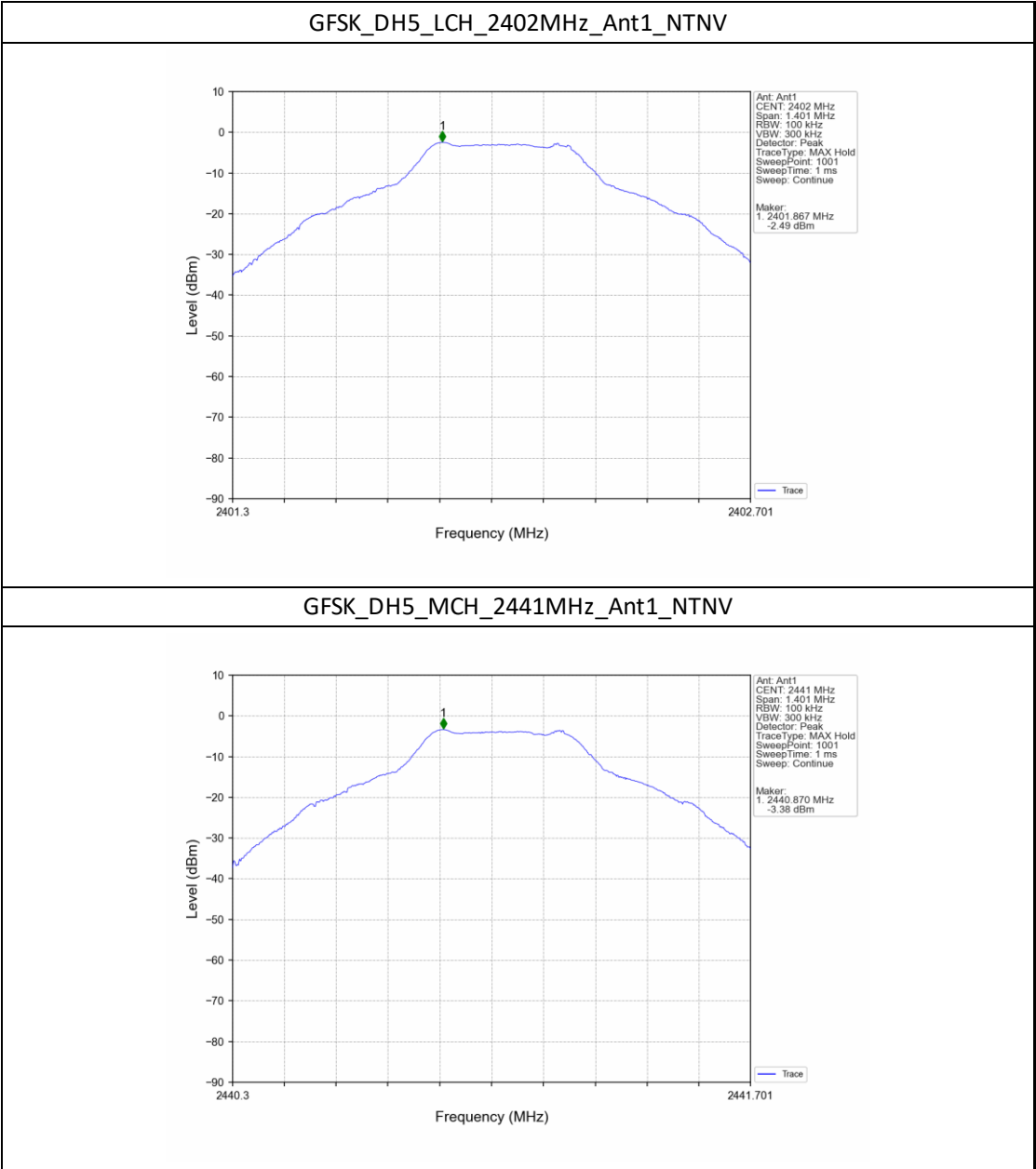
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

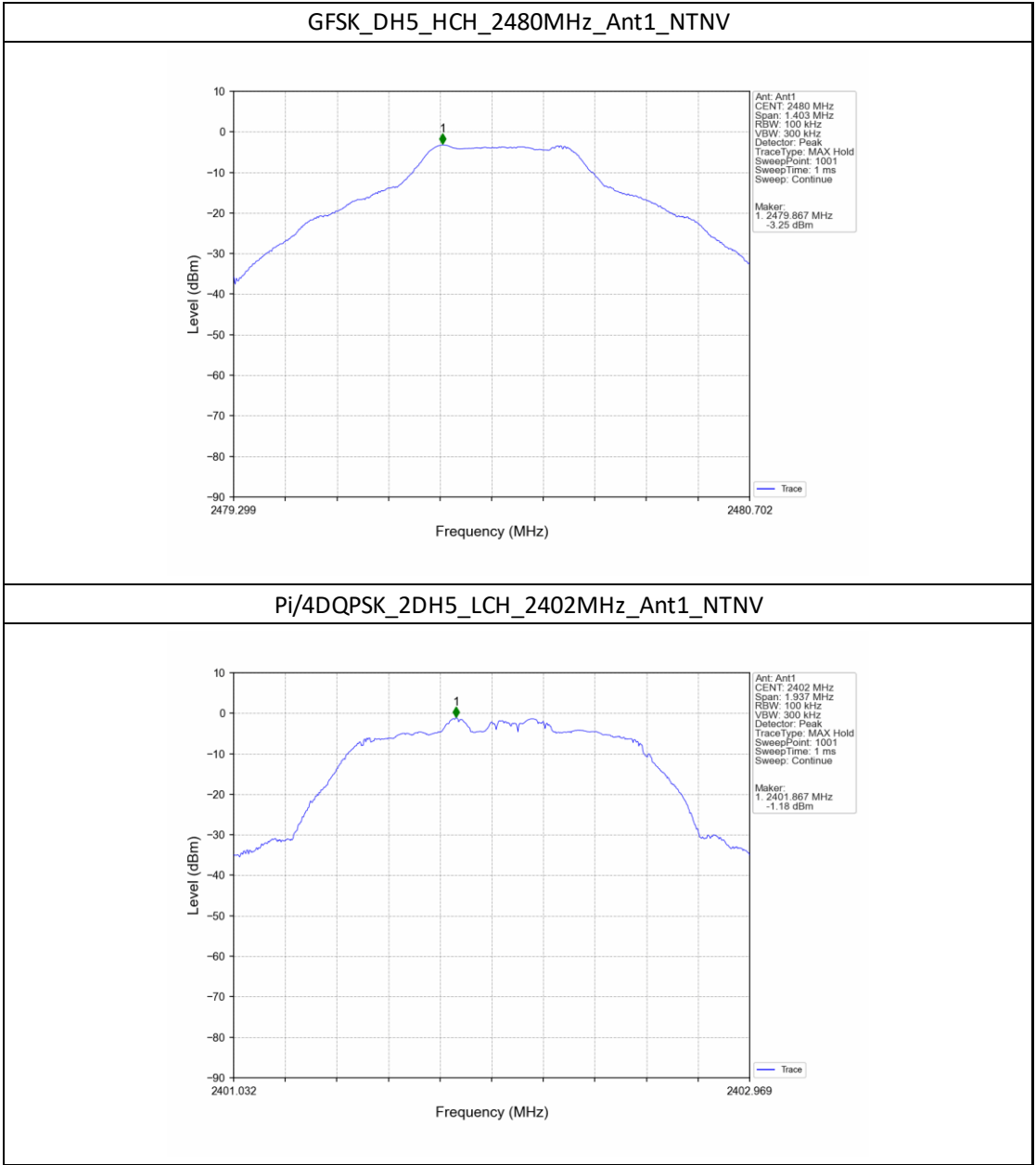
6.1.2 CSE

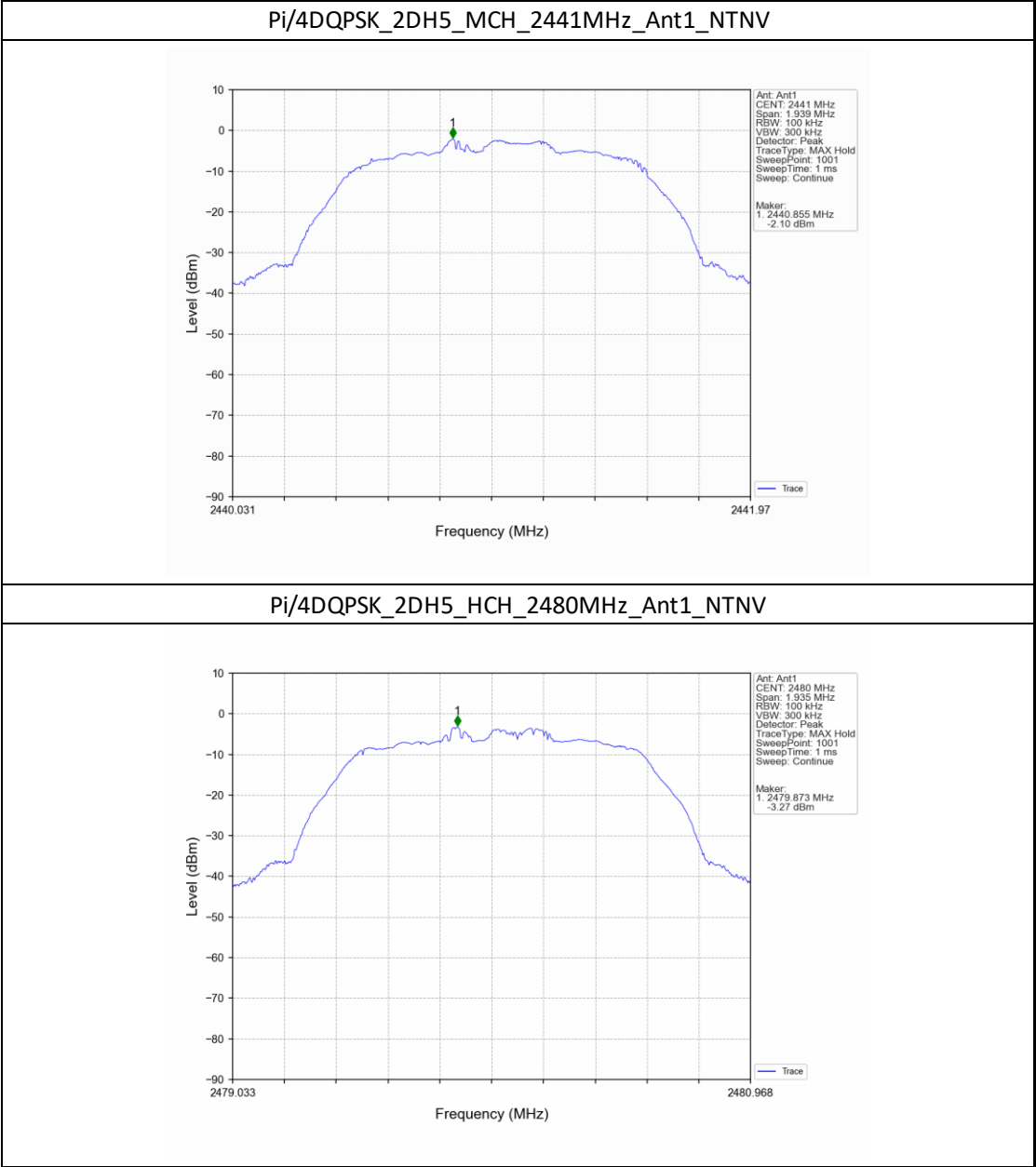
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-2.49	-22.49	Pass
		2441	DH5	1	-2.49	-22.49	Pass
		2480	DH5	1	-2.49	-22.49	Pass
		HOPP	DH5	1	-2.49	-22.49	Pass
					-2.49	-22.49	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-1.18	-21.18	Pass
		2441	2DH5	1	-1.18	-21.18	Pass
		2480	2DH5	1	-1.18	-21.18	Pass
		HOPP	2DH5	1	-1.18	-21.18	Pass
					-1.18	-21.18	Pass
8DPSK	SISO	2402	3DH5	1	-1.16	-21.16	Pass
		2441	3DH5	1	-1.16	-21.16	Pass
		2480	3DH5	1	-1.16	-21.16	Pass
		HOPP	3DH5	1	-1.16	-21.16	Pass
					-1.16	-21.16	Pass

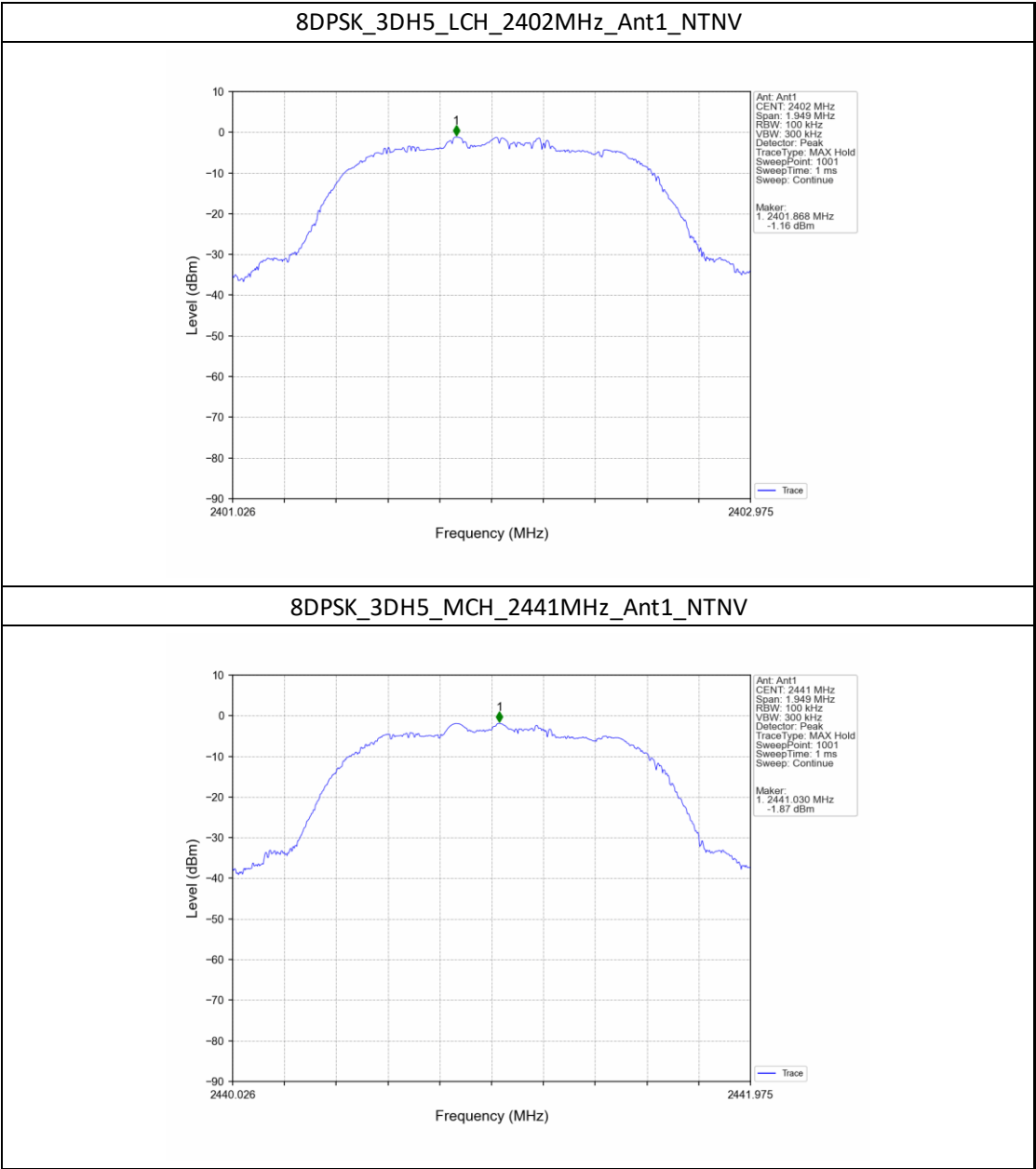
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

6.2 Test Graph
6.2.1 Ref

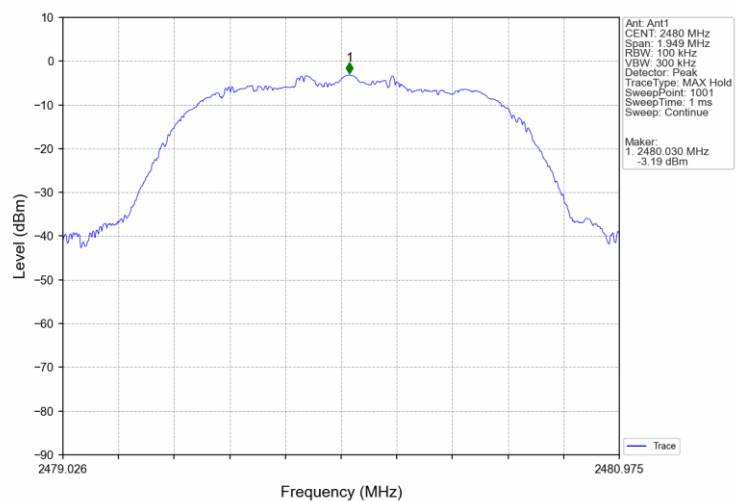




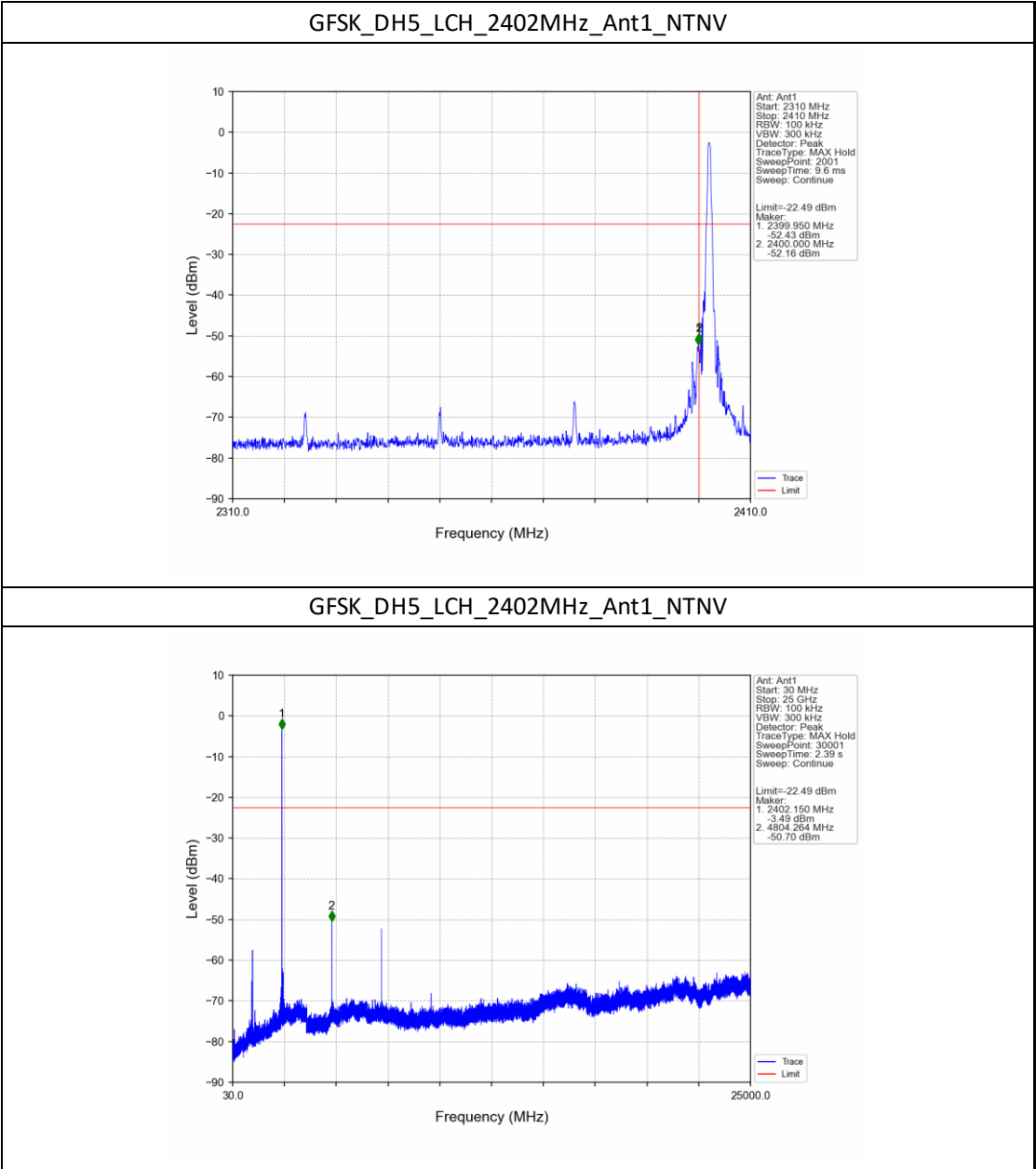


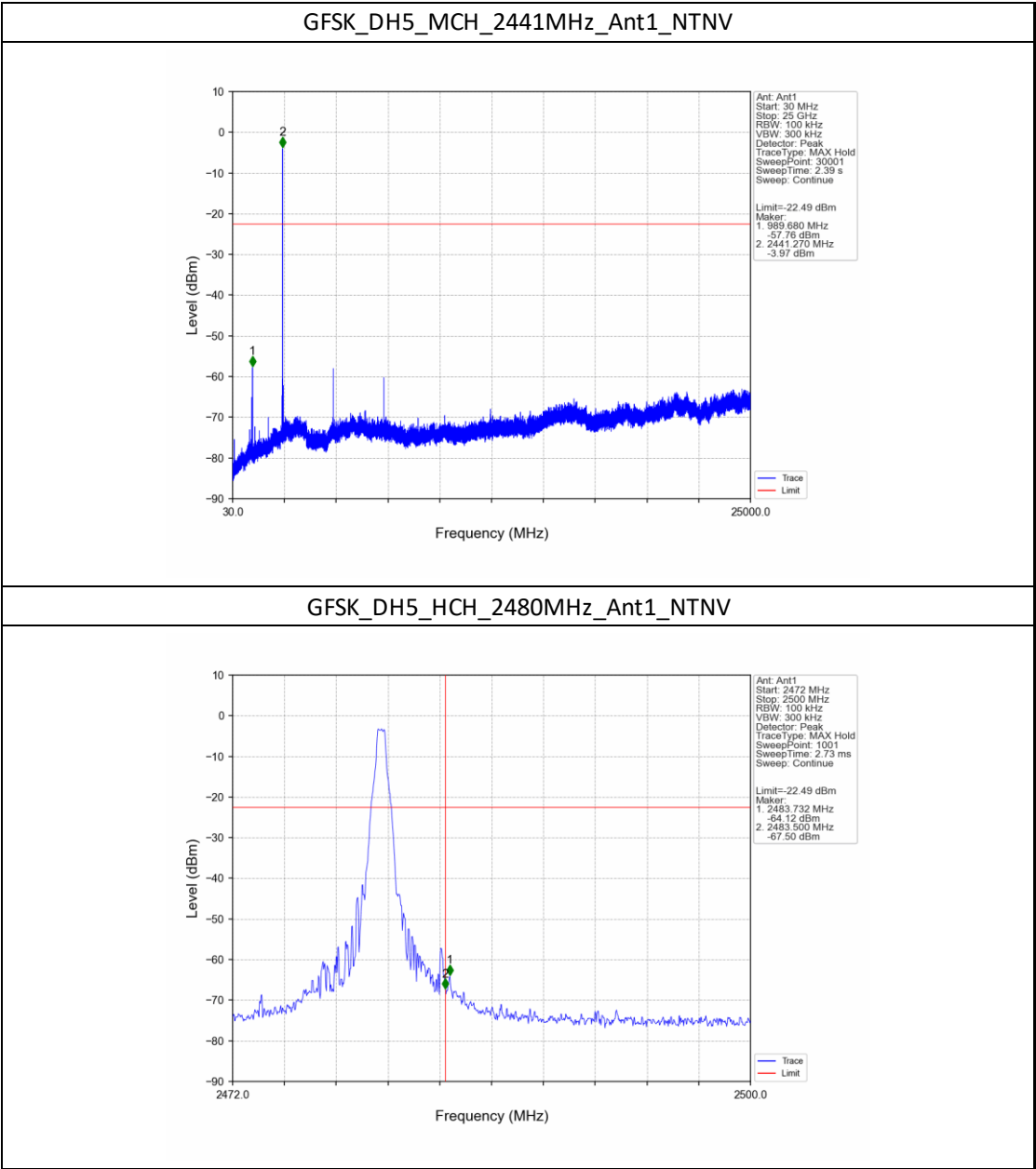


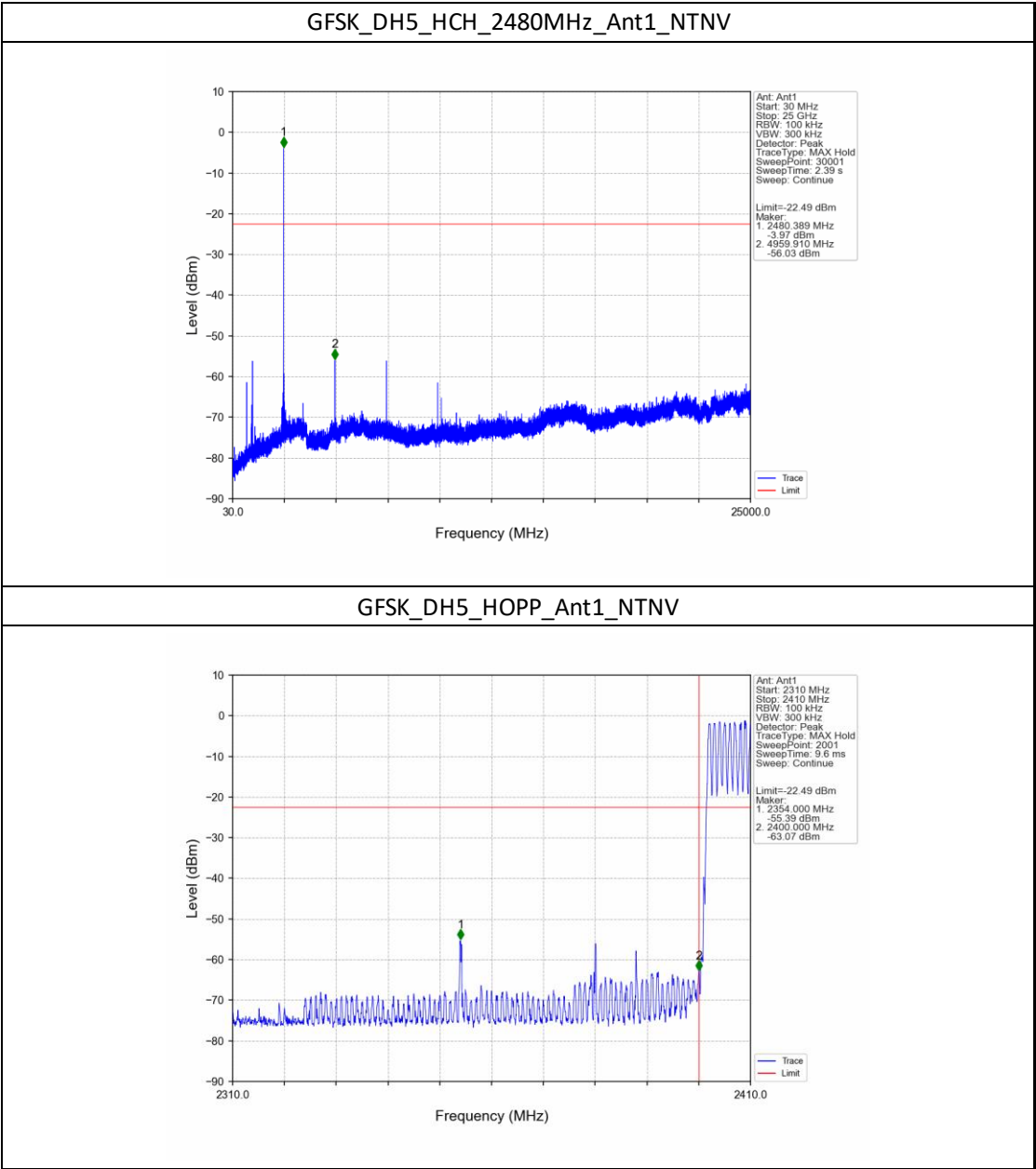
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV

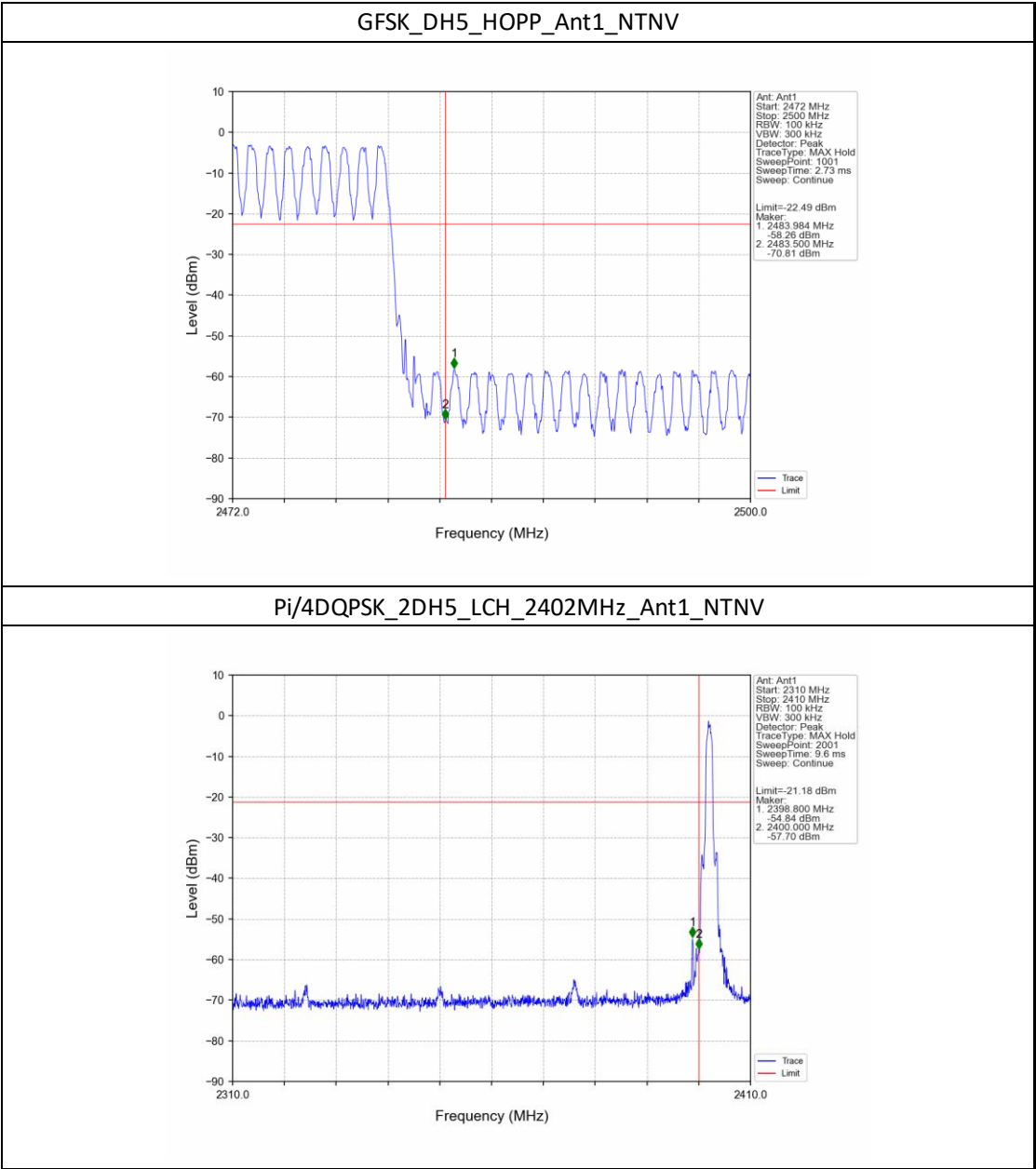


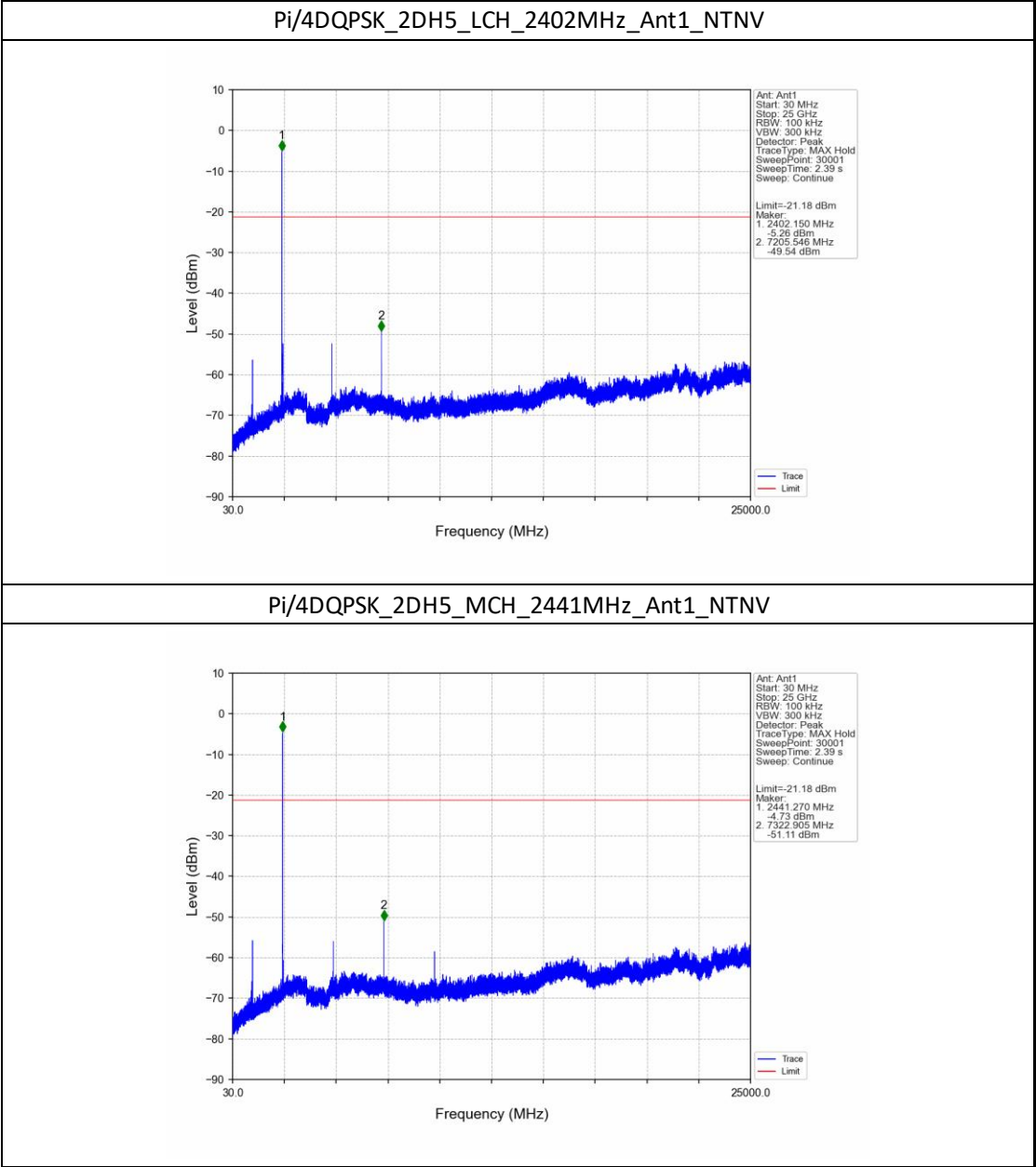
6.2.2 CSE

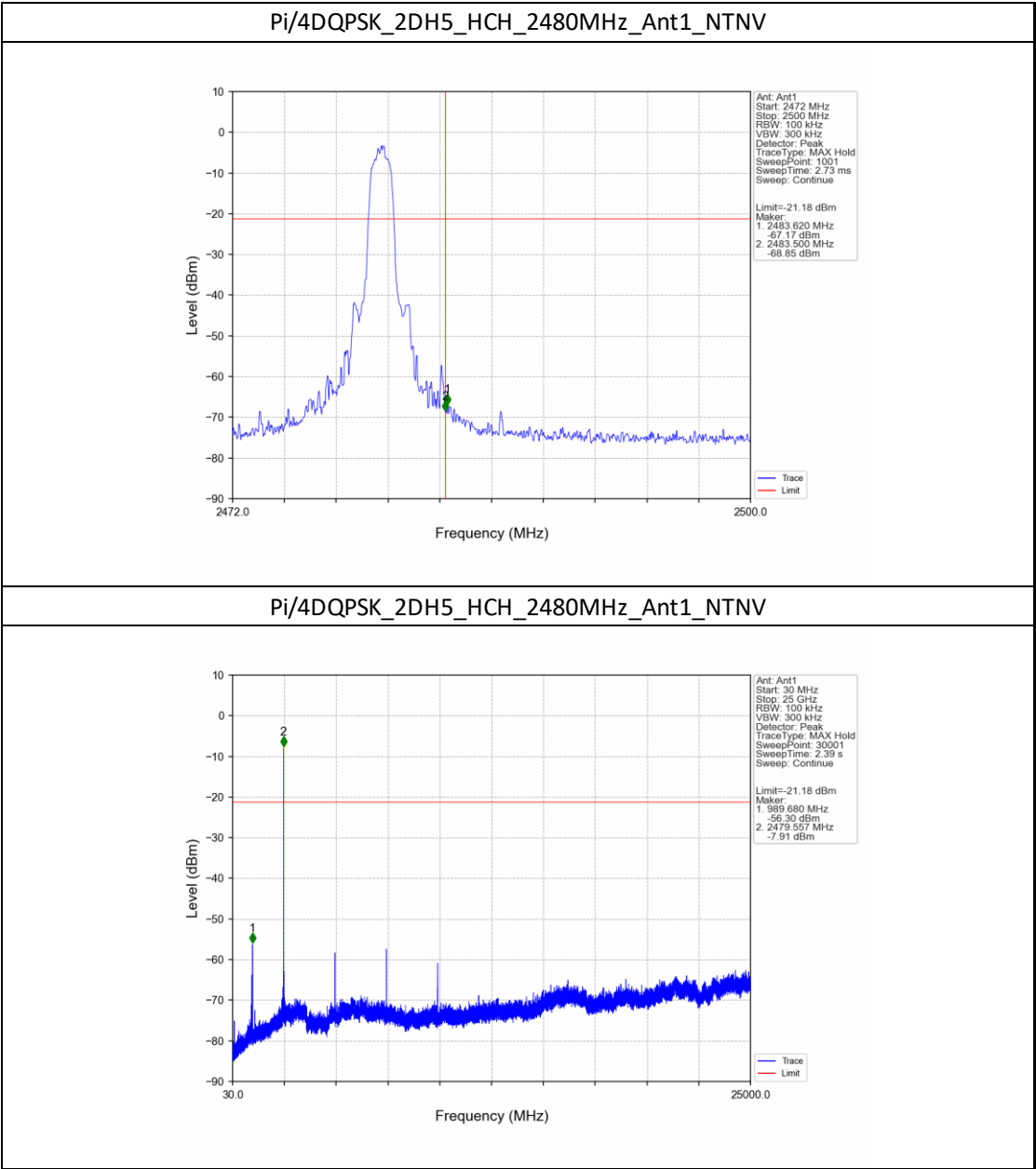


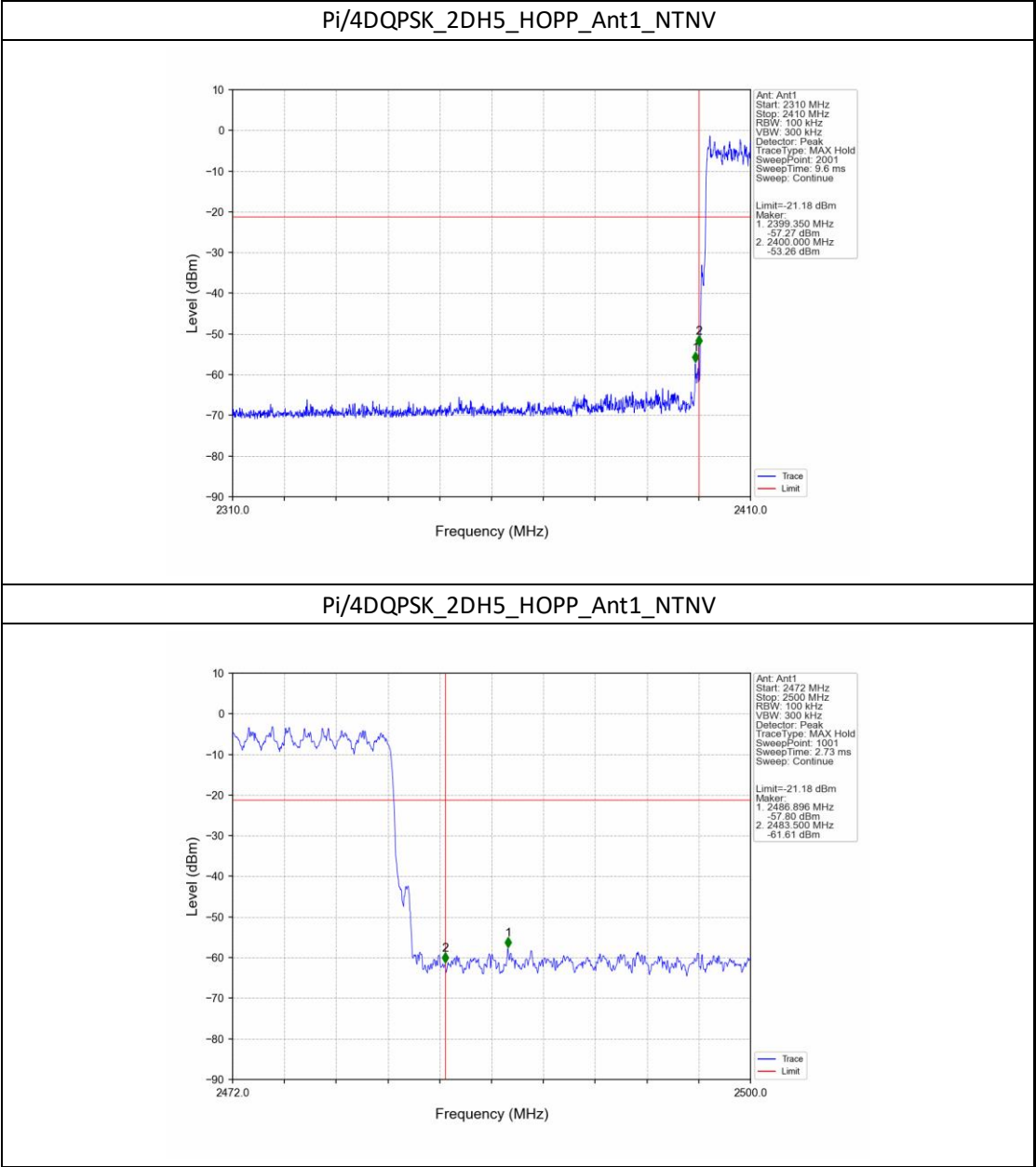


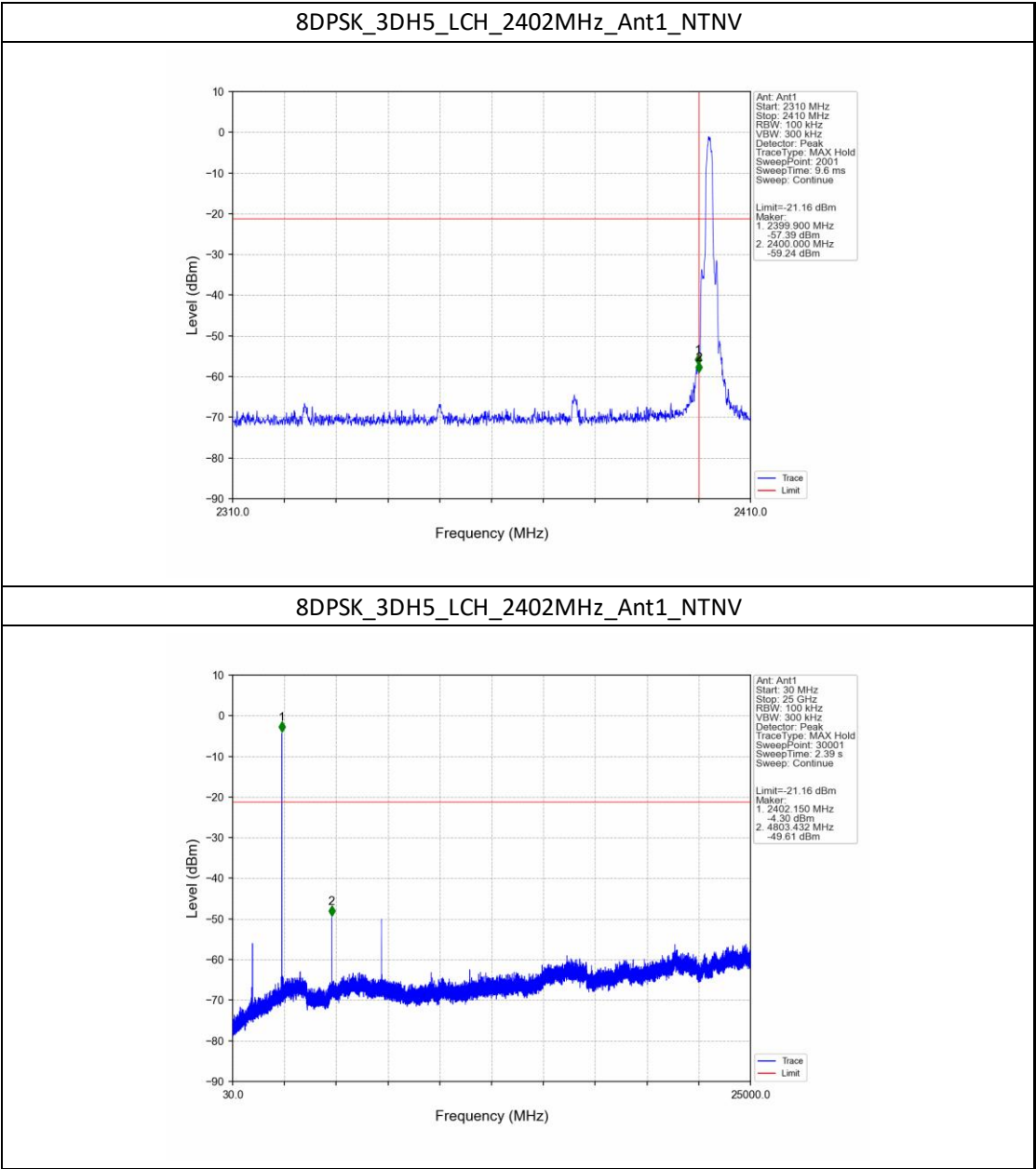


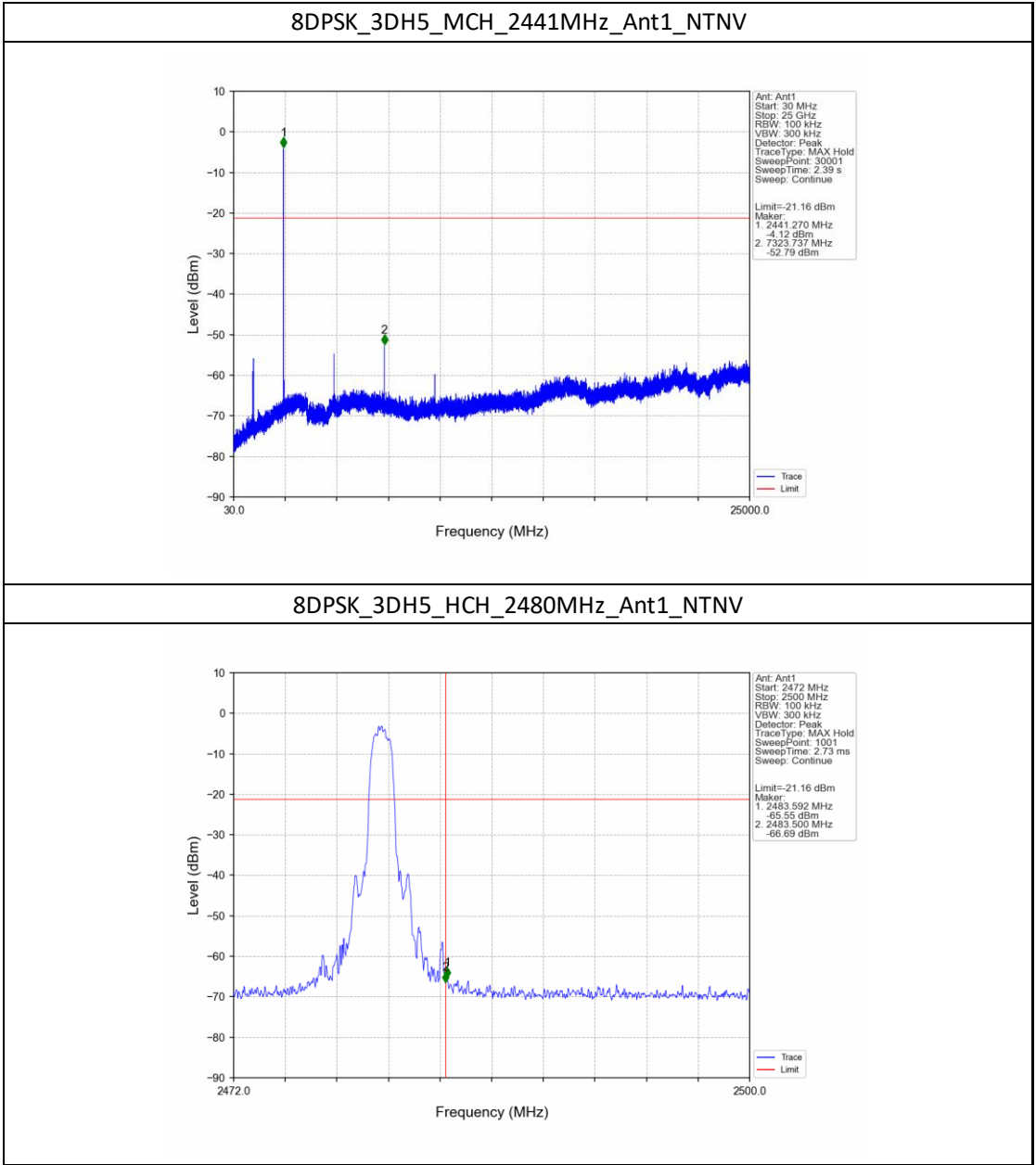


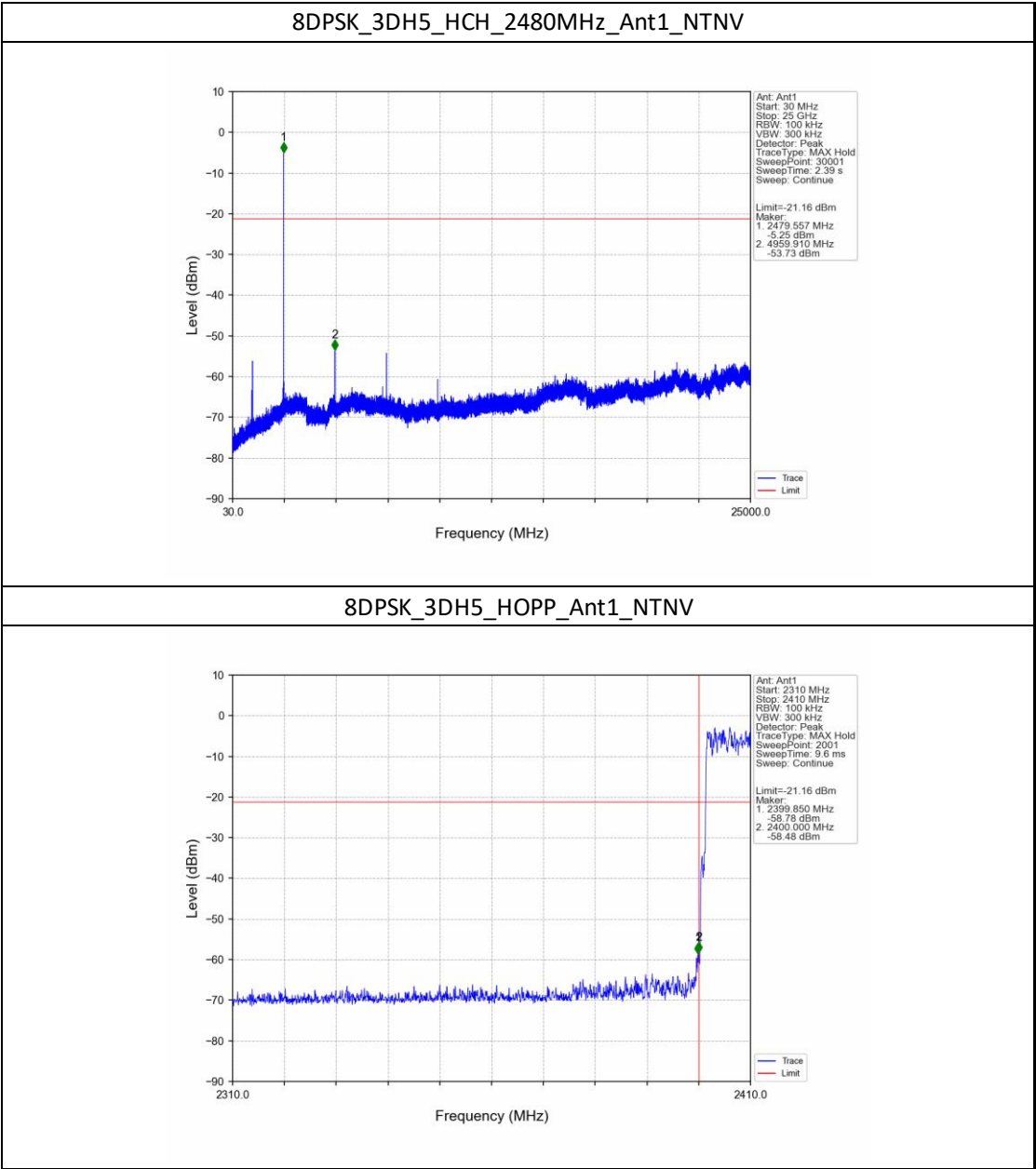


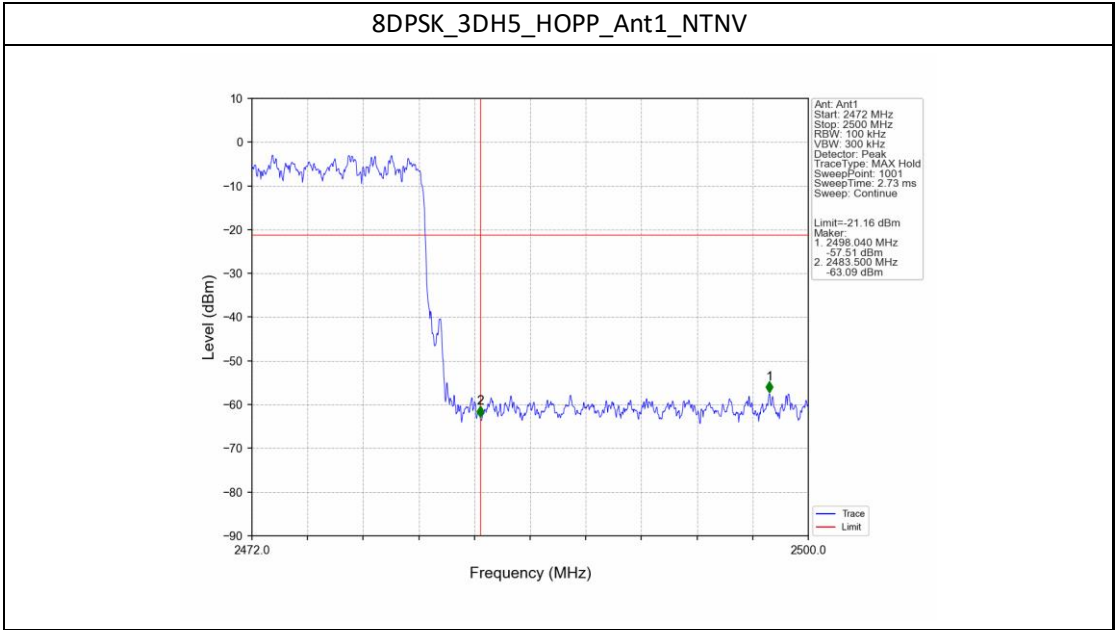












7. Form731

7.1 Test Result

7.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2402	2480	0.0019	2.69