

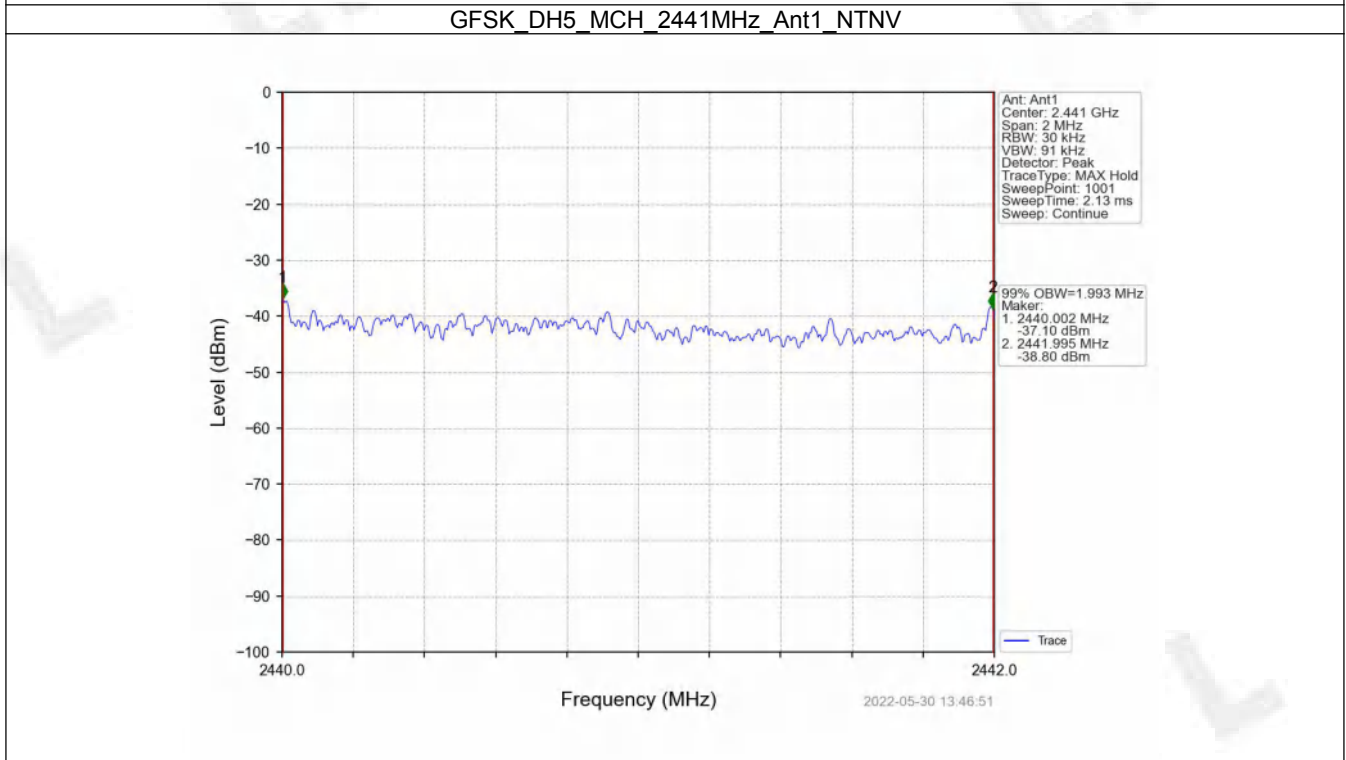
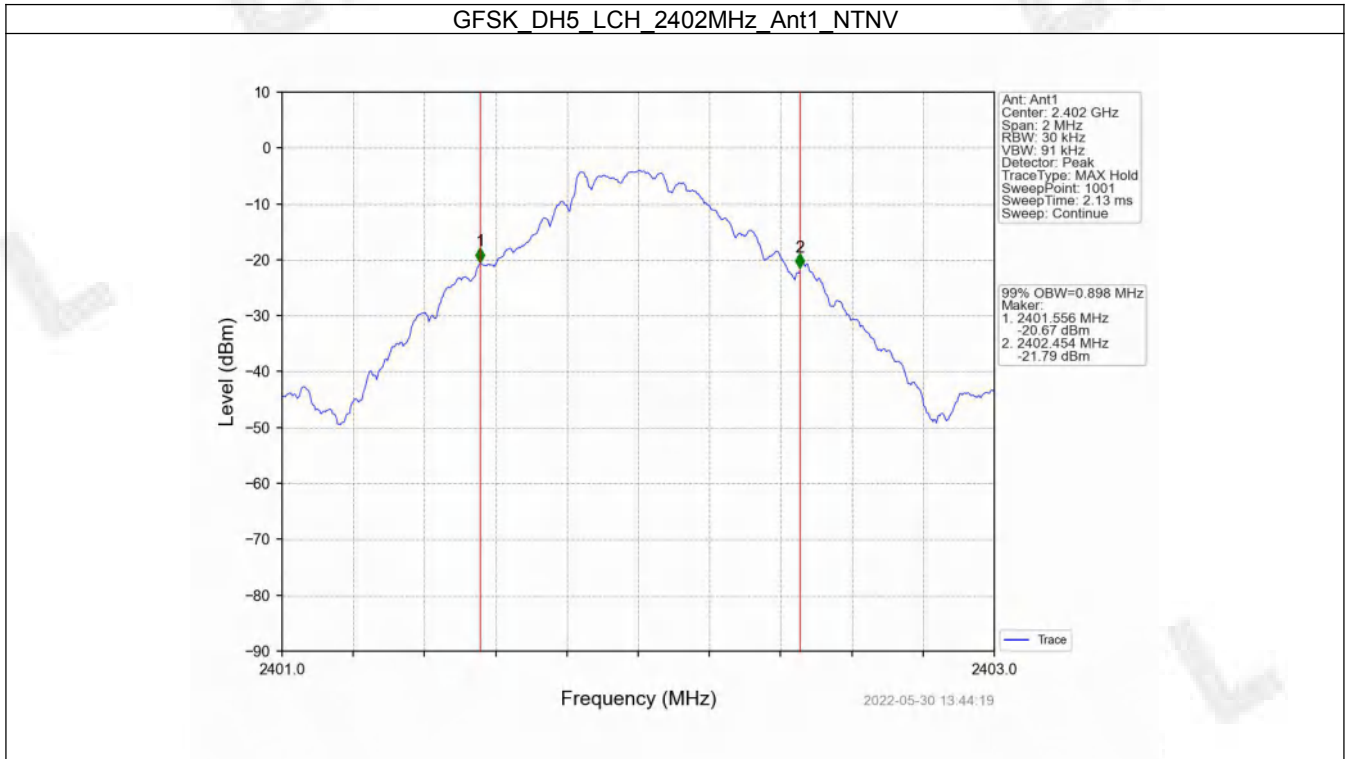
## 1. Bandwidth

### 1.1 OBW

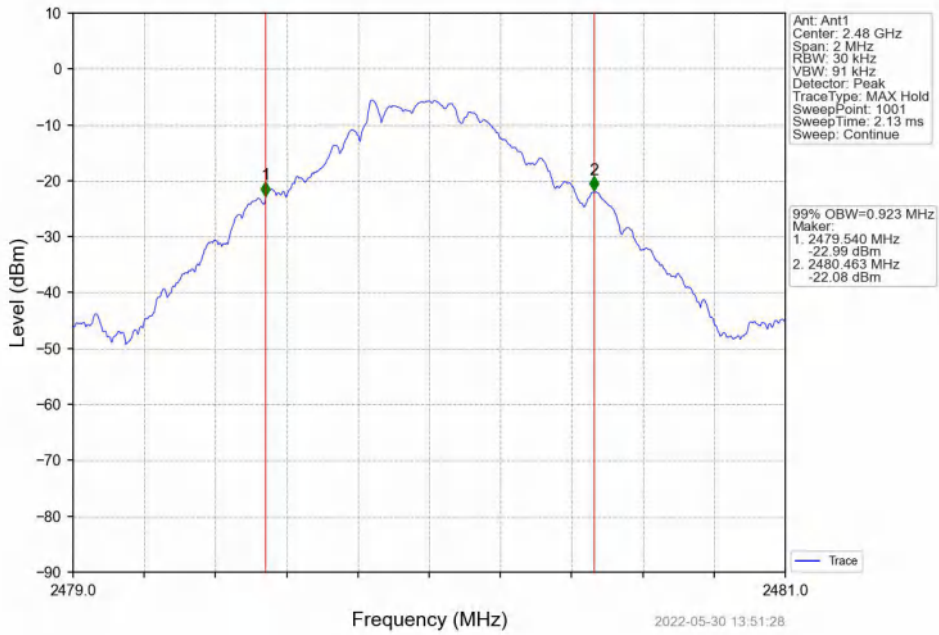
#### 1.1.1 Test Result

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	1.993	Pass
		2480	DH5	1	0.923	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.184	Pass
		2441	2DH5	1	1.194	Pass
		2480	2DH5	1	1.202	Pass
8DPSK	SISO	2402	3DH5	1	1.197	Pass
		2441	3DH5	1	1.205	Pass
		2480	3DH5	1	1.206	Pass

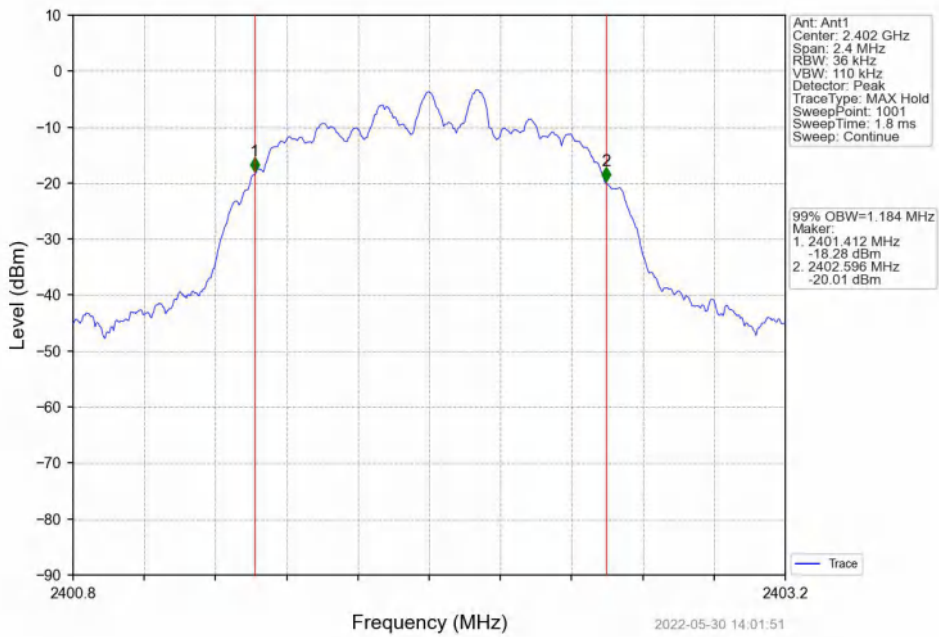
1.1.2 Test Graph



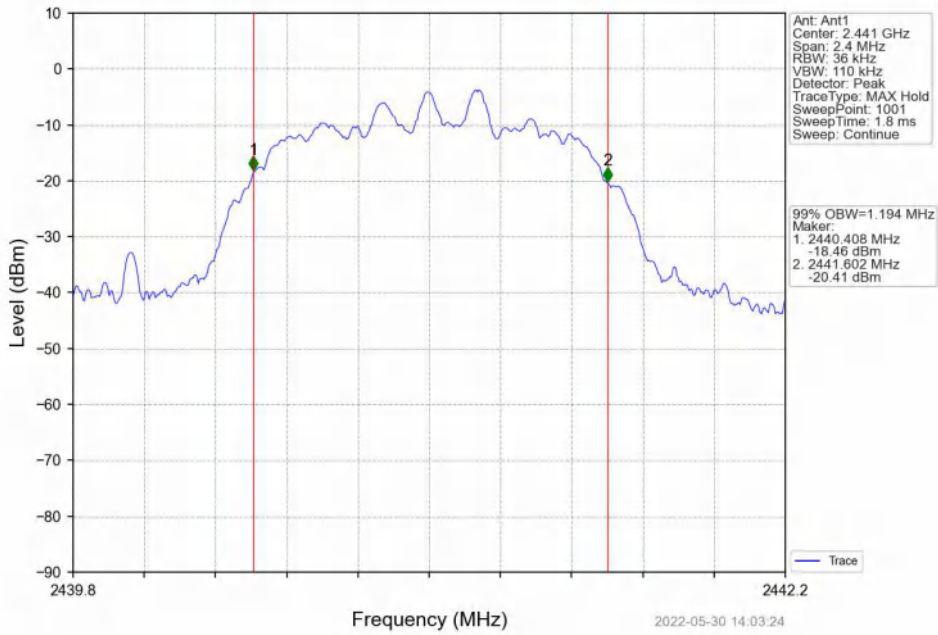
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



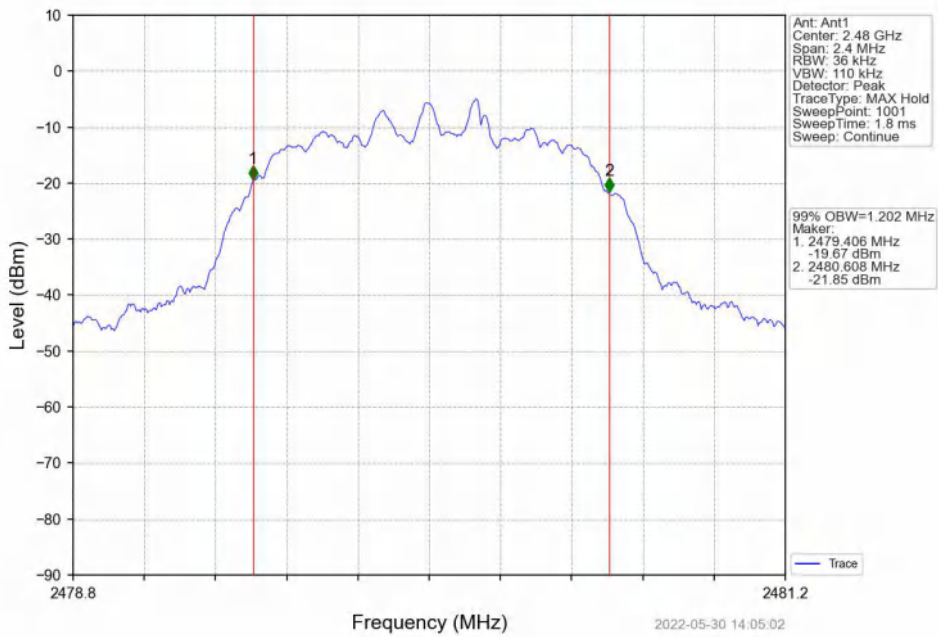
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



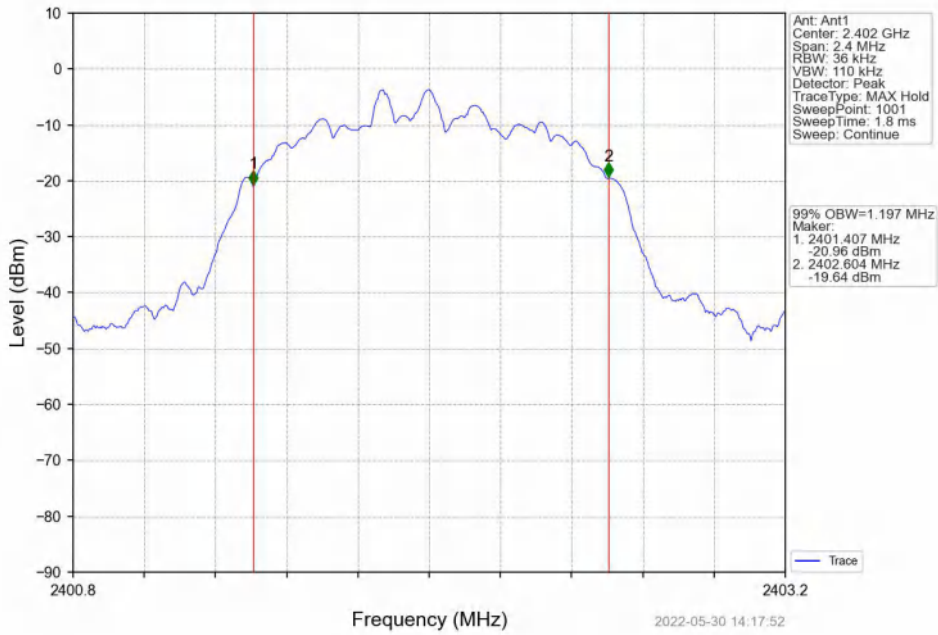
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



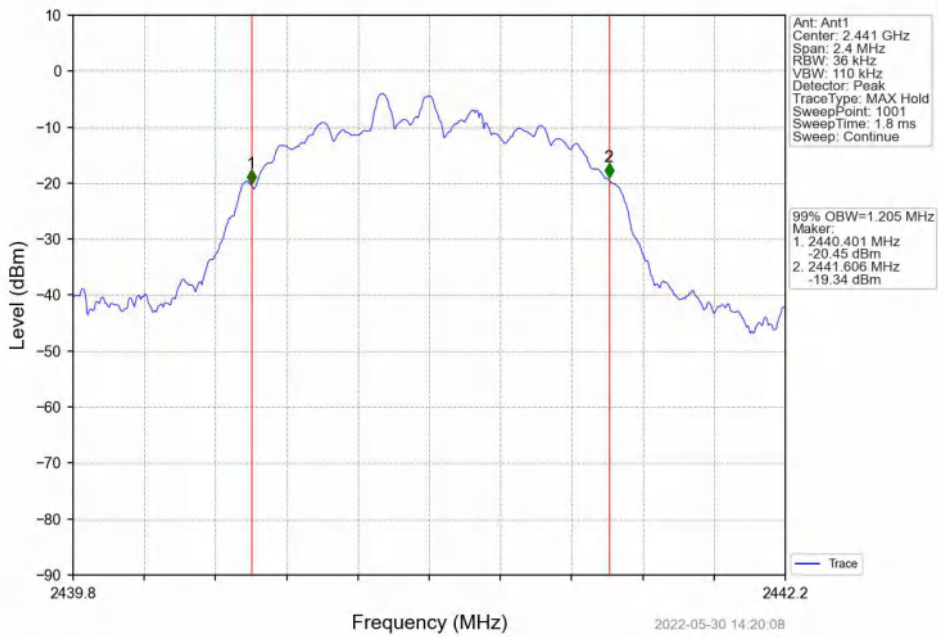
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

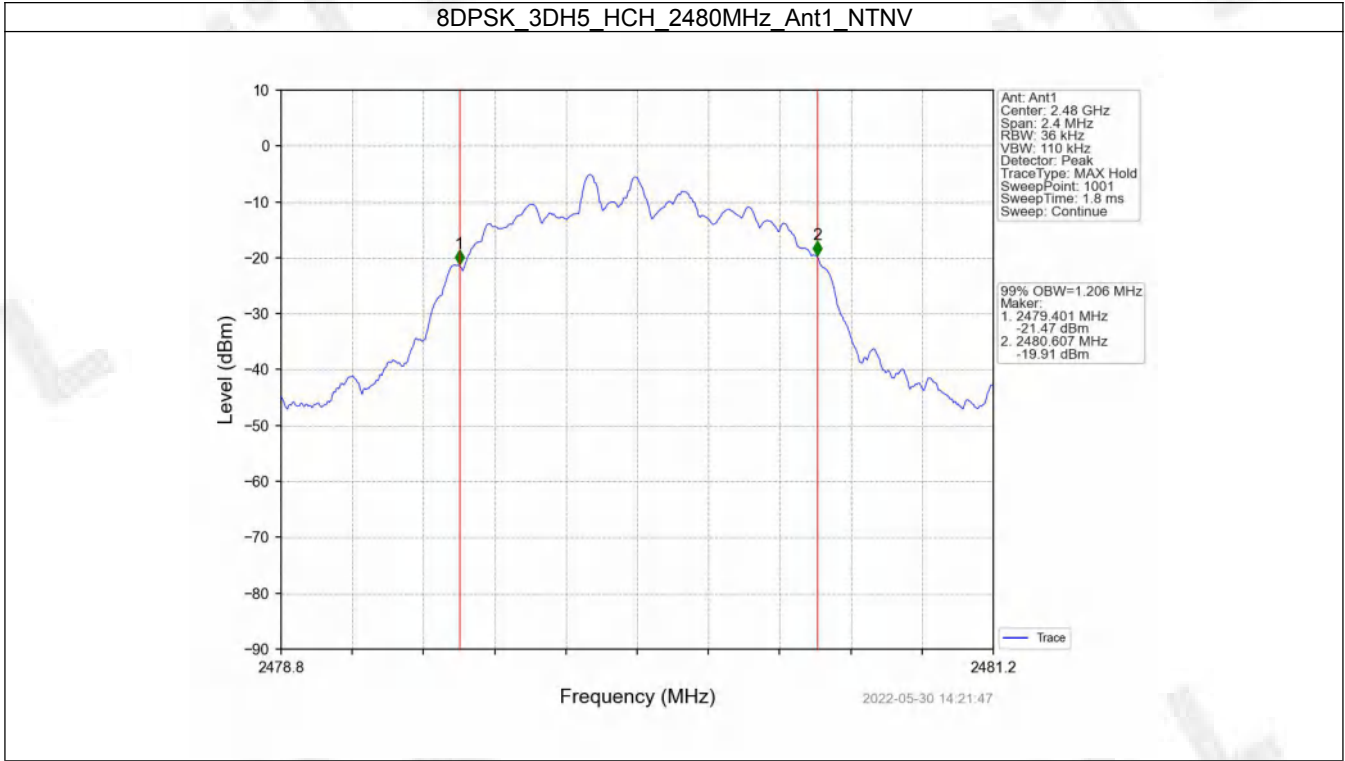


8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



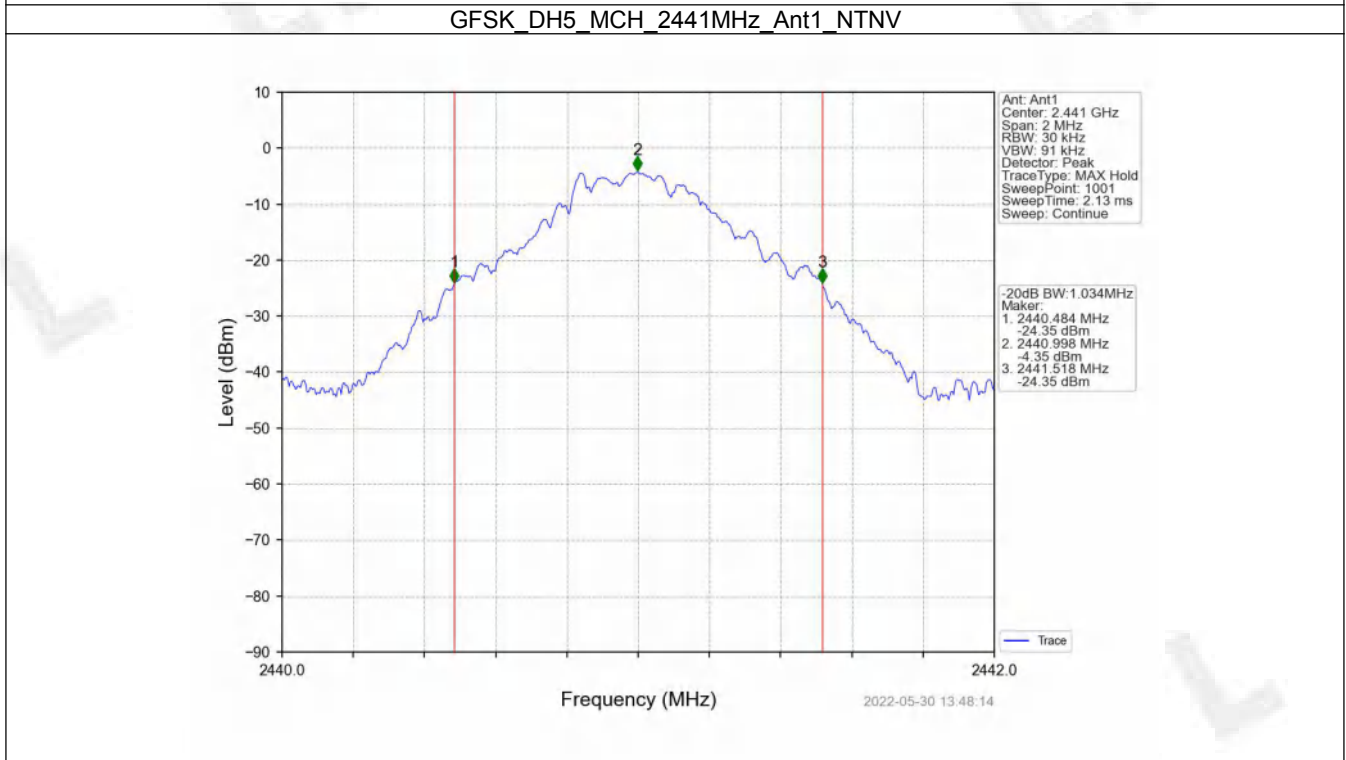
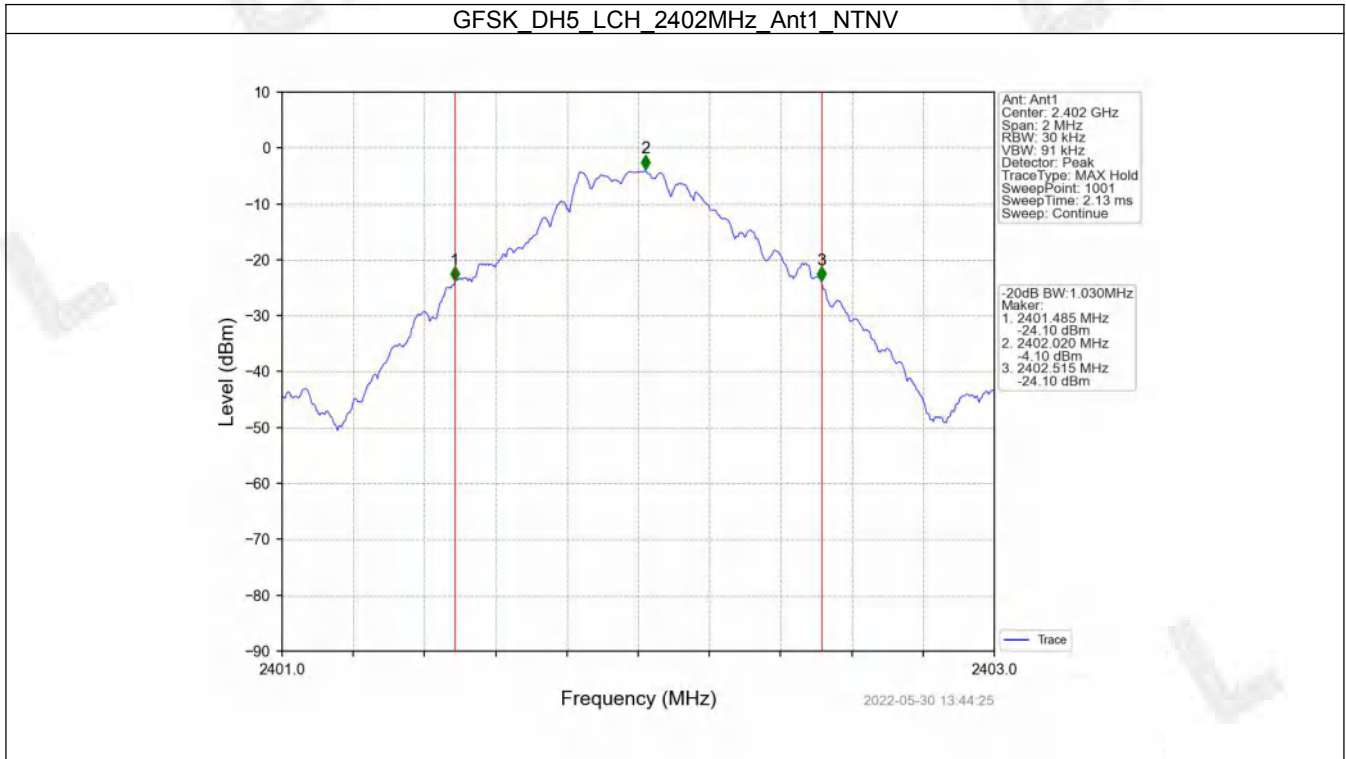


## 1.2 20dB BW

## 1.2.1 Test Result

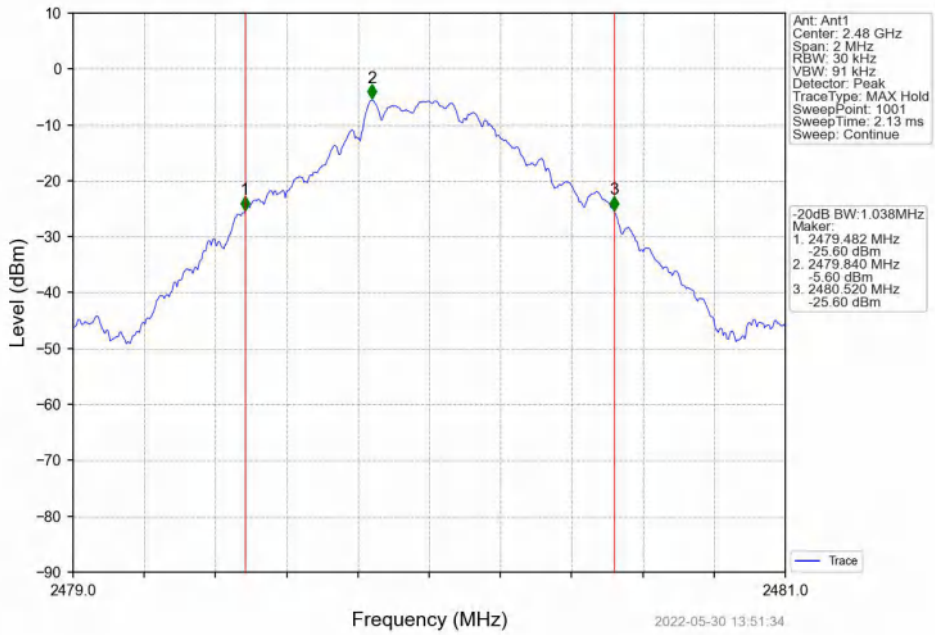
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	1.030	Pass
		2441	DH5	1	1.034	Pass
		2480	DH5	1	1.038	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.317	Pass
		2441	2DH5	1	1.323	Pass
		2480	2DH5	1	1.326	Pass
8DPSK	SISO	2402	3DH5	1	1.312	Pass
		2441	3DH5	1	1.315	Pass
		2480	3DH5	1	1.311	Pass

1.2.2 Test Graph

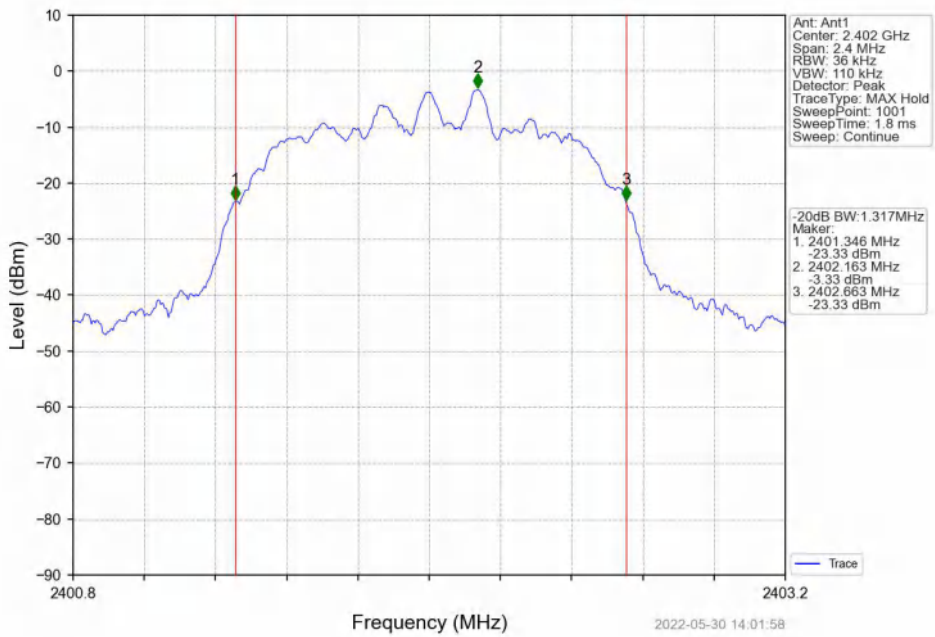




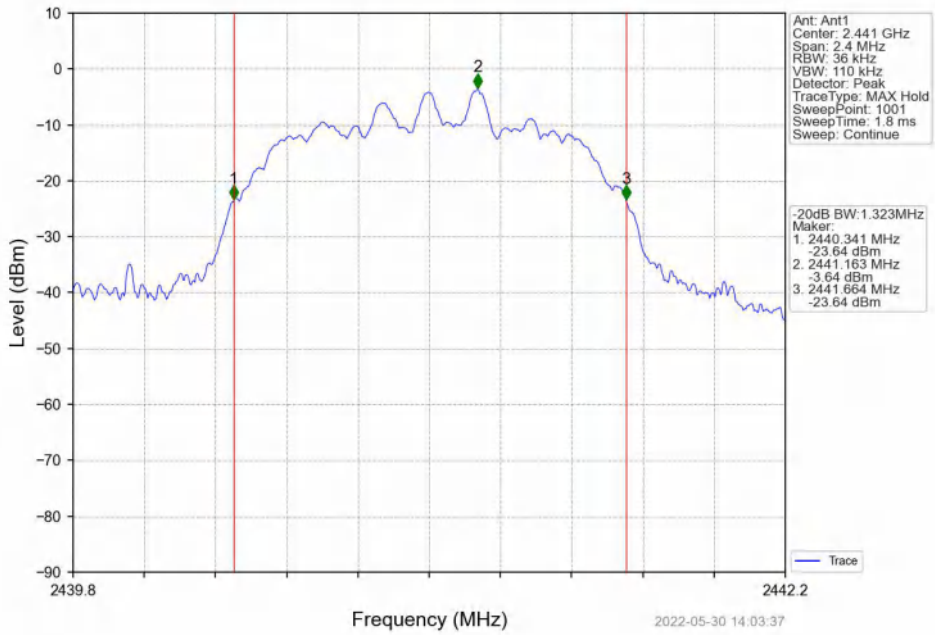
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



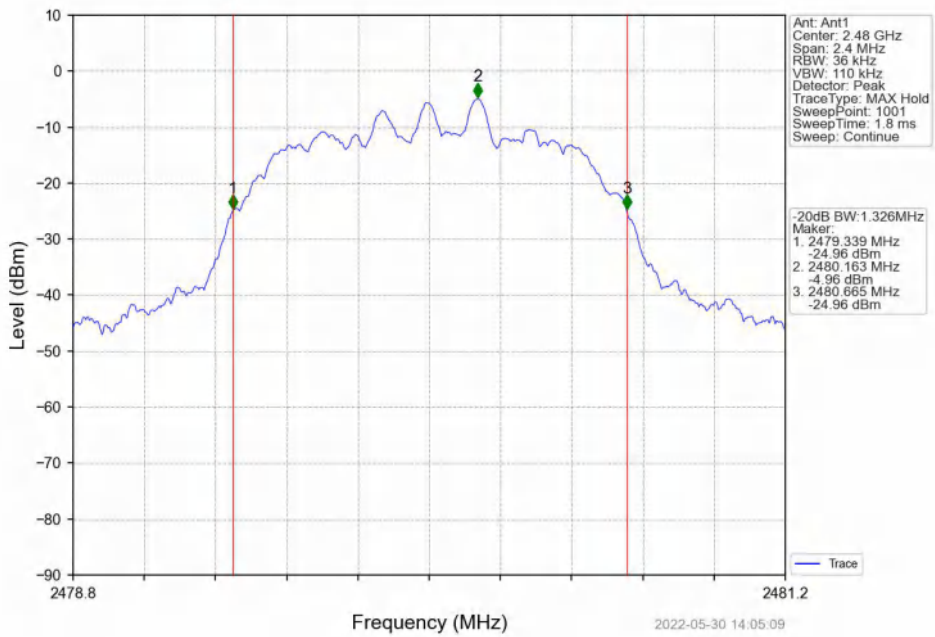
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



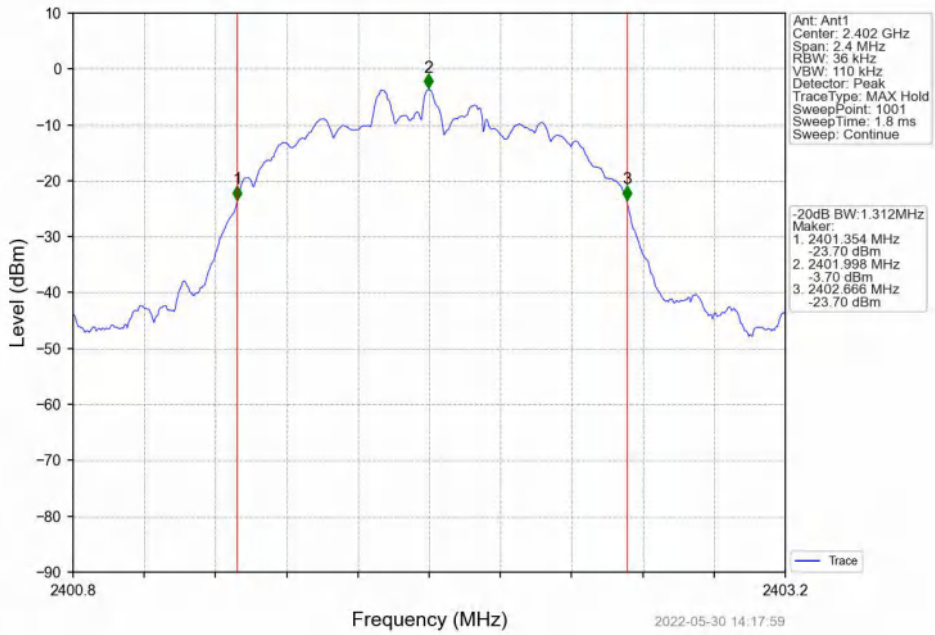
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



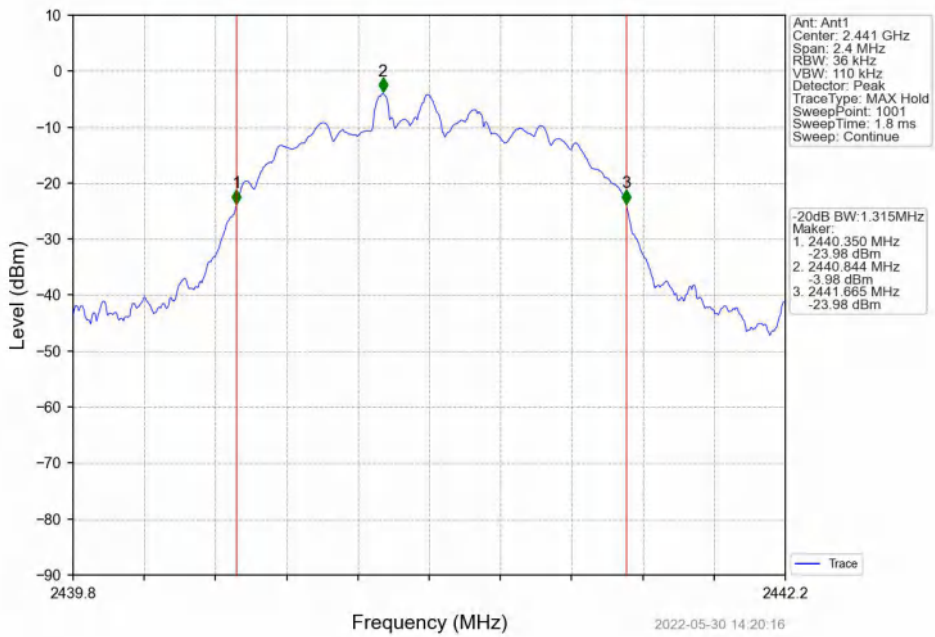
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



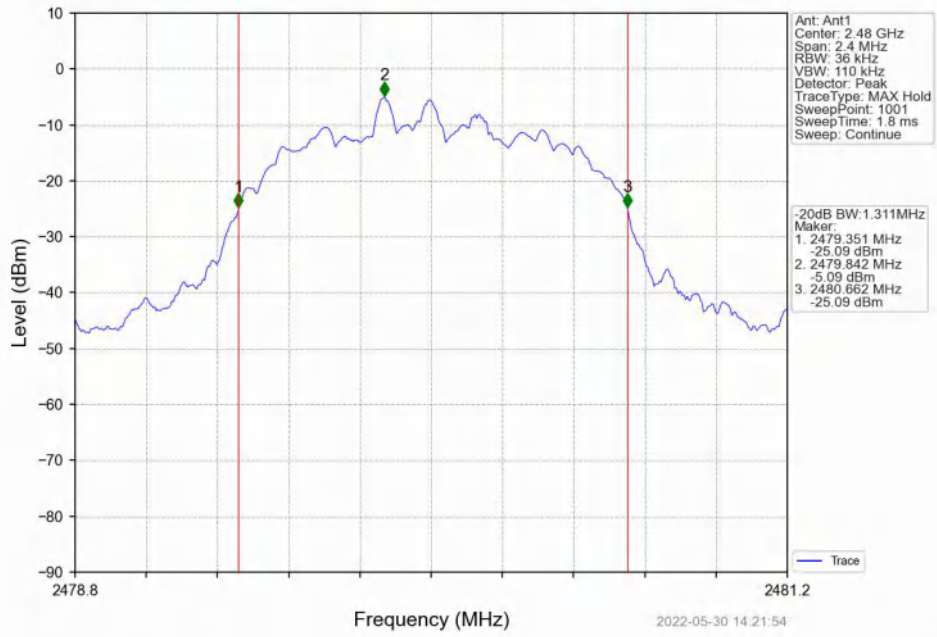
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



8DPSK 3DH5\_HCH\_2480MHz\_Ant1\_NTNV



## 2. Maximum Conducted Output Power

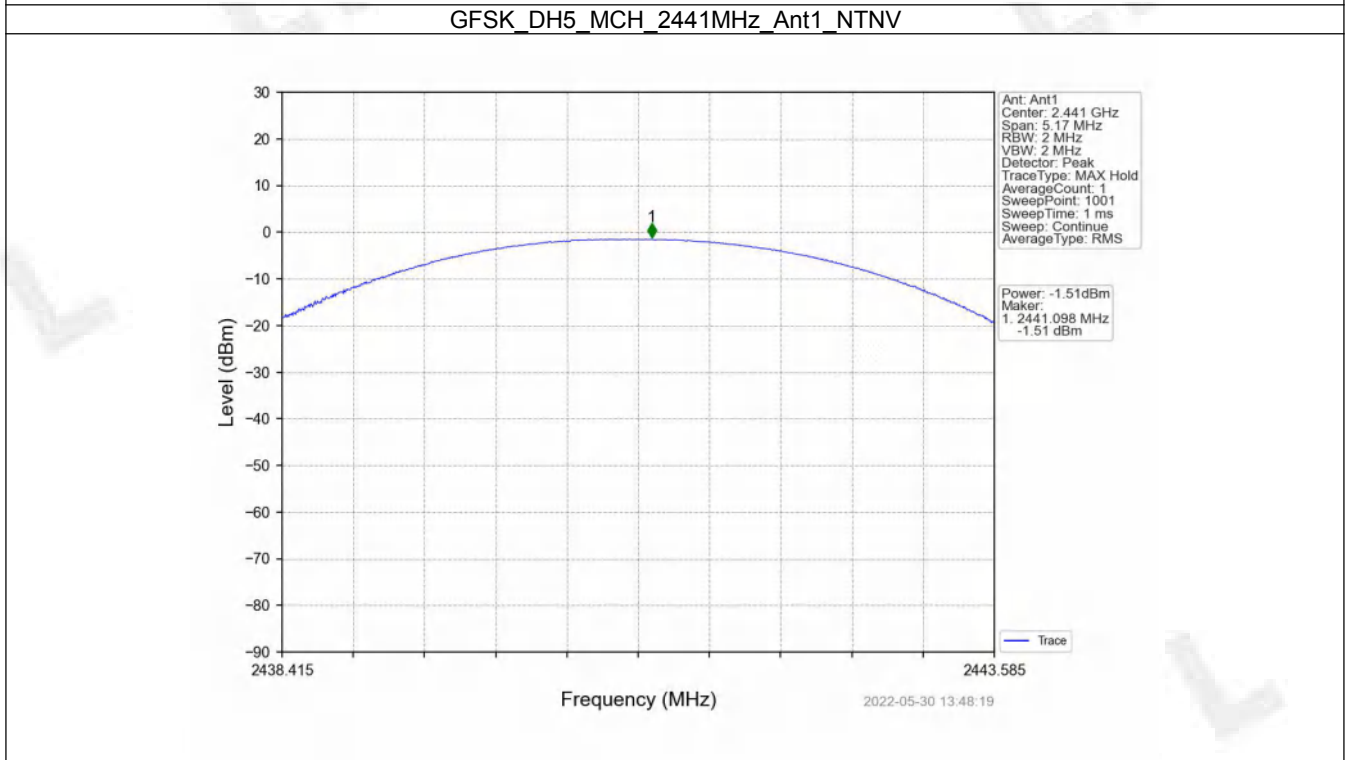
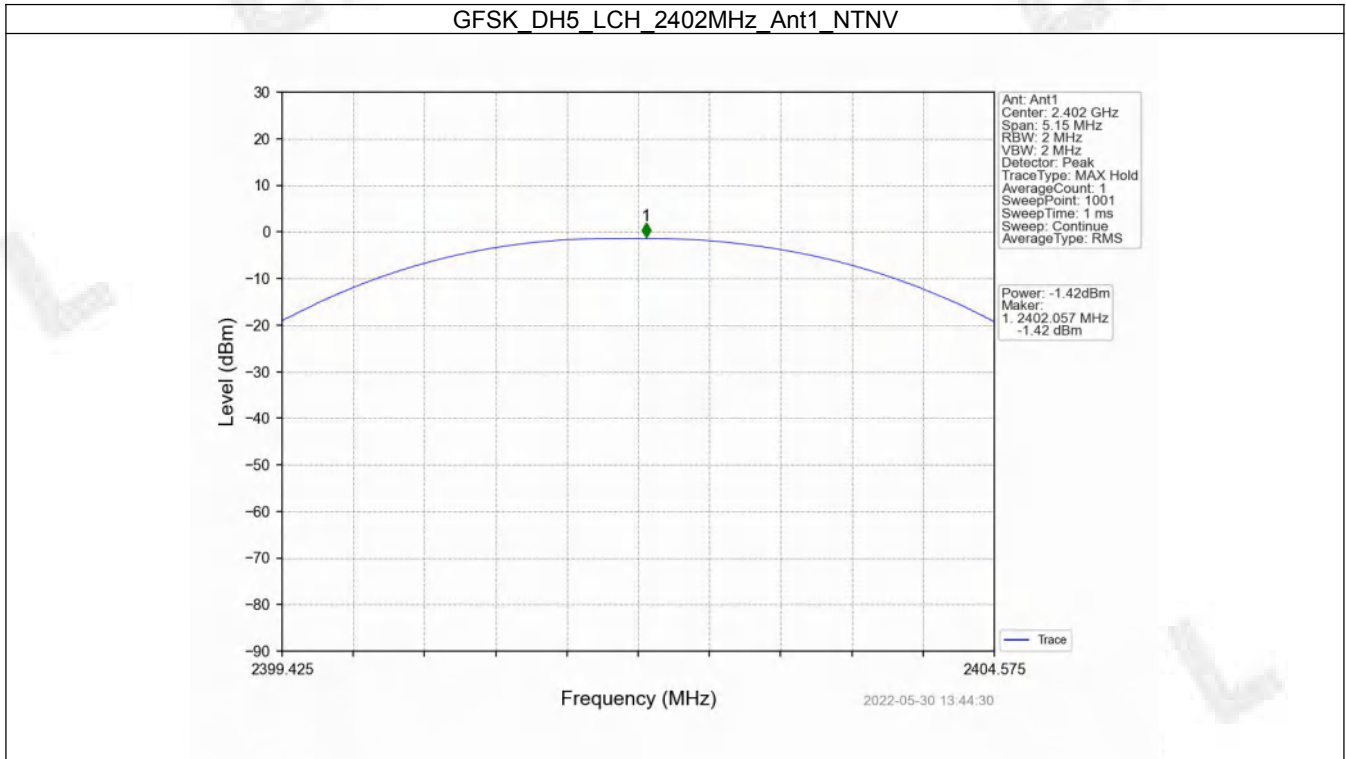
### 2.1 Power

#### 2.1.1 Test Result

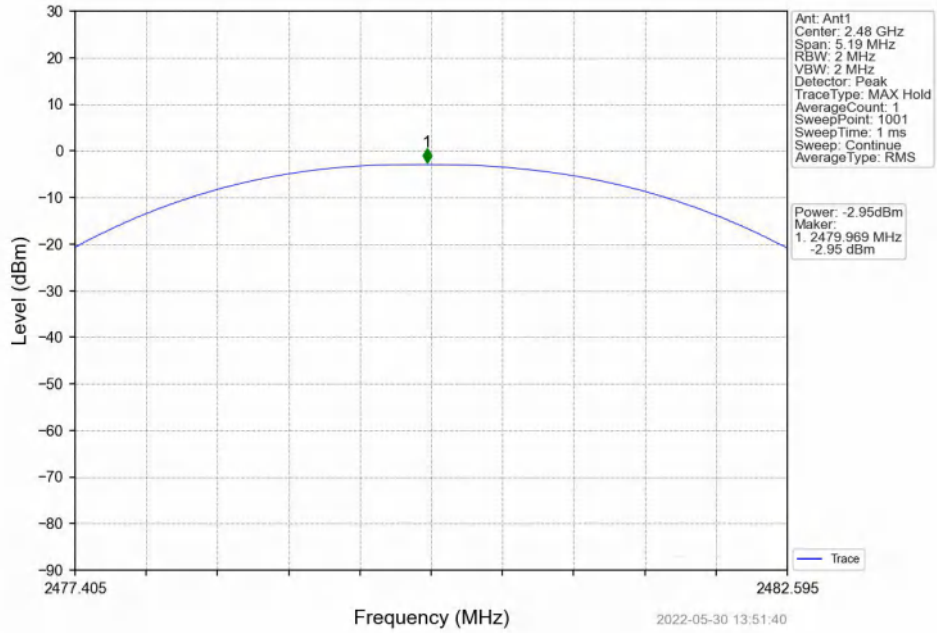
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-1.42	<=20.97	Pass
		2441	DH5	-1.51	<=20.97	Pass
		2480	DH5	-2.95	<=20.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	-0.81	<=20.97	Pass
		2441	2DH5	-0.94	<=20.97	Pass
		2480	2DH5	-2.30	<=20.97	Pass
8DPSK	SISO	2402	3DH5	-0.46	<=20.97	Pass
		2441	3DH5	-0.64	<=20.97	Pass
		2480	3DH5	-1.89	<=20.97	Pass

Note1: Antenna Gain: Ant1: 0.00dBi;

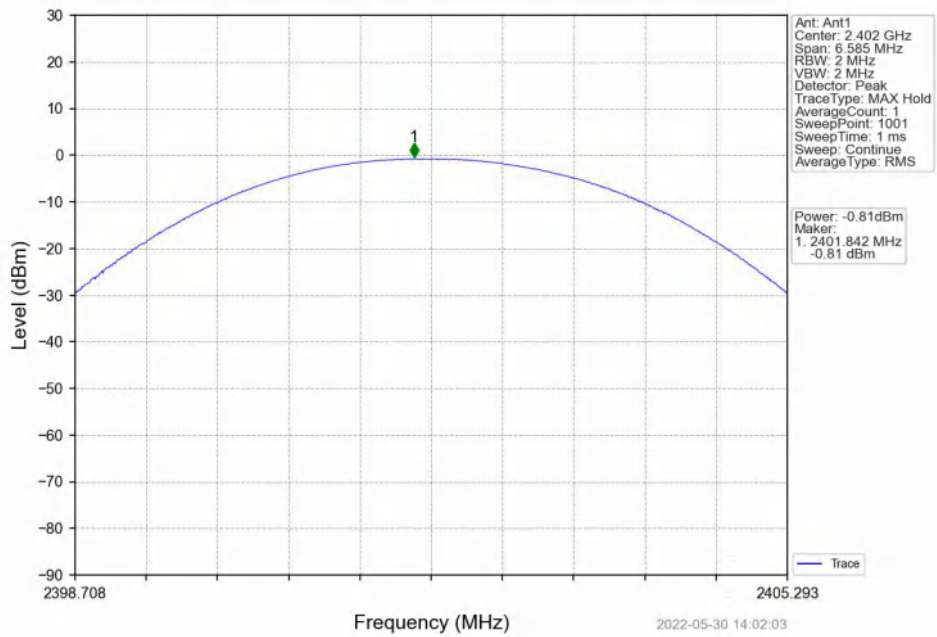
2.1.2 Test Graph



GFSK DH5\_HCH\_2480MHz\_Ant1\_NTNV

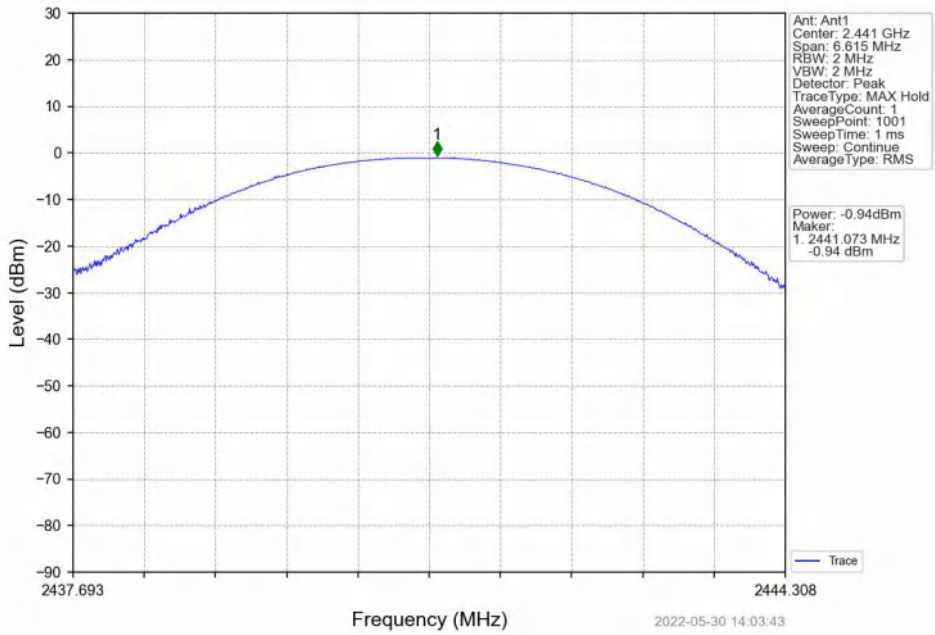


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

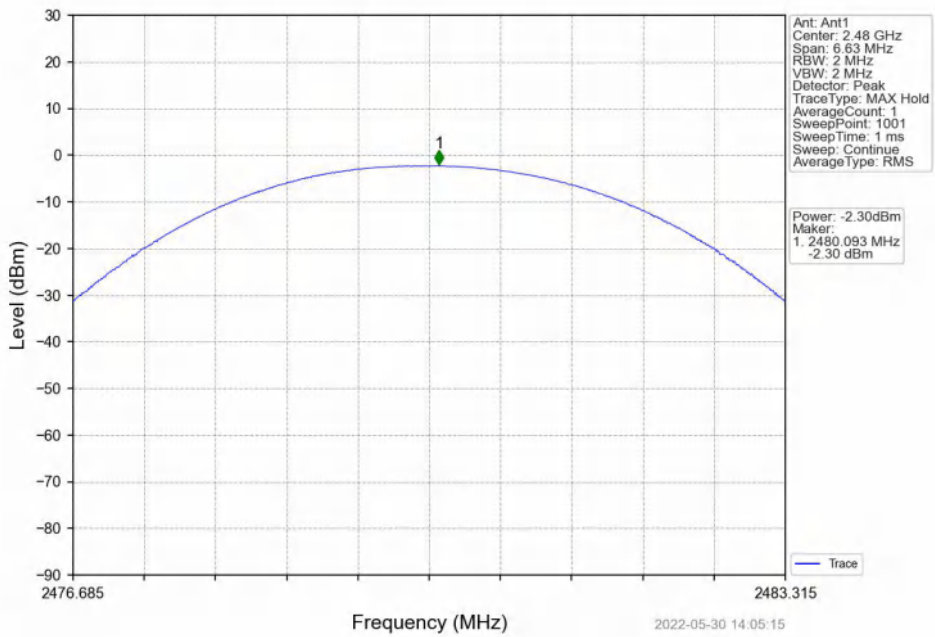




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV

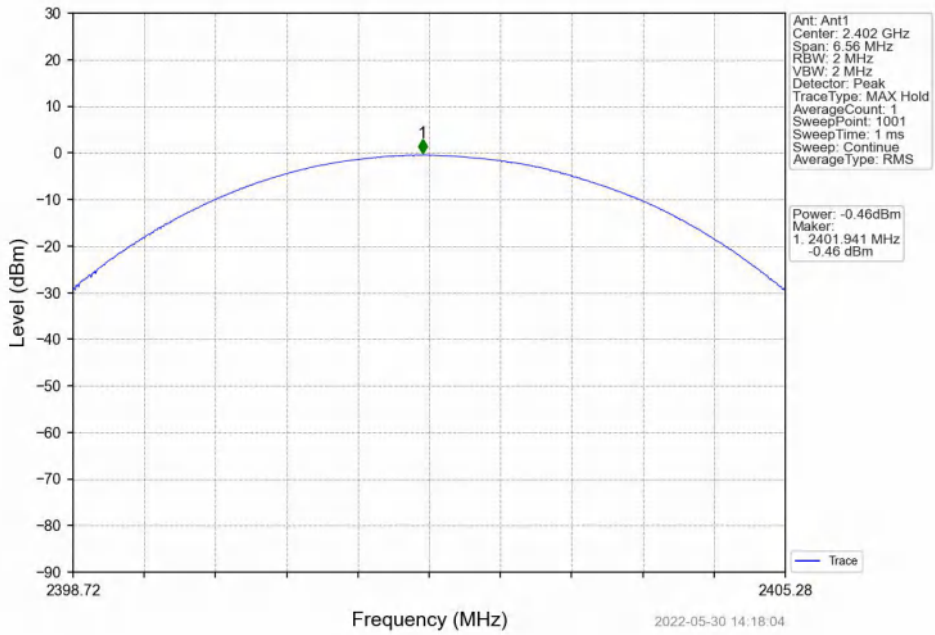


Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV

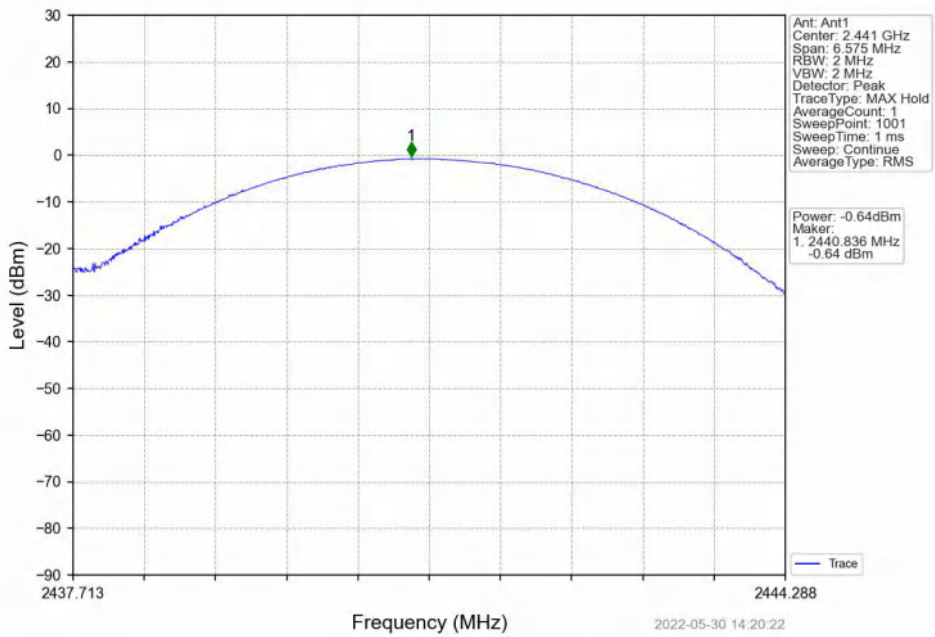




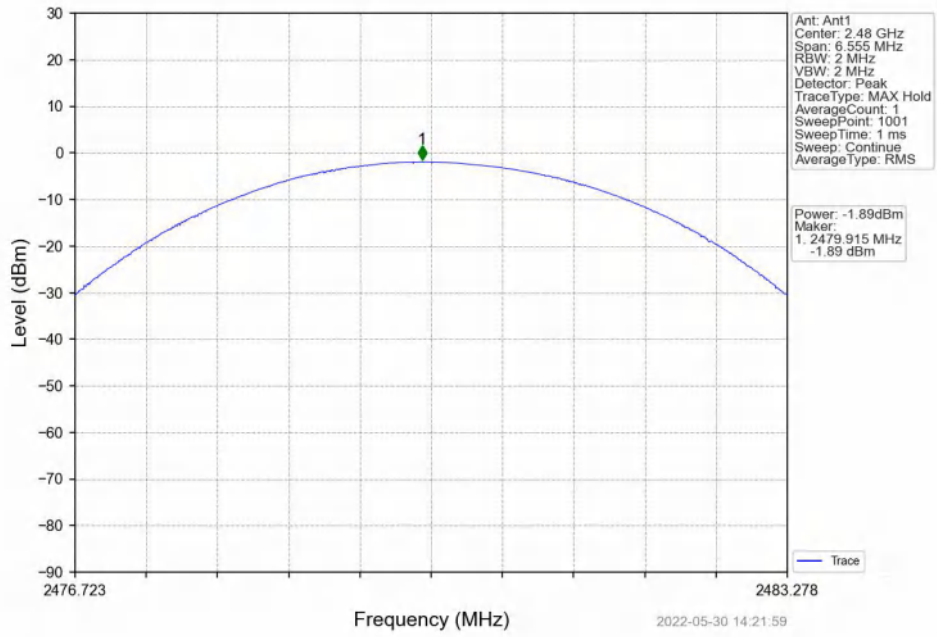
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



8DPSK 3DH5\_HCH\_2480MHz\_Ant1\_NTNV



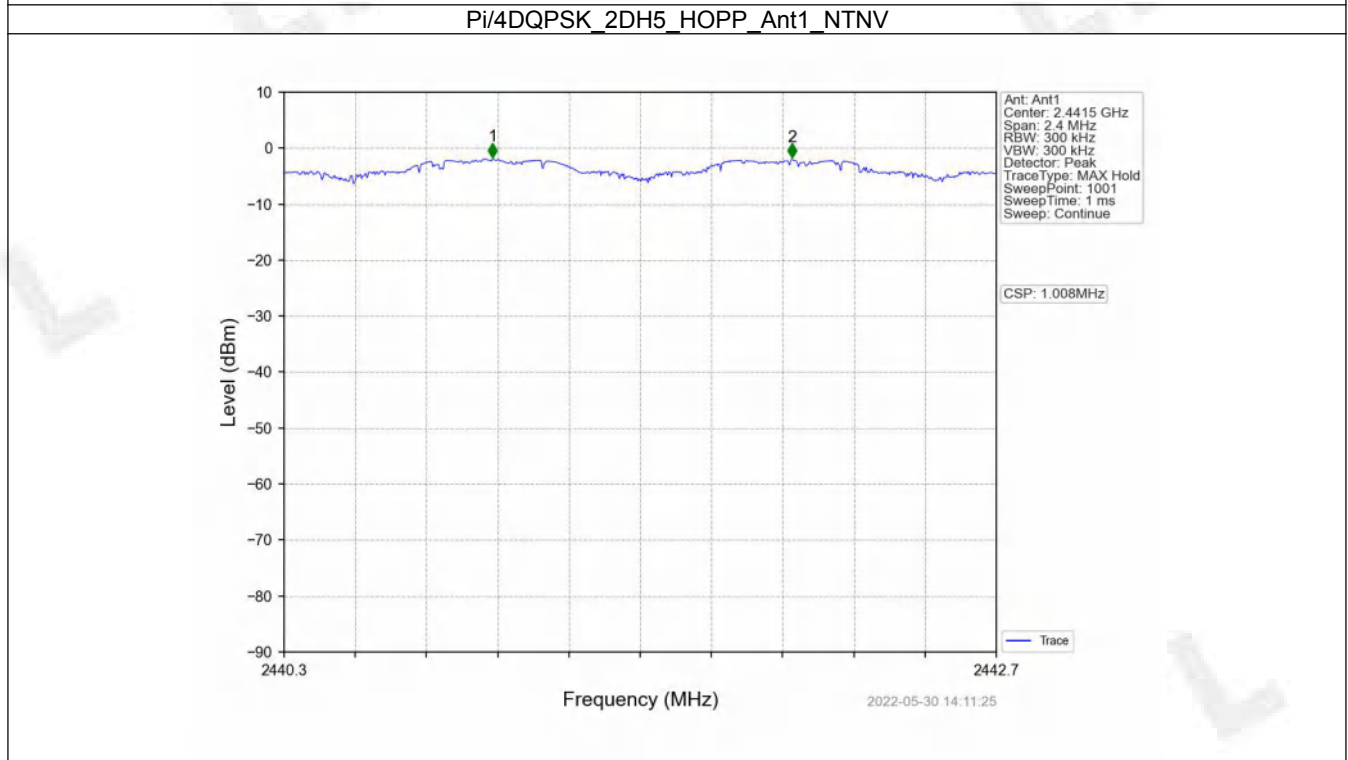
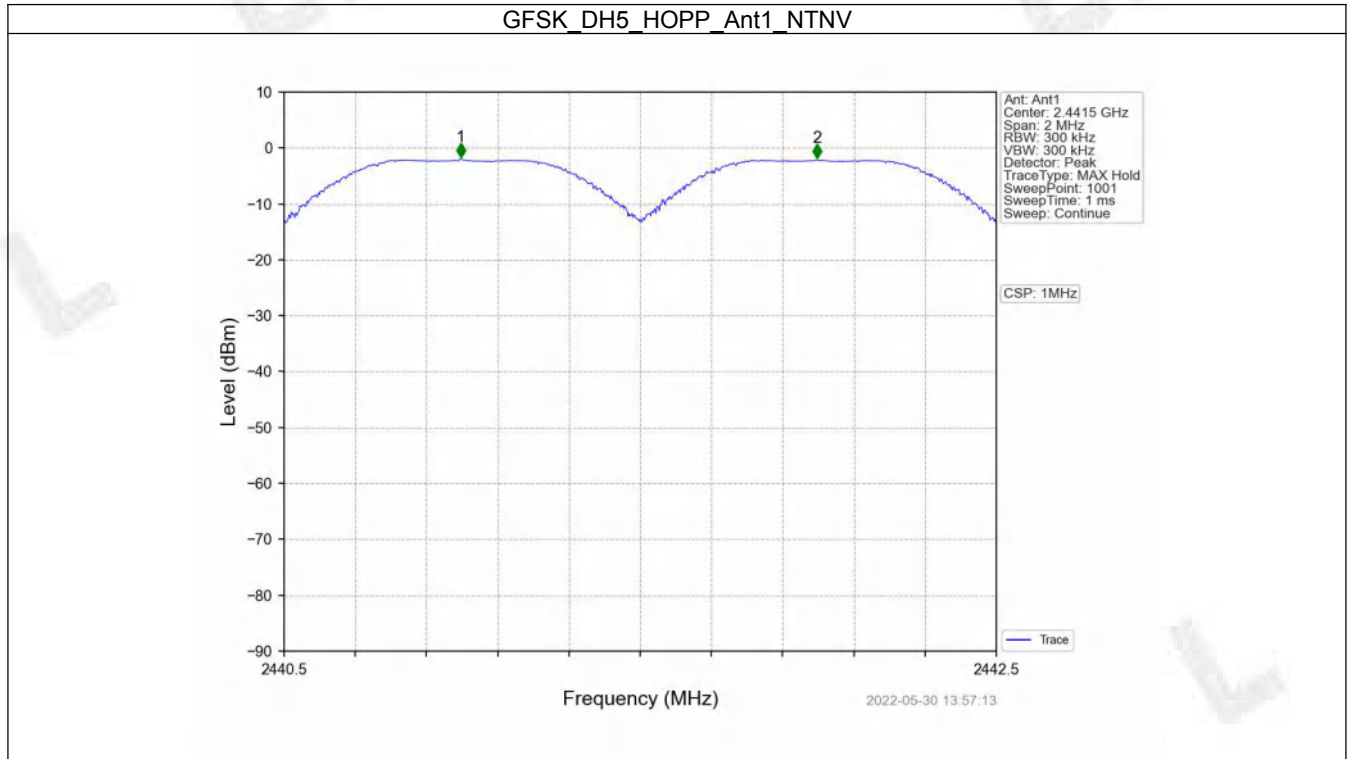
### 3. Carrier Frequency Separation

#### 3.1 Ant1

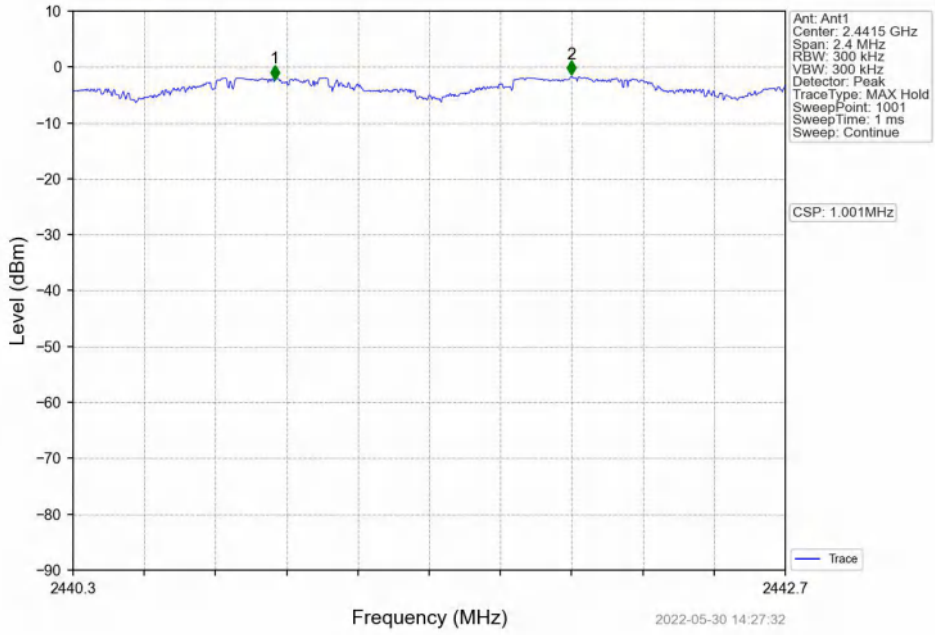
##### 3.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.000	1.038	$\geq 0.692$	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.008	1.326	$\geq 0.884$	Pass
8DPSK	SISO	HOPP	3DH5	1.001	1.315	$\geq 0.877$	Pass

3.1.2 Test Graph



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



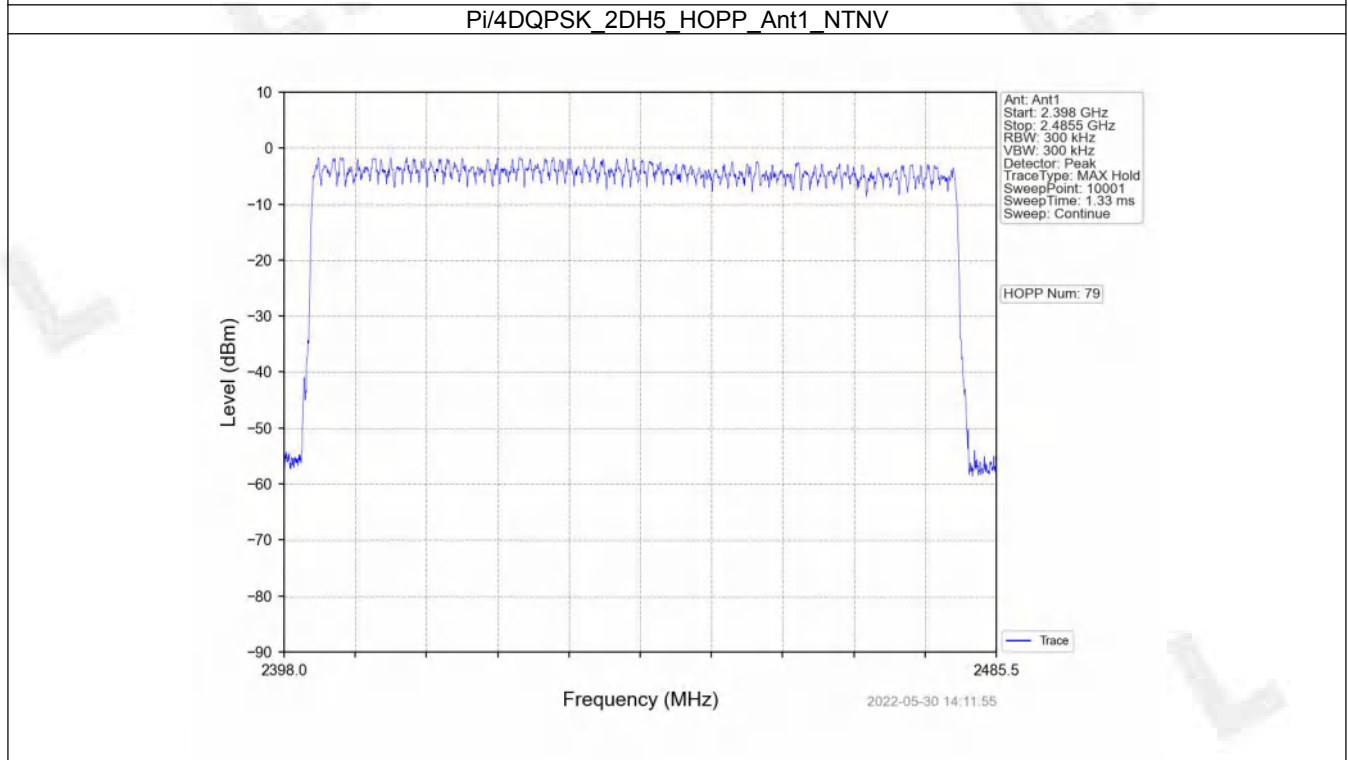
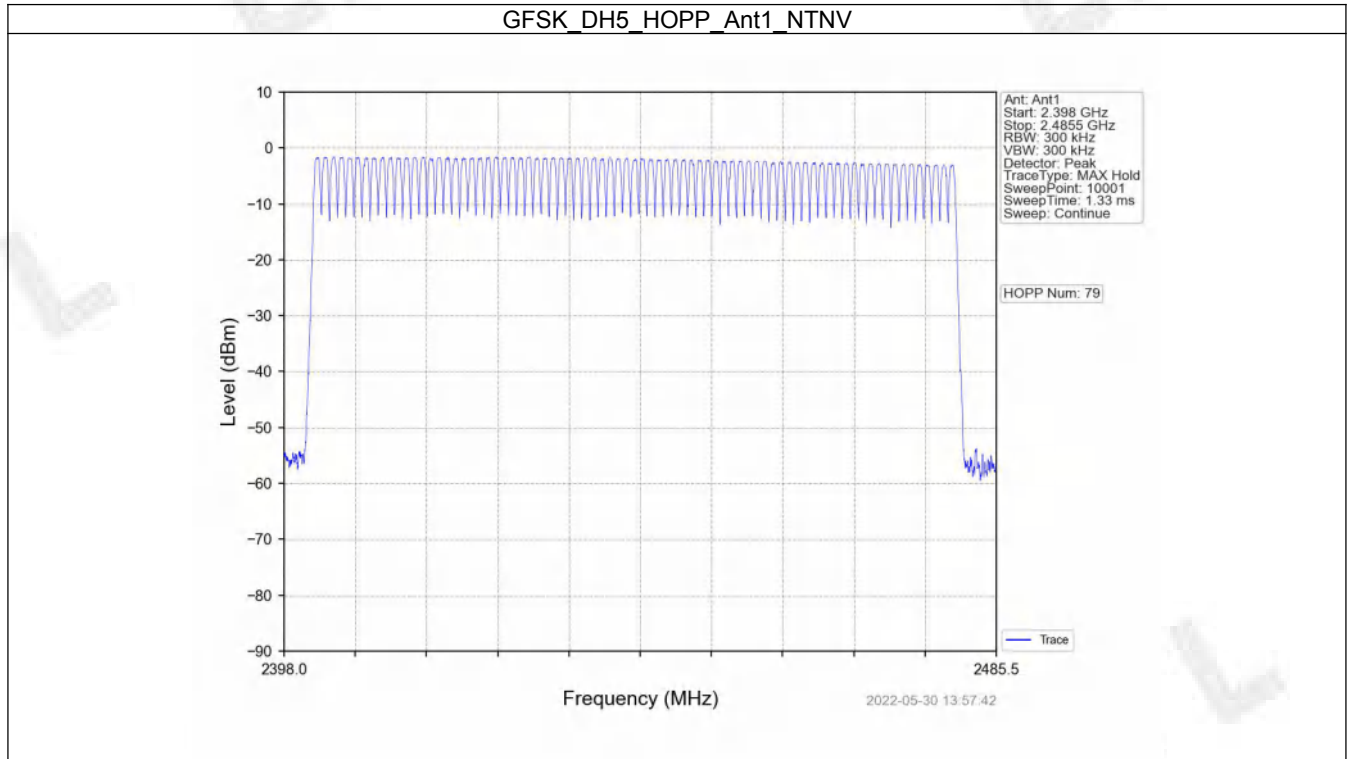
## 4. Number of Hopping Frequencies

### 4.1 HoppNum

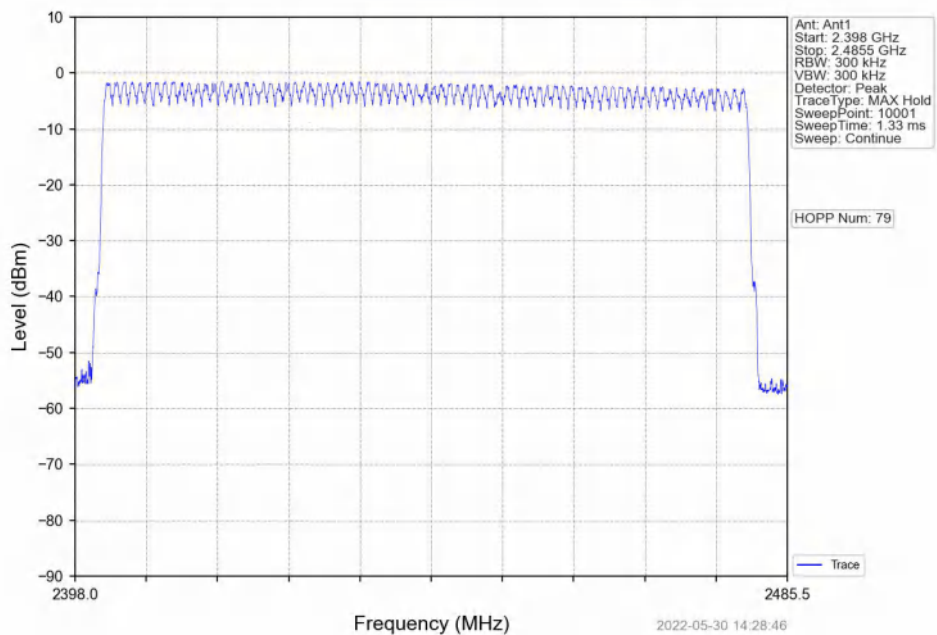
#### 4.1.1 Test Result

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



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV





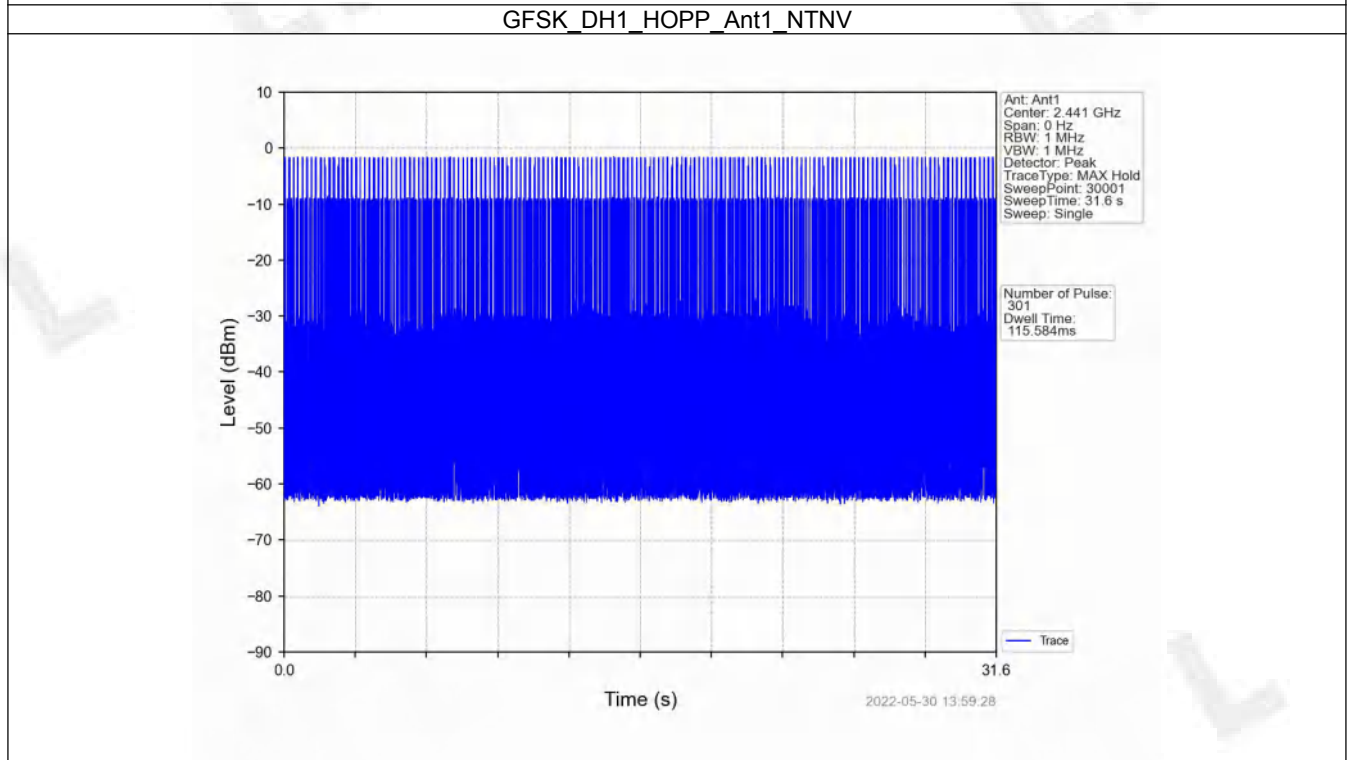
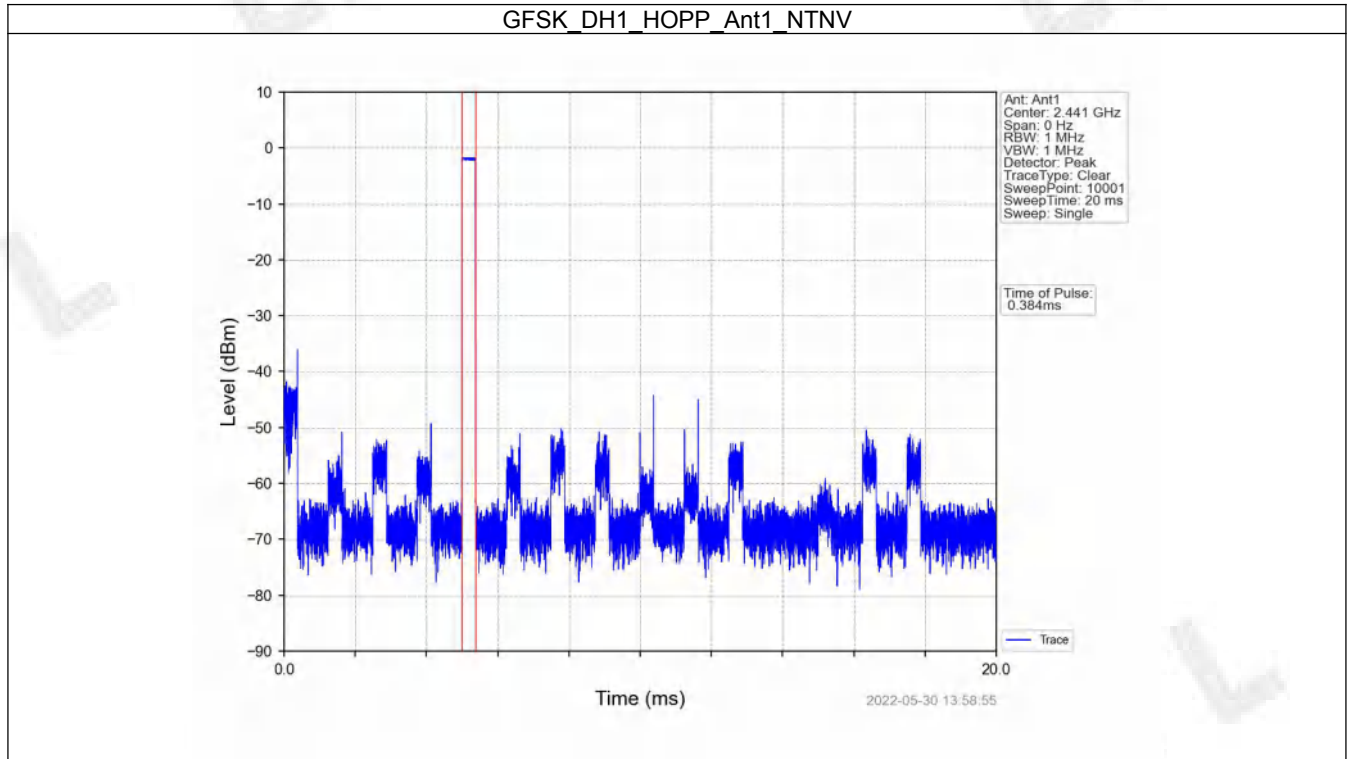
## 5. Time of Occupancy (Dwell Time)

### 5.1 Ant1

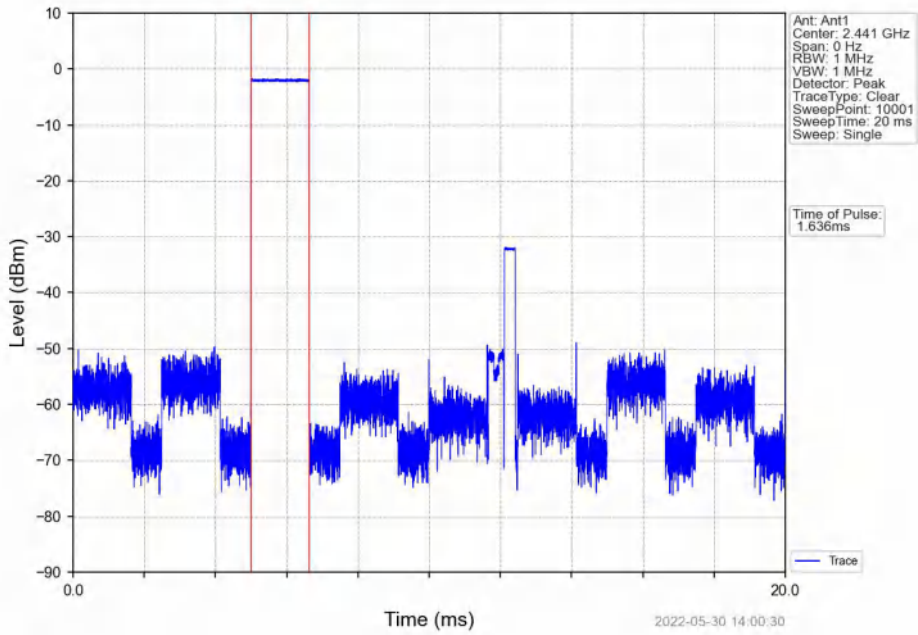
#### 5.1.1 Test Result

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	0.384	31.600	301	115.584	<=400	Pass
			DH3	1.636	31.600	141	230.676	<=400	Pass
			DH5	2.886	31.600	107	308.802	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.388	31.600	305	118.340	<=400	Pass
			2DH3	1.642	31.600	155	254.510	<=400	Pass
			2DH5	2.896	31.600	99	286.704	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.390	31.600	305	118.950	<=400	Pass
			3DH3	1.642	31.600	138	226.596	<=400	Pass
			3DH5	2.894	31.600	108	312.552	<=400	Pass

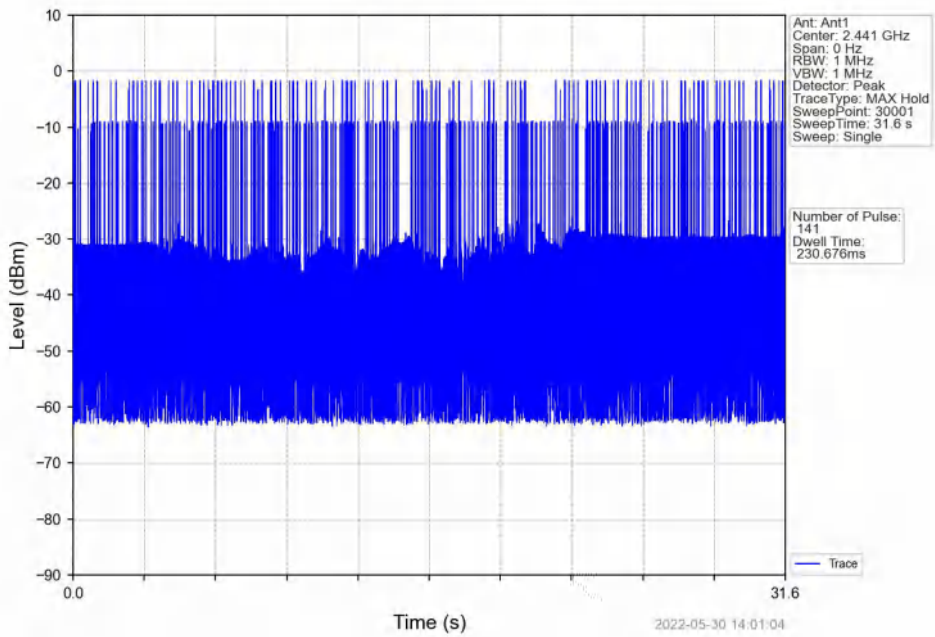
5.1.2 Test Graph



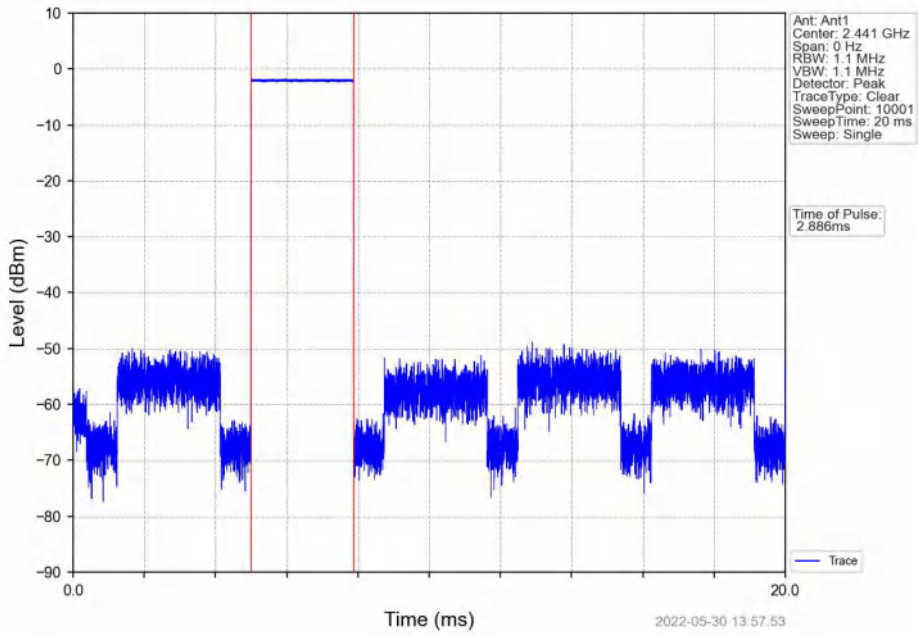
GFSK\_DH3\_HOPP\_Ant1\_NTNV



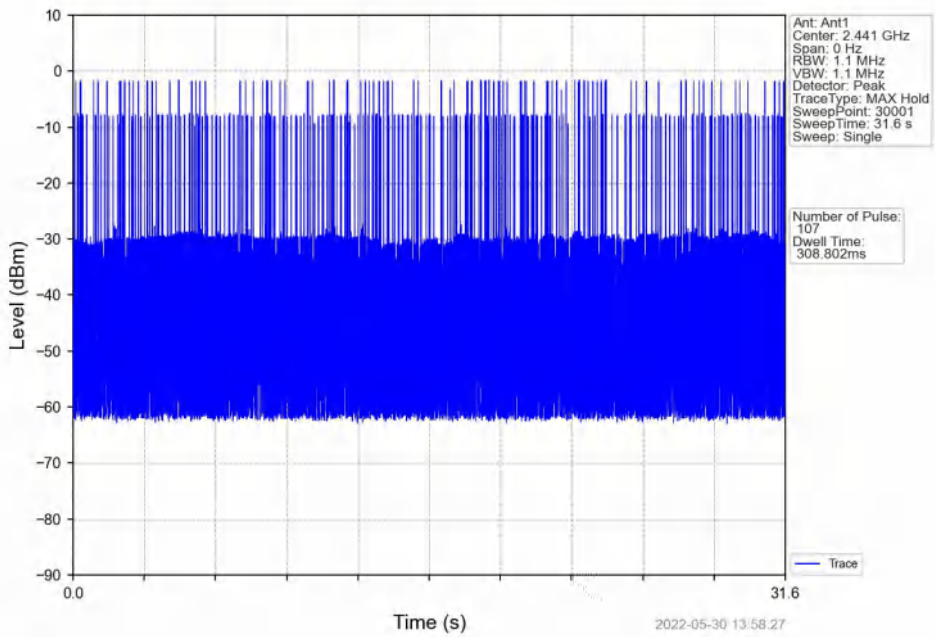
GFSK\_DH3\_HOPP\_Ant1\_NTNV



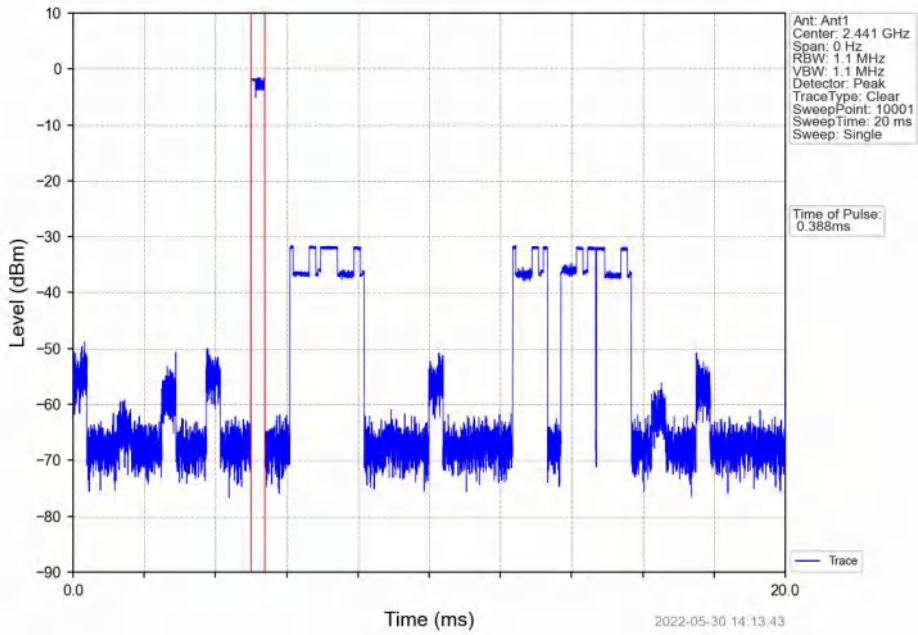
GFSK\_DH5\_HOPP\_Ant1\_NTNV



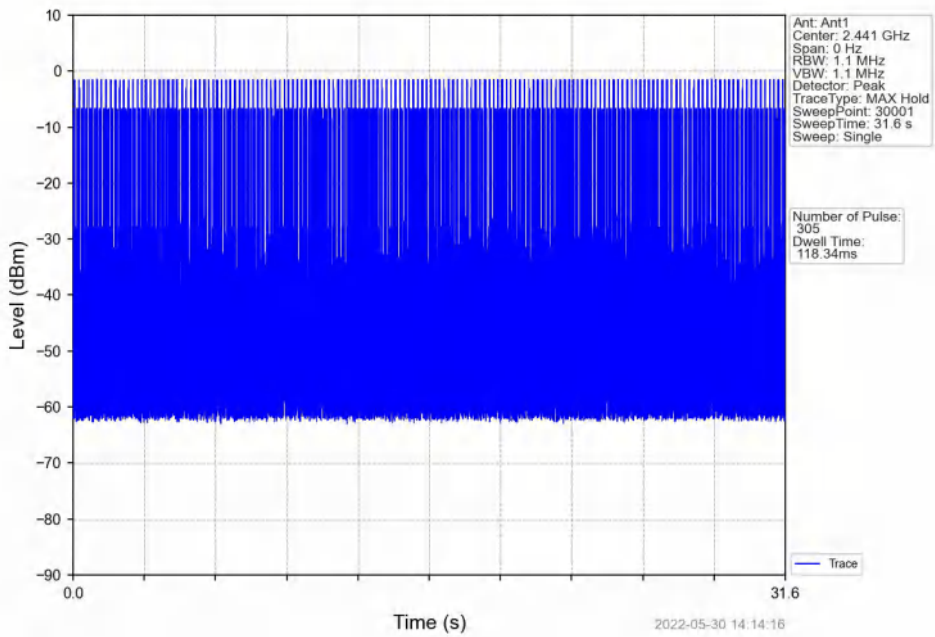
GFSK\_DH5\_HOPP\_Ant1\_NTNV



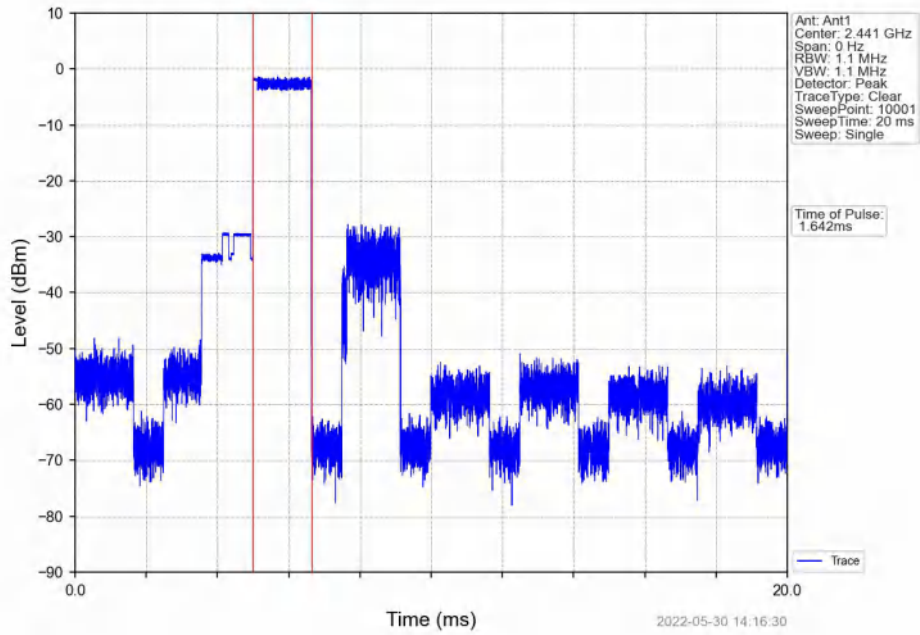
Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



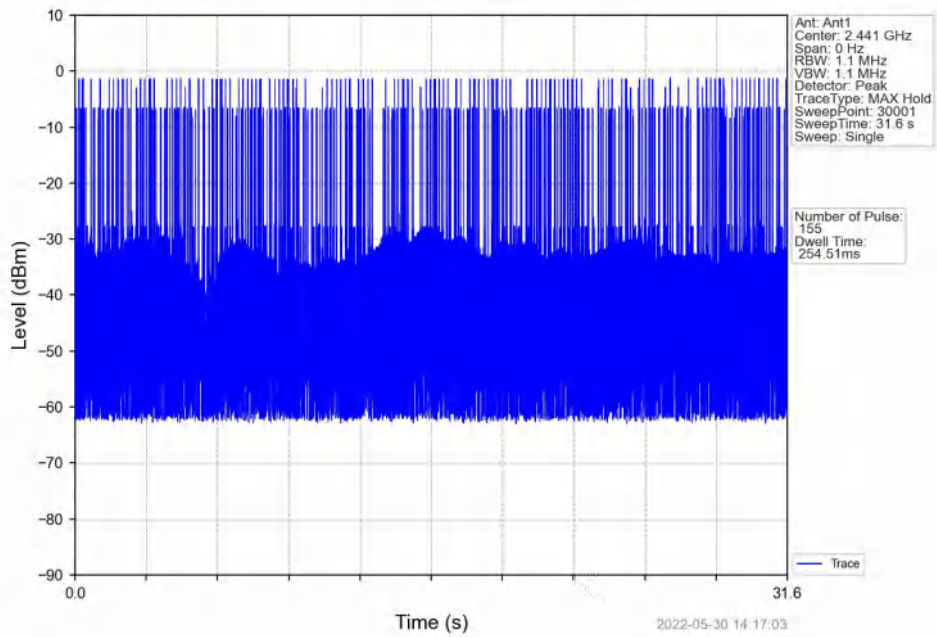
Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV



Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV

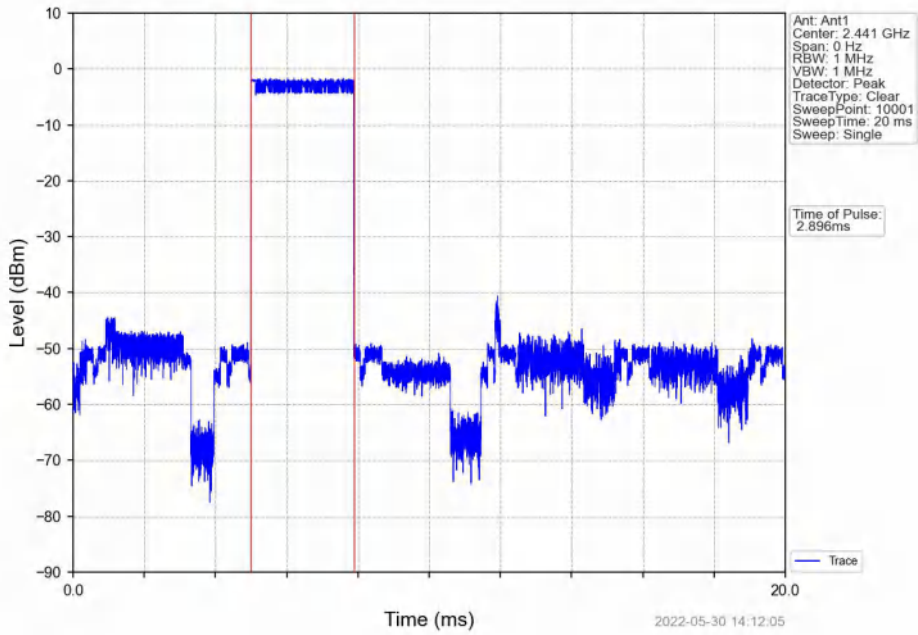


Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV

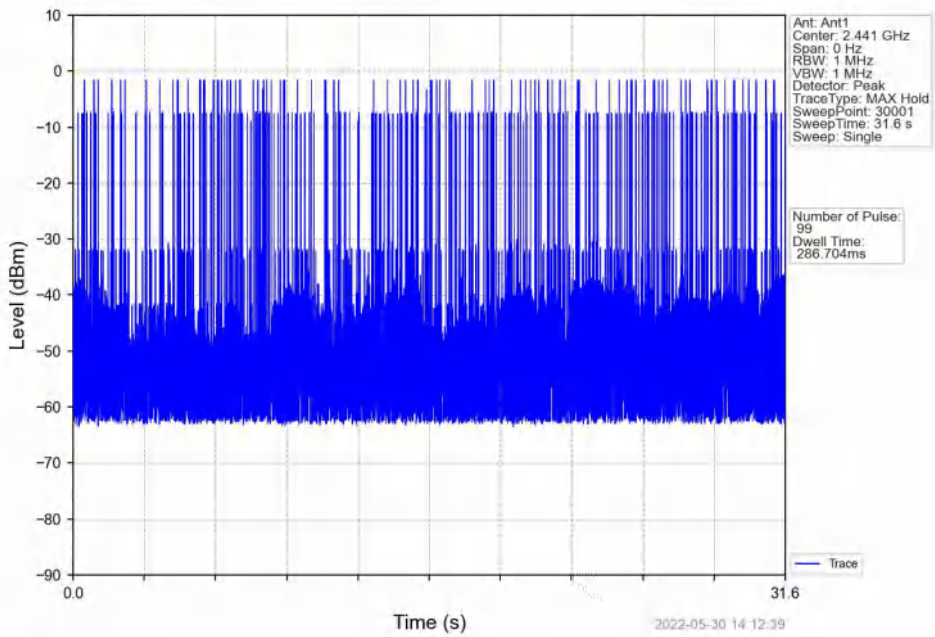




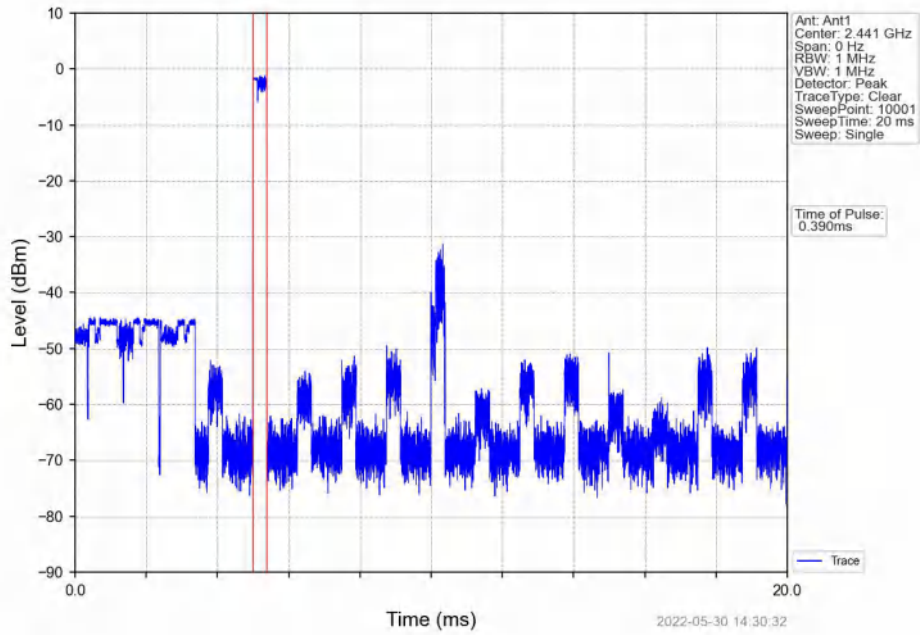
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



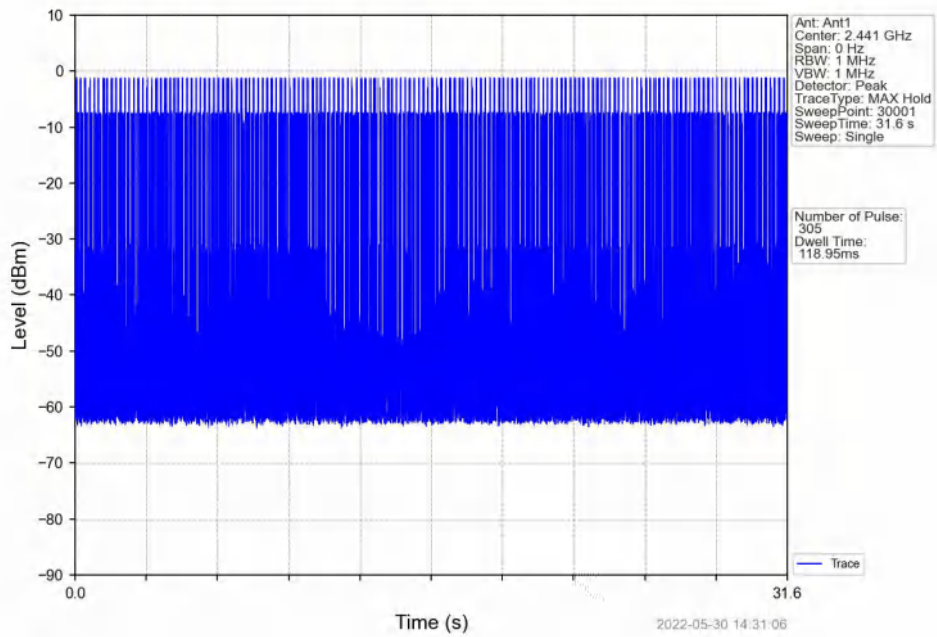
Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



8DPSK\_3DH1\_HOPP\_Ant1\_NTNV

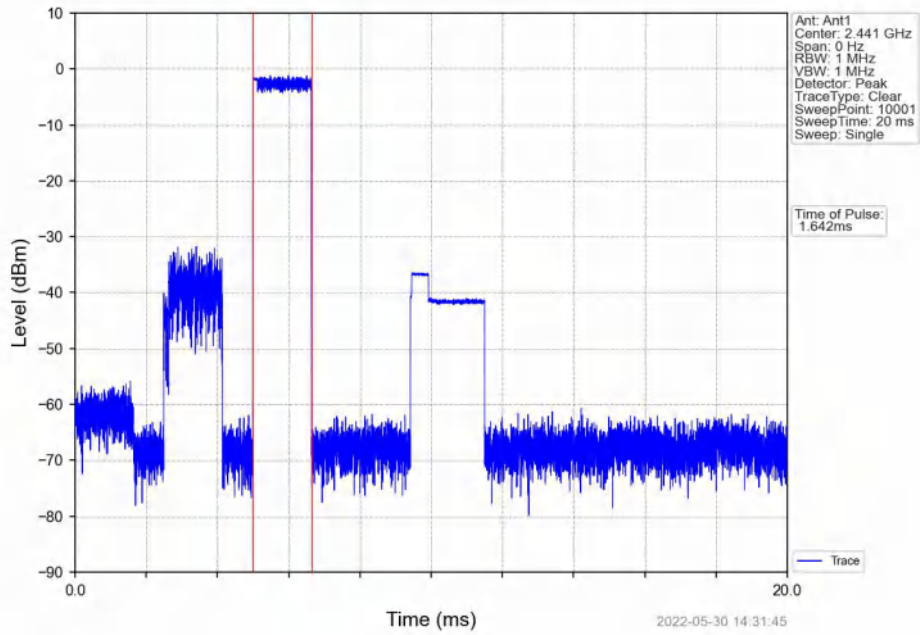


8DPSK\_3DH1\_HOPP\_Ant1\_NTNV

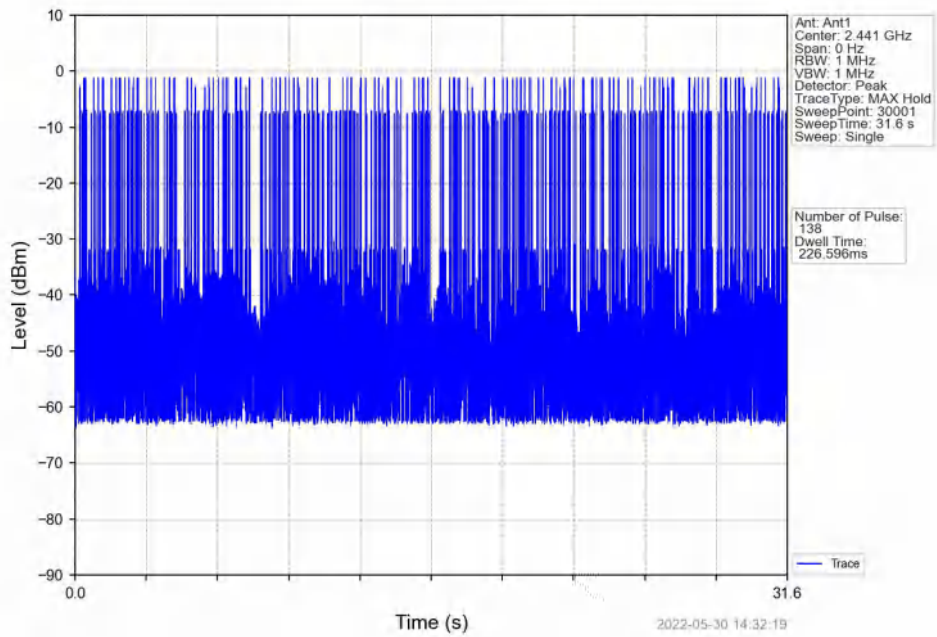




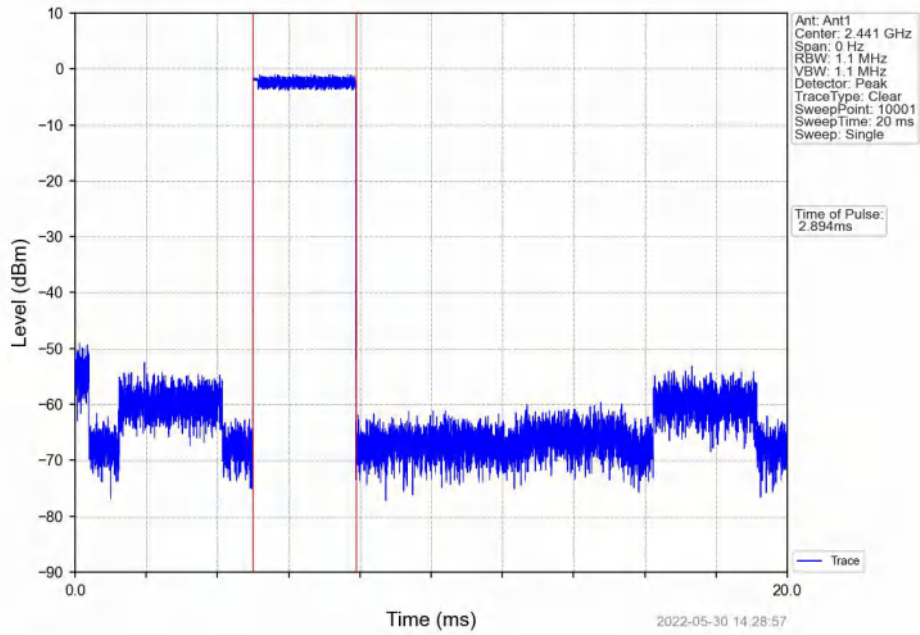
8DPSK\_3DH3\_HOPP\_Ant1\_NTNV



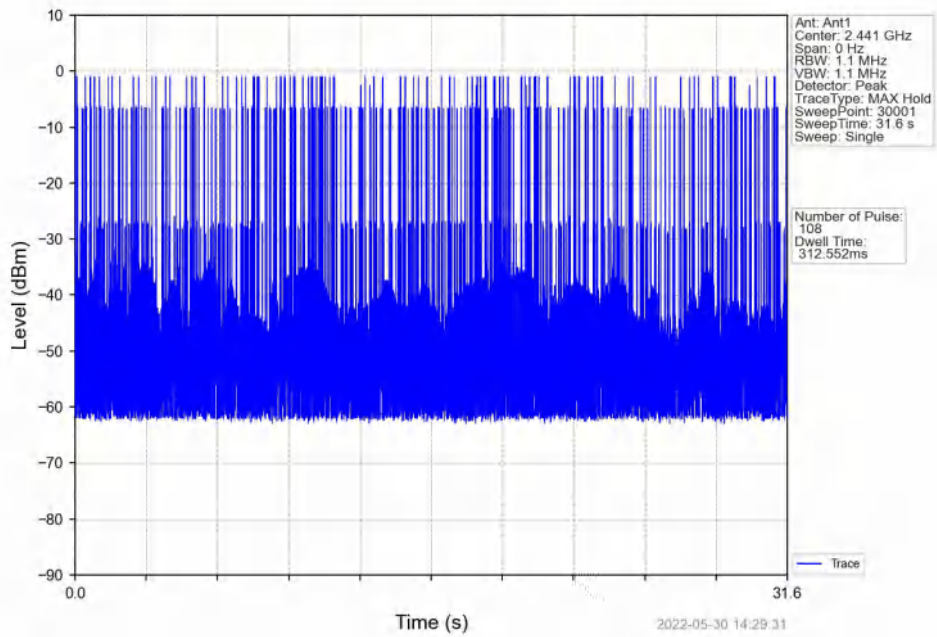
8DPSK\_3DH3\_HOPP\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



## 6. Unwanted Emissions In Non-restricted Frequency Bands

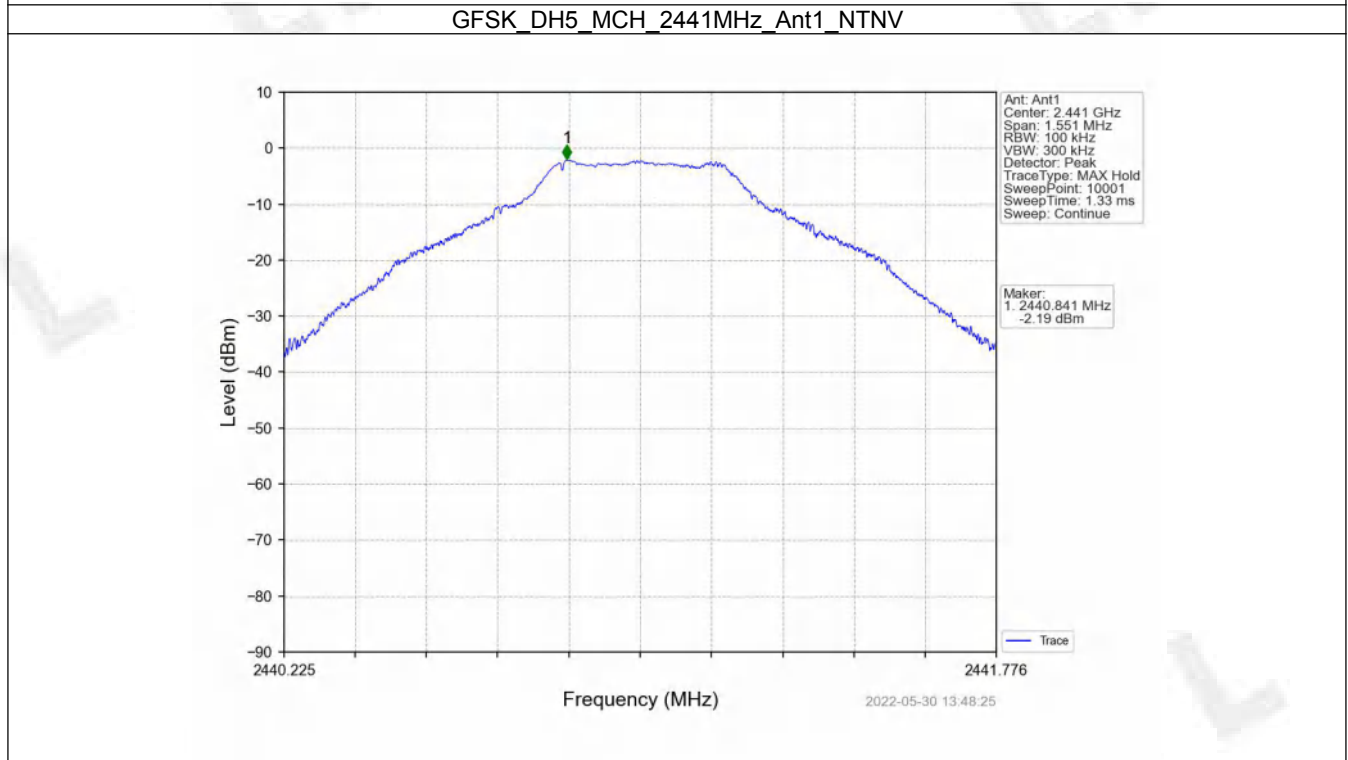
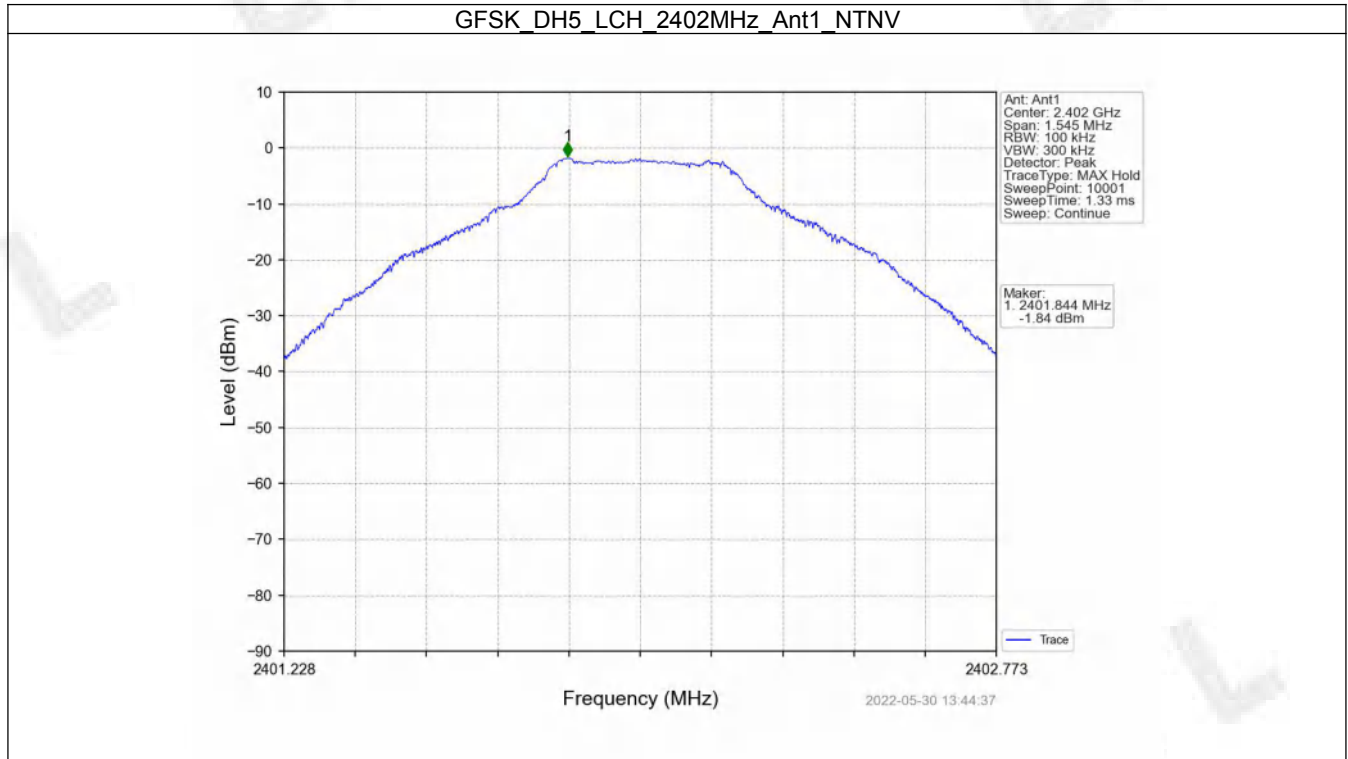
### 6.1 Ref

#### 6.1.1 Test Result

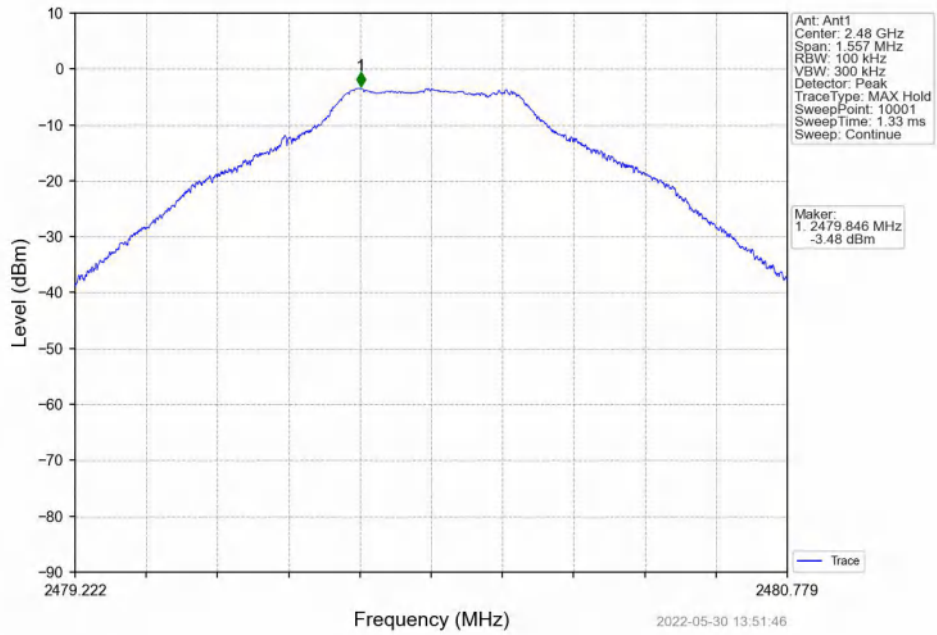
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-1.84
		2441	DH5	1	-2.19
		2480	DH5	1	-3.48
Pi/4DQPSK	SISO	2402	2DH5	1	-1.94
		2441	2DH5	1	-2.39
		2480	2DH5	1	-3.58
8DPSK	SISO	2402	3DH5	1	-1.92
		2441	3DH5	1	-2.24
		2480	3DH5	1	-3.51

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.

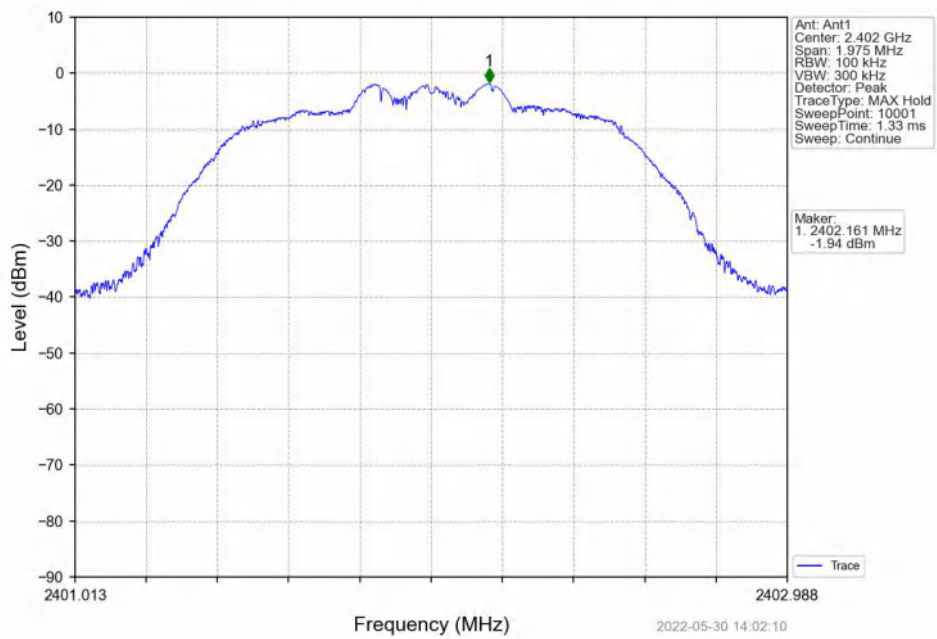
6.1.2 Test Graph



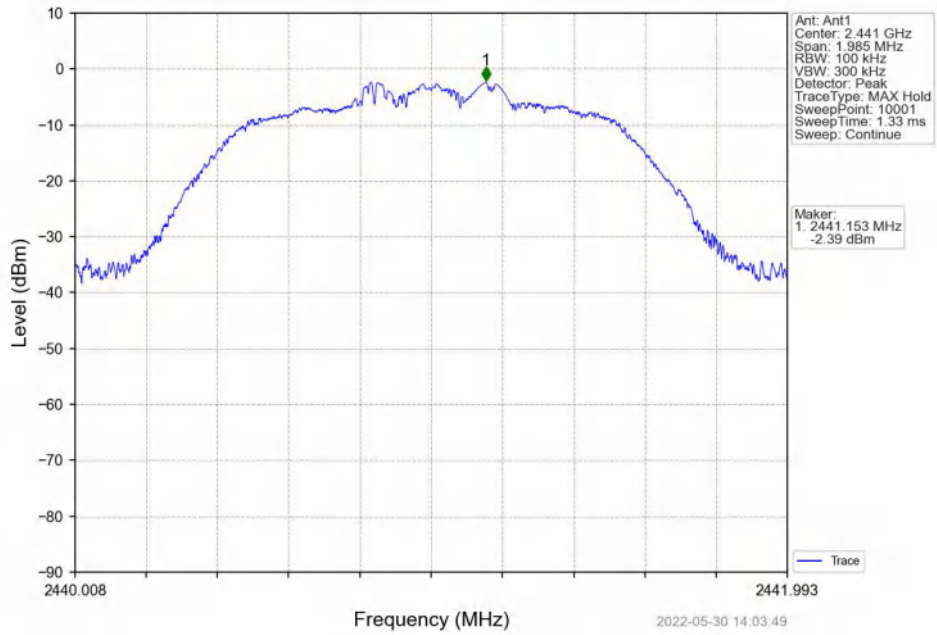
GFSK DH5\_HCH\_2480MHz\_Ant1\_NTNV



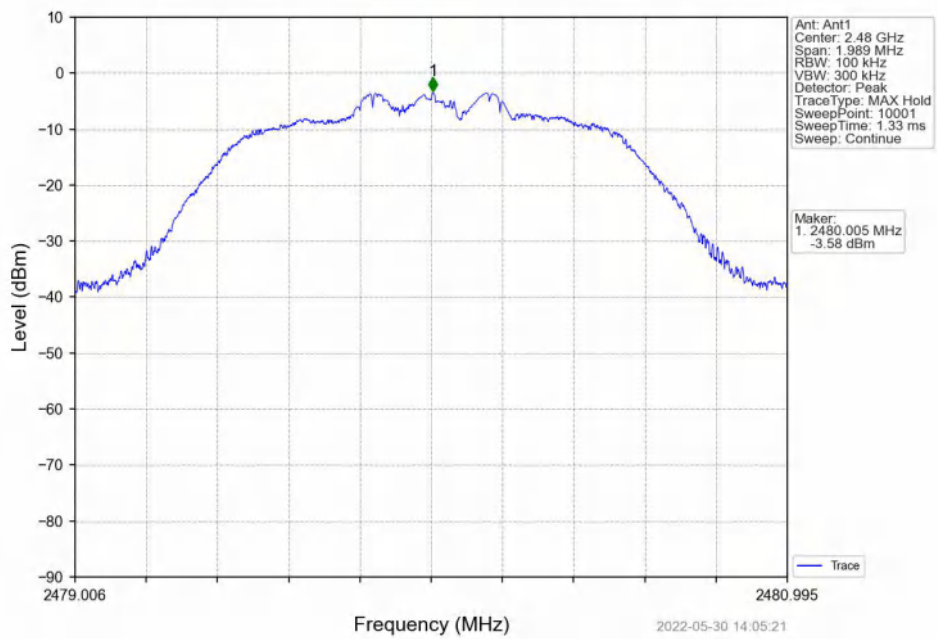
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



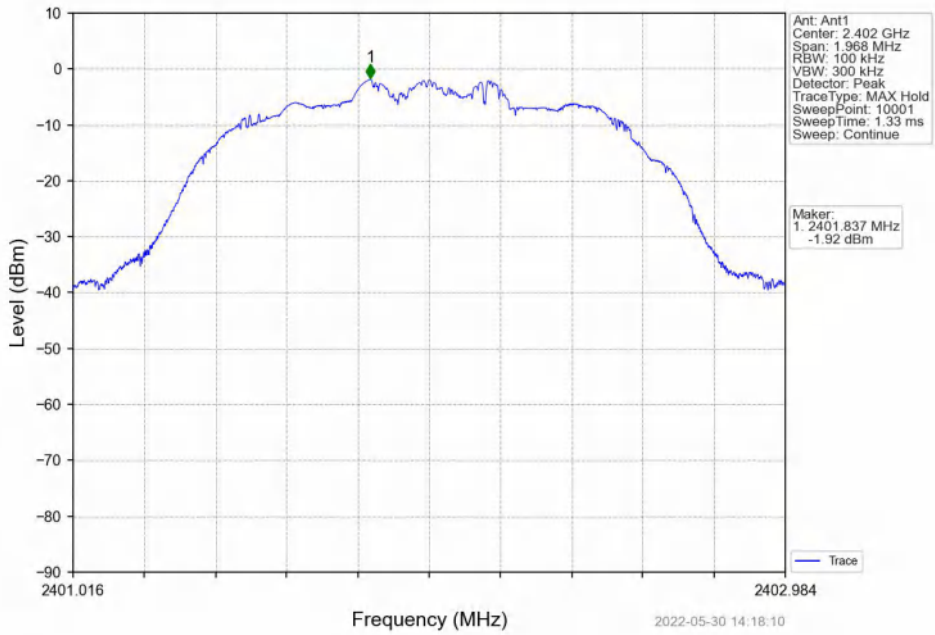
Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



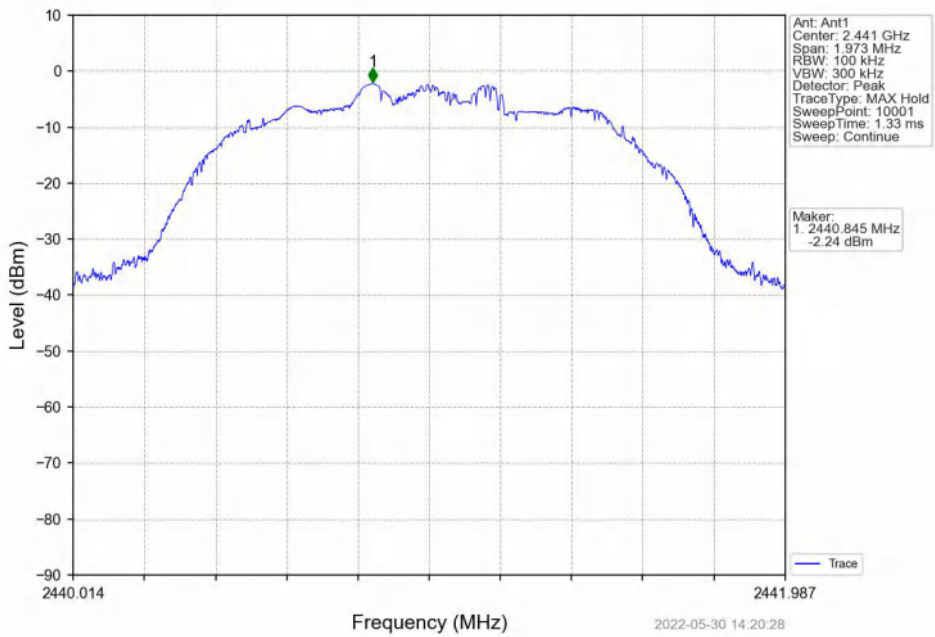
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV

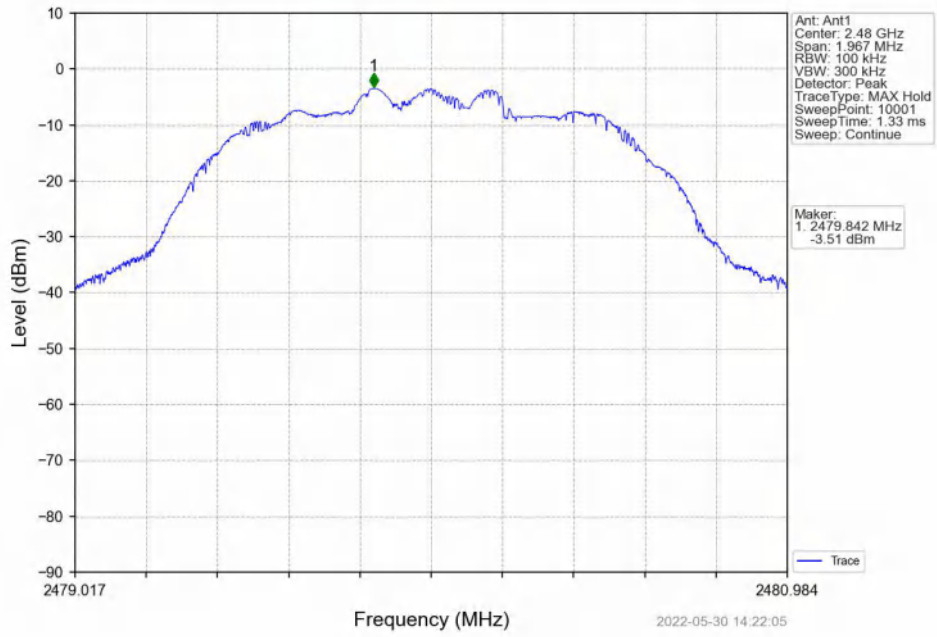


8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV





8DPSK 3DH5\_HCH\_2480MHz\_Ant1\_NTNV





## 6.2 CSE

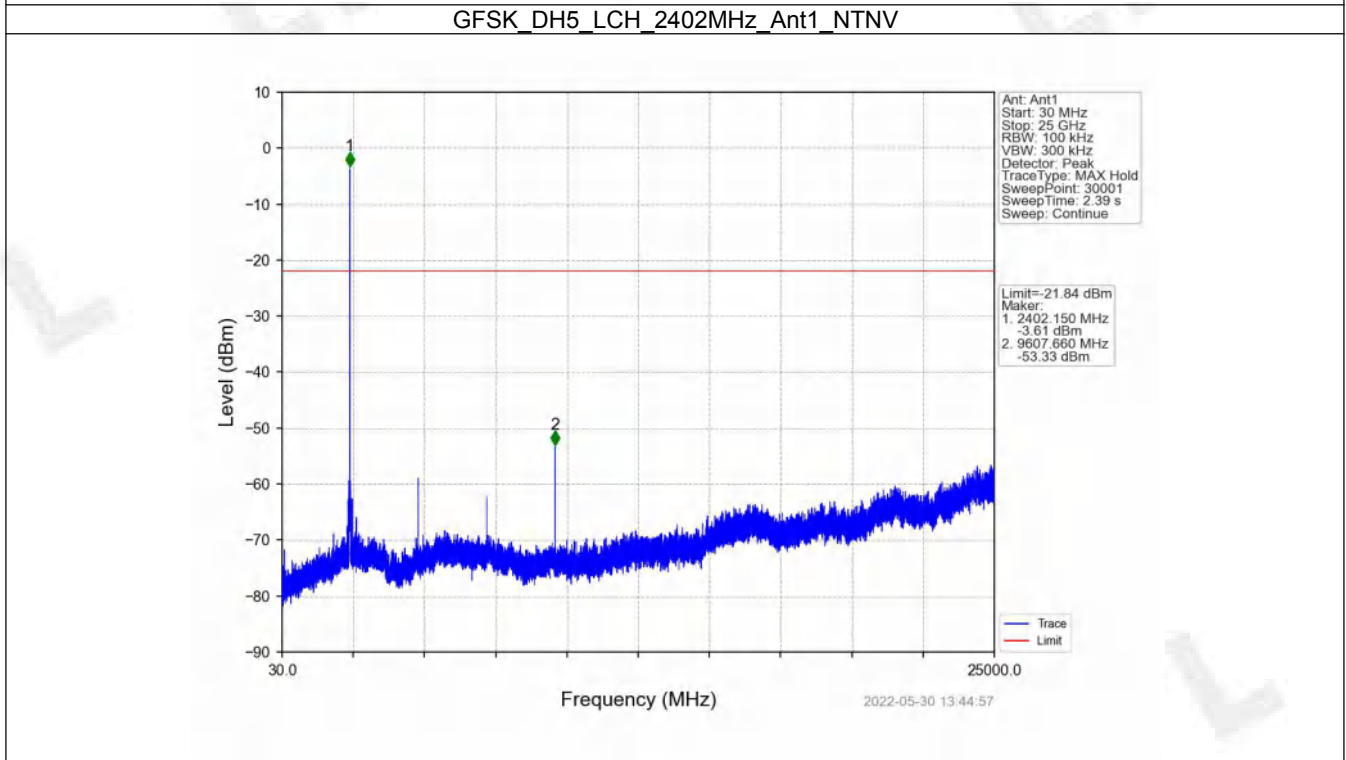
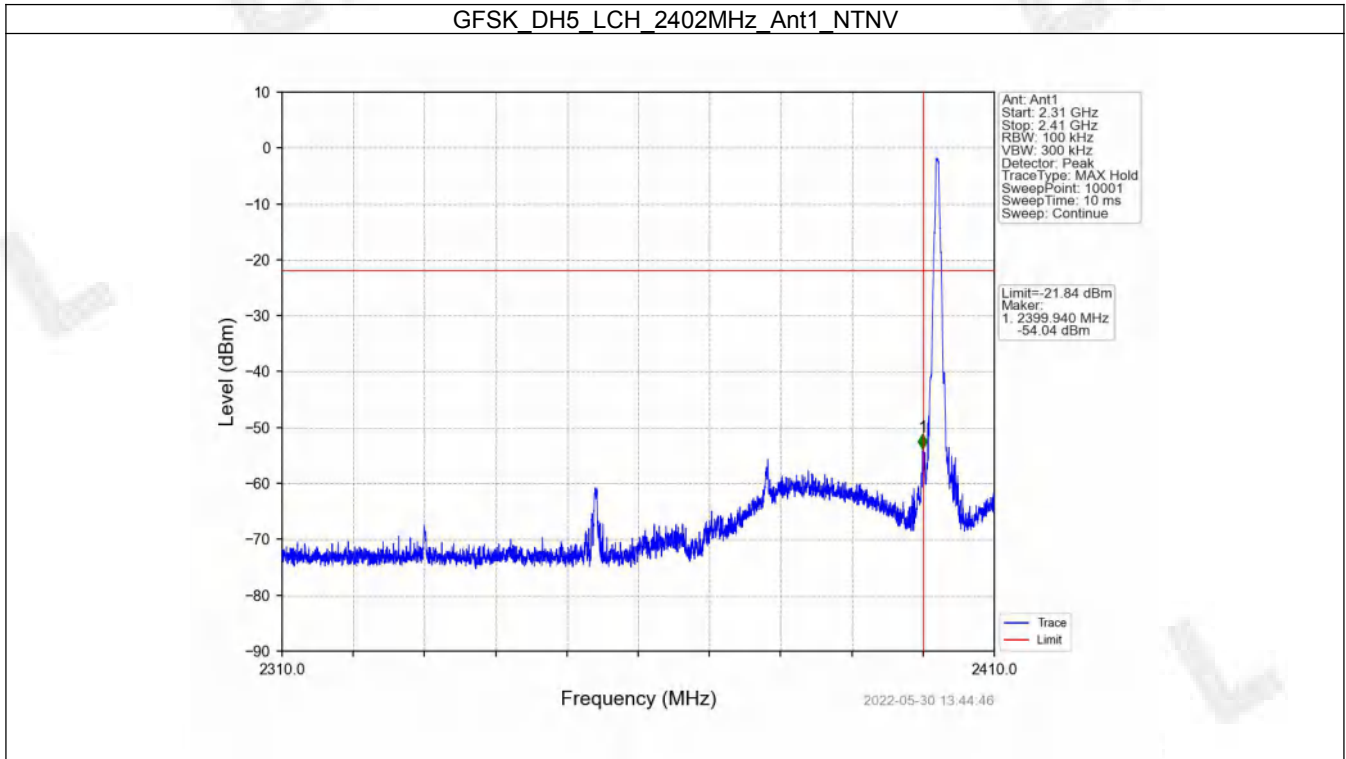
## 6.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-1.84	-21.84	Pass
		2441	DH5	1	-1.84	-21.84	Pass
		2480	DH5	1	-1.84	-21.84	Pass
		HOPP	DH5	1	-1.84	-21.84	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-1.94	-21.94	Pass
		2441	2DH5	1	-1.94	-21.94	Pass
		2480	2DH5	1	-1.94	-21.94	Pass
		HOPP	2DH5	1	-1.94	-21.94	Pass
8DPSK	SISO	2402	3DH5	1	-1.92	-21.92	Pass
		2441	3DH5	1	-1.92	-21.92	Pass
		2480	3DH5	1	-1.92	-21.92	Pass
		HOPP	3DH5	1	-1.92	-21.92	Pass

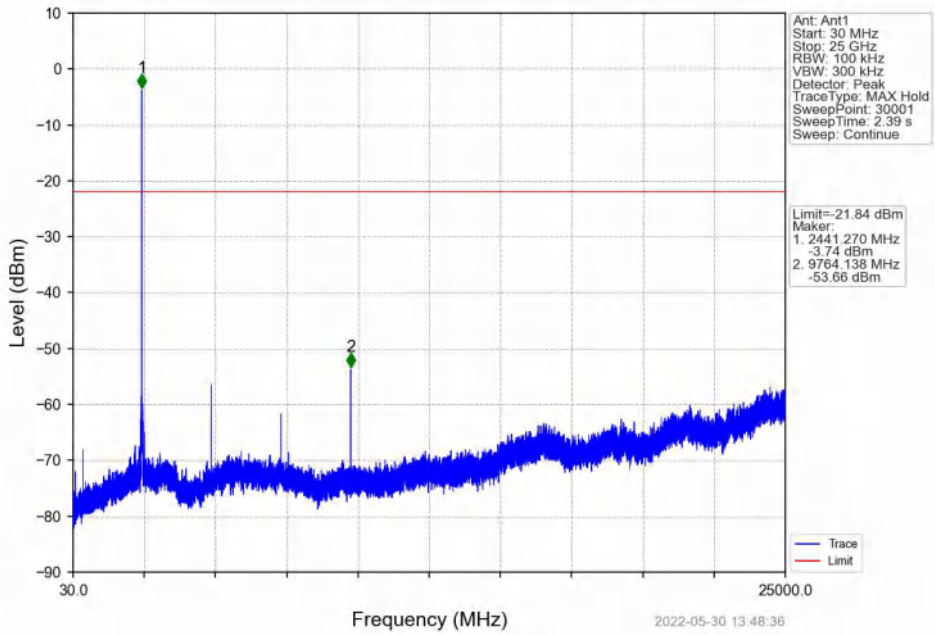
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

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.

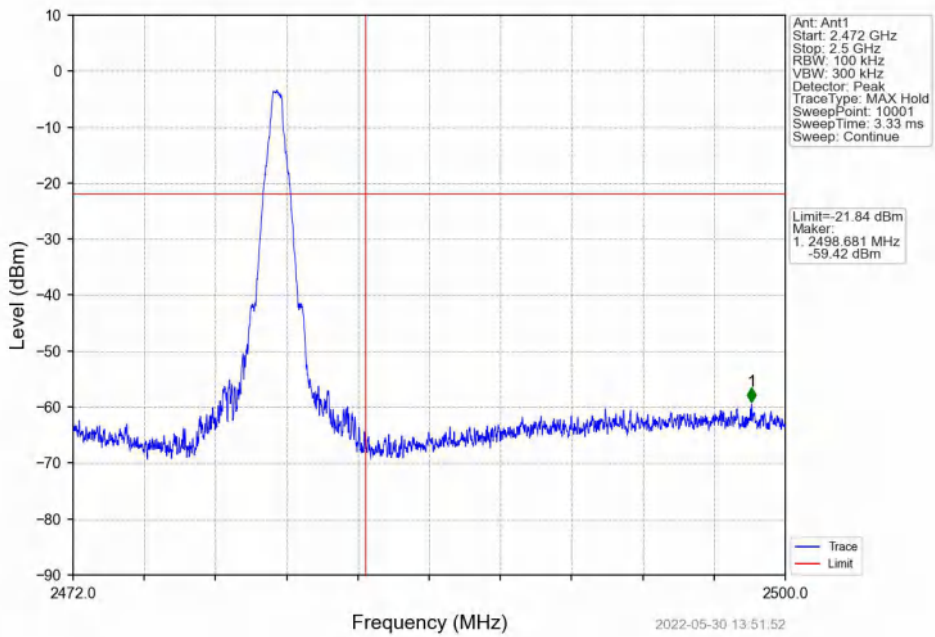
6.2.2 Test Graph



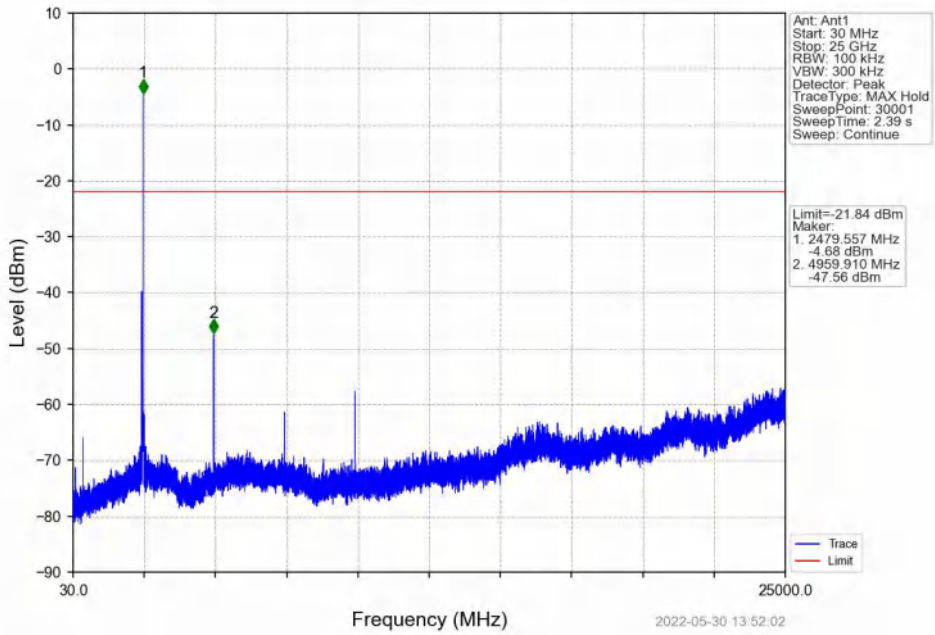
GFSK\_DH5\_MCH\_2441MHz\_Ant1\_NTNV



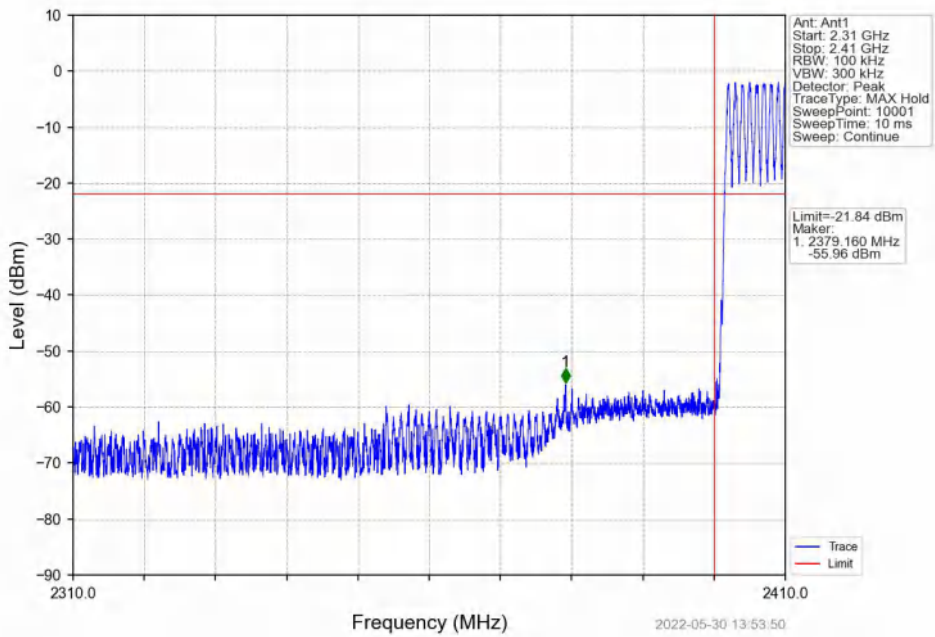
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



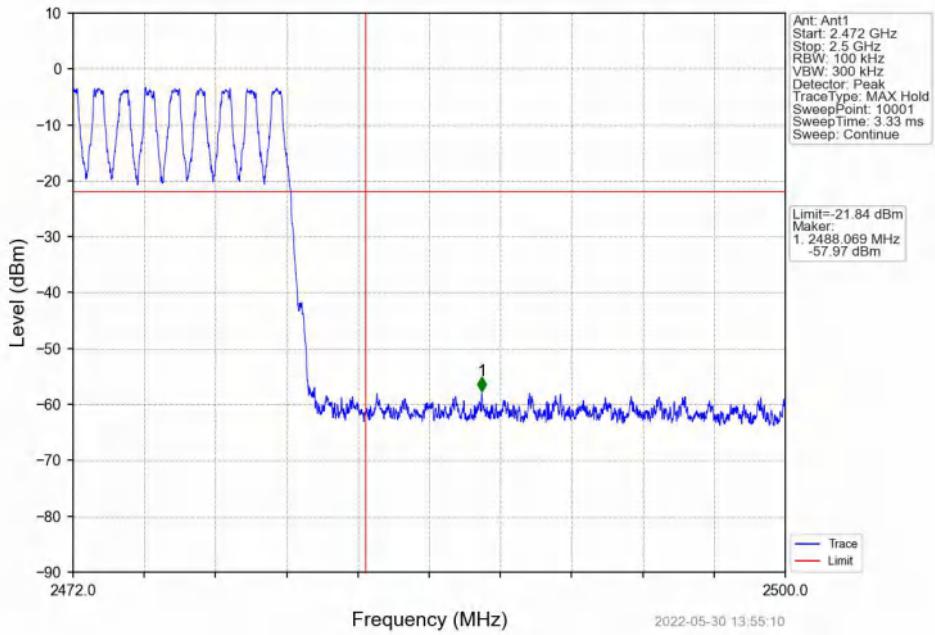
GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV



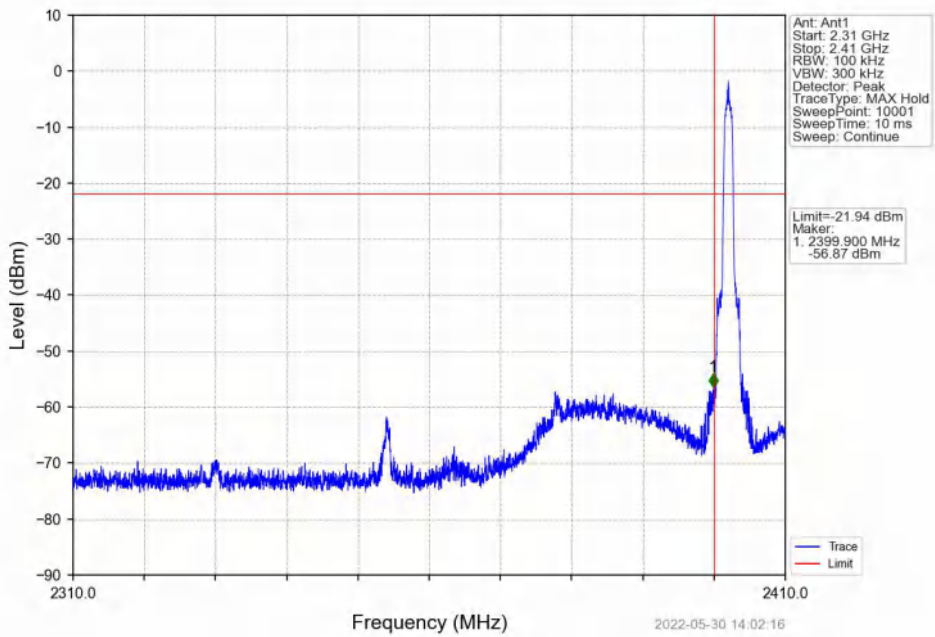
GFSK\_DH5\_HOPP\_Ant1\_NTNV



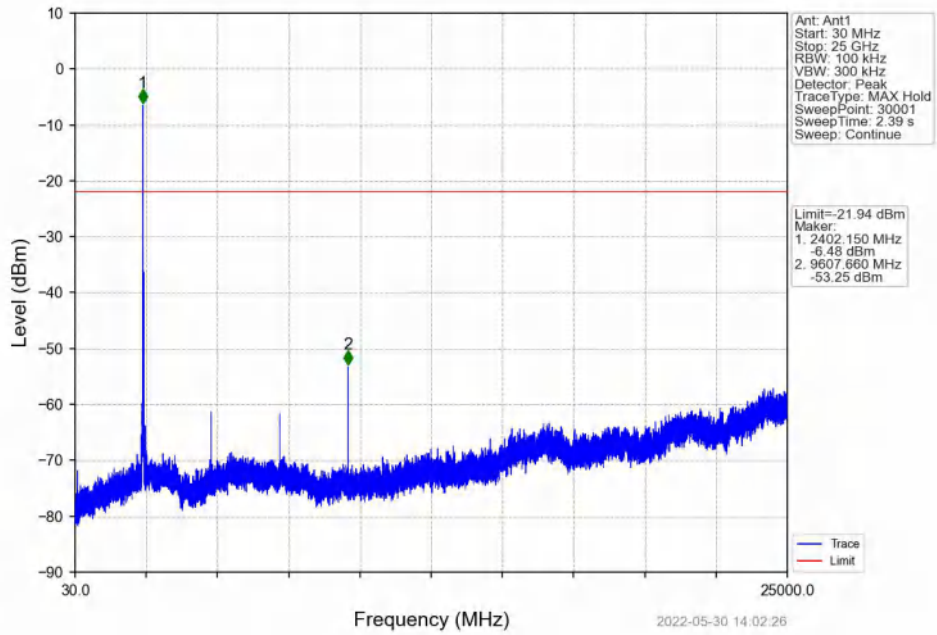
GFSK\_DH5\_HOPP\_Ant1\_NTNV



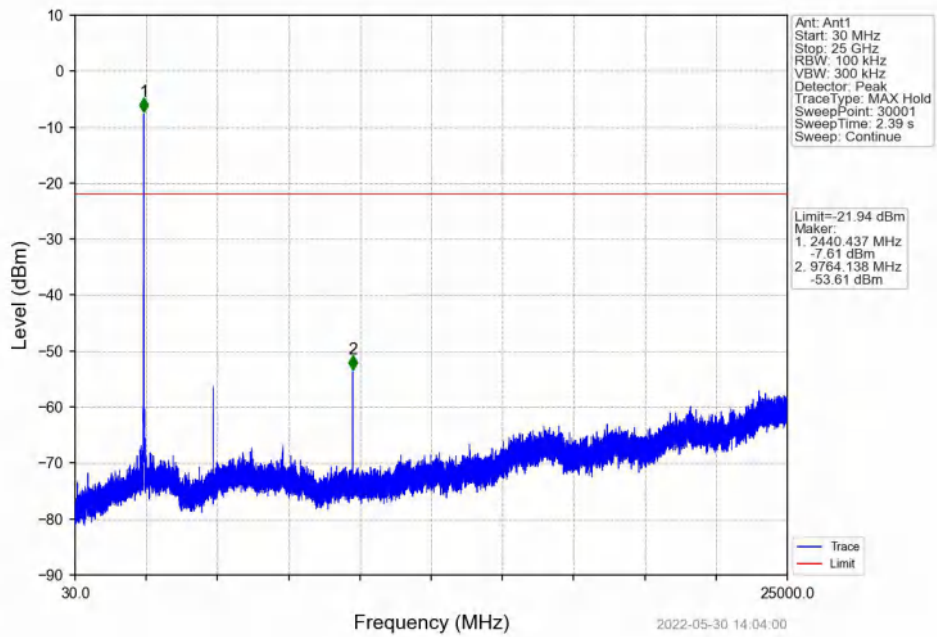
Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV



Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

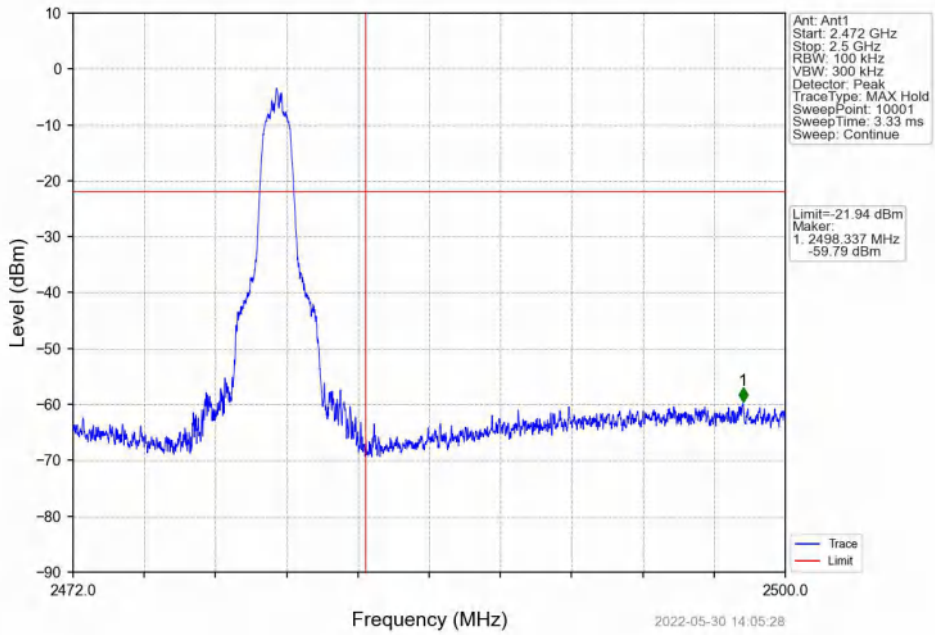


Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV

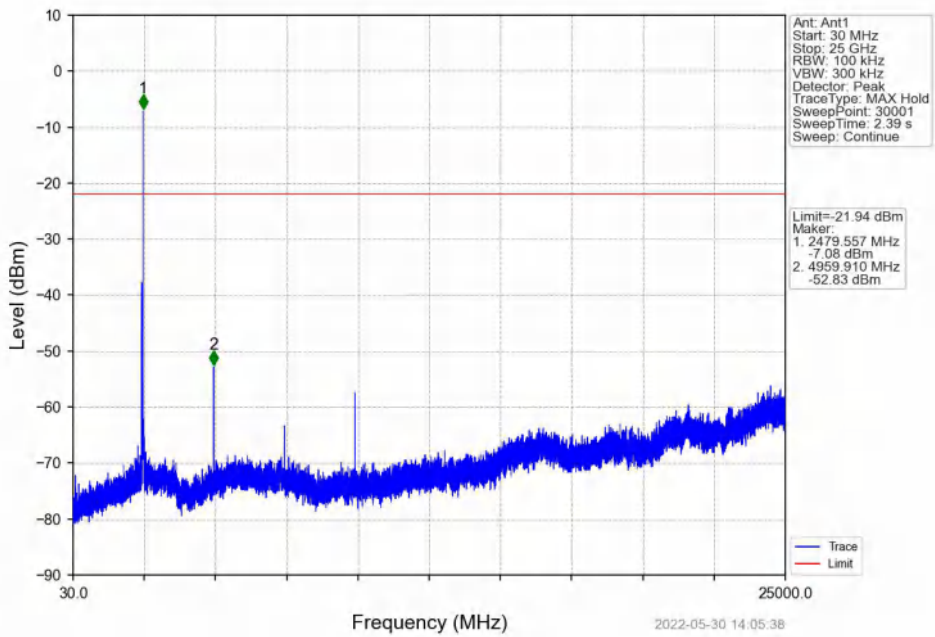




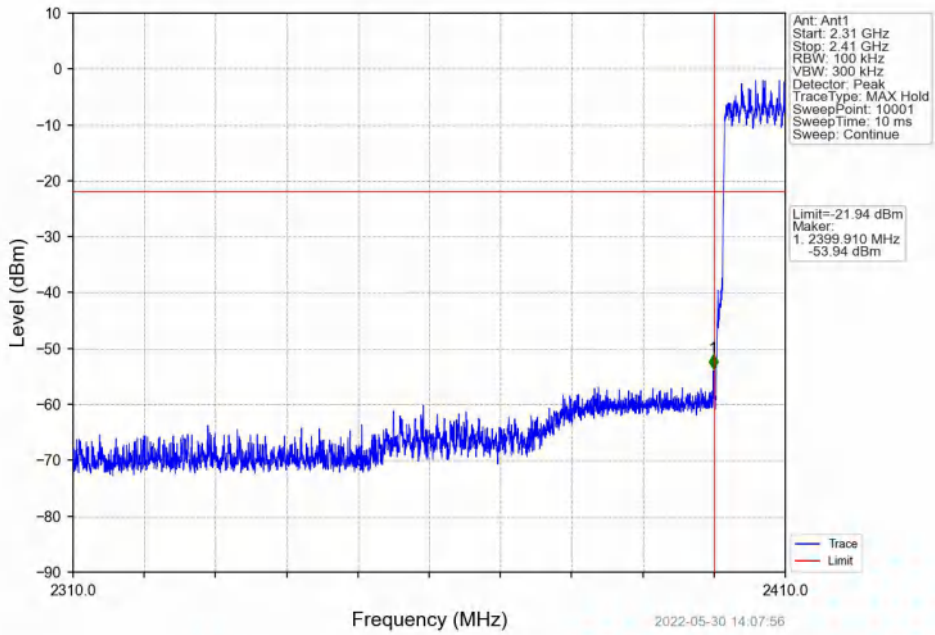
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



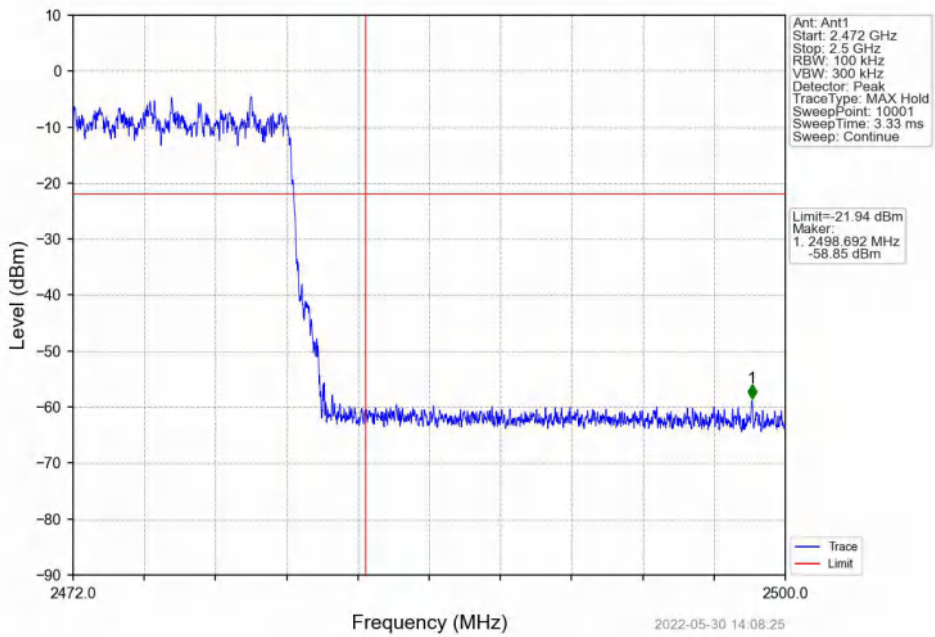
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV

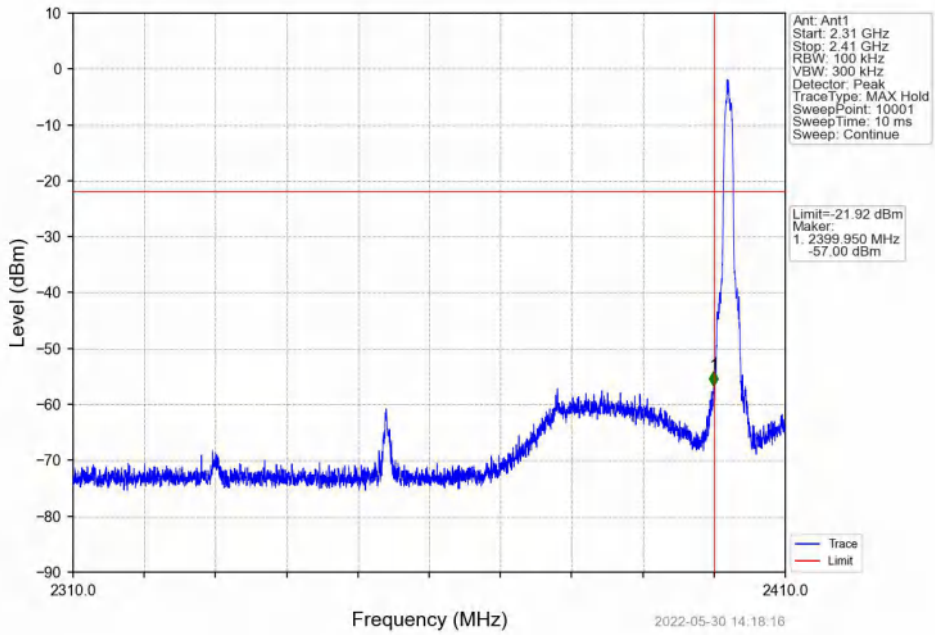


Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV

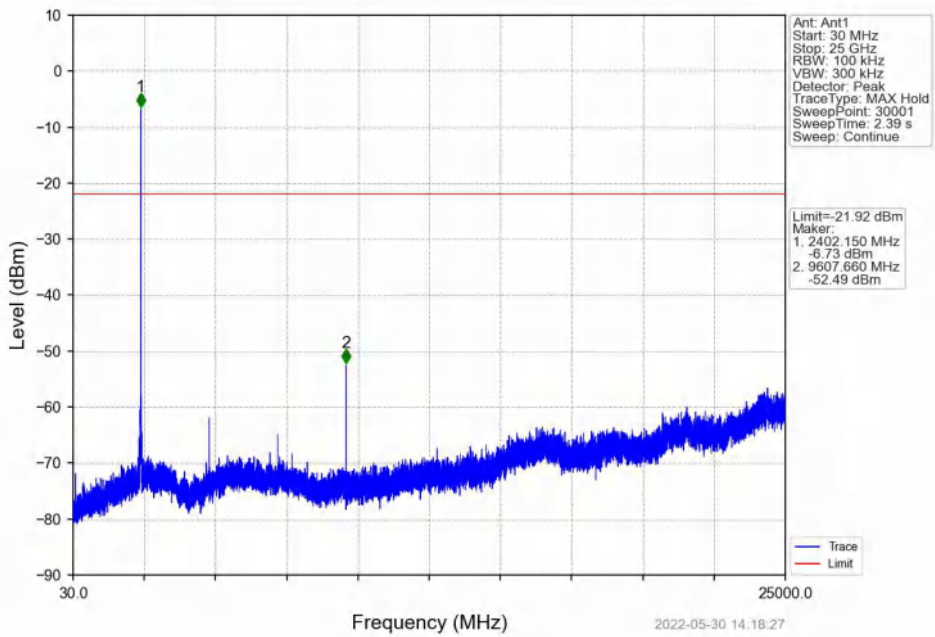




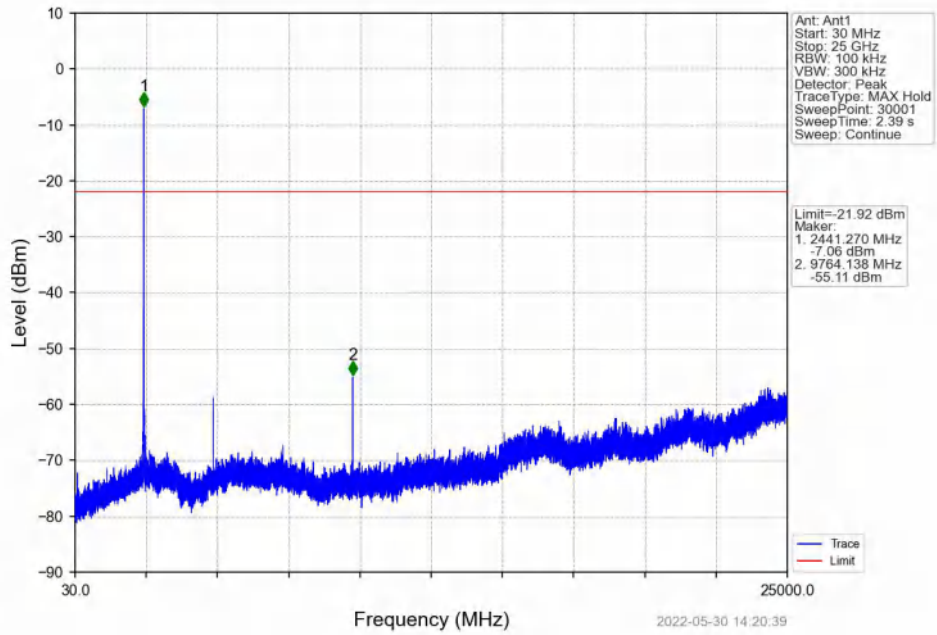
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



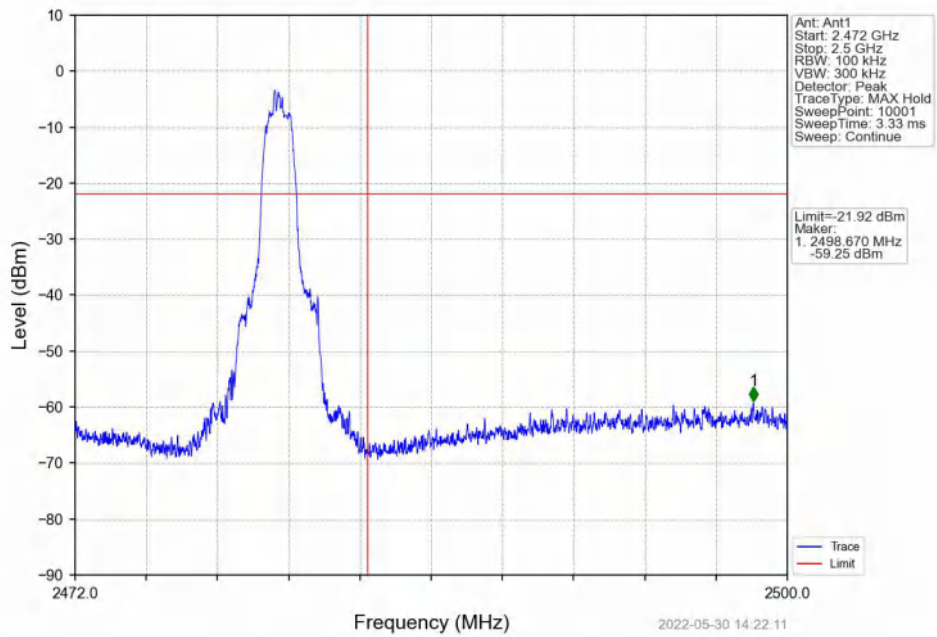
8DPSK\_3DH5\_LCH\_2402MHz\_Ant1\_NTNV



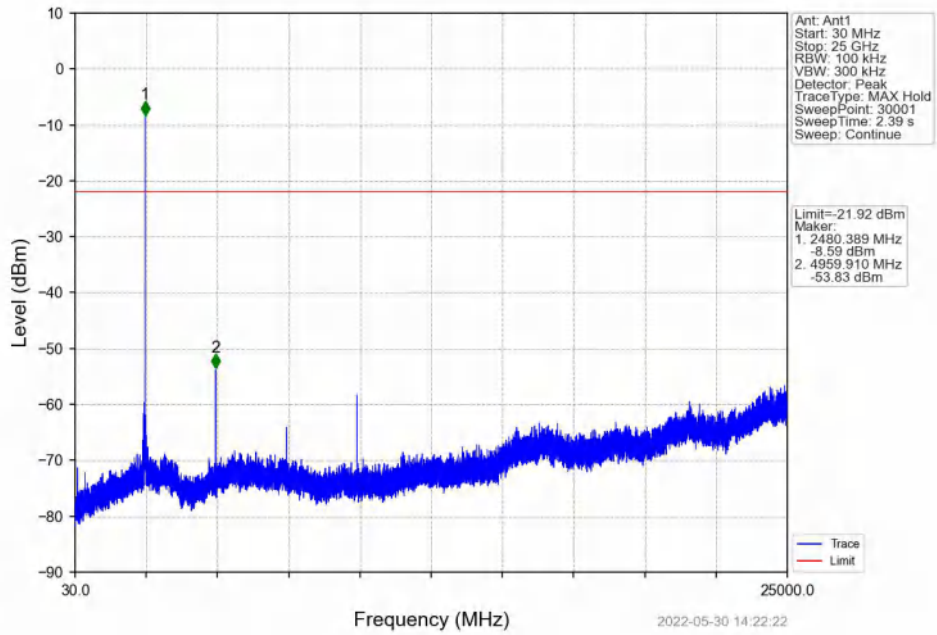
8DPSK\_3DH5\_MCH\_2441MHz\_Ant1\_NTNV



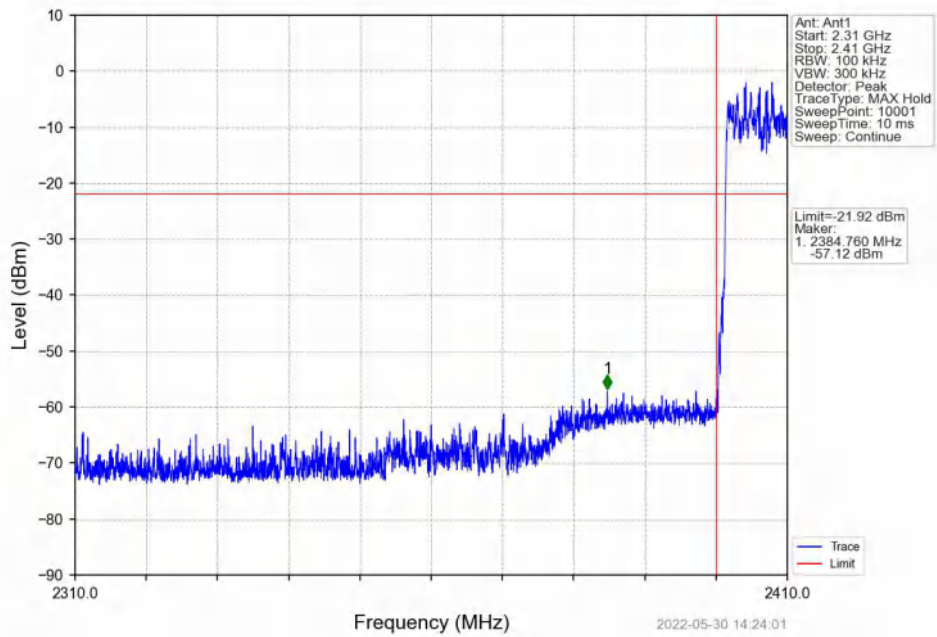
8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



8DPSK\_3DH5\_HCH\_2480MHz\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV



8DPSK\_3DH5\_HOPP\_Ant1\_NTNV

