



# 1. Duty Cycle

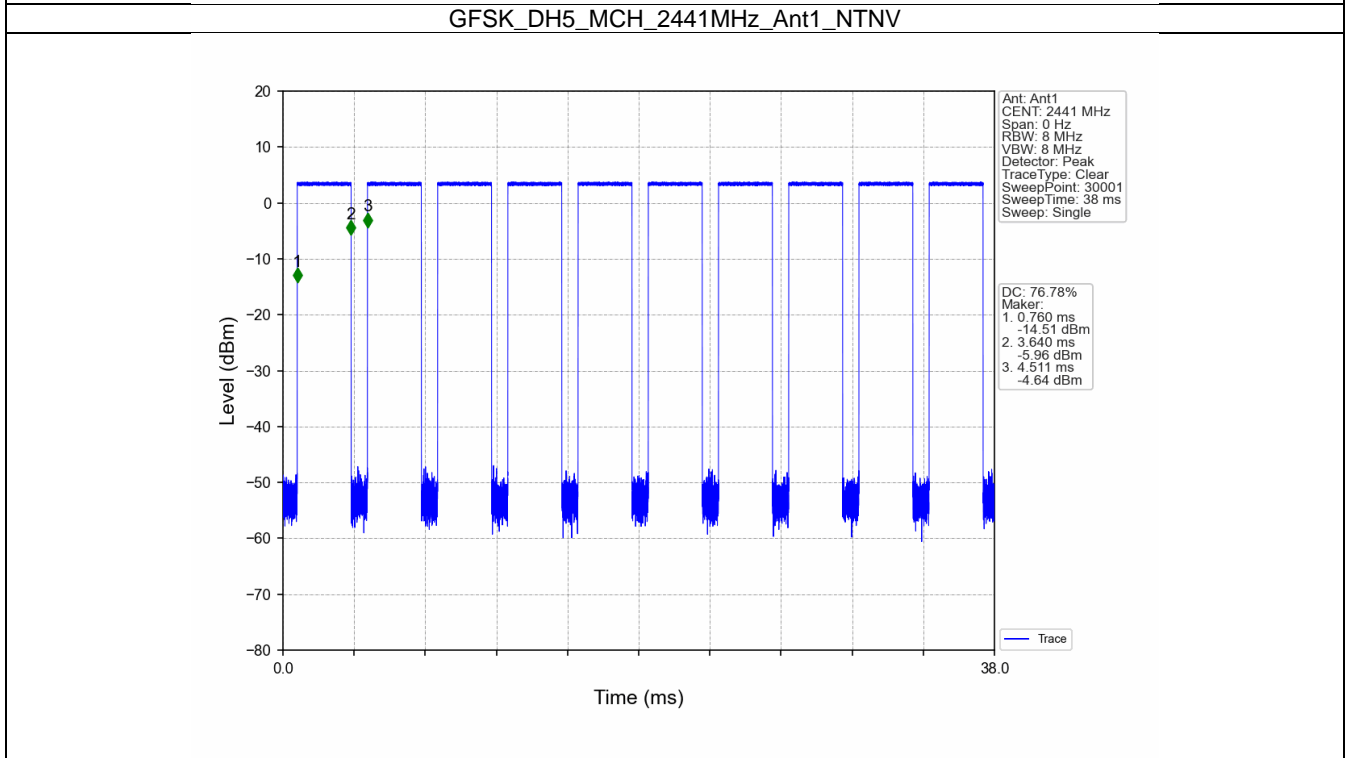
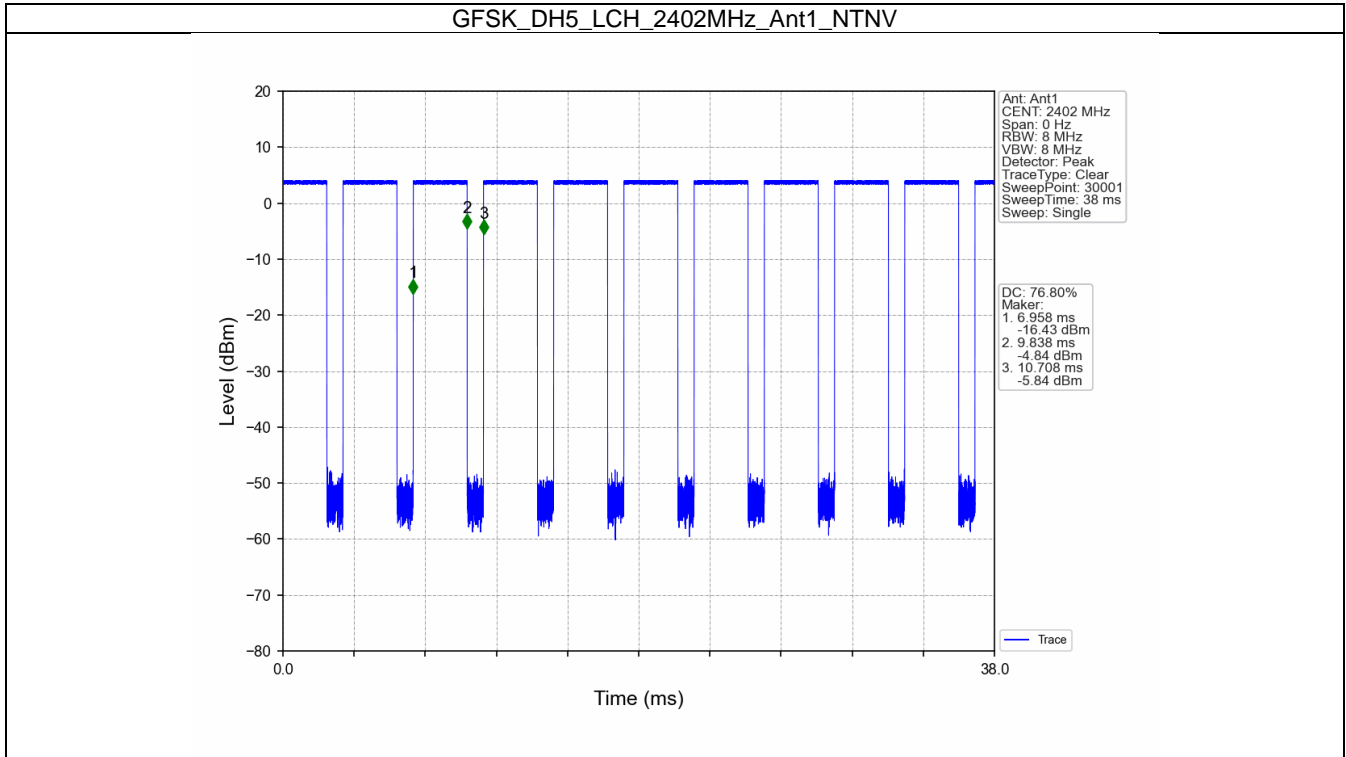
## 1.1 Ant1

### 1.1.1 Test Result

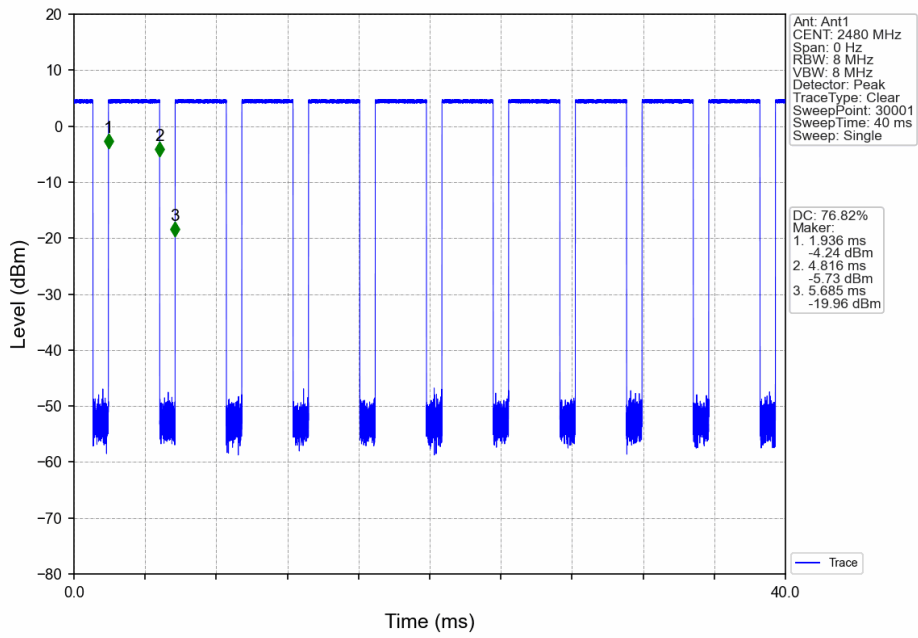
Ant1								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.880	3.750	76.80	1.15	0.03
		2441	DH5	2.880	3.751	76.78	1.15	0.03
		2480	DH5	2.880	3.749	76.82	1.15	0.04
Pi/4DQPSK	SISO	2402	2DH5	2.884	3.749	76.93	1.14	0.01
		2441	2DH5	2.884	3.751	76.89	1.14	0.03
		2480	2DH5	2.884	3.750	76.91	1.14	0.03



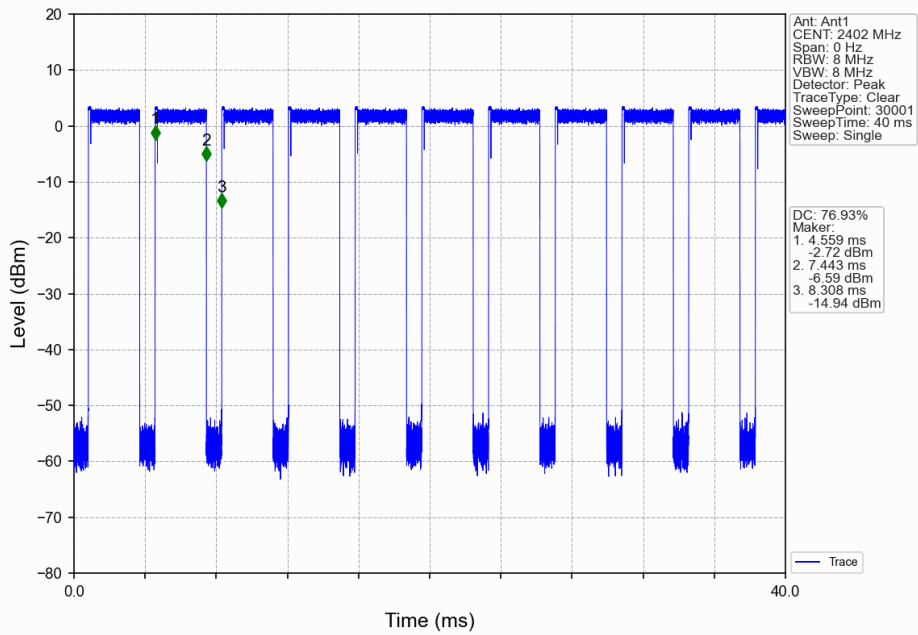
1.1.2 Test Graph



GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

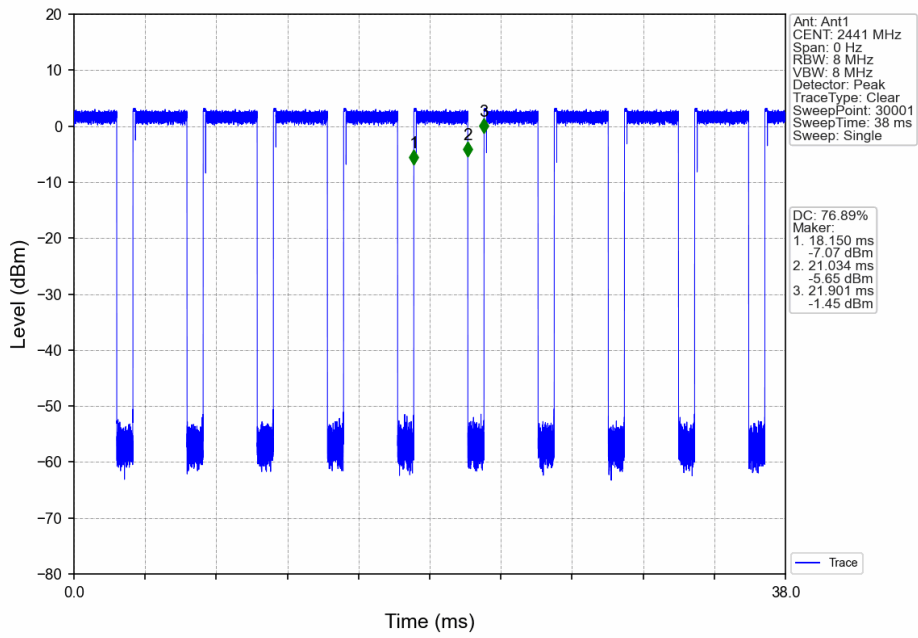


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

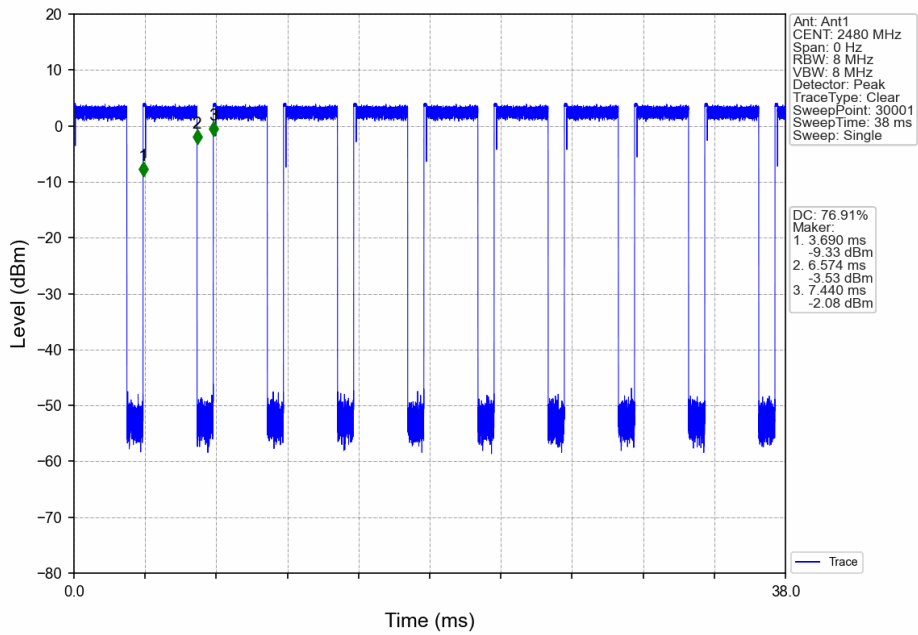




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



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





## 2. Bandwidth

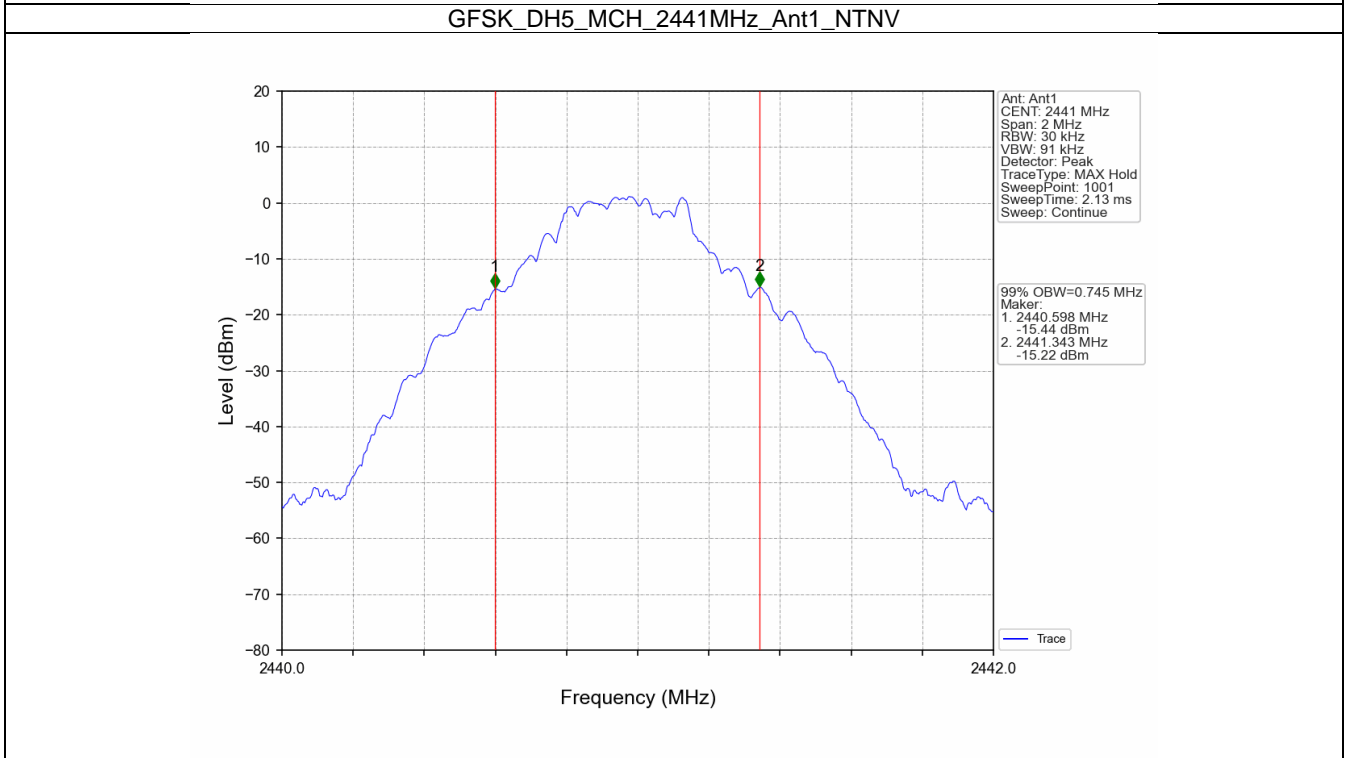
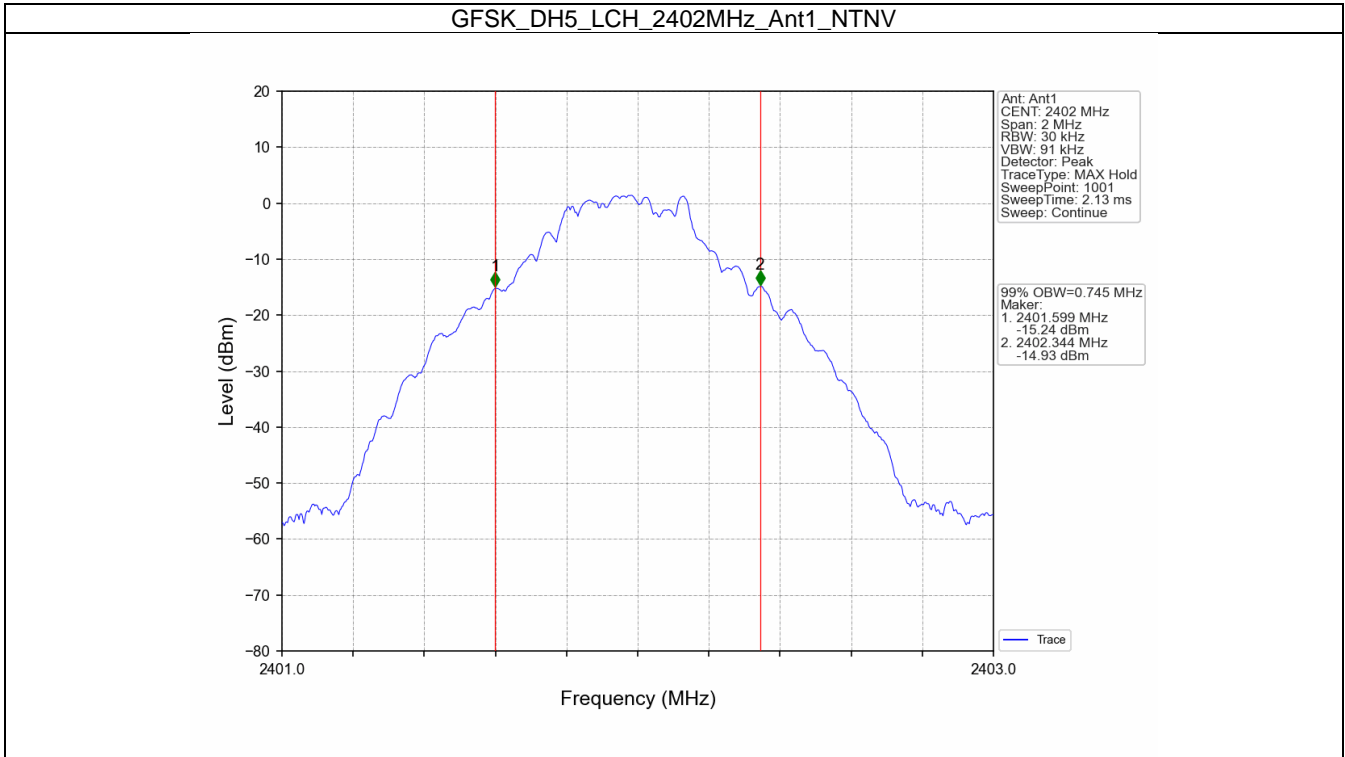
### 2.1 OBW

#### 2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.745	/	Pass
		2441	DH5	1	0.745	/	Pass
		2480	DH5	1	0.750	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.139	/	Pass
		2441	2DH5	1	1.142	/	Pass
		2480	2DH5	1	1.140	/	Pass

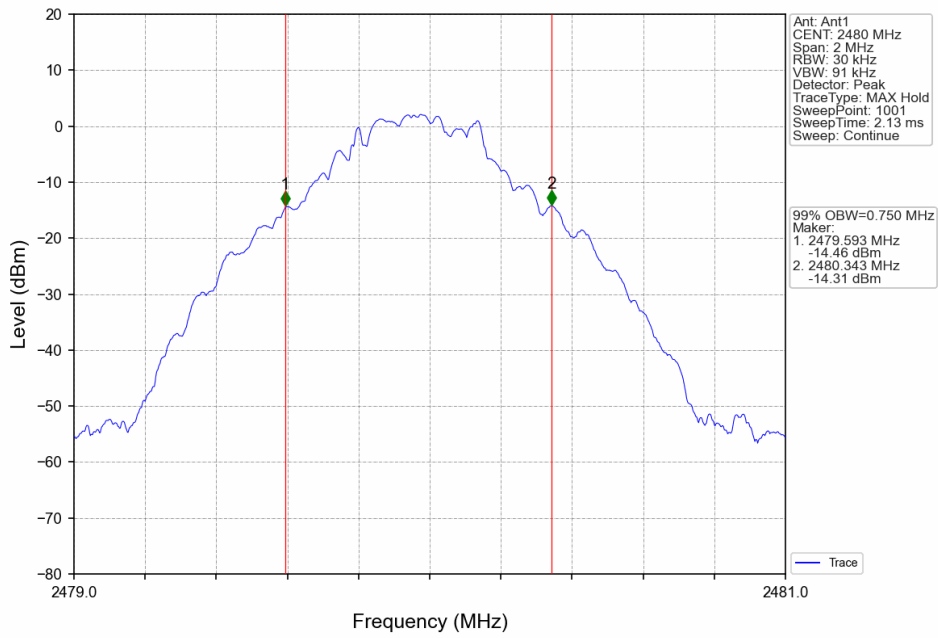


2.1.2 Test Graph

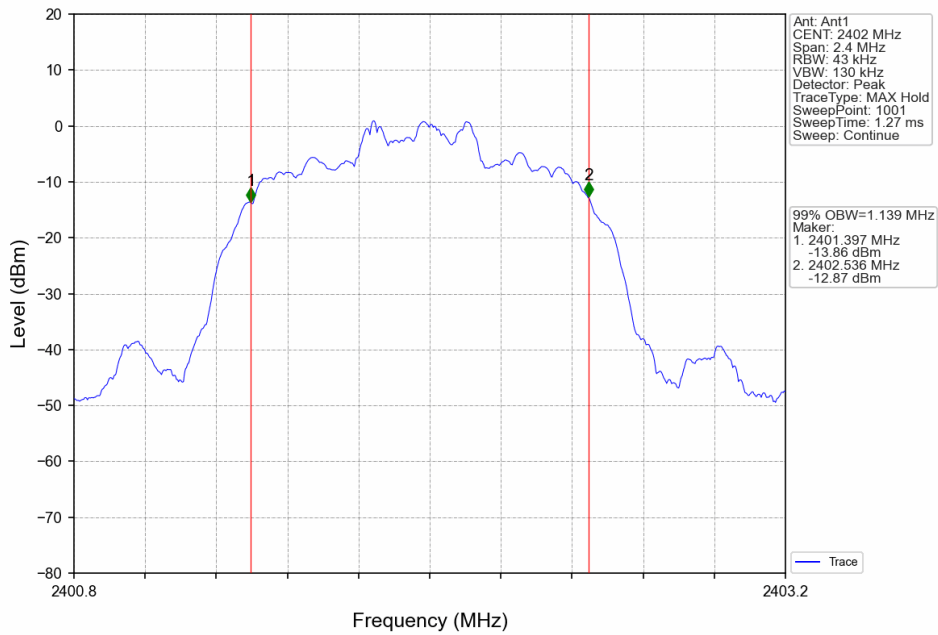




GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

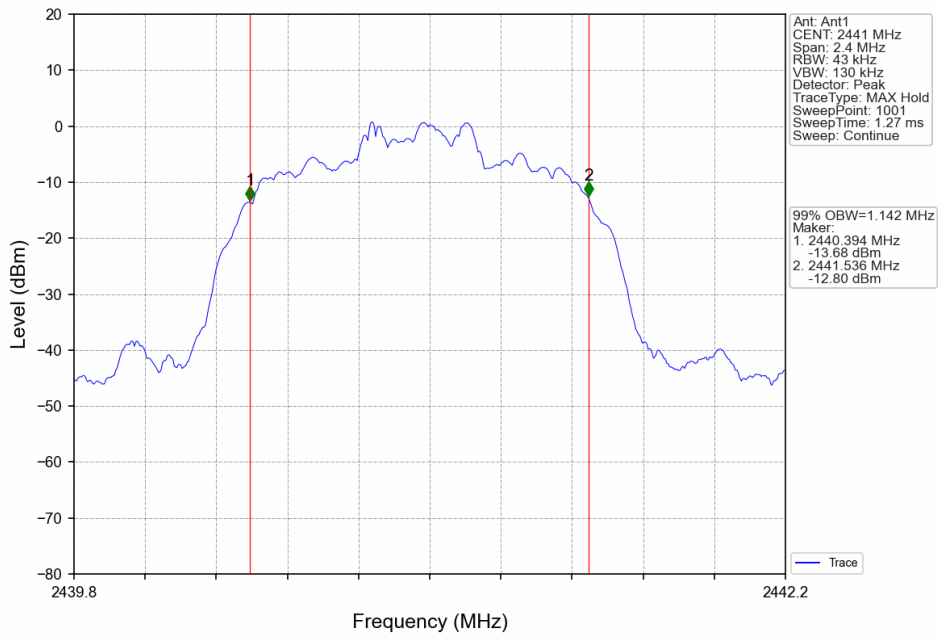


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

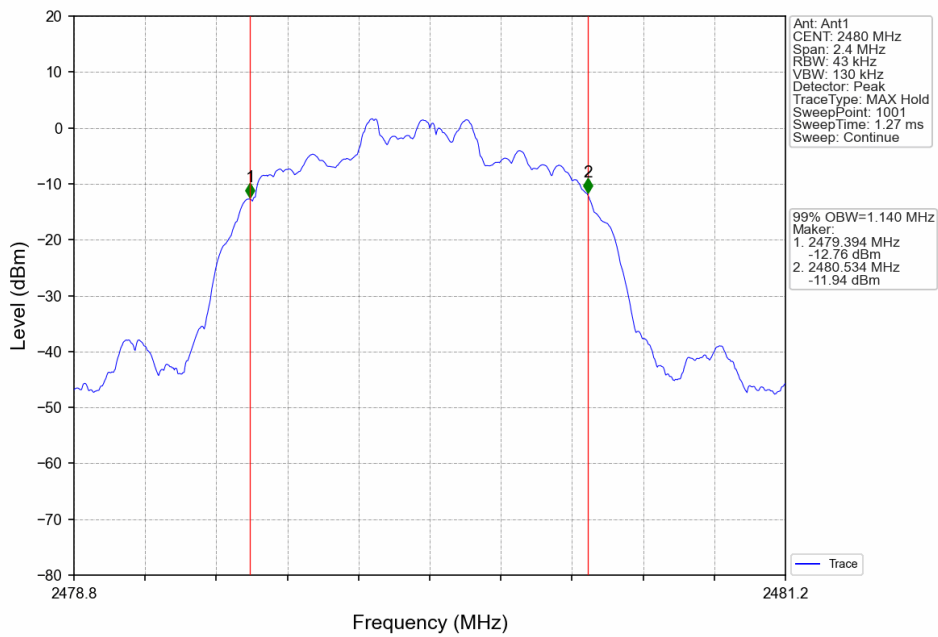




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



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







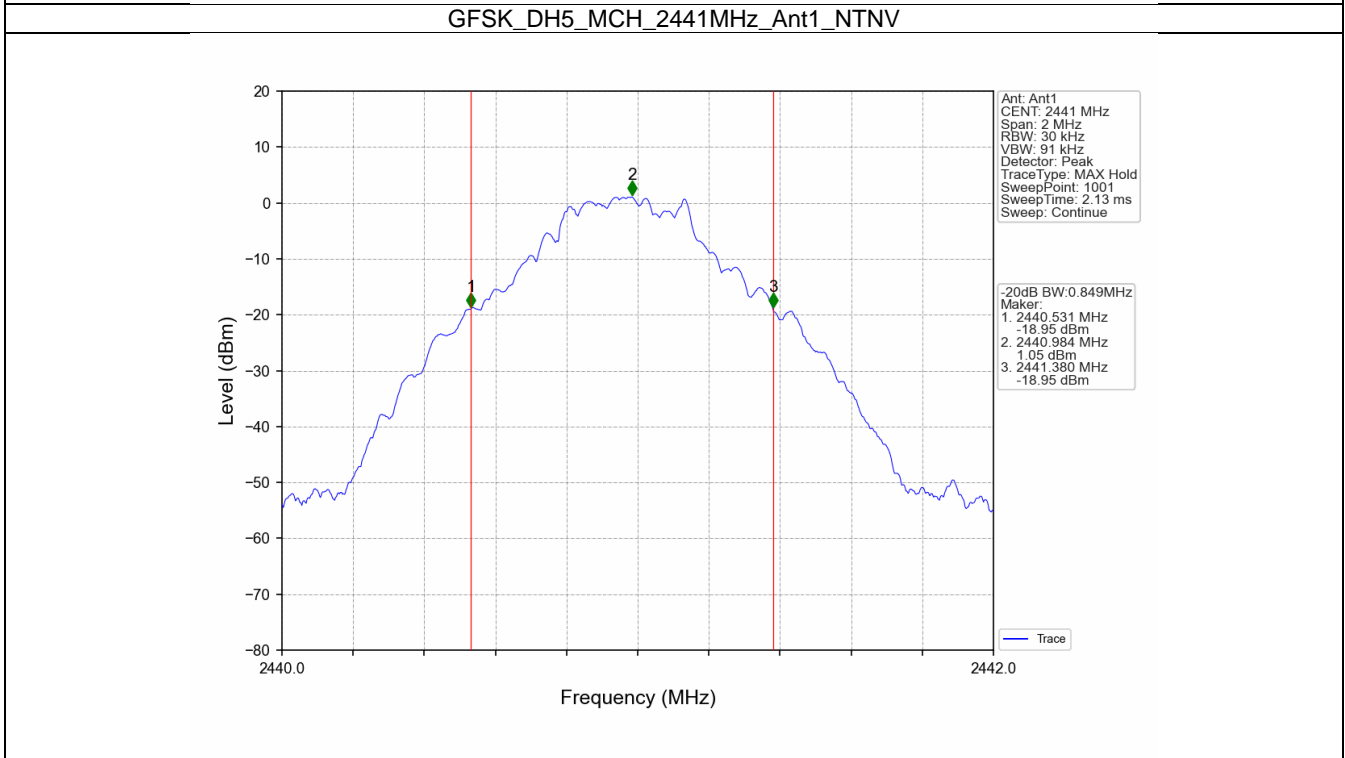
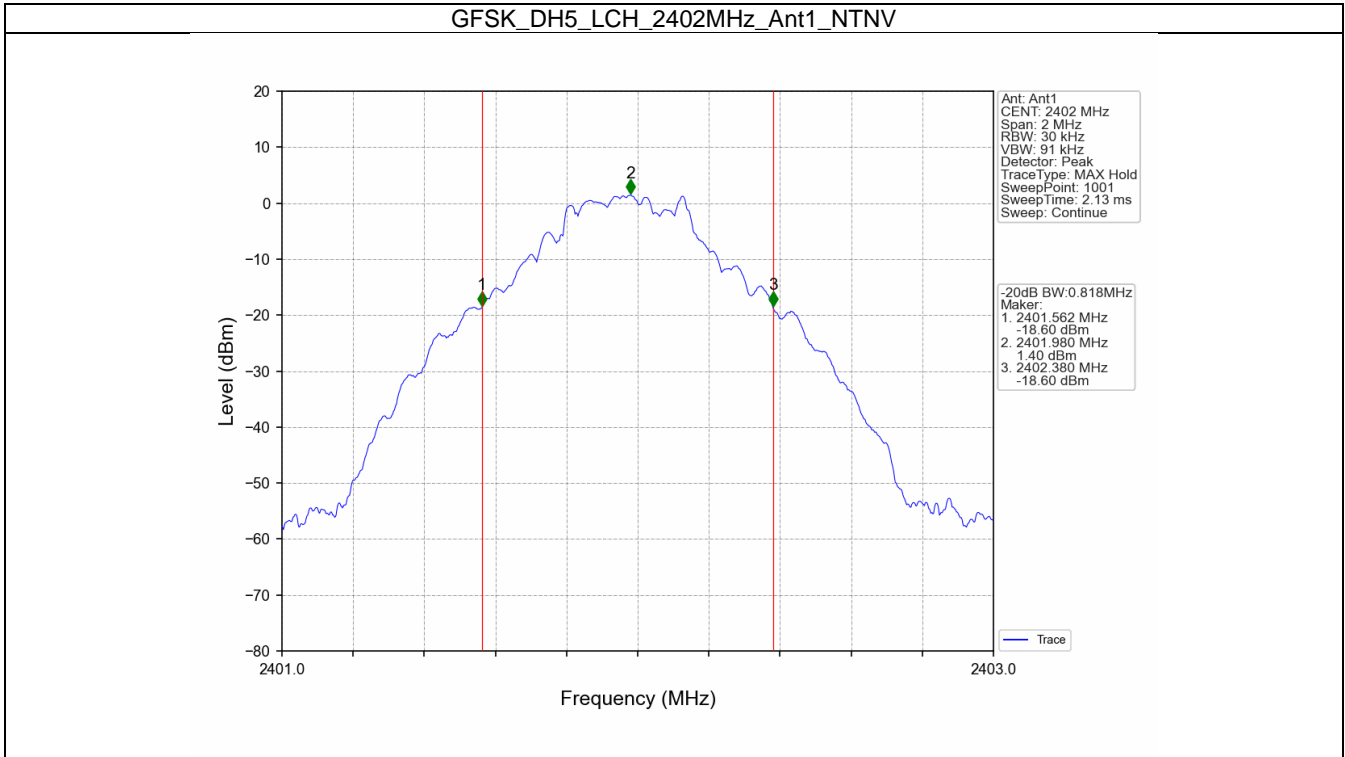
## 2.2 20dB BW

### 2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.818	/	Pass
		2441	DH5	1	0.849	/	Pass
		2480	DH5	1	0.847	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.278	/	Pass
		2441	2DH5	1	1.280	/	Pass
		2480	2DH5	1	1.278	/	Pass

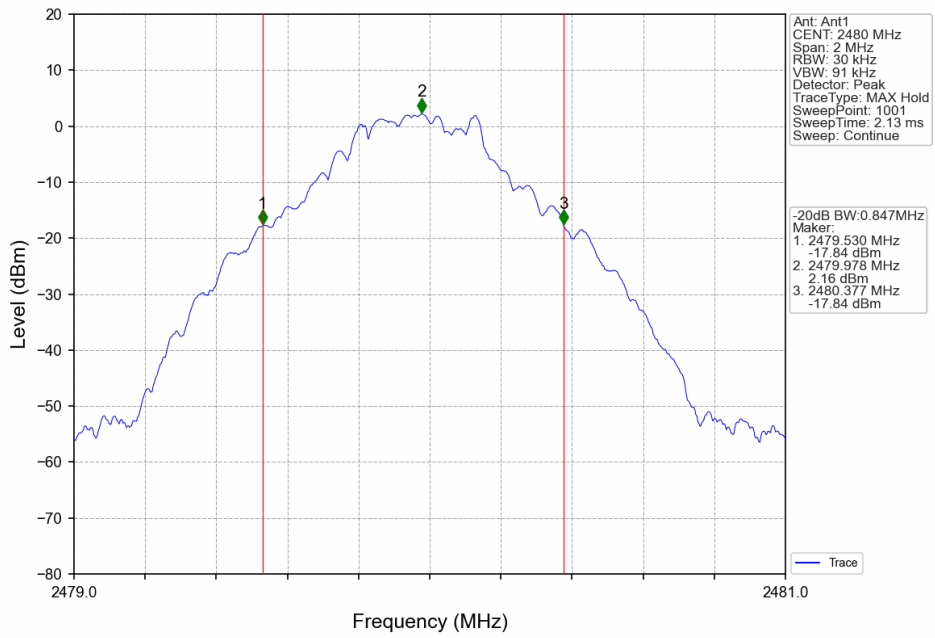


2.2.2 Test Graph

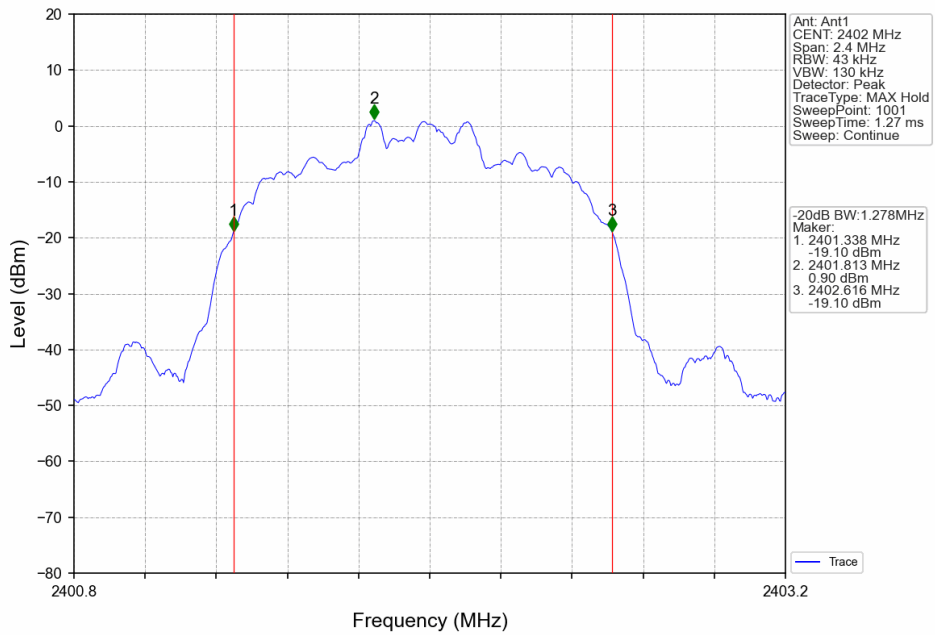




GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

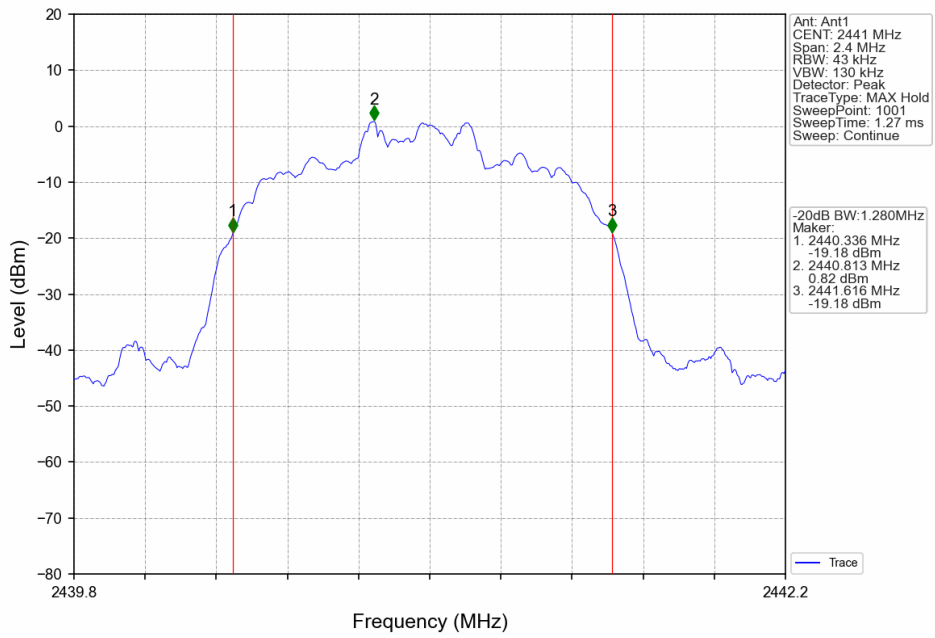


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

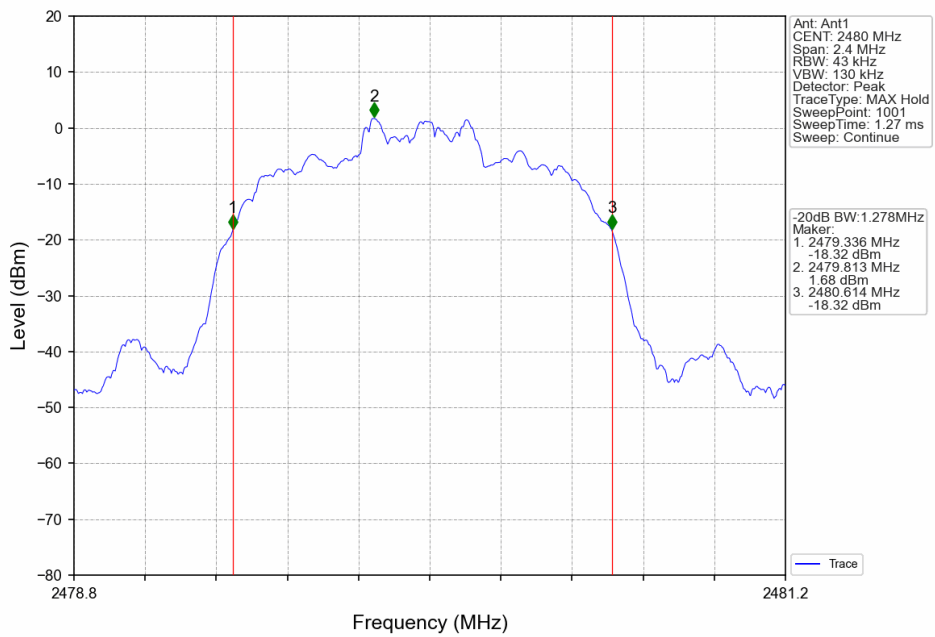




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



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





### 3. Maximum Conducted Output Power

#### 3.1 Power

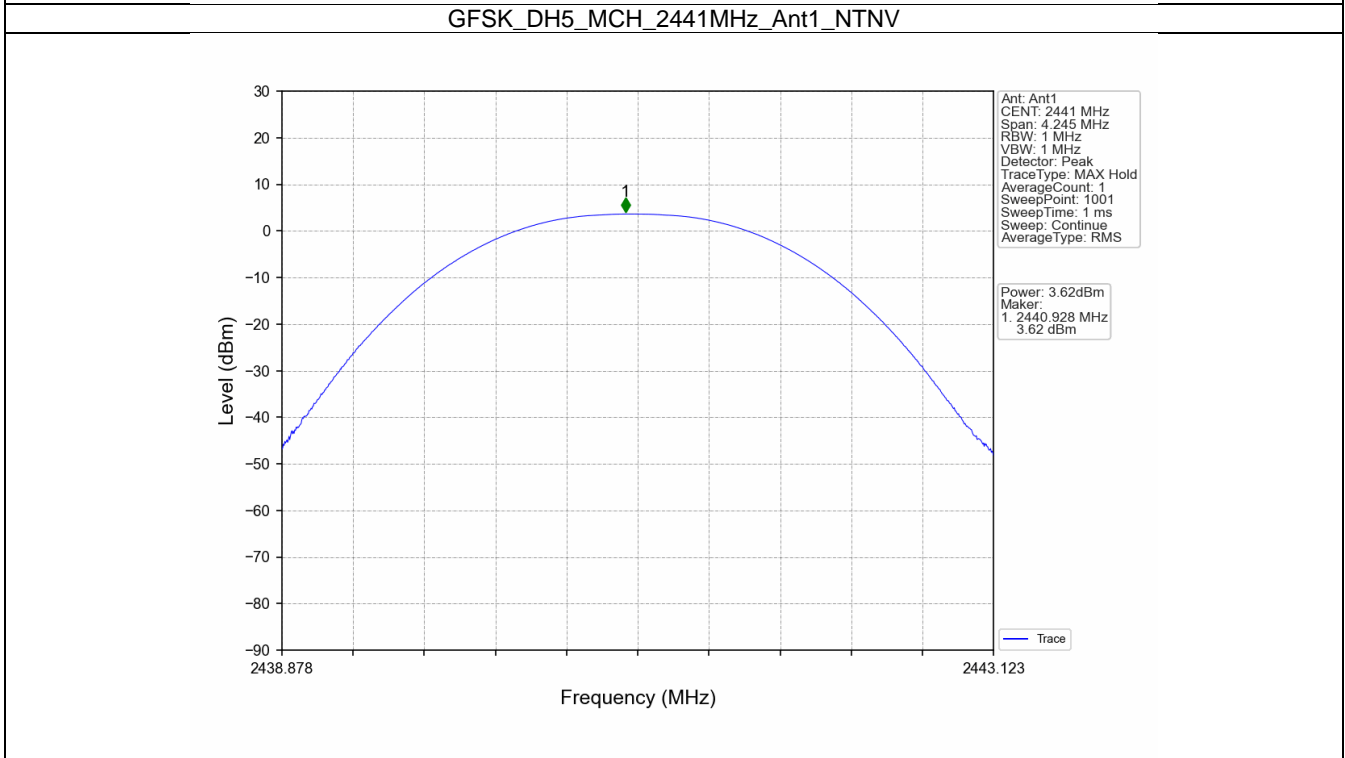
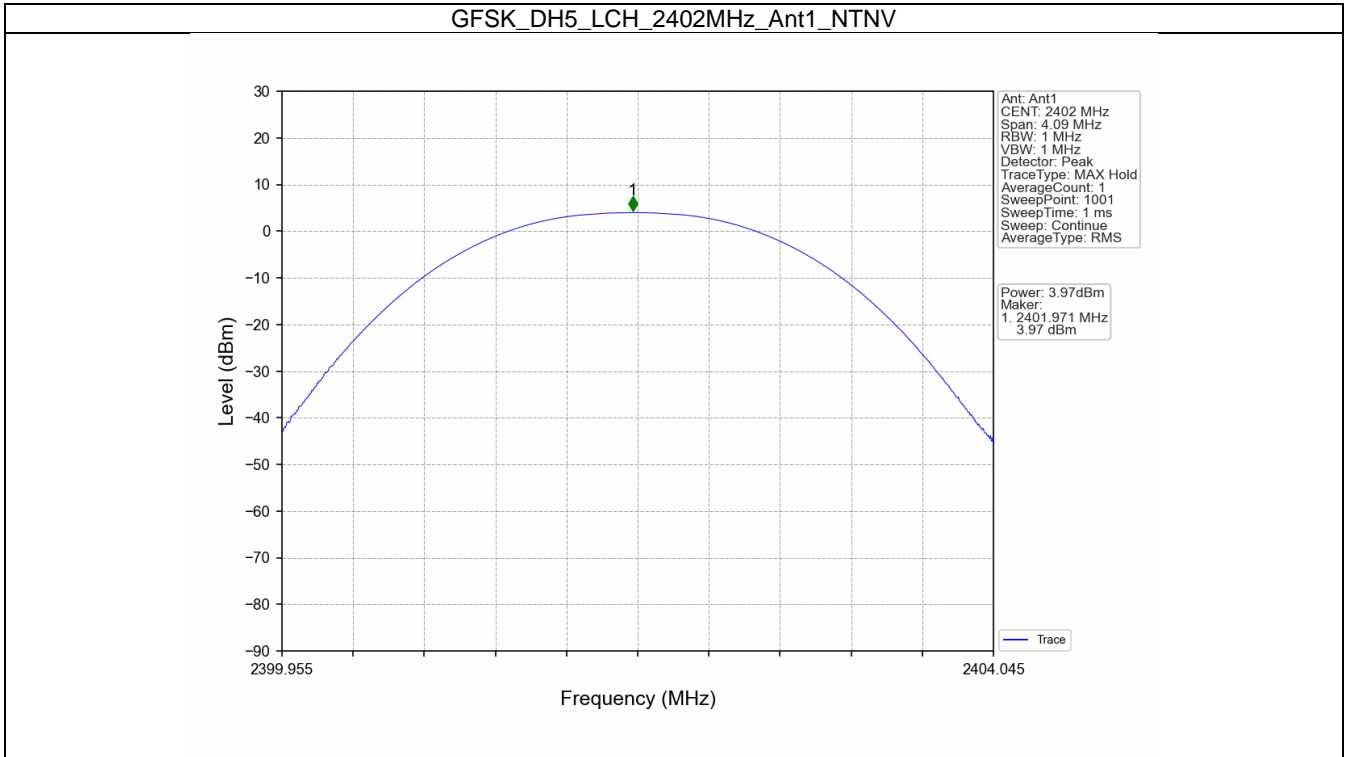
##### 3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	3.97	<=30	Pass
		2441	DH5	3.62	<=30	Pass
		2480	DH5	4.66	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	3.26	<=20.97	Pass
		2441	2DH5	3.10	<=20.97	Pass
		2480	2DH5	3.99	<=20.97	Pass

Note1: Antenna Gain: Ant1: 3.54dBi;

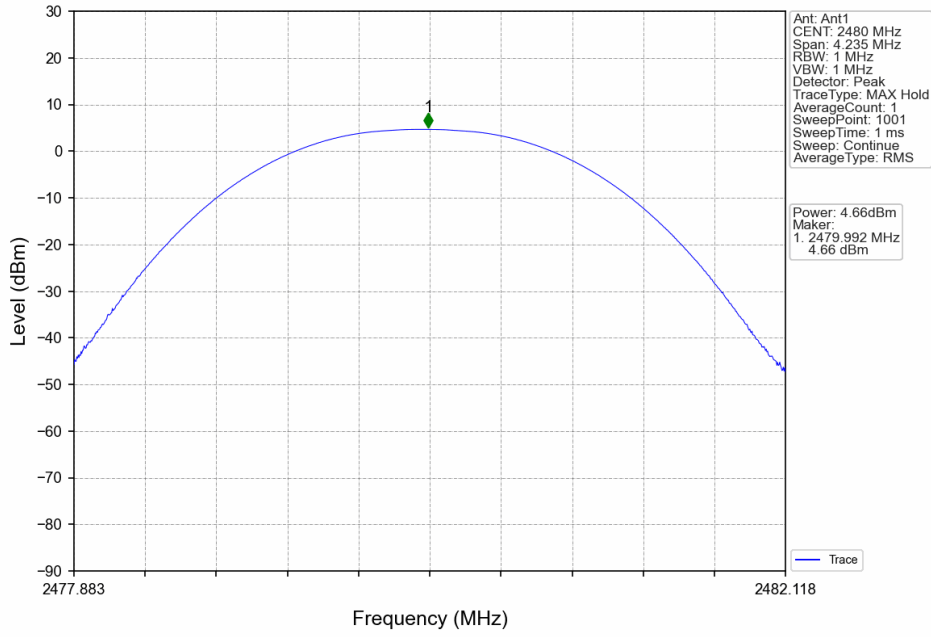


3.1.2 Test Graph

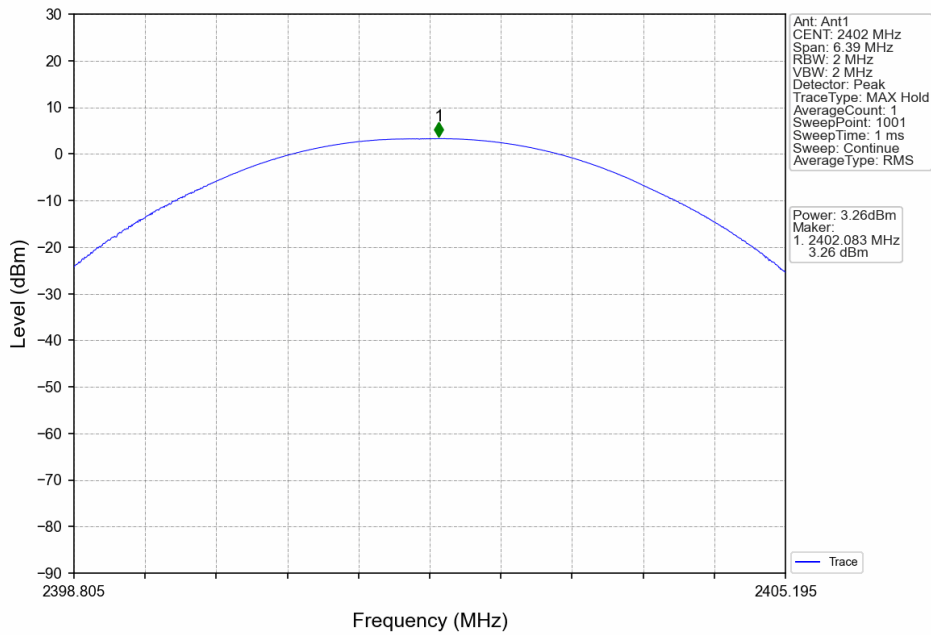




GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

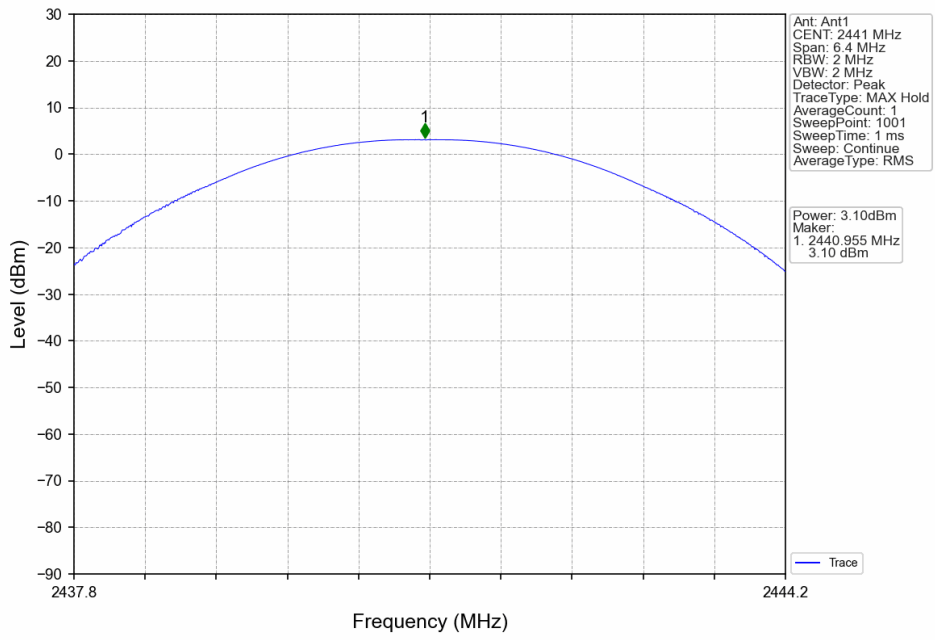


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

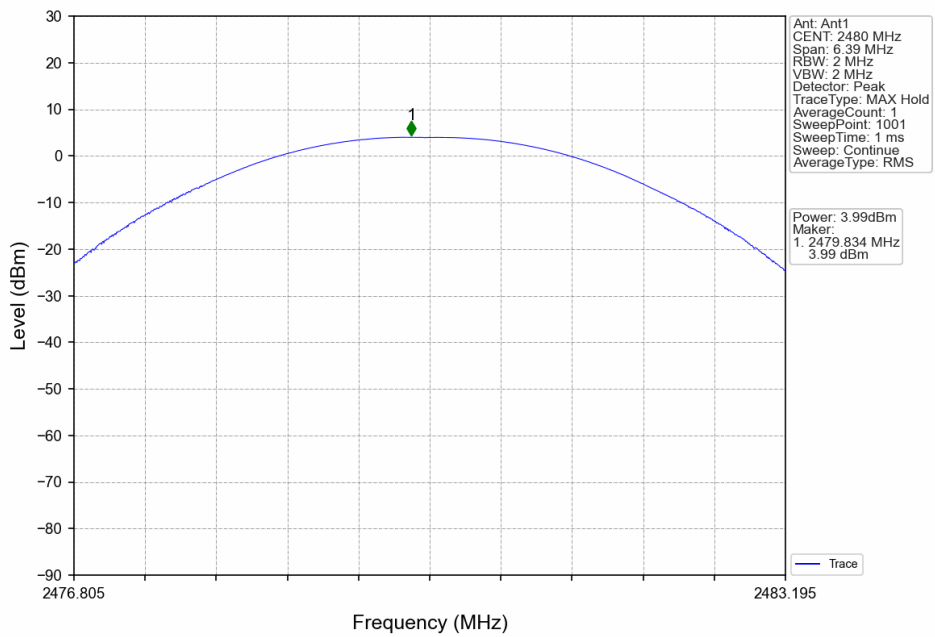




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



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







## 4. Carrier Frequency Separation

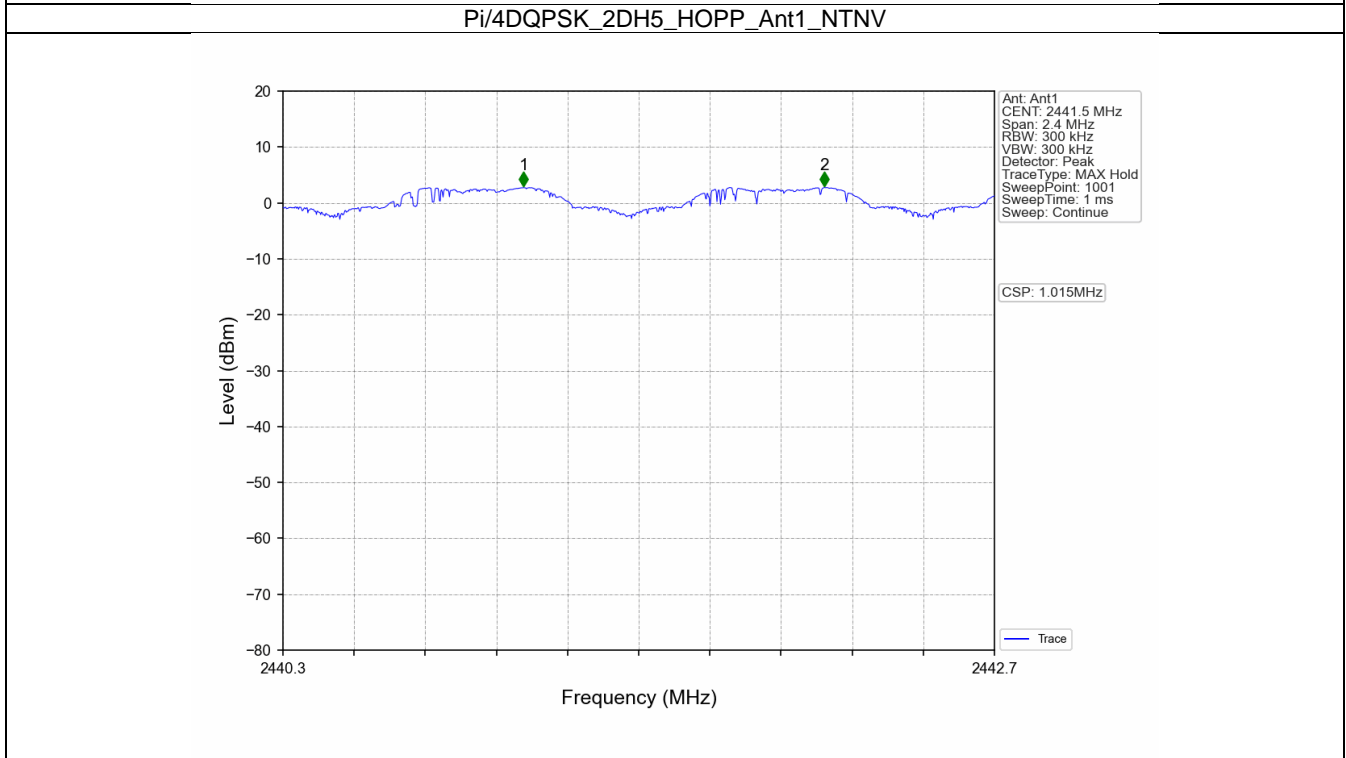
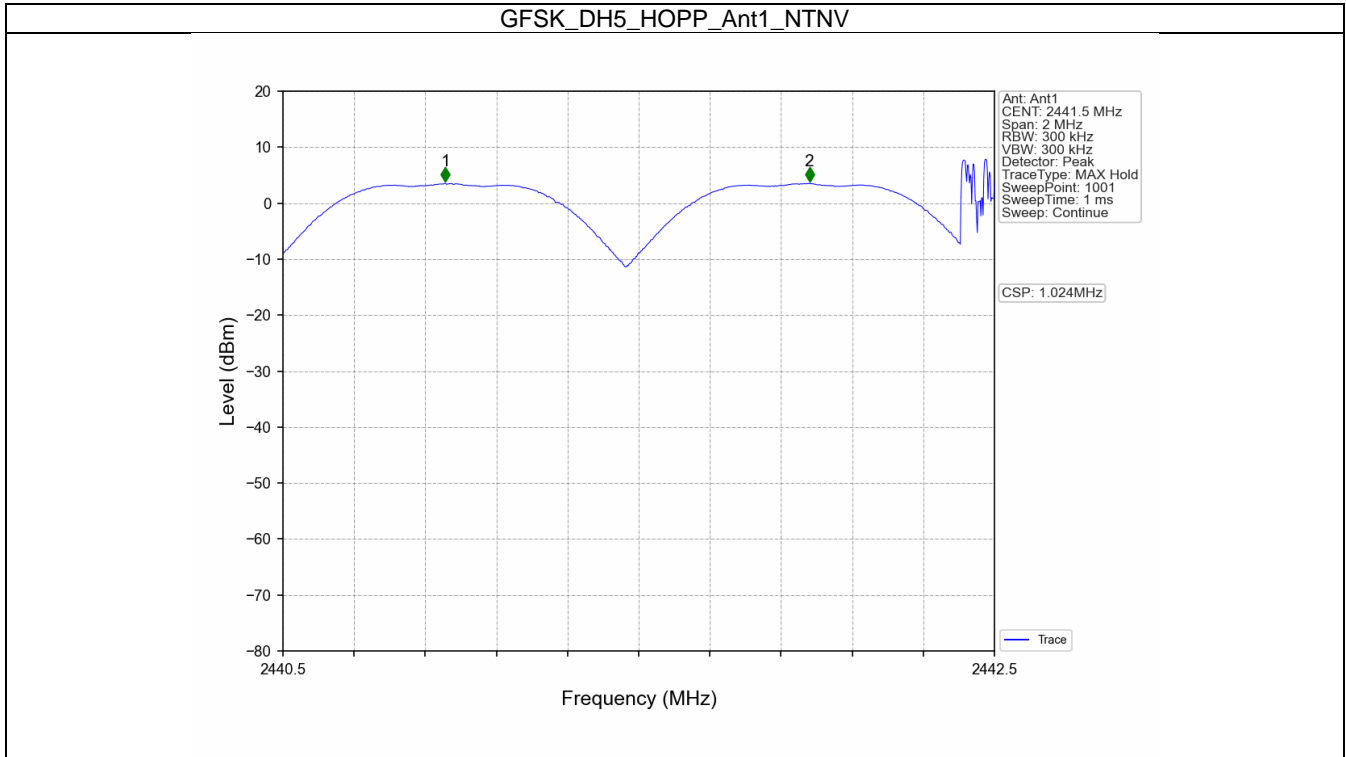
### 4.1 Ant1

#### 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	1.024	0.849	$\geq 0.849$	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.015	1.280	$\geq 0.853$	Pass



4.1.2 Test Graph





## 5. Number of Hopping Frequencies

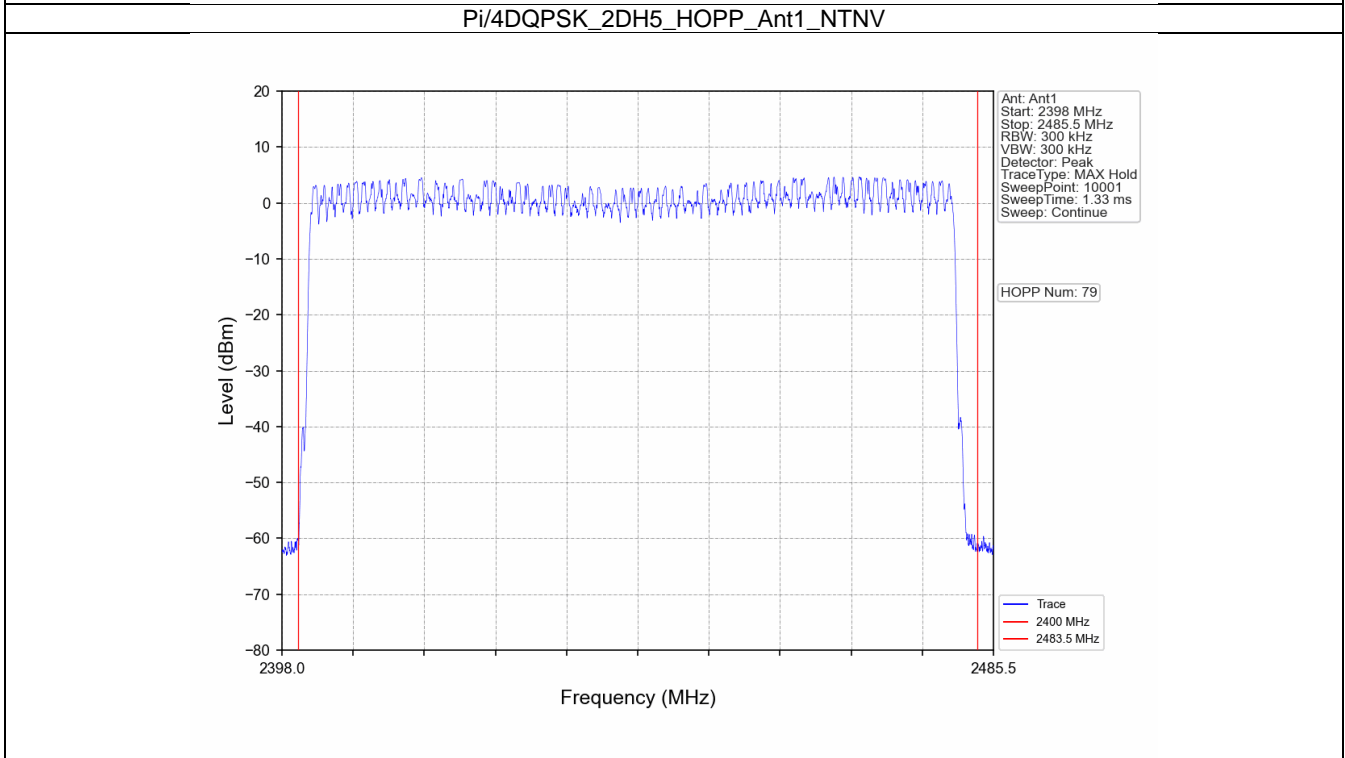
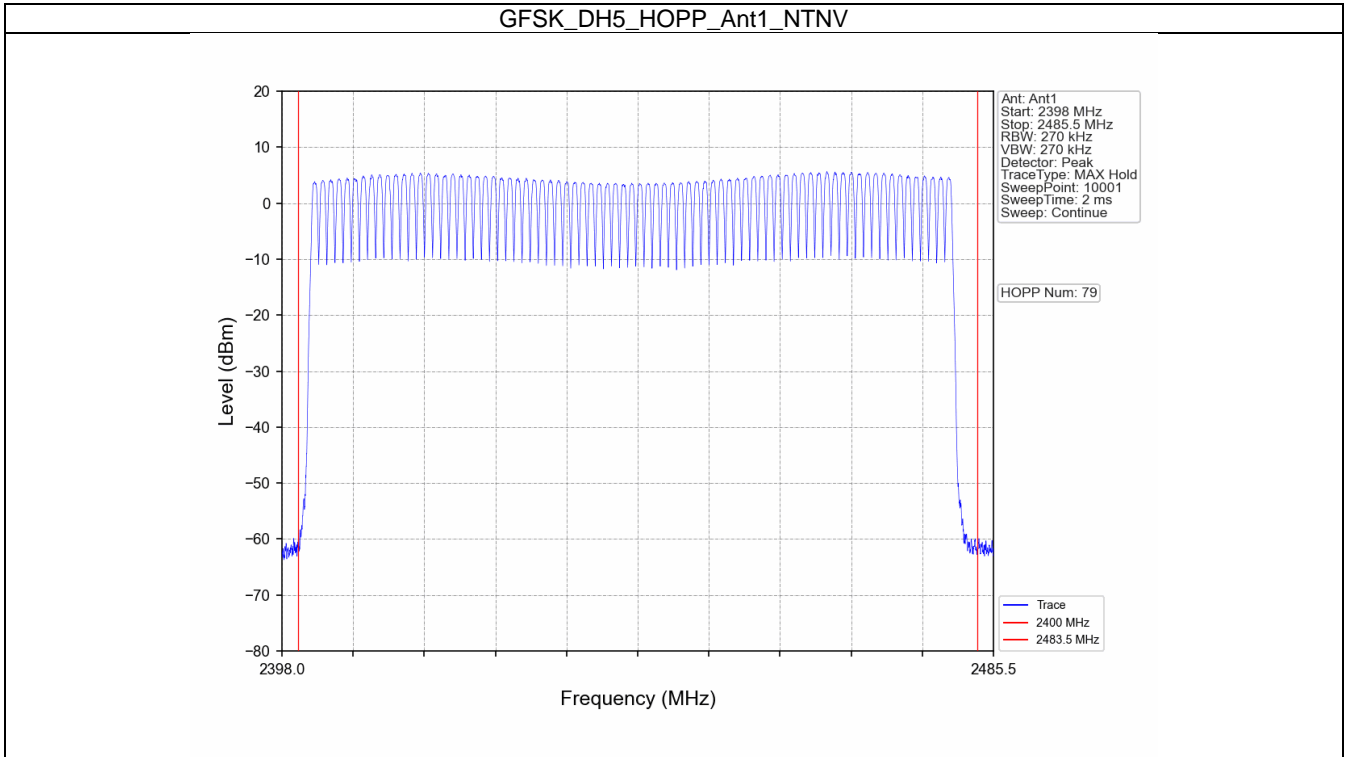
### 5.1 HoppNum

#### 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)

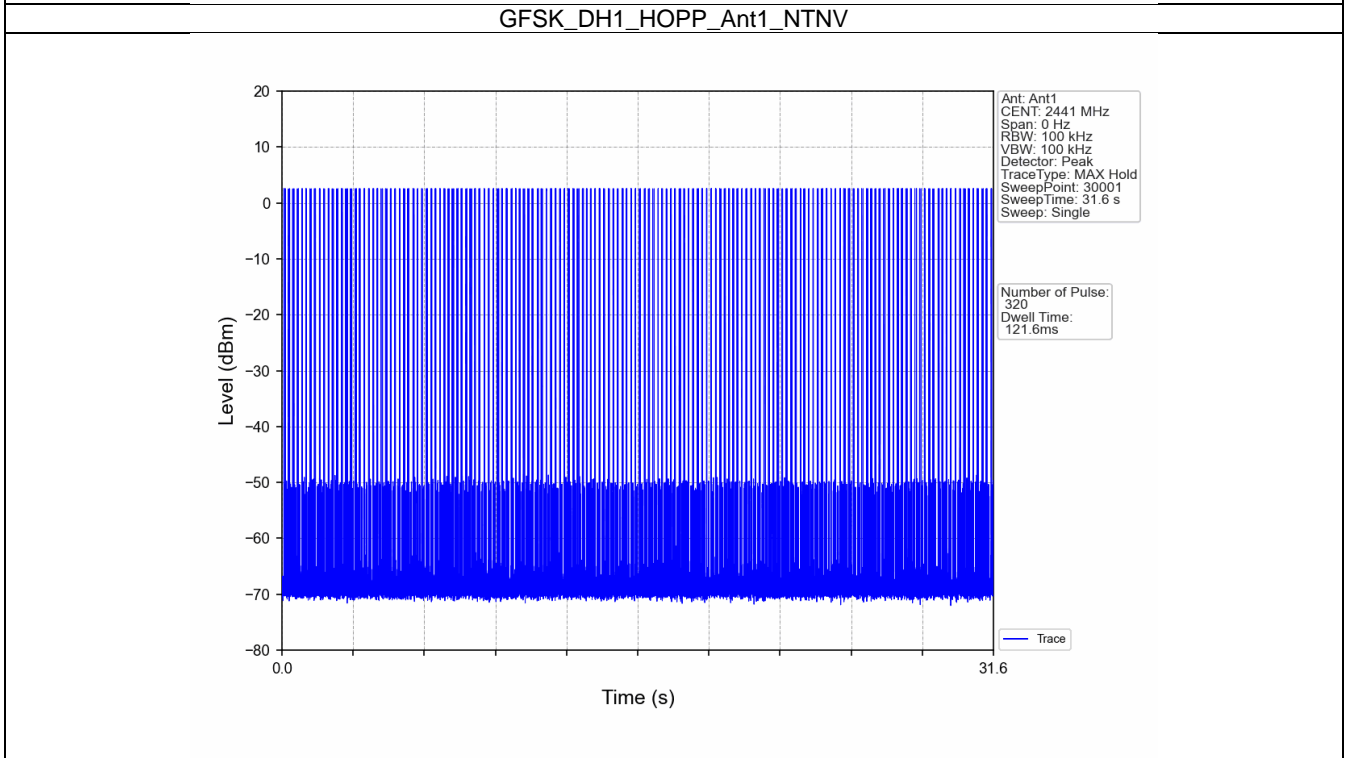
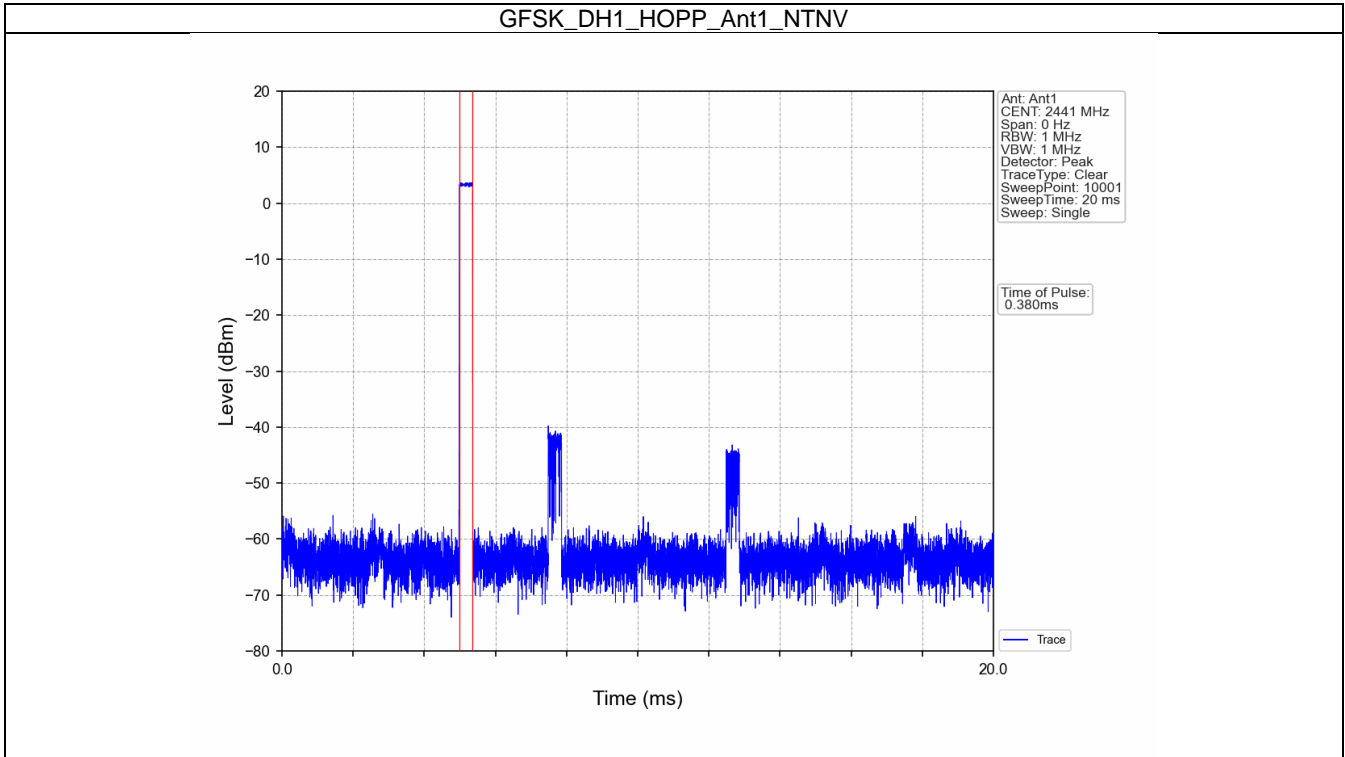
### 6.1 Ant1

#### 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	0.380	31.600	320	121.600	<=400	Pass
			DH3	1.636	31.600	150	245.400	<=400	Pass
			DH5	2.896	31.600	98	283.808	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.386	31.600	320	123.520	<=400	Pass
			2DH3	1.640	31.600	162	265.680	<=400	Pass
			2DH5	2.888	31.600	113	326.344	<=400	Pass

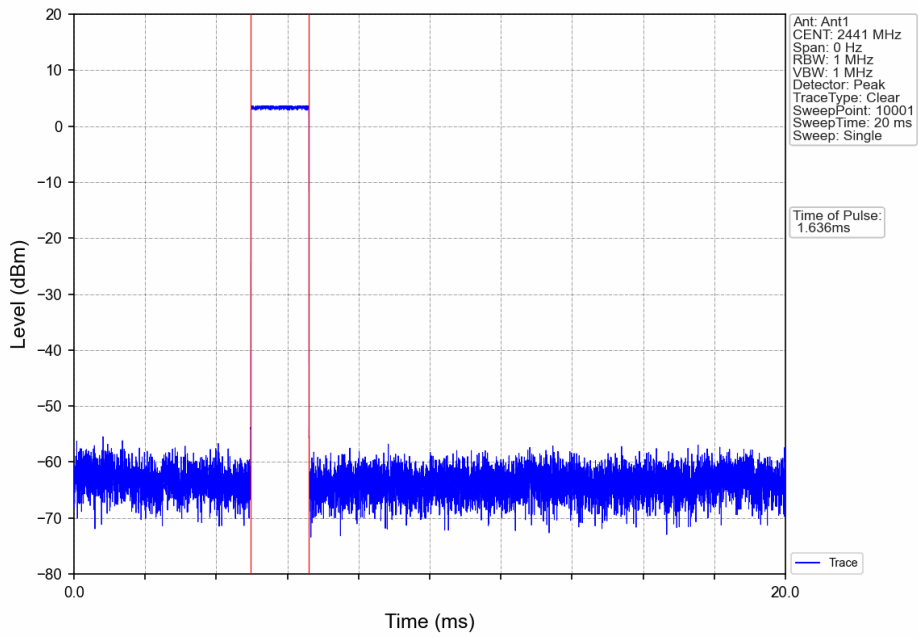


6.1.2 Test Graph

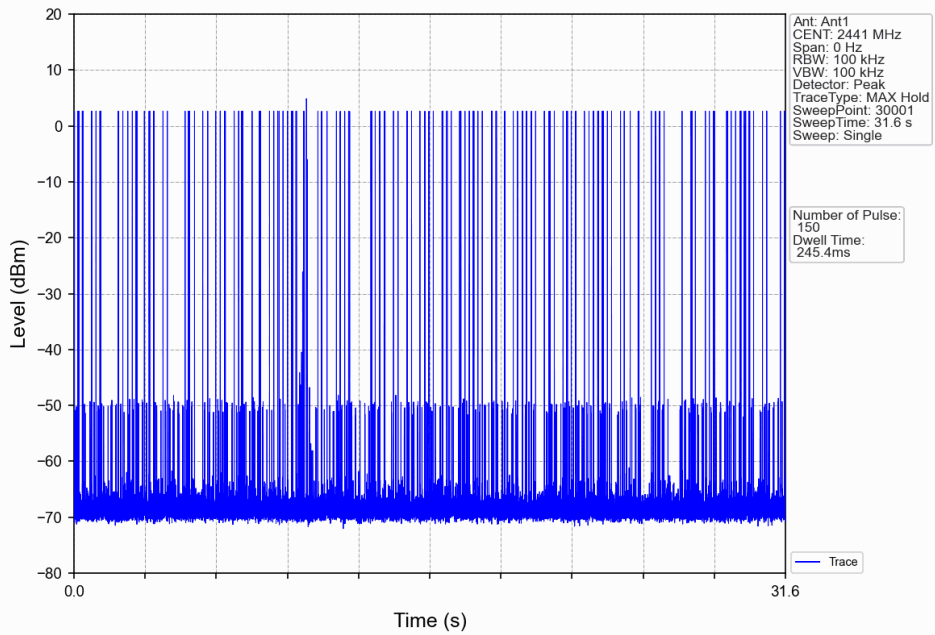




GFSK\_DH3\_HOPP\_Ant1\_NTNV

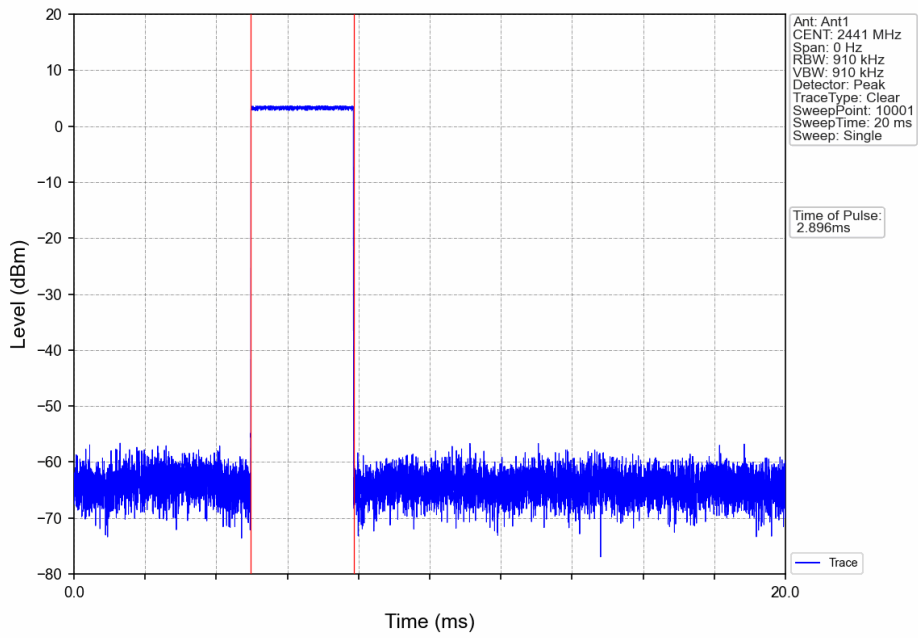


GFSK\_DH3\_HOPP\_Ant1\_NTNV

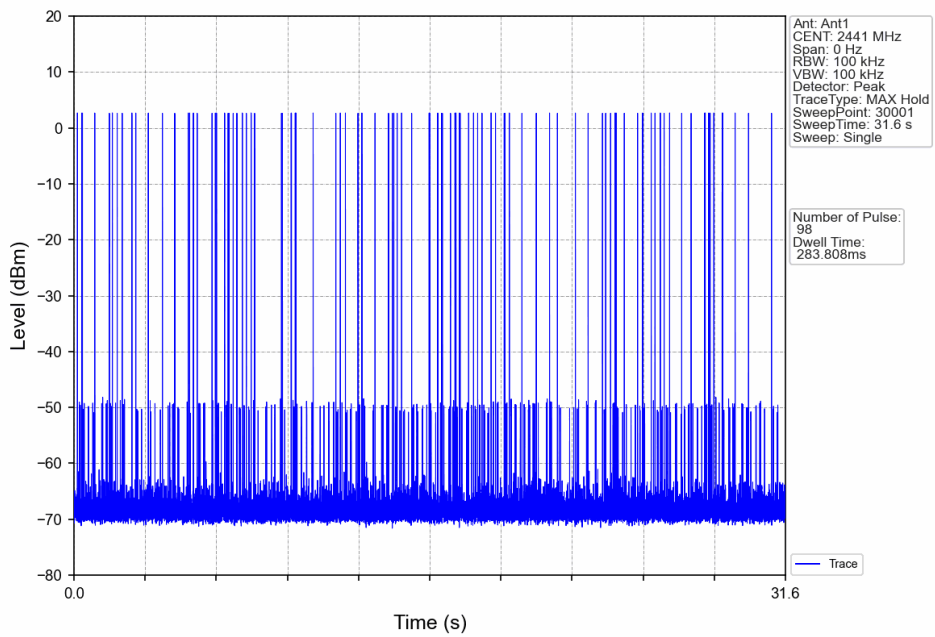




GFSK\_DH5\_HOPP\_Ant1\_NTNV



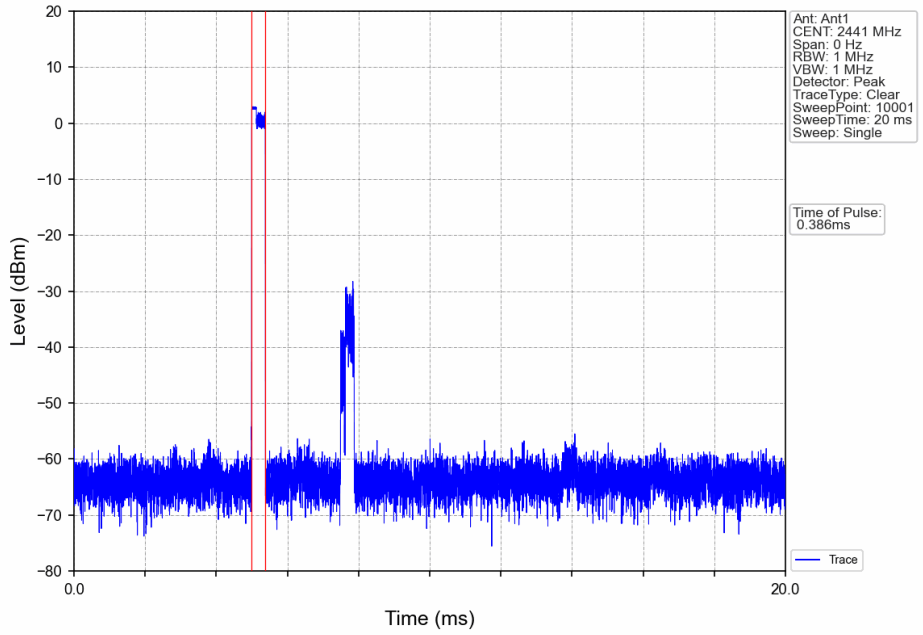
GFSK\_DH5\_HOPP\_Ant1\_NTNV



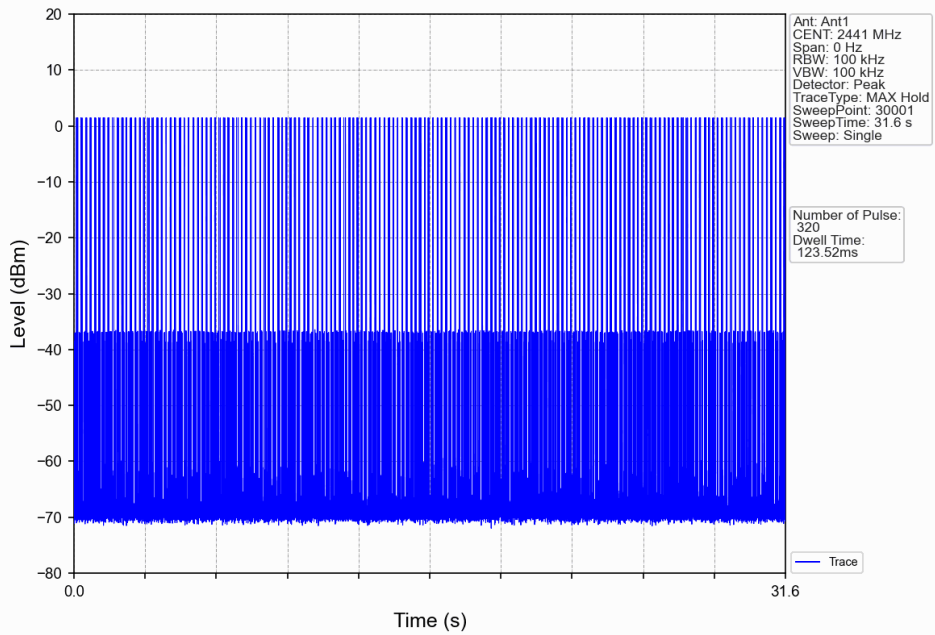




Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV

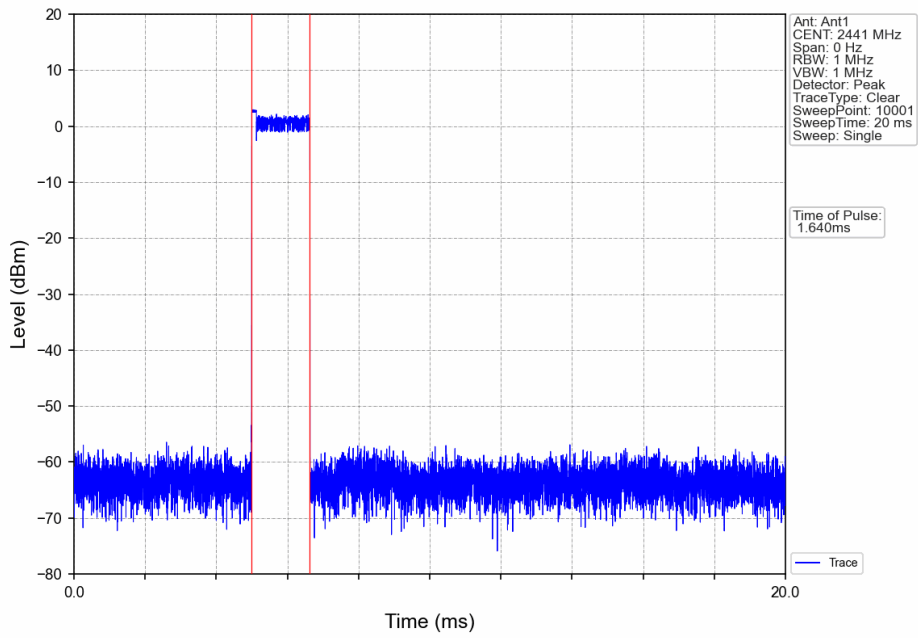


Pi/4DQPSK\_2DH1\_HOPP\_Ant1\_NTNV

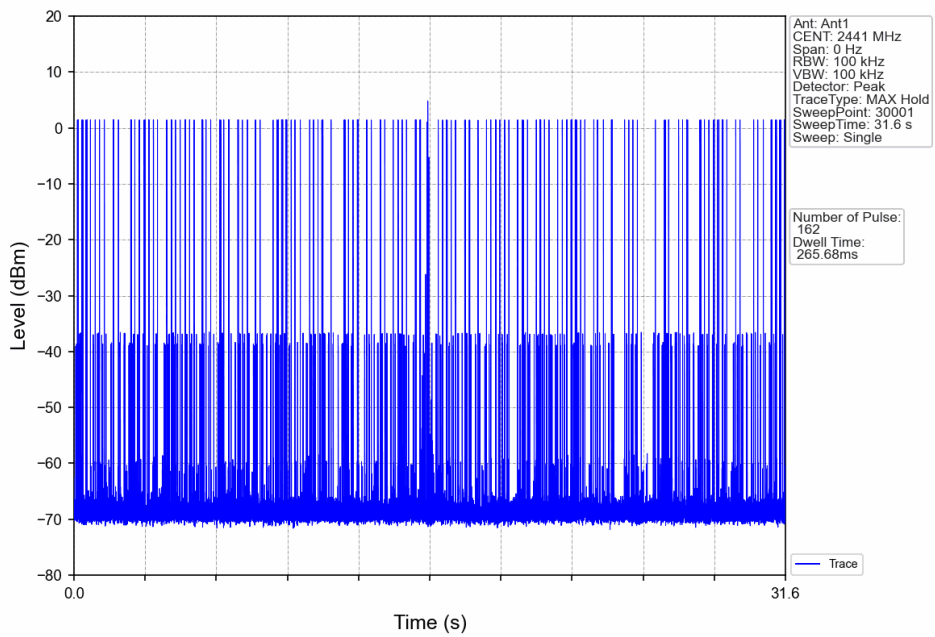




Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV

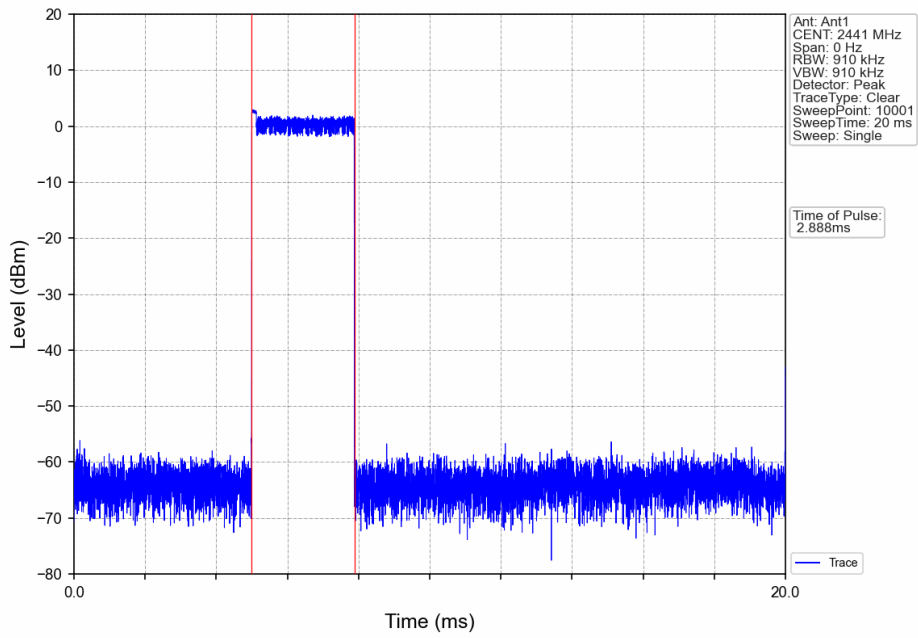


Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV

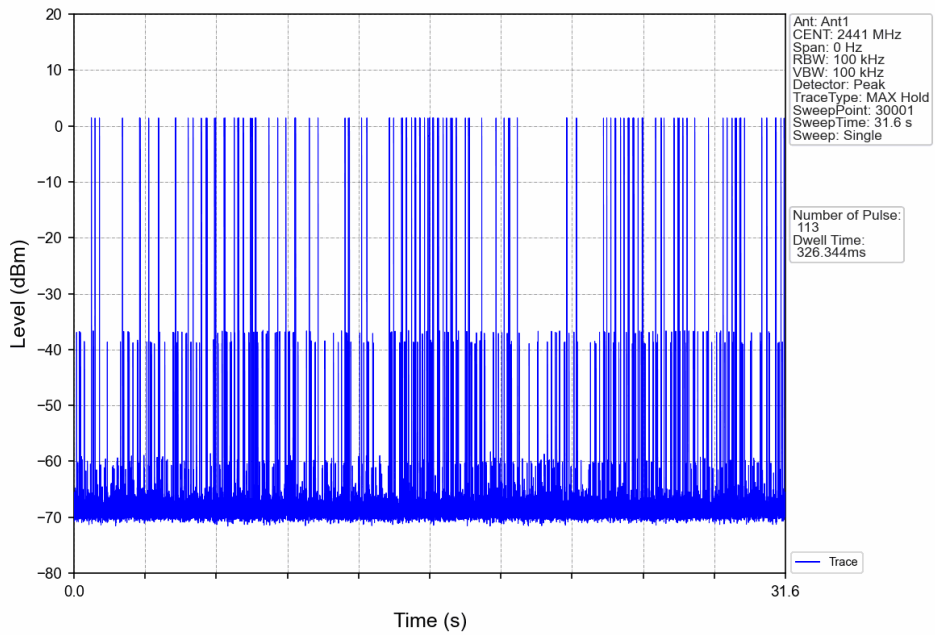




Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



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





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

### 7.1 Ref

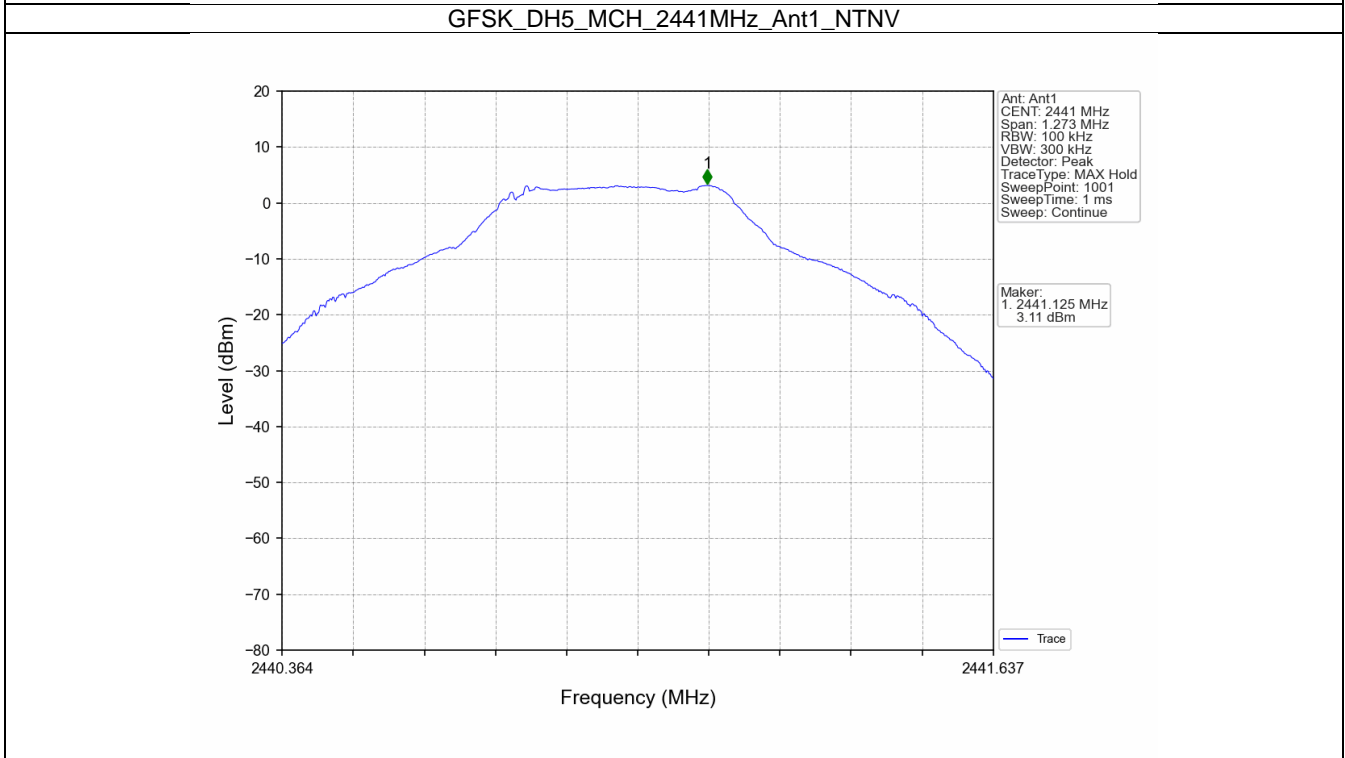
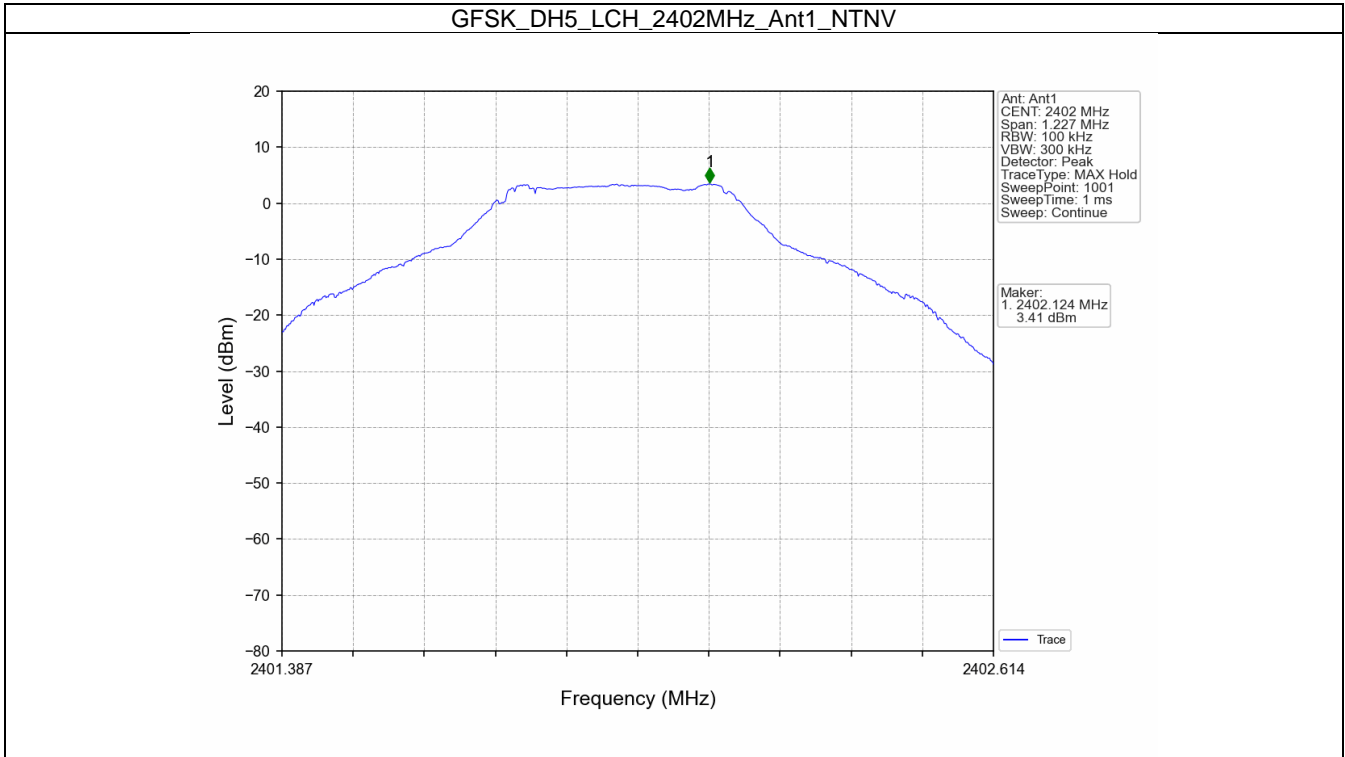
#### 7.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	3.41
		2441	DH5	1	3.11
		2480	DH5	1	4.10
		HOPP	DH5	1	5.13
		HOPP	DH5	1	5.13
Pi/4DQPSK	SISO	2402	2DH5	1	2.73
		2441	2DH5	1	2.65
		2480	2DH5	1	3.61
		HOPP	2DH5	1	4.15
		HOPP	2DH5	1	4.15

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.

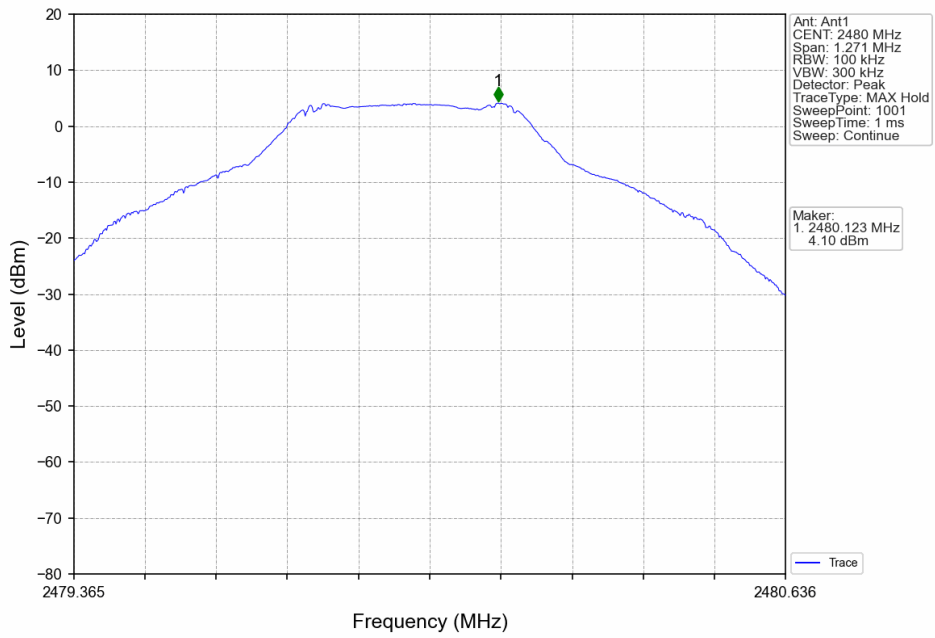


7.1.2 Test Graph

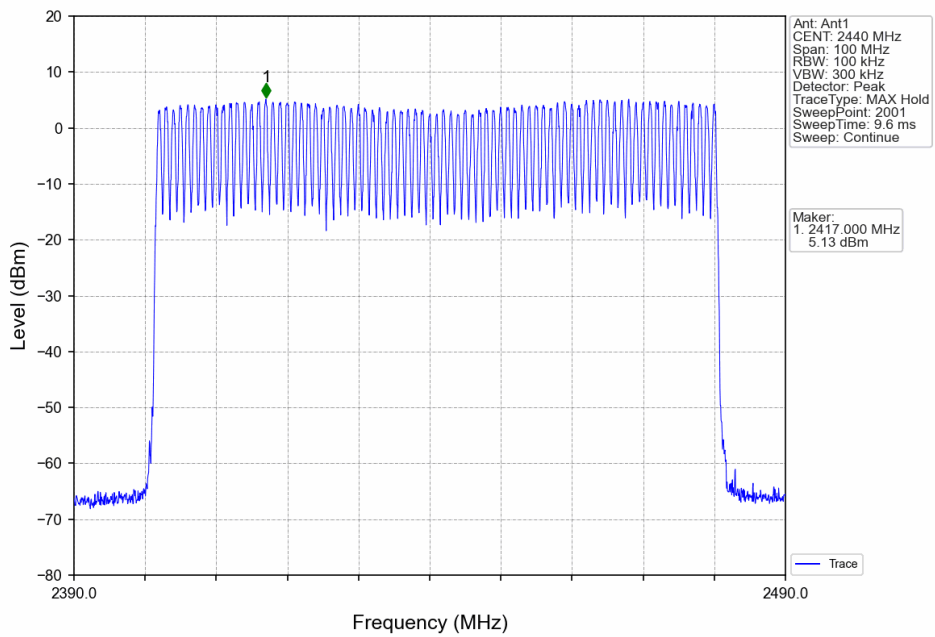




GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

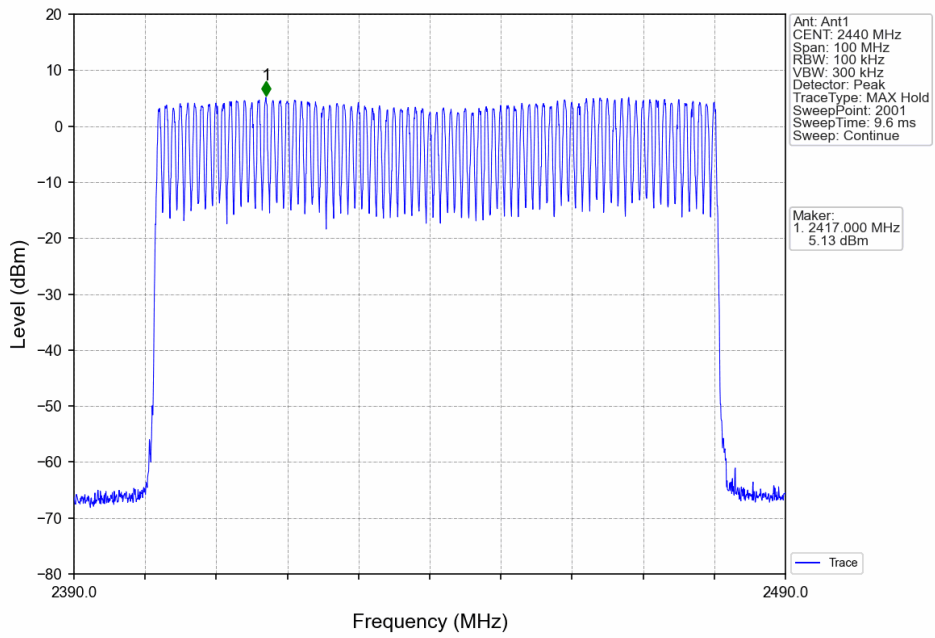


GFSK\_DH5\_HOPP\_2440MHz\_Ant1\_NTNV

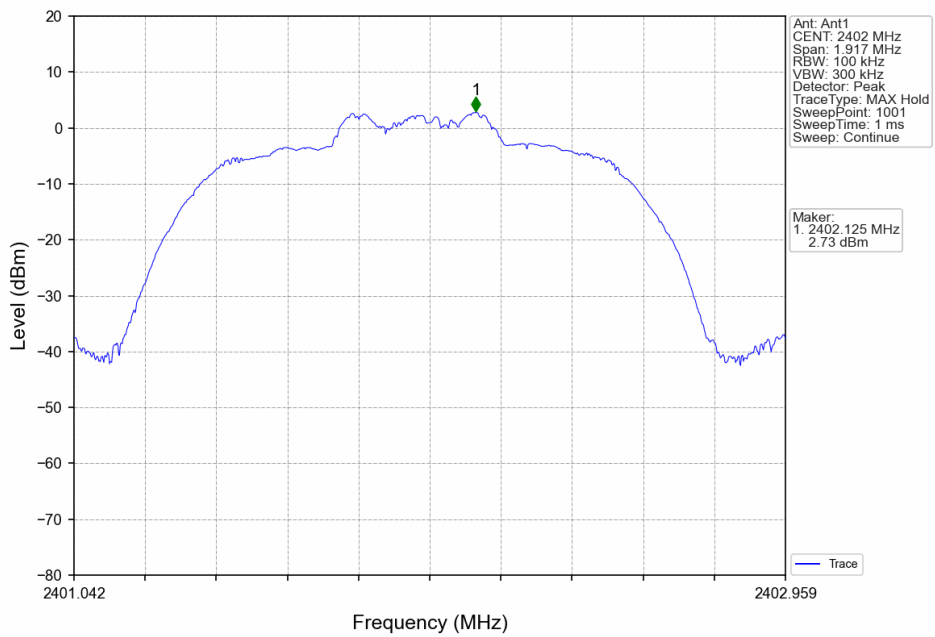




GFSK\_DH5\_HOPP\_Ant1\_NTNV

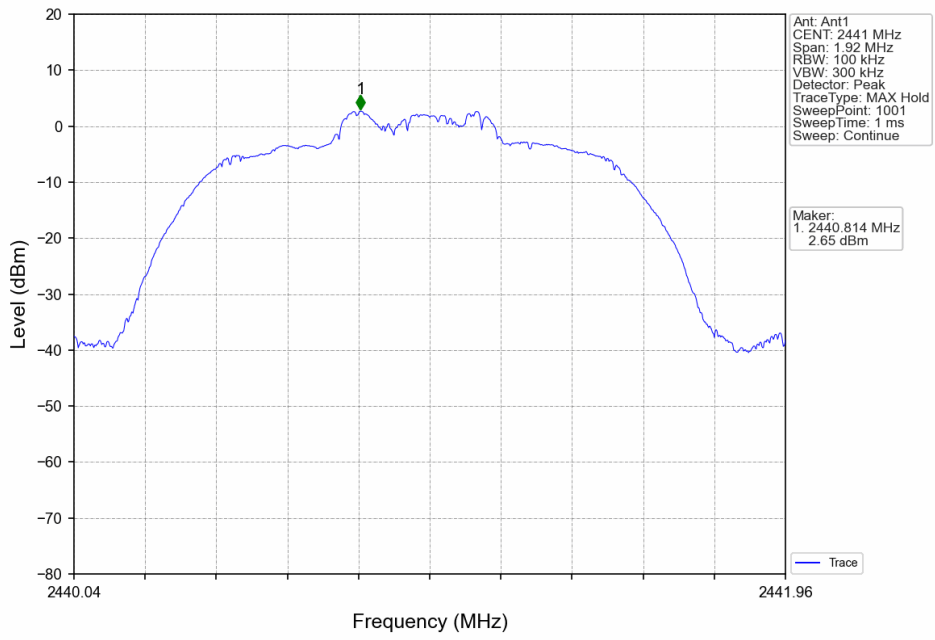


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

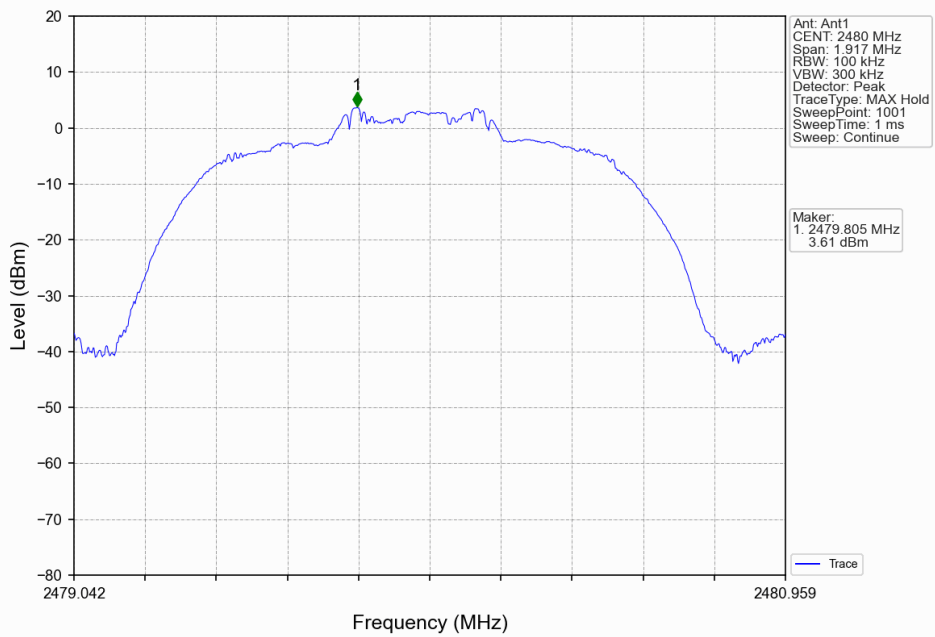




Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV



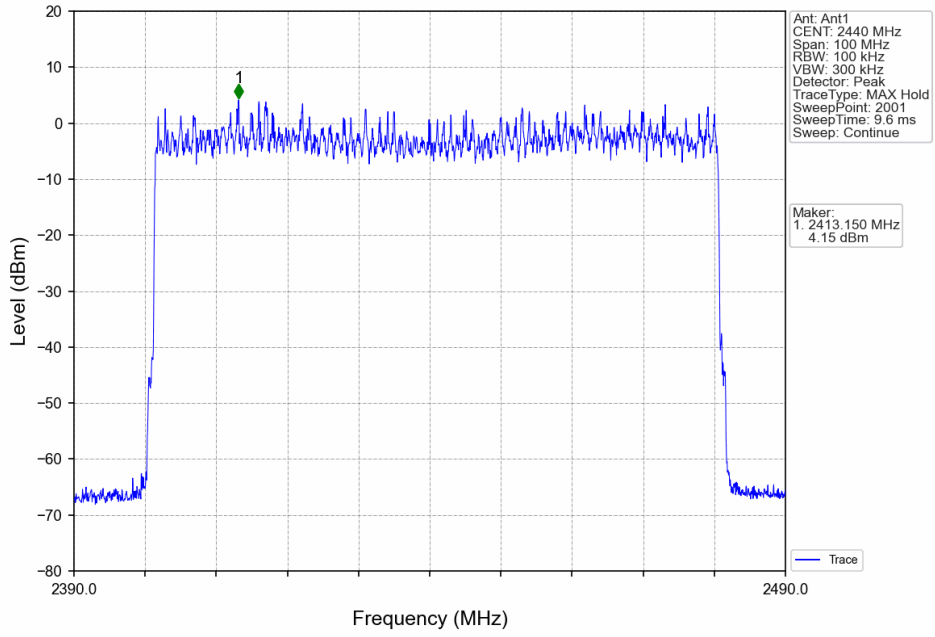
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



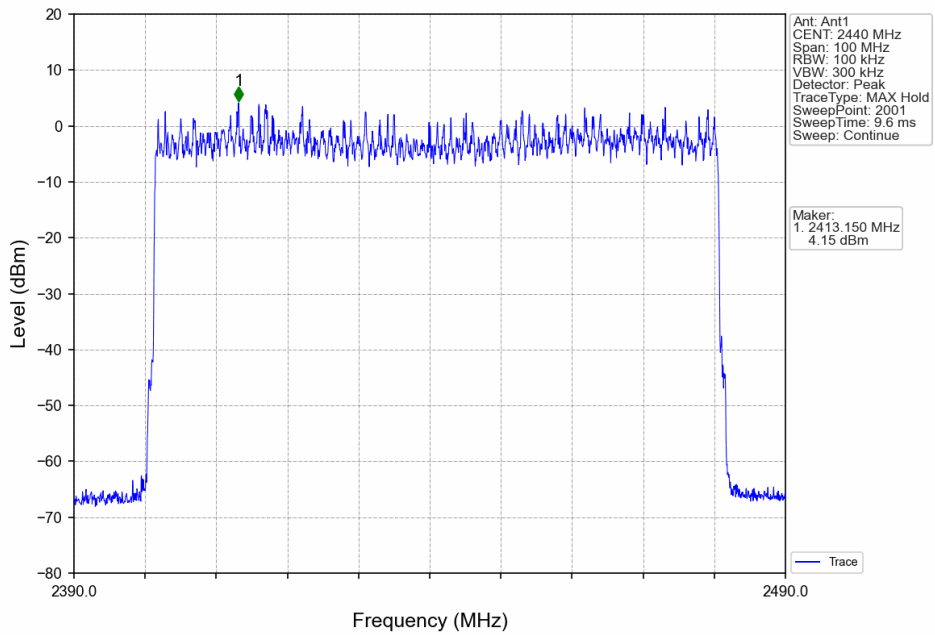




Pi/4DQPSK\_2DH5\_HOPP\_Ant1\_NTNV



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





### 7.2 CSE

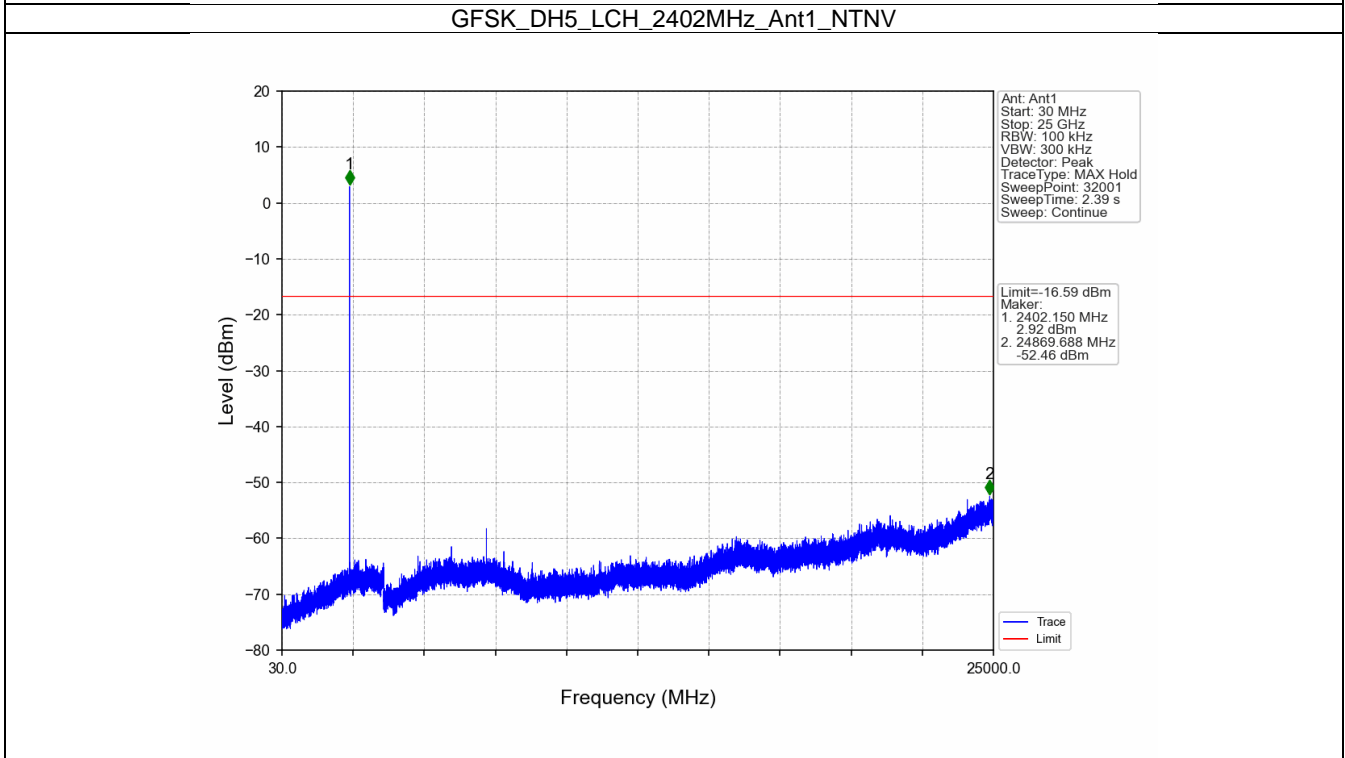
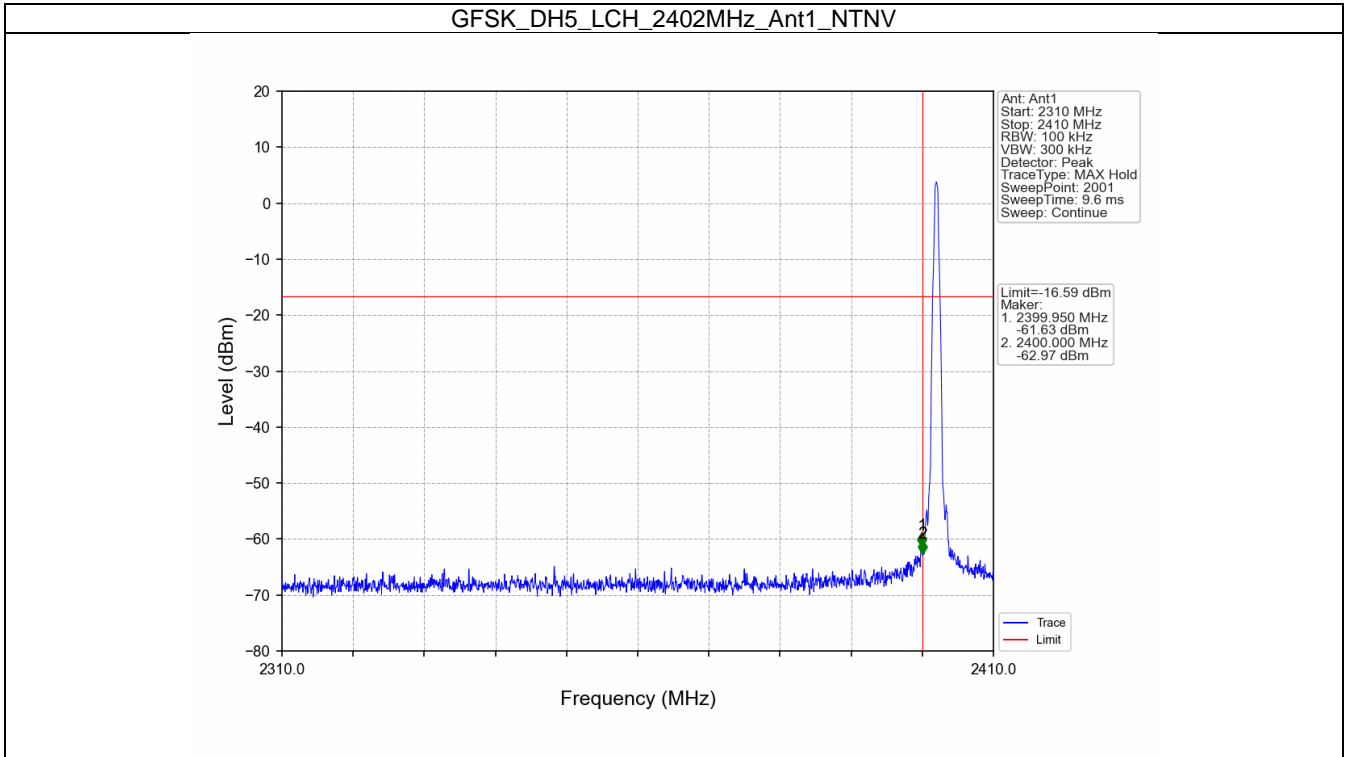
#### 7.2.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	3.41	-16.59	Pass
		2441	DH5	1	3.11	-16.89	Pass
		2480	DH5	1	4.10	-15.90	Pass
		HOPP	DH5	1	5.13	-14.87	Pass
					5.13	-14.87	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	2.73	-17.27	Pass
		2441	2DH5	1	2.65	-17.35	Pass
		2480	2DH5	1	3.61	-16.39	Pass
		HOPP	2DH5	1	4.15	-15.85	Pass
					4.15	-15.85	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.

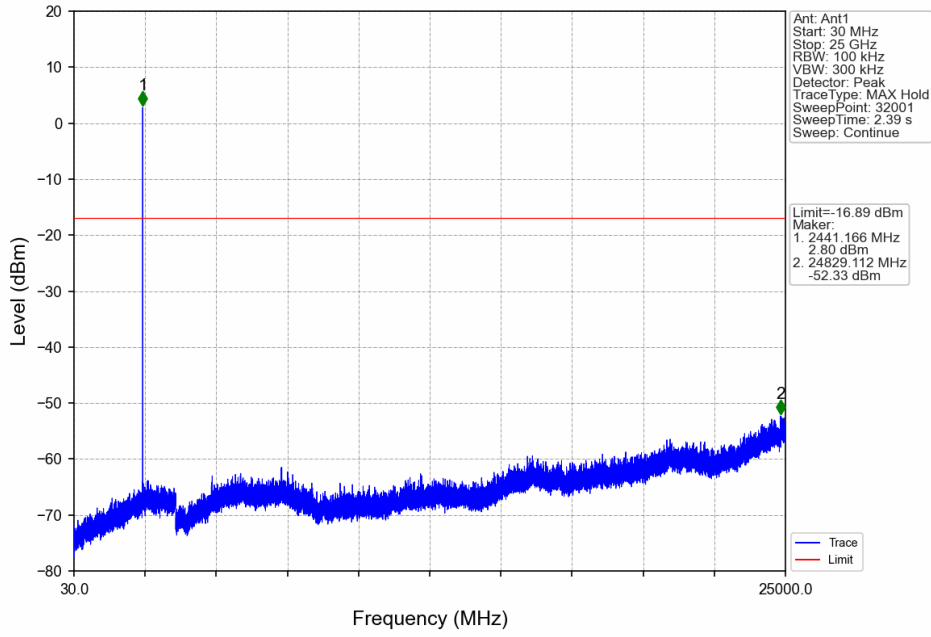


7.2.2 Test Graph

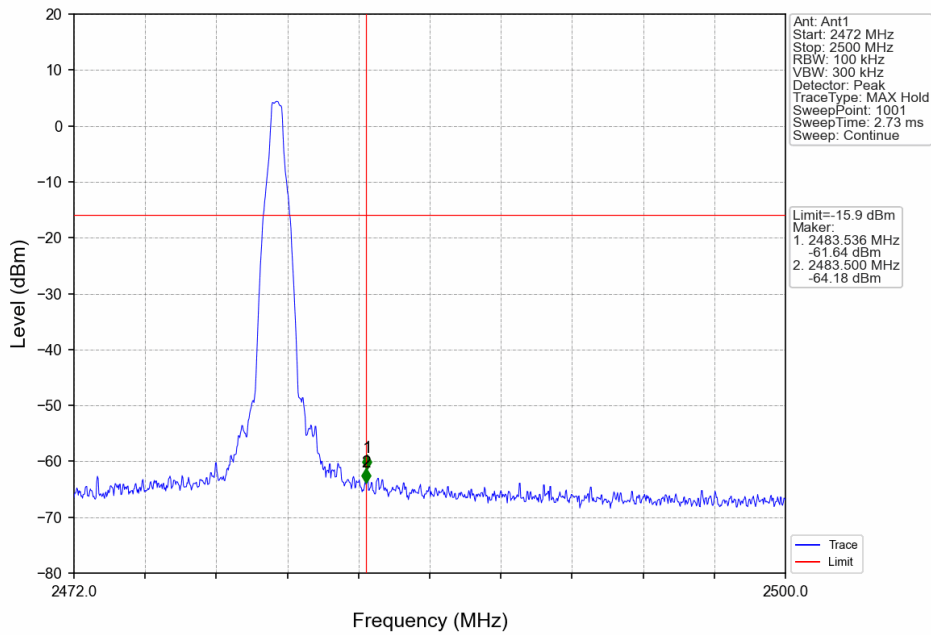




GFSK\_DH5\_MCH\_2441MHz\_Ant1\_NTNV

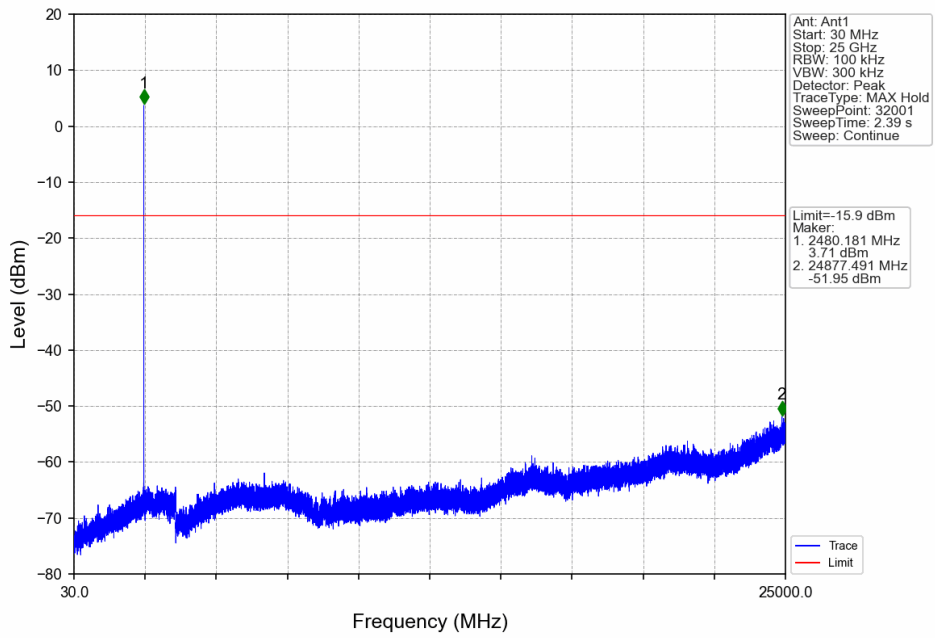


GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

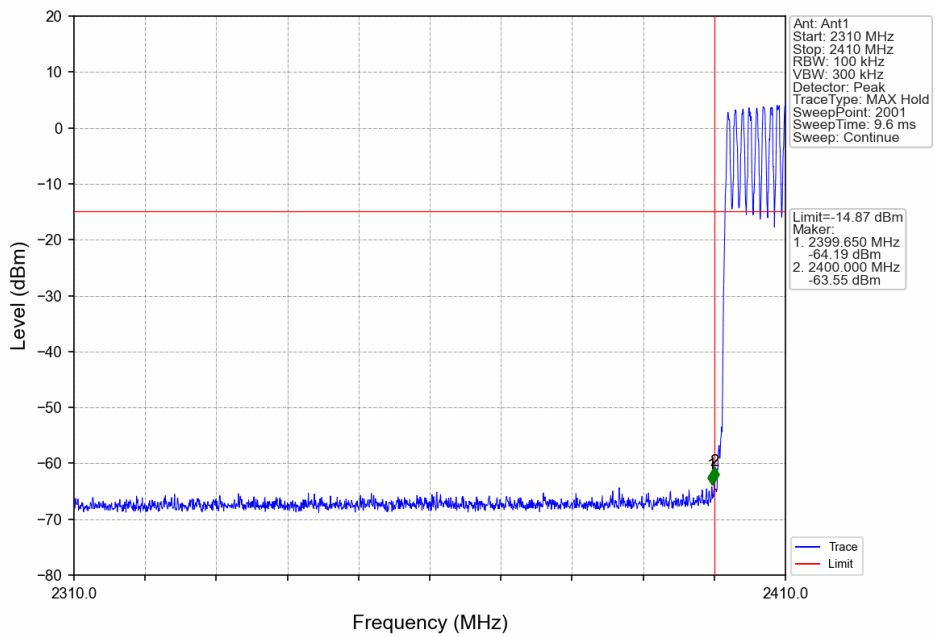




GFSK\_DH5\_HCH\_2480MHz\_Ant1\_NTNV

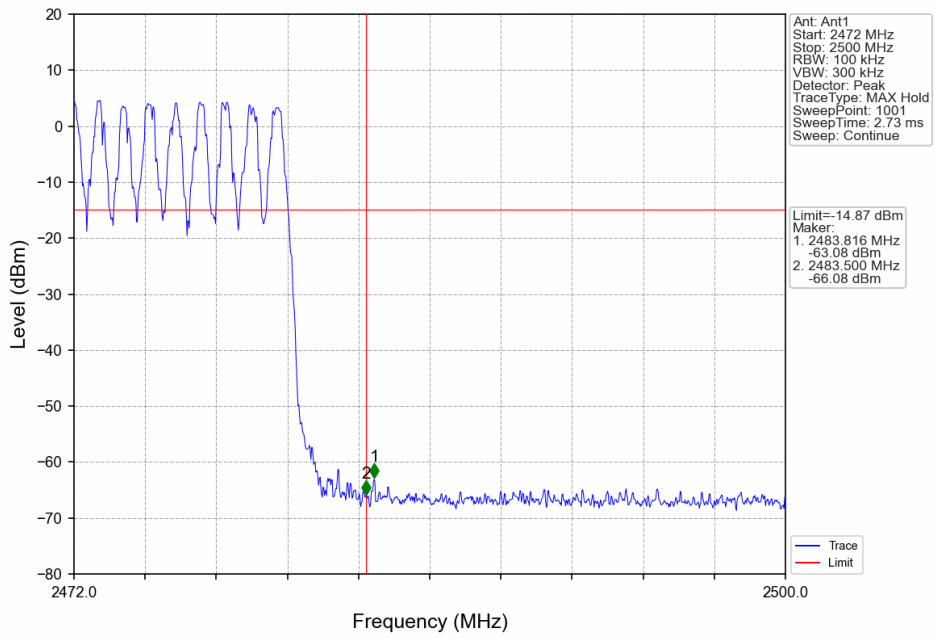


GFSK\_DH5\_HOPP\_Ant1\_NTNV

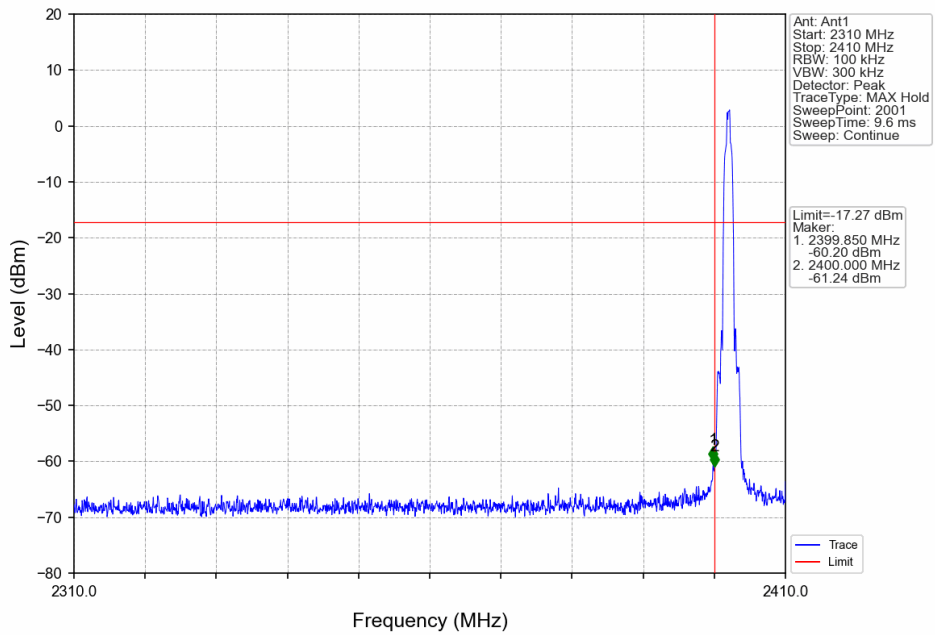




GFSK\_DH5\_HOPP\_Ant1\_NTNV

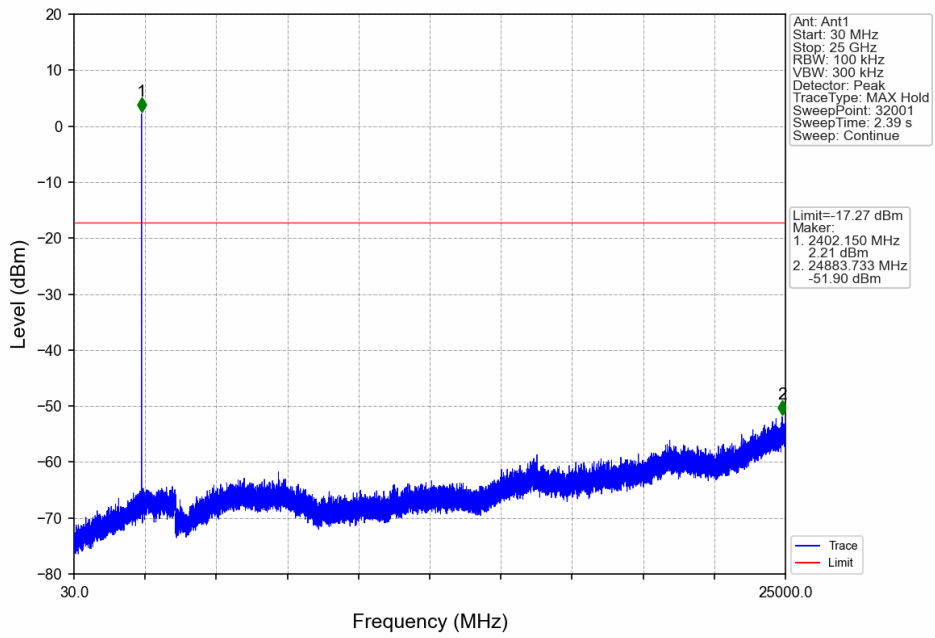


Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

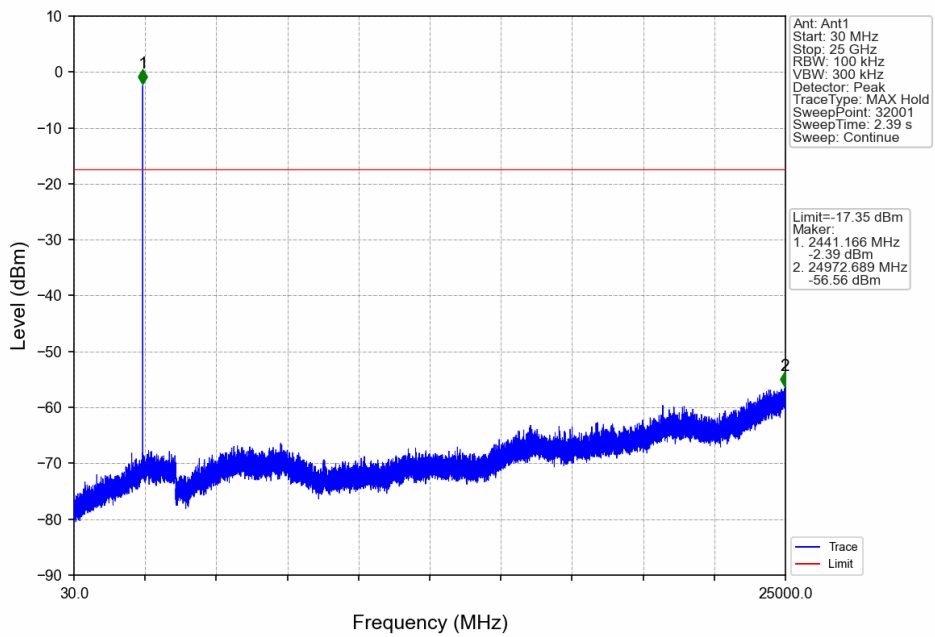




Pi/4DQPSK\_2DH5\_LCH\_2402MHz\_Ant1\_NTNV

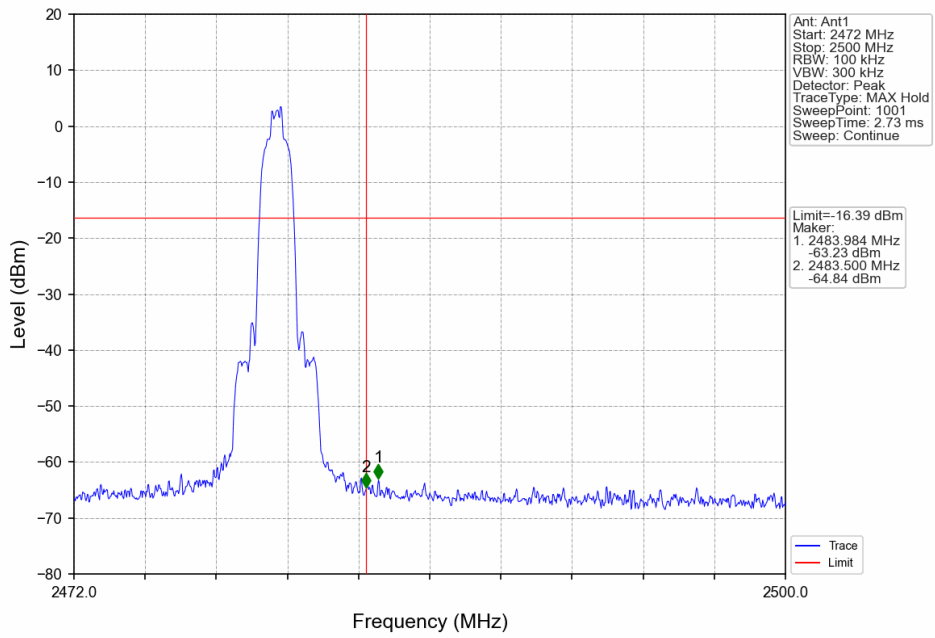


Pi/4DQPSK\_2DH5\_MCH\_2441MHz\_Ant1\_NTNV

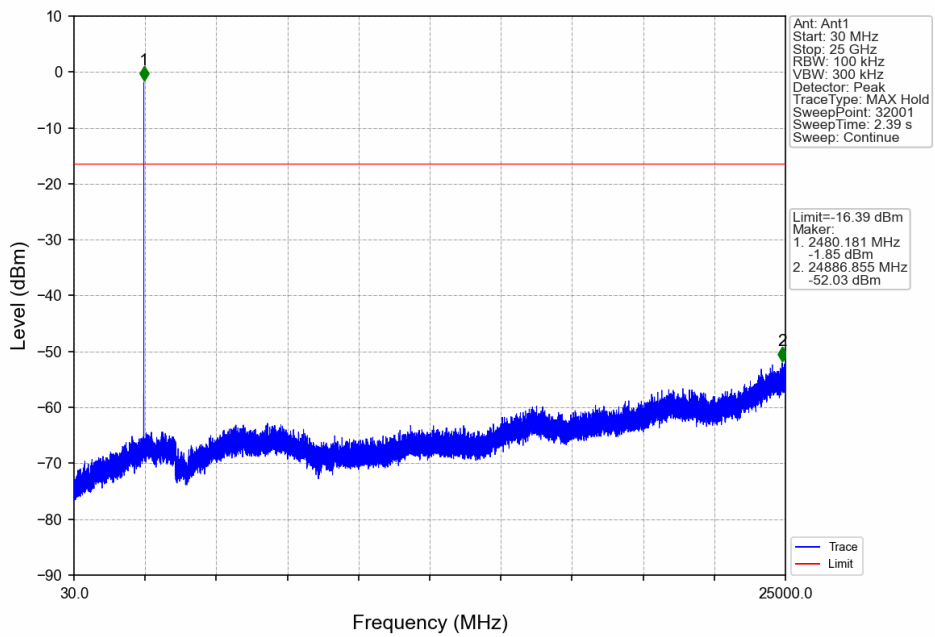




Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV



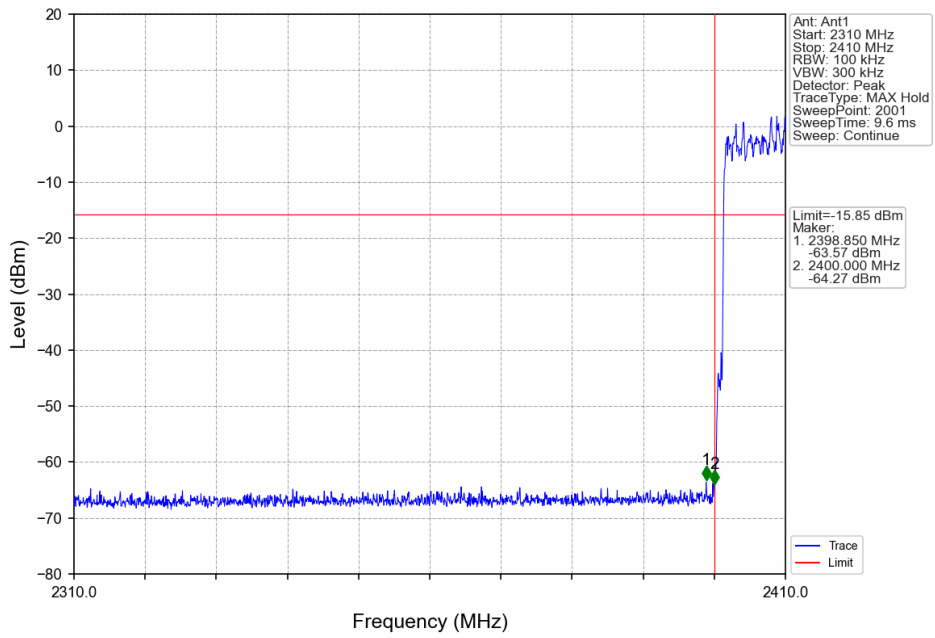
Pi/4DQPSK\_2DH5\_HCH\_2480MHz\_Ant1\_NTNV







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



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

