

# 1. Bandwidth

## 1.1 Test Result

### 1.1.1 OBW

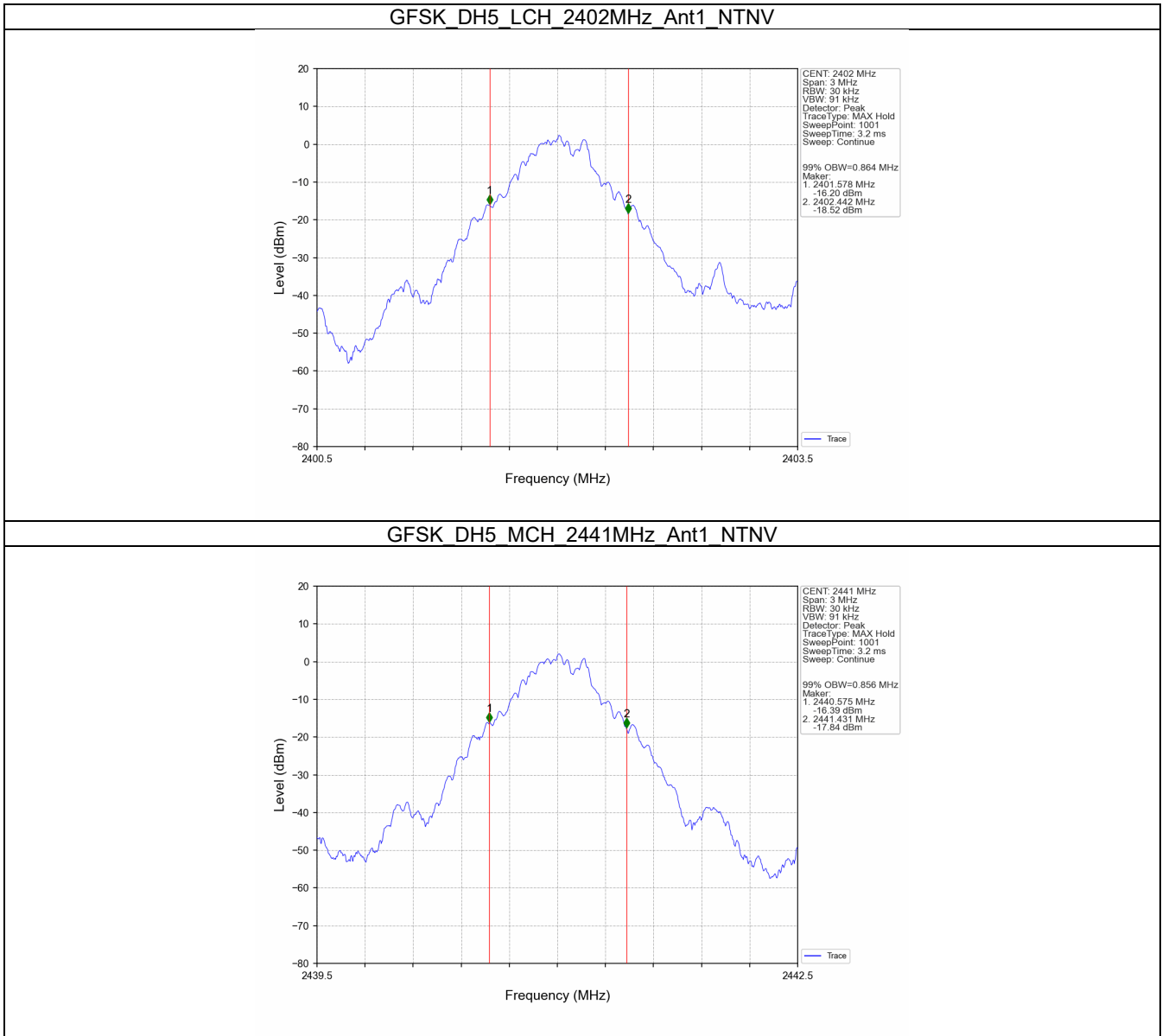
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.864	/	Pass
		2441	DH5	1	0.856	/	Pass
		2480	DH5	1	0.858	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.184	/	Pass
		2441	2DH5	1	1.180	/	Pass
		2480	2DH5	1	1.181	/	Pass
8DPSK	SISO	2402	3DH5	1	1.172	/	Pass
		2441	3DH5	1	1.178	/	Pass
		2480	3DH5	1	1.174	/	Pass

### 1.1.2 20dB BW

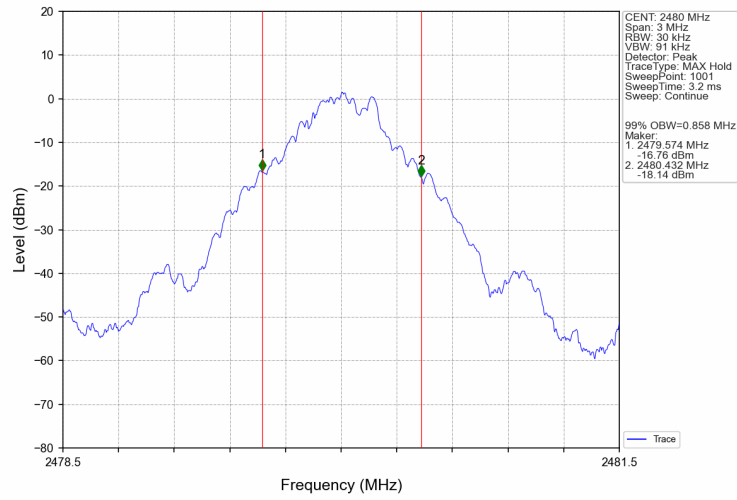
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.945	/	Pass
		2441	DH5	1	0.944	/	Pass
		2480	DH5	1	0.944	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.267	/	Pass
		2441	2DH5	1	1.274	/	Pass
		2480	2DH5	1	1.285	/	Pass
8DPSK	SISO	2402	3DH5	1	1.291	/	Pass
		2441	3DH5	1	1.290	/	Pass
		2480	3DH5	1	1.290	/	Pass

## 1.2 Test Graph

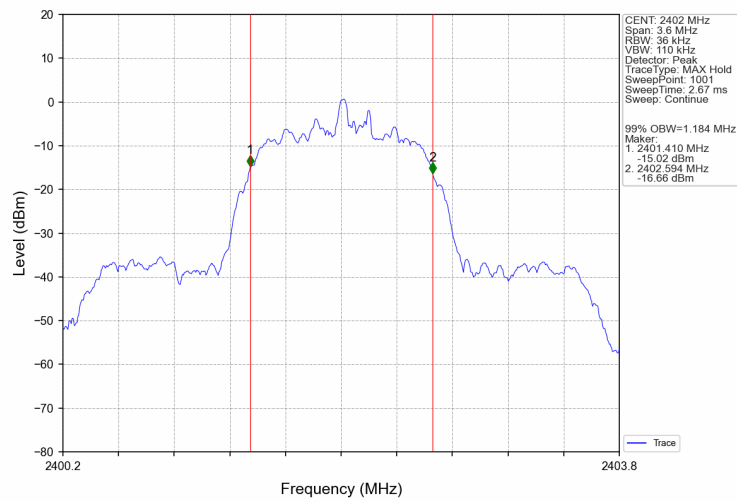
### 1.2.1 OBW



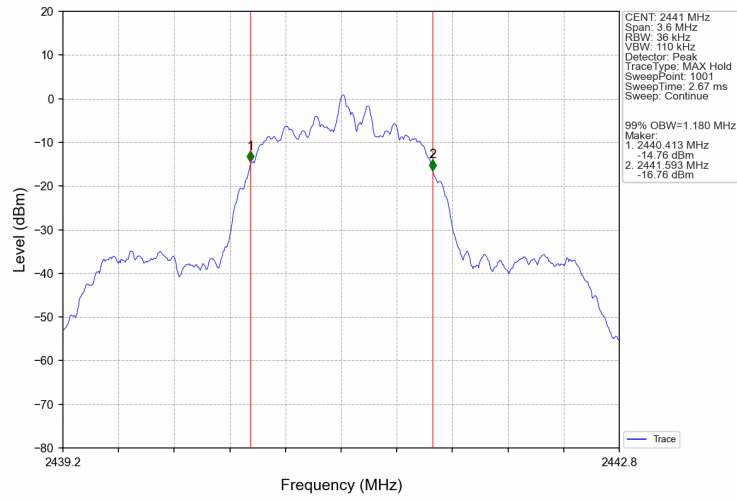
GFSK DH5 HCH 2480MHz Ant1 NTN



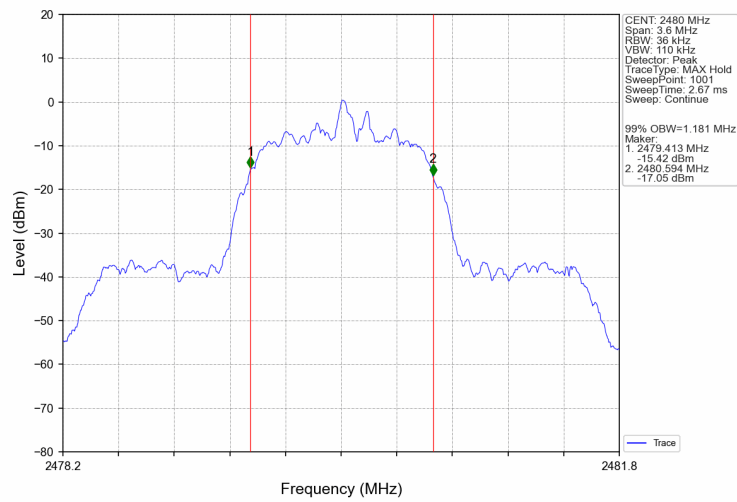
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



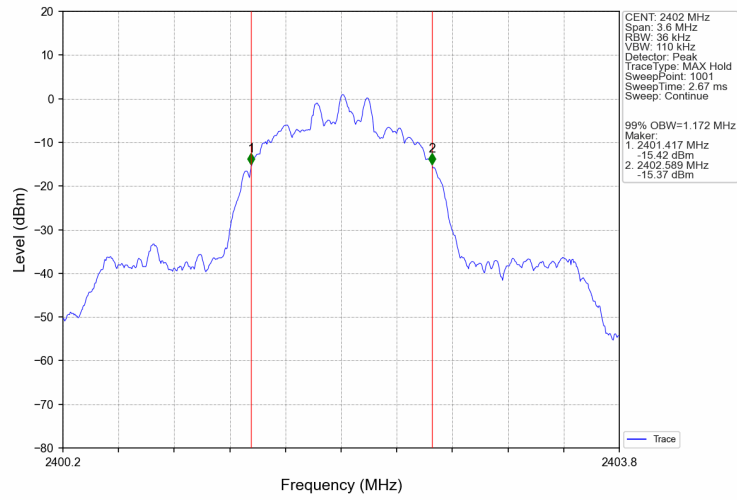
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



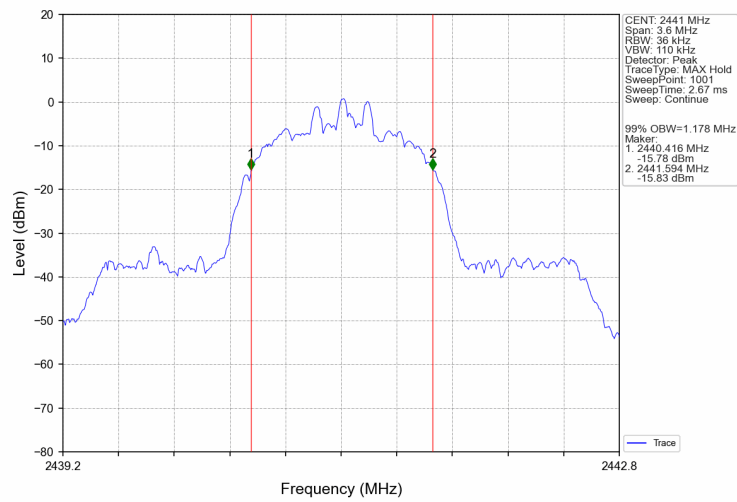
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



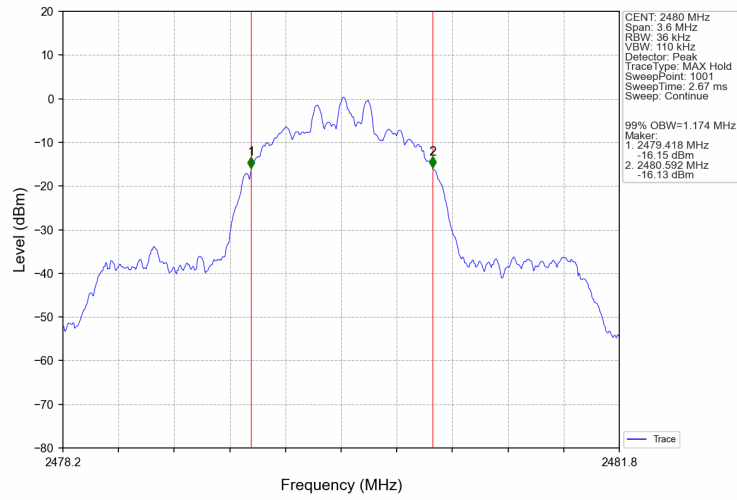
8DPSK 3DH5 LCH 2402MHz Ant1 NTV



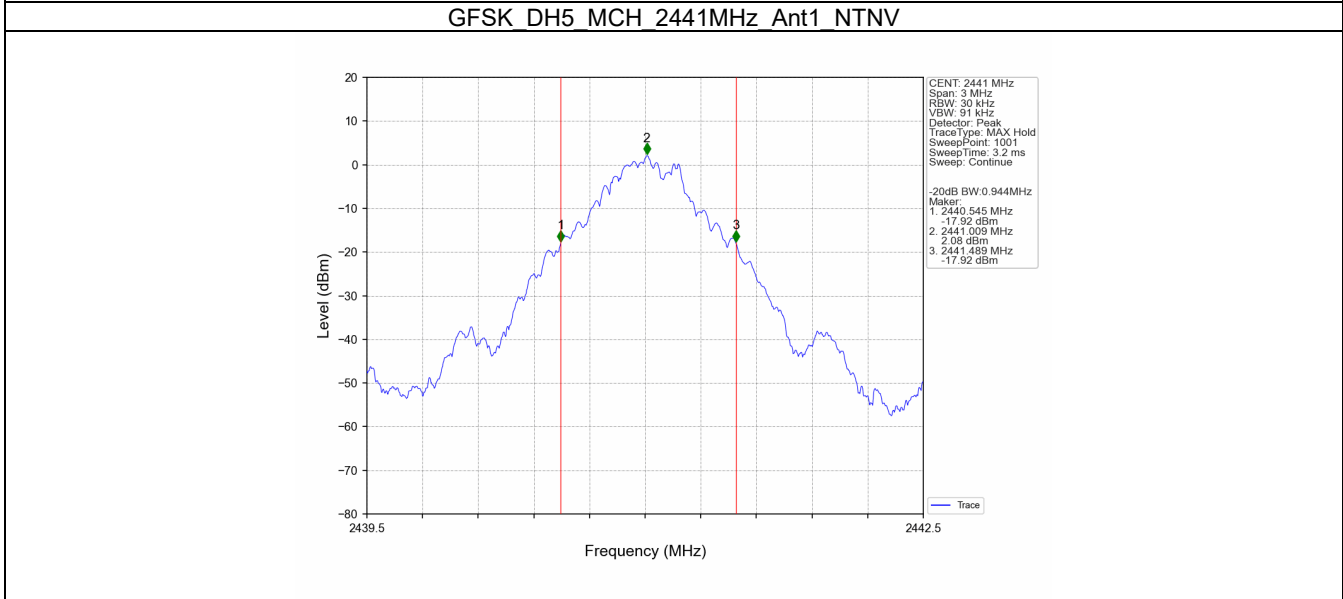
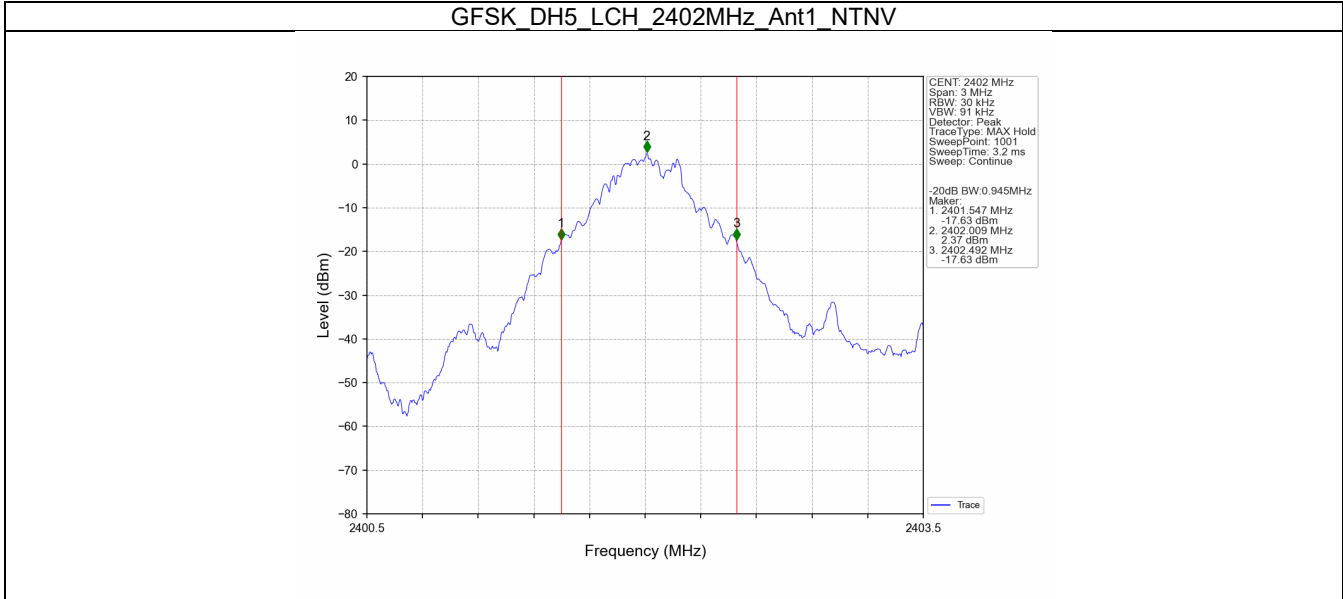
8DPSK 3DH5 MCH 2441MHz Ant1 NTV



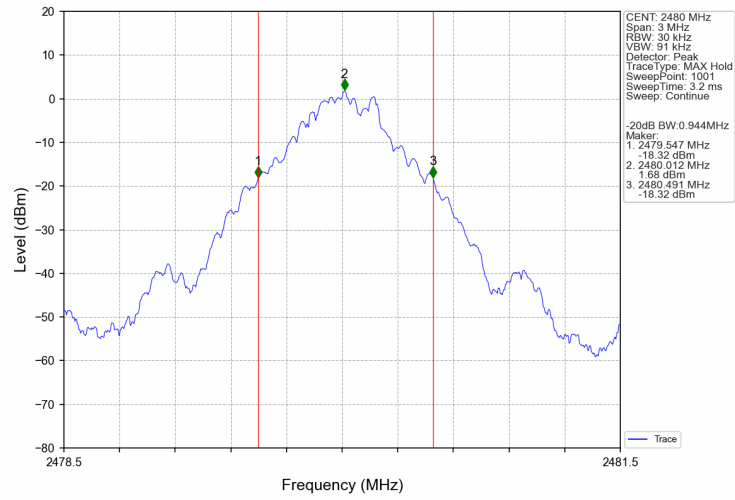
8DPSK 3DH5 HCH 2480MHz Ant1 NTN



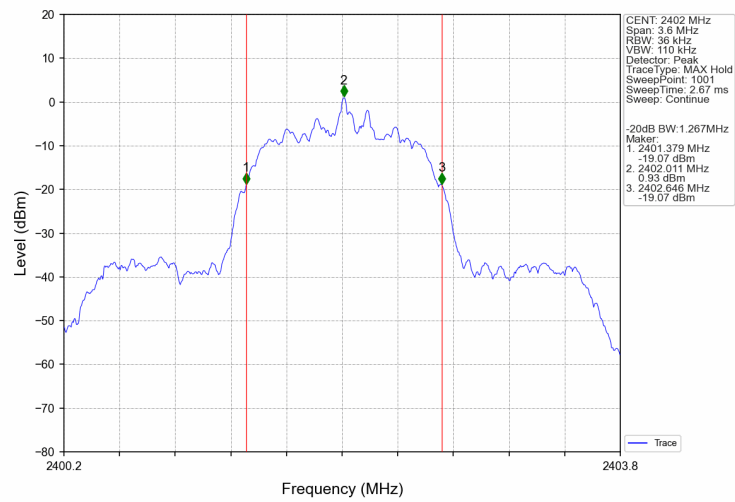
### 1.2.2 20dB BW



GFSK DH5 HCH 2480MHz Ant1 NTN

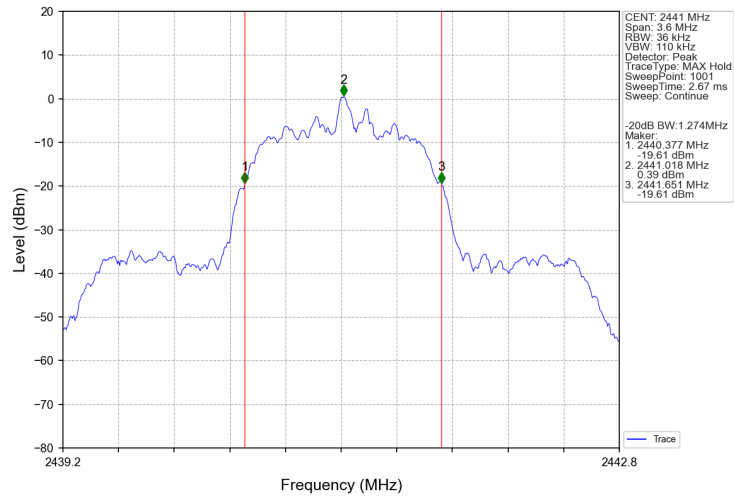


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN

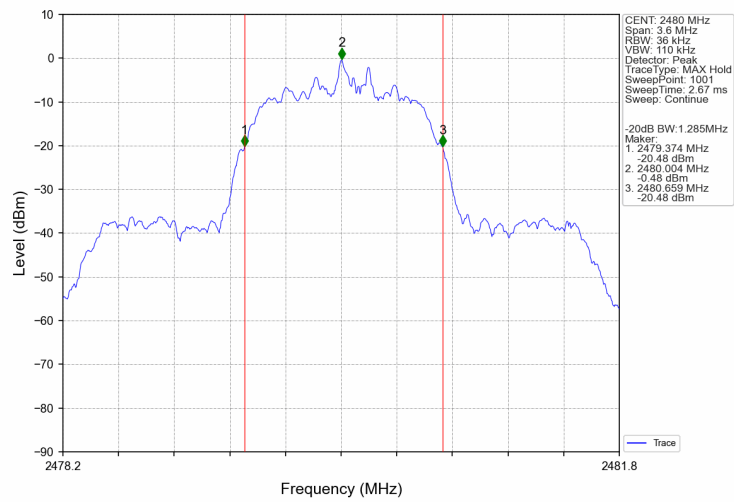




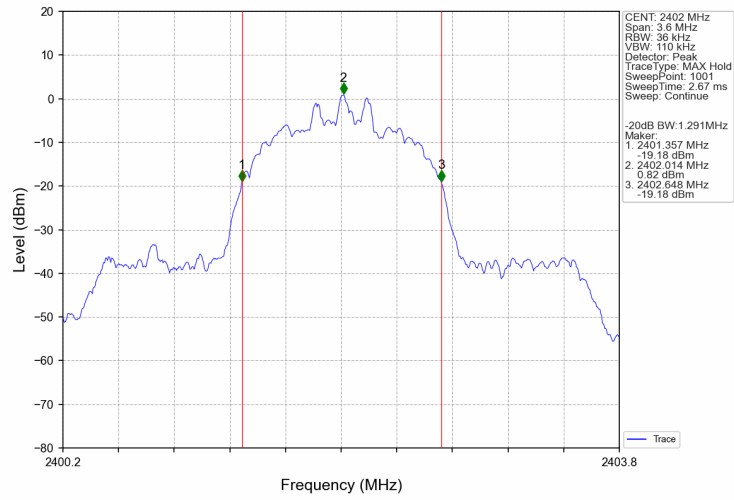
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



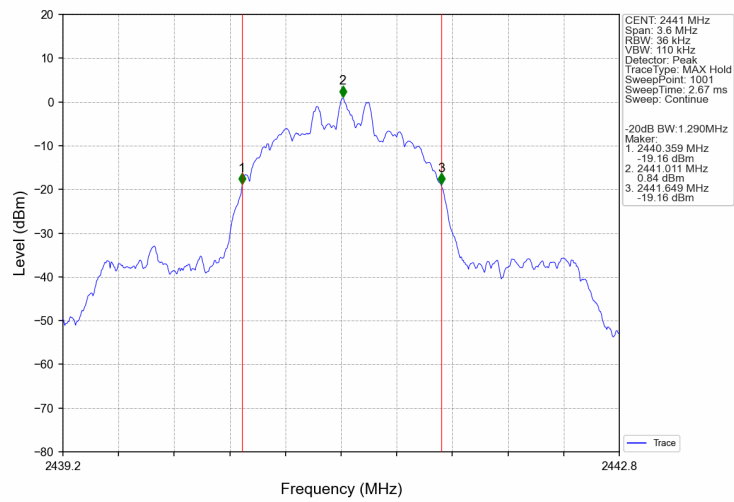
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



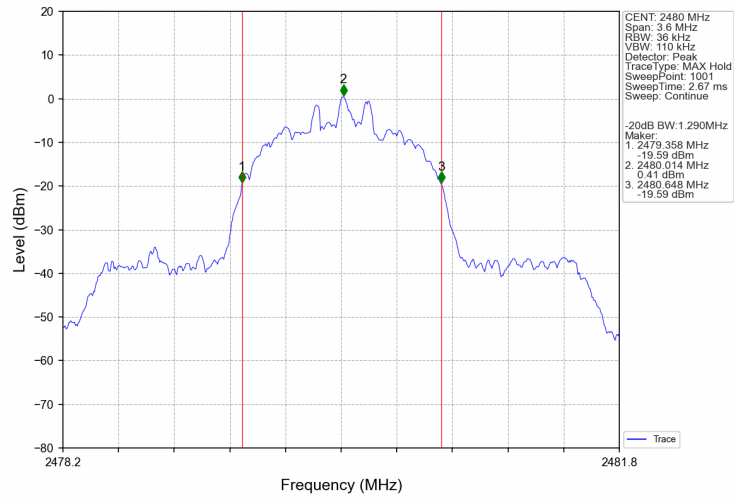
8DPSK 3DH5 LCH 2402MHz Ant1 NTN



8DPSK 3DH5 MCH 2441MHz Ant1 NTN



8DPSK 3DH5 HCH 2480MHz Ant1 NTVN



## 2. Maximum Conducted Output Power

### 2.1 Test Result

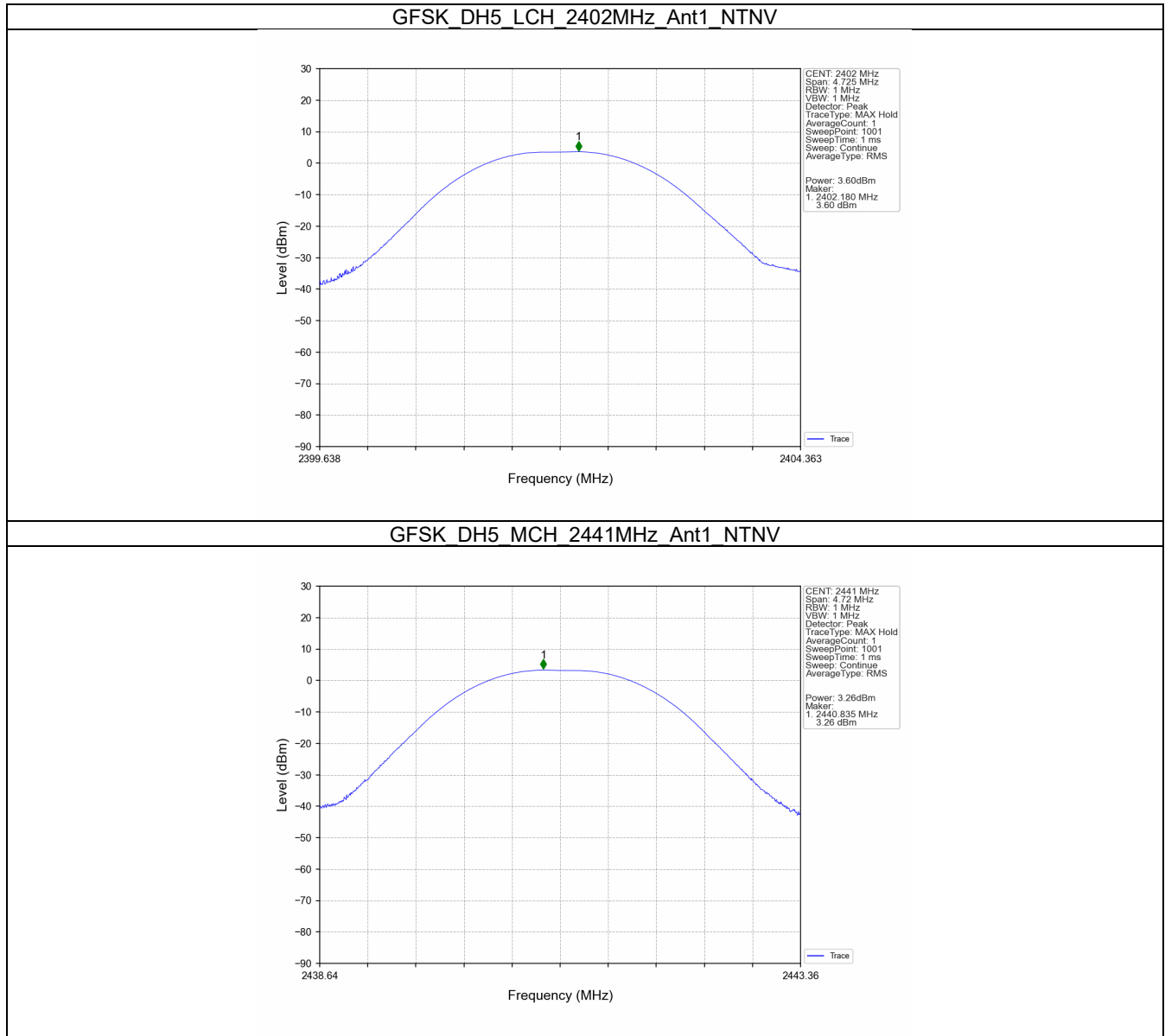
#### 2.1.1 Power

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	3.60	<=30	Pass
		2441	DH5	3.26	<=30	Pass
		2480	DH5	2.86	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	2.10	<=20.97	Pass
		2441	2DH5	1.94	<=20.97	Pass
		2480	2DH5	1.55	<=20.97	Pass
8DPSK	SISO	2402	3DH5	2.43	<=20.97	Pass
		2441	3DH5	2.24	<=20.97	Pass
		2480	3DH5	1.86	<=20.97	Pass

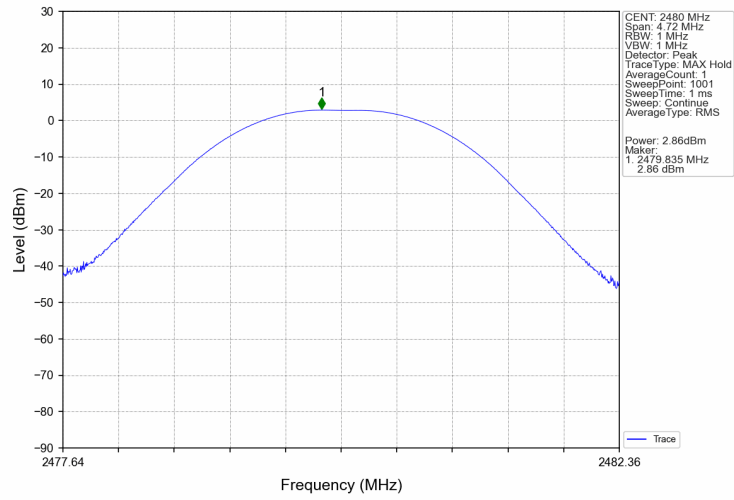
Note1: Antenna Gain: Ant1: 0.00dBi;

## 2.2 Test Graph

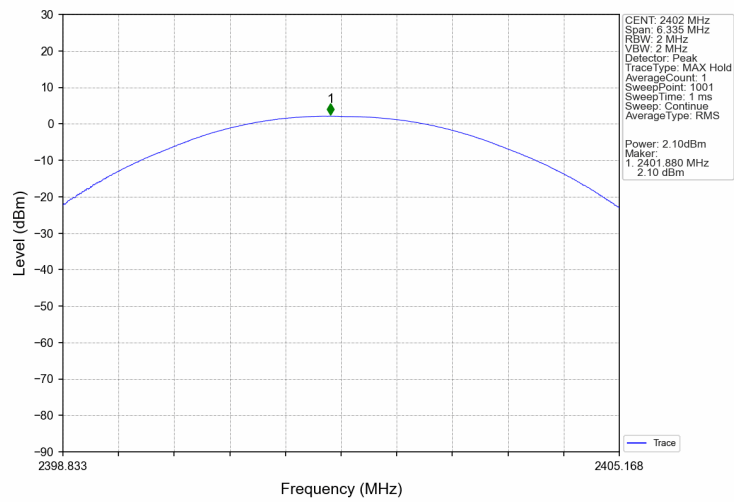
### 2.2.1 Power



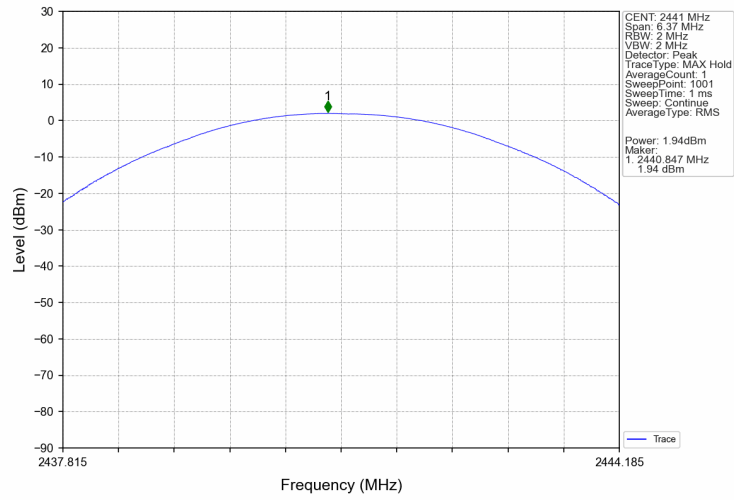
GFSK DH5 HCH 2480MHz Ant1 NTN



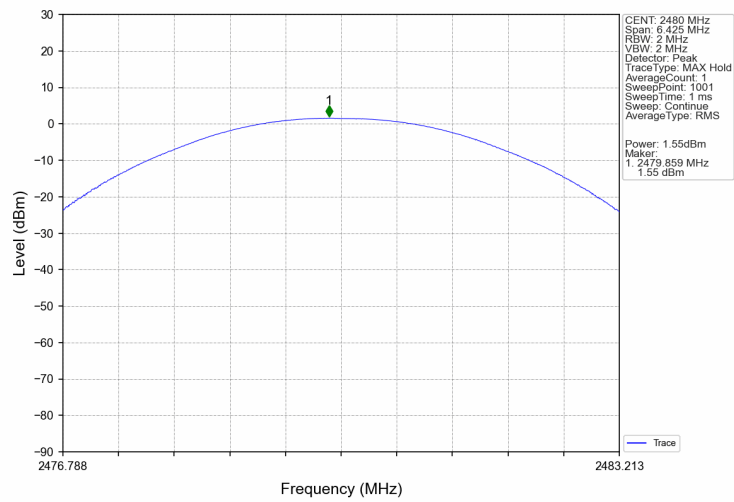
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



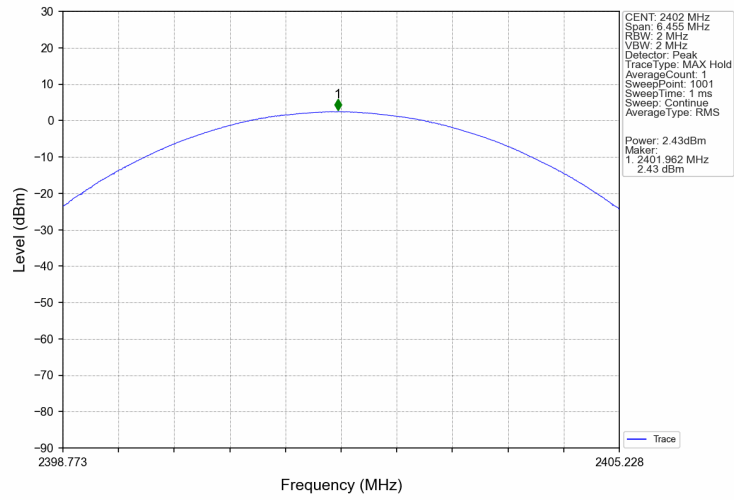
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



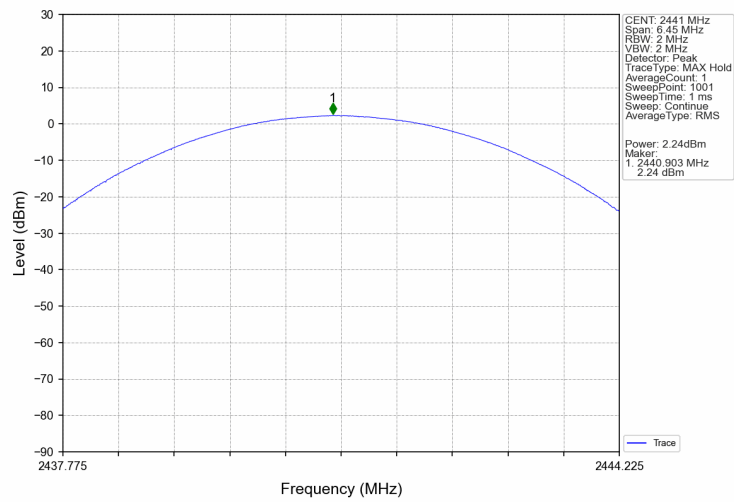
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



8DPSK 3DH5 LCH 2402MHz Ant1 NTVN

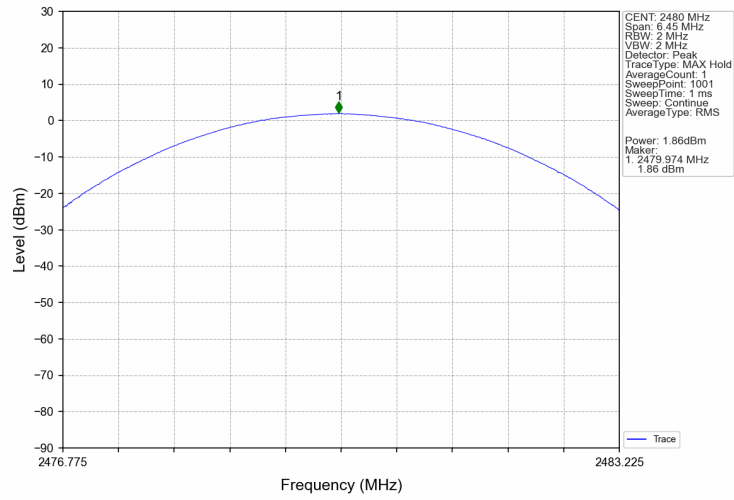


8DPSK 3DH5 MCH 2441MHz Ant1 NTVN





8DPSK 3DH5 HCH 2480MHz Ant1 NTVN



### 3. Carrier Frequency Separation

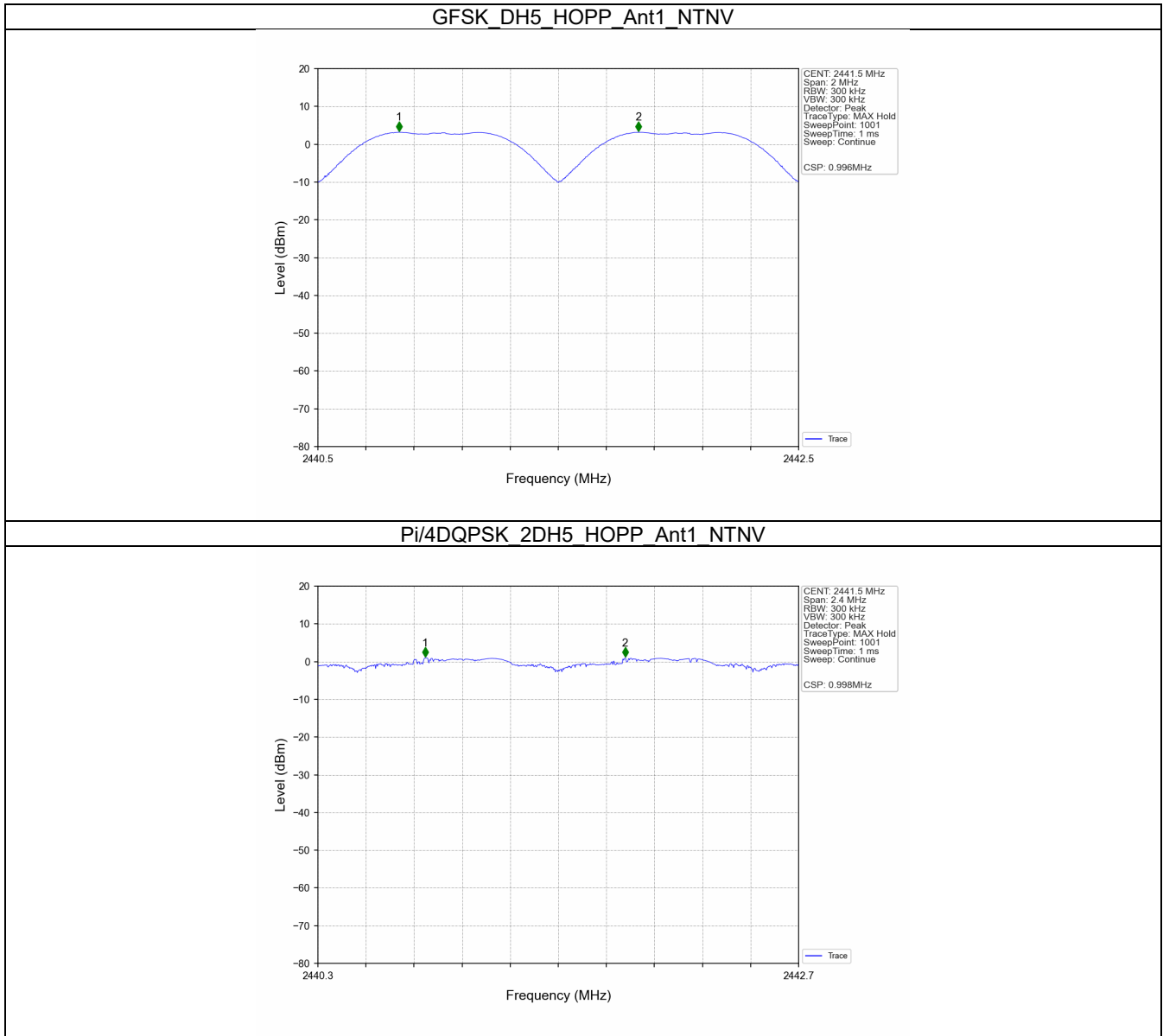
#### 3.1 Test Result

##### 3.1.1 Ant1

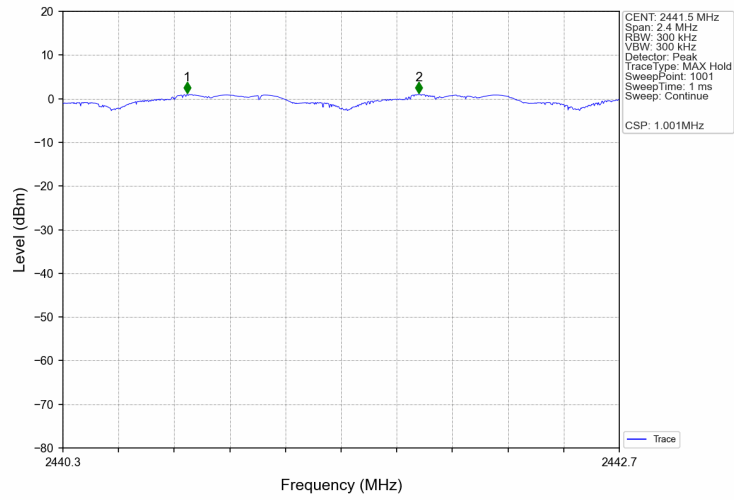
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	0.996	0.945	$\geq 0.945$	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	0.998	1.285	$\geq 0.857$	Pass
8DPSK	SISO	HOPP	3DH5	1.001	1.291	$\geq 0.861$	Pass

### 3.2 Test Graph

#### 3.2.1 Ant1



8DPSK 3DH5 HOPP Ant1 NTVN



## 4. Number of Hopping Frequencies

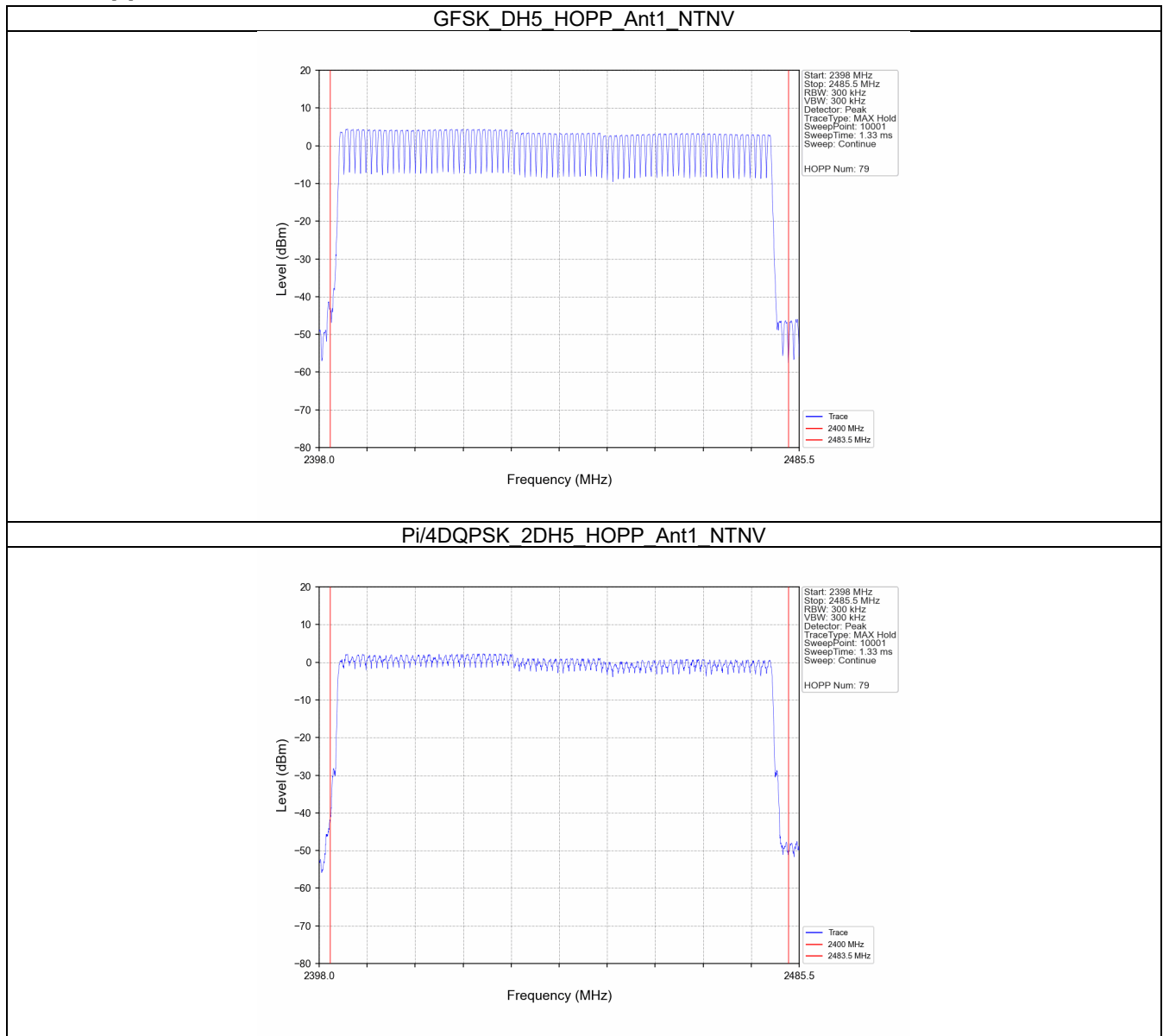
### 4.1 Test Result

#### 4.1.1 HoppNum

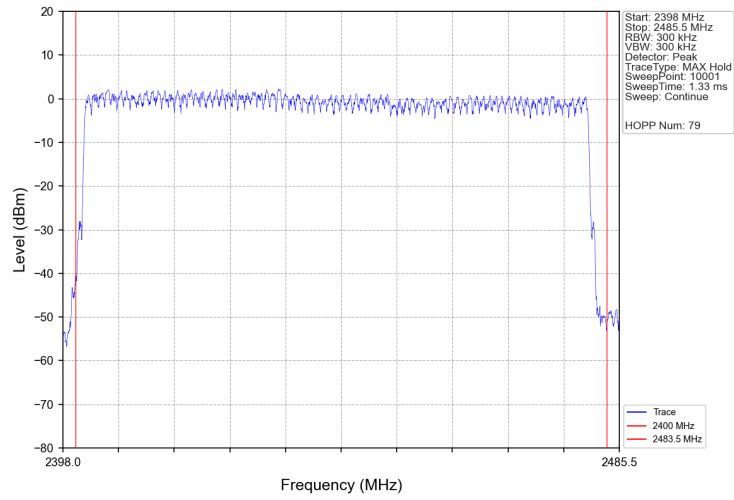
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

## 4.2 Test Graph

### 4.2.1 HoppNum



8DPSK 3DH5 HOPP Ant1 NTN



## 5. Time of Occupancy (Dwell Time)

### 5.1 Test Result

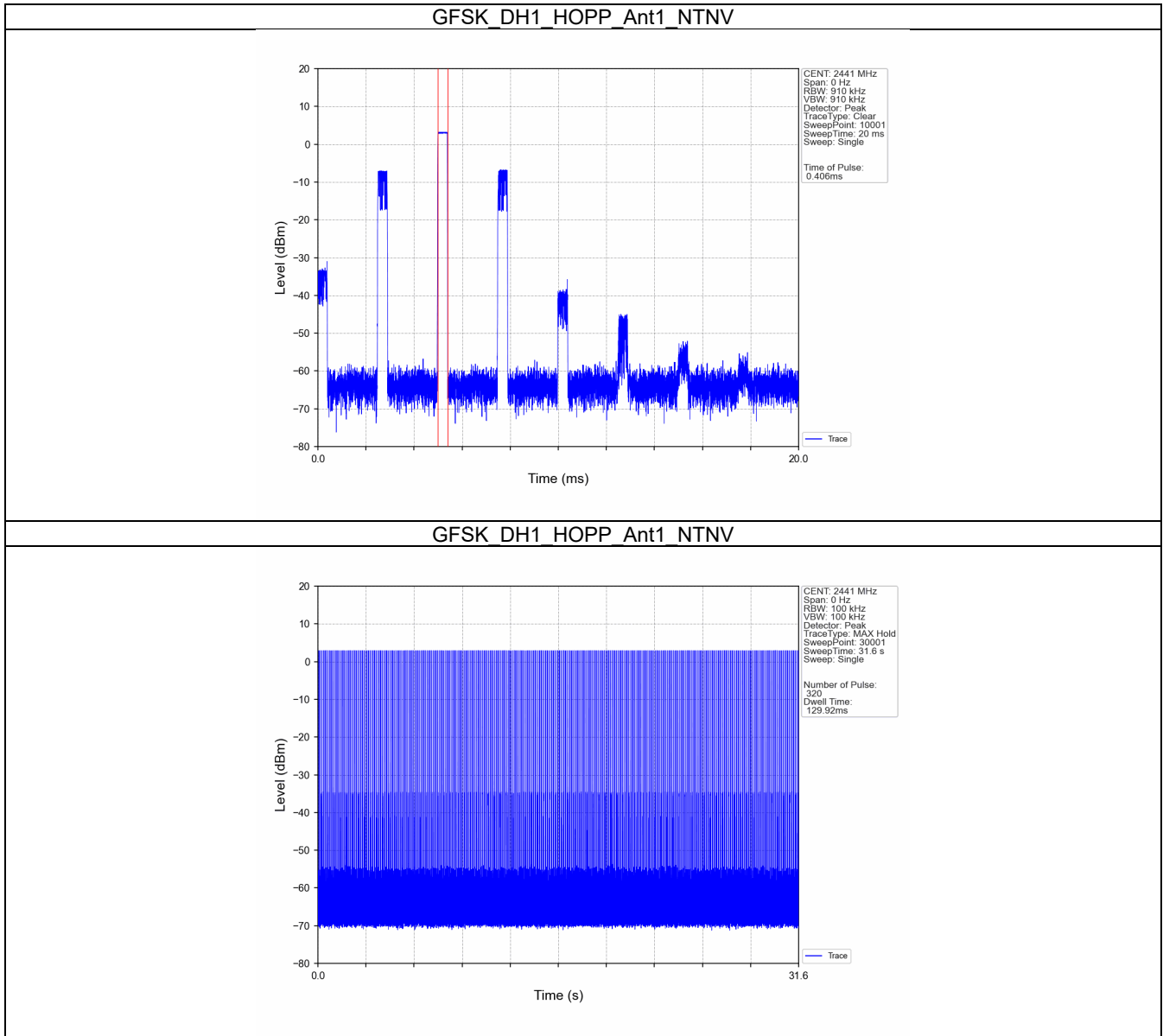
#### 5.1.1 Ant1

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	0.406	31.600	320	129.920	<=400	Pass
			DH3	1.662	31.600	160	265.920	<=400	Pass
			DH5	2.906	31.600	106	308.036	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.414	31.600	320	132.480	<=400	Pass
			2DH3	1.664	31.600	160	266.240	<=400	Pass
			2DH5	2.912	31.600	106	308.672	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.412	31.600	320	131.840	<=400	Pass
			3DH3	1.662	31.600	160	265.920	<=400	Pass
			3DH5	2.914	31.600	106	308.884	<=400	Pass

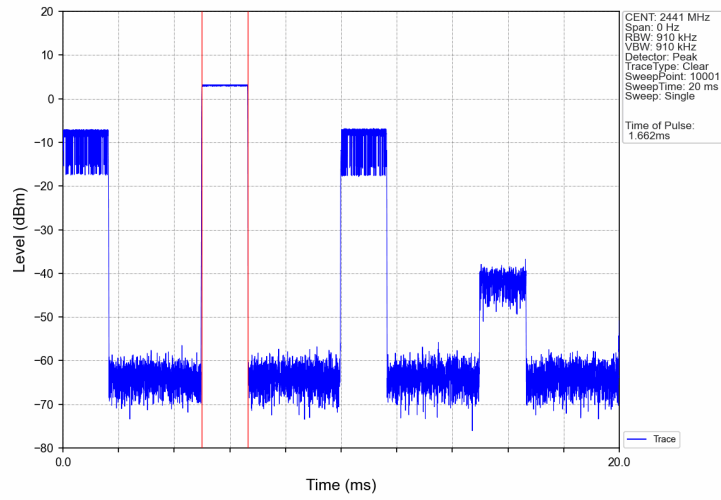


## 5.2 Test Graph

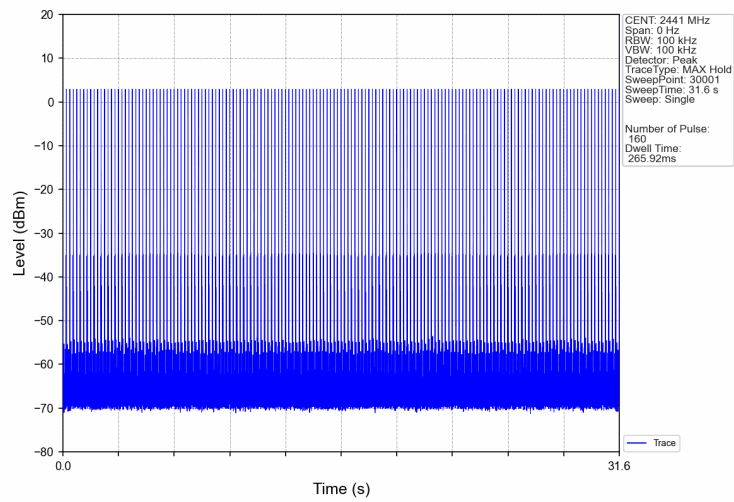
### 5.2.1 Ant1



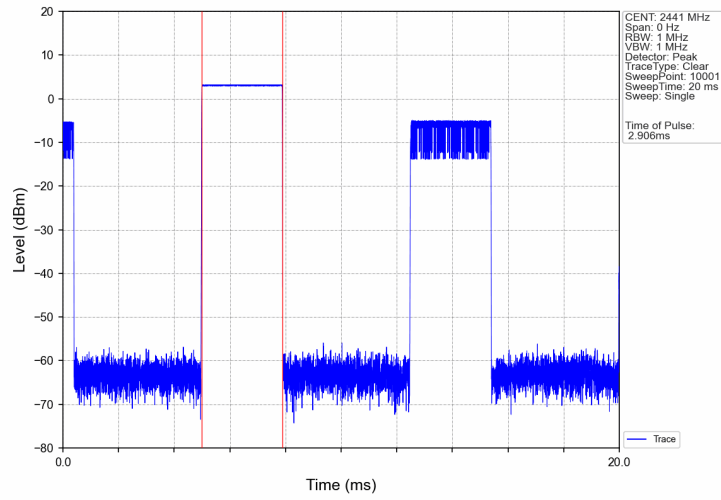
GFSK DH3\_HOPP\_Ant1\_NTNV



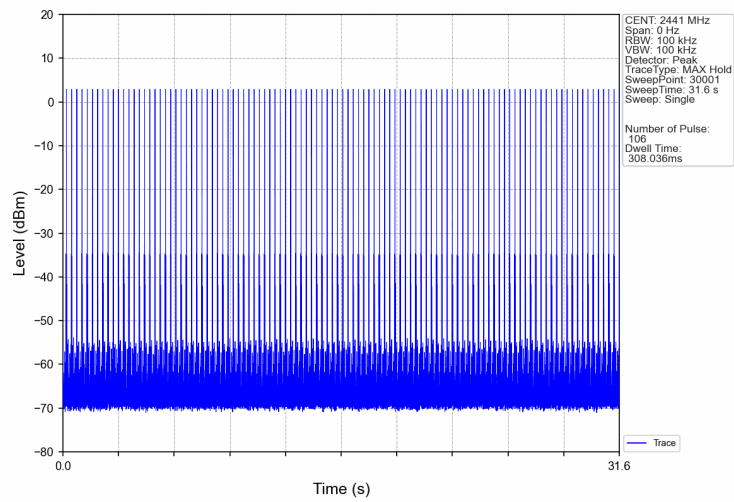
GFSK DH3\_HOPP\_Ant1\_NTNV



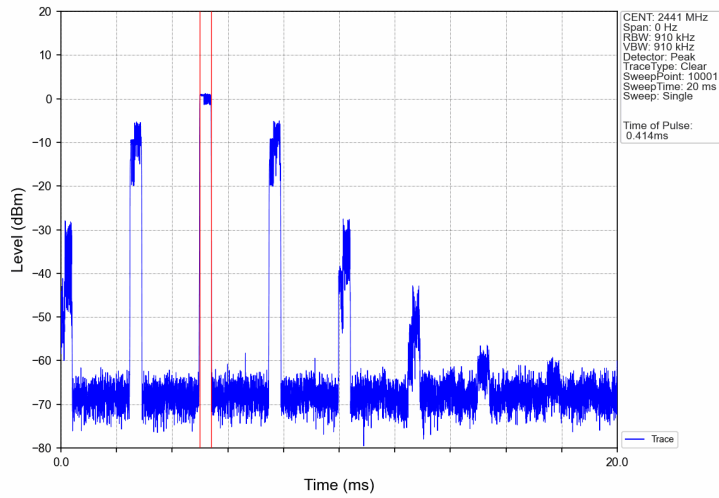
GFSK DH5 HOPP Ant1 NTN



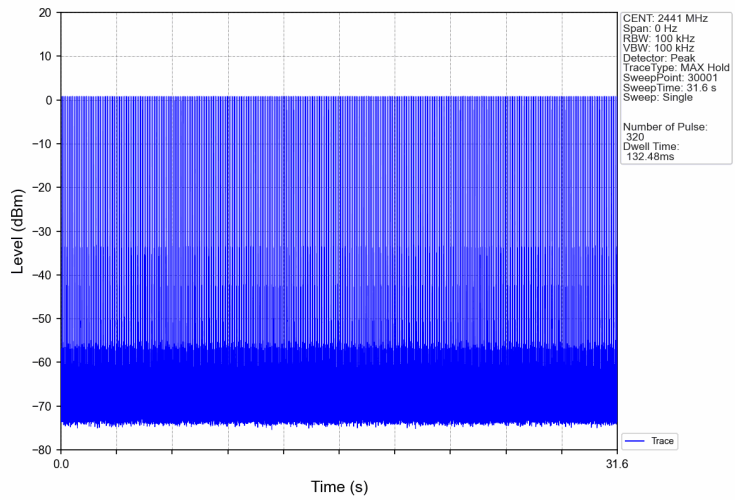
GFSK DH5 HOPP Ant1 NTN



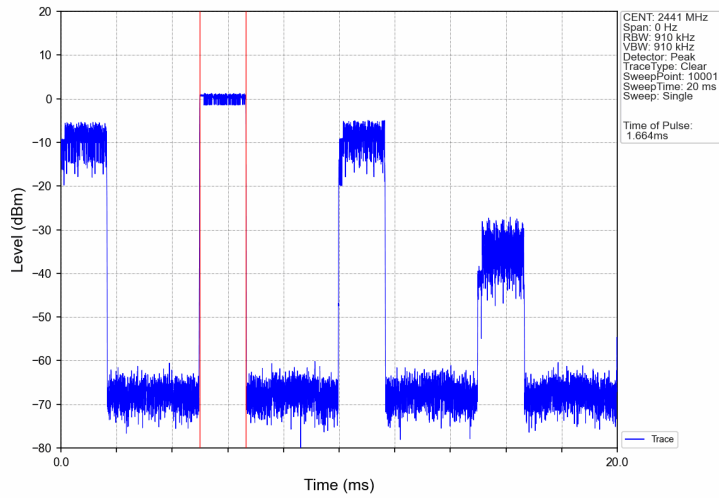
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



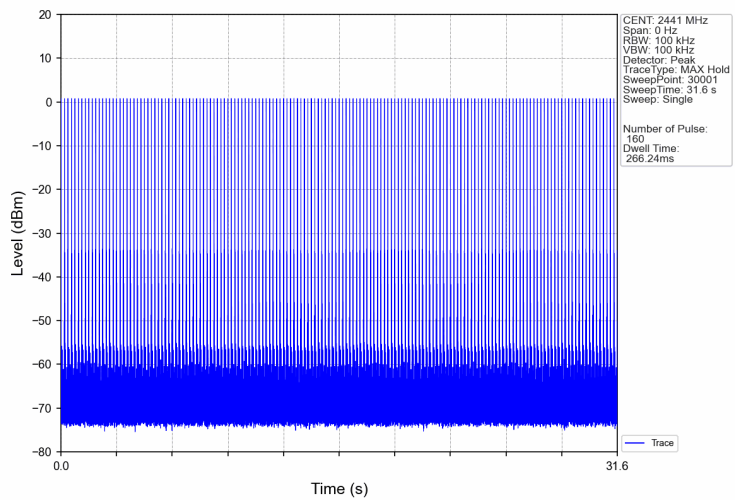
Pi/4DQPSK 2DH1 HOPP Ant1 NTN



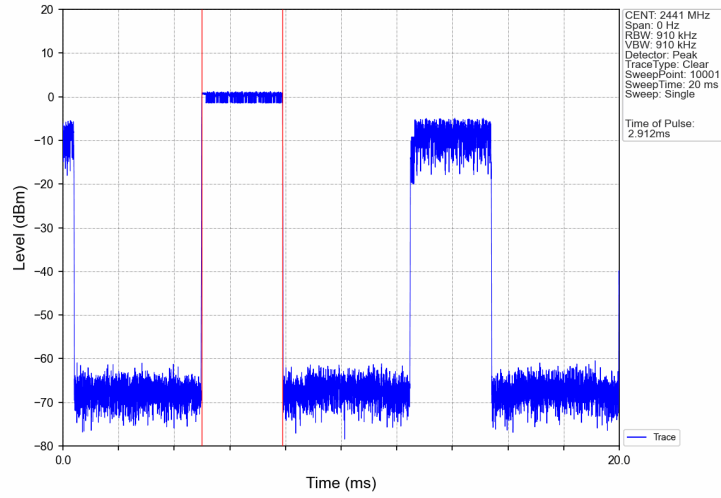
Pi/4DQPSK\_2DH3\_HOPP\_Ant1\_NTNV



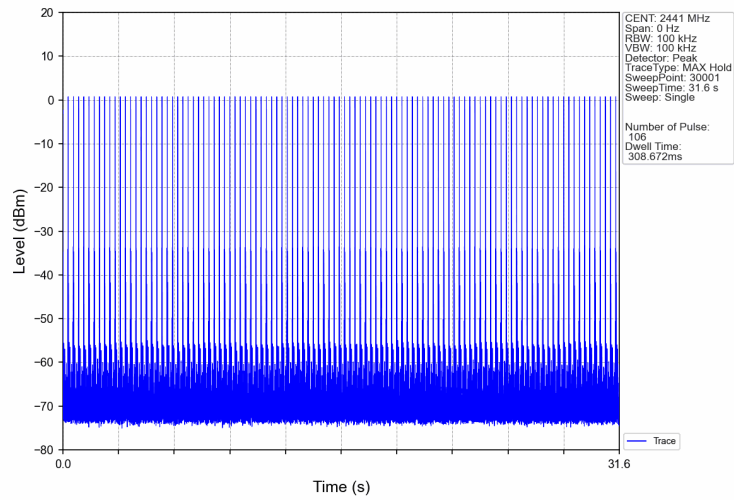
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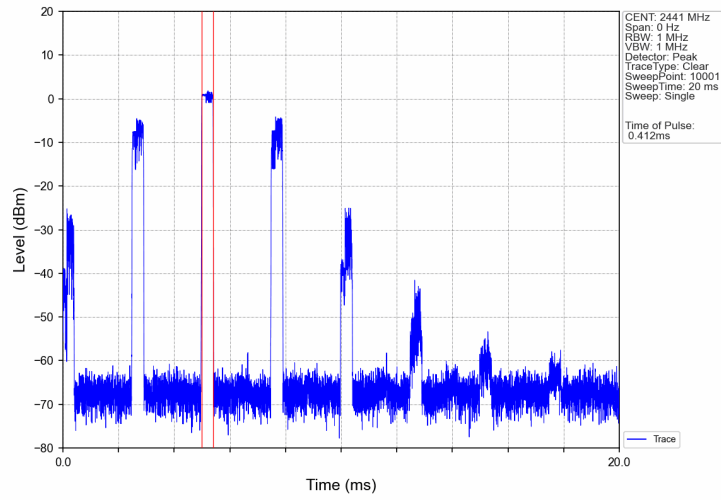
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



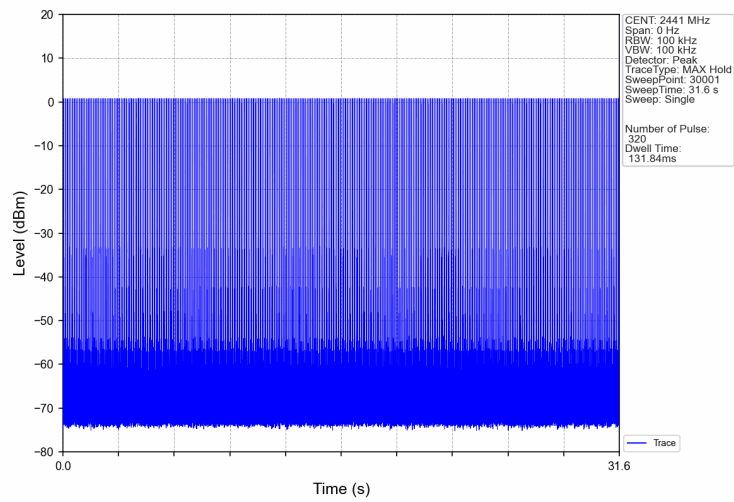
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



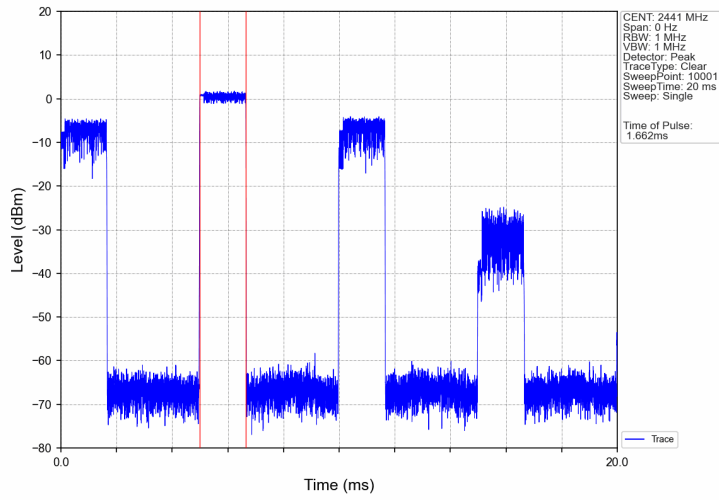
8DPSK 3DH1 HOPP\_Ant1\_NTNV



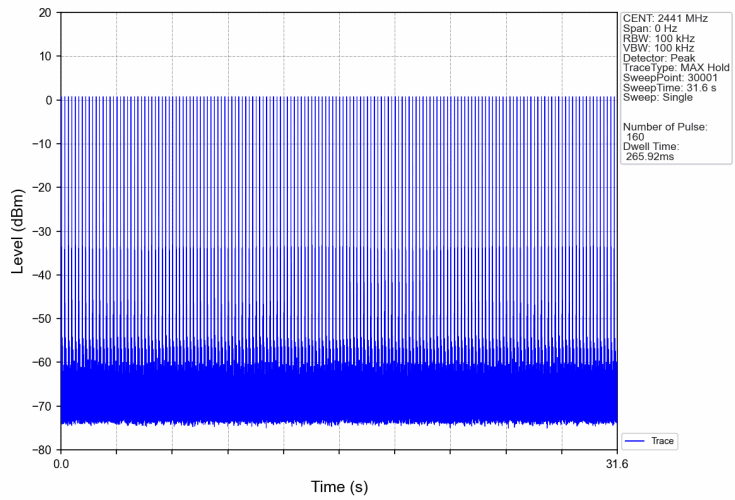
8DPSK 3DH1 HOPP\_Ant1\_NTNV



8DPSK 3DH3 HOPP\_Ant1\_NTNV

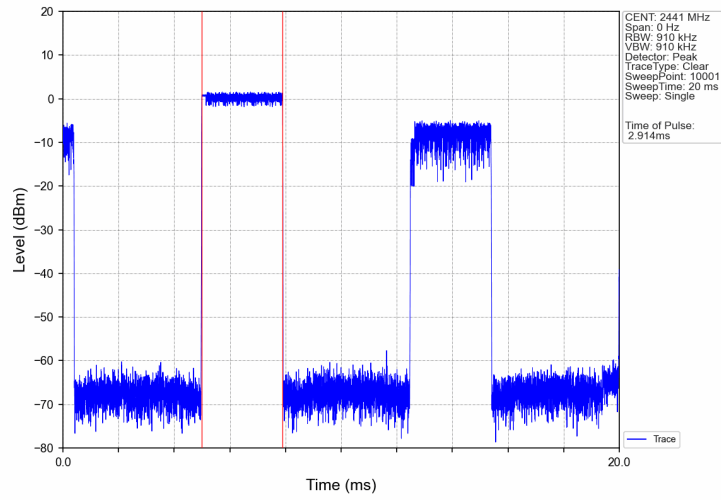


8DPSK 3DH3 HOPP\_Ant1\_NTNV

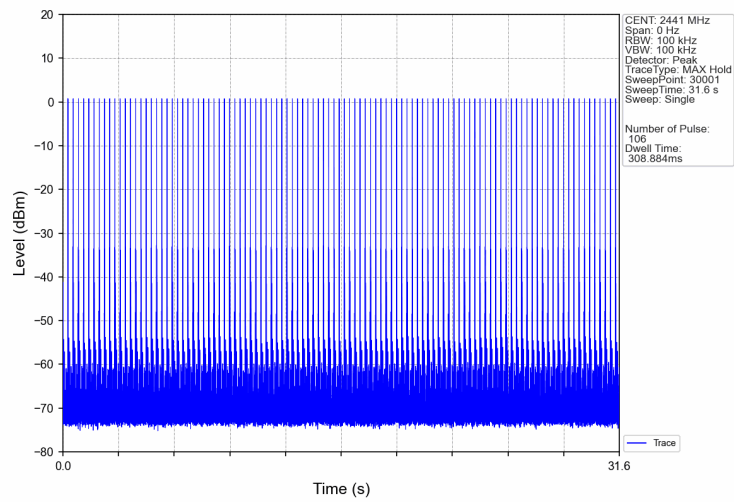




8DPSK 3DH5 HOPP\_Ant1\_NTNV



8DPSK 3DH5 HOPP\_Ant1\_NTNV



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

### 6.1 Test Result

#### 6.1.1 Ref

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	3.48
		2441	DH5	1	3.06
		2480	DH5	1	2.70
		HOPP	DH5	1	4.23
					4.23
Pi/4DQPSK	SISO	2402	2DH5	1	0.95
		2441	2DH5	1	0.85
		2480	2DH5	1	0.46
		HOPP	2DH5	1	2.14
					2.14
8DPSK	SISO	2402	3DH5	1	1.02
		2441	3DH5	1	0.94
		2480	3DH5	1	0.53
		HOPP	3DH5	1	2.19
					2.19

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.

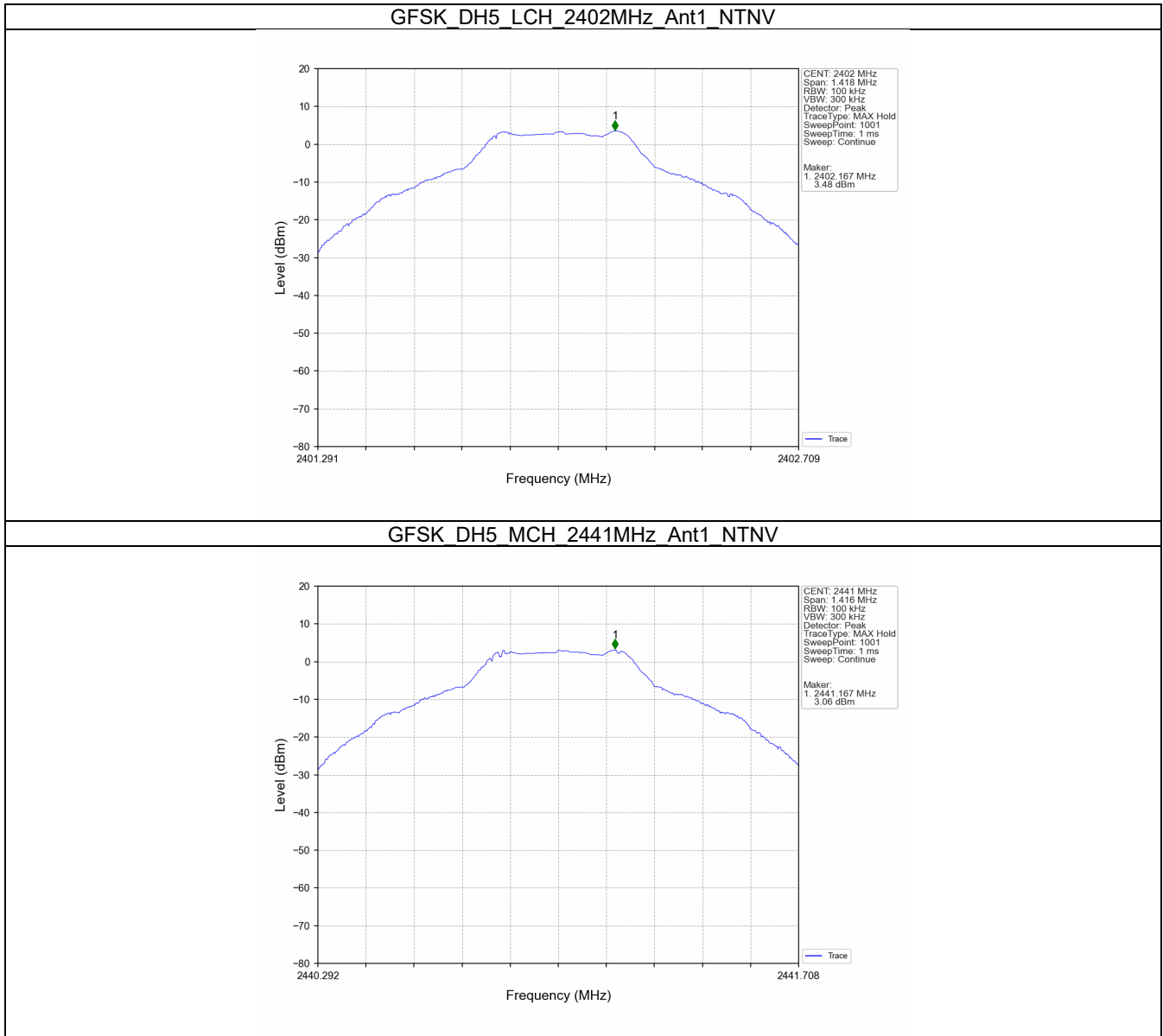
#### 6.1.2 CSE

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	3.48	-16.52	Pass
		2441	DH5	1	3.06	-16.94	Pass
		2480	DH5	1	2.70	-17.30	Pass
		HOPP	DH5	1	4.23	-15.77	Pass
					4.23	-15.77	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	0.95	-19.05	Pass
		2441	2DH5	1	0.85	-19.15	Pass
		2480	2DH5	1	0.46	-19.54	Pass
		HOPP	2DH5	1	2.14	-17.86	Pass
					2.14	-17.86	Pass
8DPSK	SISO	2402	3DH5	1	1.02	-18.98	Pass
		2441	3DH5	1	0.94	-19.06	Pass
		2480	3DH5	1	0.53	-19.47	Pass
		HOPP	3DH5	1	2.19	-17.81	Pass
					2.19	-17.81	Pass

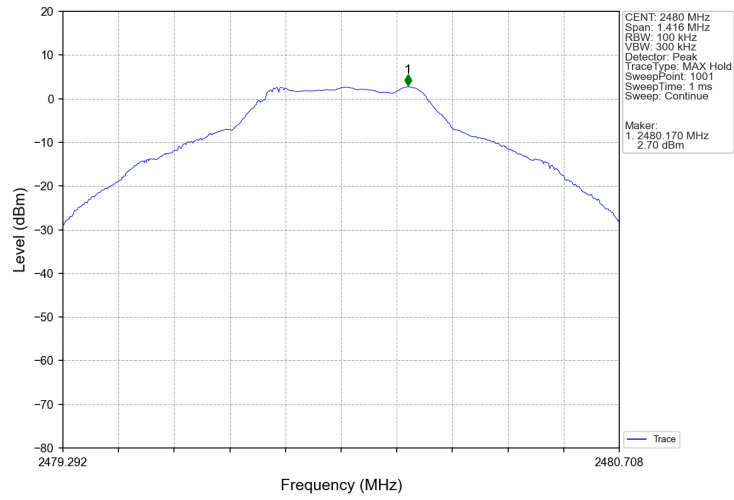
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

## 6.2 Test Graph

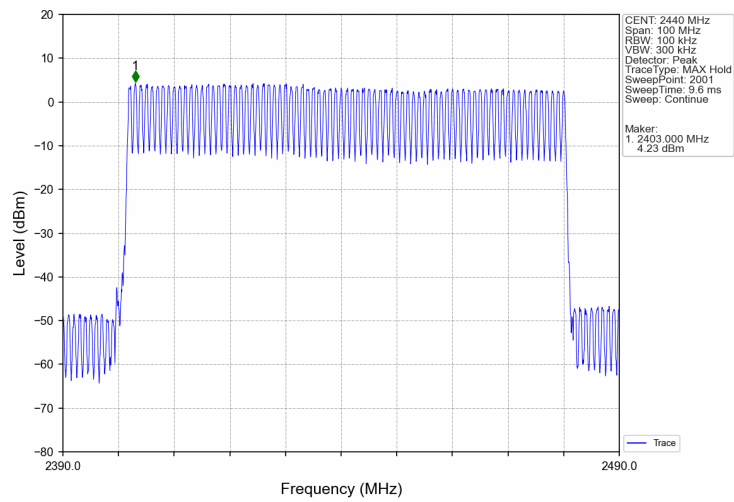
### 6.2.1 Ref



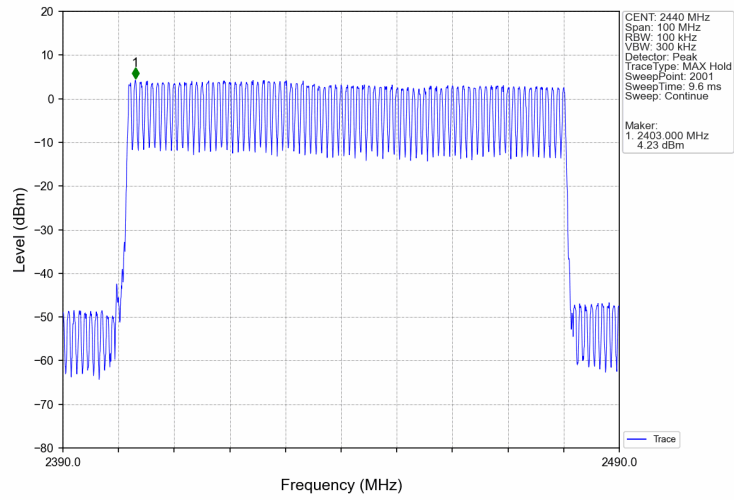
GFSK DH5 HCH 2480MHz Ant1 NTN



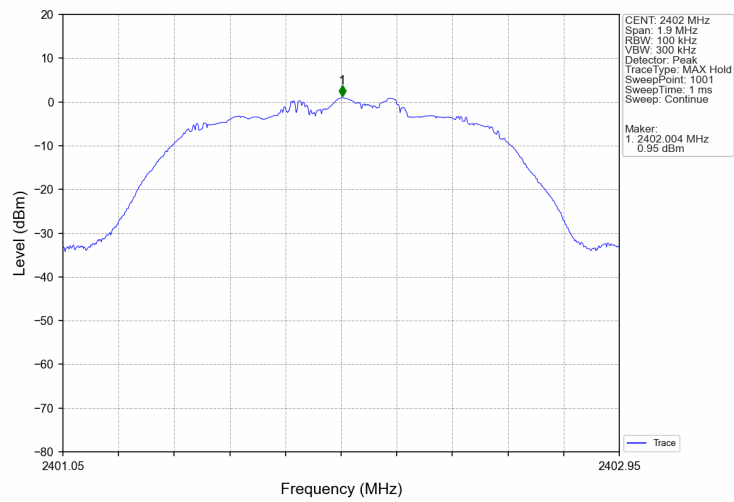
GFSK DH5 HOPP Ant1 NTN



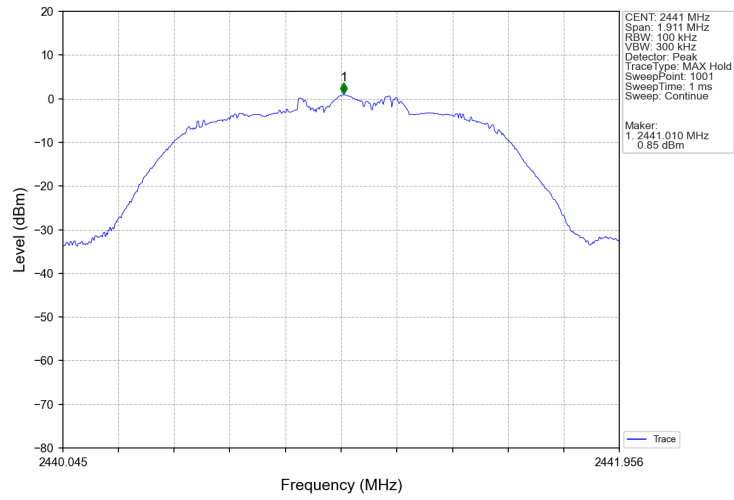
### GFSK DH5 HOPP Ant1 NTN



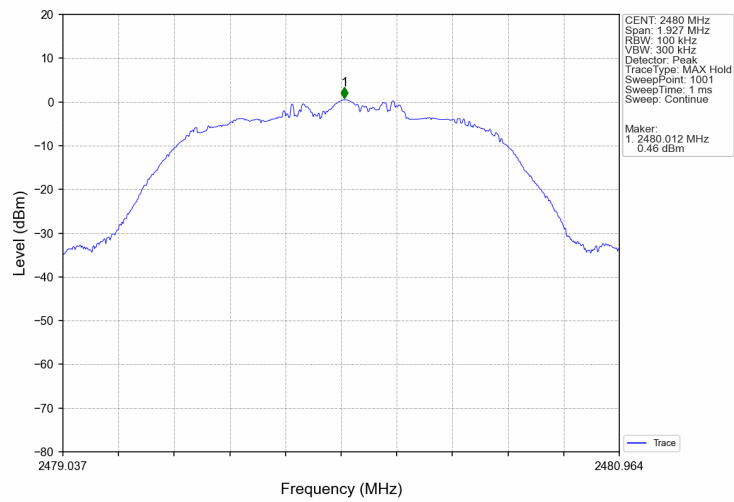
### Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



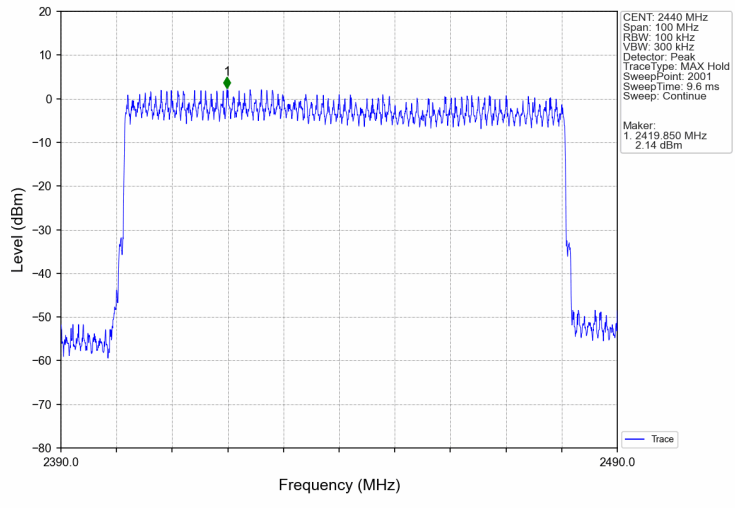
Pi/4DQPSK 2DH5 MCH 2441MHz Ant1 NTN



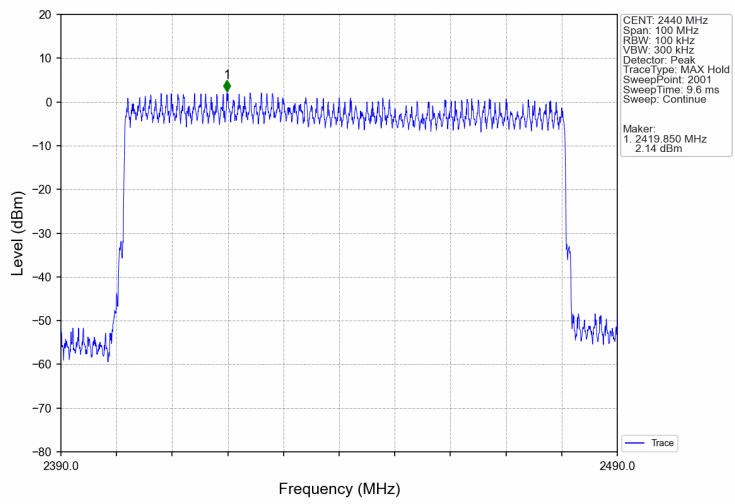
Pi/4DQPSK 2DH5 HCH 2480MHz Ant1 NTN



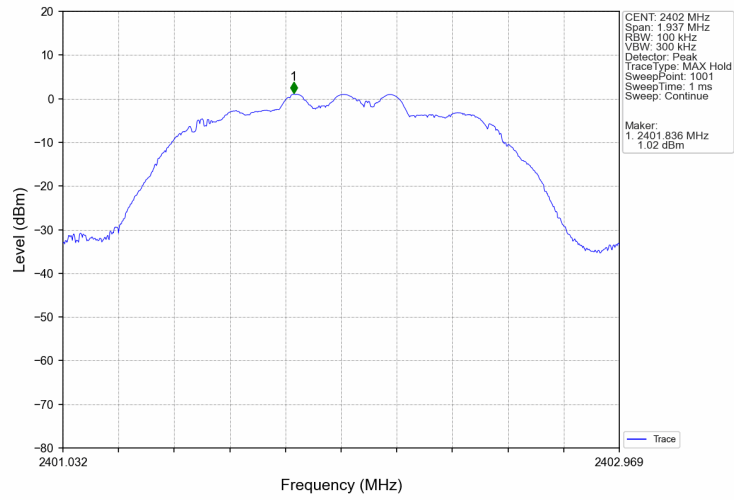
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



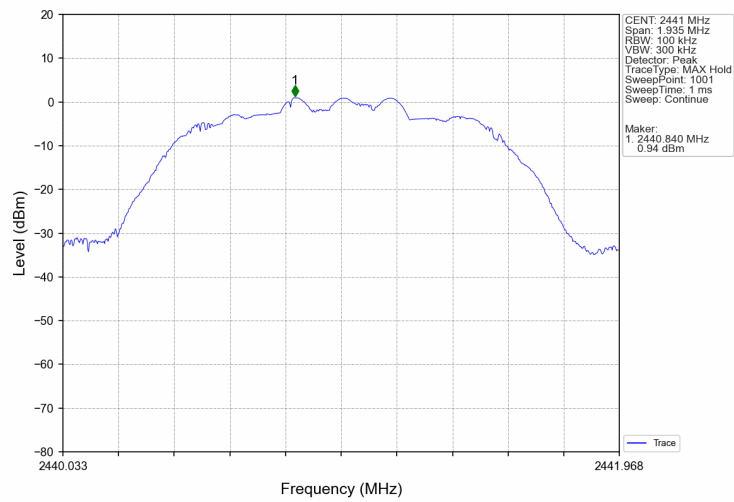
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



8DPSK 3DH5 LCH 2402MHz Ant1 NTN

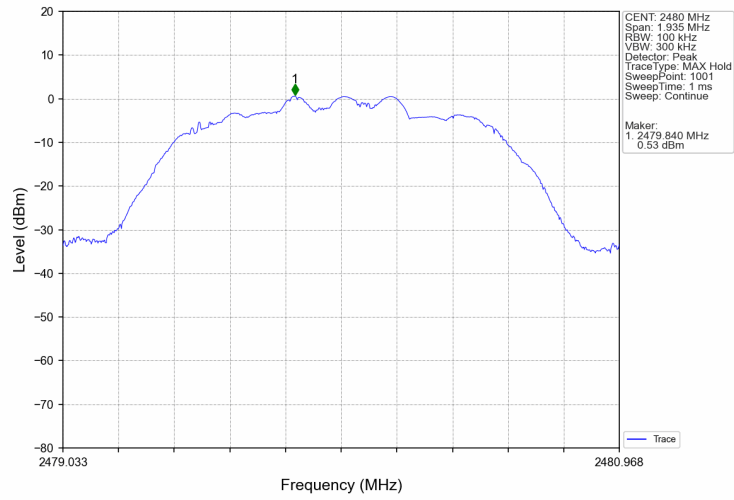


8DPSK 3DH5 MCH 2441MHz Ant1 NTN

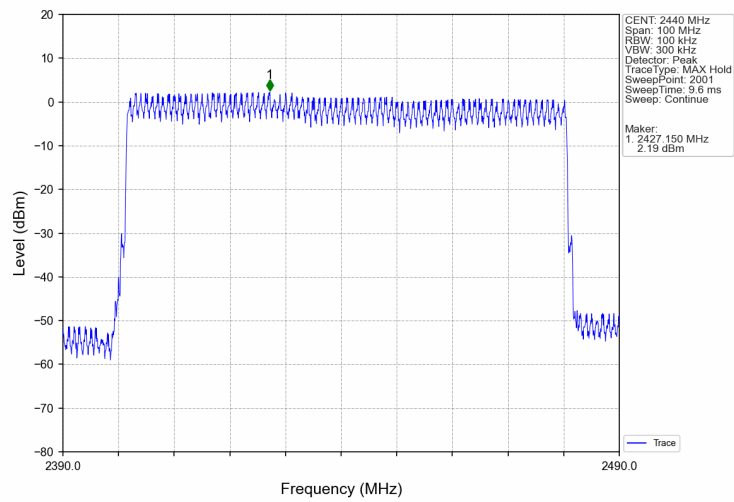




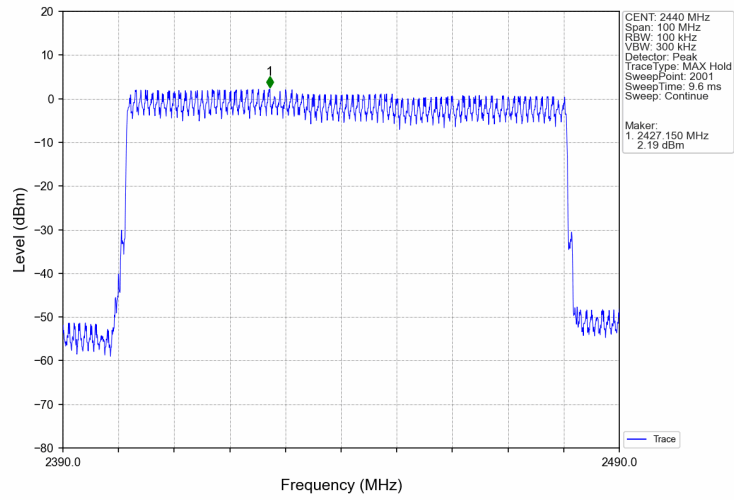
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8DPSK 3DH5 HOPP\_Ant1\_NTNV

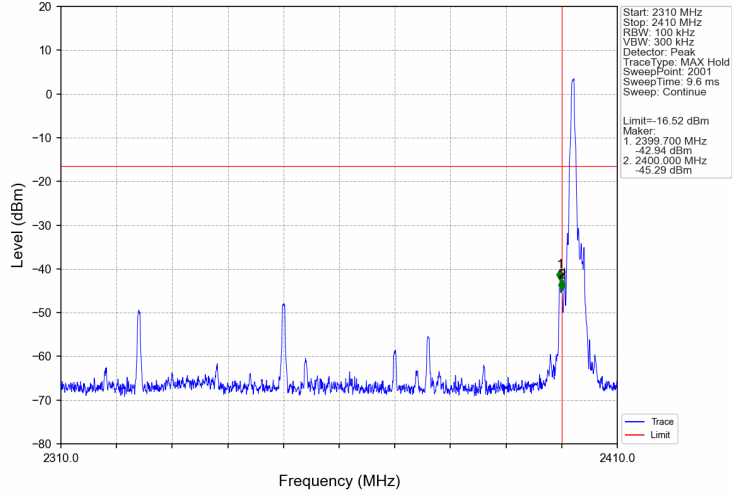


8DPSK 3DH5 HOPP Ant1 NTVN

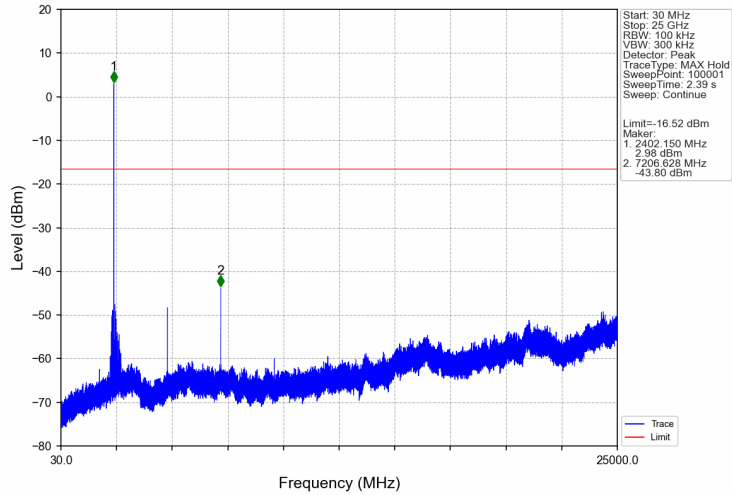


6.2.2 CSE

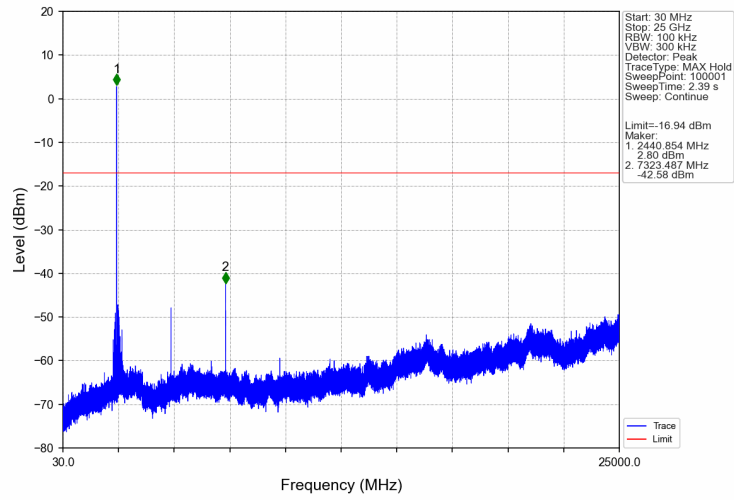
GFSK DH5 LCH 2402MHz Ant1 NTN



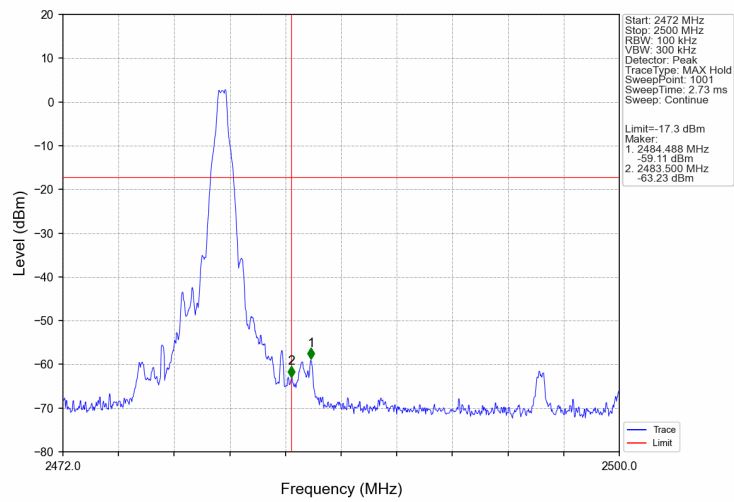
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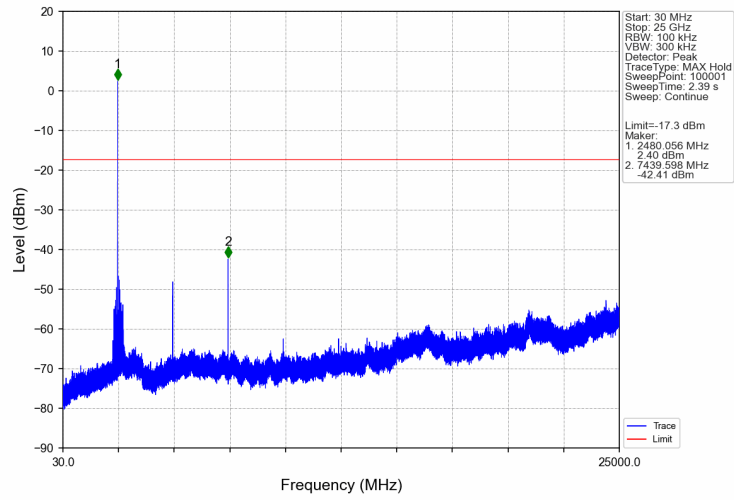
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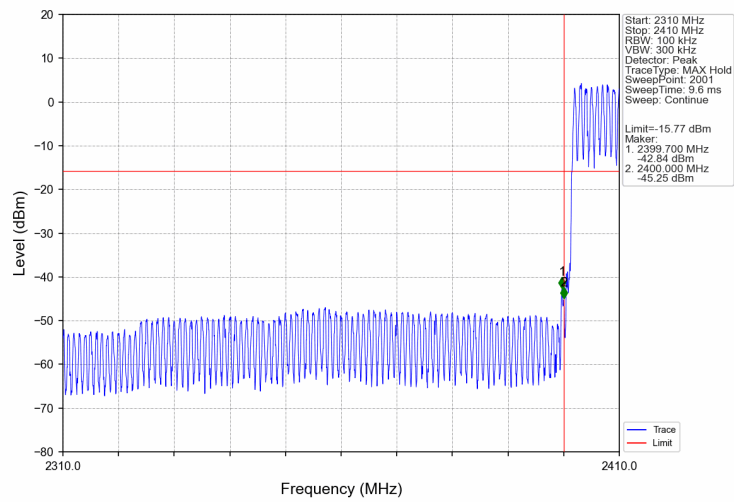
GFSK DH5 HCH 2480MHz Ant1 NTN



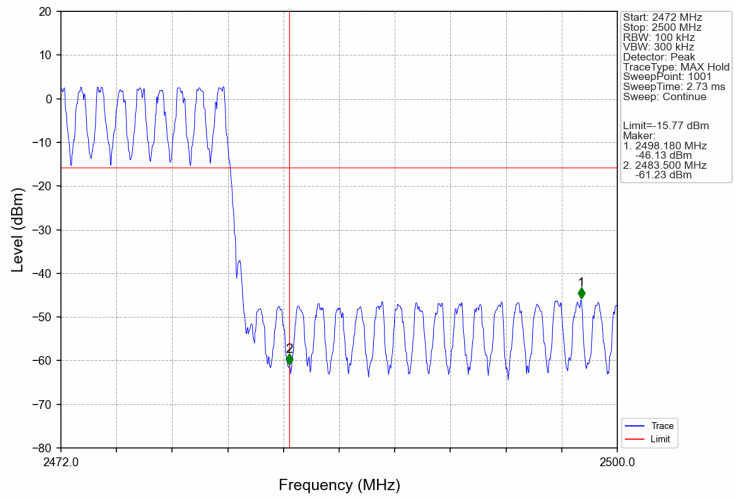
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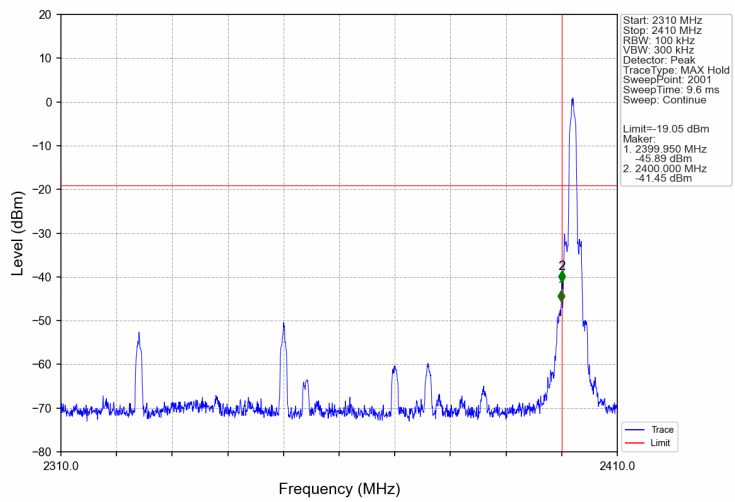
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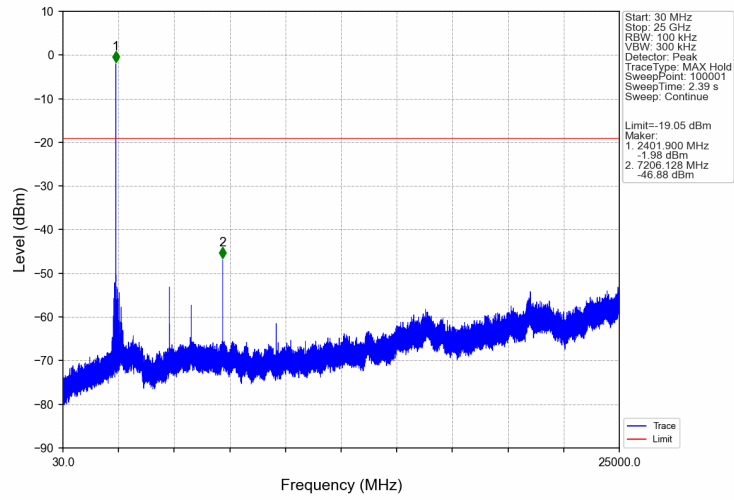
GFSK DH5 HOPP Ant1 NTN



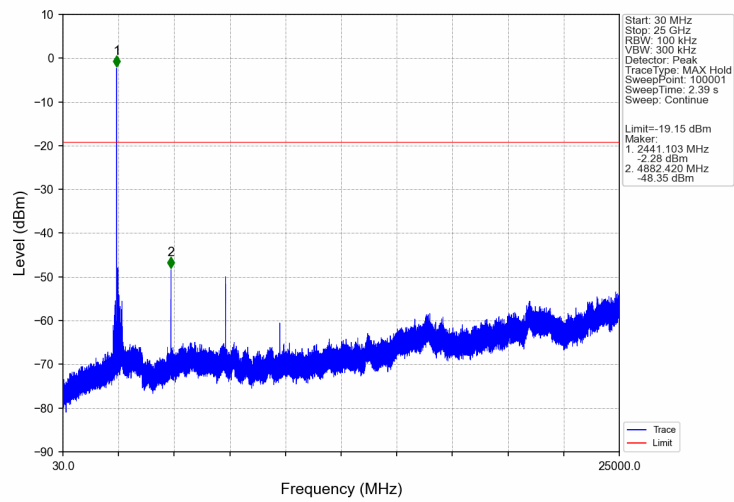
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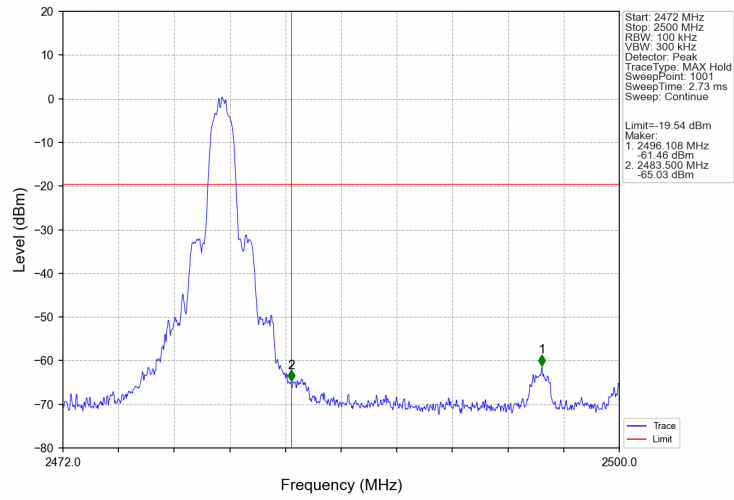
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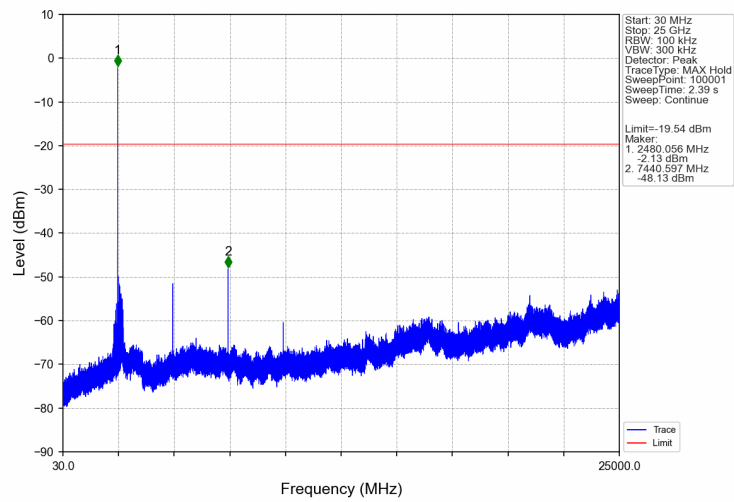
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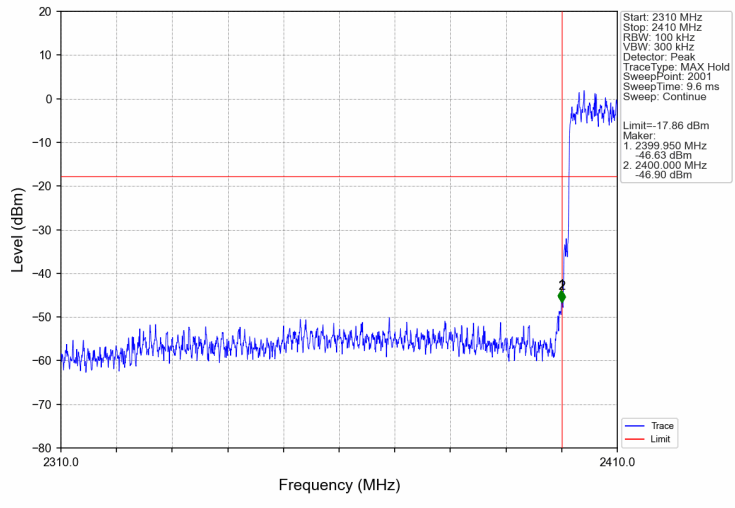


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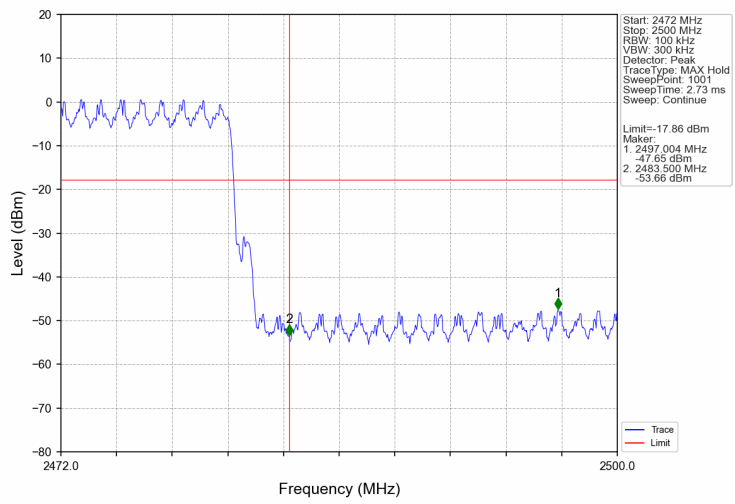




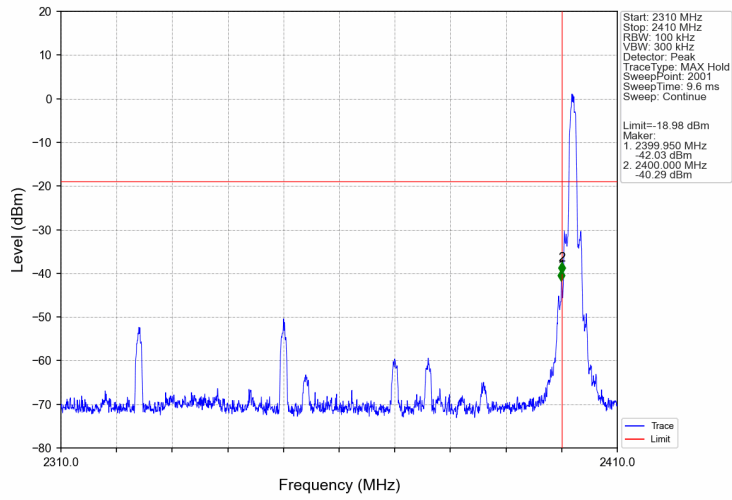
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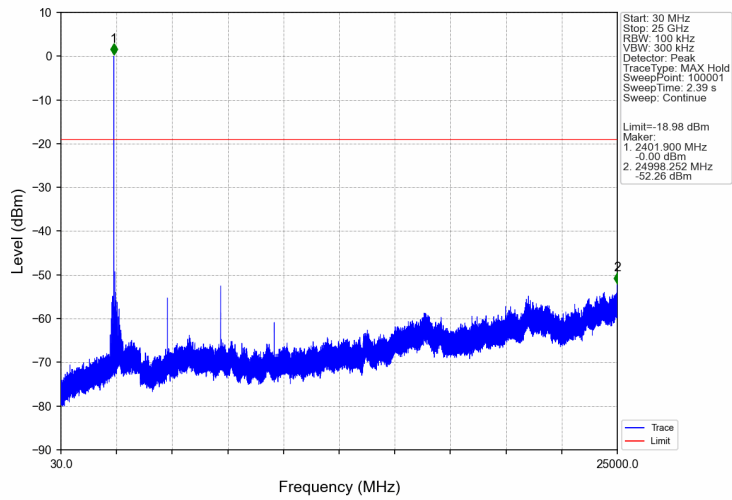
Pi/4DQPSK 2DH5 HOPP Ant1 NTN



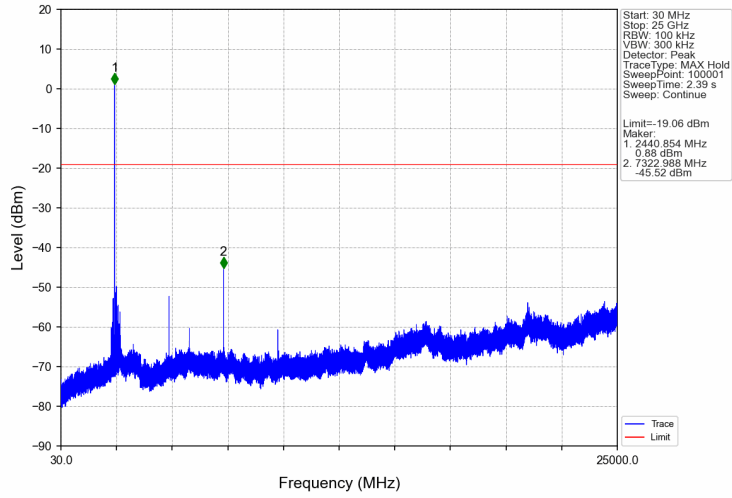
8DPSK 3DH5 LCH 2402MHz Ant1 NTV



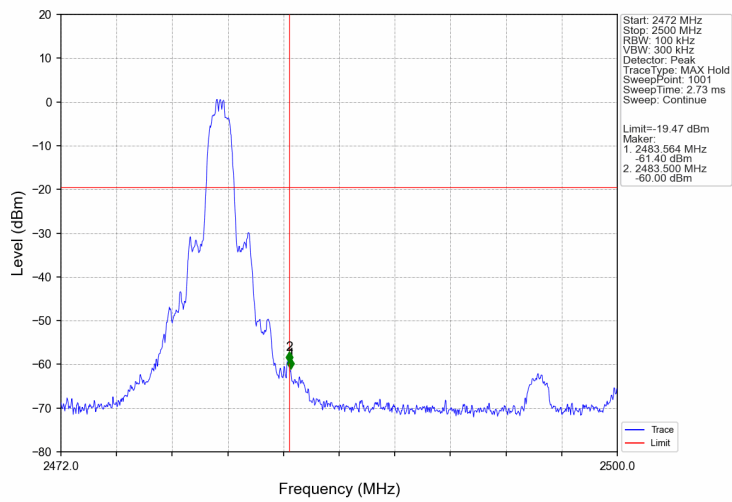
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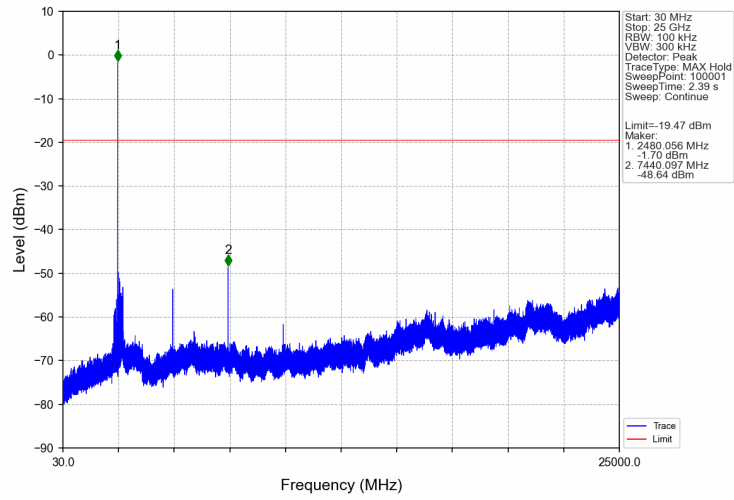
8DPSK 3DH5 MCH 2441MHz Ant1 NTN



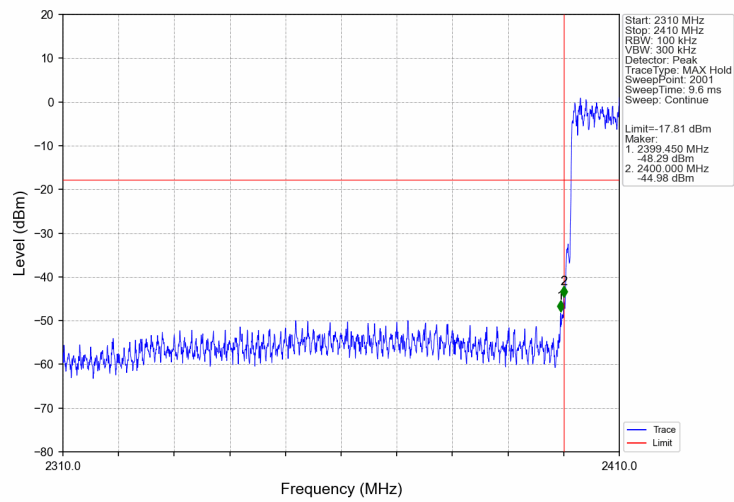
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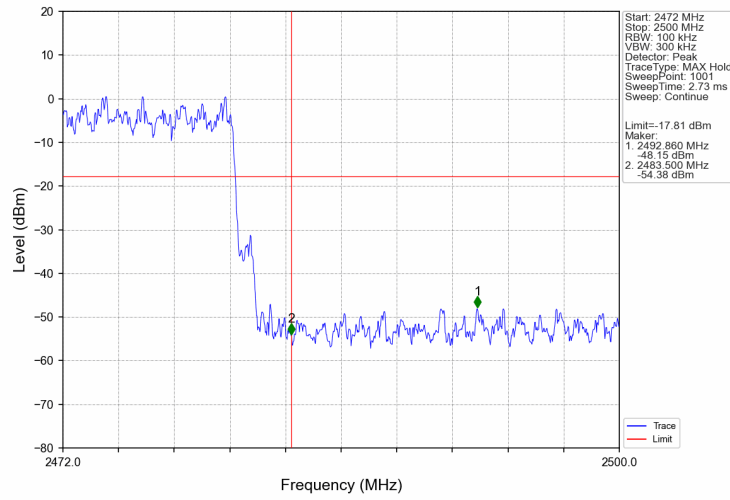
8DPSK 3DH5 HCH 2480MHz Ant1 NTNV



8DPSK 3DH5 HOPP Ant1 NTNV



8DPSK 3DH5 HOPP Ant1 NTN



## 7. Form731

### 7.1 Test Result

#### 7.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2402	2480	0.0023	3.60