



## 9 Appendix

### 9.1 Appendix 15.247

#### 1. Bandwidth

##### 1.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	1.021	PASS
	2441	SISO	1	1.021	PASS
	2480	SISO	1	0.966	PASS
Pi/4DQPSK	2402	SISO	1	1.375	PASS
	2441	SISO	1	1.373	PASS
	2480	SISO	1	1.374	PASS
8DPSK	2402	SISO	1	1.356	PASS
	2441	SISO	1	1.355	PASS
	2480	SISO	1	1.354	PASS



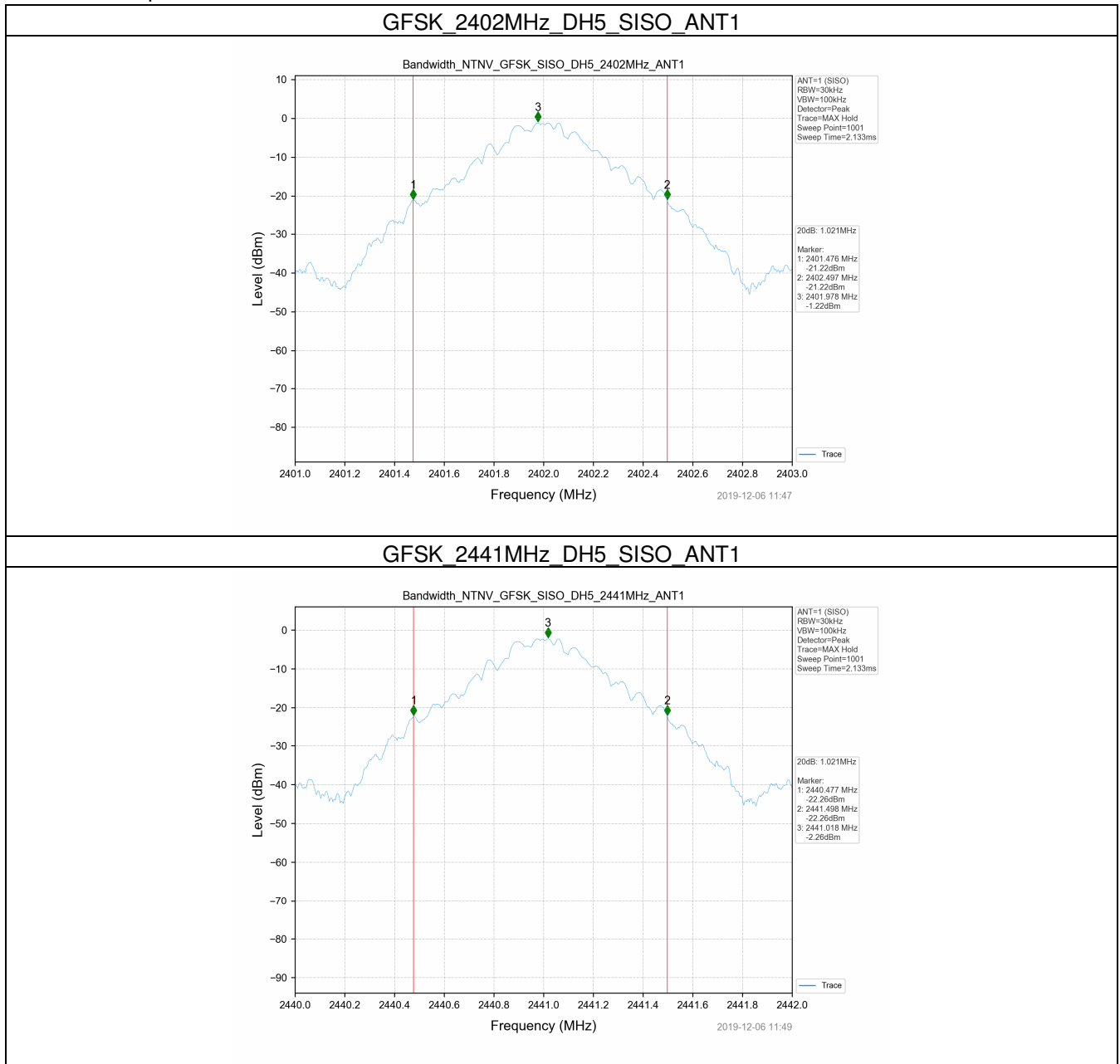
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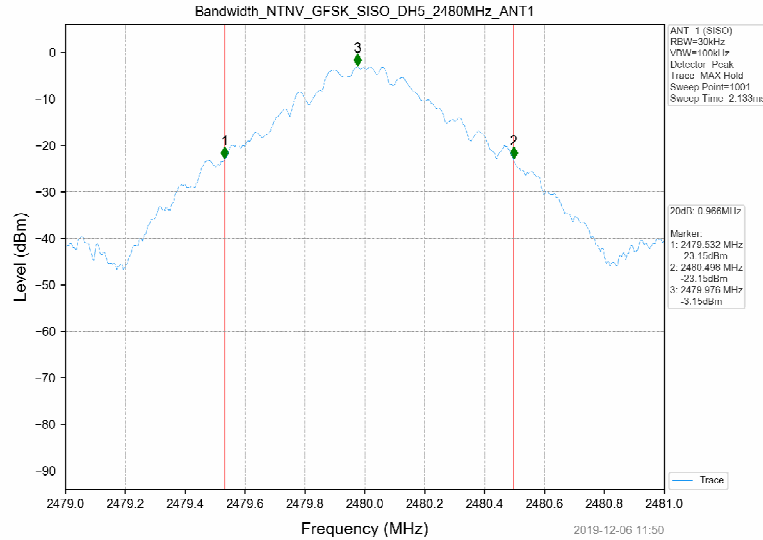
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中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



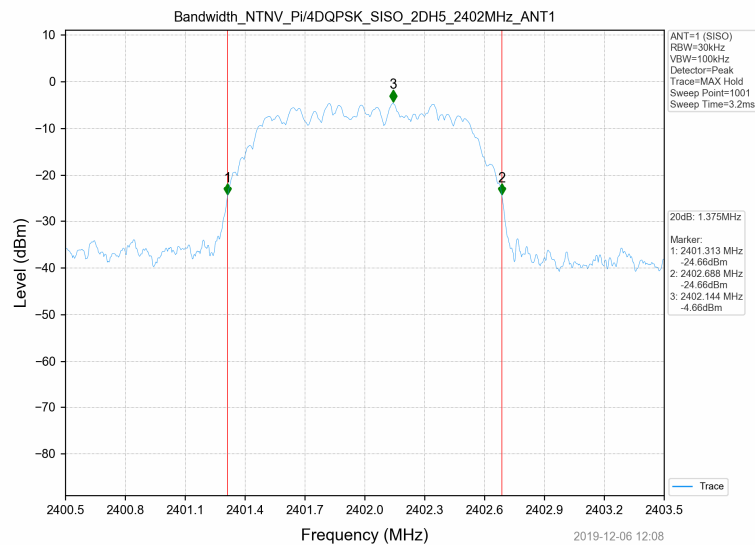
1.2 Test Graph - 20dB Bandwidth



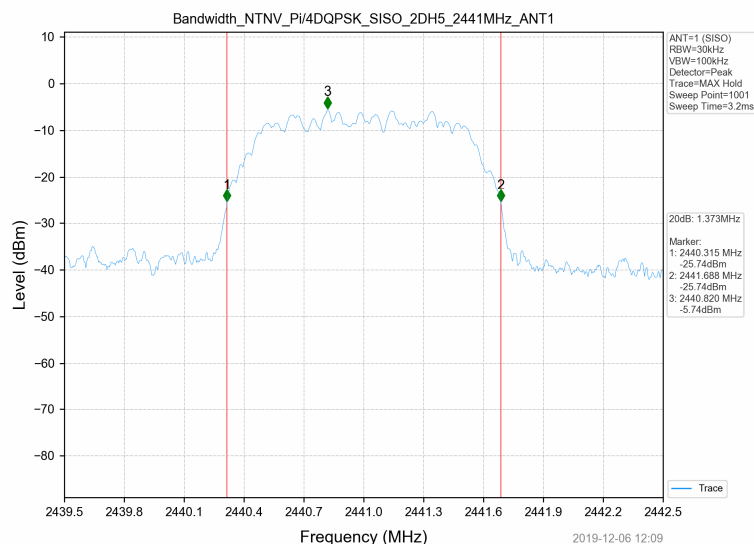
### GFSK\_2480MHz\_DH5\_SISO\_ANT1



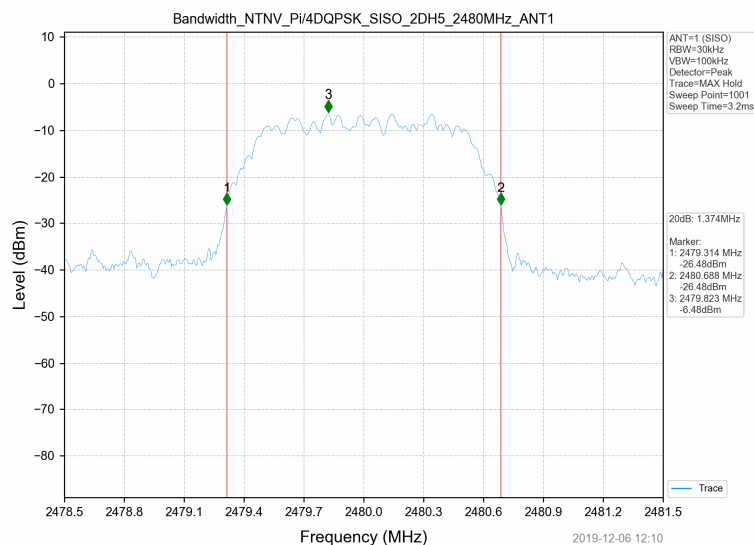
### Pi/4DQPSK\_2402MHz\_2DH5\_SISO\_ANT1



### Pi/4DQPSK\_2441MHz\_2DH5\_SISO\_ANT1

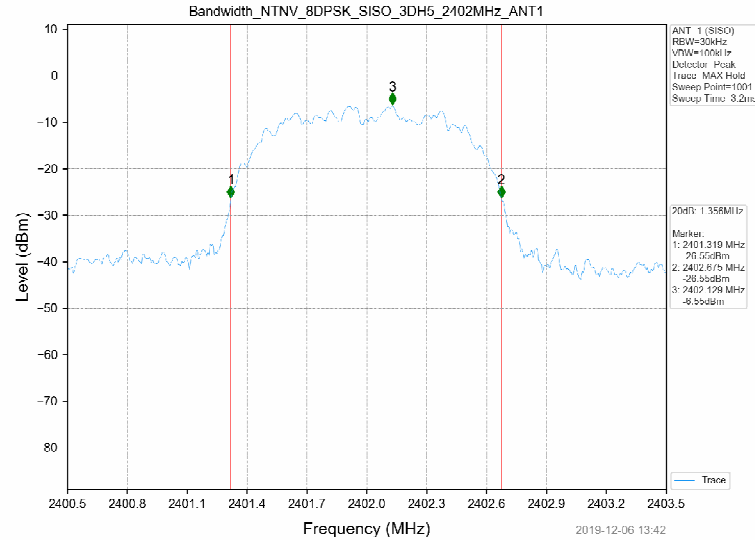


### Pi/4DQPSK\_2480MHz\_2DH5\_SISO\_ANT1

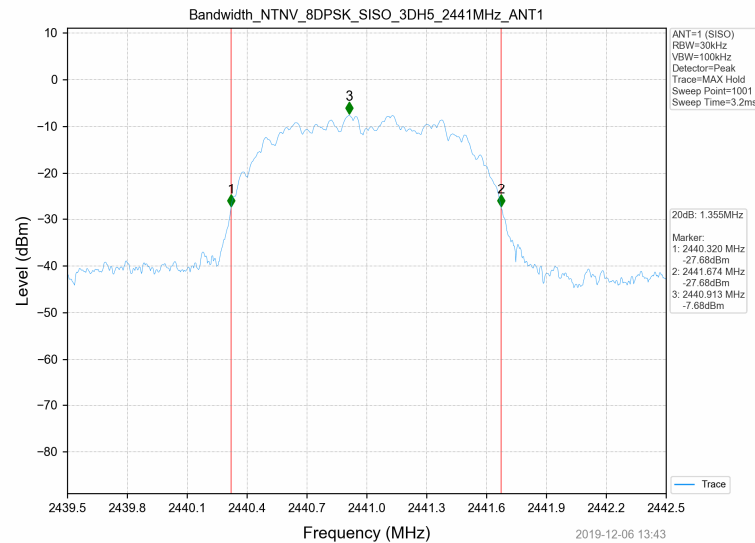




8DPSK\_2402MHz\_3DH5\_SISO\_ANT1



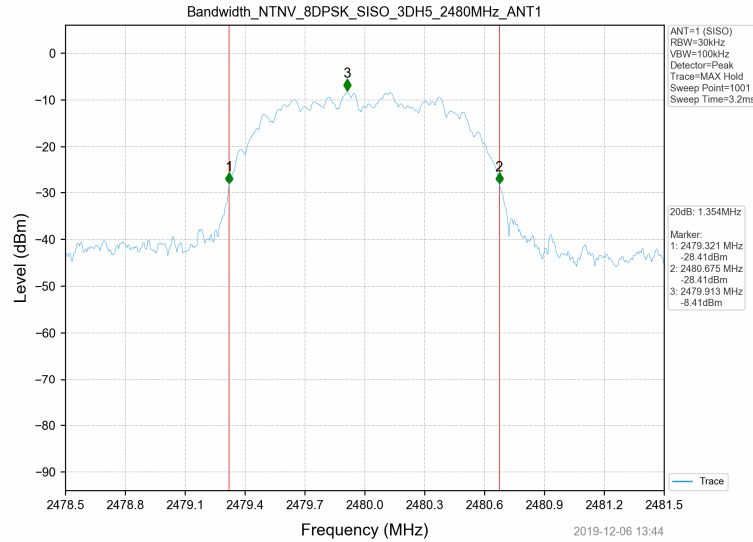
8DPSK\_2441MHz\_3DH5\_SISO\_ANT1







8DPSK\_2480MHz\_3DH5\_SISO\_ANT1



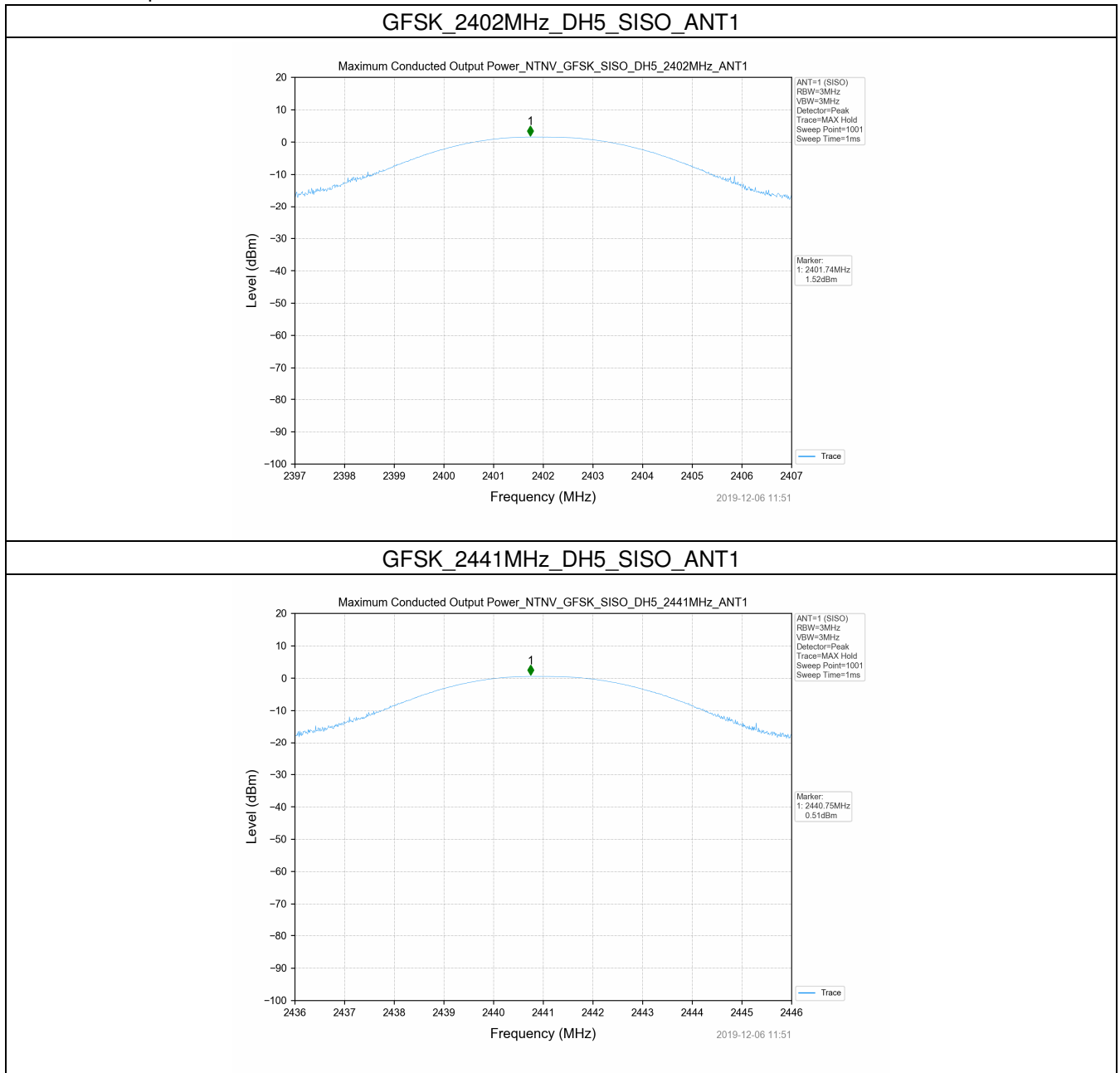
## 2. Maximum Conducted Output Power

### 2.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	1.52	≤20.97	PASS
	2441	SISO	0.51	≤20.97	PASS
	2480	SISO	-0.40	≤20.97	PASS
Pi/4DQPSK	2402	SISO	4.11	≤20.97	PASS
	2441	SISO	3.07	≤20.97	PASS
	2480	SISO	2.46	≤20.97	PASS
8DPSK	2402	SISO	2.12	≤20.97	PASS
	2441	SISO	1.09	≤20.97	PASS
	2480	SISO	0.43	≤20.97	PASS



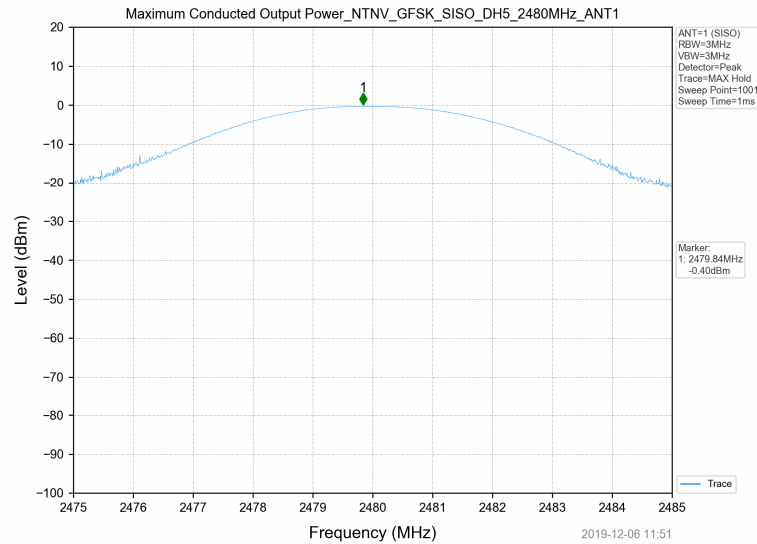
## 2.2 Test Graph



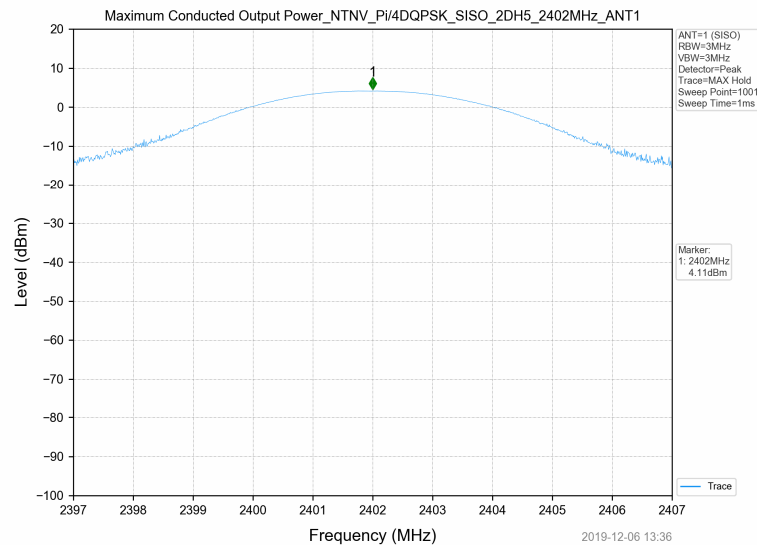




GFSK\_2480MHz\_DH5\_SISO\_ANT1

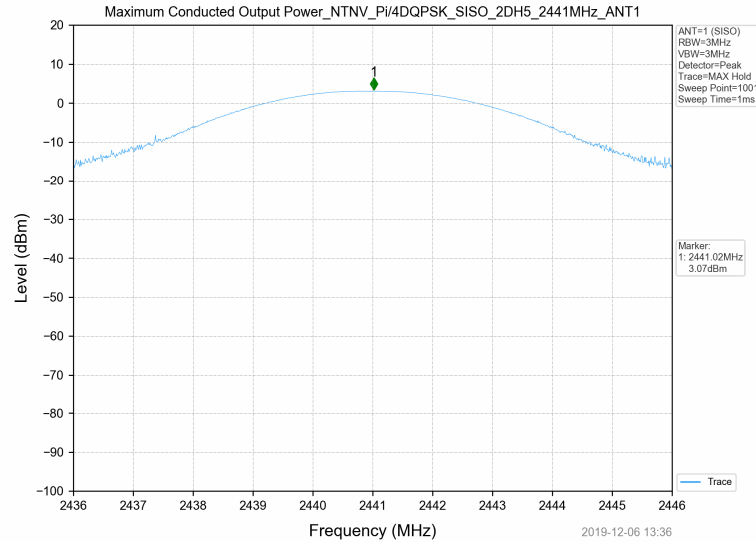


Pi/4DQPSK\_2402MHz\_2DH5\_SISO\_ANT1

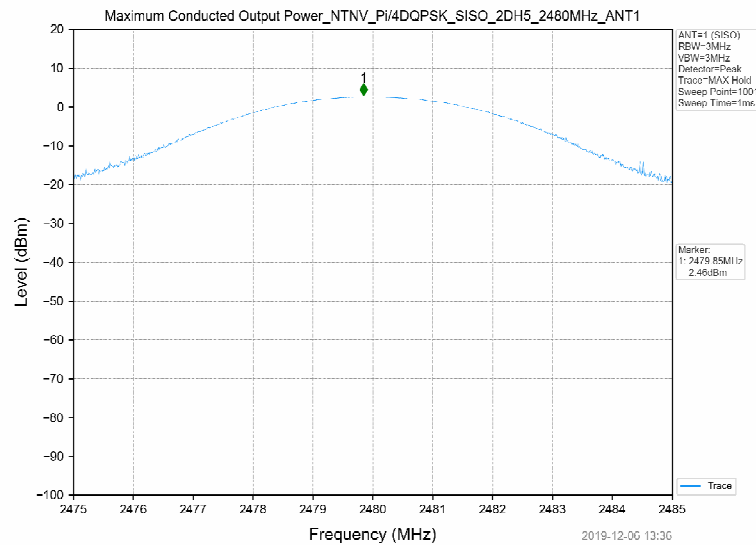




Pi/4DQPSK\_2441MHz\_2DH5\_SISO\_ANT1



Pi/4DQPSK\_2480MHz\_2DH5\_SISO\_ANT1

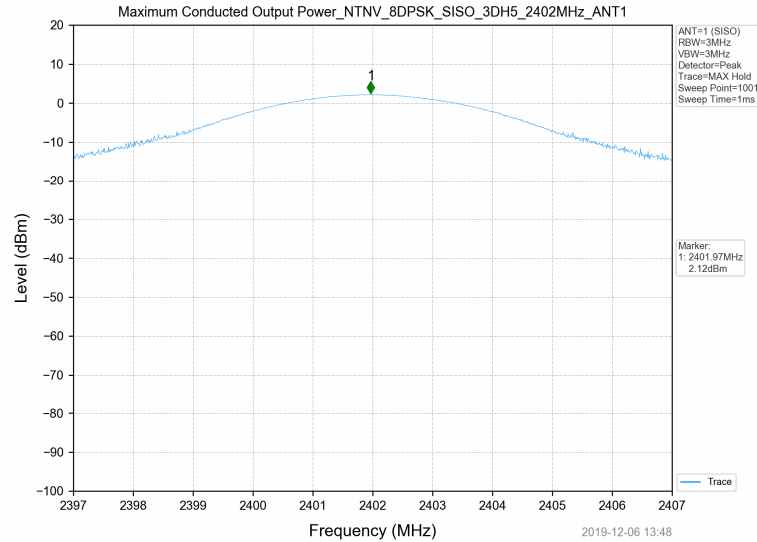


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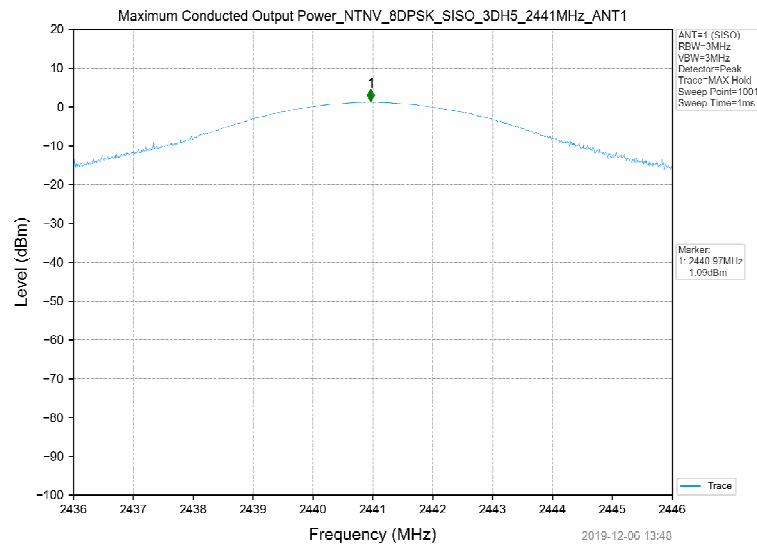
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**8DPSK\_2402MHz\_3DH5\_SISO\_ANT1**



**8DPSK\_2441MHz\_3DH5\_SISO\_ANT1**



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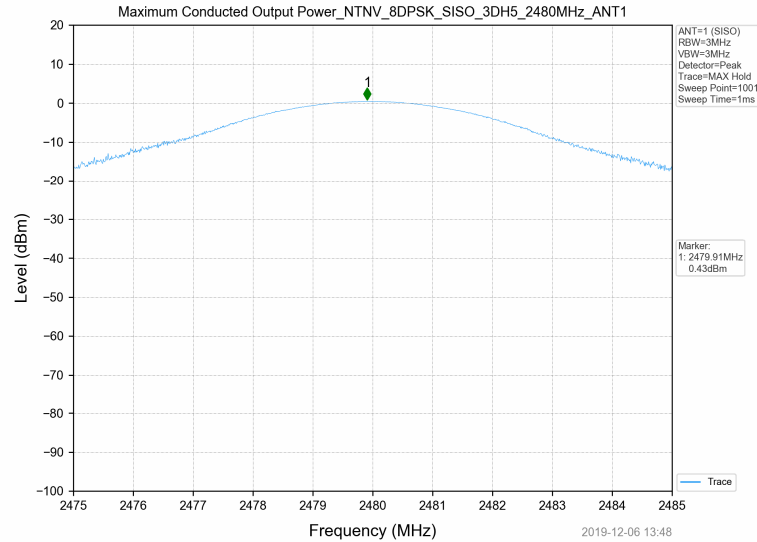
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8DPSK\_2480MHz\_3DH5\_SISO\_ANT1





### 3. Carrier frequency separation

#### 3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	1.008	1.021	$\geq 0.681$	PASS
Pi/4DQPSK	SISO	1	0.975	1.375	$\geq 0.917$	PASS
8DPSK	SISO	1	1.011	1.356	$\geq 0.904$	PASS



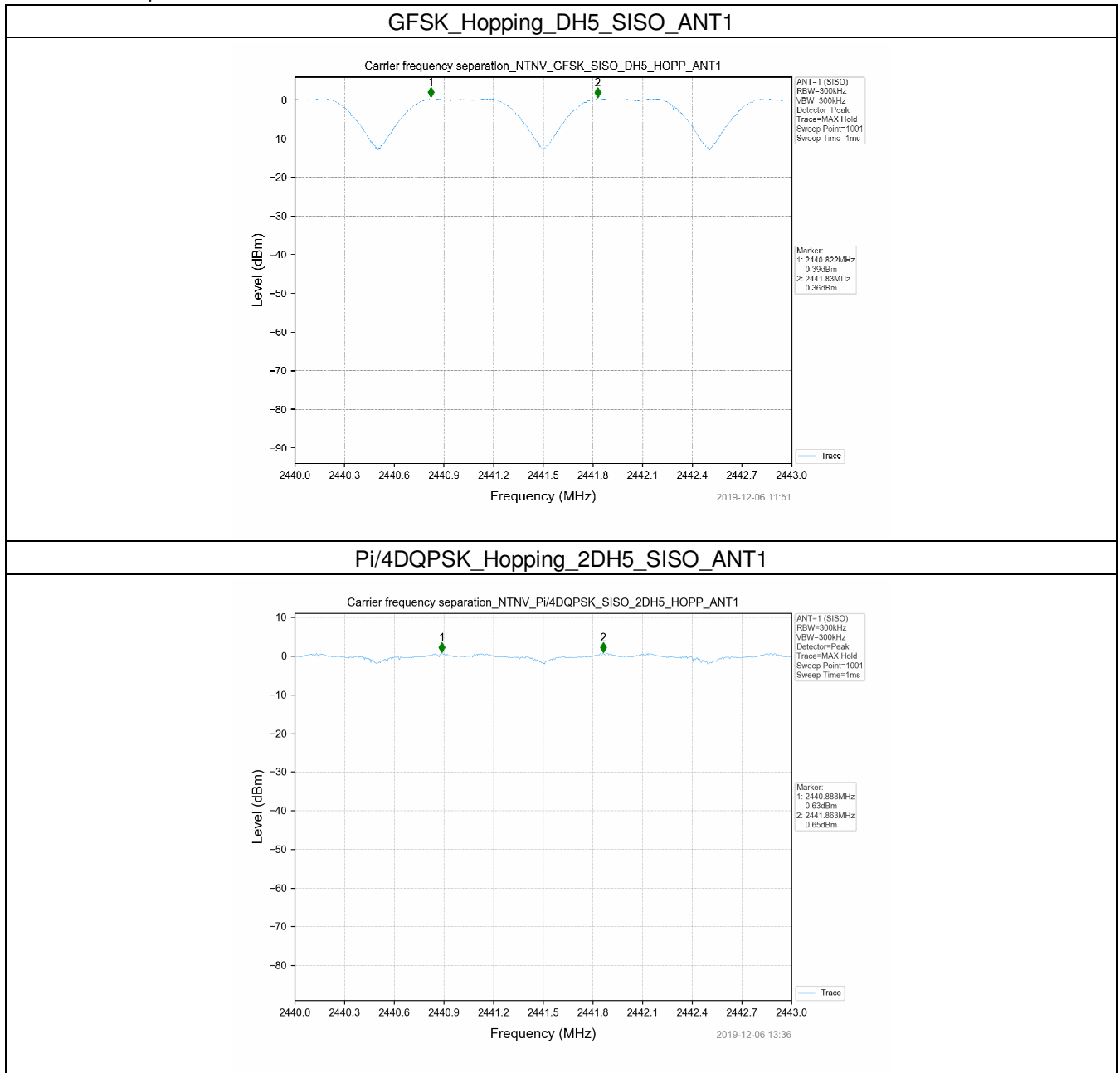
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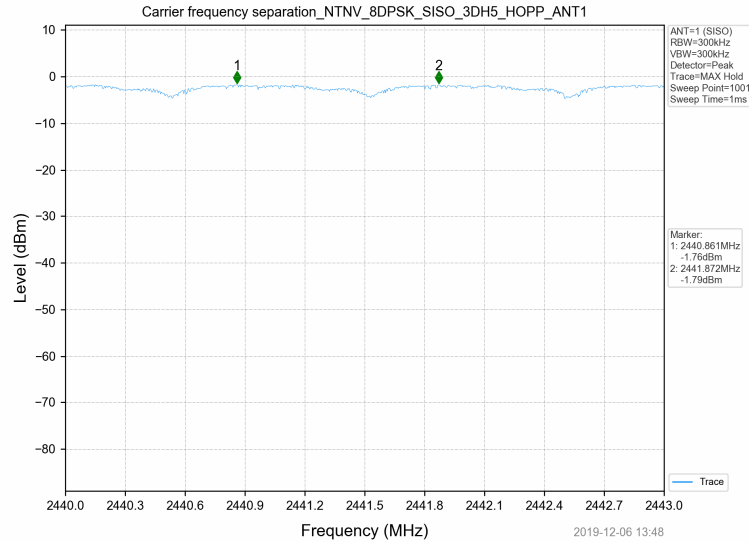


### 3.2 Test Graph





8DPSK\_Hopping\_3DH5\_SISO\_ANT1





#### 4. Number of hopping frequencies

##### 4.1 Test Result

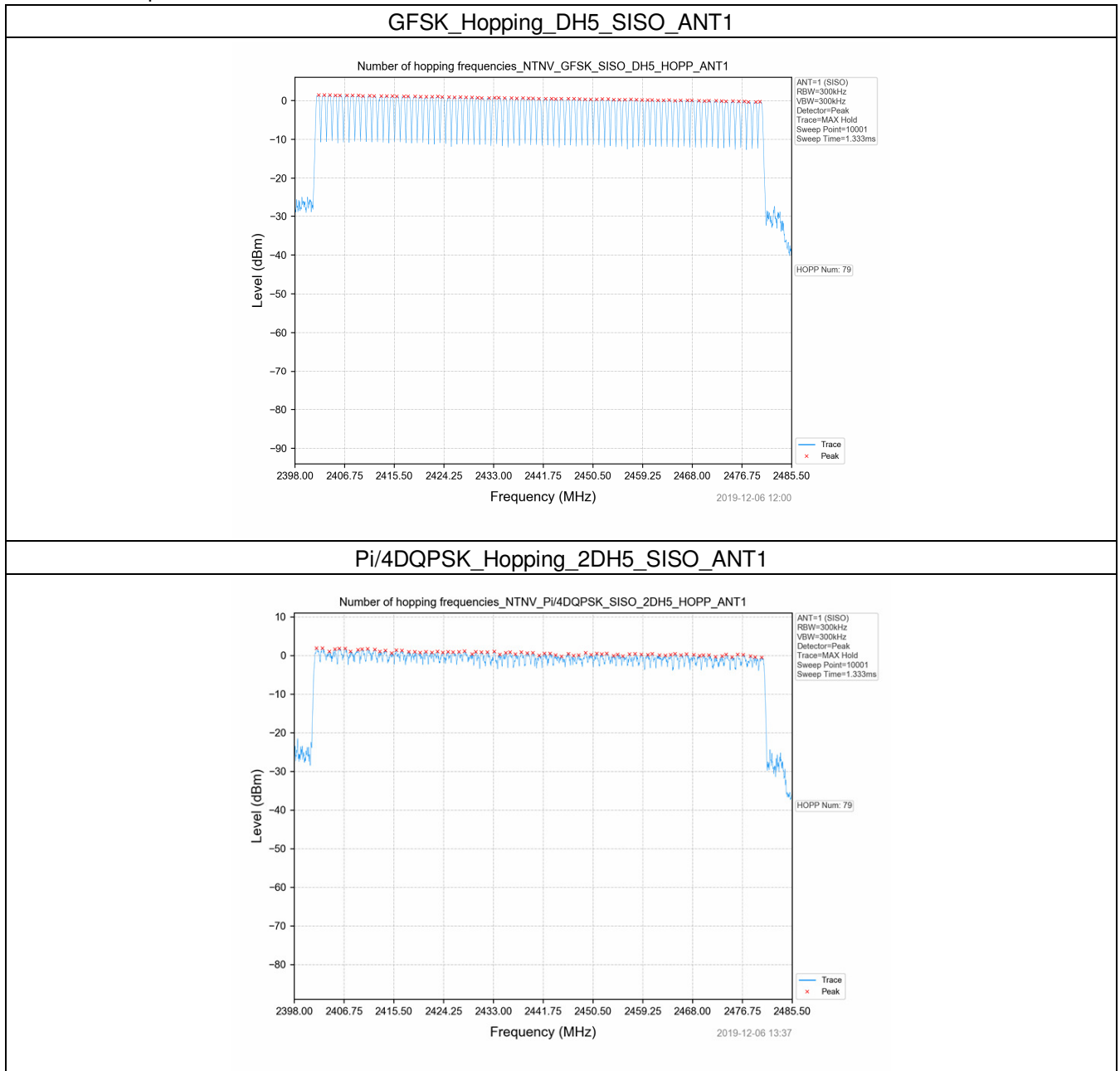
Test Mode	TX Type	ANT No.	Num of Hopping Frequencies	Limits	Verdict
GFSK	SISO	1	79	≥15	PASS
Pi/4DQPSK	SISO	1	79	≥15	PASS
8DPSK	SISO	1	79	≥15	PASS



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#### 4.2 Test Graph



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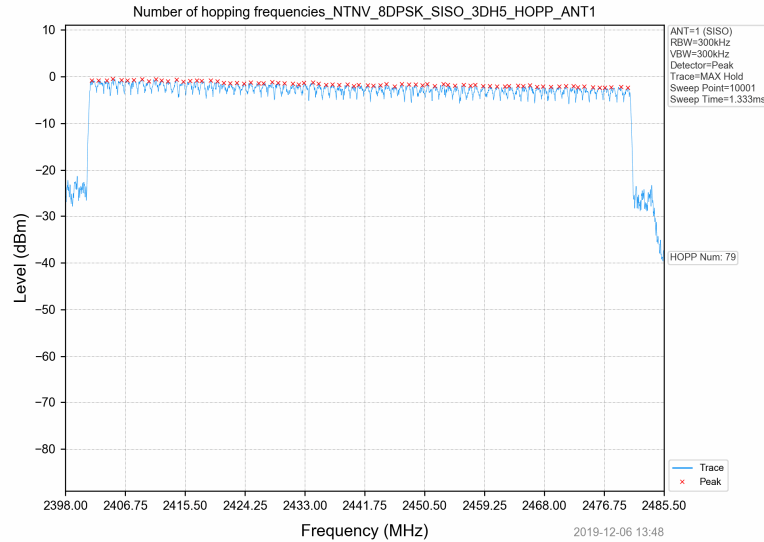
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8DPSK\_Hopping\_3DH5\_SISO\_ANT1





## 5. Time of occupancy (dwell time)

### 5.1 Test Result

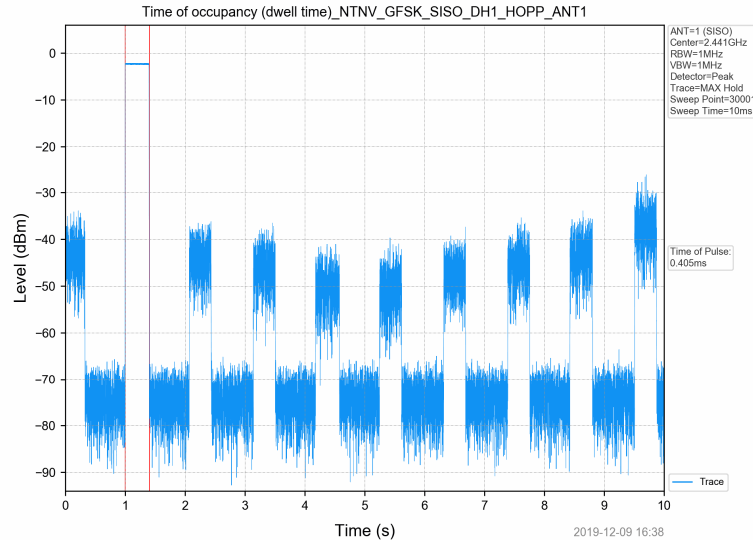
Test Mod e	Packet Type	TX Type	ANT No.	Duration of Single Pulse (ms)	Obese rvation Period (s)	Num of Pulse in Observatio n Period	Dwell Time (ms)	Limits (ms)	Verdict
GFS K	DH1	SISO	1	0.405	31.6	373	151.065	≤400	PASS
	DH3	SISO	1	1.677	31.6	169	283.413	≤400	PASS
	DH5	SISO	1	2.892	31.6	109	315.228	≤400	PASS
Pi/4D QPS K	2DH1	SISO	1	0.404	31.6	364	147.056	≤400	PASS
	2DH3	SISO	1	1.652	31.6	166	274.232	≤400	PASS
	2DH5	SISO	1	2.938	31.6	107	314.366	≤400	PASS
8DP SK	3DH1	SISO	1	0.404	31.6	373	150.692	≤400	PASS
	3DH3	SISO	1	1.689	31.6	170	287.130	≤400	PASS
	3DH5	SISO	1	2.909	31.6	110	319.990	≤400	PASS



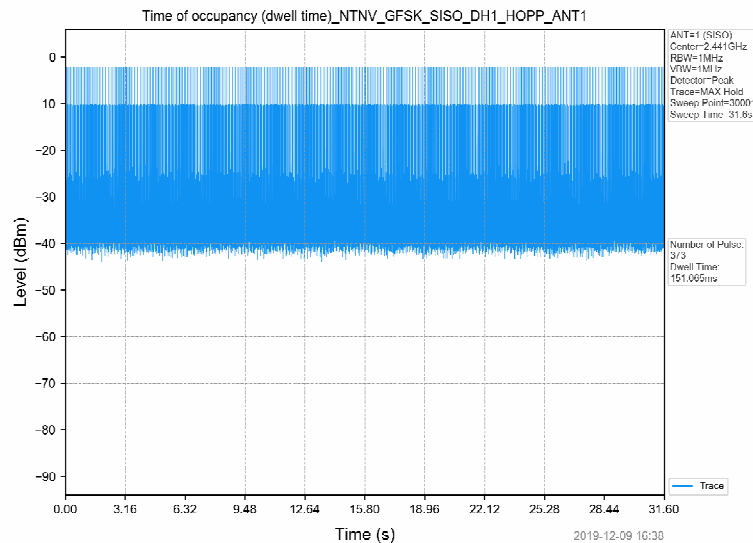


## 5.2 Test Graph

GFSK\_Hopping\_DH1\_SISO\_ANT1

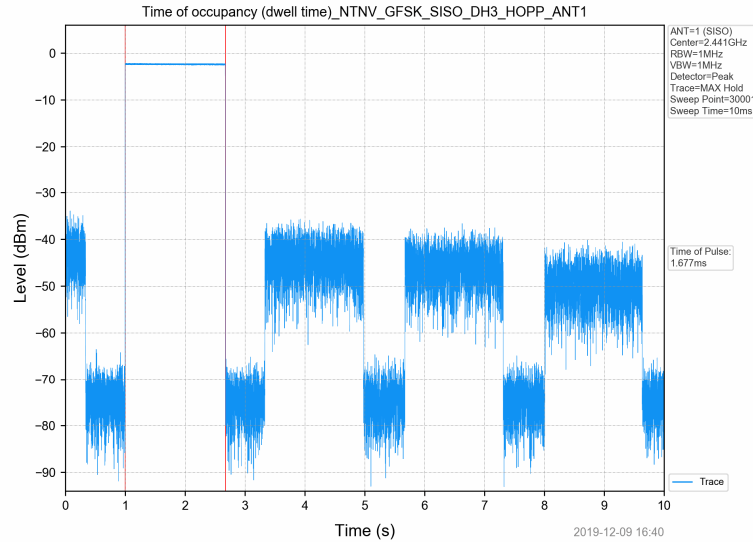


GFSK\_Hopping\_DH1\_SISO\_ANT1

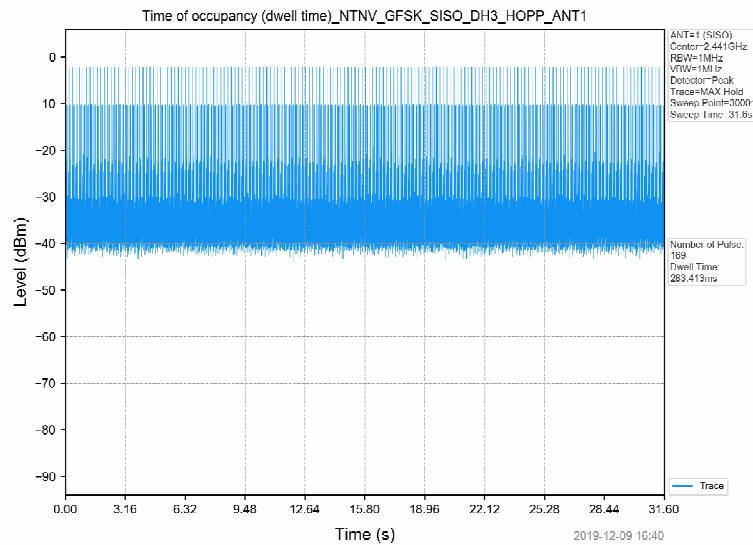




GFSK\_Hopping\_DH3\_SISO\_ANT1

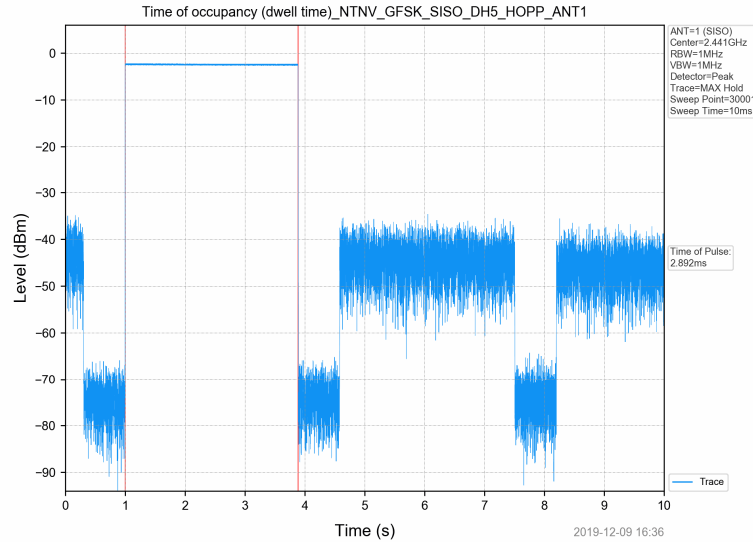


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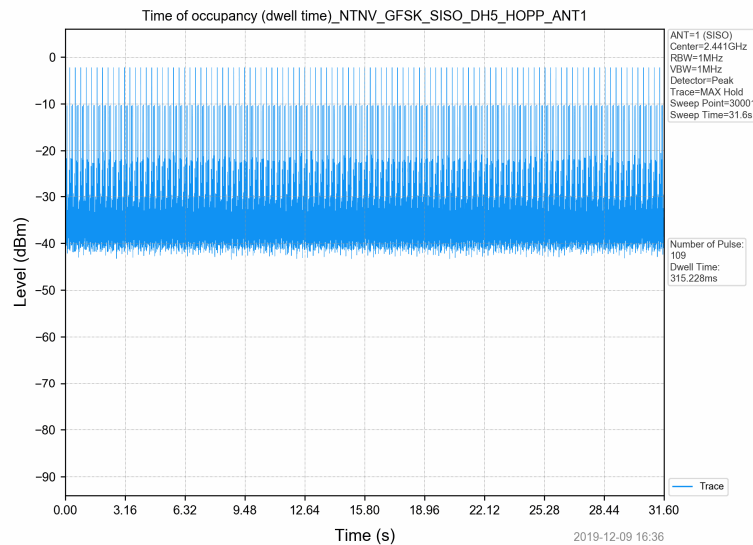




GFSK\_Hopping\_DH5\_SISO\_ANT1

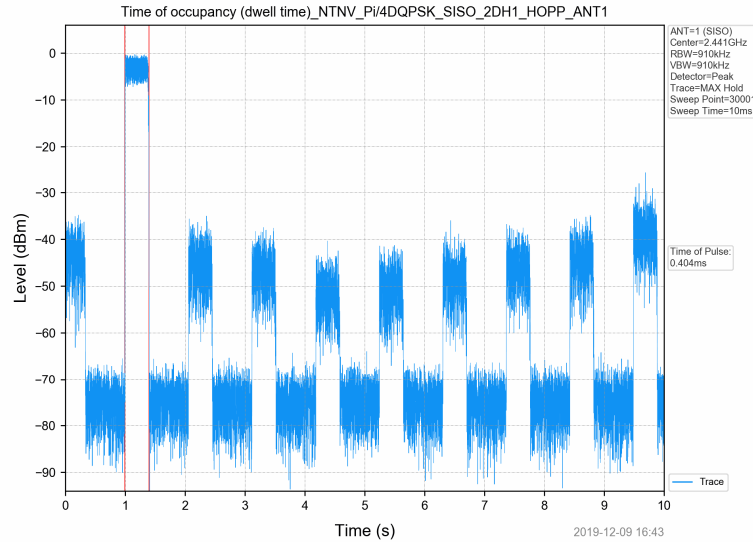


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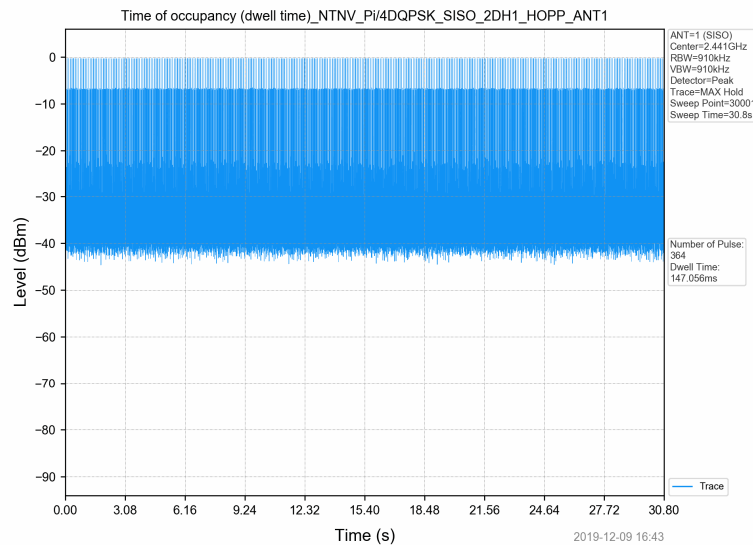




Pi/4DQPSK\_Hopping\_2DH1\_SISO\_ANT1



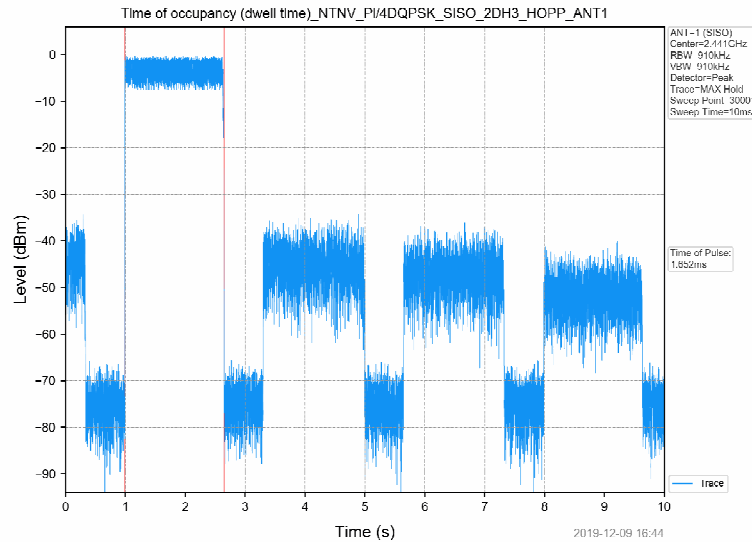
Pi/4DQPSK\_Hopping\_2DH1\_SISO\_ANT1



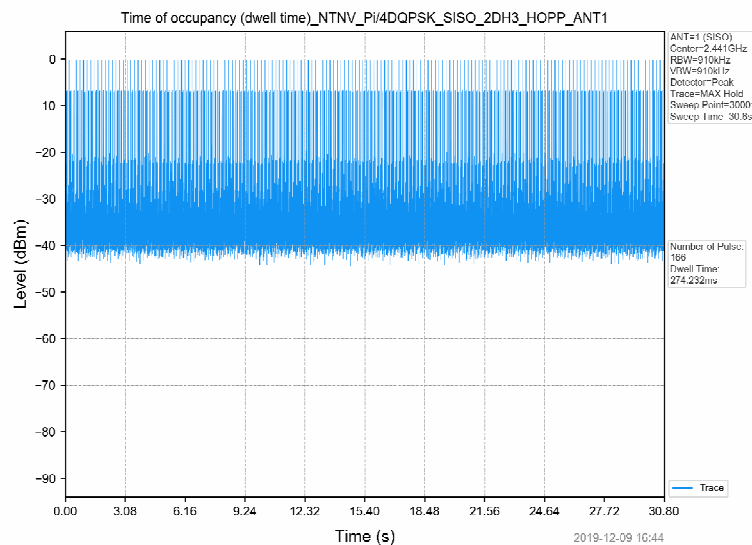




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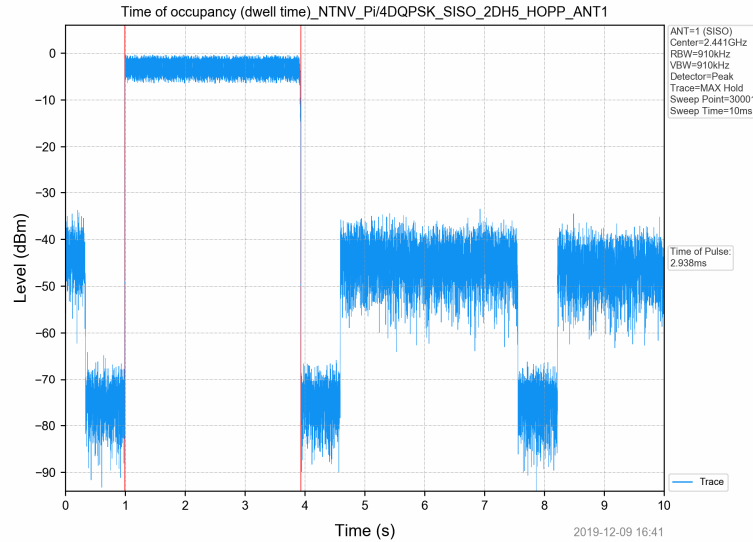


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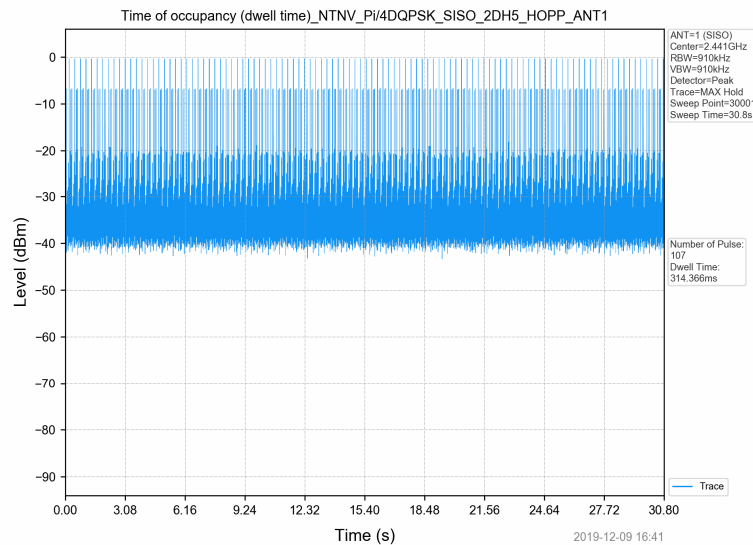




Pi/4DQPSK\_Hopping\_2DH5\_SISO\_ANT1

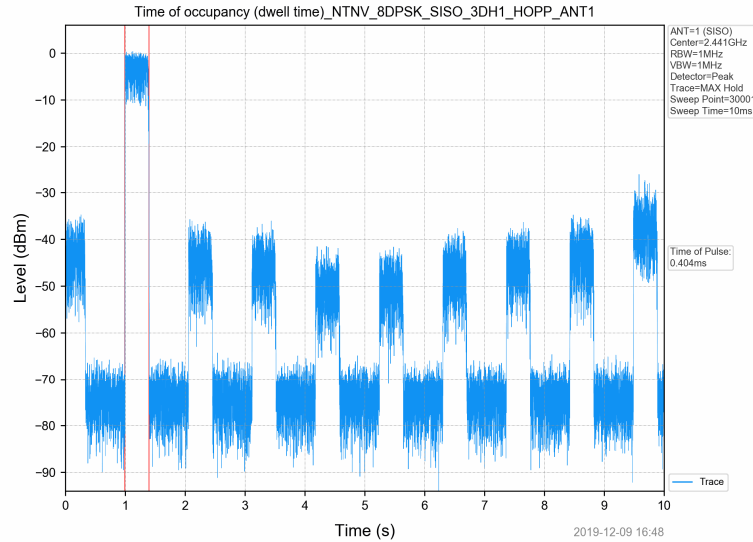


Pi/4DQPSK\_Hopping\_2DH5\_SISO\_ANT1

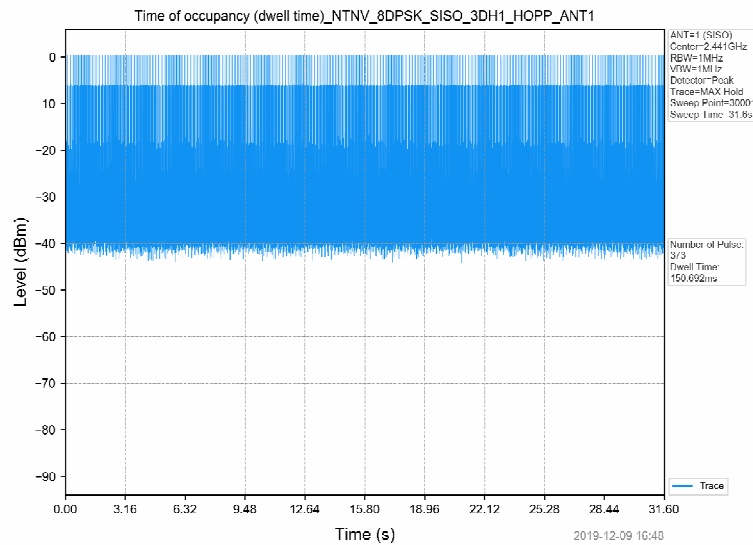




8DPSK\_Hopping\_3DH1\_SISO\_ANT1

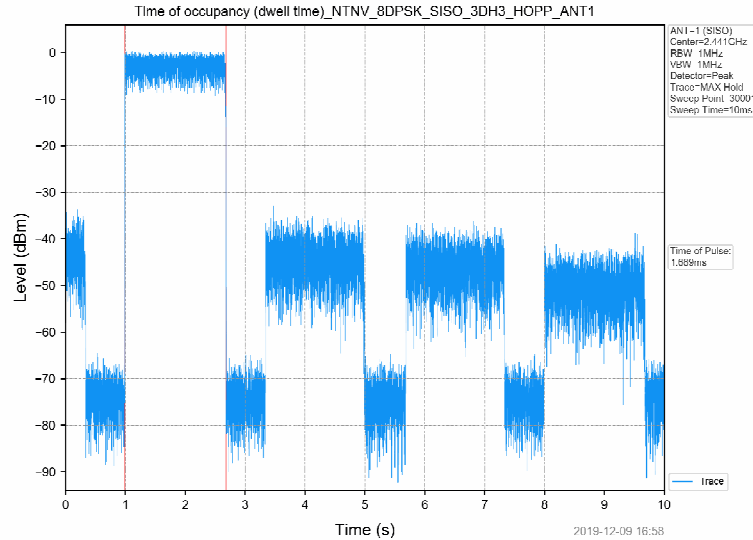


8DPSK\_Hopping\_3DH1\_SISO\_ANT1

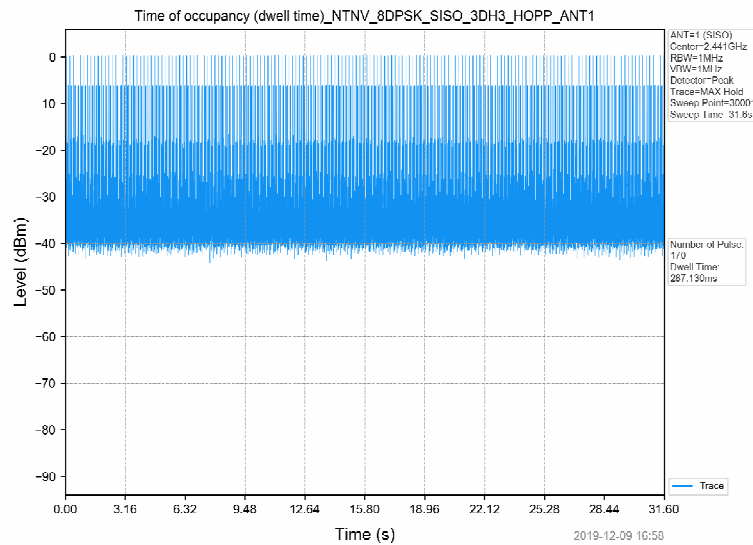




8DPSK\_Hopping\_3DH3\_SISO\_ANT1

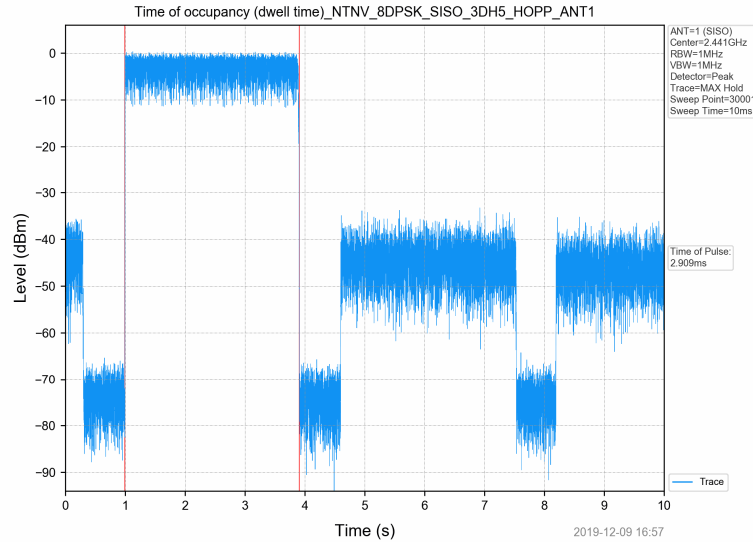


8DPSK\_Hopping\_3DH3\_SISO\_ANT1

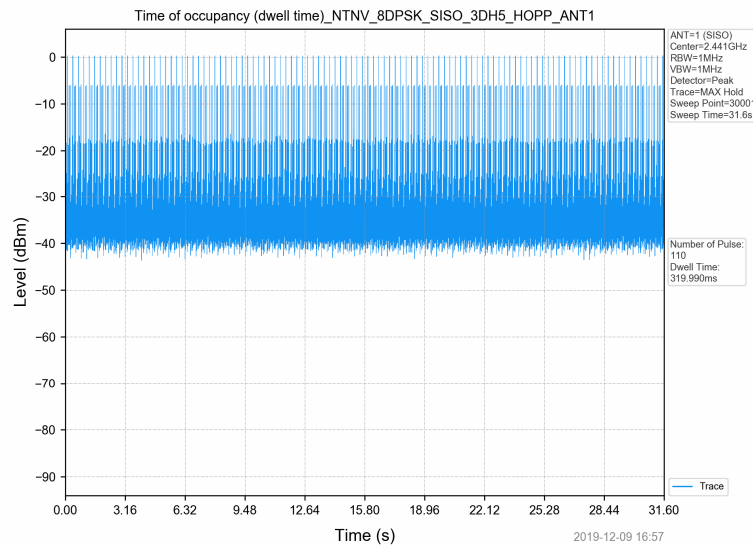




8DPSK\_Hopping\_3DH5\_SISO\_ANT1



8DPSK\_Hopping\_3DH5\_SISO\_ANT1







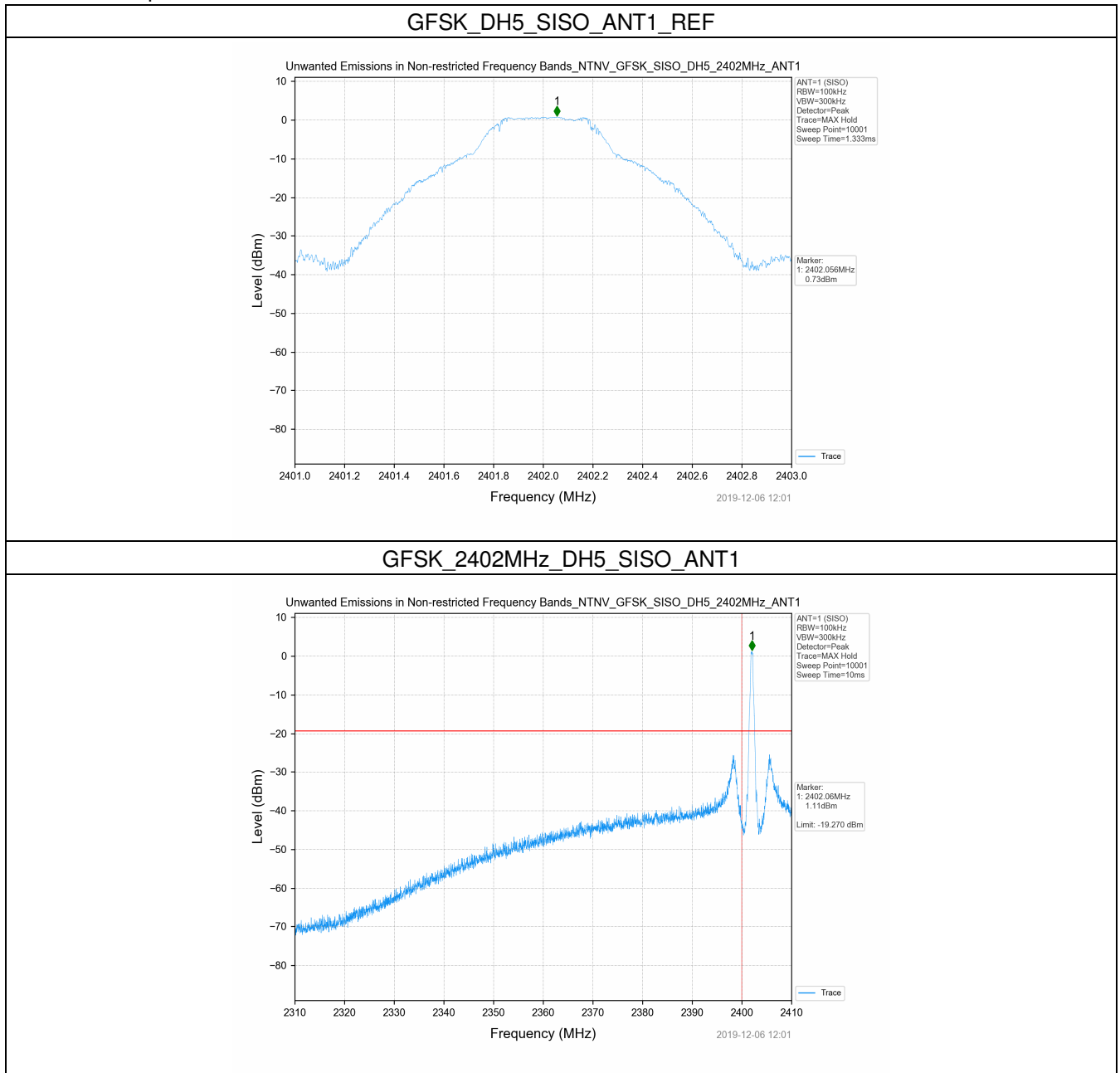
## 6. Unwanted Emissions in Non-restricted Frequency Bands

### 6.1 Test Result

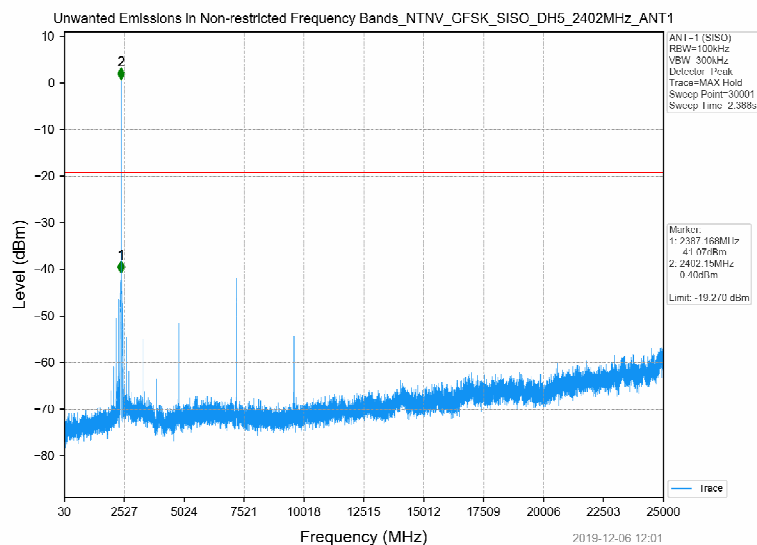
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBc)	Limits (dBc)	Verdict
GFSK	2402	SISO	1	Refer to test graph	$\leq -20$	PASS
	2441	SISO	1	Refer to test graph	$\leq -20$	PASS
	2480	SISO	1	Refer to test graph	$\leq -20$	PASS
	Hopping	SISO	1	Refer to test graph	$\leq -20$	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	$\leq -20$	PASS
	2441	SISO	1	Refer to test graph	$\leq -20$	PASS
	2480	SISO	1	Refer to test graph	$\leq -20$	PASS
	Hopping	SISO	1	Refer to test graph	$\leq -20$	PASS
8DPSK	2402	SISO	1	Refer to test graph	$\leq -20$	PASS
	2441	SISO	1	Refer to test graph	$\leq -20$	PASS
	2480	SISO	1	Refer to test graph	$\leq -20$	PASS
	Hopping	SISO	1	Refer to test graph	$\leq -20$	PASS



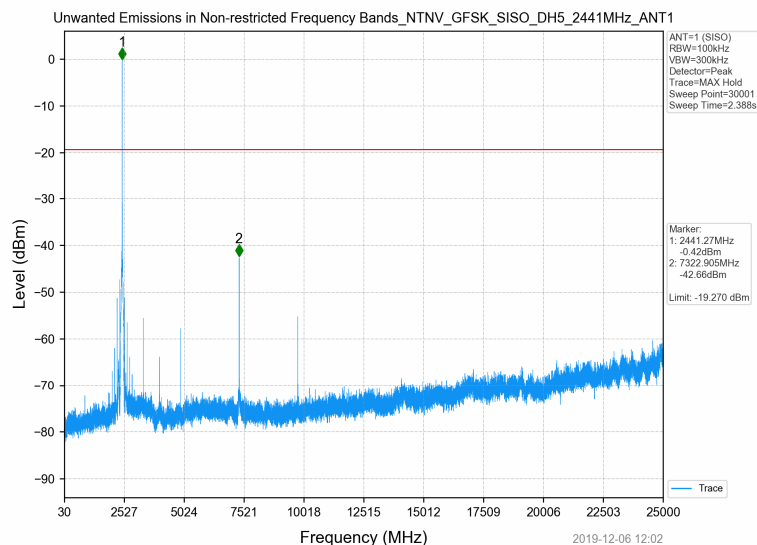
## 6.2 Test Graph



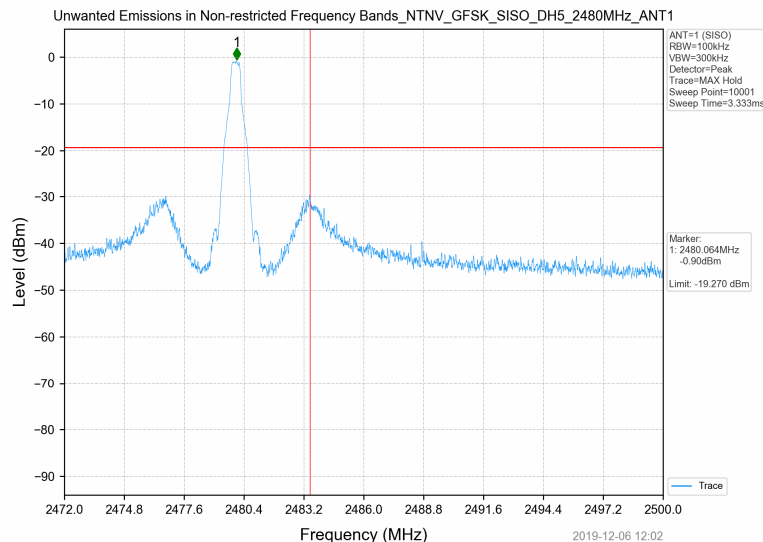
### GFSK\_2402MHz\_DH5\_SISO\_ANT1



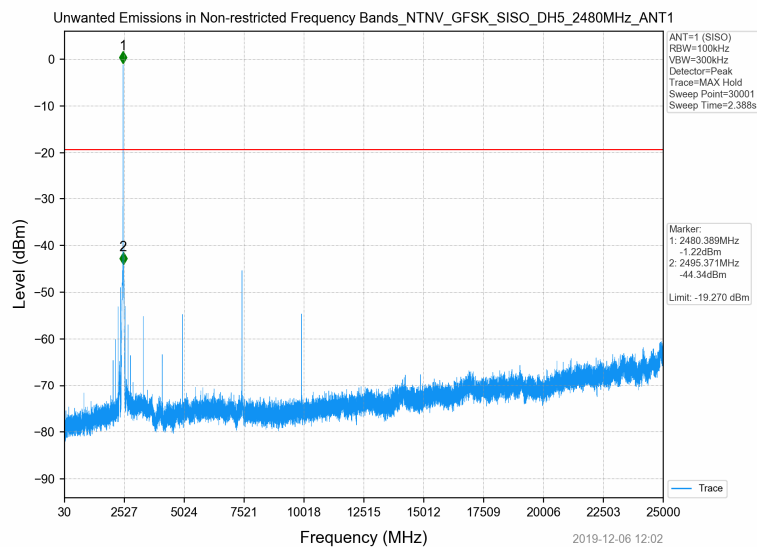
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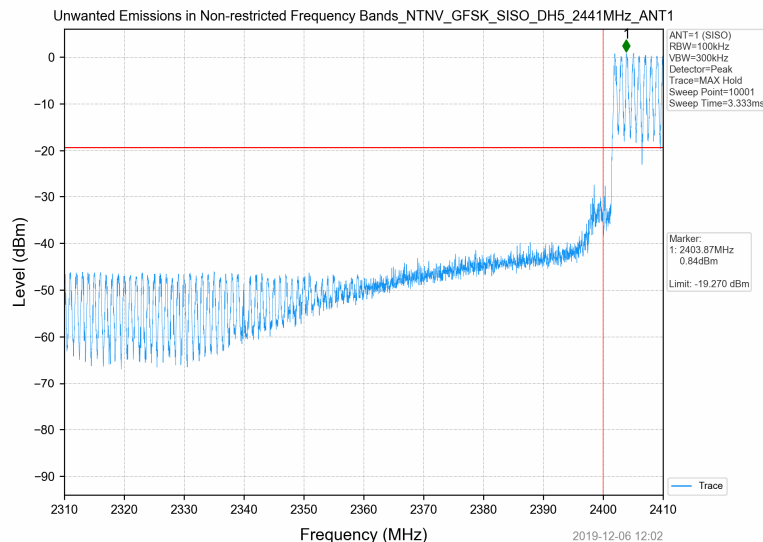
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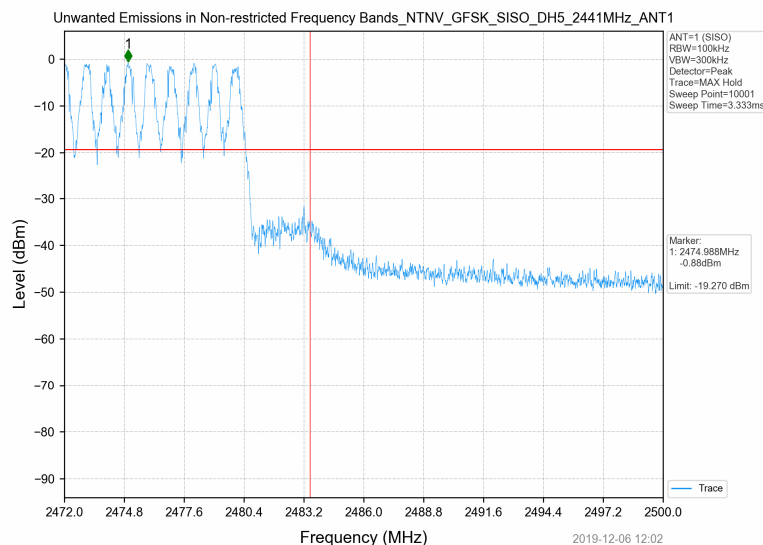
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### GFSK\_Hopping\_DH5\_SISO\_ANT1



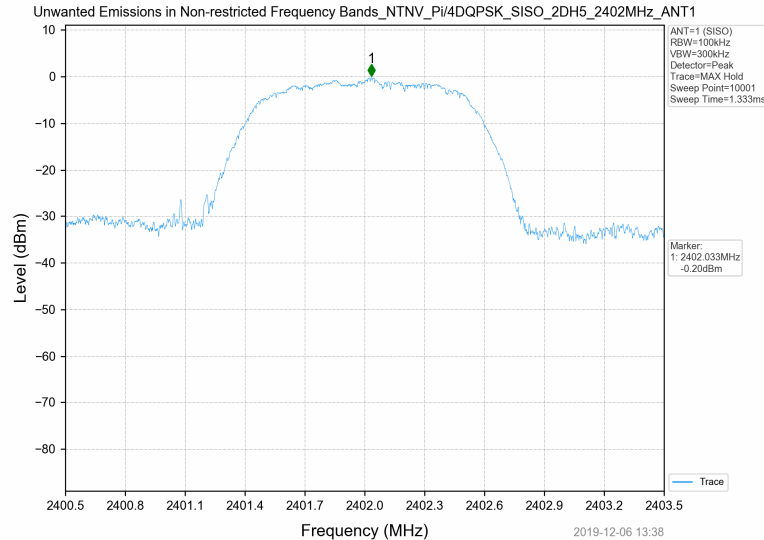
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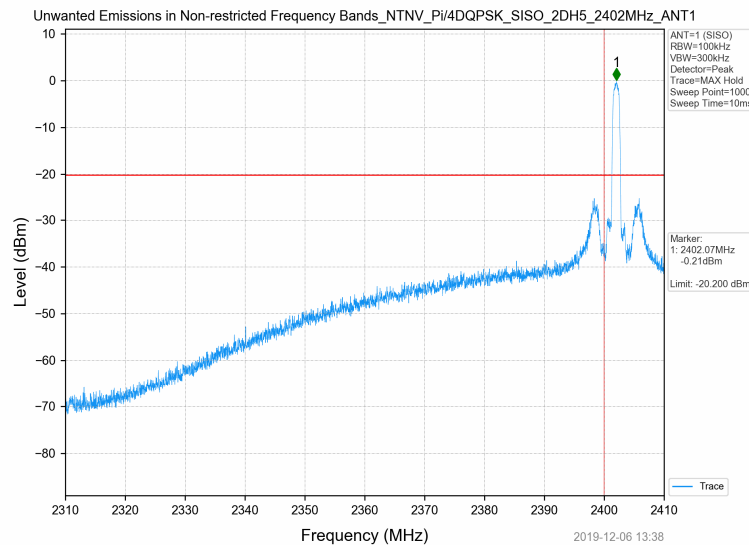




Pi/4DQPSK\_2DH5\_SISO\_ANT1\_REF



Pi/4DQPSK\_2402MHz\_2DH5\_SISO\_ANT1

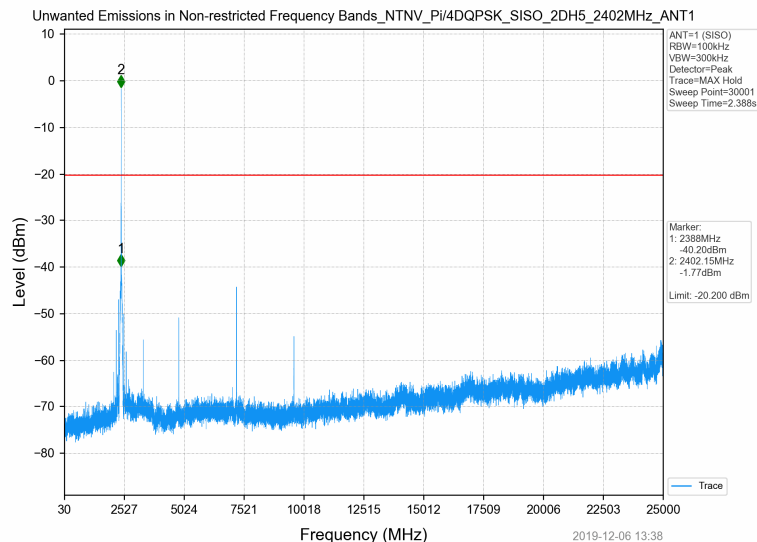


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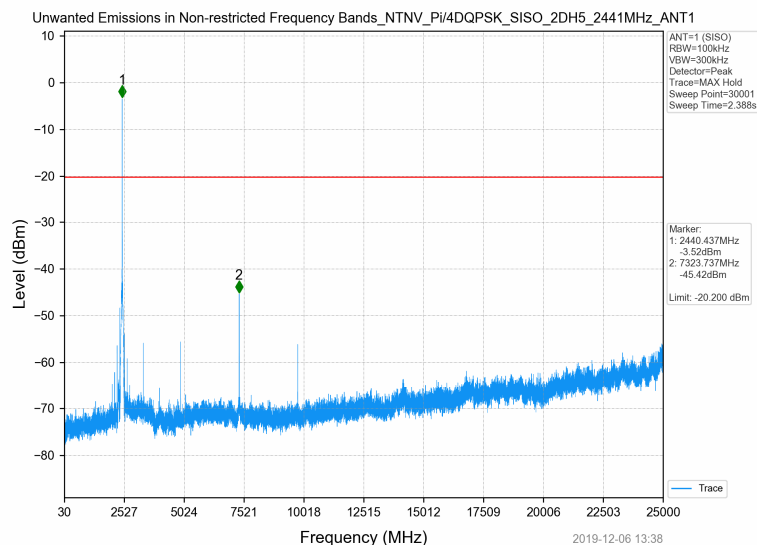
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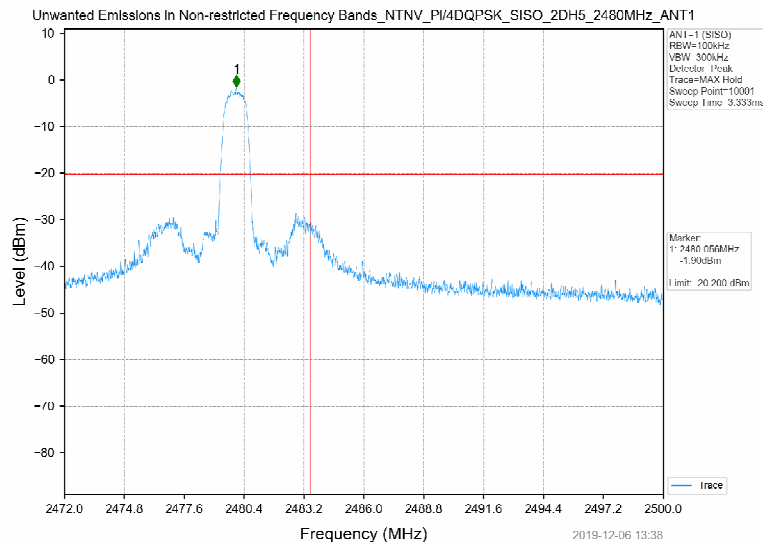
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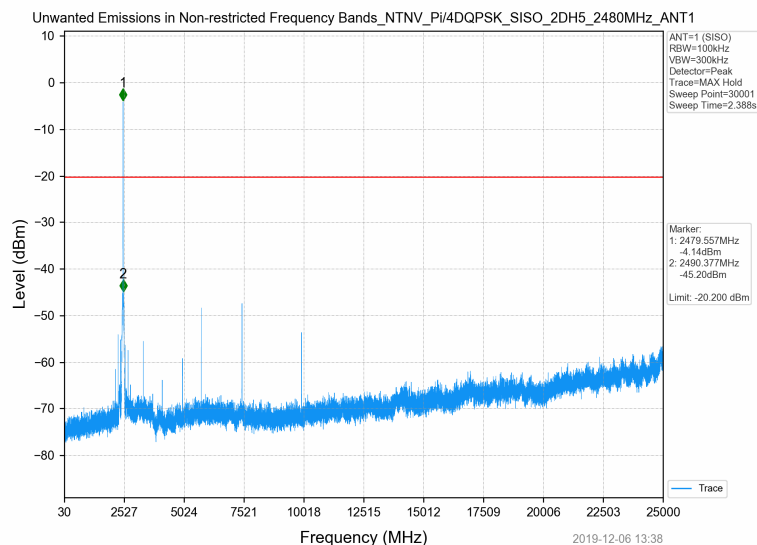
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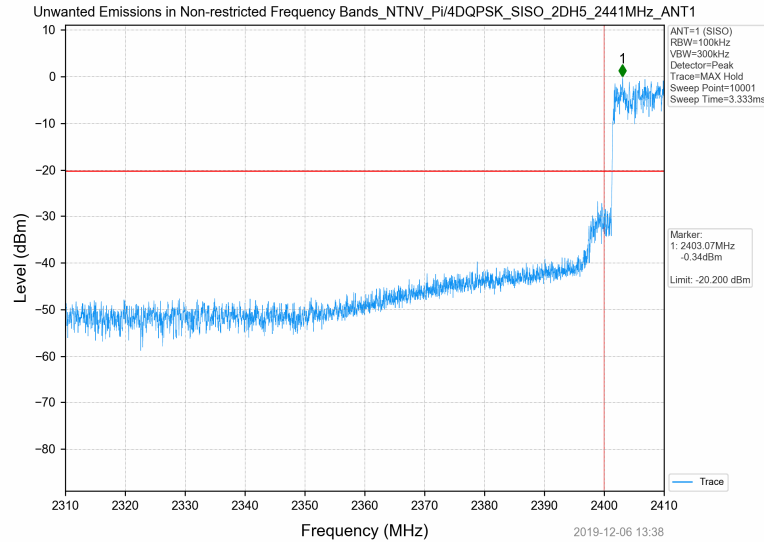


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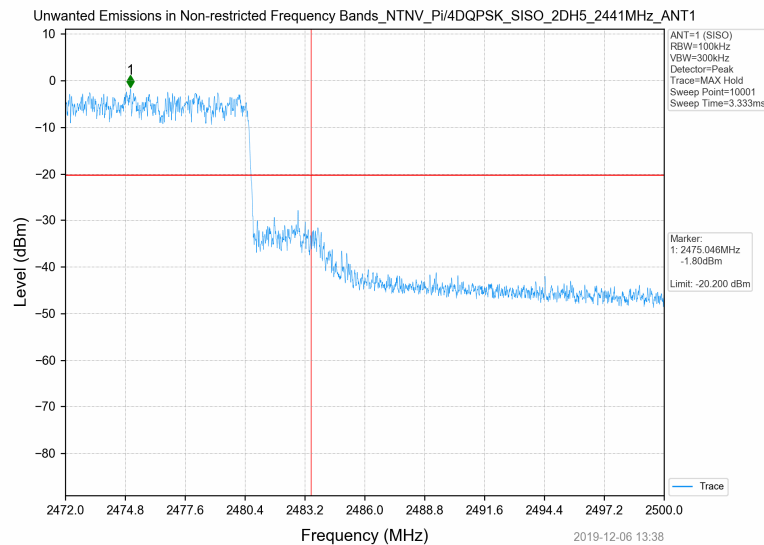




Pi/4DQPSK\_Hopping\_2DH5\_SISO\_ANT1

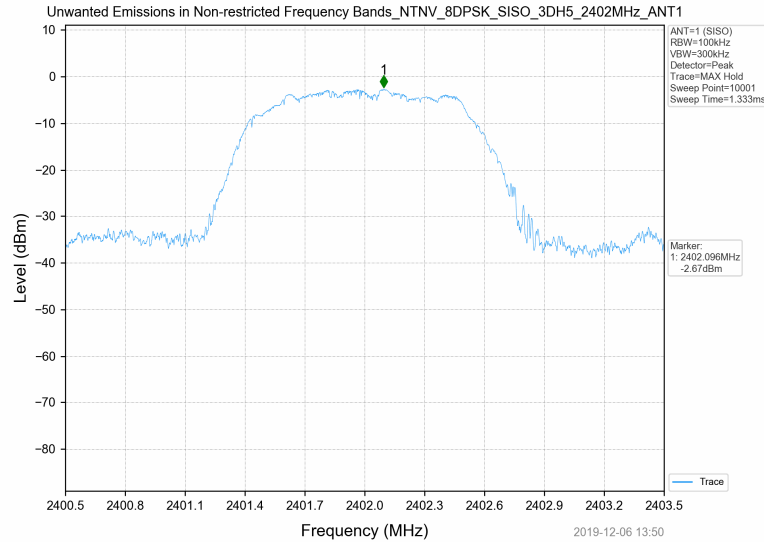


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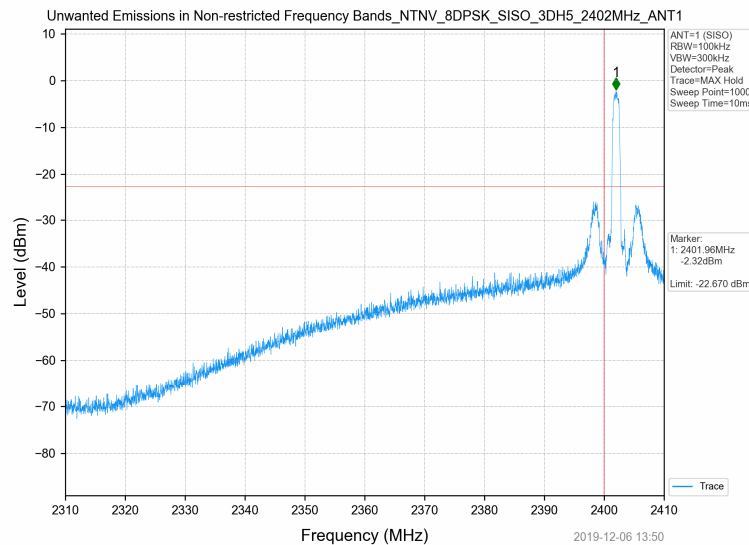




8DPSK\_3DH5\_SISO\_ANT1\_REF



8DPSK\_2402MHz\_3DH5\_SISO\_ANT1

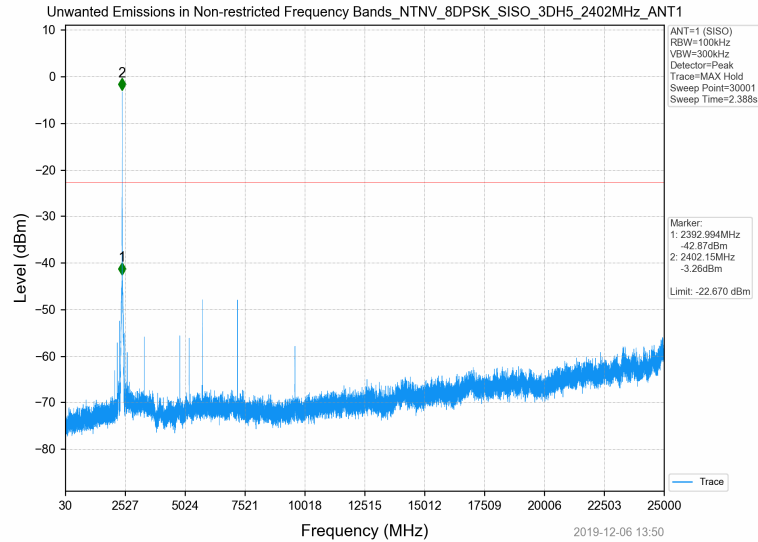


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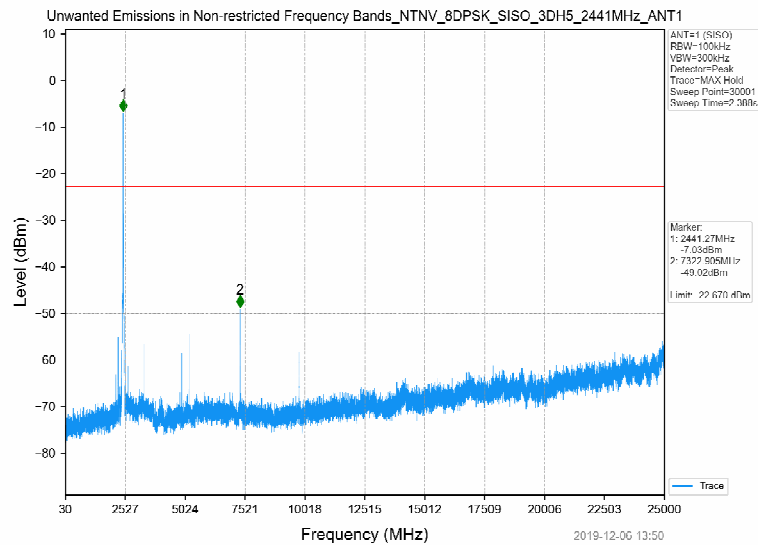
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### 8DPSK\_2402MHz\_3DH5\_SISO\_ANT1



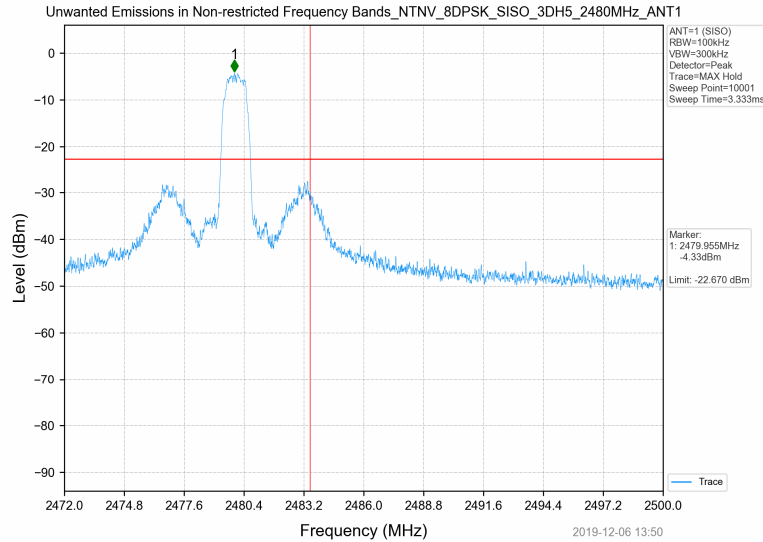
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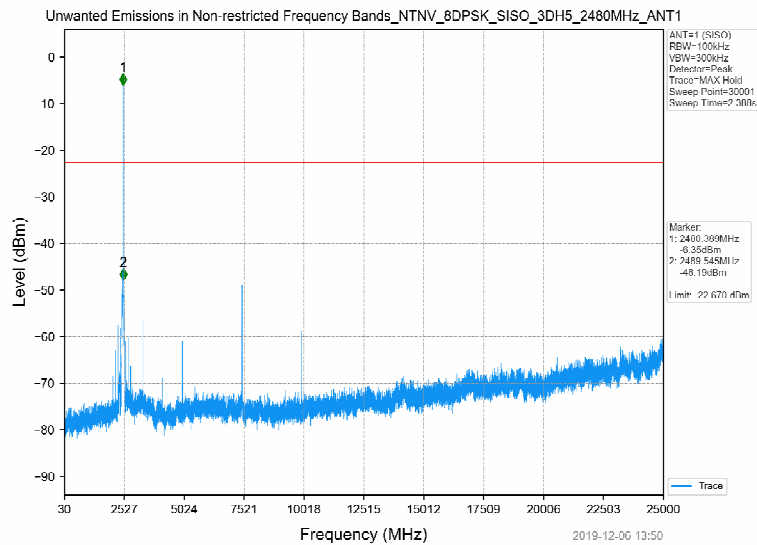
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### 8DPSK\_2480MHz\_3DH5\_SISO\_ANT1

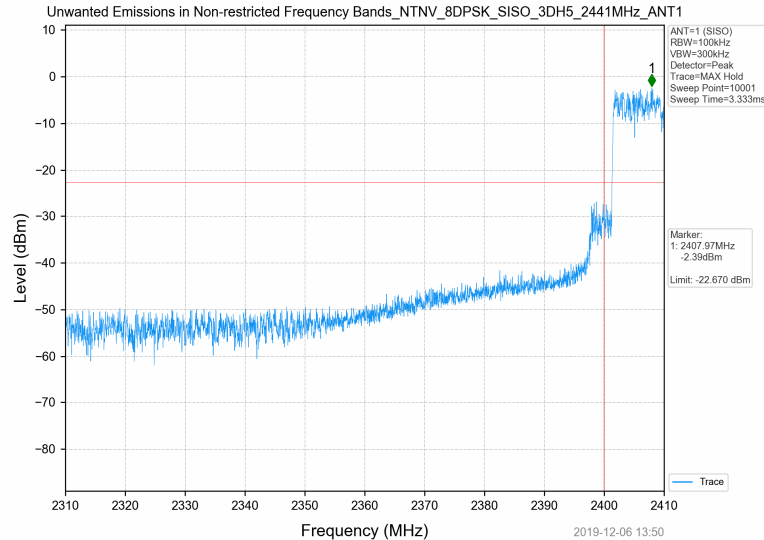


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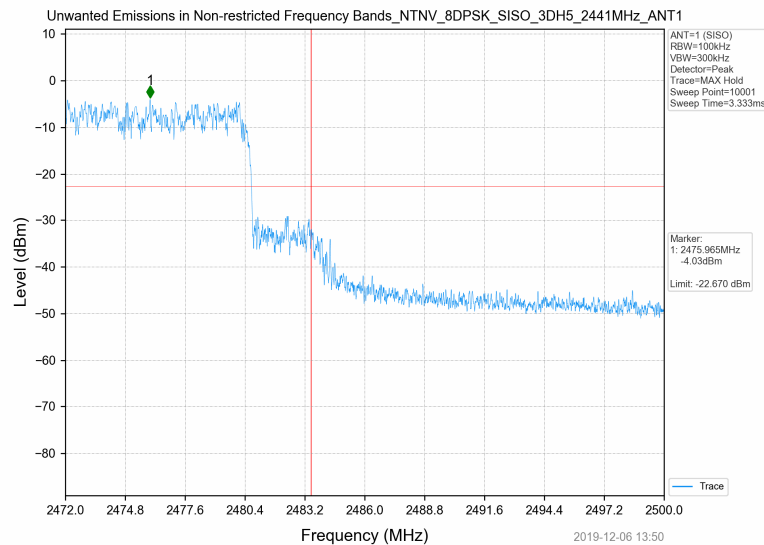




8DPSK\_Hopping\_3DH5\_SISO\_ANT1



8DPSK\_Hopping\_3DH5\_SISO\_ANT1



- End of the Report -

