

## Appendix for 15.247

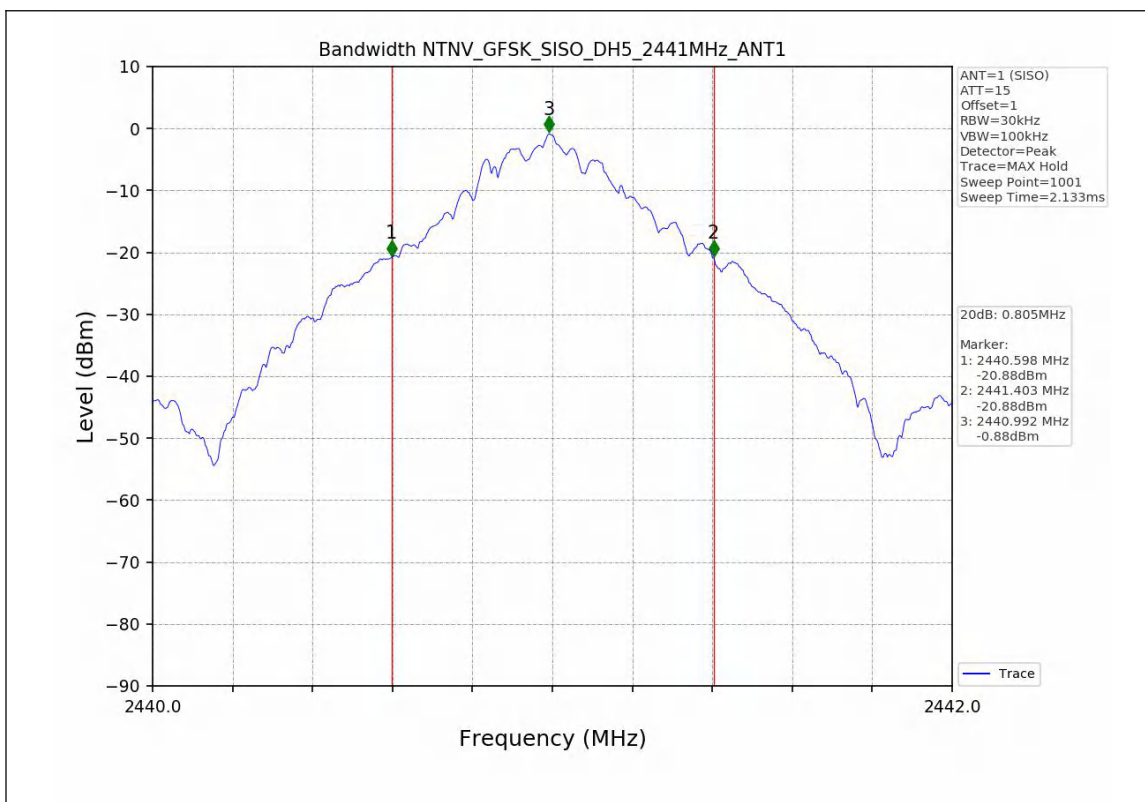
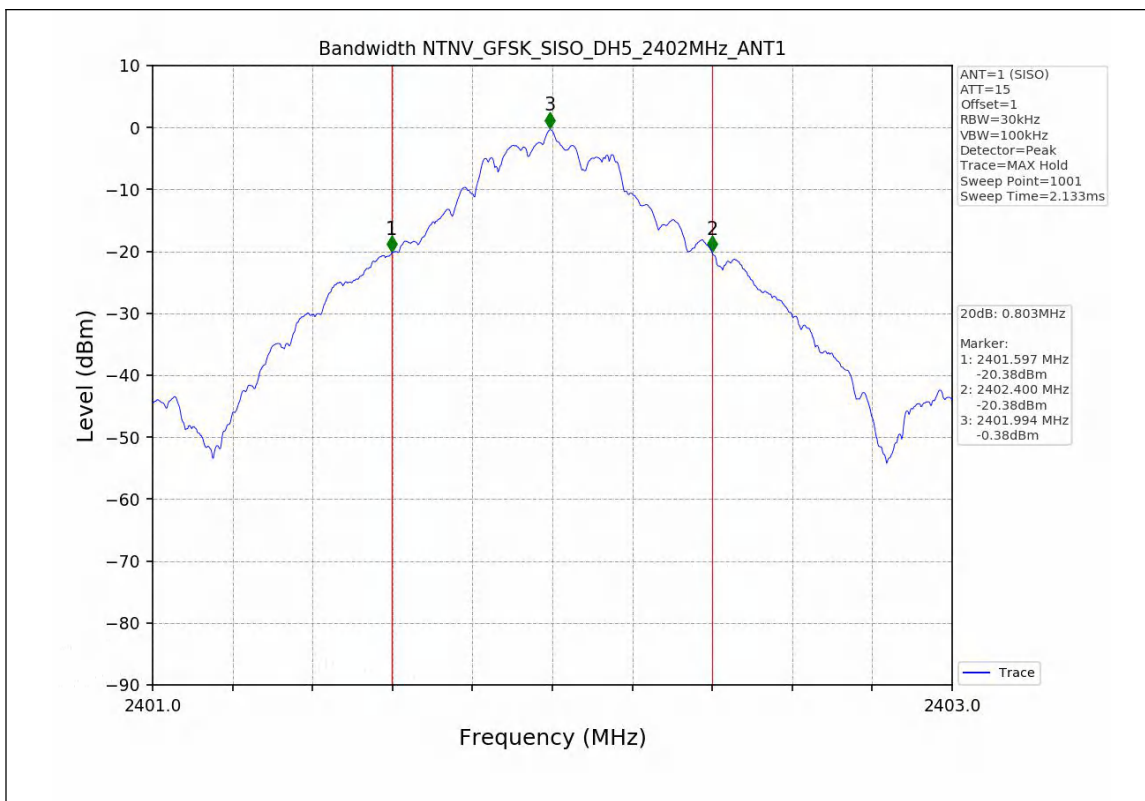
### 1. Bandwidth

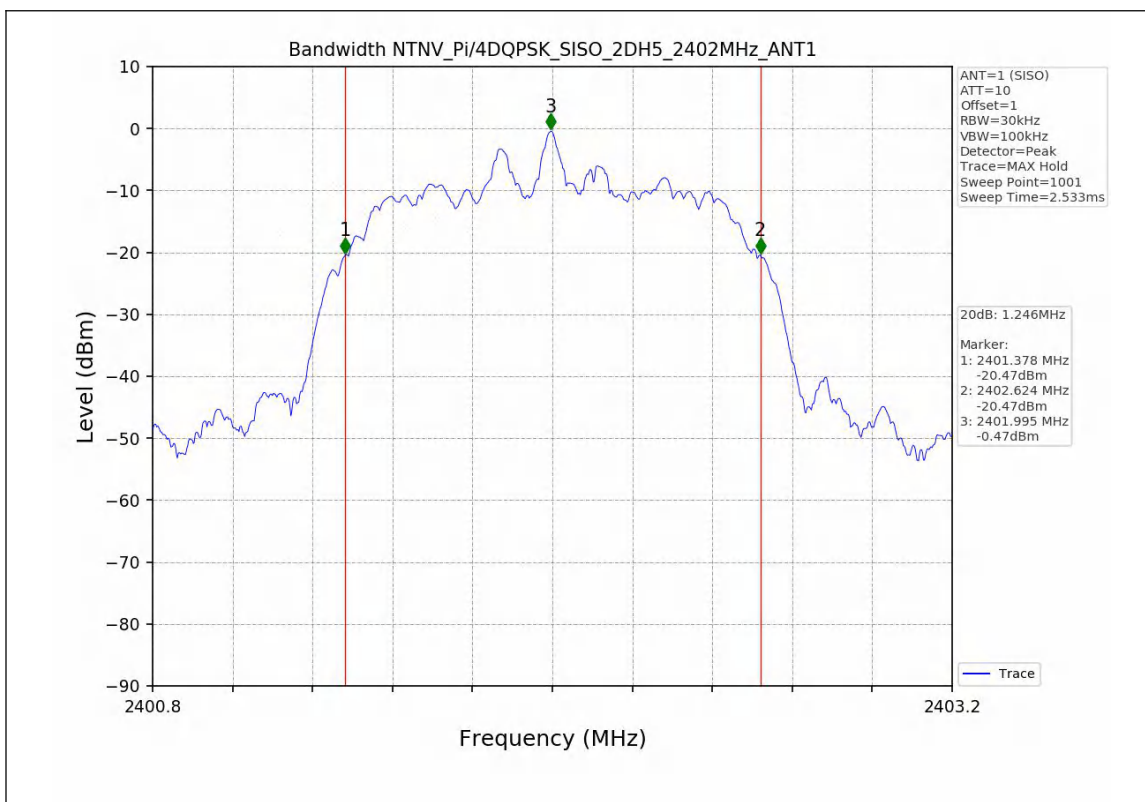
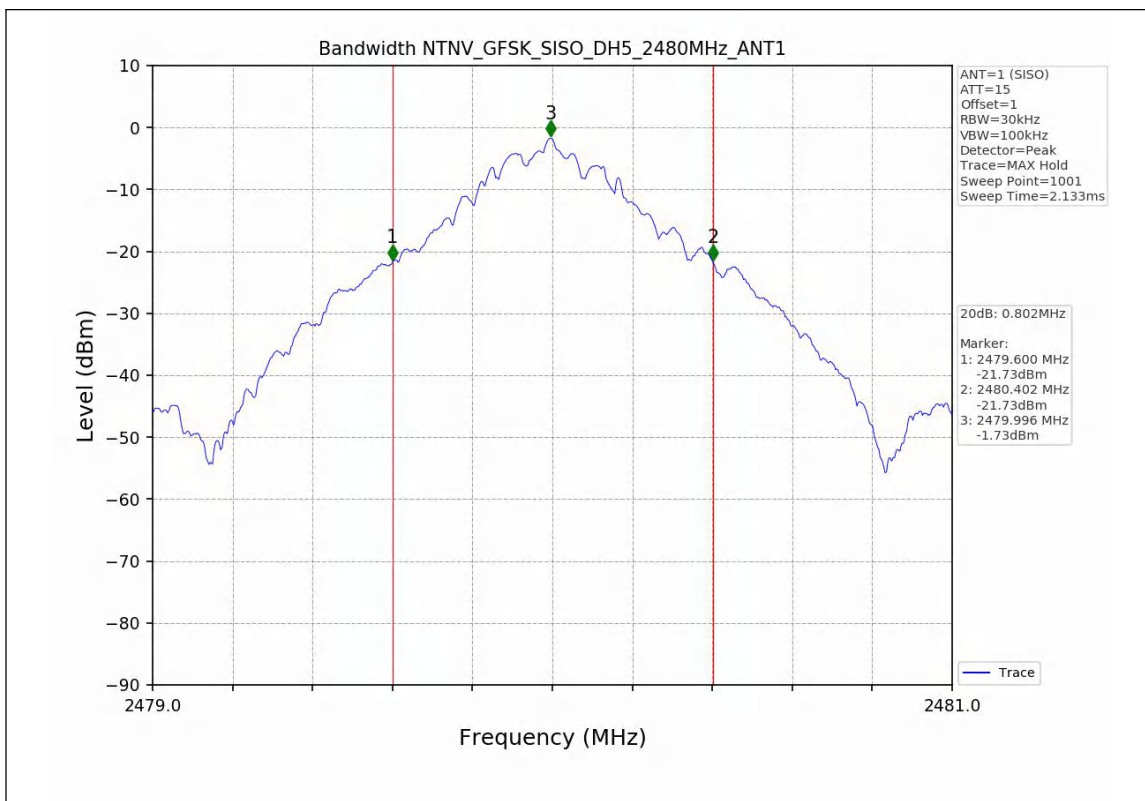
#### 1.1 Test Result

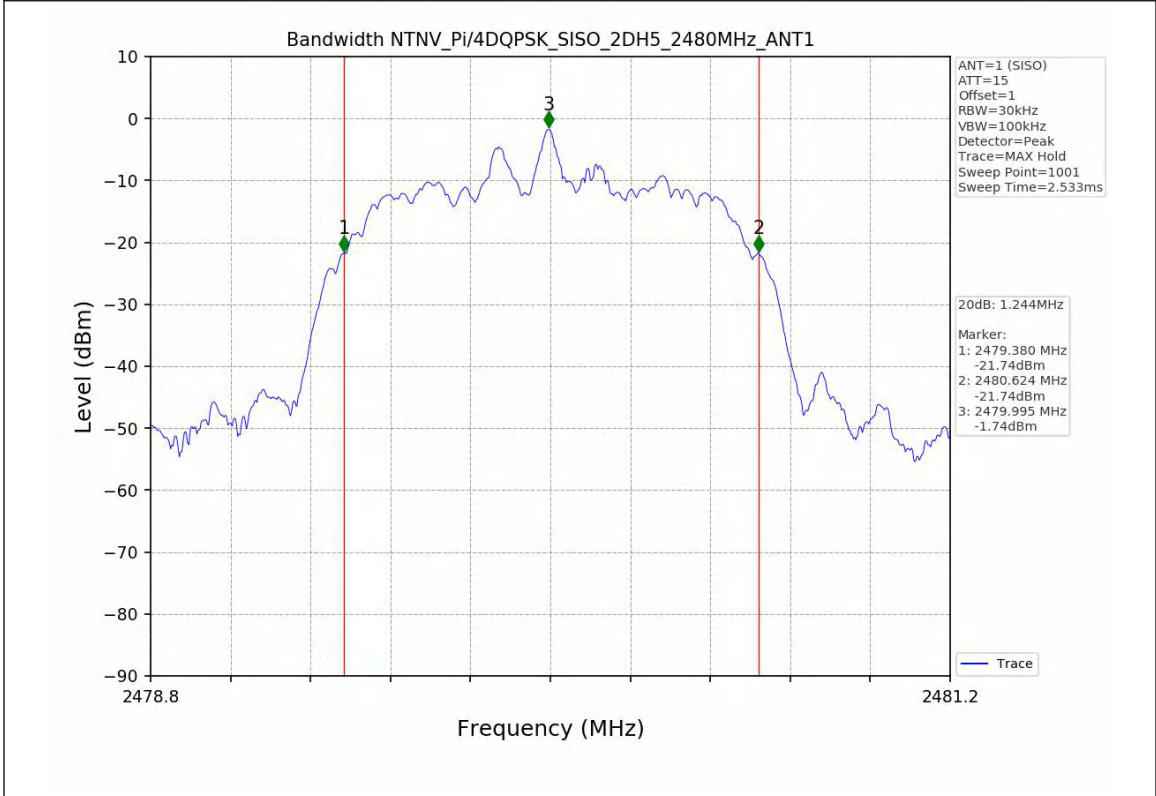
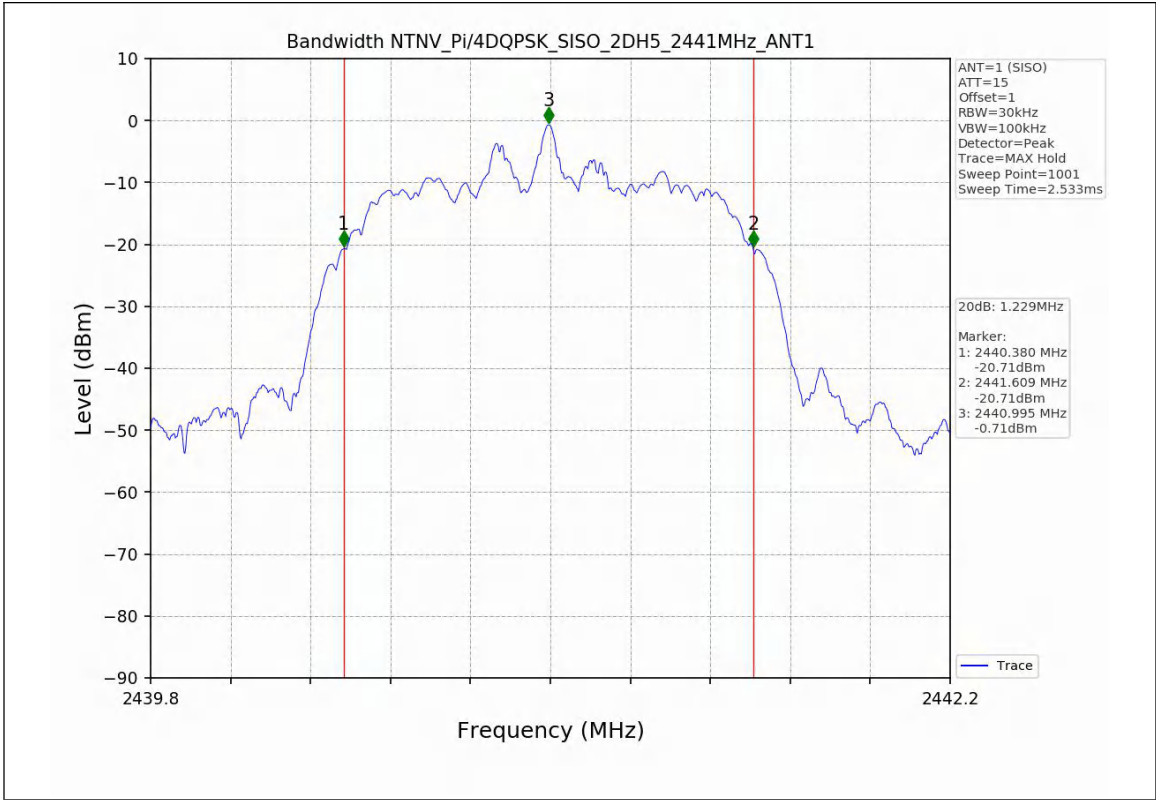
Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	0.803	PASS
	2441	SISO	1	0.805	PASS
	2480	SISO	1	0.802	PASS
Pi/4DQPSK	2402	SISO	1	1.246	PASS
	2441	SISO	1	1.229	PASS
	2480	SISO	1	1.244	PASS
8DPSK	2402	SISO	1	1.260	PASS
	2441	SISO	1	1.262	PASS
	2480	SISO	1	1.263	PASS

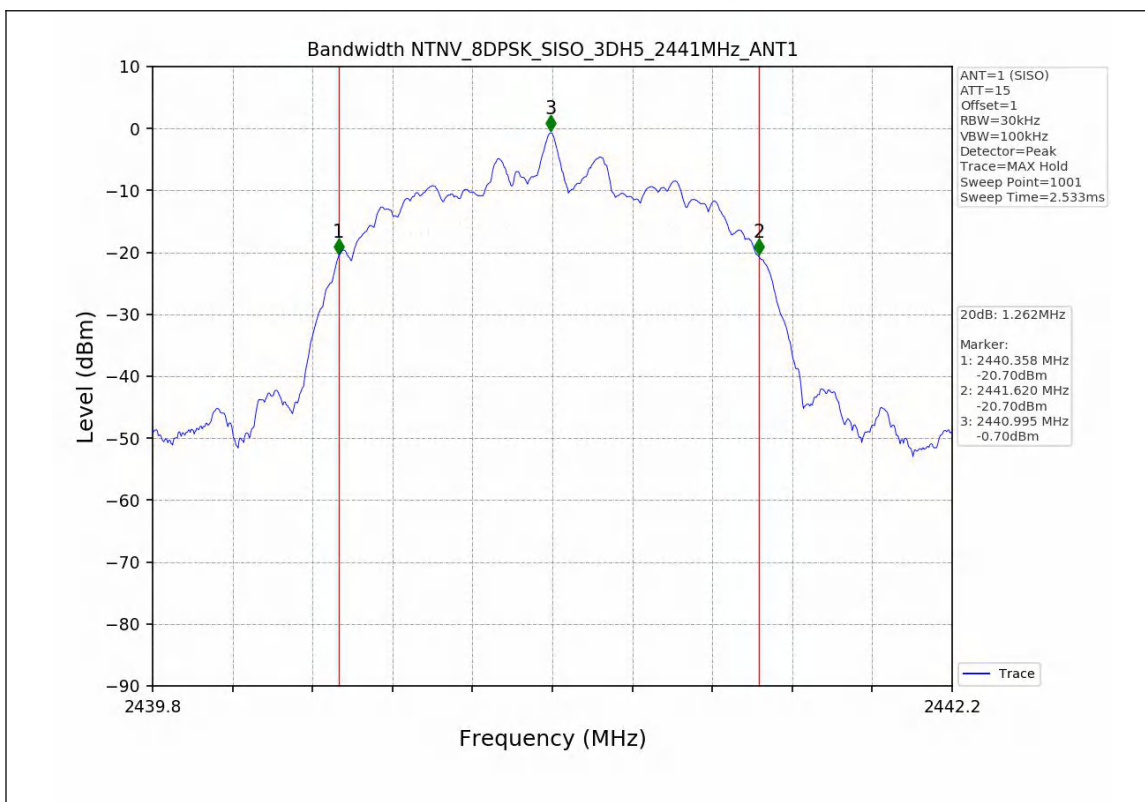
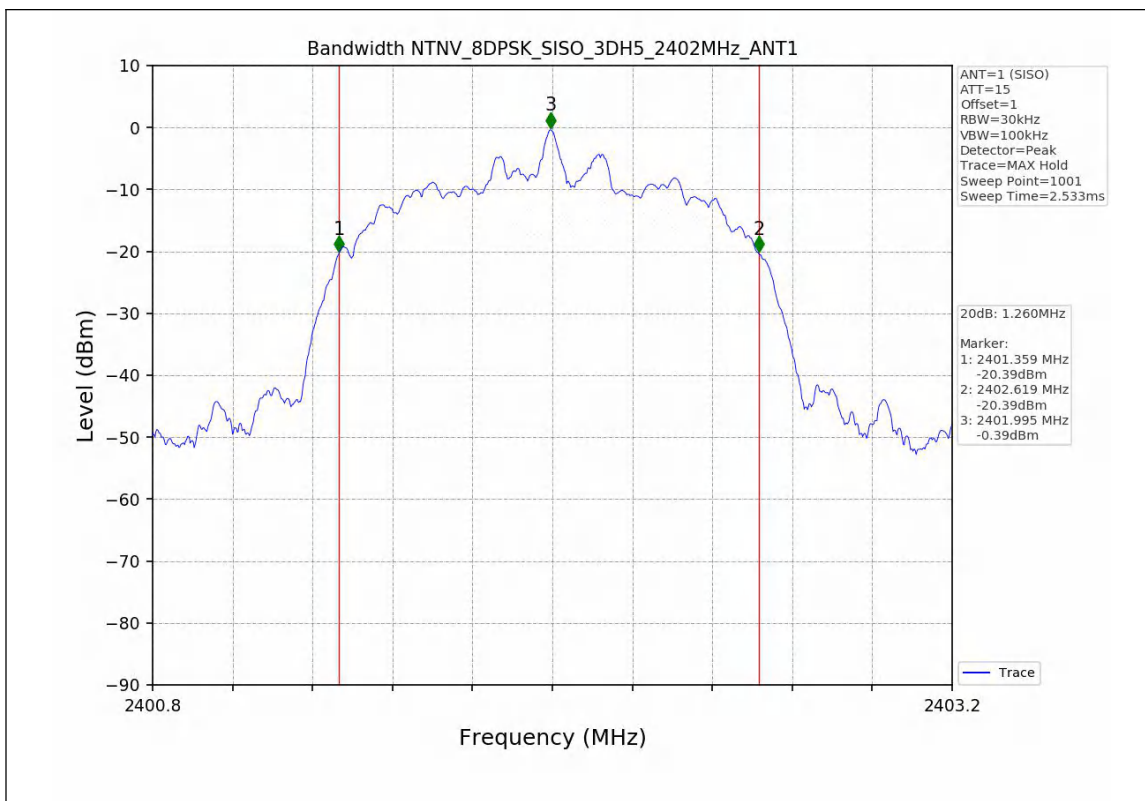
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
GFSK	2402	SISO	1	0.816	Only for Report Use
	2441	SISO	1	0.816	Only for Report Use
	2480	SISO	1	0.816	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.169	Only for Report Use
	2441	SISO	1	1.171	Only for Report Use
	2480	SISO	1	1.168	Only for Report Use
8DPSK	2402	SISO	1	1.173	Only for Report Use
	2441	SISO	1	1.175	Only for Report Use
	2480	SISO	1	1.175	Only for Report Use

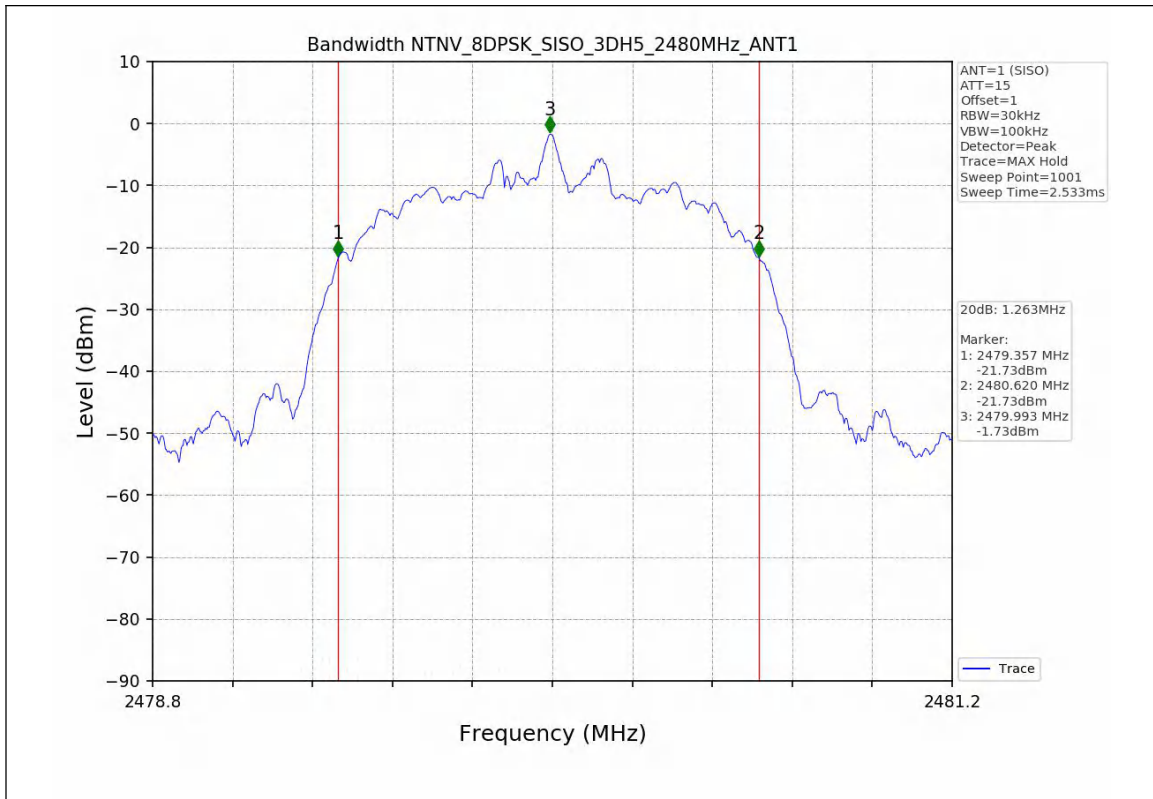
#### 1.2 Test Graph - 20dB Bandwidth



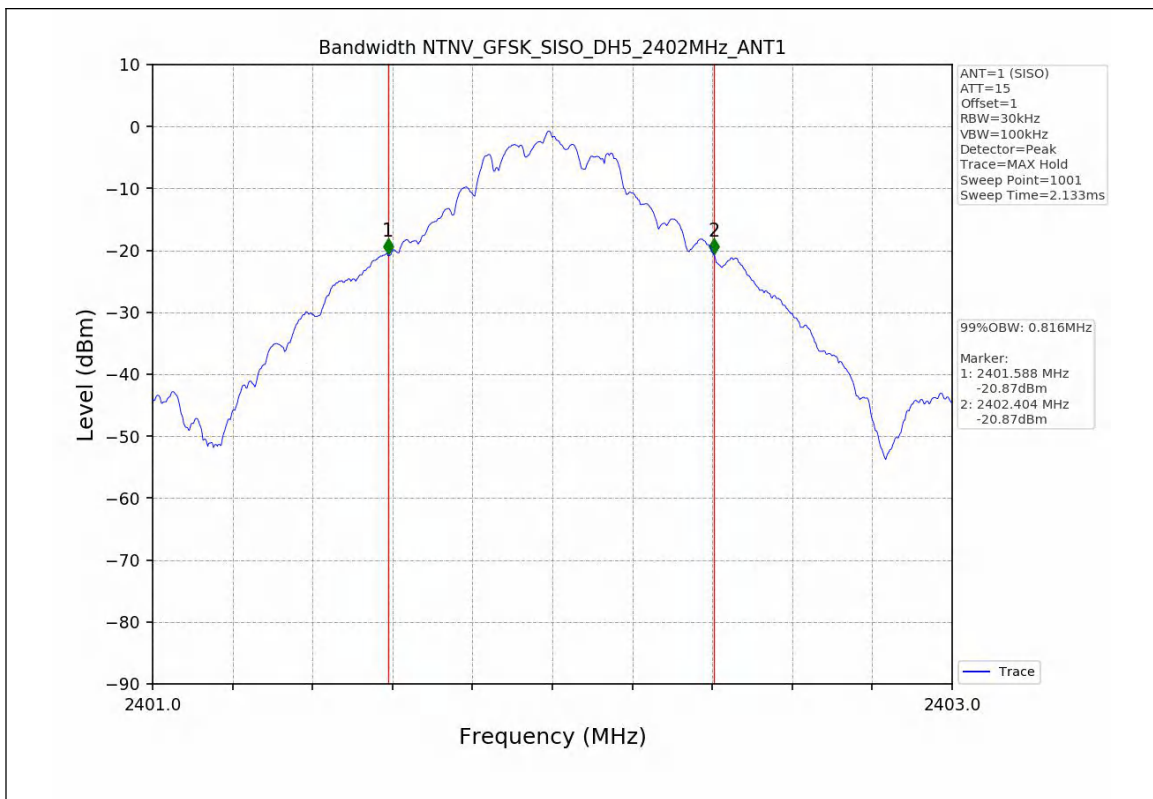




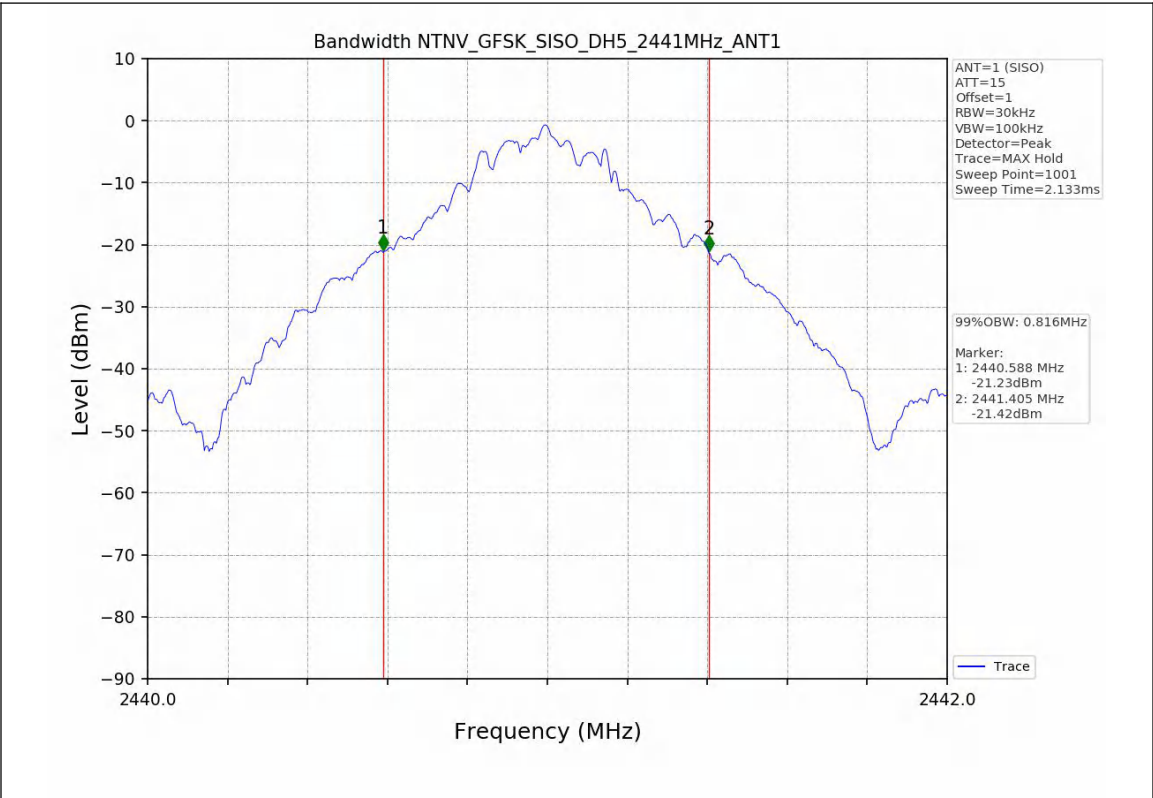


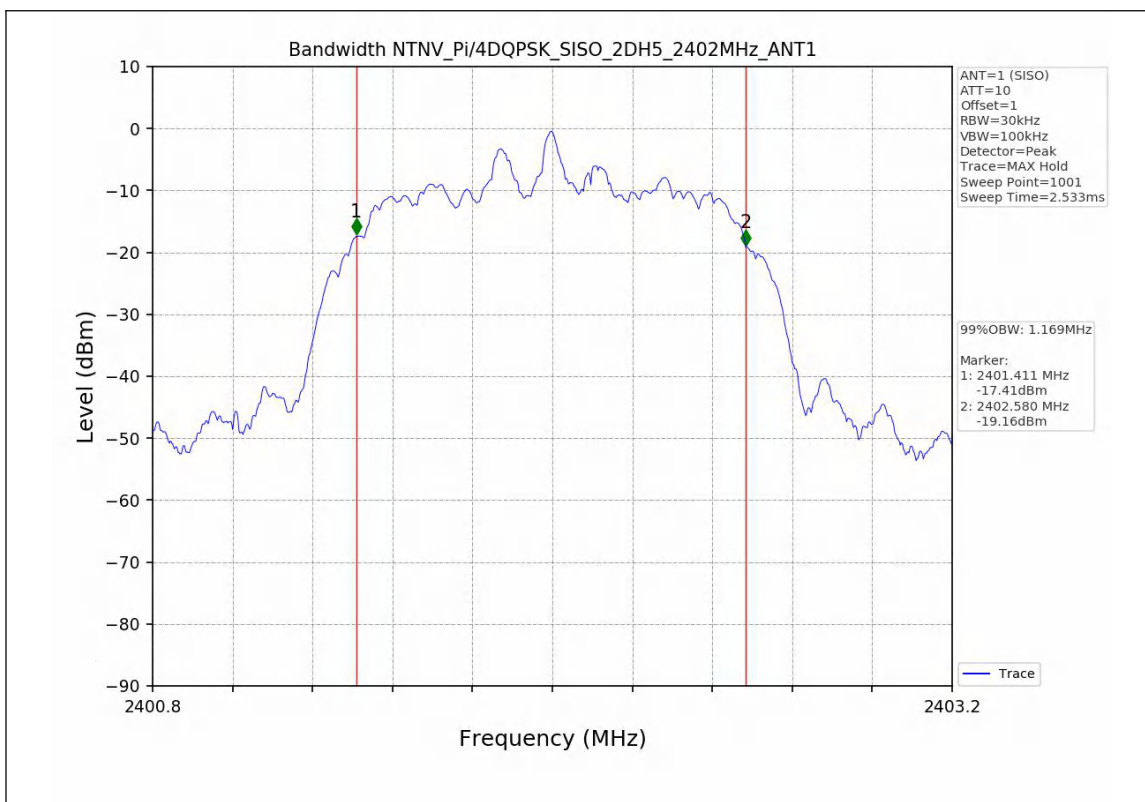
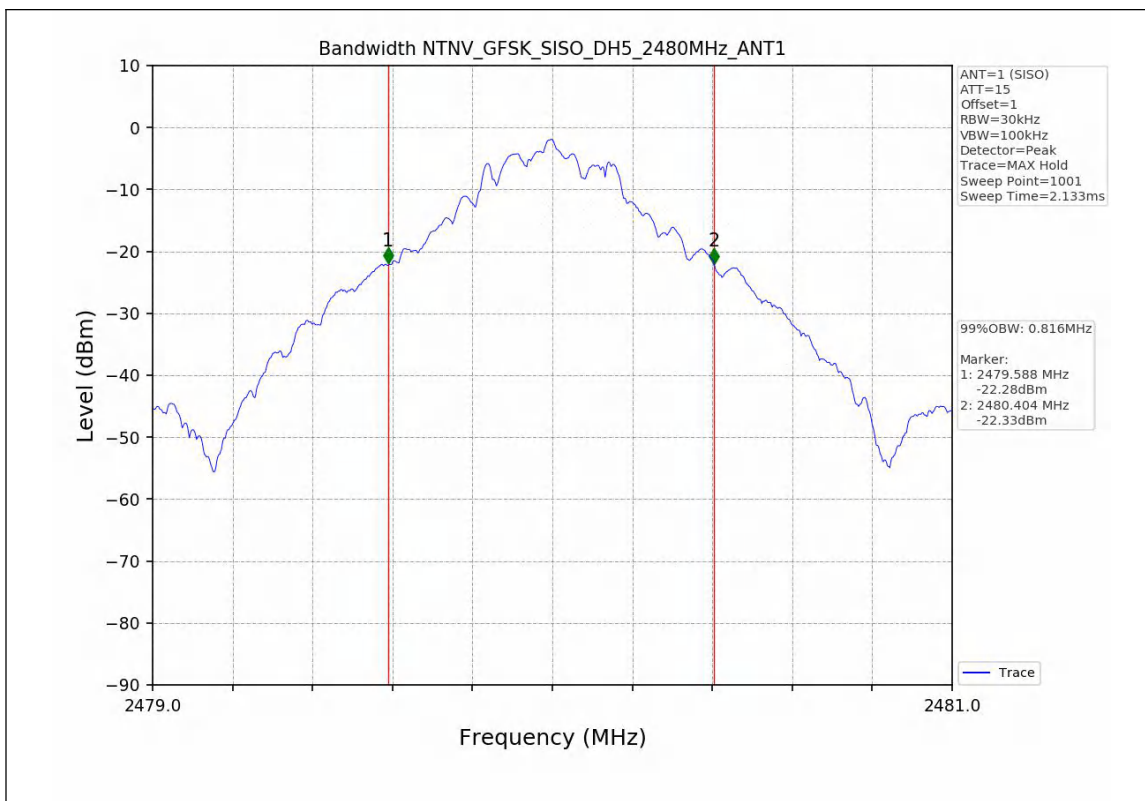


### 1.3 Test Graph - 99% Occupied Bandwidth

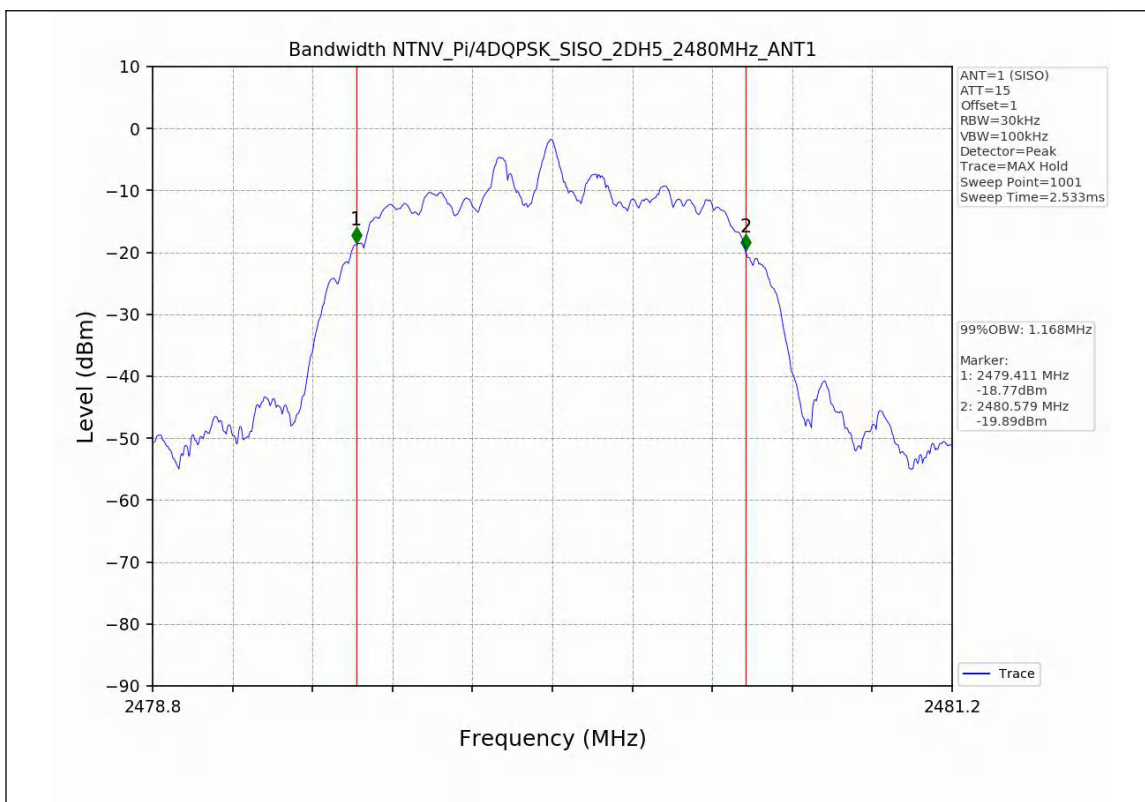
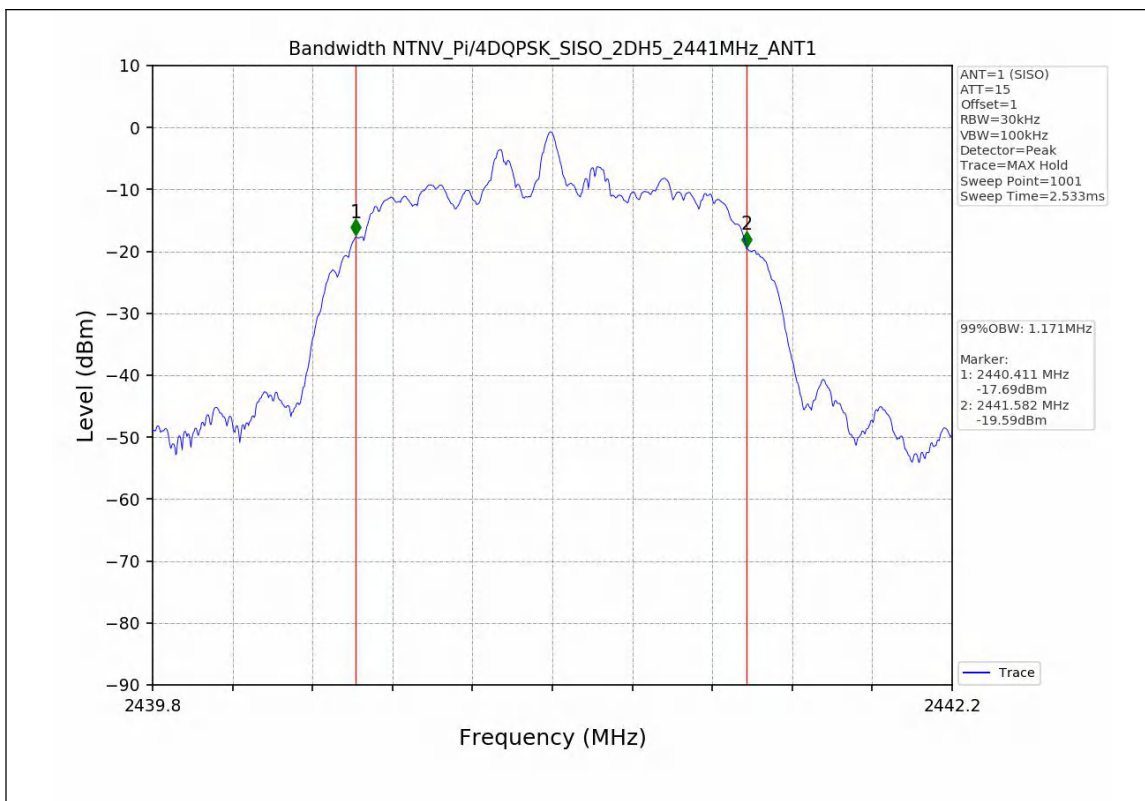


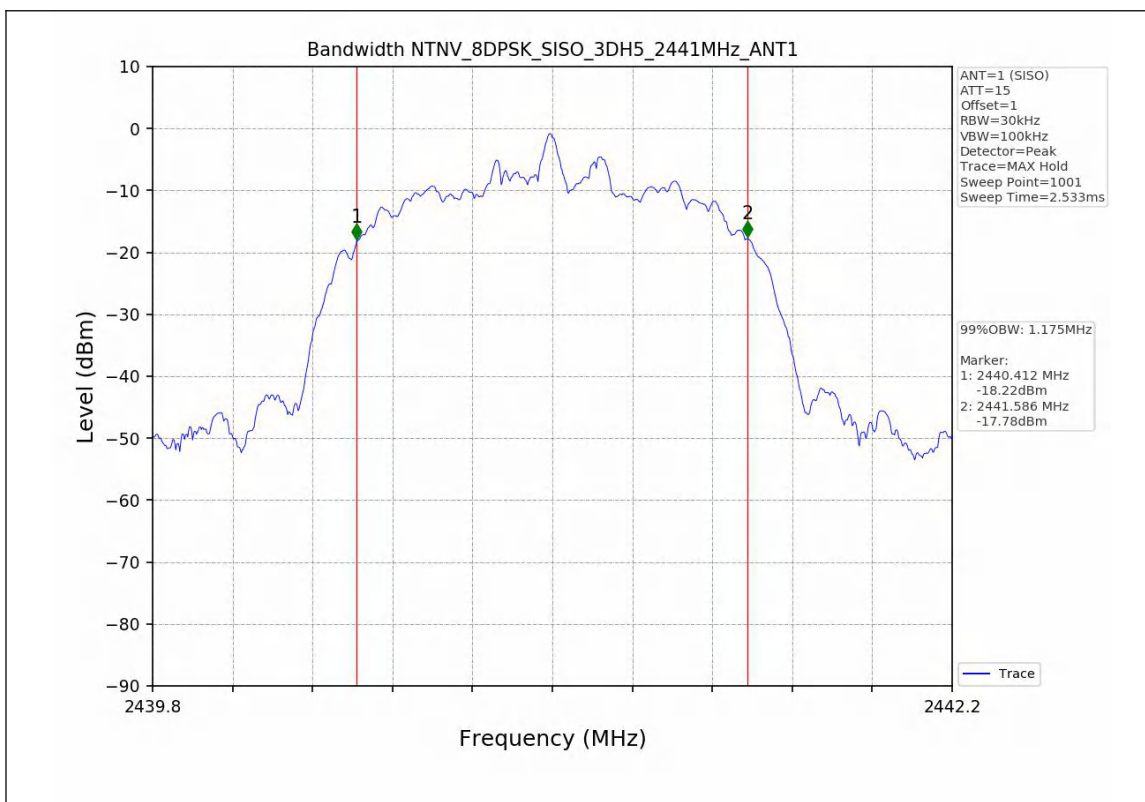
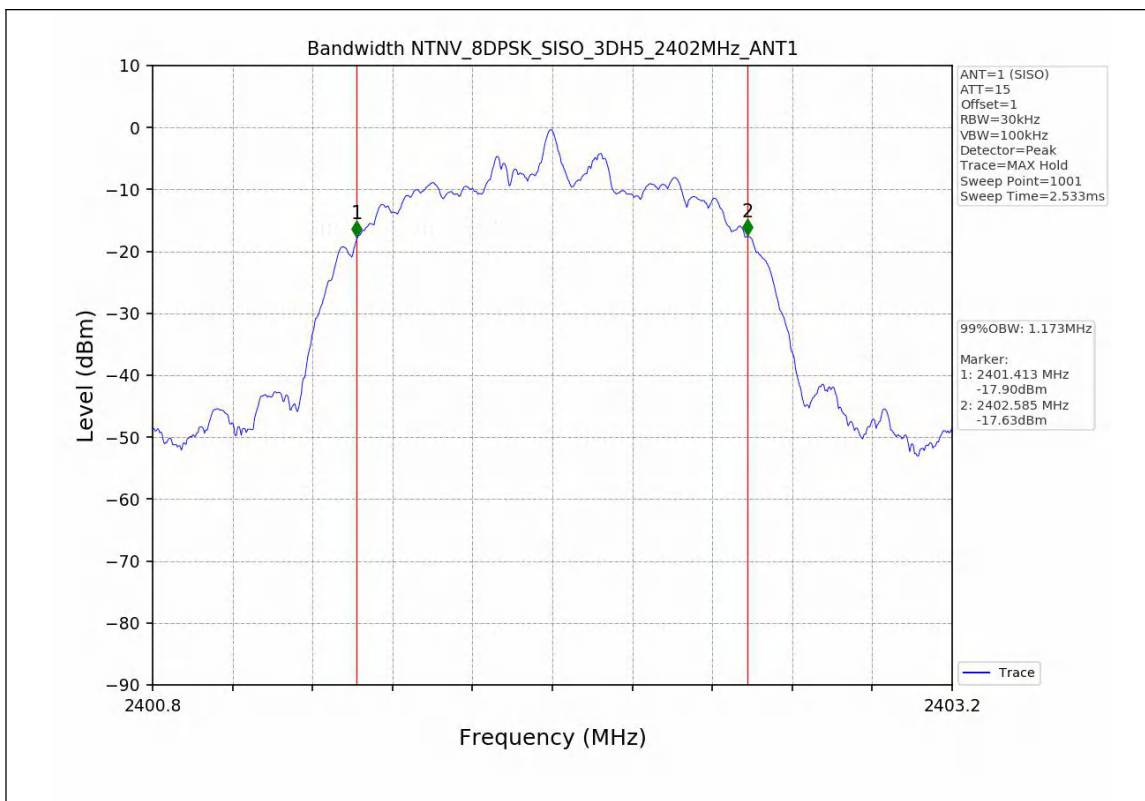


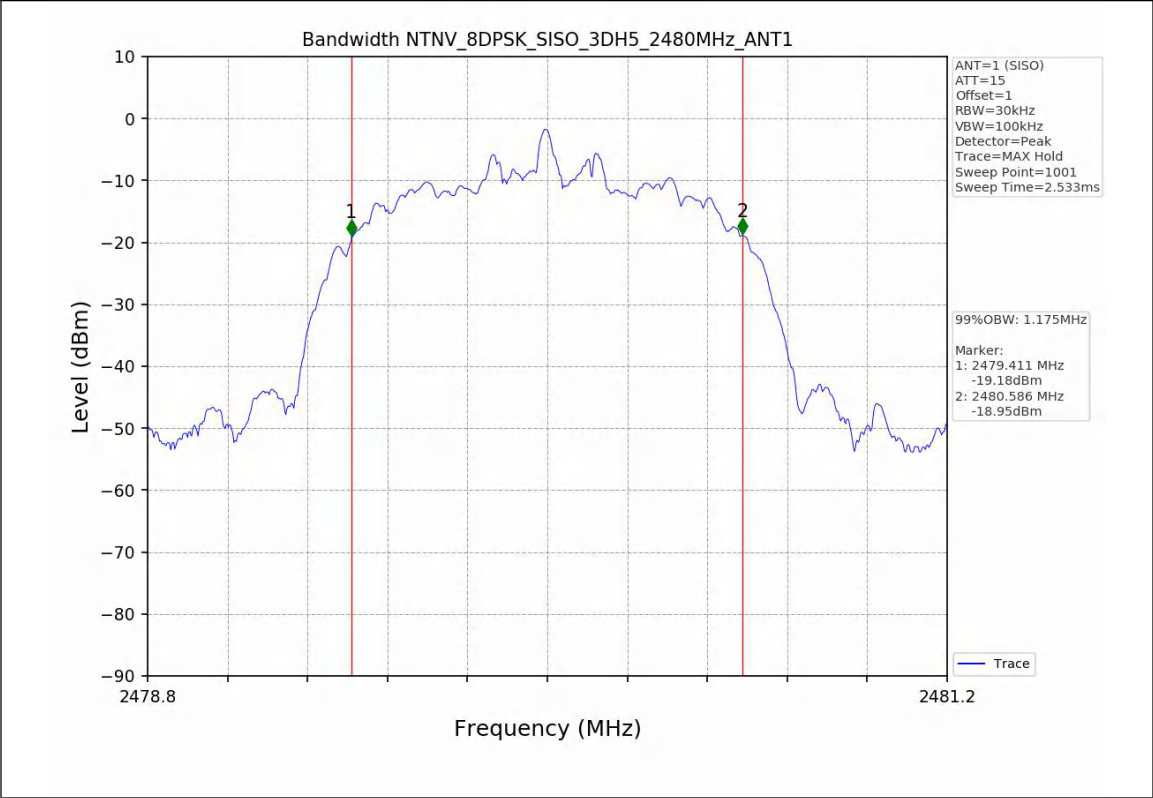










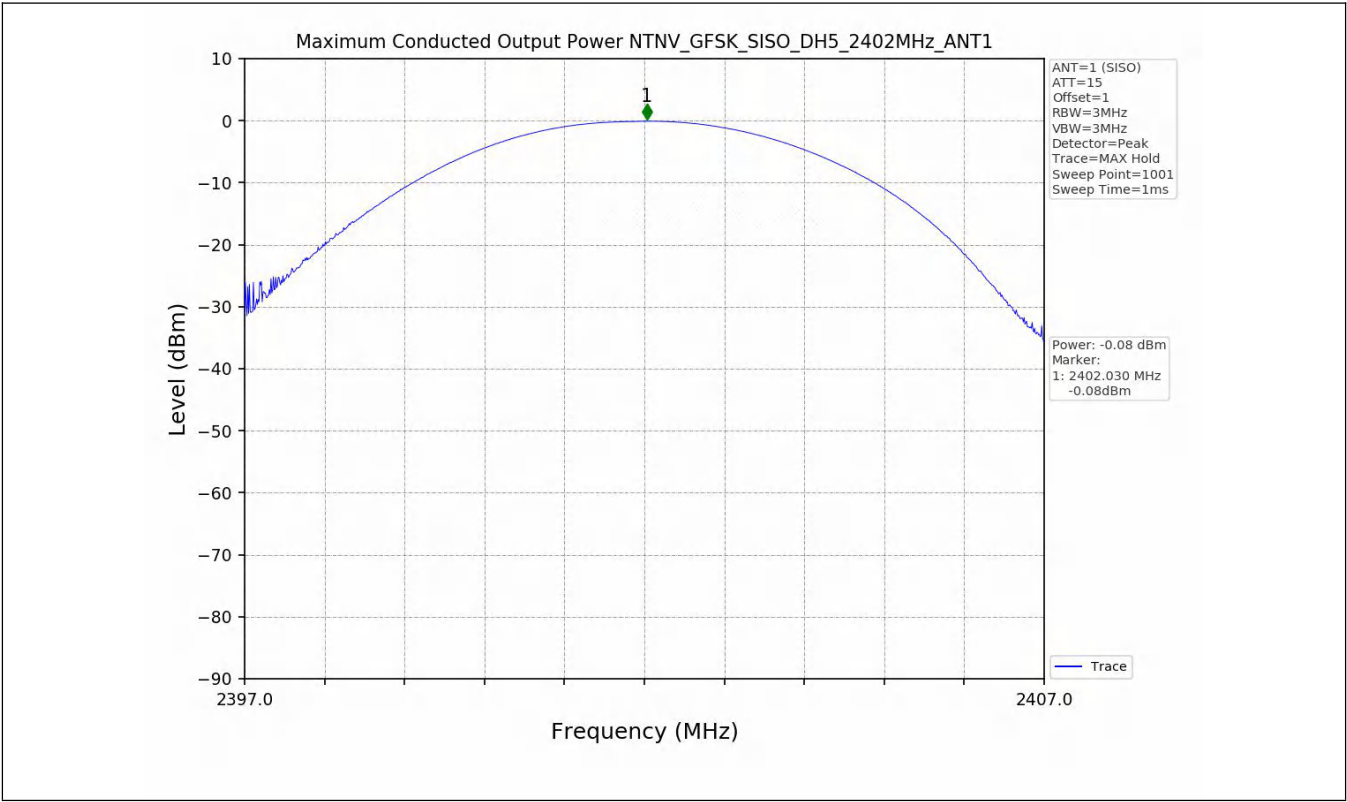


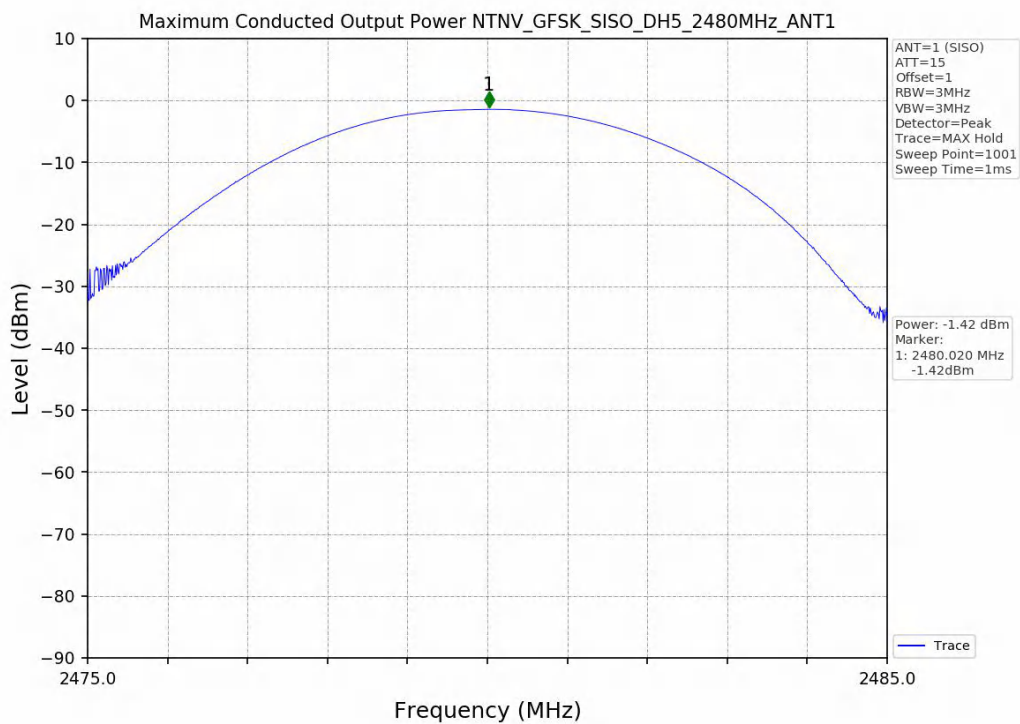
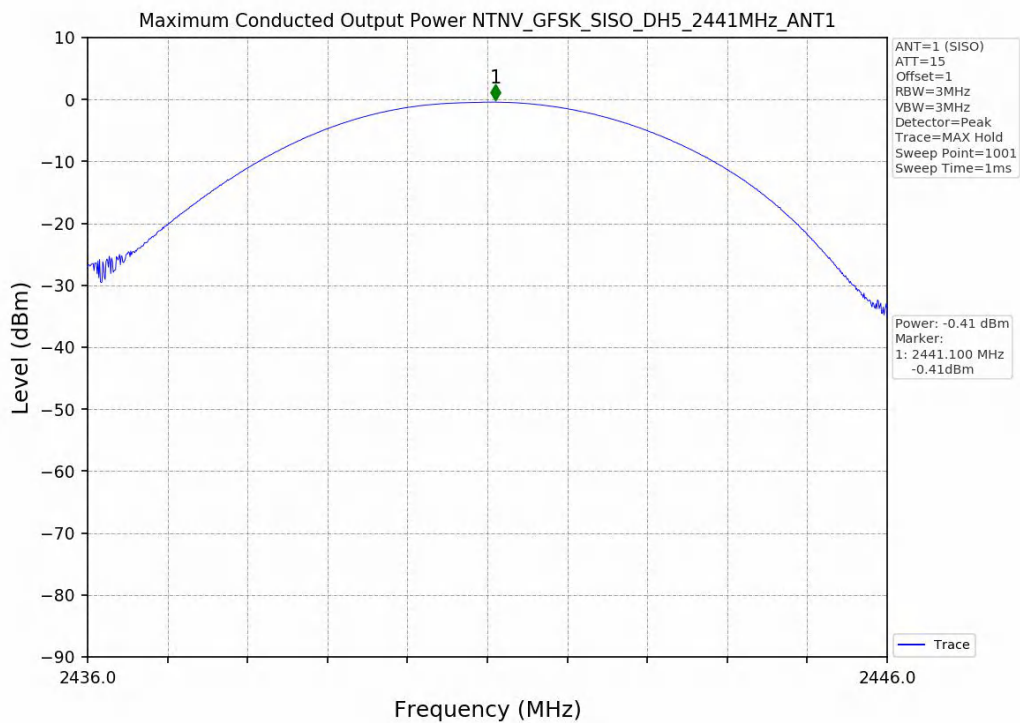
## 2. Maximum Conducted Output Power

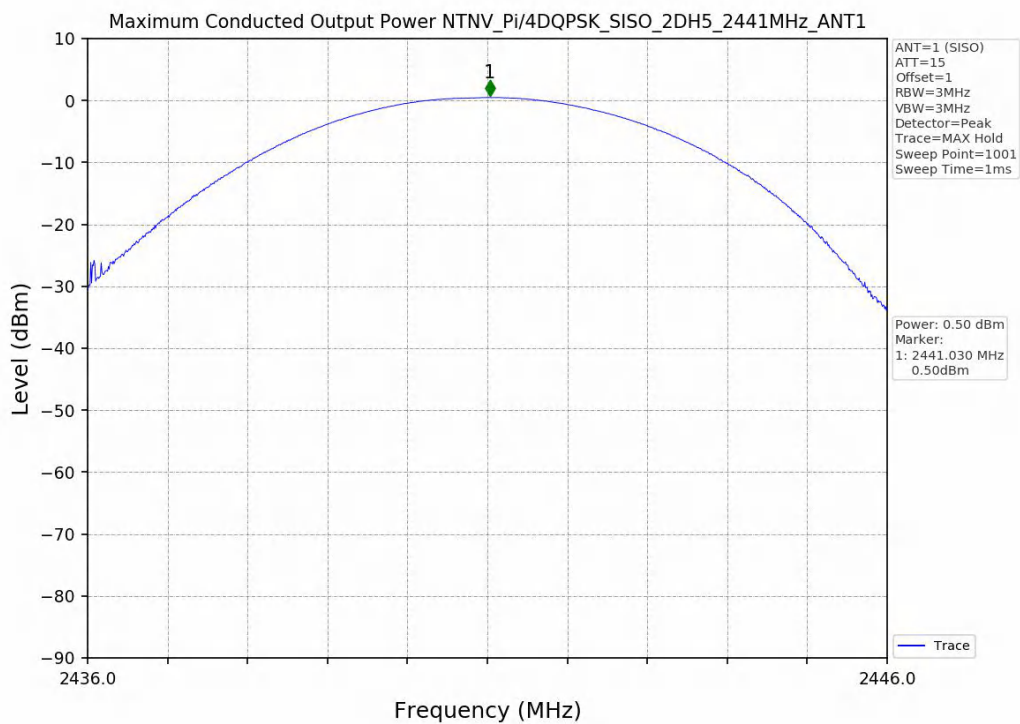
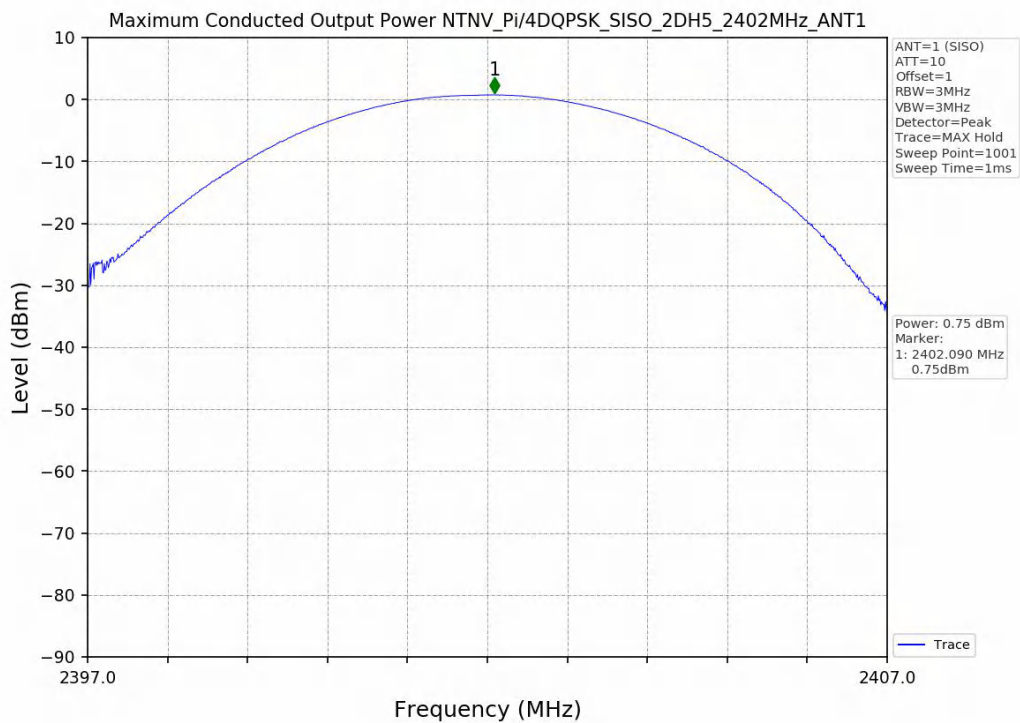
### 2.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	-0.08	30	PASS
	2441	SISO	-0.41	30	PASS
	2480	SISO	-1.42	30	PASS
Pi/4DQPSK	2402	SISO	0.75	20.97	PASS
	2441	SISO	0.50	20.97	PASS
	2480	SISO	-0.51	20.97	PASS
8DPSK	2402	SISO	1.12	20.97	PASS
	2441	SISO	0.78	20.97	PASS
	2480	SISO	-0.22	20.97	PASS

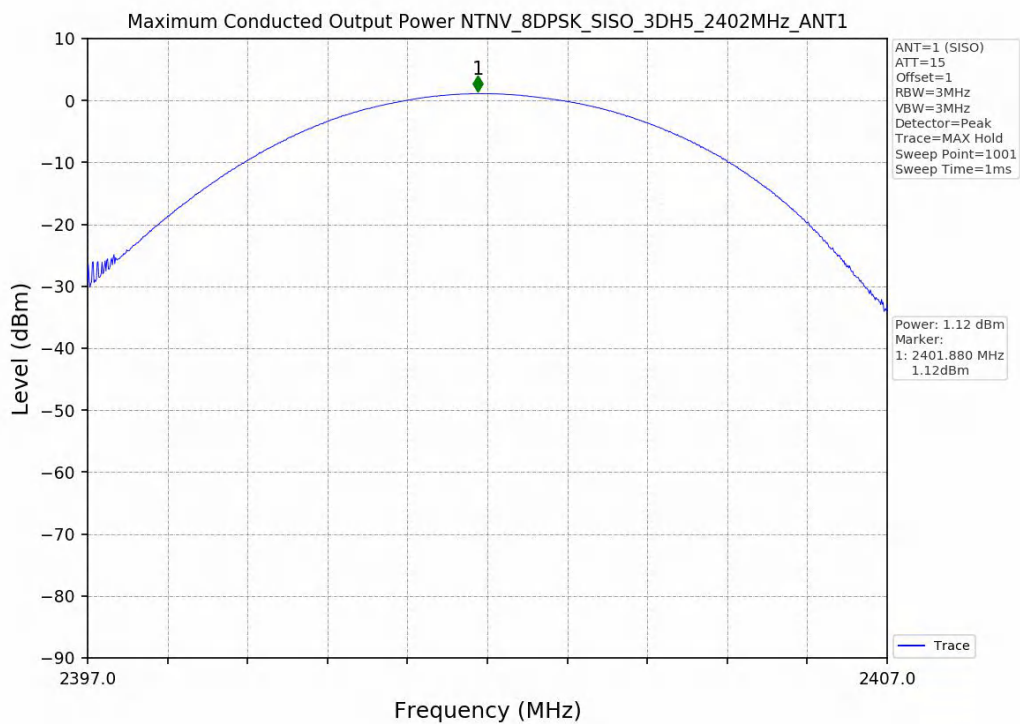
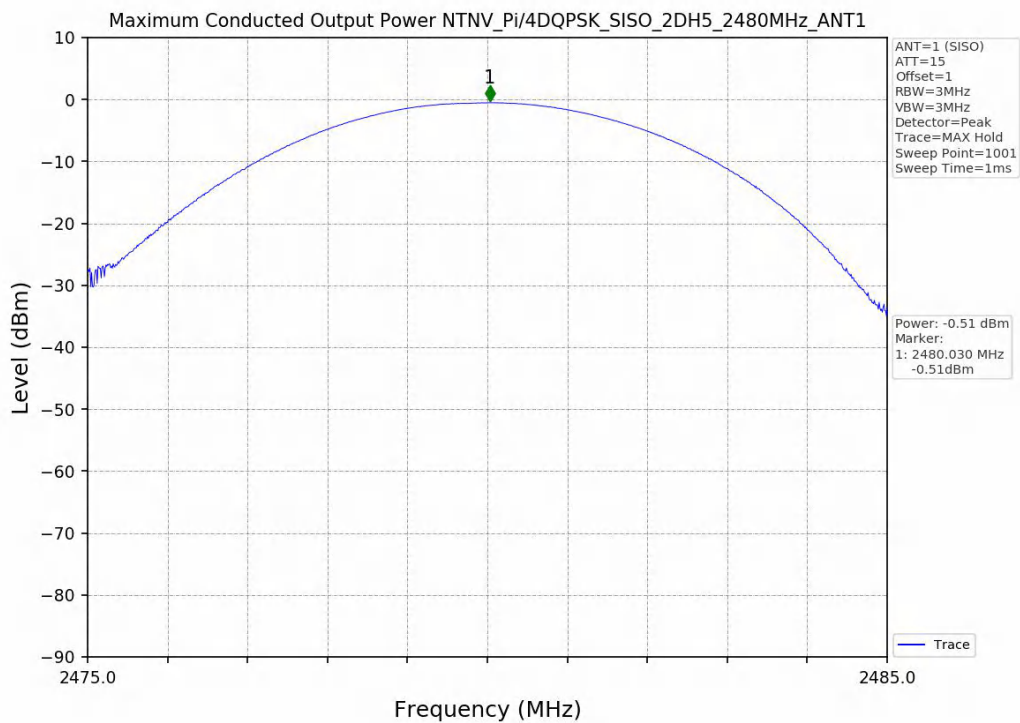
### 2.2 Test Graph

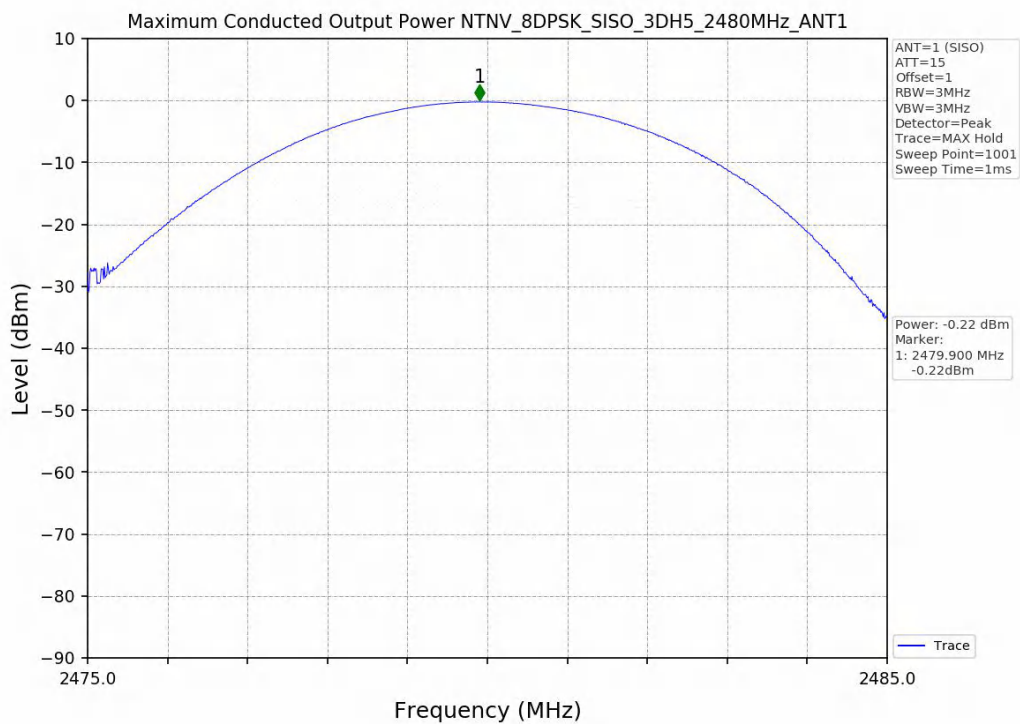
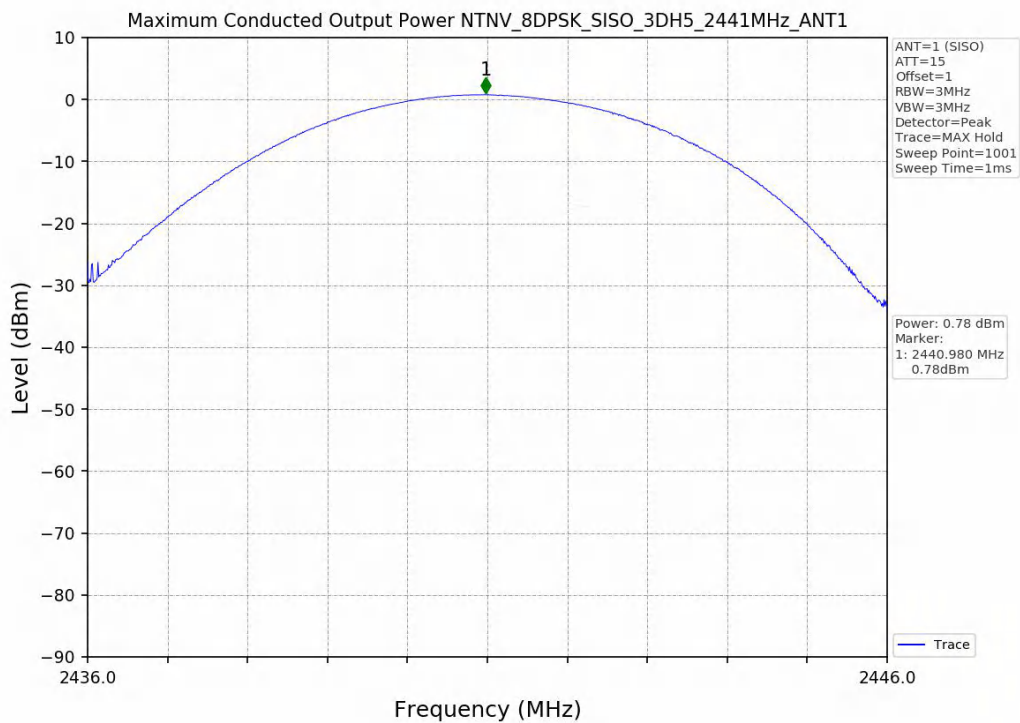










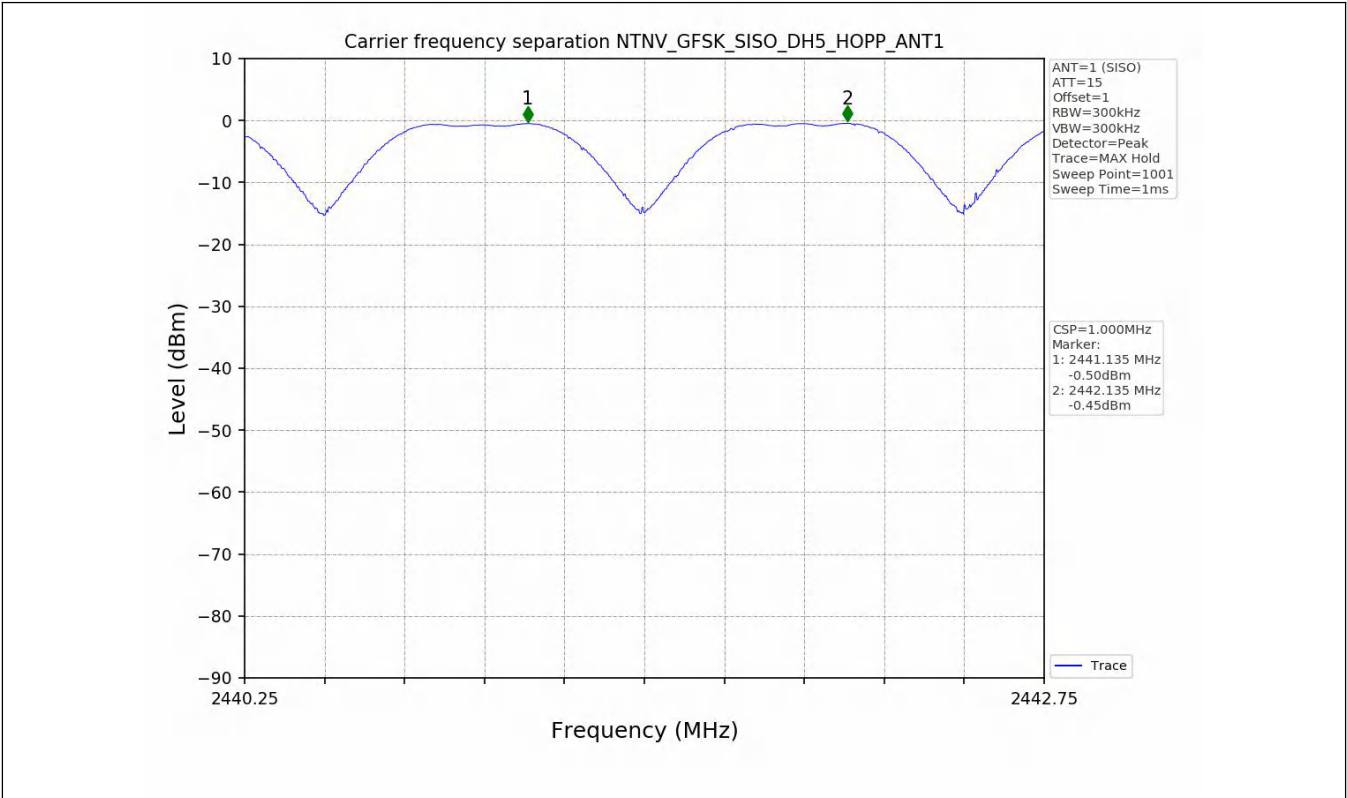


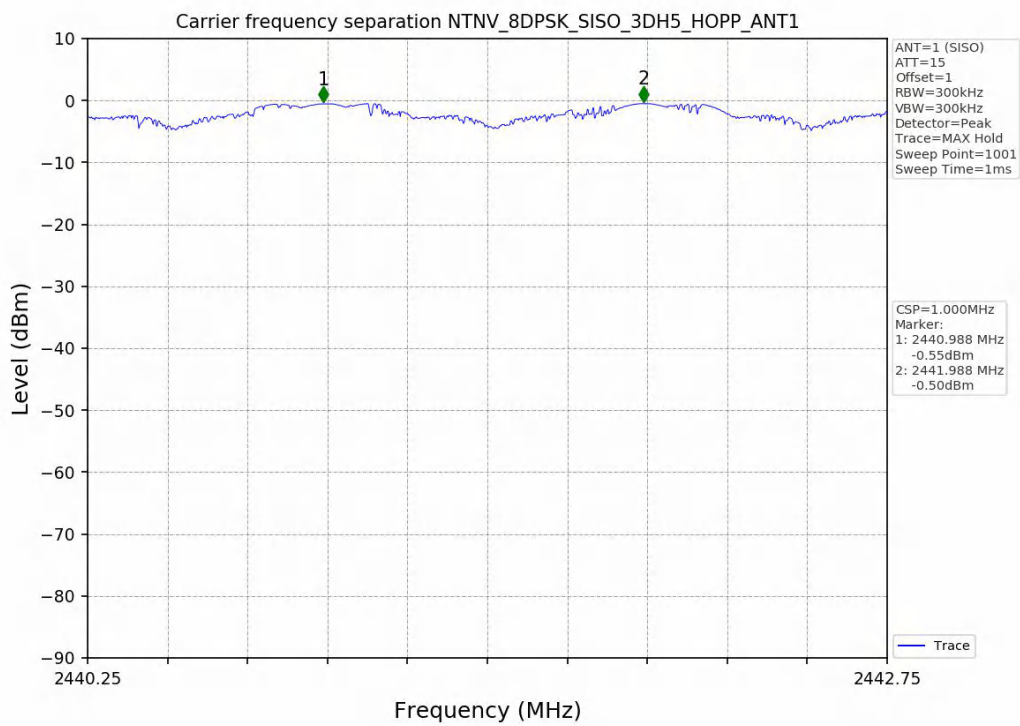
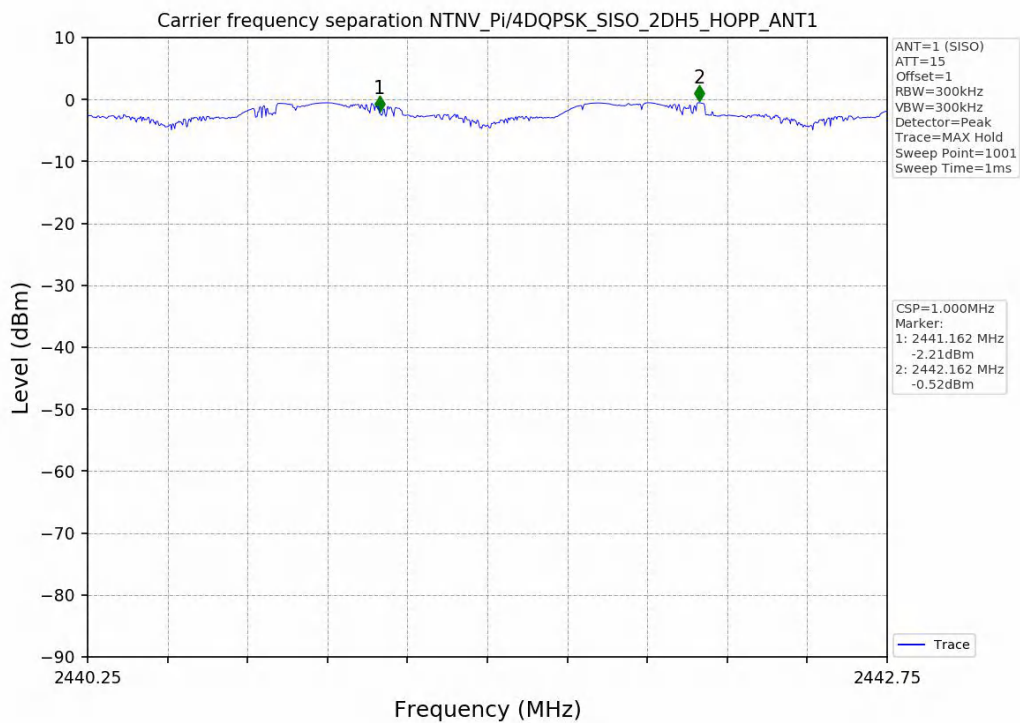
### 3. Carrier frequency separation

#### 3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	1.000	0.805	$\geq 0.805$	PASS
Pi/4DQPSK	SISO	1	1.000	1.246	$\geq 0.831$	PASS
8DPSK	SISO	1	1.000	1.263	$\geq 0.842$	PASS

#### 3.2 Test Graph



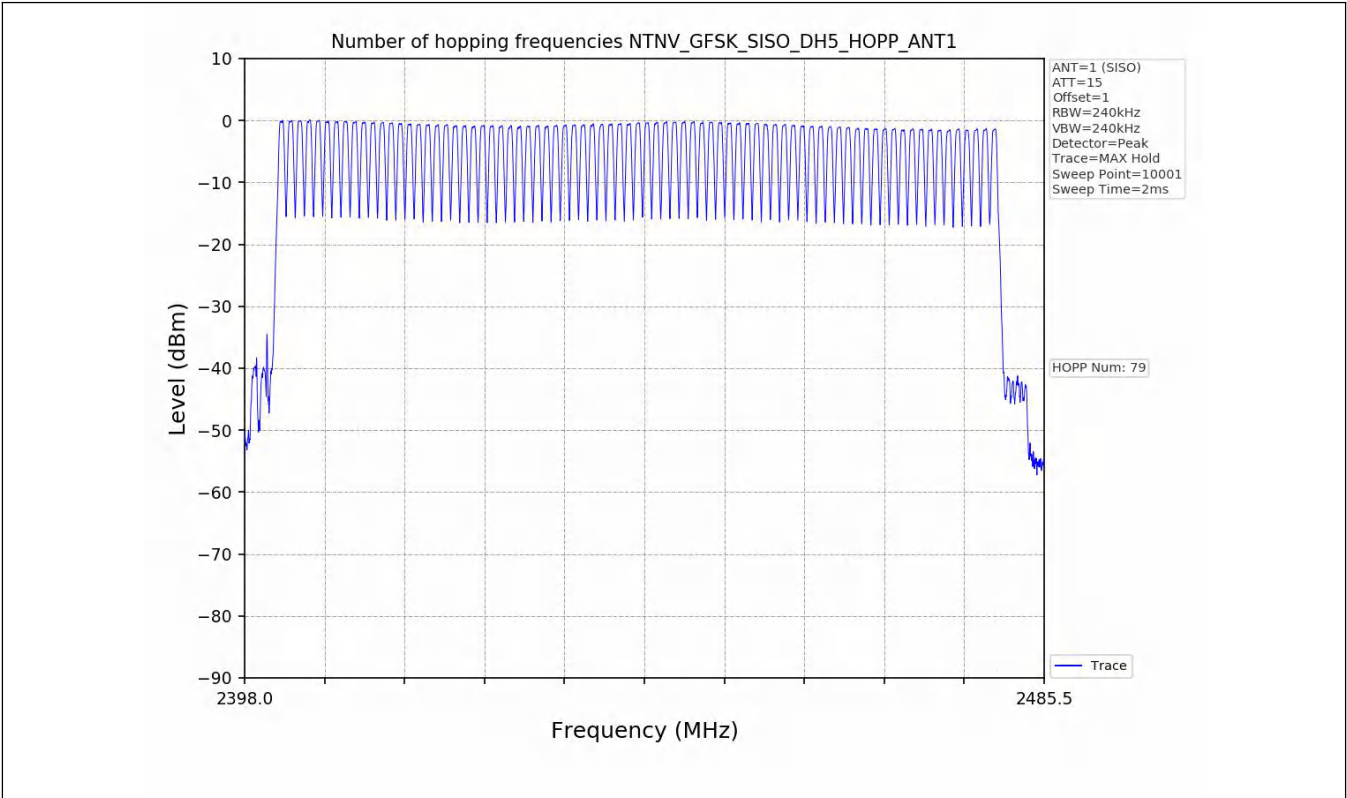


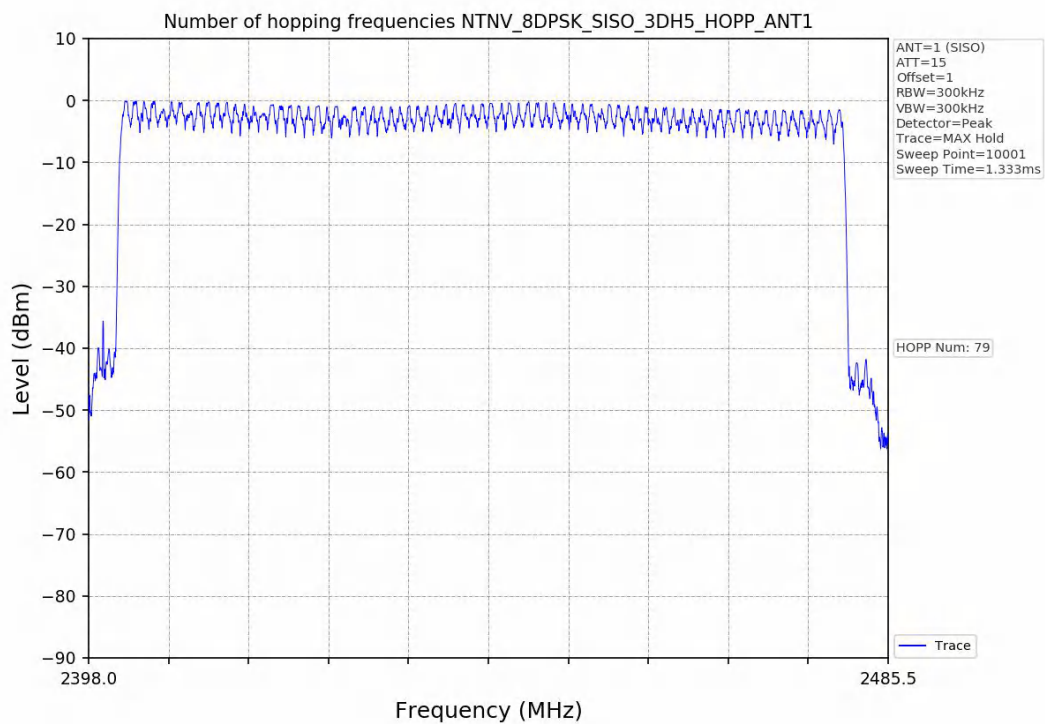
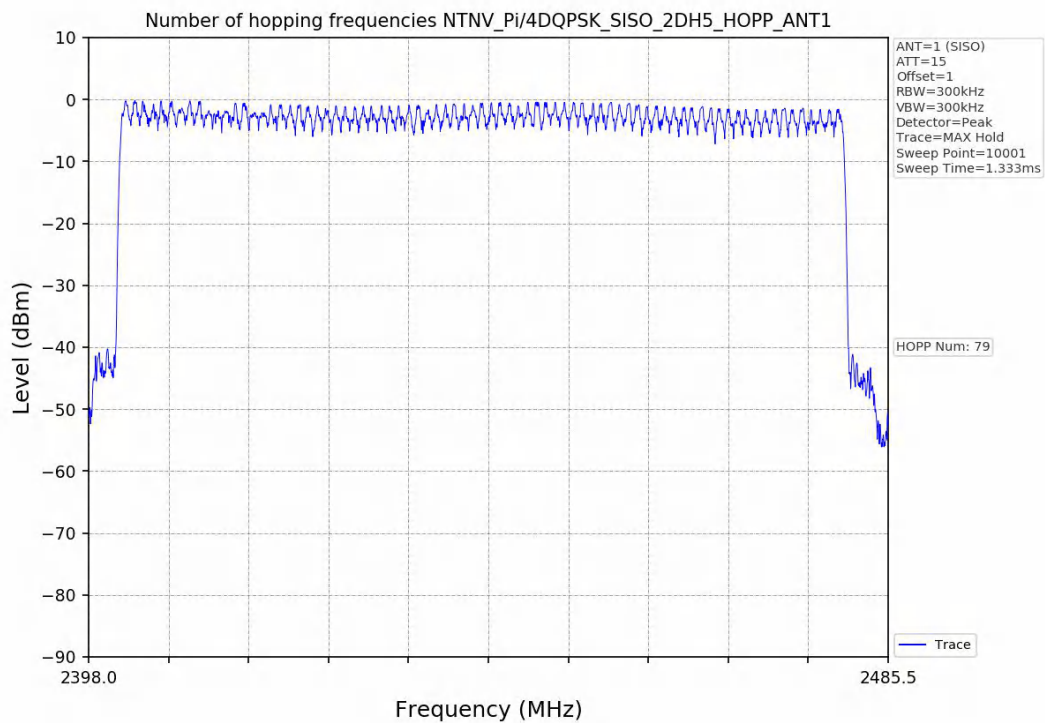
## 4. Number of hopping frequencies

### 4.1 Test Result

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

### 4.2 Test Graph





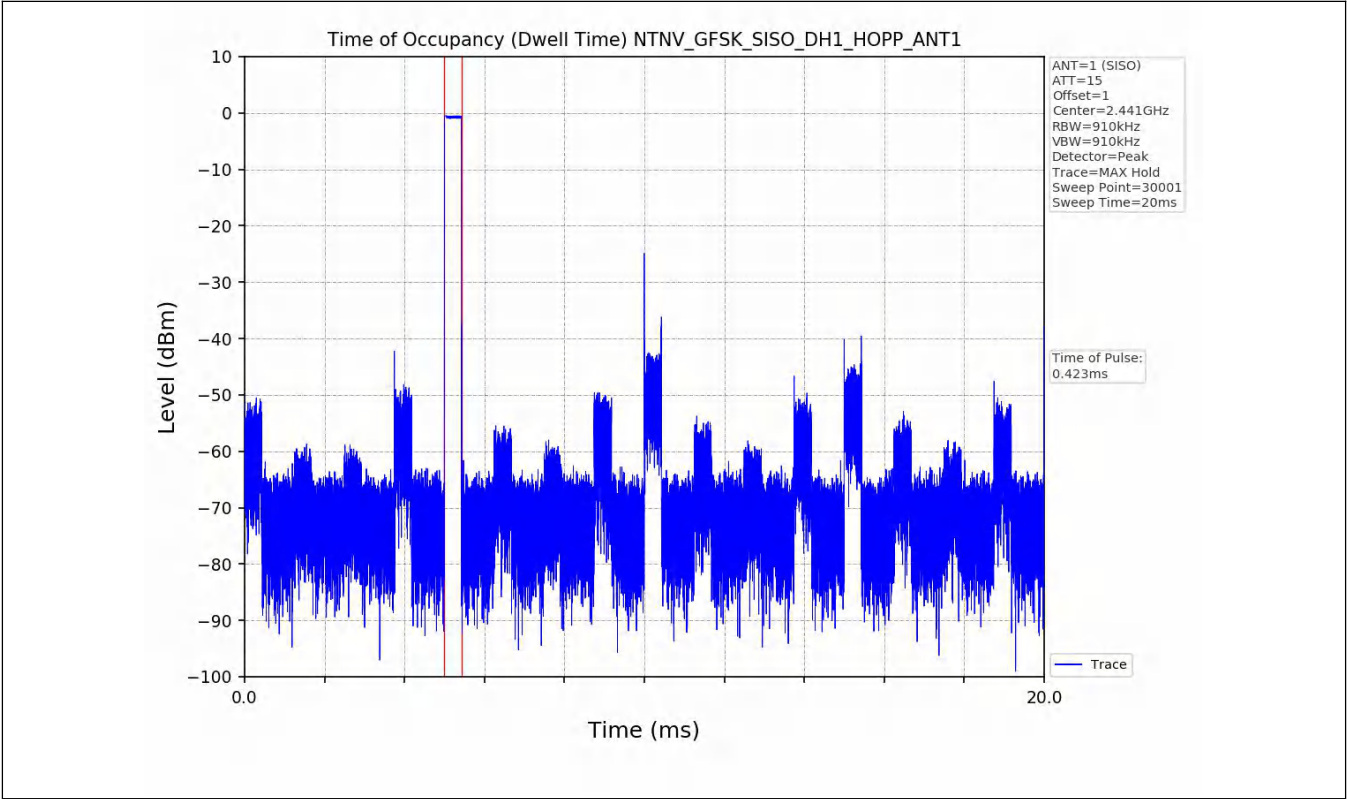


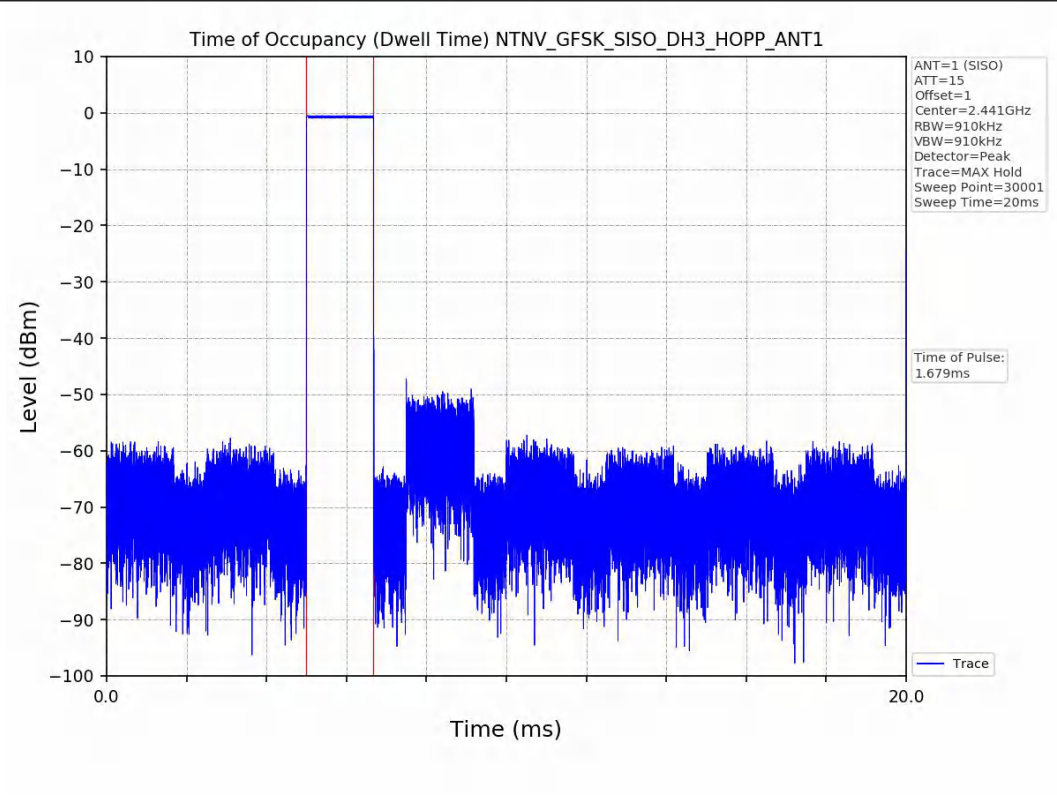
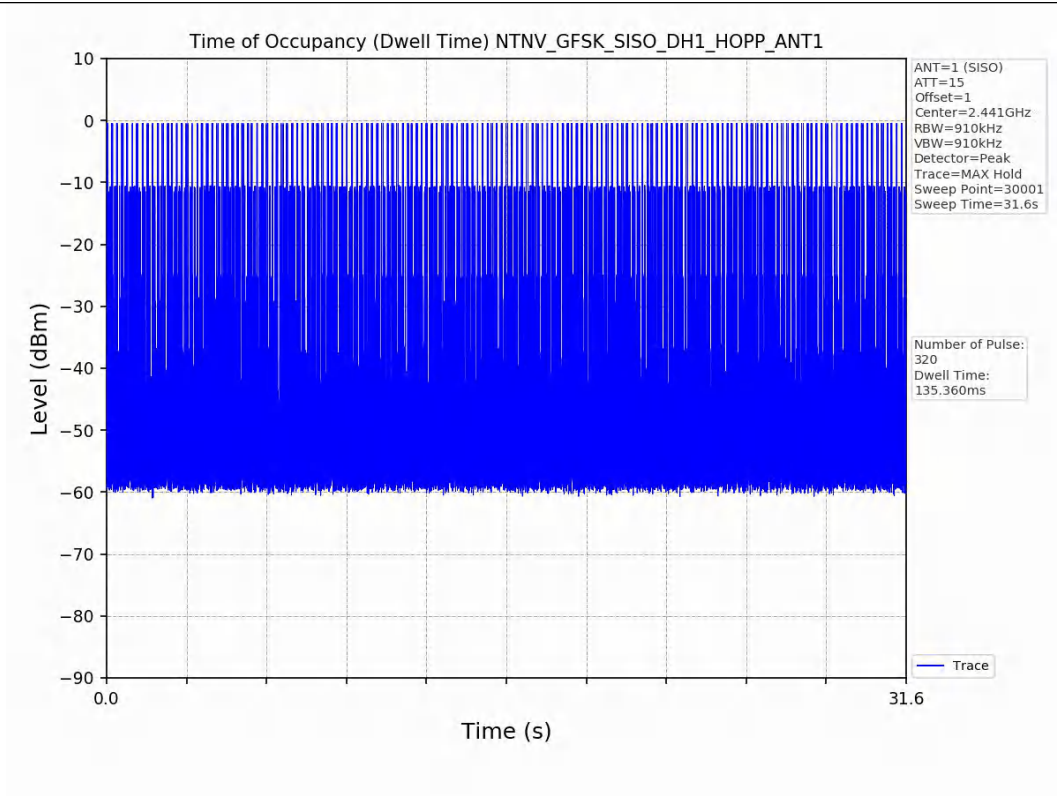
# 5. Time of Occupancy (Dwell Time)

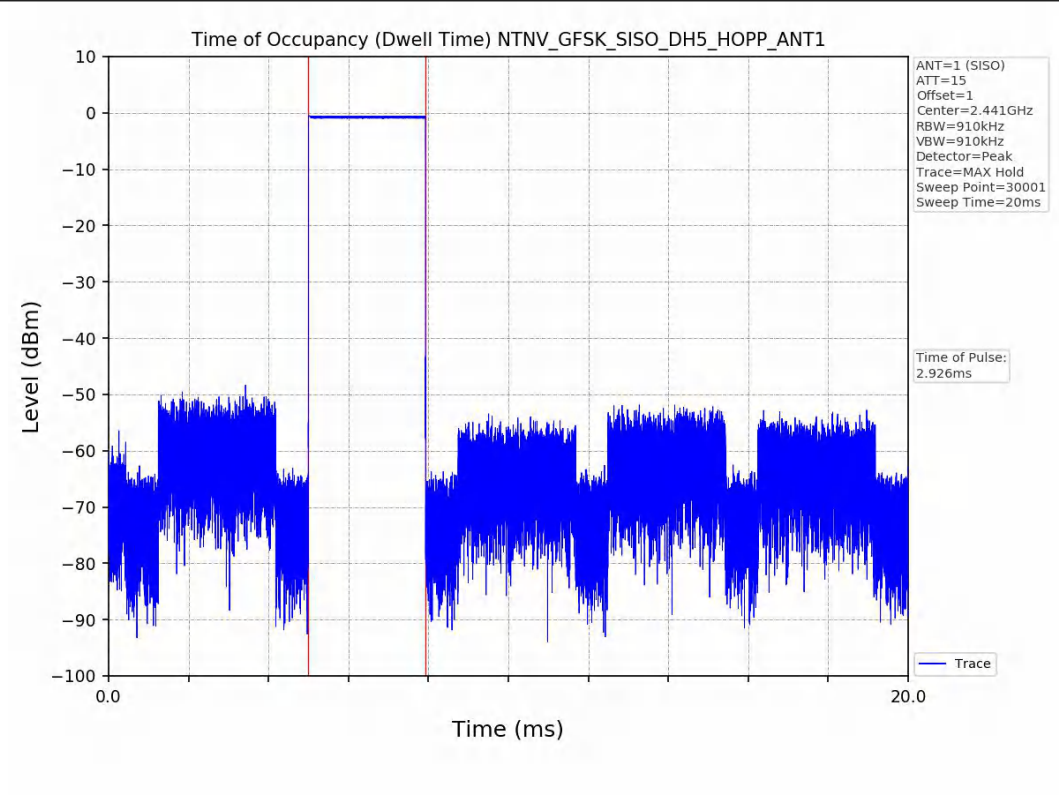
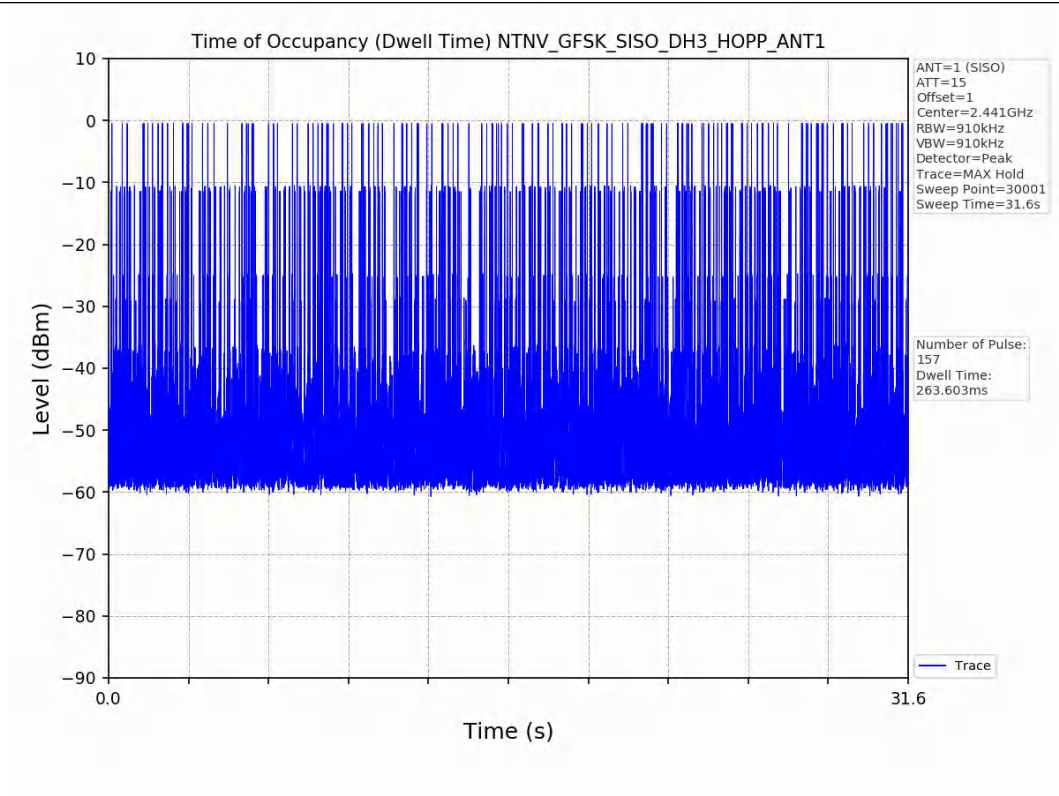
## 5.1 Test Result

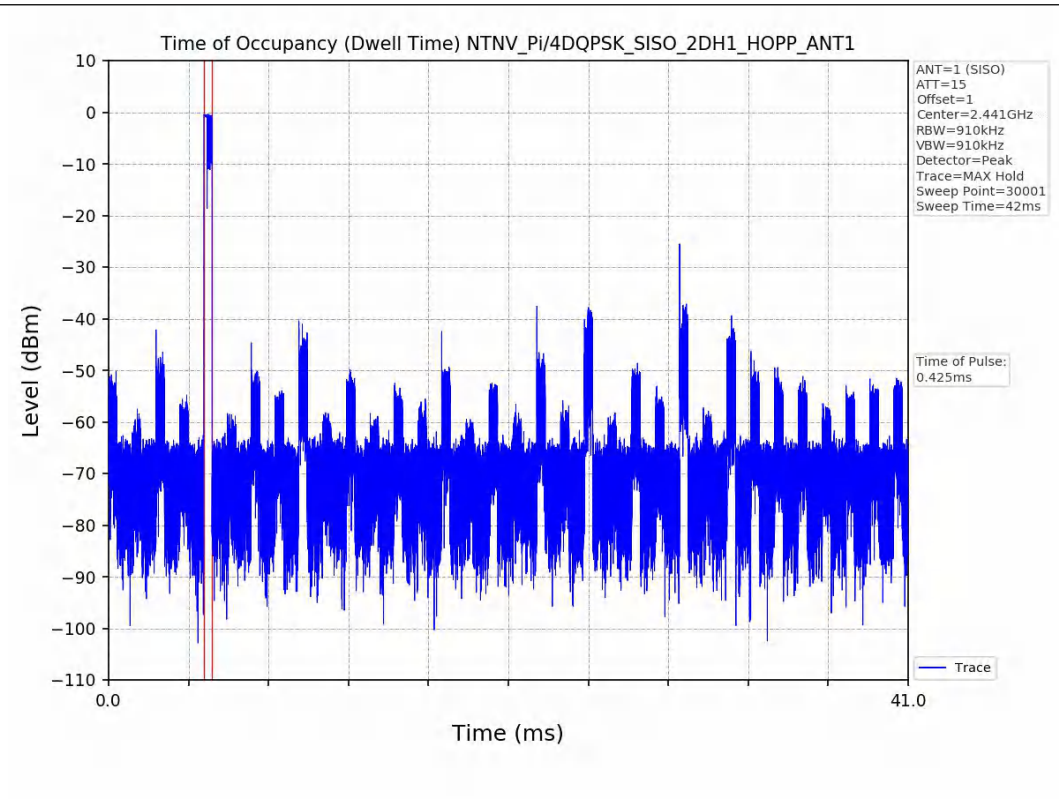
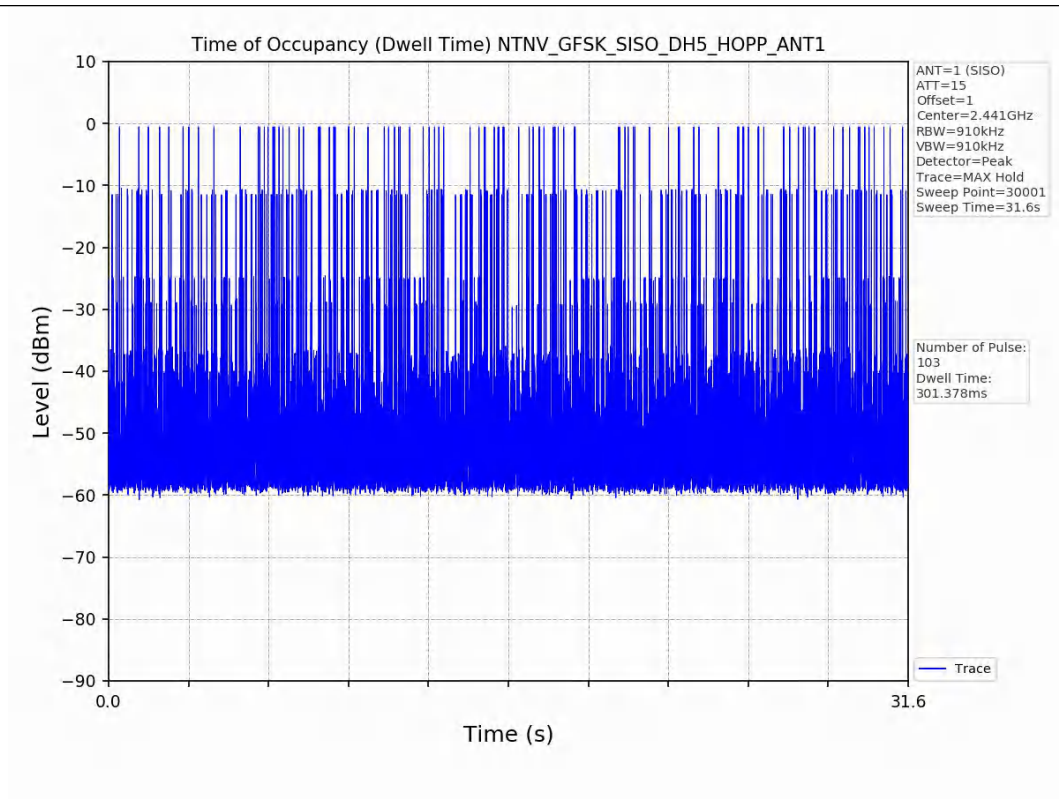
Test Mode	Packet Type	TX Type	ANT No.	Duration of Single Pulse (ms)	Obeservation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limits (ms)	Verdict
GFSK	DH1	SISO	1	0.423	31.6	320	135.360	≤400	PASS
	DH3	SISO	1	1.679	31.6	157	263.603	≤400	PASS
	DH5	SISO	1	2.926	31.6	103	301.378	≤400	PASS
Pi/4DQPSK	2DH1	SISO	1	0.425	31.6	320	136.000	≤400	PASS
	2DH3	SISO	1	1.685	31.6	159	267.915	≤400	PASS
	2DH5	SISO	1	2.933	31.6	102	299.166	≤400	PASS
8DPSK	3DH1	SISO	1	0.435	31.6	320	139.200	≤400	PASS
	3DH3	SISO	1	1.686	31.6	158	266.388	≤400	PASS
	3DH5	SISO	1	2.935	31.6	104	305.240	≤400	PASS

## 5.2 Test Graph

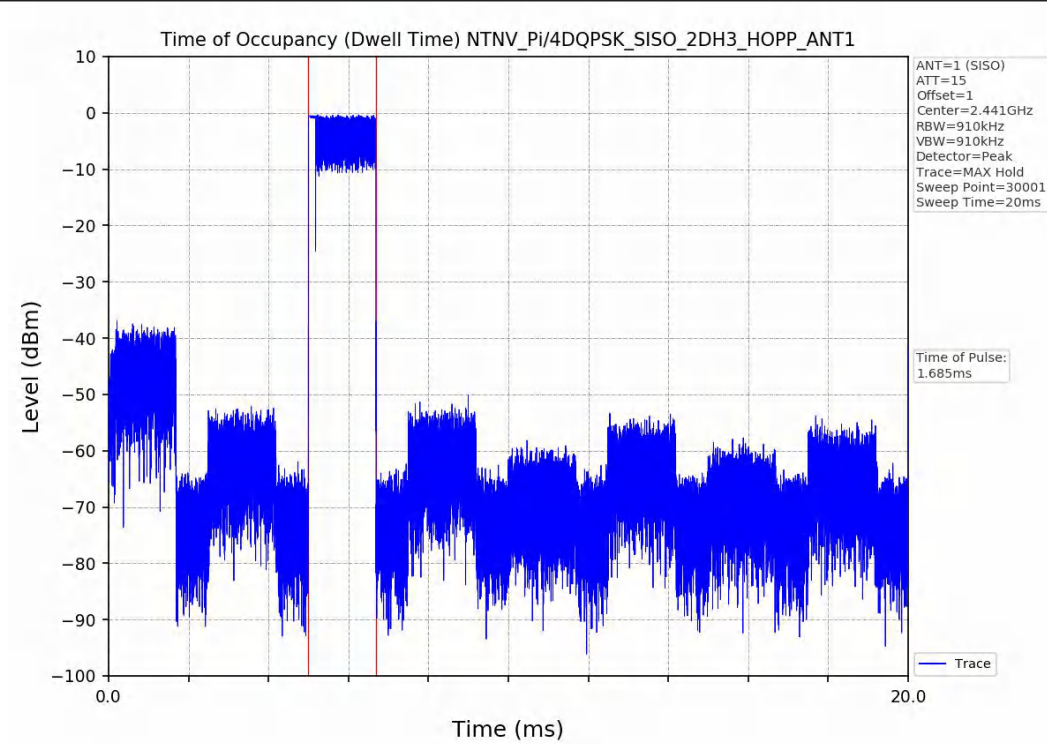
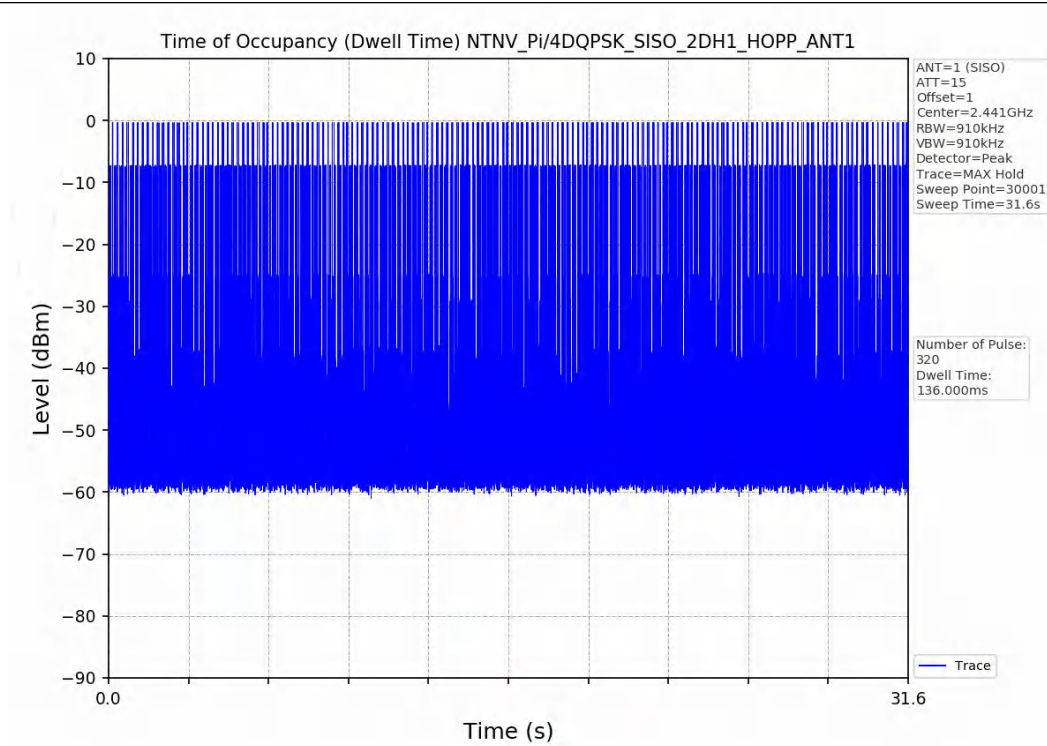


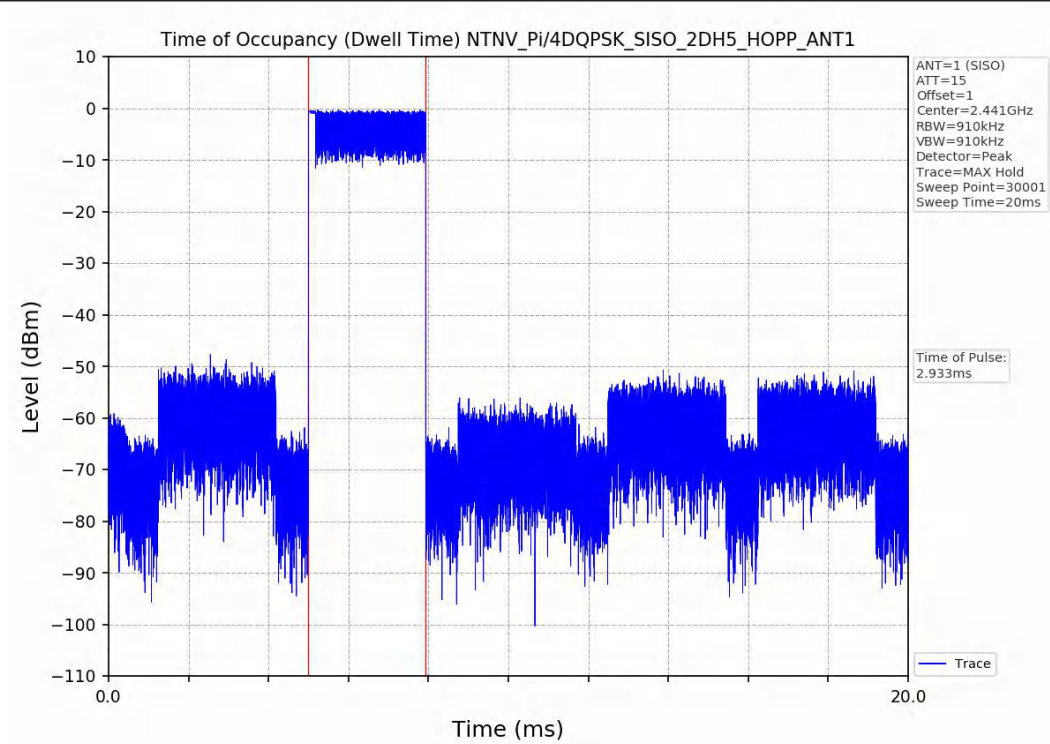
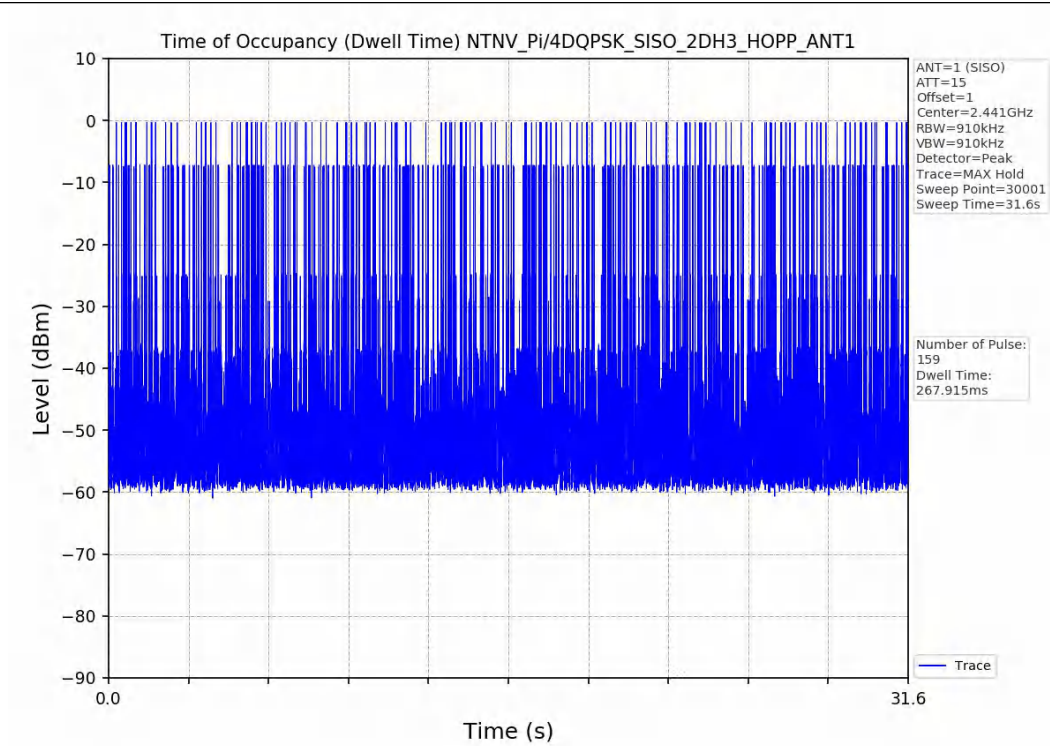




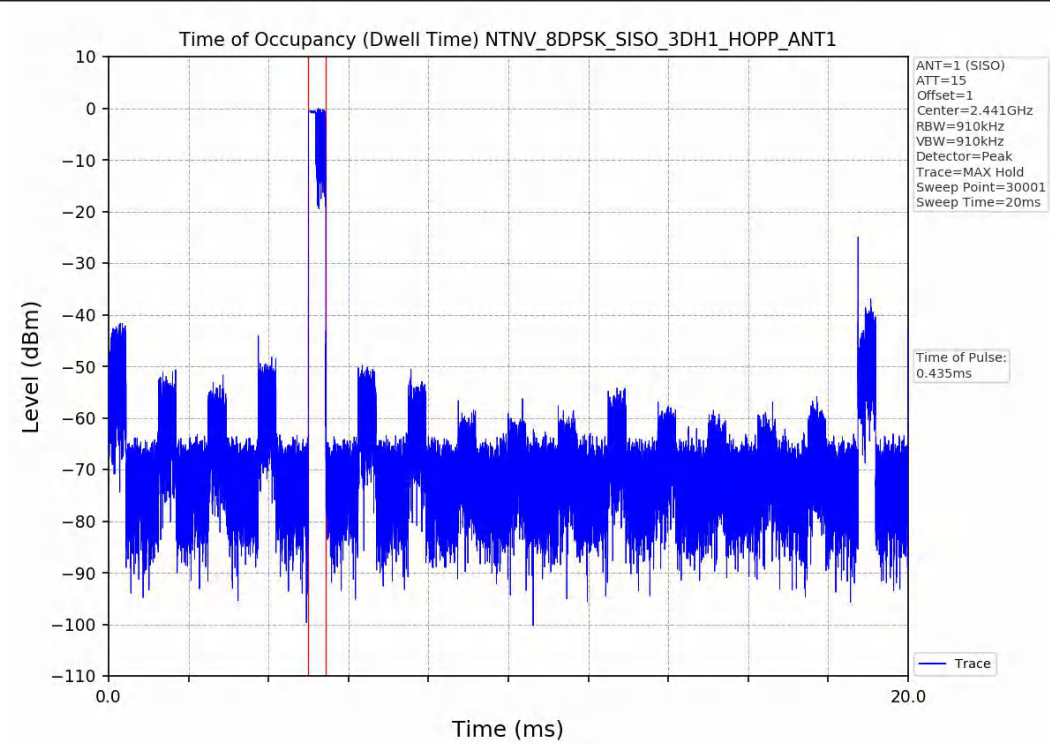
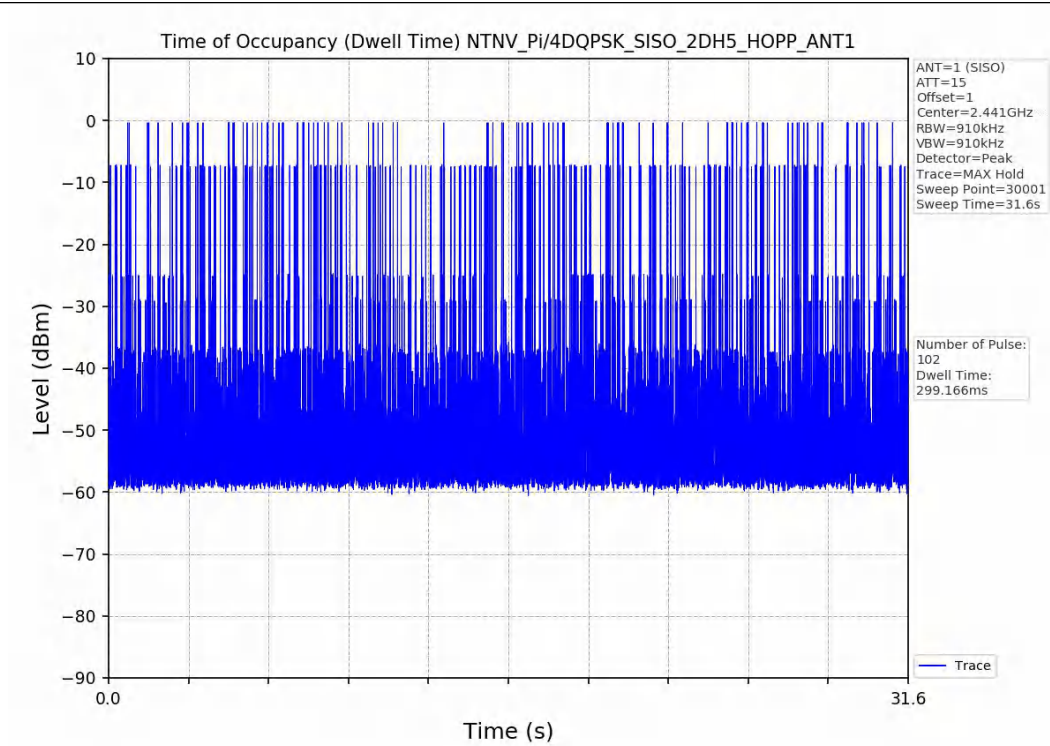


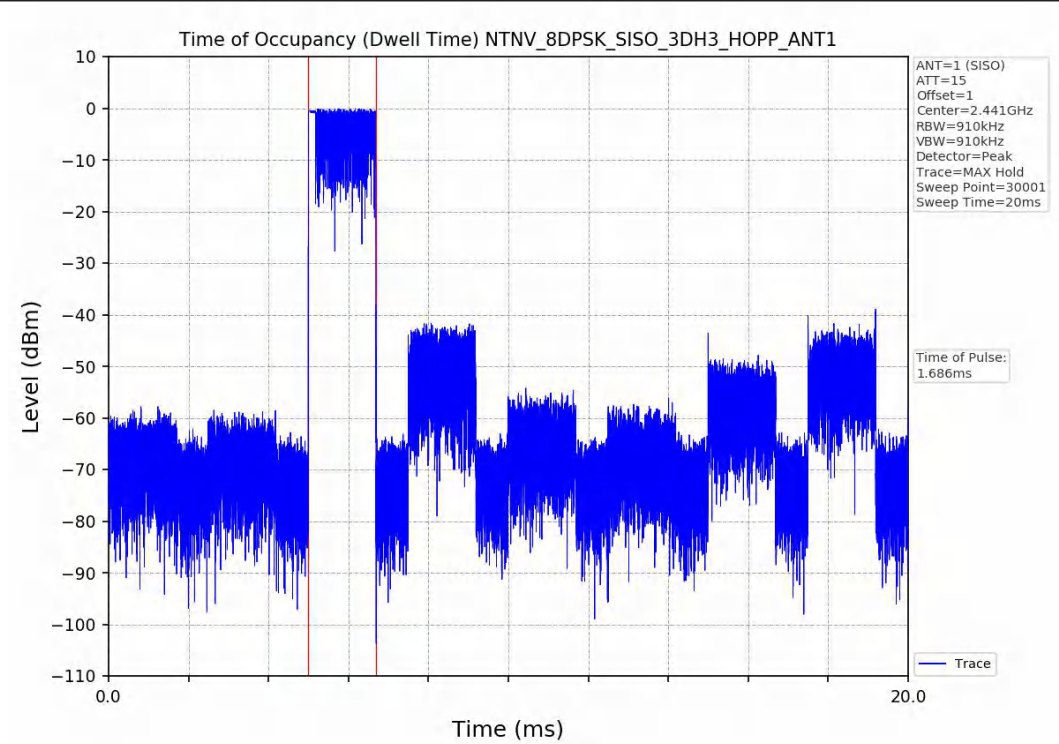
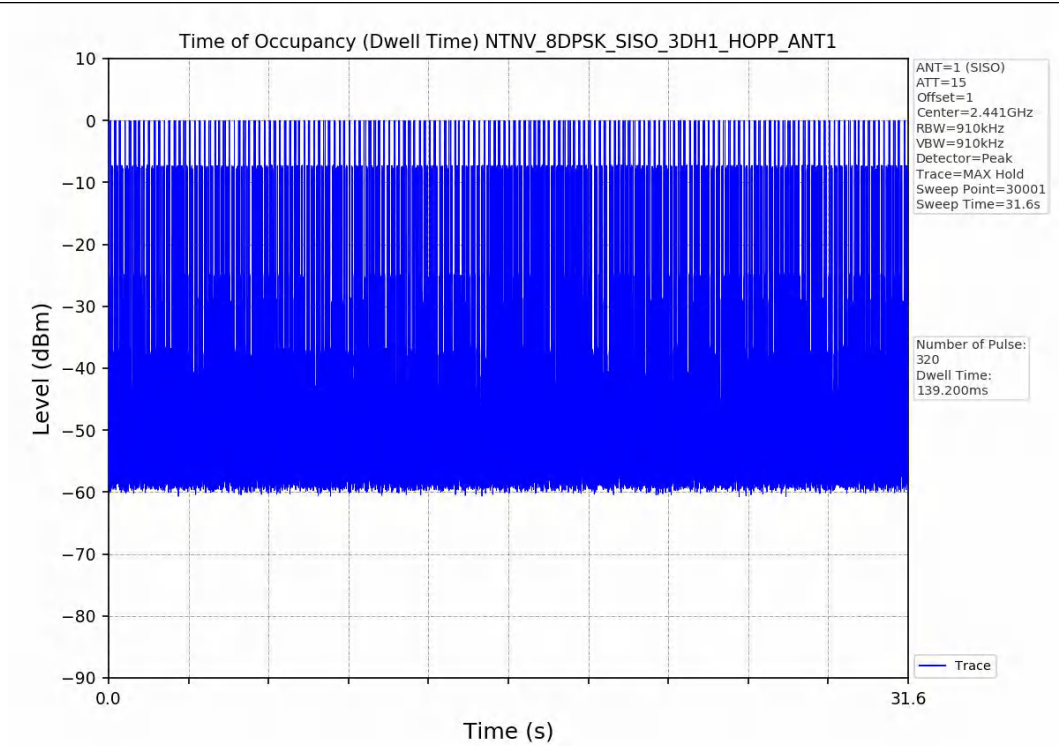


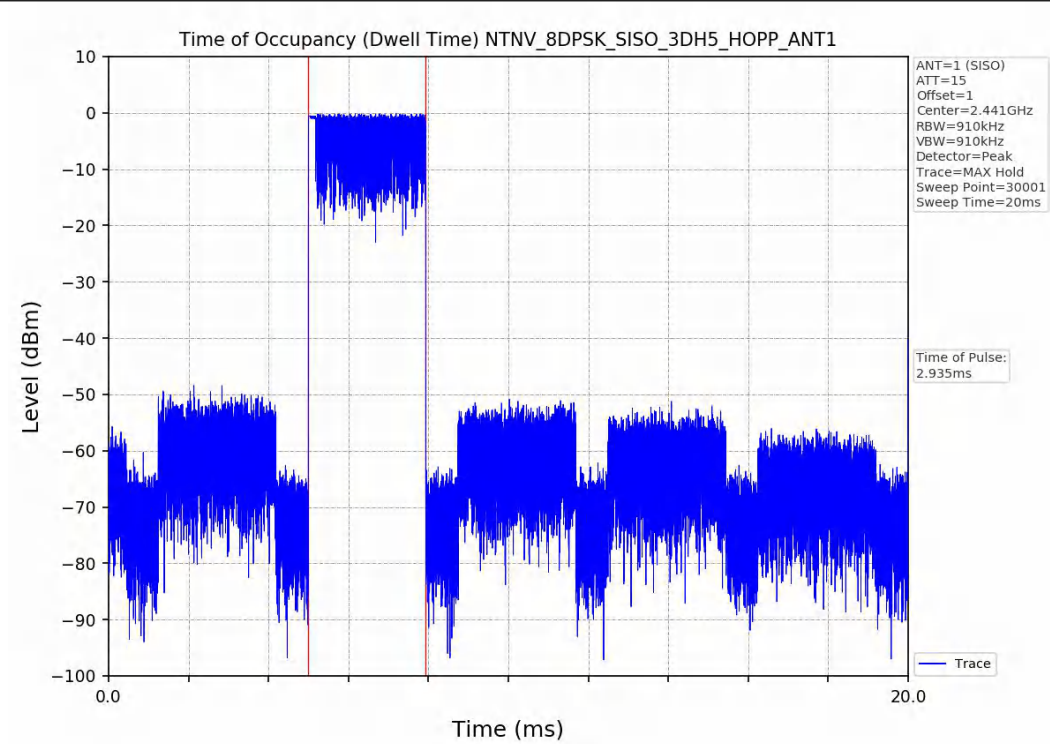
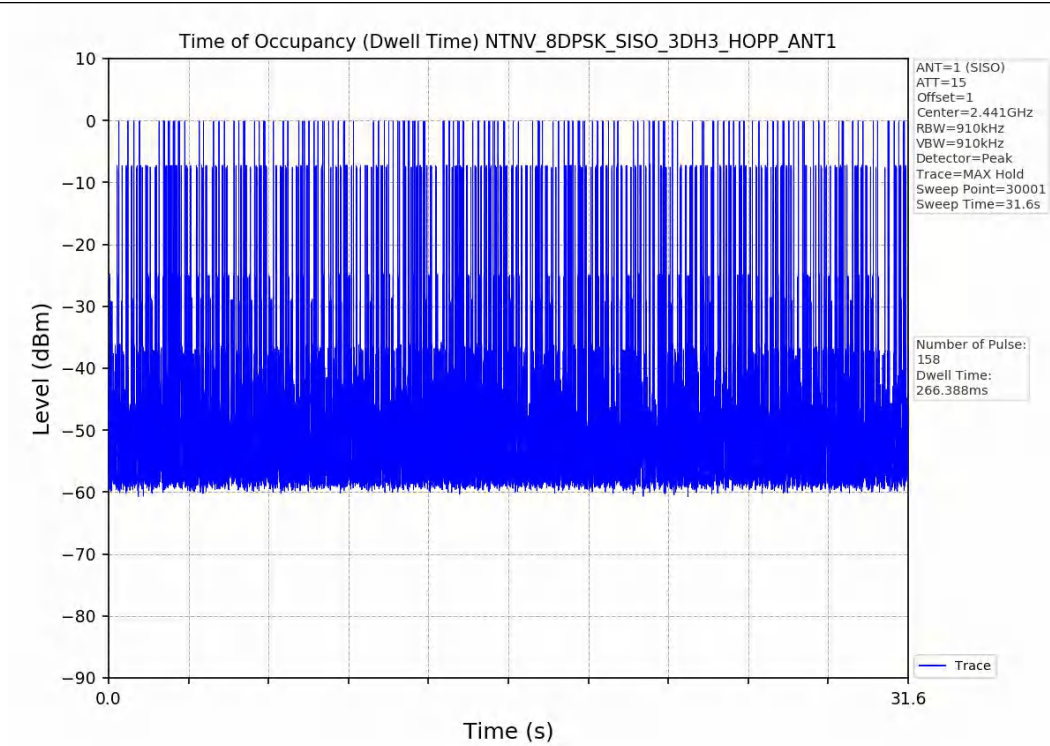


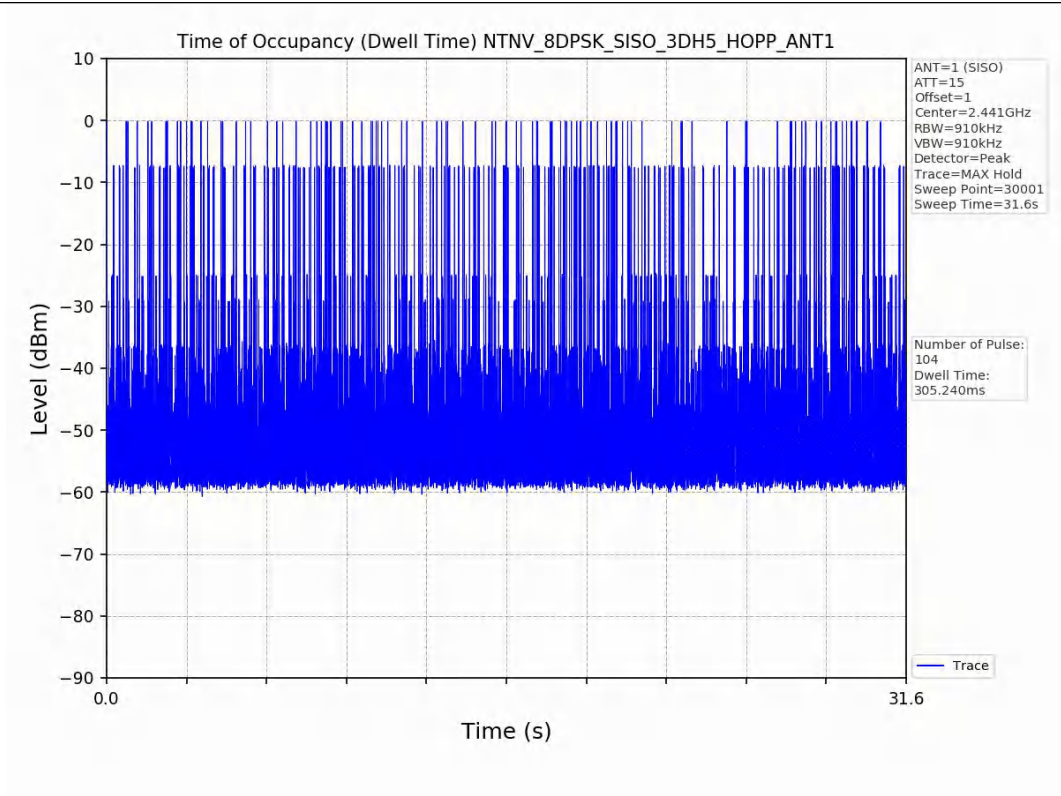










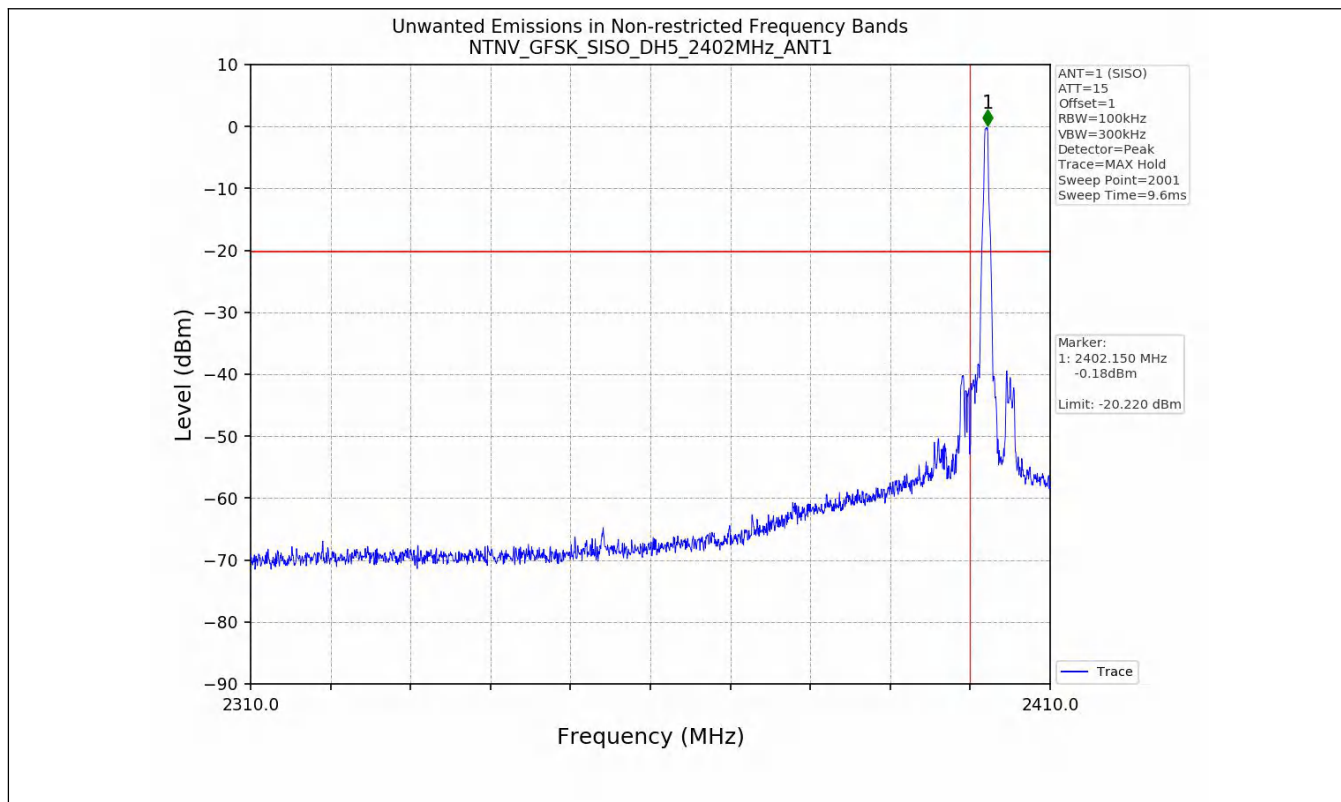
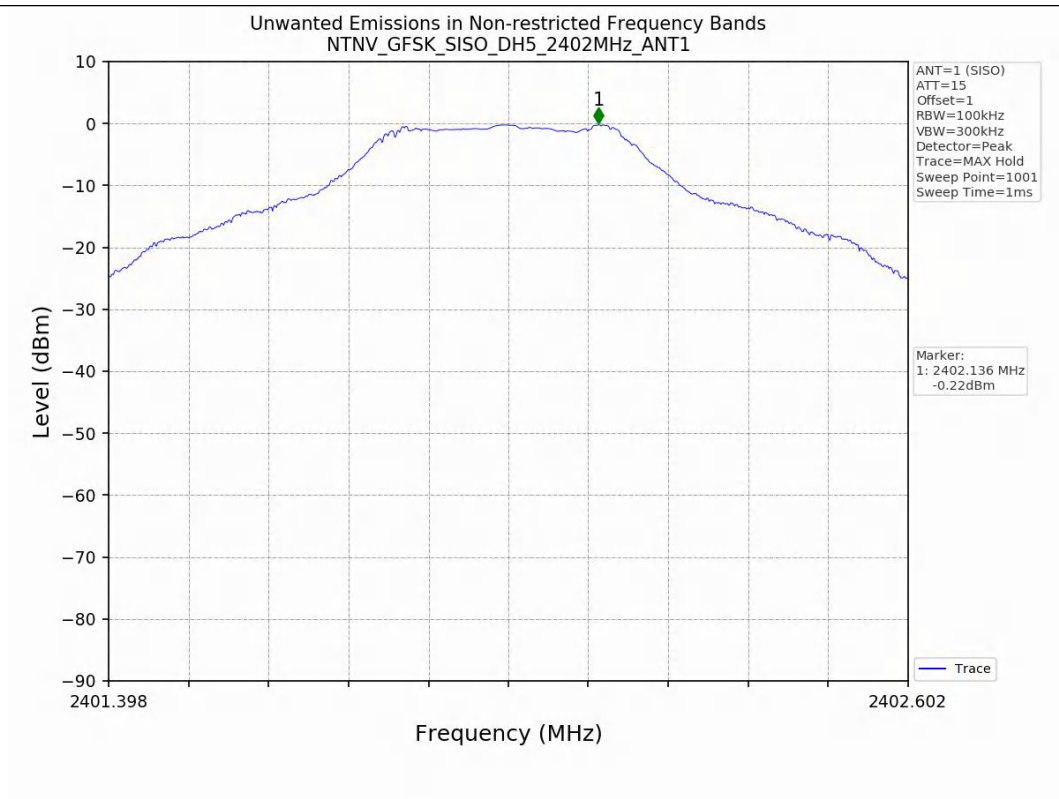


## 6. Unwanted Emissions in Non-restricted Frequency Bands

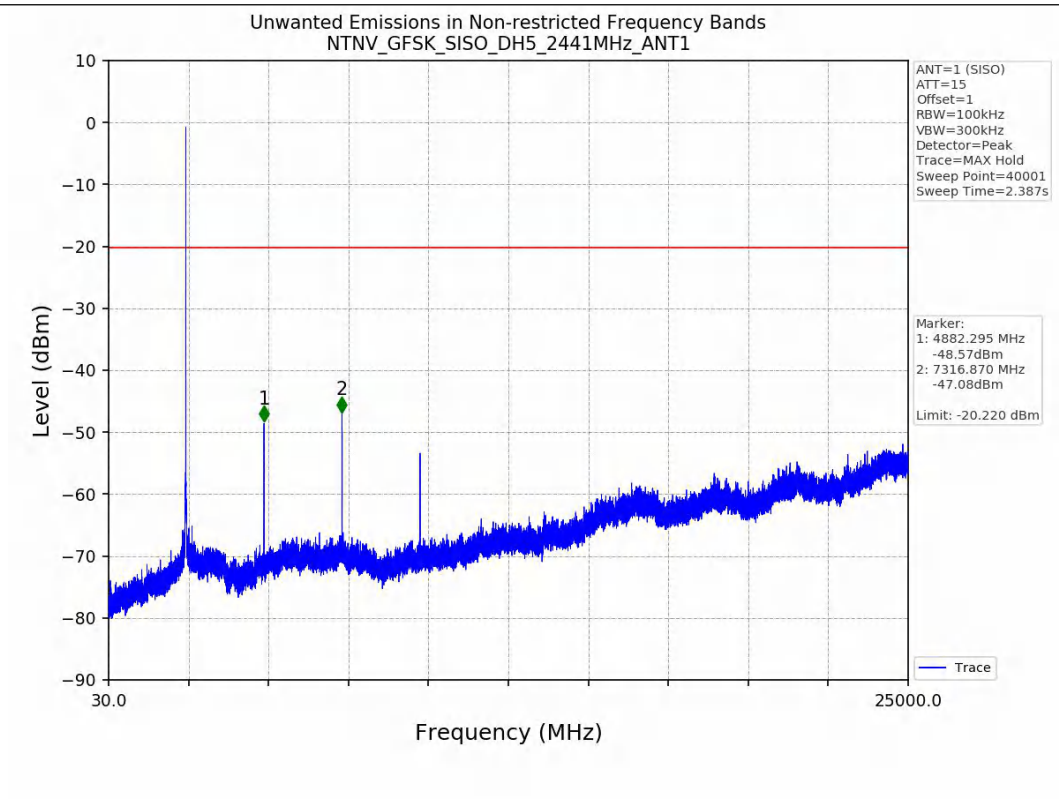
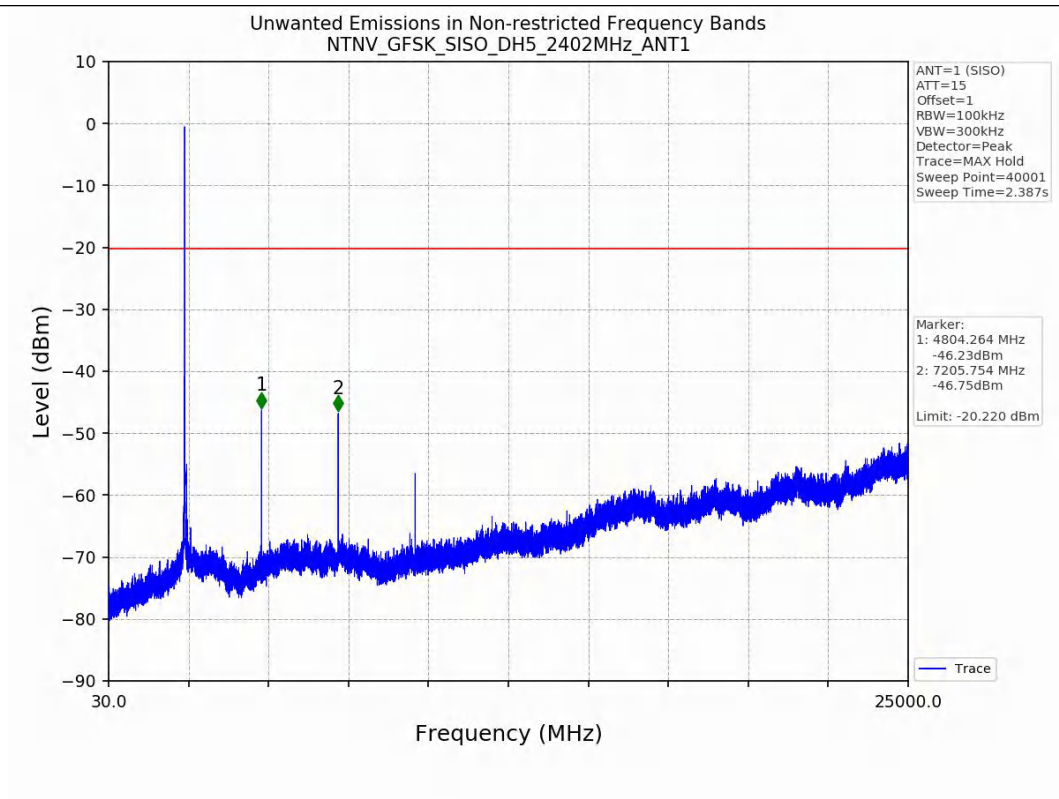
### 6.1 Test Result

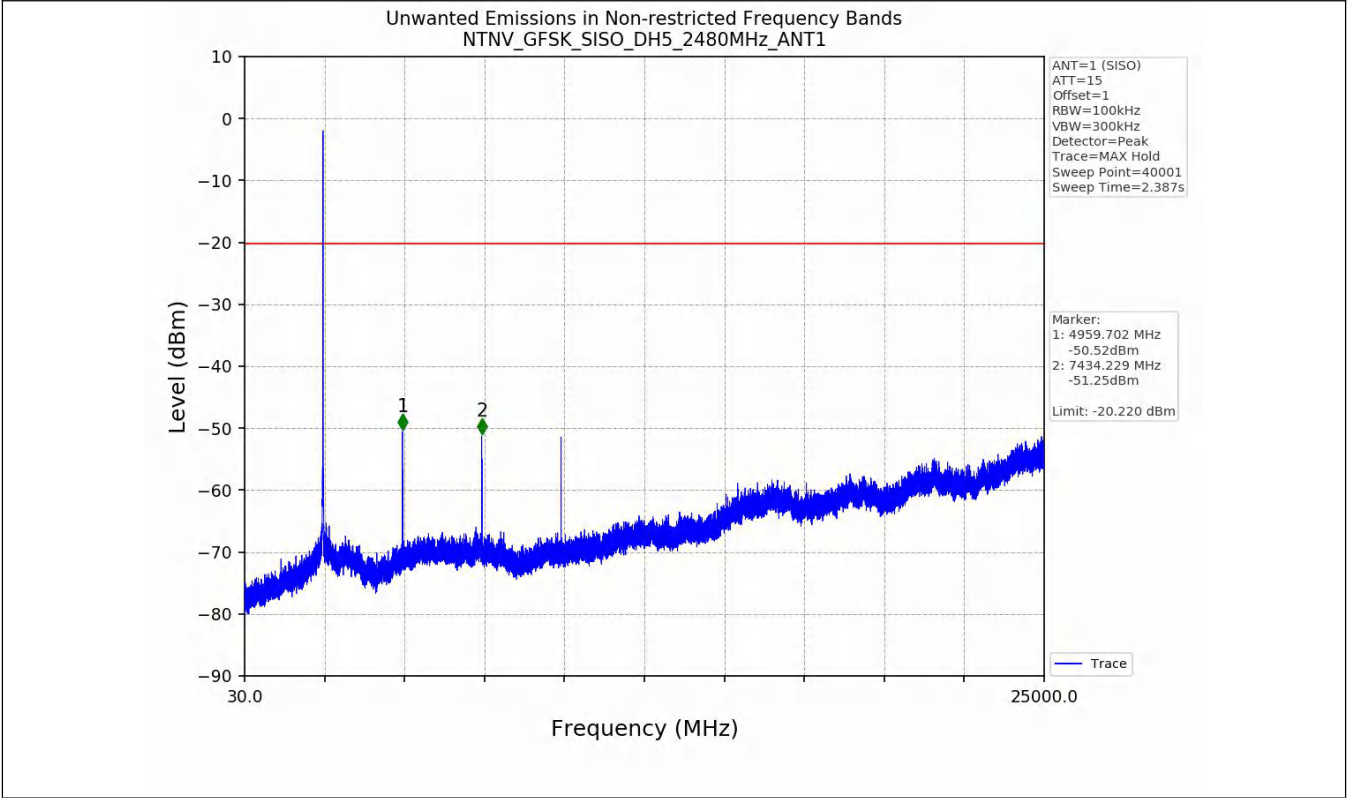
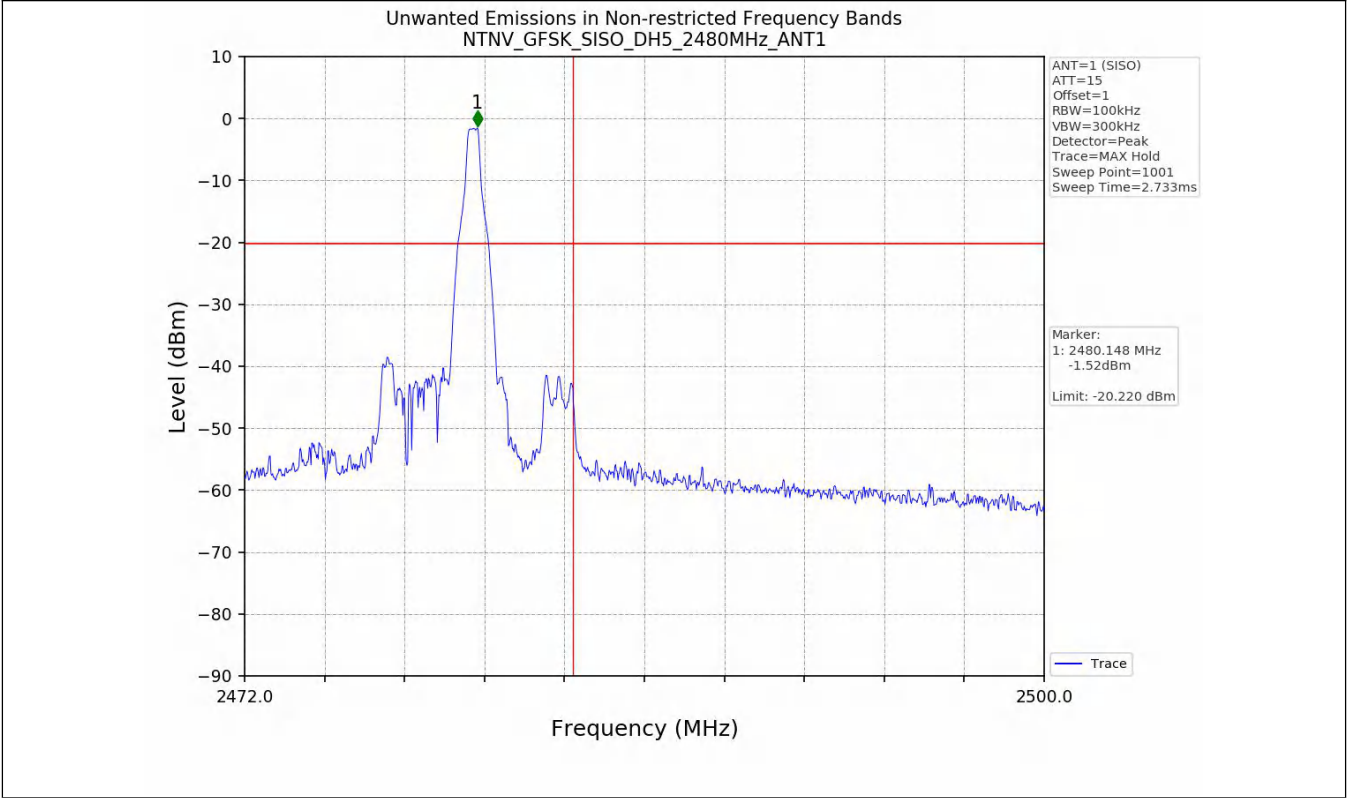
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
GFSK	2402	SISO	1	Refer to test graph	-20.22	PASS
	2441	SISO	1	Refer to test graph	-20.22	PASS
	2480	SISO	1	Refer to test graph	-20.22	PASS
	Hopping	SISO	1	Refer to test graph	-20.22	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	-20.30	PASS
	2441	SISO	1	Refer to test graph	-20.30	PASS
	2480	SISO	1	Refer to test graph	-20.30	PASS
	Hopping	SISO	1	Refer to test graph	-20.30	PASS
8DPSK	2402	SISO	1	Refer to test graph	-20.19	PASS
	2441	SISO	1	Refer to test graph	-20.19	PASS
	2480	SISO	1	Refer to test graph	-20.19	PASS
	Hopping	SISO	1	Refer to test graph	-20.19	PASS

### 6.2 Test Graph

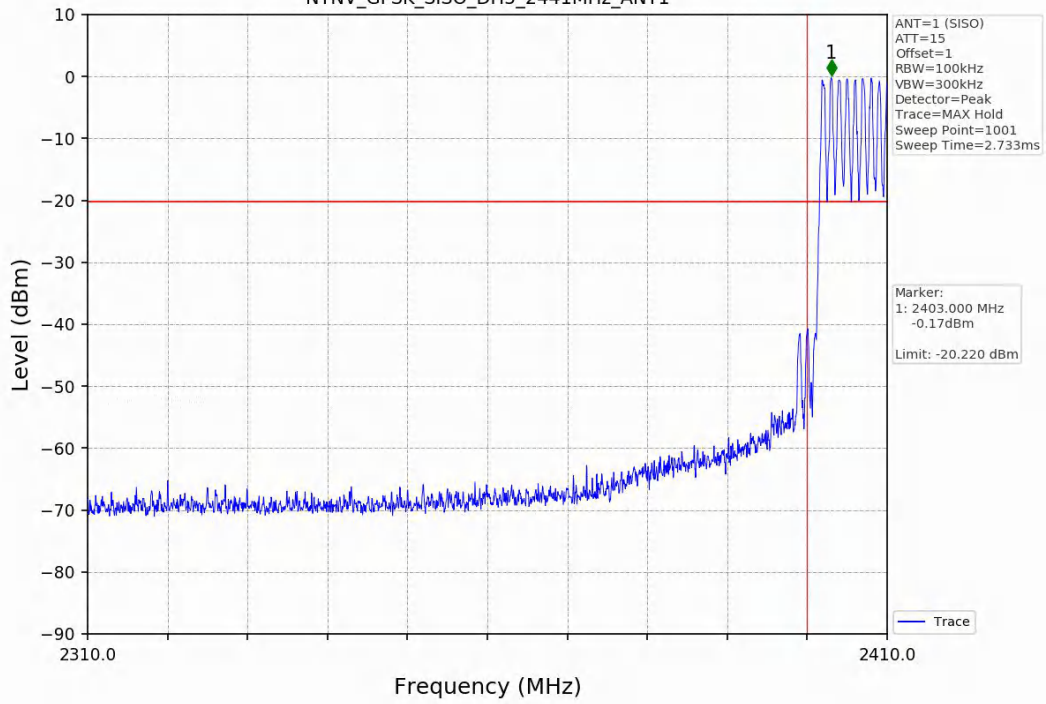




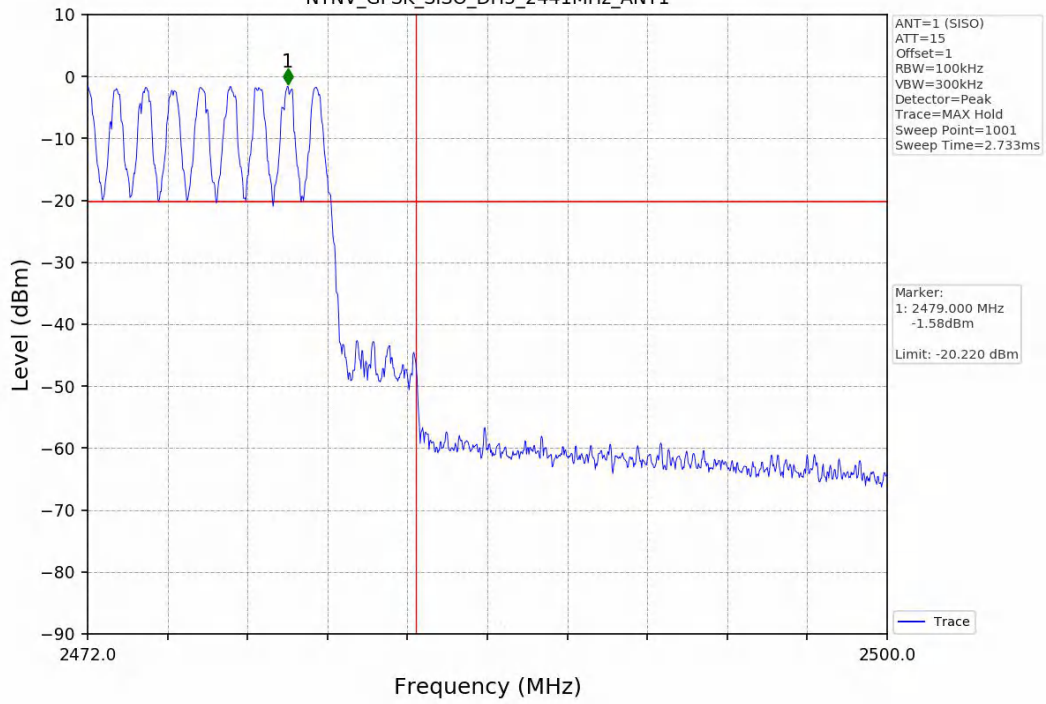


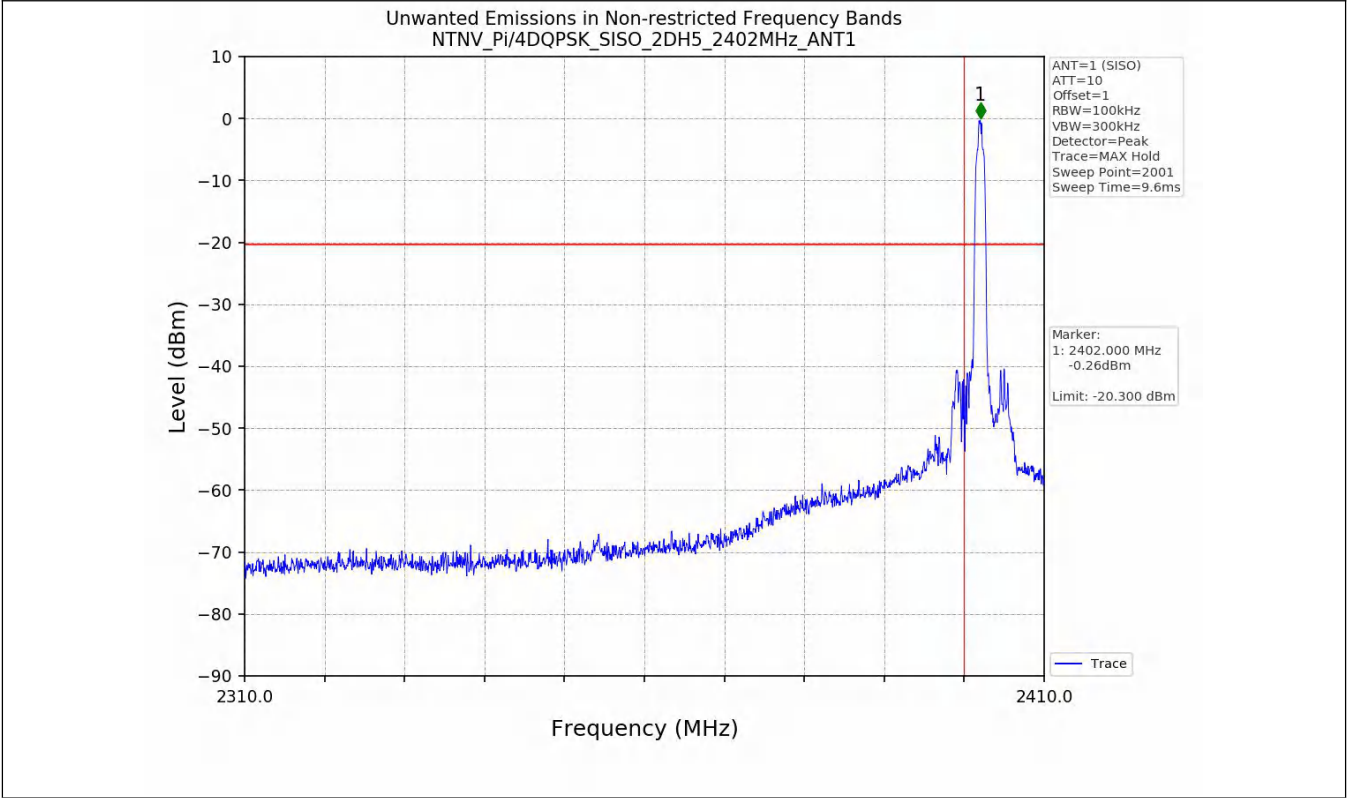
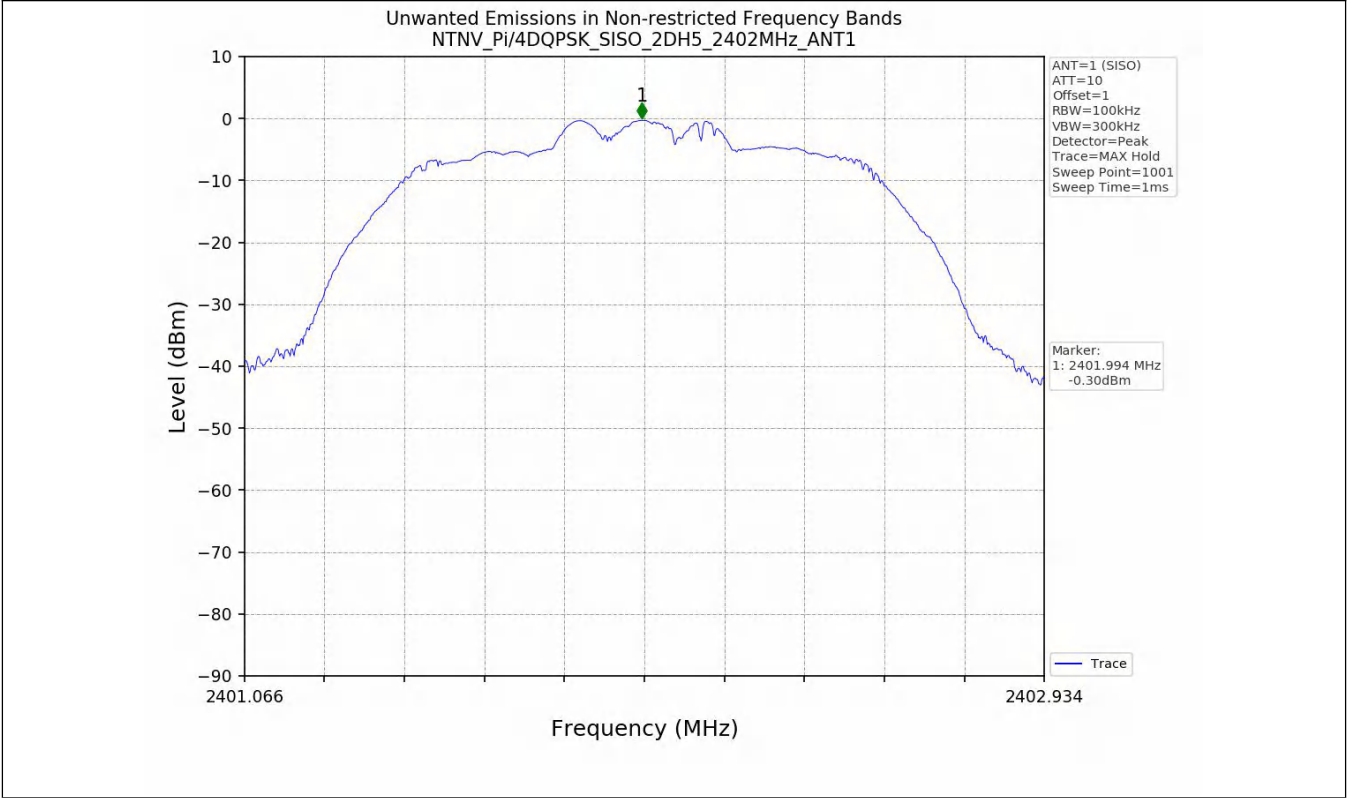


Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_GFSK\_SISO\_DH5\_2441MHz\_ANT1

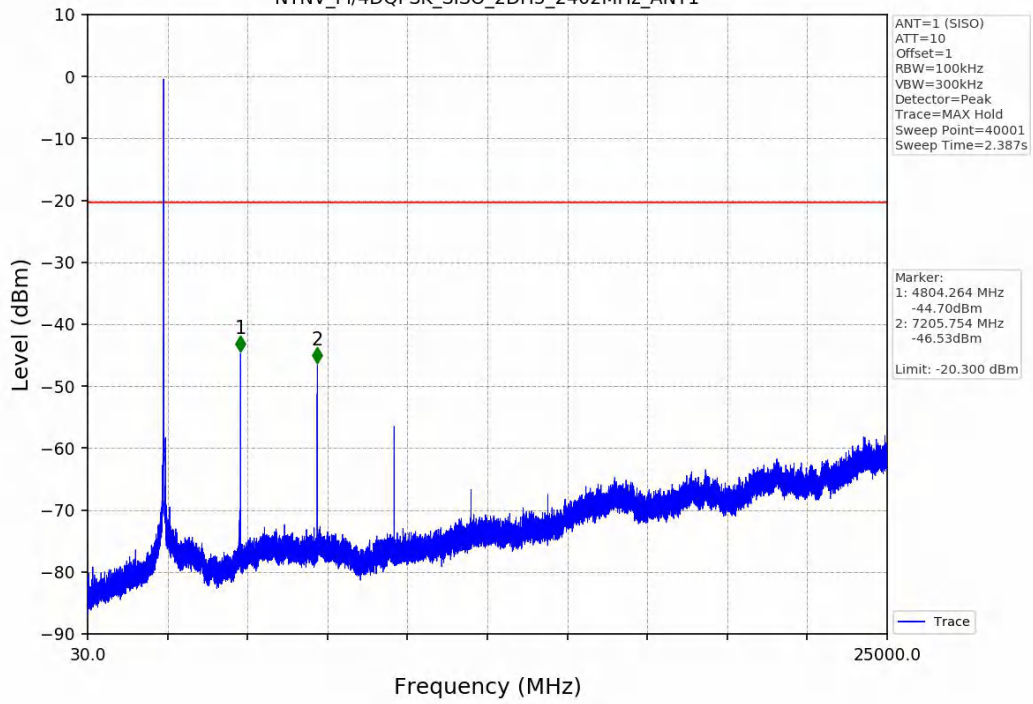


Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_GFSK\_SISO\_DH5\_2441MHz\_ANT1

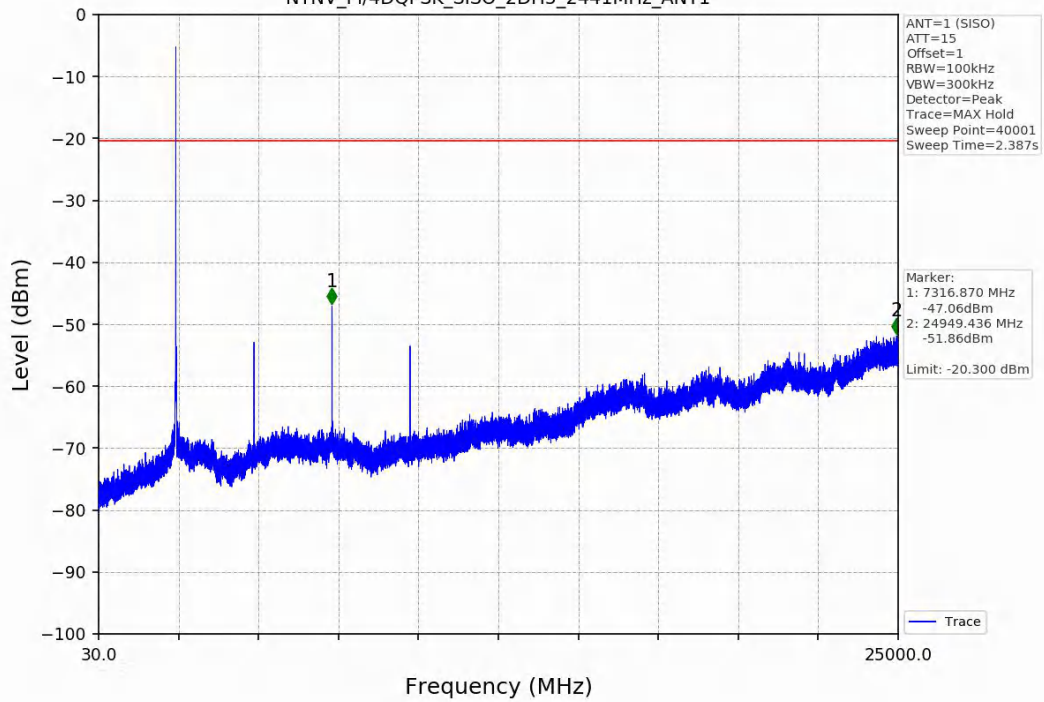




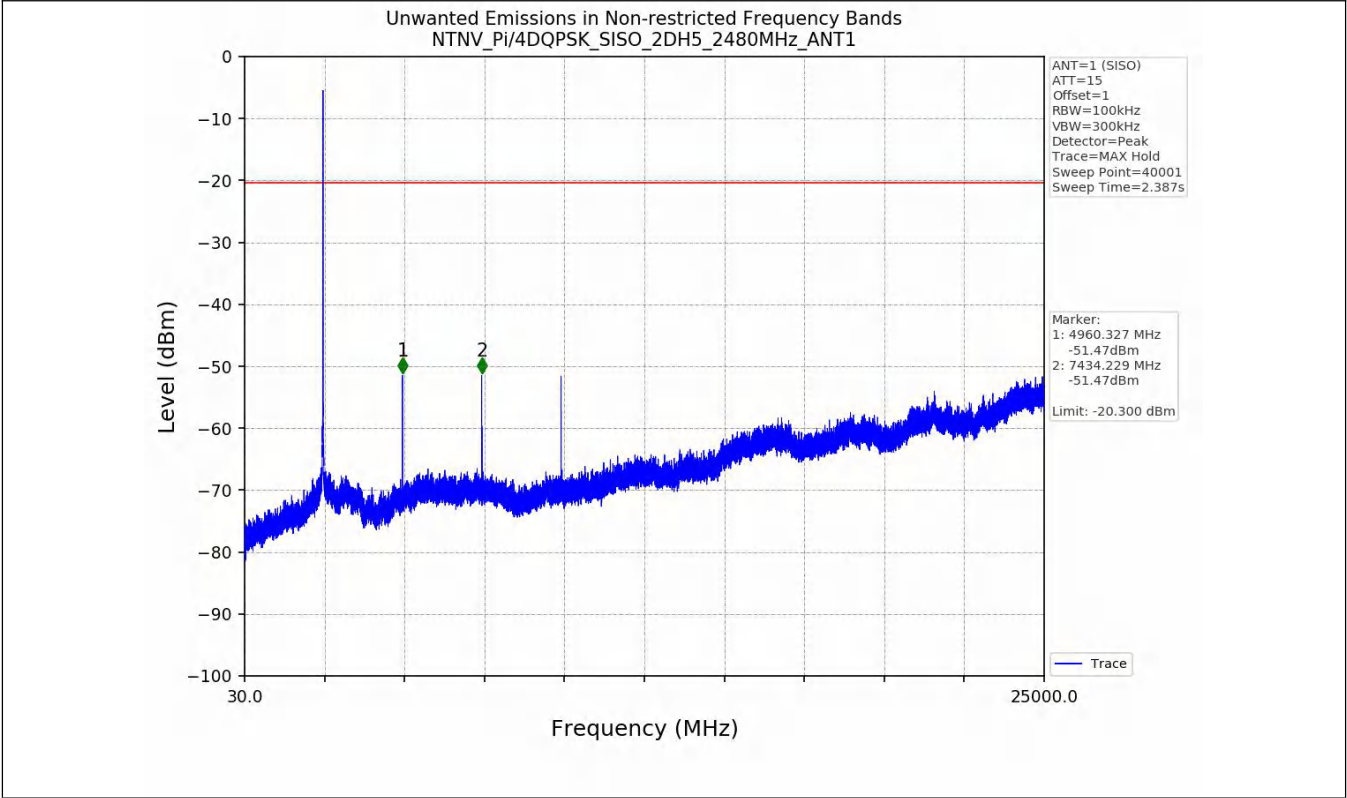
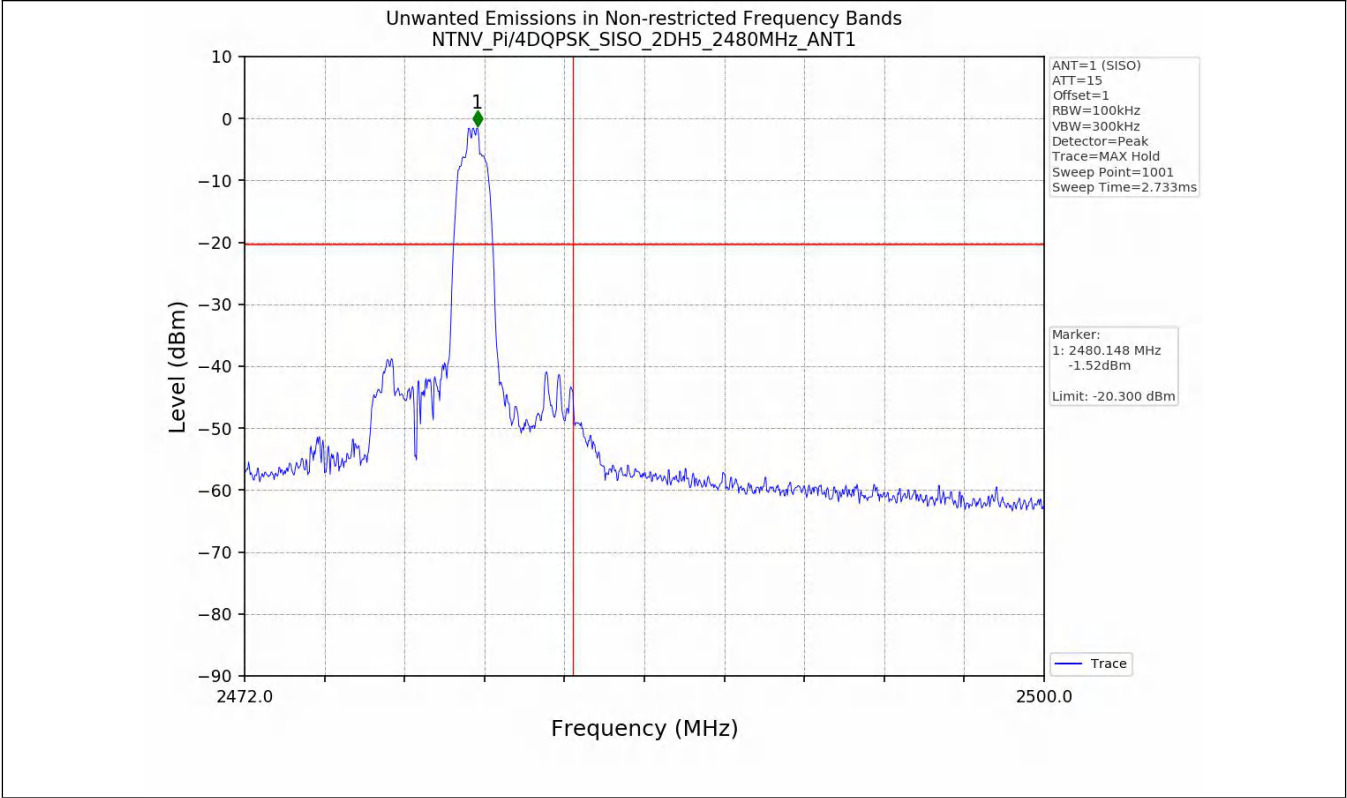
Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_Pi/4DQPSK\_SISO\_2DH5\_2402MHz\_ANT1



Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_Pi/4DQPSK\_SISO\_2DH5\_2441MHz\_ANT1

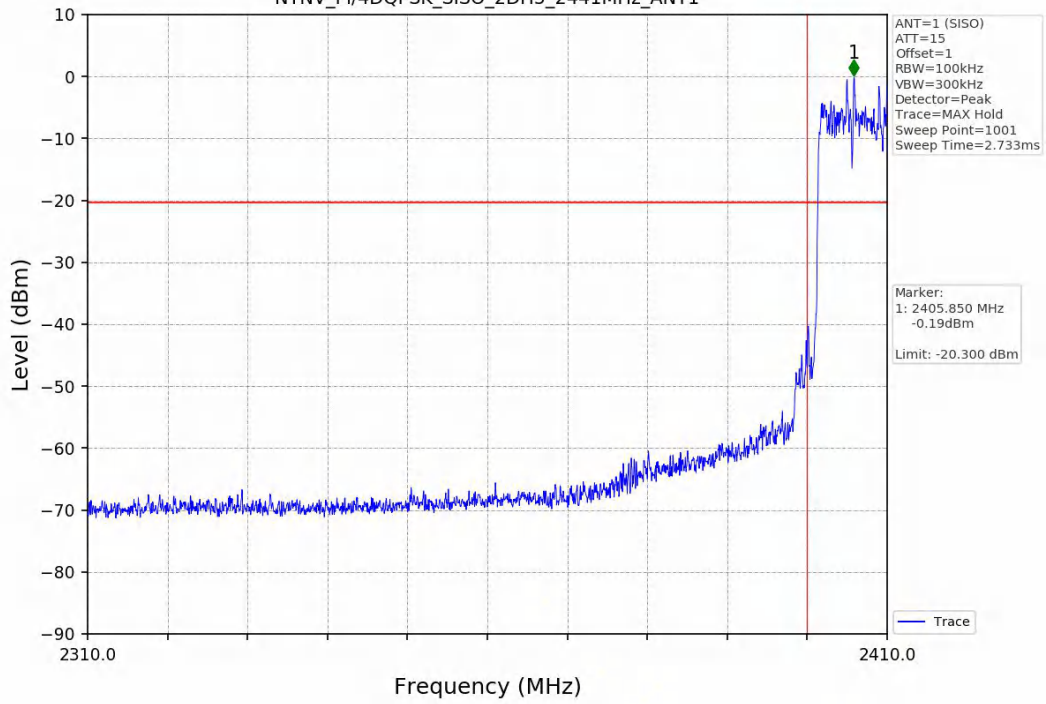




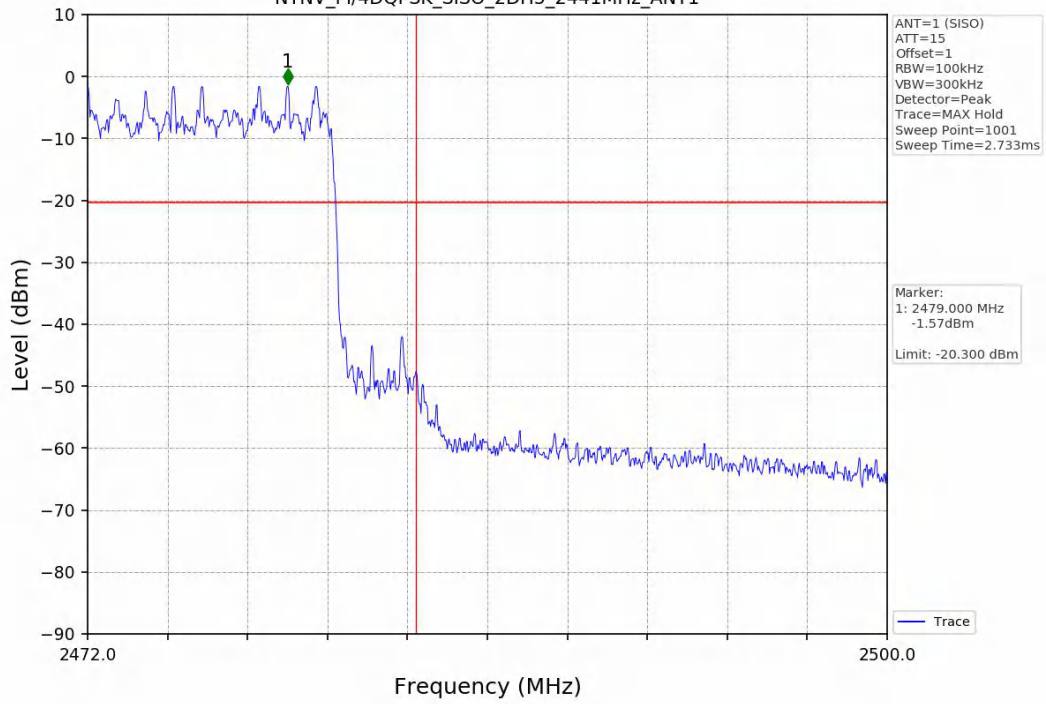


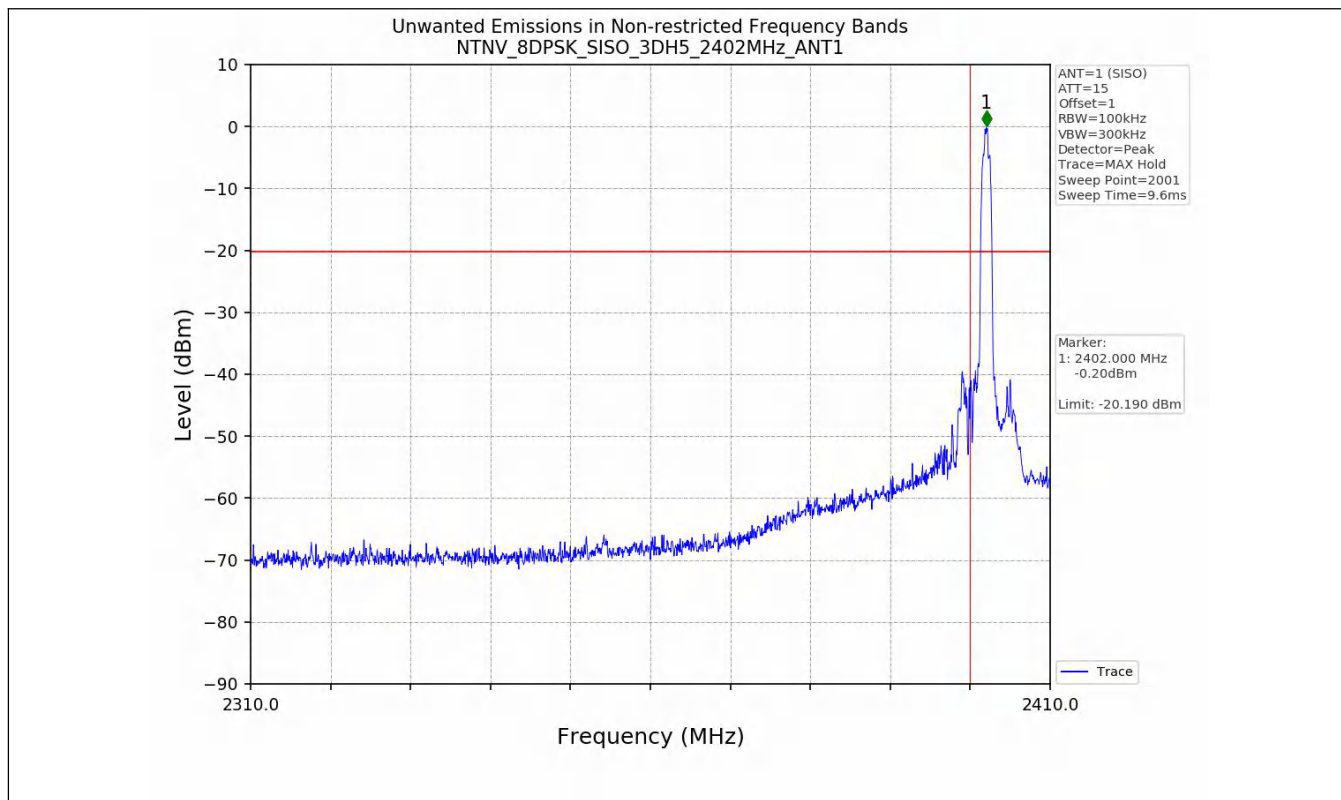
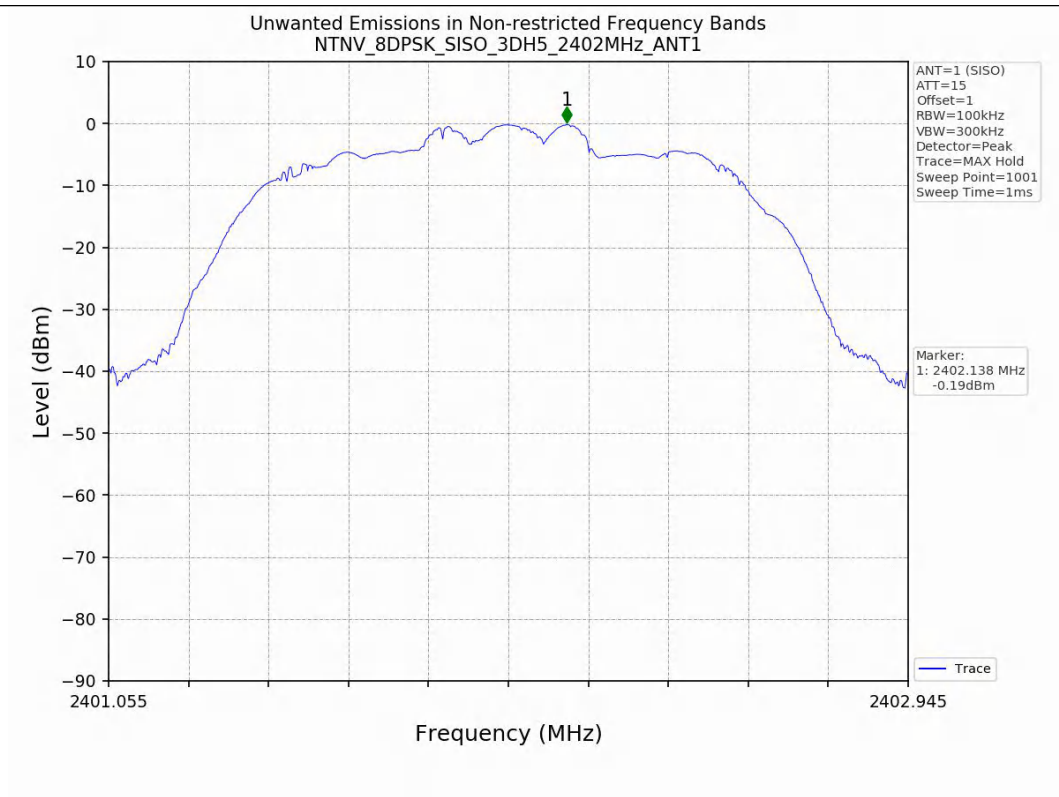


Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_Pi/4DQPSK\_SISO\_2DH5\_2441MHz\_ANT1

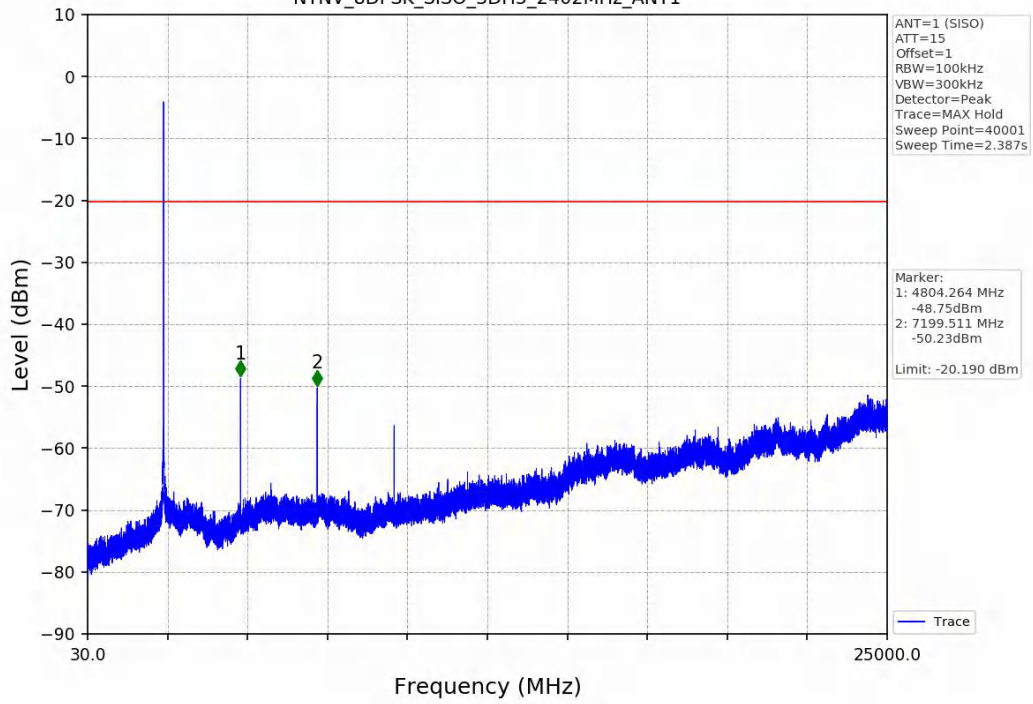


Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_Pi/4DQPSK\_SISO\_2DH5\_2441MHz\_ANT1

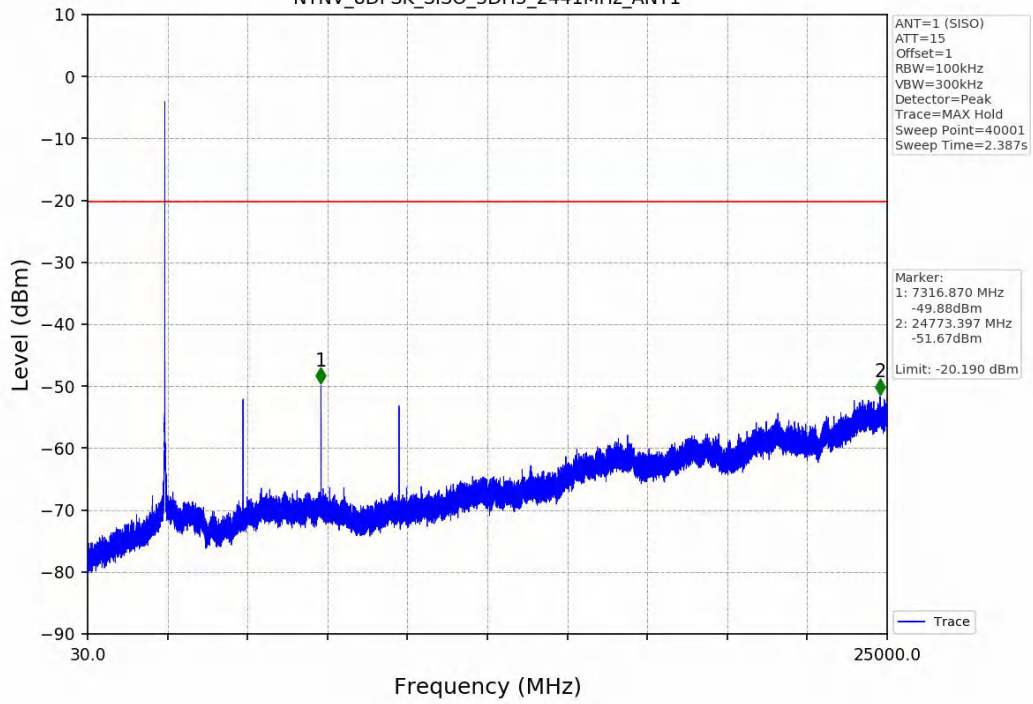


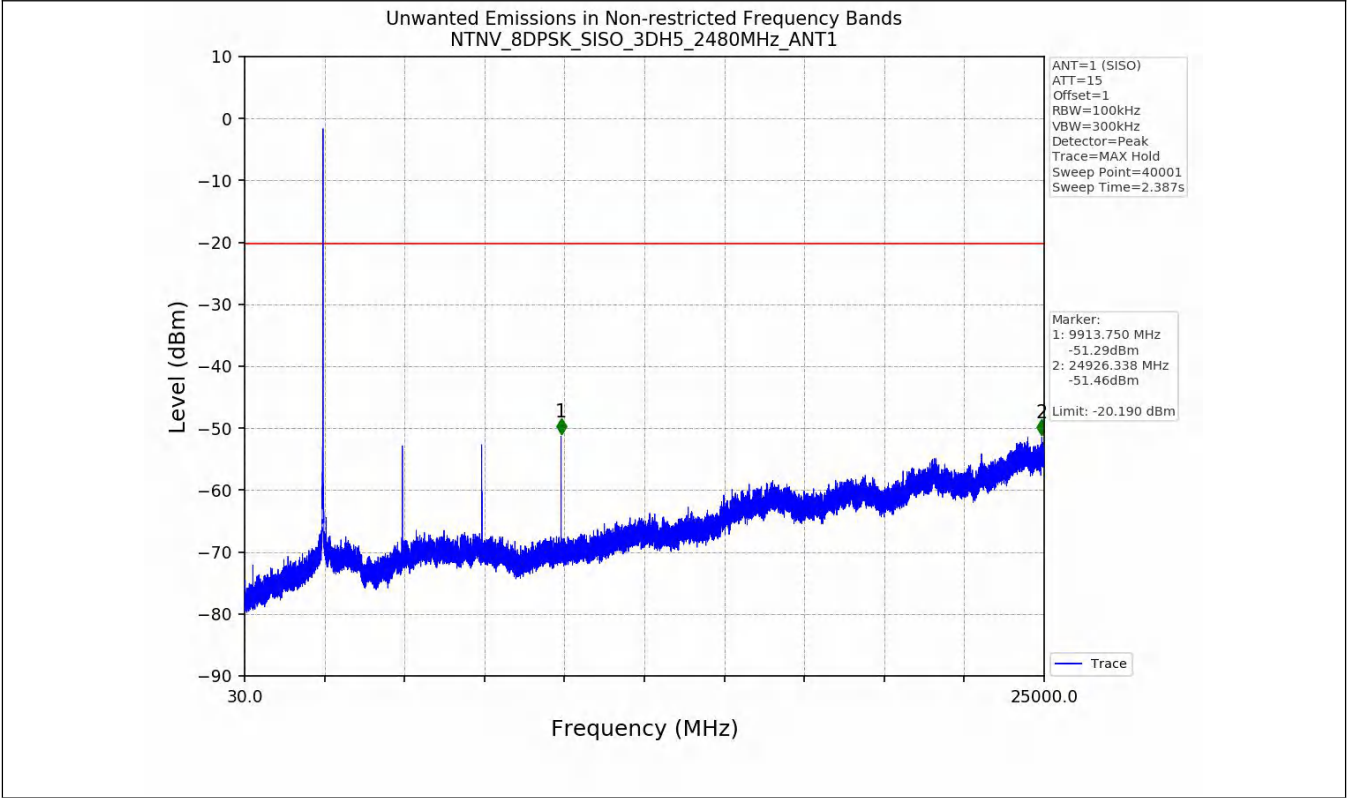
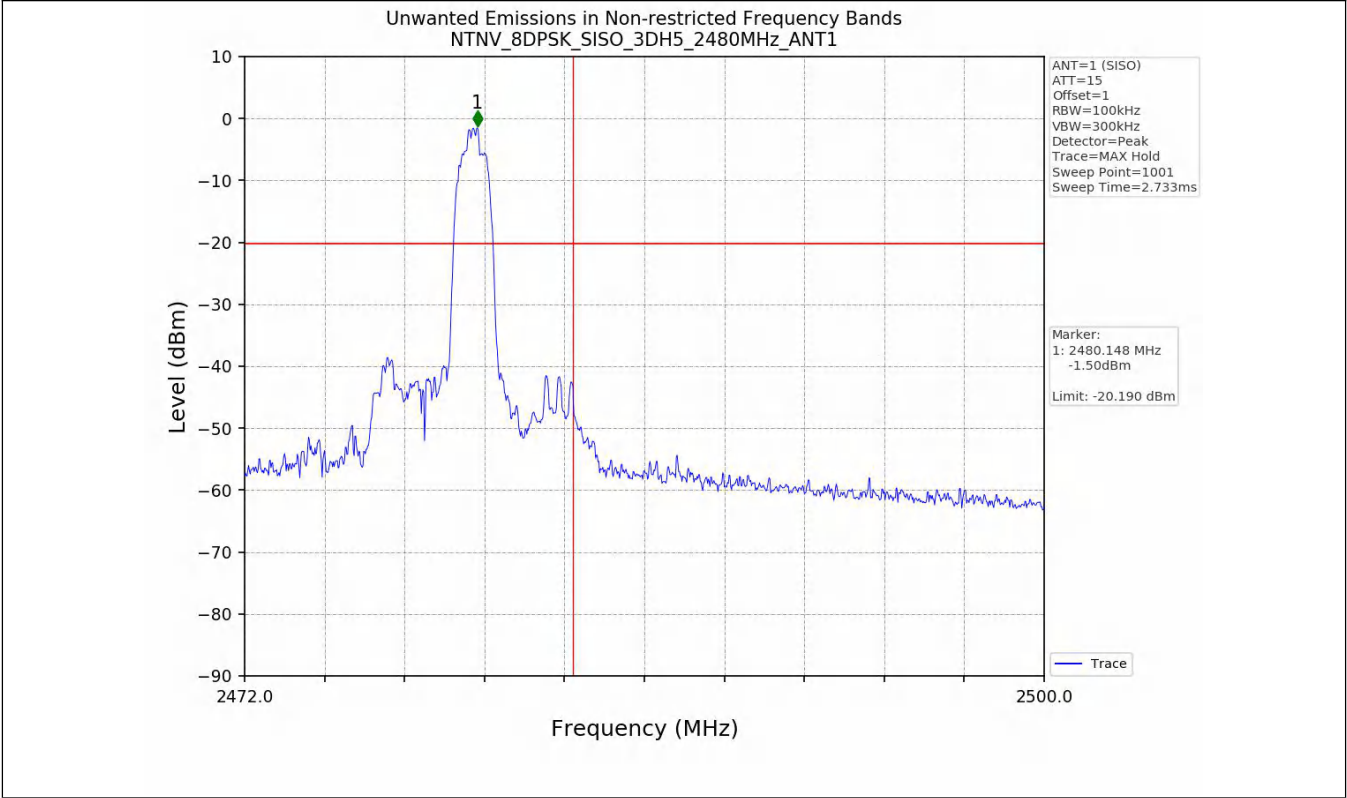


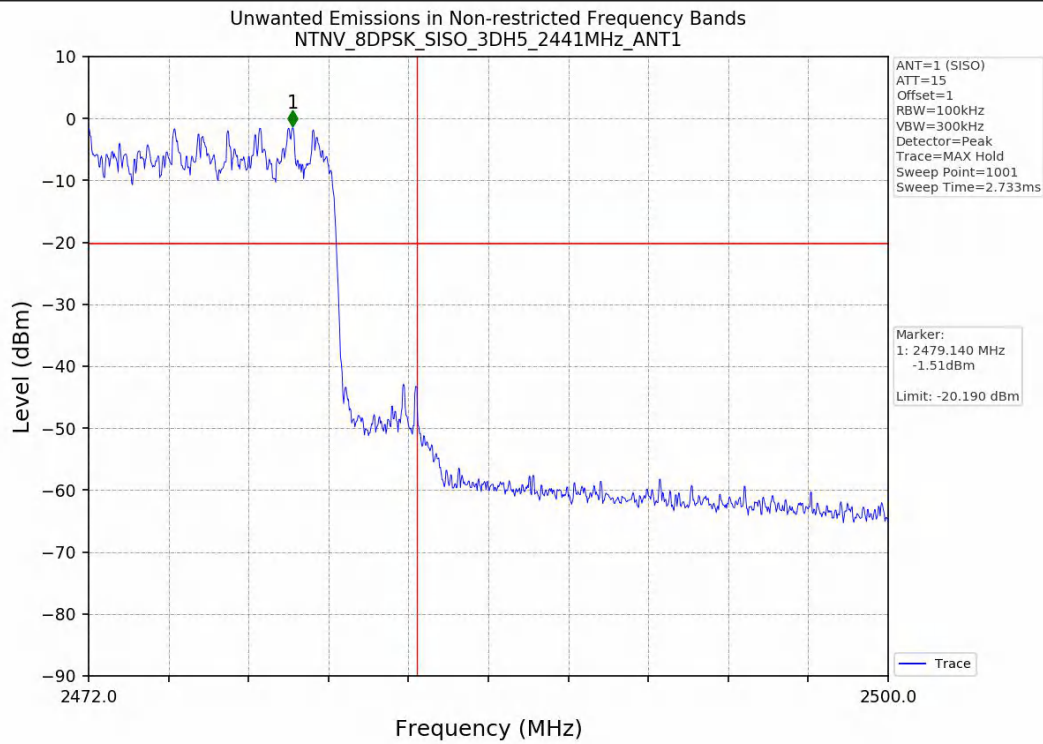
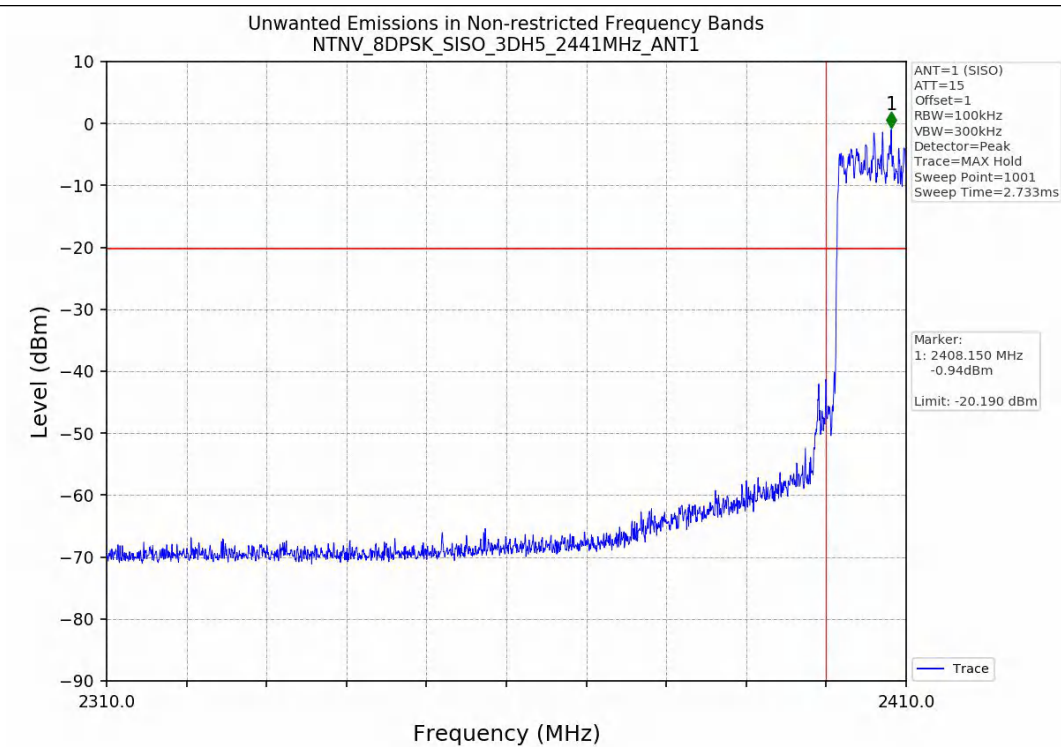
Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_8DPSK\_SISO\_3DH5\_2402MHz\_ANT1



Unwanted Emissions in Non-restricted Frequency Bands  
NTNV\_8DPSK\_SISO\_3DH5\_2441MHz\_ANT1









## 7. Frequency Error

### 7.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT	Measured Frequency (MHz)		Verdict
				Test Result	Limit	
GFSK	2402	SISO	1	2402.00	2400-2483.5	PASS
	2441	SISO	1	2440.99	2400-2483.5	PASS
	2480	SISO	1	2479.99	2400-2483.5	PASS
Pi/4DQPSK	2402	SISO	1	2402.00	2400-2483.5	PASS
	2441	SISO	1	2440.99	2400-2483.5	PASS
	2480	SISO	1	2480.00	2400-2483.5	PASS

### 7.2 Test Graph

