

Appendix for 15.247

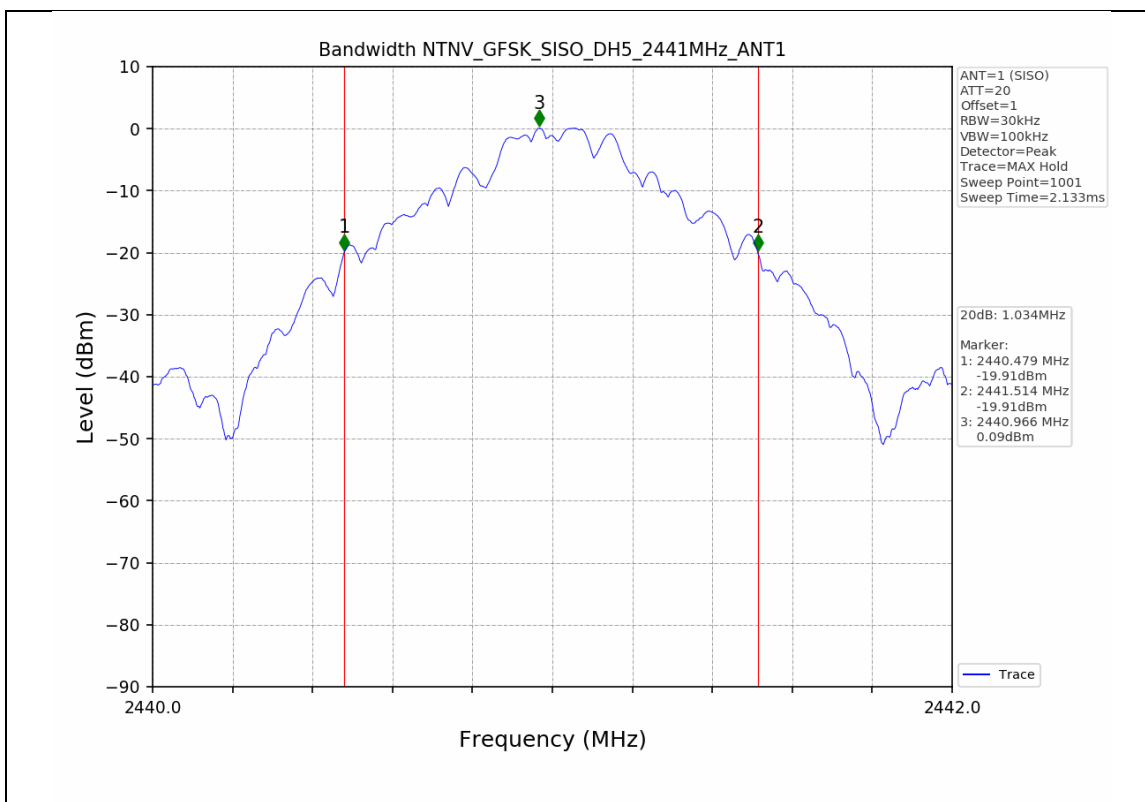
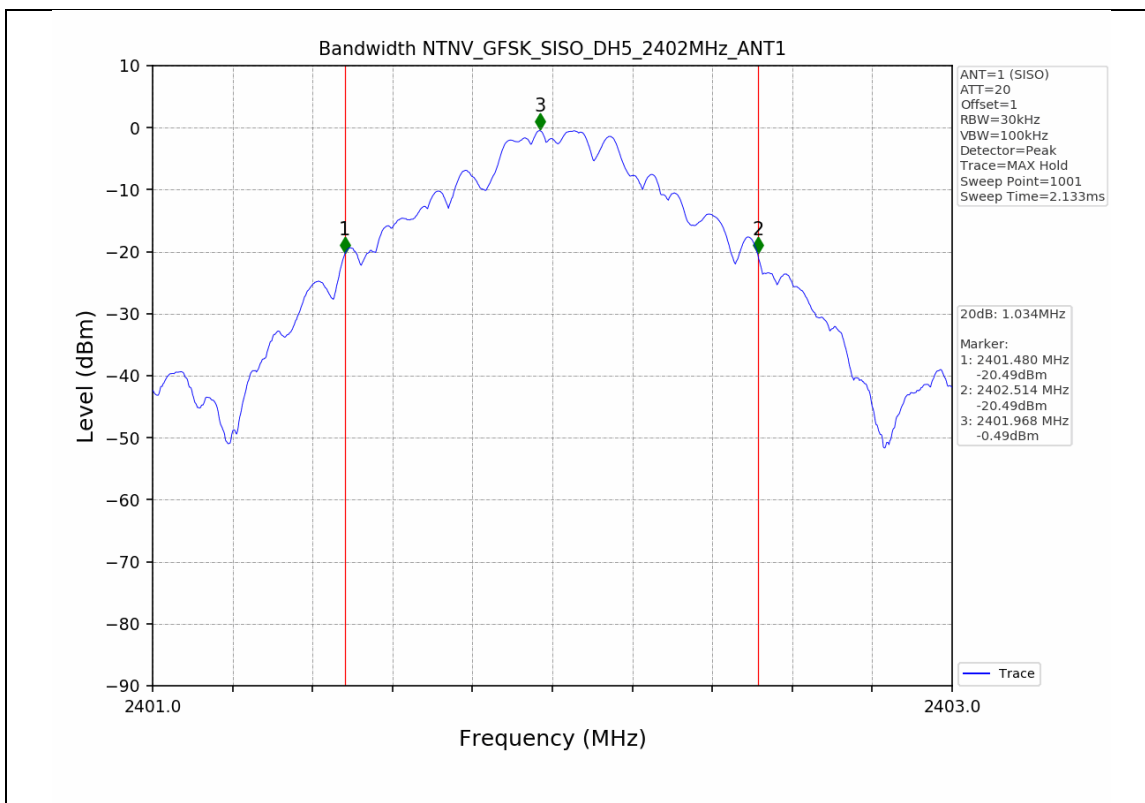
1. Bandwidth

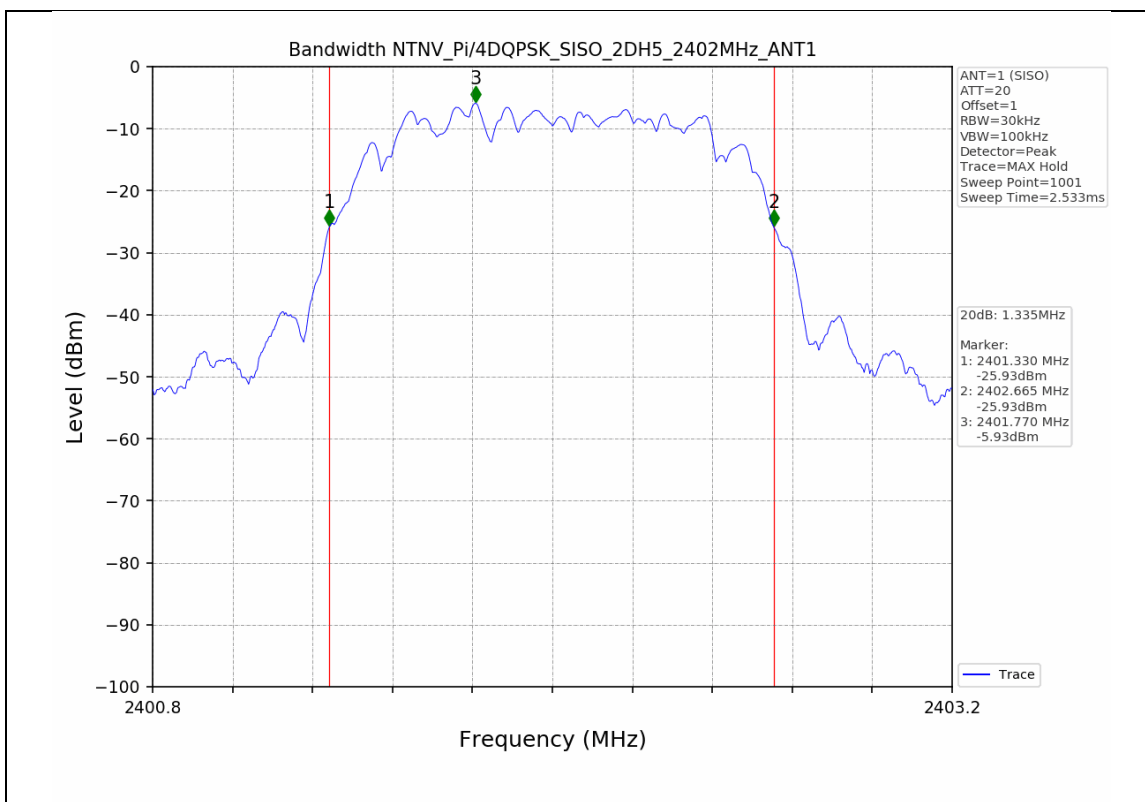
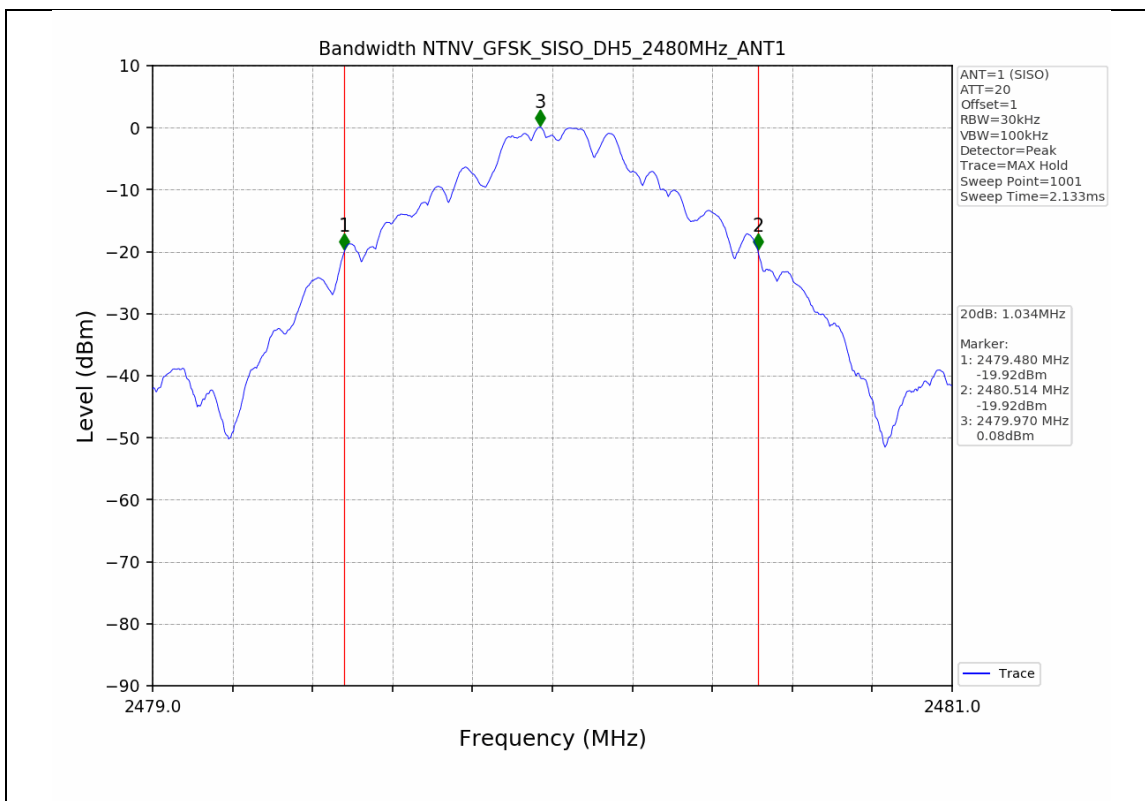
1.1 Test Result

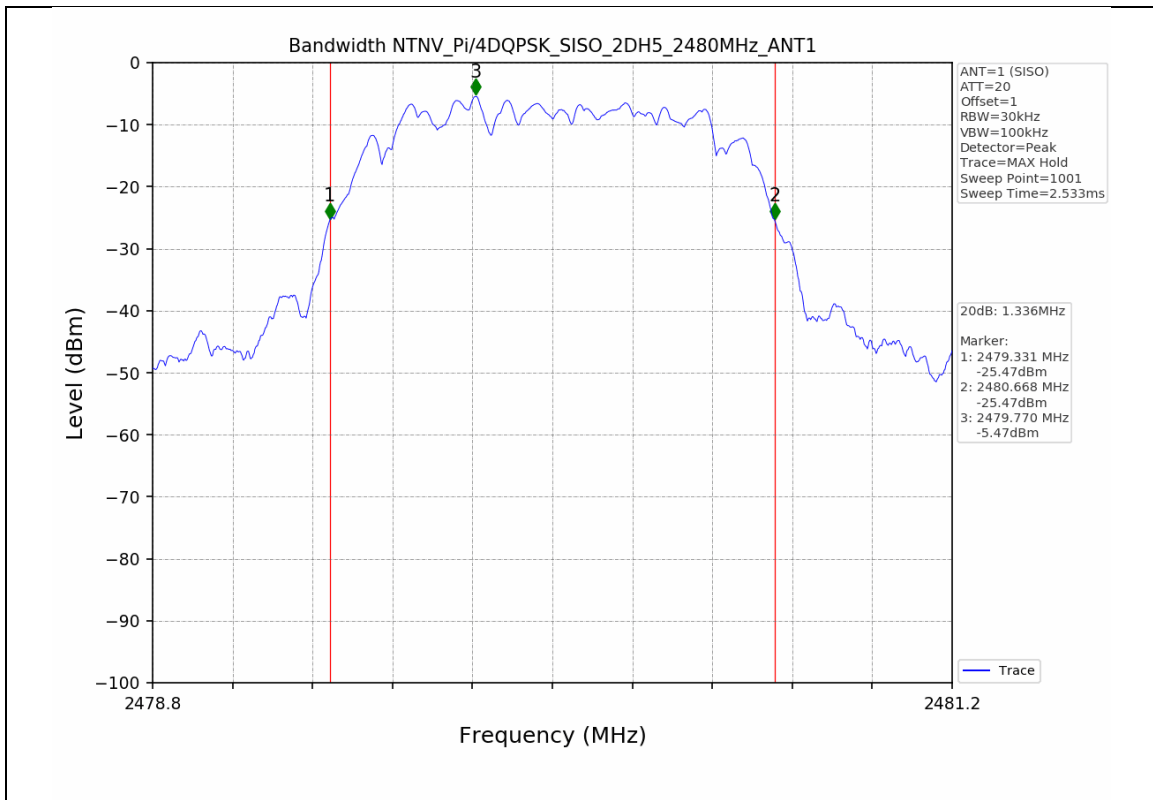
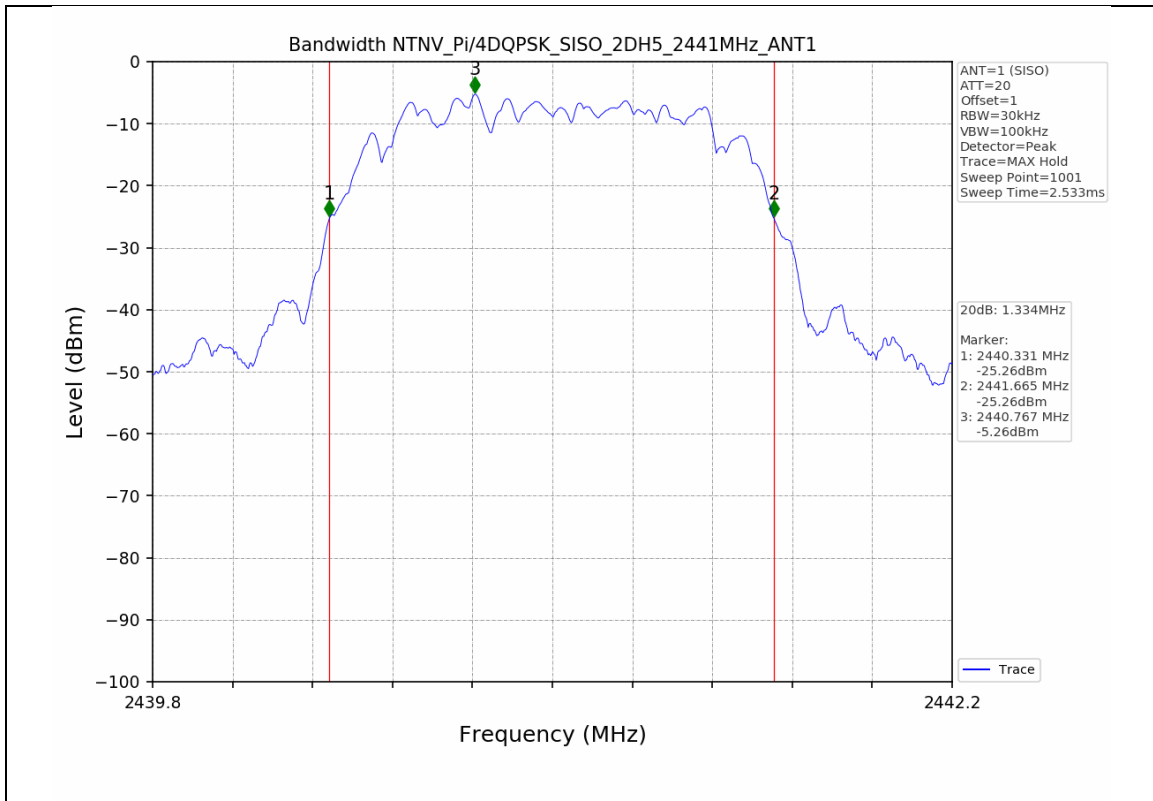
Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	1.034	PASS
	2441	SISO	1	1.034	PASS
	2480	SISO	1	1.034	PASS
Pi/4DQPSK	2402	SISO	1	1.335	PASS
	2441	SISO	1	1.334	PASS
	2480	SISO	1	1.336	PASS
8DPSK	2402	SISO	1	1.359	PASS
	2441	SISO	1	1.358	PASS
	2480	SISO	1	1.359	PASS

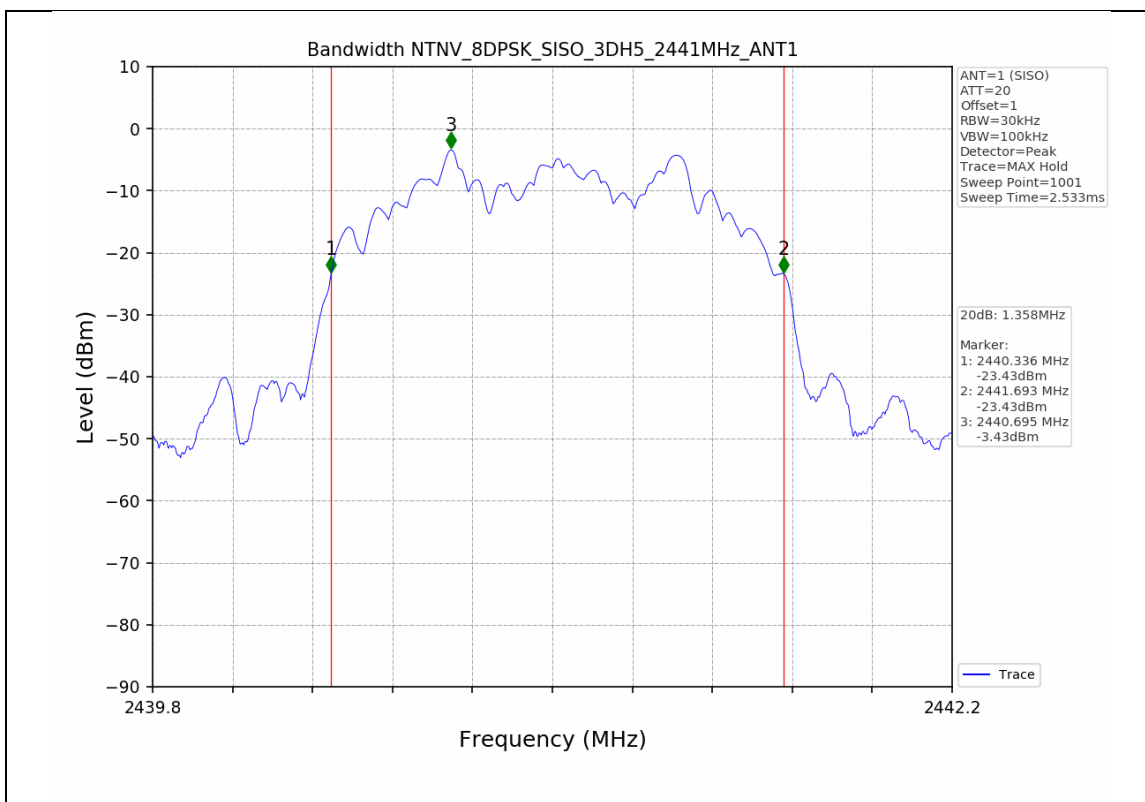
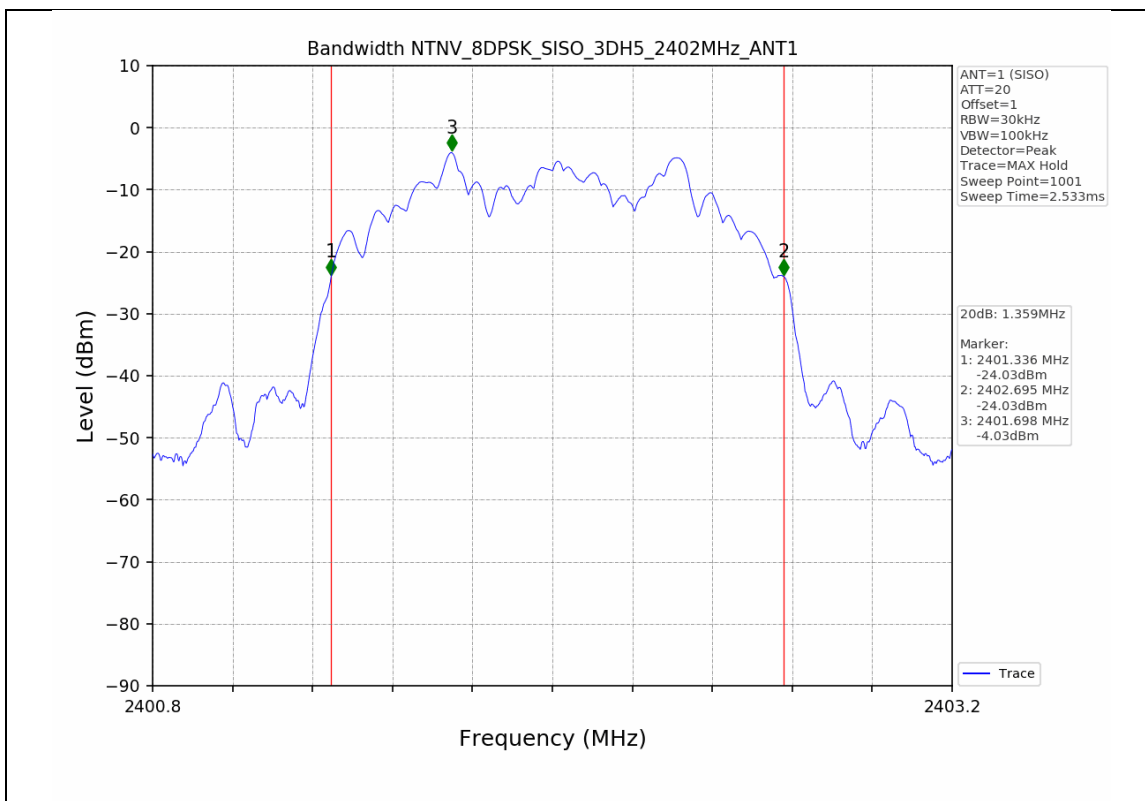
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
GFSK	2402	SISO	1	0.896	Only for Report Use
	2441	SISO	1	0.897	Only for Report Use
	2480	SISO	1	0.897	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.186	Only for Report Use
	2441	SISO	1	1.186	Only for Report Use
	2480	SISO	1	1.187	Only for Report Use
8DPSK	2402	SISO	1	1.228	Only for Report Use
	2441	SISO	1	1.229	Only for Report Use
	2480	SISO	1	1.229	Only for Report Use

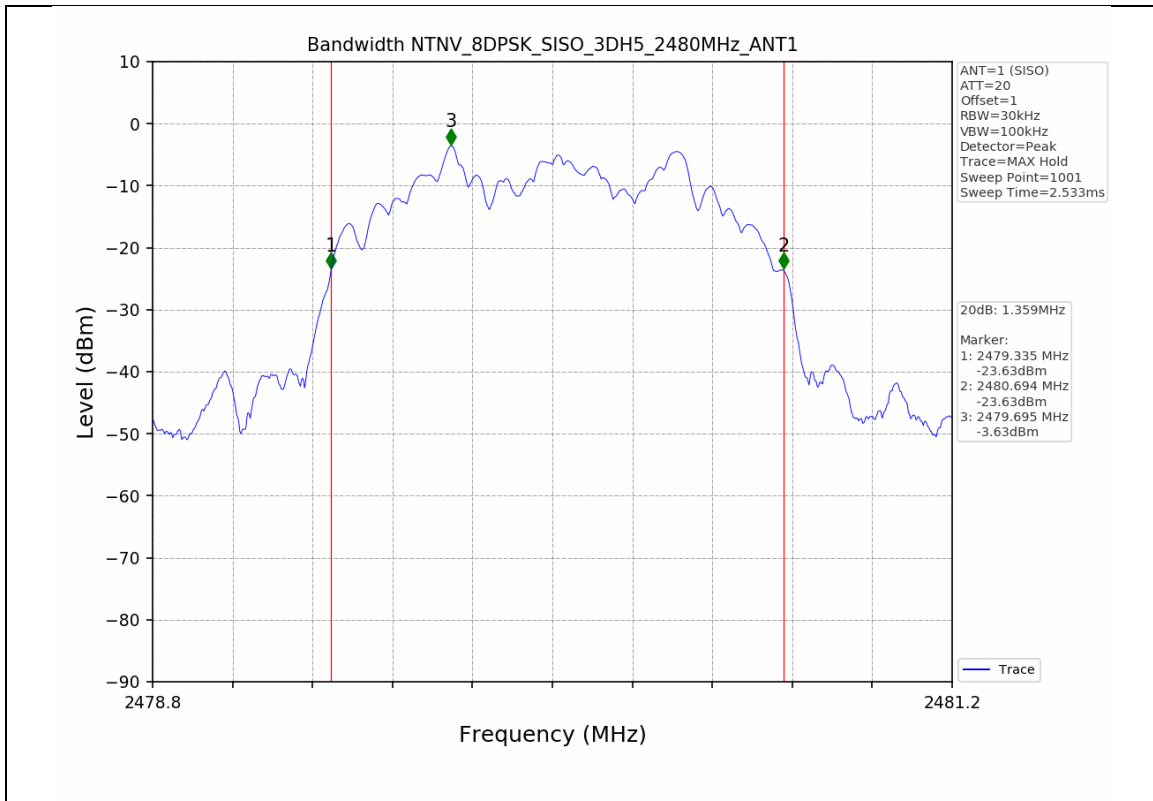
1.2 Test Graph - 20dB Bandwidth



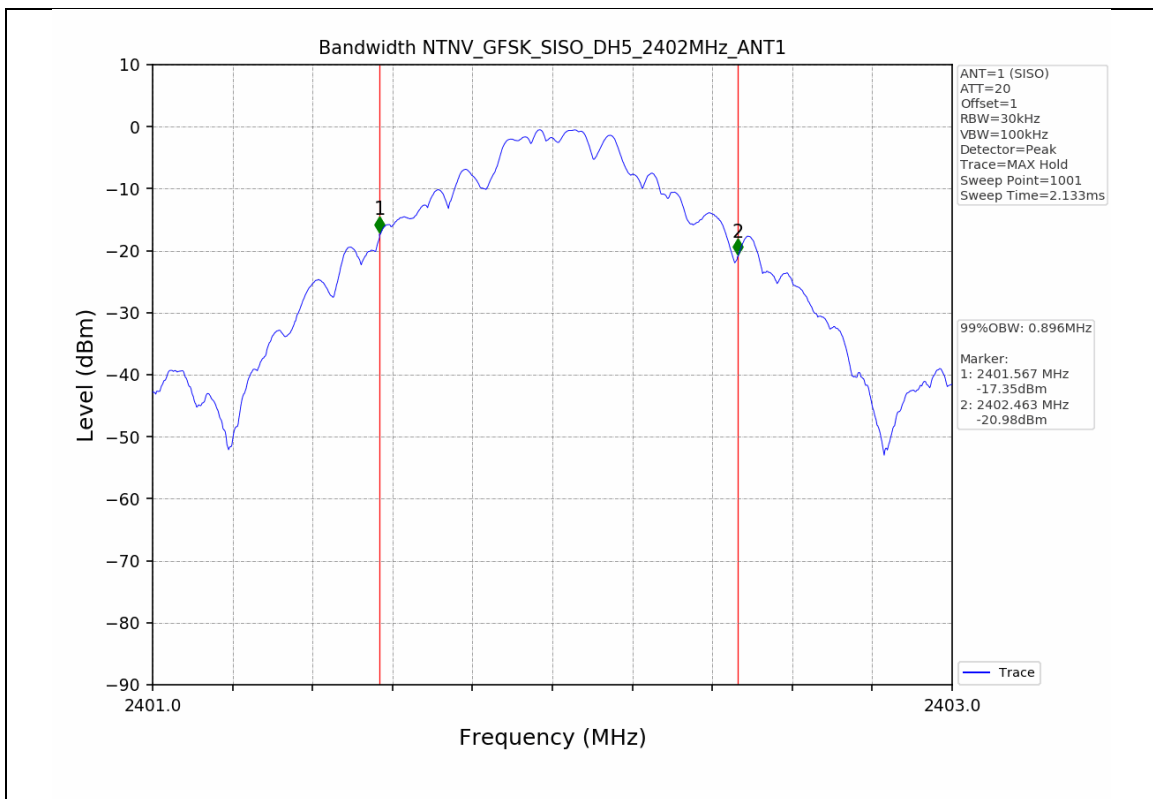


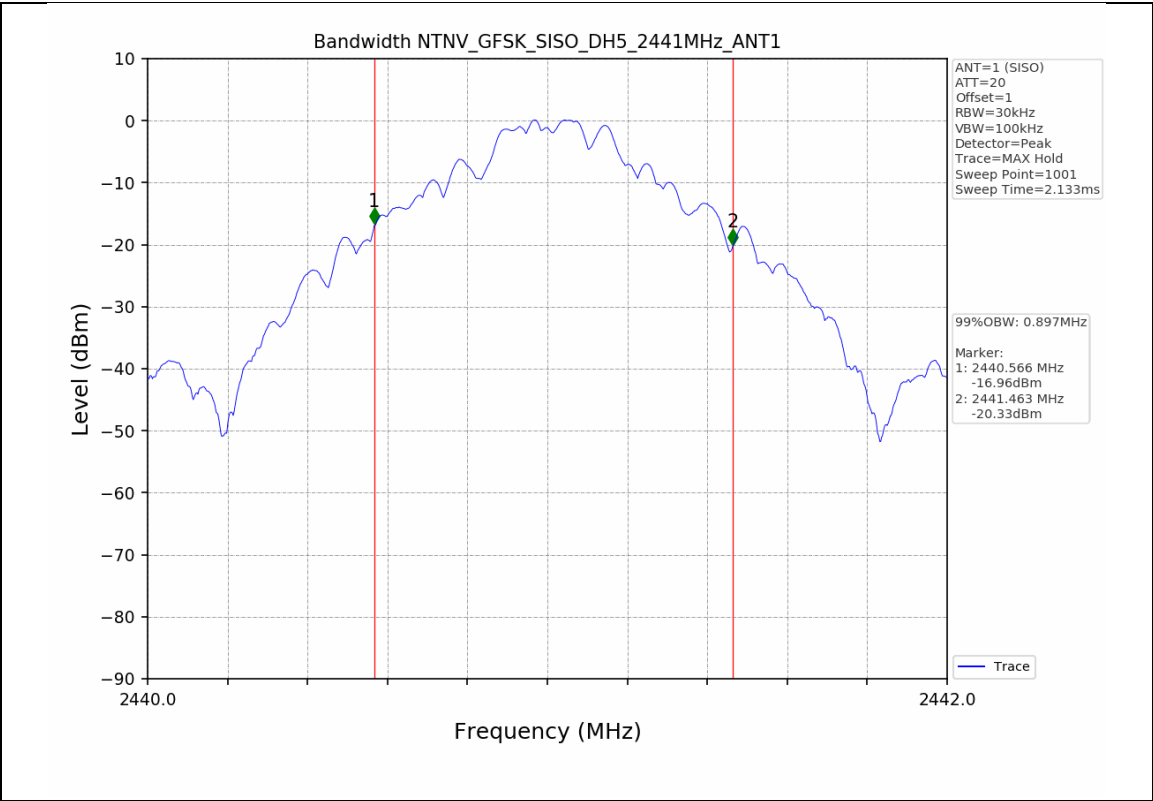


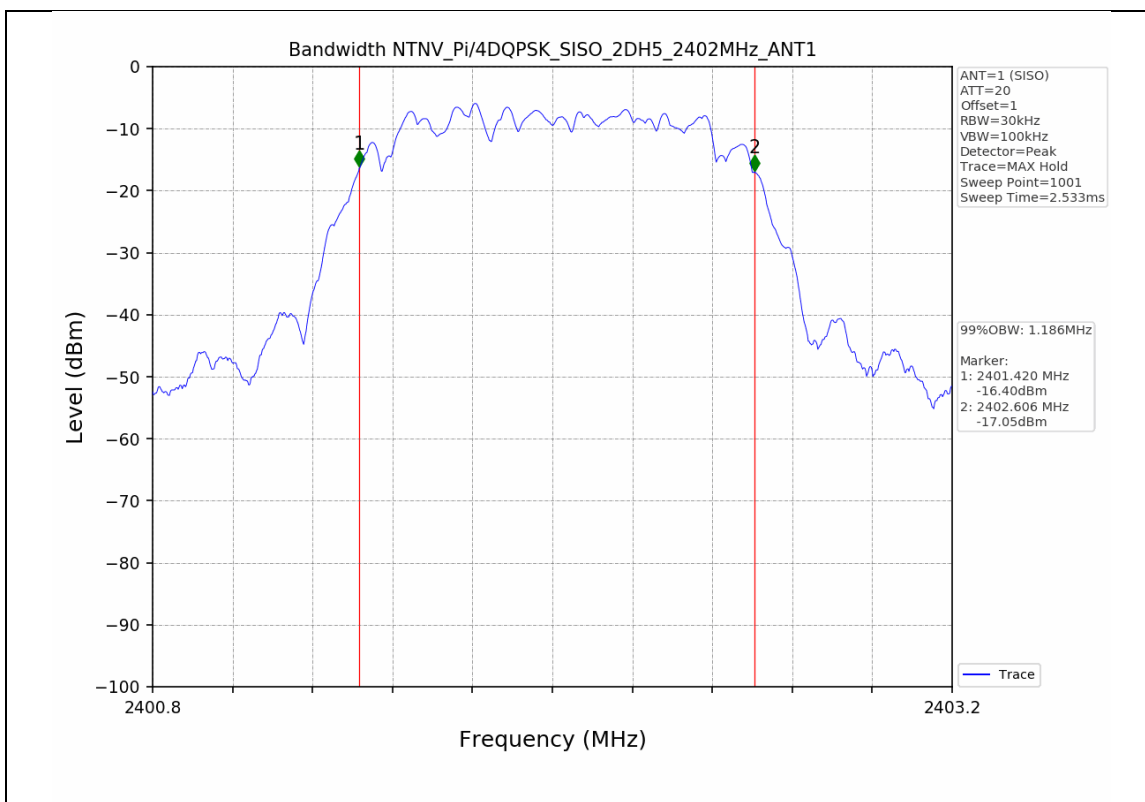
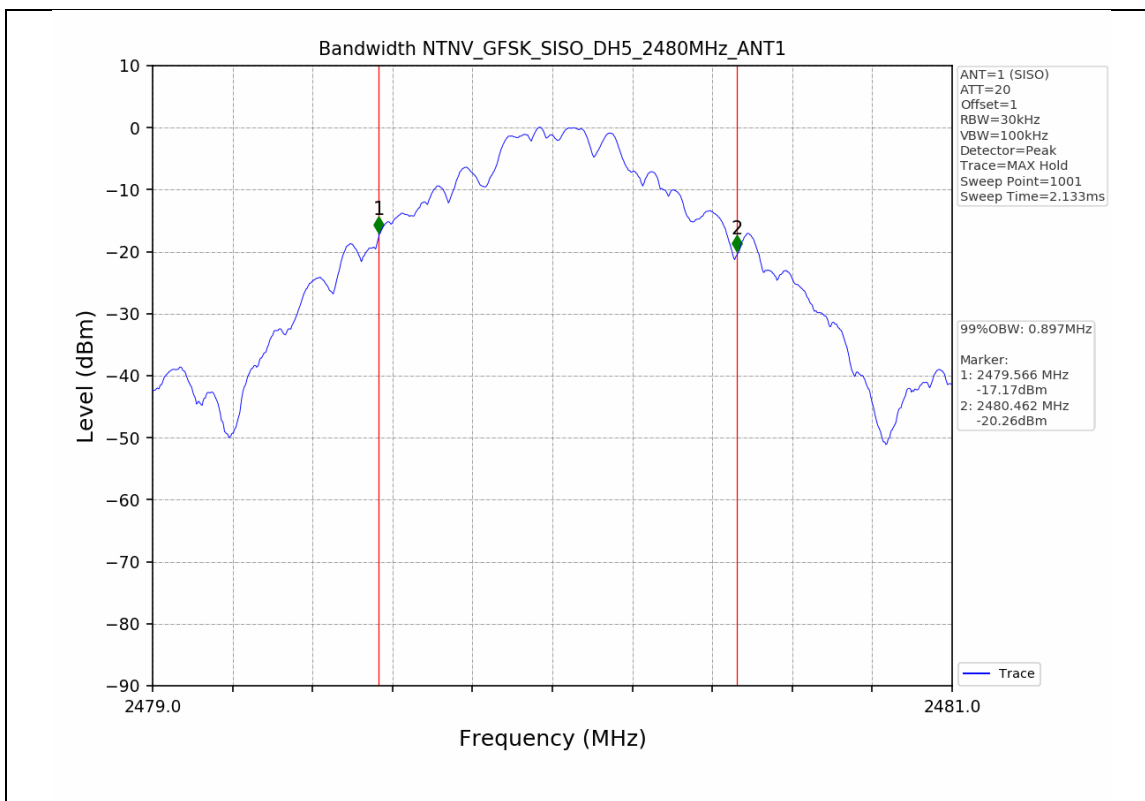


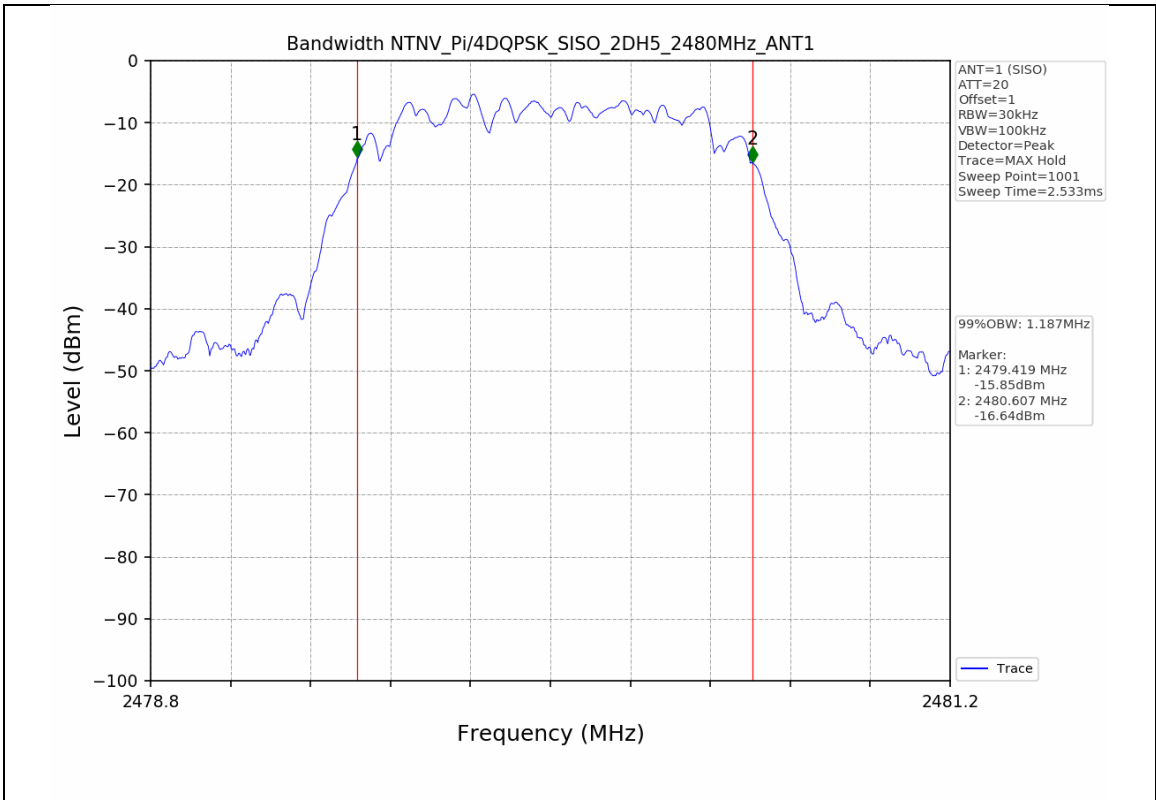
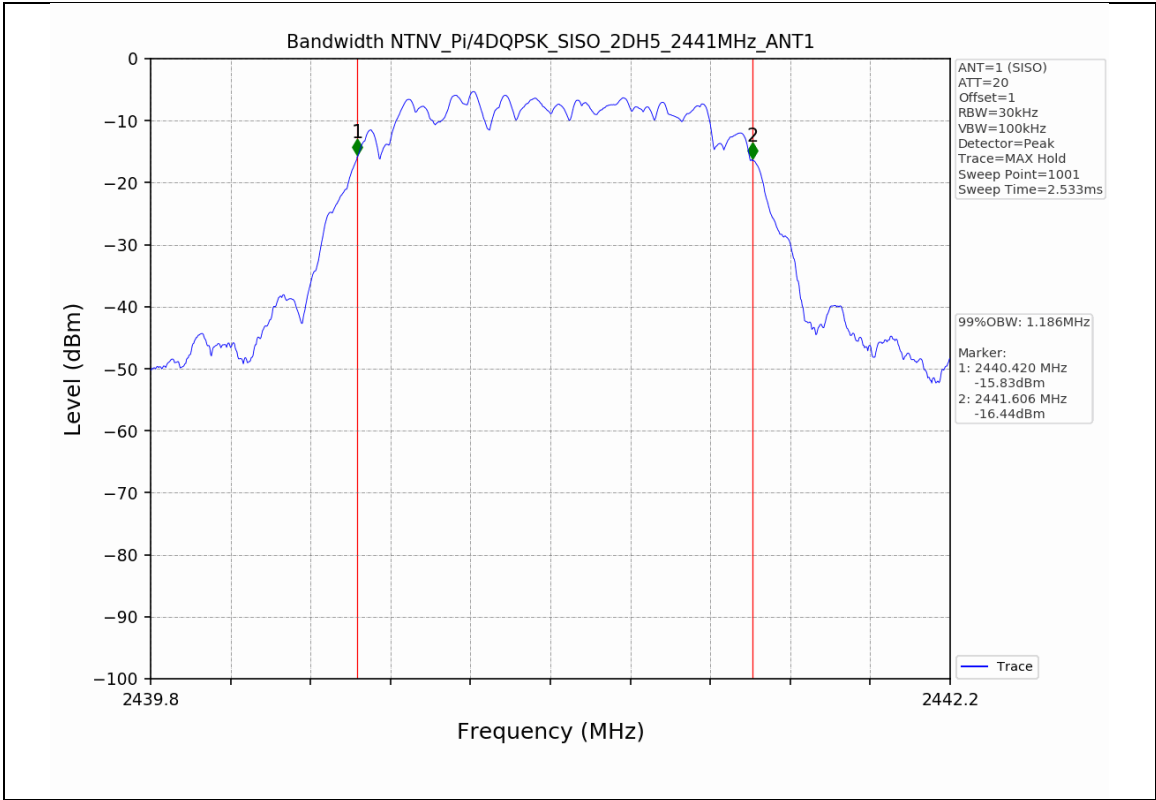


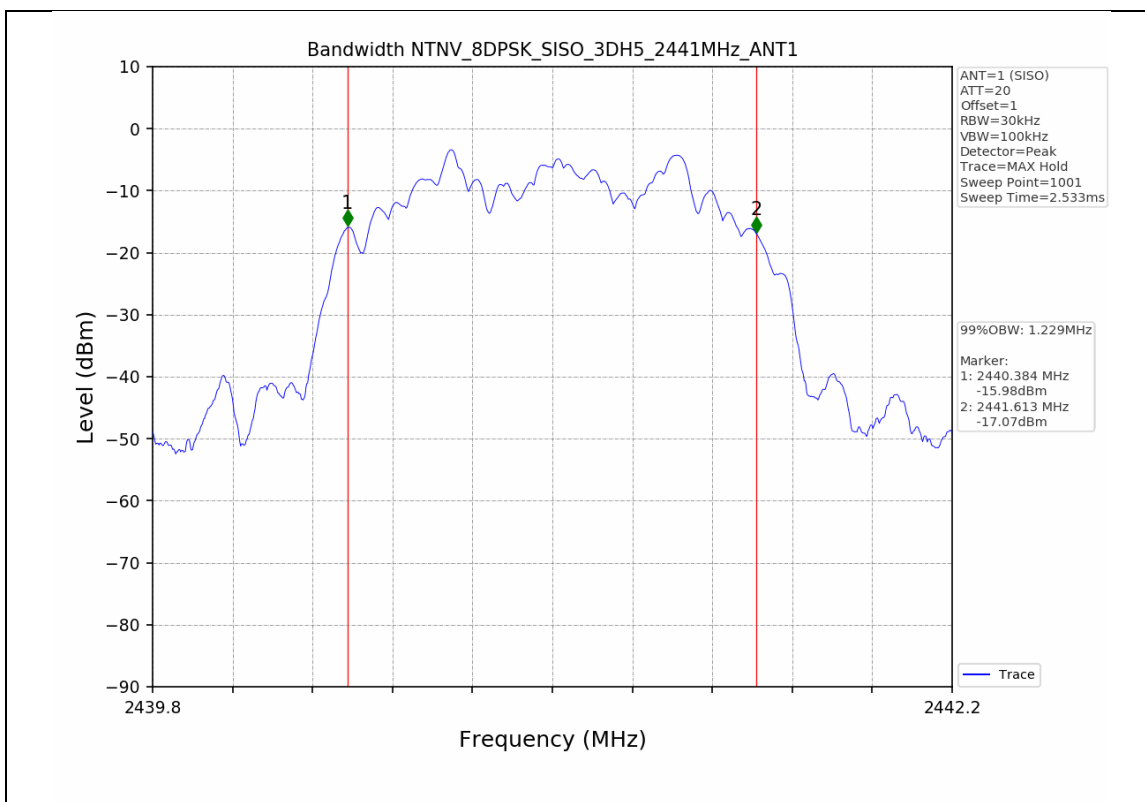
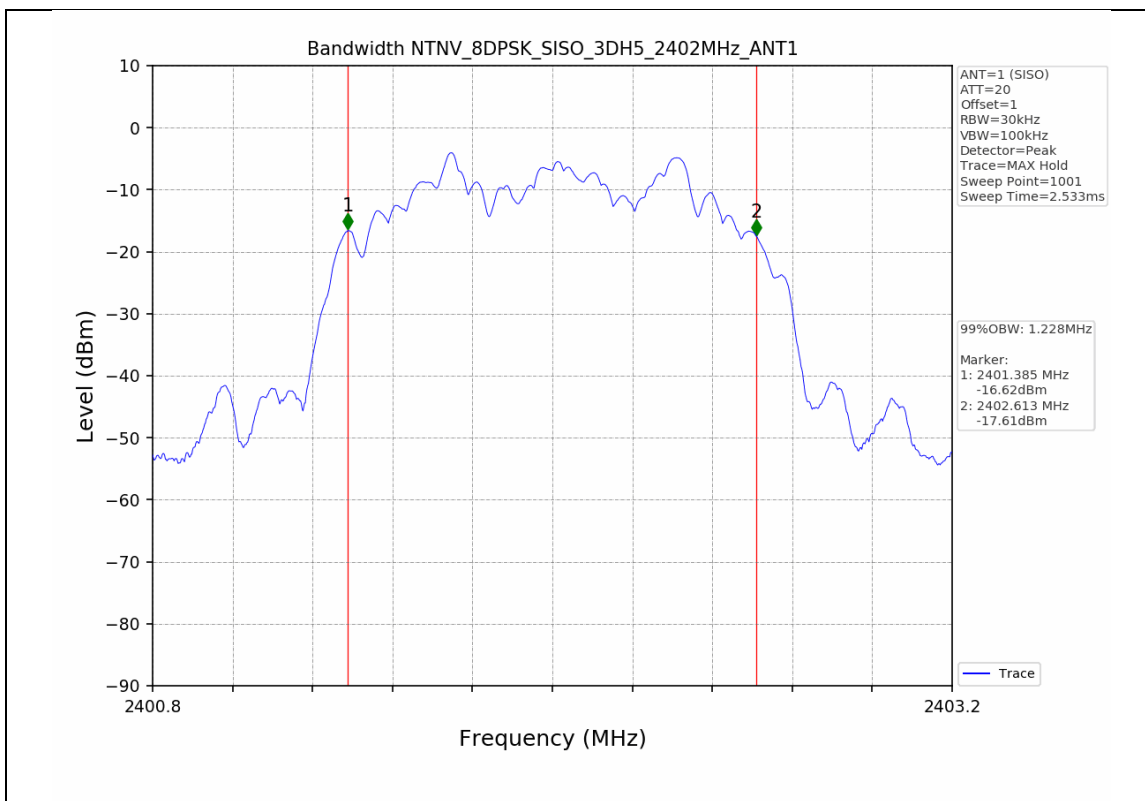
1.3 Test Graph - 99% Occupied Bandwidth

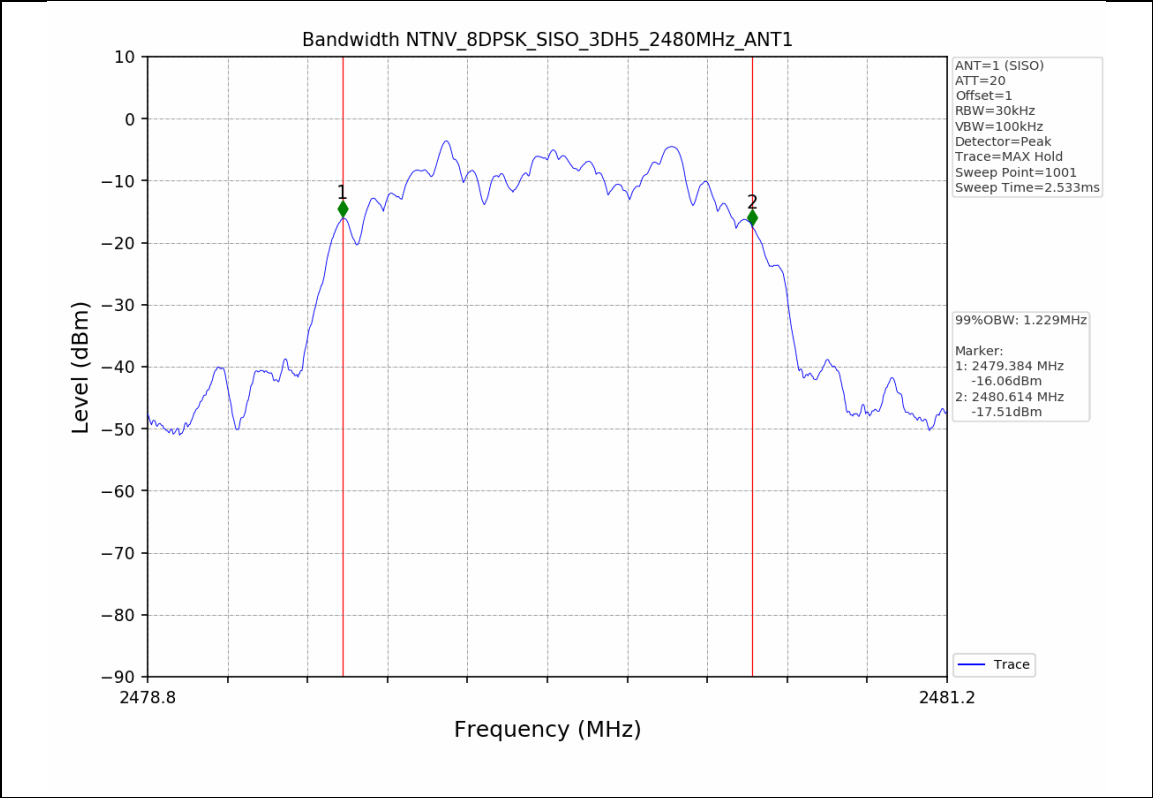










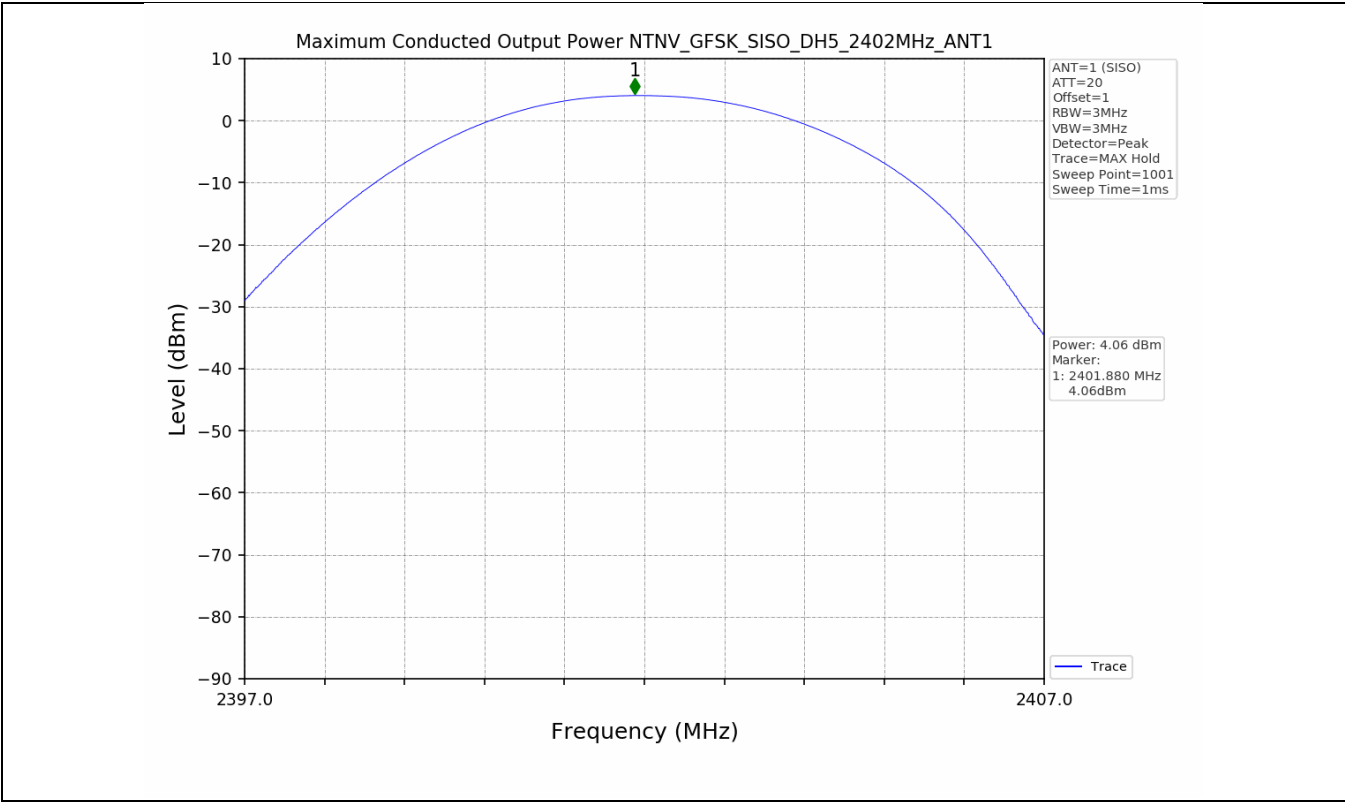


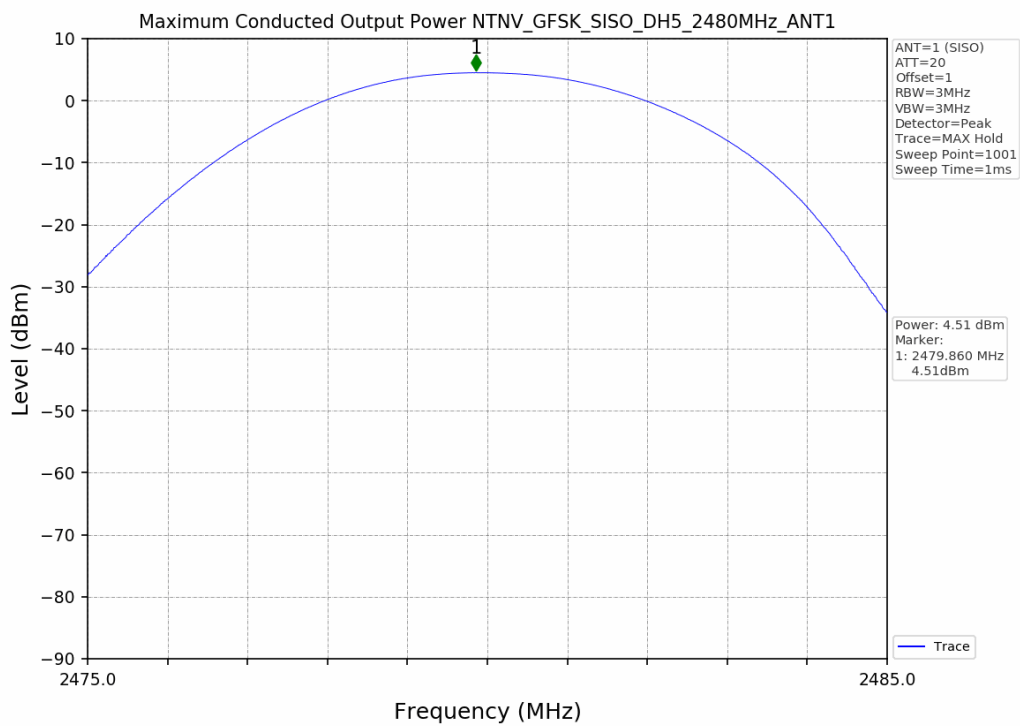
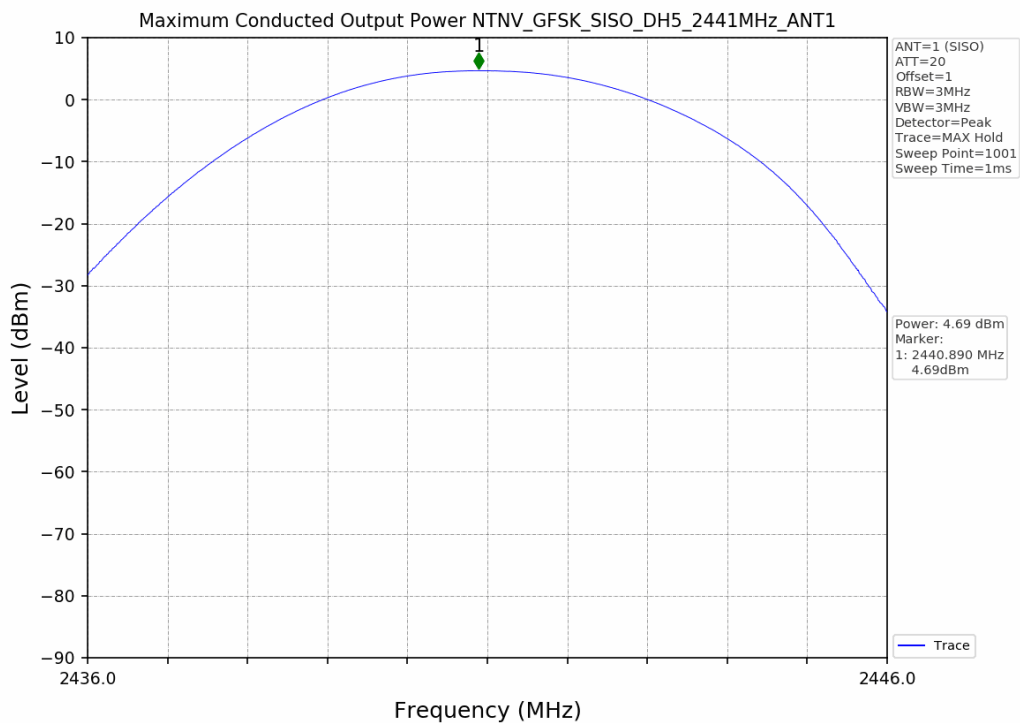
2. Maximum Conducted Output Power

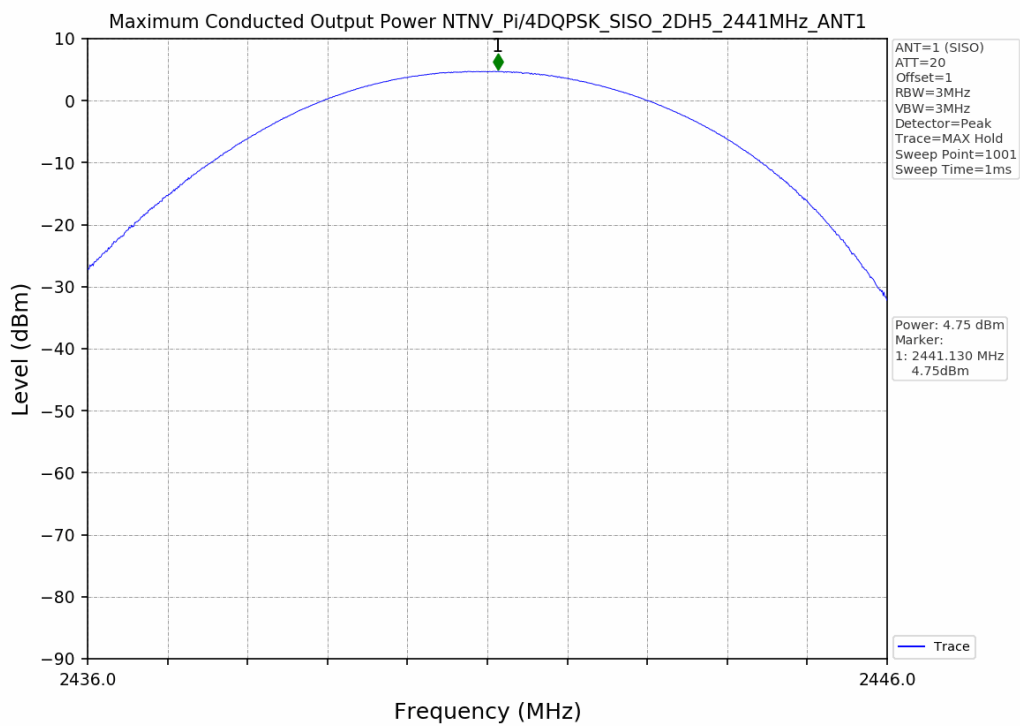
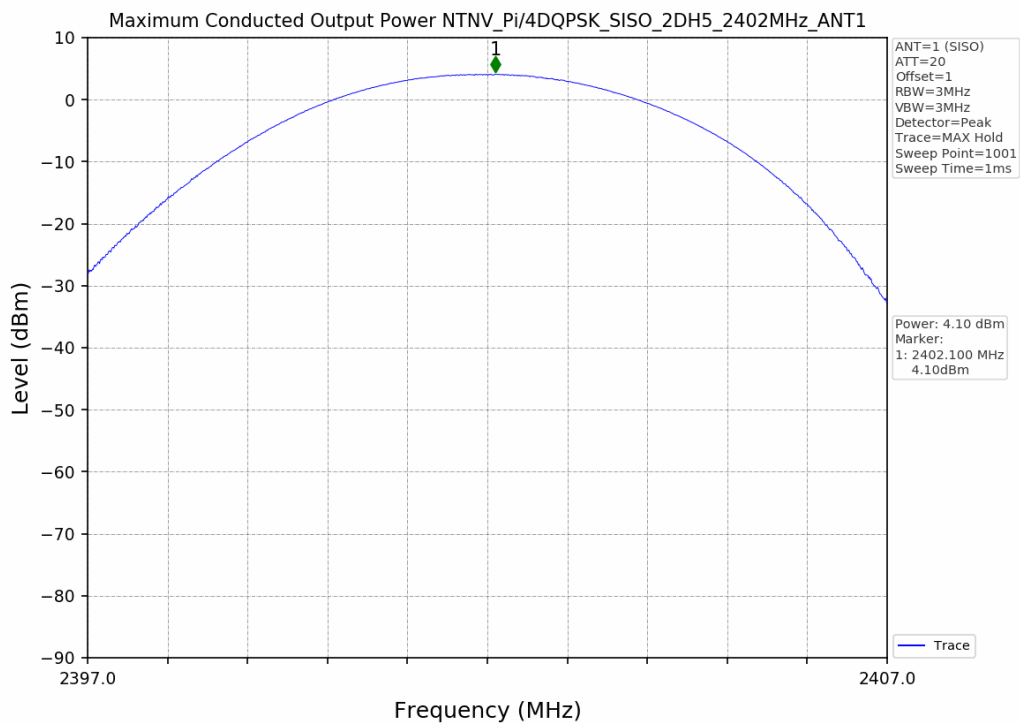
2.1 Test Result

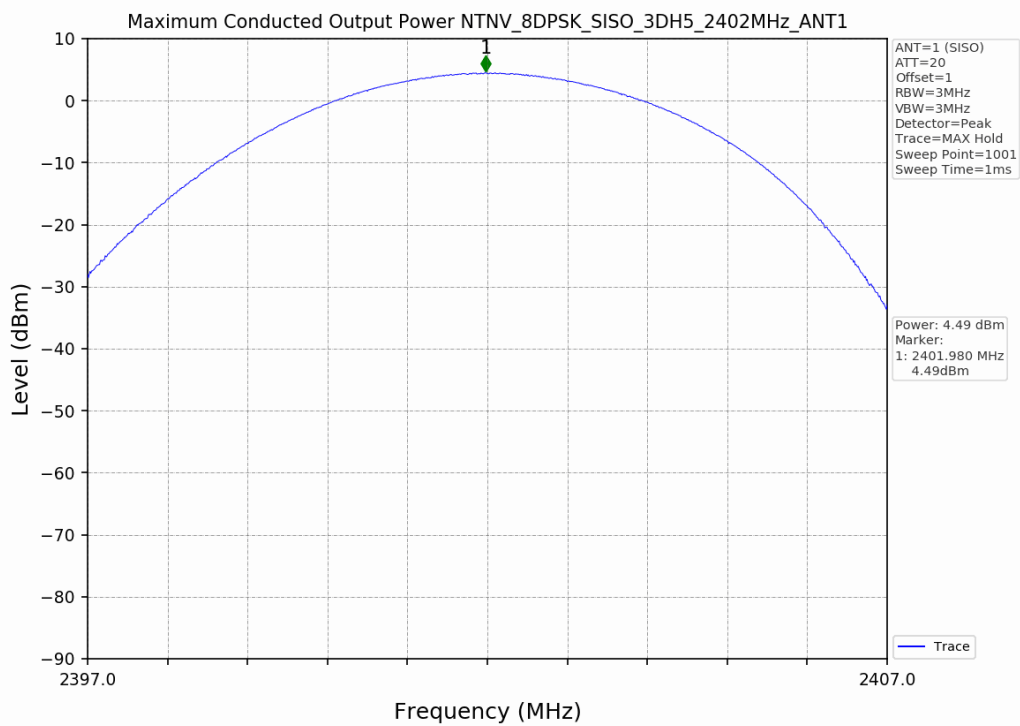
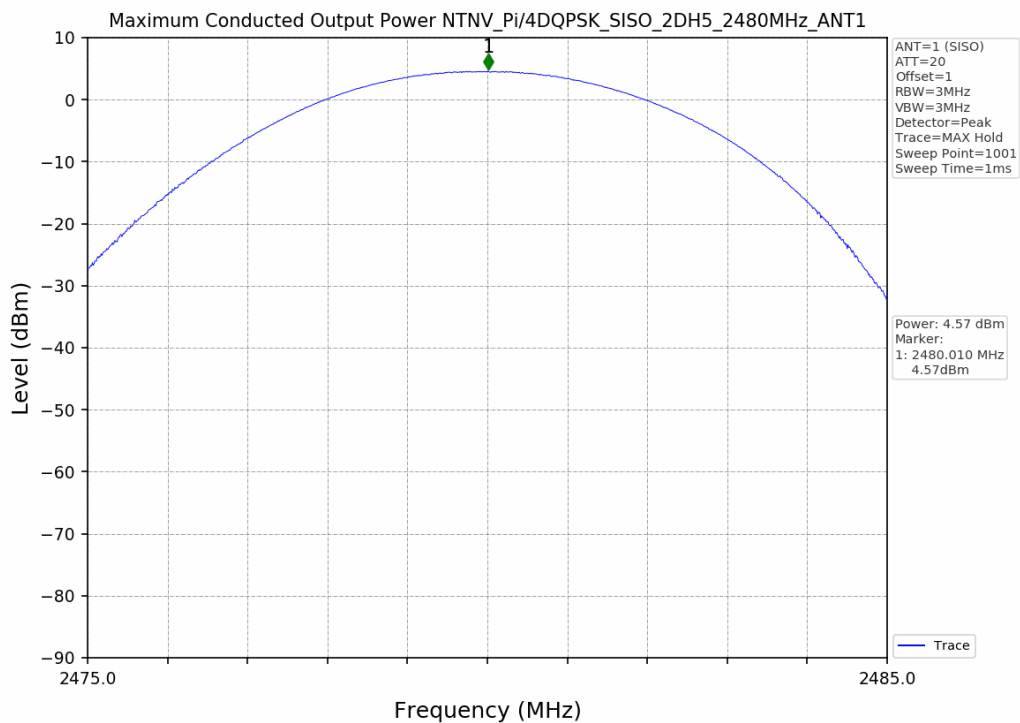
Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	4.06	20.97	PASS
	2441	SISO	4.69	20.97	PASS
	2480	SISO	4.51	20.97	PASS
Pi/4DQPSK	2402	SISO	4.10	20.97	PASS
	2441	SISO	4.75	20.97	PASS
	2480	SISO	4.57	20.97	PASS
8DPSK	2402	SISO	4.49	20.97	PASS
	2441	SISO	5.15	20.97	PASS
	2480	SISO	4.98	20.97	PASS

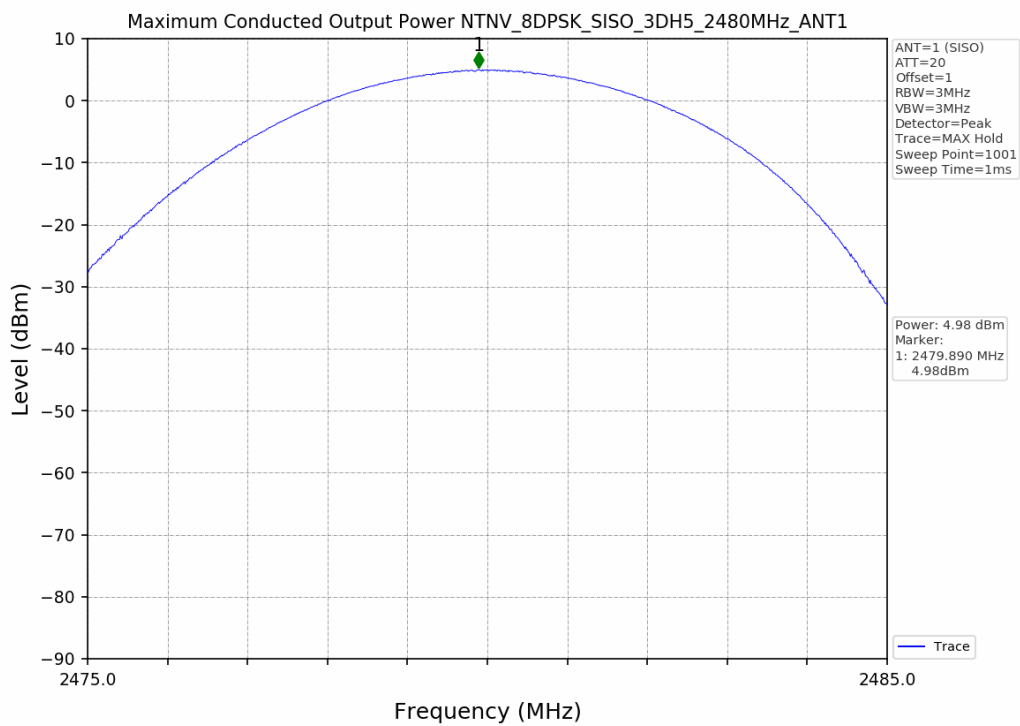
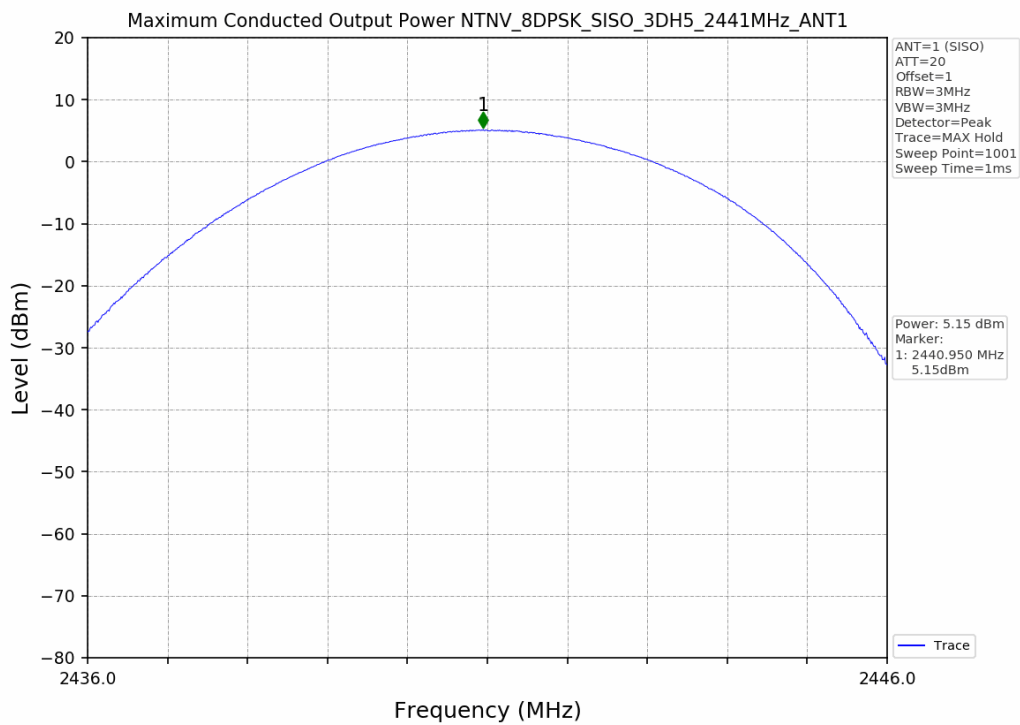
2.2 Test Graph









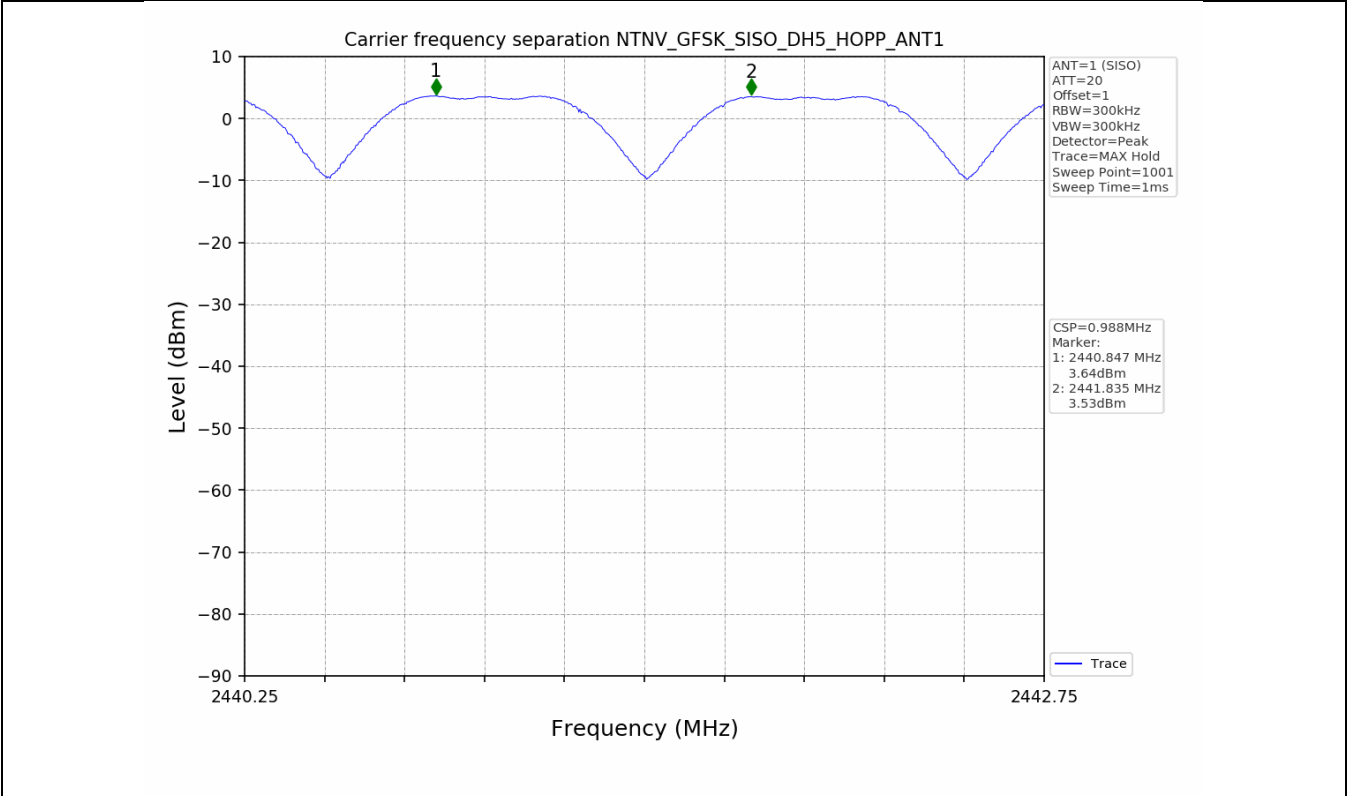


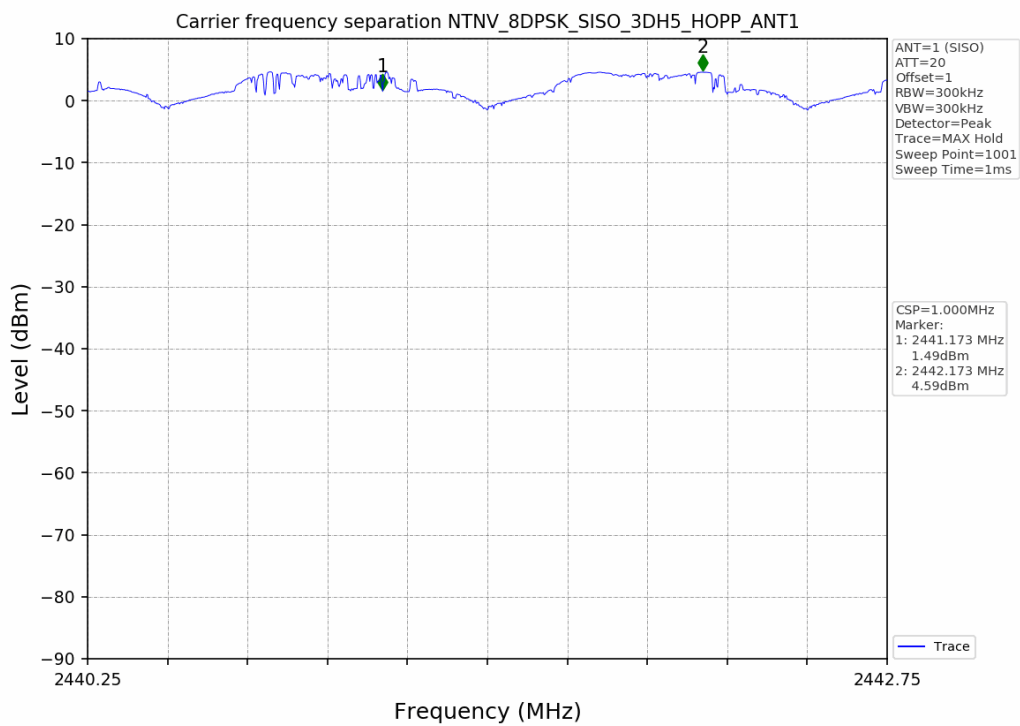
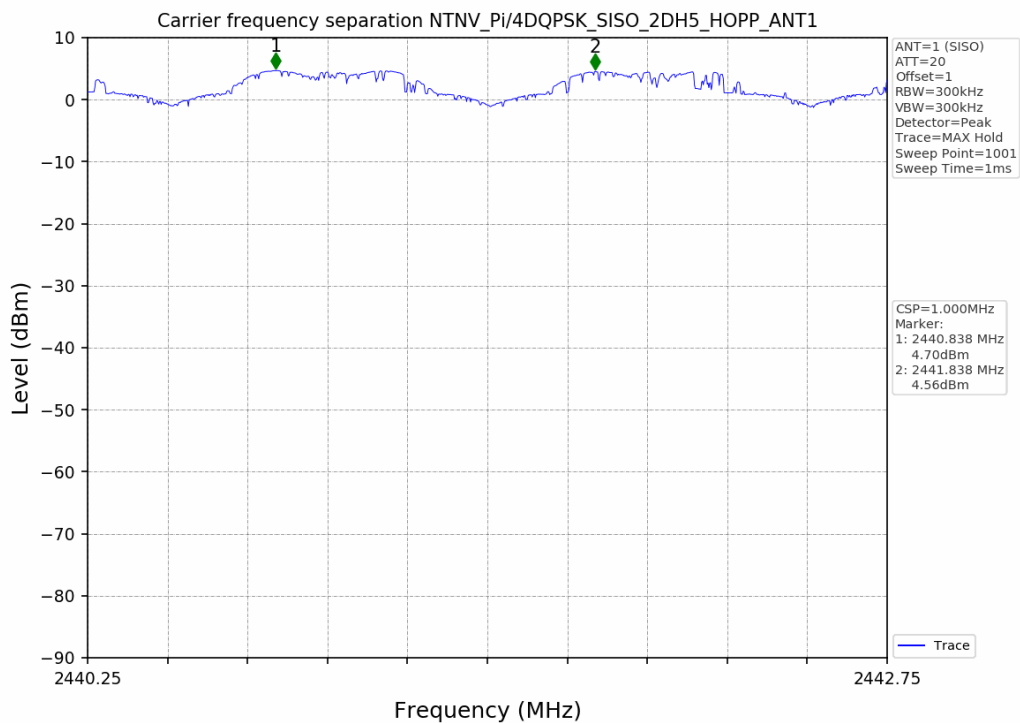
3. Carrier frequency separation

3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	0.988	1.034	≥ 0.689	PASS
Pi/4DQPSK	SISO	1	1.000	1.336	≥ 0.891	PASS
8DPSK	SISO	1	1.000	1.359	≥ 0.906	PASS

3.2 Test Graph



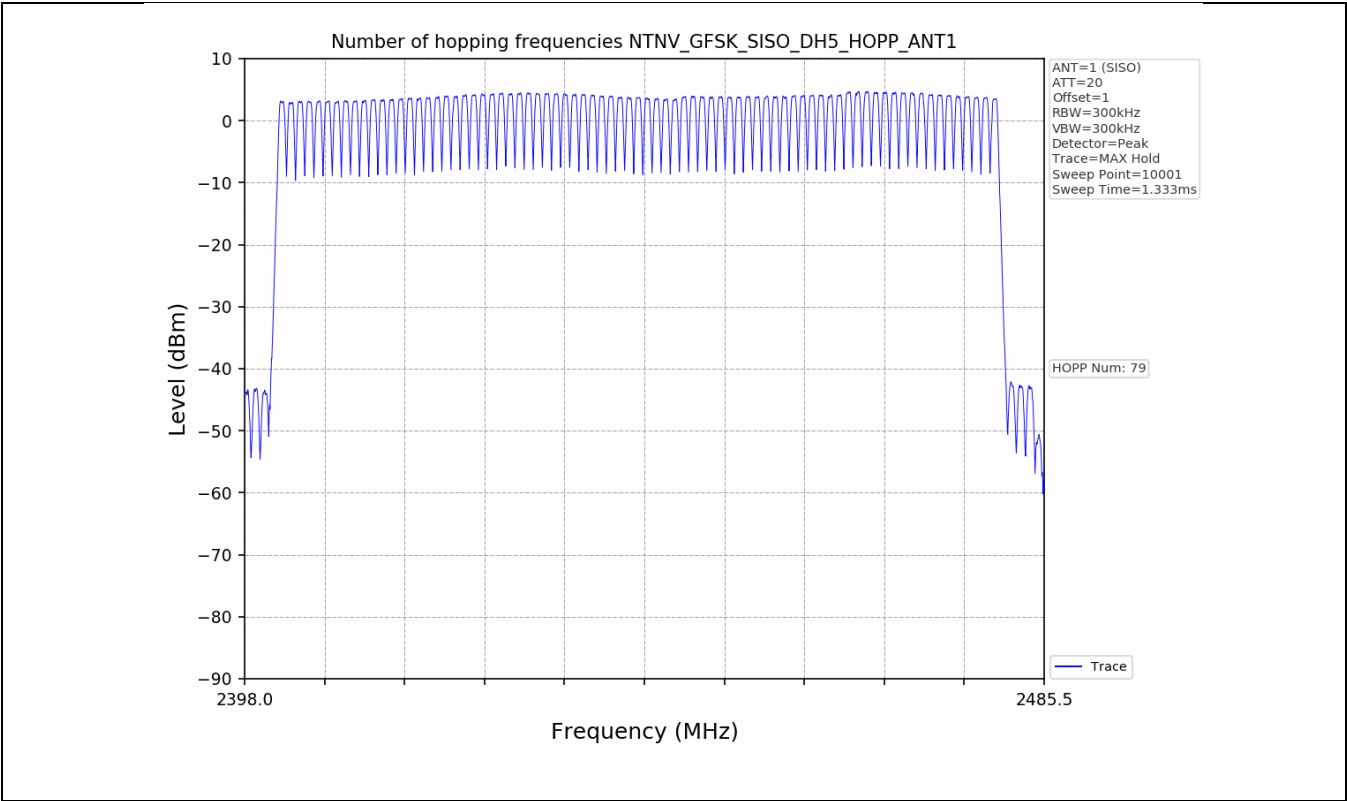


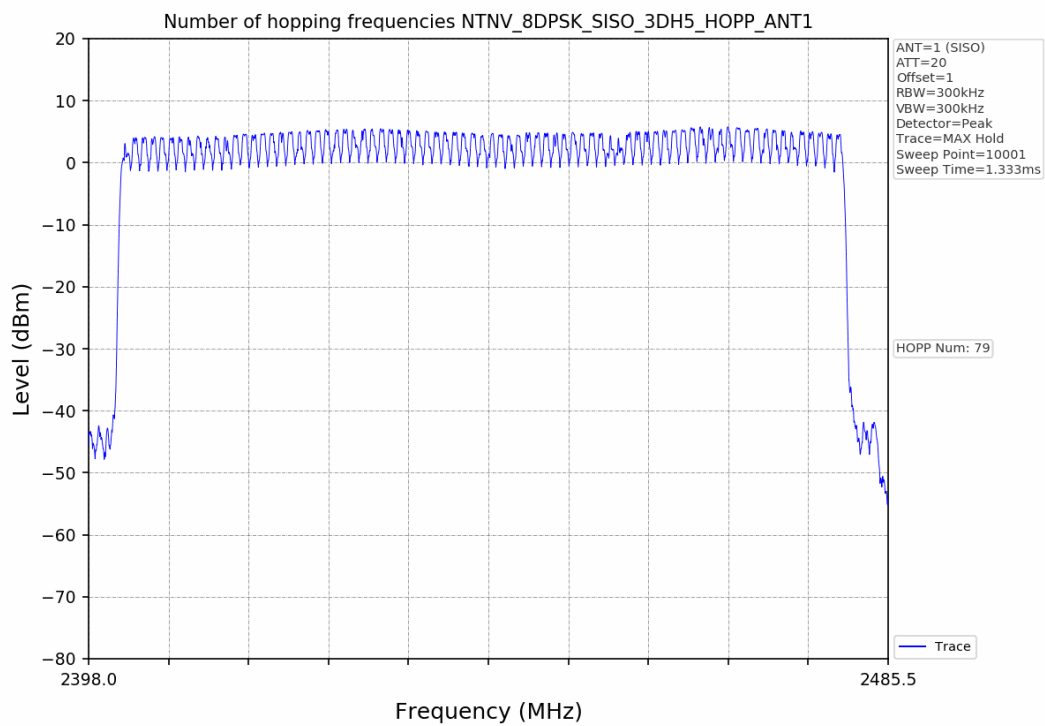
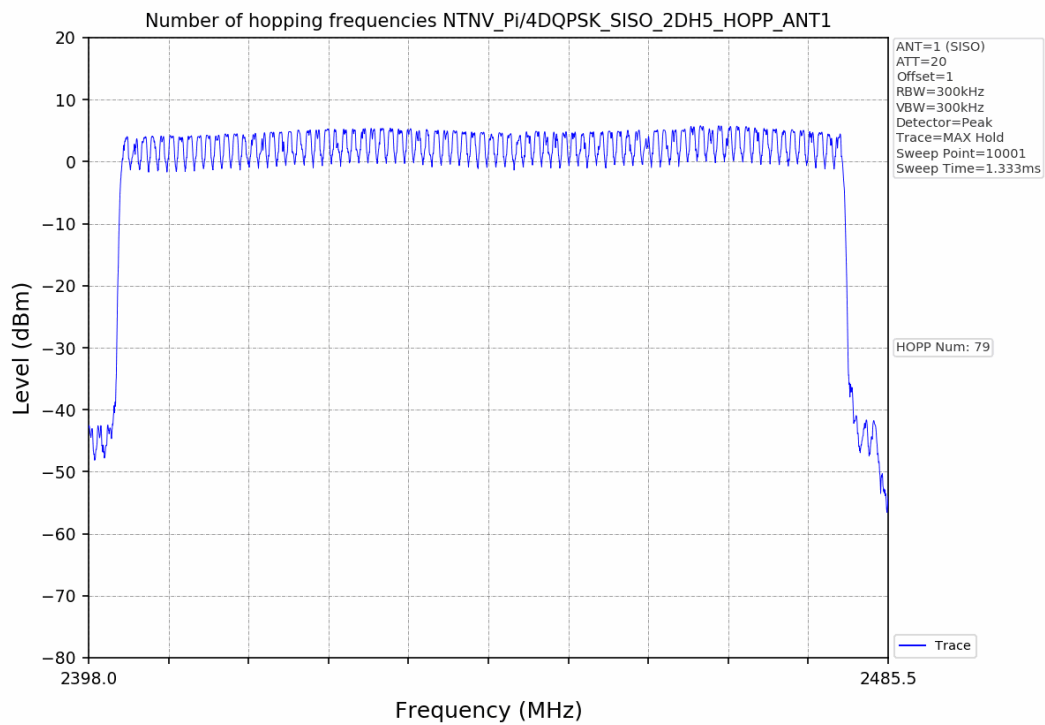
4. Number of hopping frequencies

4.1 Test Result

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

4.2 Test Graph



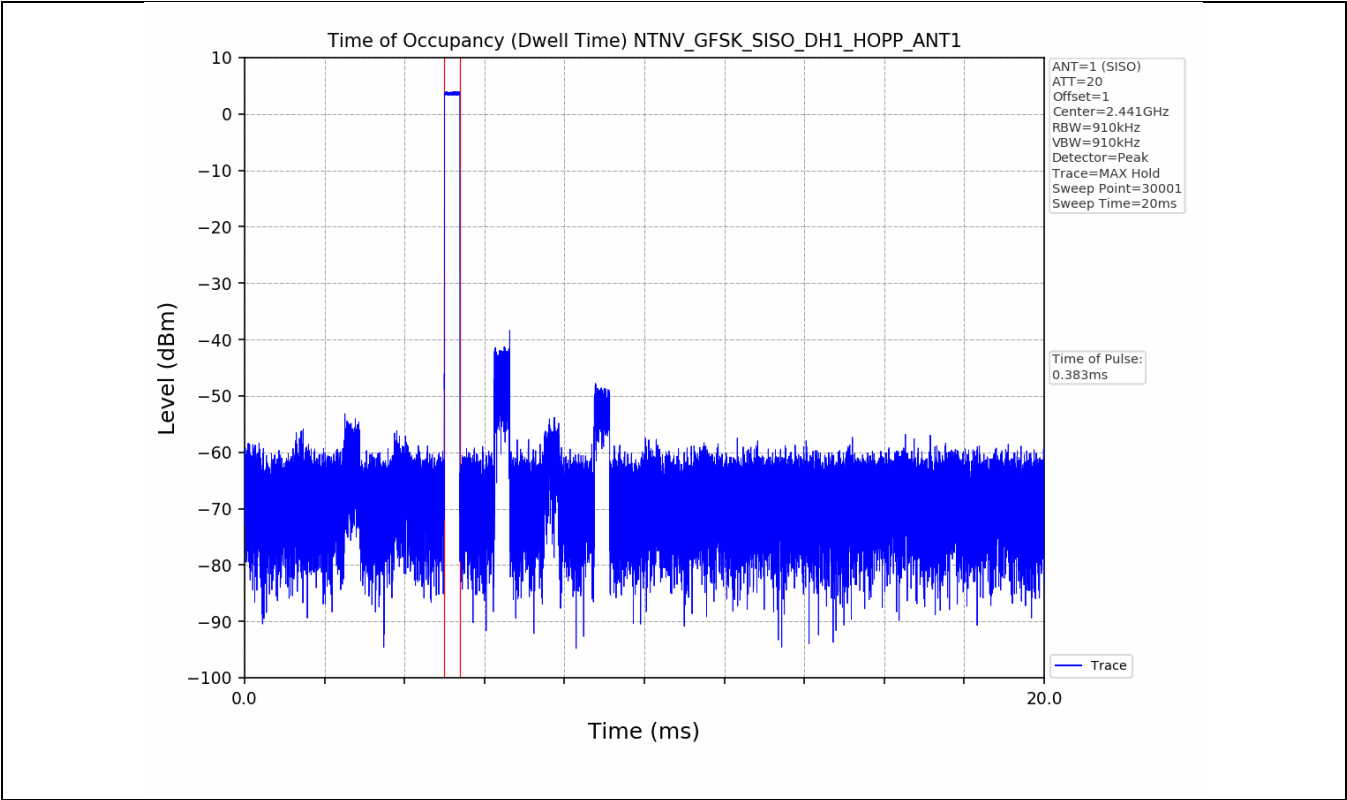


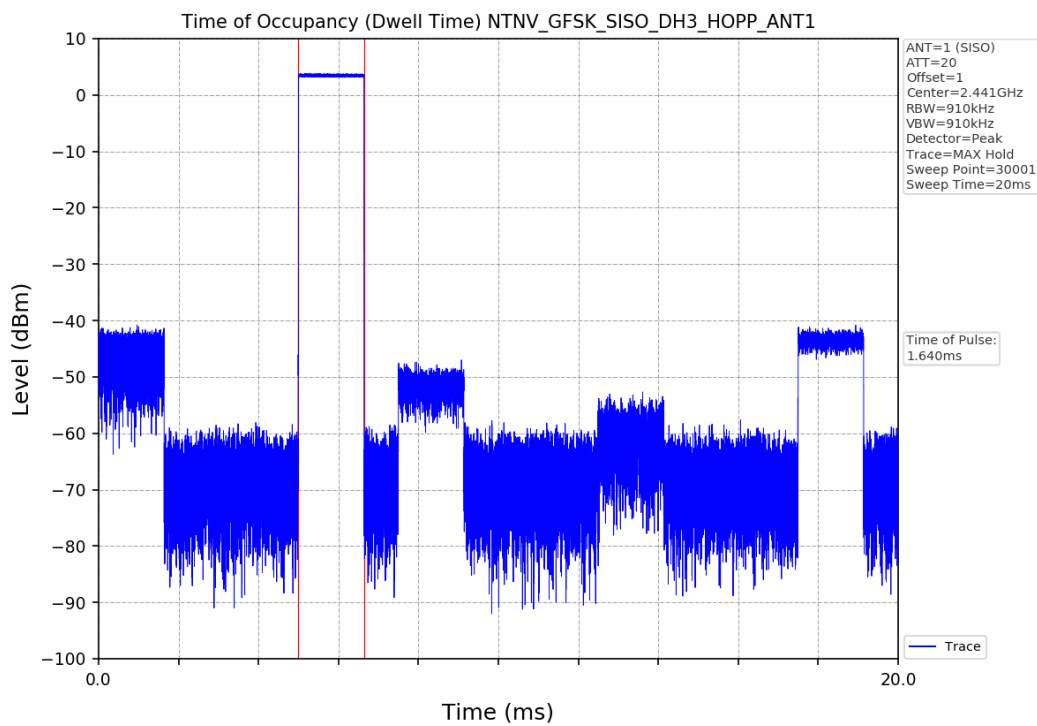
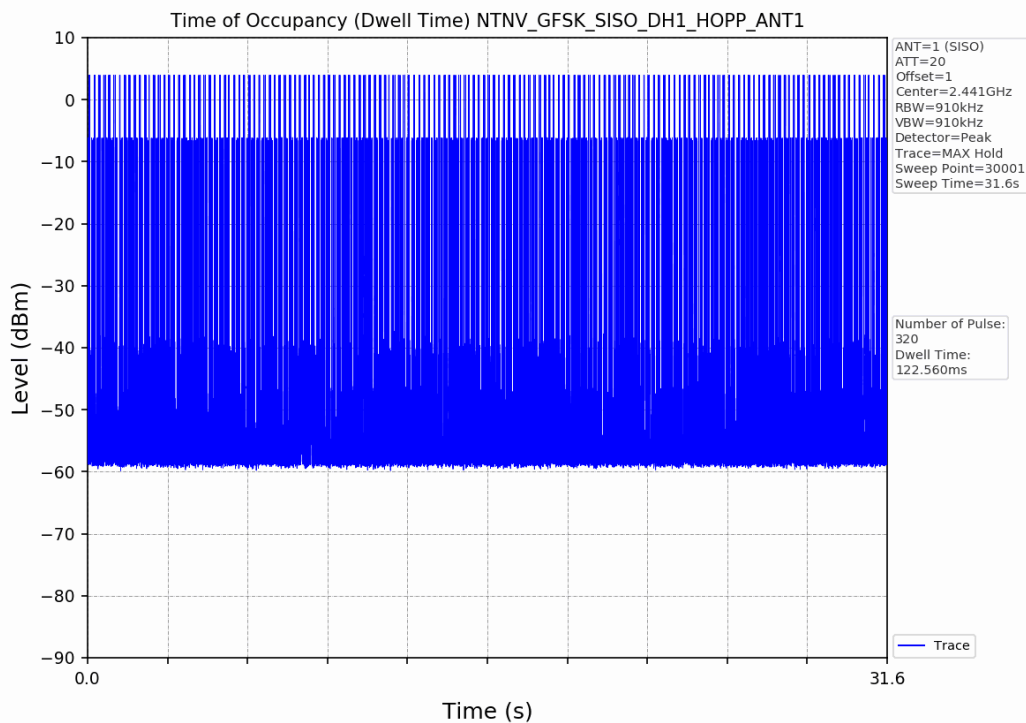
5. Time of Occupancy (Dwell Time)

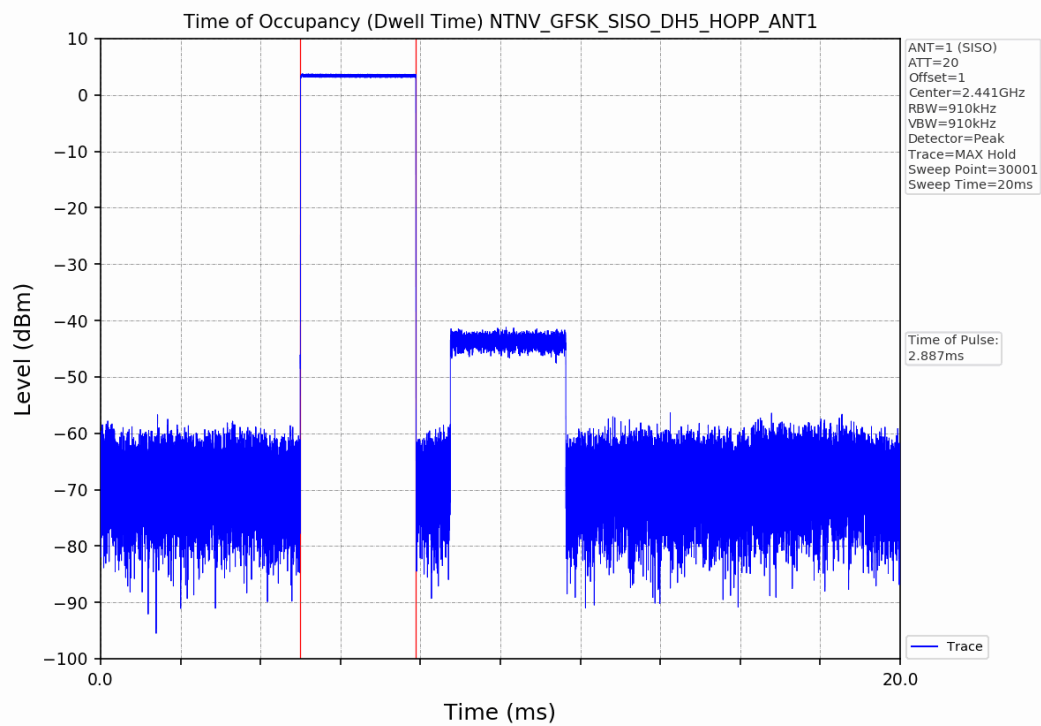
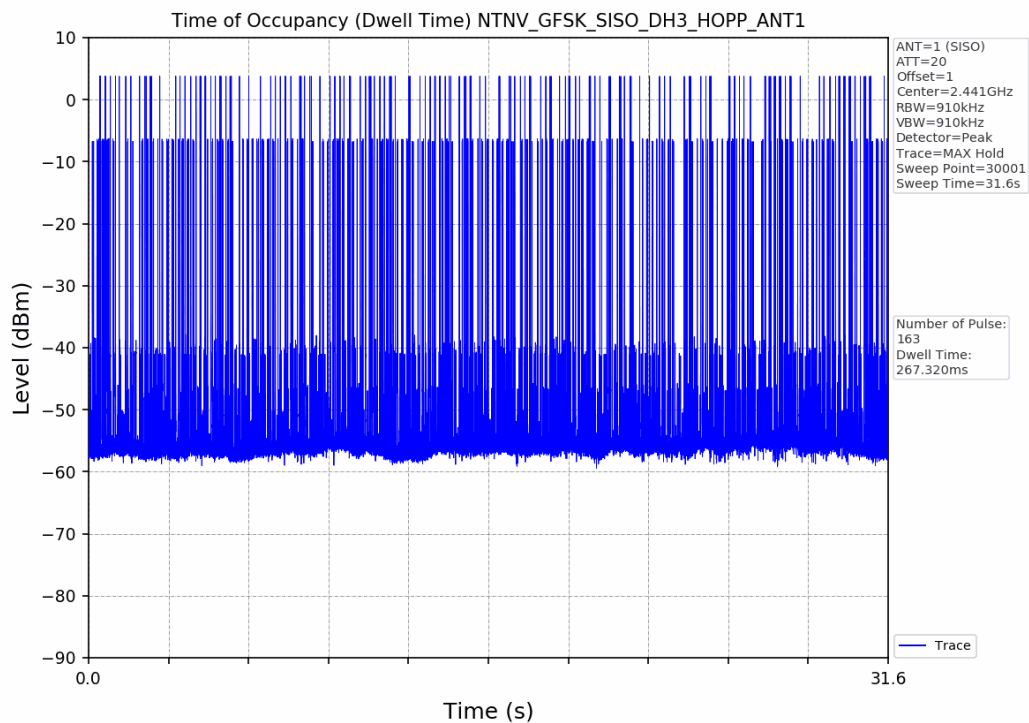
5.1 Test Result

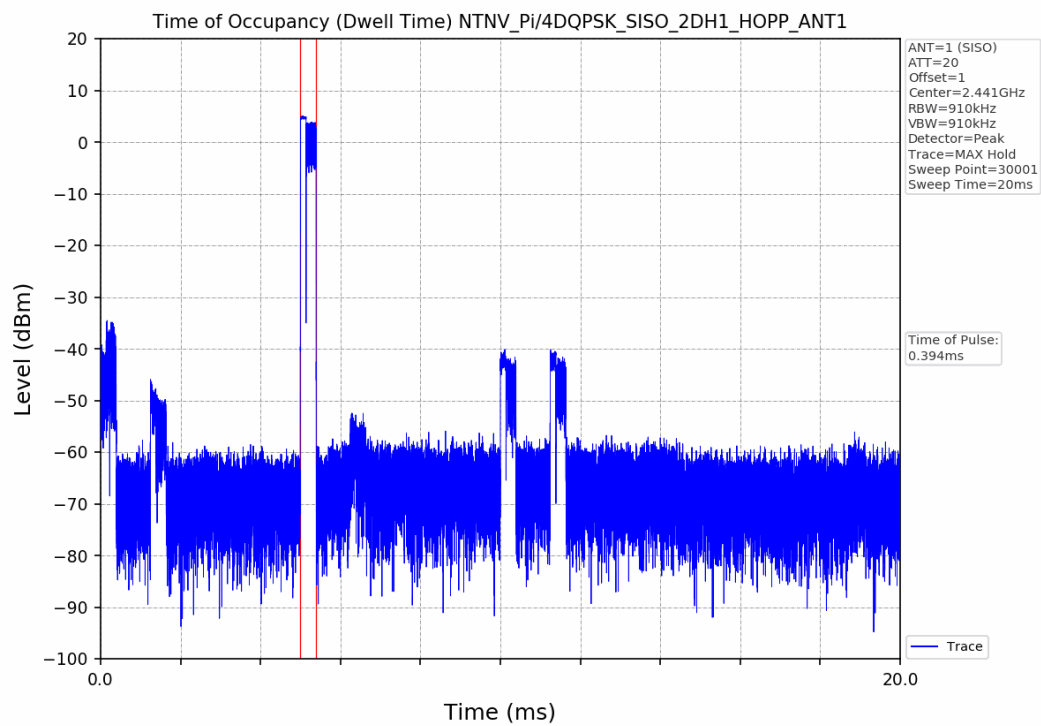
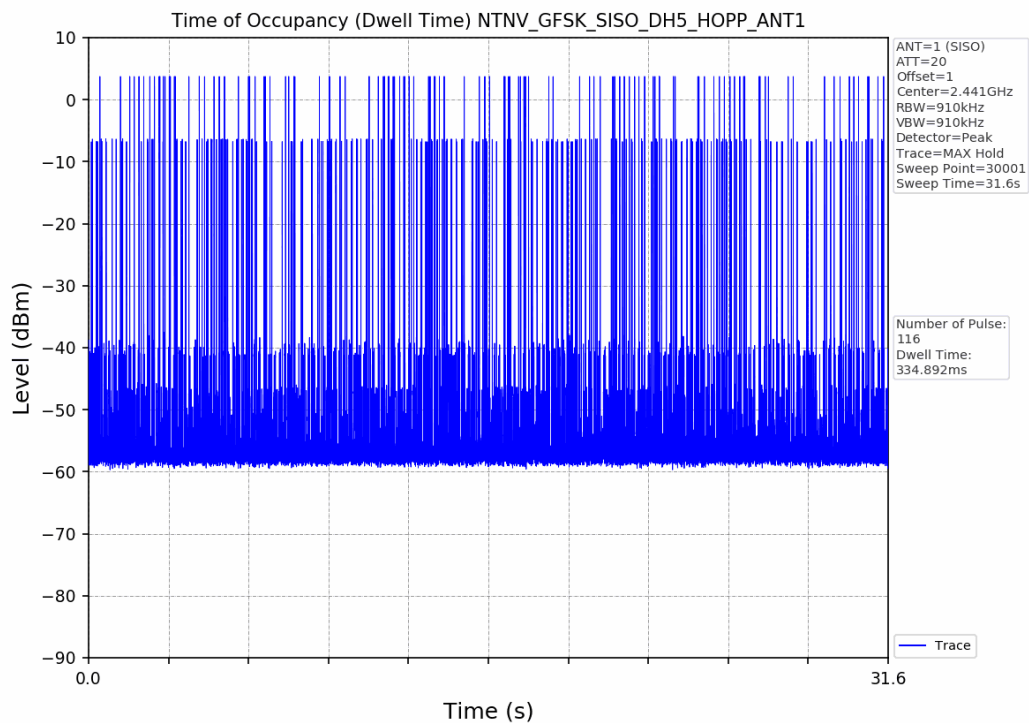
Test Mode	Packet Type	TX Type	ANT No.	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limits (ms)	Verdict
GFSK	DH1	SISO	1	0.383	31.6	320	122.560	≤400	PASS
	DH3	SISO	1	1.640	31.6	163	267.320	≤400	PASS
	DH5	SISO	1	2.887	31.6	116	334.892	≤400	PASS
Pi/4DQ PSK	2DH1	SISO	1	0.394	31.6	320	126.080	≤400	PASS
	2DH3	SISO	1	1.646	31.6	146	240.316	≤400	PASS
	2DH5	SISO	1	2.896	31.6	107	309.872	≤400	PASS
8DPSK	3DH1	SISO	1	0.395	31.6	321	126.795	≤400	PASS
	3DH3	SISO	1	1.651	31.6	157	259.207	≤400	PASS
	3DH5	SISO	1	2.899	31.6	92	266.708	≤400	PASS

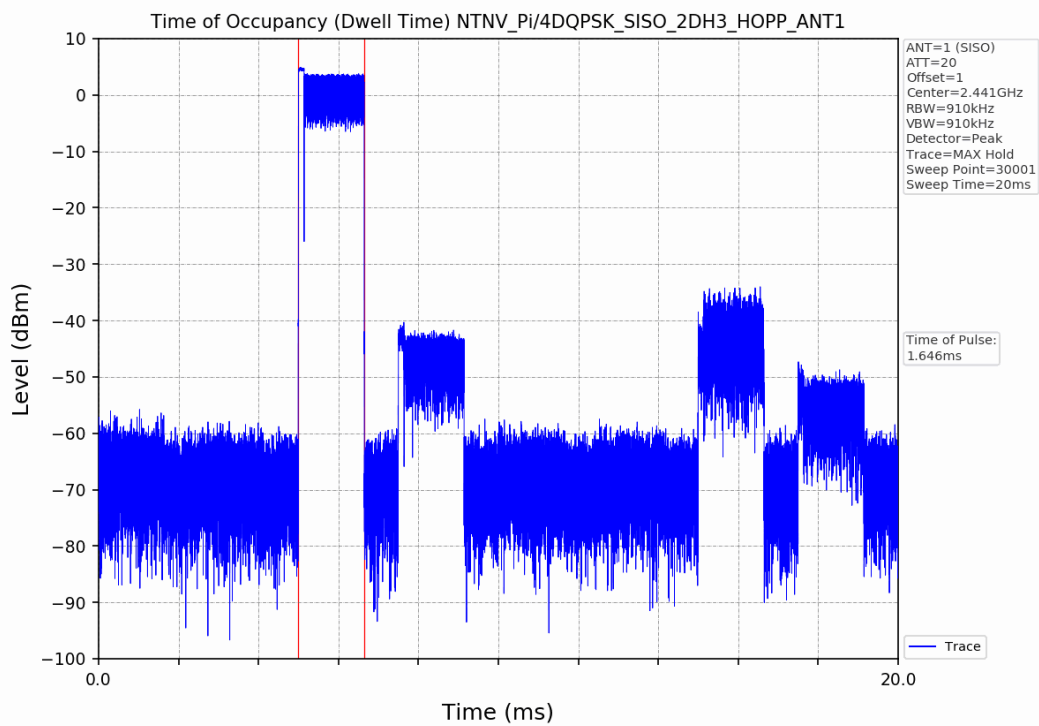
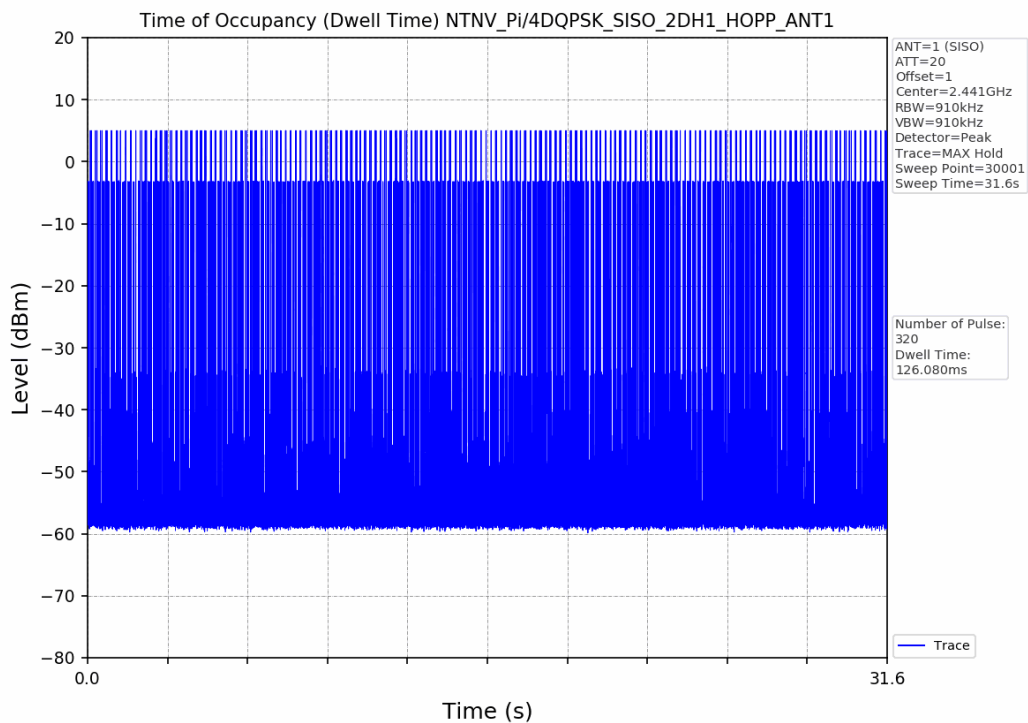
5.2 Test Graph

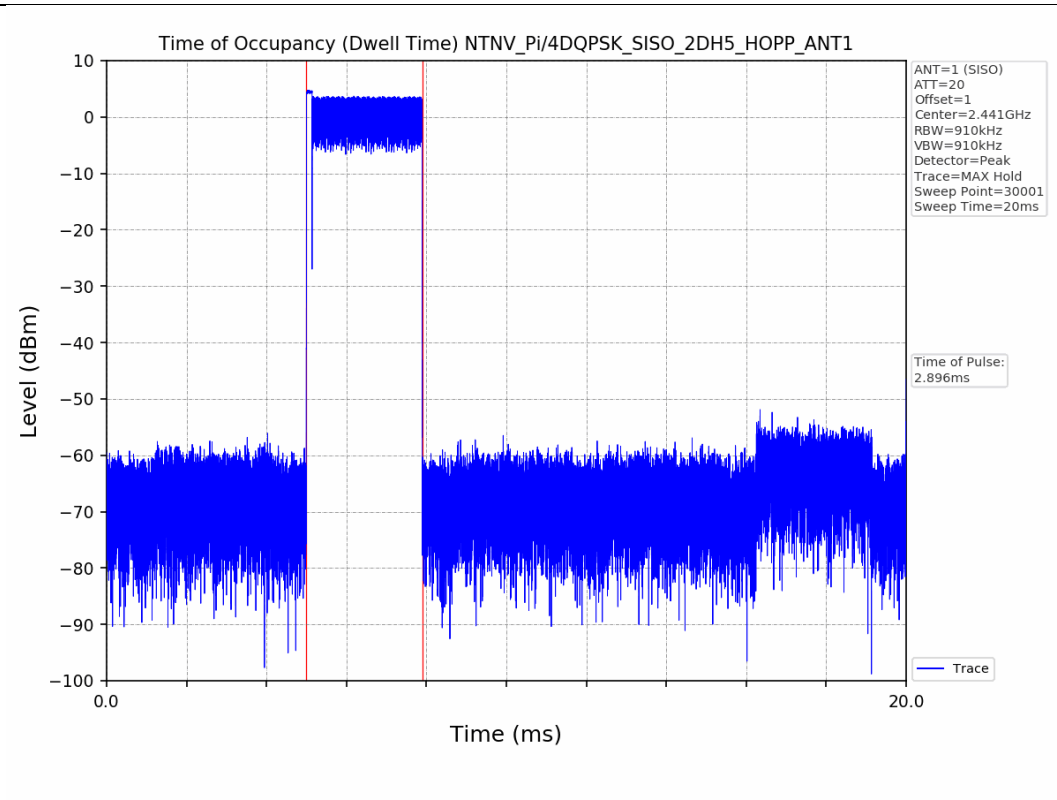
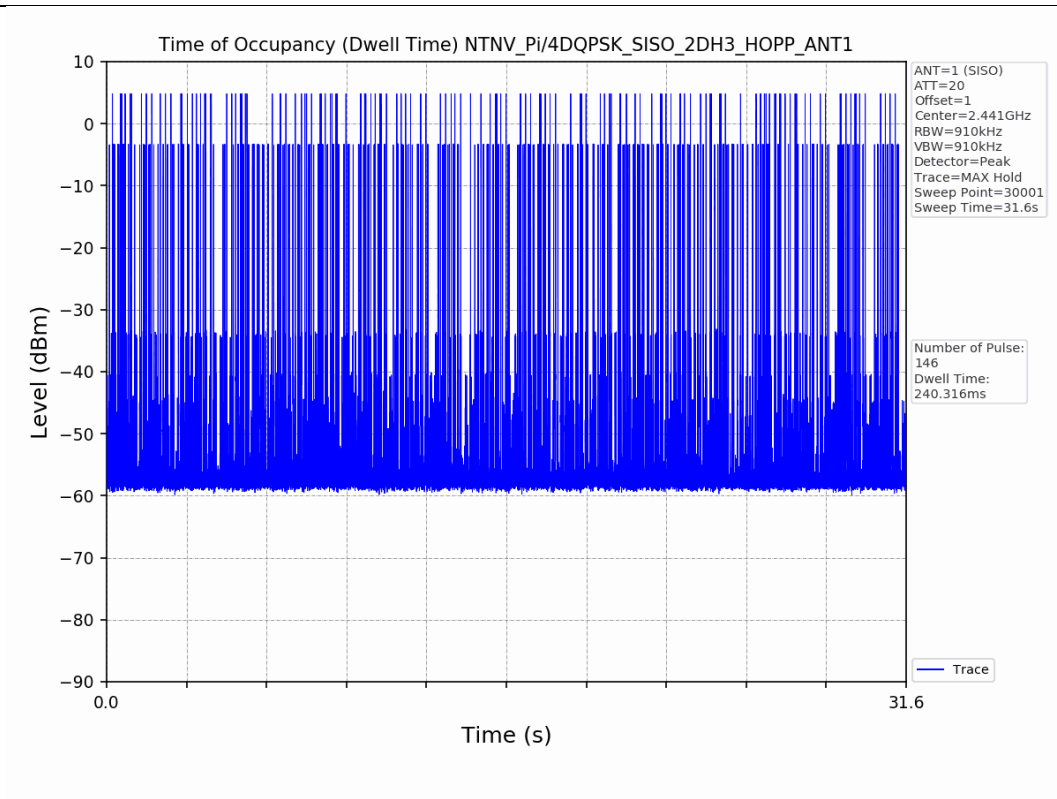


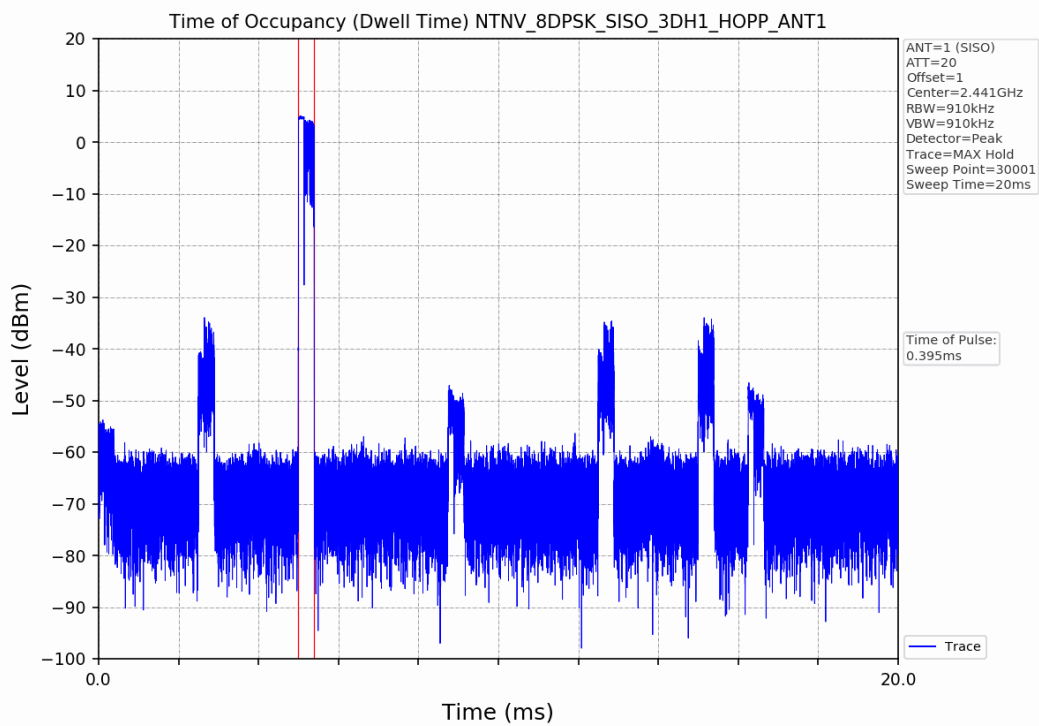
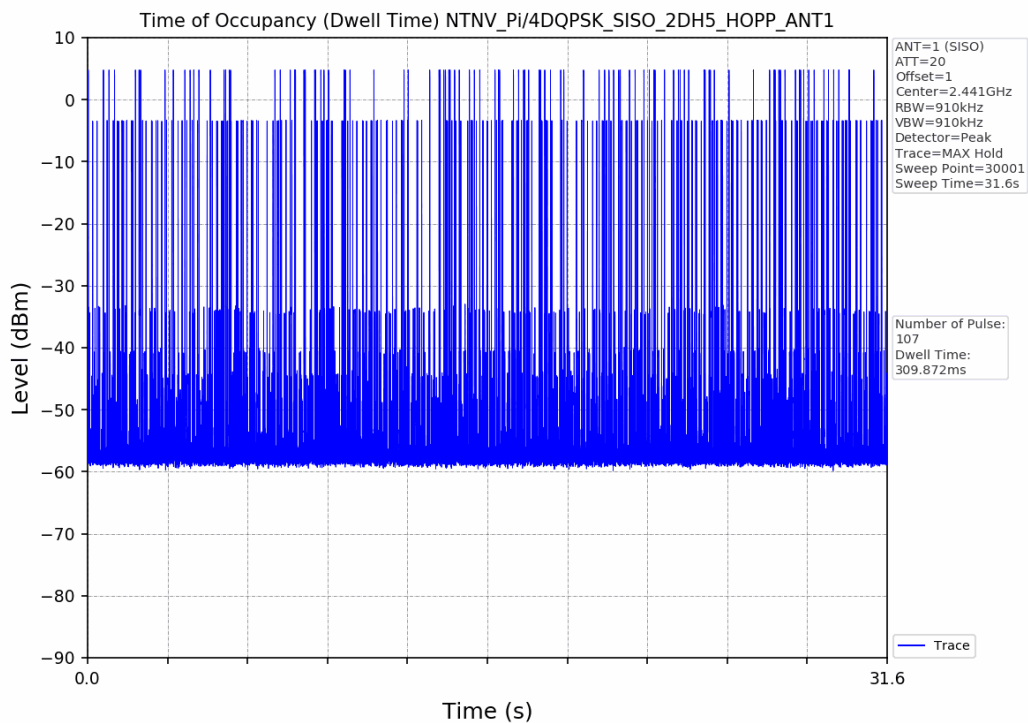


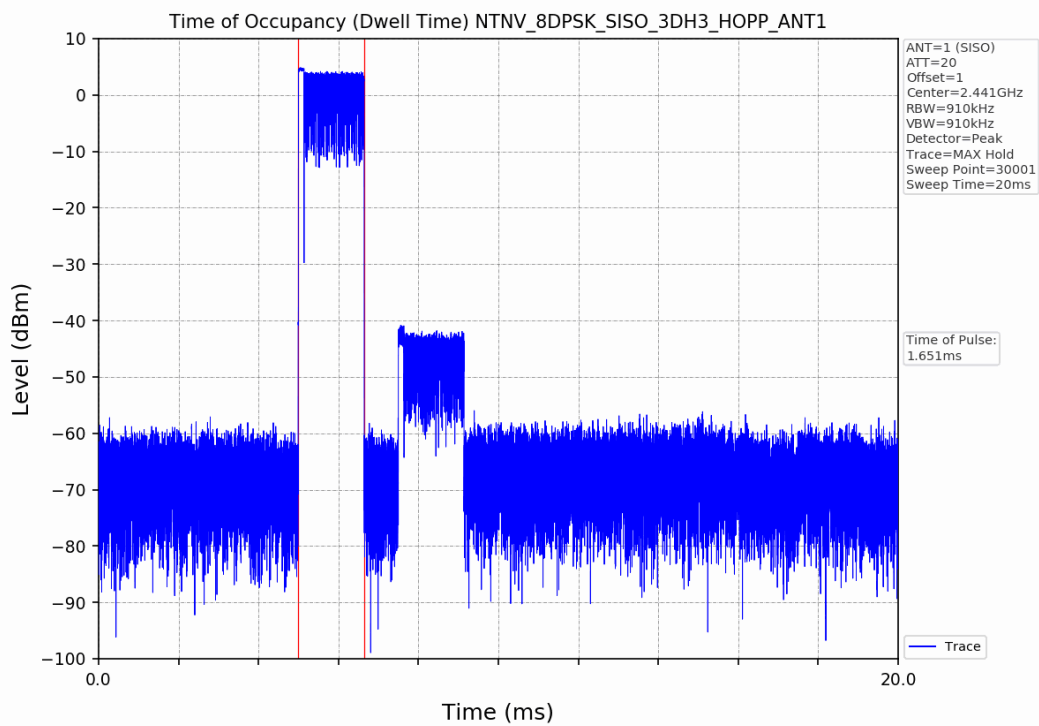
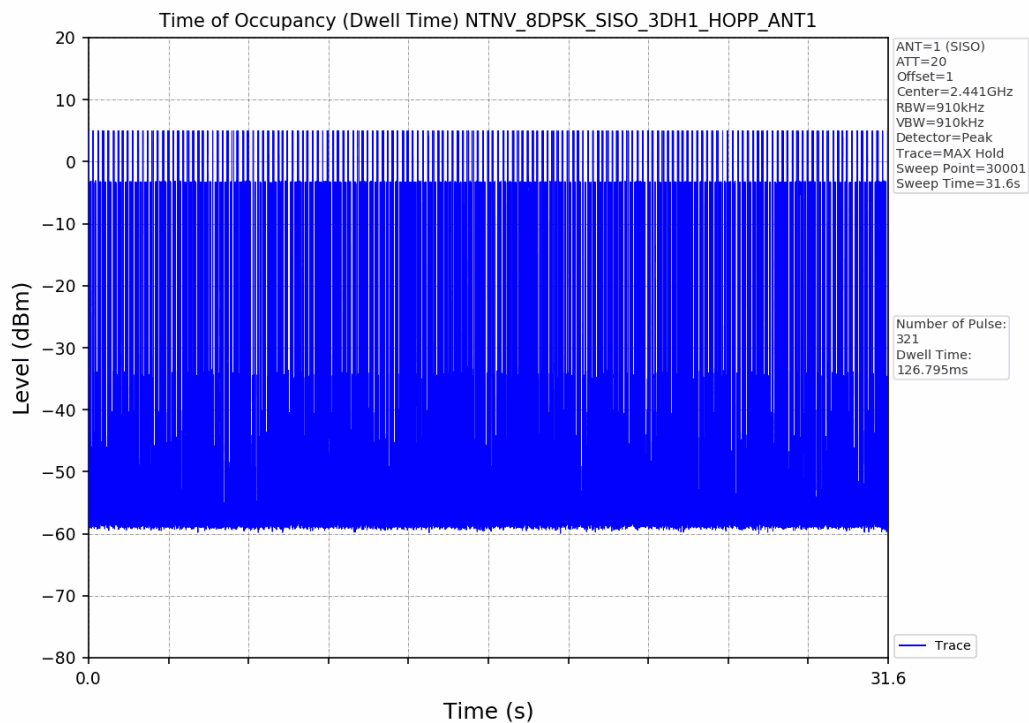


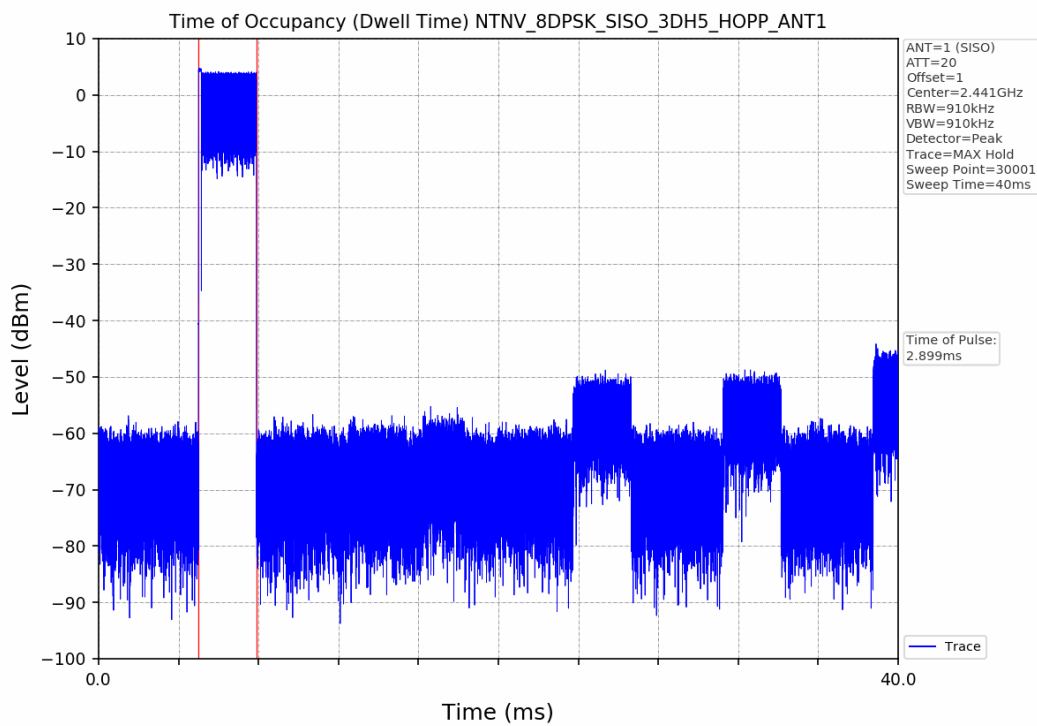
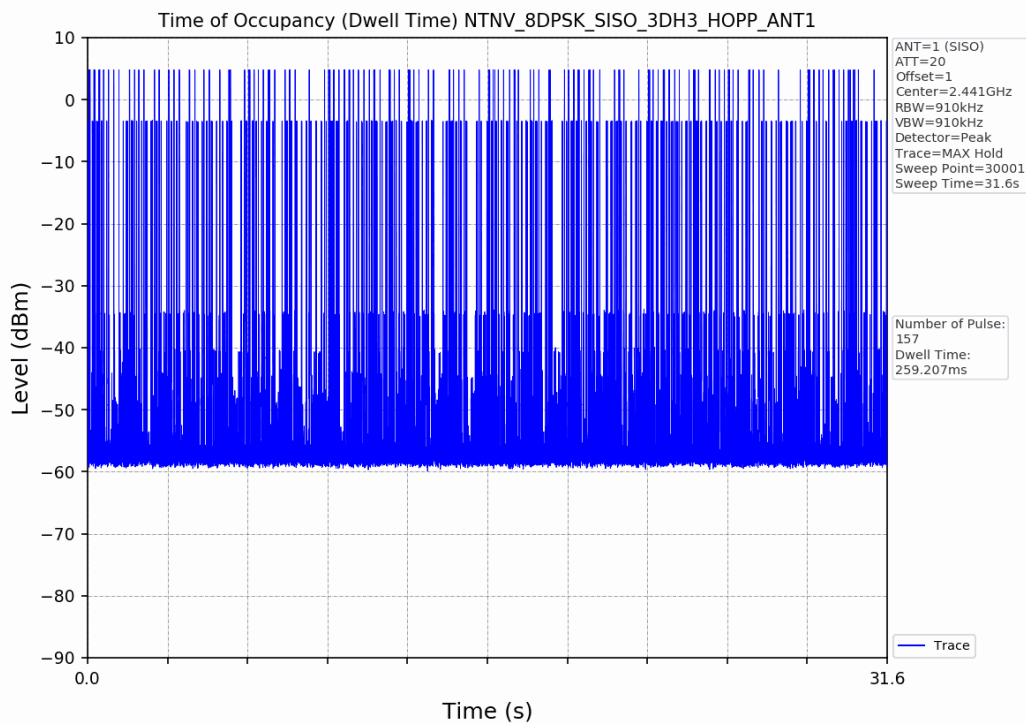


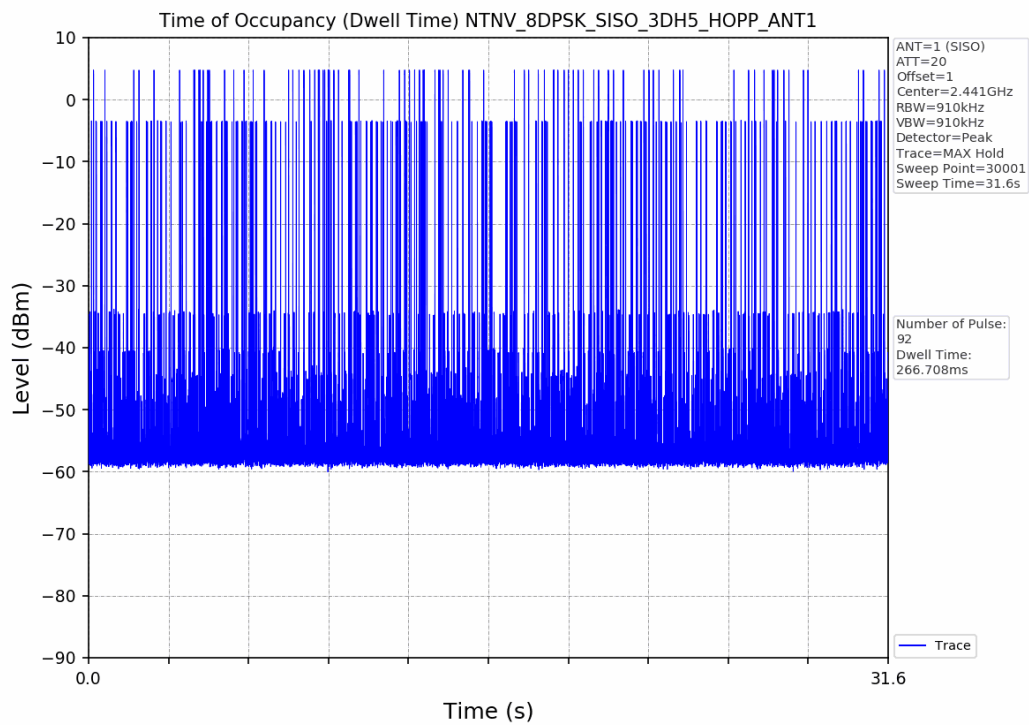










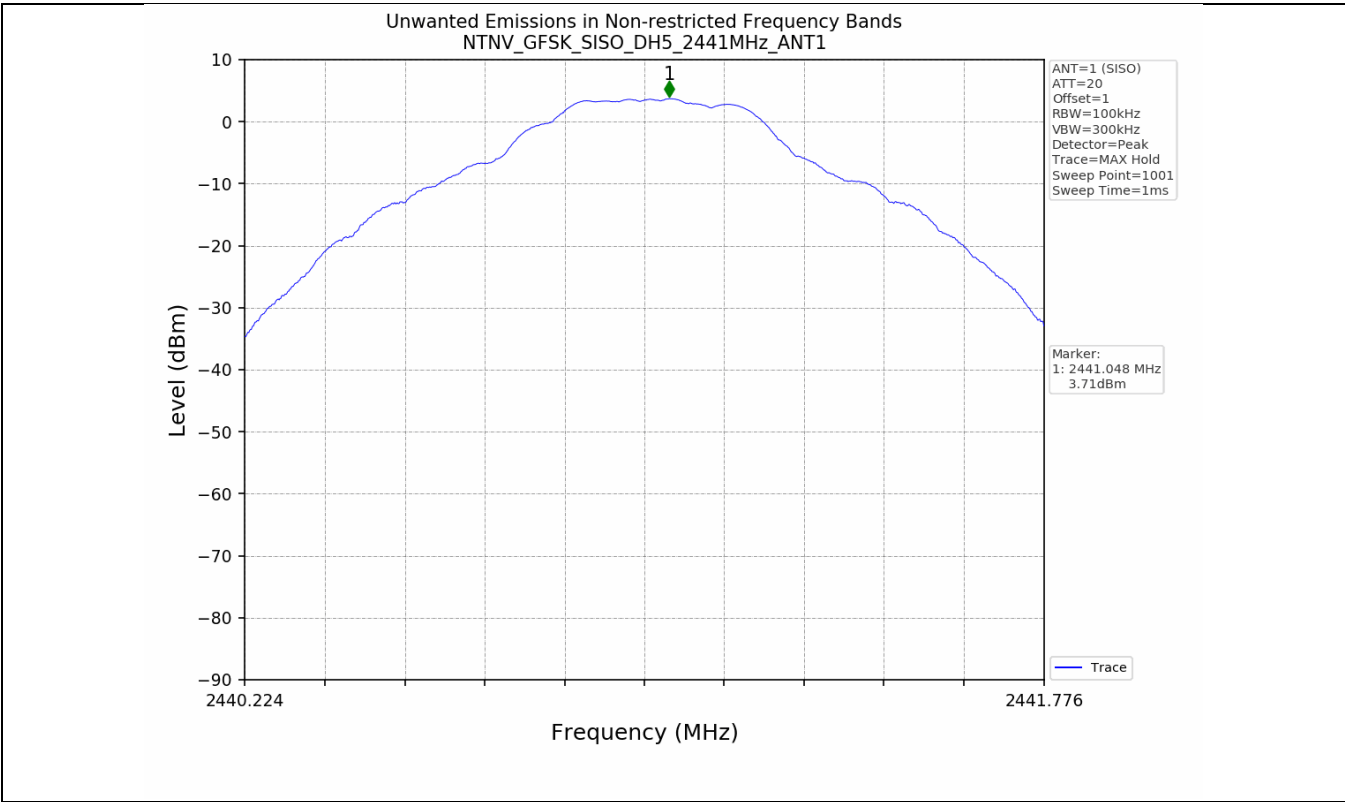


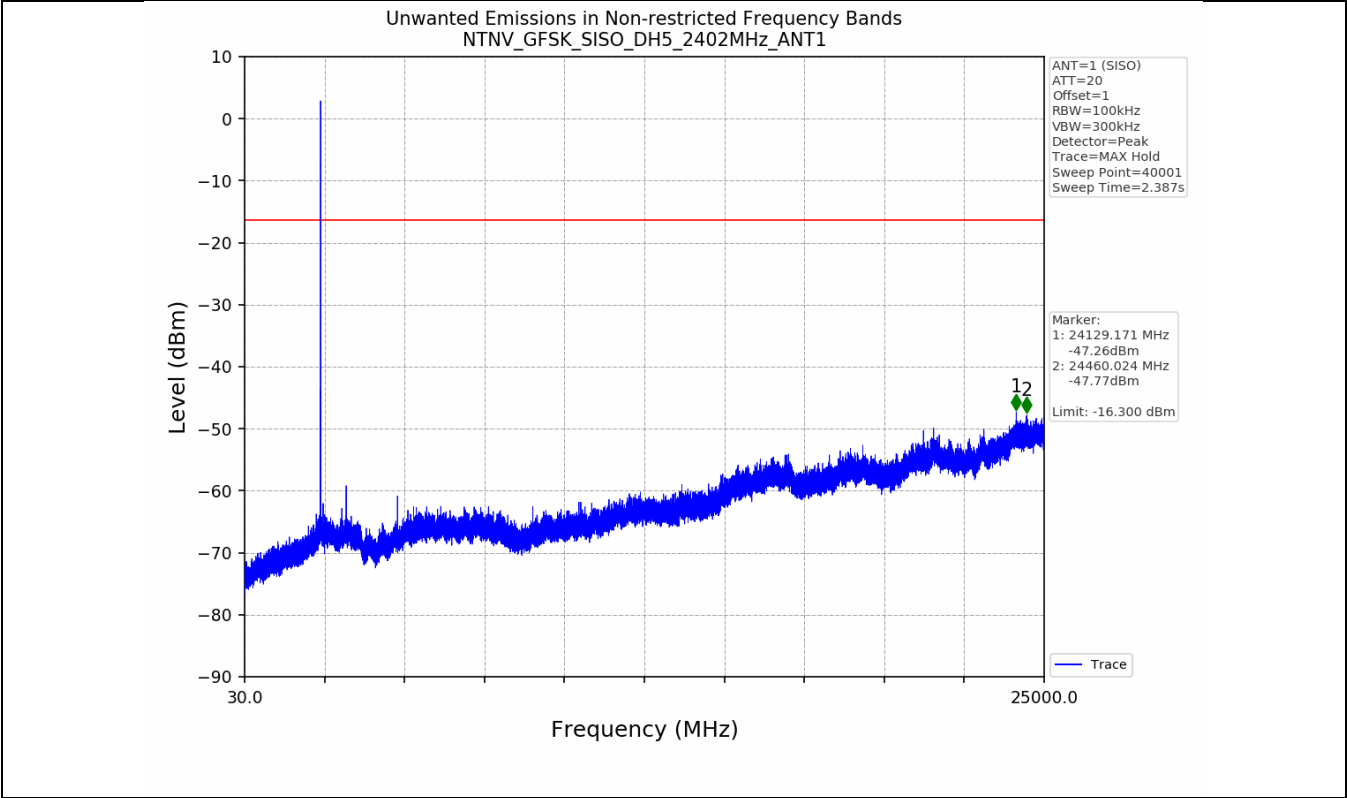
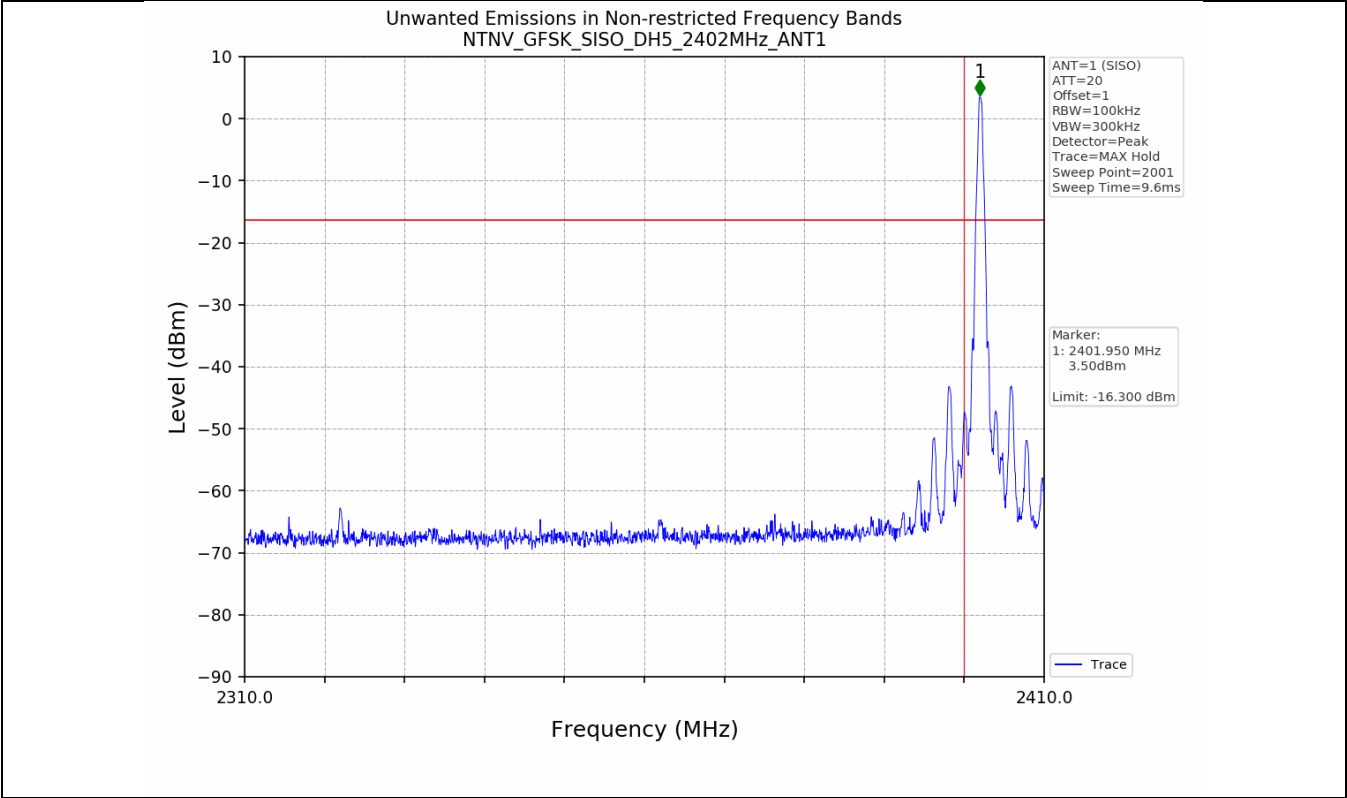
6. Unwanted Emissions in Non-restricted Frequency Bands

6.1 Test Result

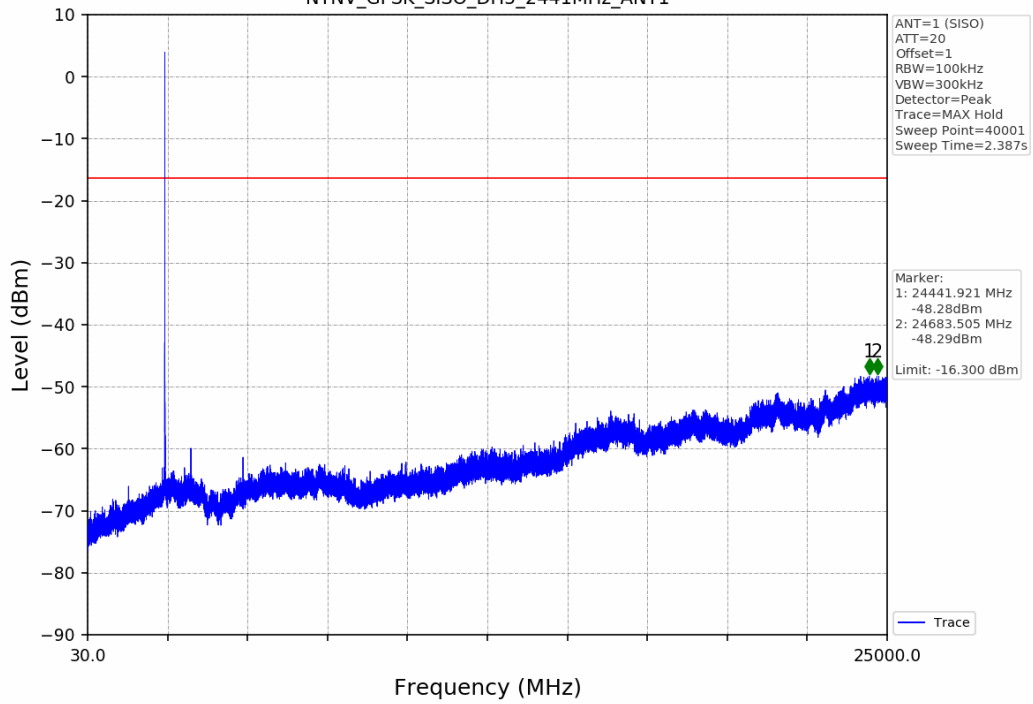
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
GFSK	2402	SISO	1	Refer to test graph	-16.30	PASS
	2441	SISO	1	Refer to test graph	-16.30	PASS
	2480	SISO	1	Refer to test graph	-16.30	PASS
	Hopping	SISO	1	Refer to test graph	-16.30	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	-20.31	PASS
	2441	SISO	1	Refer to test graph	-20.31	PASS
	2480	SISO	1	Refer to test graph	-20.31	PASS
	Hopping	SISO	1	Refer to test graph	-20.31	PASS
8DPSK	2402	SISO	1	Refer to test graph	-19.95	PASS
	2441	SISO	1	Refer to test graph	-19.95	PASS
	2480	SISO	1	Refer to test graph	-19.95	PASS
	Hopping	SISO	1	Refer to test graph	-19.95	PASS

6.2 Test Graph

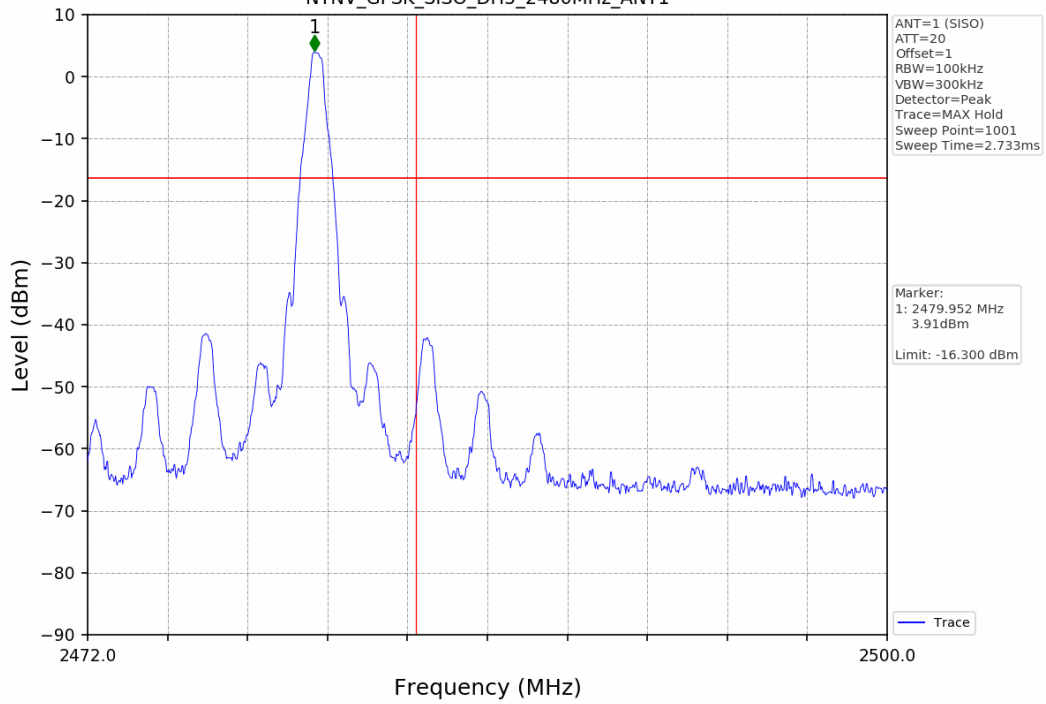




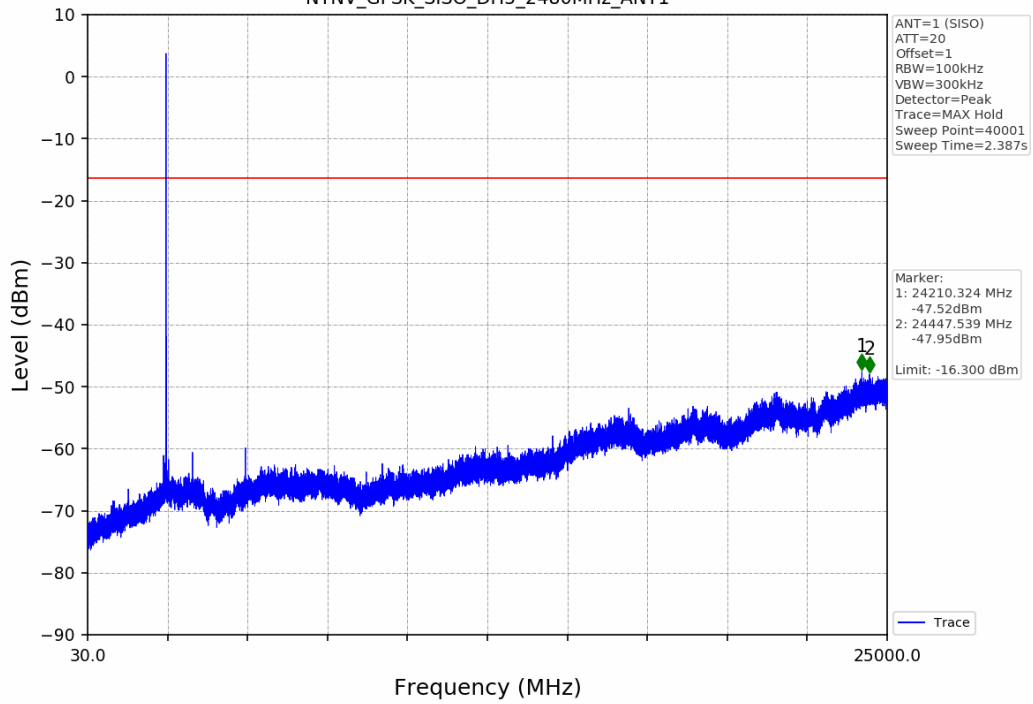
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_GFSK_SISO_DH5_2441MHz_ANT1



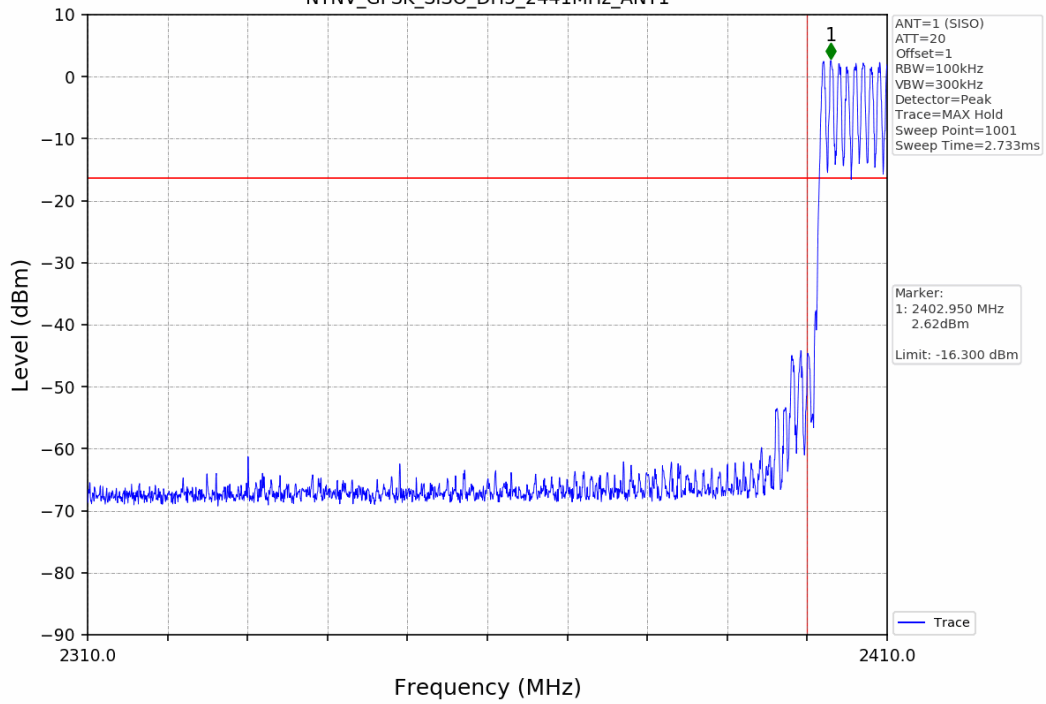
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_GFSK_SISO_DH5_2480MHz_ANT1

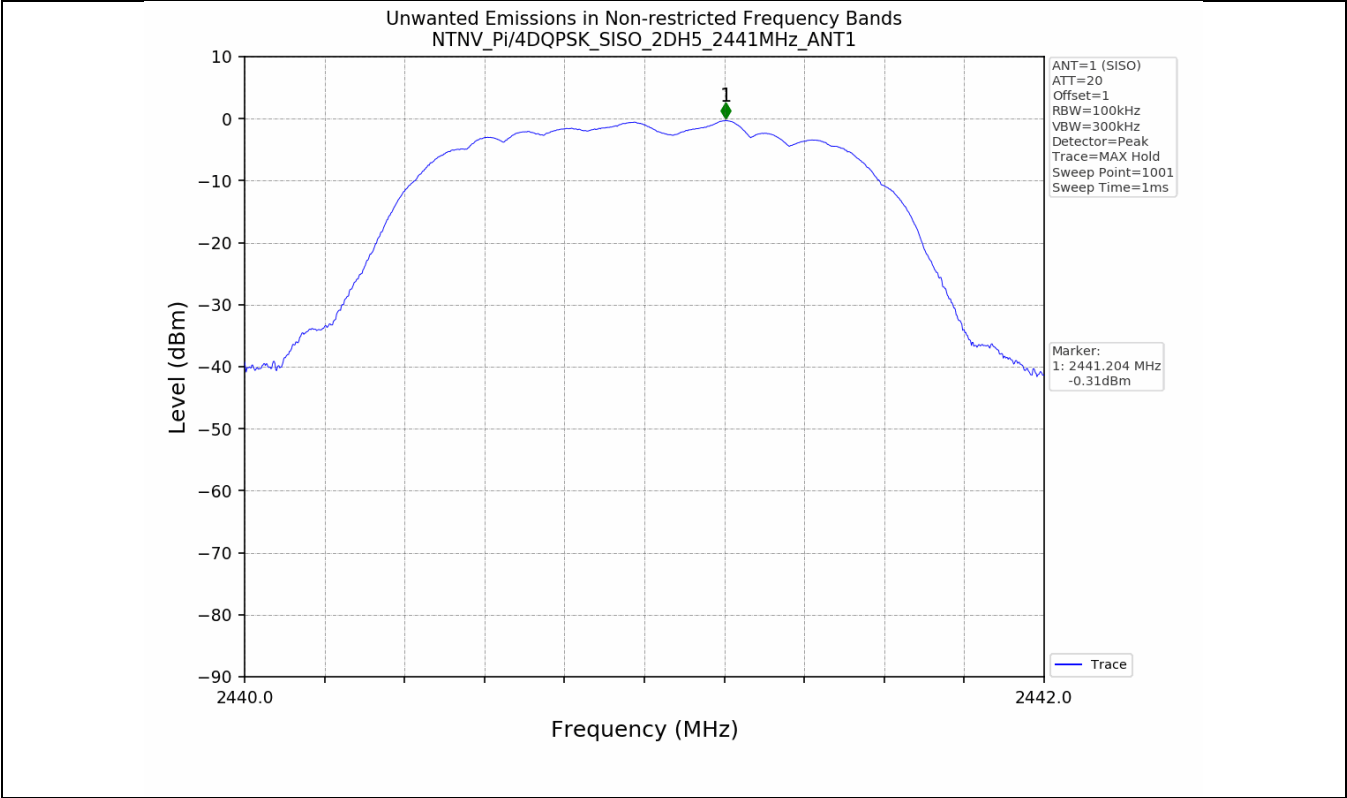
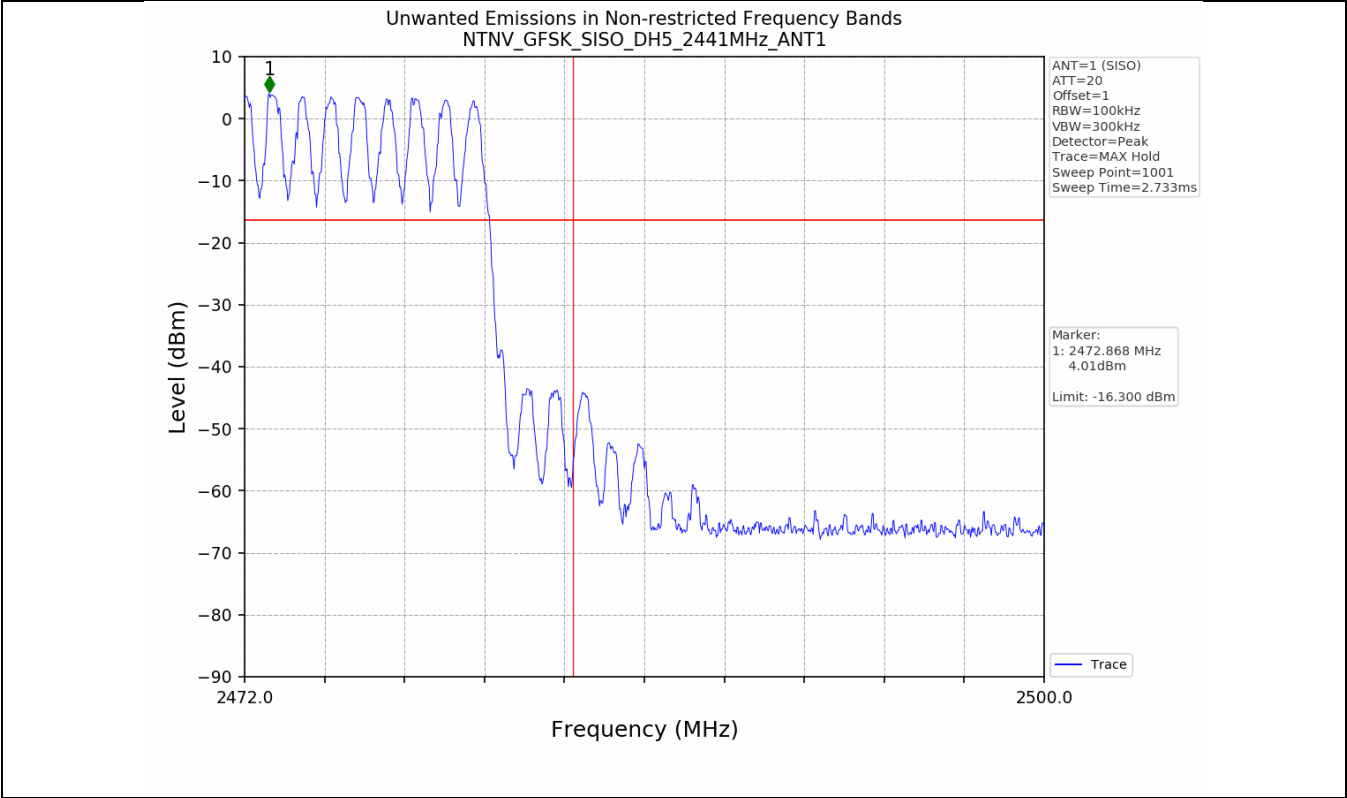


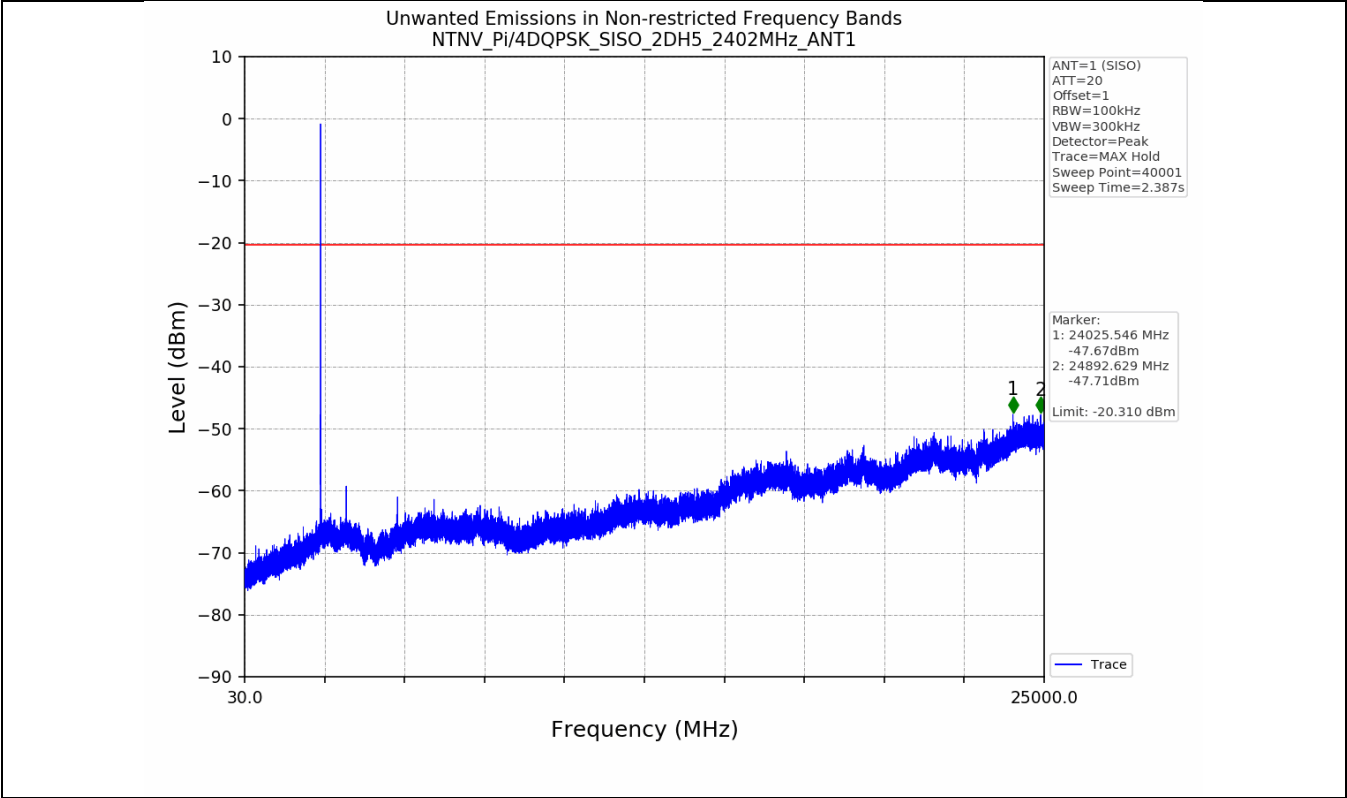
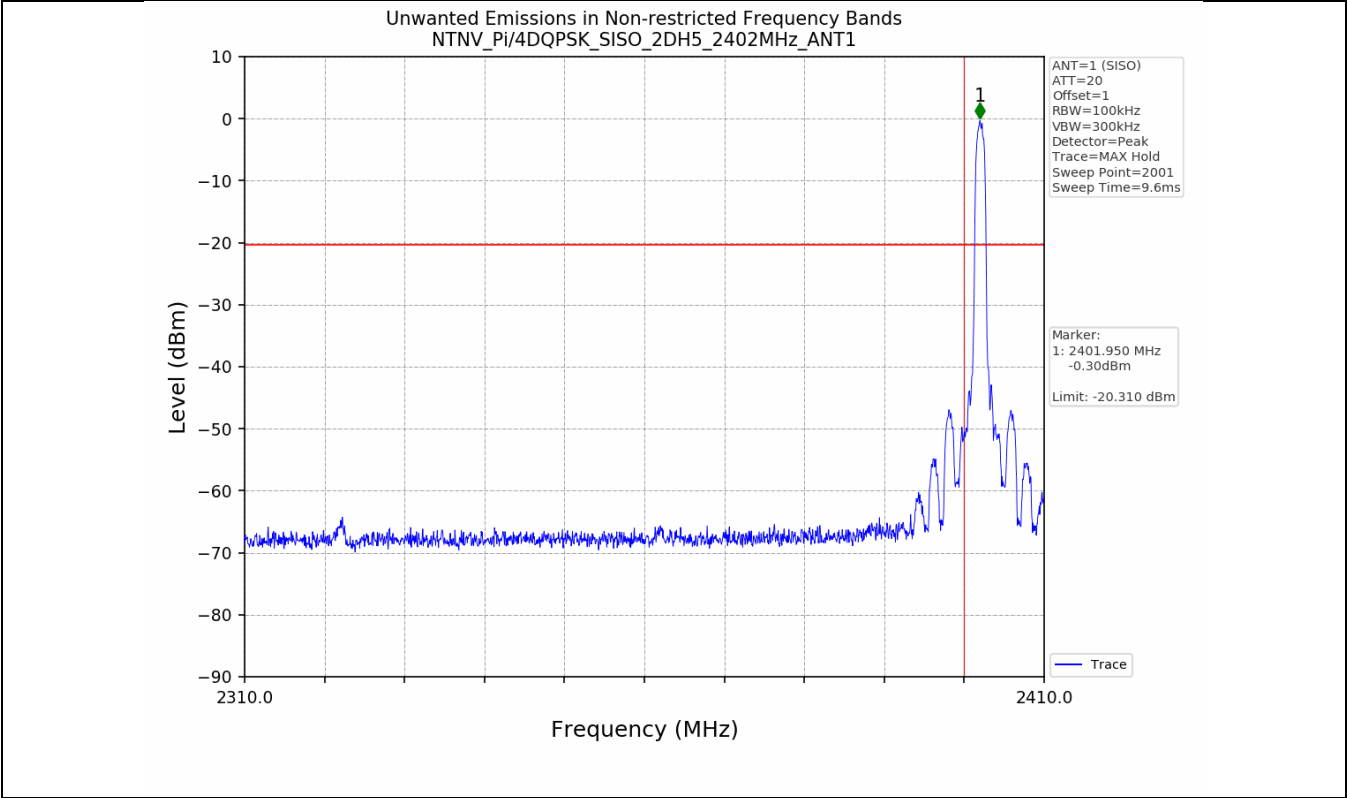
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_GFSK_SISO_DH5_2480MHz_ANT1



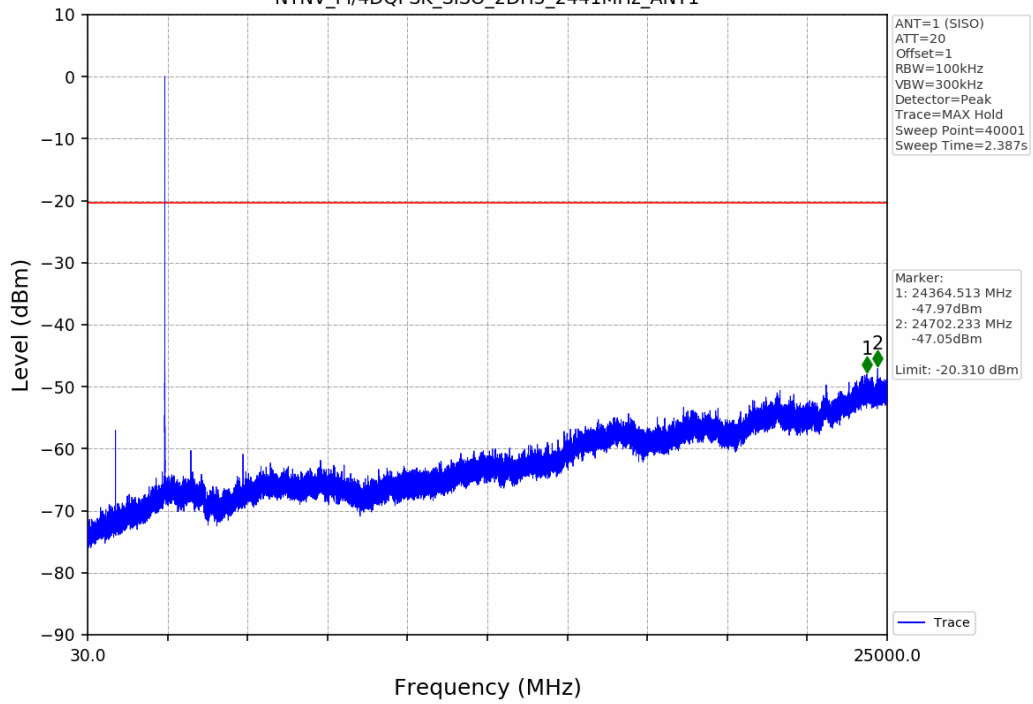
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_GFSK_SISO_DH5_2441MHz_ANT1



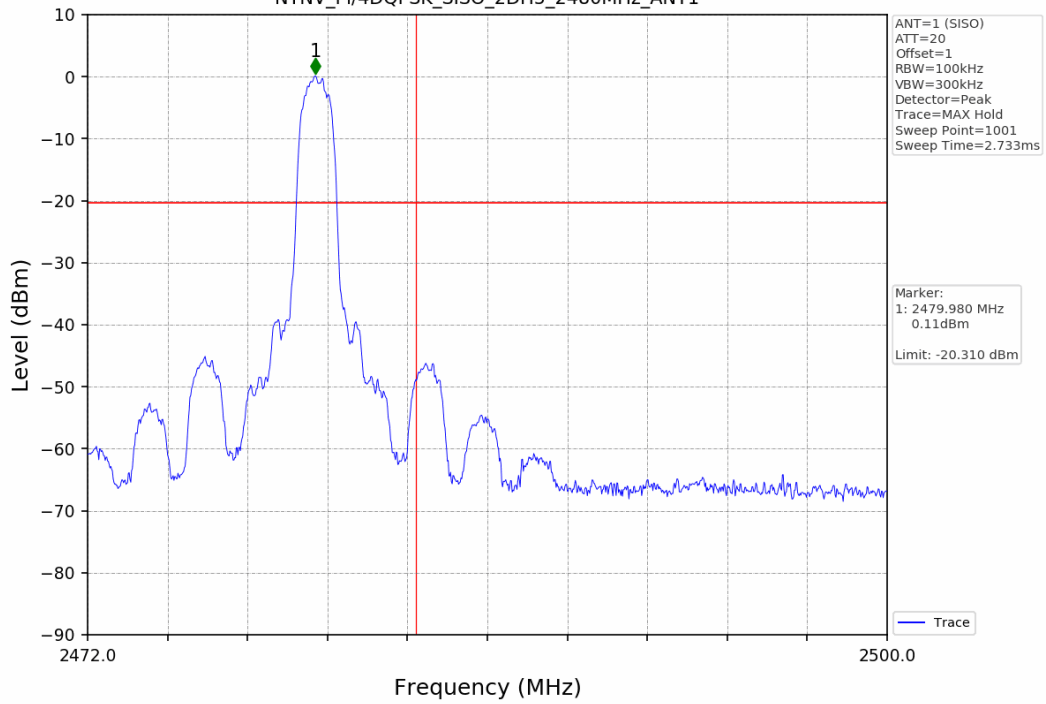




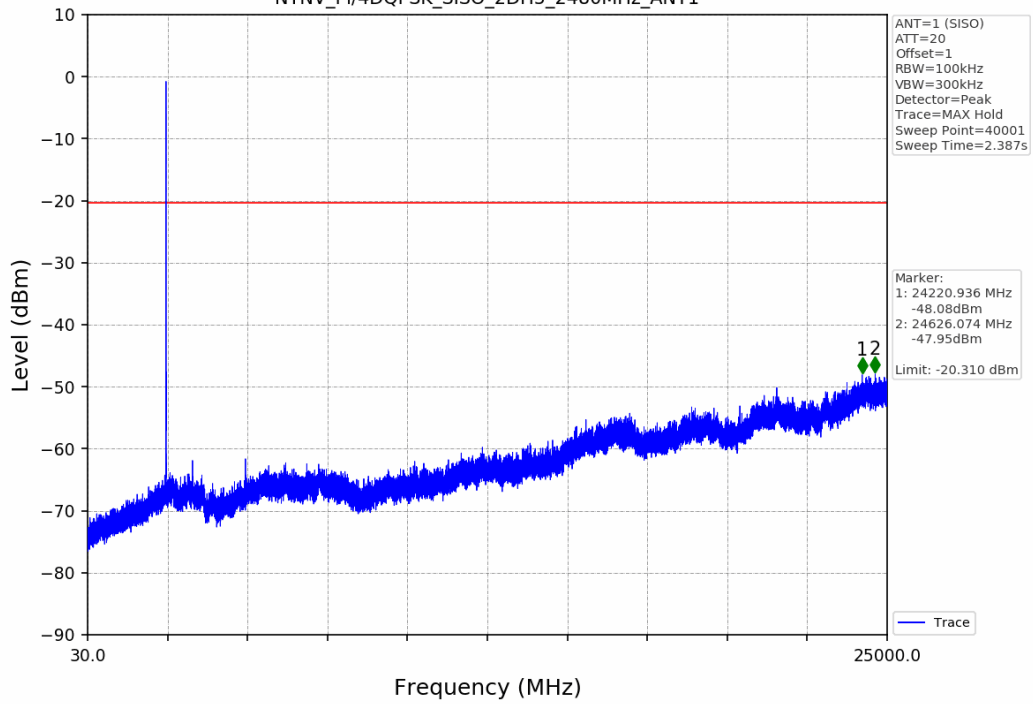
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_Pi/4DQPSK_SISO_2DH5_2441MHz_ANT1



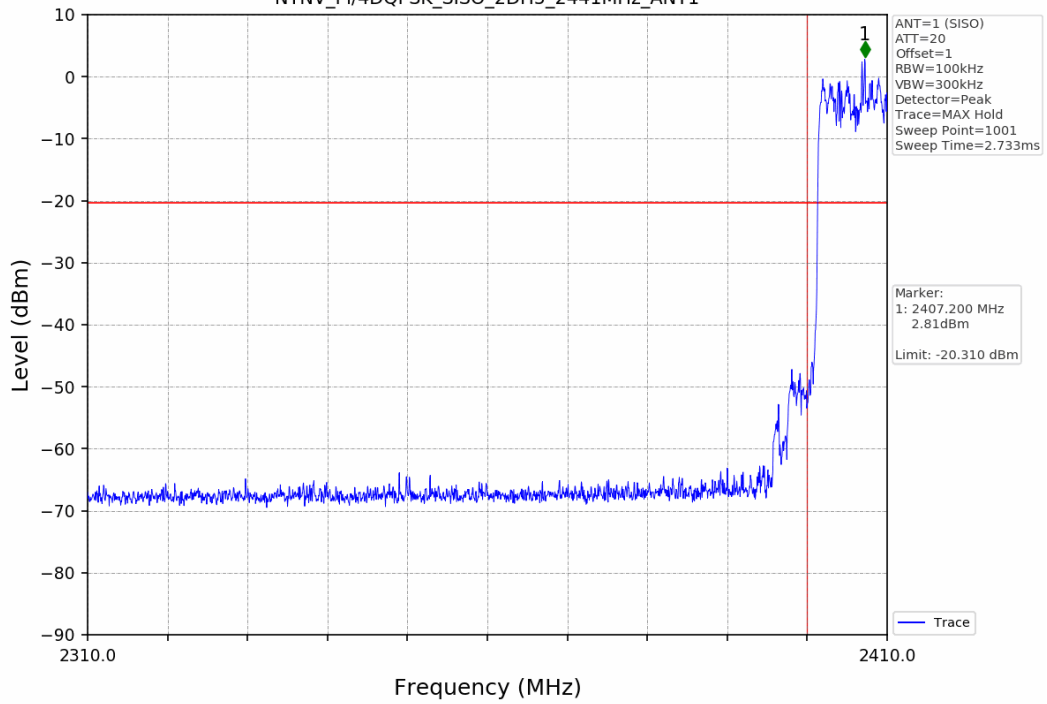
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_Pi/4DQPSK_SISO_2DH5_2480MHz_ANT1

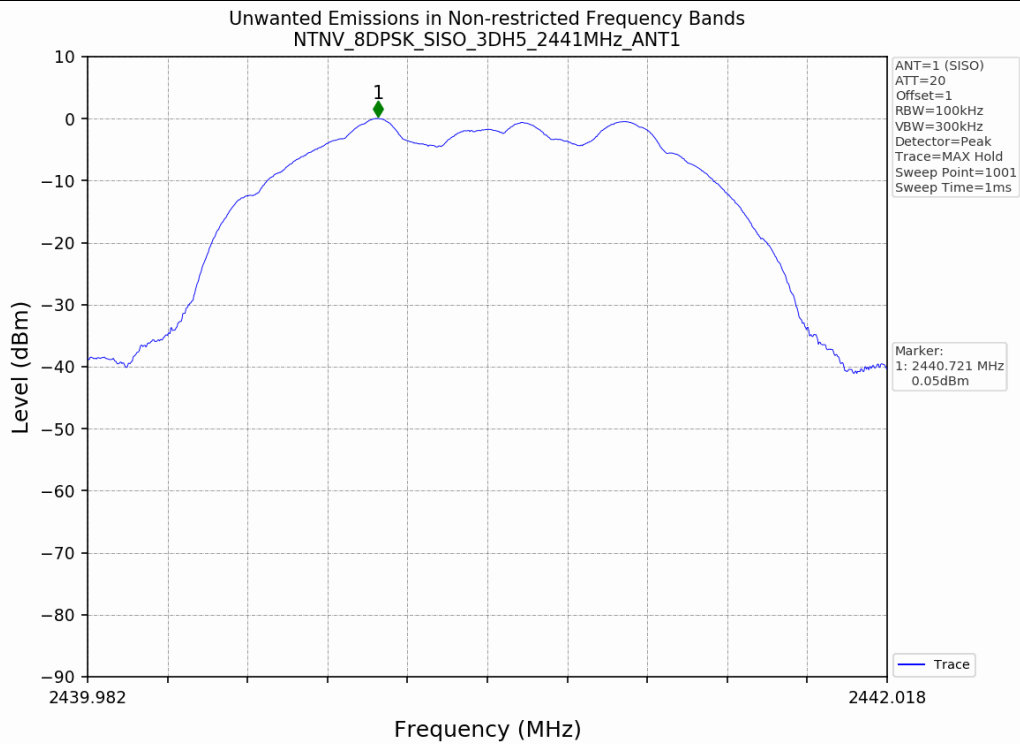
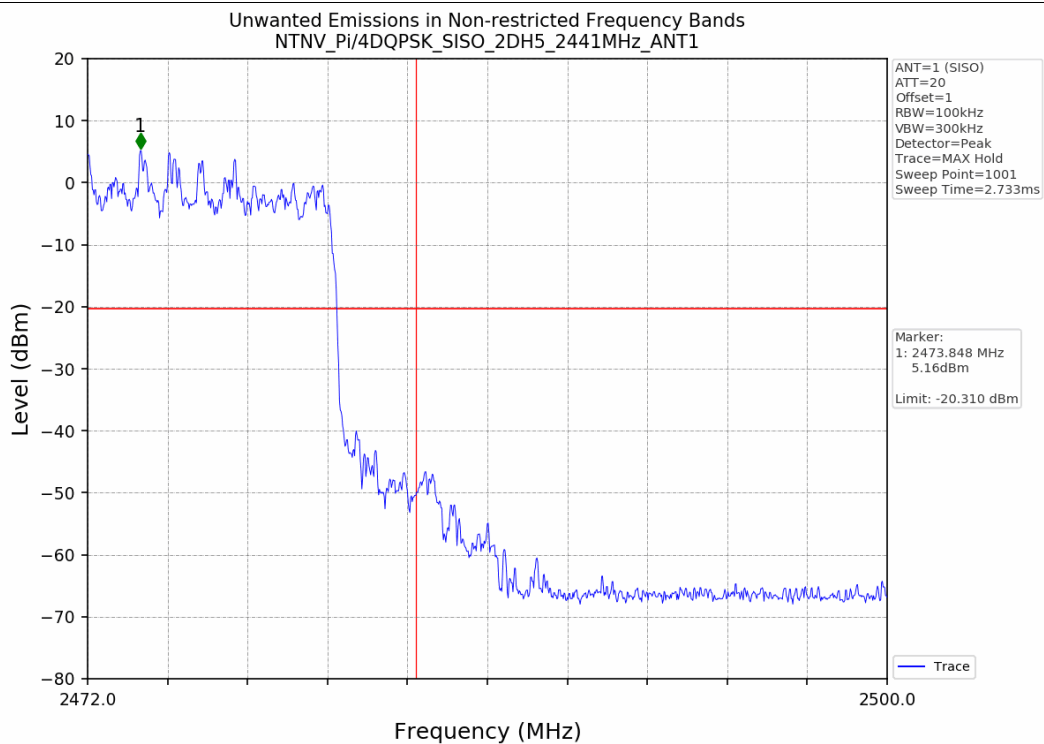


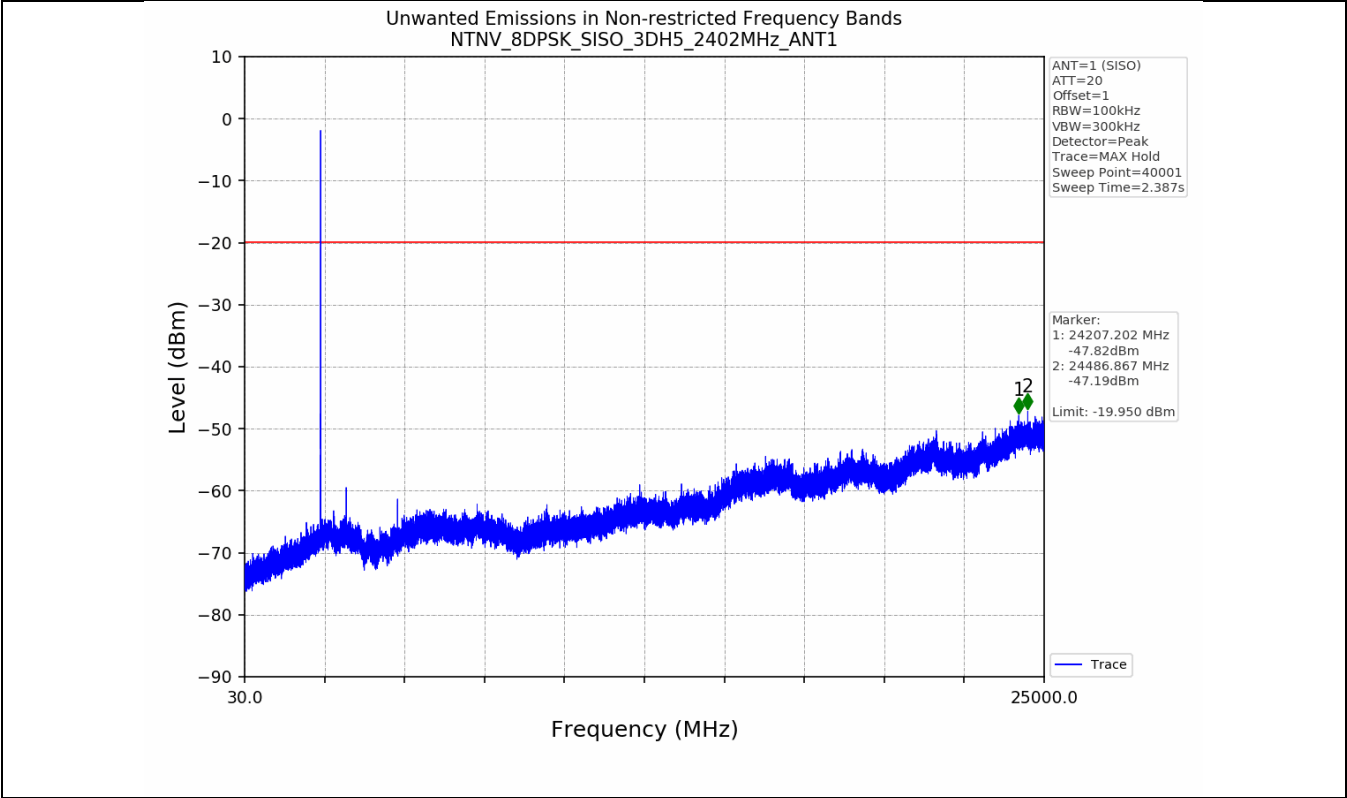
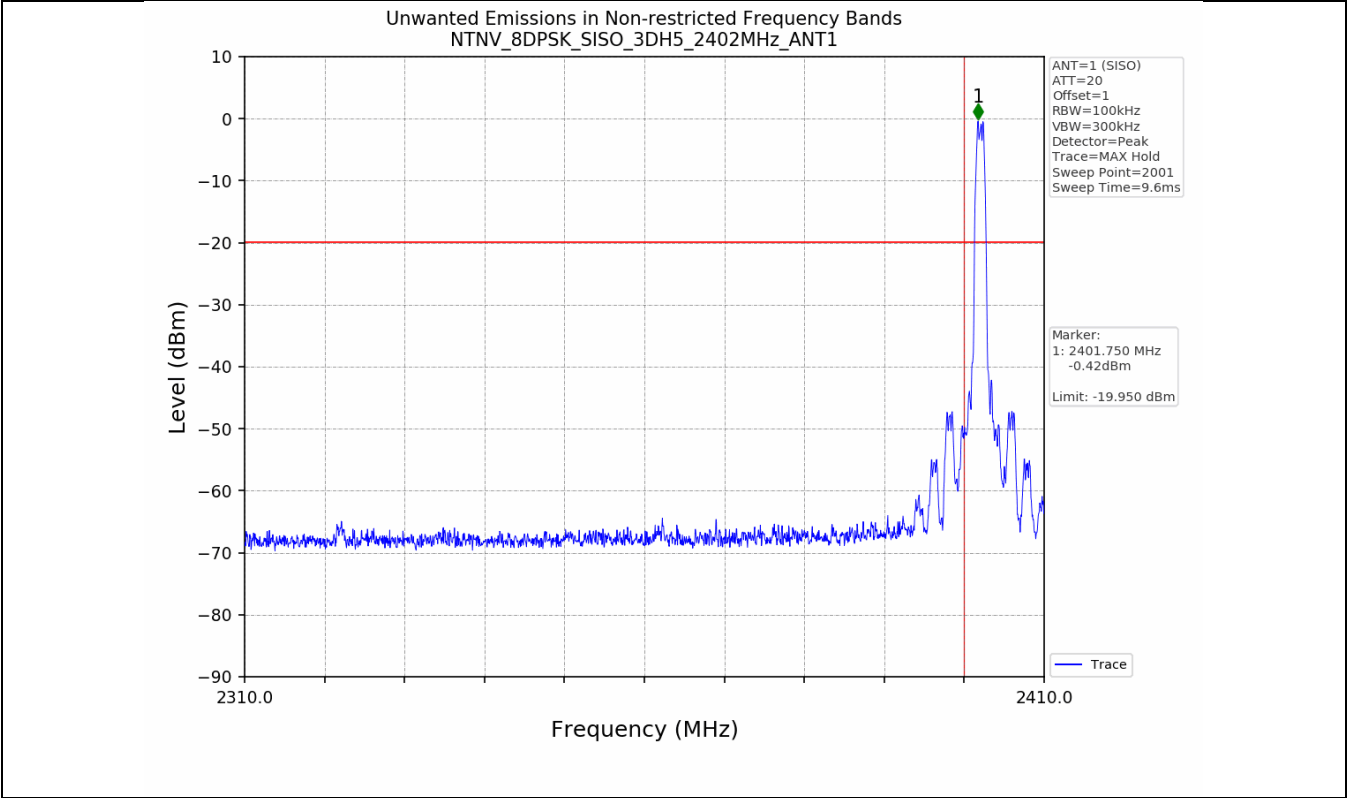
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_Pi/4DQPSK_SISO_2DH5_2480MHz_ANT1

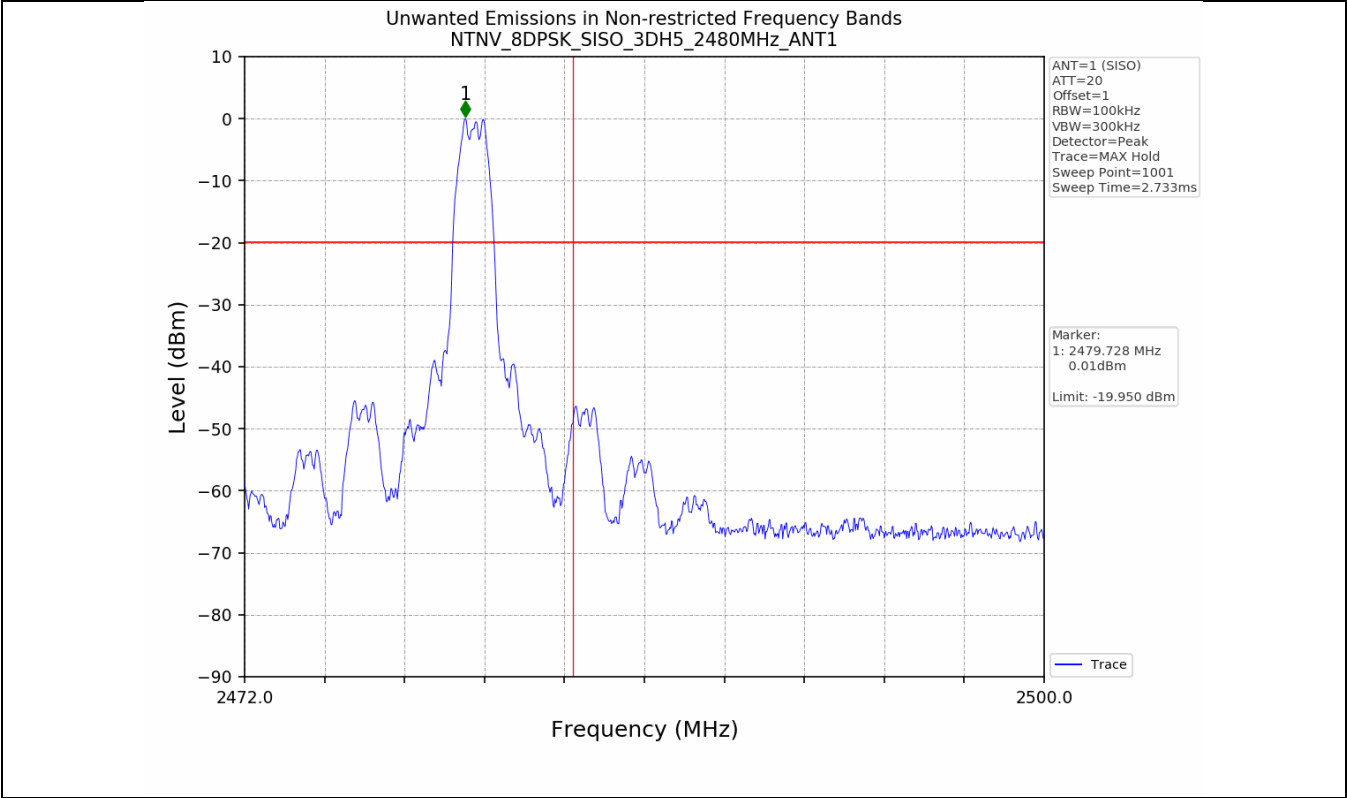
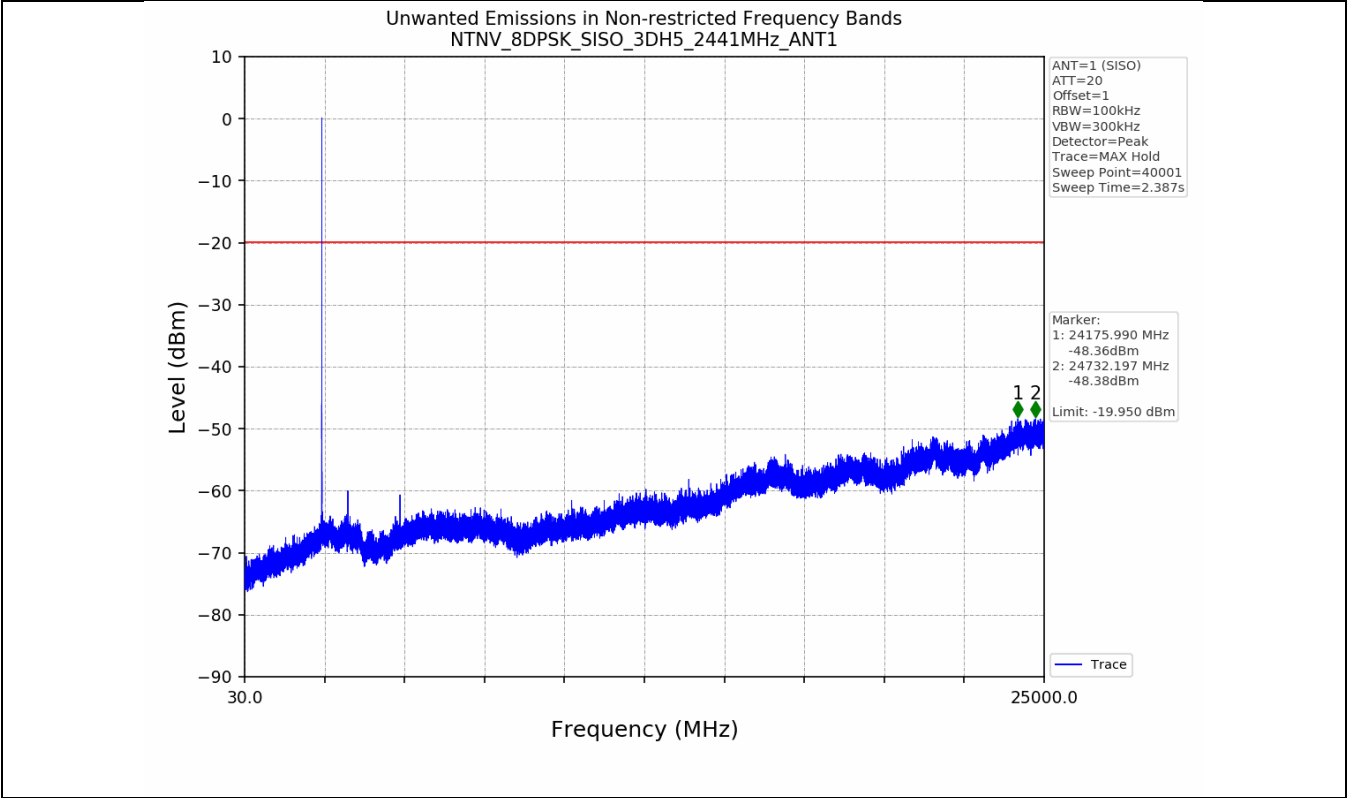


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_Pi/4DQPSK_SISO_2DH5_2441MHz_ANT1

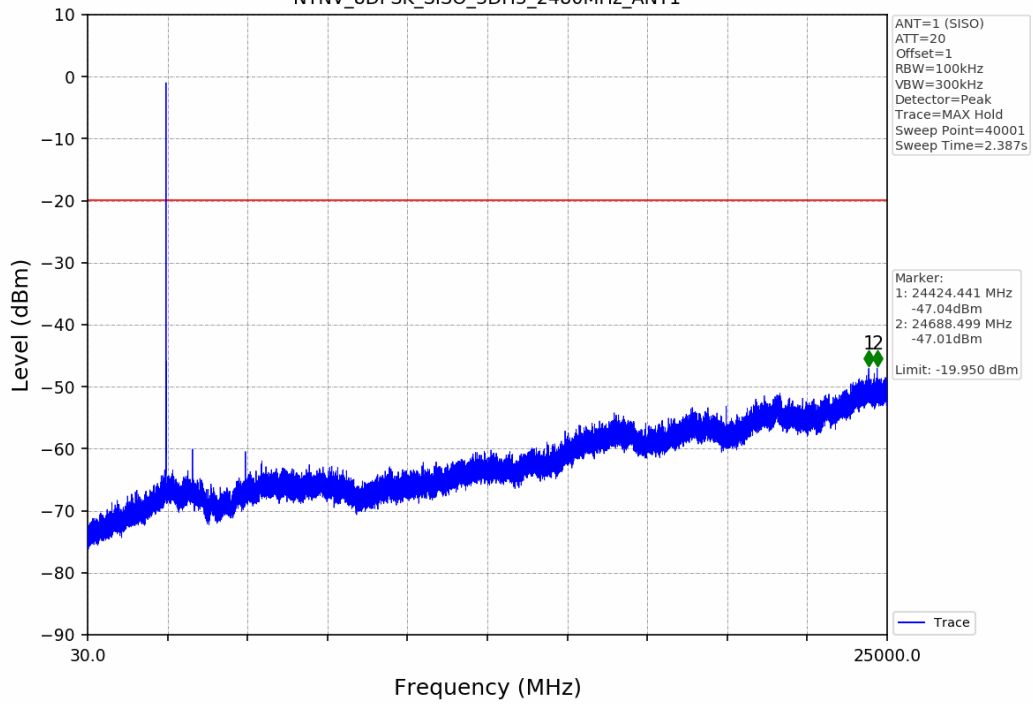




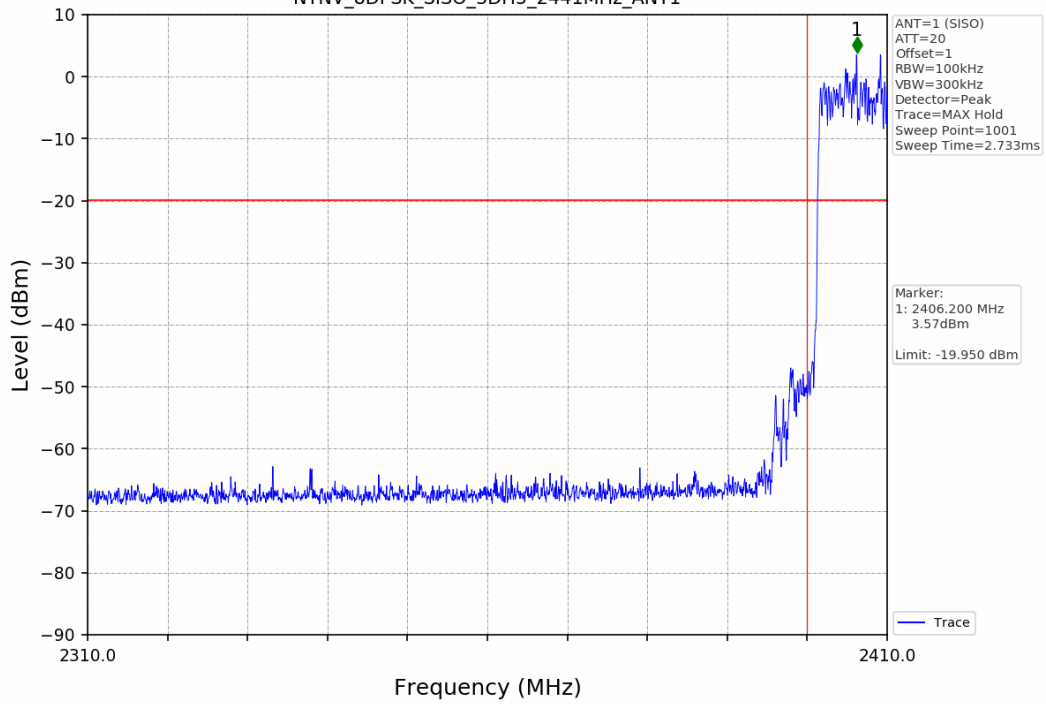




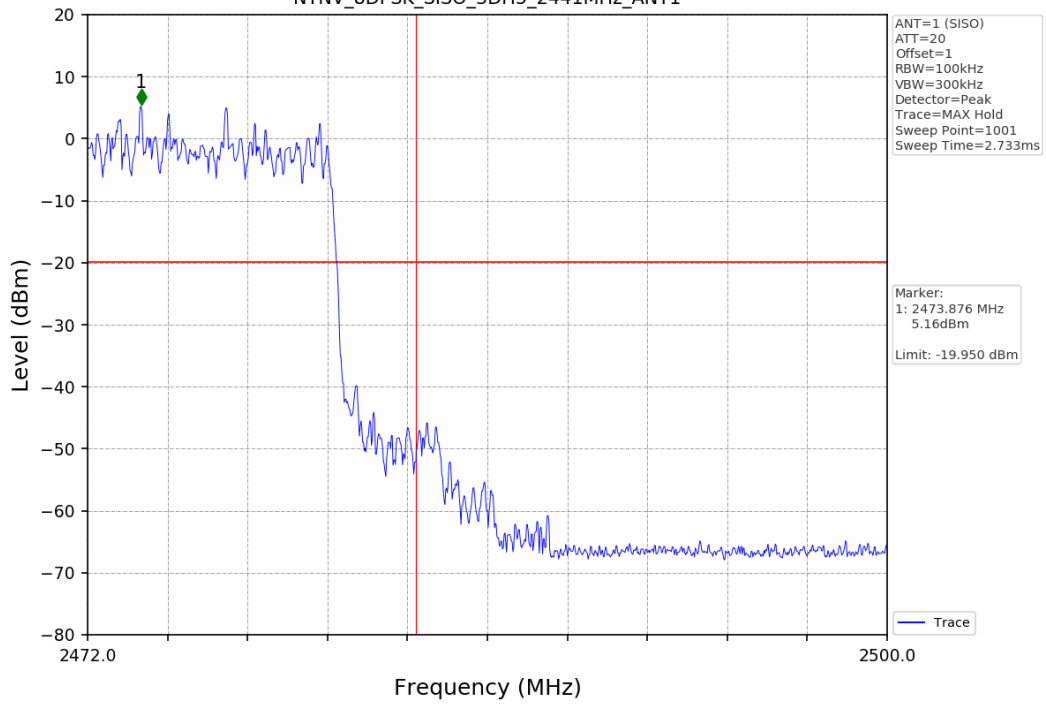
Unwanted Emissions in Non-restricted Frequency Bands
NTNV_8DPSK_SISO_3DH5_2480MHz_ANT1



Unwanted Emissions in Non-restricted Frequency Bands
NTNV_8DPSK_SISO_3DH5_2441MHz_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	2402.02	2400-2483.5	PASS
	2441	SISO	1	2441.02	2400-2483.5	PASS
	2480	SISO	1	2480.01	2400-2483.5	PASS
Pi/4DQPSK	2402	SISO	1	2402.00	2400-2483.5	PASS
	2441	SISO	1	2441.00	2400-2483.5	PASS
	2480	SISO	1	2480.00	2400-2483.5	PASS

7.2 Test Graph

