

Appendix for 15.247

Product Name: smart watch

Test Model: i13

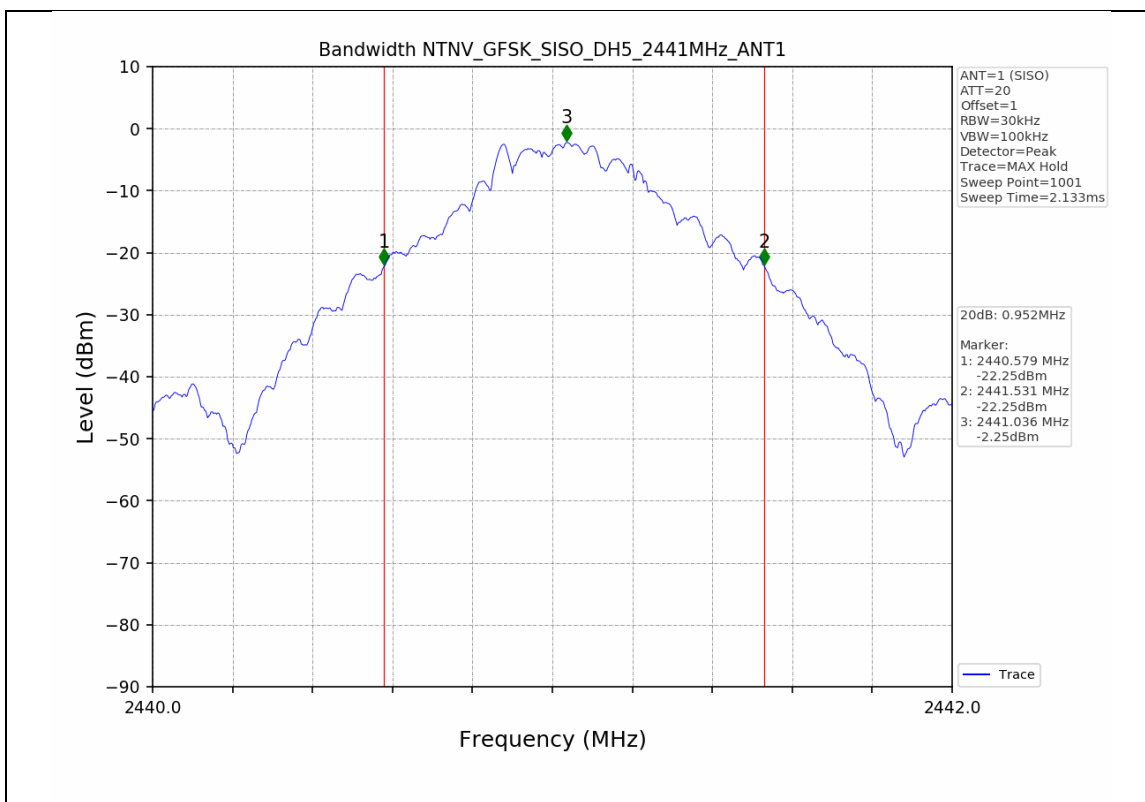
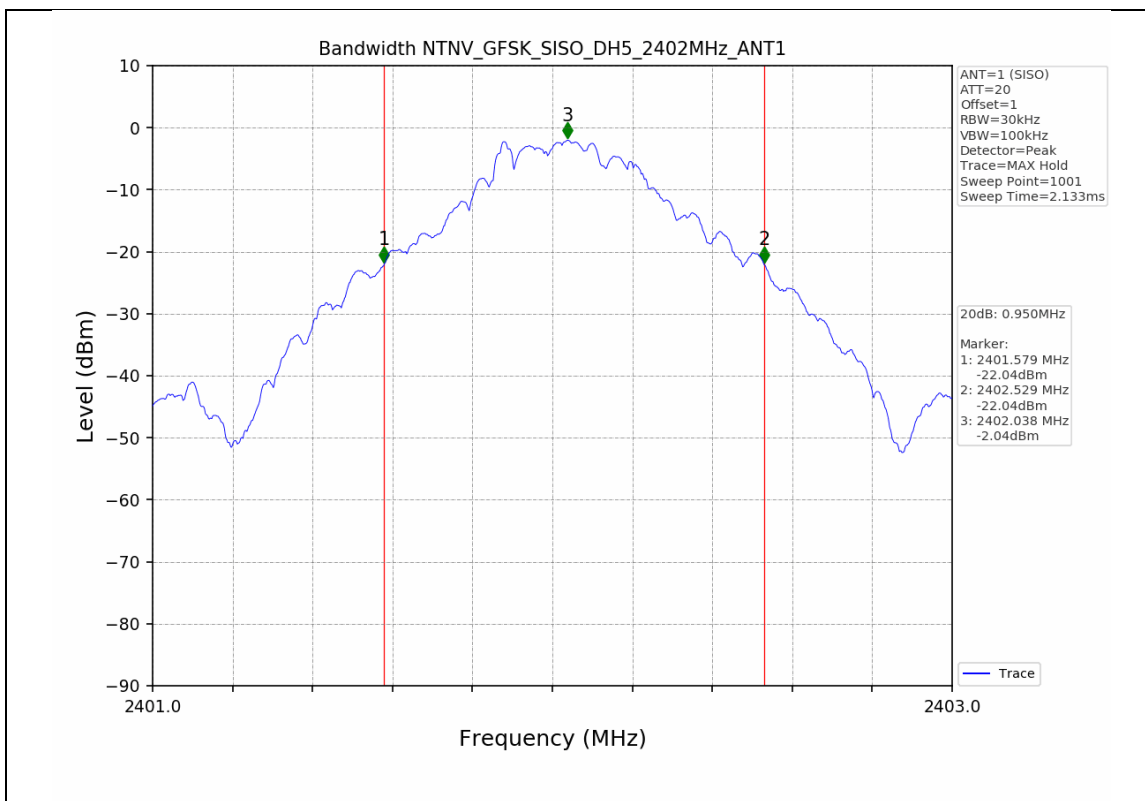
1. Bandwidth

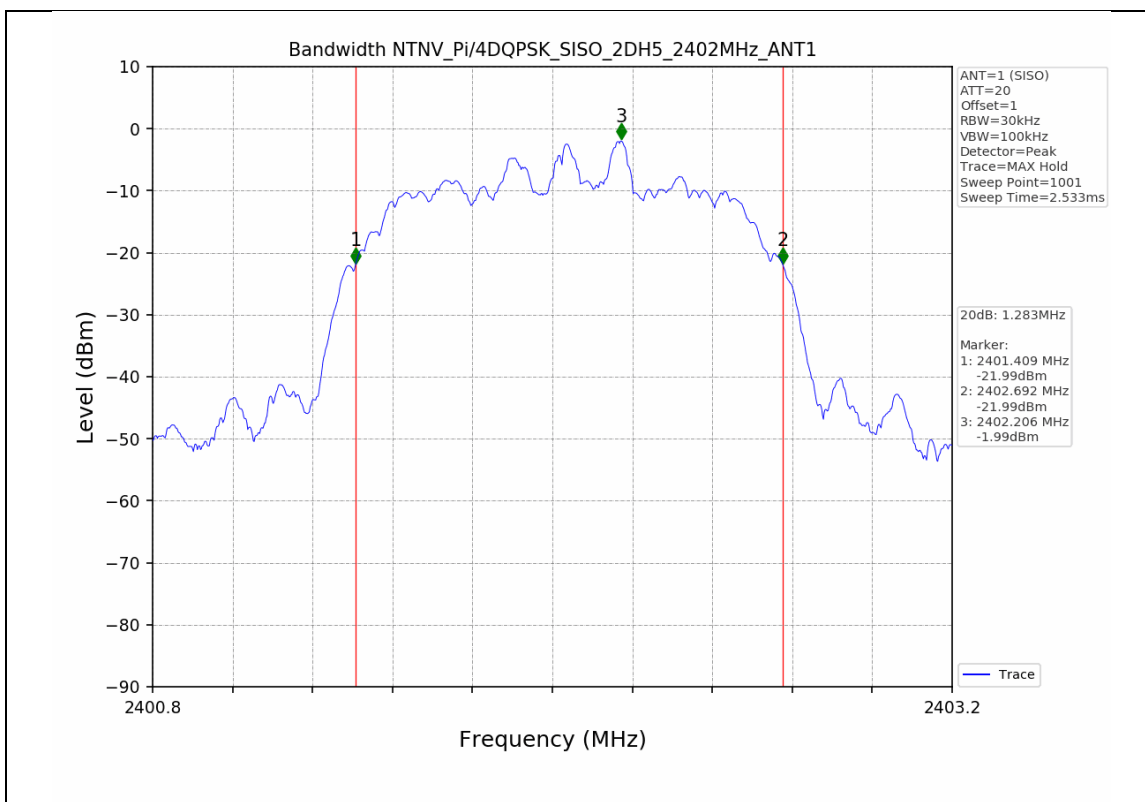
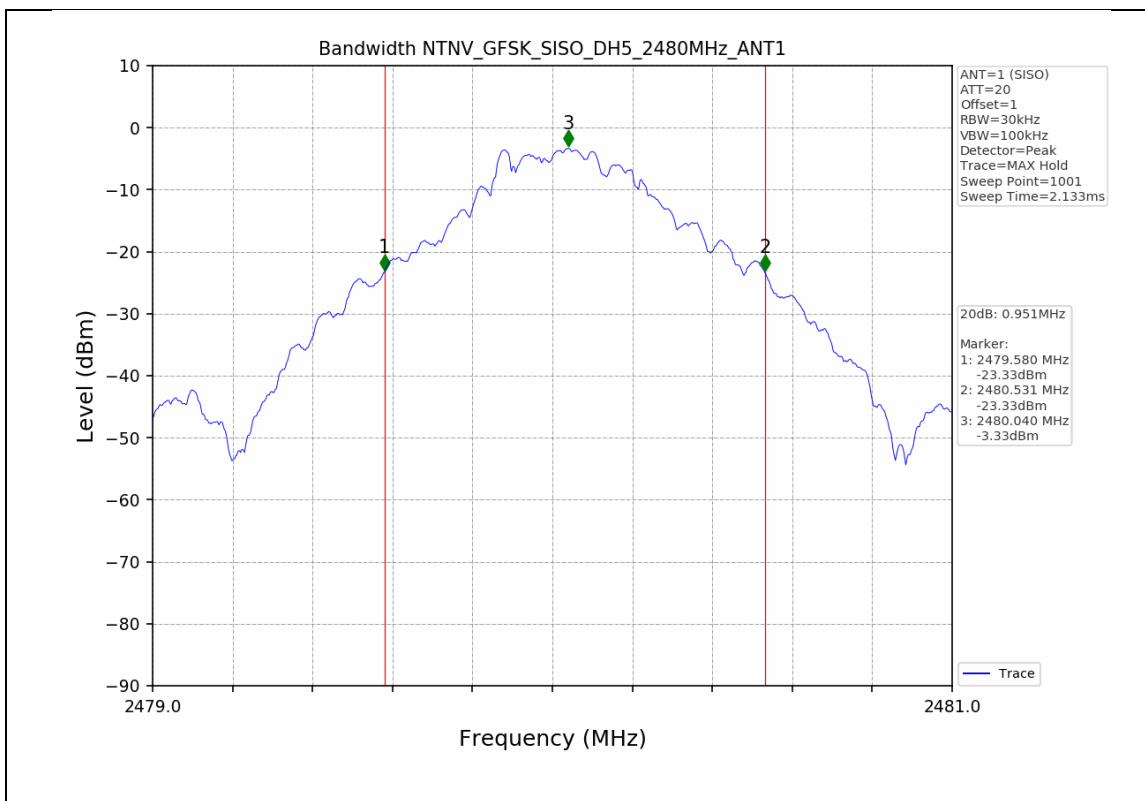
1.1 Test Result

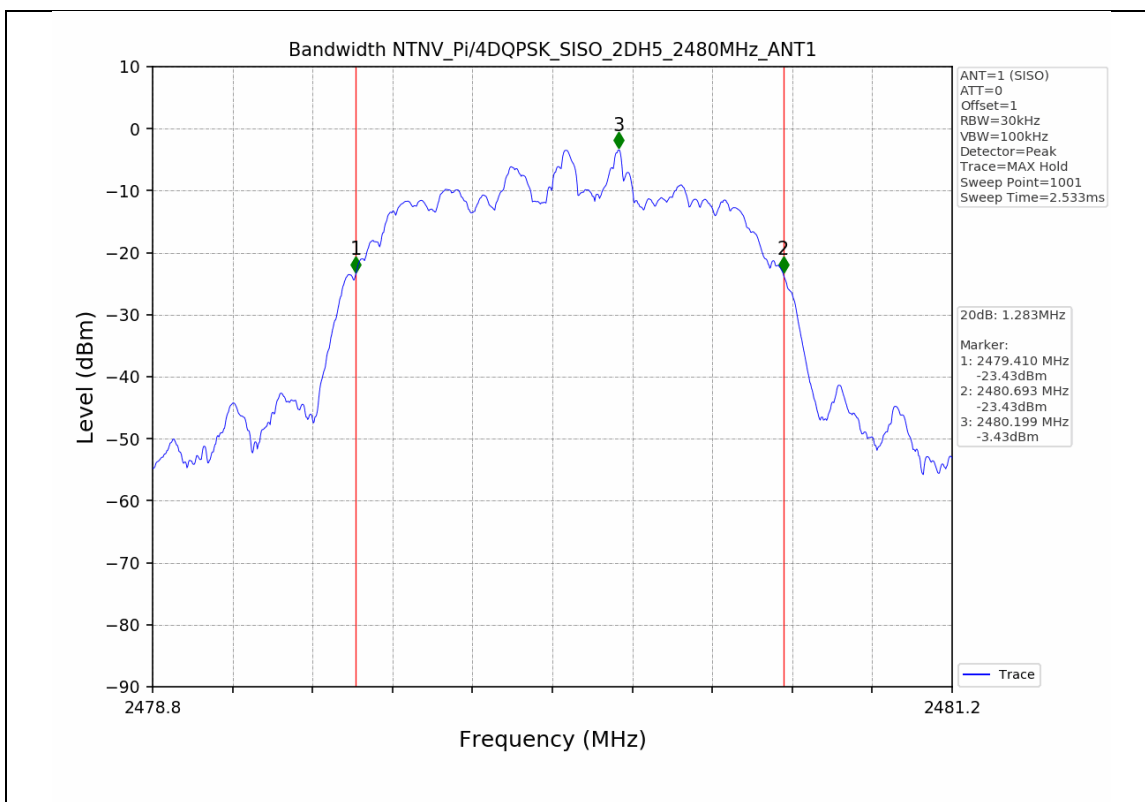
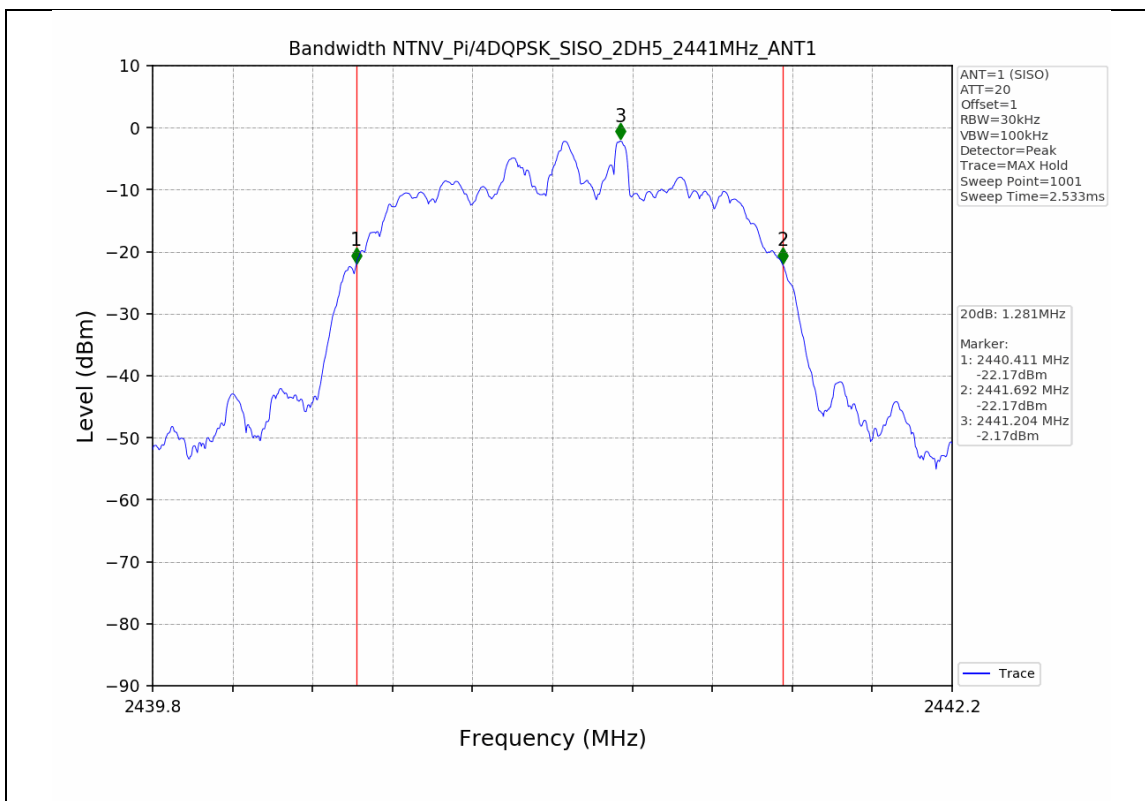
Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	0.950	PASS
	2441	SISO	1	0.952	PASS
	2480	SISO	1	0.951	PASS
Pi/4DQPSK	2402	SISO	1	1.283	PASS
	2441	SISO	1	1.281	PASS
	2480	SISO	1	1.283	PASS
8DPSK	2402	SISO	1	1.298	PASS
	2441	SISO	1	1.298	PASS
	2480	SISO	1	1.299	PASS

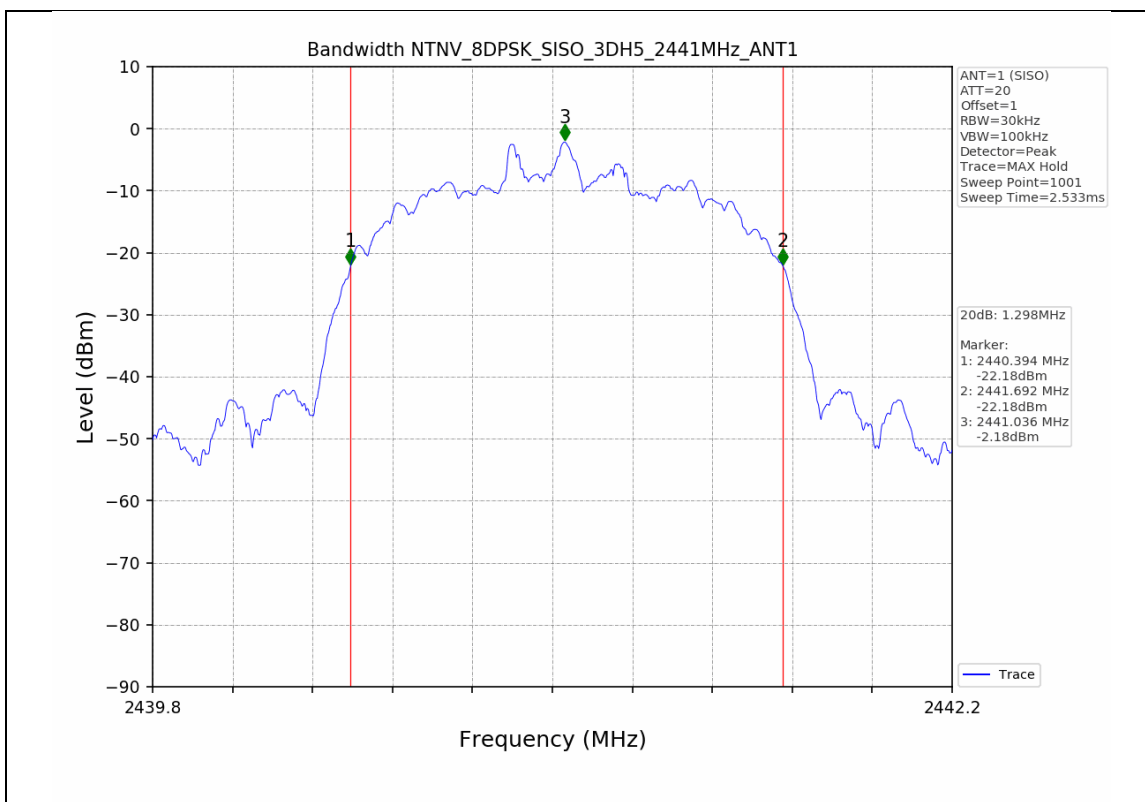
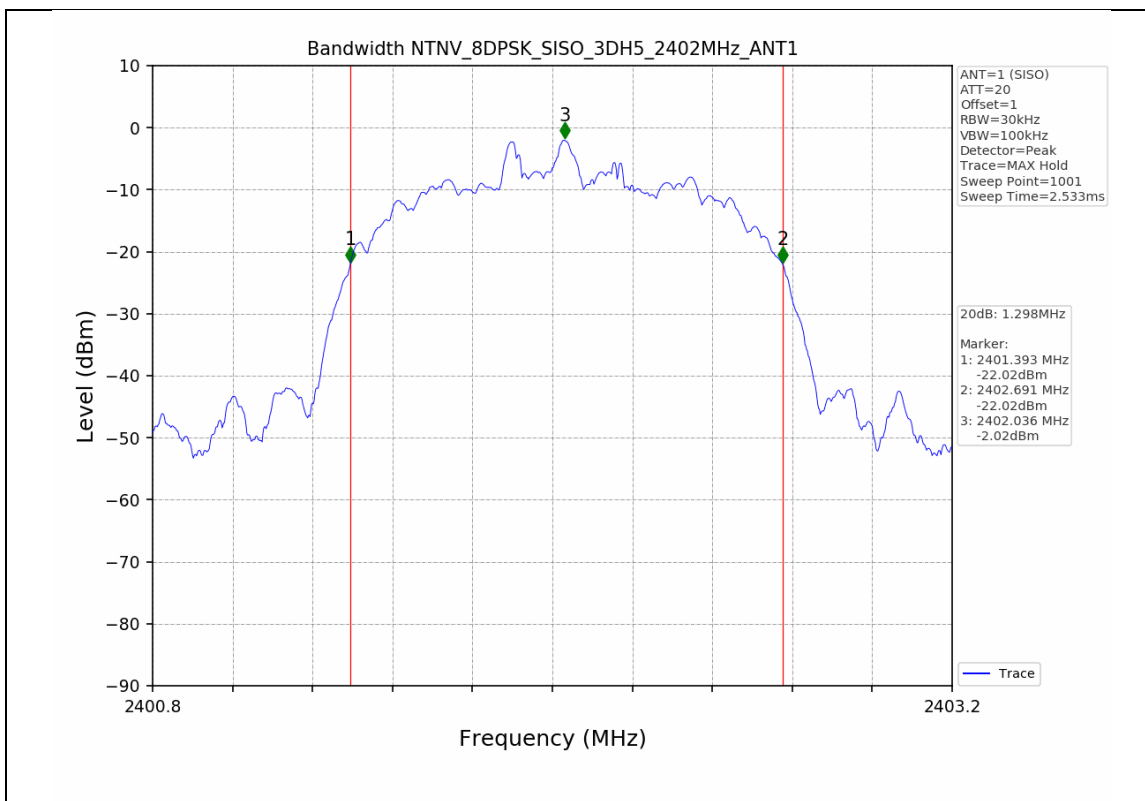
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
GFSK	2402	SISO	1	0.851	Only for Report Use
	2441	SISO	1	0.851	Only for Report Use
	2480	SISO	1	0.849	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.170	Only for Report Use
	2441	SISO	1	1.168	Only for Report Use
	2480	SISO	1	1.170	Only for Report Use
8DPSK	2402	SISO	1	1.180	Only for Report Use
	2441	SISO	1	1.183	Only for Report Use
	2480	SISO	1	1.179	Only for Report Use

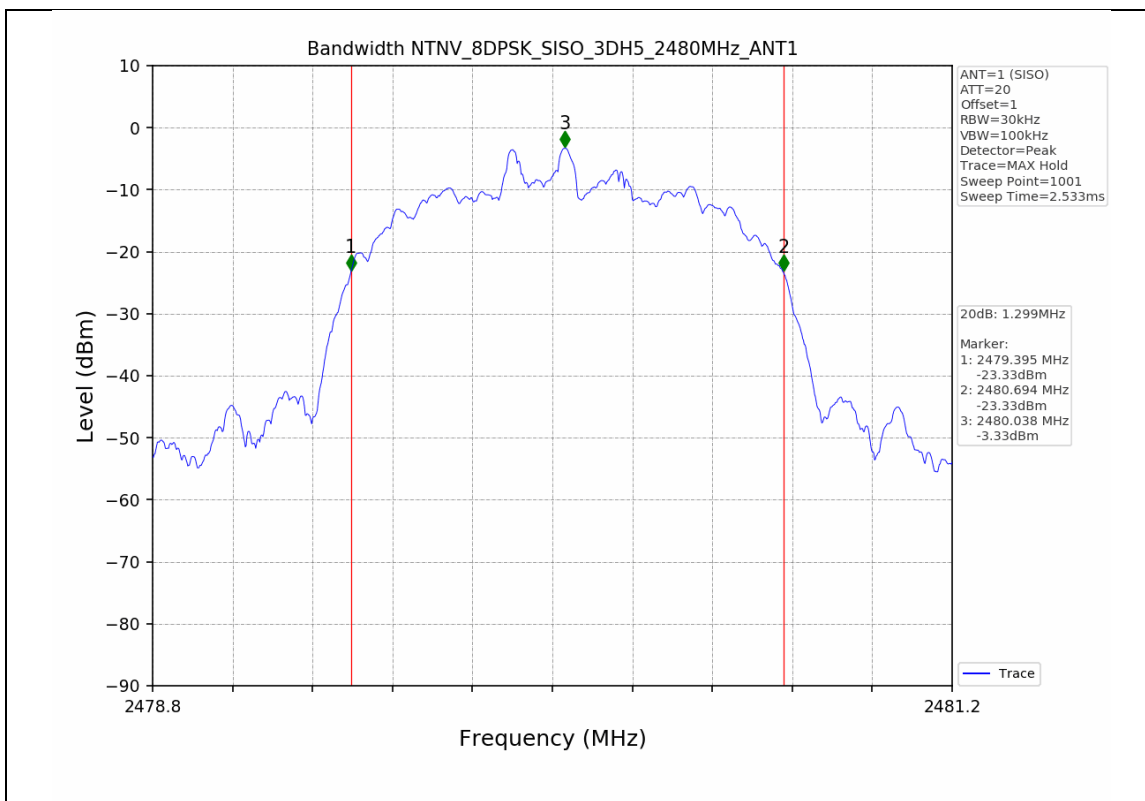
1.2 Test Graph - 20dB Bandwidth



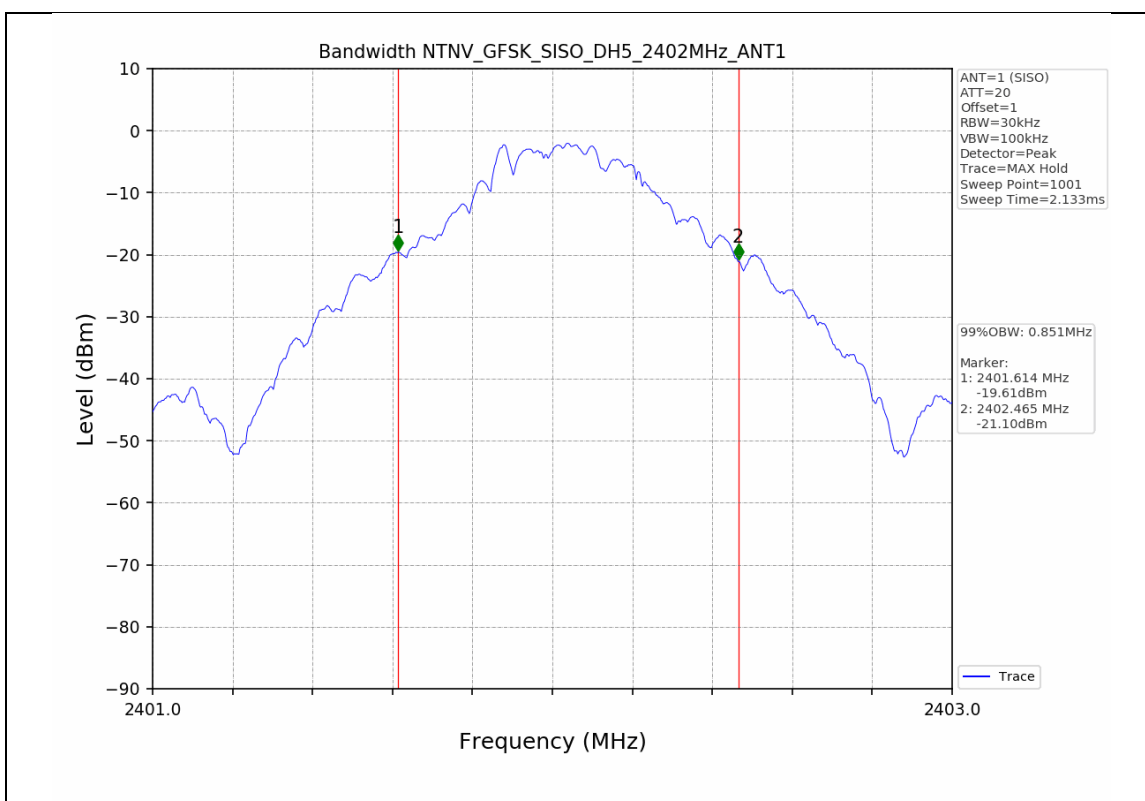


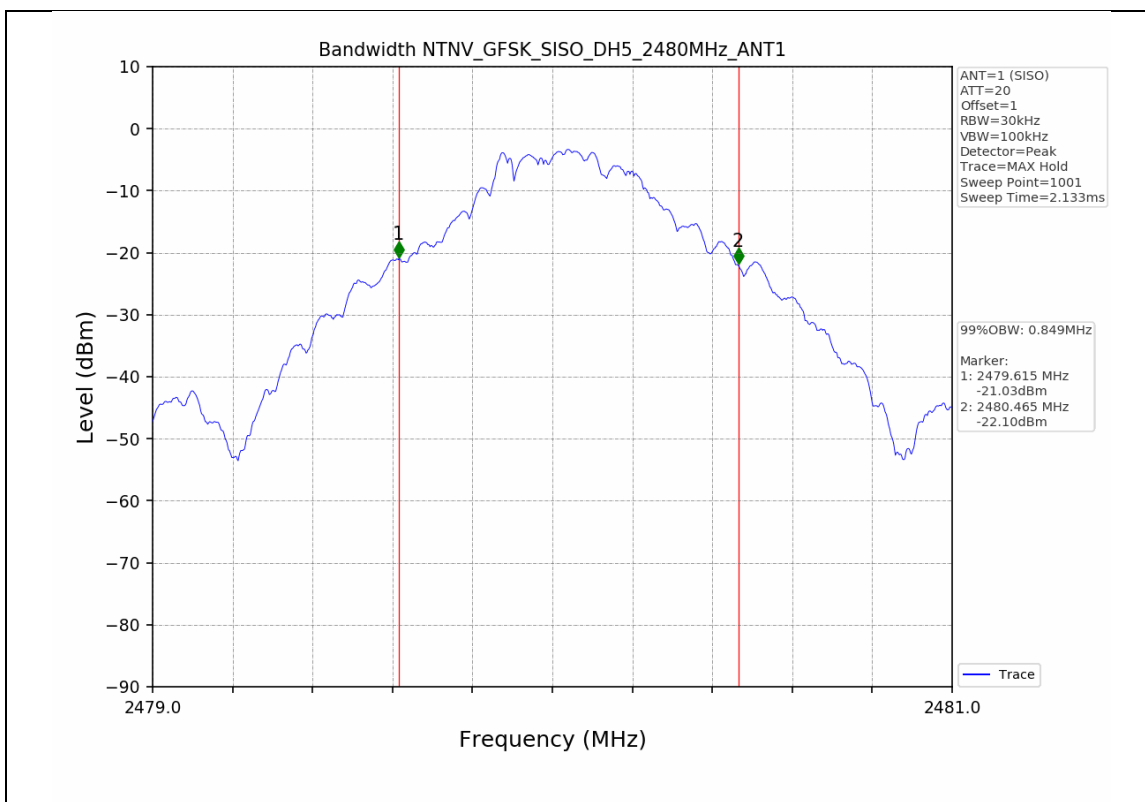
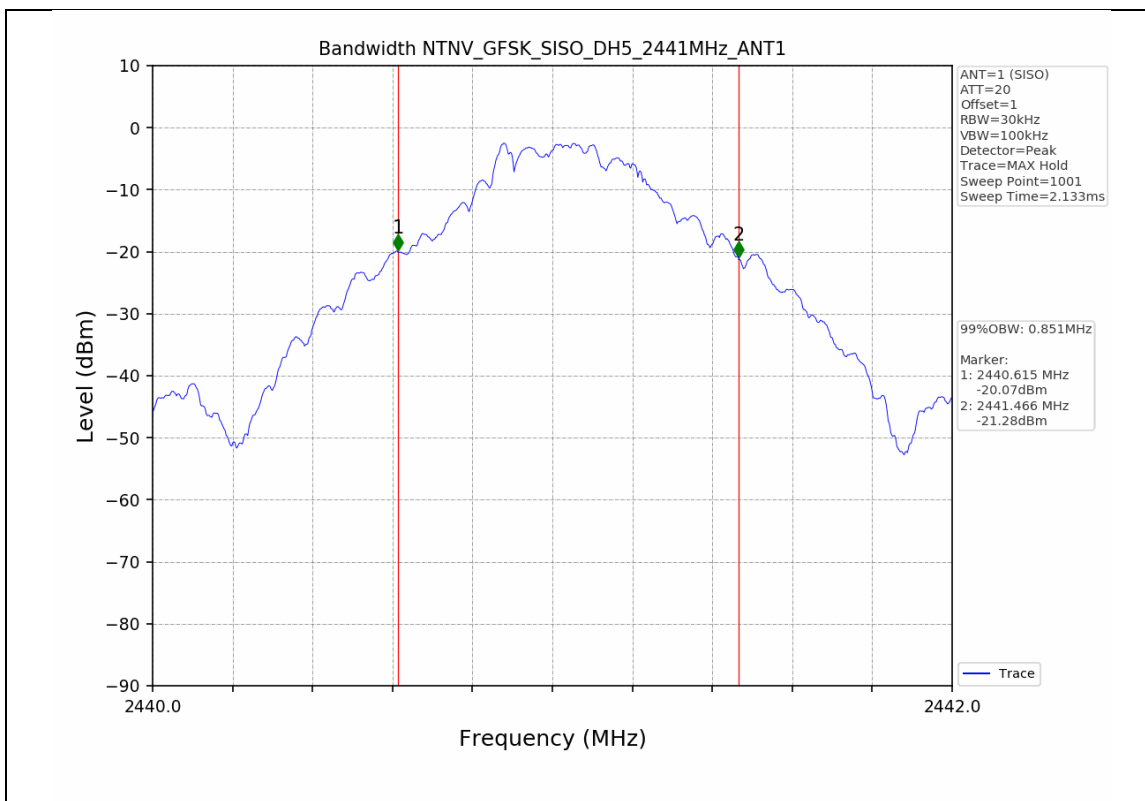


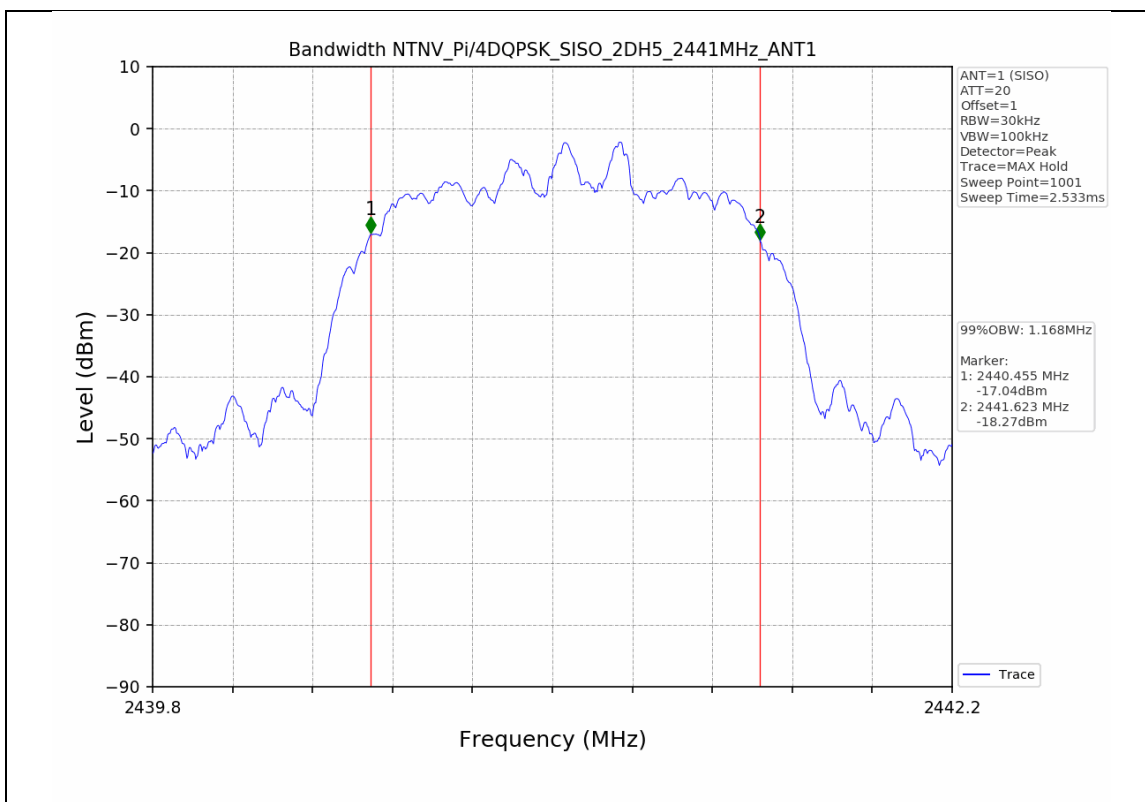
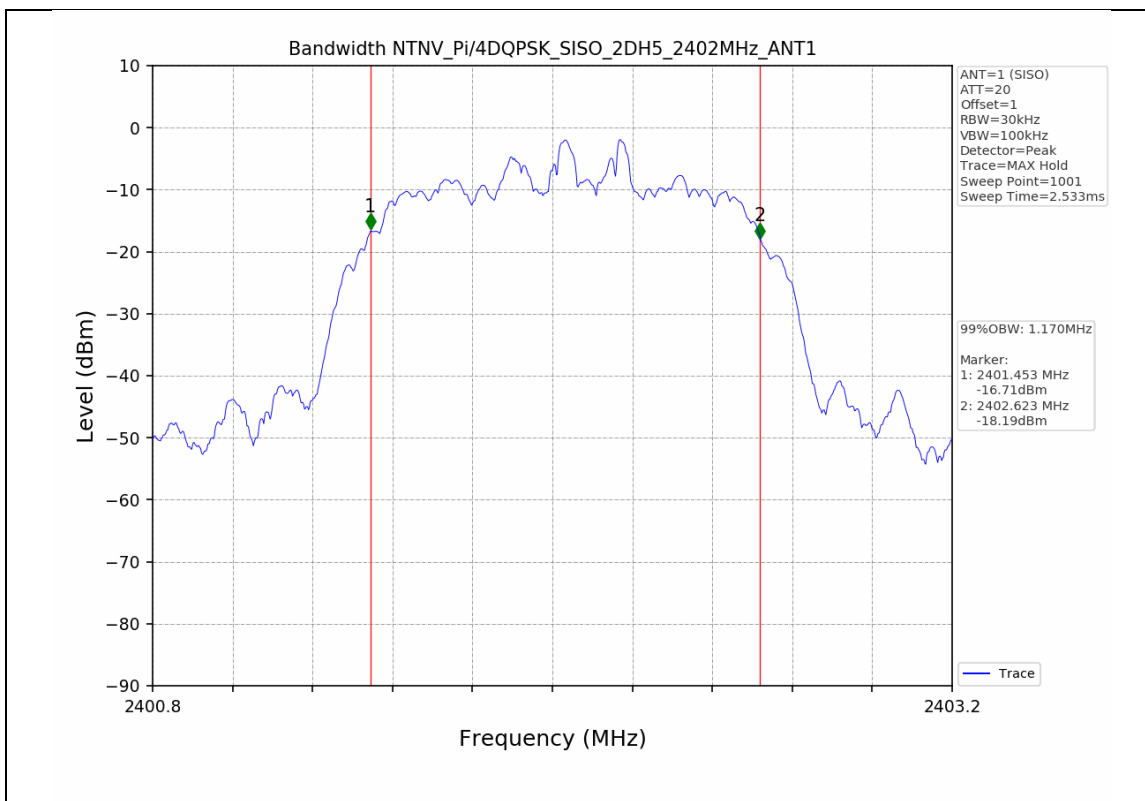


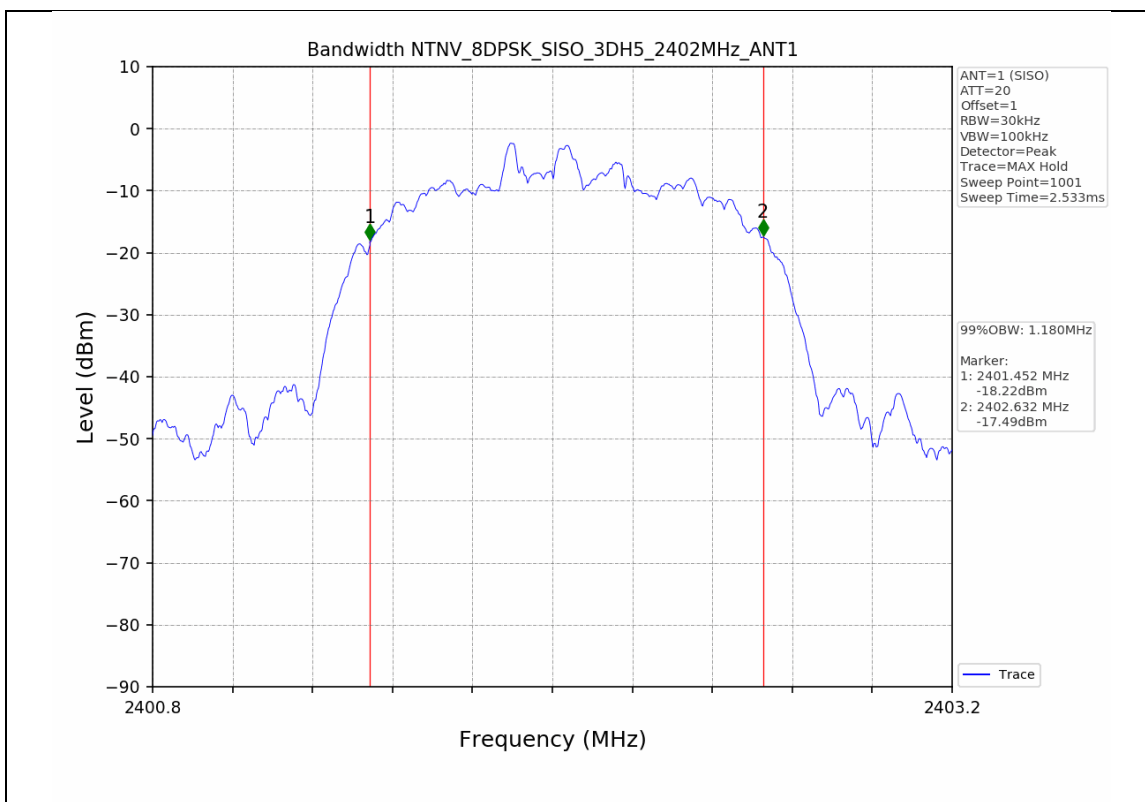
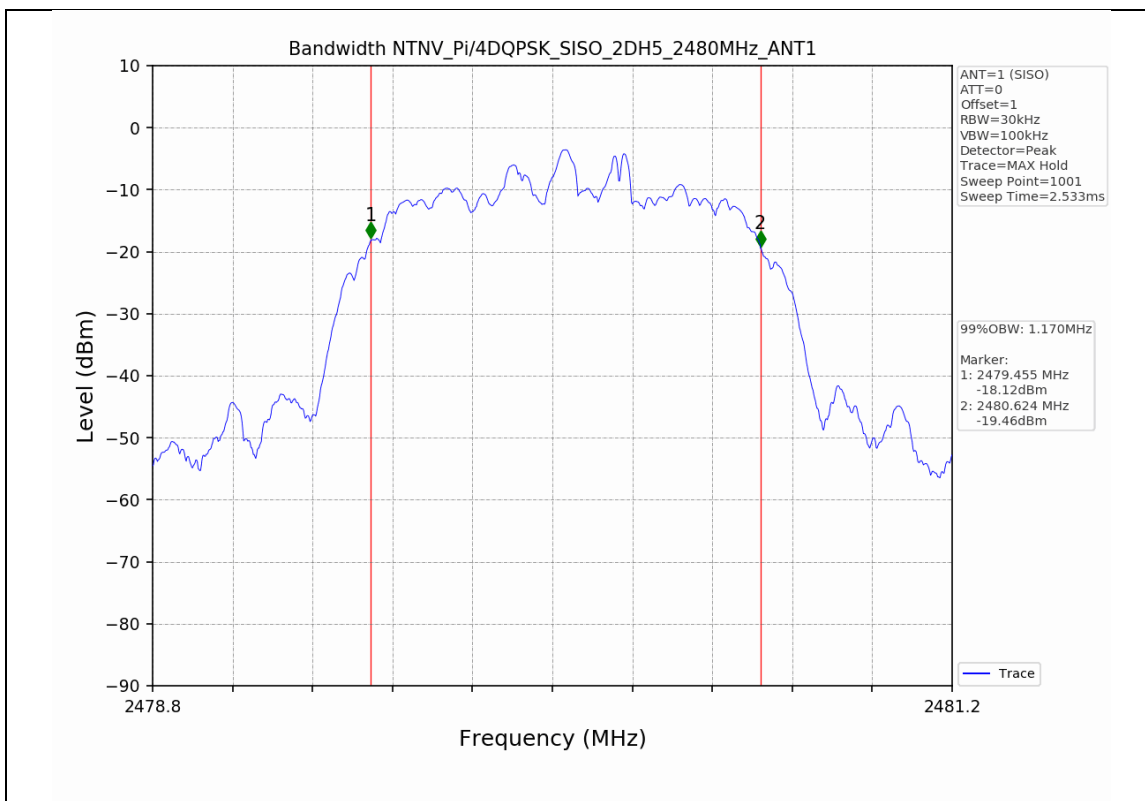


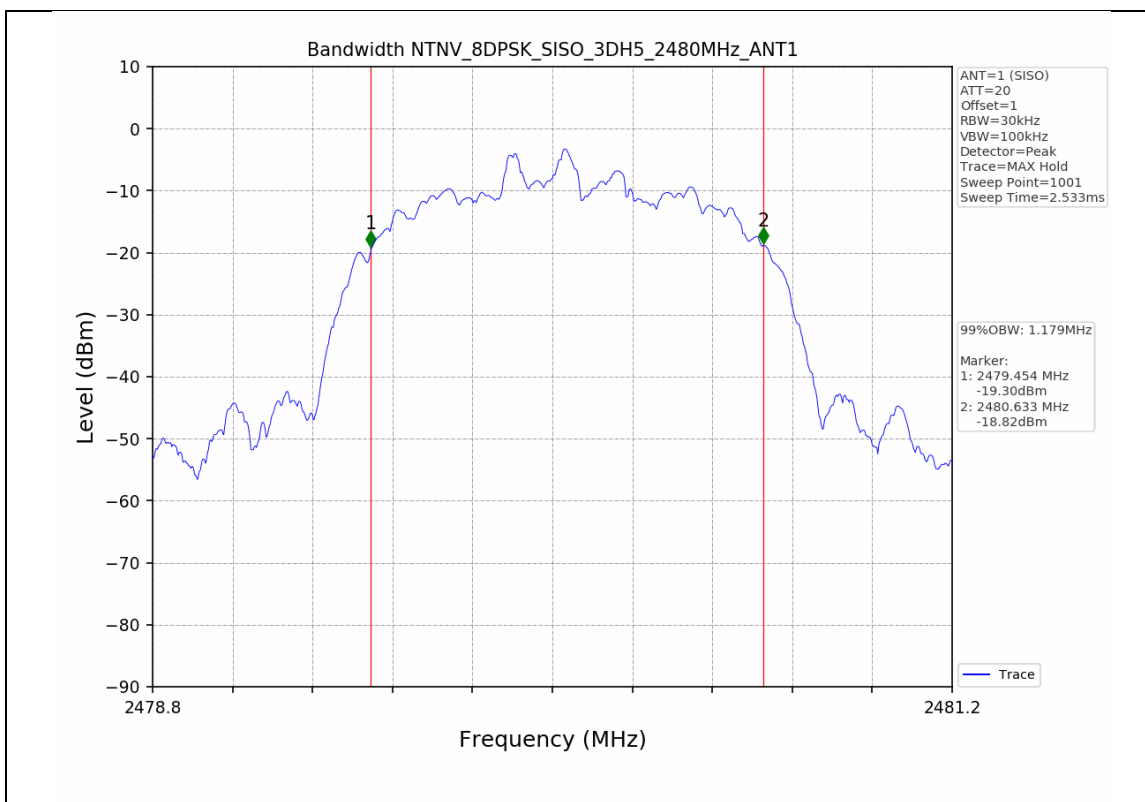
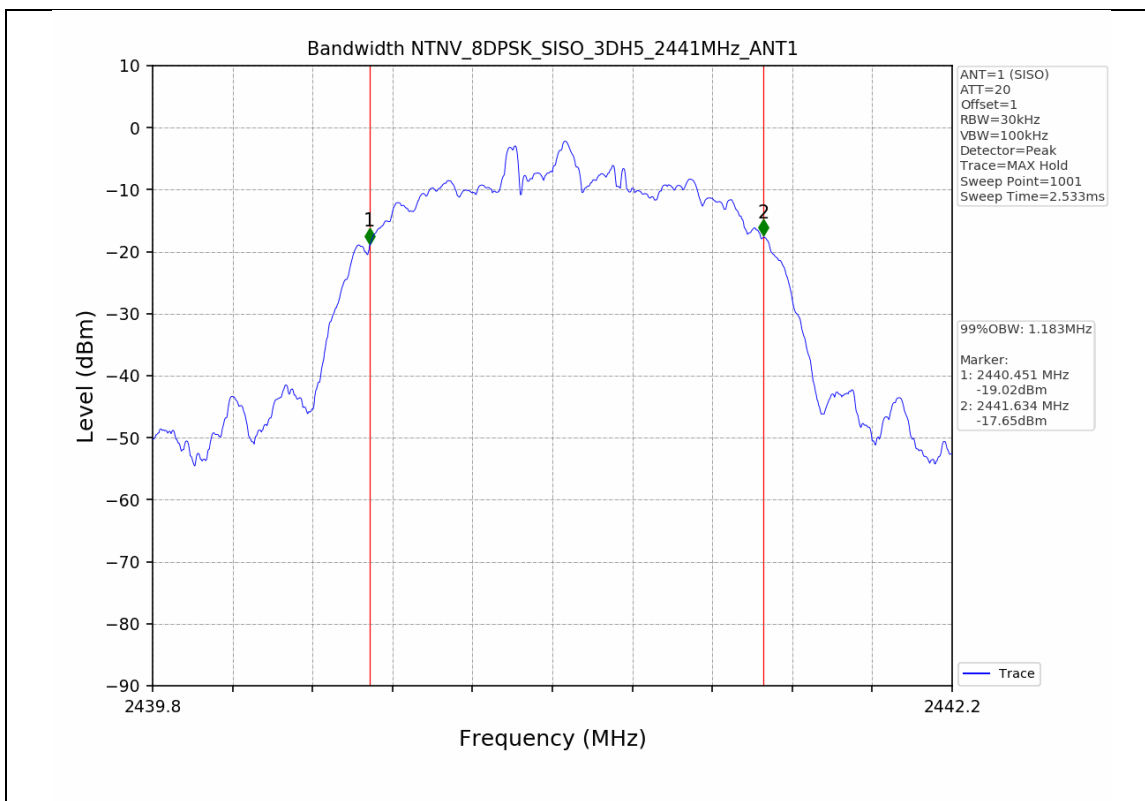
1.3 Test Graph - 99% Occupied Bandwidth









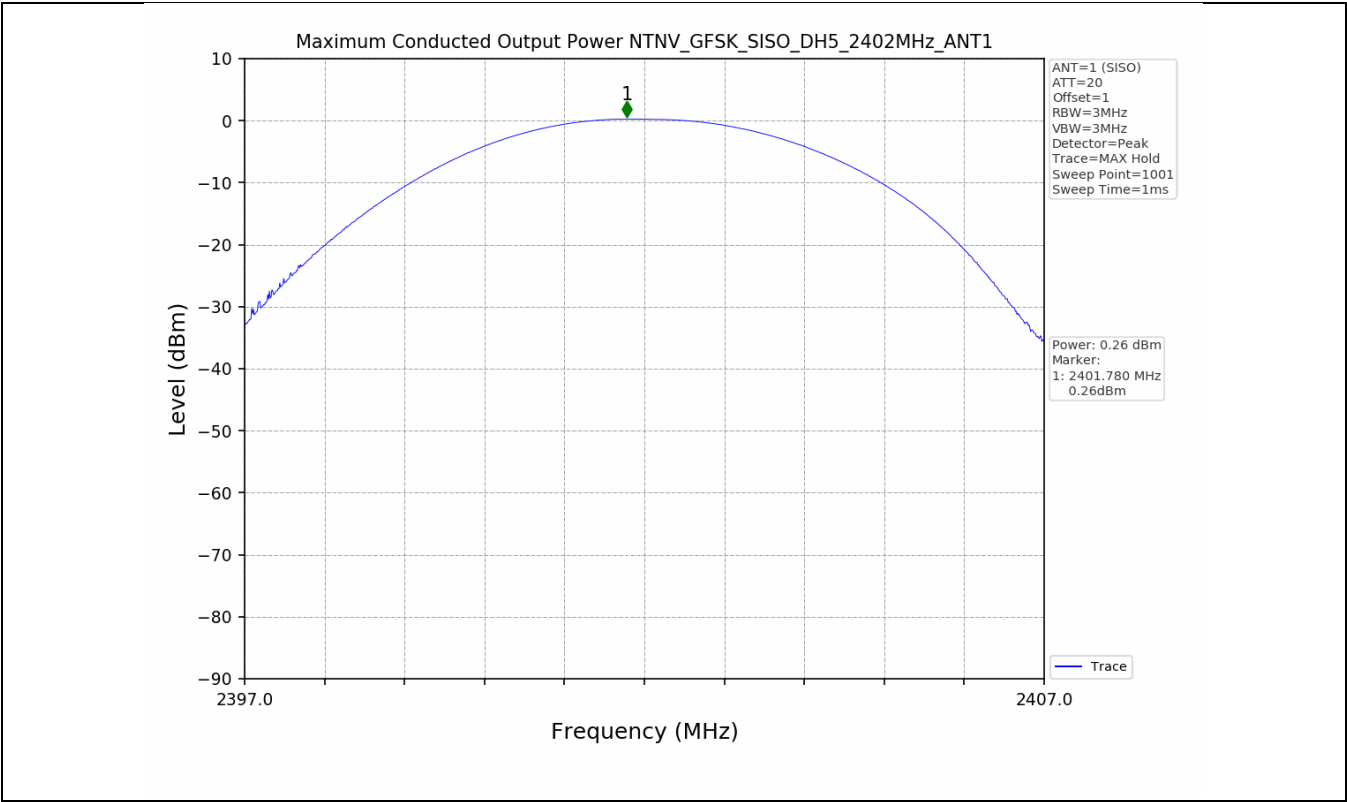


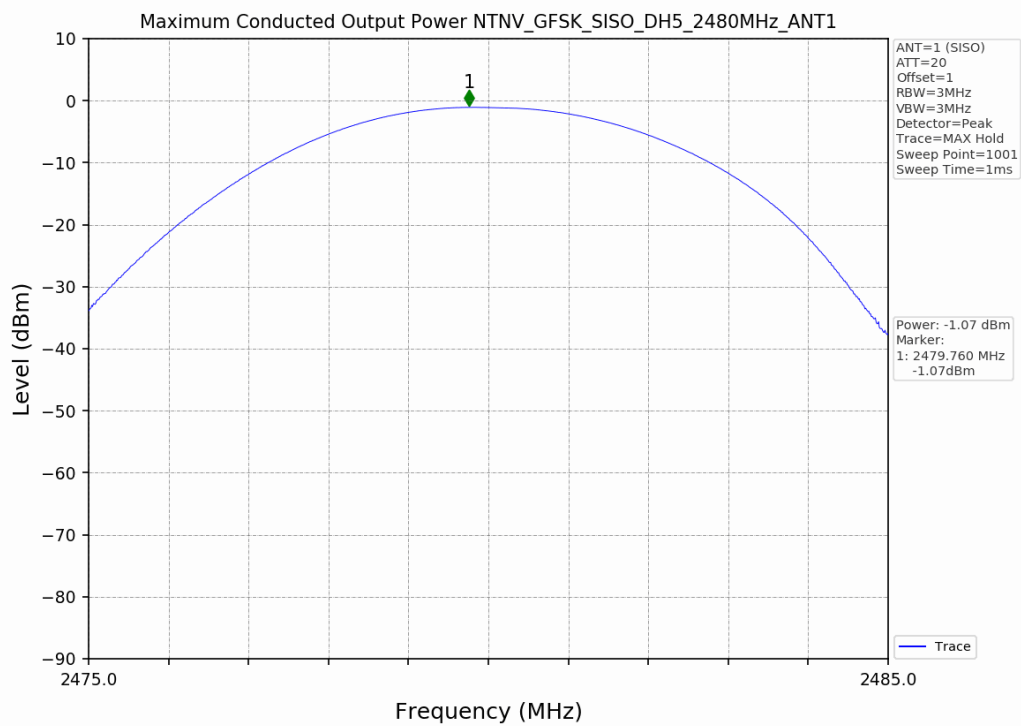
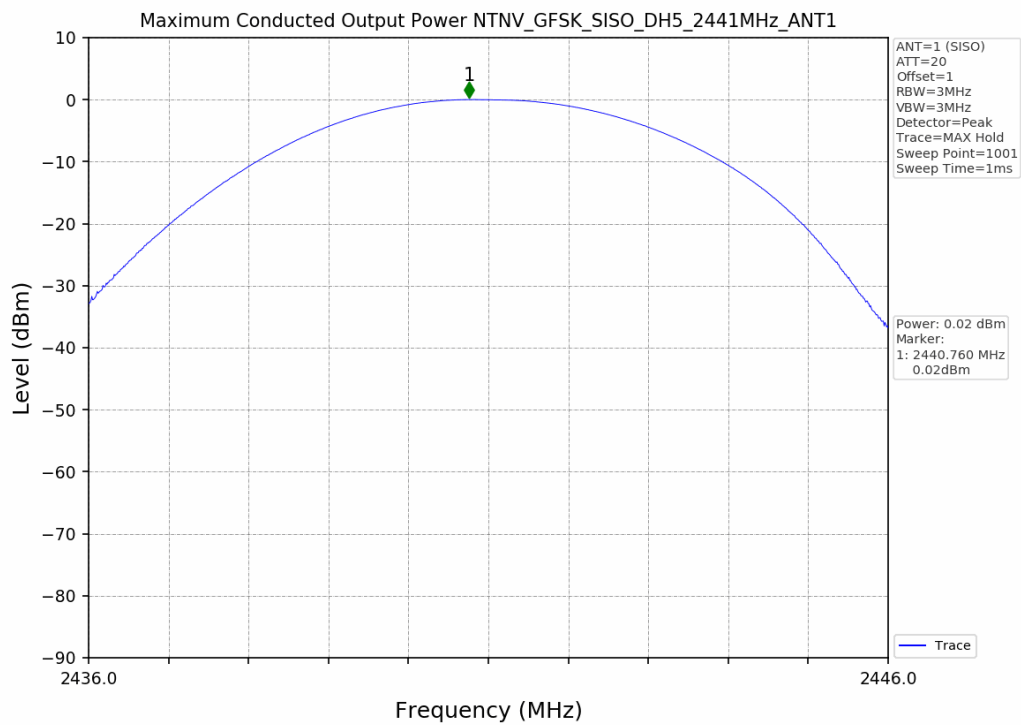
2. Maximum Conducted Output Power

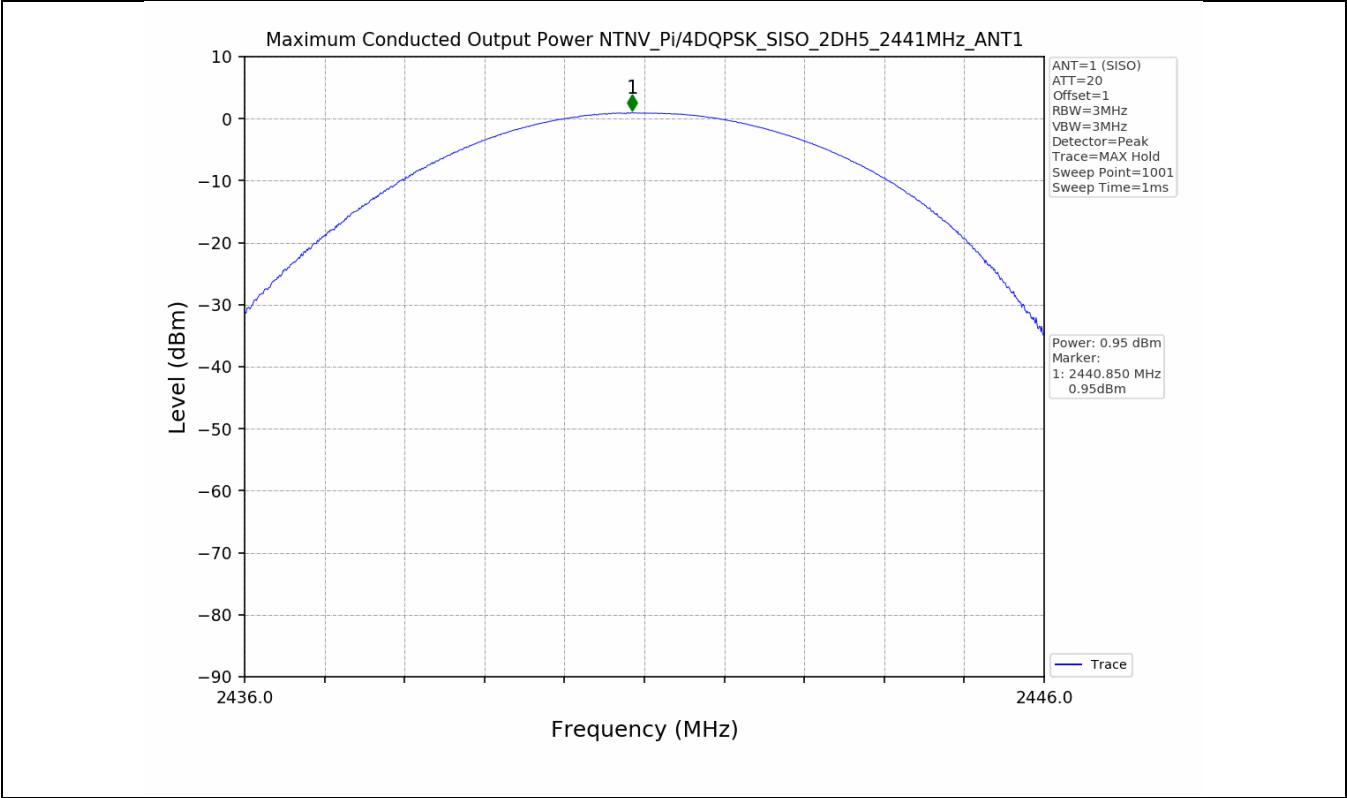
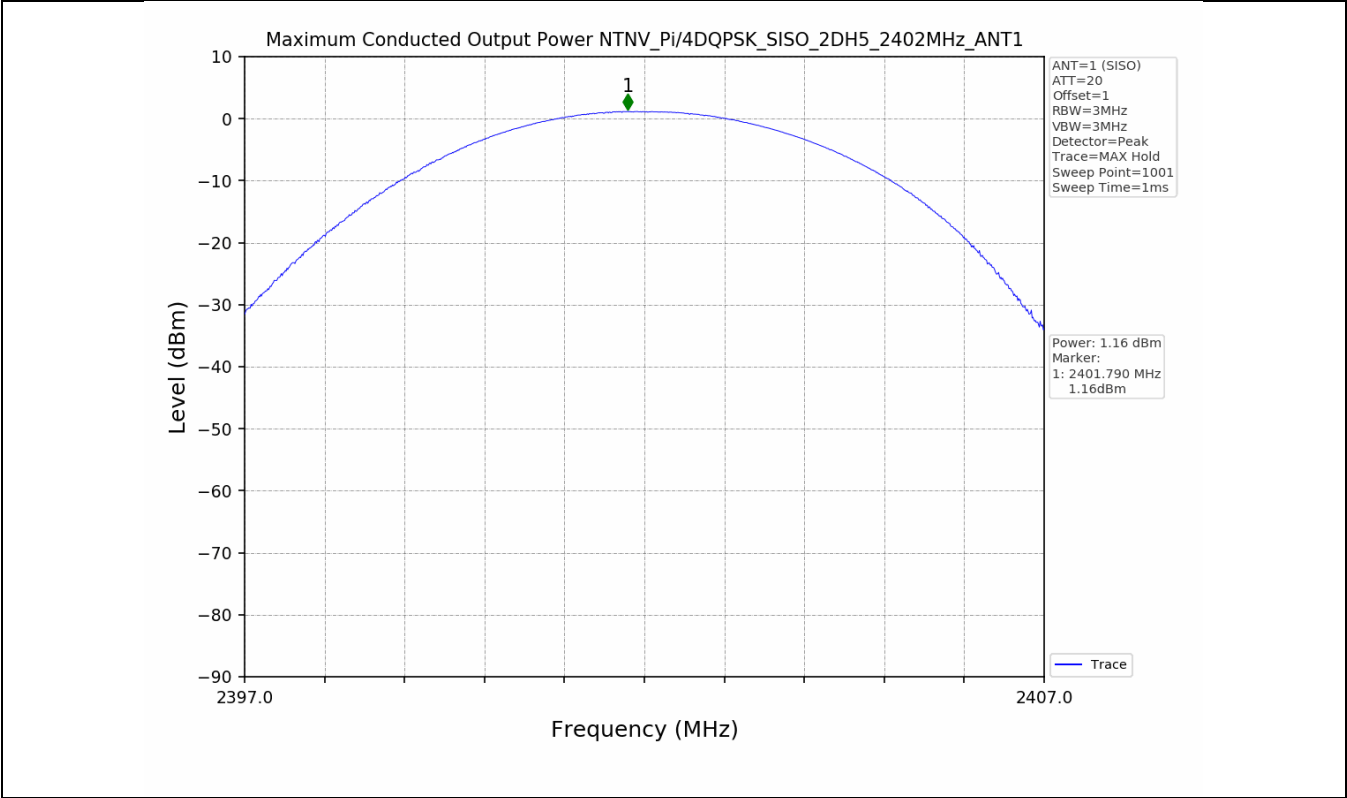
2.1 Test Result

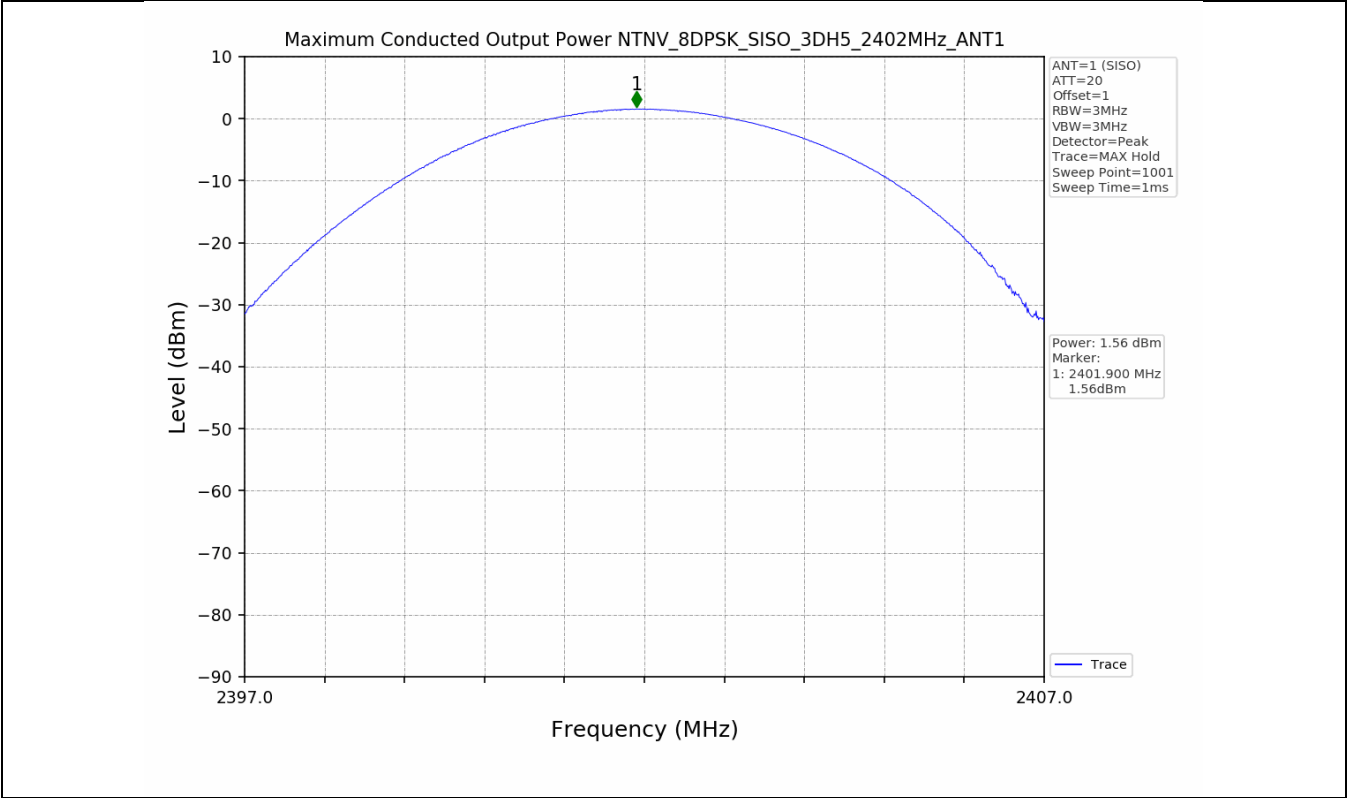
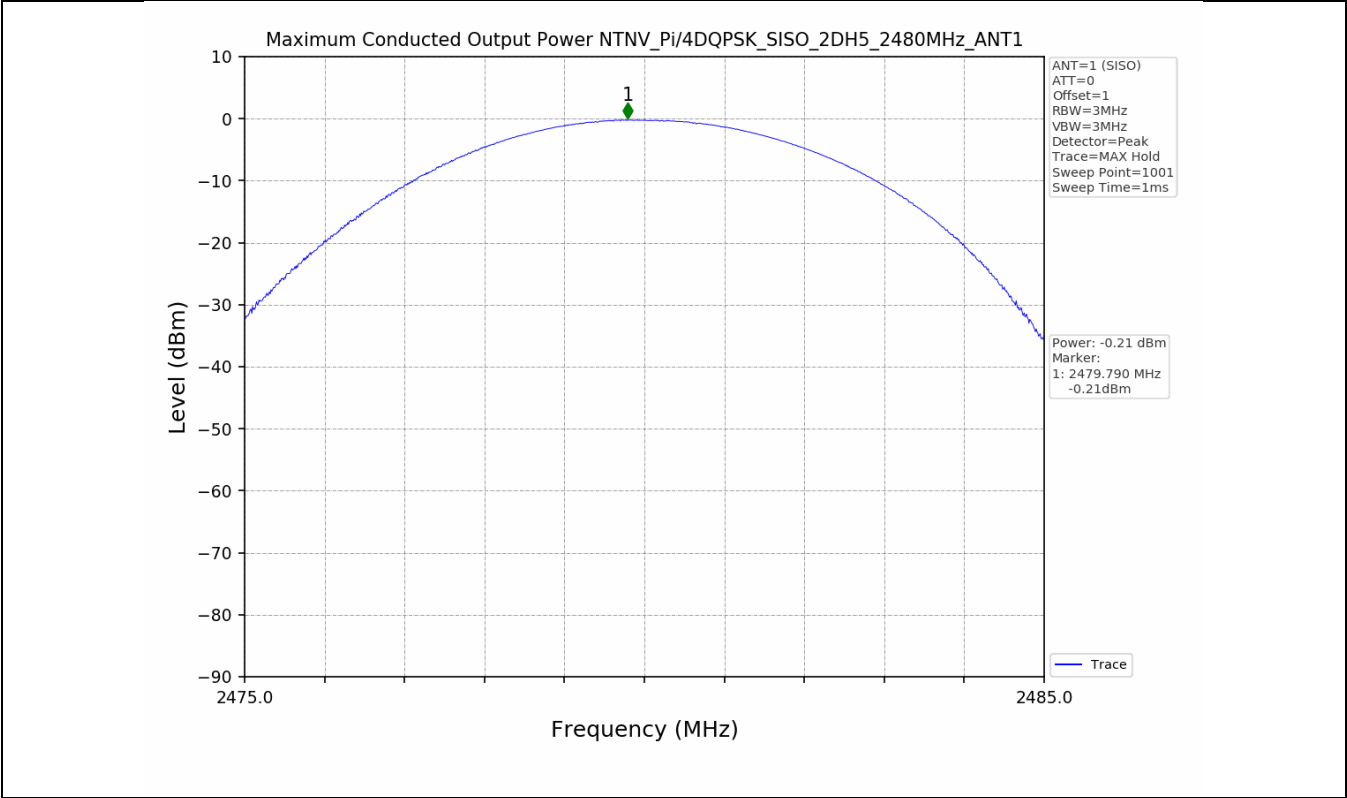
Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	0.26	30	PASS
	2441	SISO	0.02	30	PASS
	2480	SISO	-1.07	30	PASS
Pi/4DQPSK	2402	SISO	1.16	20.97	PASS
	2441	SISO	0.95	20.97	PASS
	2480	SISO	-0.21	20.97	PASS
8DPSK	2402	SISO	1.56	20.97	PASS
	2441	SISO	1.34	20.97	PASS
	2480	SISO	0.30	20.97	PASS

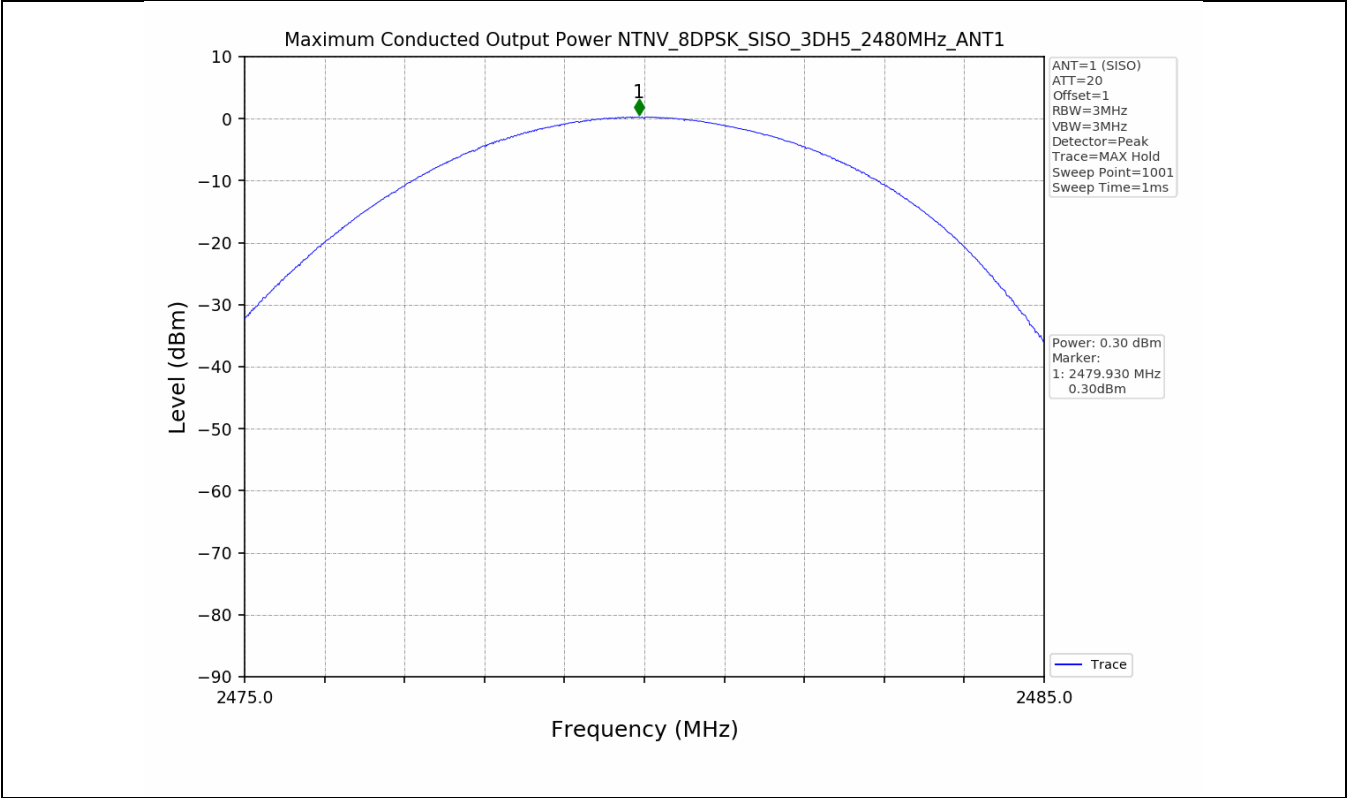
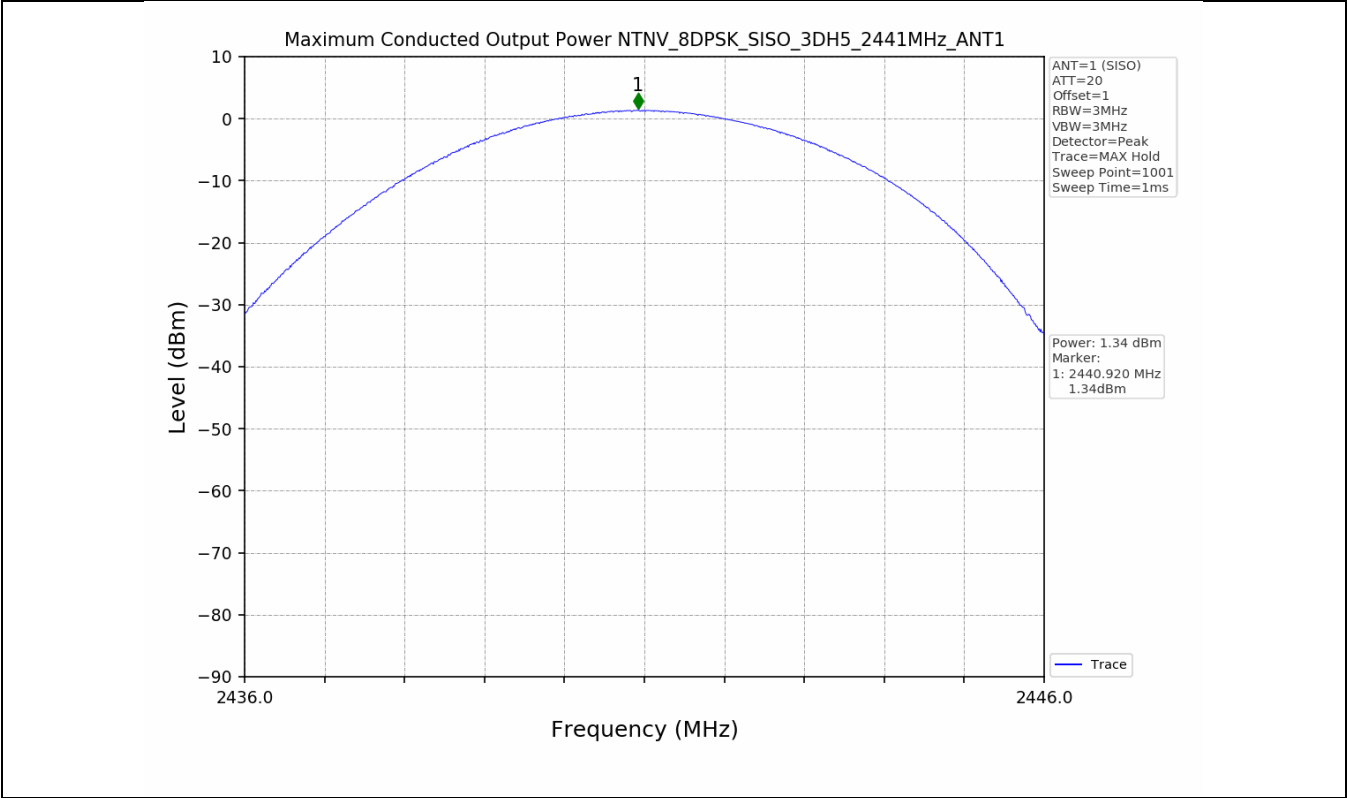
2.2 Test Graph









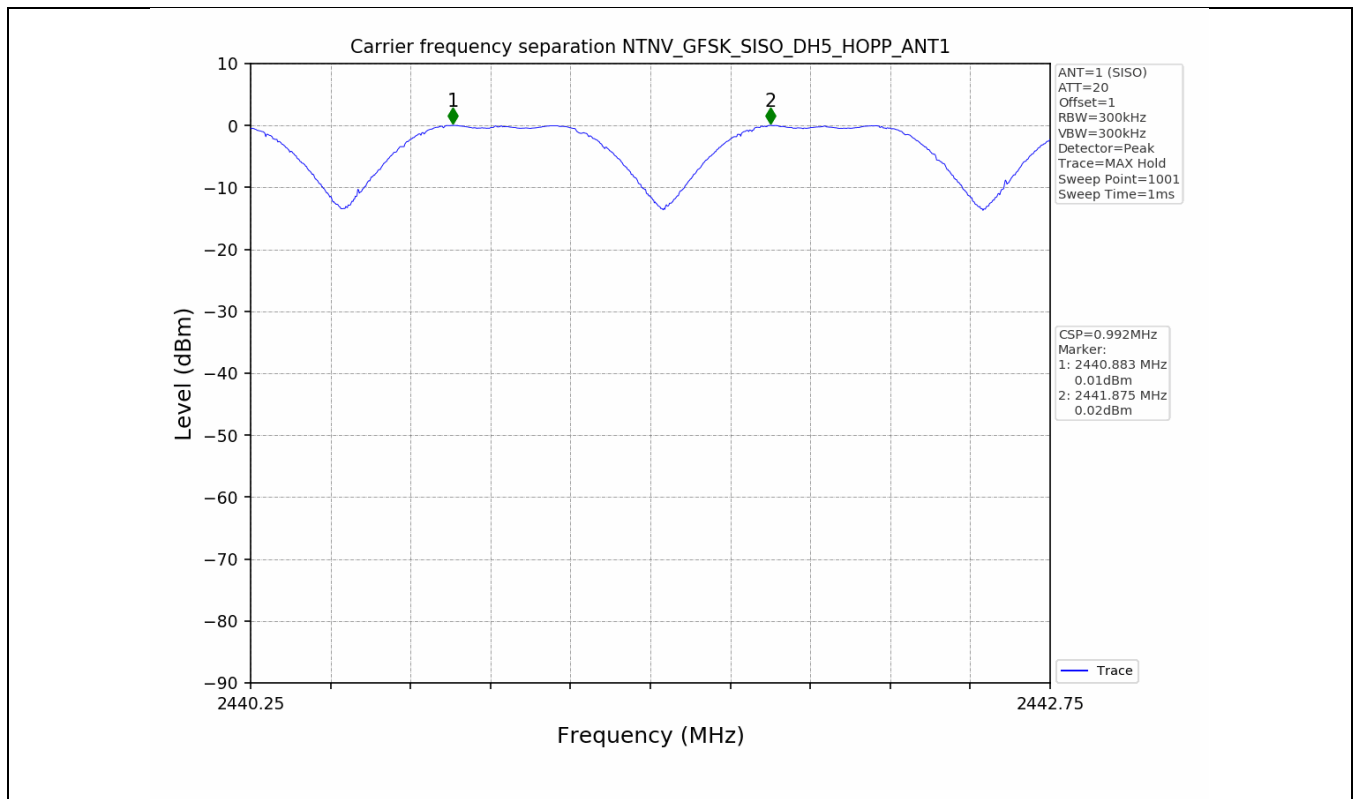


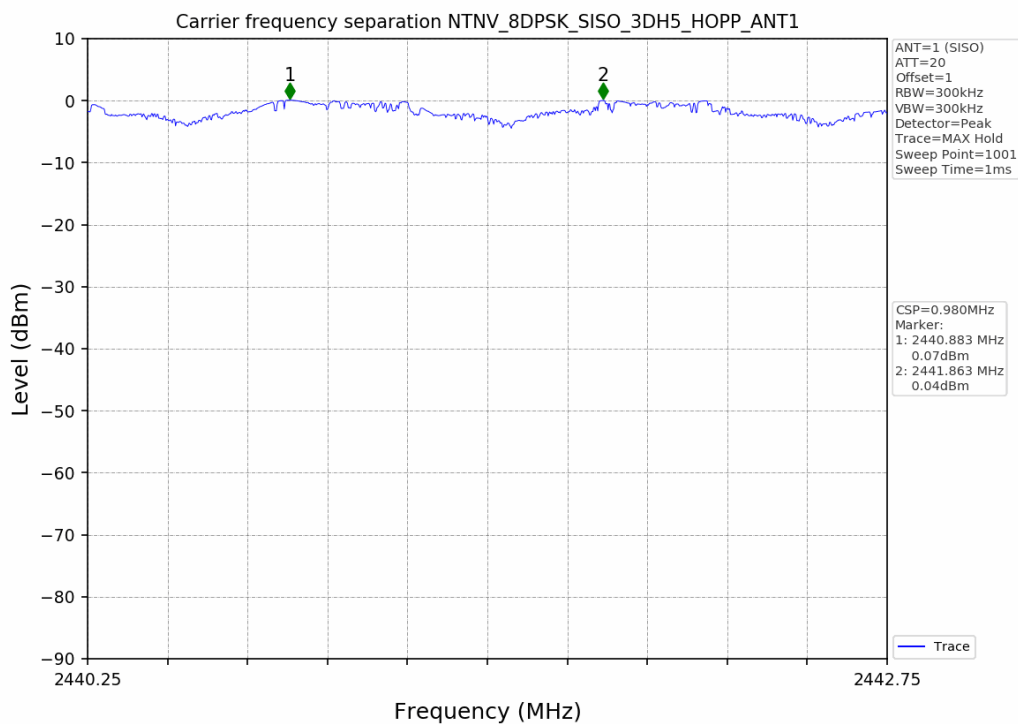
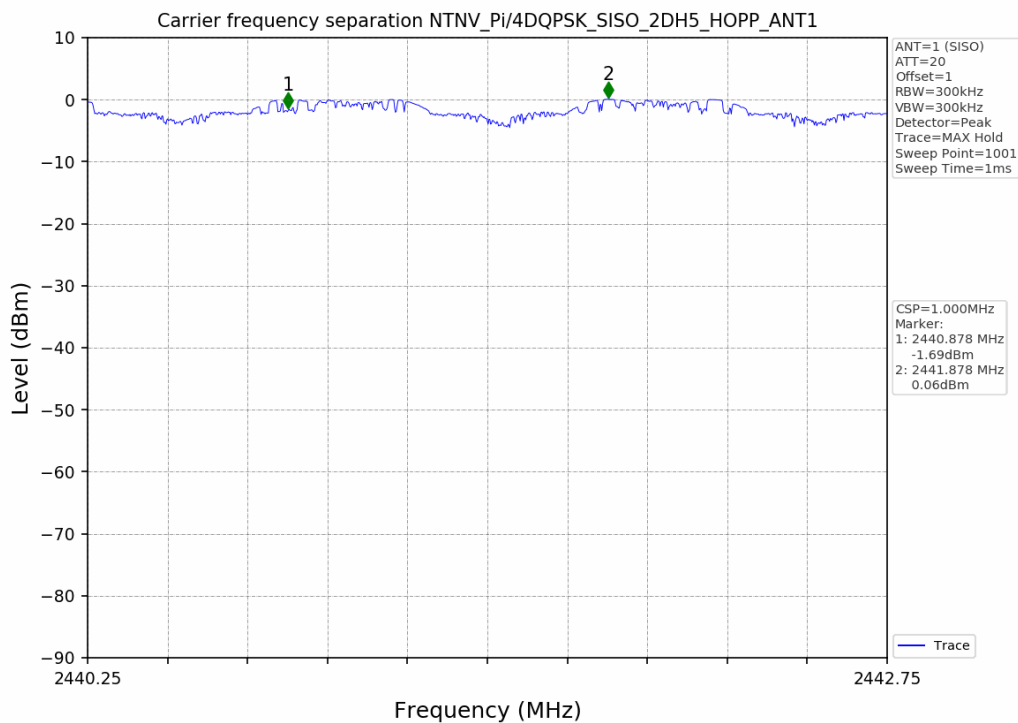
3. Carrier frequency separation

3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	0.992	0.952	≥ 0.952	PASS
Pi/4DQPSK	SISO	1	1.000	1.283	≥ 0.855	PASS
8DPSK	SISO	1	0.980	1.299	≥ 0.866	PASS

3.2 Test Graph



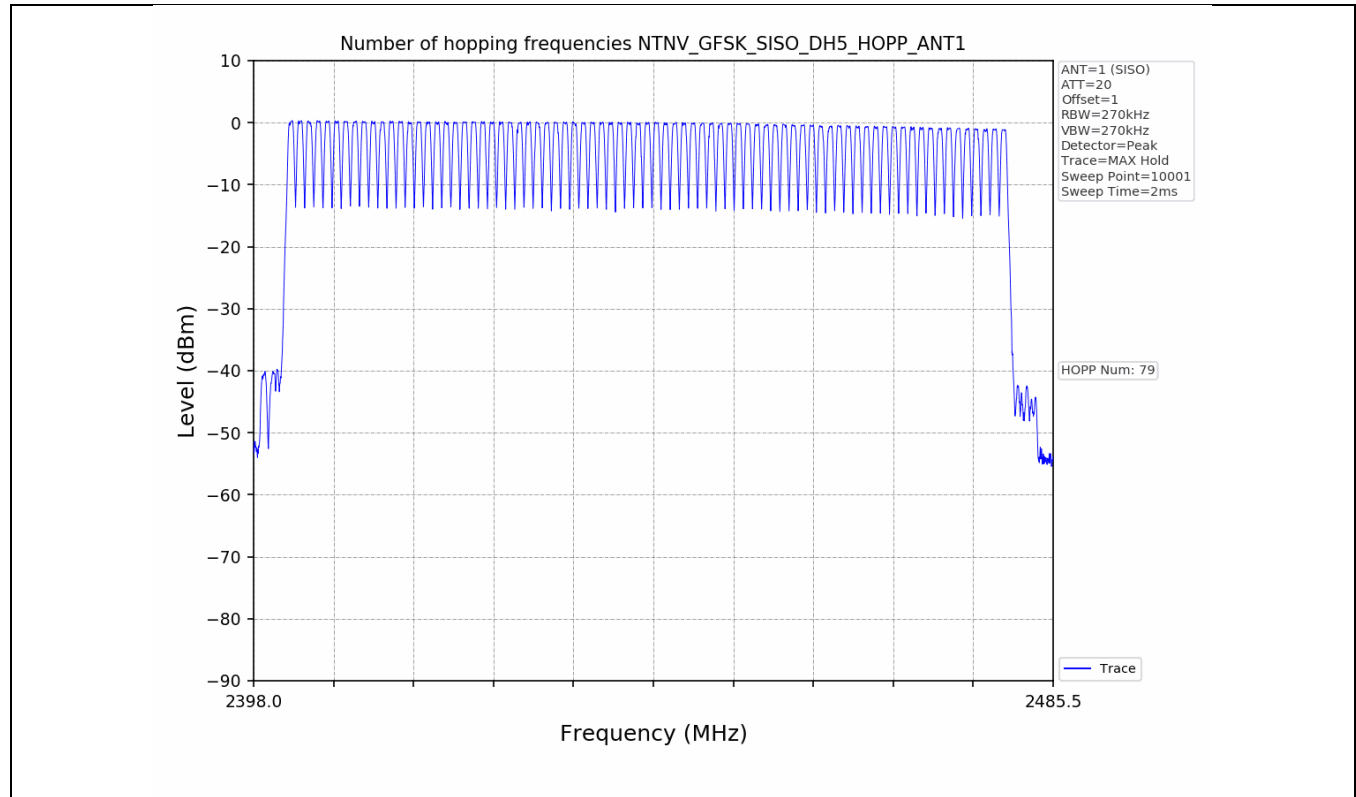


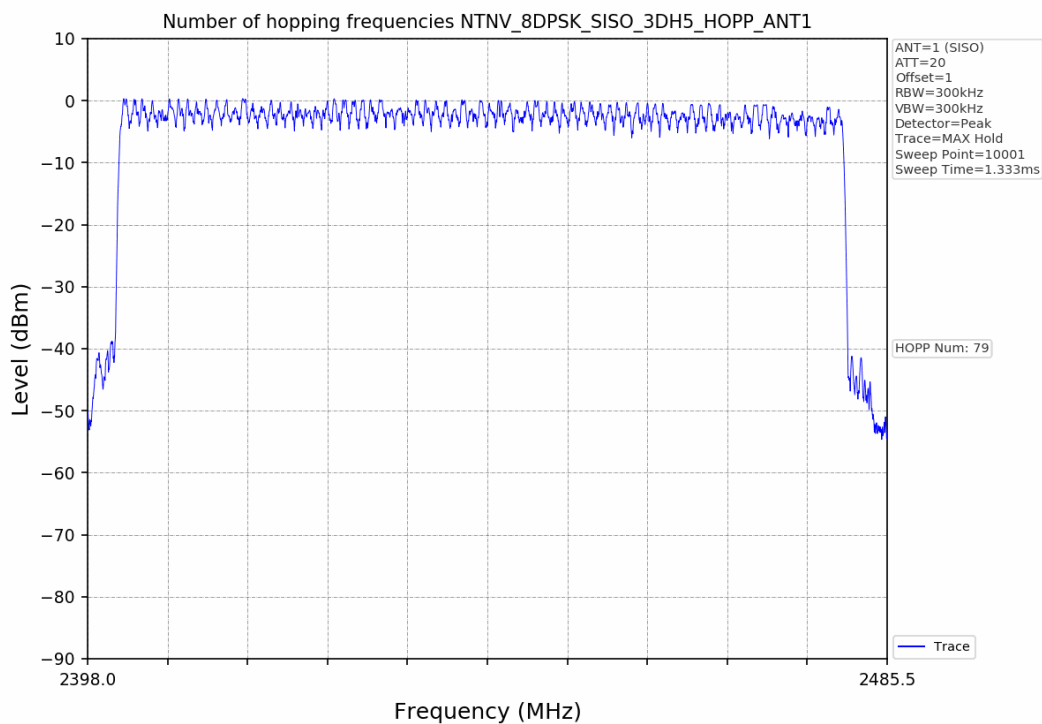
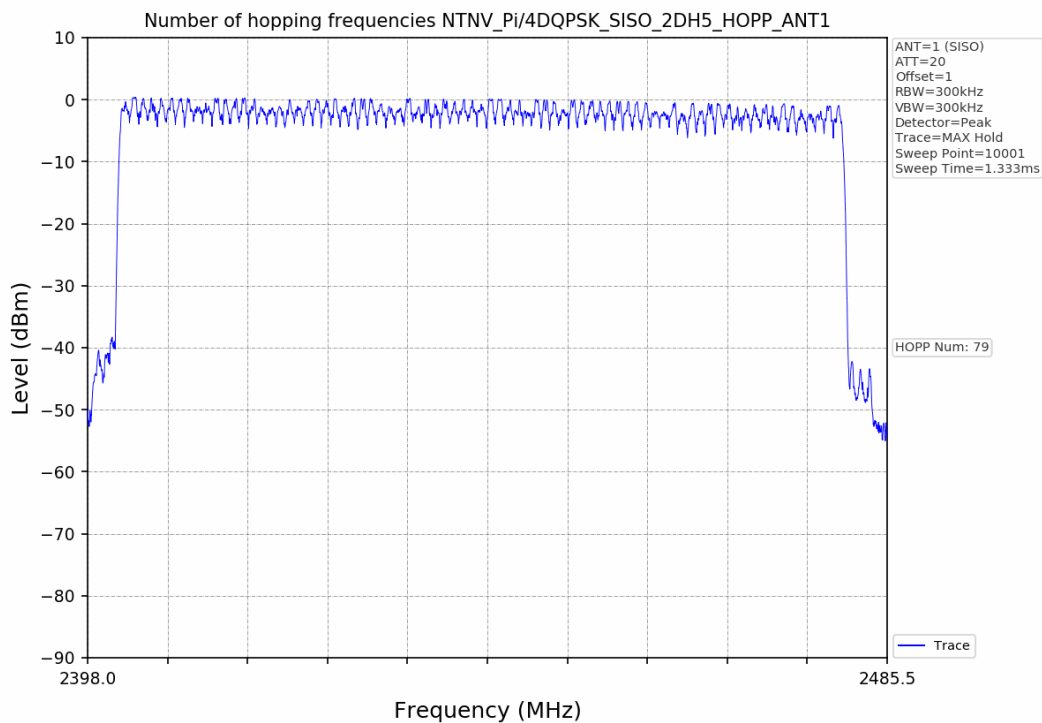
4. Number of hopping frequencies

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



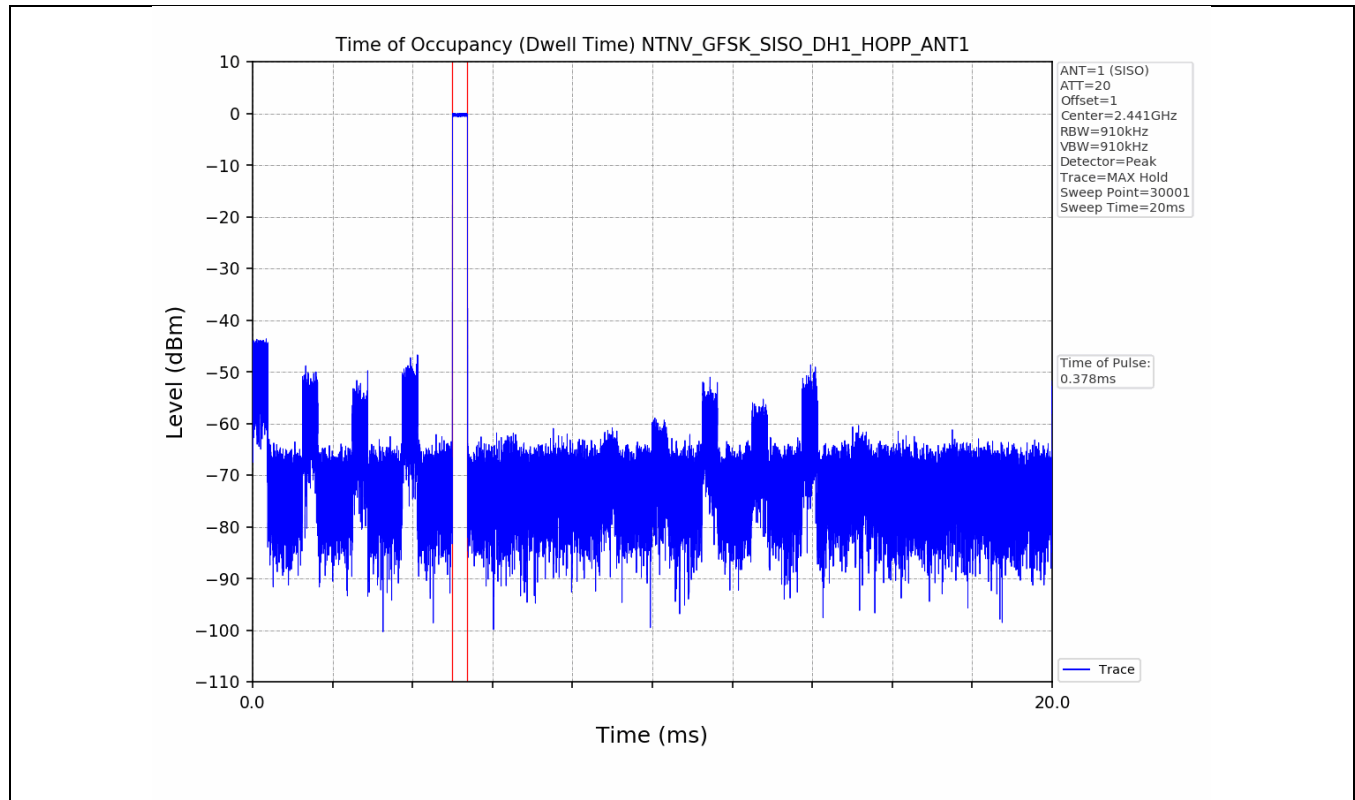


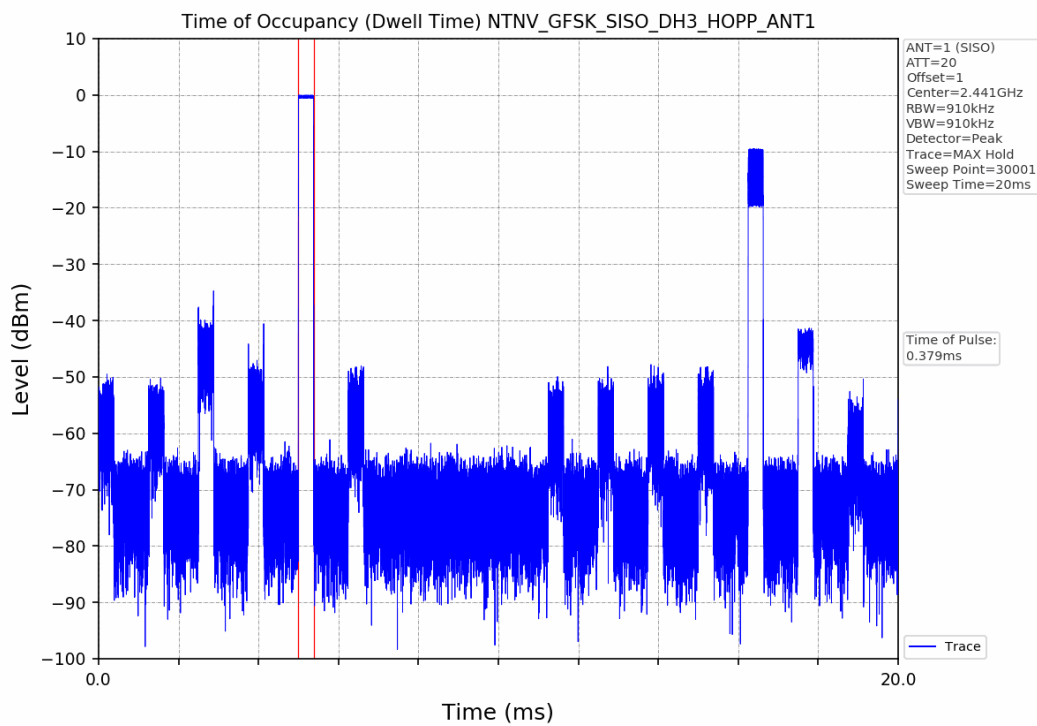
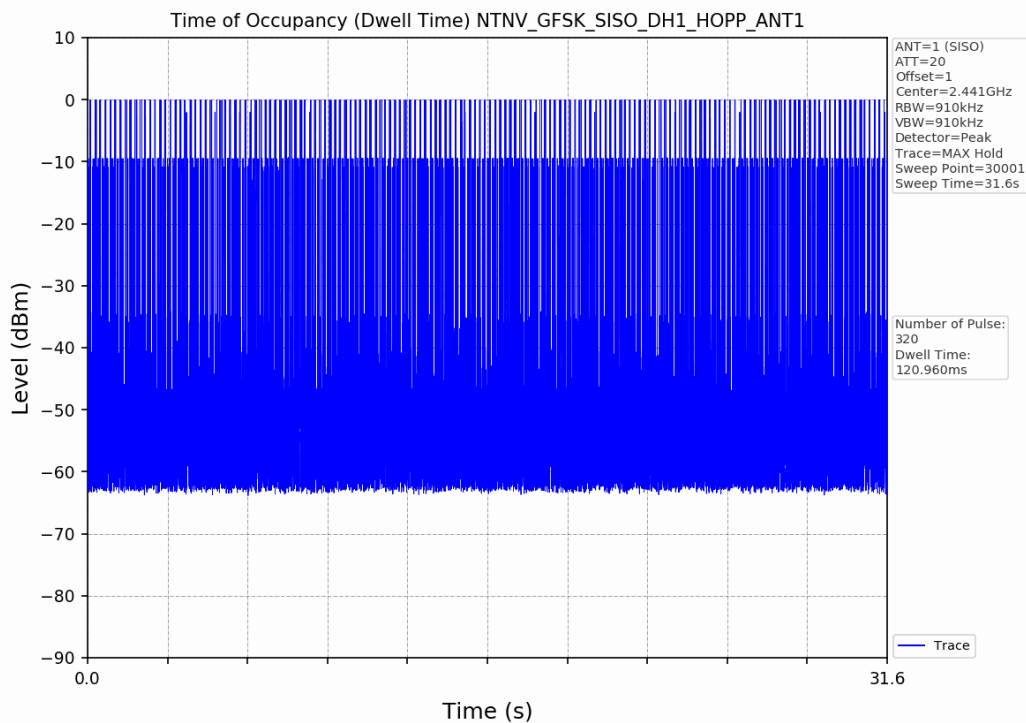
5. Time of Occupancy (Dwell Time)

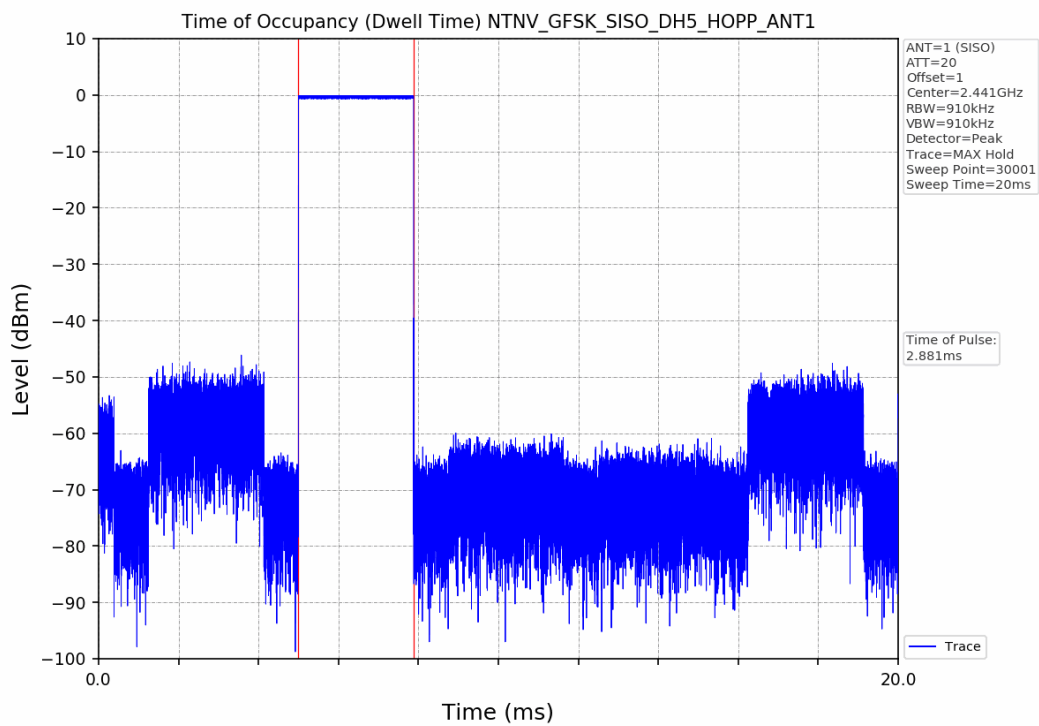
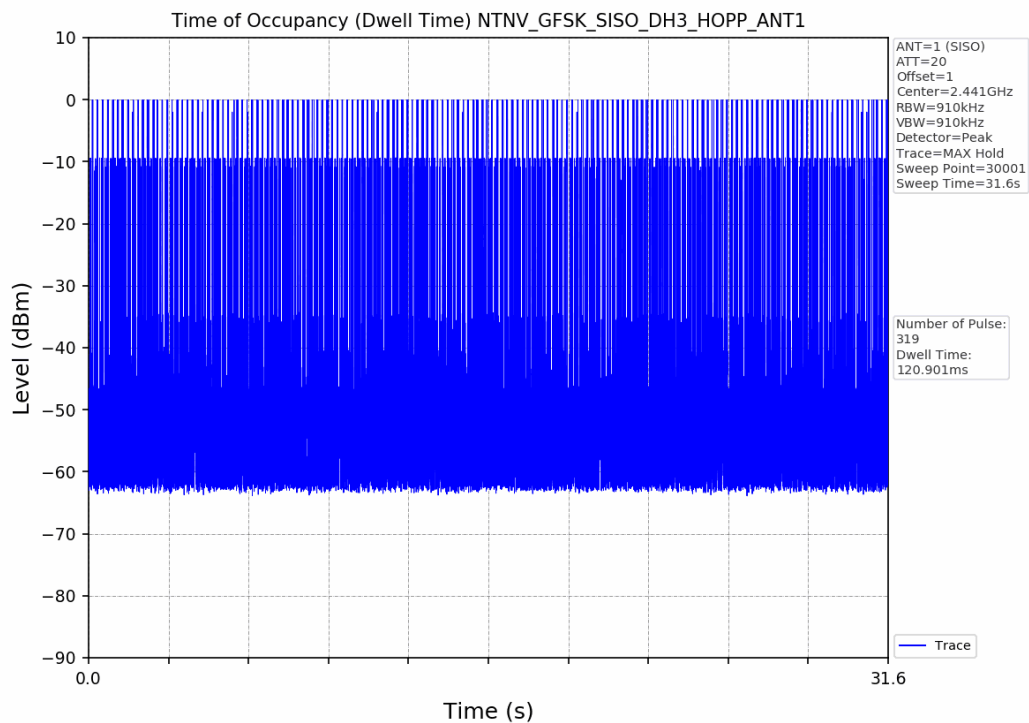
5.1 Test Result

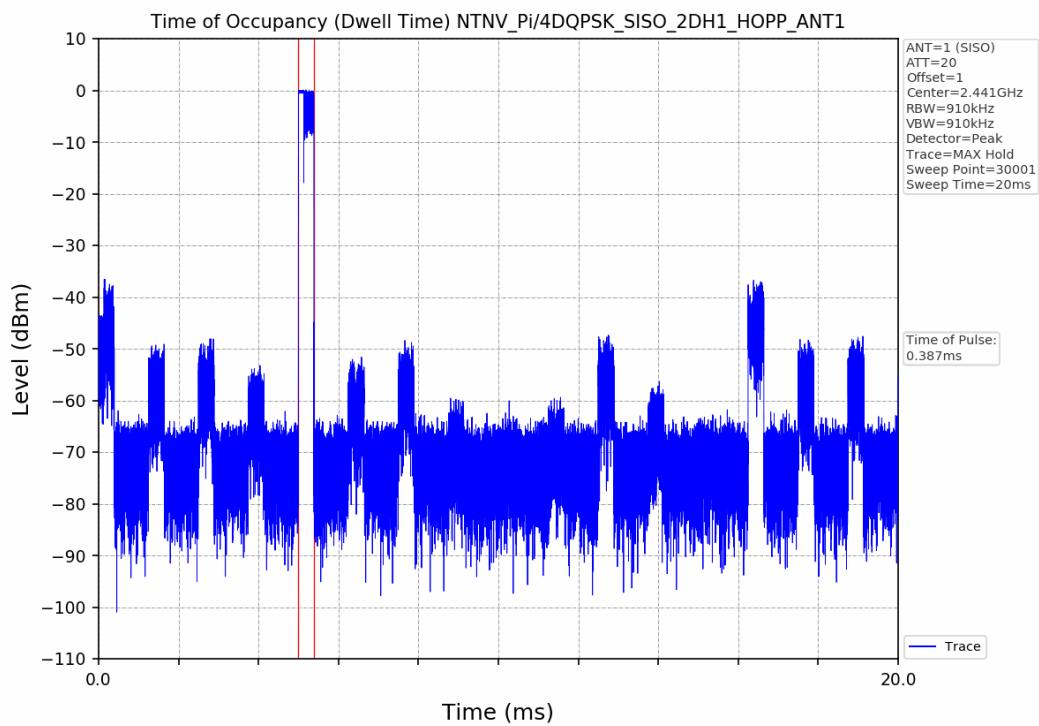
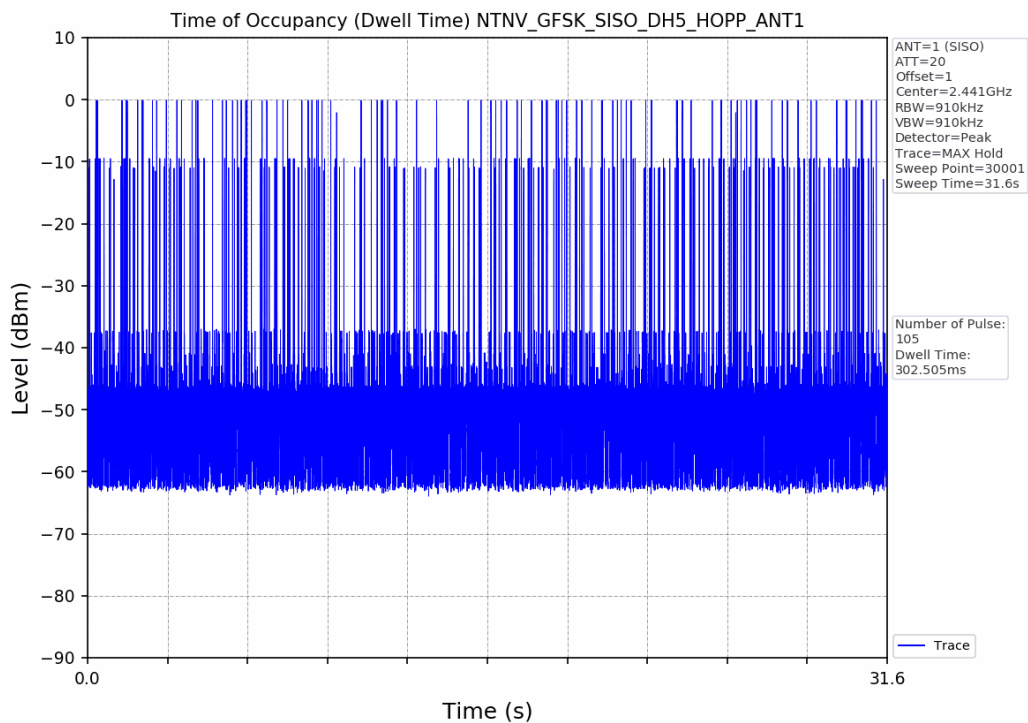
Test Mode	Packet Type	TX Type	ANT No.	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limits (ms)	Verdict
GFSK	DH1	SISO	1	0.378	31.6	320	120.960	≤400	PASS
	DH3	SISO	1	0.379	31.6	319	120.901	≤400	PASS
	DH5	SISO	1	2.881	31.6	105	302.505	≤400	PASS
Pi/4DQ PSK	2DH1	SISO	1	0.387	31.6	320	123.840	≤400	PASS
	2DH3	SISO	1	1.639	31.6	165	270.435	≤400	PASS
	2DH5	SISO	1	2.888	31.6	90	259.920	≤400	PASS
8DPSK	3DH1	SISO	1	0.389	31.6	319	124.091	≤400	PASS
	3DH3	SISO	1	1.639	31.6	163	267.157	≤400	PASS
	3DH5	SISO	1	2.890	31.6	97	280.330	≤400	PASS

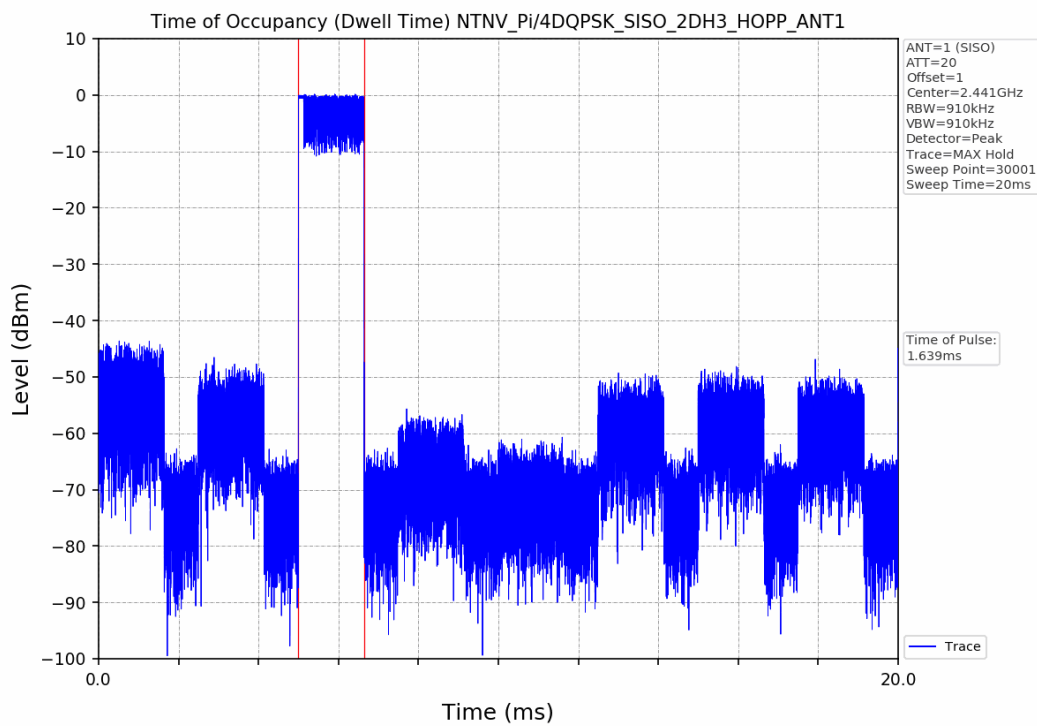
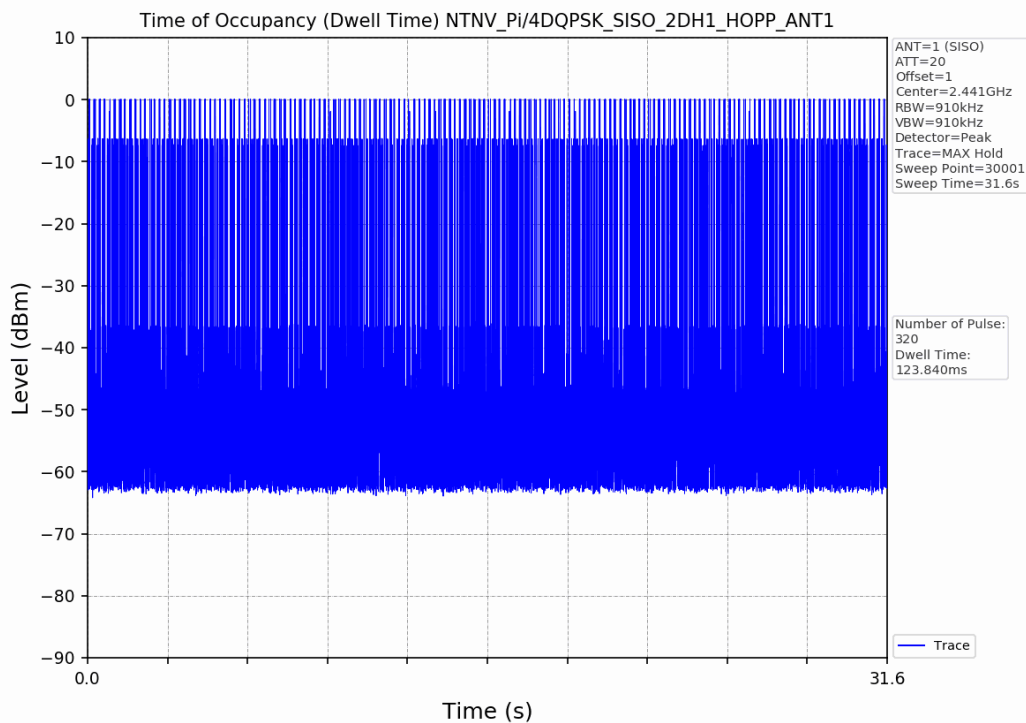
5.2 Test Graph

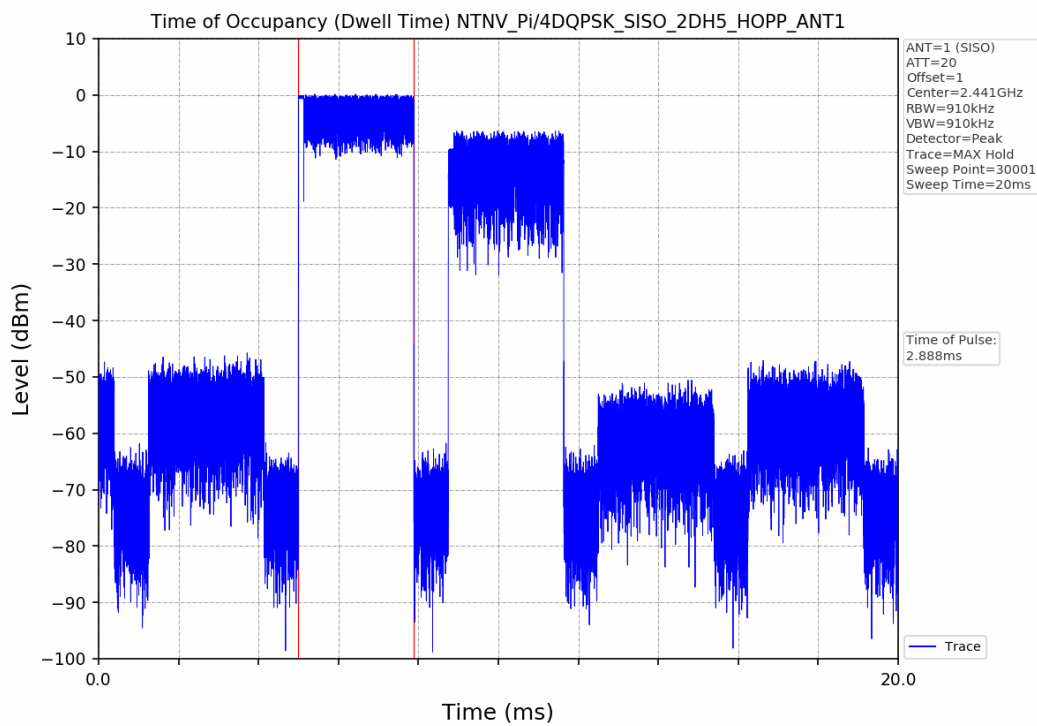
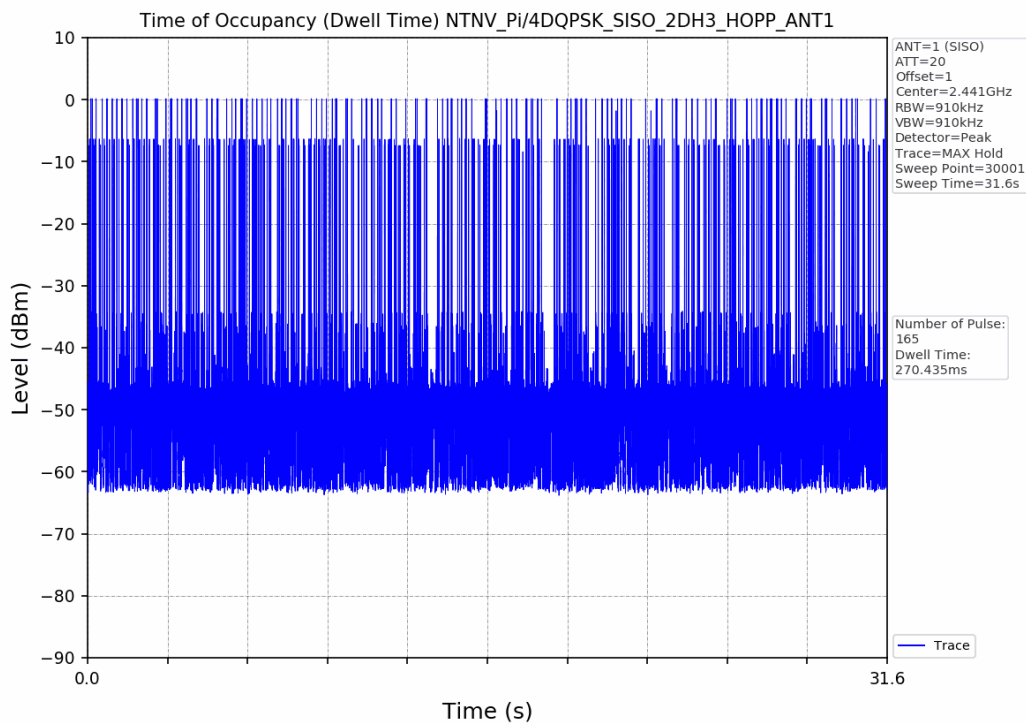


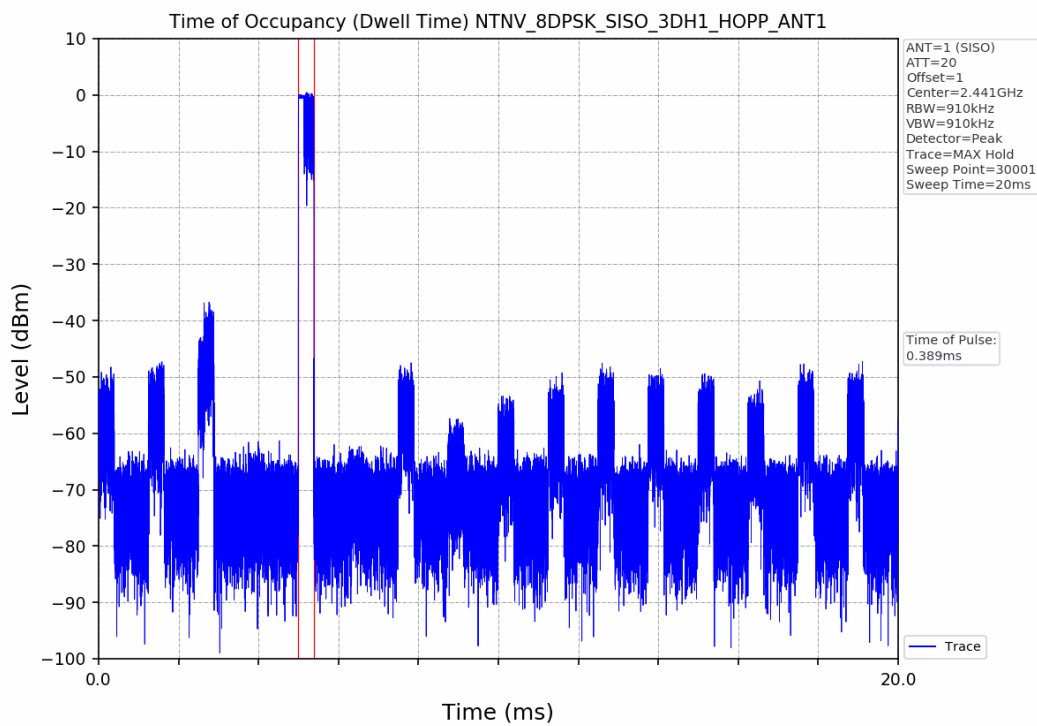
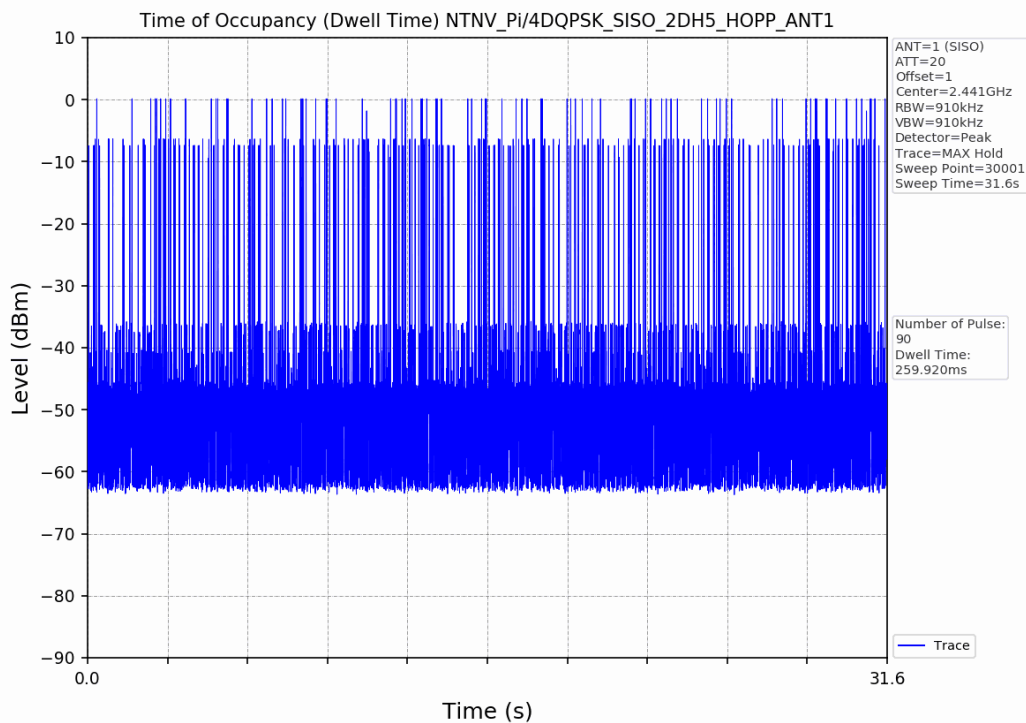


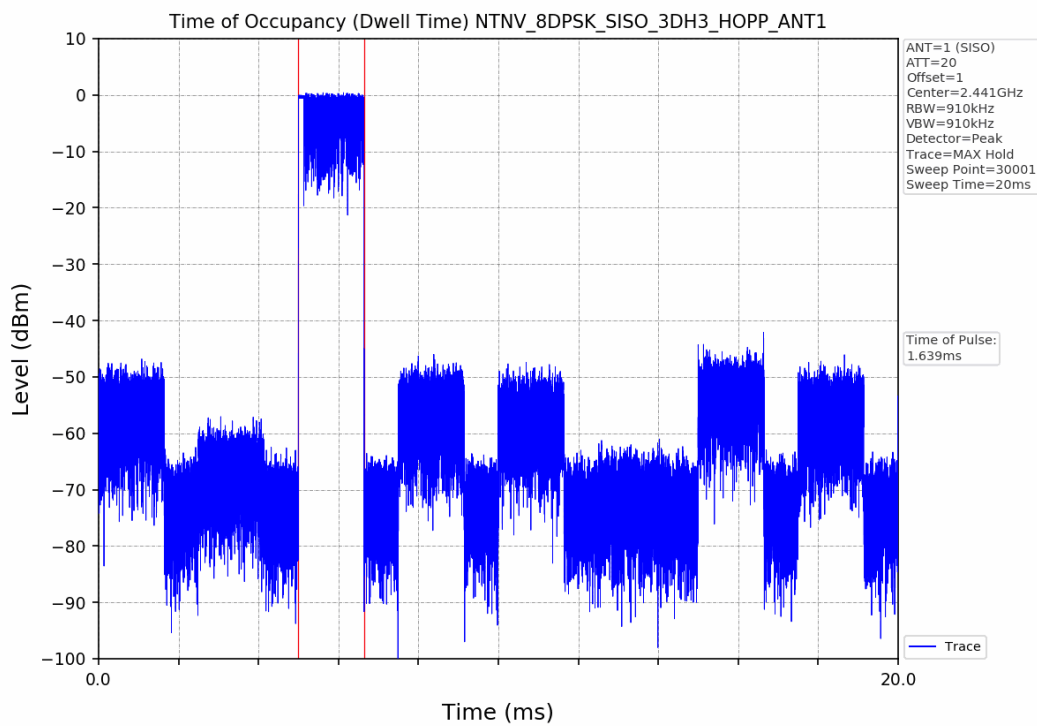
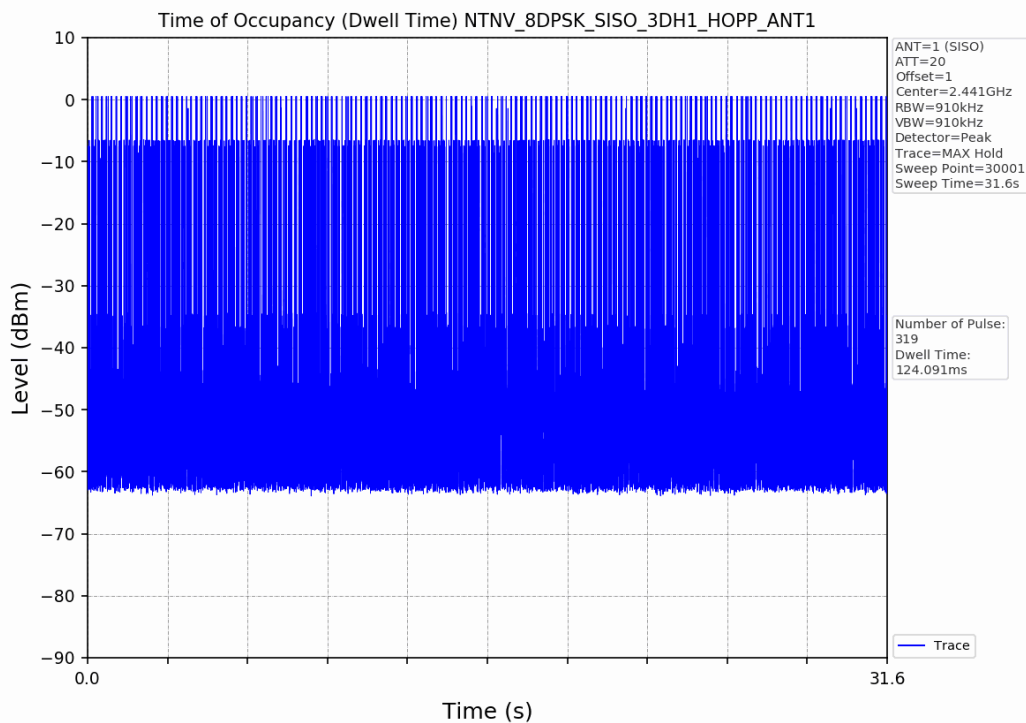


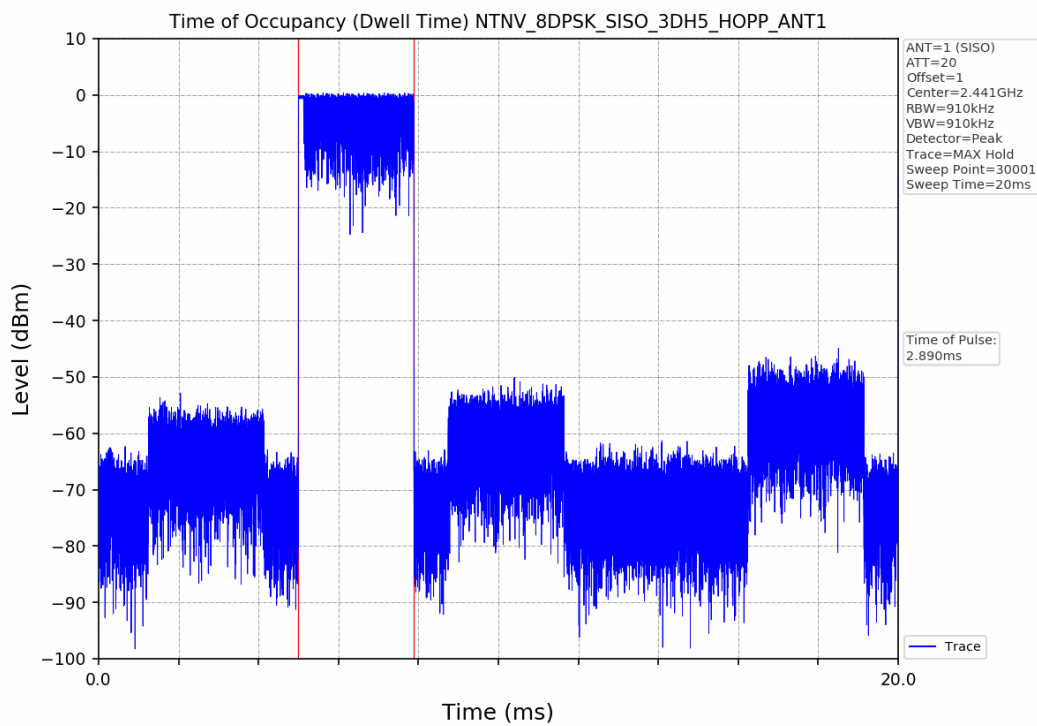
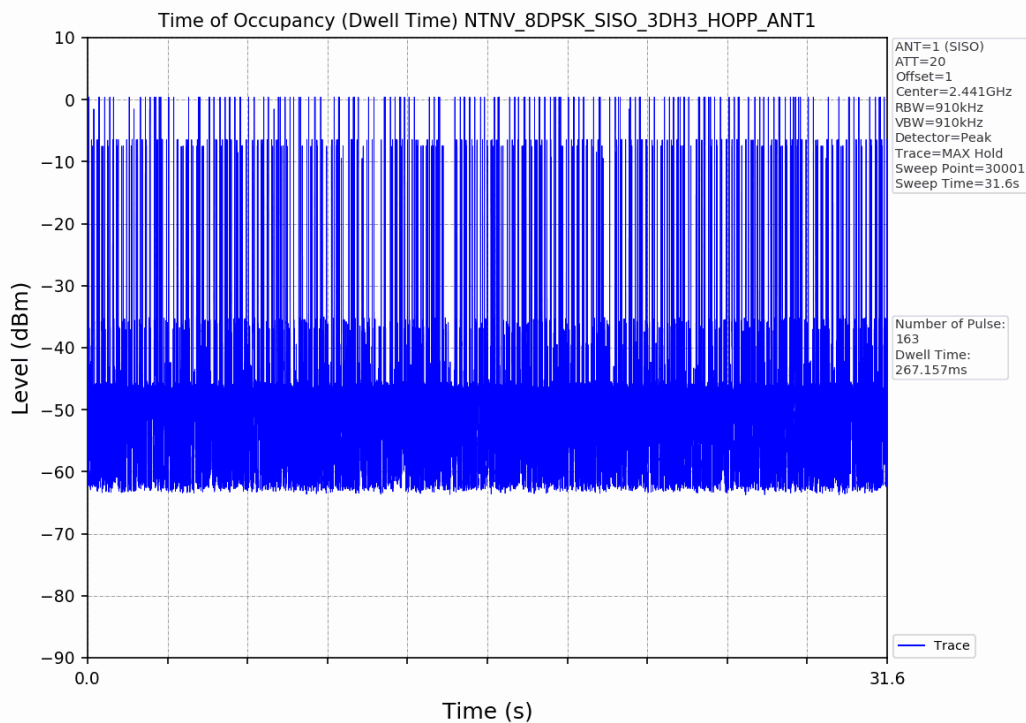


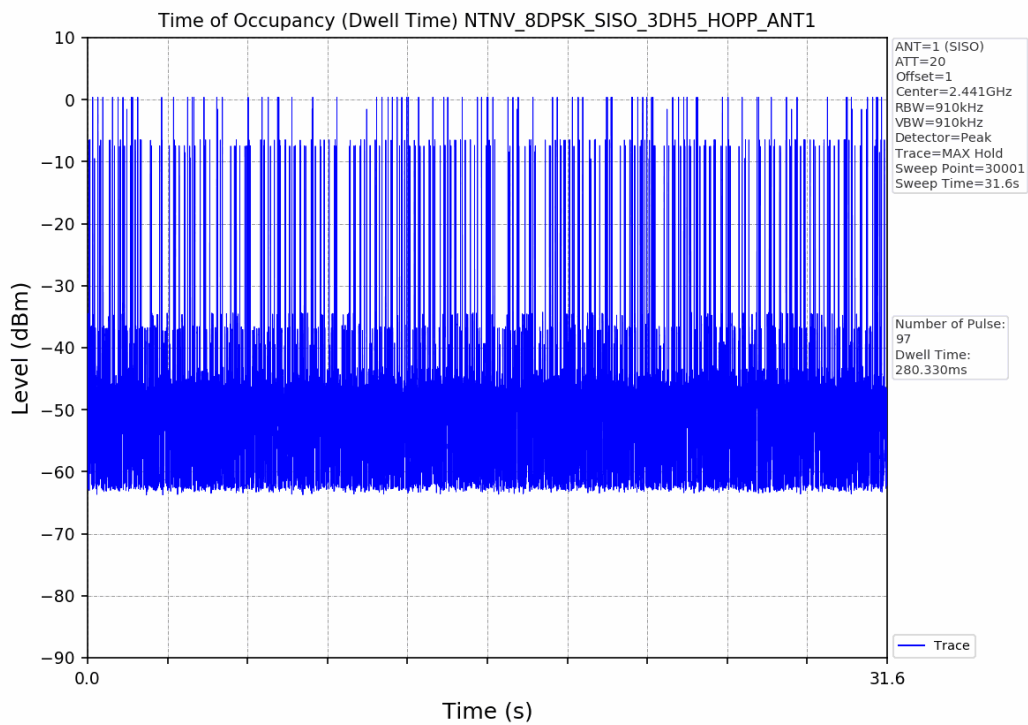










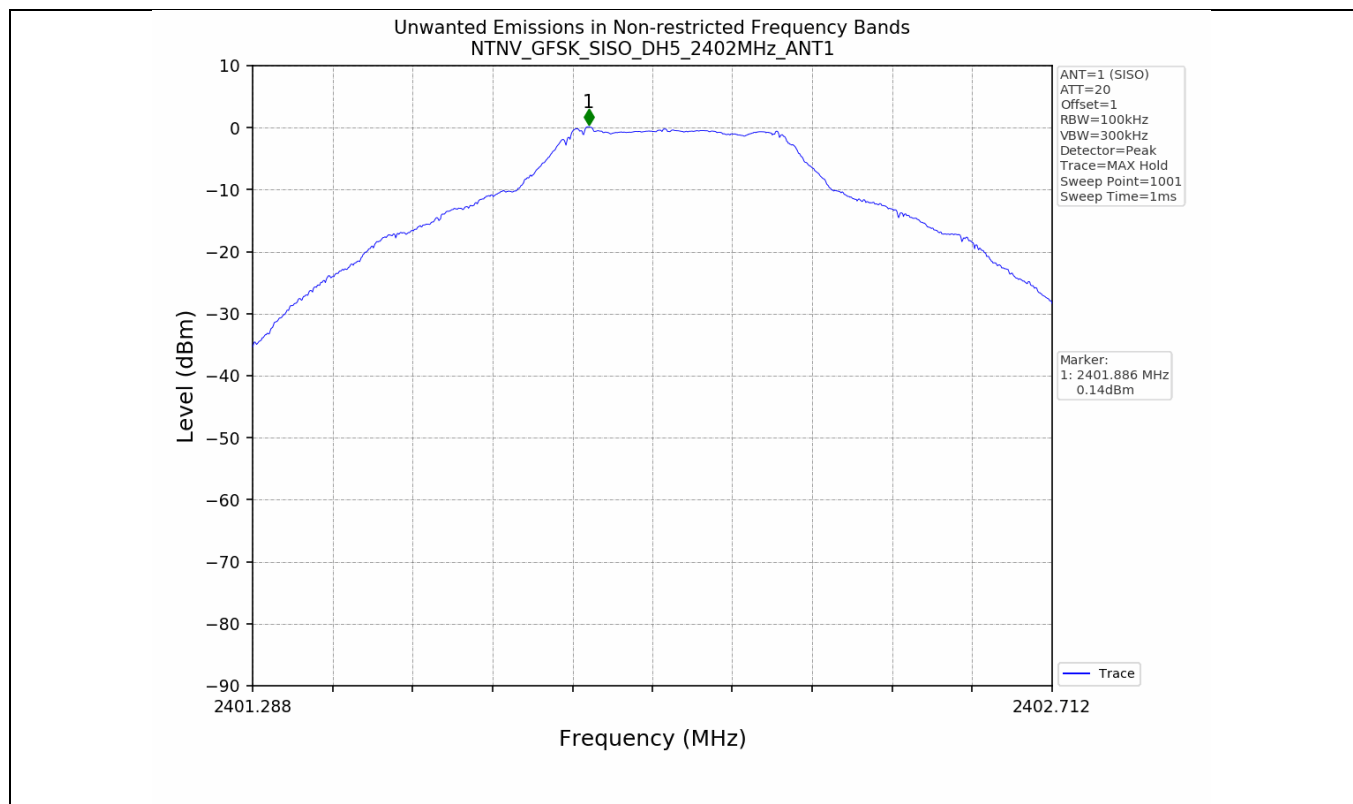


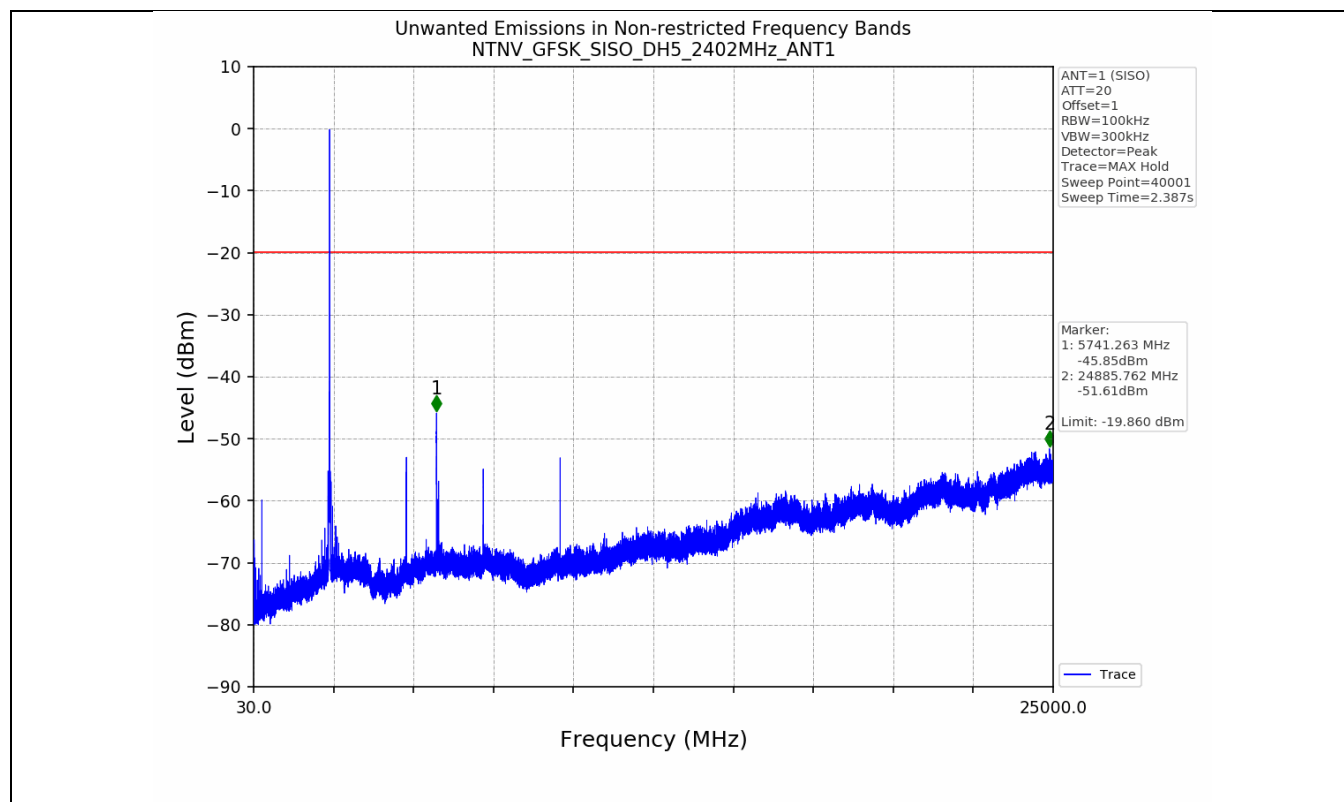
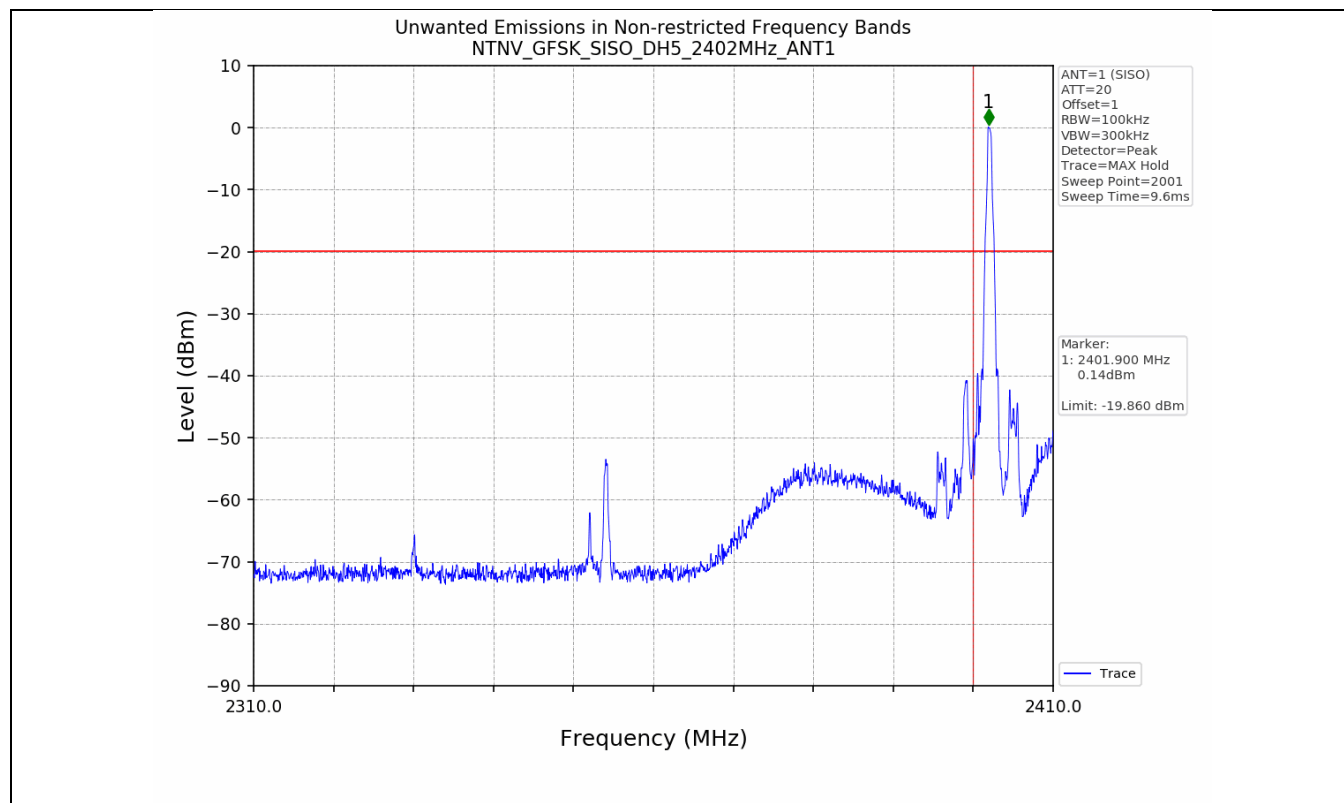
6. Unwanted Emissions in Non-restricted Frequency Bands

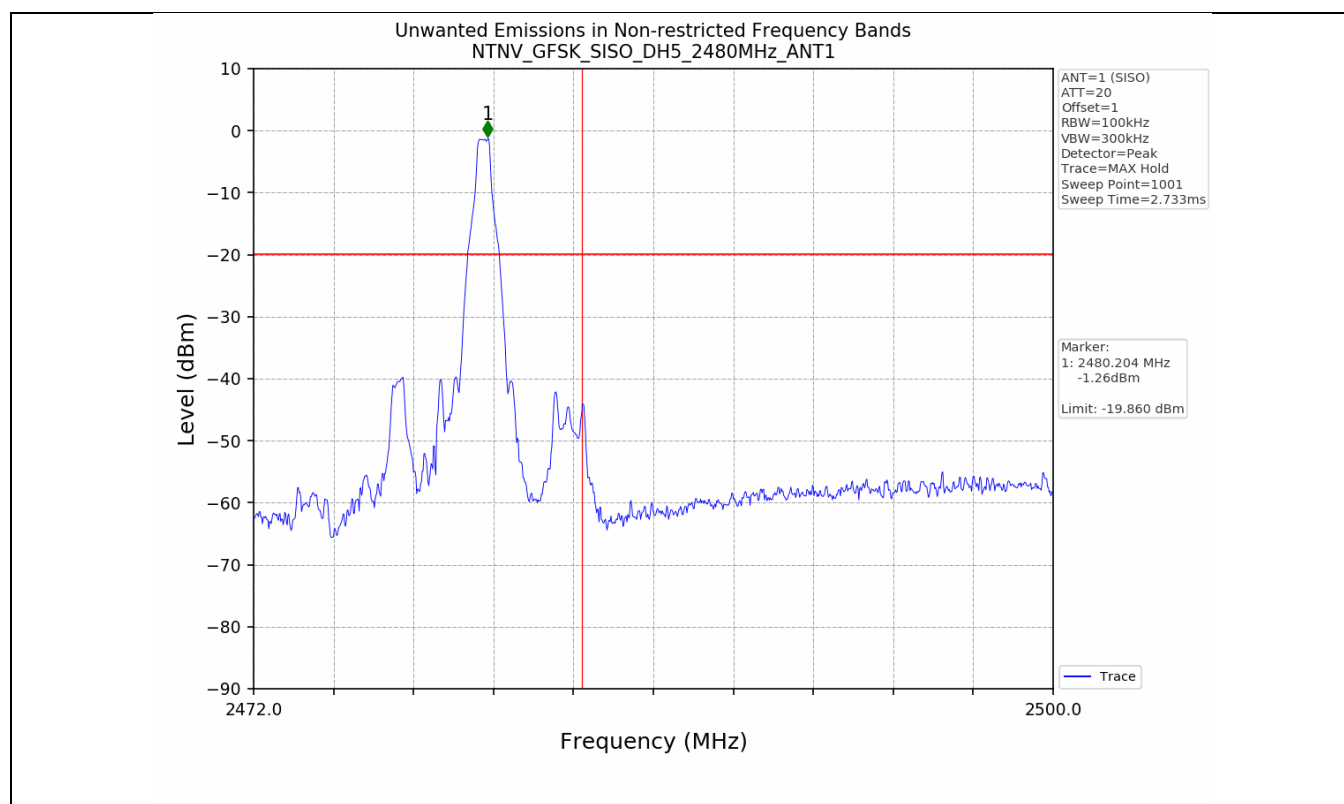
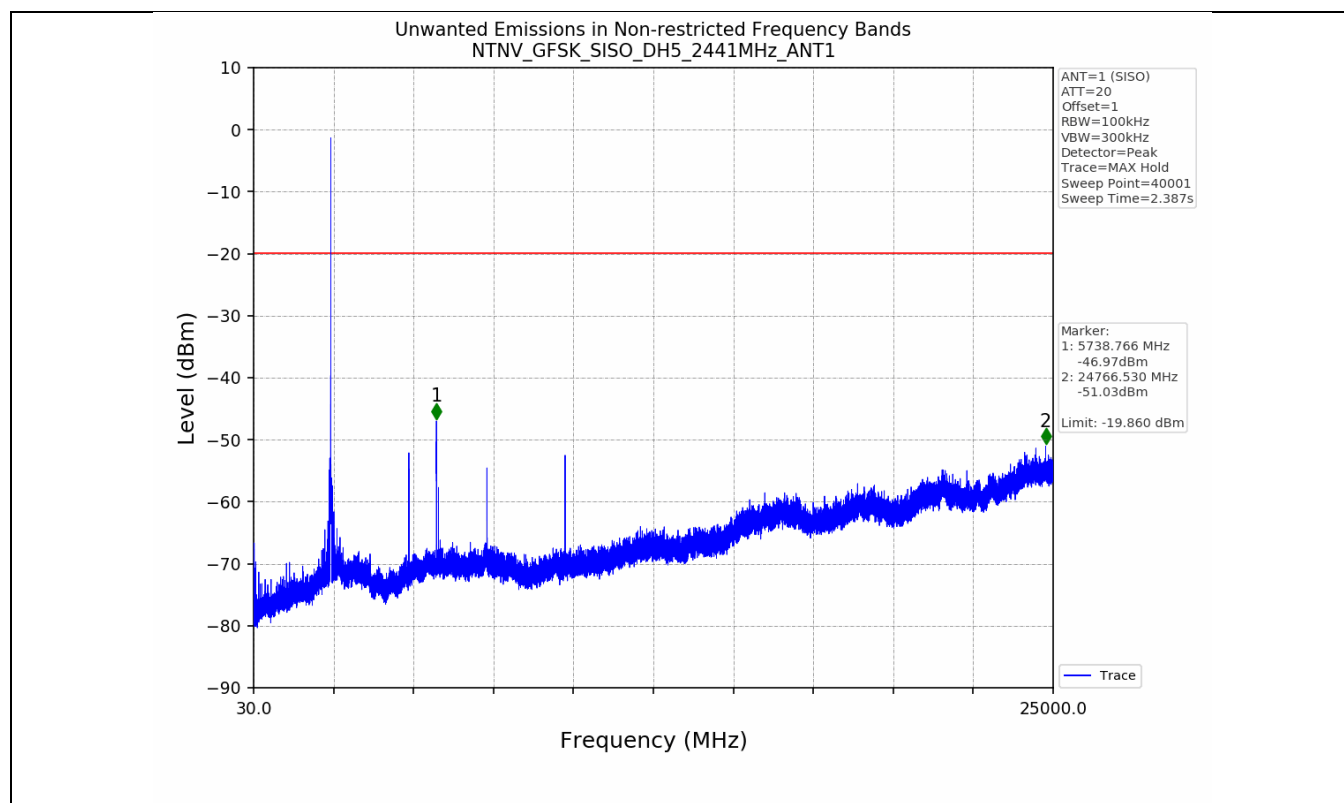
6.1 Test Result

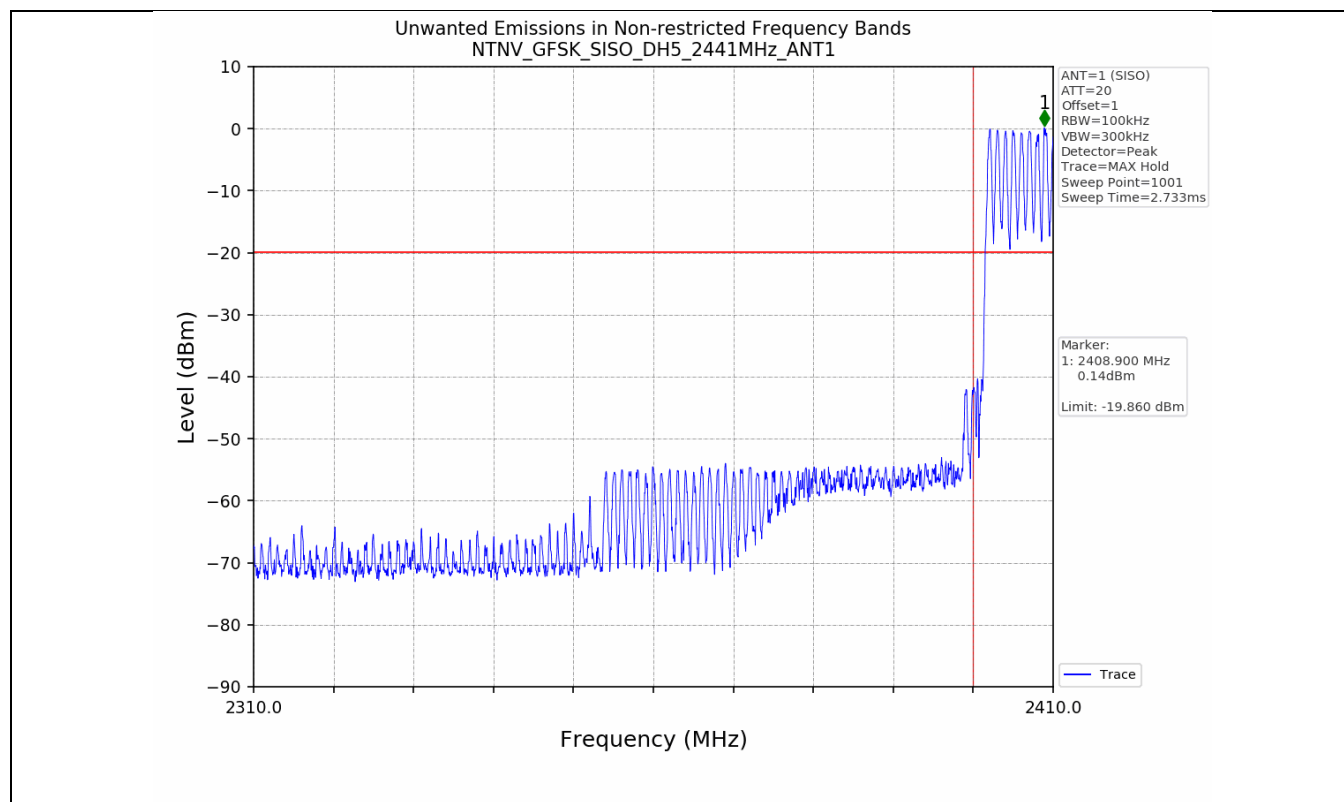
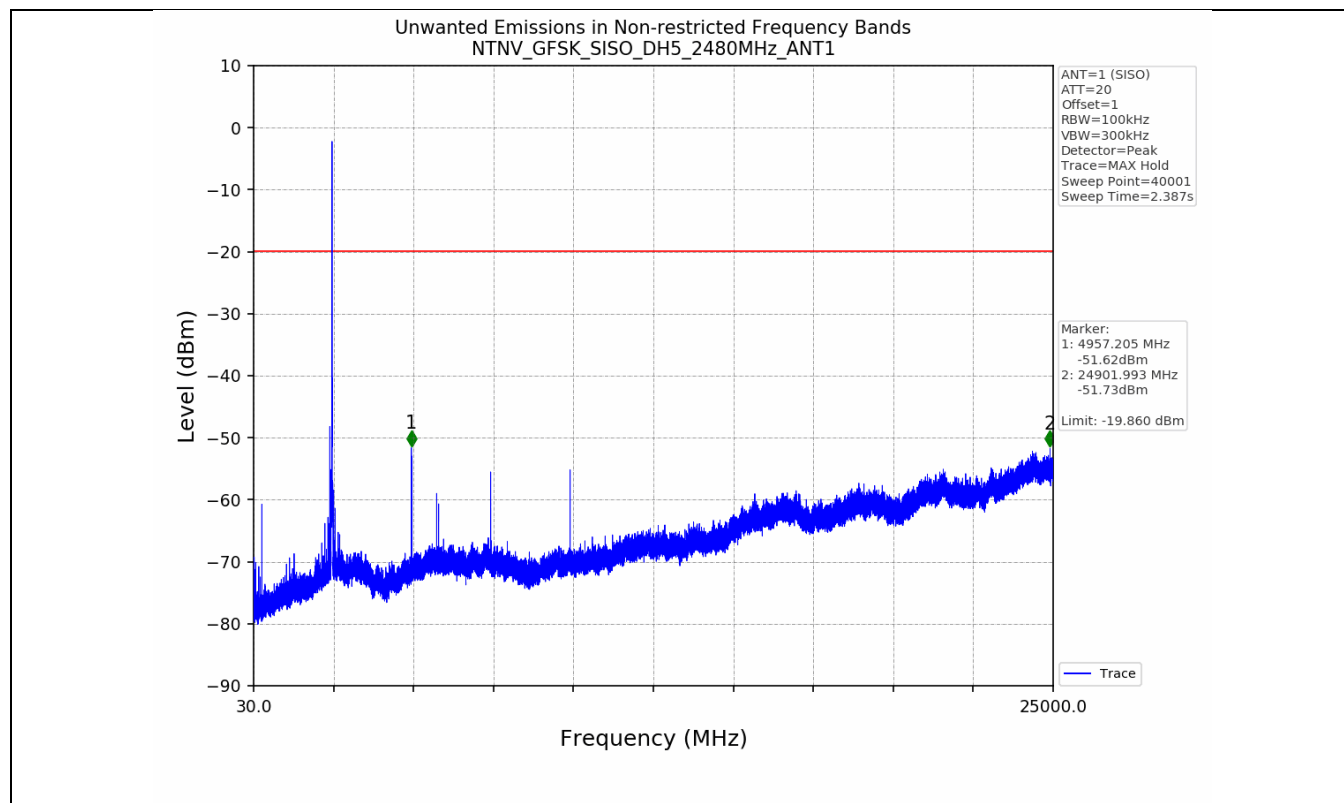
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
GFSK	2402	SISO	1	Refer to test graph	-19.86	PASS
	2441	SISO	1	Refer to test graph	-19.86	PASS
	2480	SISO	1	Refer to test graph	-19.86	PASS
	Hopping	SISO	1	Refer to test graph	-19.86	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	-19.87	PASS
	2441	SISO	1	Refer to test graph	-19.87	PASS
	2480	SISO	1	Refer to test graph	-19.87	PASS
	Hopping	SISO	1	Refer to test graph	-19.87	PASS
8DPSK	2402	SISO	1	Refer to test graph	-19.87	PASS
	2441	SISO	1	Refer to test graph	-19.87	PASS
	2480	SISO	1	Refer to test graph	-19.87	PASS
	Hopping	SISO	1	Refer to test graph	-19.87	PASS

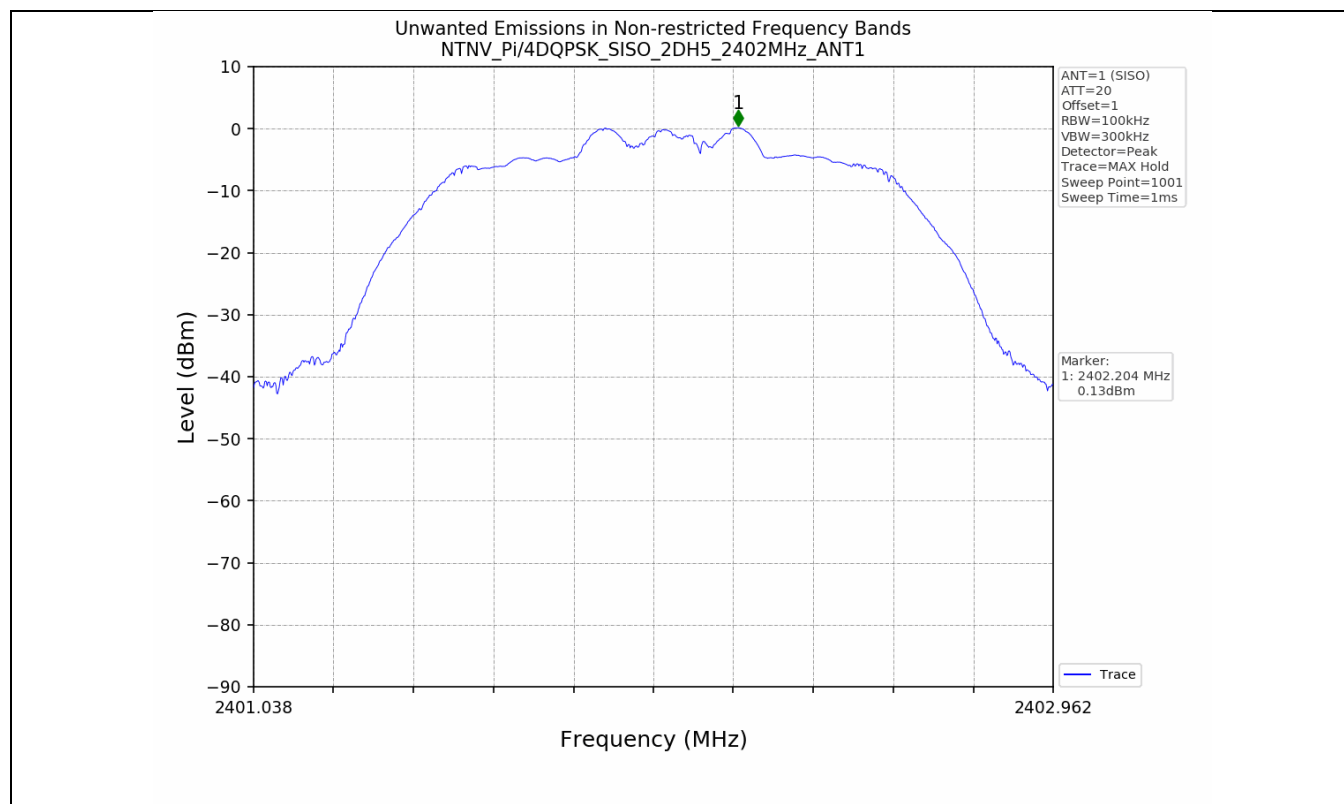
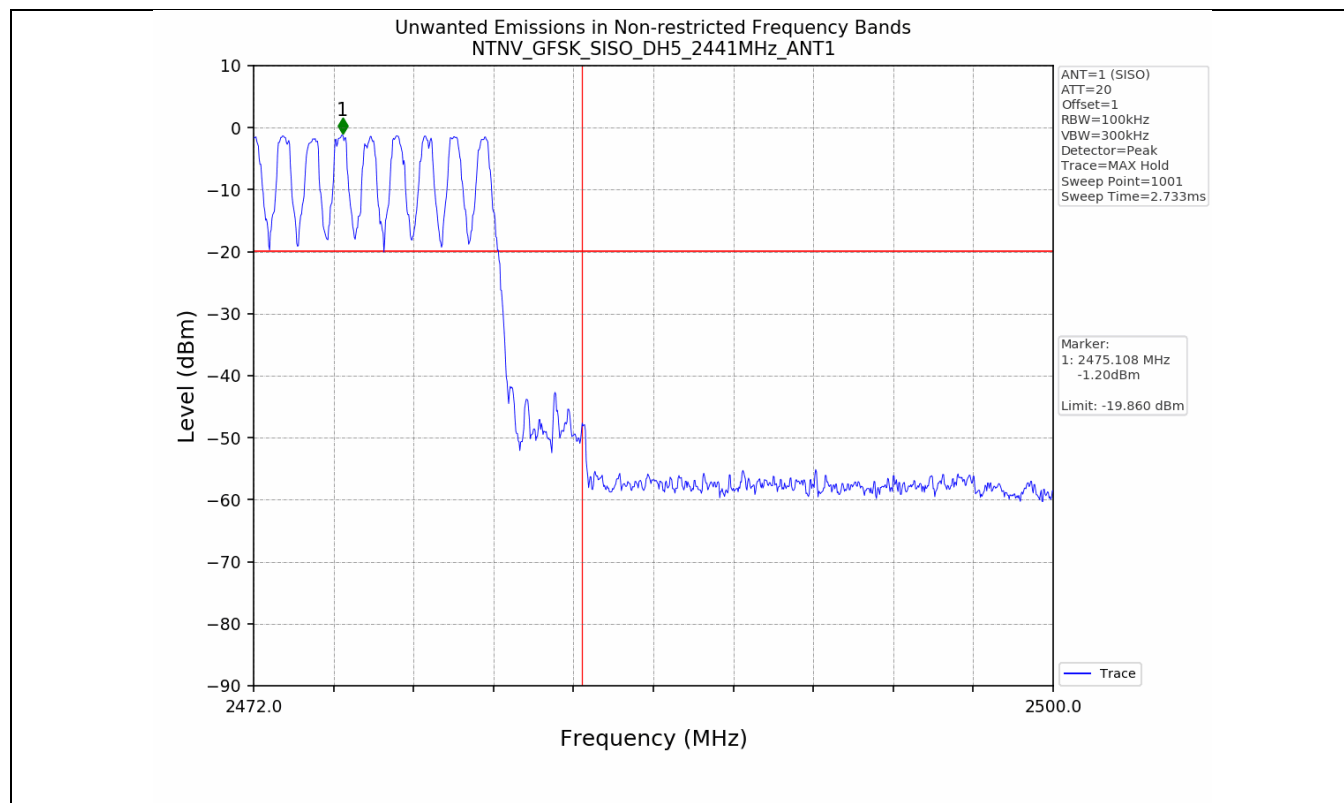
6.2 Test Graph

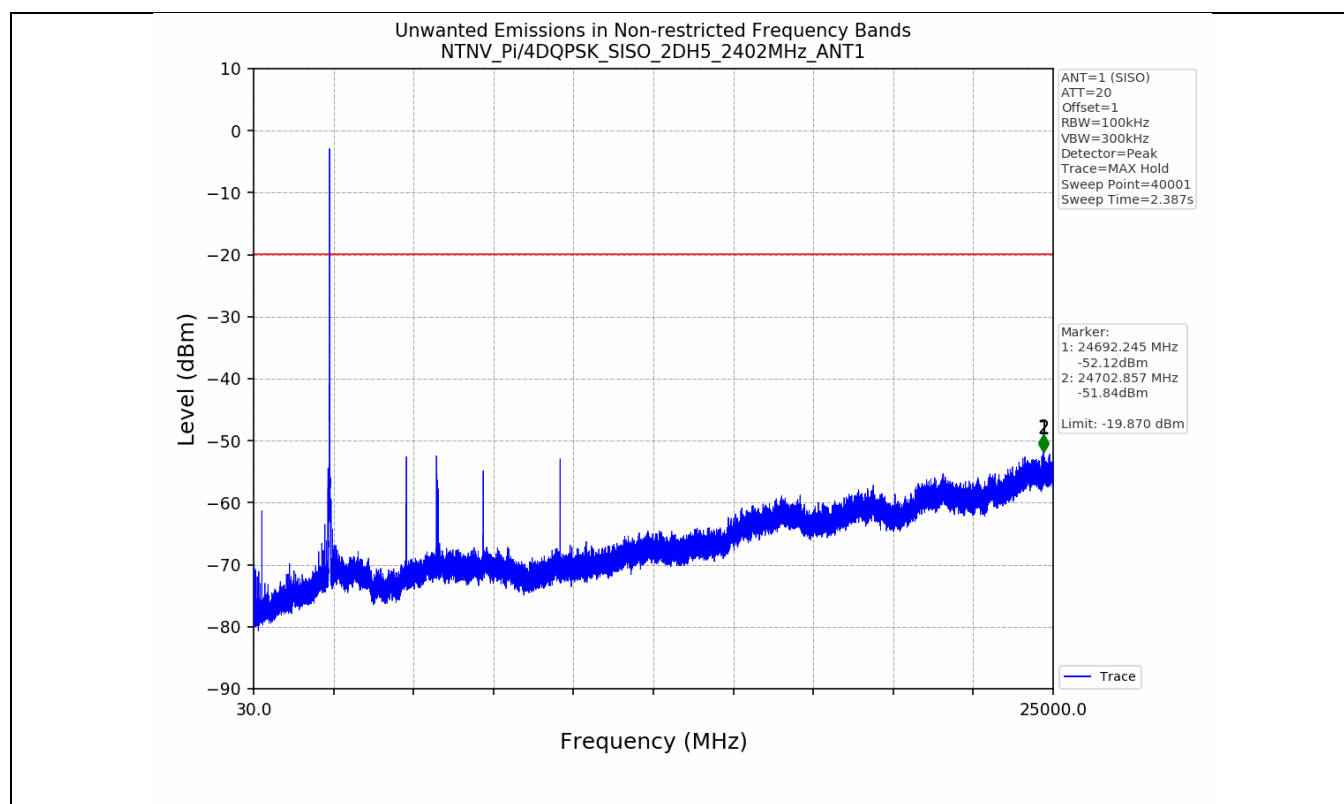
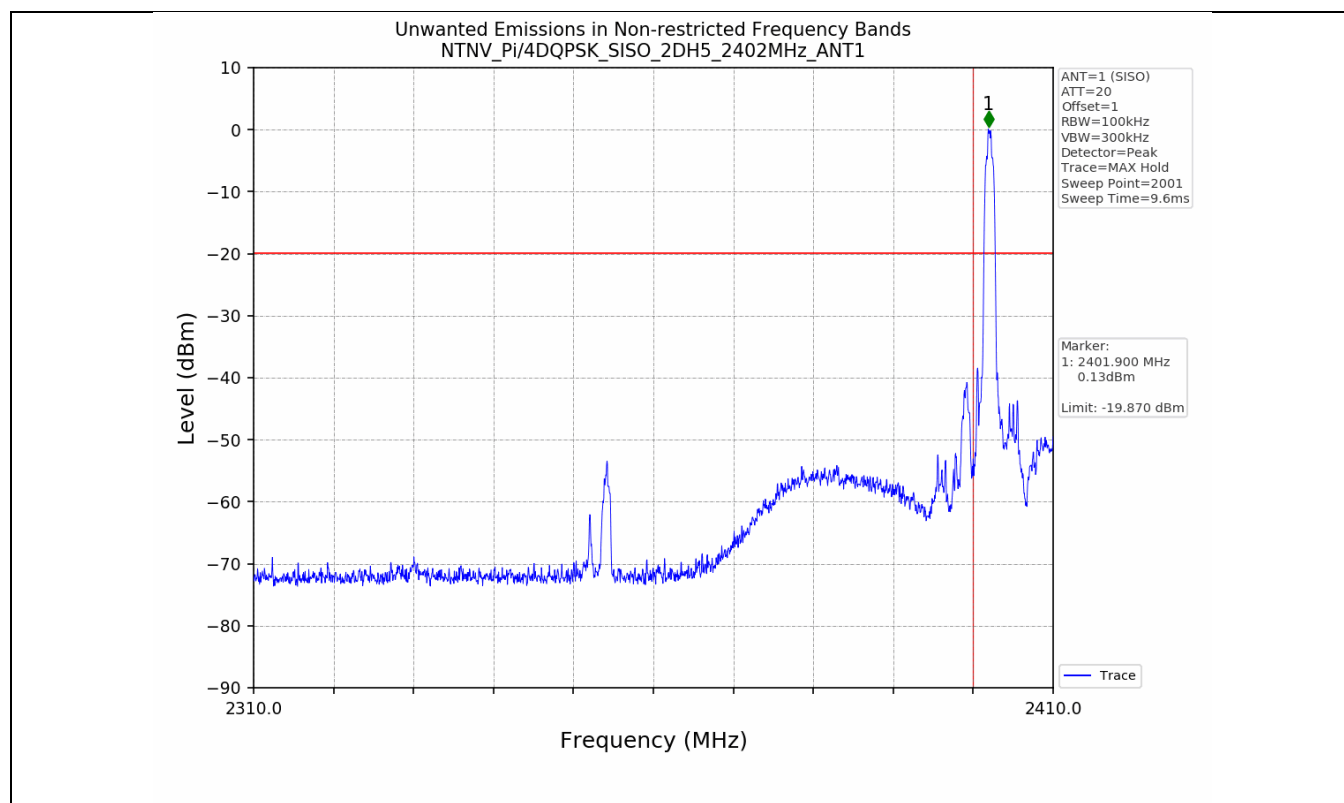


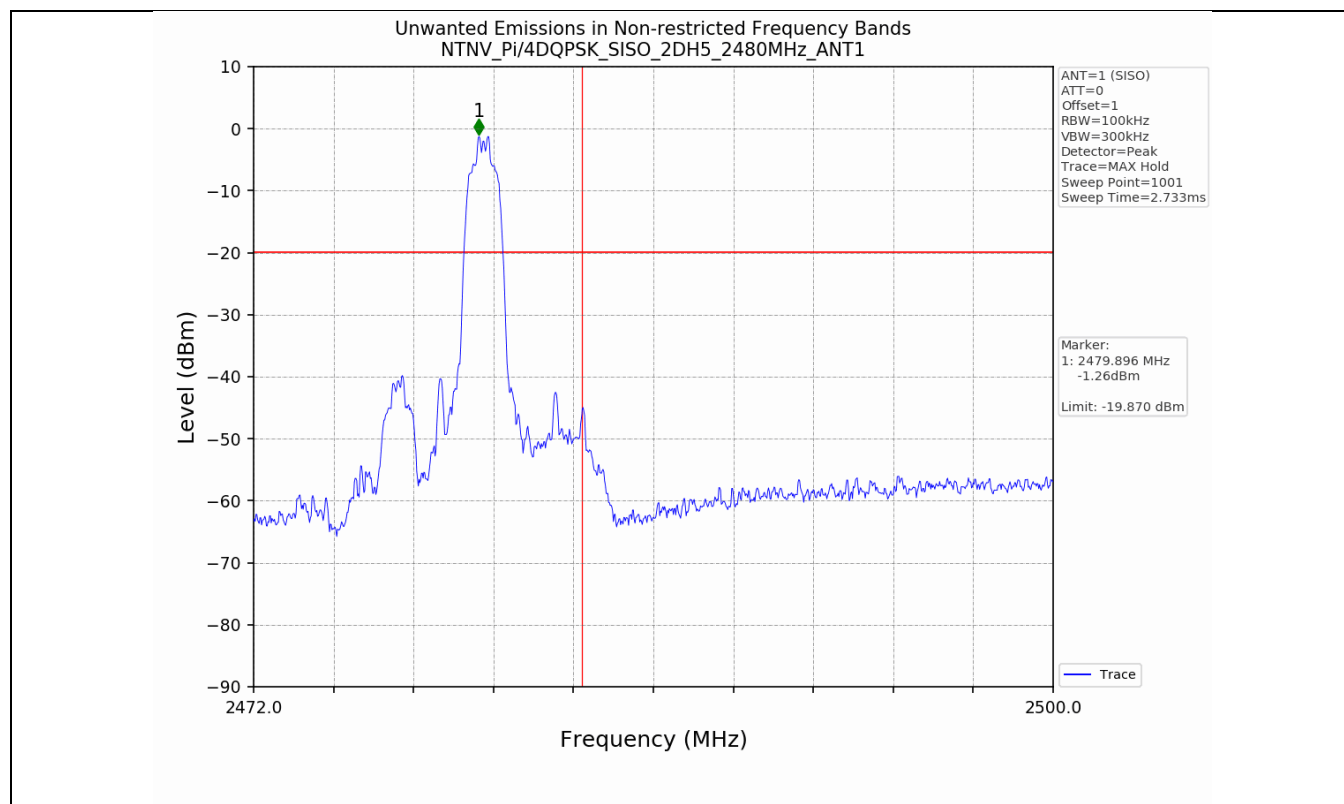
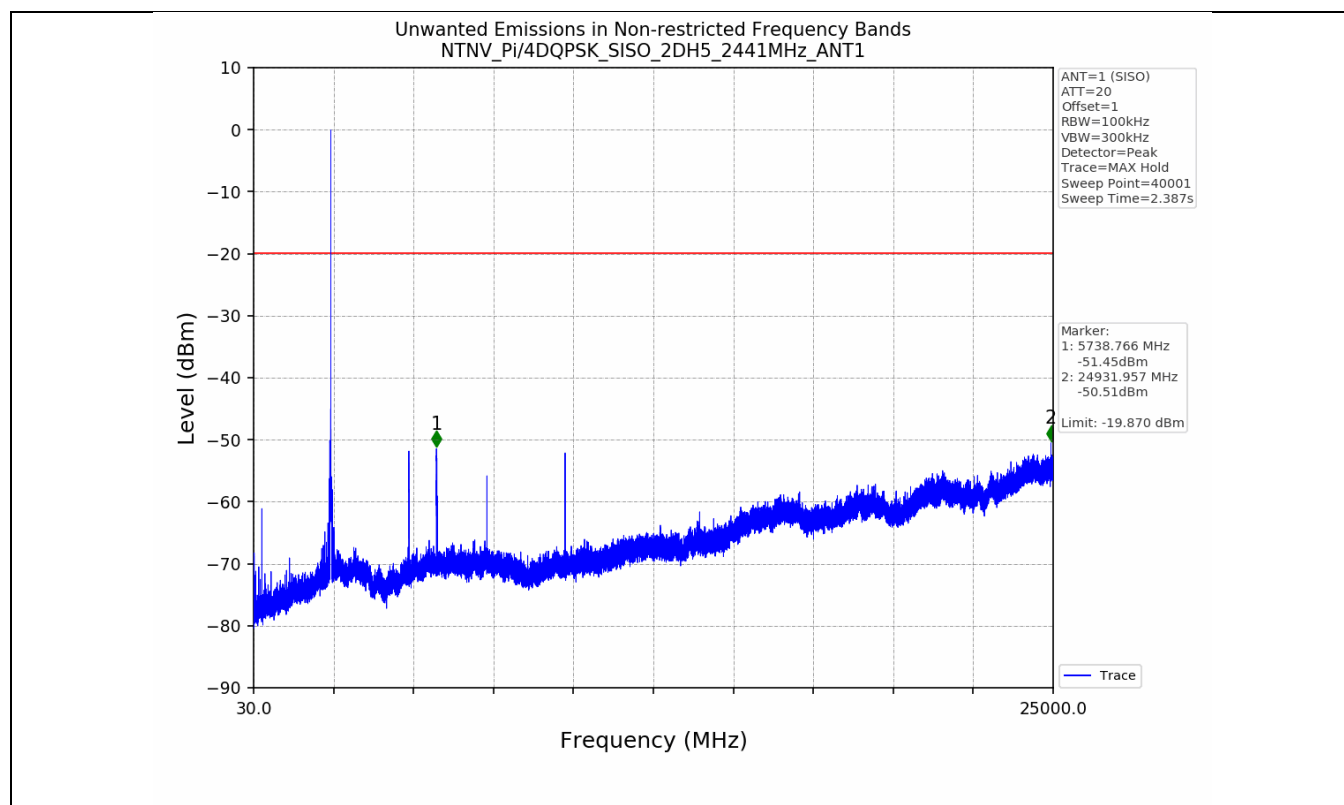


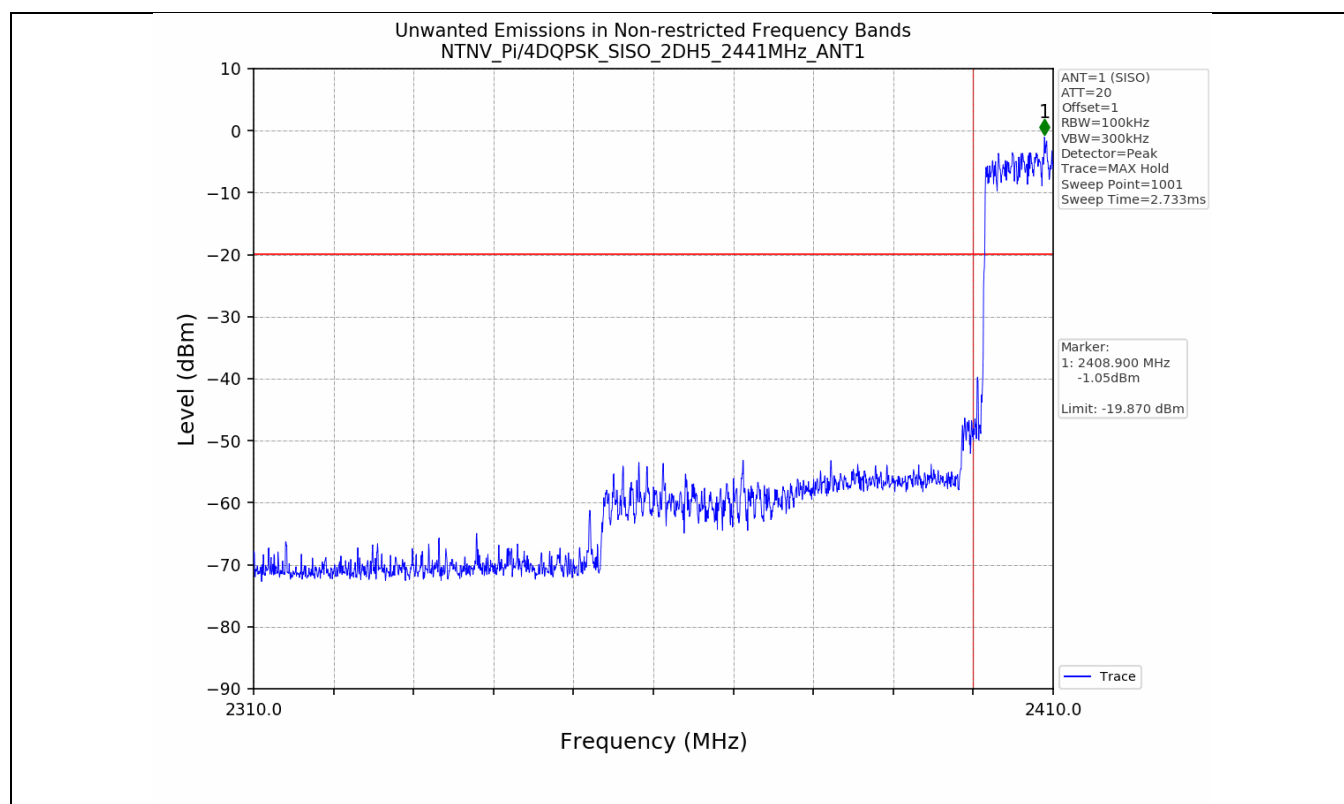
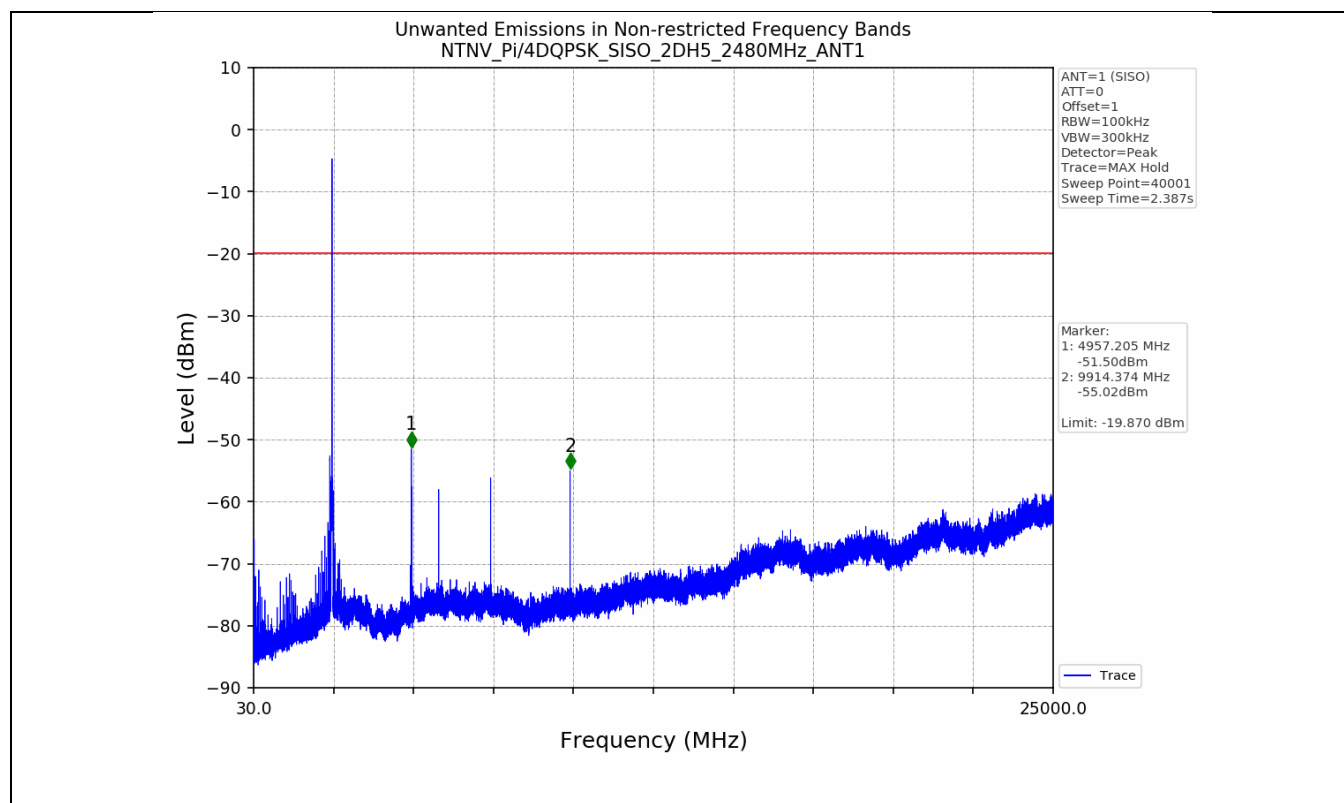


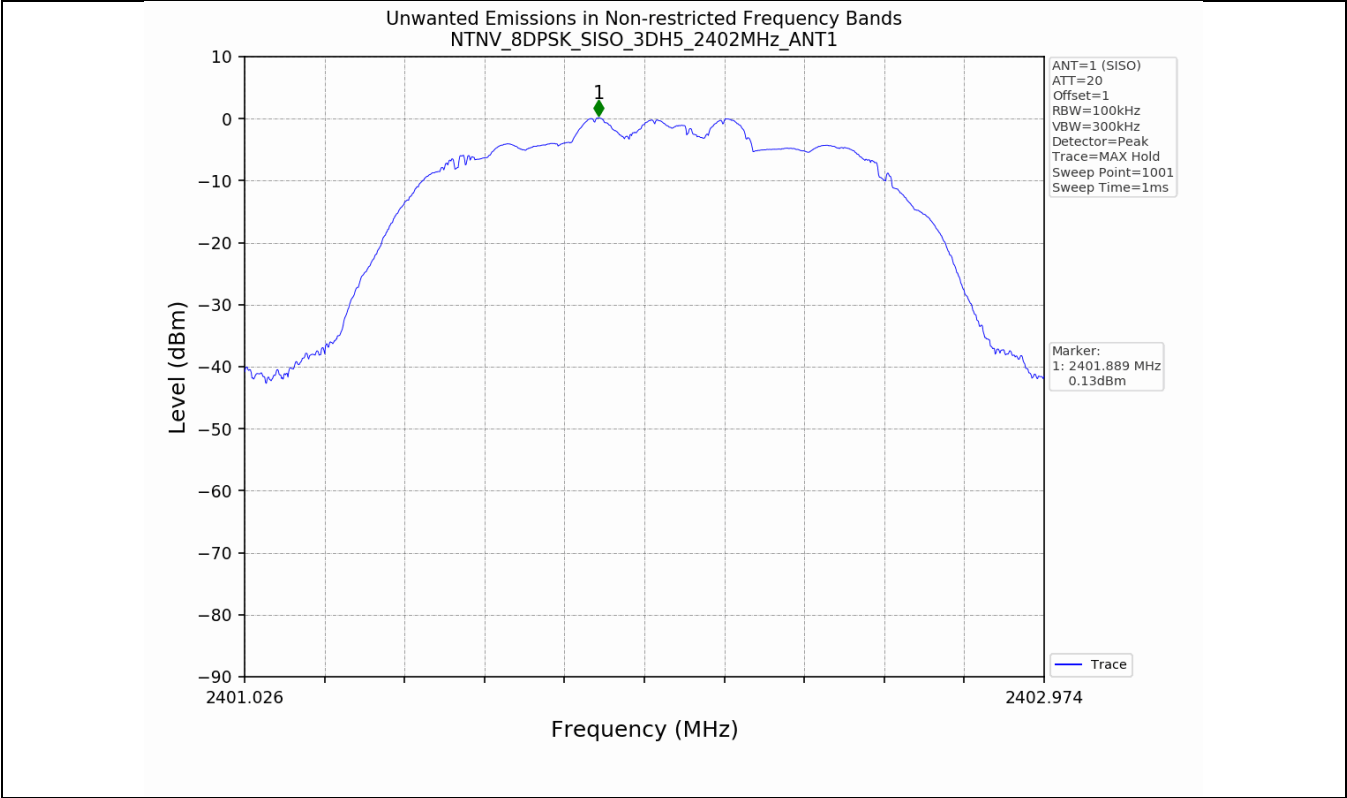
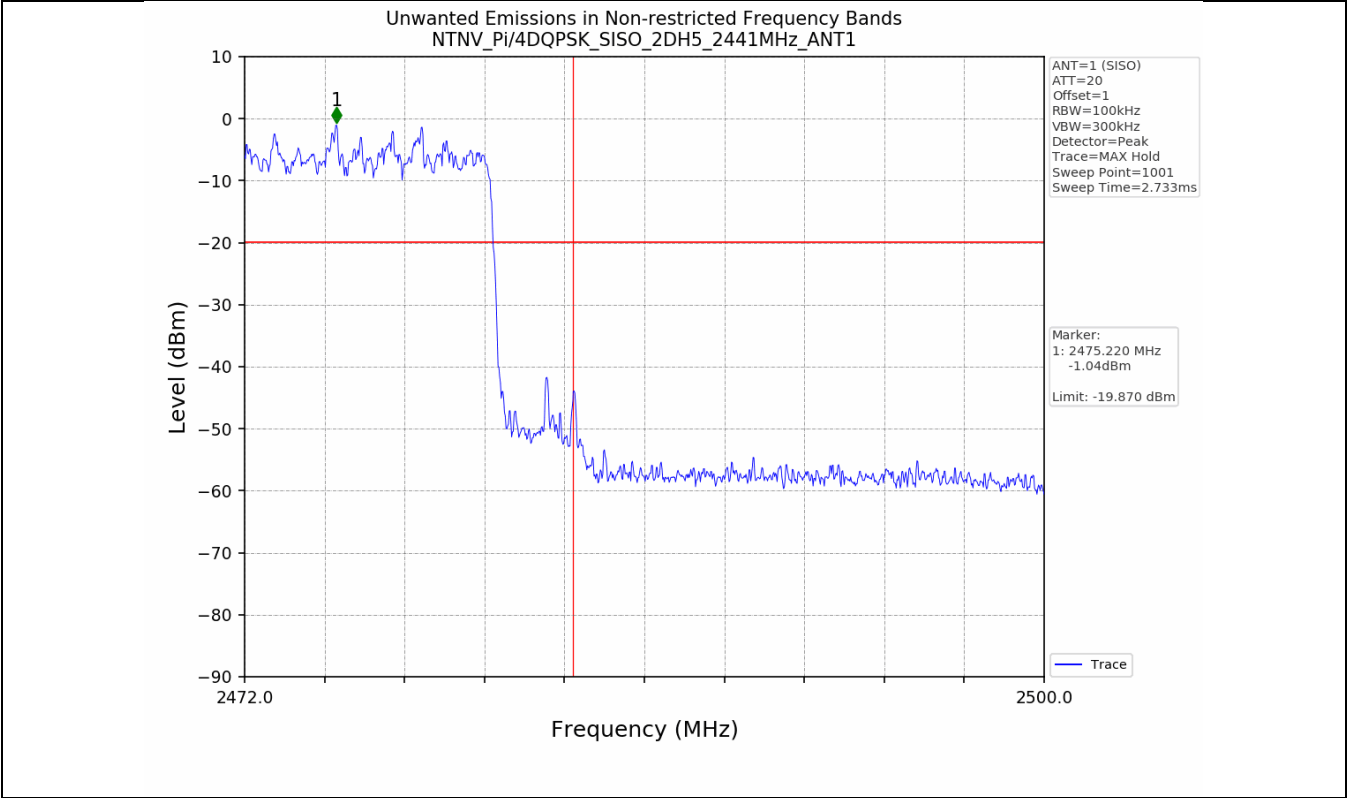


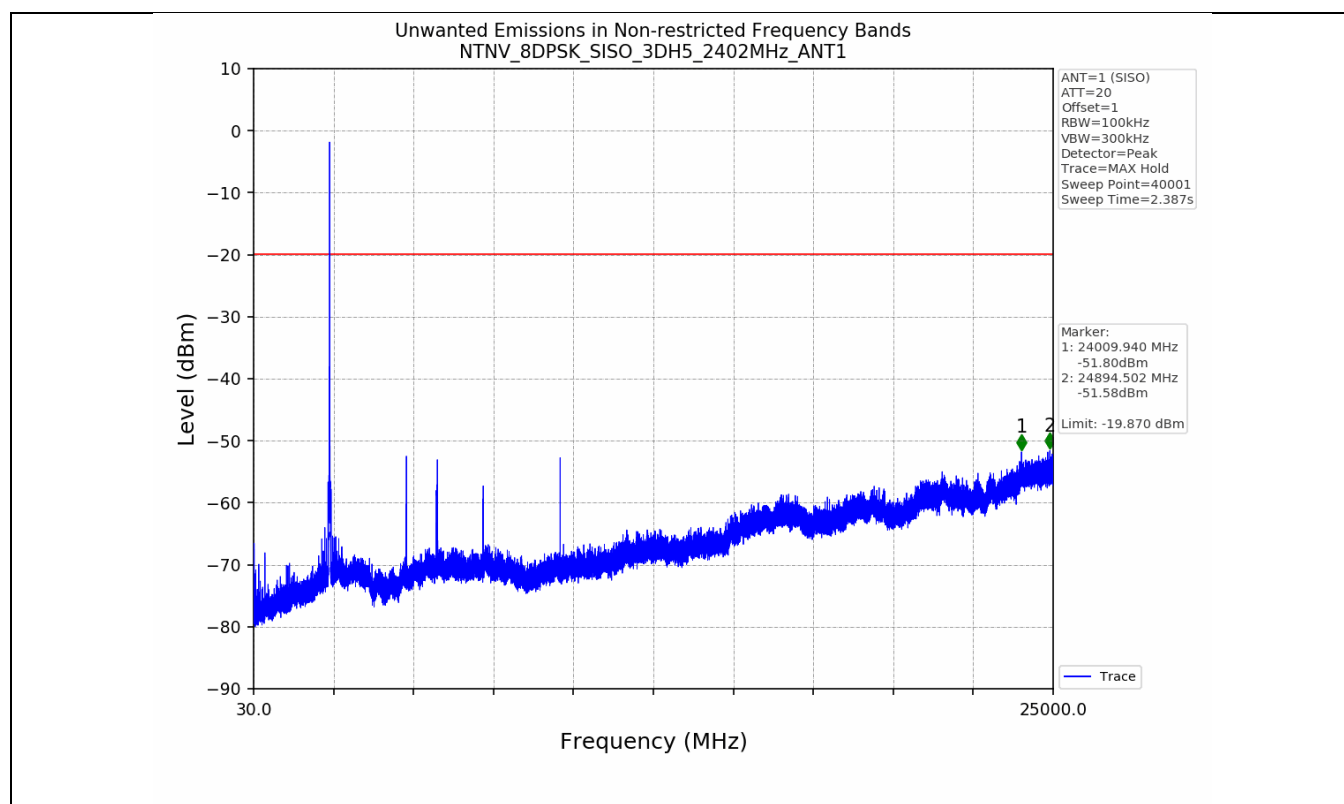
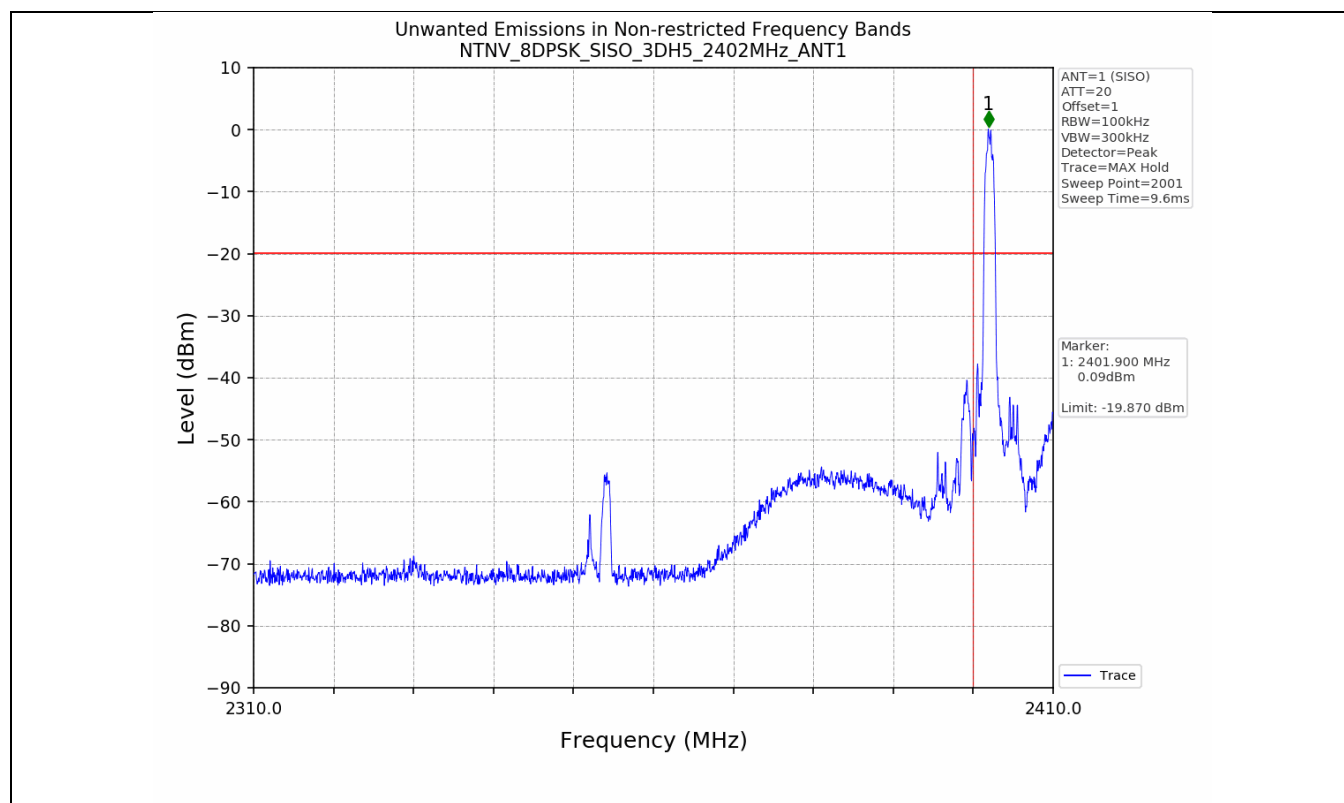


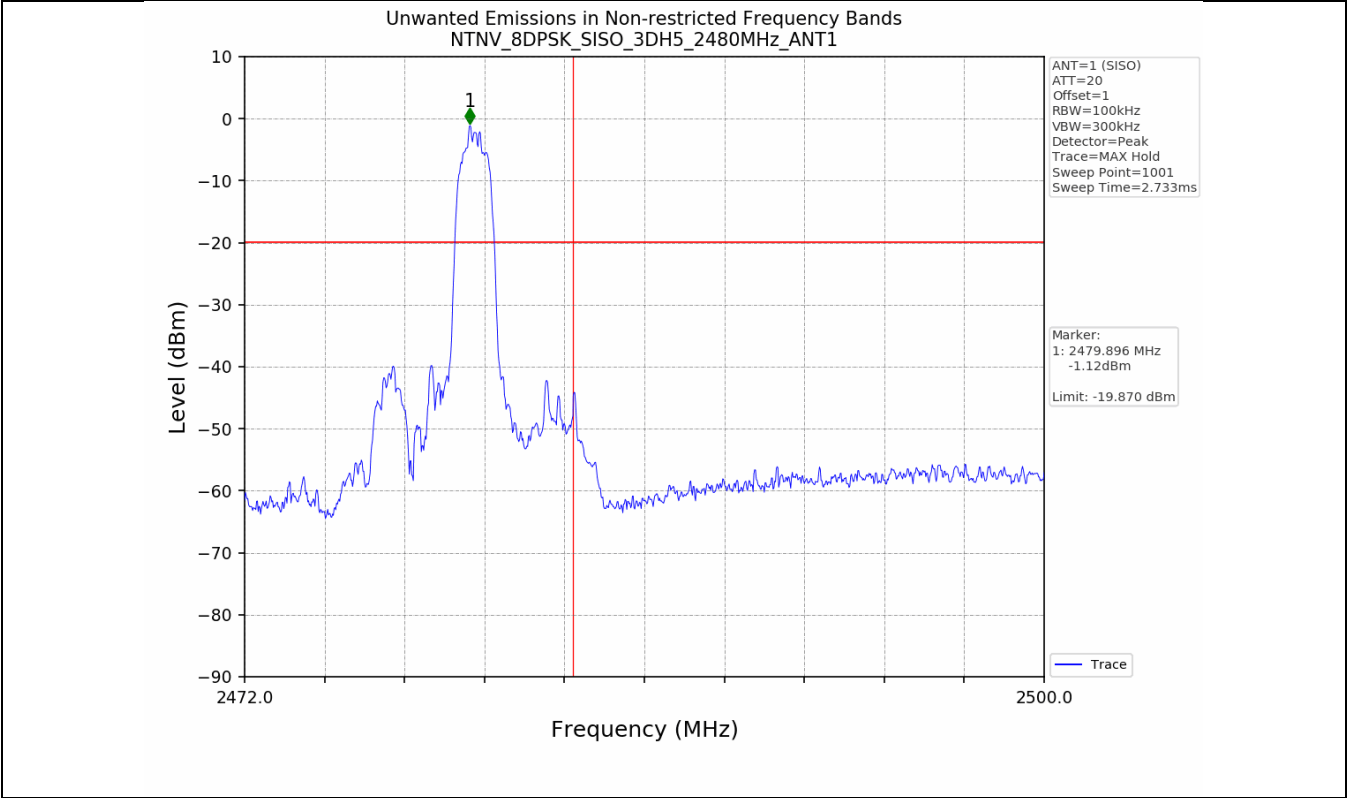
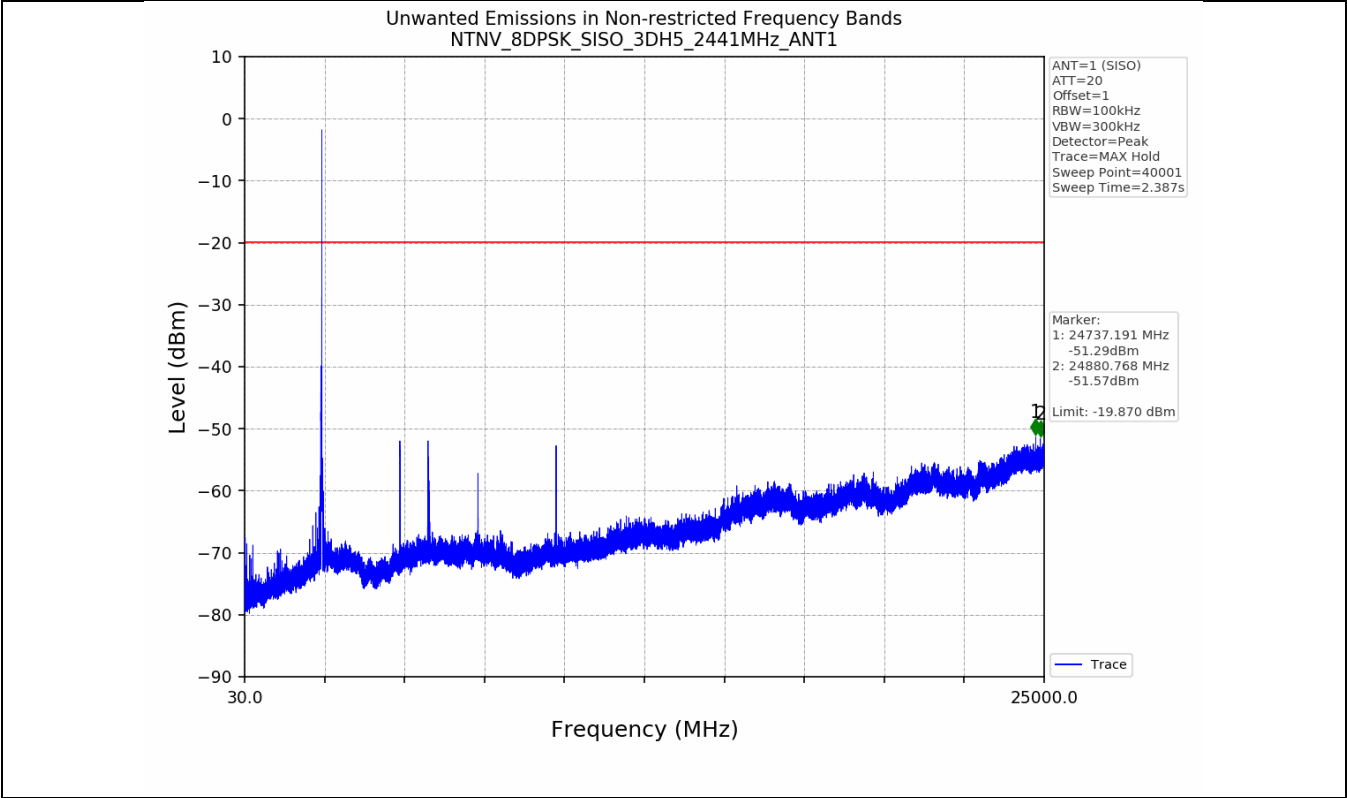


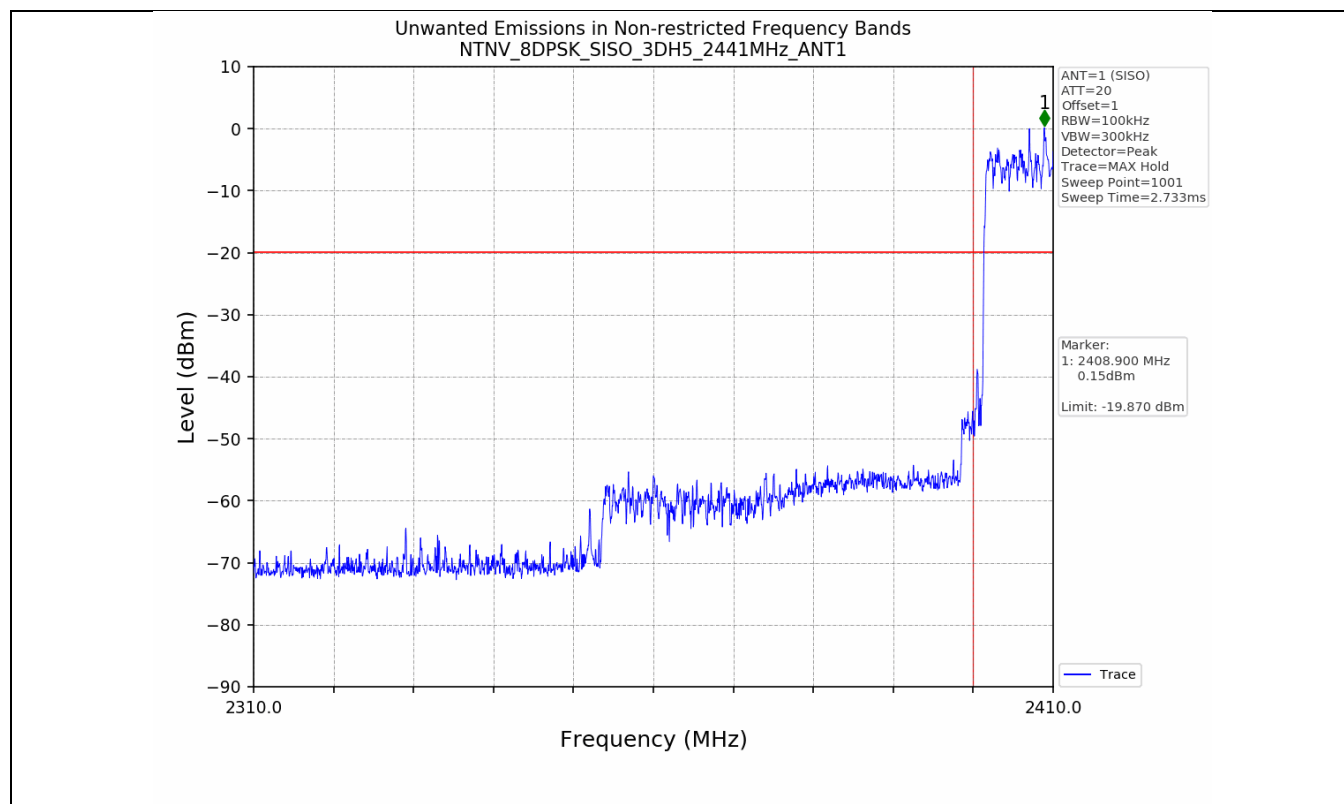
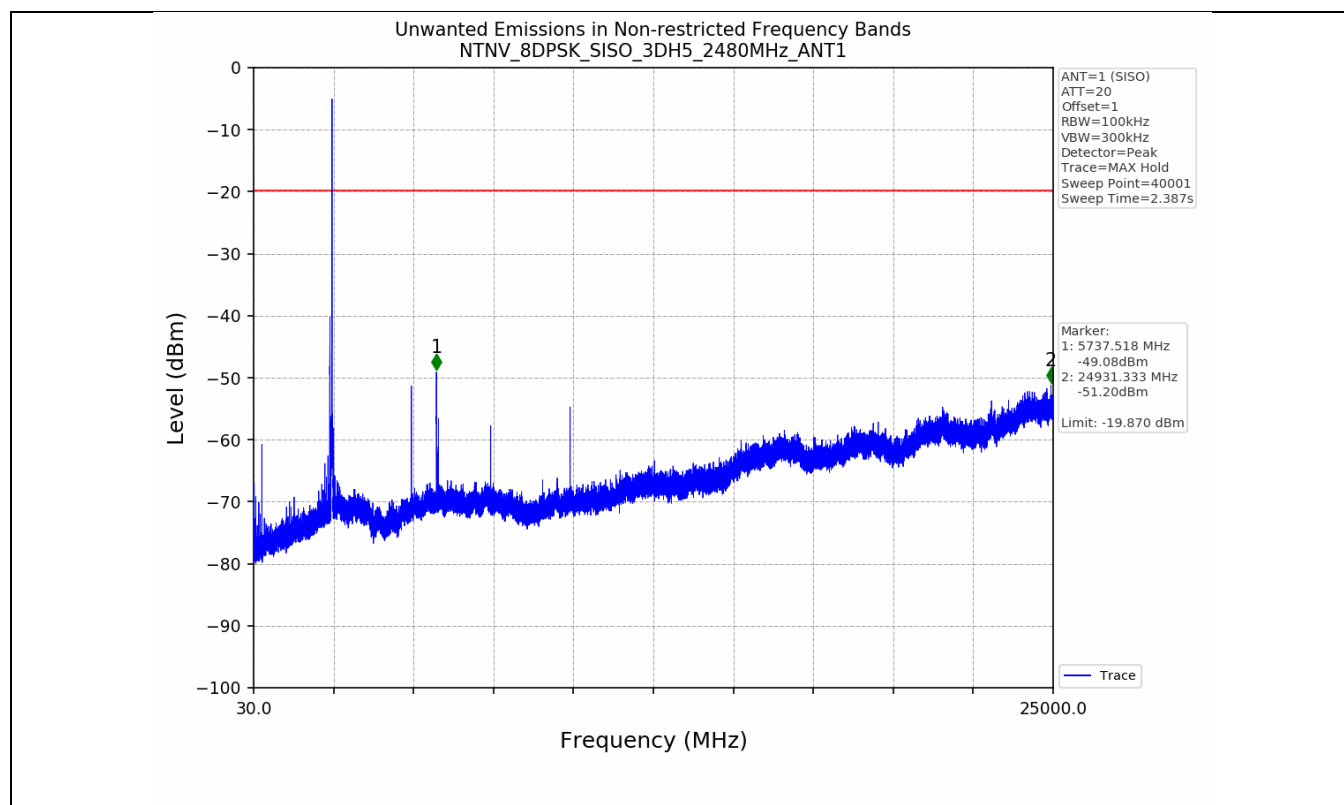


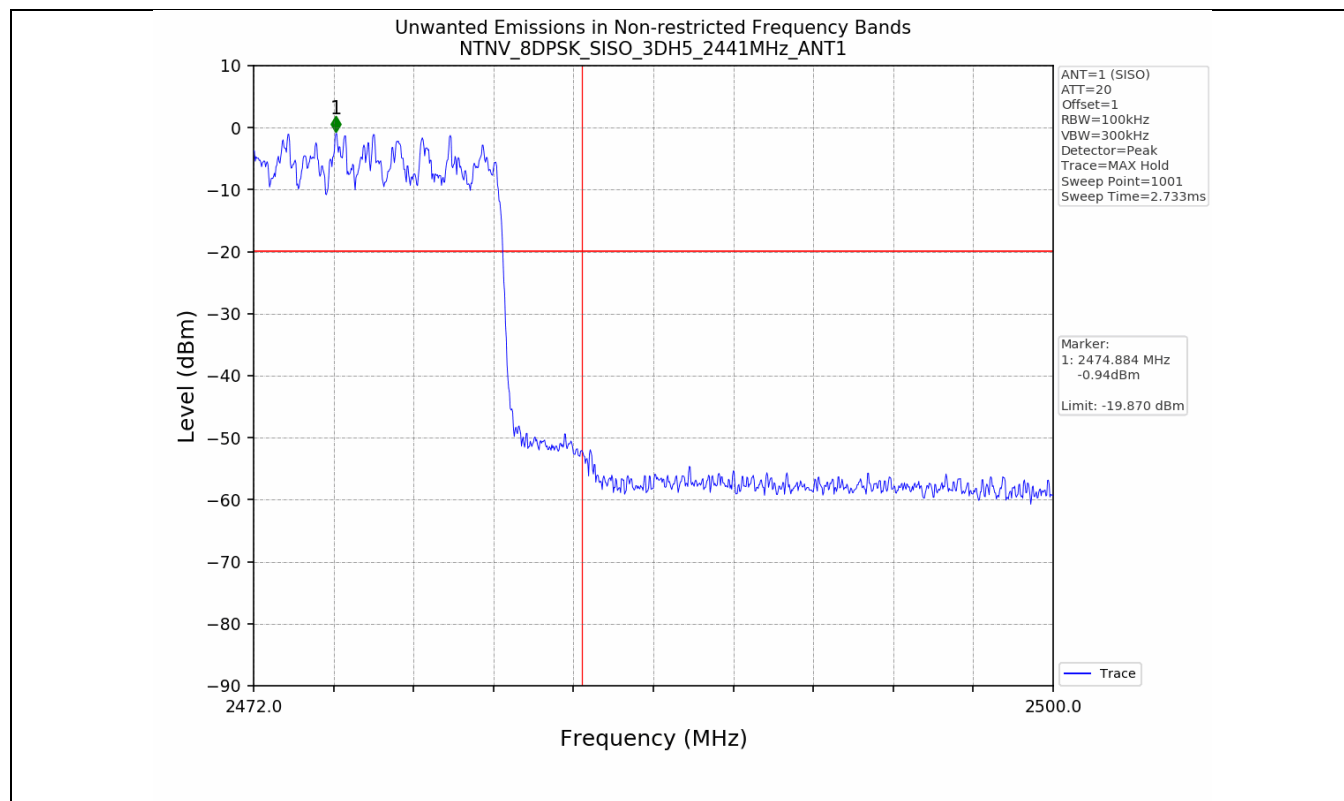












7. Frequency Error

7.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT	Measured Frequency (MHz)		Verdict
				Test Result	Limit	
GFSK	2402	SISO	1	2402.04	2400-2483.5	PASS
	2441	SISO	1	2441.04	2400-2483.5	PASS
	2480	SISO	1	2480.04	2400-2483.5	PASS
Pi/4DQPSK	2402	SISO	1	2402.04	2400-2483.5	PASS
	2441	SISO	1	2441.03	2400-2483.5	PASS
	2480	SISO	1	2480.04	2400-2483.5	PASS

7.2 Test Graph

