



Appendix B for SHEM200300156702

1. Bandwidth

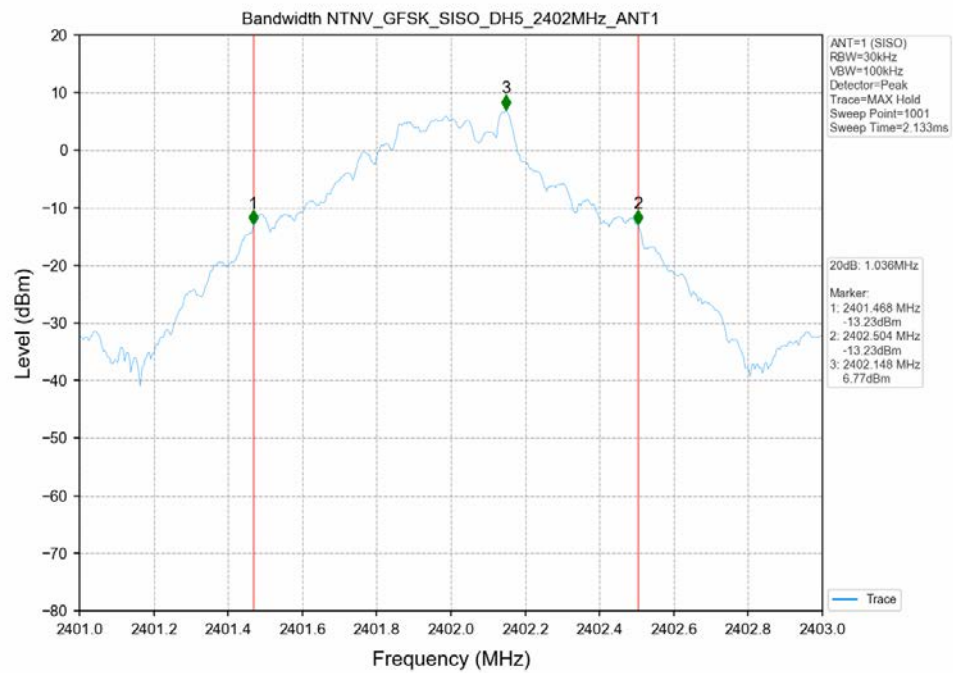
1.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	1.036	PASS
	2441	SISO	1	1.035	PASS
	2480	SISO	1	1.035	PASS
Pi/4DQPSK	2402	SISO	1	1.354	PASS
	2441	SISO	1	1.354	PASS
	2480	SISO	1	1.350	PASS
8DPSK	2402	SISO	1	1.318	PASS
	2441	SISO	1	1.318	PASS
	2480	SISO	1	1.317	PASS

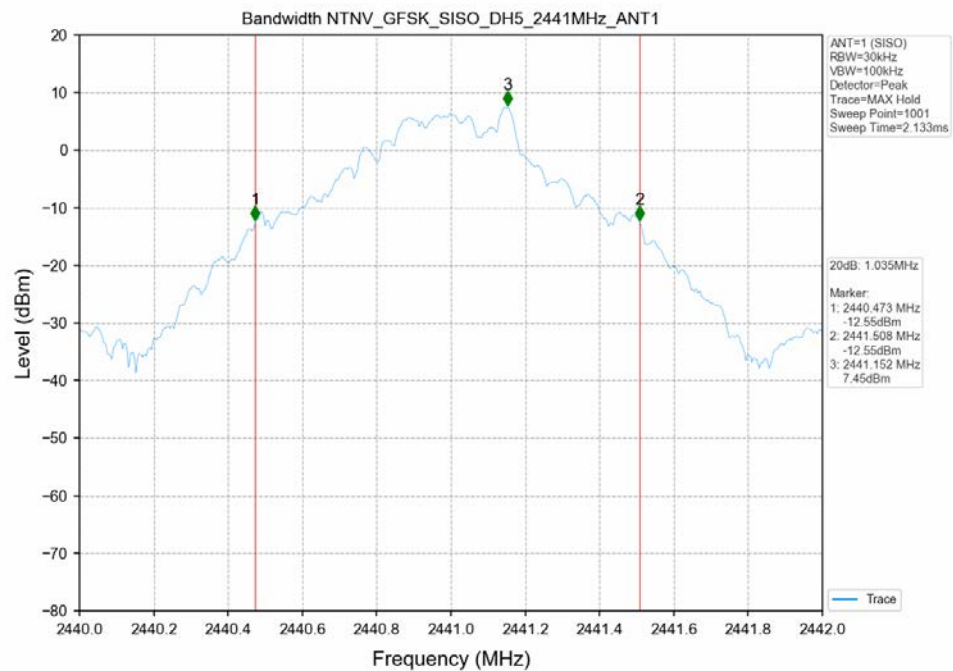
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
GFSK	2402	SISO	1	1.059	Only for Report Use
	2441	SISO	1	0.934	Only for Report Use
	2480	SISO	1	0.923	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.210	Only for Report Use
	2441	SISO	1	1.213	Only for Report Use
	2480	SISO	1	1.208	Only for Report Use
8DPSK	2402	SISO	1	1.225	Only for Report Use
	2441	SISO	1	1.215	Only for Report Use
	2480	SISO	1	1.213	Only for Report Use

1.2 Test Graph - 20dB Bandwidth

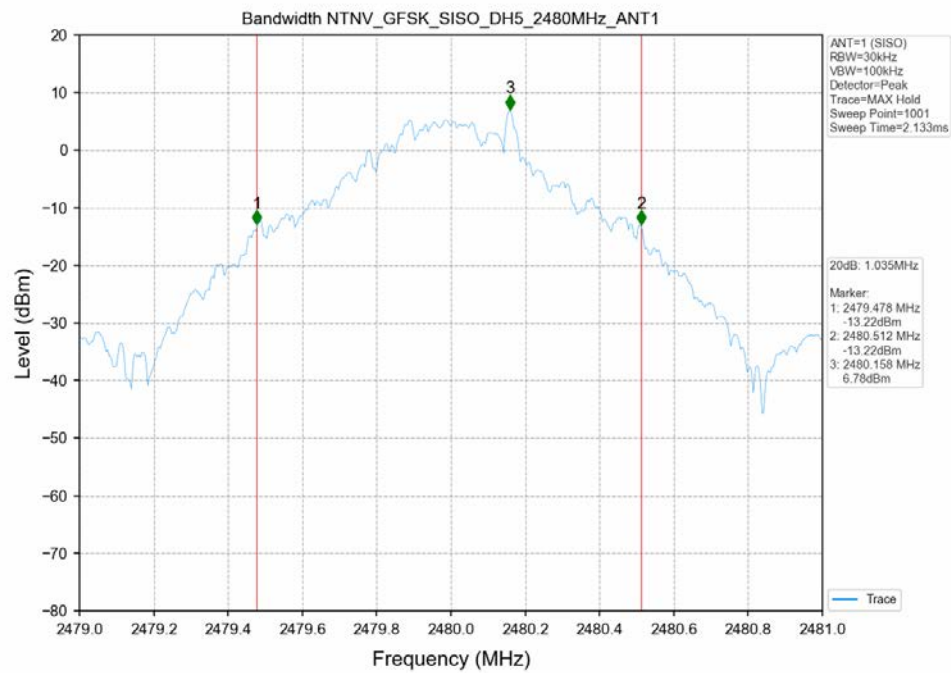
GFSK_2402MHz_DH5_SISO_ANT1



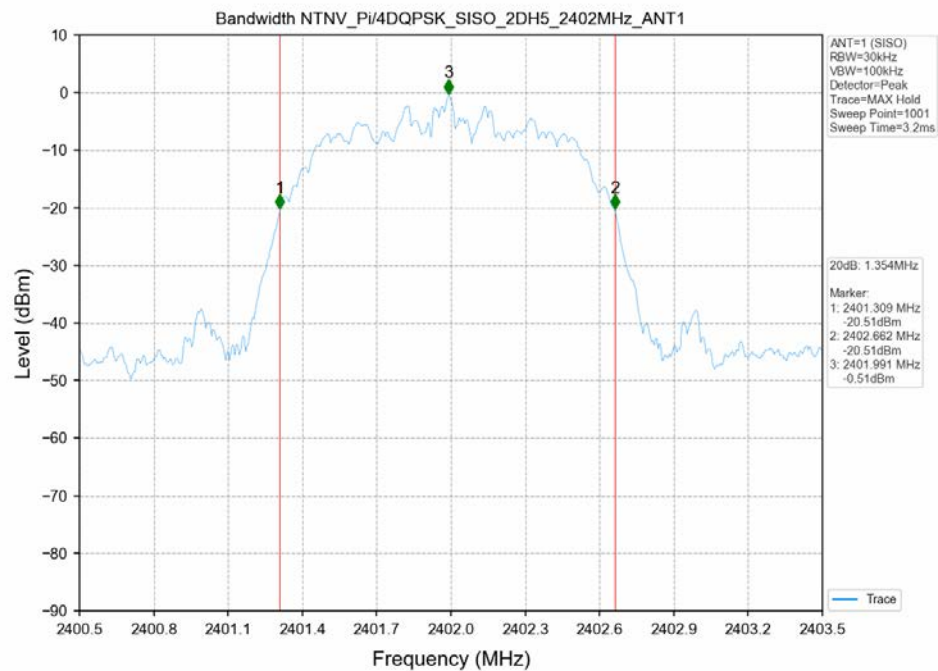
GFSK_2441MHz_DH5_SISO_ANT1



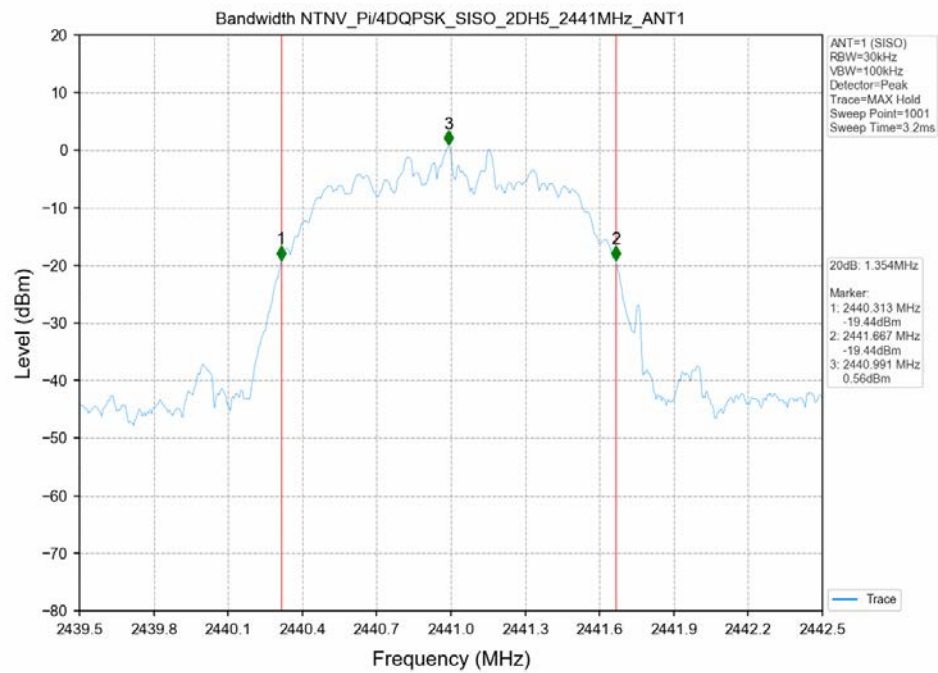
GFSK_2480MHz_DH5_SISO_ANT1



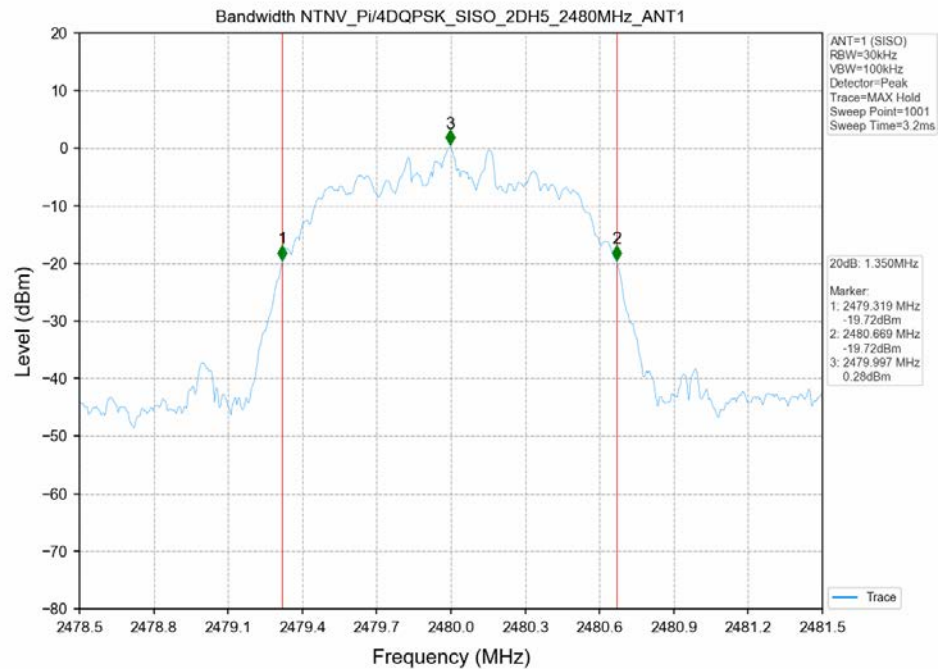
Pi/4DQPSK_2402MHz_2DH5_SISO_ANT1



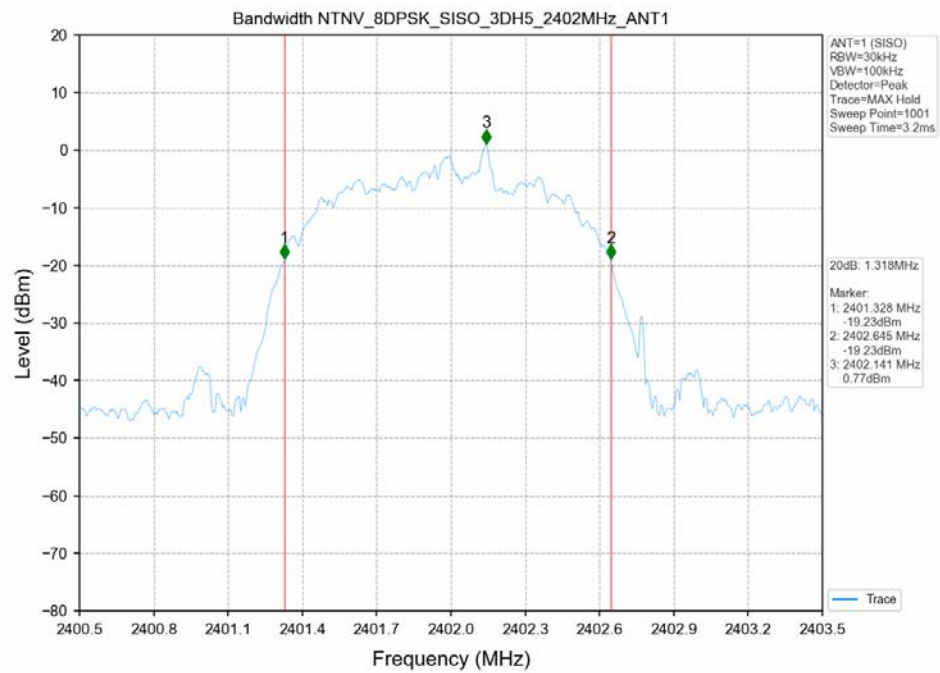
Pi/4DQPSK_2441MHz_2DH5_SISO_ANT1



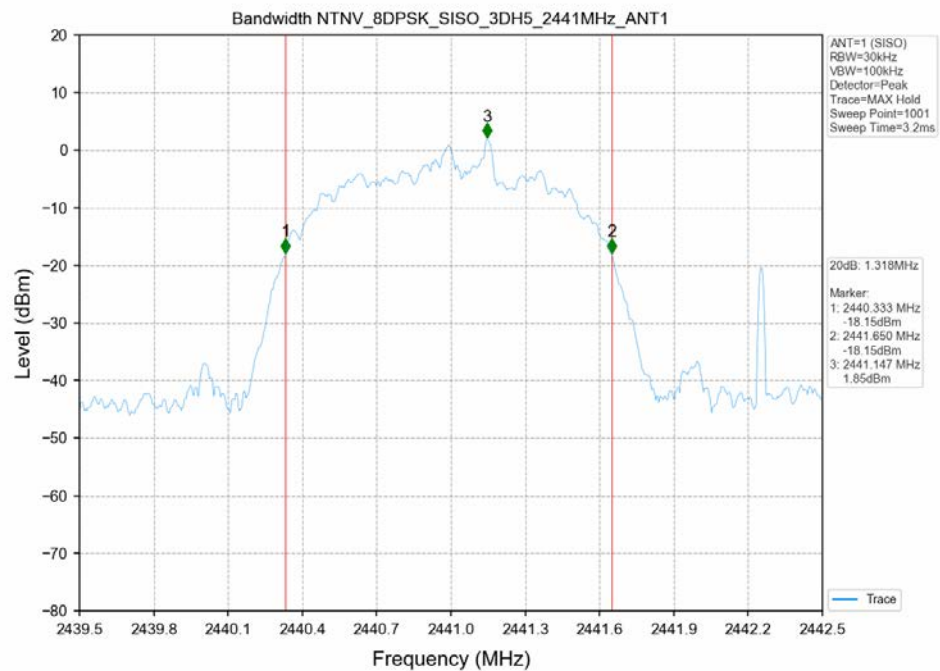
Pi/4DQPSK_2480MHz_2DH5_SISO_ANT1



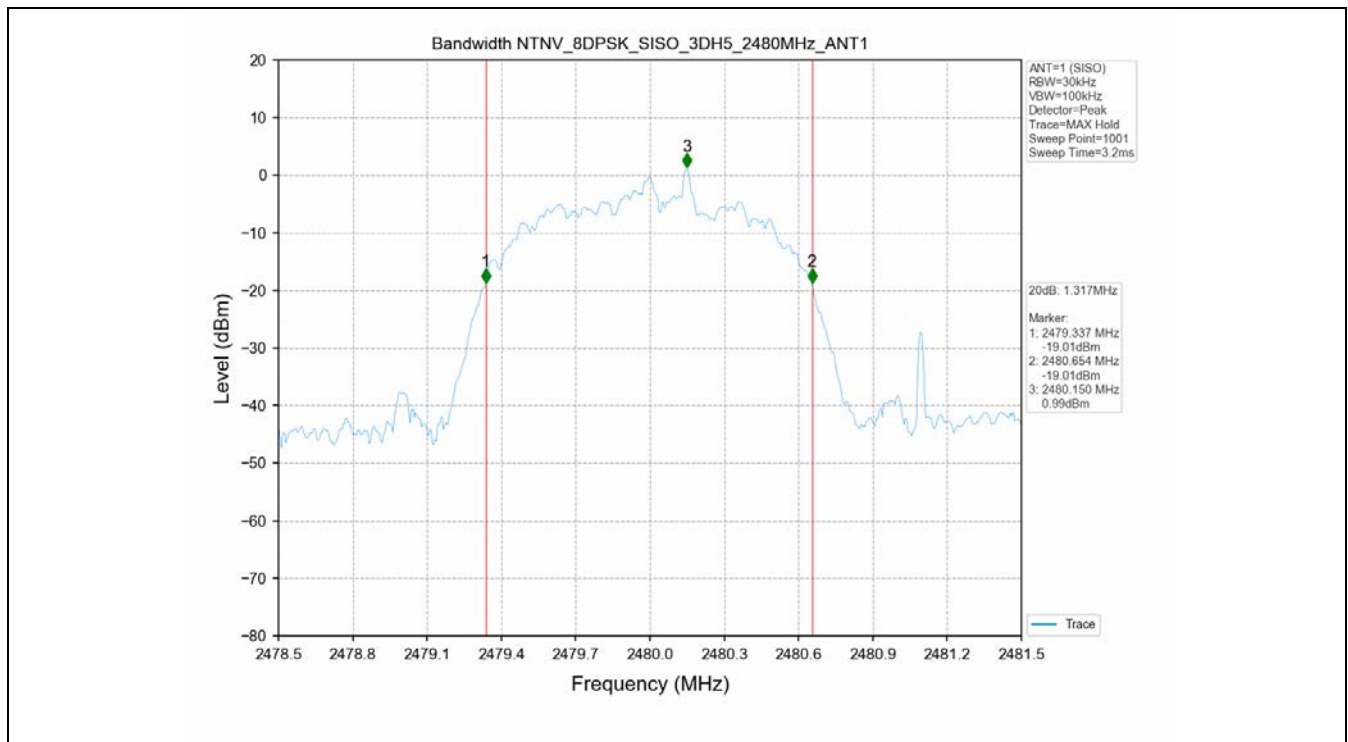
8DPSK_2402MHz_3DH5_SISO_ANT1



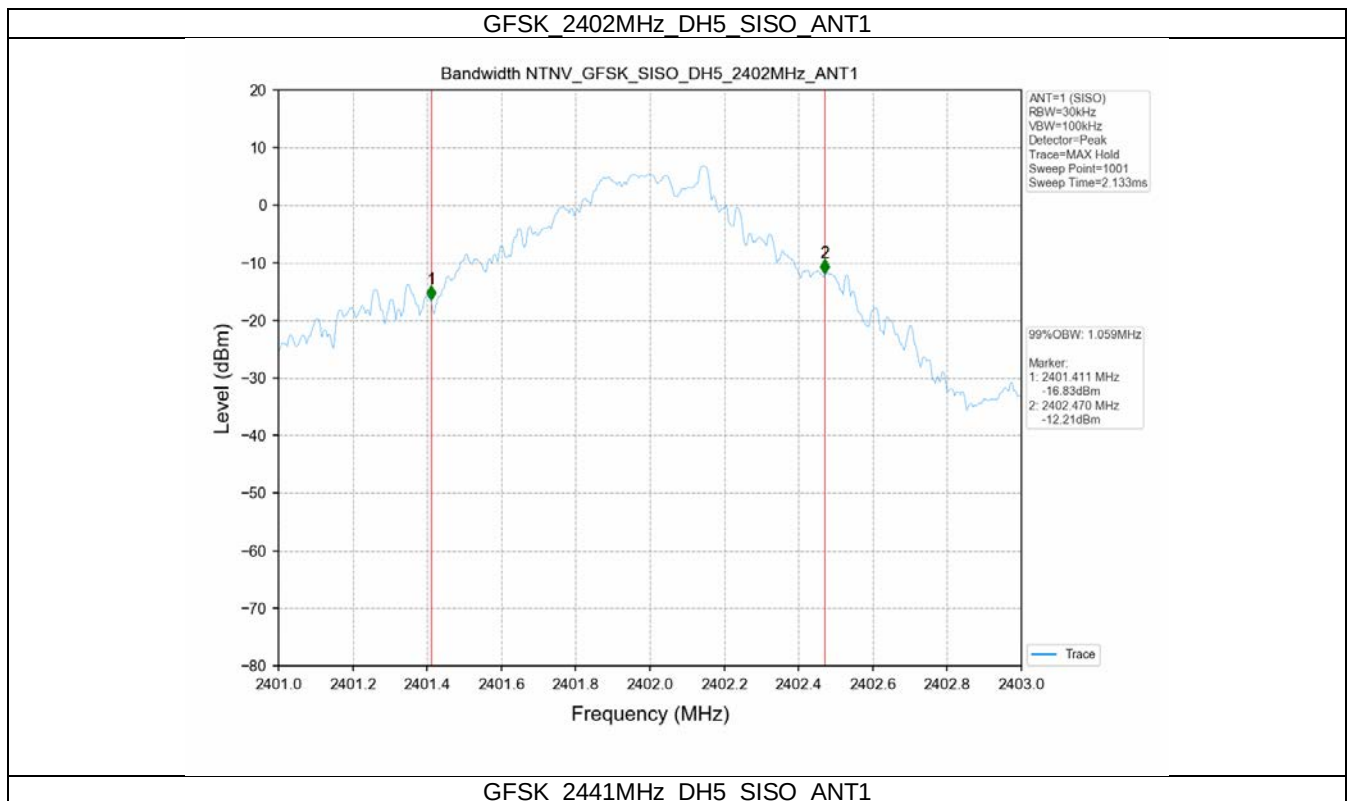
8DPSK_2441MHz_3DH5_SISO_ANT1

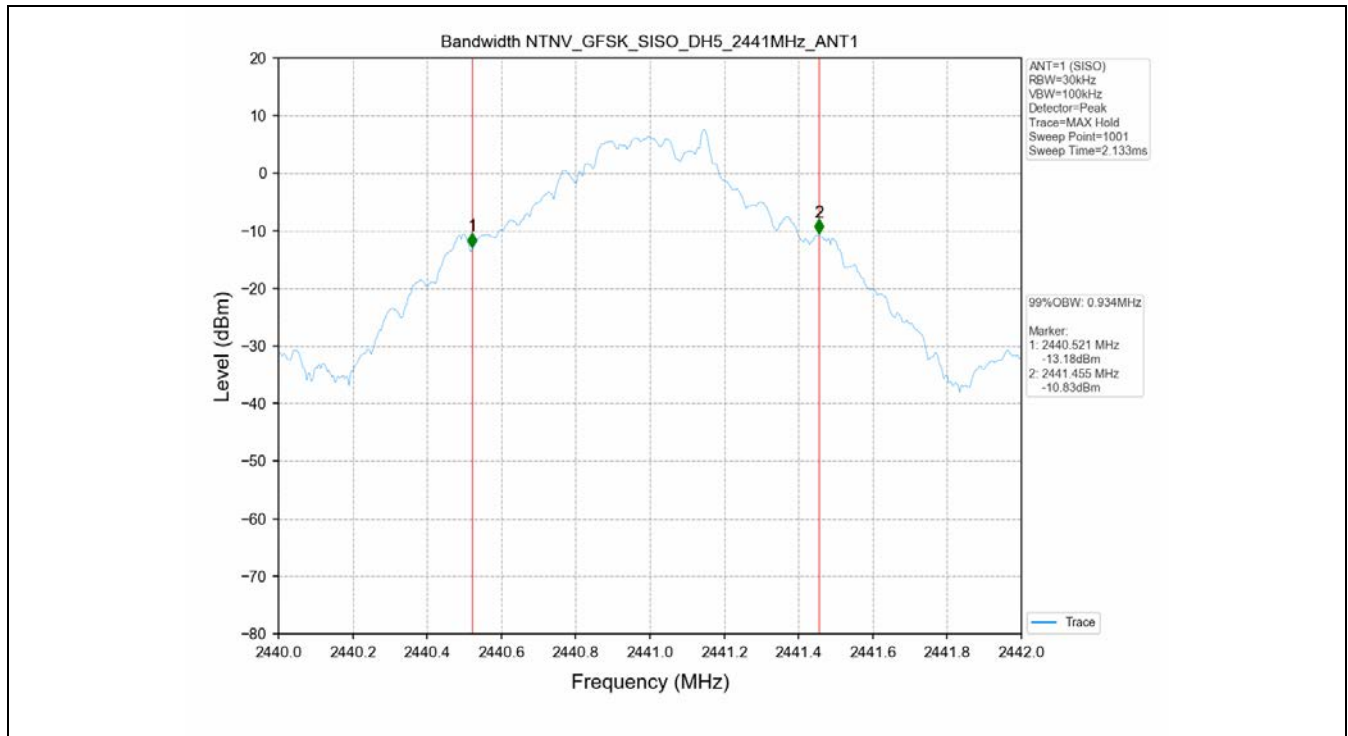


8DPSK_2480MHz_3DH5_SISO_ANT1

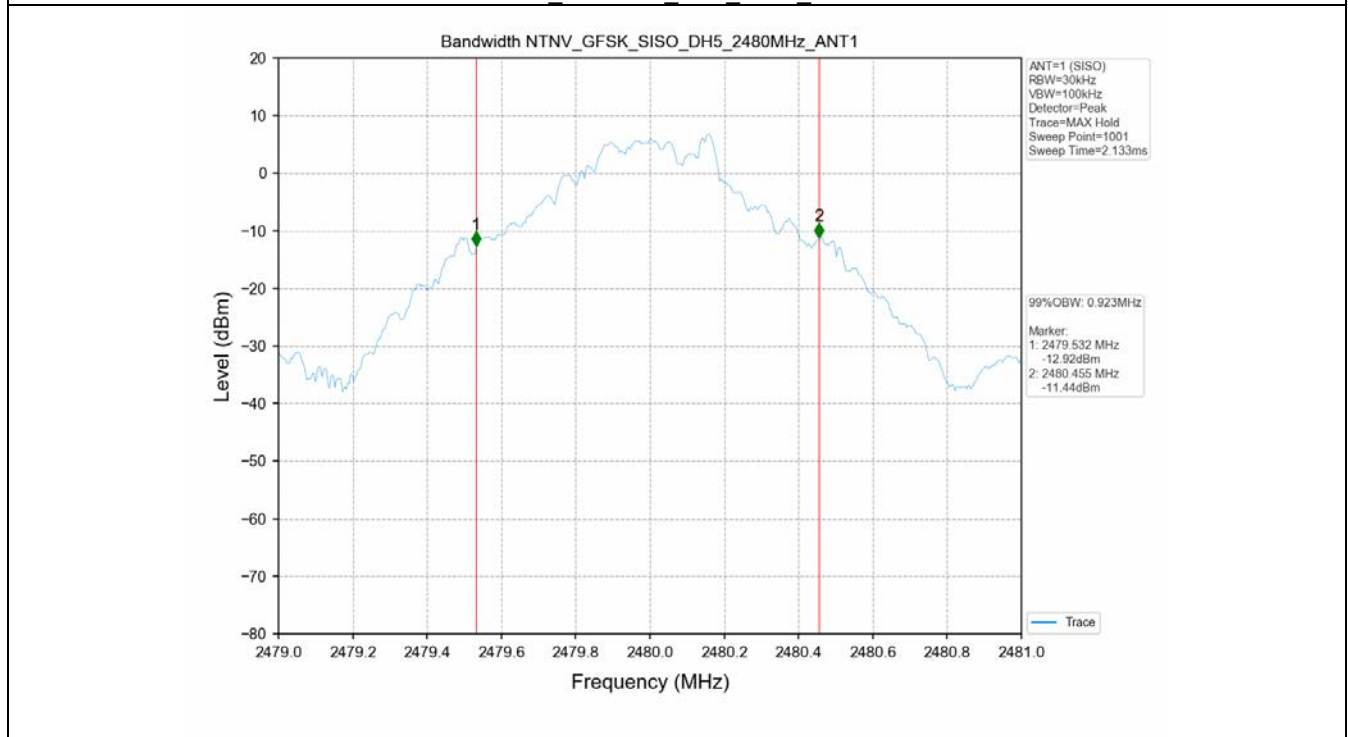


1.3 Test Graph - 99% Occupied Bandwidth

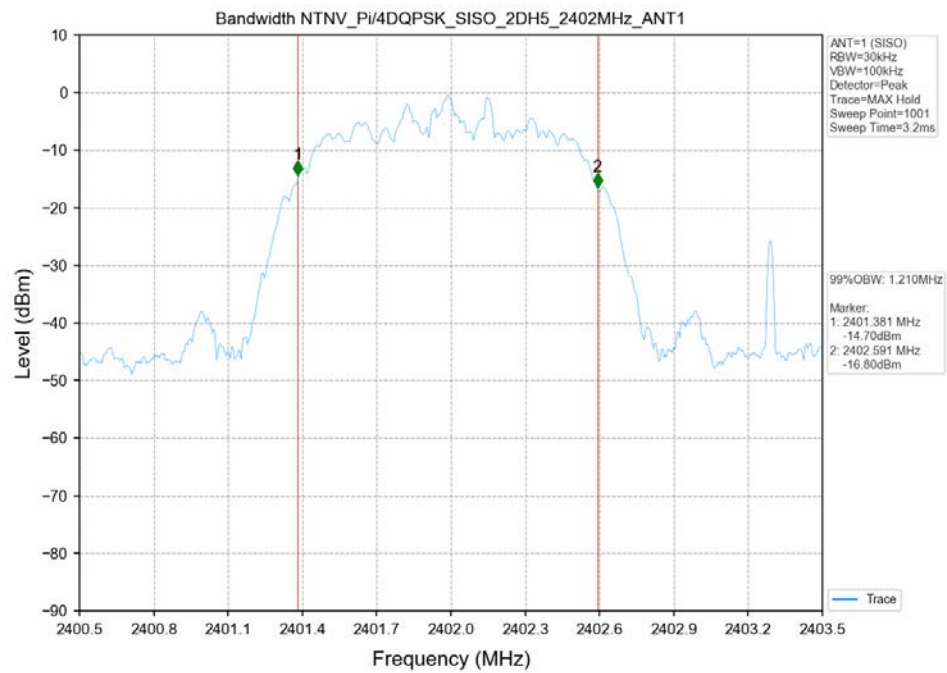




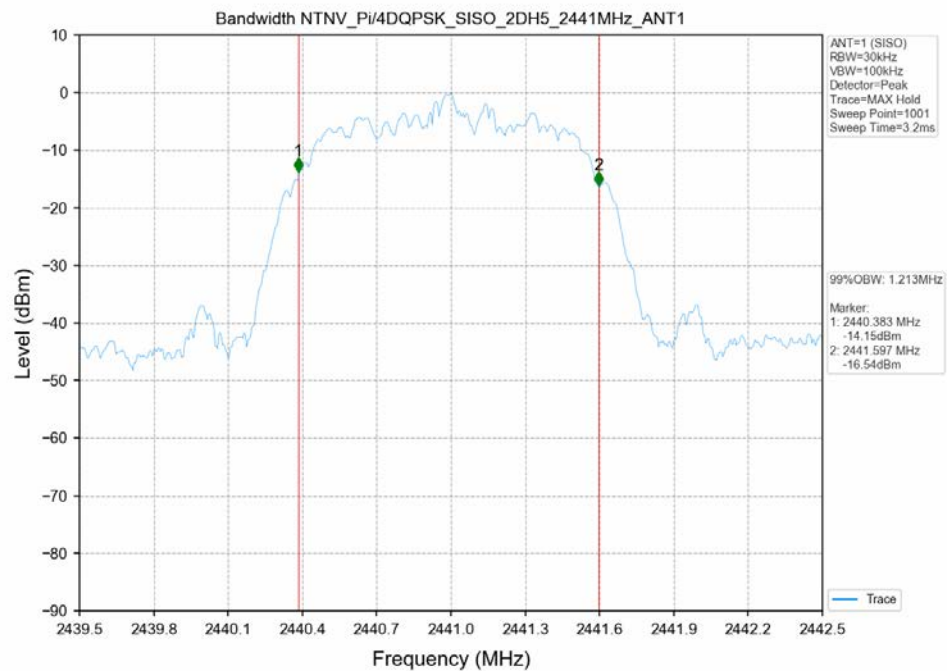
GFSK_2480MHz_DH5_SISO_ANT1



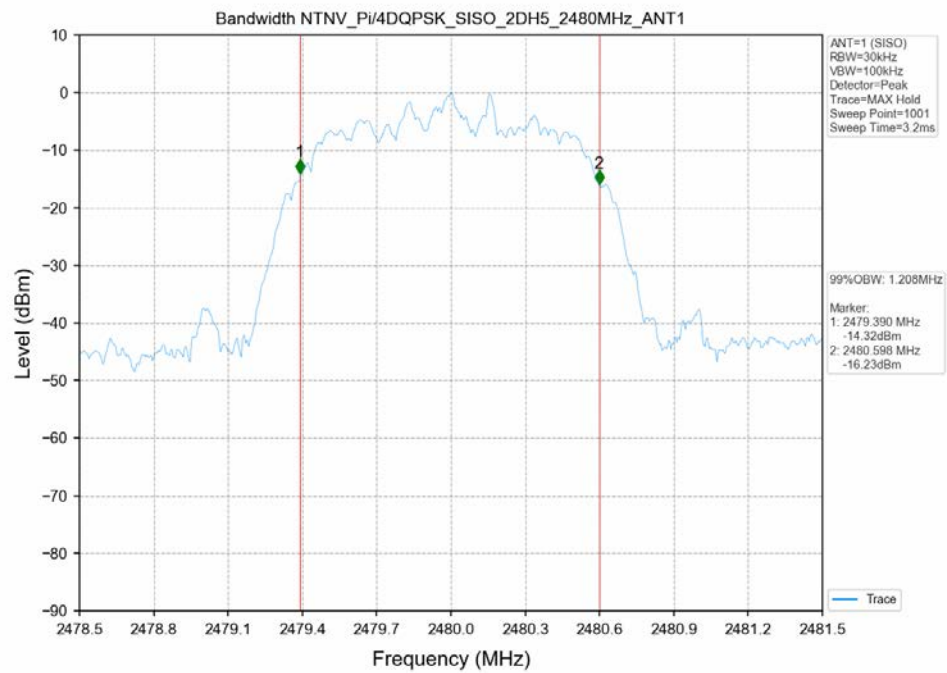
Pi/4DQPSK_2402MHz_2DH5_SISO_ANT1



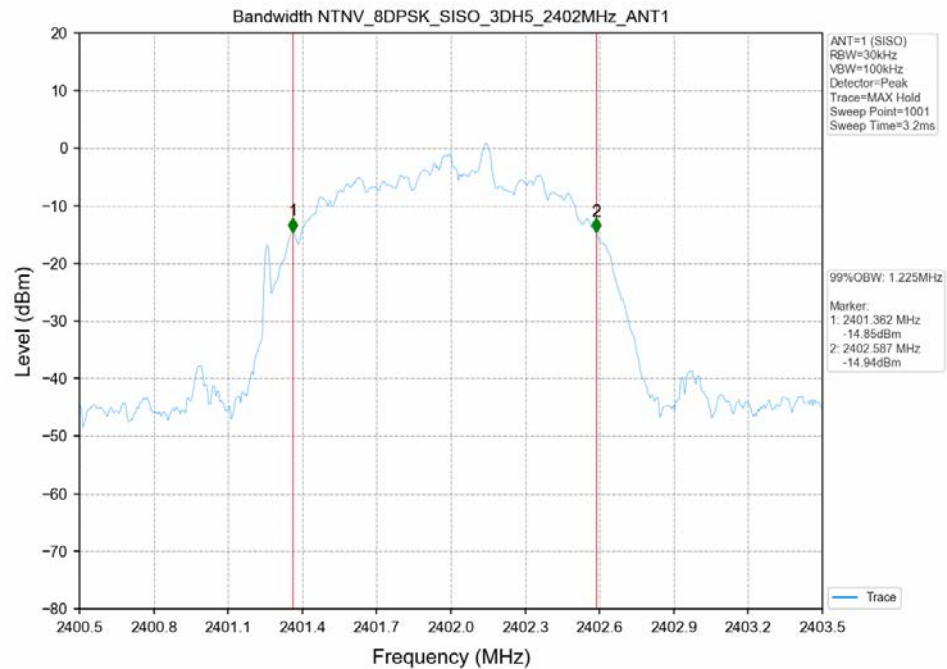
Pi/4DQPSK_2441MHz_2DH5_SISO_ANT1



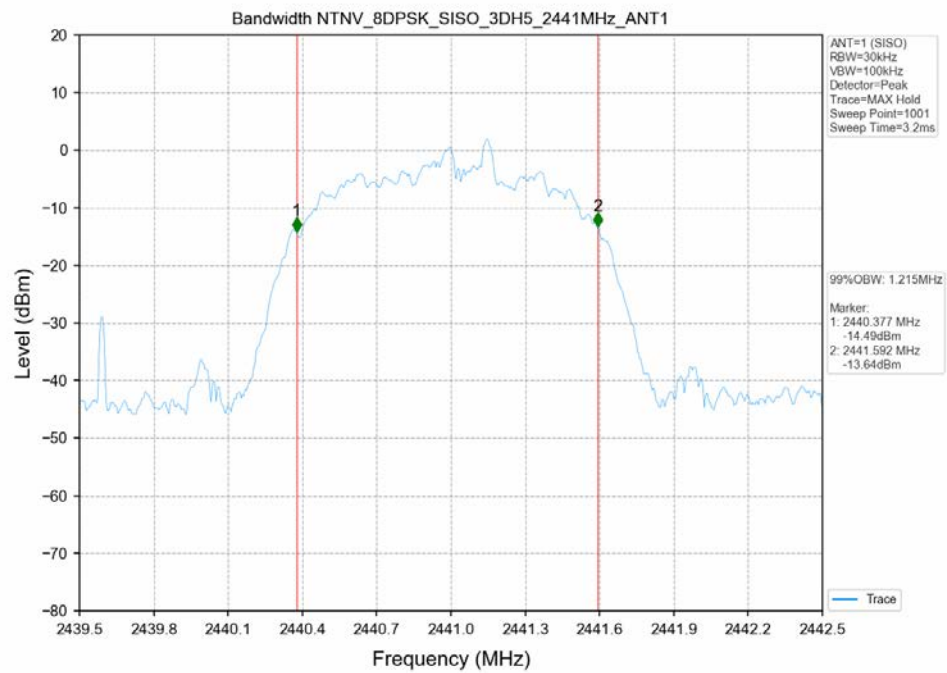
Pi/4DQPSK_2480MHz_2DH5_SISO_ANT1



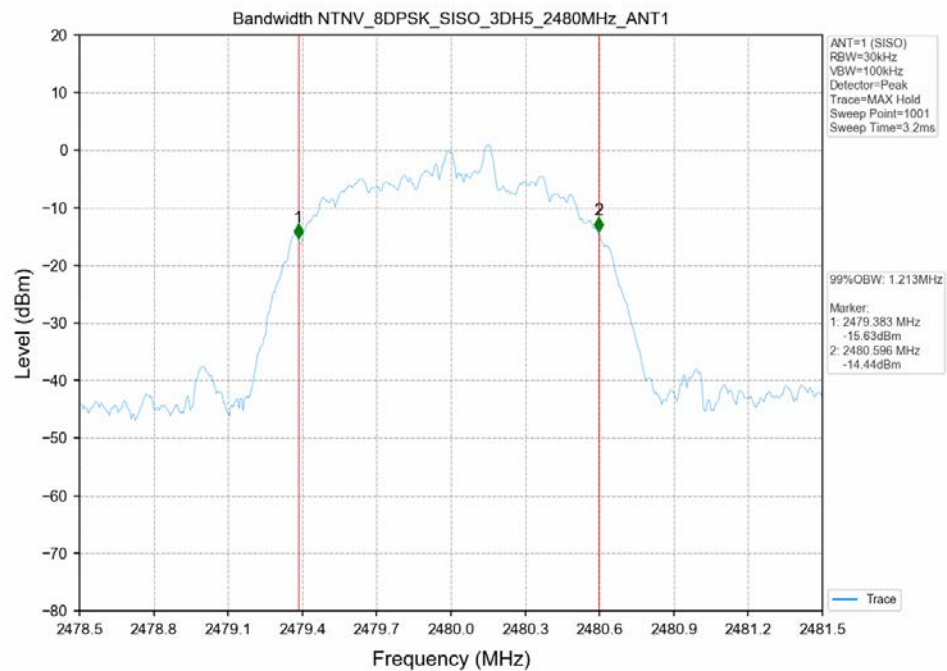
8DPSK_2402MHz_3DH5_SISO_ANT1



8DPSK_2441MHz_3DH5_SISO_ANT1



8DPSK_2480MHz_3DH5_SISO_ANT1



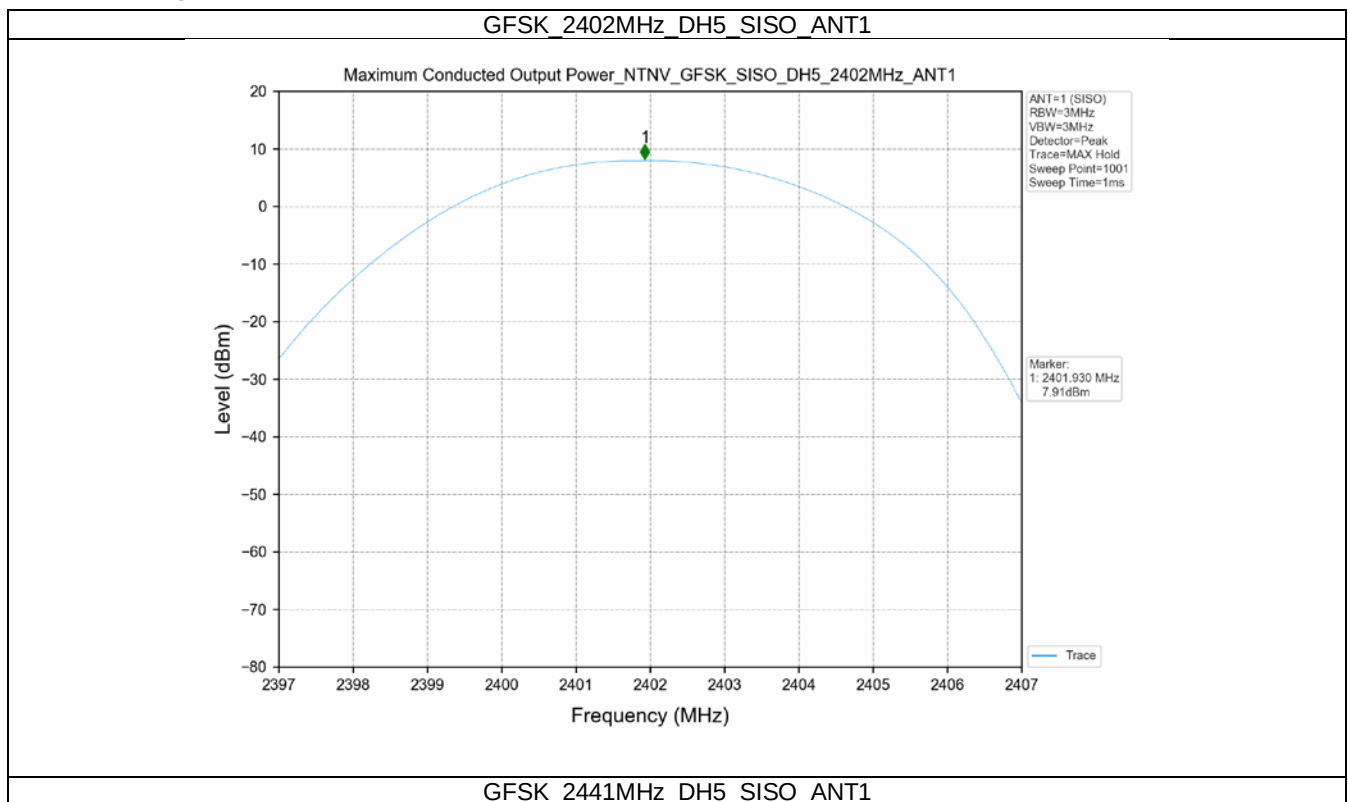


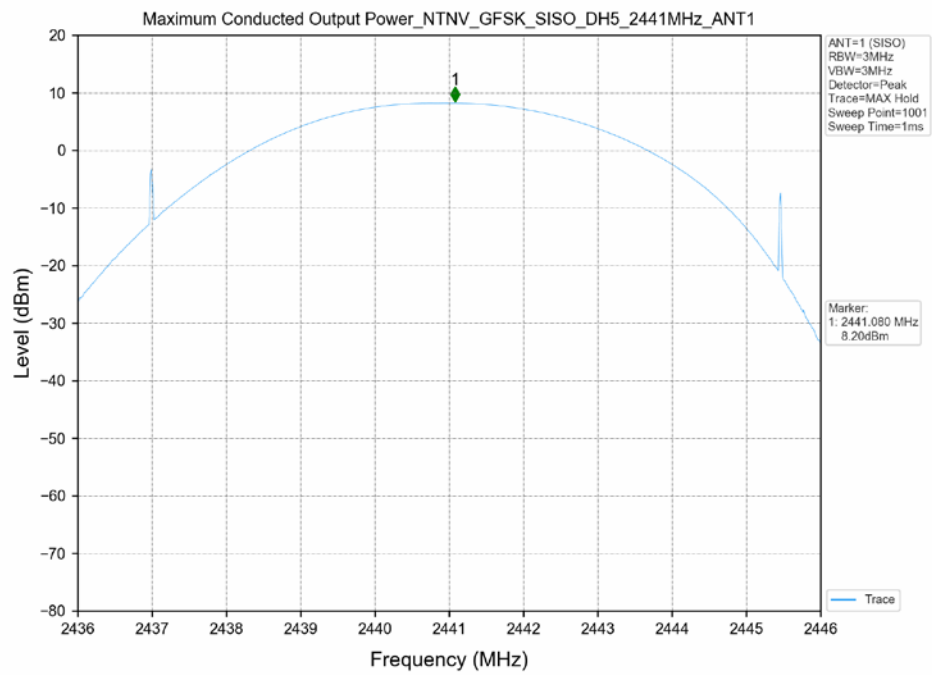
2. Maximum Conducted Output Power

2.1 Test Result

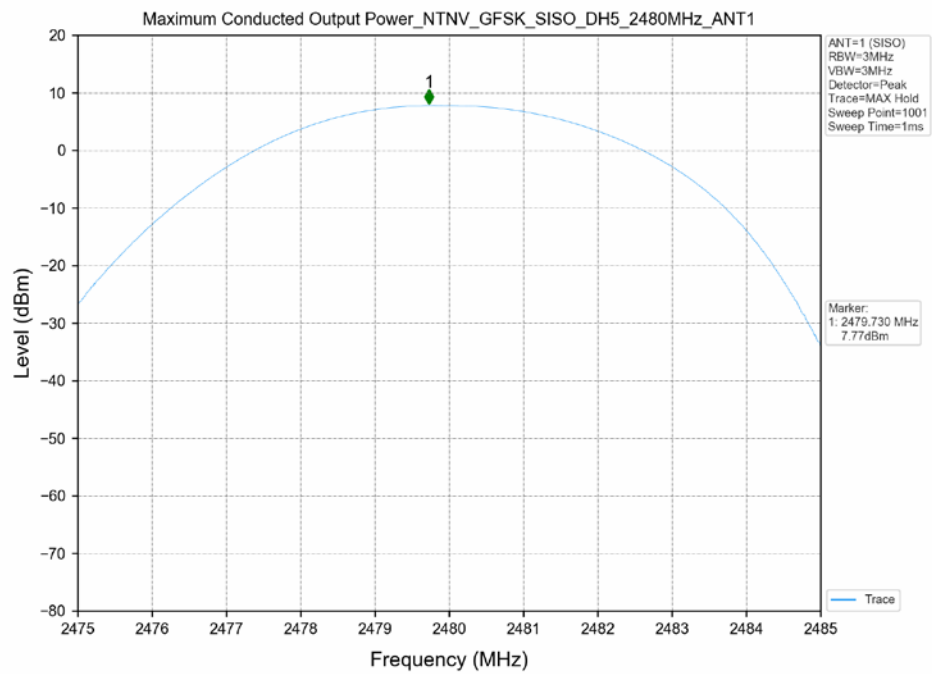
Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	7.91	20.97	PASS
	2441	SISO	8.20	20.97	PASS
	2480	SISO	7.77	20.97	PASS
Pi/4DQPSK	2402	SISO	3.76	20.97	PASS
	2441	SISO	4.68	20.97	PASS
	2480	SISO	4.19	20.97	PASS
8DPSK	2402	SISO	4.18	20.97	PASS
	2441	SISO	5.10	20.97	PASS
	2480	SISO	4.62	20.97	PASS

2.2 Test Graph

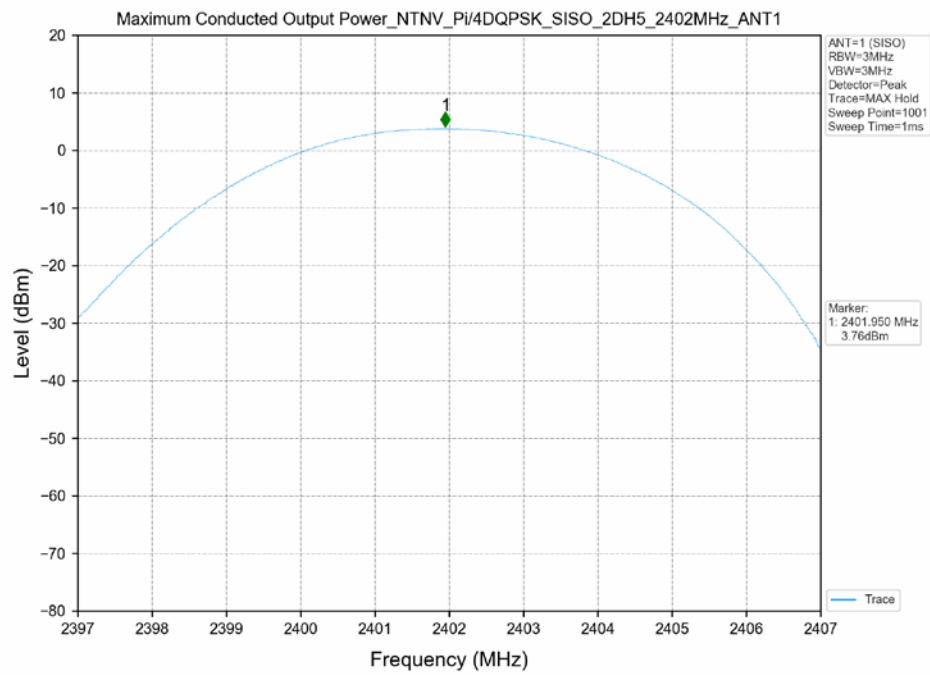




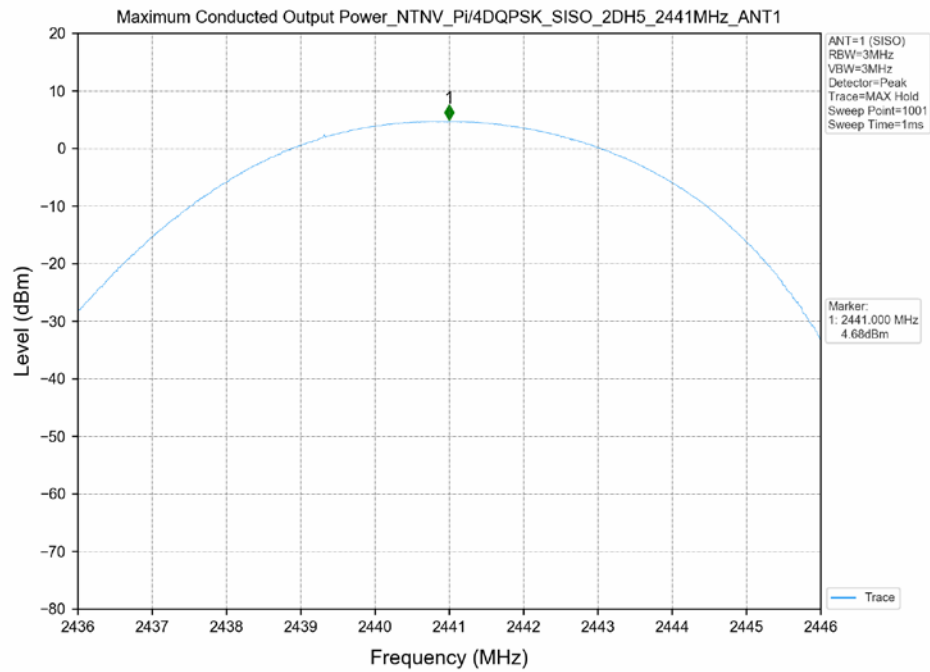
GFSK_2480MHz_DH5_SISO_ANT1



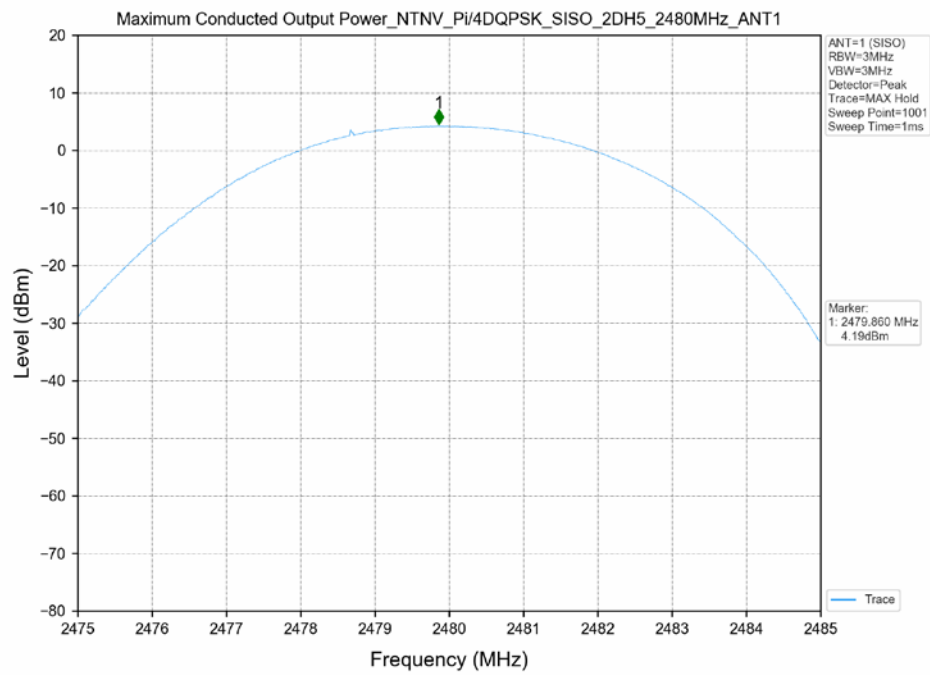
Pi/4DQPSK_2402MHz_2DH5_SISO_ANT1



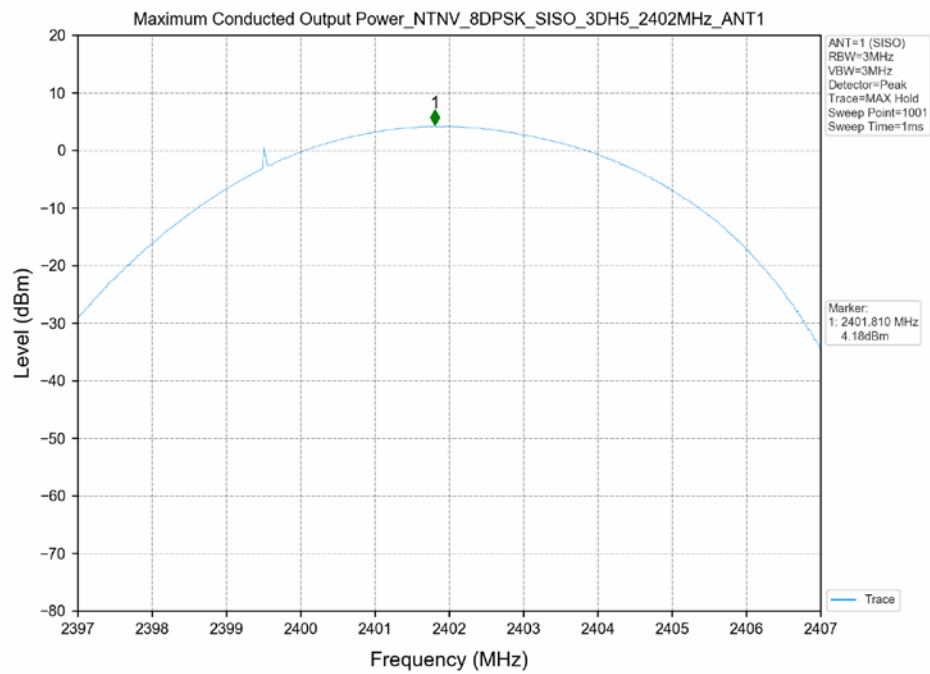
Pi/4DQPSK_2441MHz_2DH5_SISO_ANT1



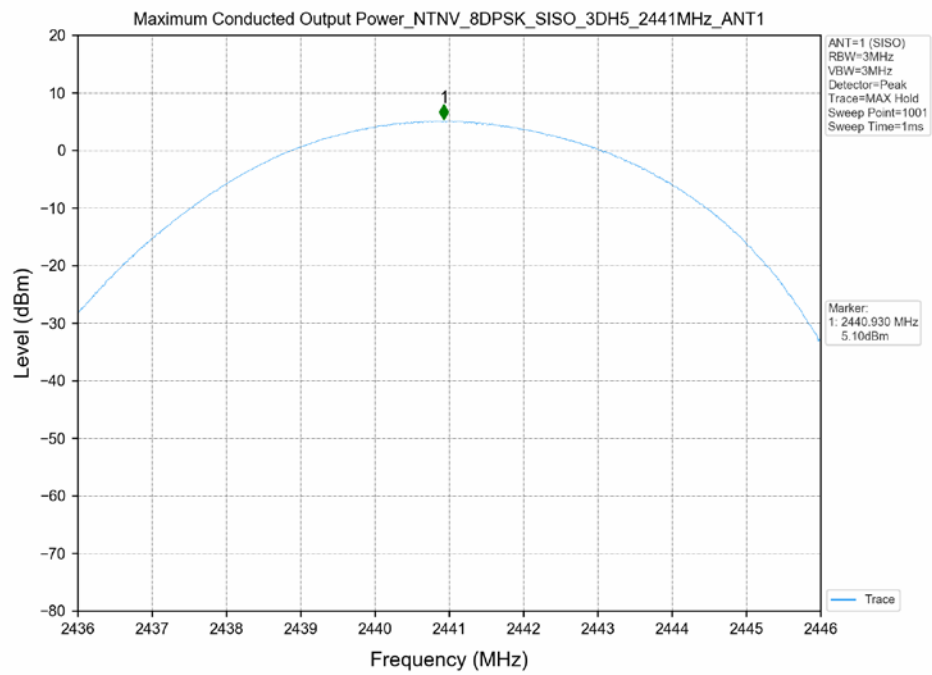
Pi/4DQPSK_2480MHz_2DH5_SISO_ANT1



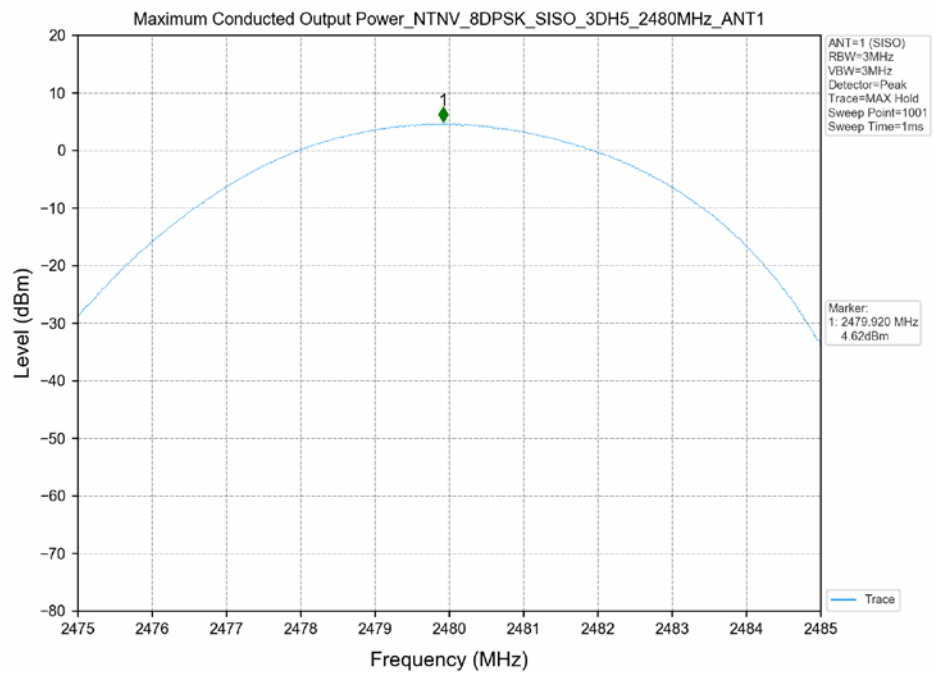
8DPSK_2402MHz_3DH5_SISO_ANT1



8DPSK_2441MHz_3DH5_SISO_ANT1



8DPSK_2480MHz_3DH5_SISO_ANT1



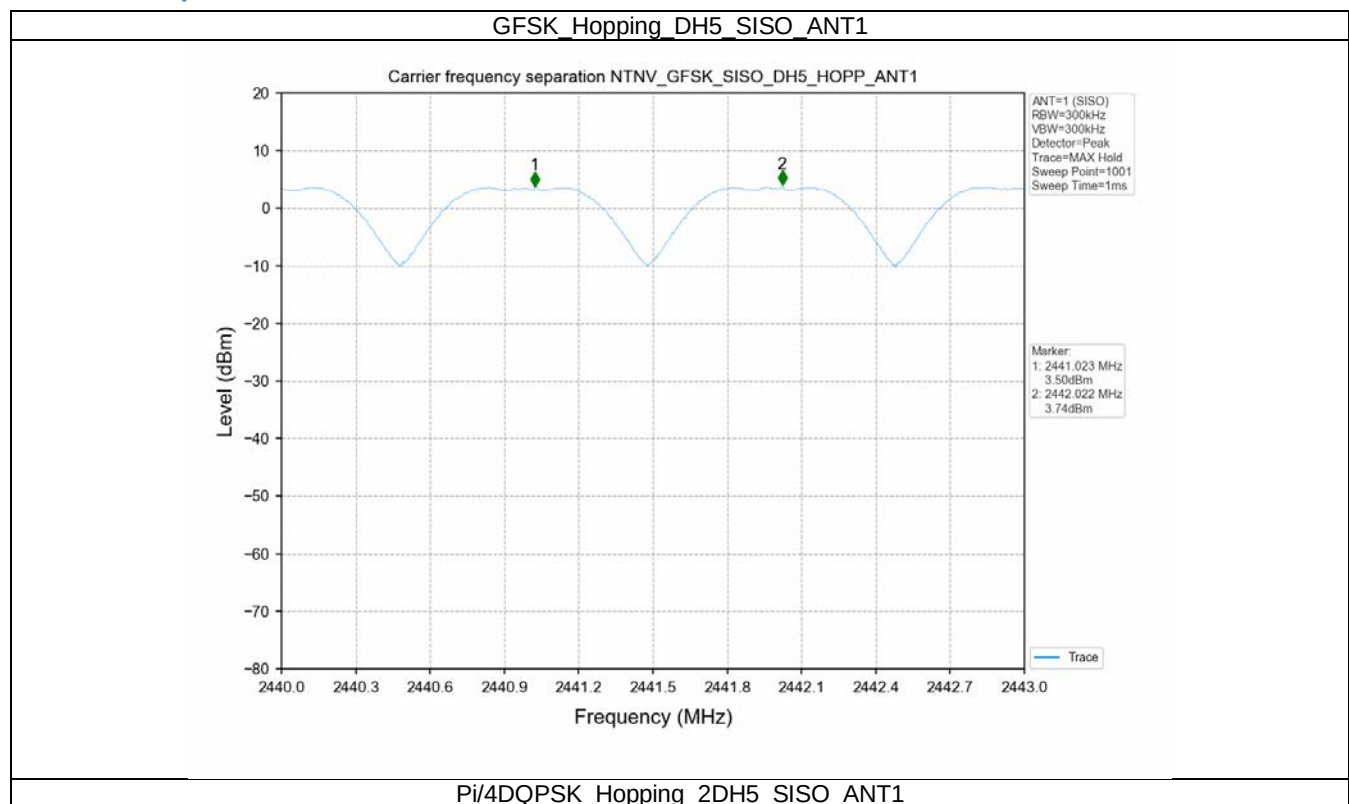


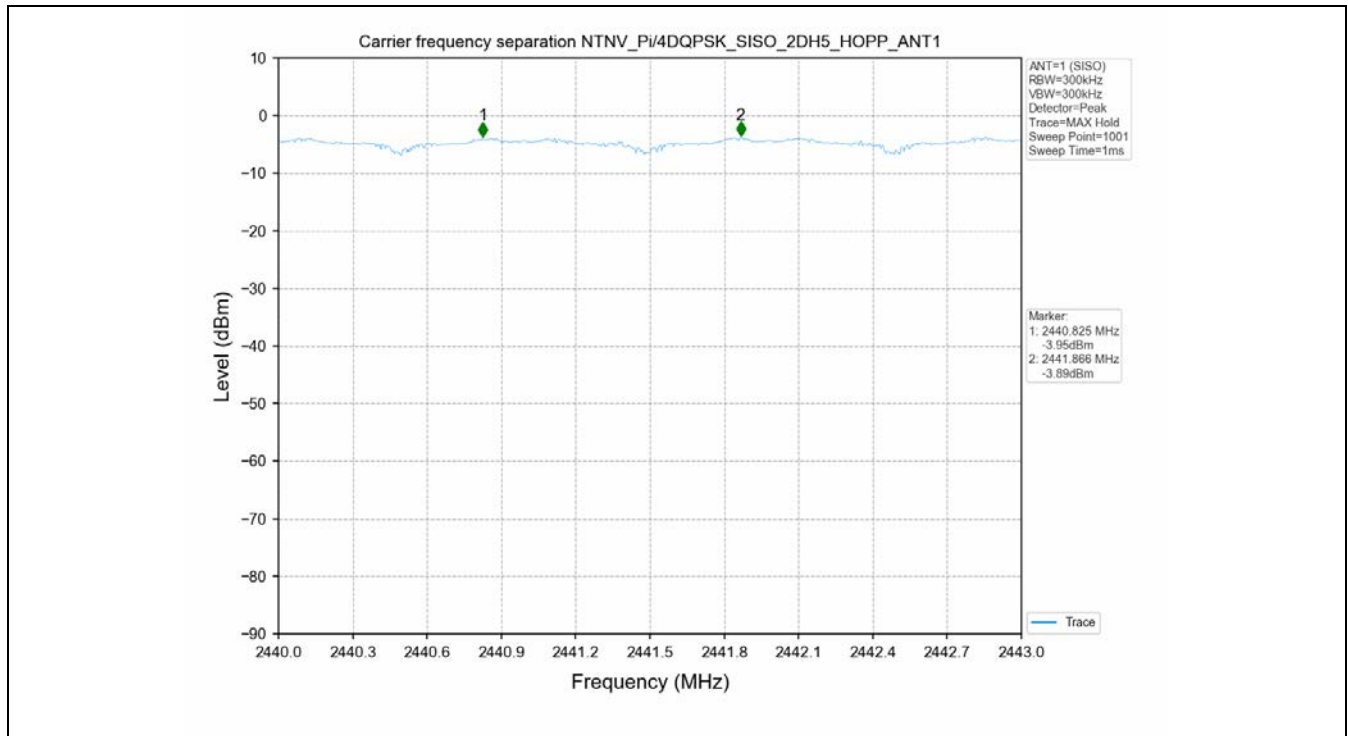
3. Carrier frequency separation

3.1 Test Result

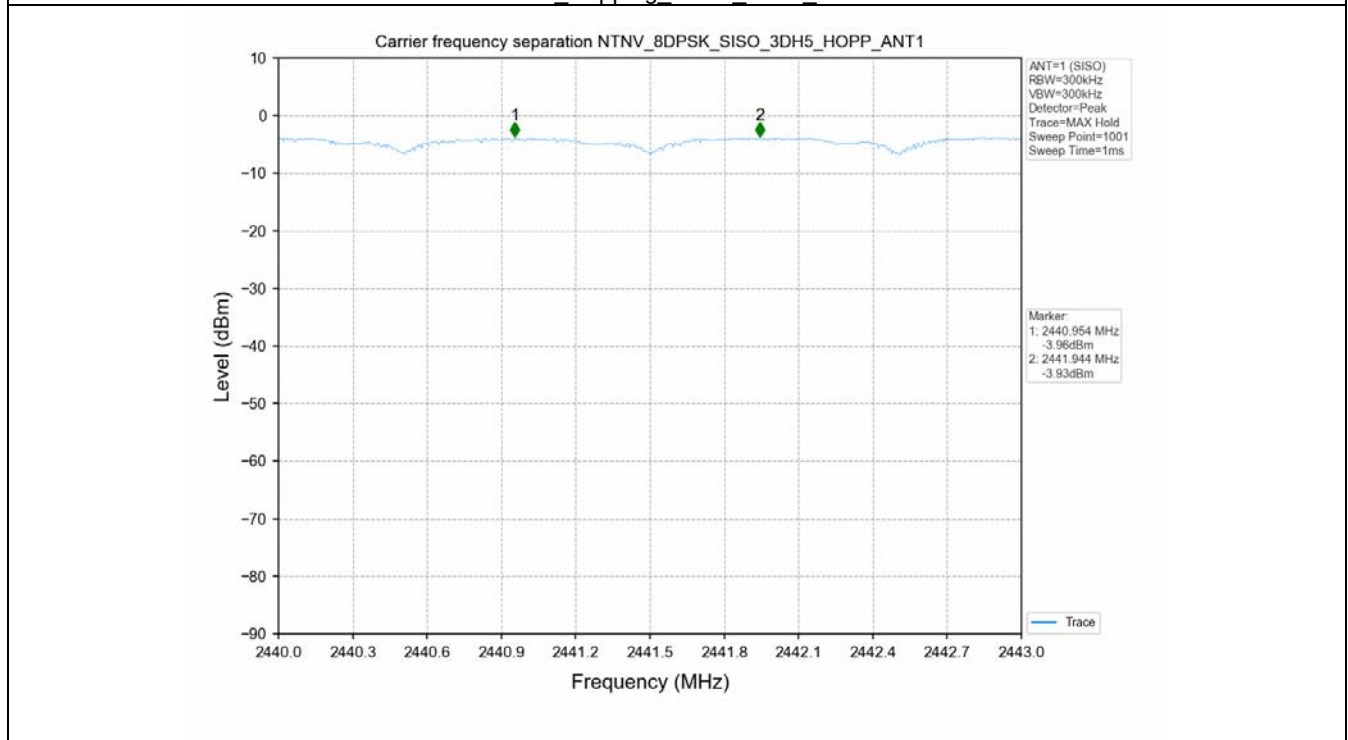
Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	0.999	1.036	≥ 0.695	PASS
Pi/4DQPSK	SISO	1	1.041	1.354	≥ 0.907	PASS
8DPSK	SISO	1	0.990	1.318	≥ 0.883	PASS

3.2 Test Graph





8DPSK_Hopping_3DH5_SISO_ANT1



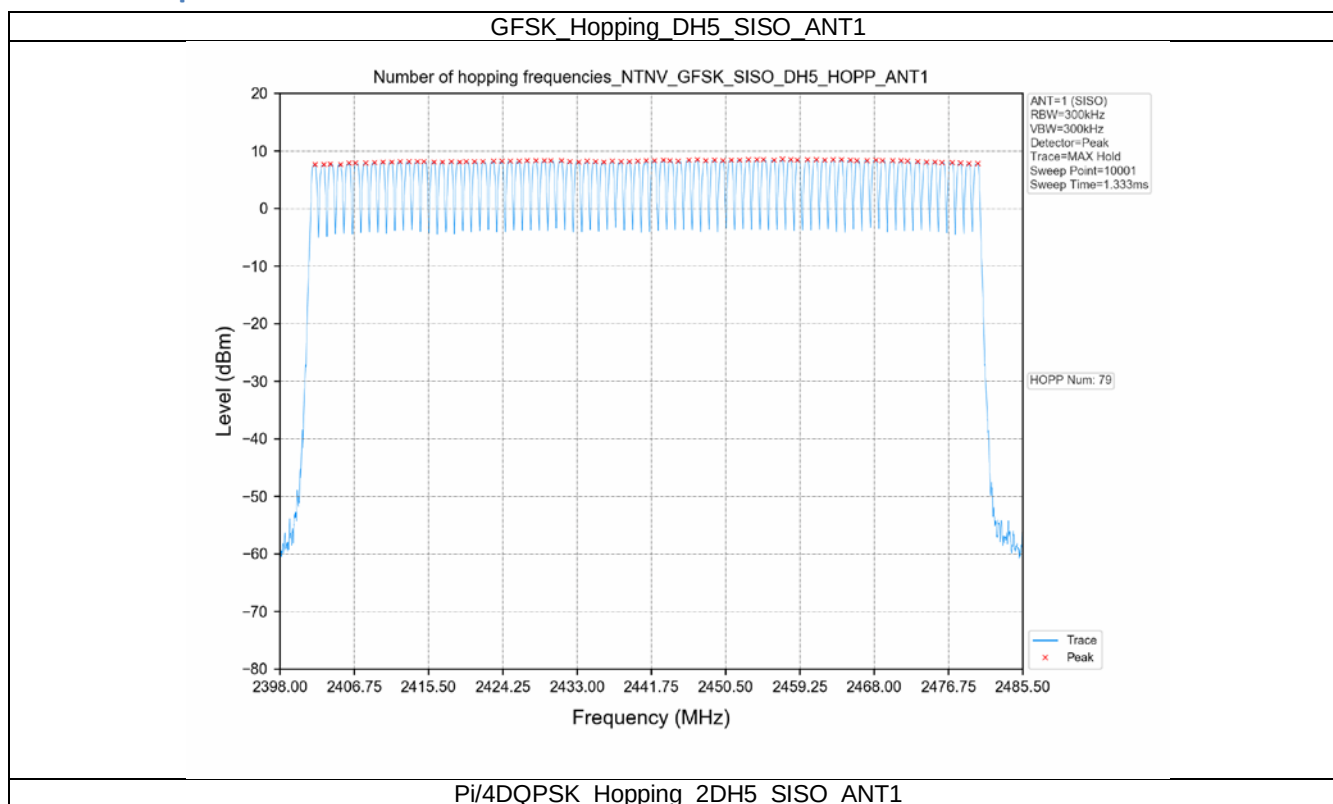


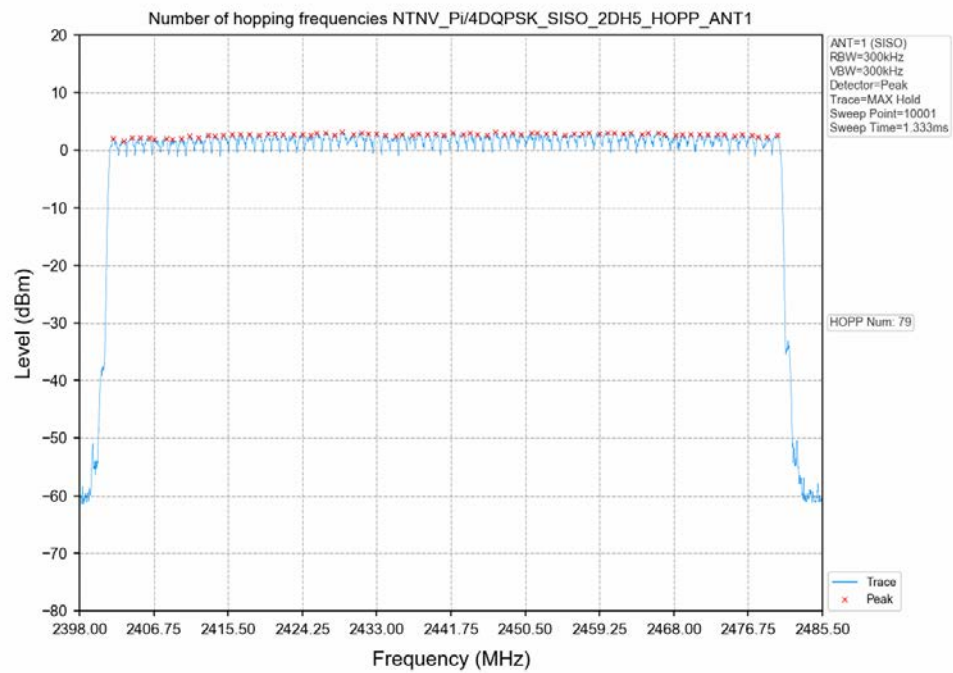
4. Number of hopping frequencies

4.1 Test Result

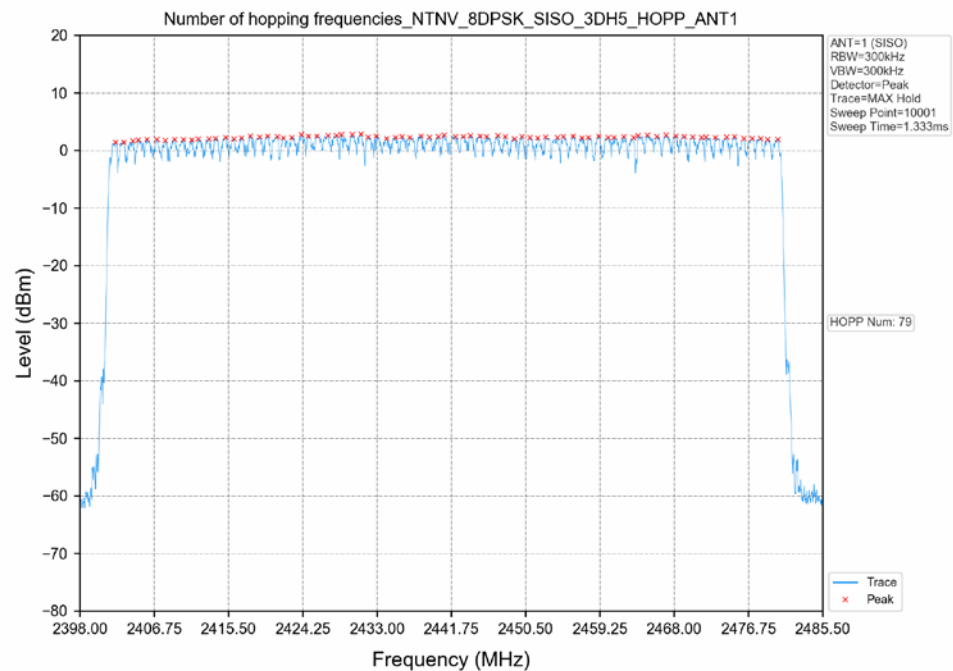
Test Mode	TX Type	ANT No.	Num of Hopping Frequencies	Limits	Verdict
GFSK	SISO	1	79	≥ 15	PASS
Pi/4DQPSK	SISO	1	79	≥ 15	PASS
8DPSK	SISO	1	79	≥ 15	PASS

4.2 Test Graph





8DPSK_Hopping_3DH5_SISO_ANT1



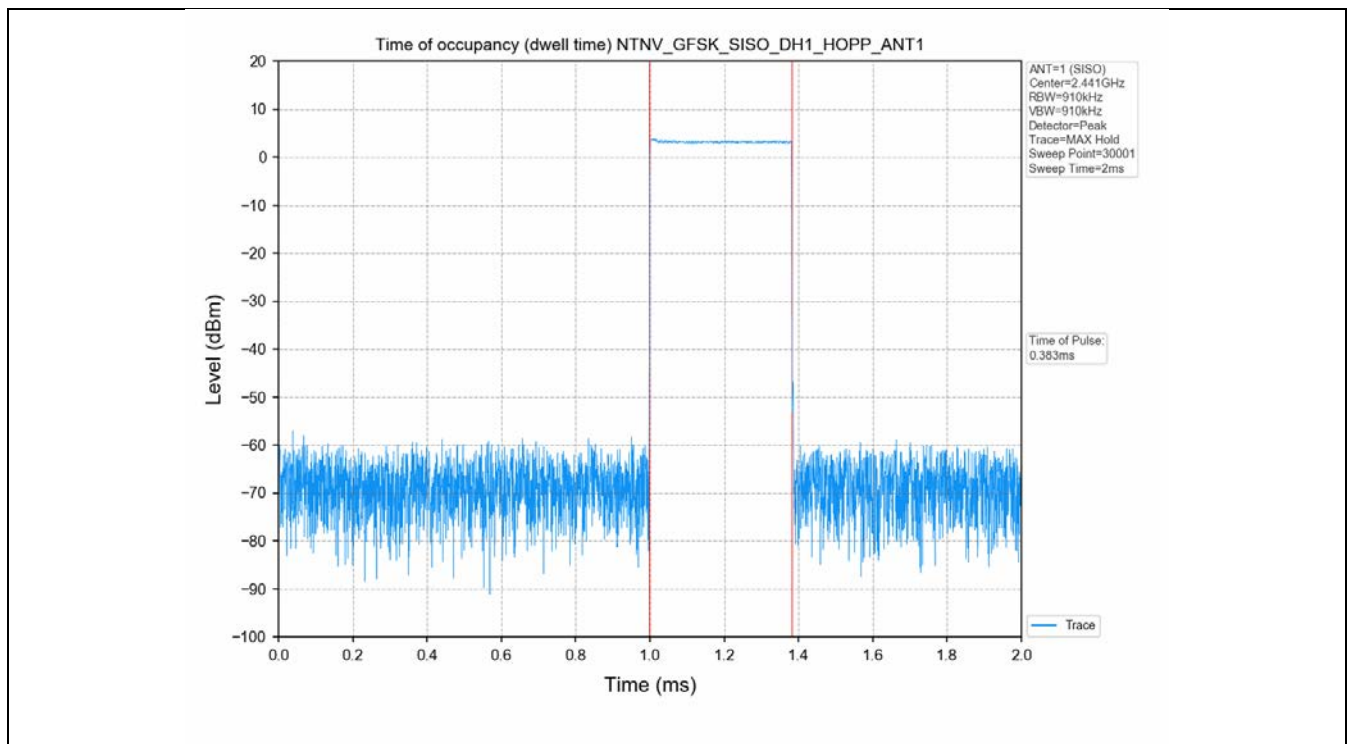


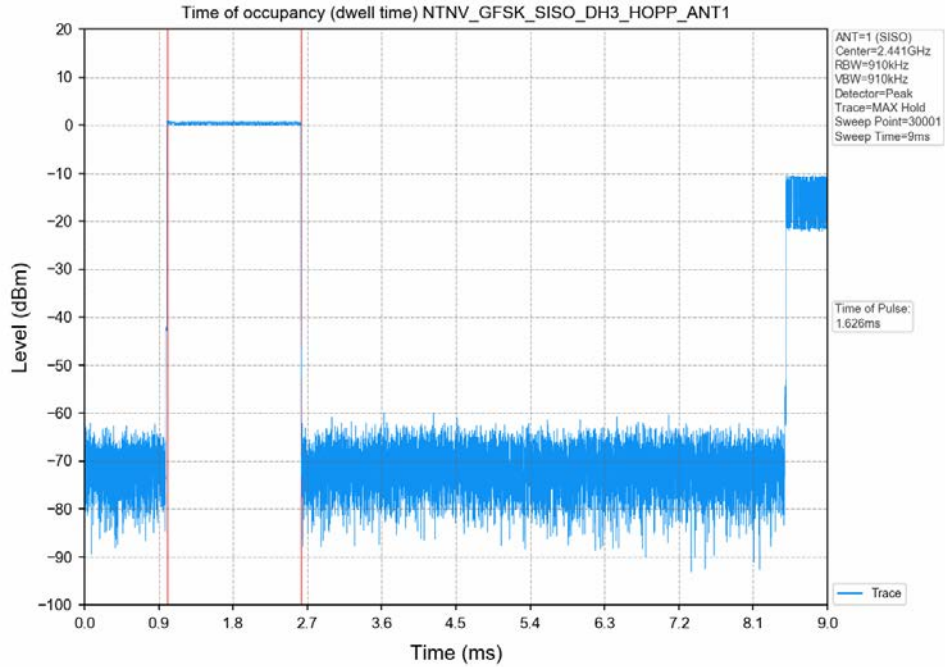
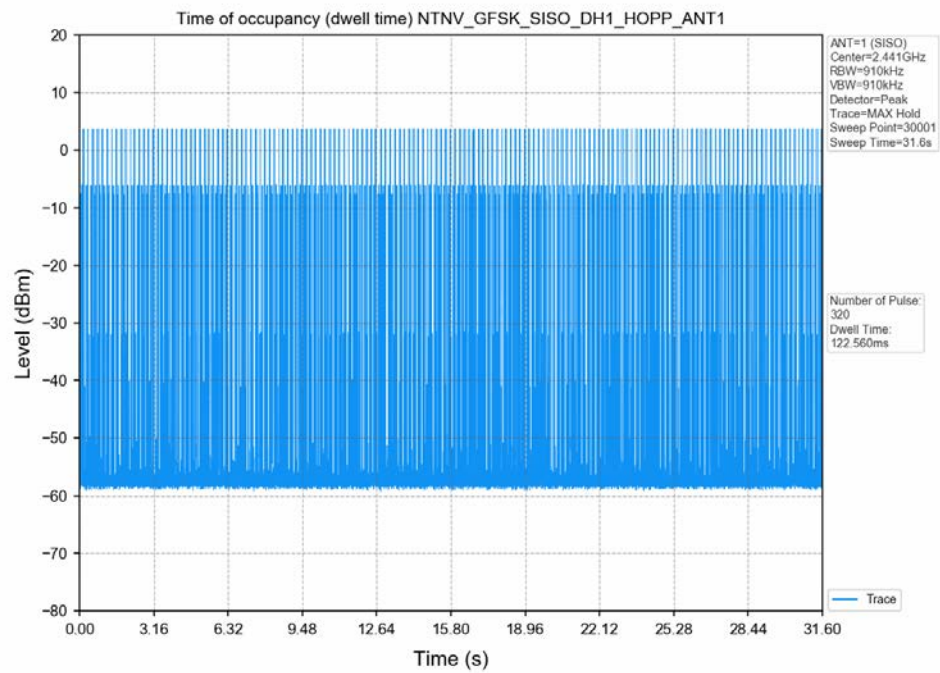
5. Time of occupancy (dwell time)

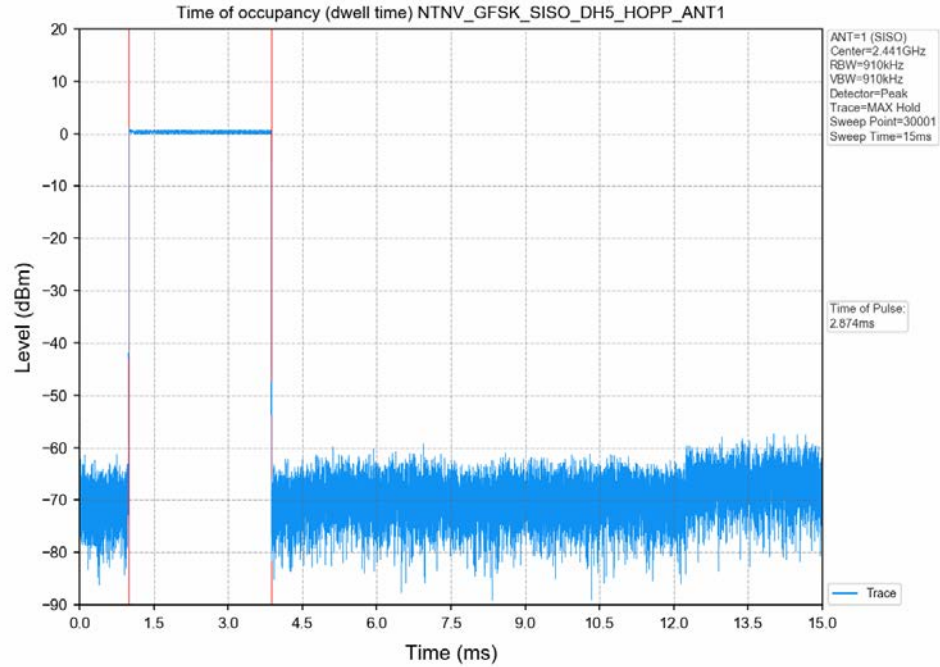
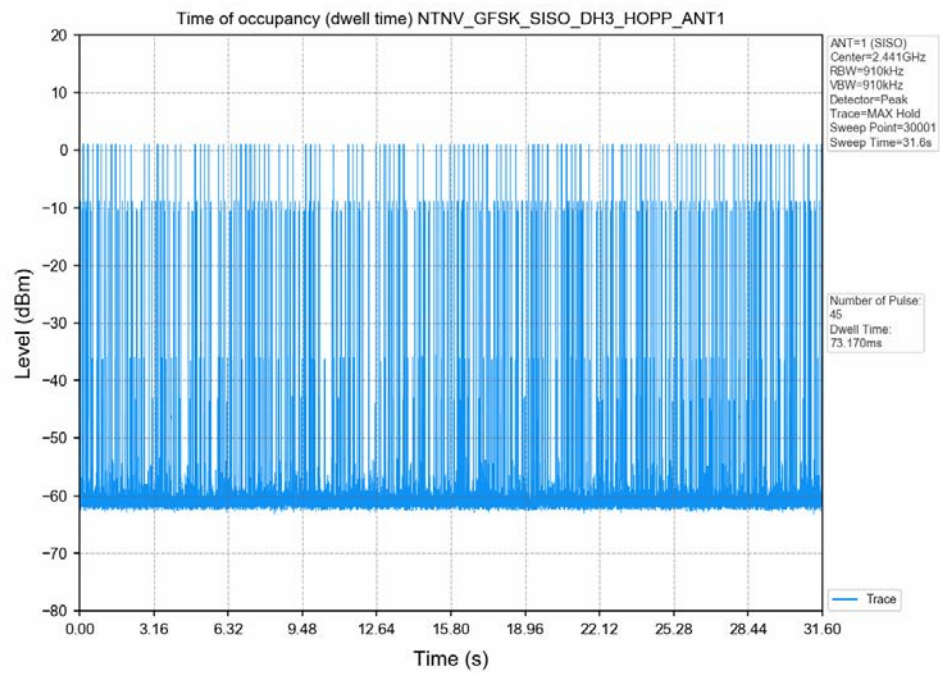
5.1 Test Result

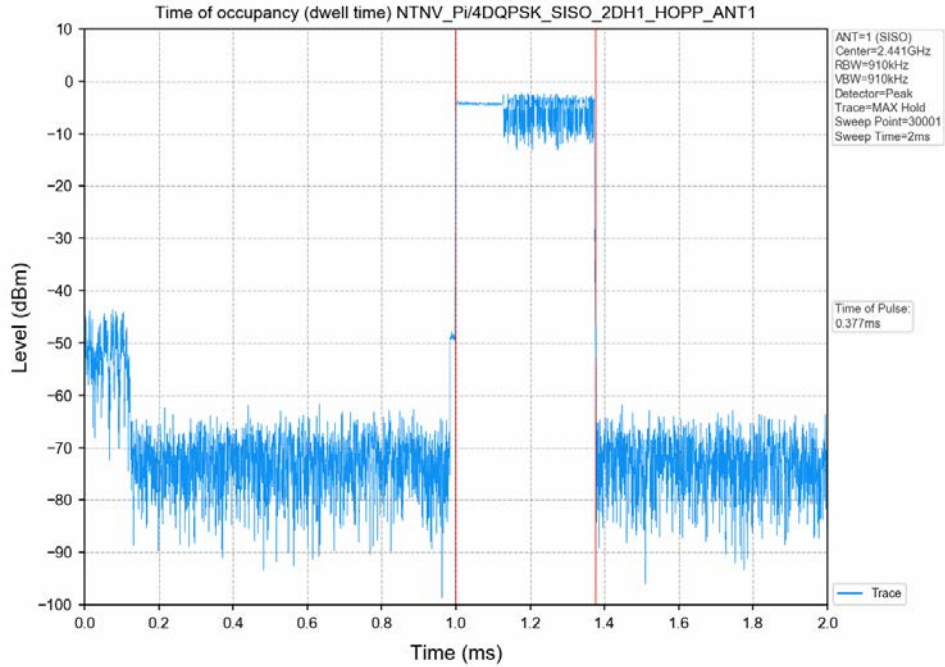
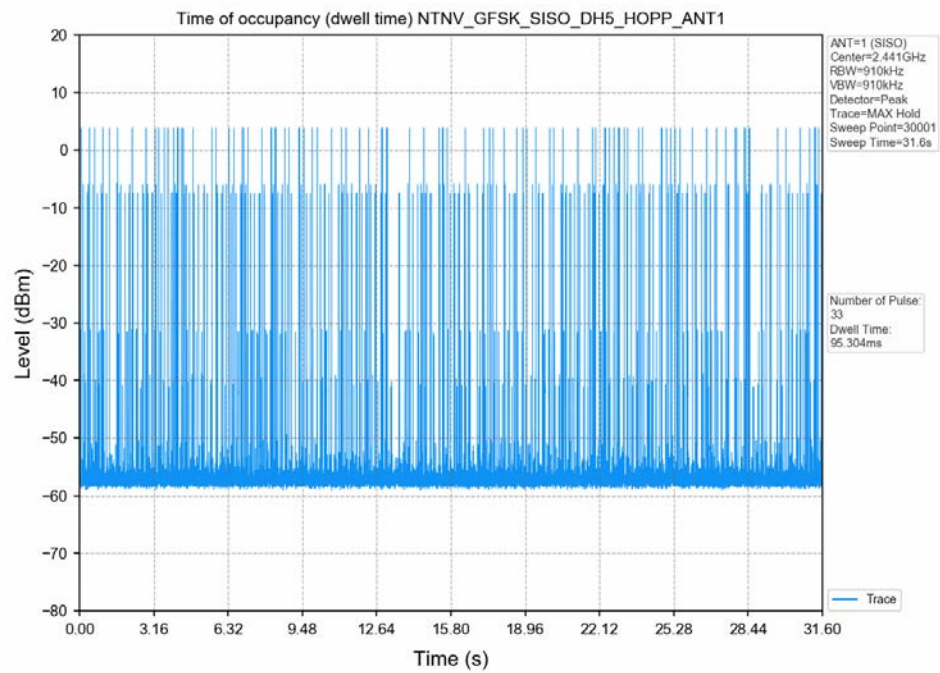
Test Mode	Packet Type	TX Type	ANT No.	Duration of Single Pulse (ms)	Obeservation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limits (ms)	Verdict
GFSK	DH1	SISO	1	0.383	31.6	320	122.560	≤400	PASS
	DH3	SISO	1	1.640	31.6	158	259.120	≤400	PASS
	DH5	SISO	1	2.888	31.6	100	288.800	≤400	PASS
Pi/4D QPS K	2DH1	SISO	1	0.377	31.6	250	94.250	≤400	PASS
	2DH3	SISO	1	1.628	31.6	121	196.988	≤400	PASS
	2DH5	SISO	1	2.876	31.6	84	241.584	≤400	PASS
8DPS K	3DH1	SISO	1	0.389	31.6	251	97.639	≤400	PASS
	3DH3	SISO	1	1.641	31.6	125	205.125	≤400	PASS
	3DH5	SISO	1	2.892	31.6	86	248.712	≤400	PASS

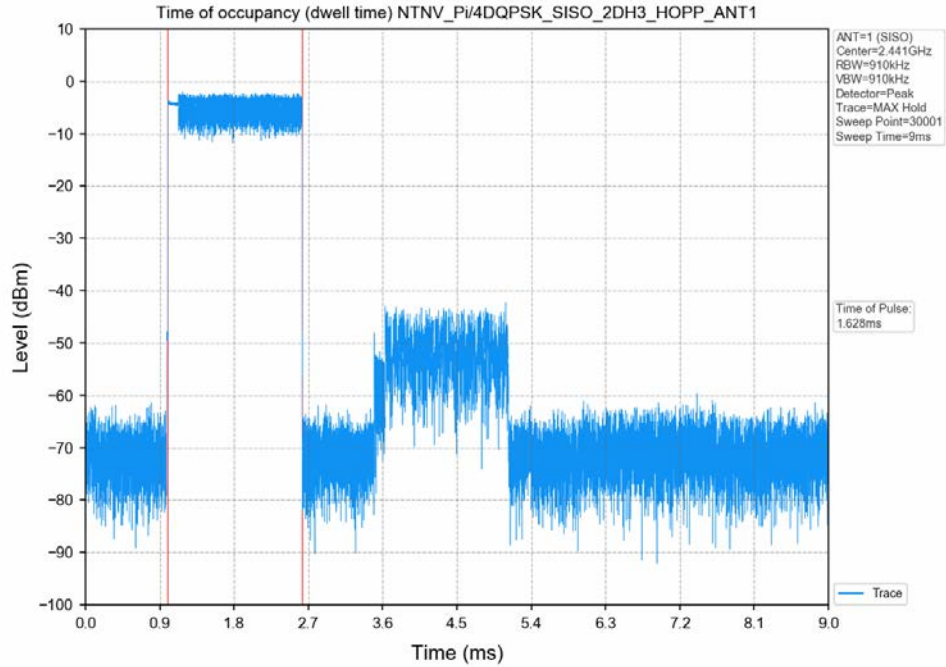
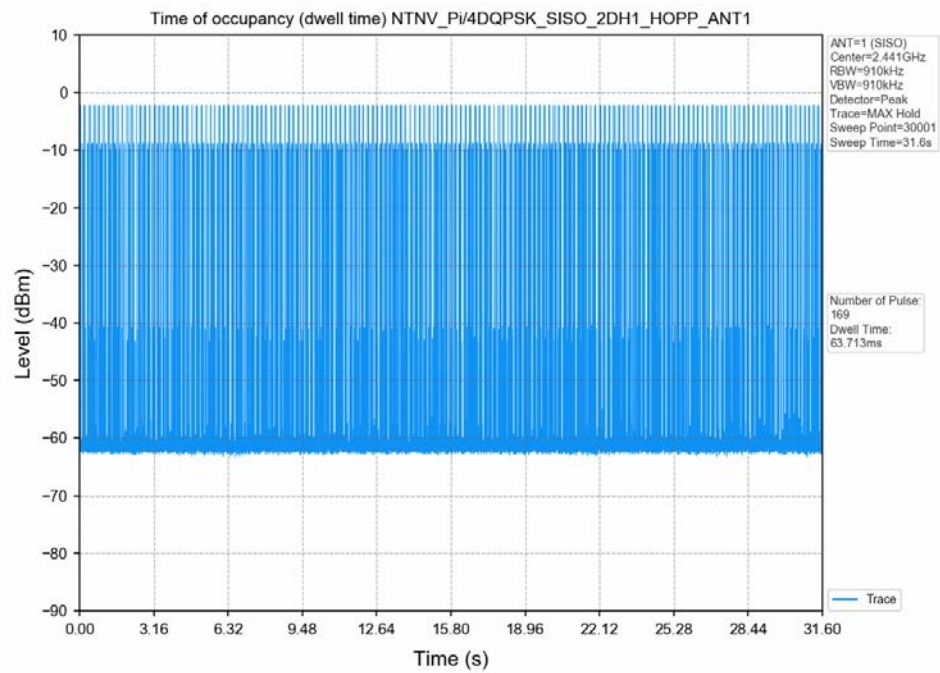
5.2 Test Graph

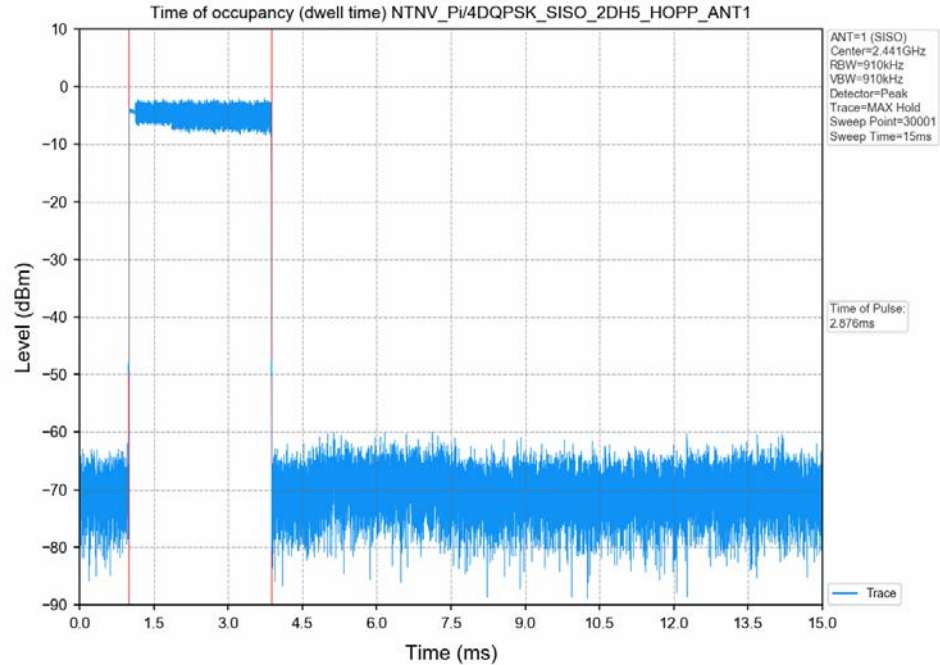
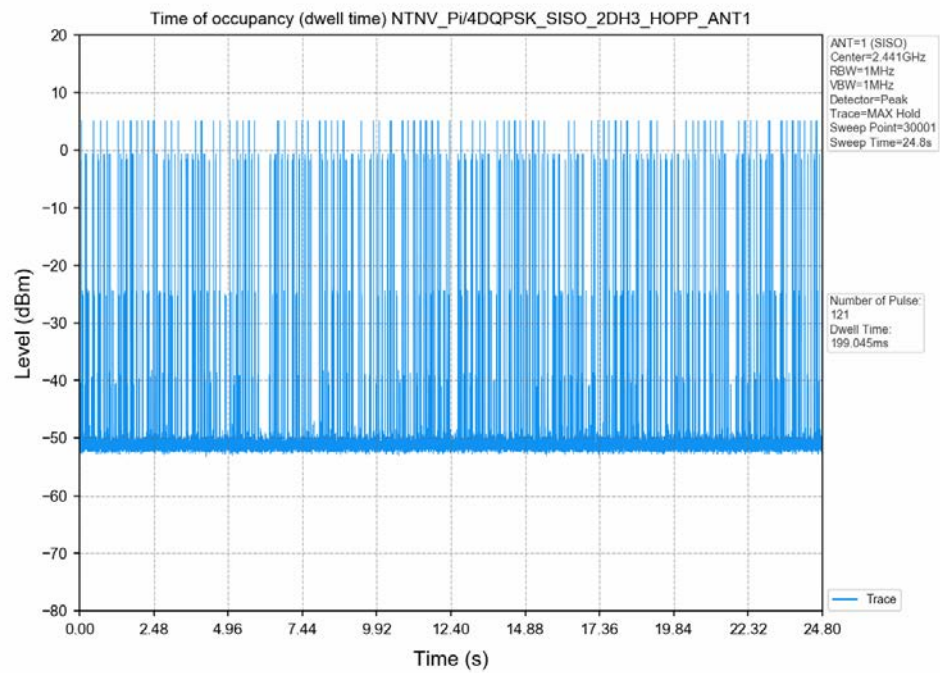


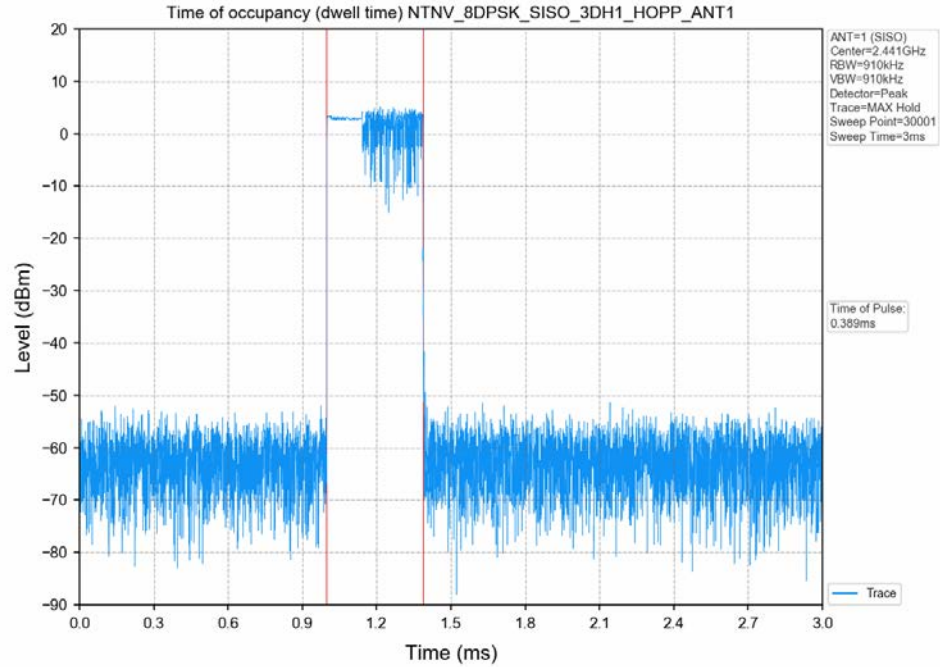
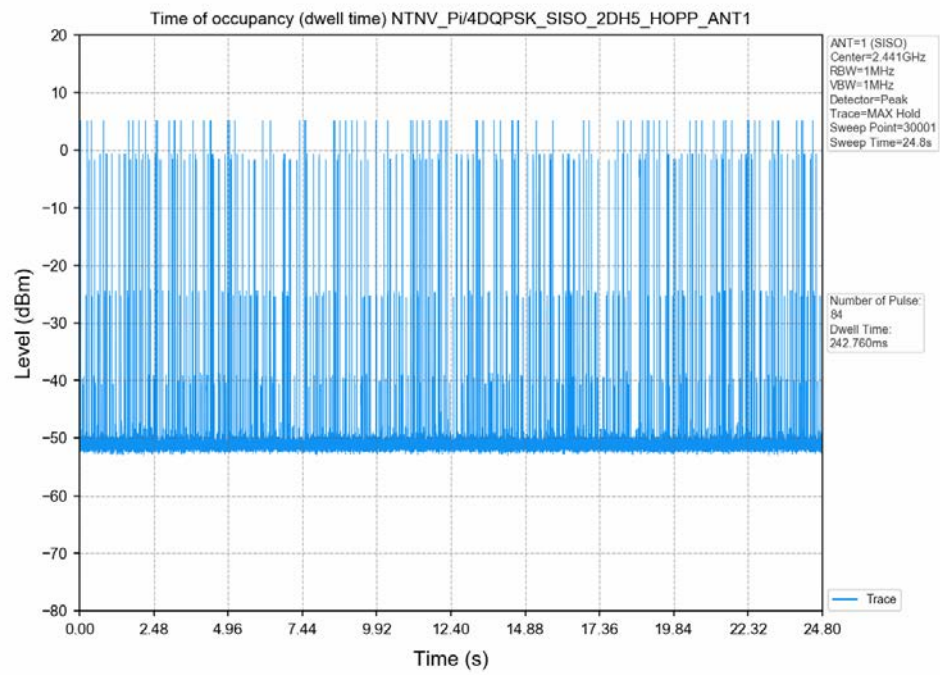


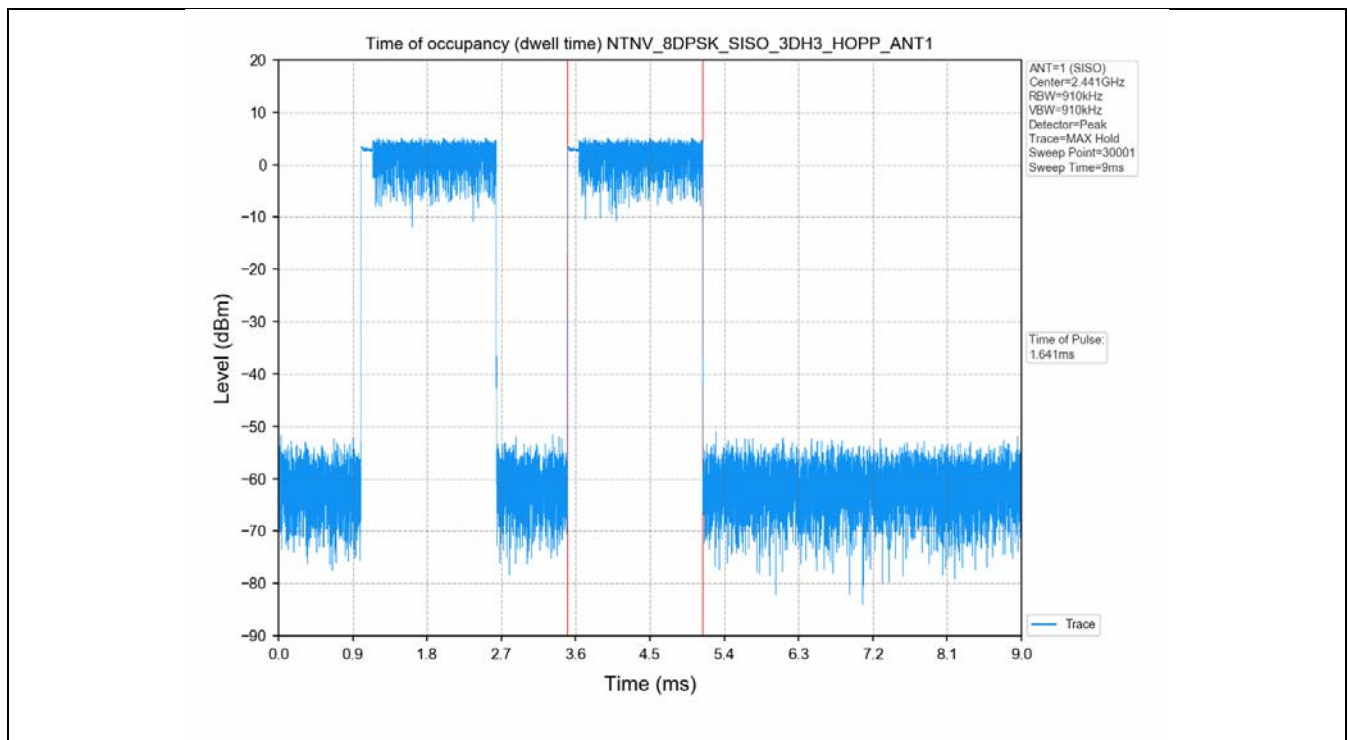
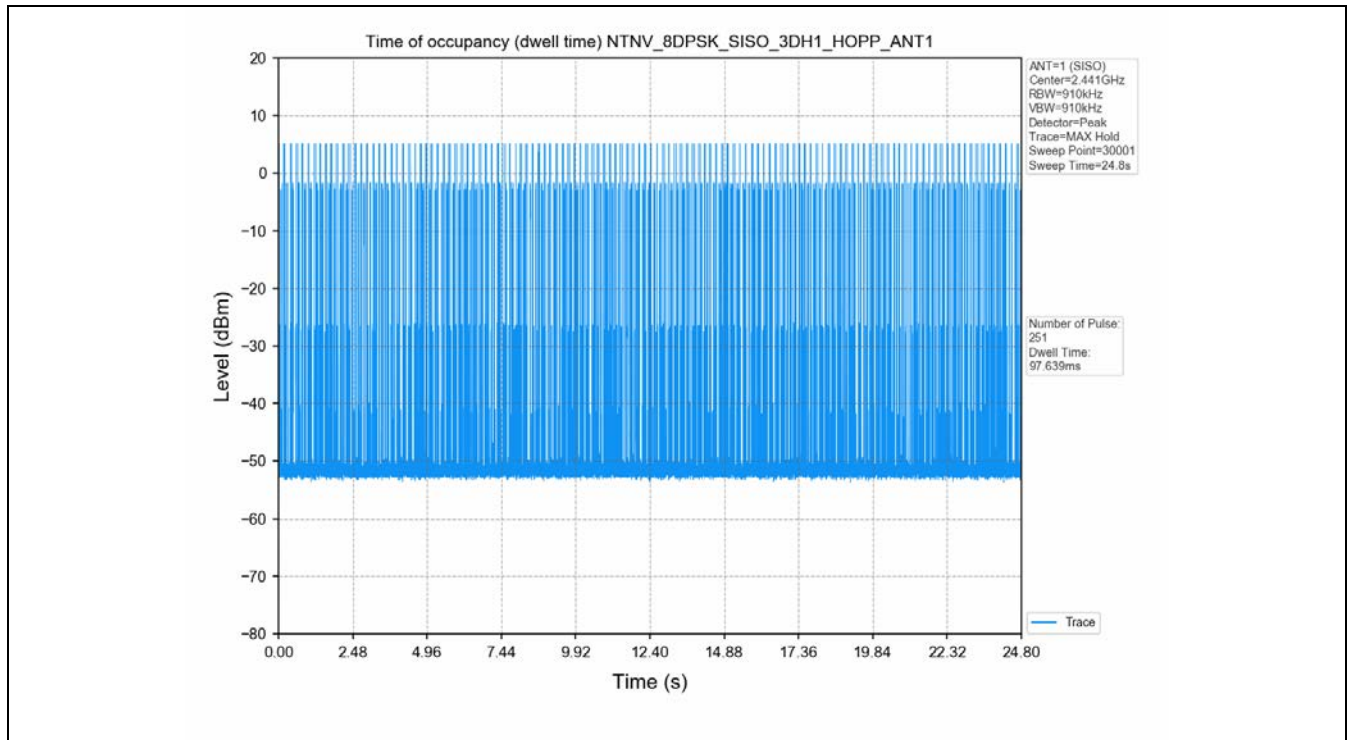


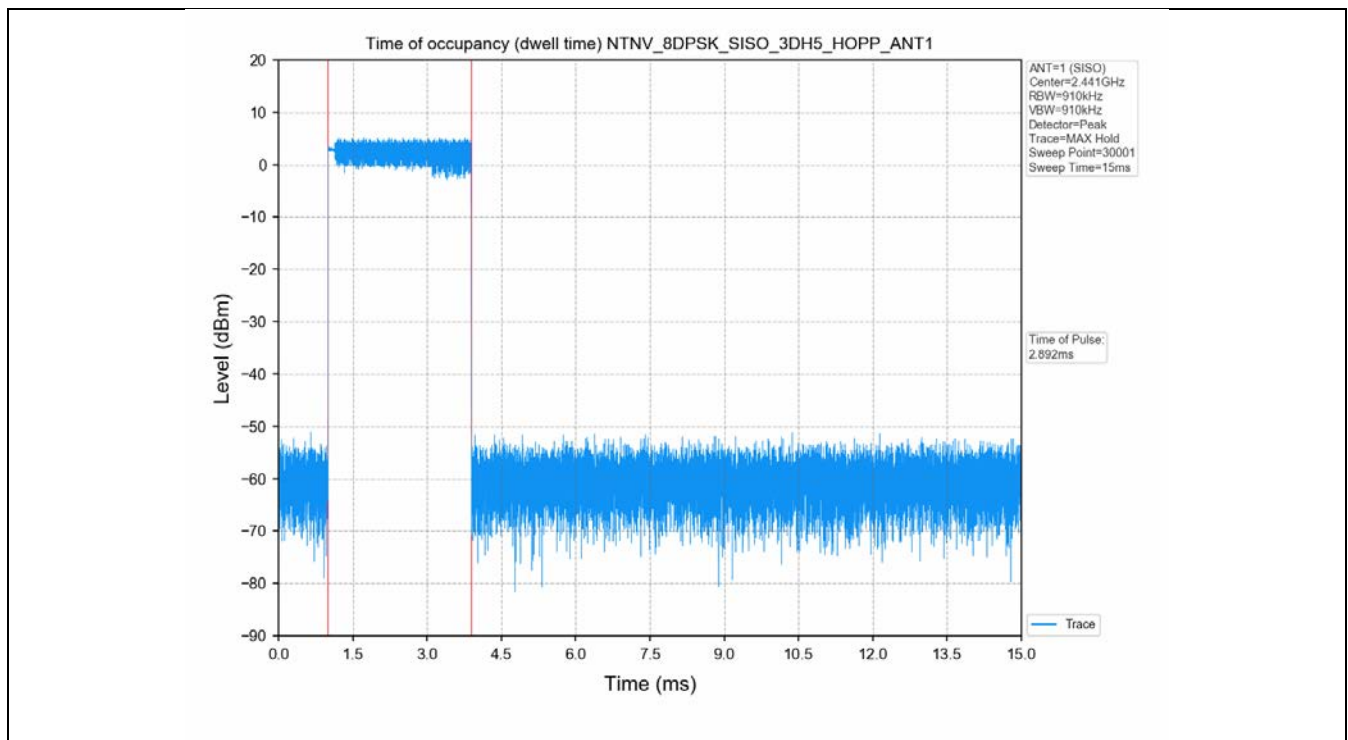
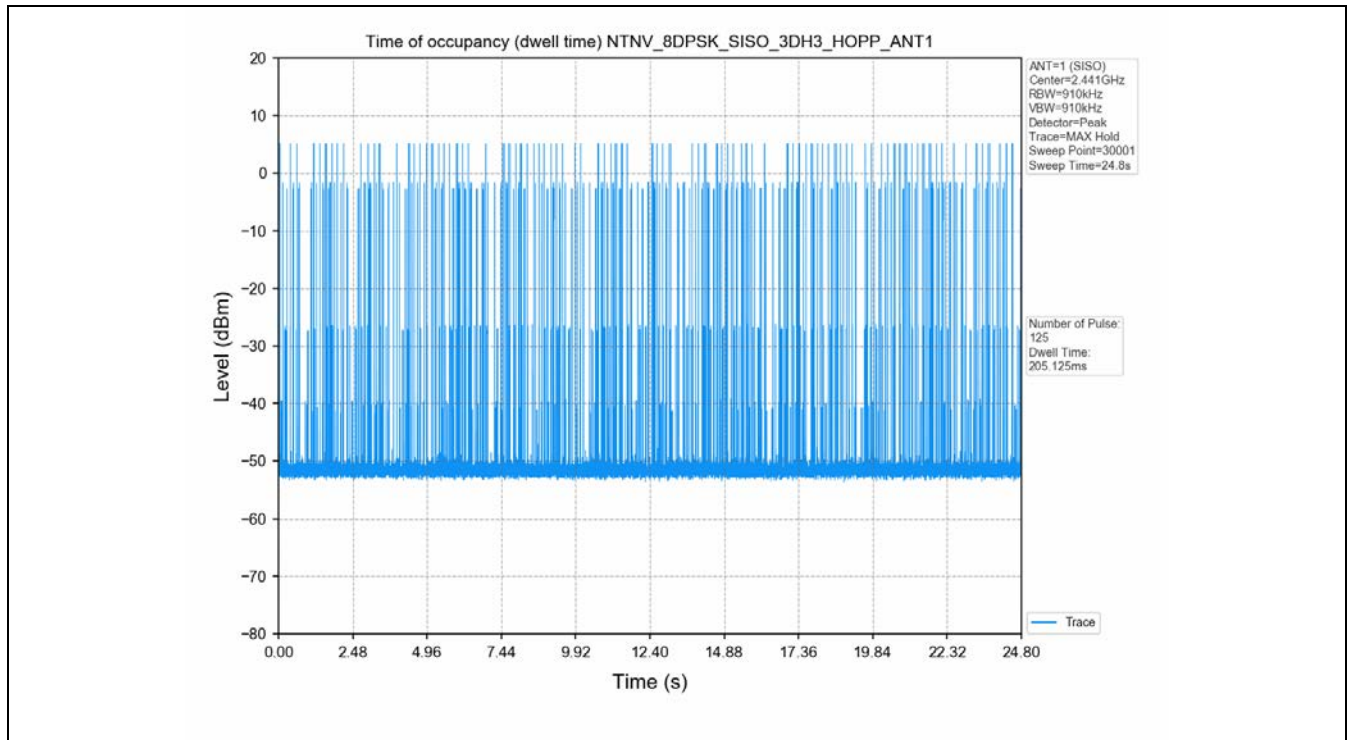


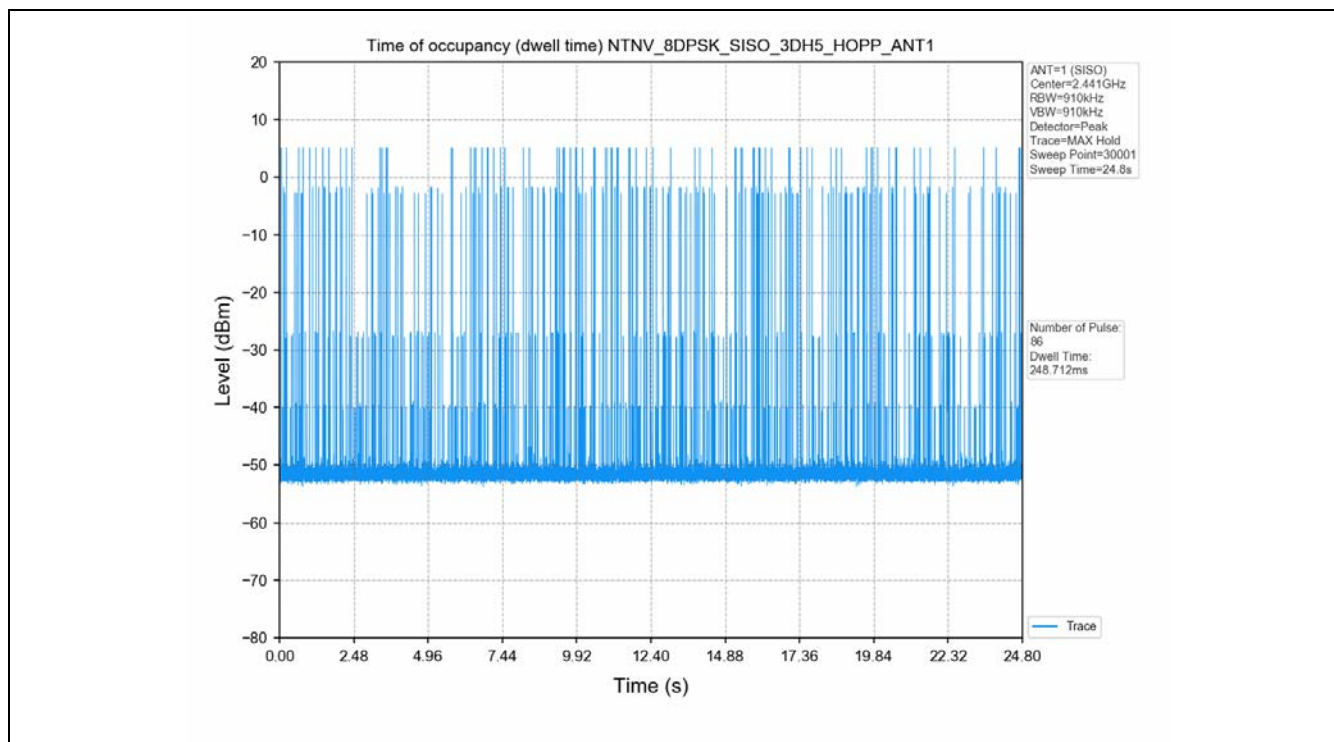












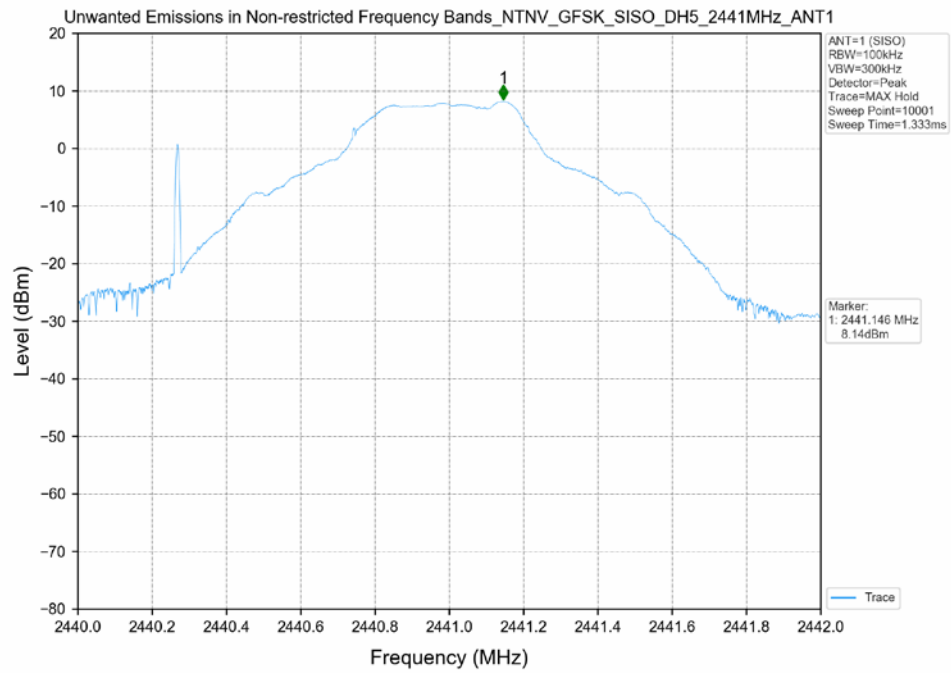
6. Unwanted Emissions in Non-restricted Frequency Bands

6.1 Test Result

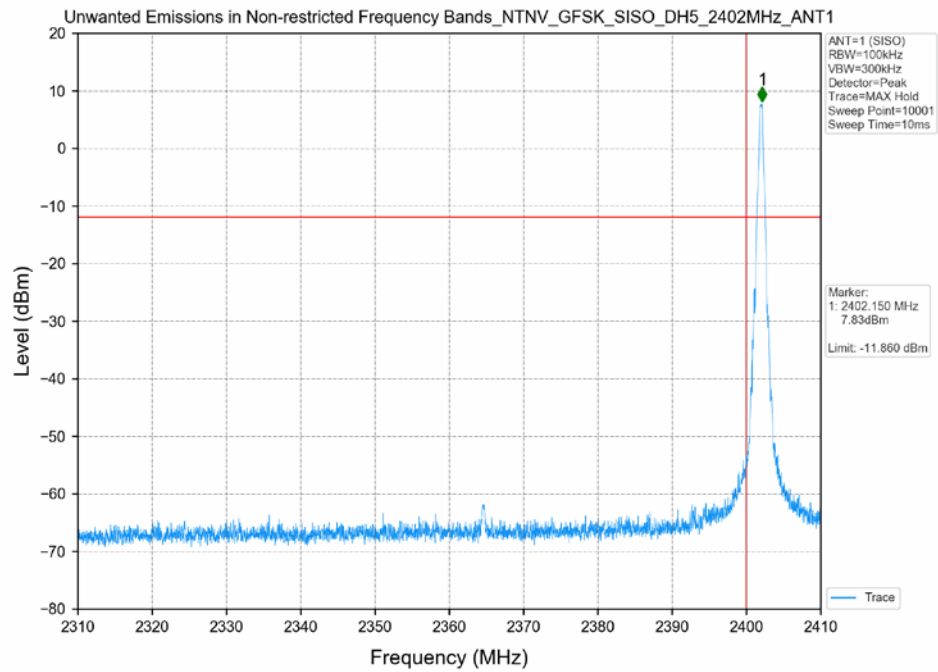
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBc)	Verdict
GFSK	2402	SISO	1	Refer to test graph	-20	PASS
	2441	SISO	1	Refer to test graph	-20	PASS
	2480	SISO	1	Refer to test graph	-20	PASS
	Hopping	SISO	1	Refer to test graph	-20	PASS
Pi/4DQPSK	2402	SISO	1	Refer to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

6.2 Test Graph

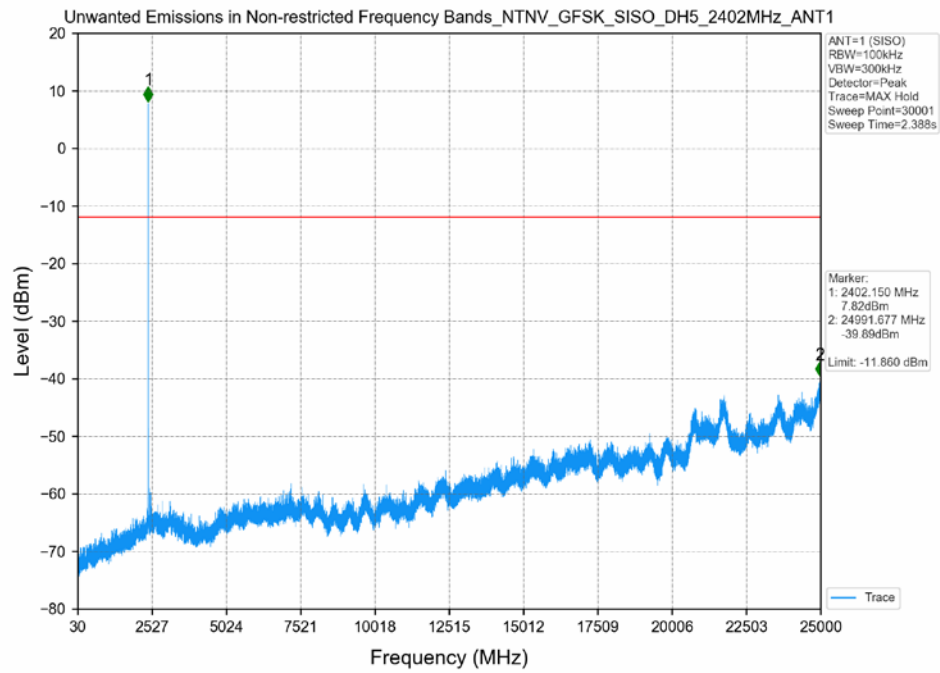
GFSK_DH5_SISO_ANT1_REF



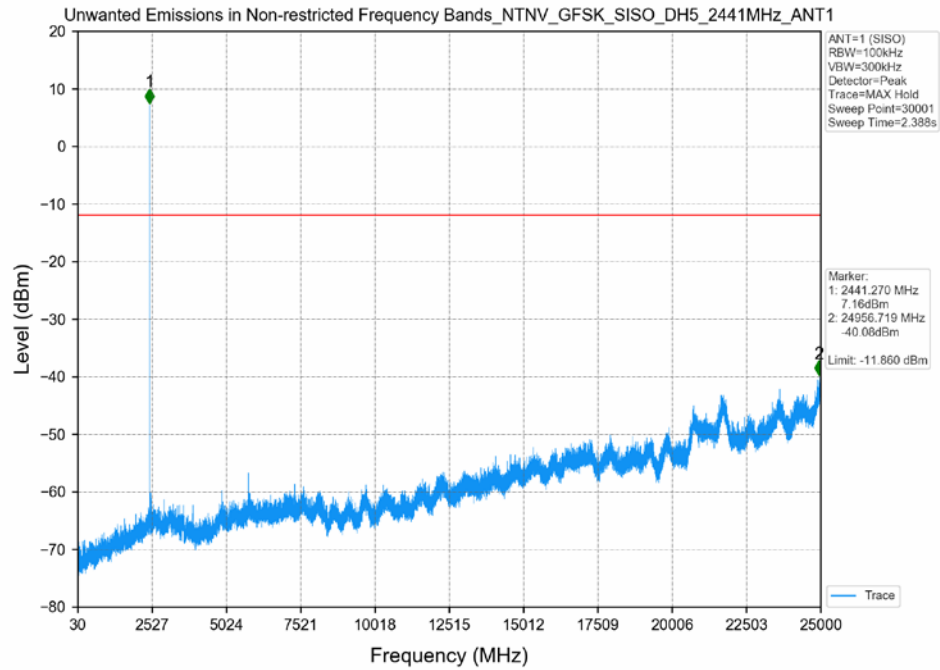
GFSK_2402MHz_DH5_SISO_ANT1



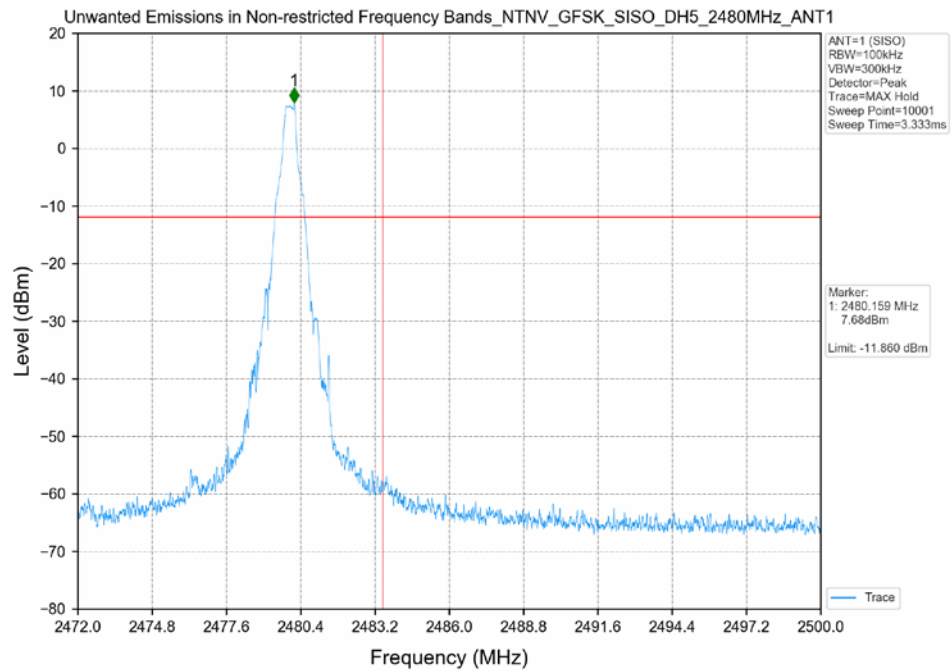
GFSK_2402MHz_DH5_SISO_ANT1



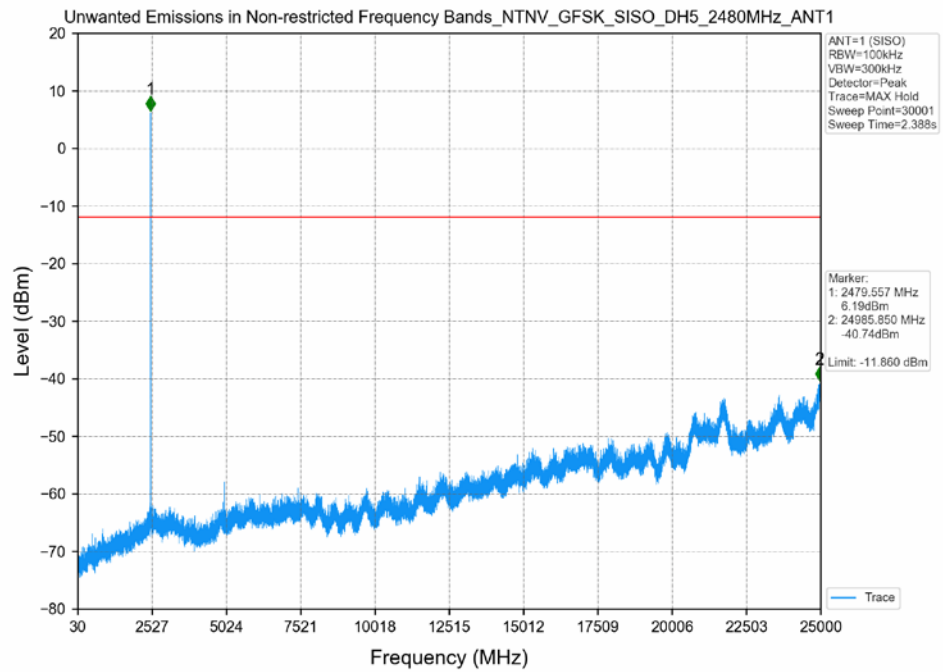
GFSK_2441MHz_DH5_SISO_ANT1



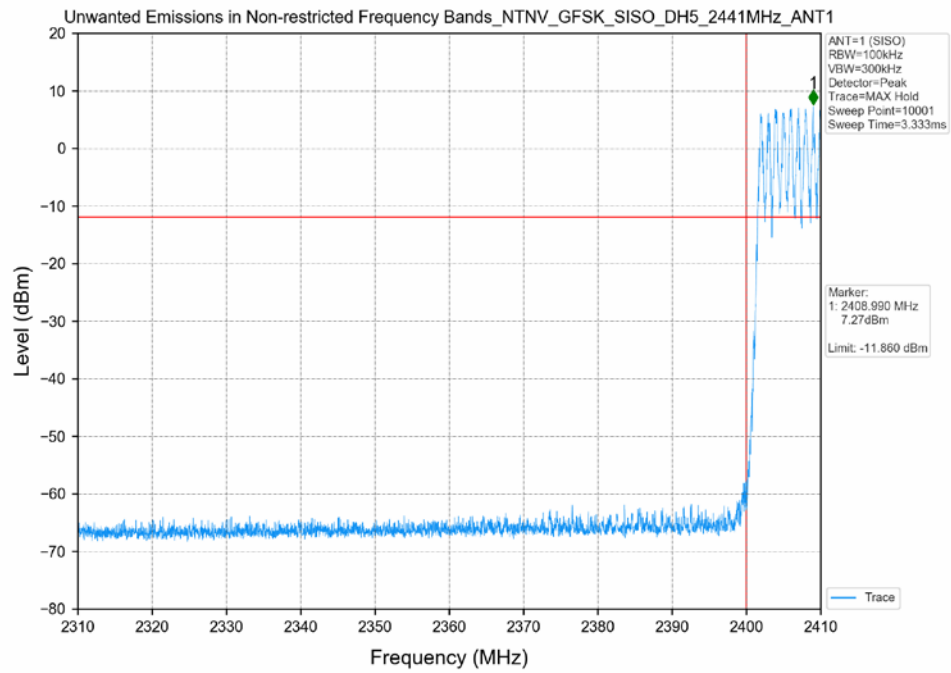
GFSK_2480MHz_DH5_SISO_ANT1



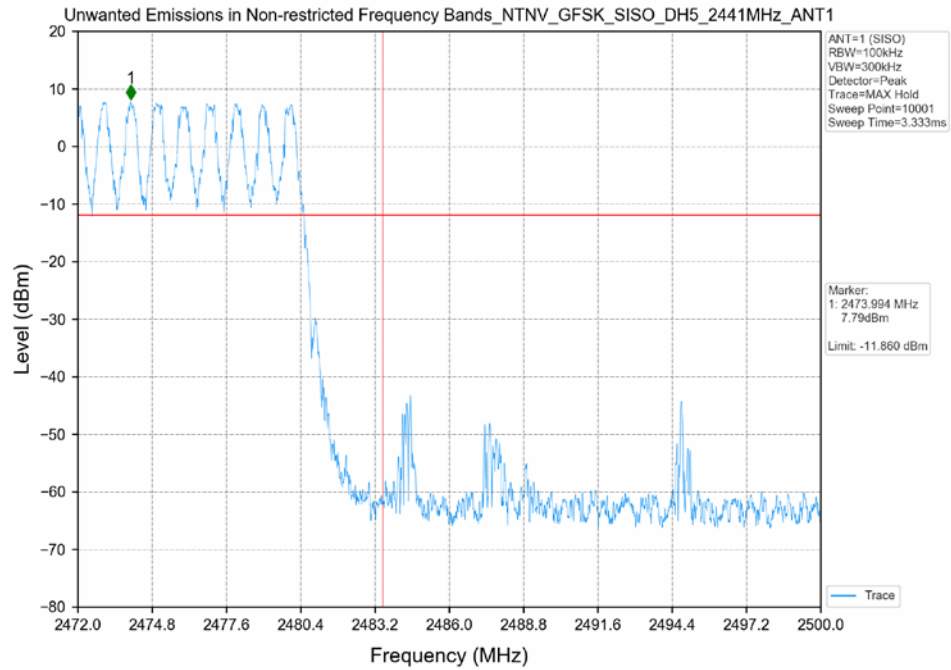
GFSK_2480MHz_DH5_SISO_ANT1



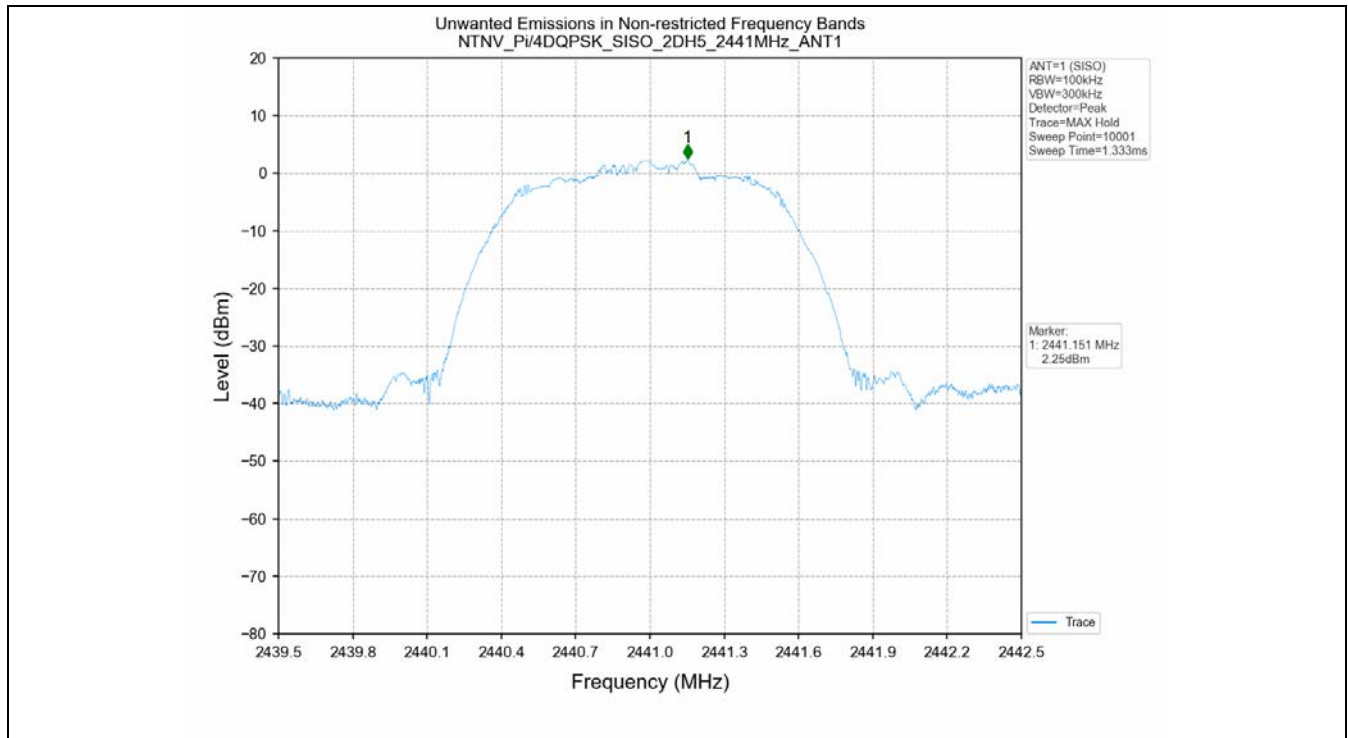
GFSK_Hopping_DH5_SISO ANT1



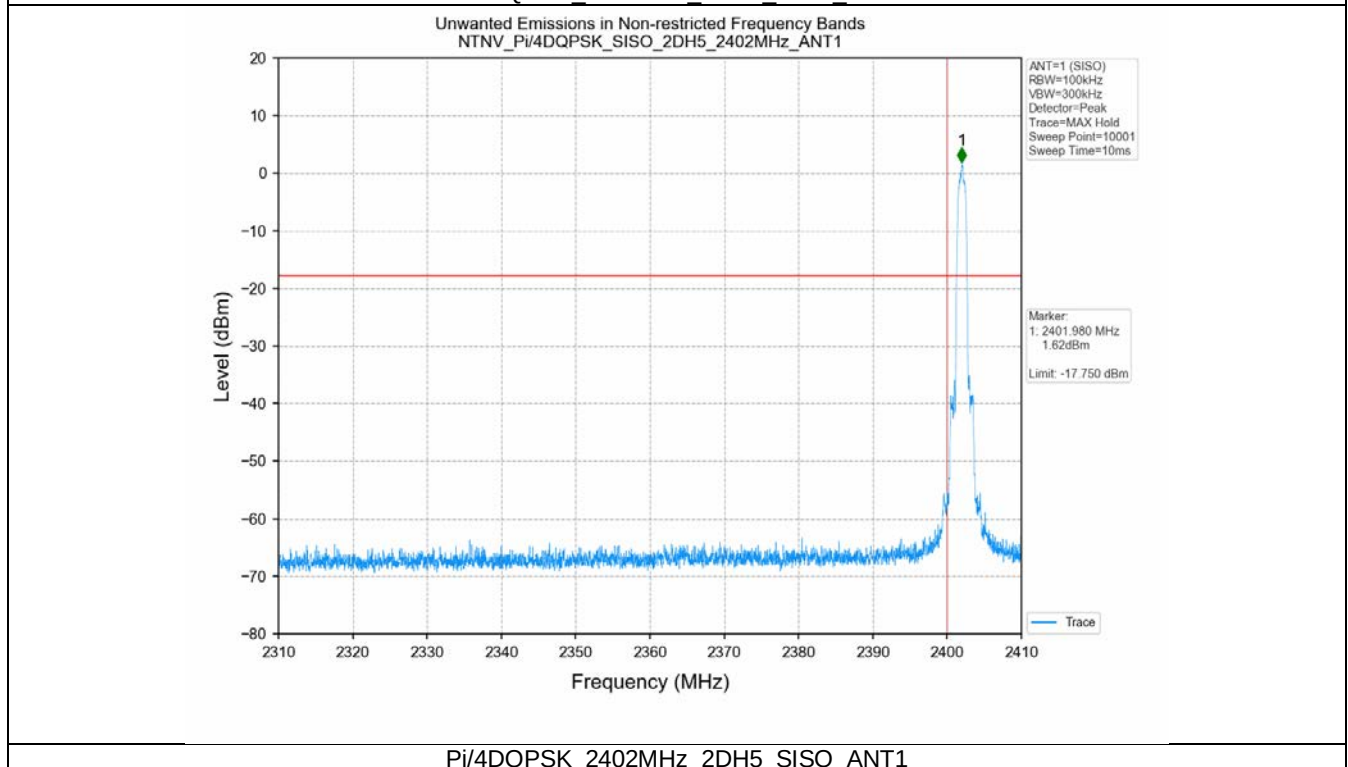
GFSK_Hopping_DH5_SISO_ANT1



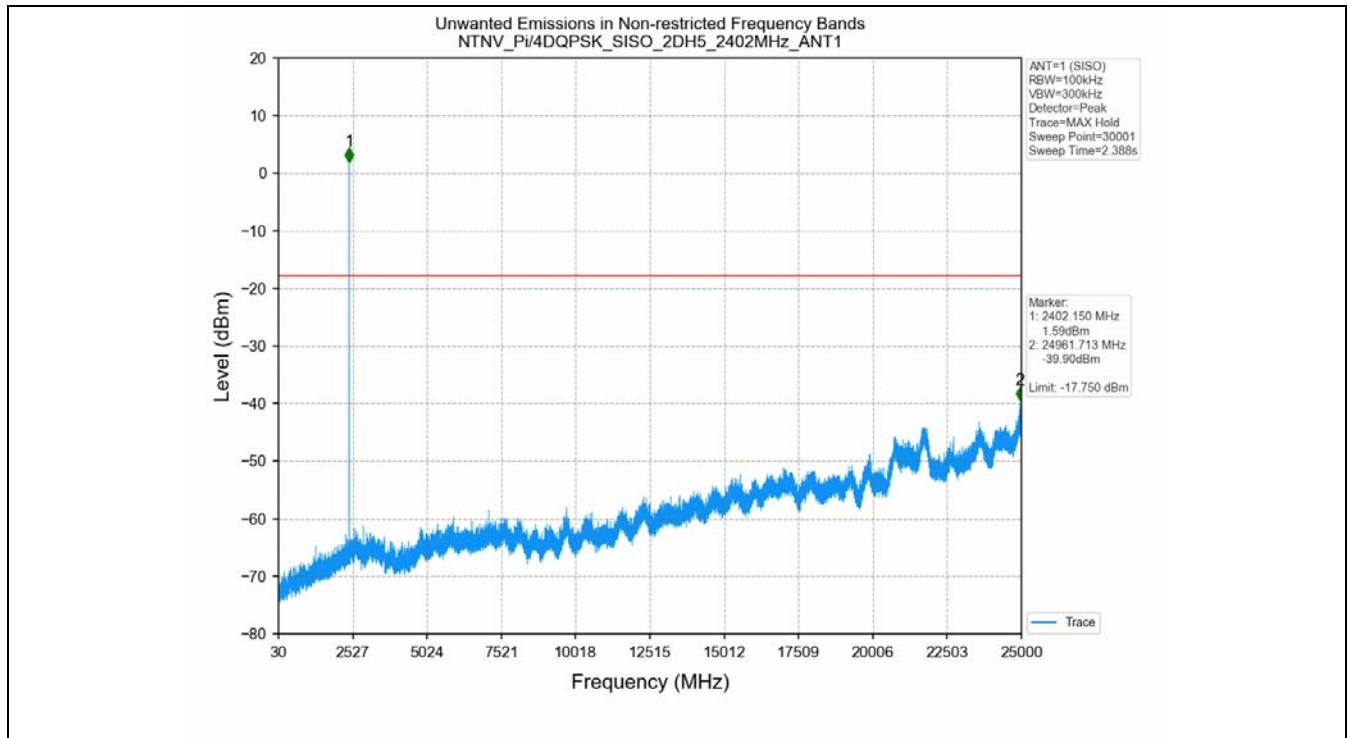
Pi/4DQPSK 2DH5_SISO ANT1_REF



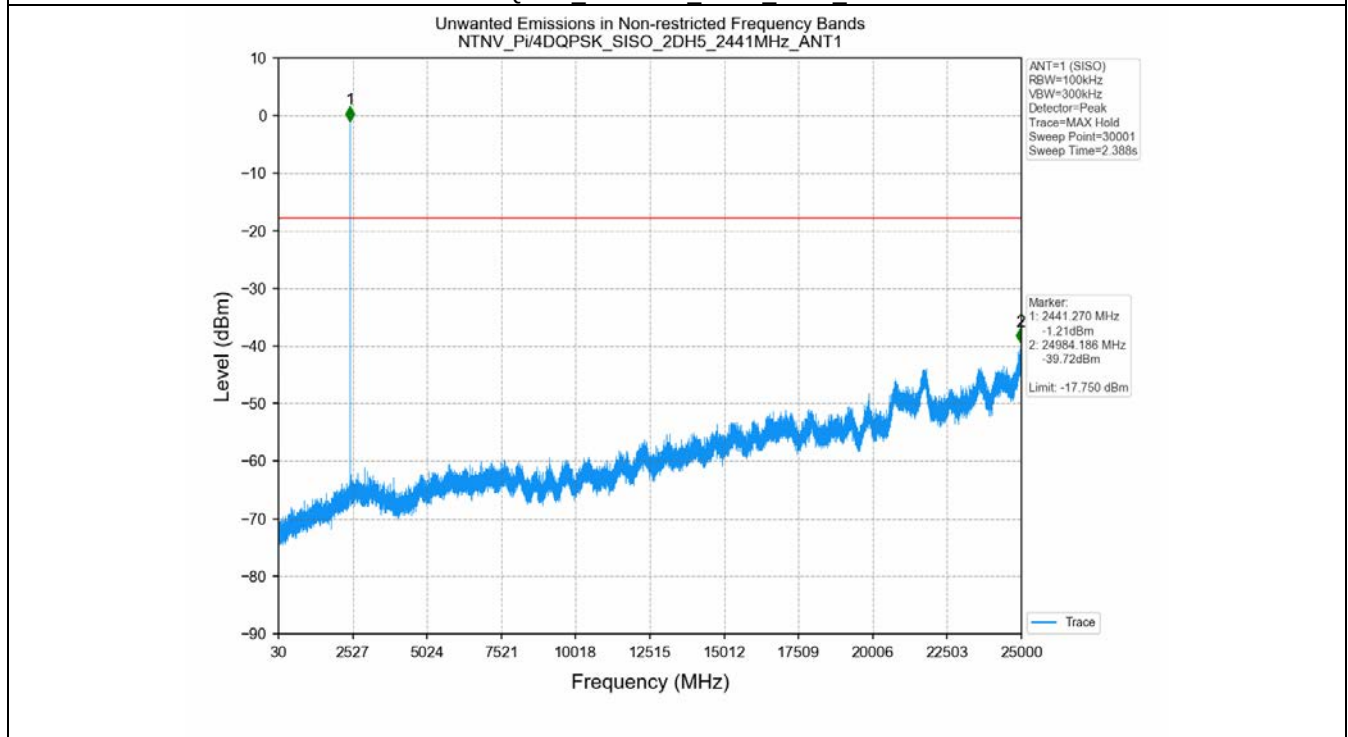
Pi/4QPSK_2402MHz_2DH5_SISO_ANT1



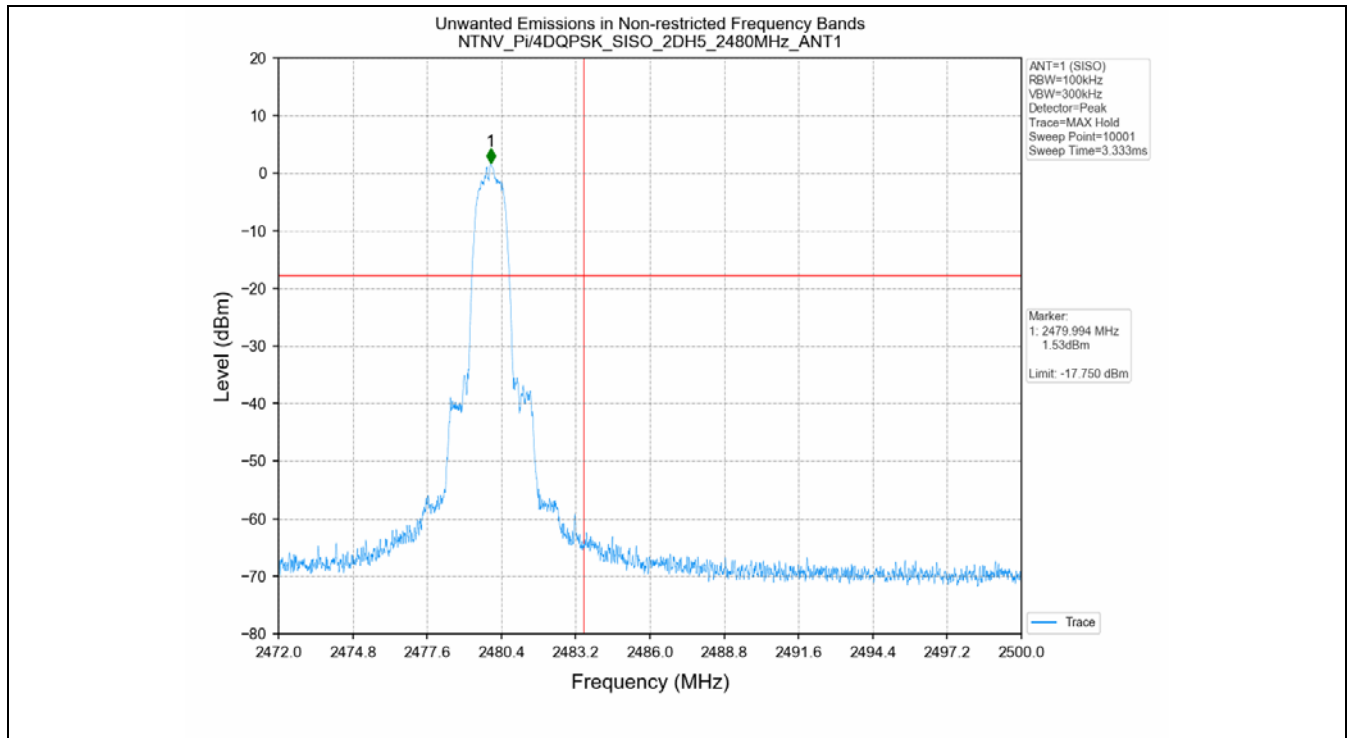
Pi/4QPSK_2402MHz_2DH5_SISO_ANT1



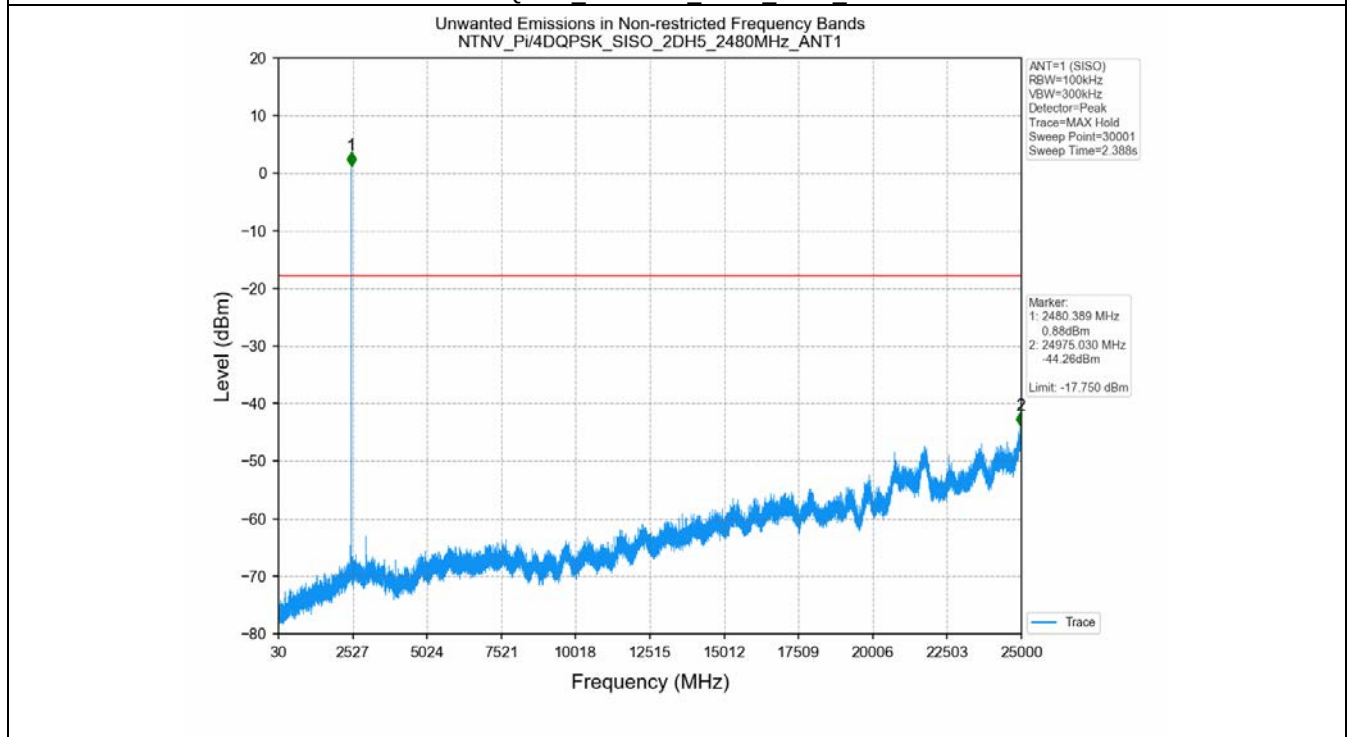
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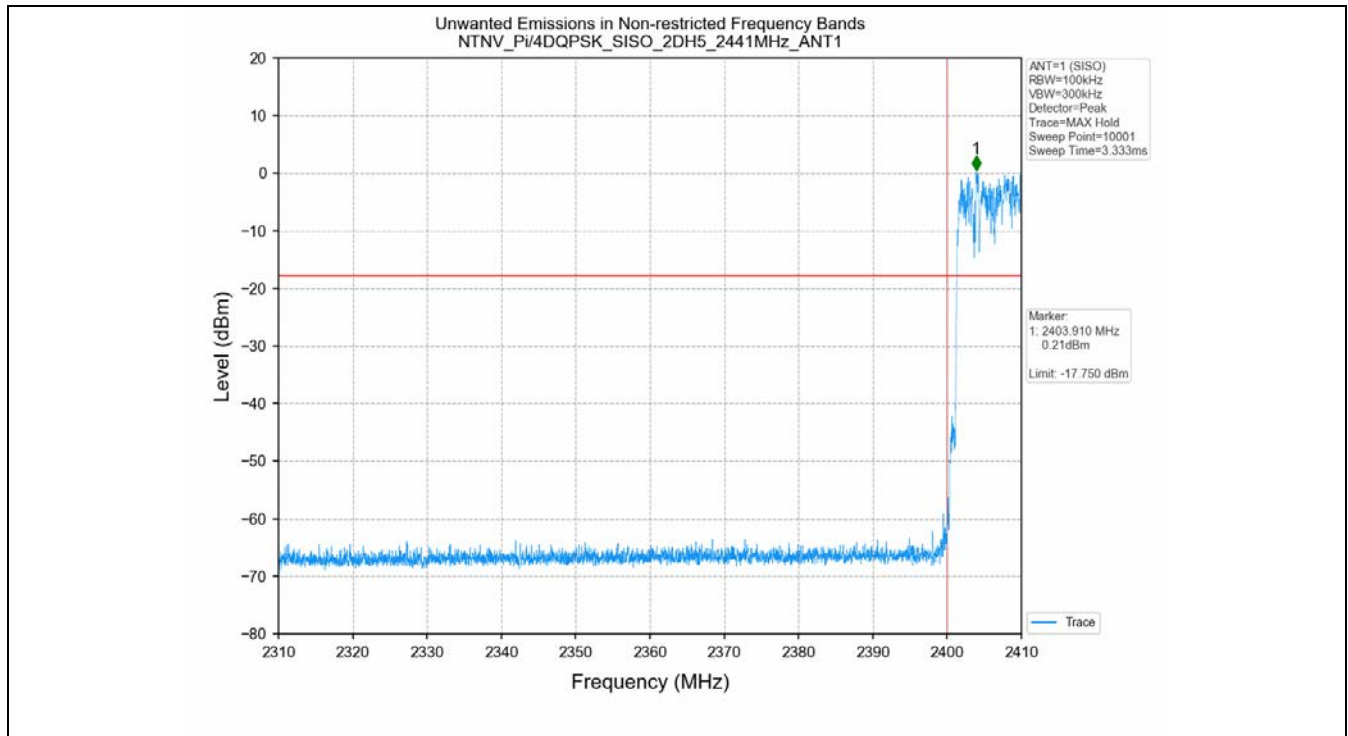
Pi/4QPSK_2480MHz_2DH5_SISO_ANT1



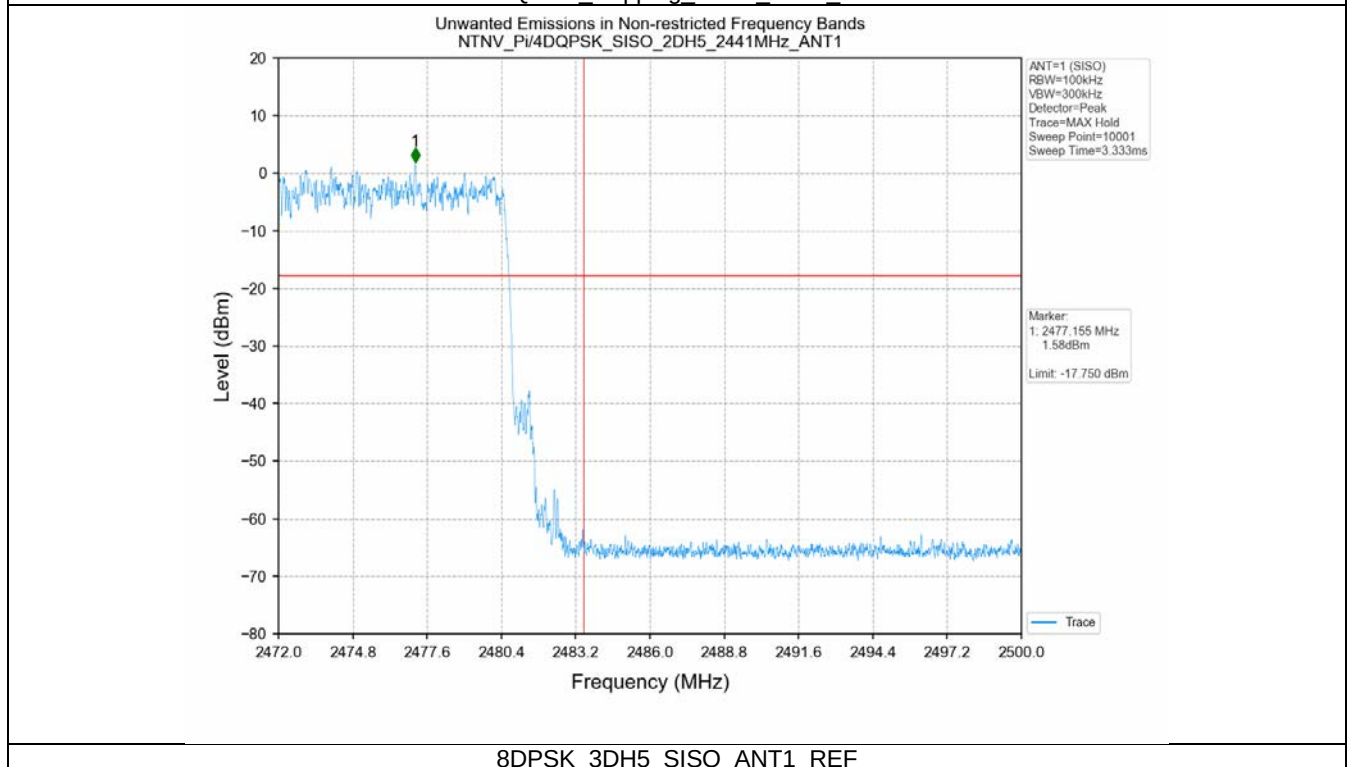
Pi/4QPSK_2480MHz_2DH5_SISO_ANT1



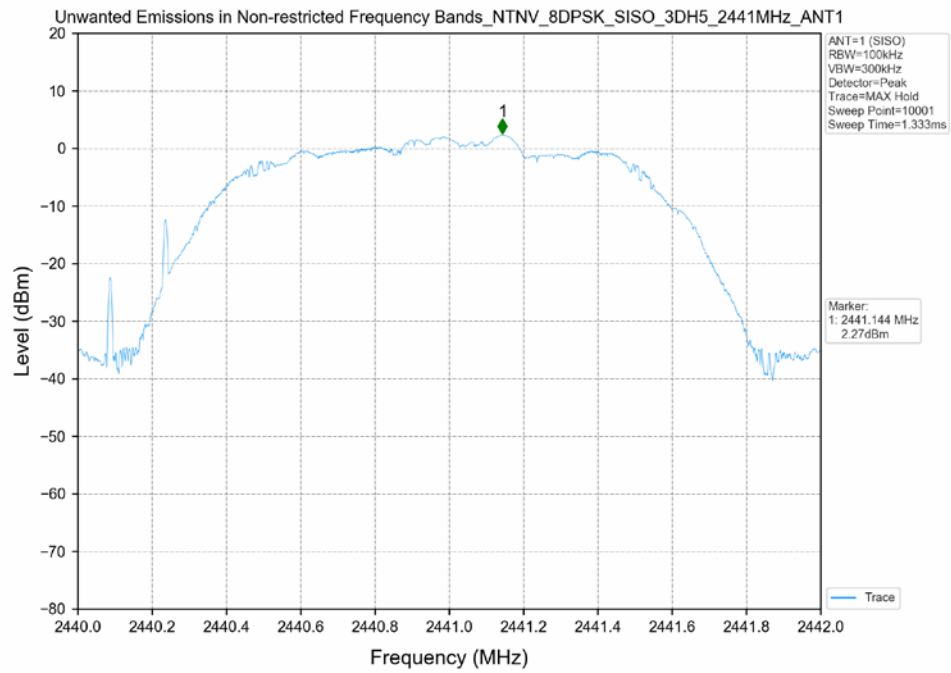
Pi/4QPSK_Hopping_2DH5_SISO_ANT1



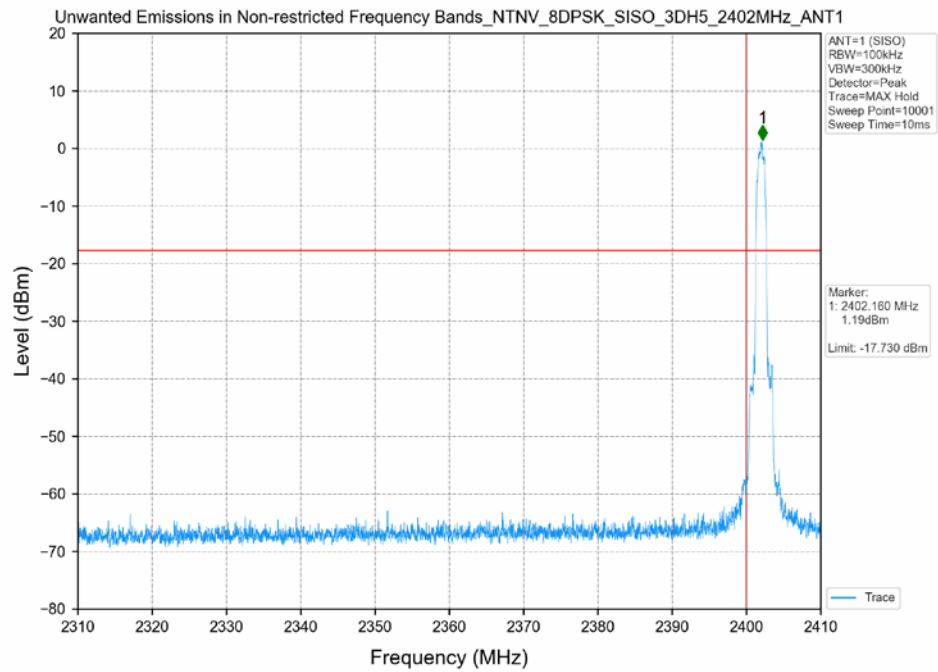
Pi/4DQPSK_Hopping_2DH5_SISO_ANT1



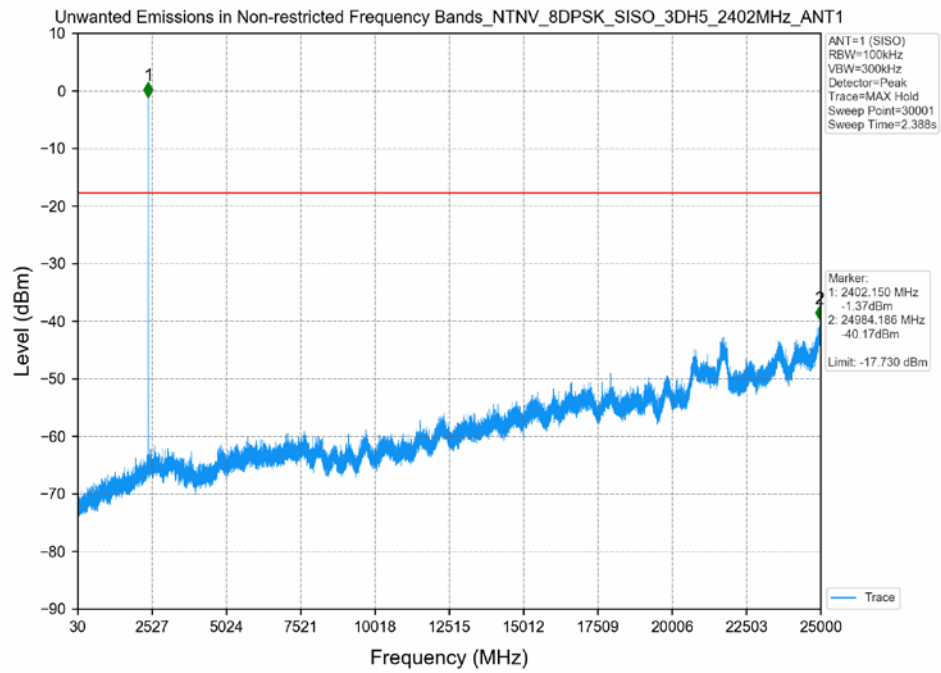
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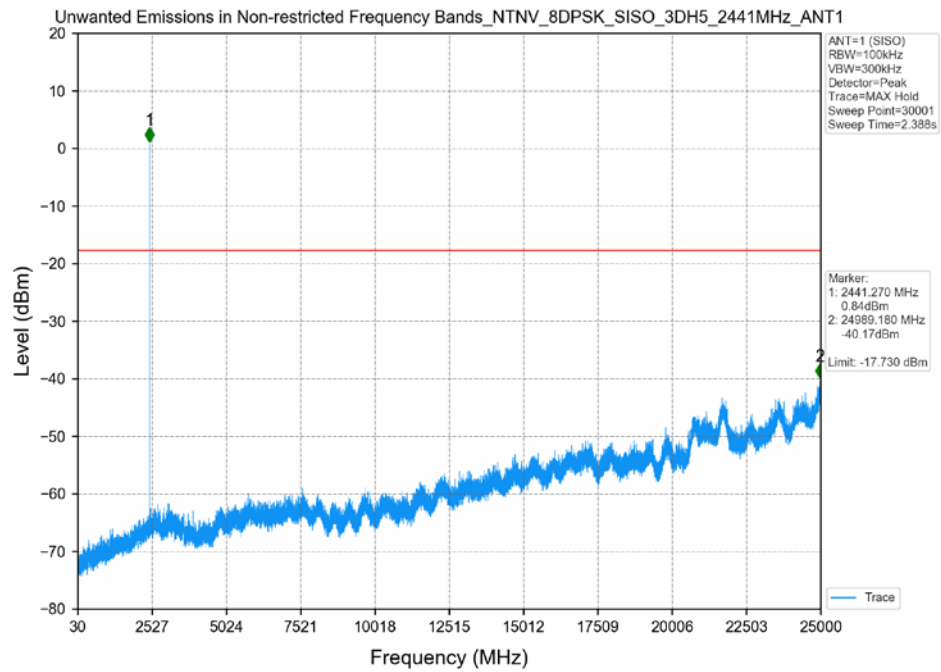
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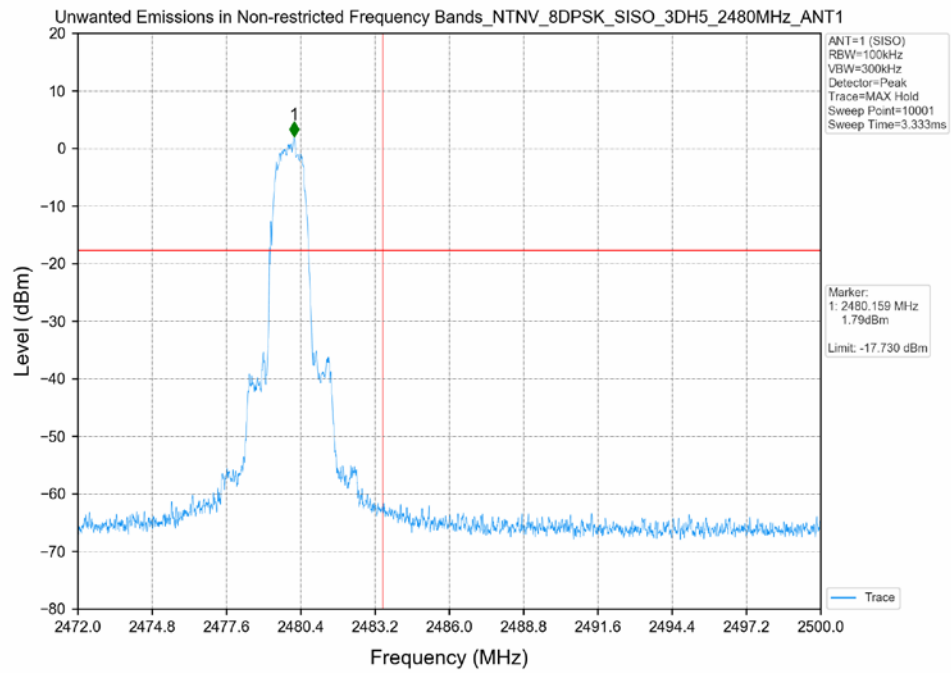
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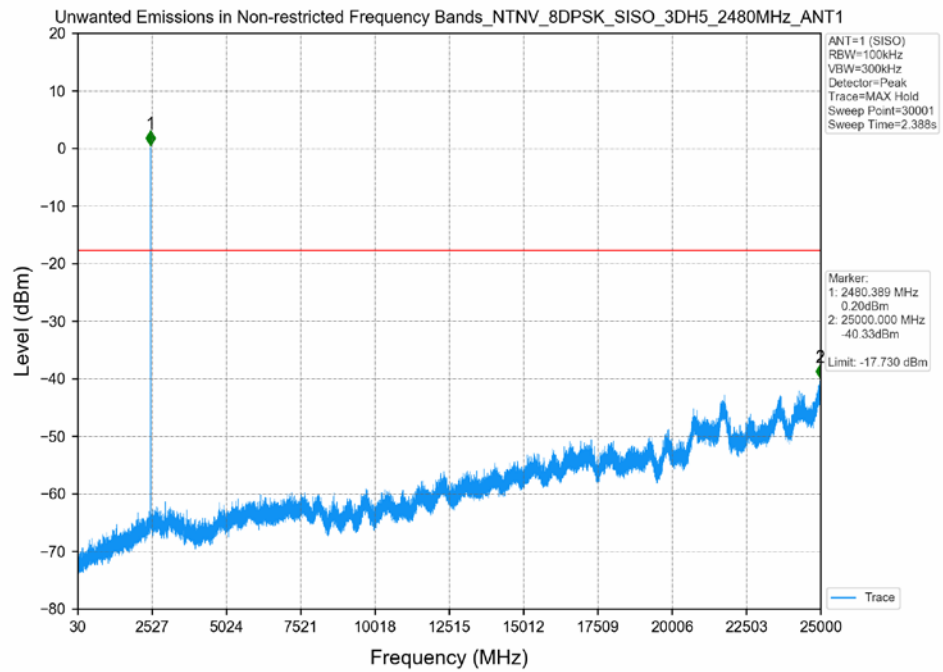
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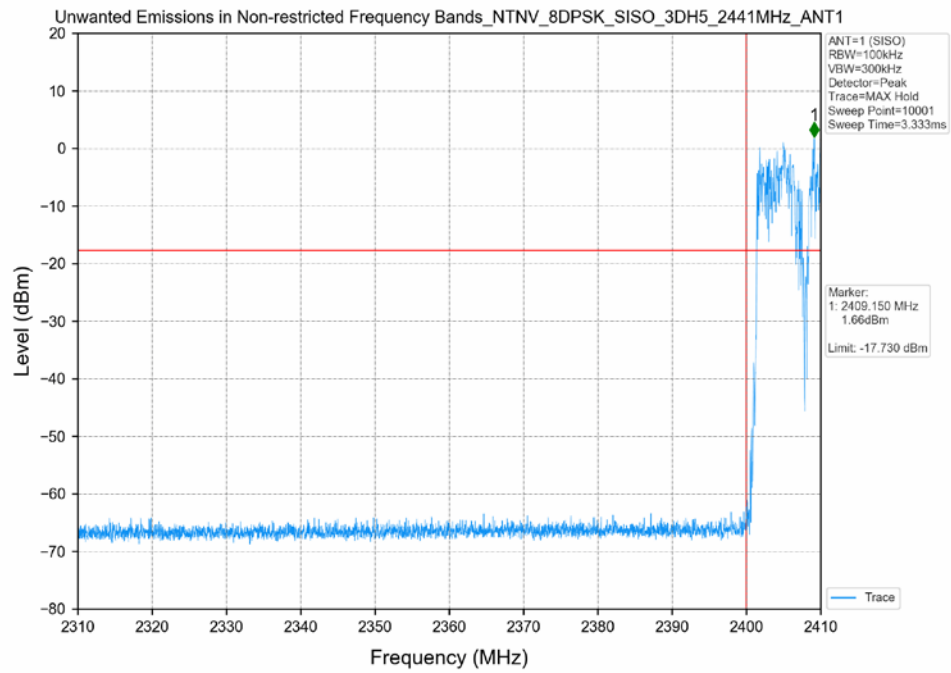
8DPSK_2480MHz_3DH5_SISO_ANT1



8DPSK_2480MHz_3DH5_SISO_ANT1



8DPSK_Hopping_3DH5_SISO ANT1



8DPSK_Hopping_3DH5_SISO ANT1

