



Shenzhen CTL Testing Technology Co., Ltd.

Tel: +86-755-89486194 E-mail: ctl@ctl-lab.com

FCC ID : 2AS7H-MPD106TS

Appendix for 15.247

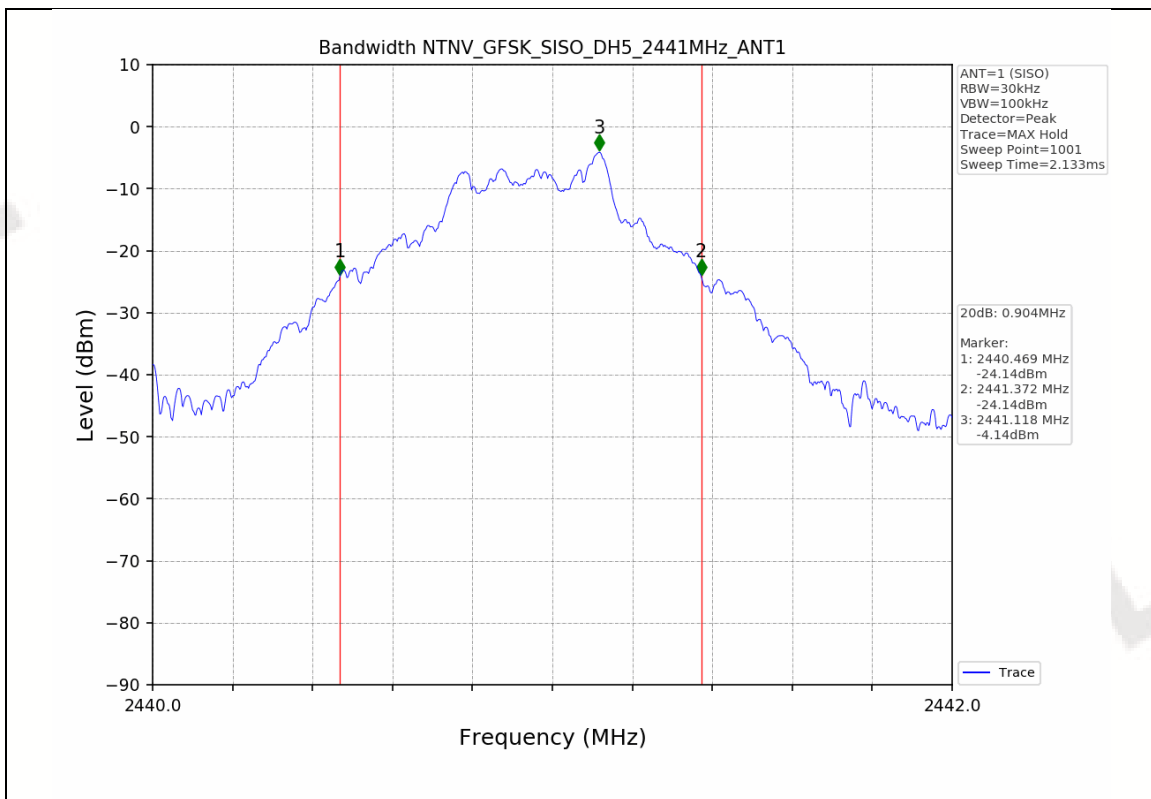
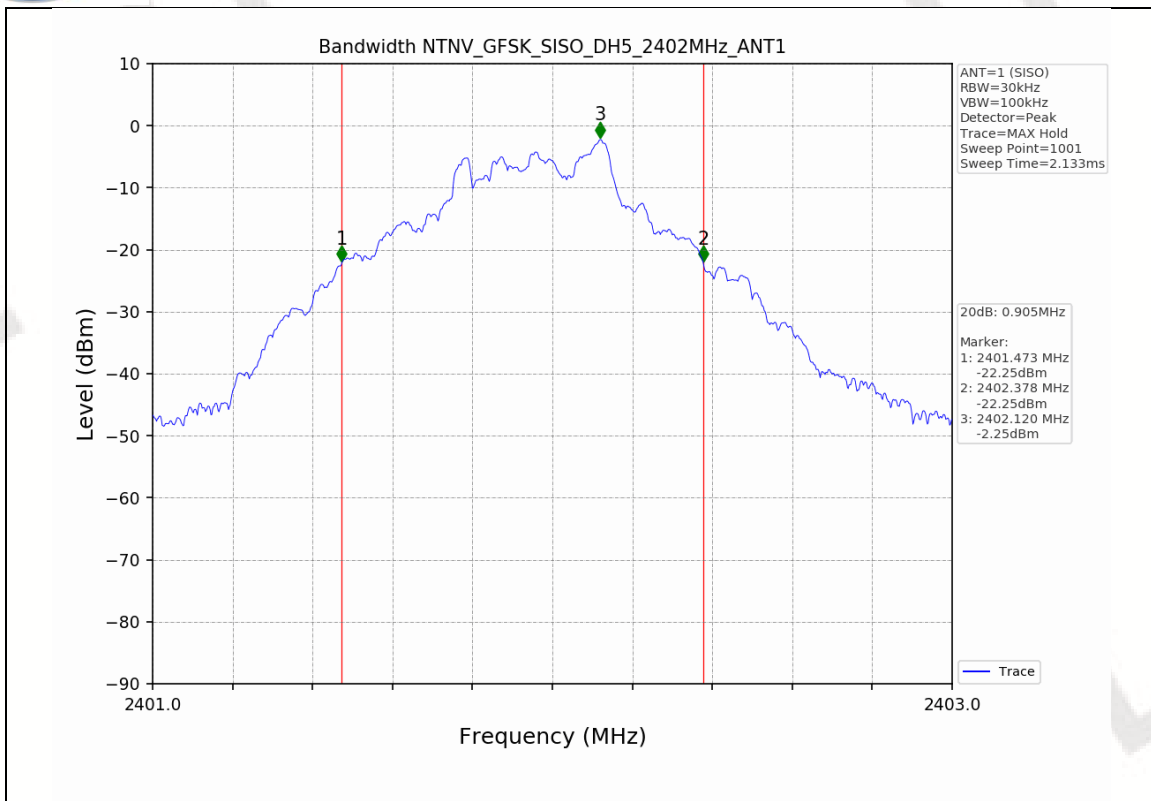
1. Bandwidth

1.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	0.905	PASS
	2441	SISO	1	0.904	PASS
	2480	SISO	1	0.902	PASS
Pi/4DQPSK	2402	SISO	1	1.286	PASS
	2441	SISO	1	1.294	PASS
	2480	SISO	1	1.300	PASS
8DPSK	2402	SISO	1	1.269	PASS
	2441	SISO	1	1.277	PASS
	2480	SISO	1	1.278	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
GFSK	2402	SISO	1	0.871	Only for Report Use
	2441	SISO	1	0.873	Only for Report Use
	2480	SISO	1	0.868	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.183	Only for Report Use
	2441	SISO	1	1.183	Only for Report Use
	2480	SISO	1	1.184	Only for Report Use
8DPSK	2402	SISO	1	1.174	Only for Report Use
	2441	SISO	1	1.178	Only for Report Use
	2480	SISO	1	1.176	Only for Report Use

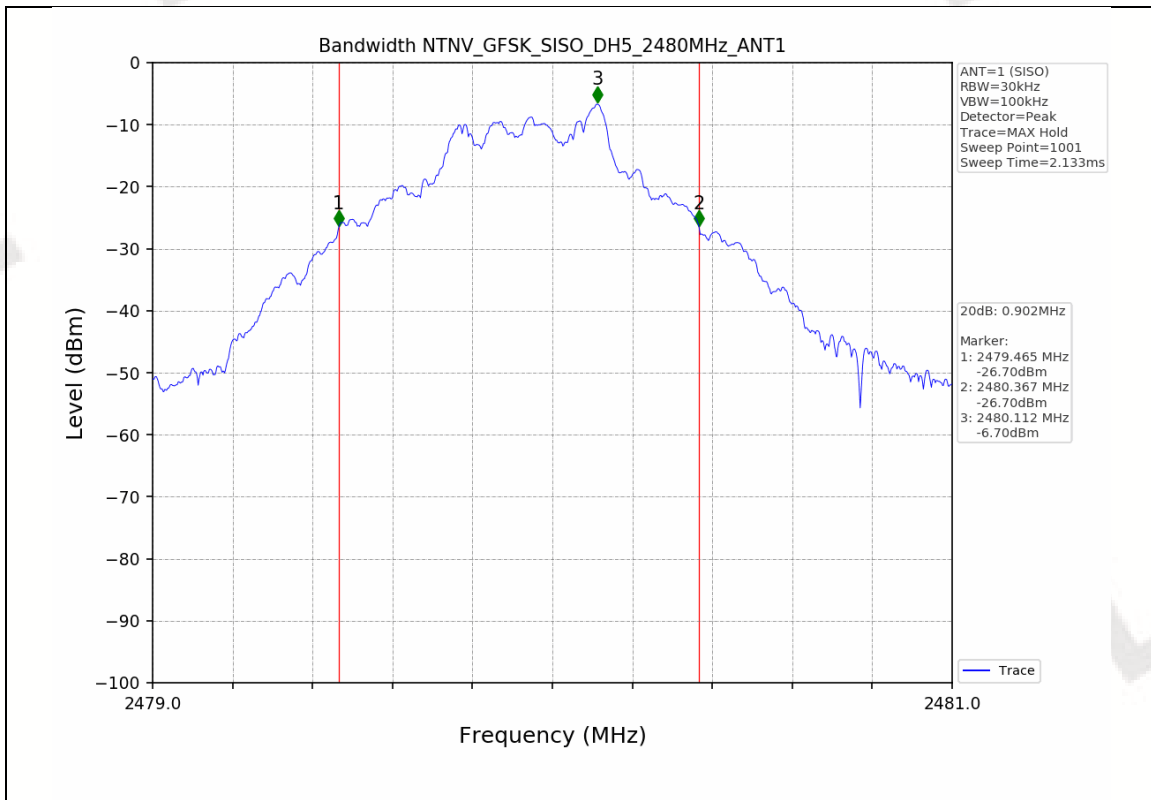
1.2 Test Graph - 20dB Bandwidth

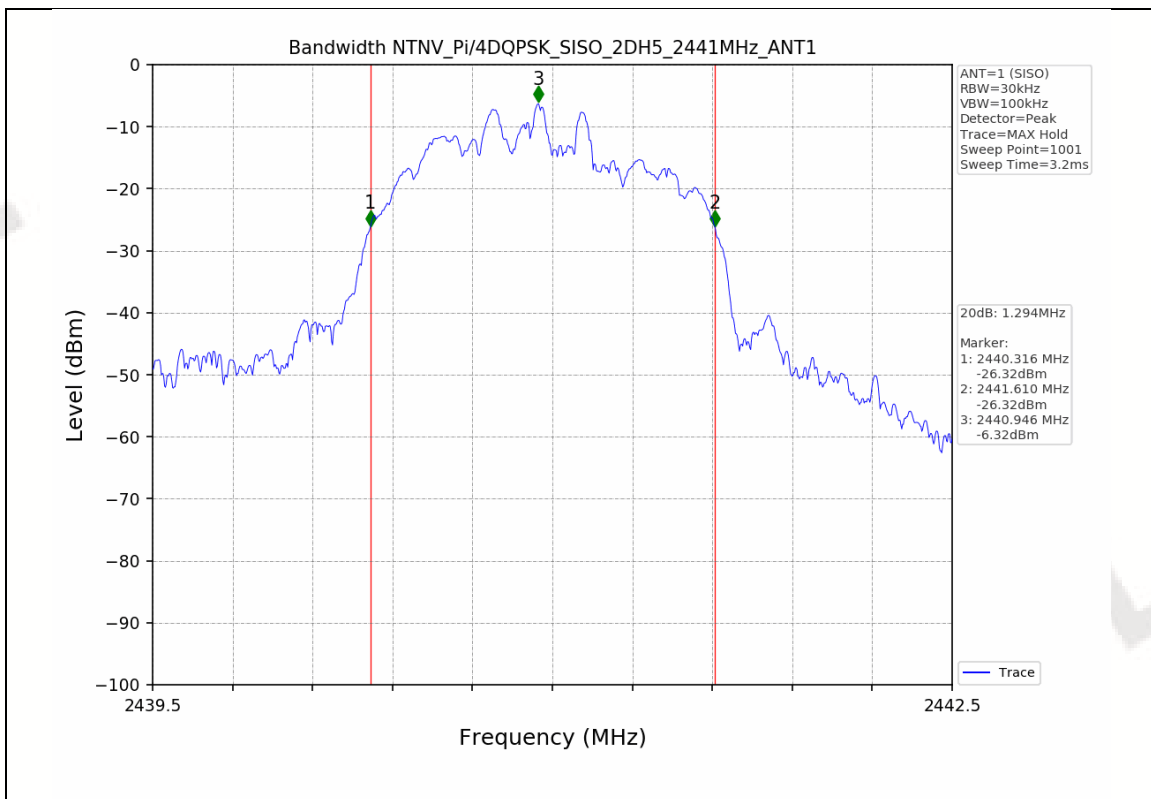
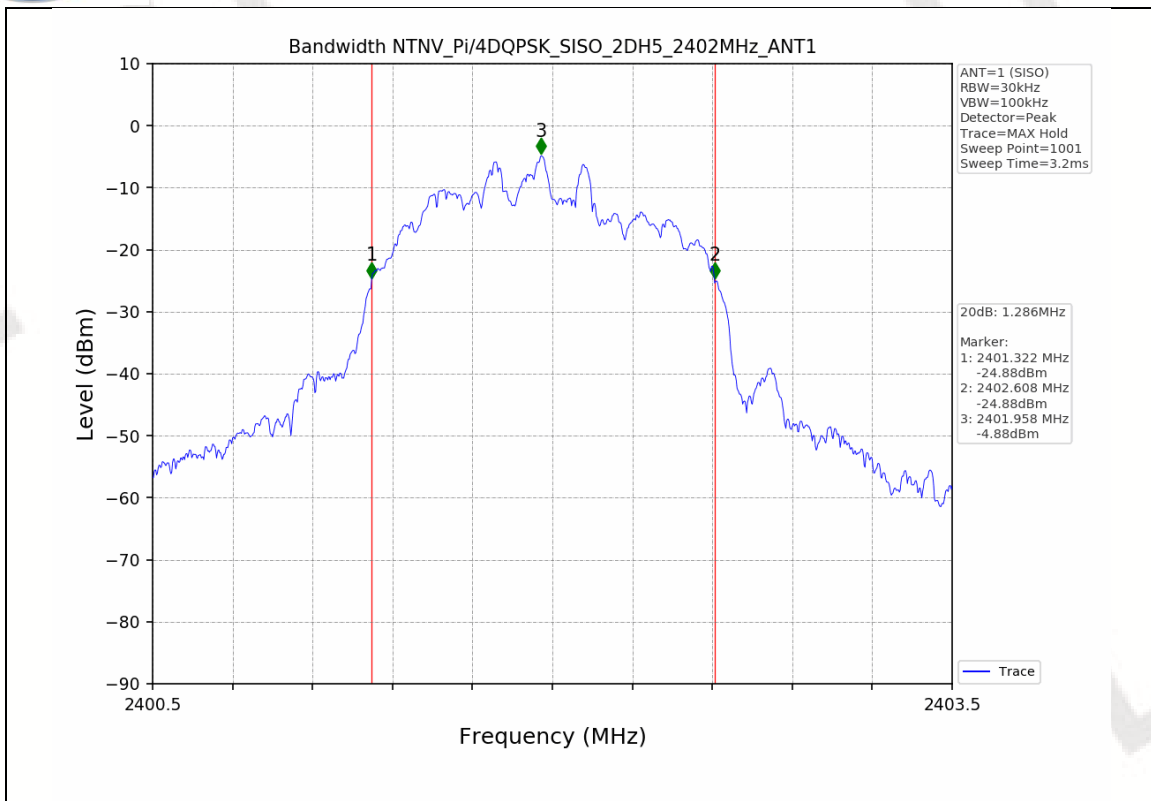




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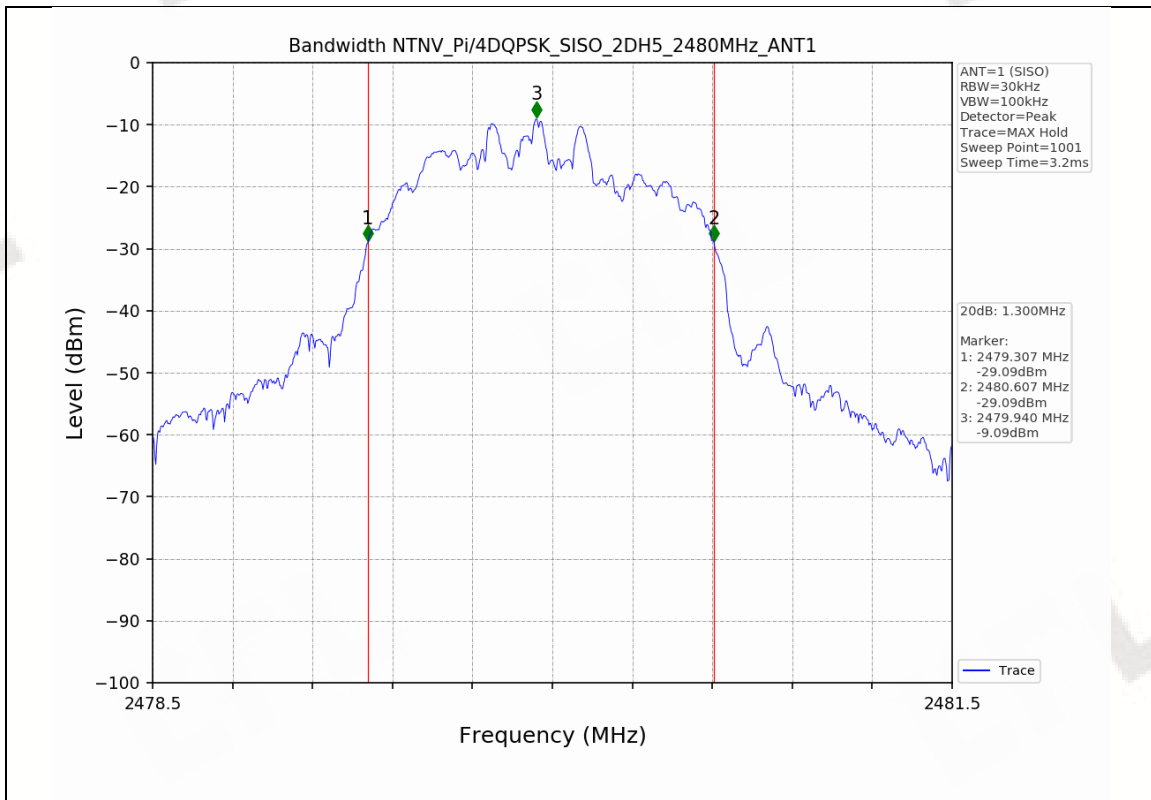


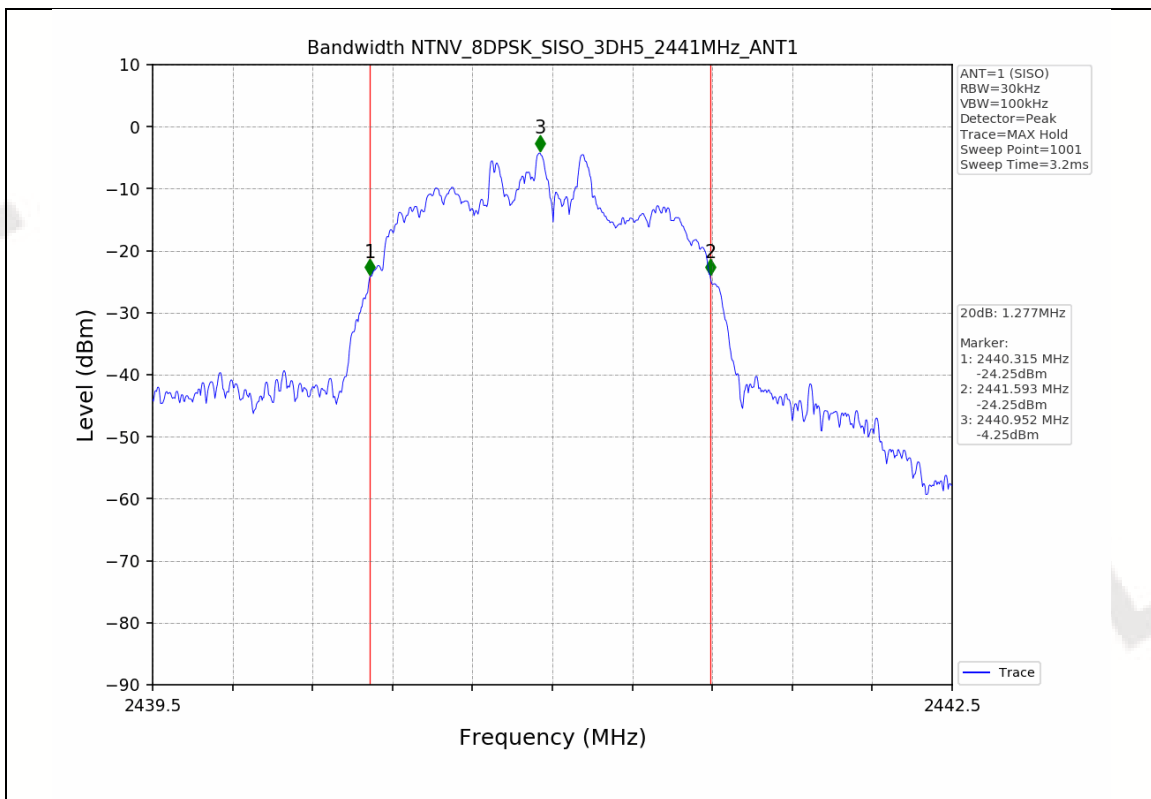
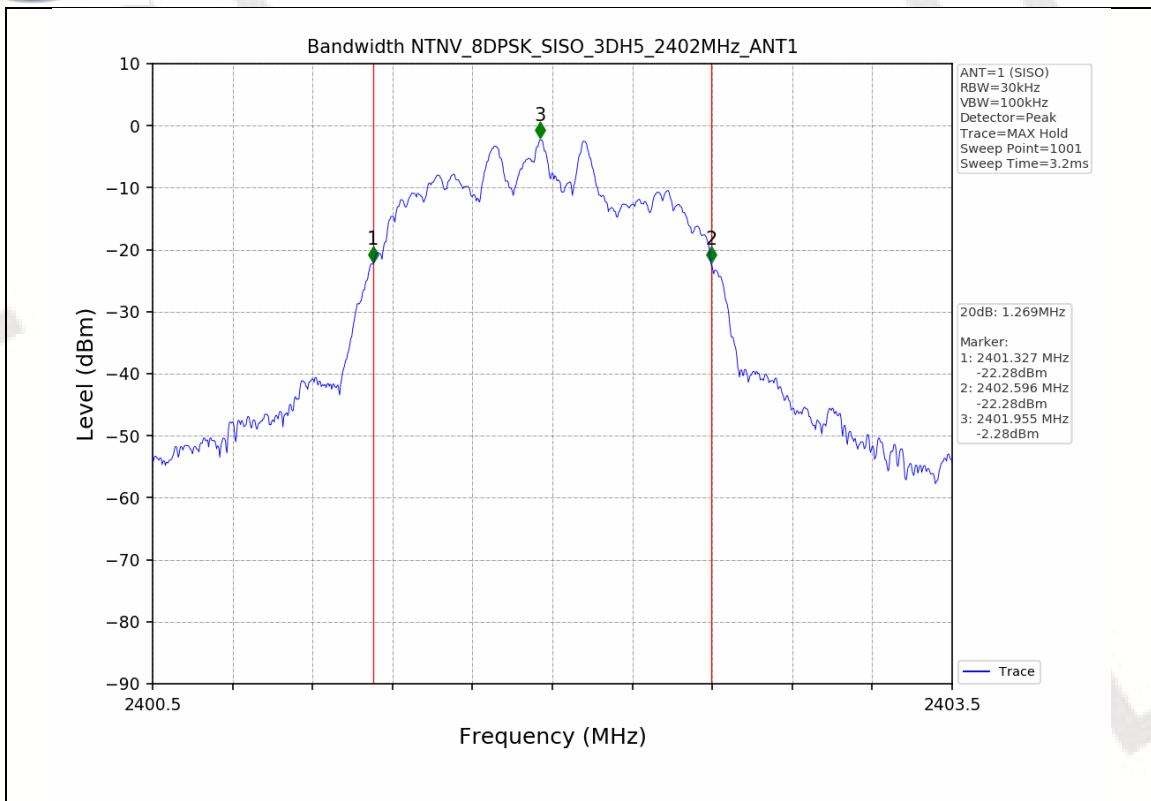




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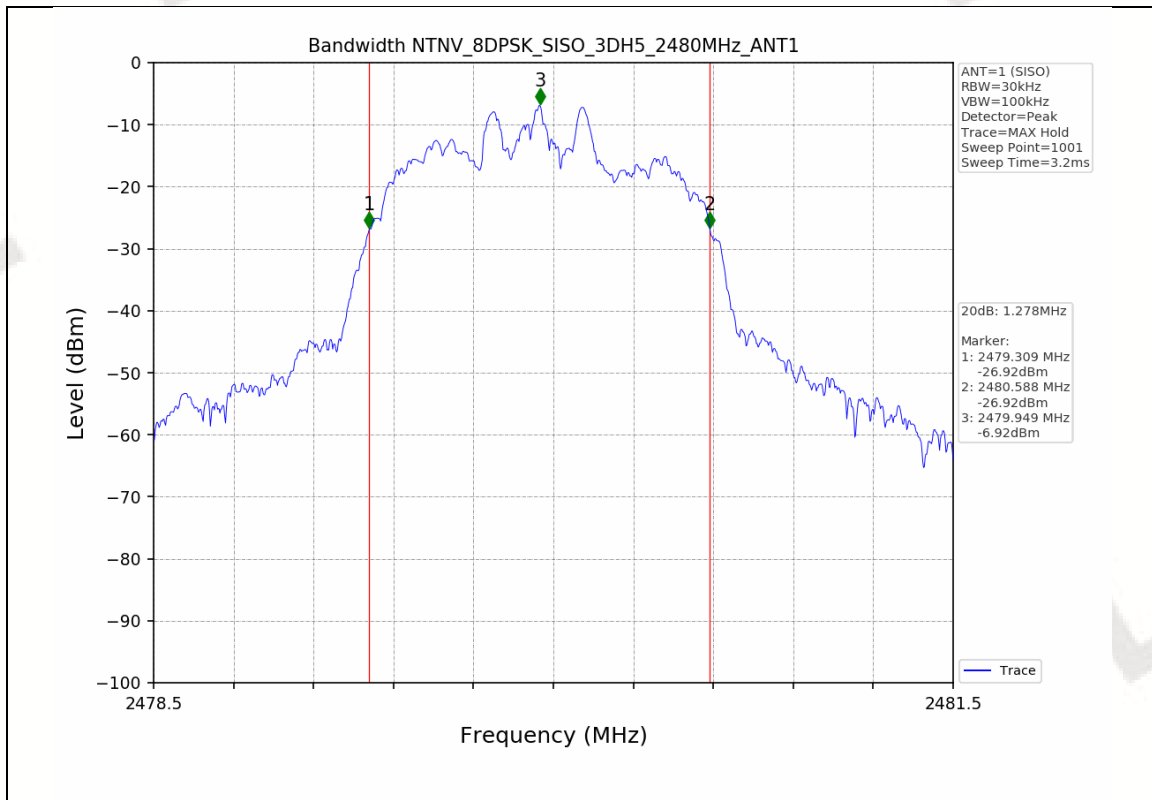




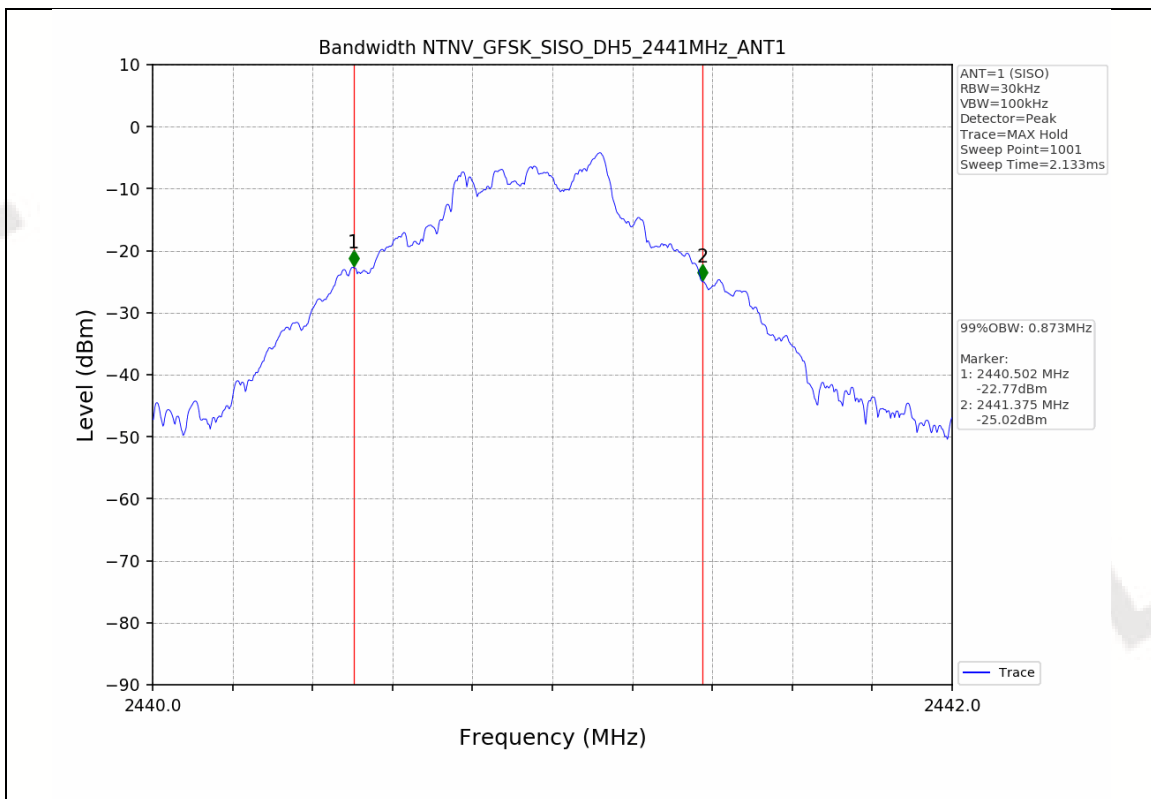
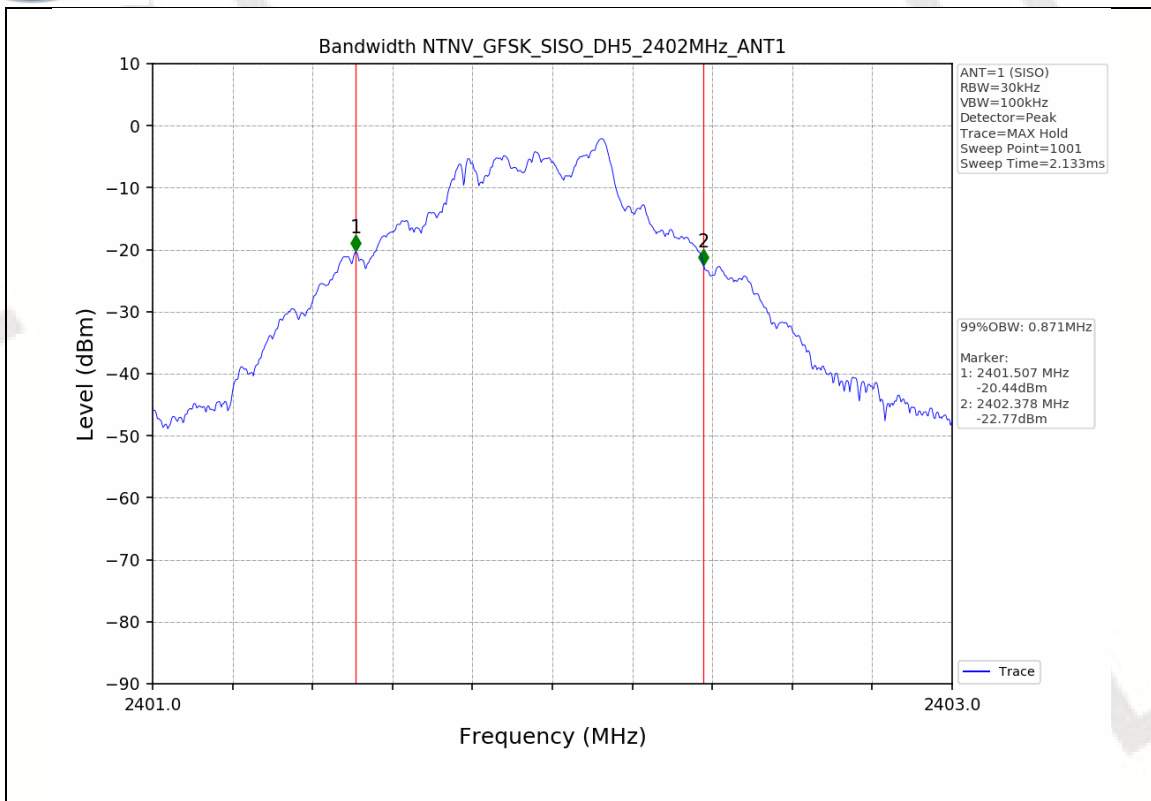


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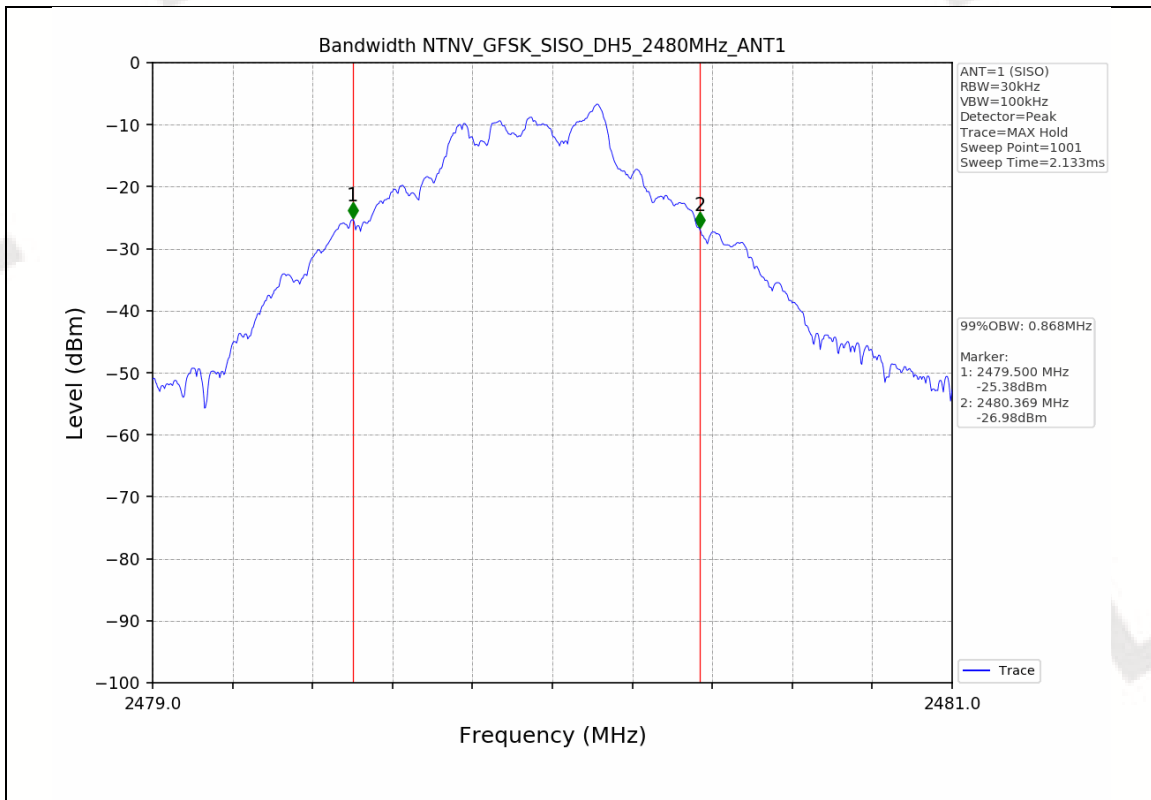
1.3 Test Graph - 99% Occupied Bandwidth





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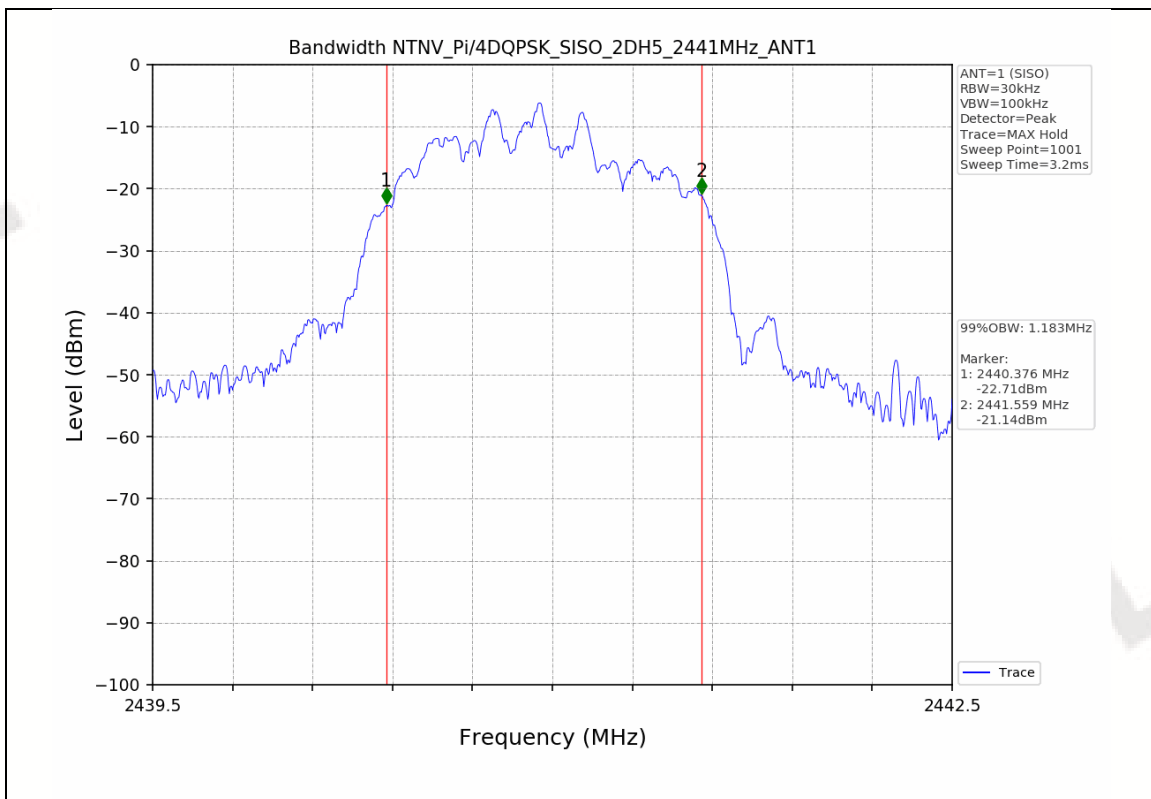
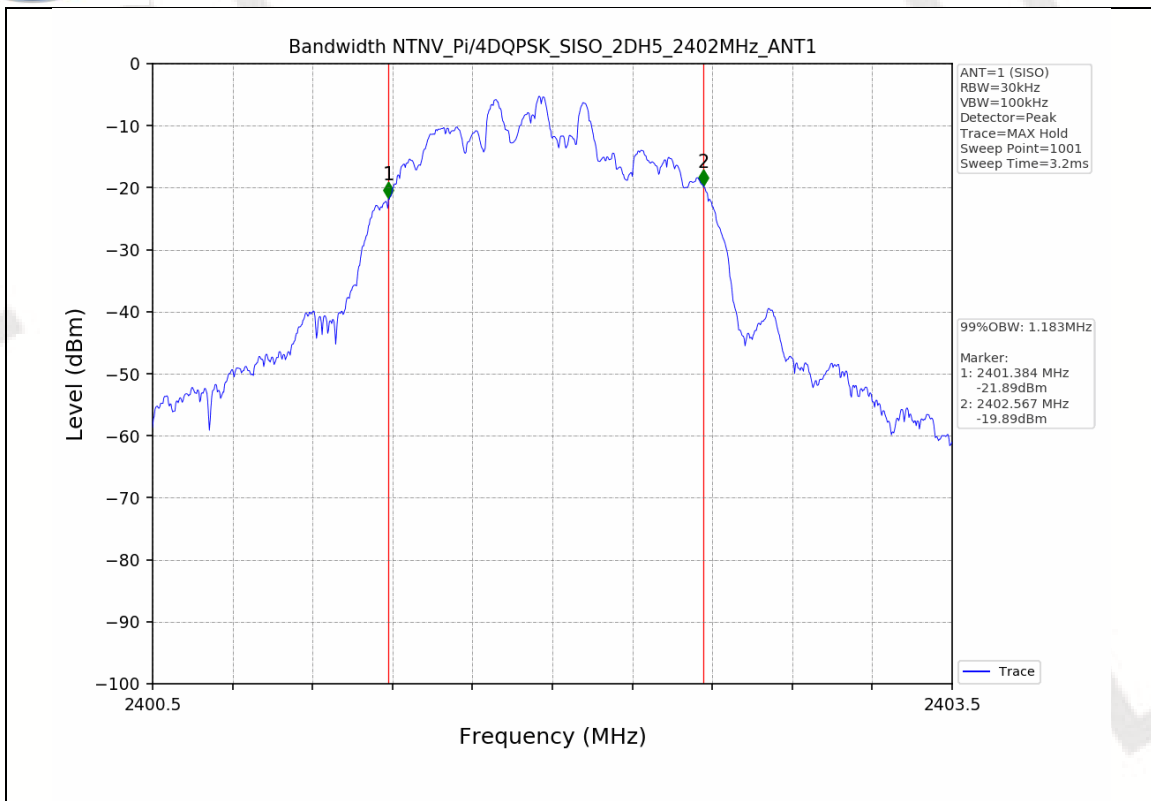
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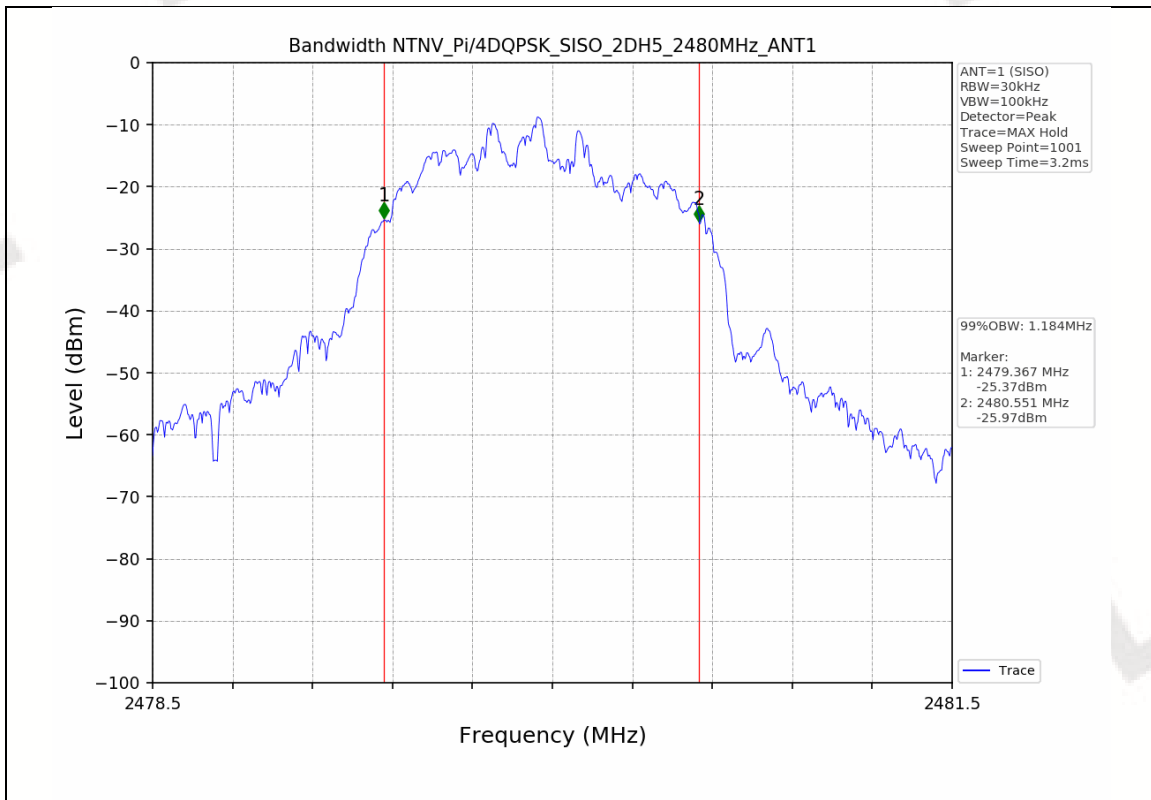
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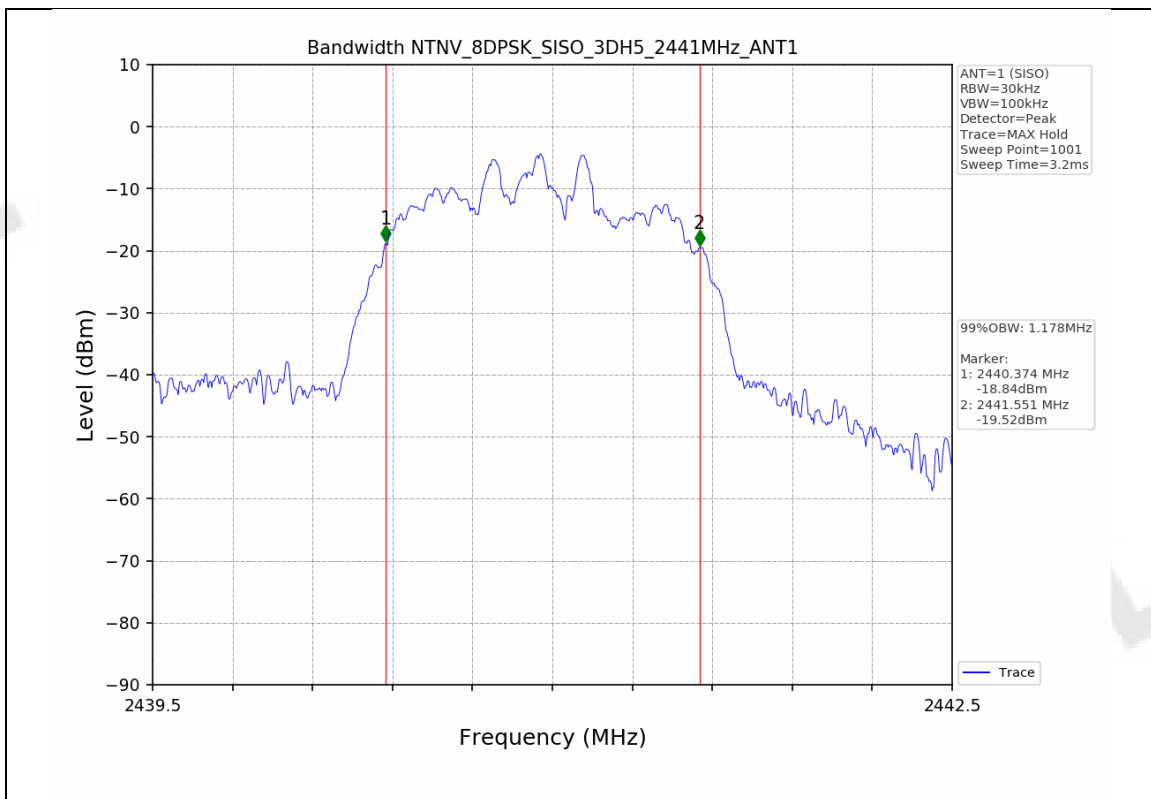
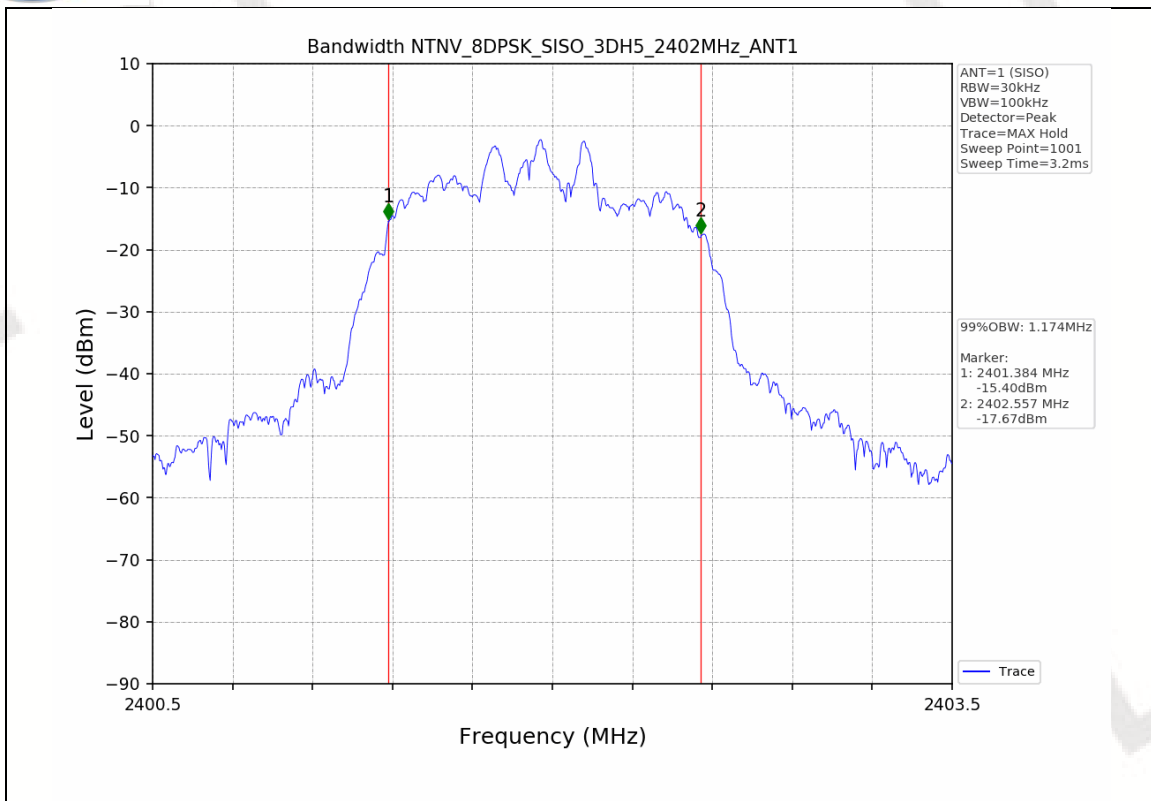




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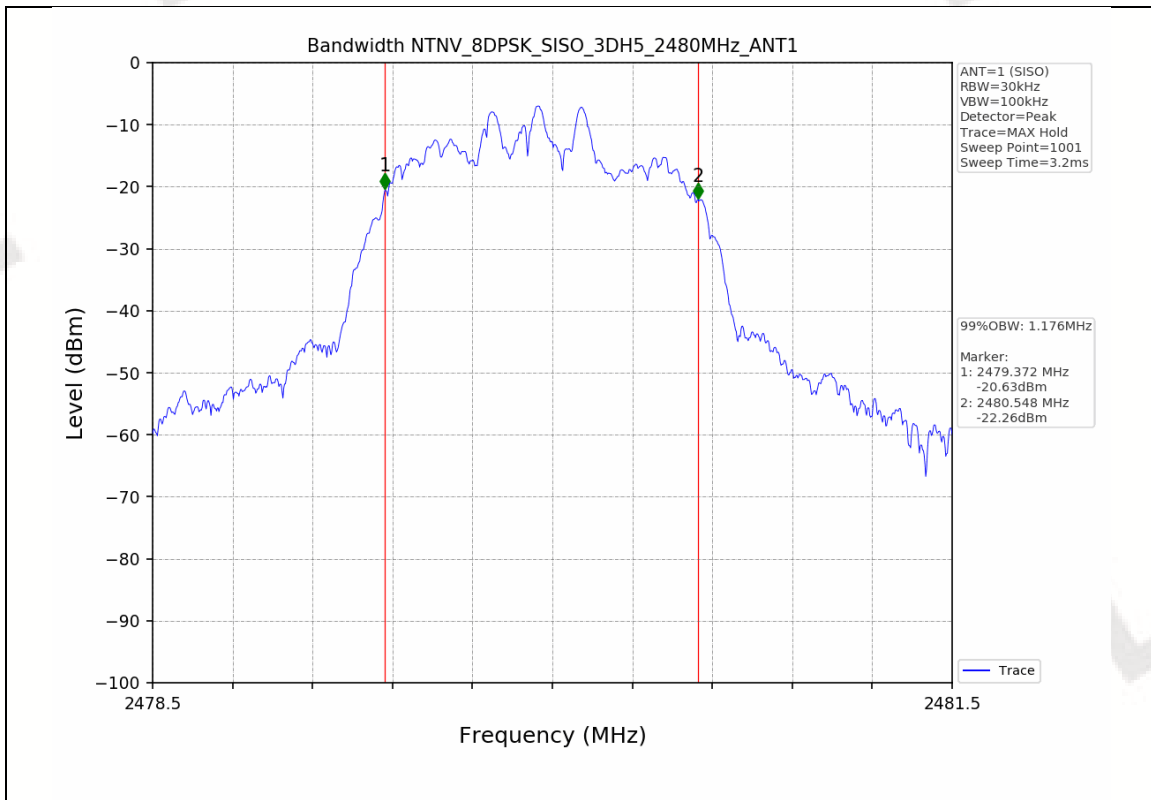






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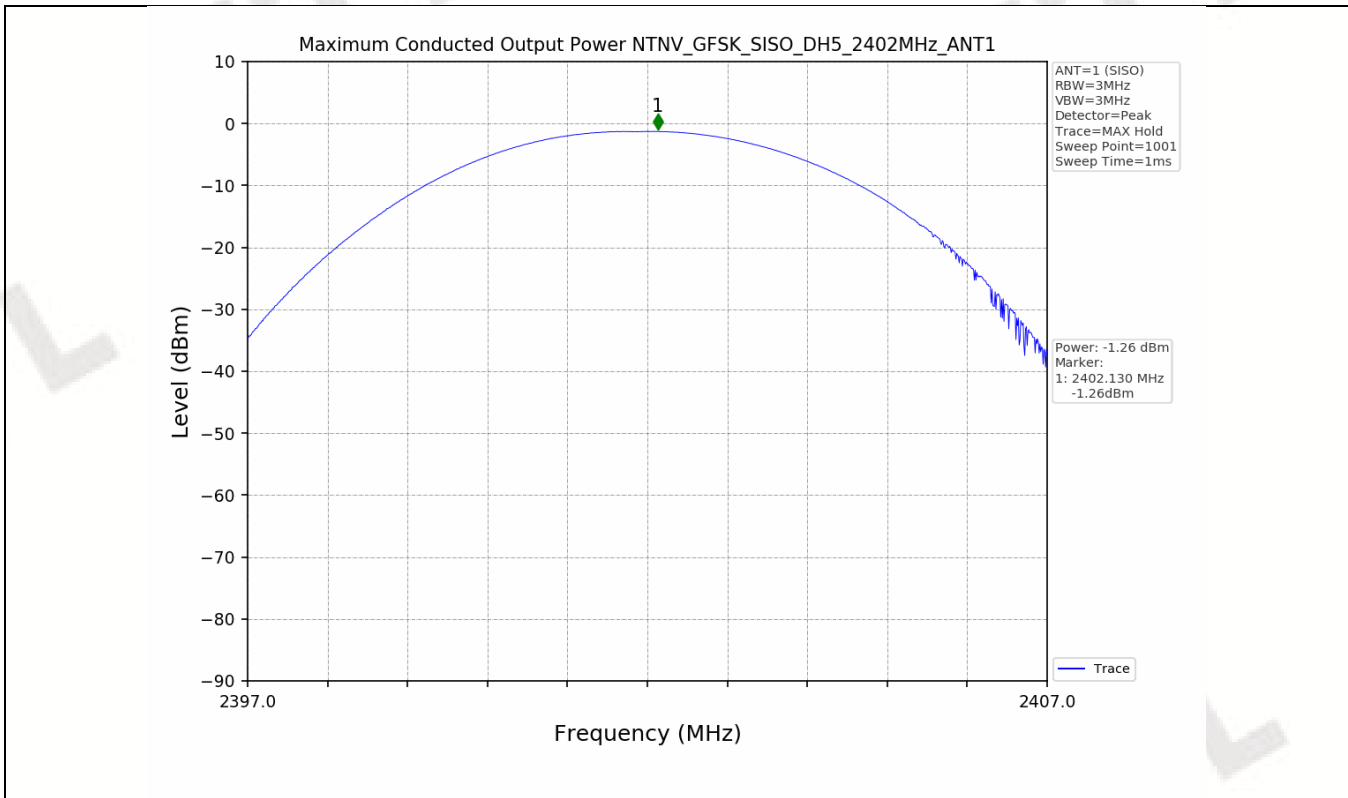
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2. Maximum Conducted Output Power

2.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	-1.26	30	PASS
	2441	SISO	-3.17	30	PASS
	2480	SISO	-5.85	30	PASS
Pi/4DQPSK	2402	SISO	-2.04	20.97	PASS
	2441	SISO	-3.16	20.97	PASS
	2480	SISO	-5.86	20.97	PASS
8DPSK	2402	SISO	0.70	20.97	PASS
	2441	SISO	-1.11	20.97	PASS
	2480	SISO	-4.00	20.97	PASS

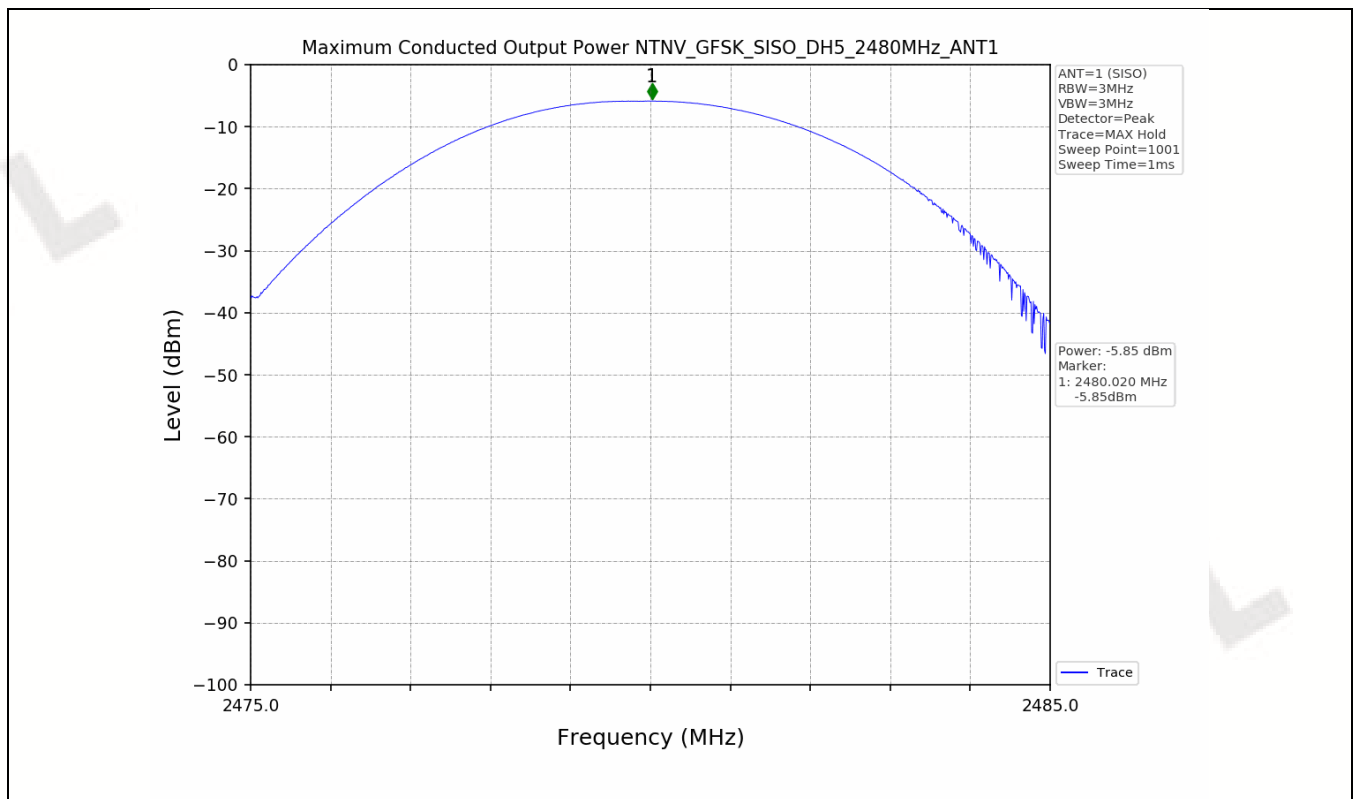
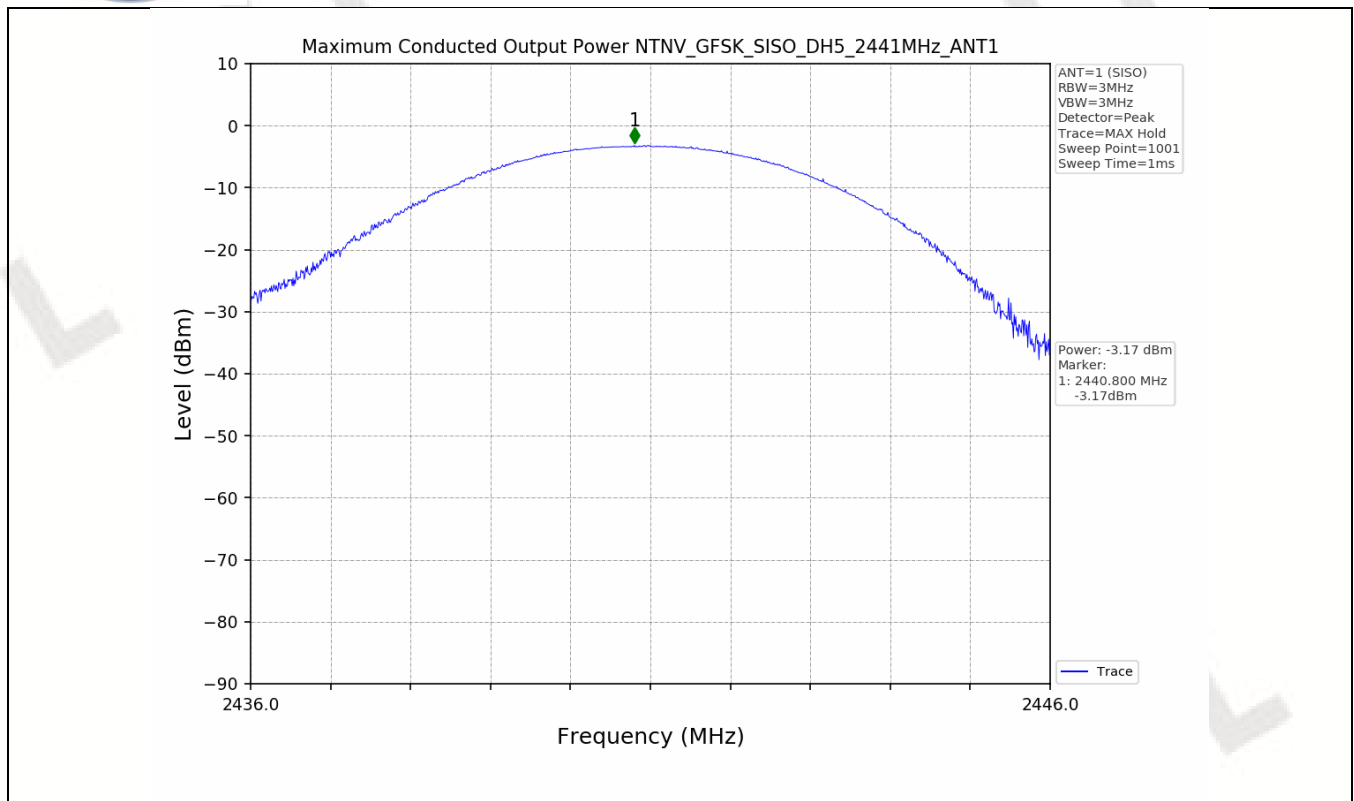
2.2 Test Graph





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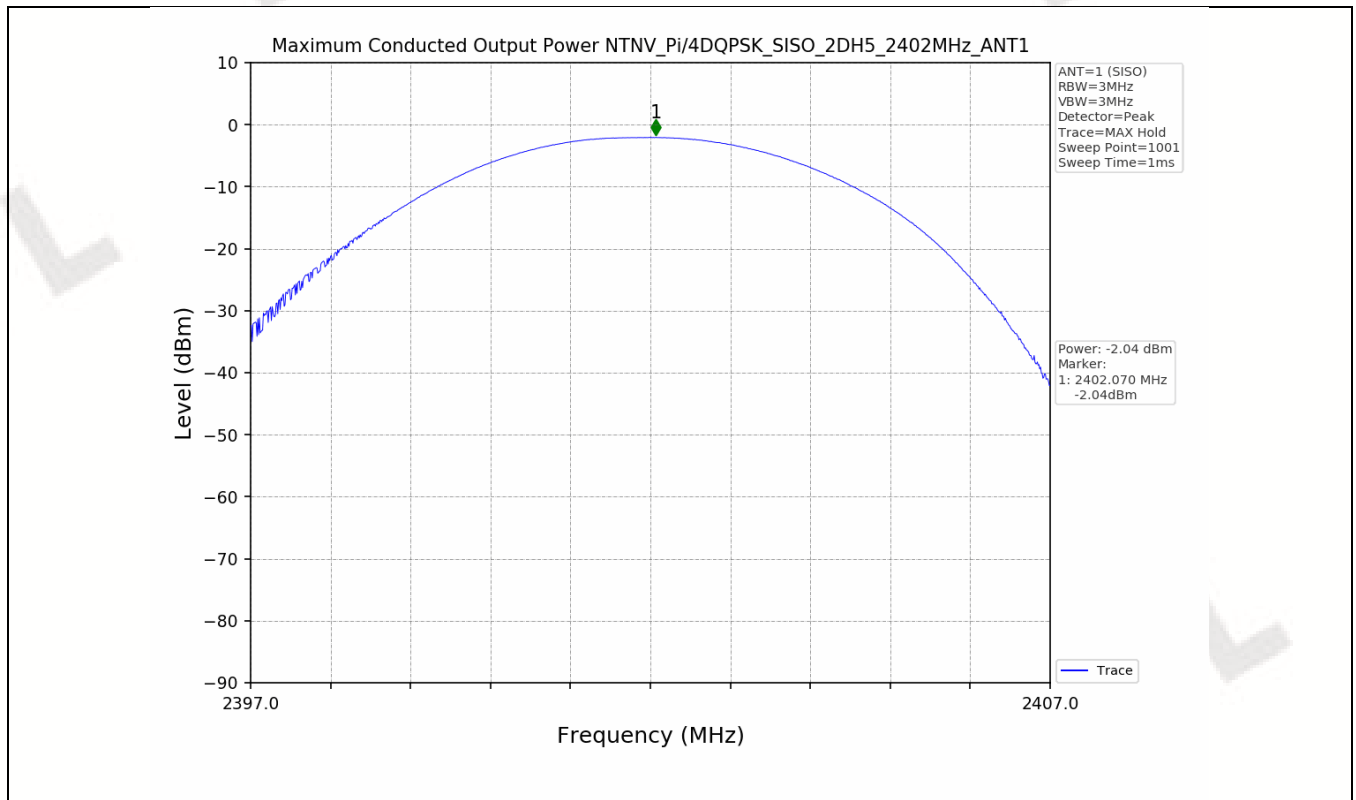
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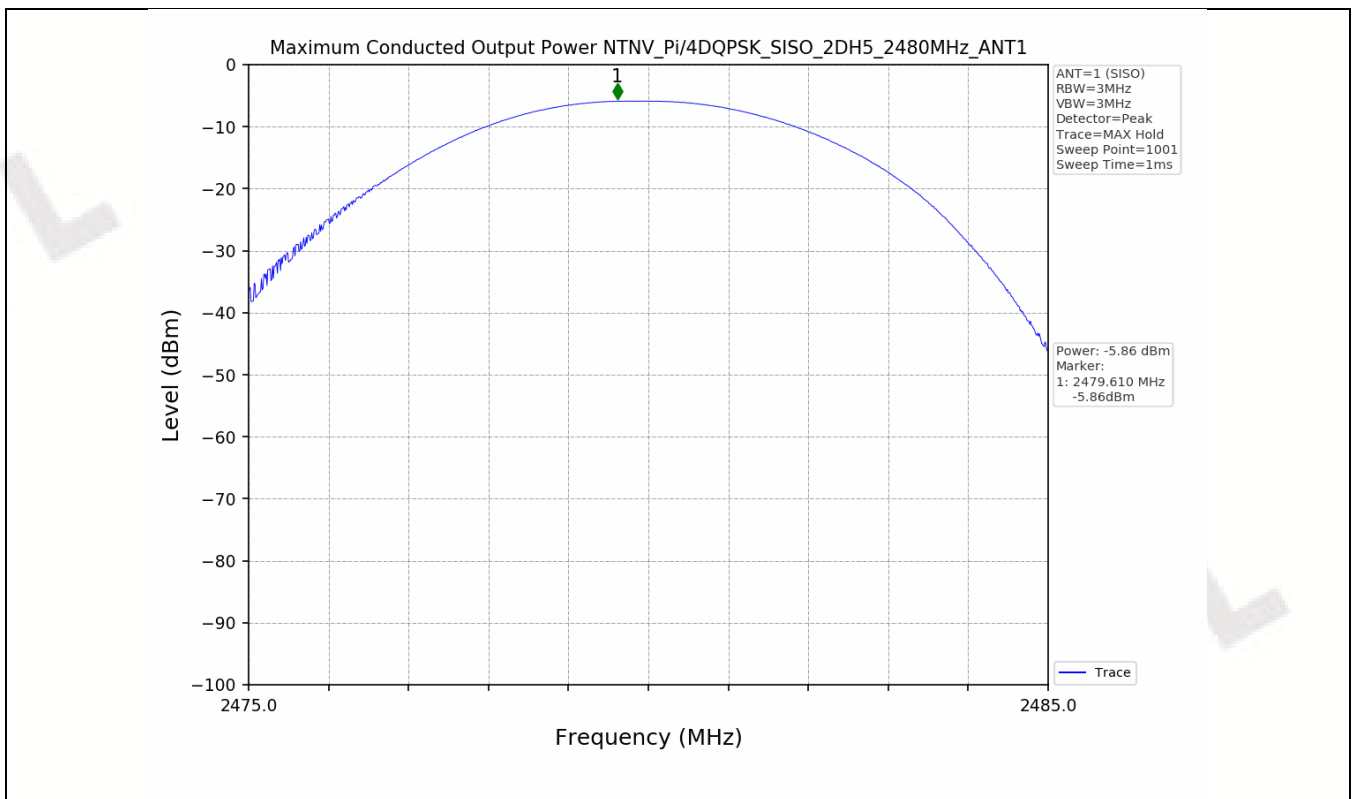
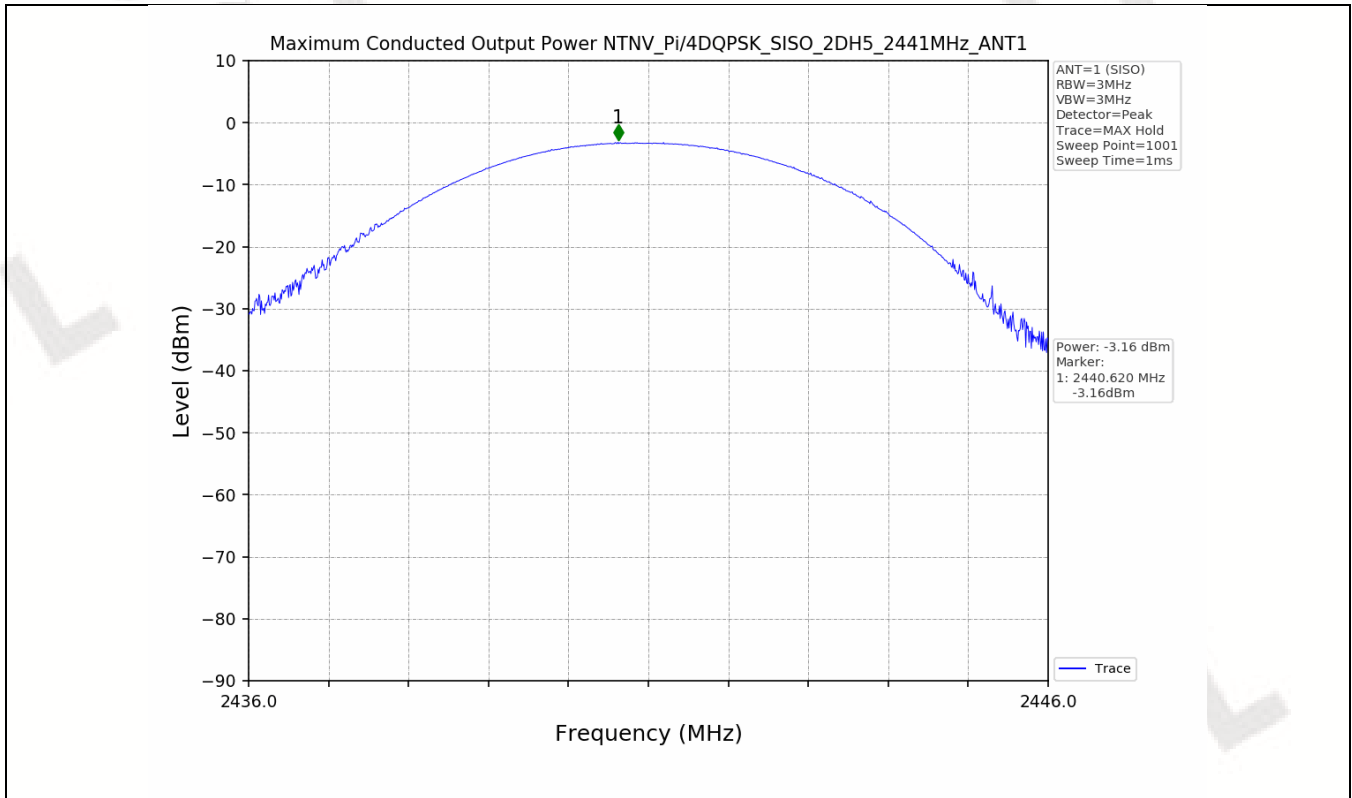
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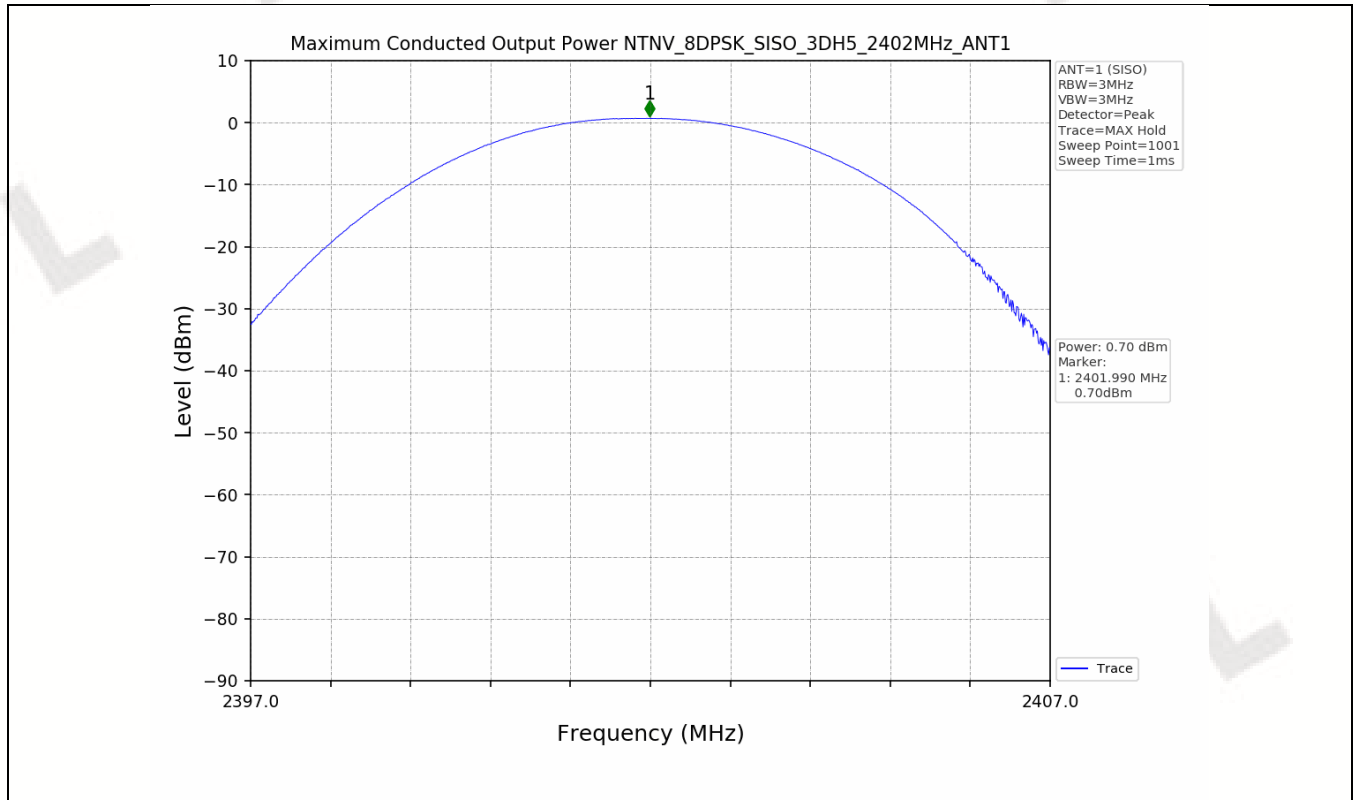
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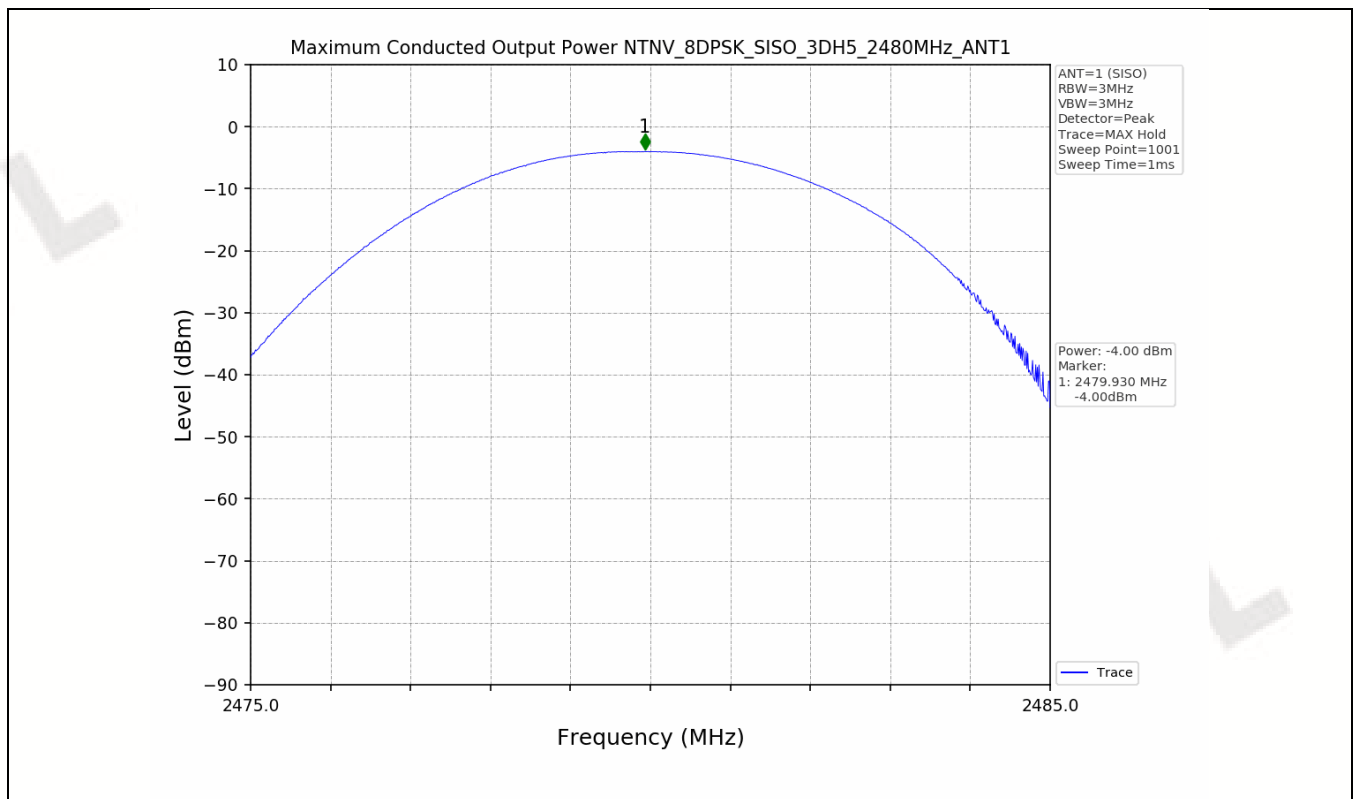
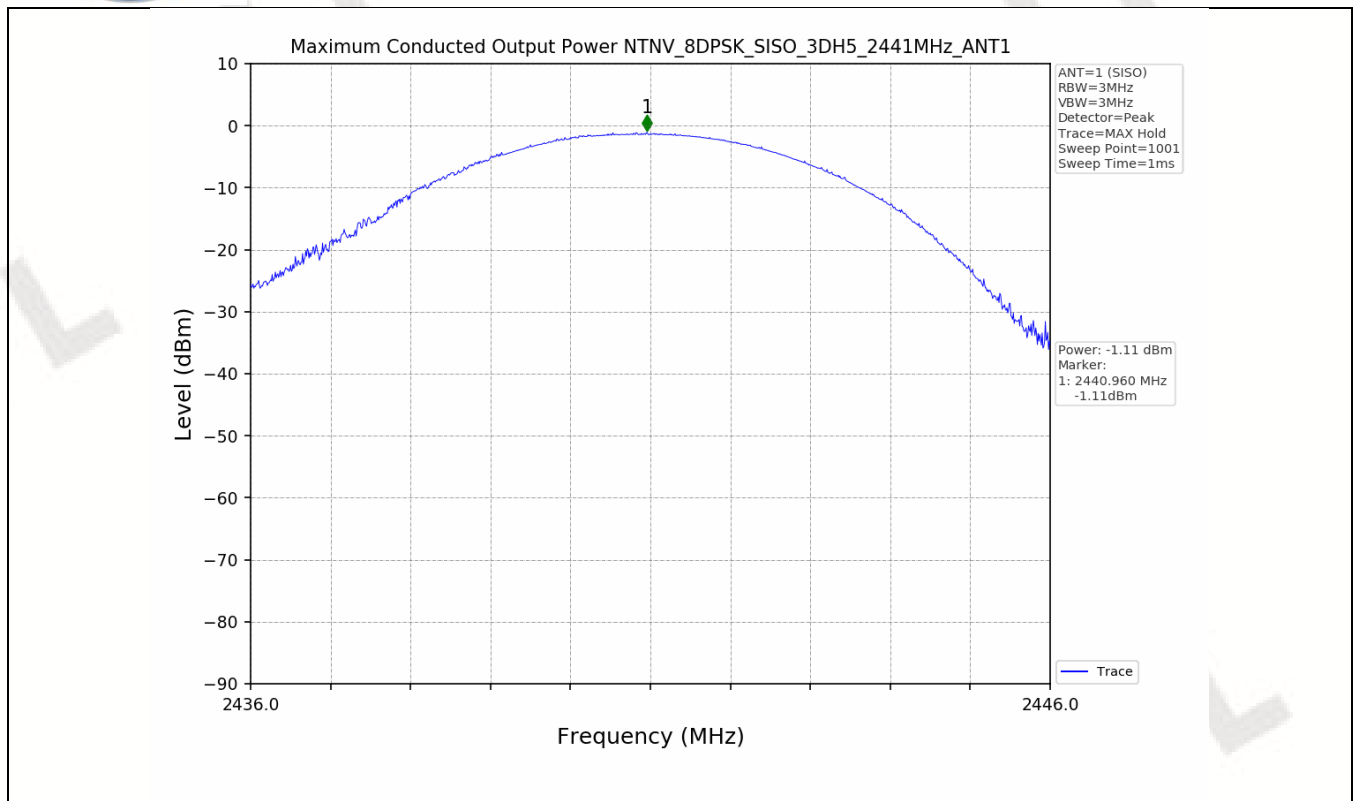
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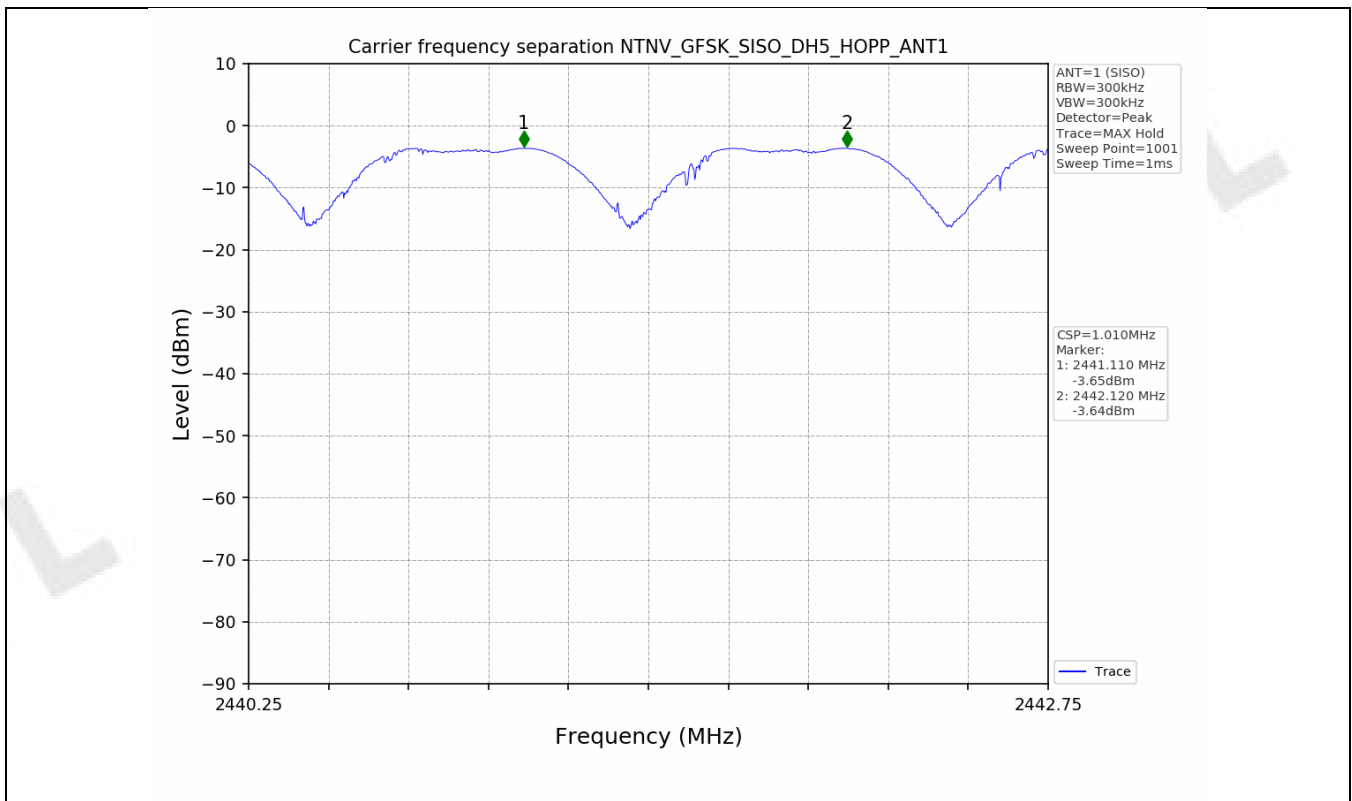
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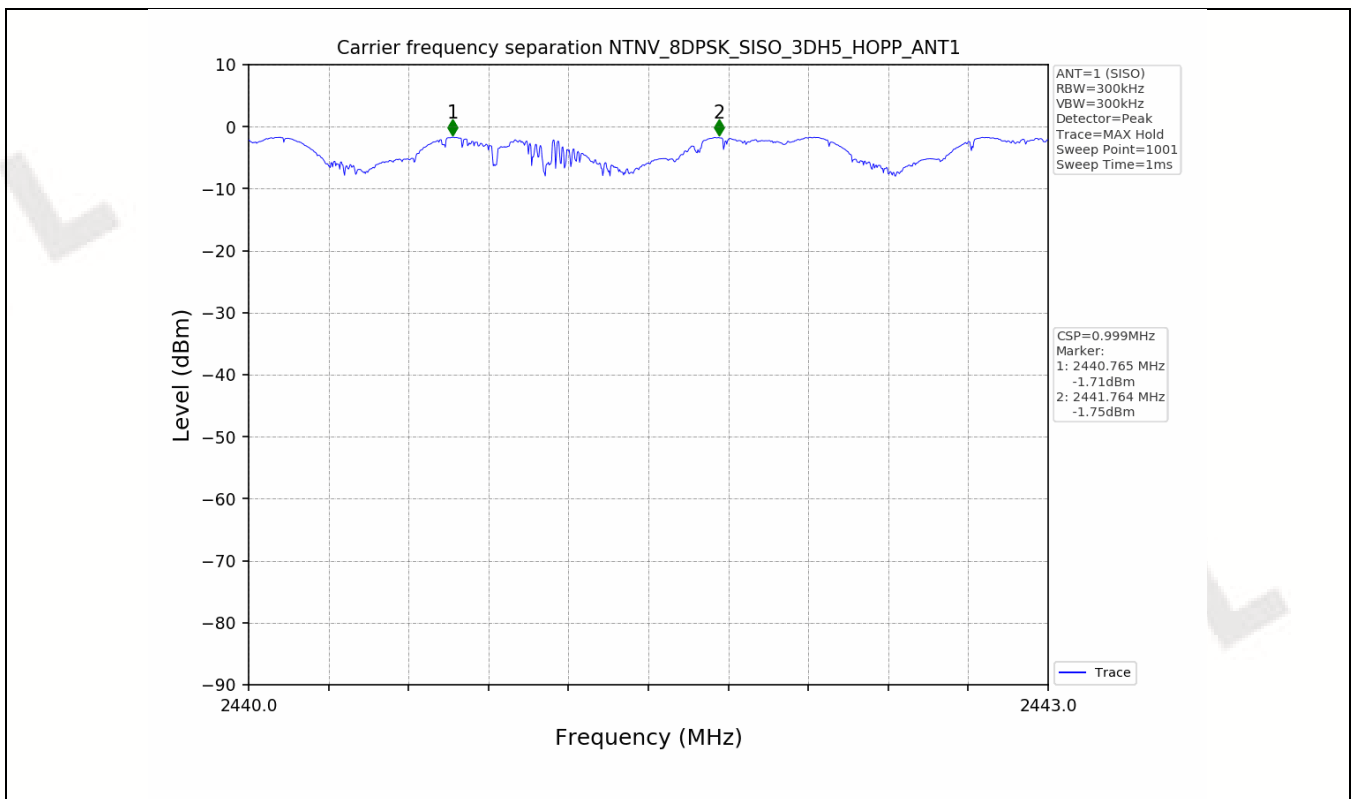
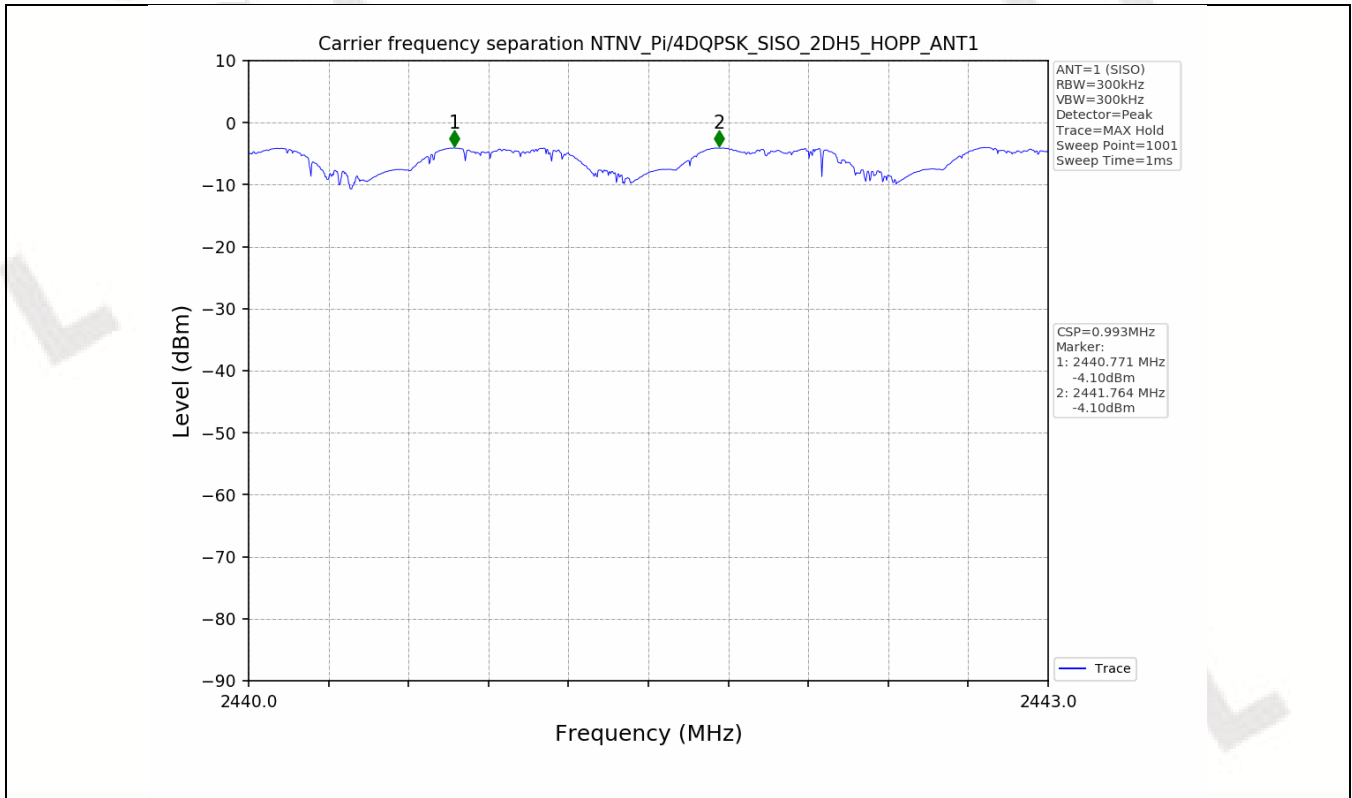
3. Carrier frequency separation

3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	1.010	0.905	≥ 0.905	PASS
Pi/4DQPSK	SISO	1	0.993	1.300	≥ 0.867	PASS
8DPSK	SISO	1	0.999	1.278	≥ 0.852	PASS

3.2 Test Graph







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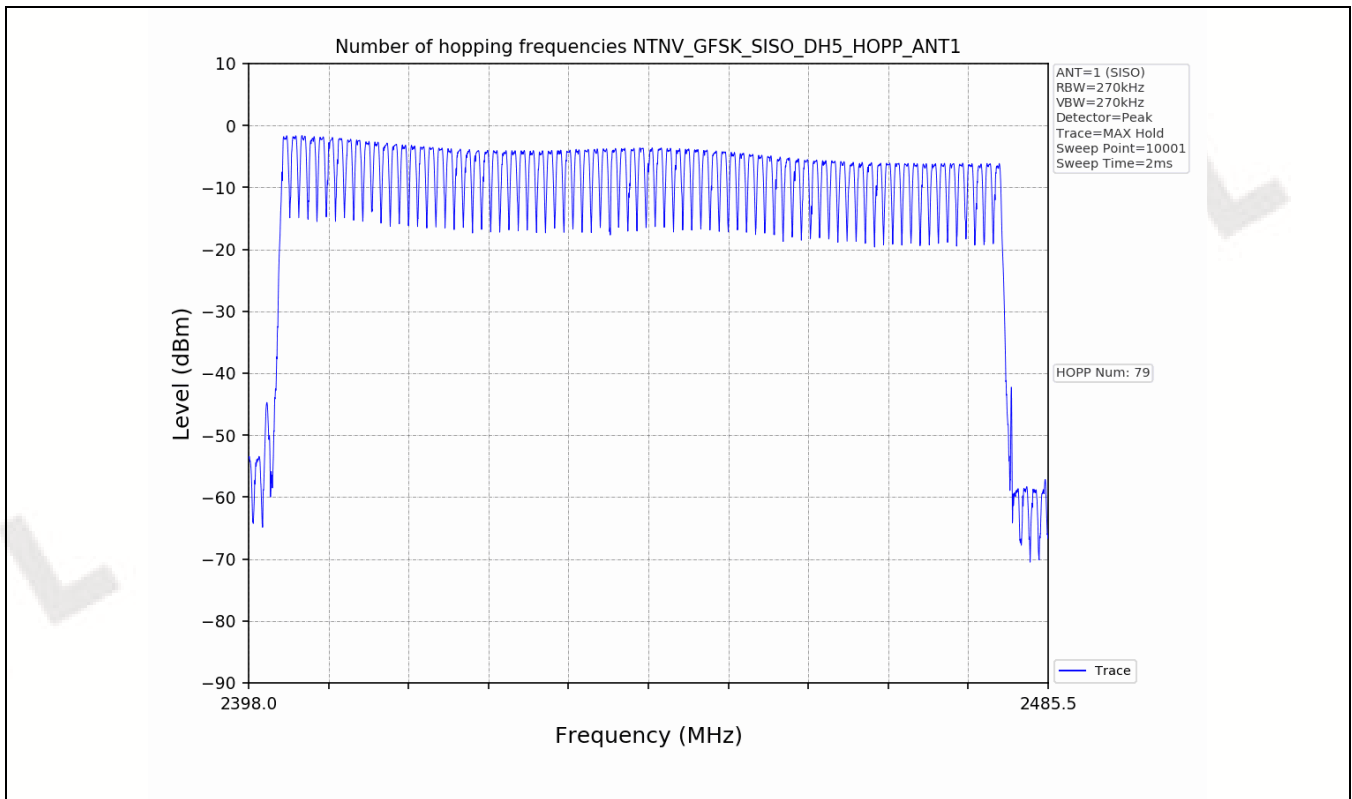
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4. Number of hopping frequencies

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

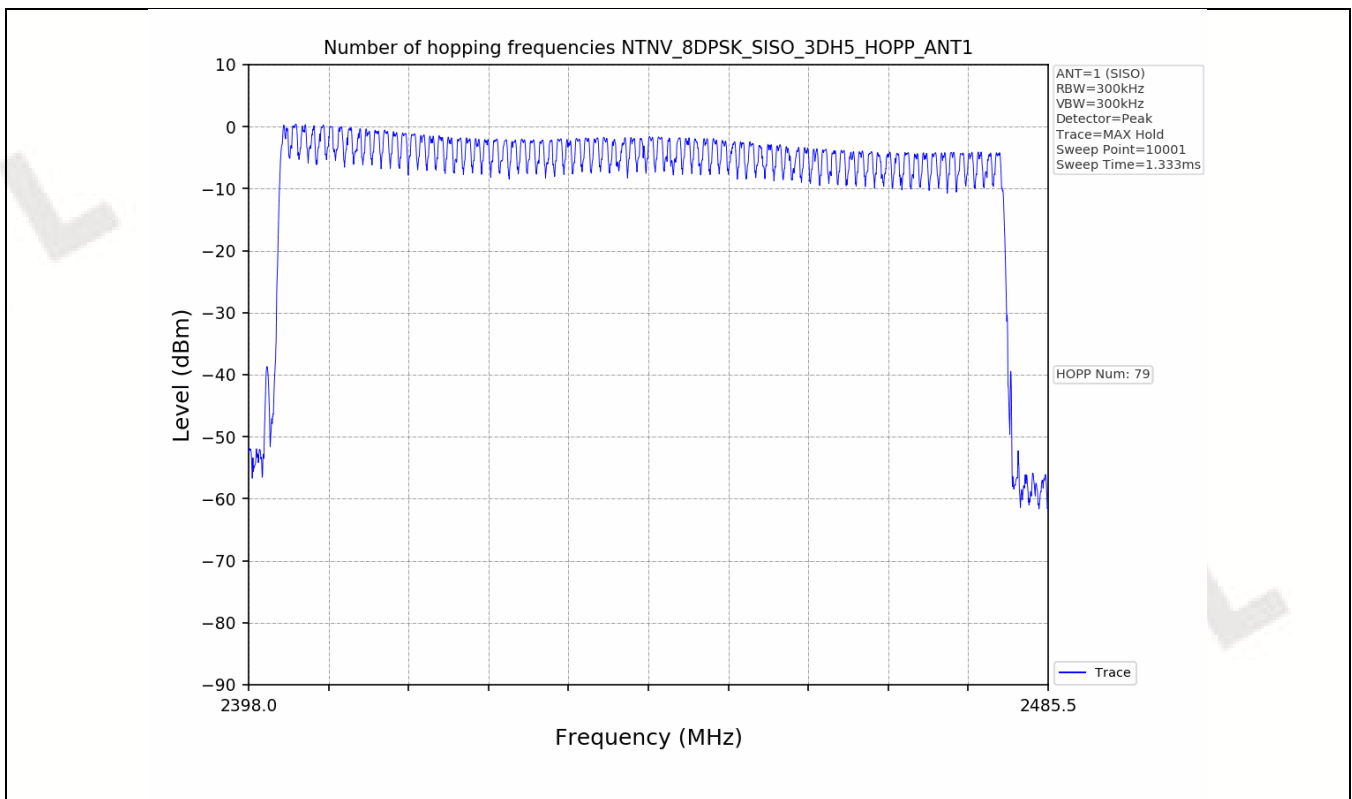
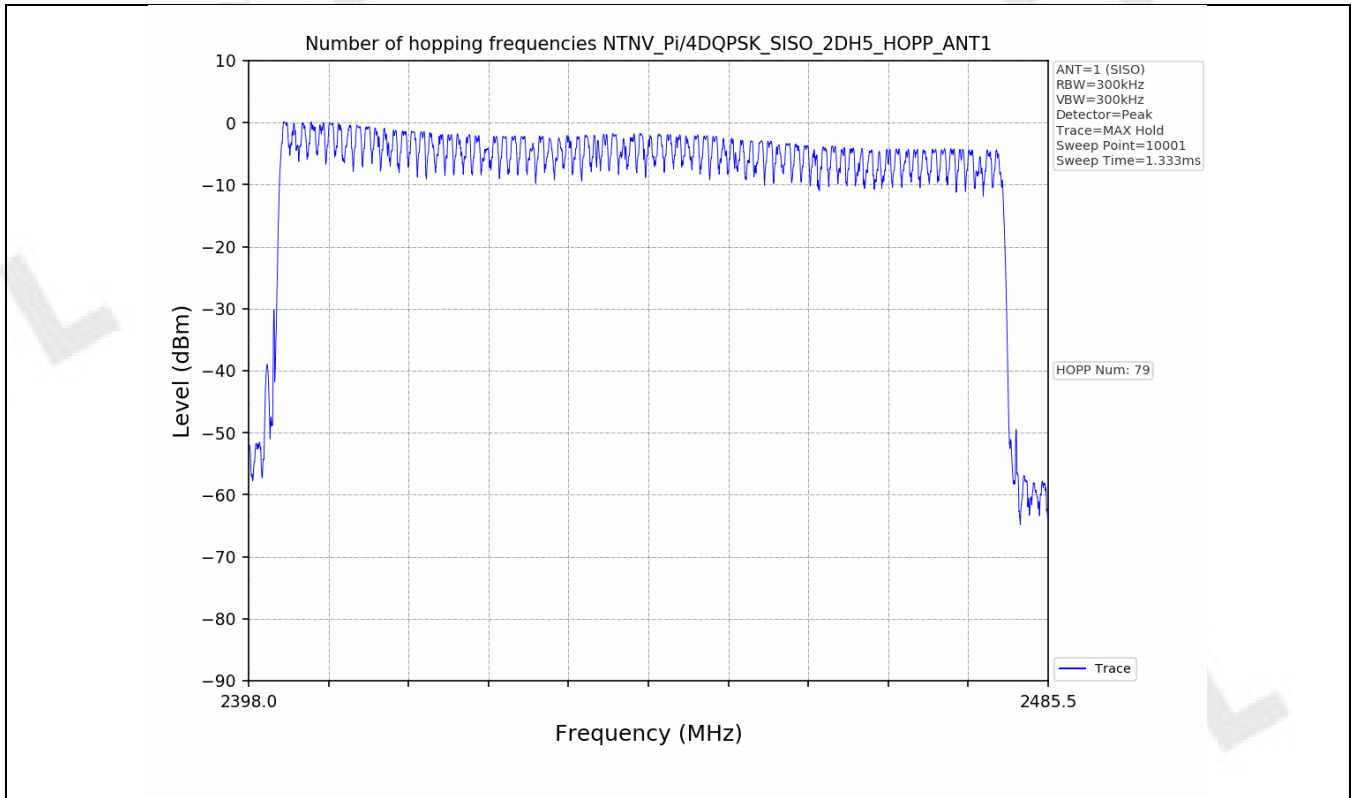
4.2 Test Graph





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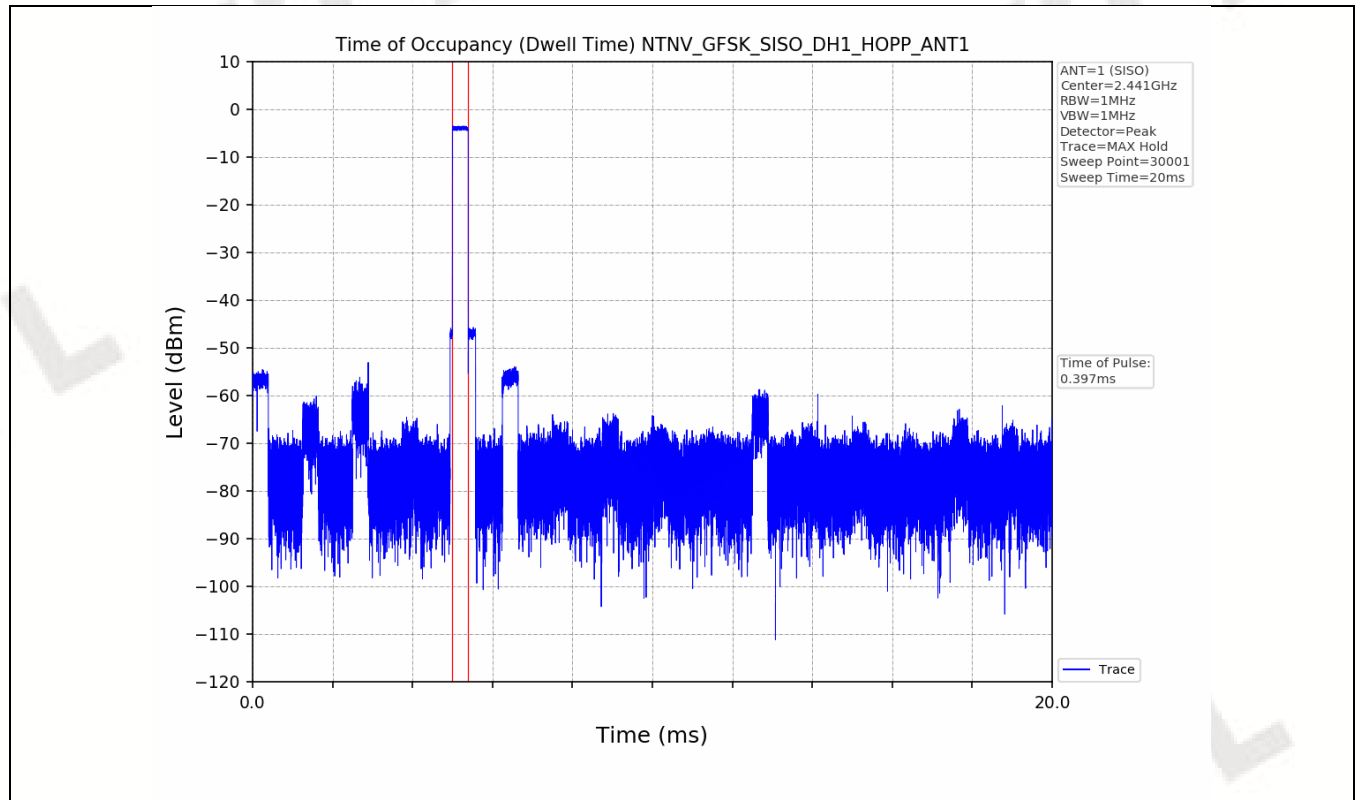


5. Time of Occupancy (Dwell Time)

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	0.397	31.6	315	125.055	≤400	PASS
	DH3	SISO	1	1.662	31.6	175	290.850	≤400	PASS
	DH5	SISO	1	3.139	31.6	94	295.066	≤400	PASS
Pi/4DQ PSK	2DH1	SISO	1	0.406	31.6	314	127.484	≤400	PASS
	2DH3	SISO	1	0.635	31.6	174	110.490	≤400	PASS
	2DH5	SISO	1	0.858	31.6	101	86.658	≤400	PASS
8DPSK	3DH1	SISO	1	0.405	31.6	314	127.170	≤400	PASS
	3DH3	SISO	1	1.888	31.6	173	326.624	≤400	PASS
	3DH5	SISO	1	0.834	31.6	105	87.570	≤400	PASS

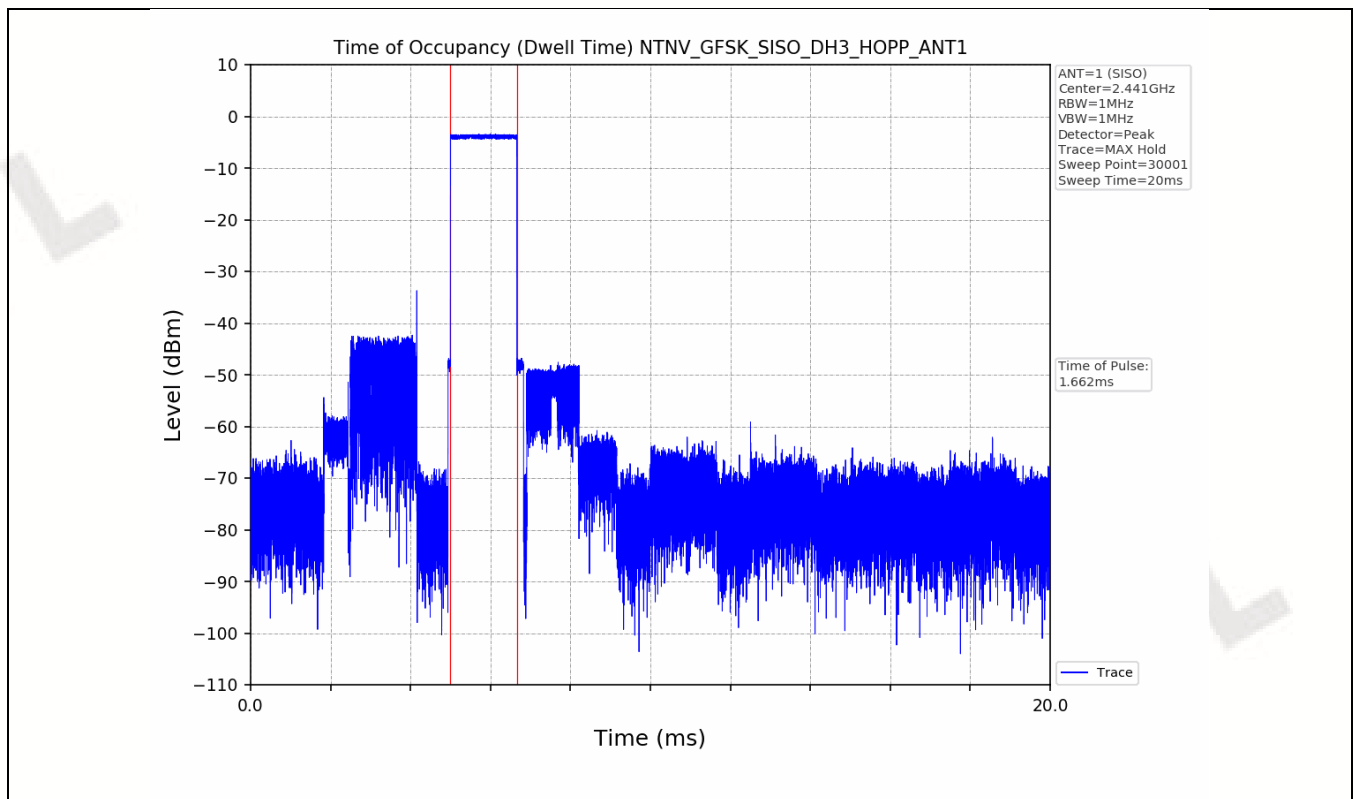
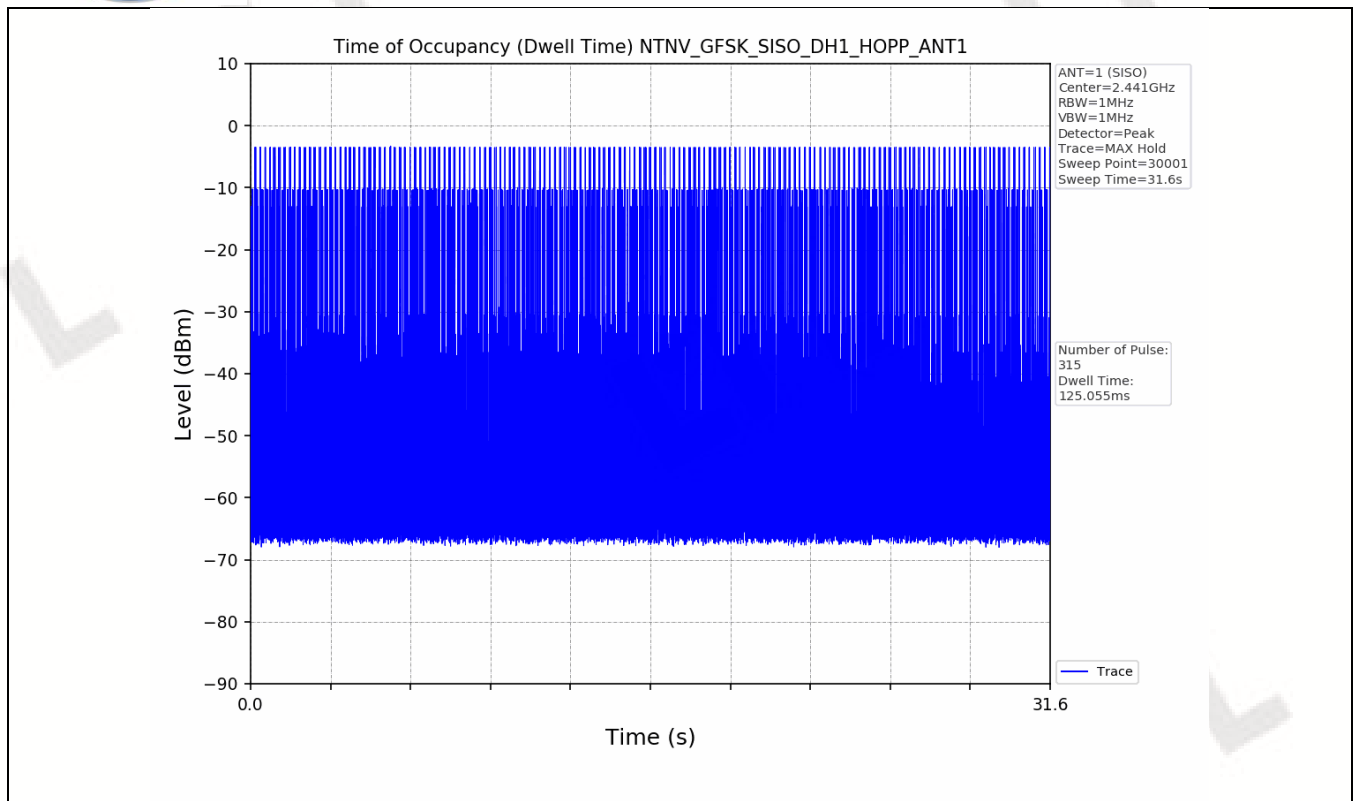
5.2 Test Graph





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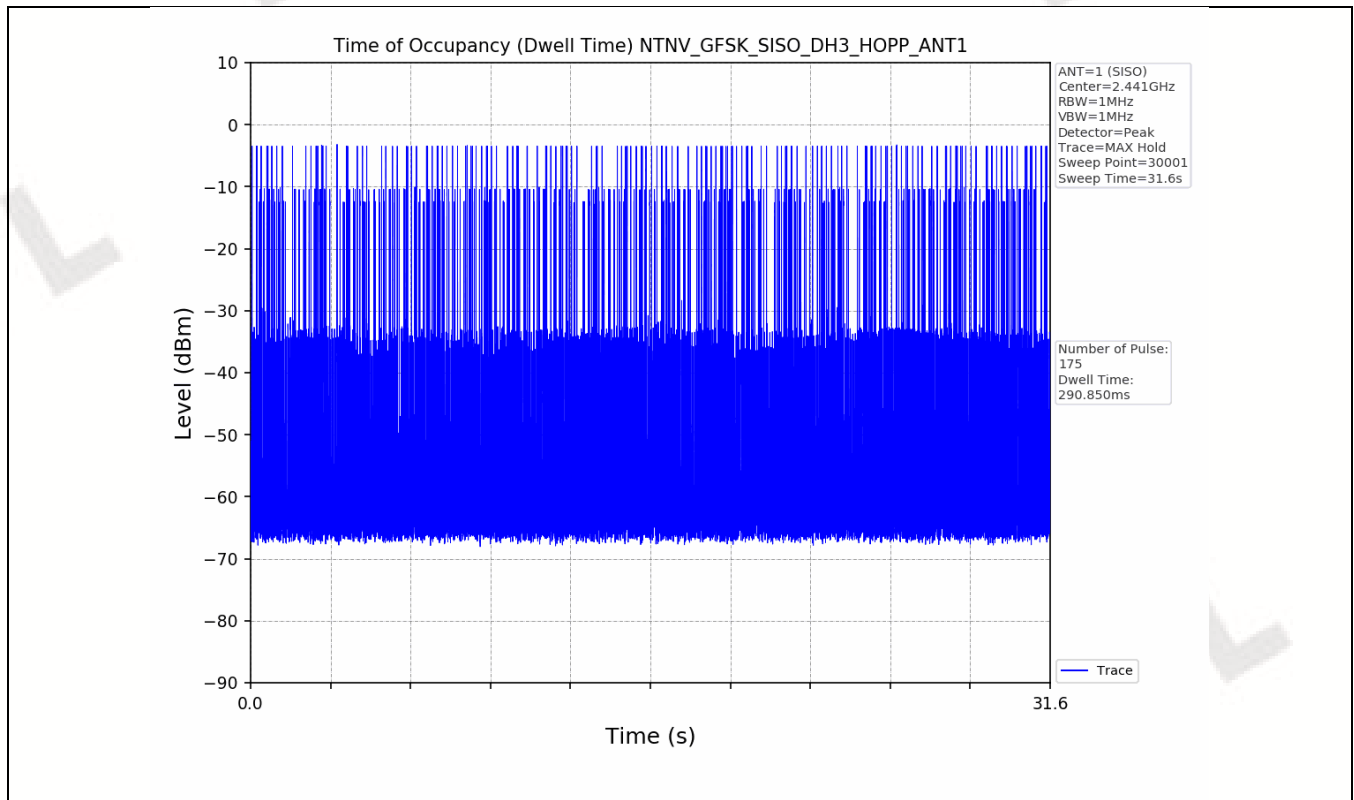
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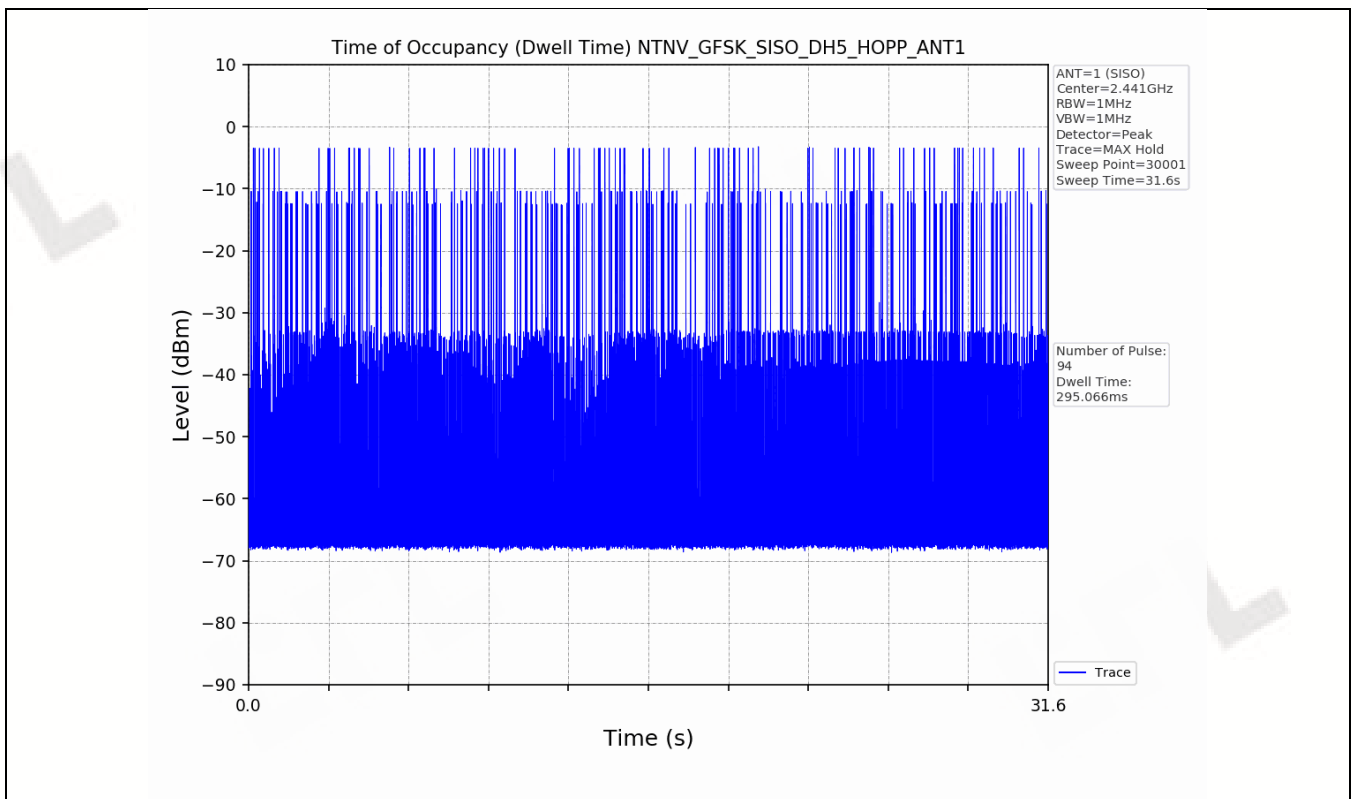
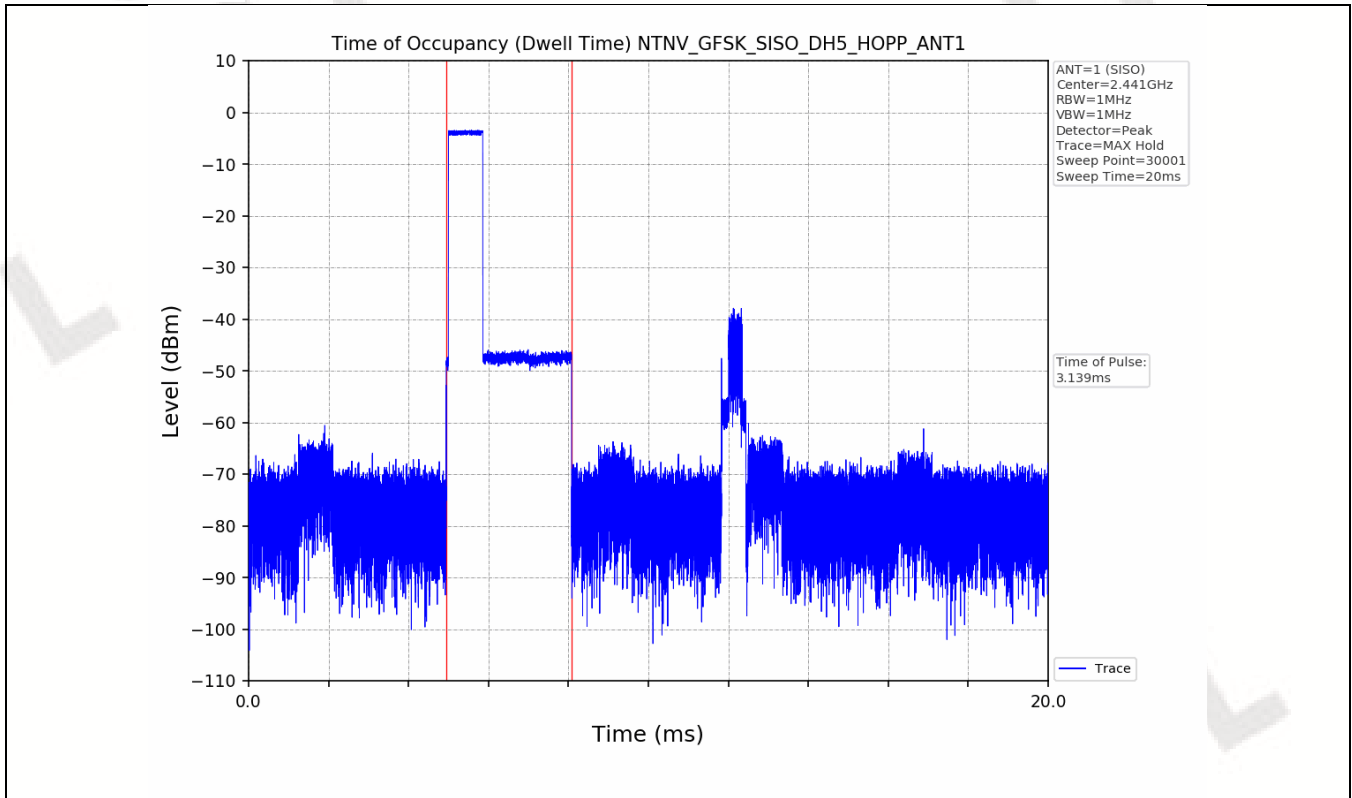
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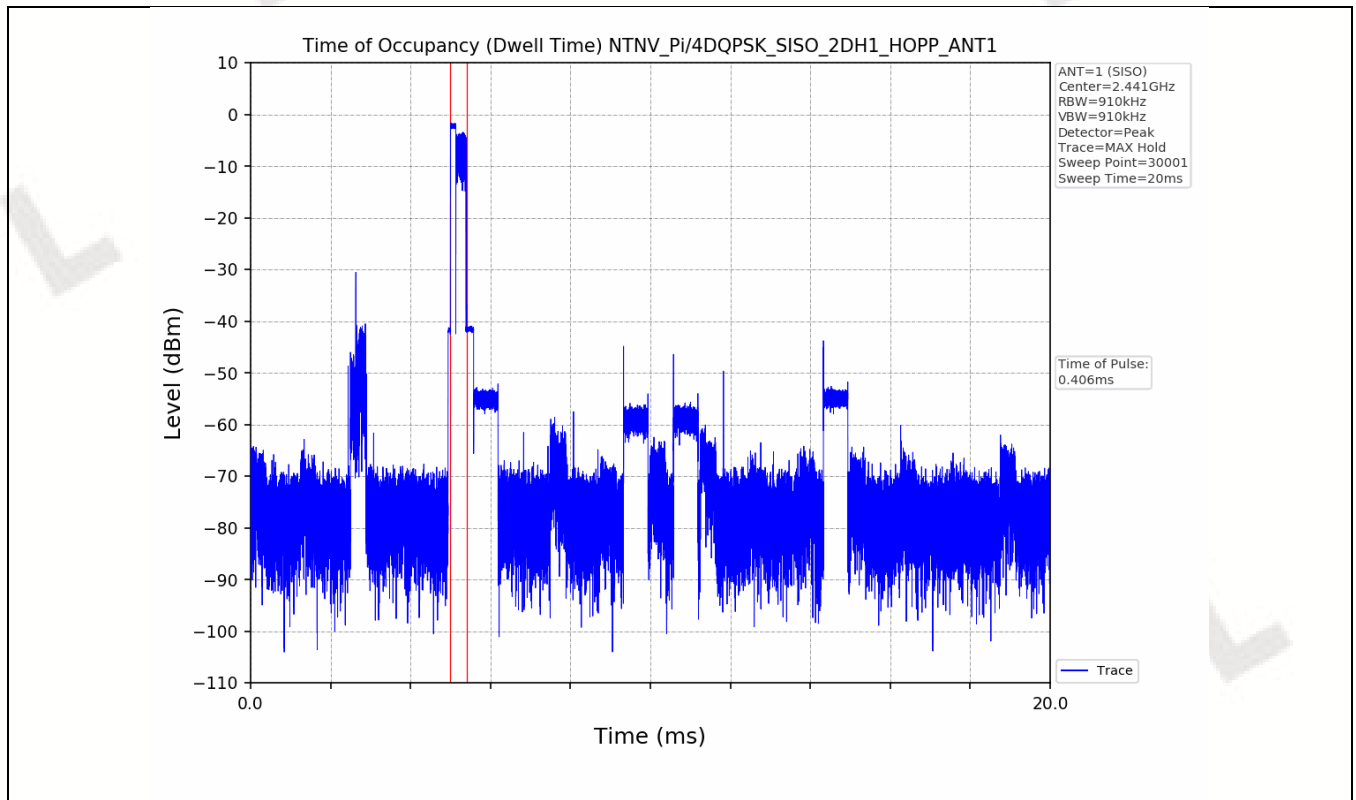
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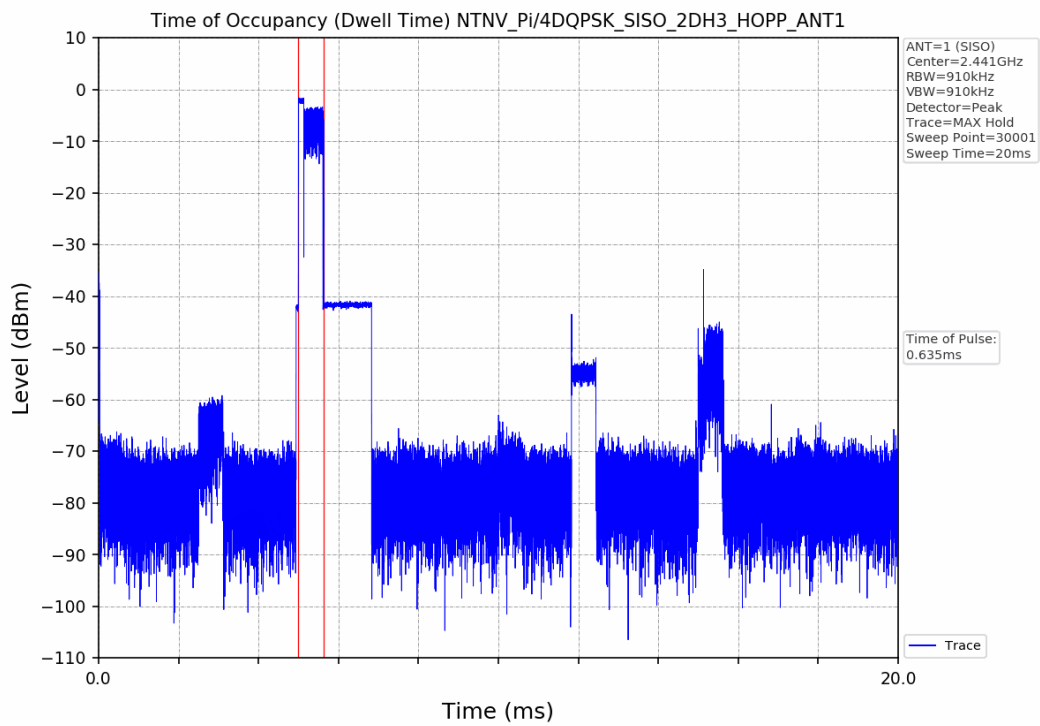
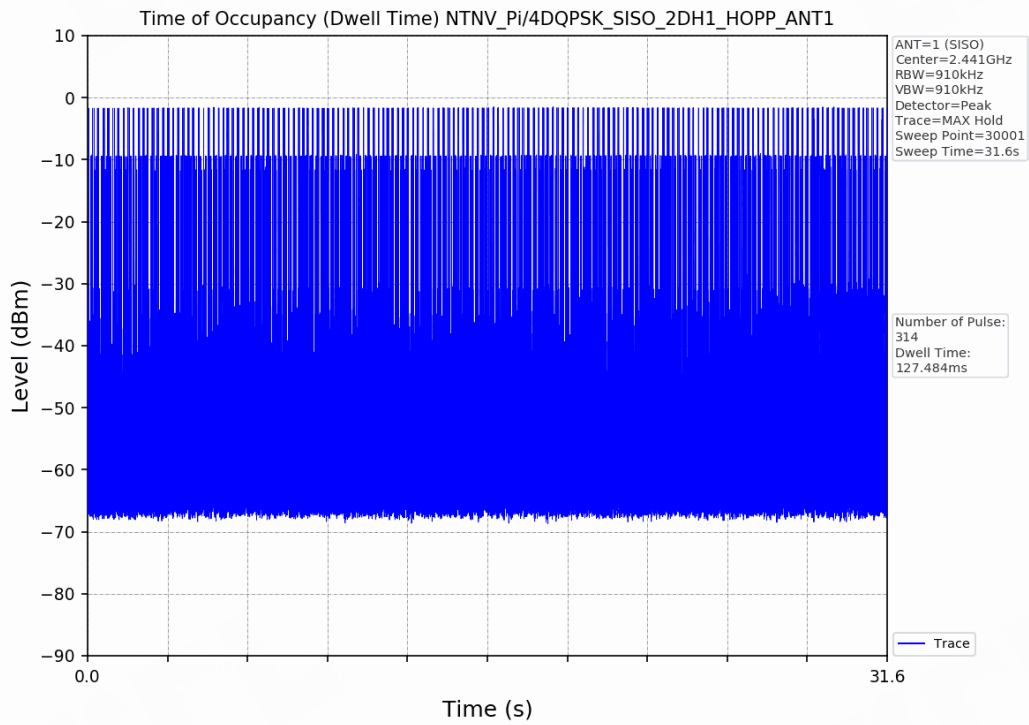
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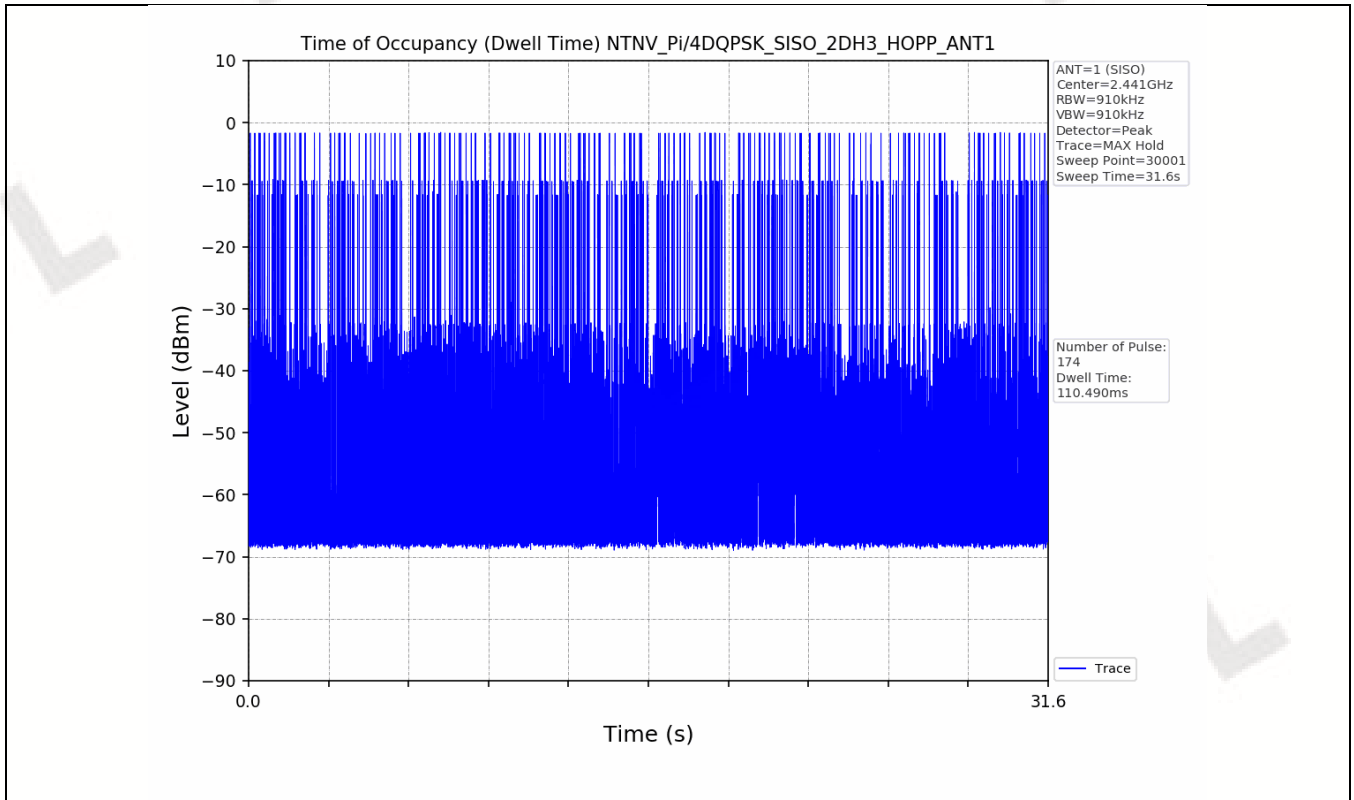
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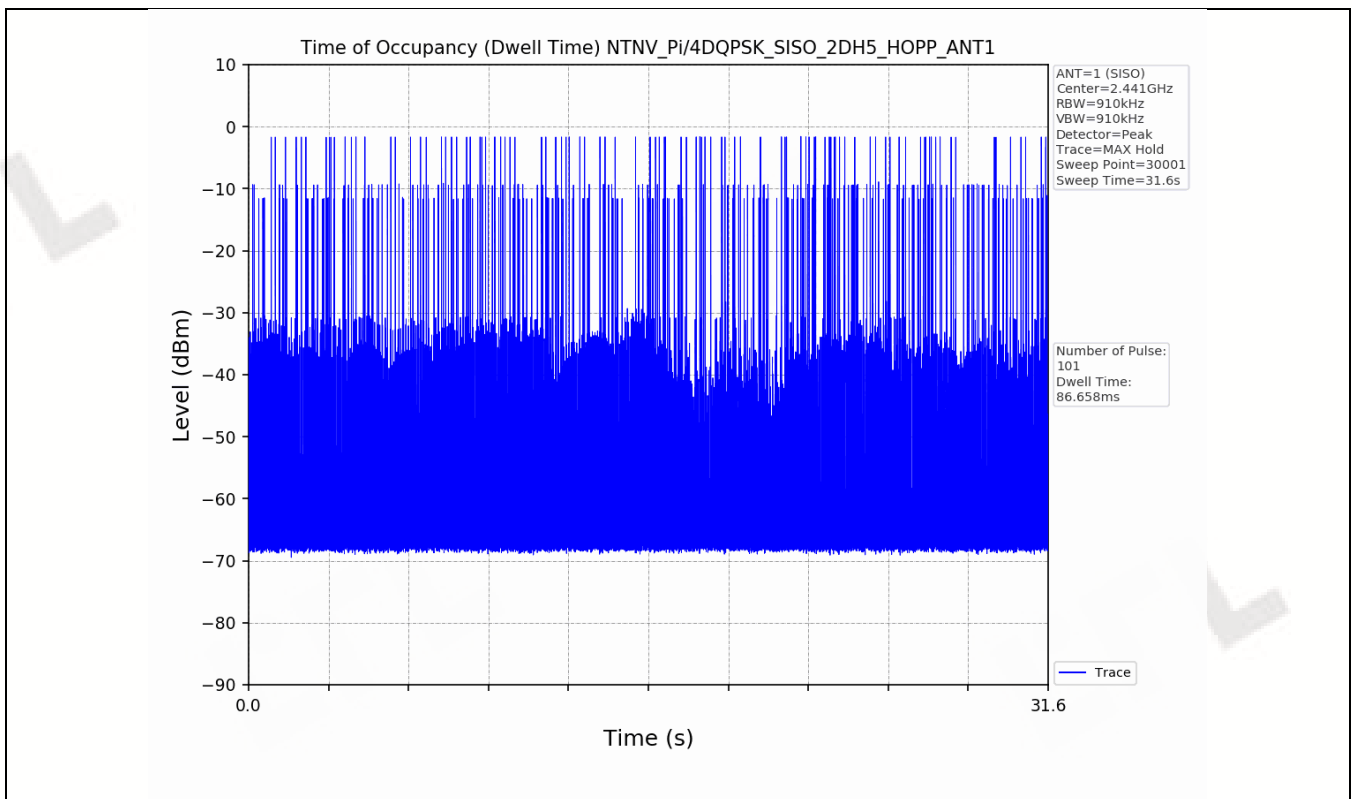
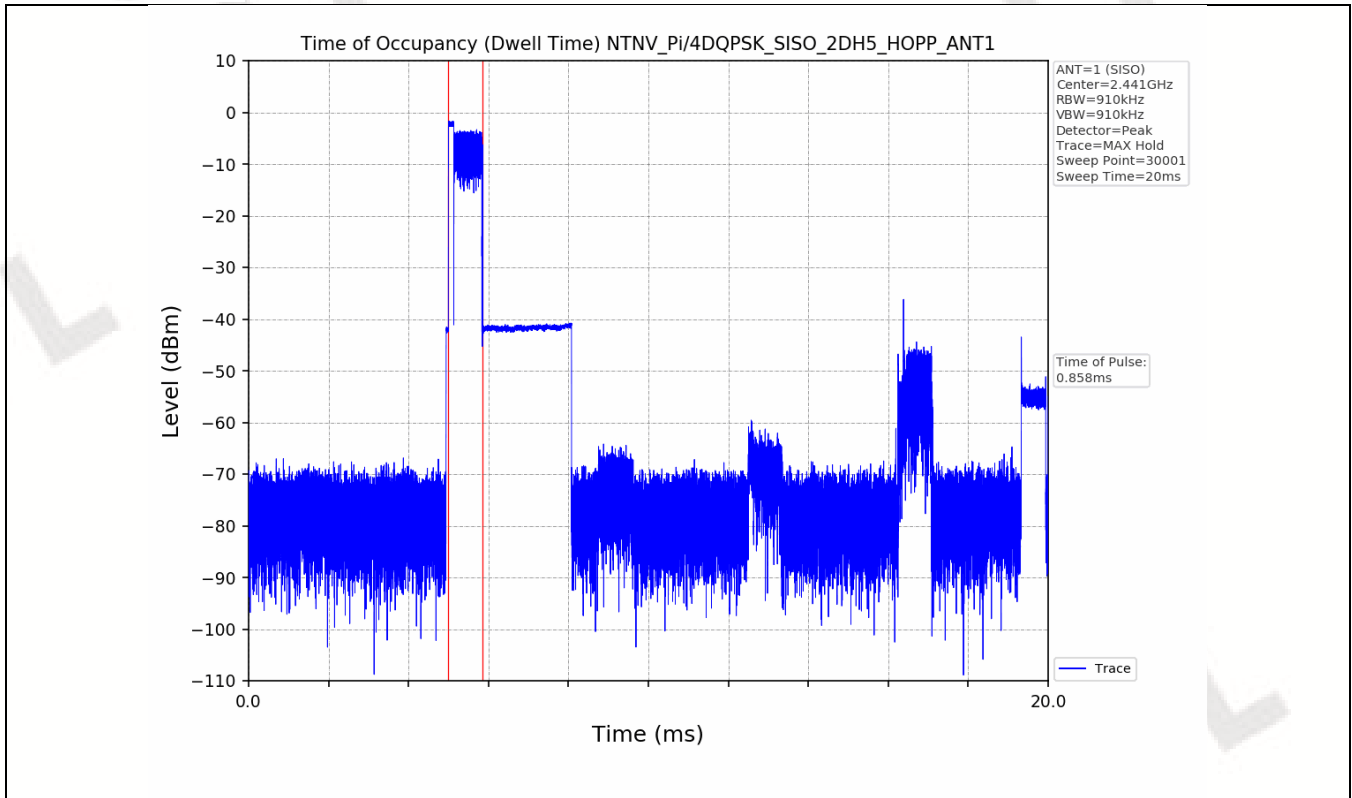
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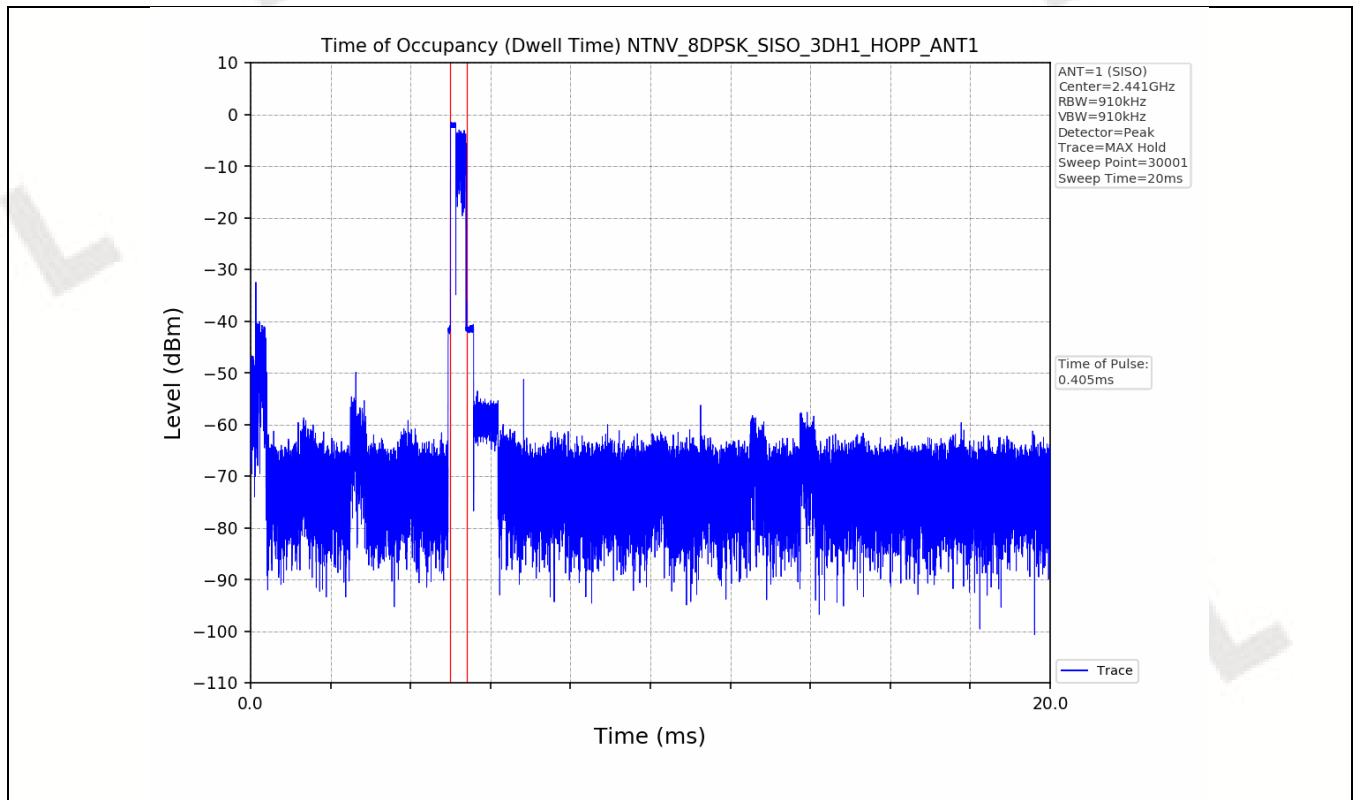
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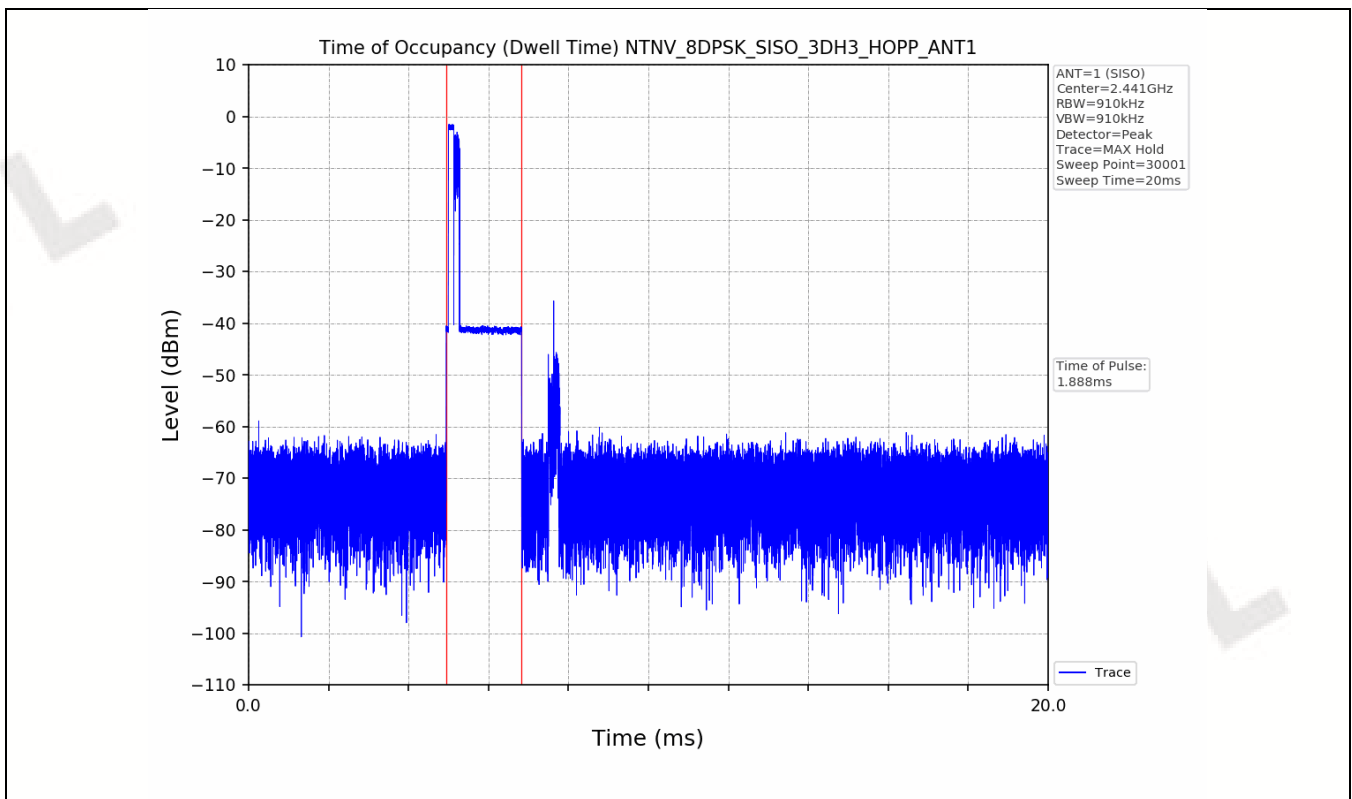
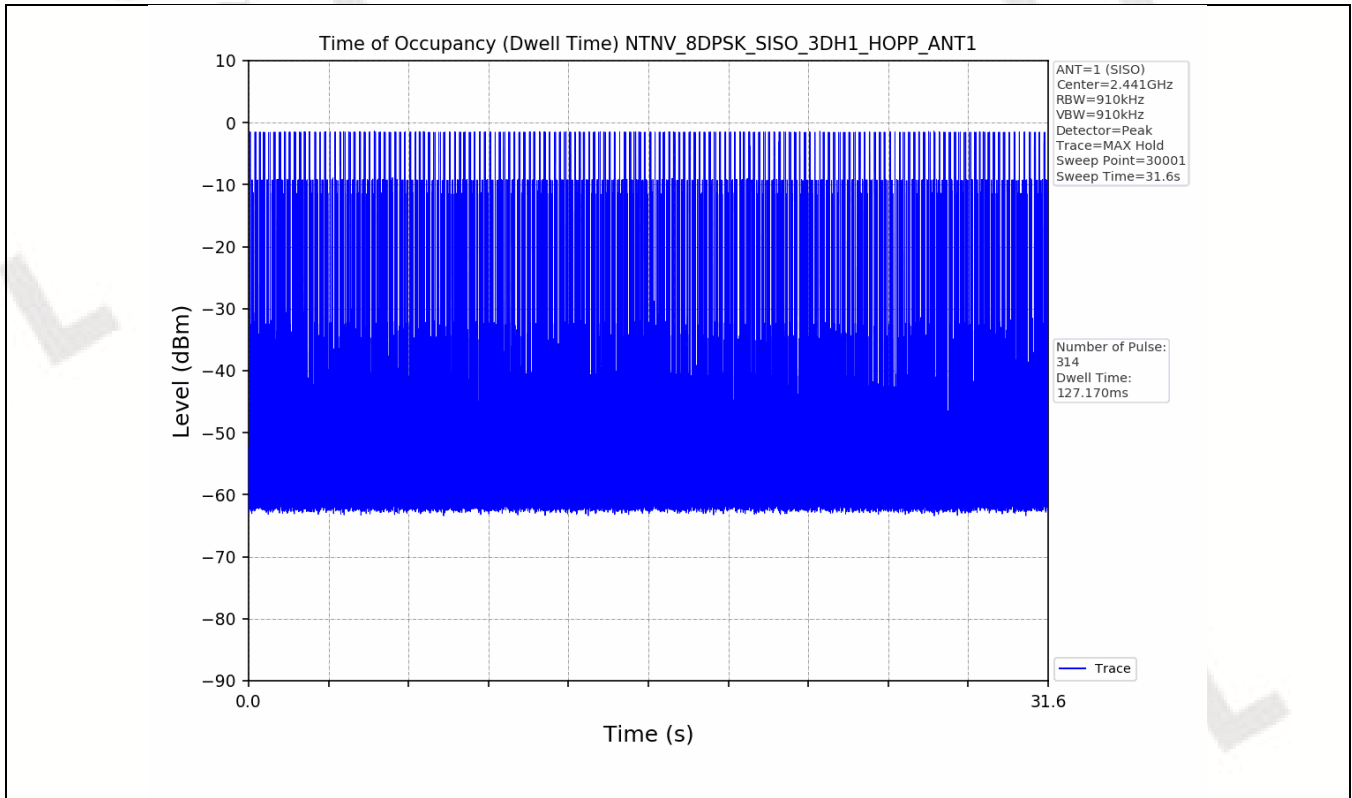
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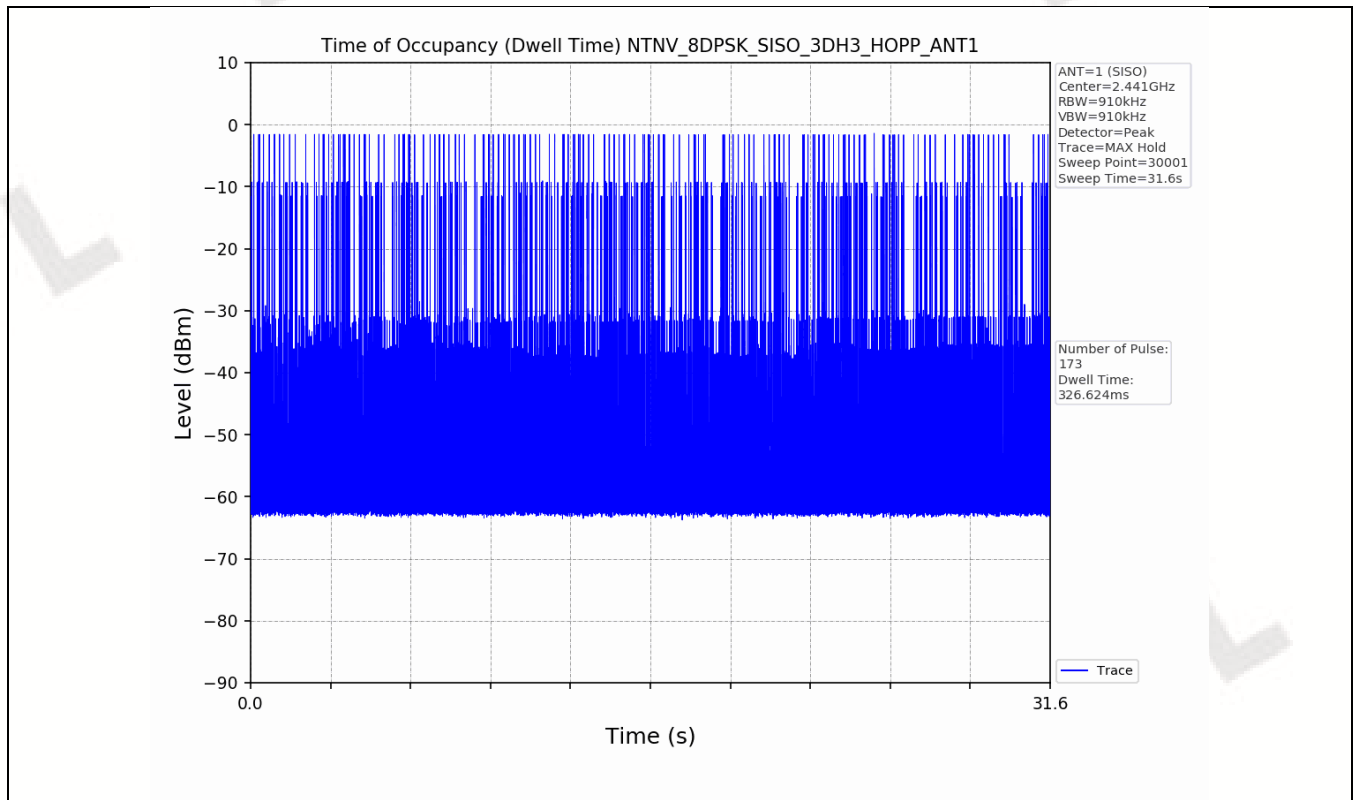
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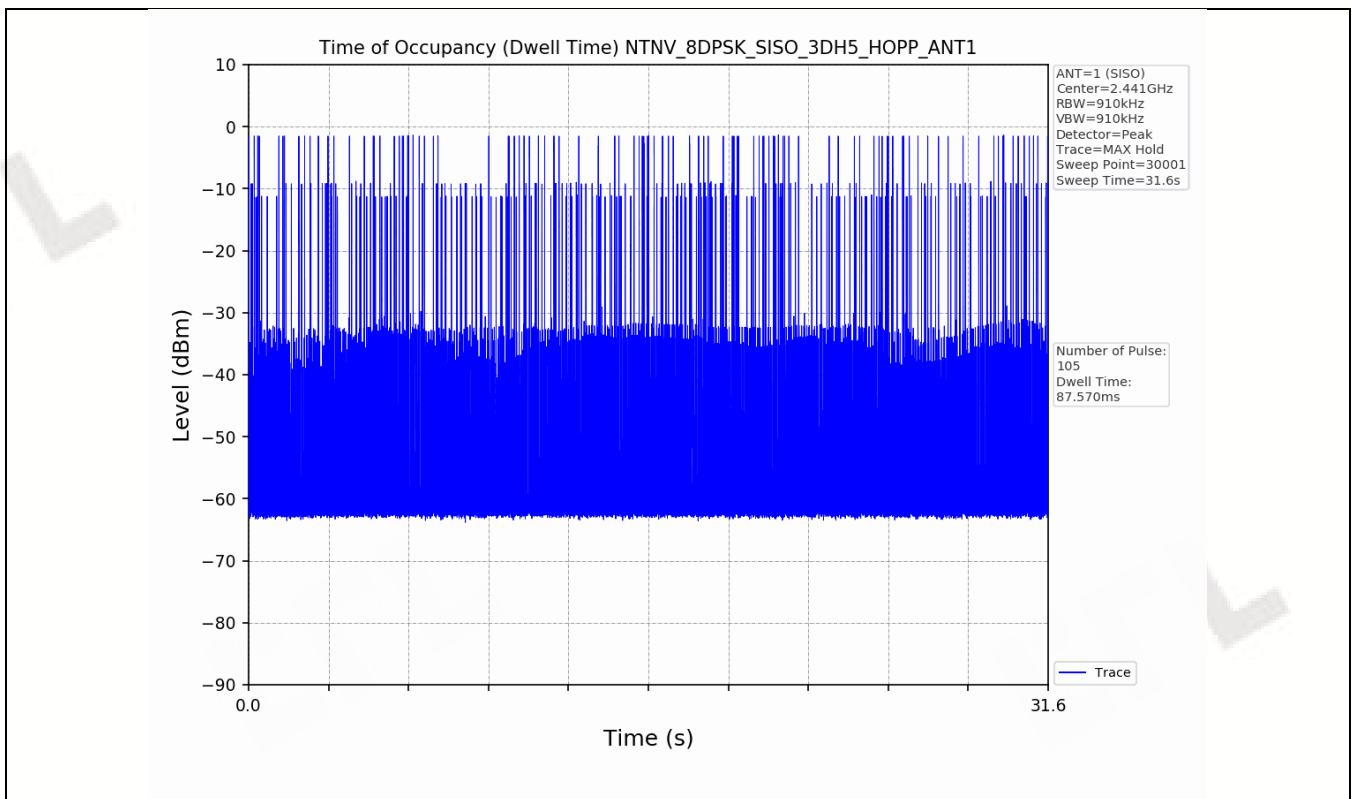
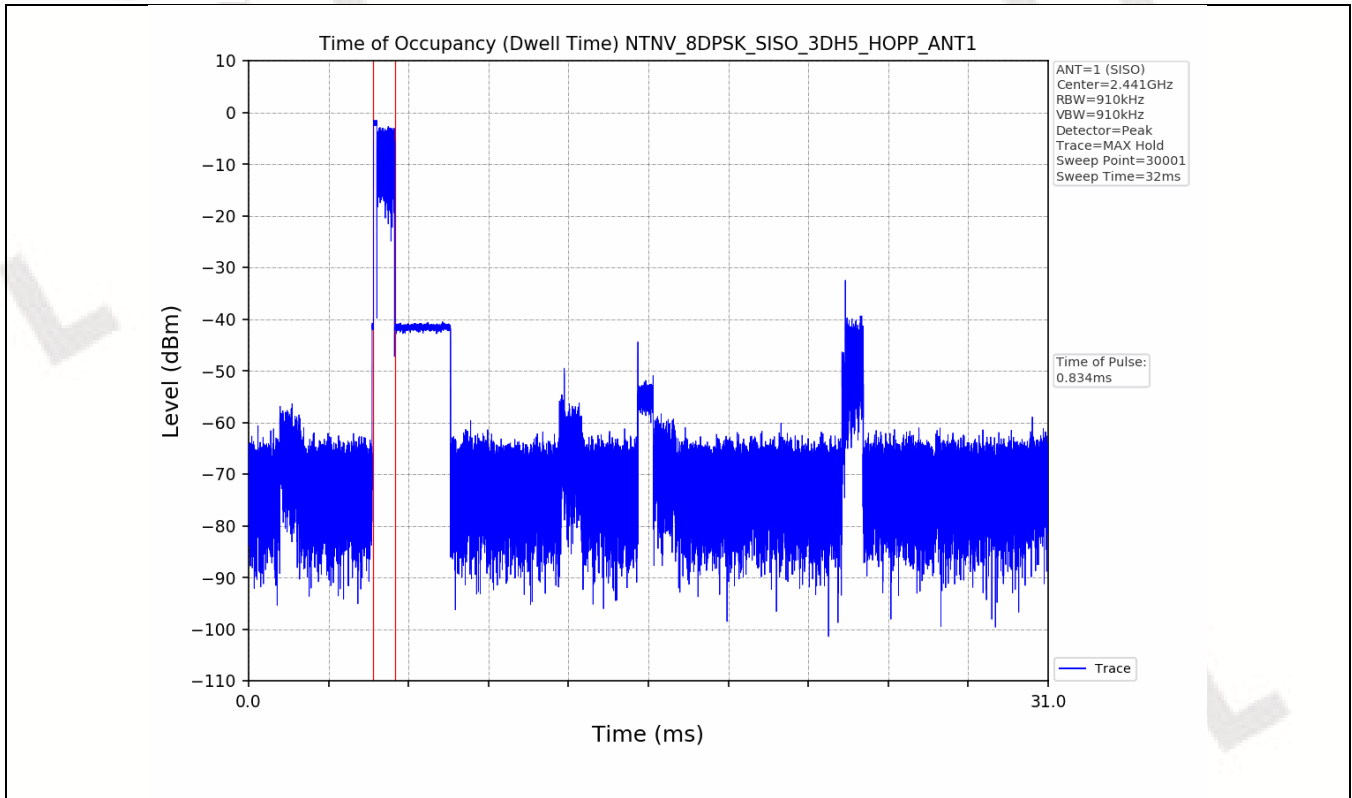




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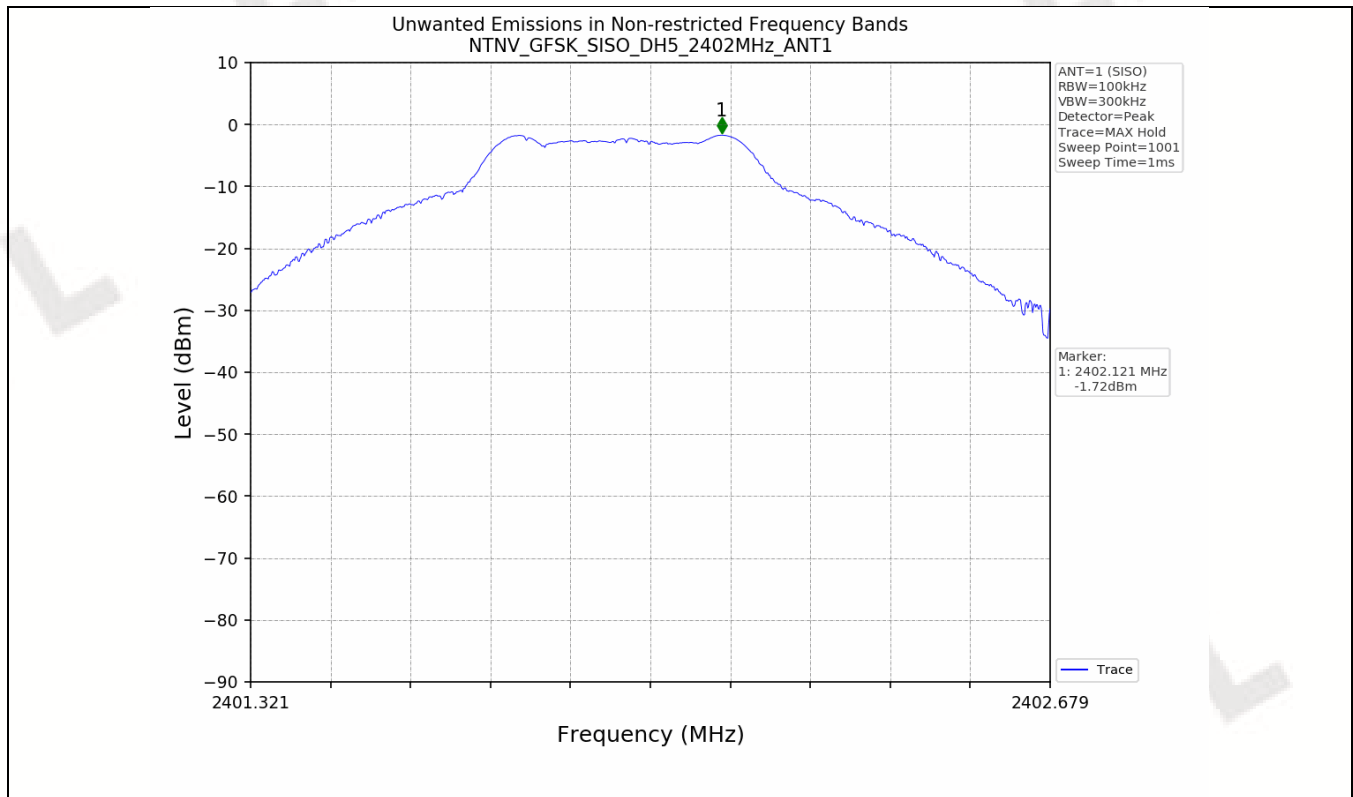


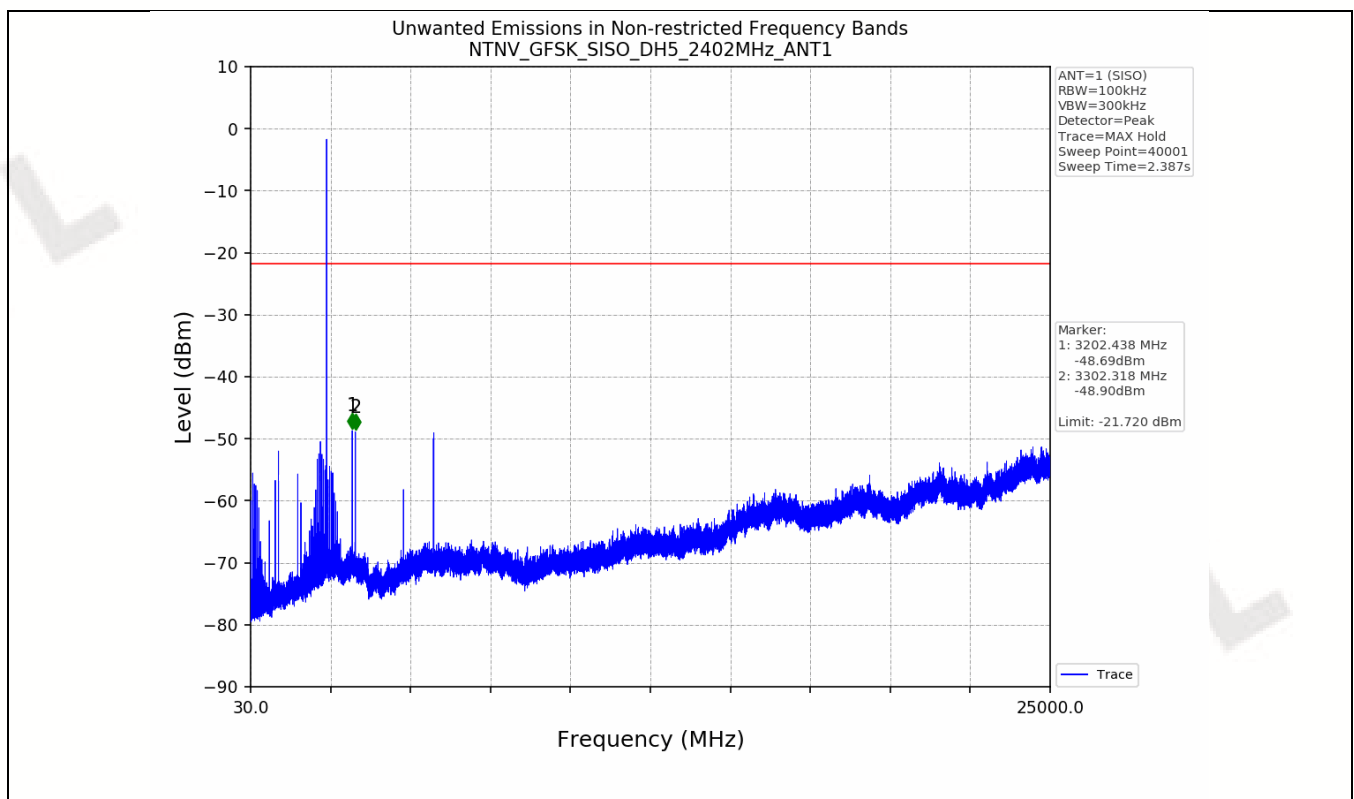
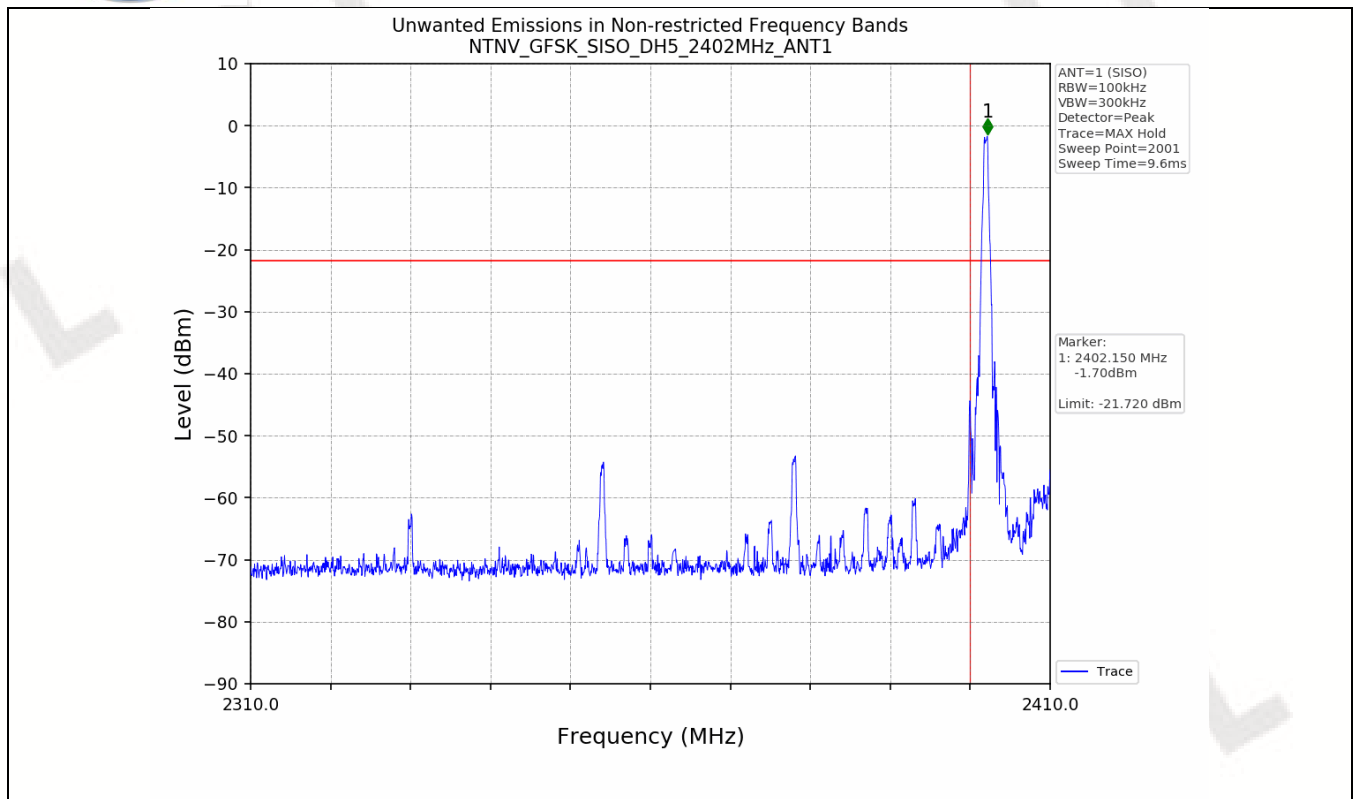
6. Unwanted Emissions in Non-restricted Frequency Bands

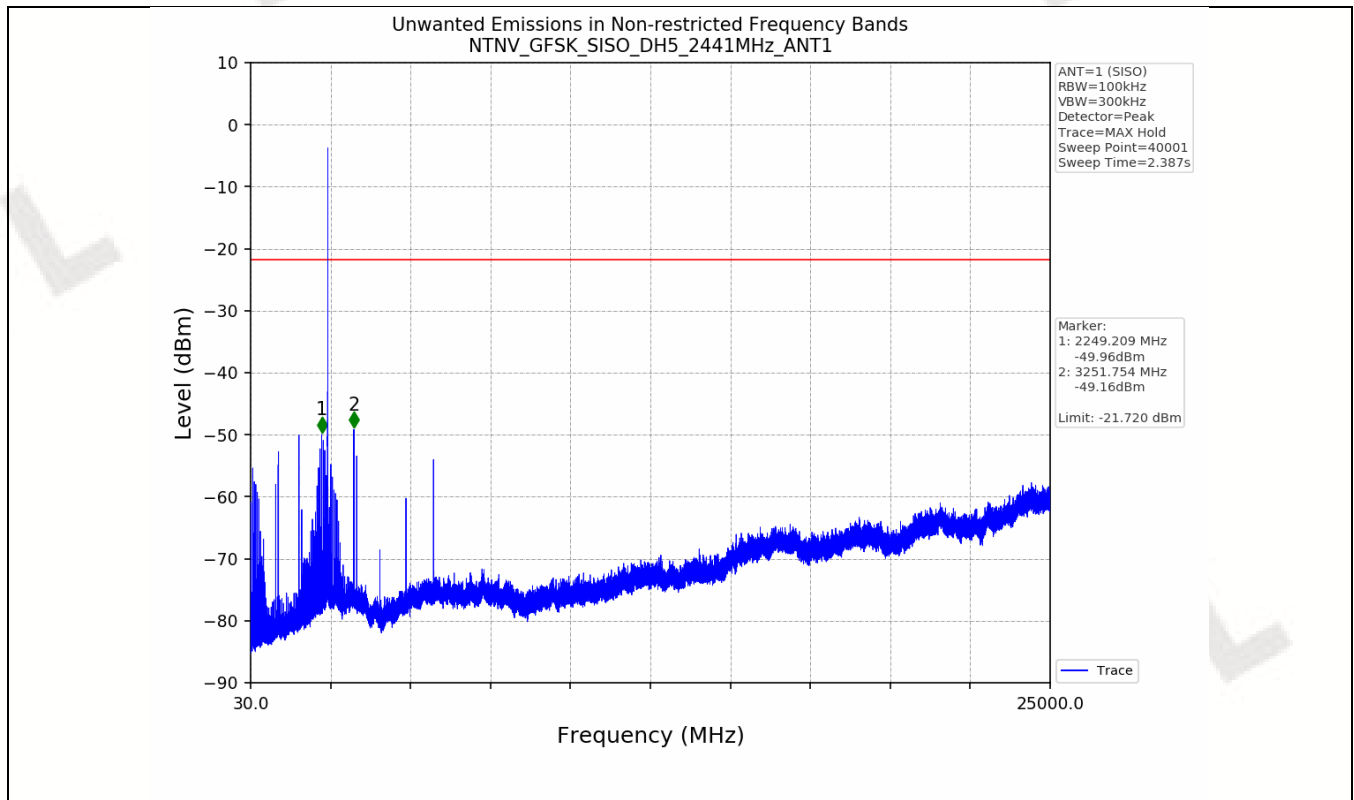
6.1 Test Result

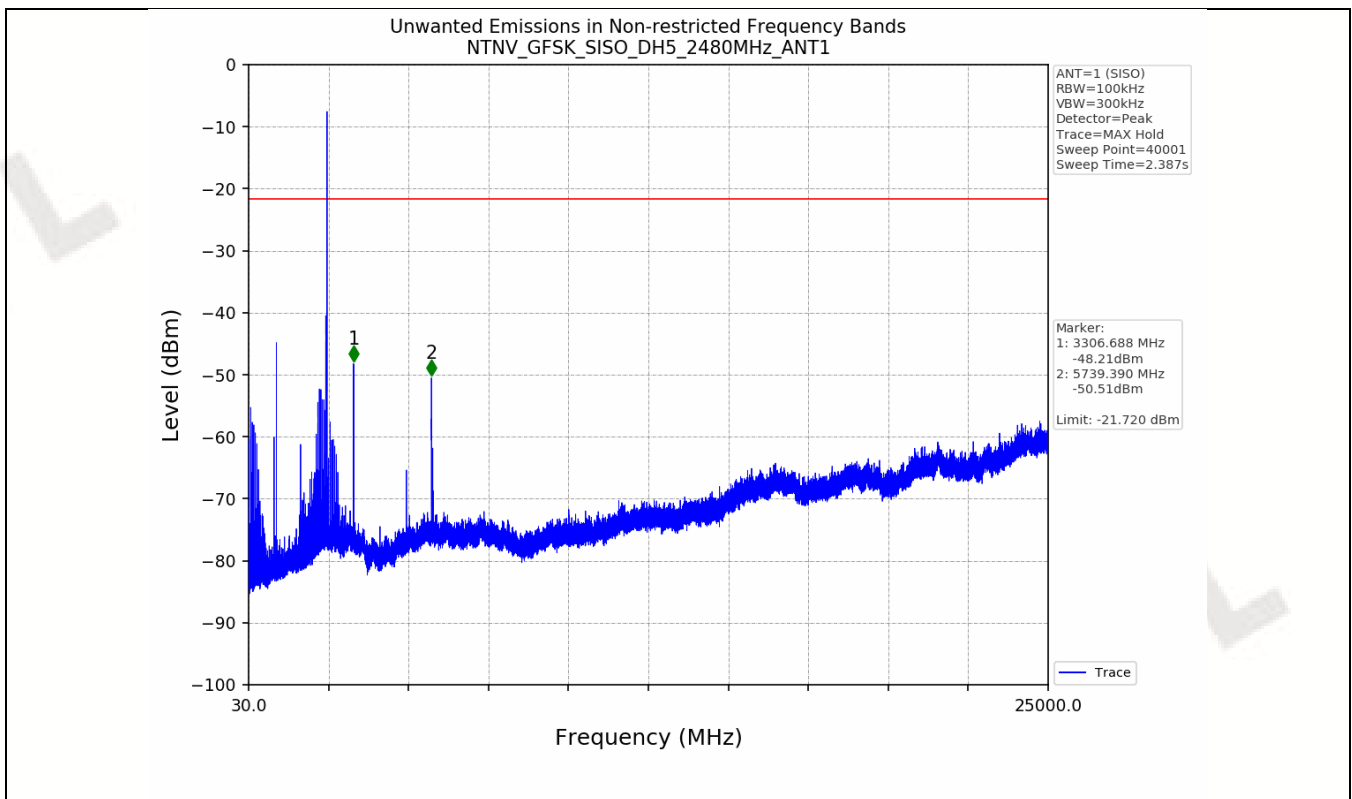
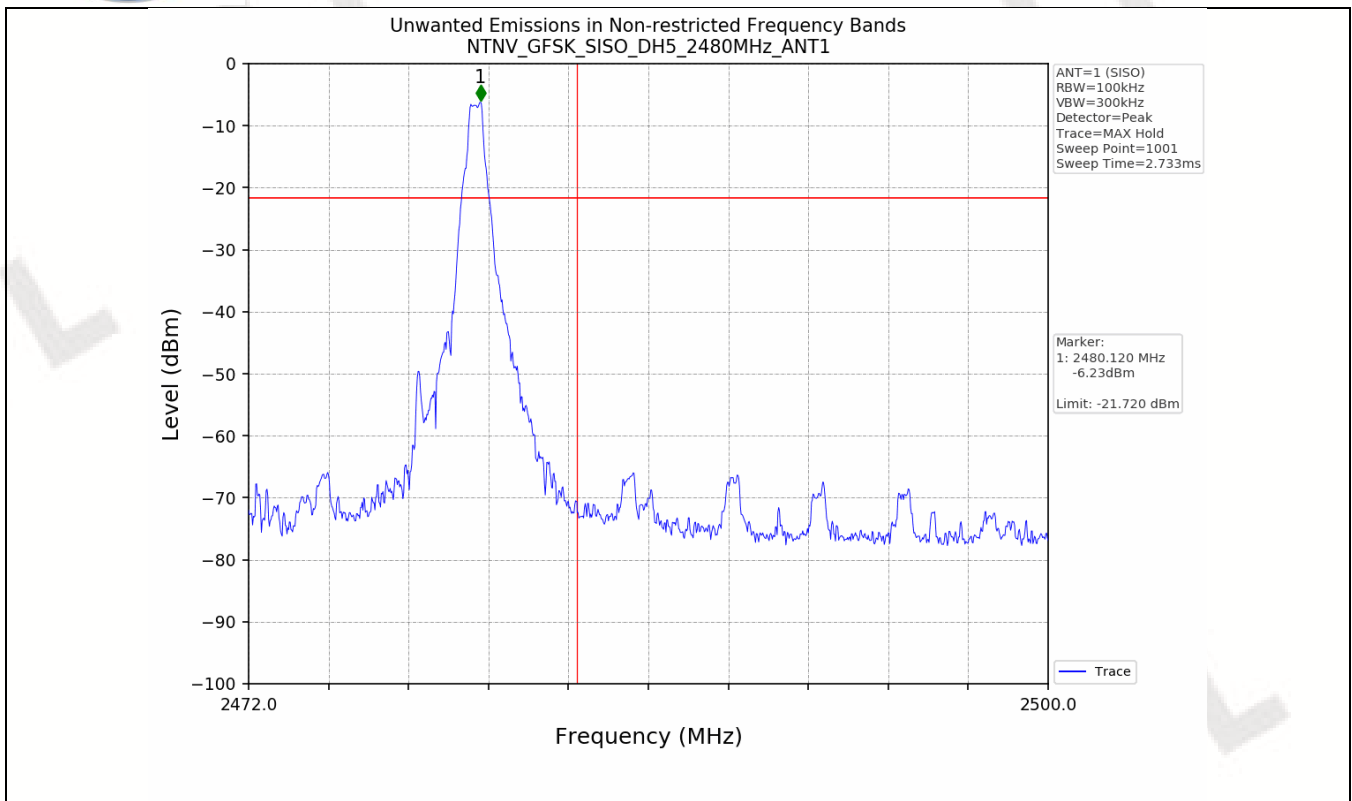
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
GFSK	2402	SISO	1	Refer to test graph	-21.72	PASS
	2441	SISO	1	Refer to test graph	-21.72	PASS
	2480	SISO	1	Refer to test graph	-21.72	PASS
	Hopping	SISO	1	Refer to test graph	-21.72	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	-22.42	PASS
	2441	SISO	1	Refer to test graph	-22.42	PASS
	2480	SISO	1	Refer to test graph	-22.42	PASS
	Hopping	SISO	1	Refer to test graph	-22.42	PASS
8DPSK	2402	SISO	1	Refer to test graph	-19.80	PASS
	2441	SISO	1	Refer to test graph	-19.80	PASS
	2480	SISO	1	Refer to test graph	-19.80	PASS
	Hopping	SISO	1	Refer to test graph	-19.80	PASS

6.2 Test Graph





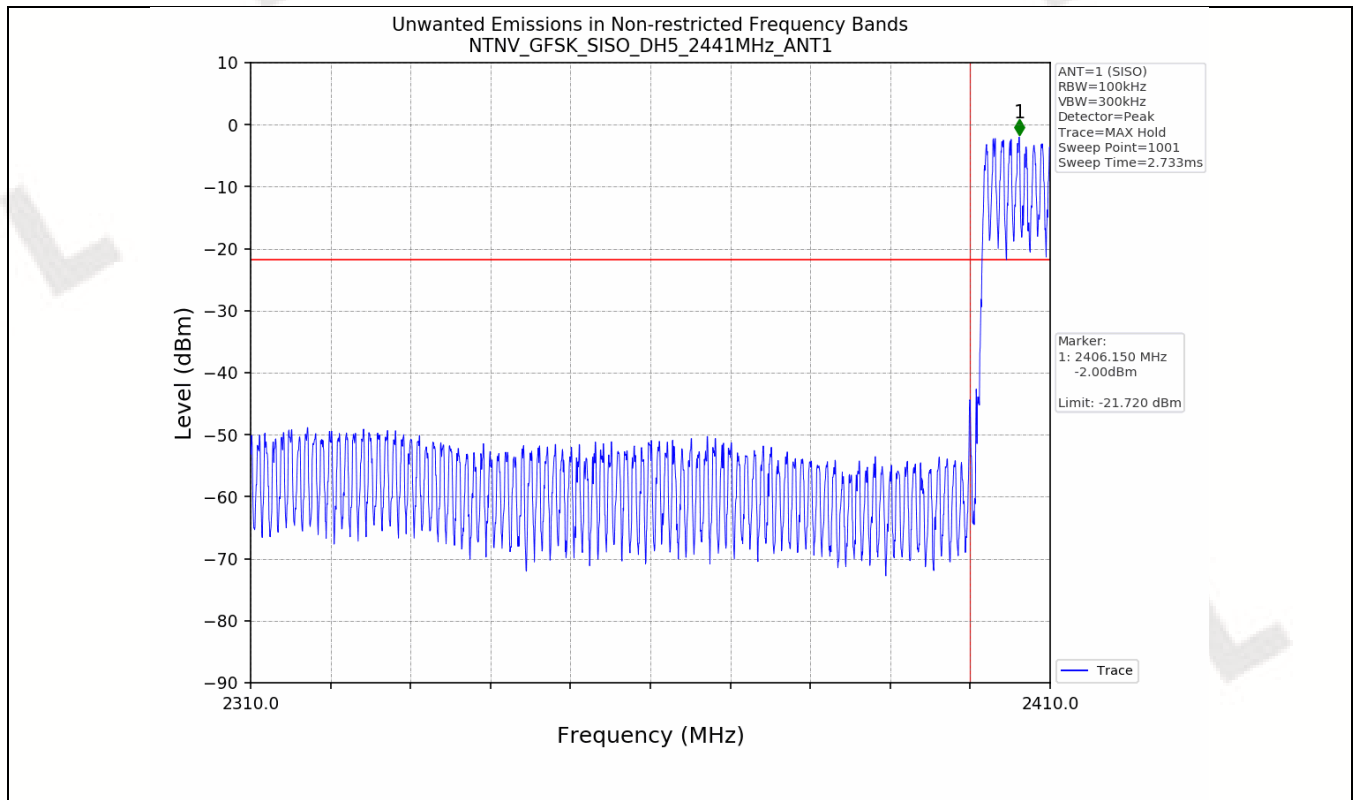






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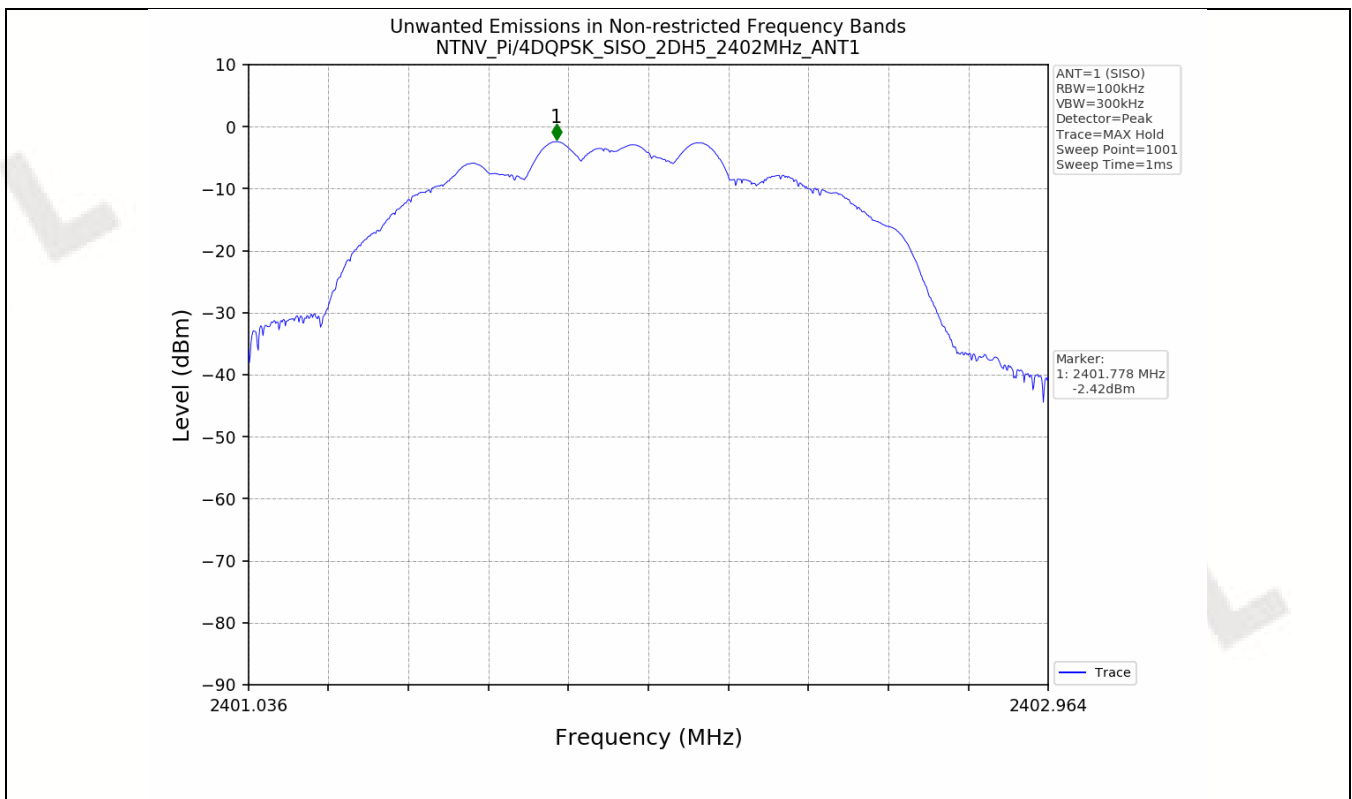
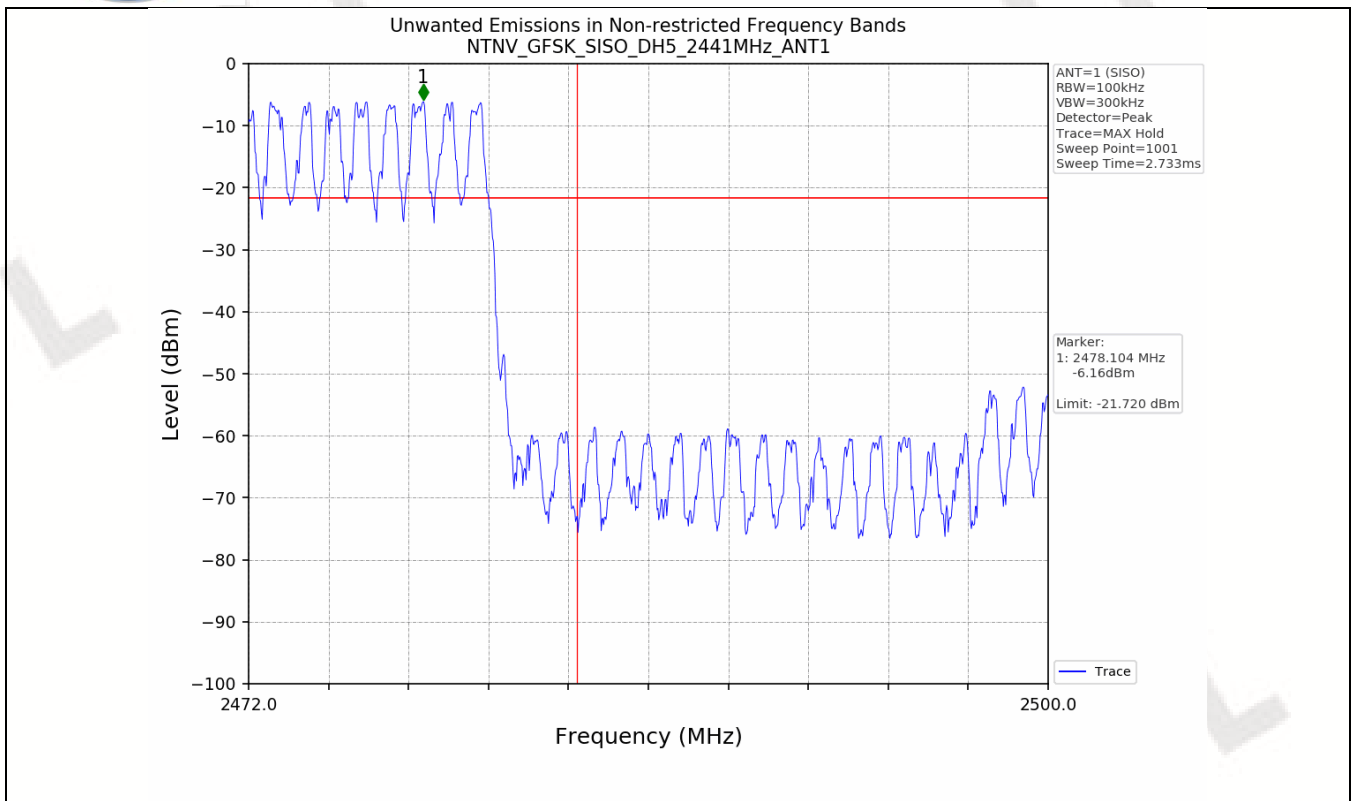
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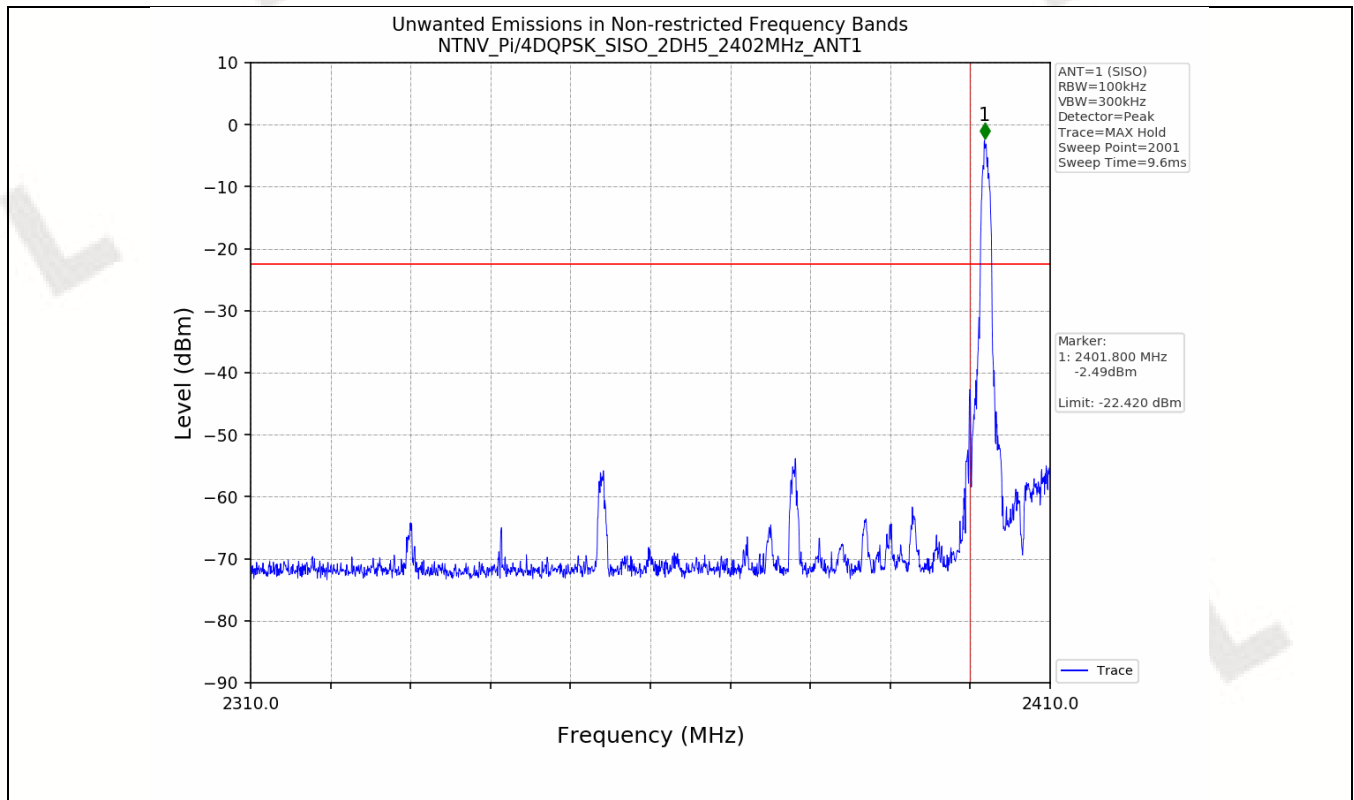
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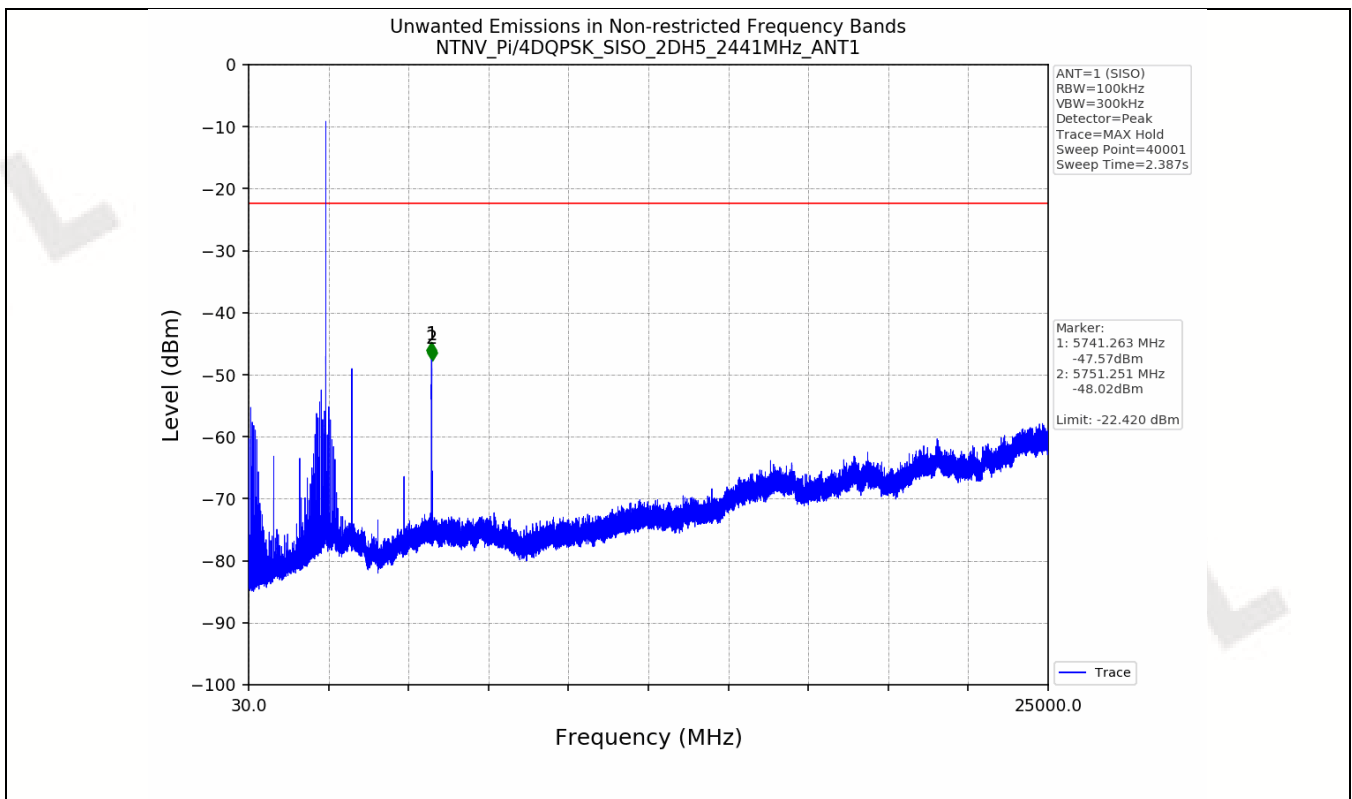
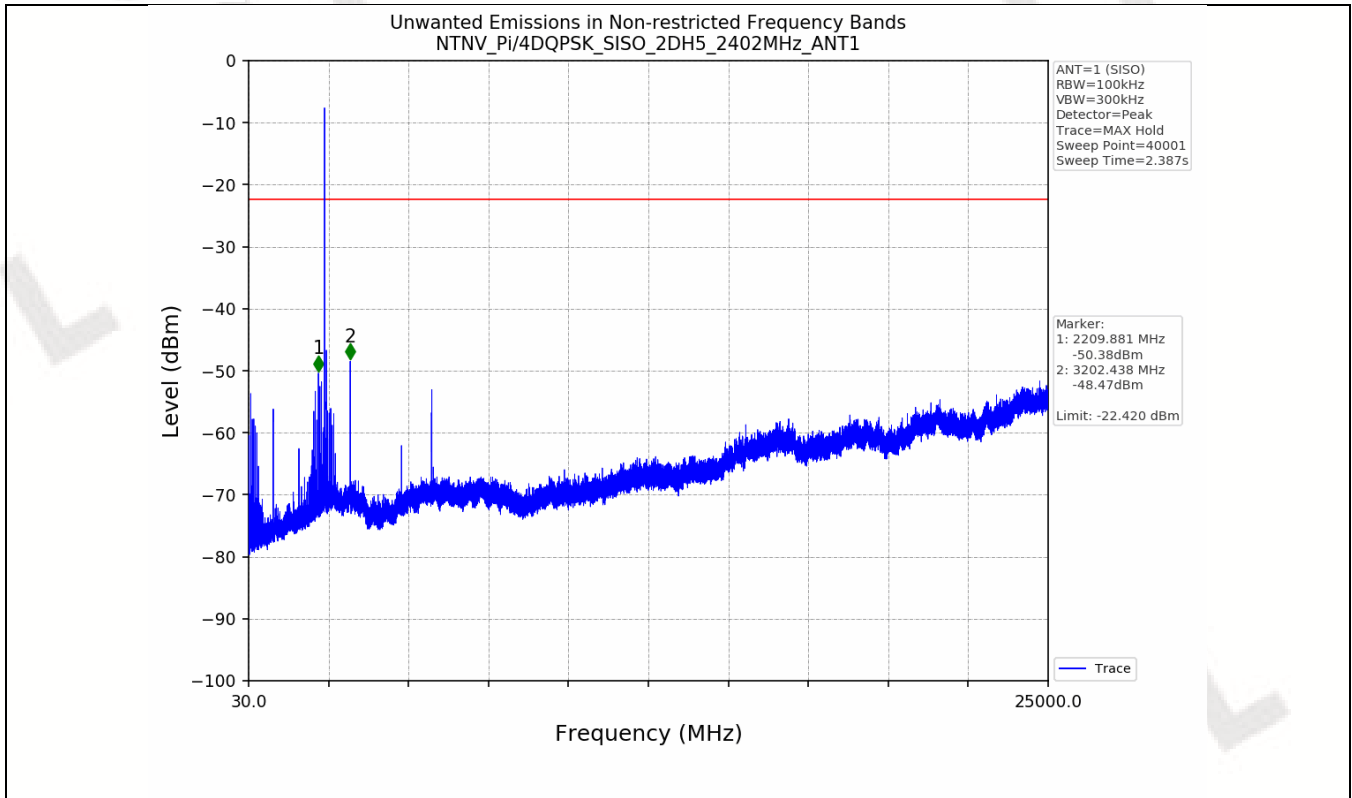




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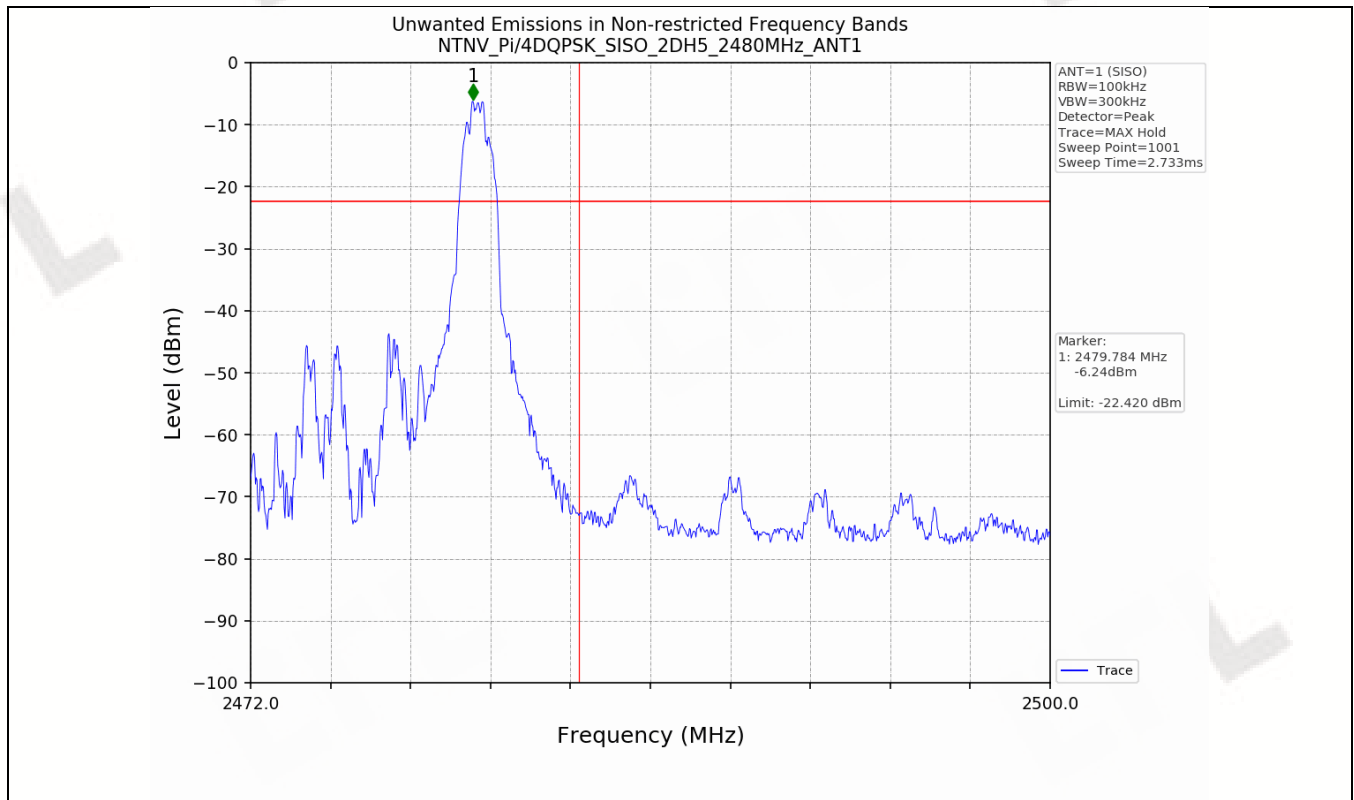






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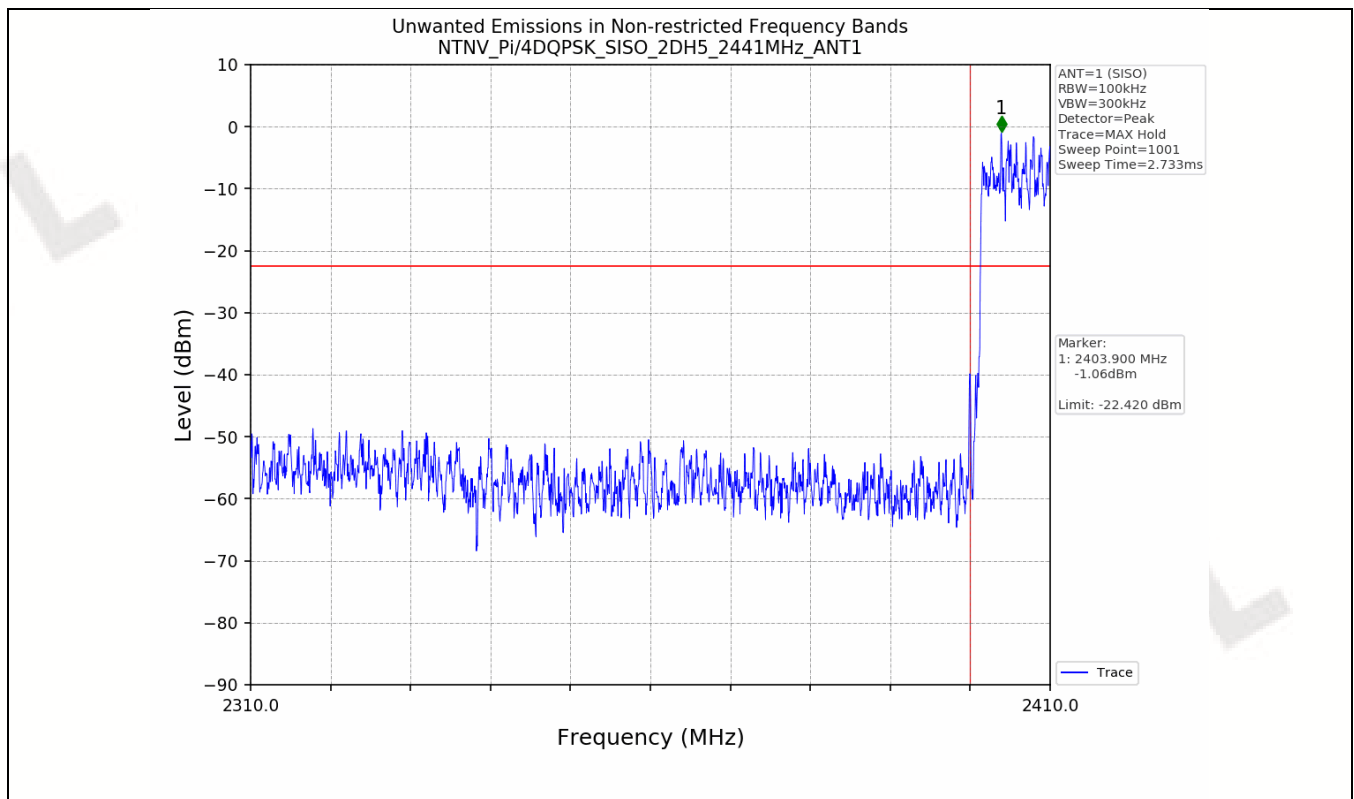
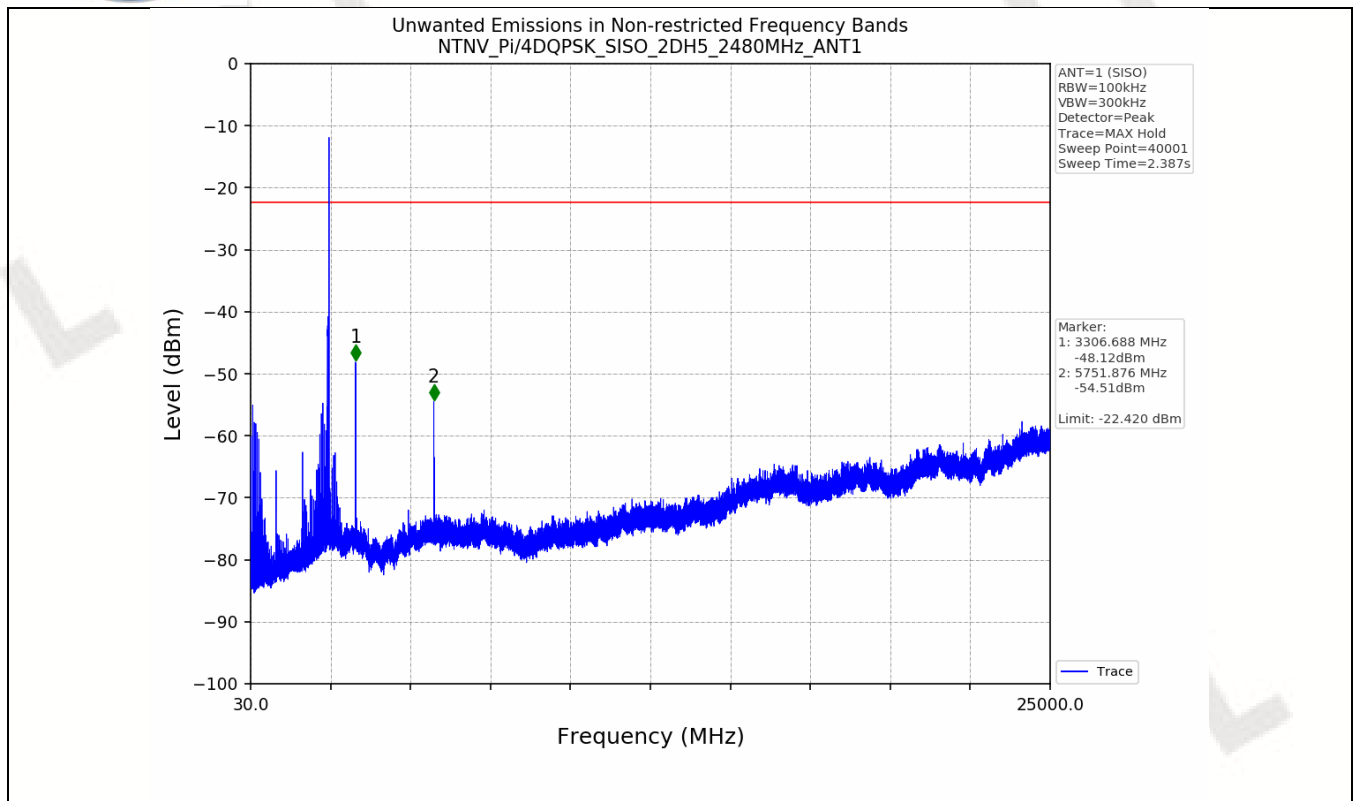
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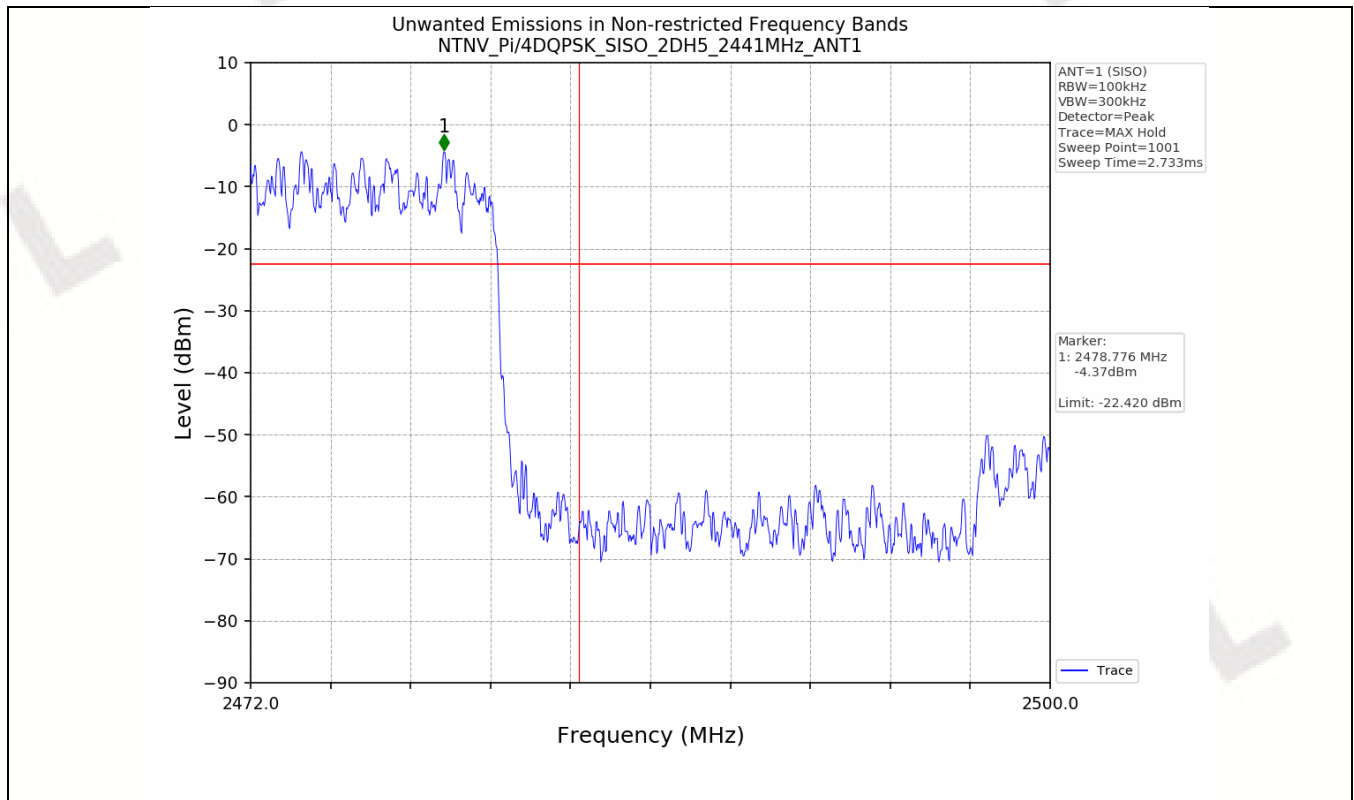
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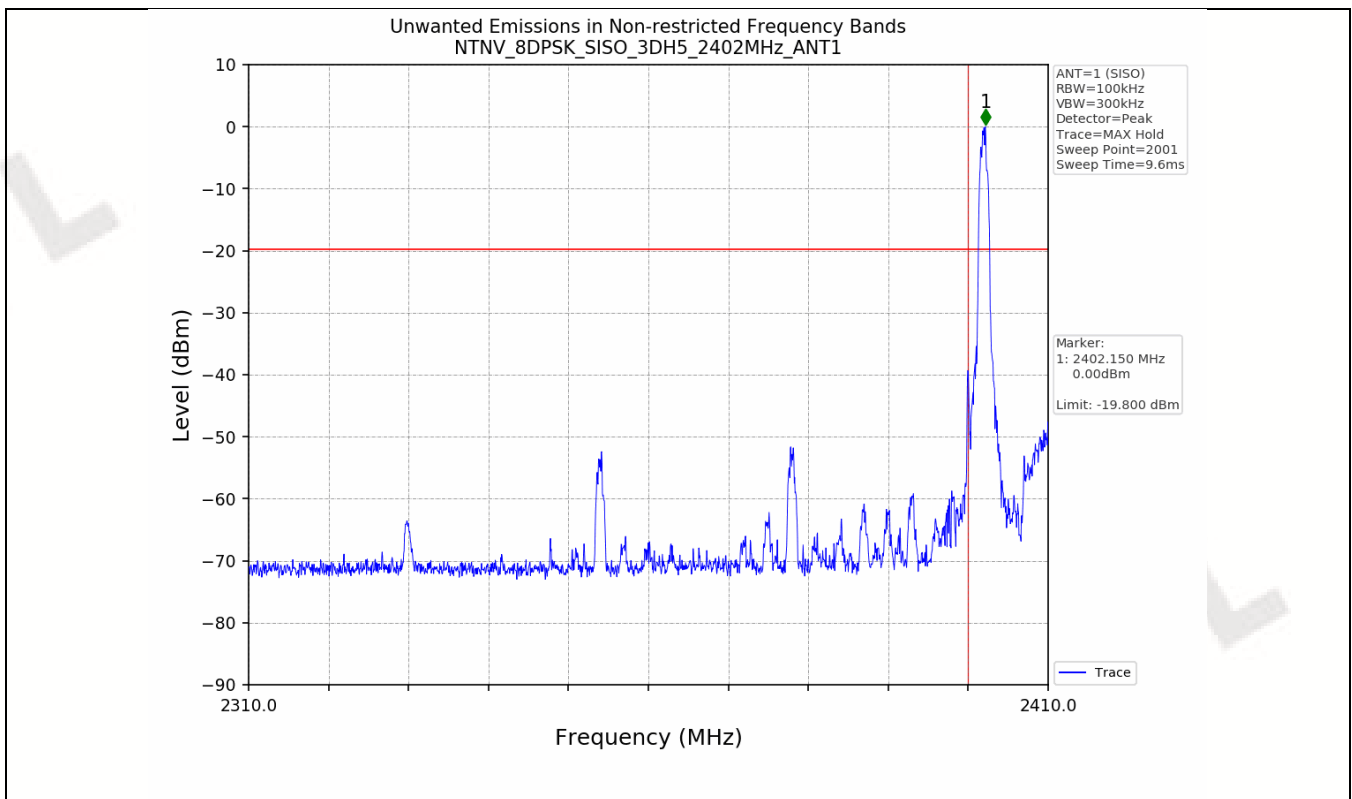
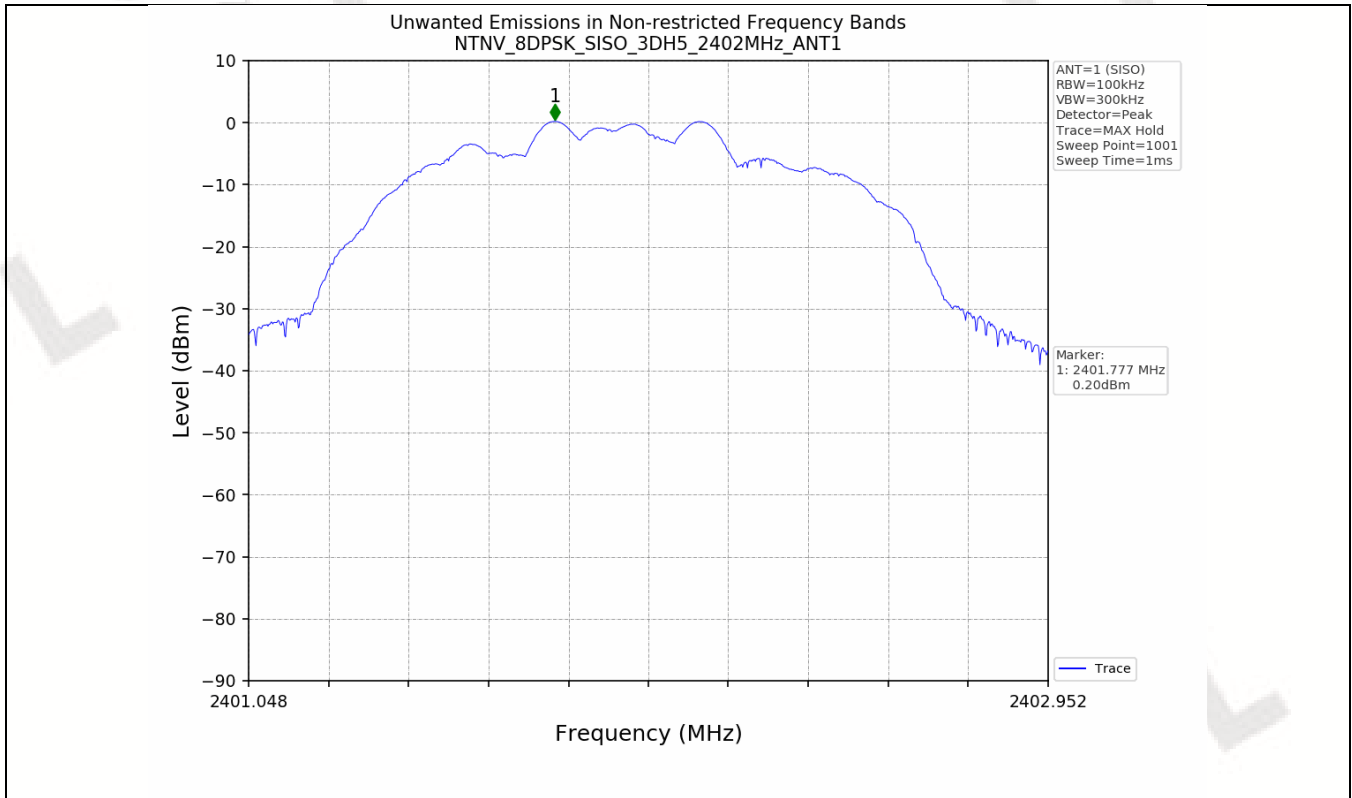
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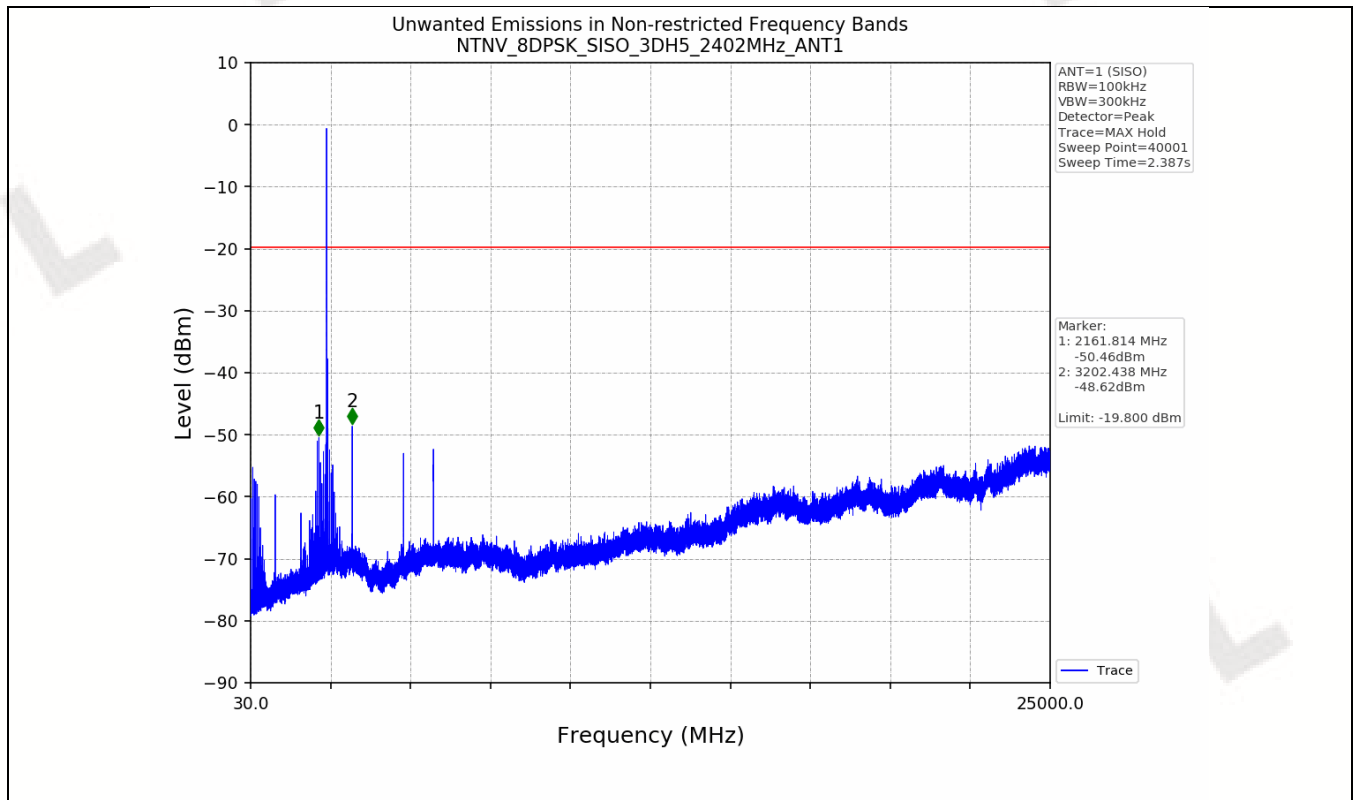
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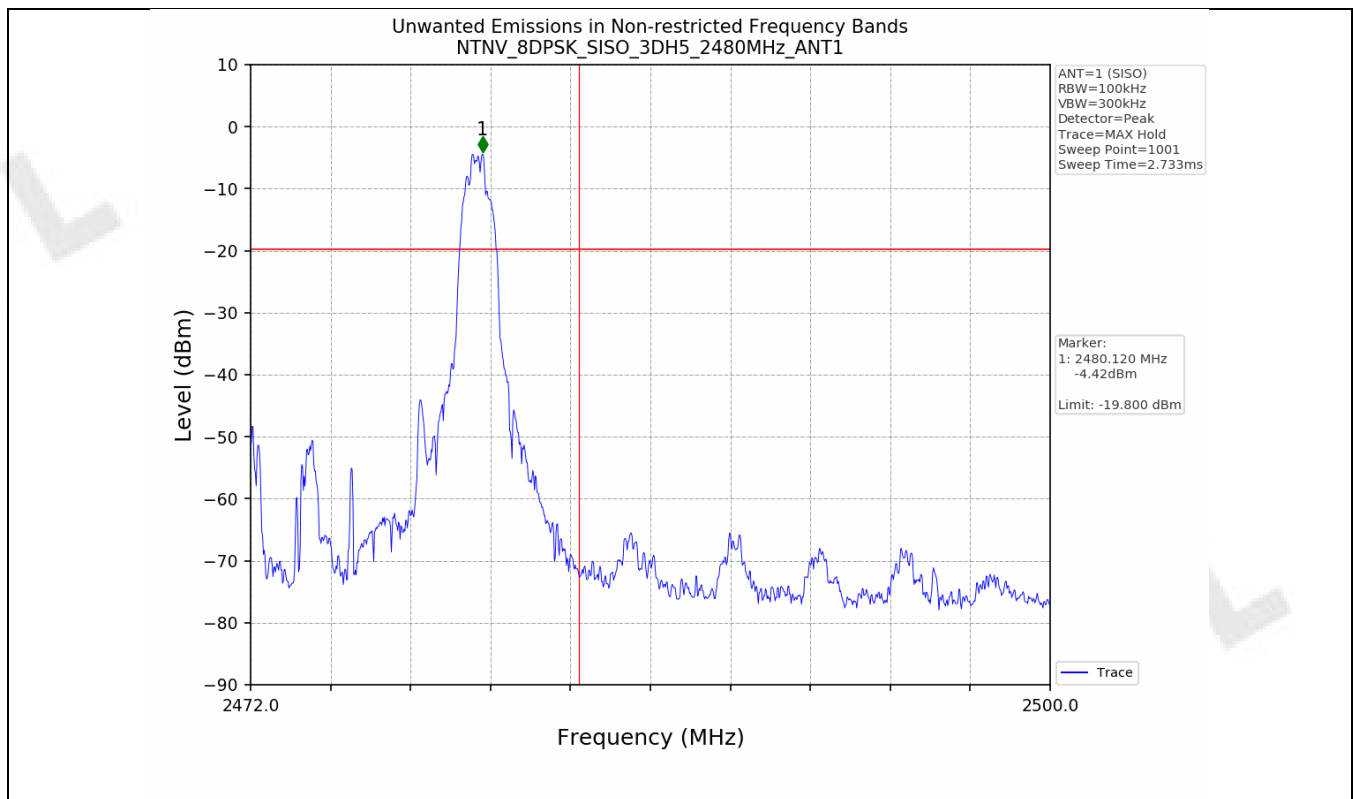
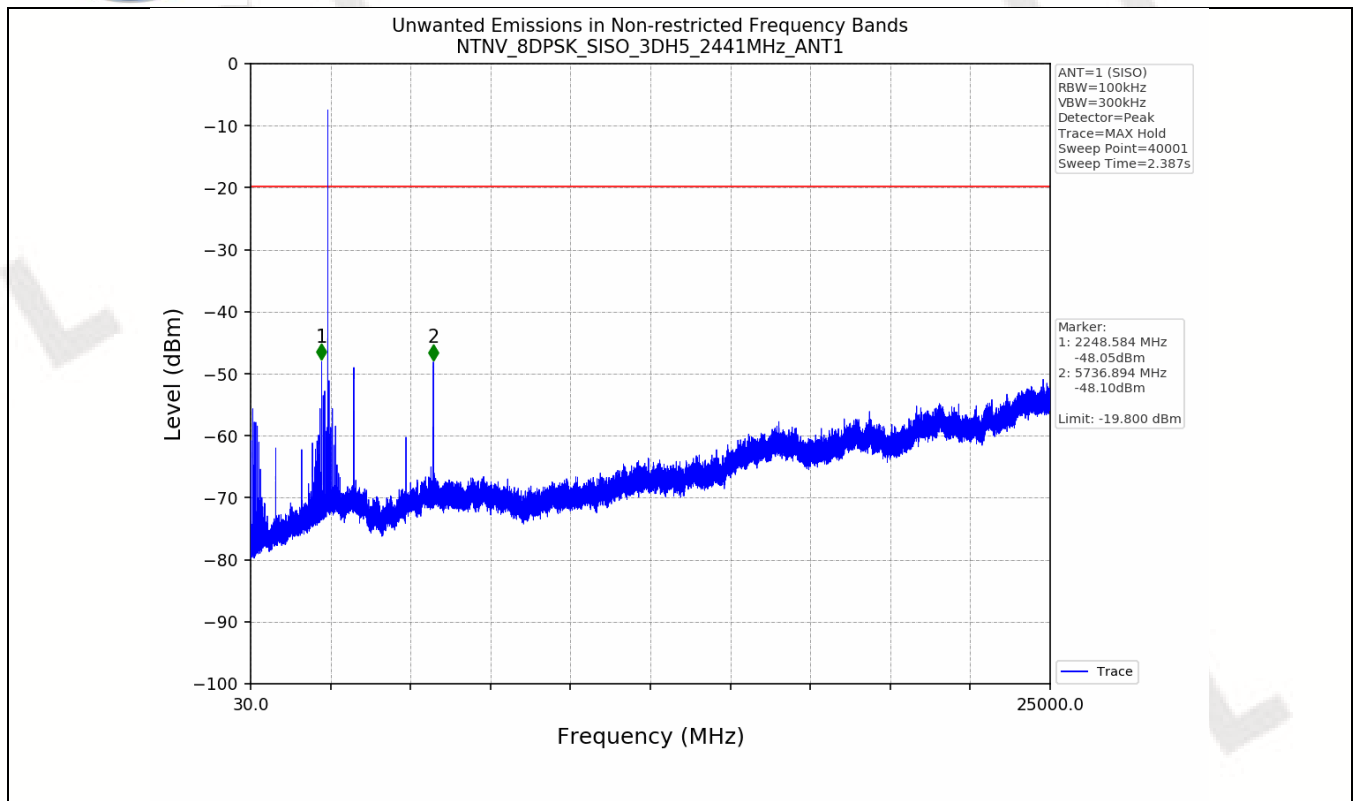


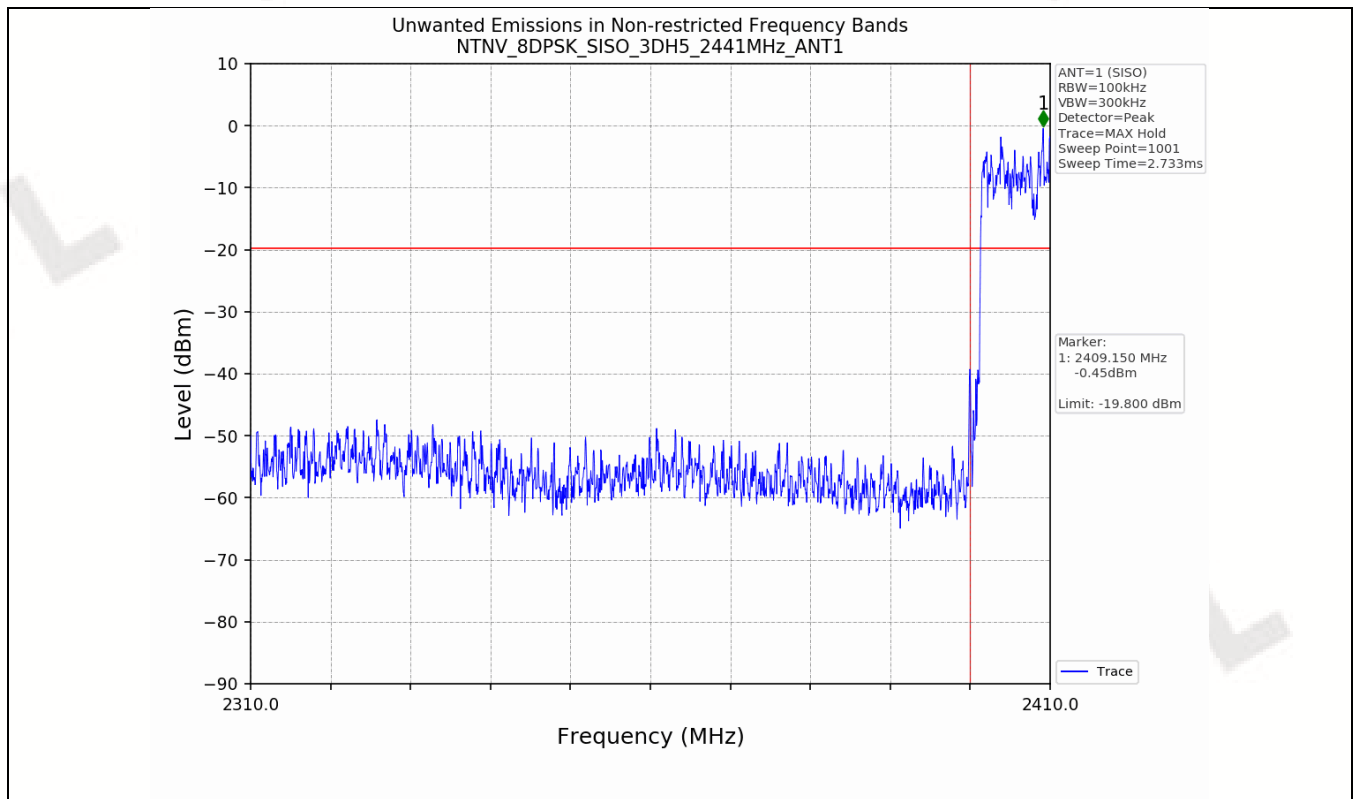
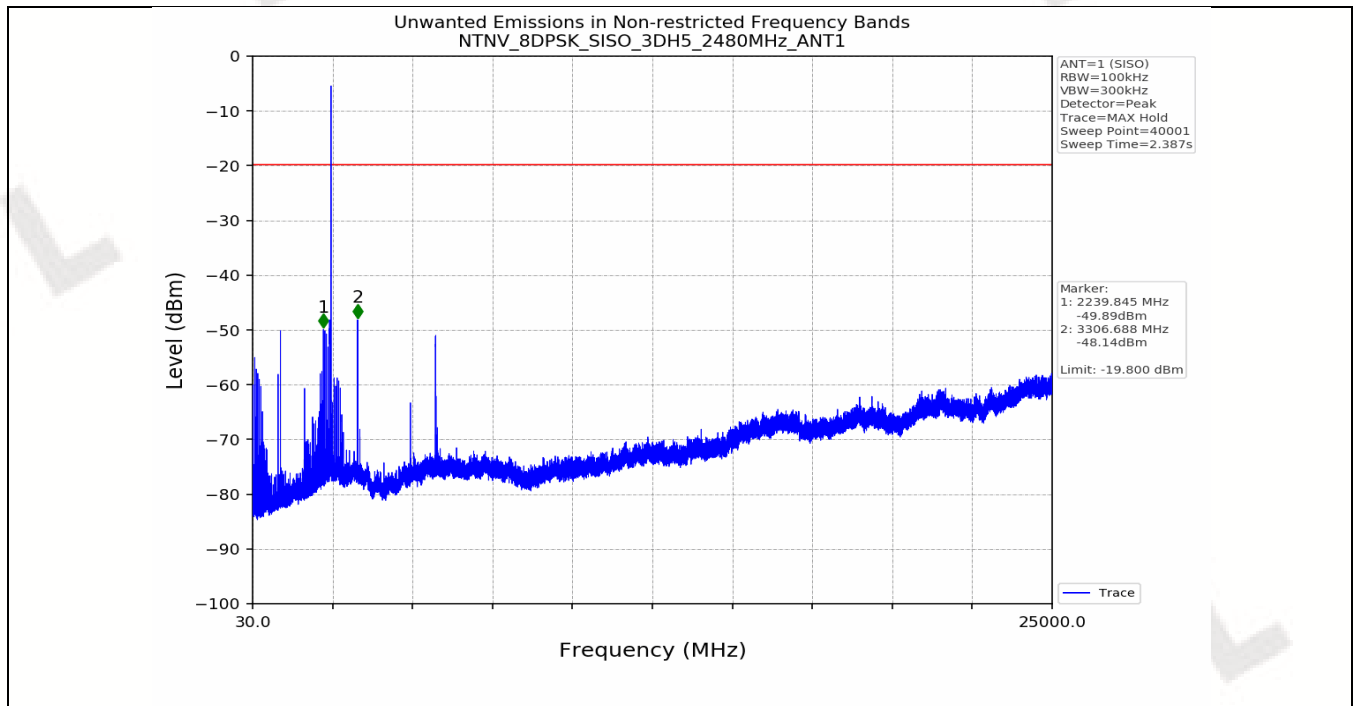


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