

Annex for Bluetooth BR&EDR Part 15.247

Test Report No. : CTL2007106021-WF

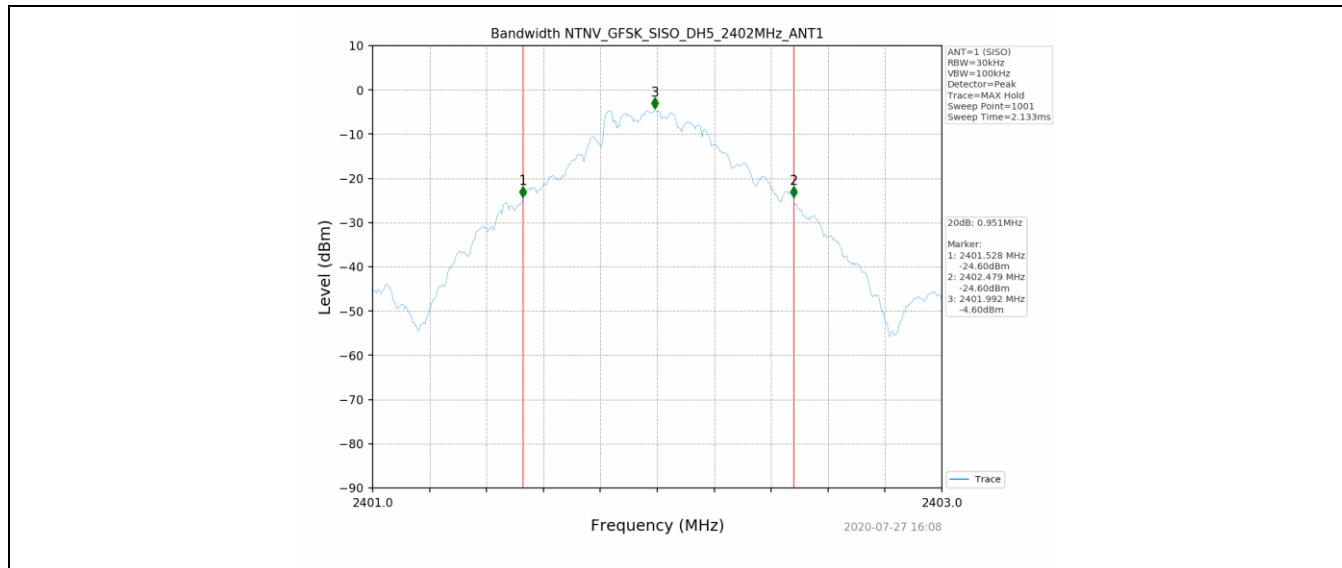
1. Bandwidth

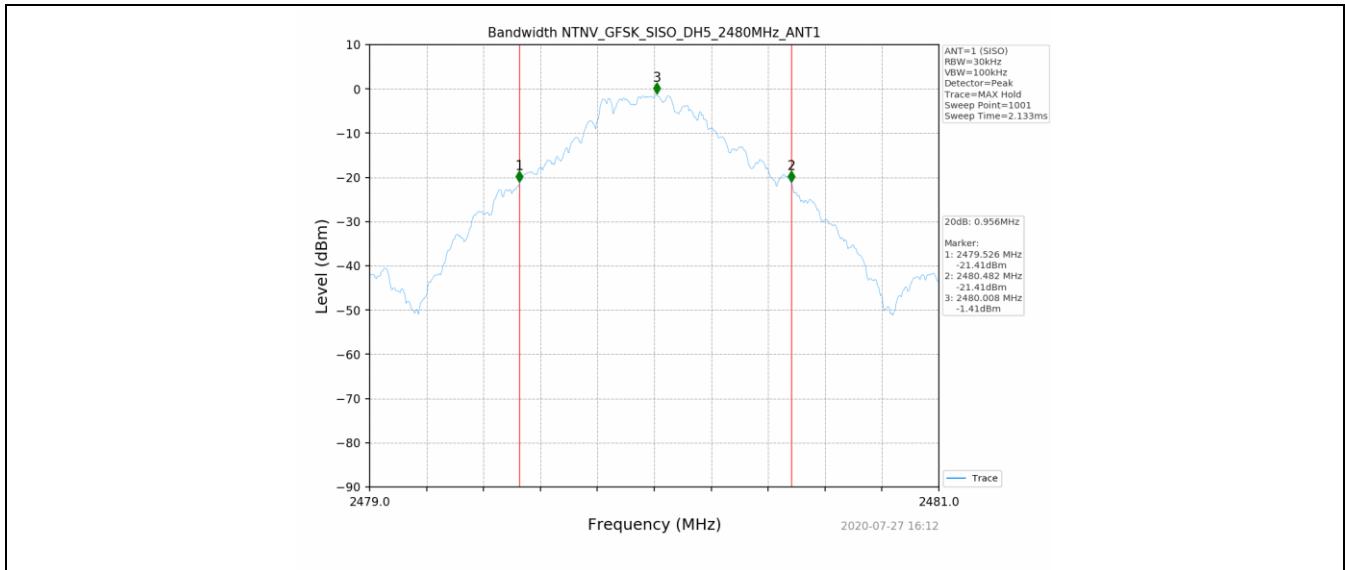
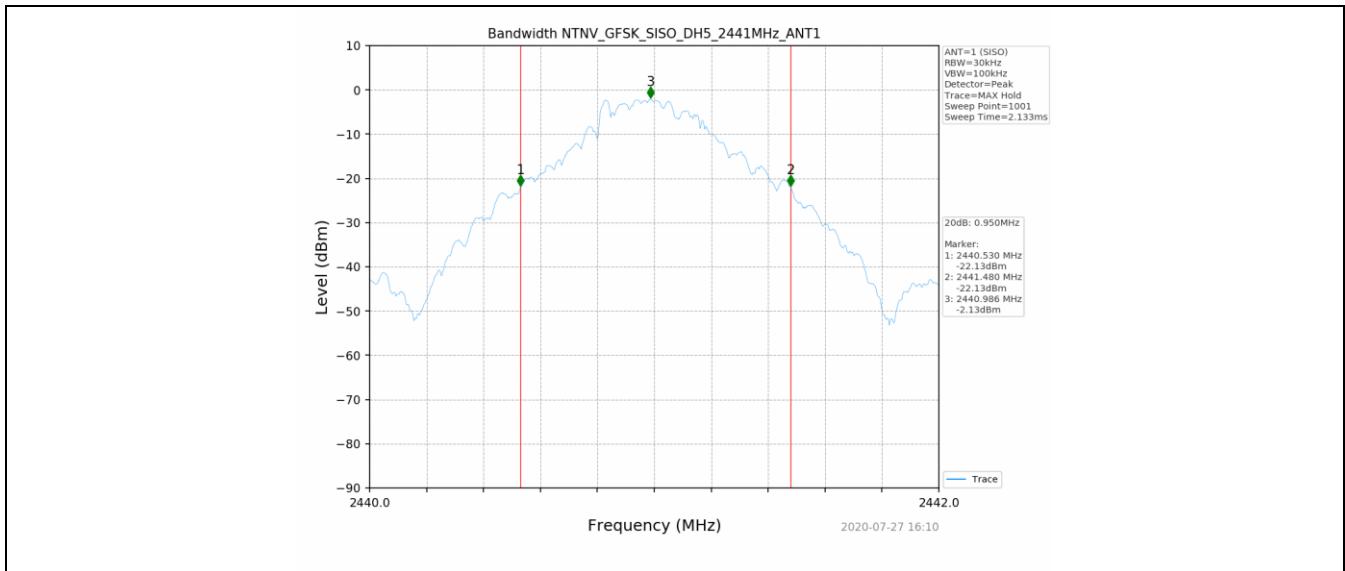
1.1 Test Result

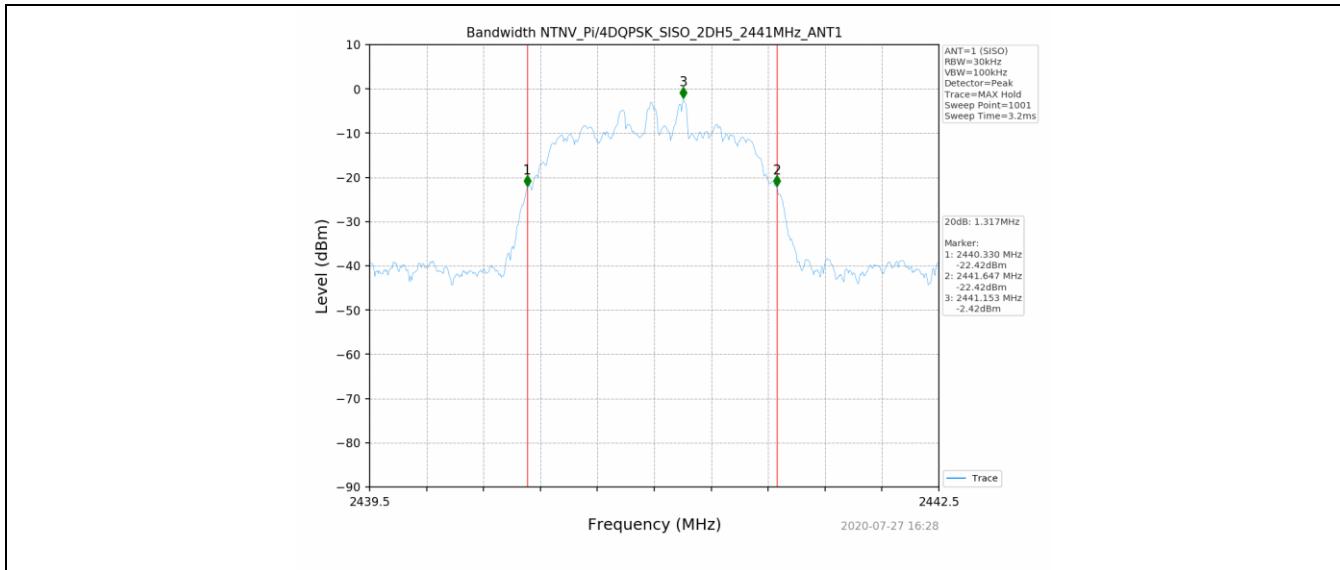
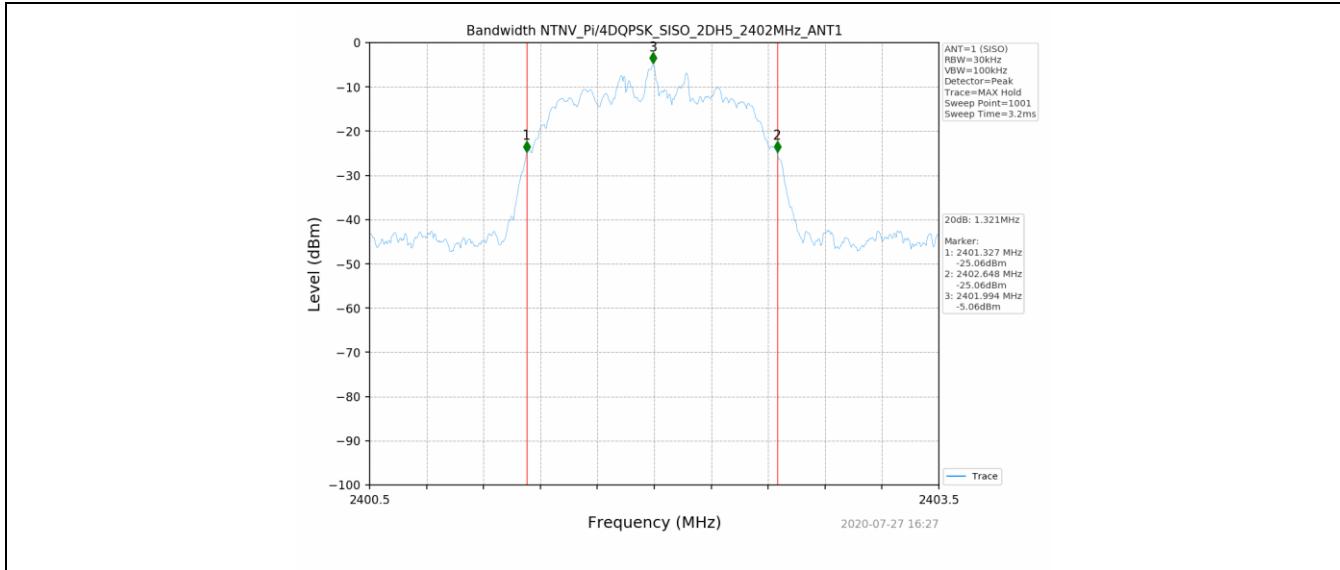
Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth	Verdict
				Test Result (MHz)	
GFSK	2402	SISO	1	0.951	PASS
	2441	SISO	1	0.950	PASS
	2480	SISO	1	0.956	PASS
Pi/4DQPSK	2402	SISO	1	1.321	PASS
	2441	SISO	1	1.317	PASS
	2480	SISO	1	1.320	PASS
8DPSK	2402	SISO	1	1.290	PASS
	2441	SISO	1	1.327	PASS
	2480	SISO	1	1.317	PASS

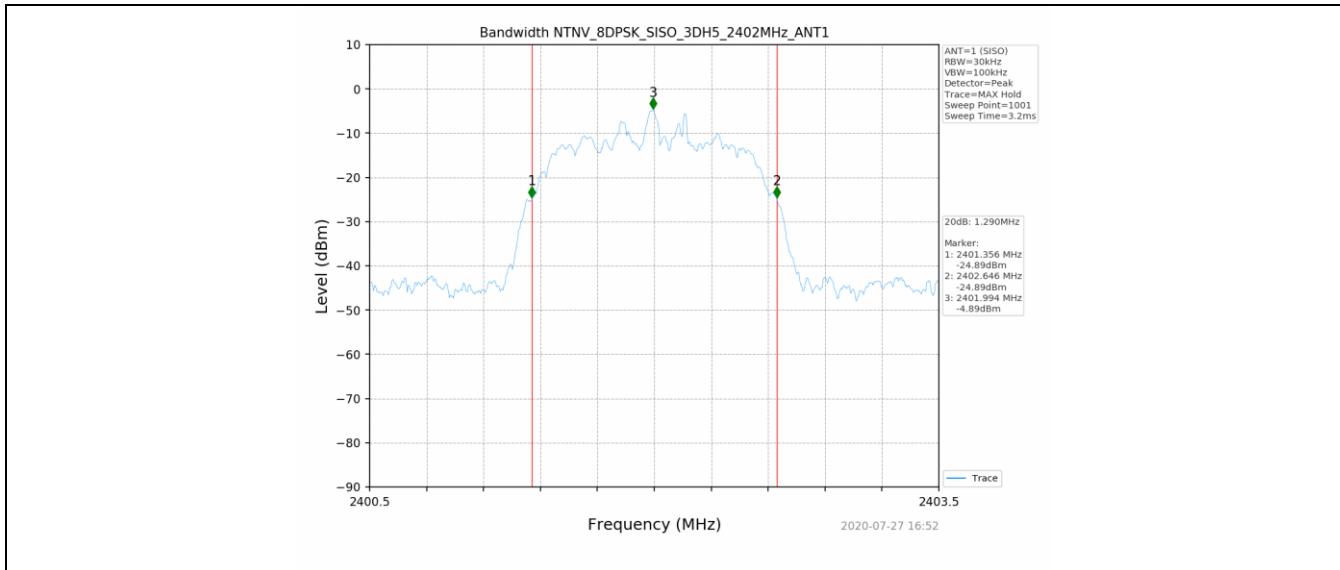
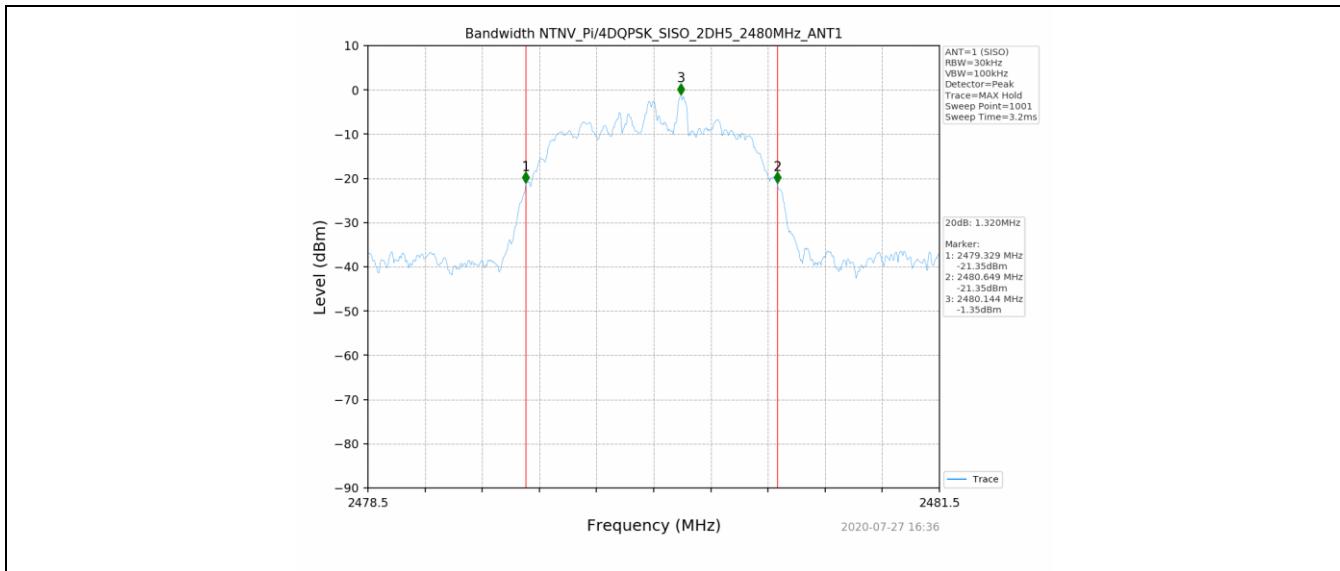
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	Test Result (MHz)
				Test Result (MHz)	
GFSK	2402	SISO	1	0.841	Only for Report Use
	2441	SISO	1	0.846	Only for Report Use
	2480	SISO	1	0.840	Only for Report Use
Pi/4DQPSK	2402	SISO	1	1.183	Only for Report Use
	2441	SISO	1	1.187	Only for Report Use
	2480	SISO	1	1.193	Only for Report Use
8DPSK	2402	SISO	1	1.190	Only for Report Use
	2441	SISO	1	1.197	Only for Report Use
	2480	SISO	1	1.196	Only for Report Use

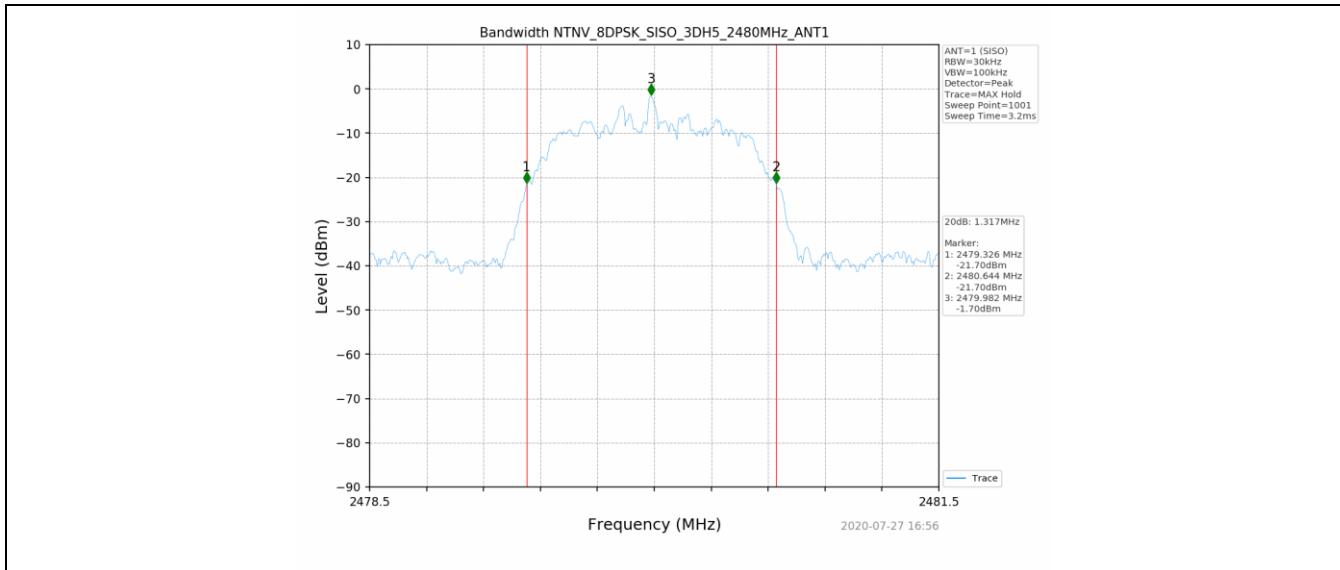
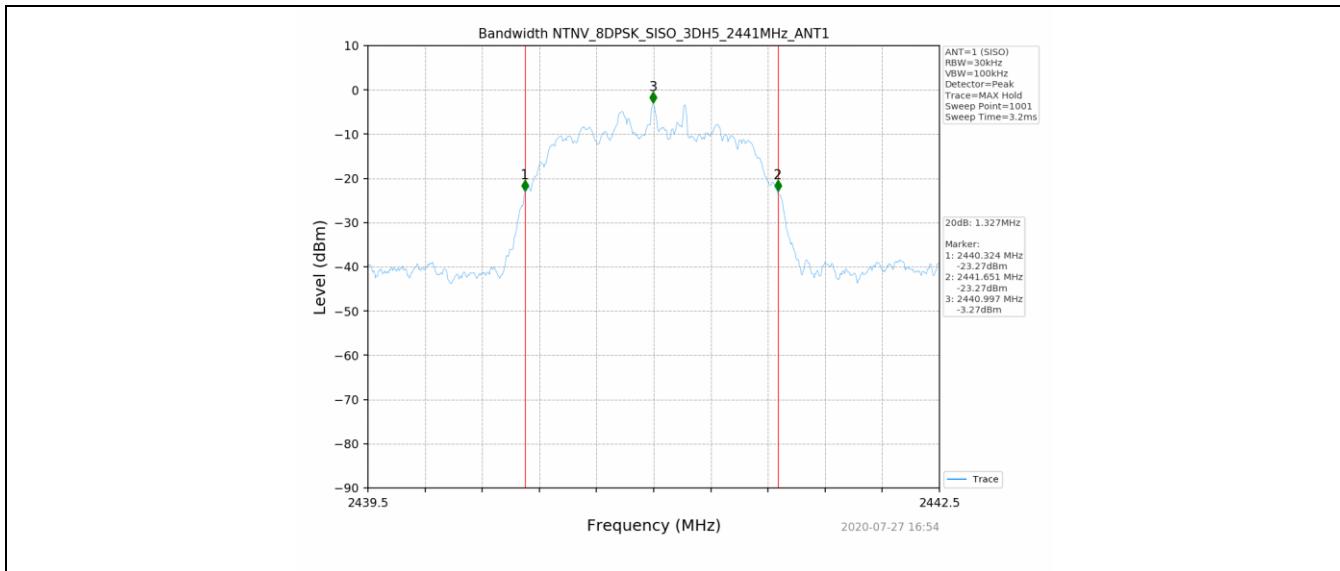
1.2 Test Graph - 20dB Bandwidth



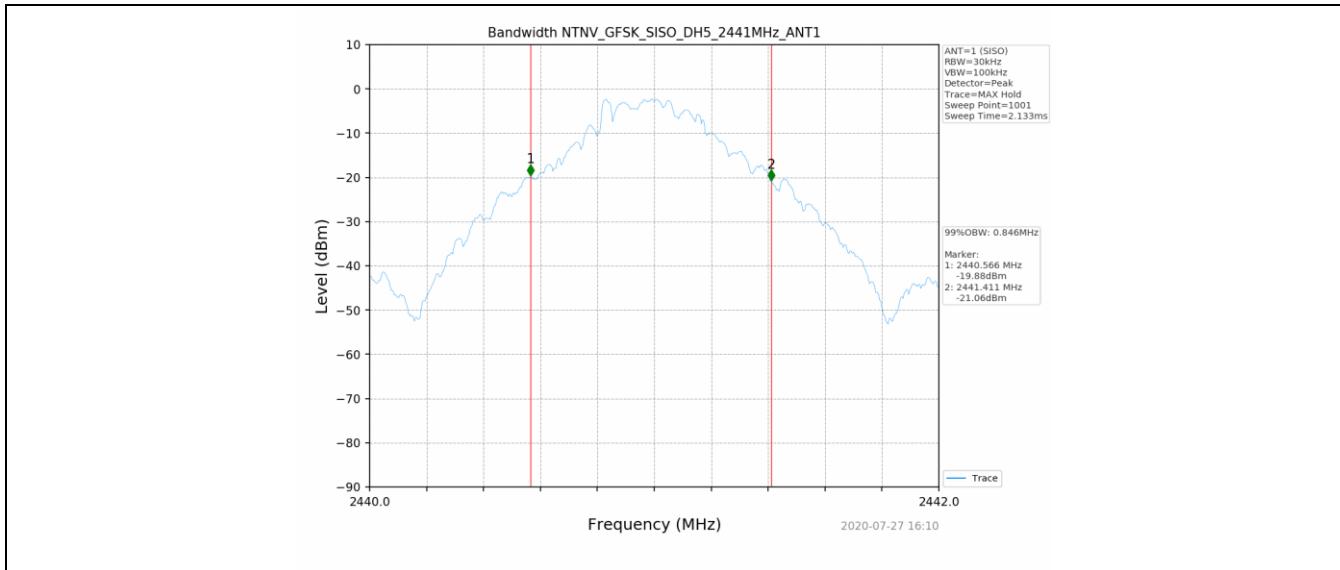
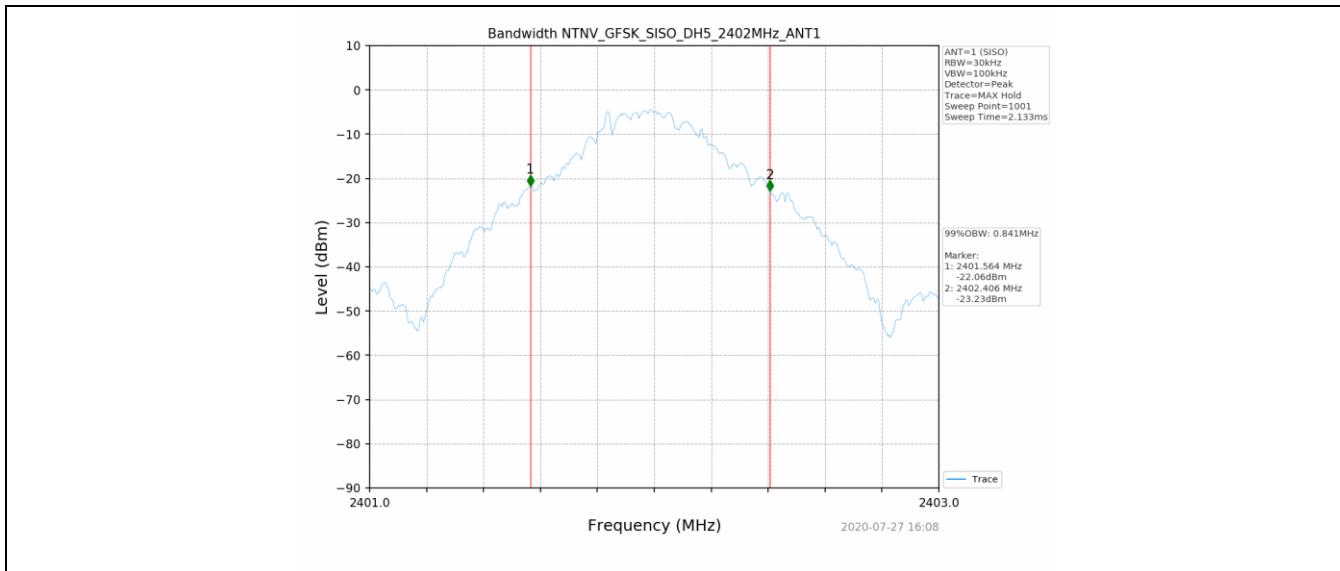


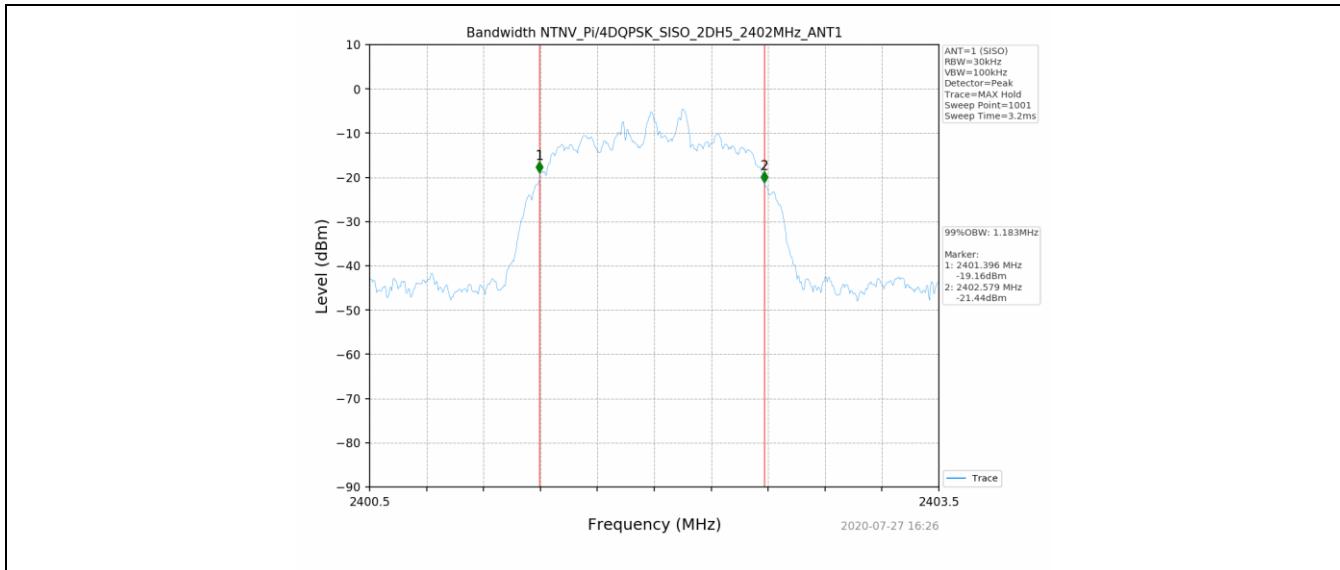
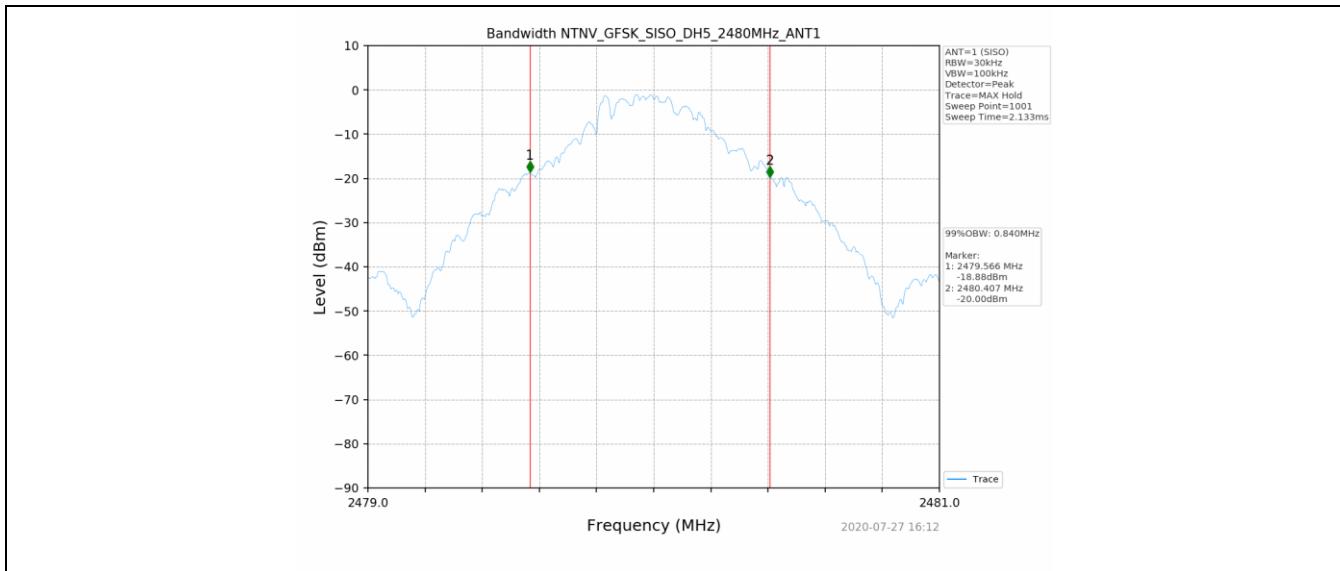


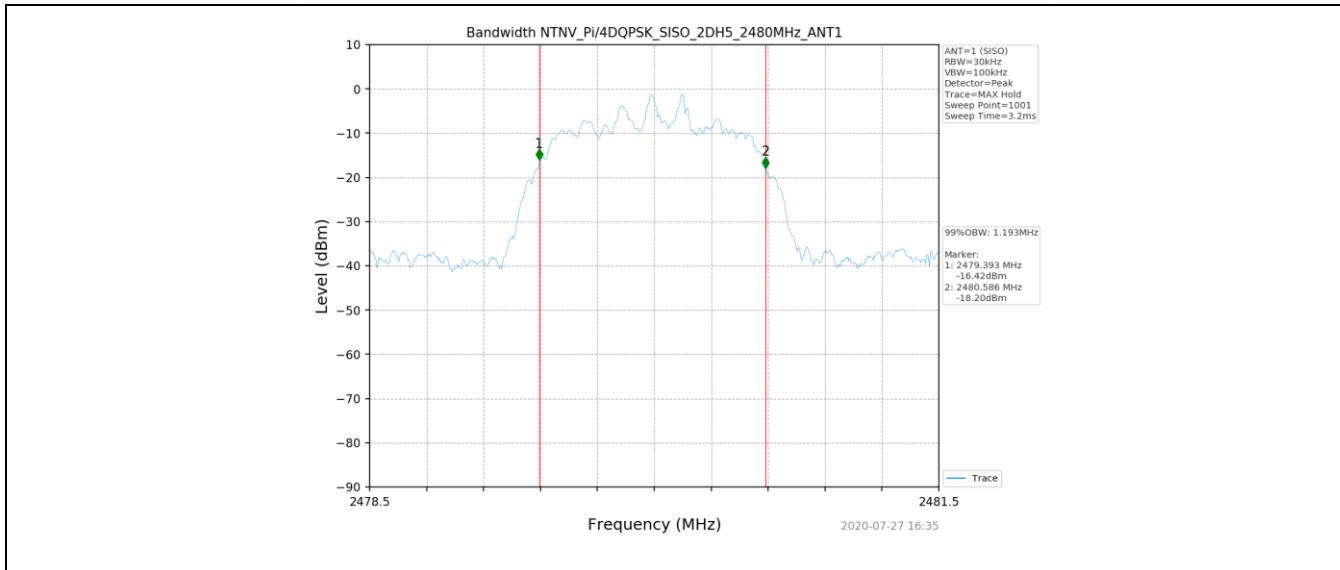
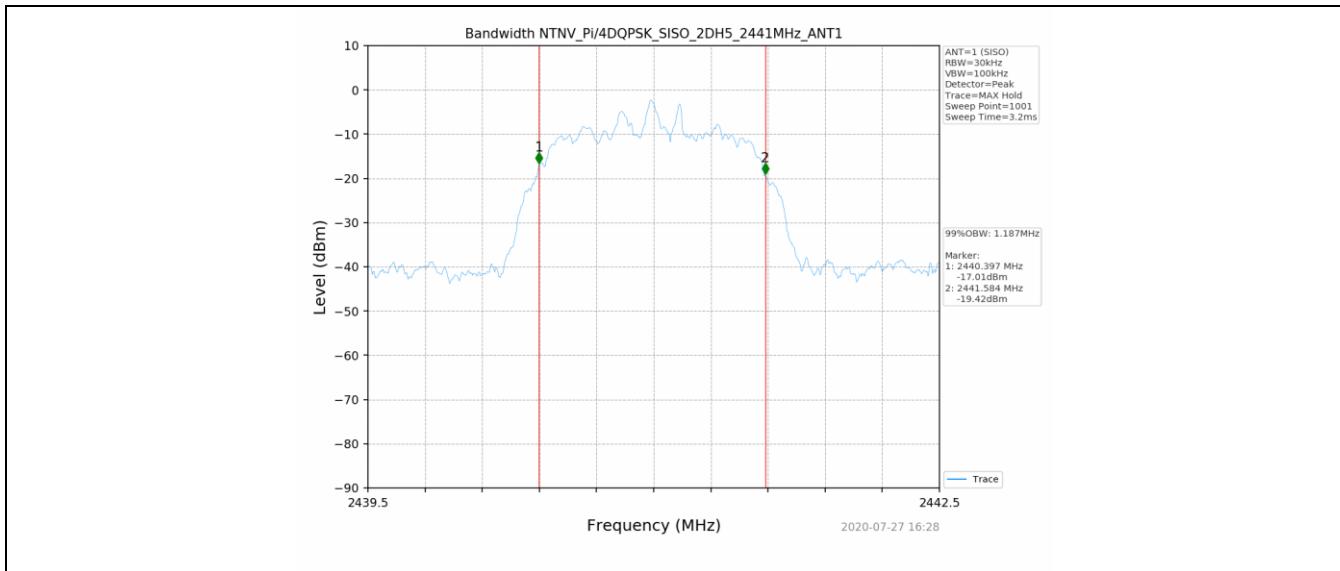


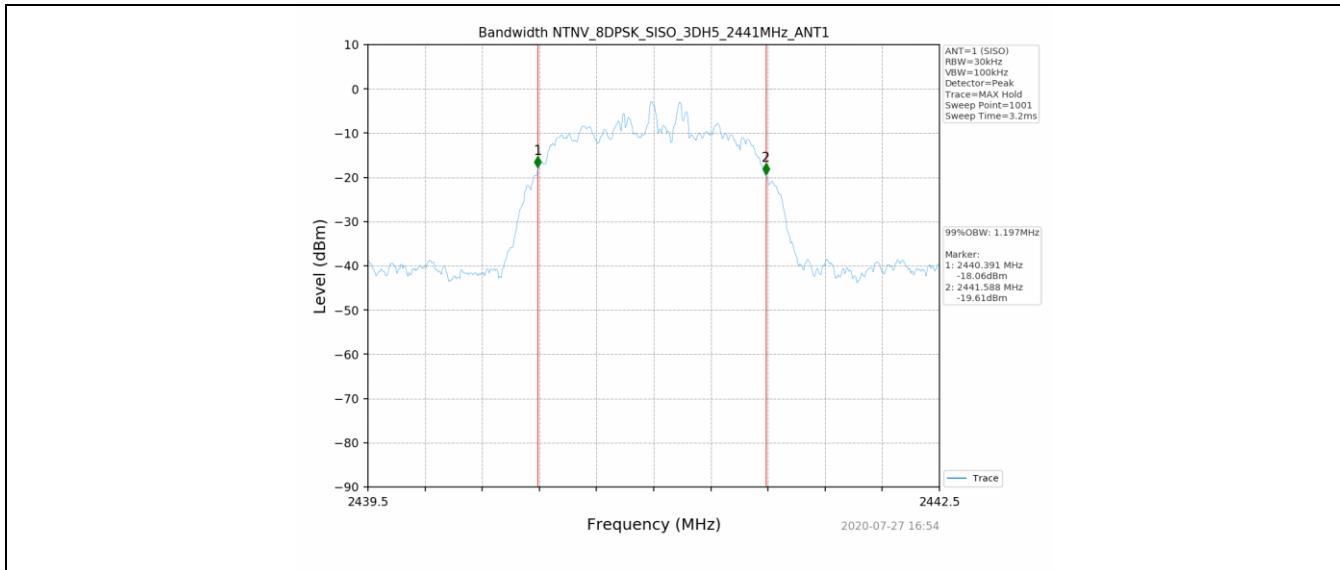
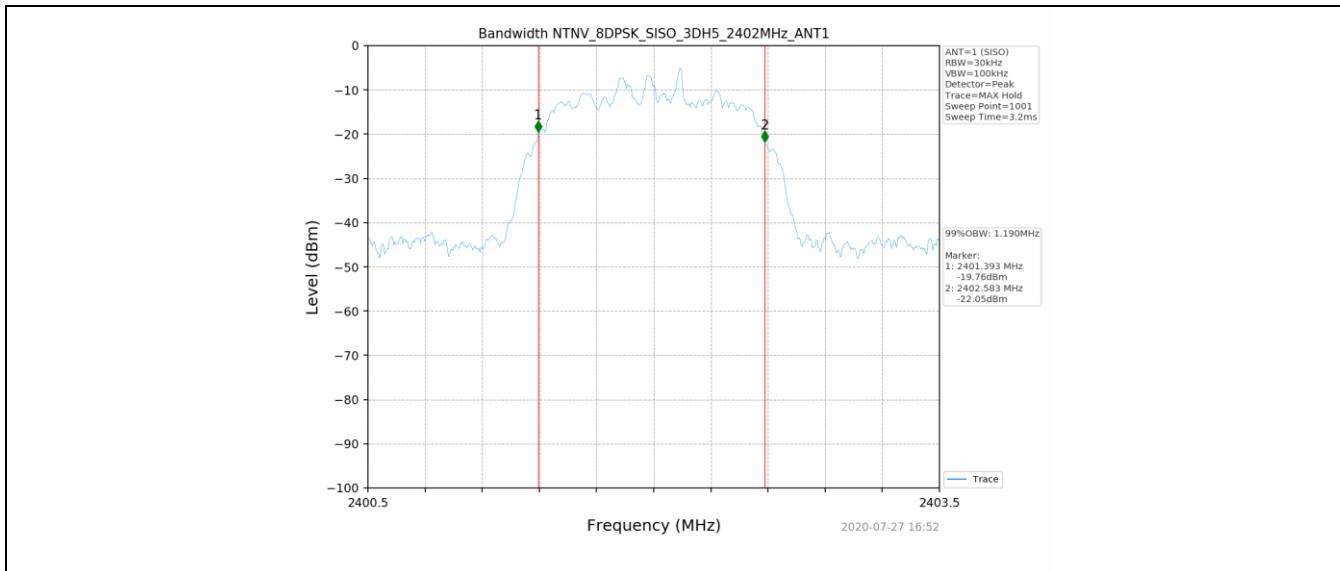


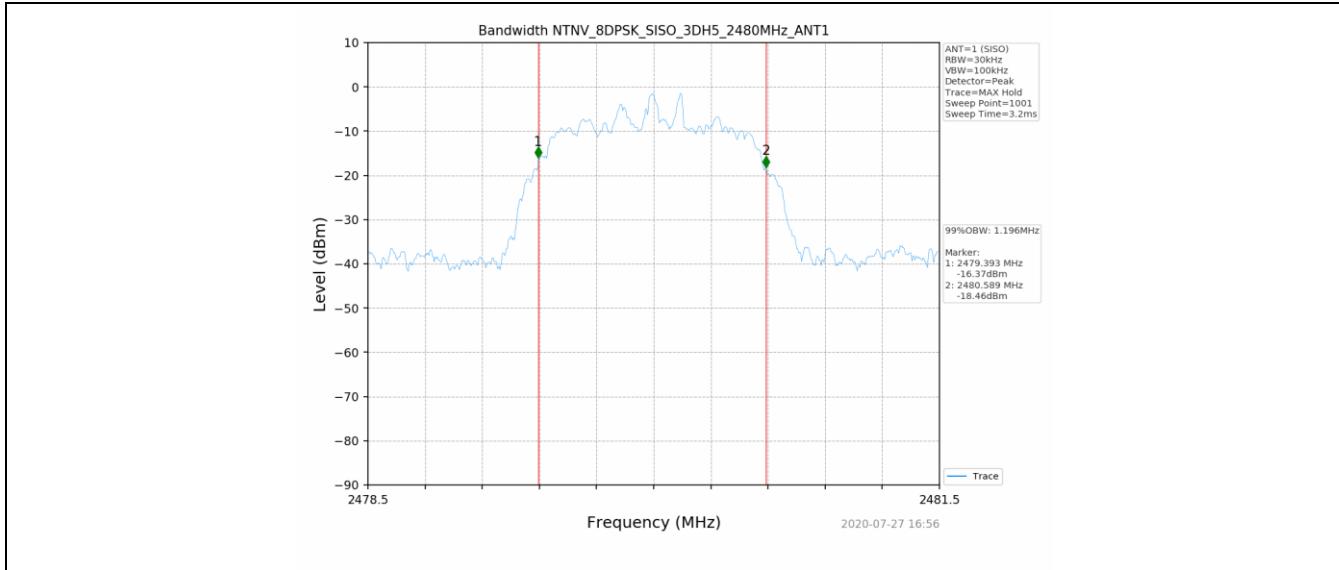
1.3 Test Graph - 99% Occupied Bandwidth









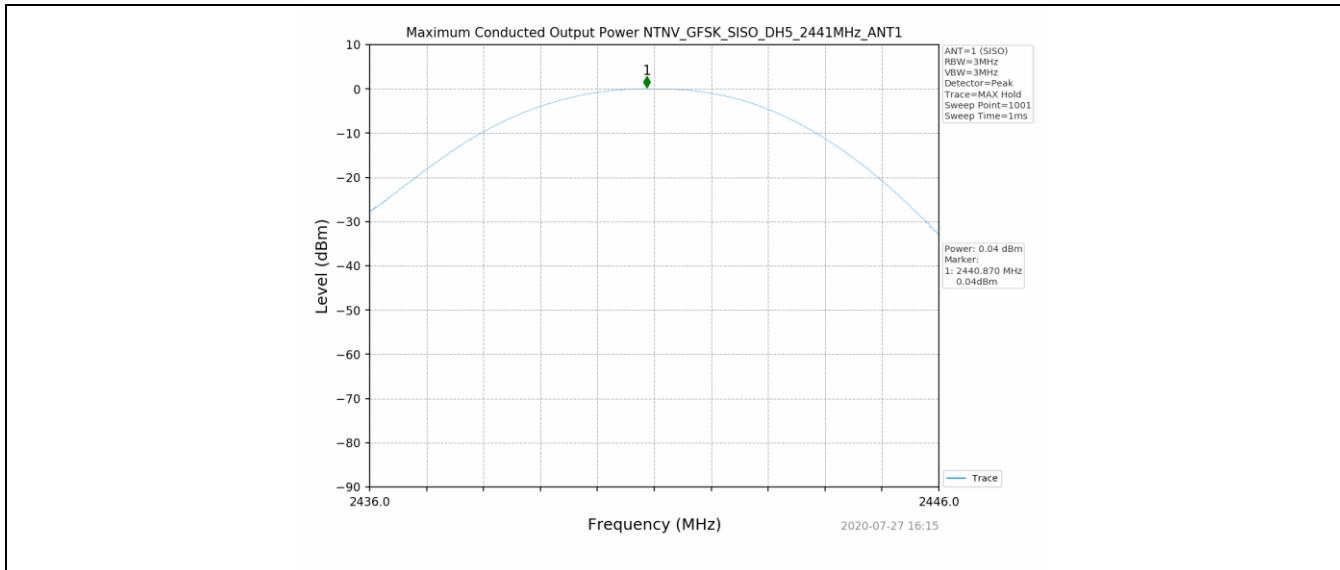
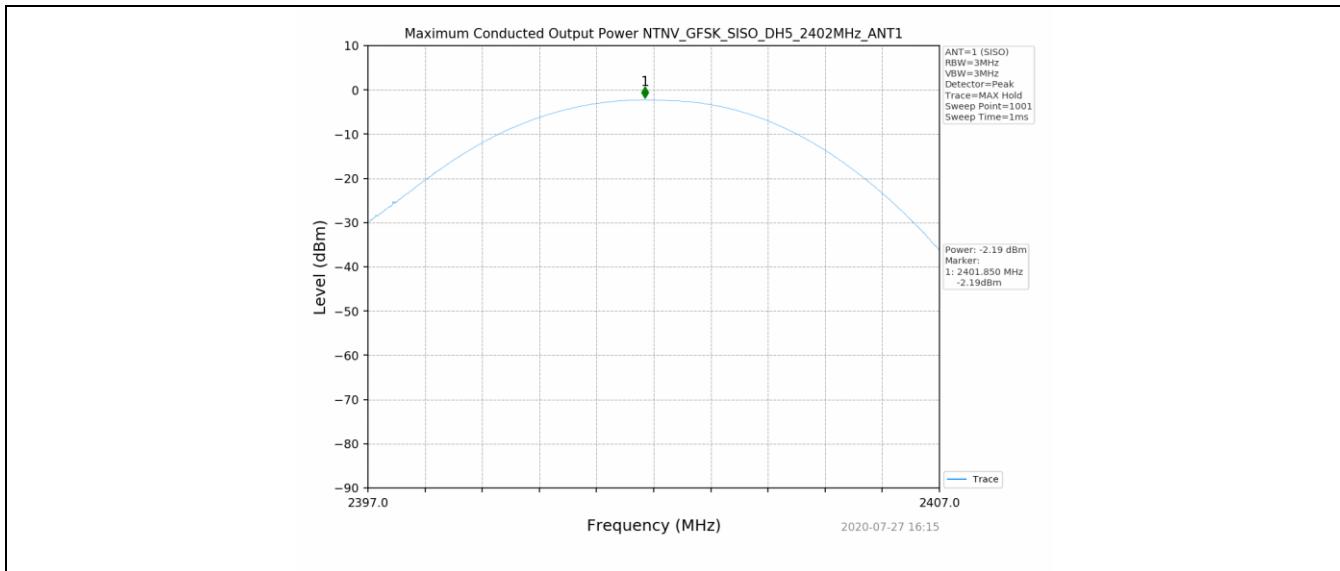


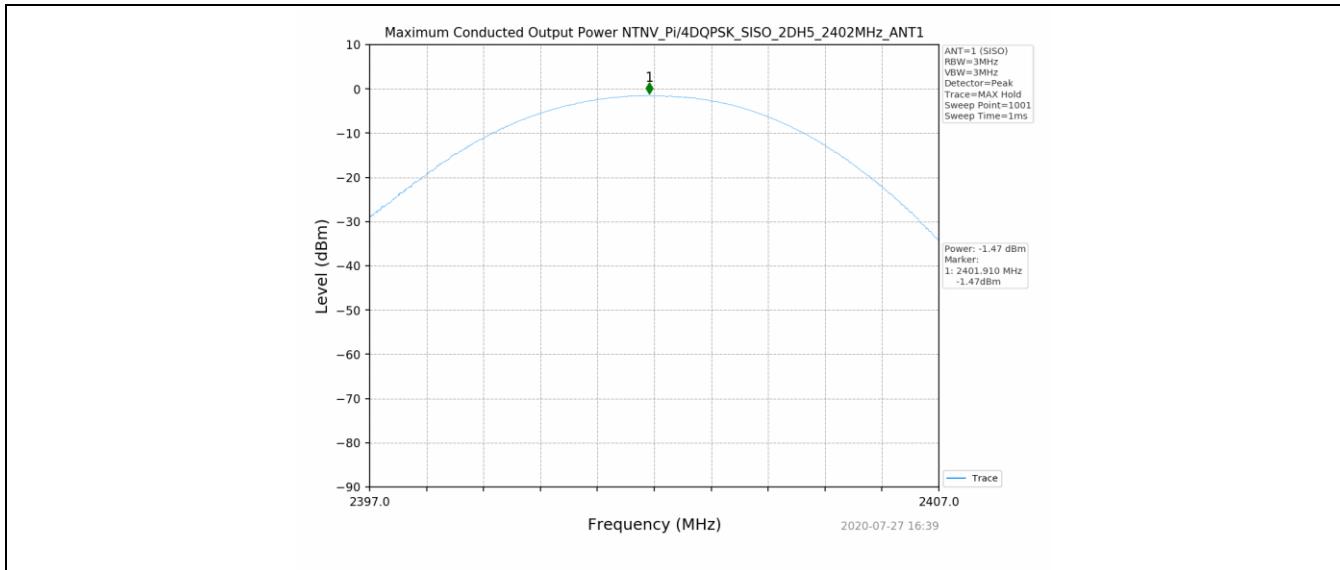
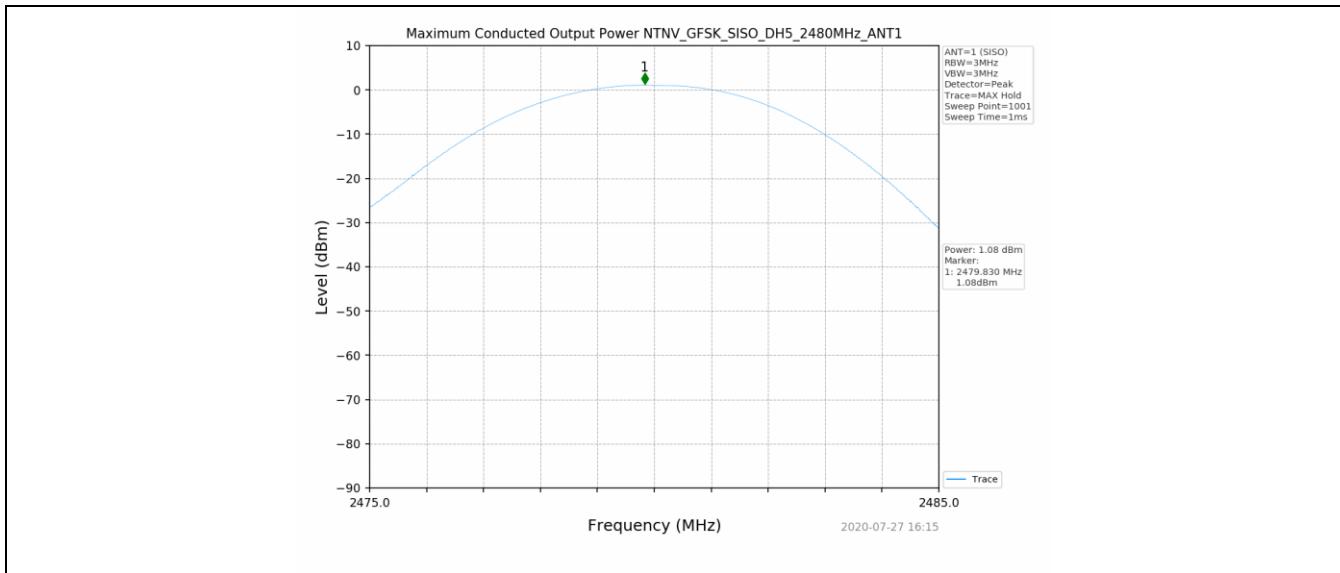
2. Maximum Conducted Output Power

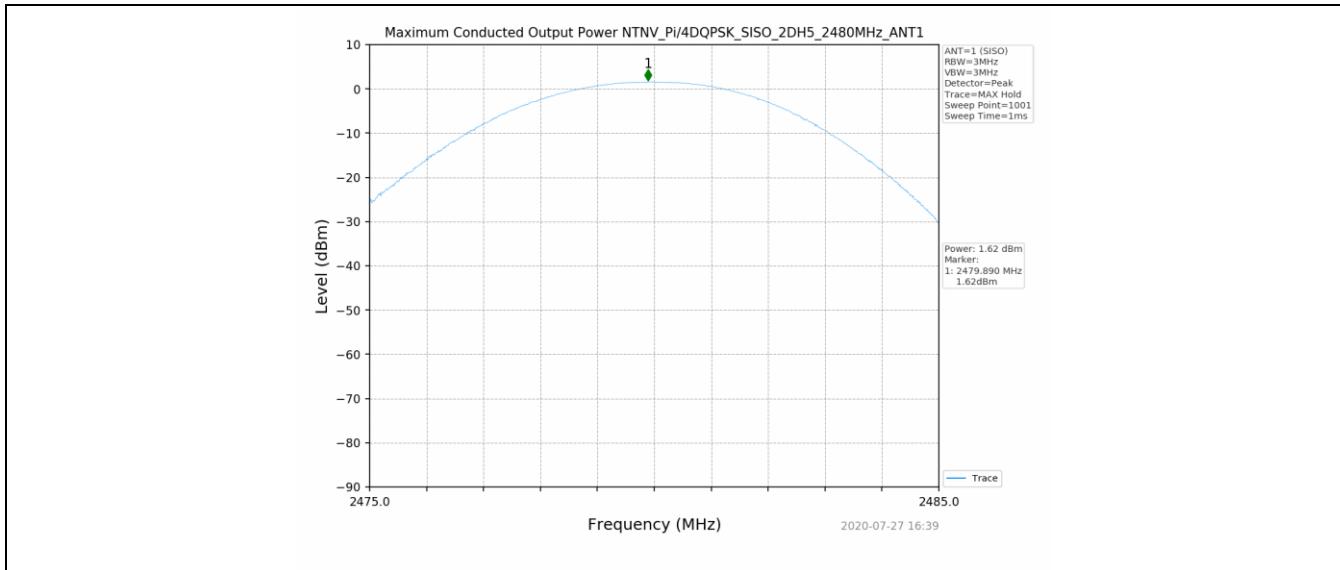
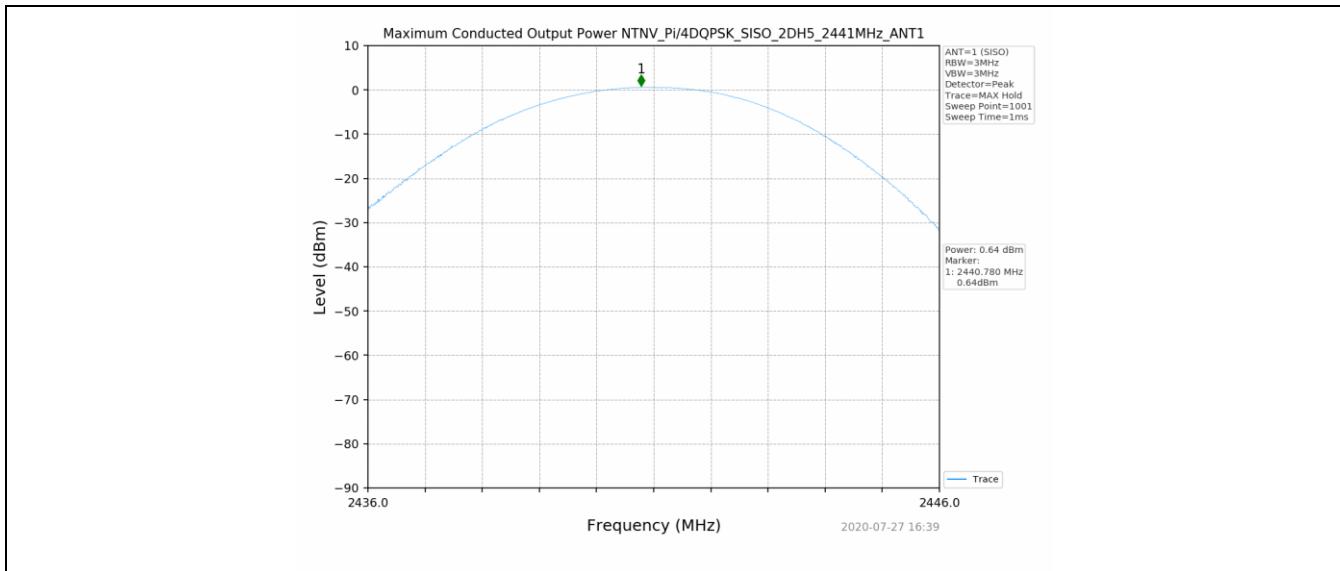
2.1 Test Result

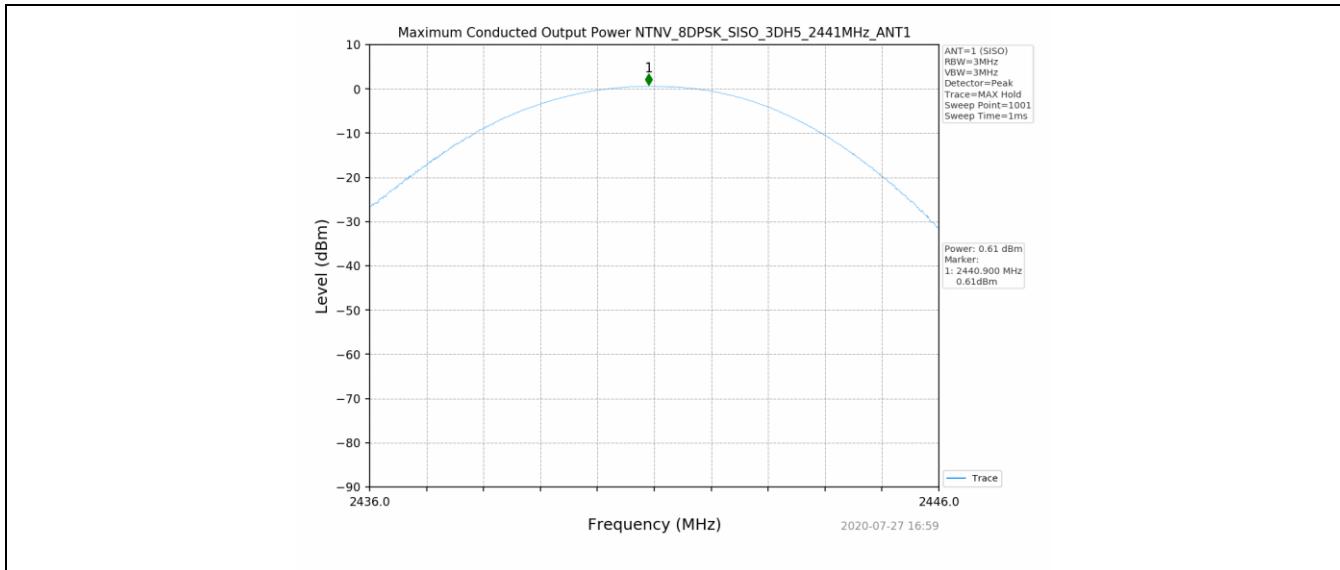
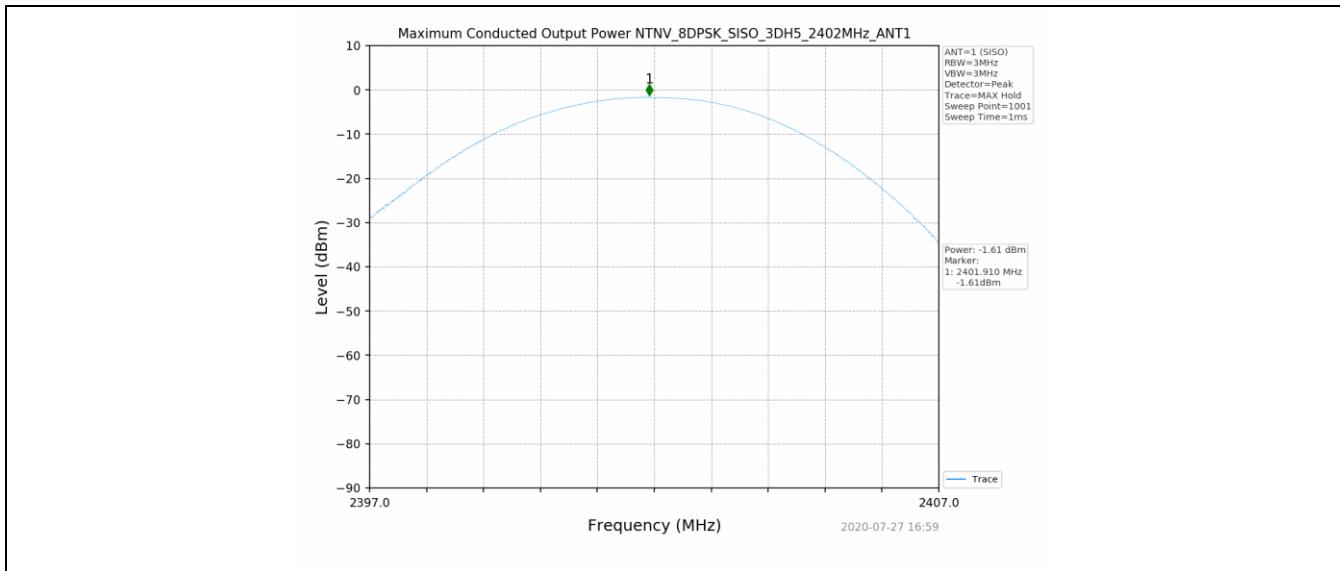
Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
GFSK	2402	SISO	-2.19	30	PASS
	2441	SISO	0.04	30	PASS
	2480	SISO	1.08	30	PASS
Pi/4DQPSK	2402	SISO	-1.47	30	PASS
	2441	SISO	0.64	30	PASS
	2480	SISO	1.62	30	PASS
8DPSK	2402	SISO	-1.61	20.97	PASS
	2441	SISO	0.61	20.97	PASS
	2480	SISO	1.57	20.97	PASS

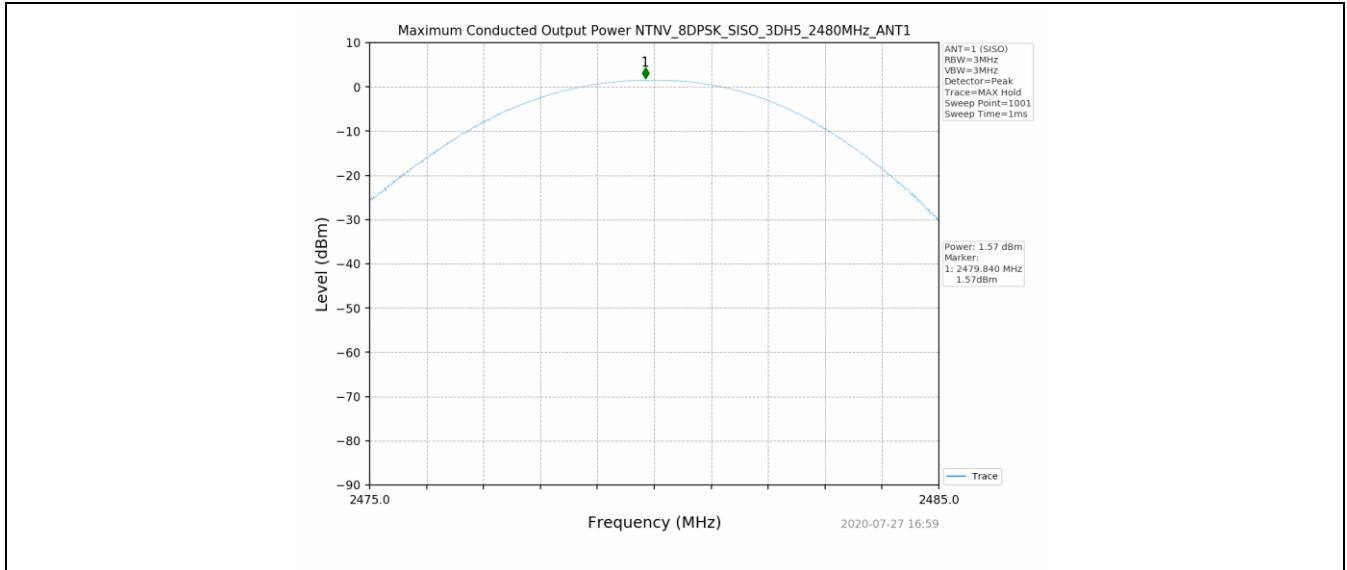
2.2 Test Graph









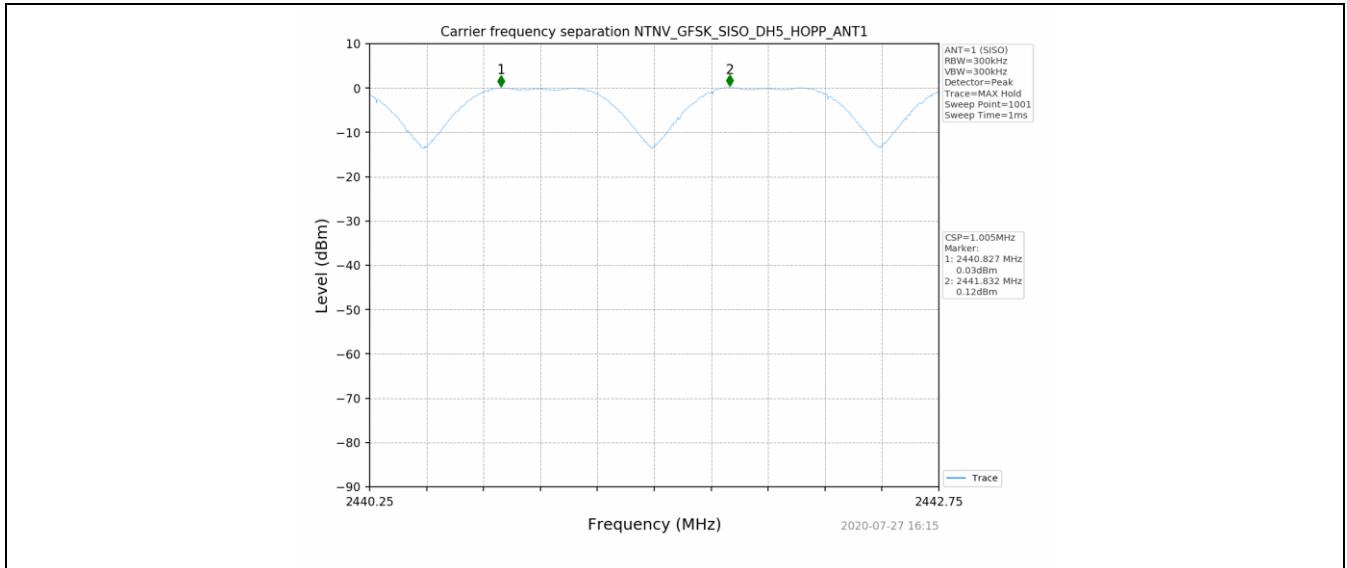


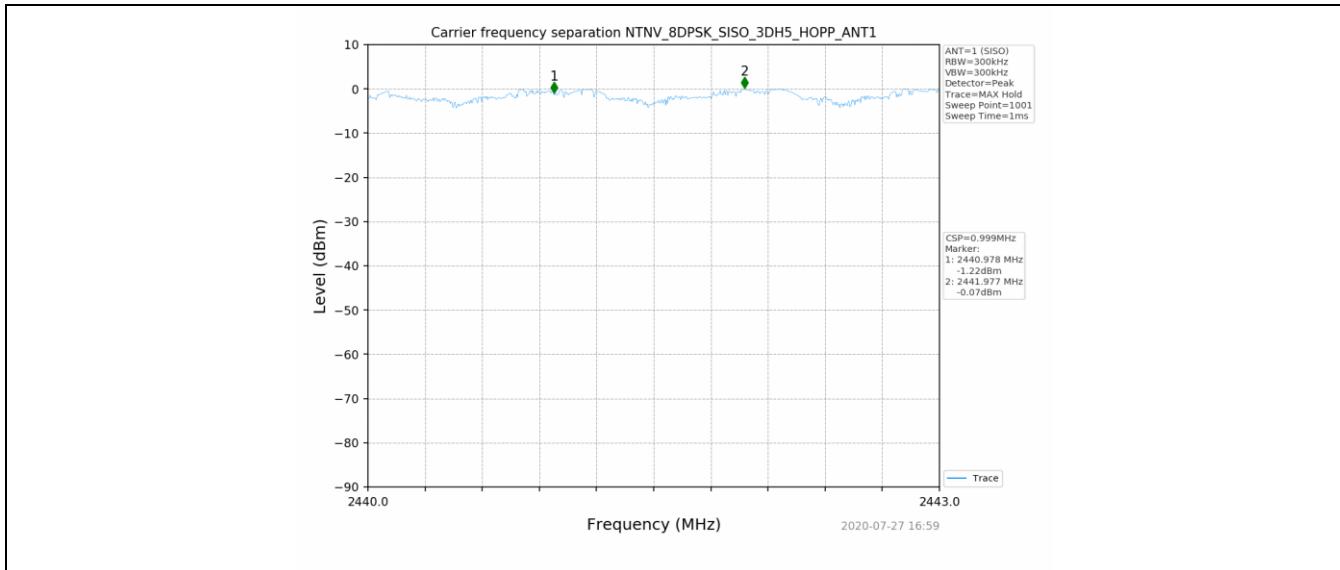
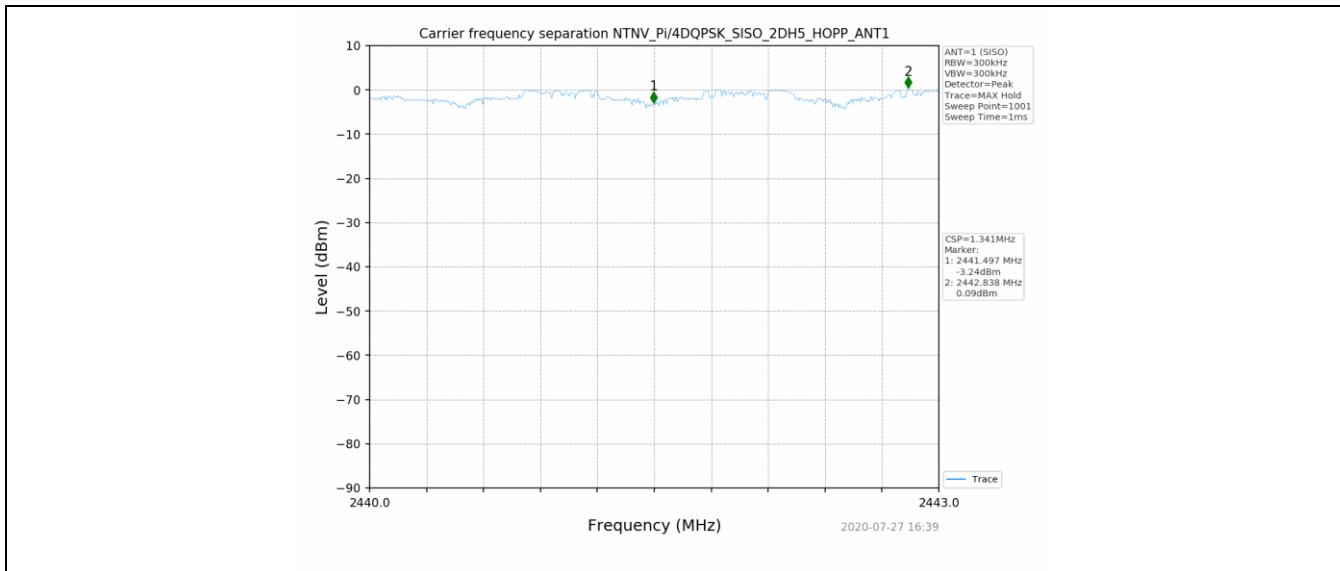
3. Carrier frequency separation

3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	1.005	0.956	≥0.670	PASS
Pi/4DQPSK	SISO	1	1.341	1.321	≥0.881	PASS
8DPSK	SISO	1	0.999	1.327	≥0.885	PASS

3.2 Test Graph



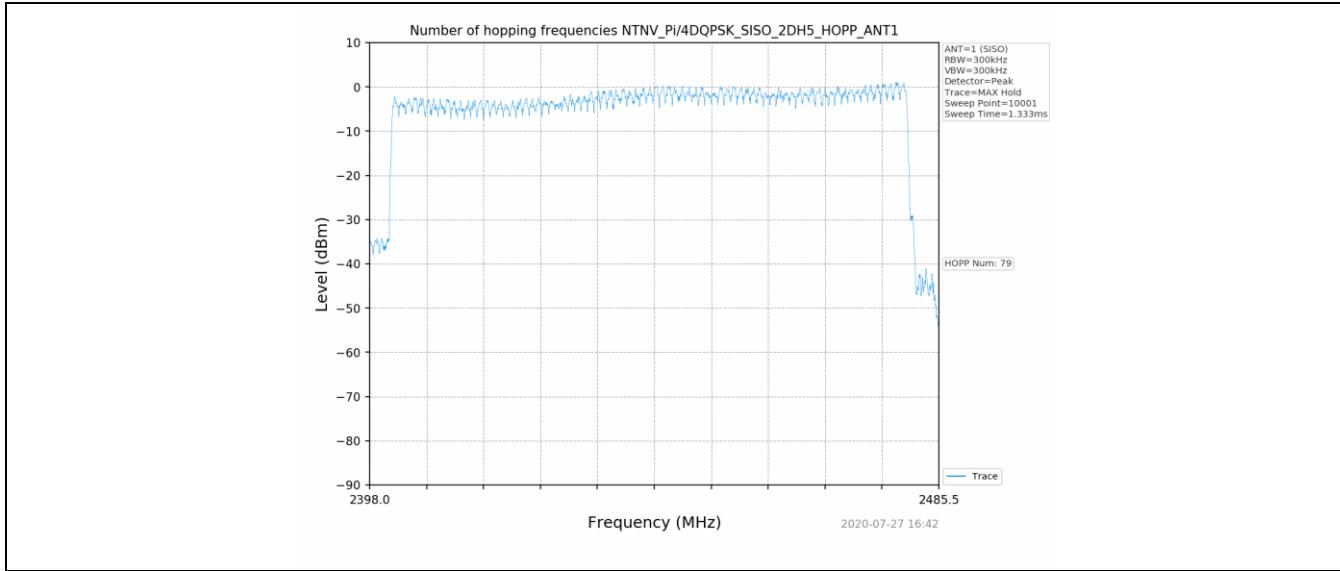
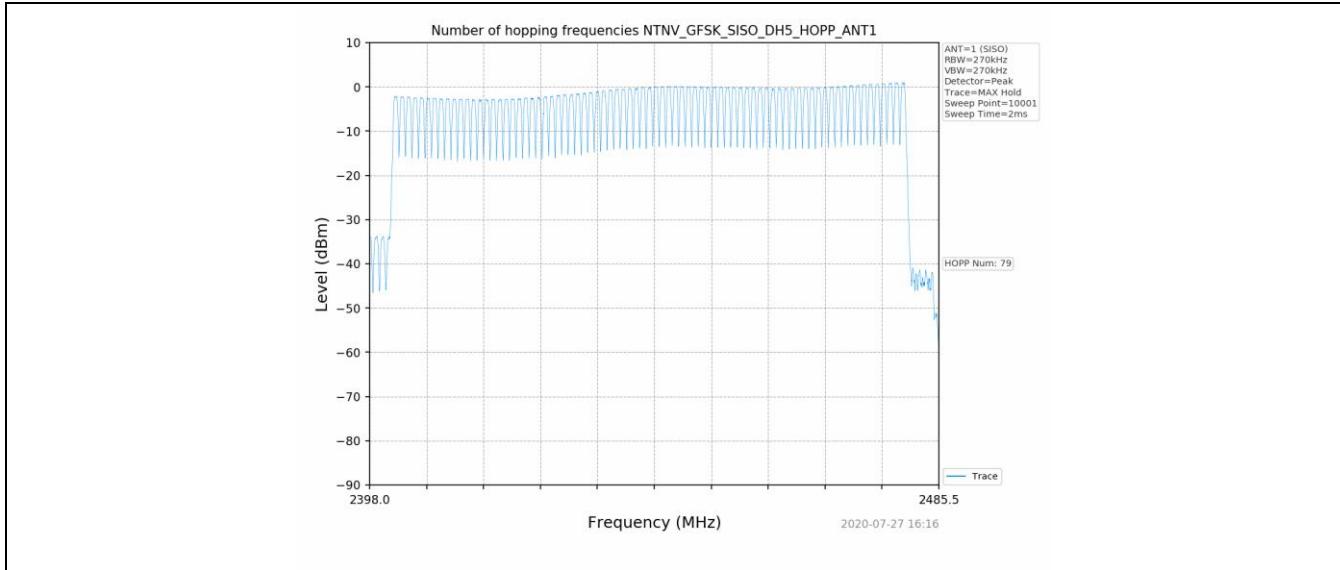


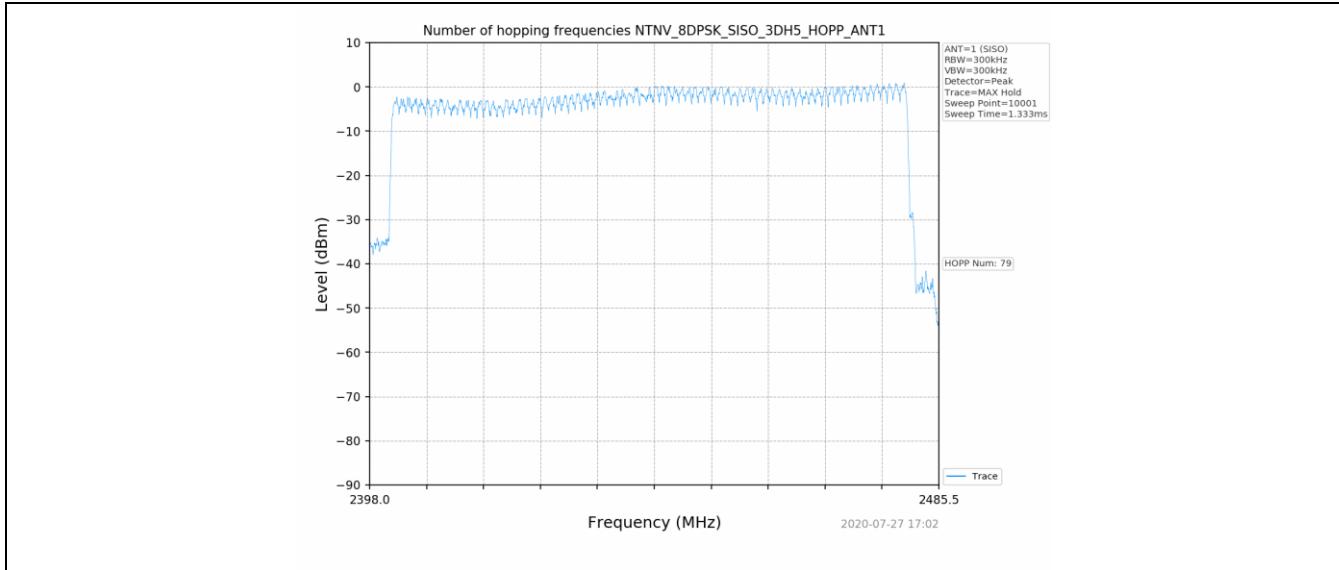
4. Number of hopping frequencies

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

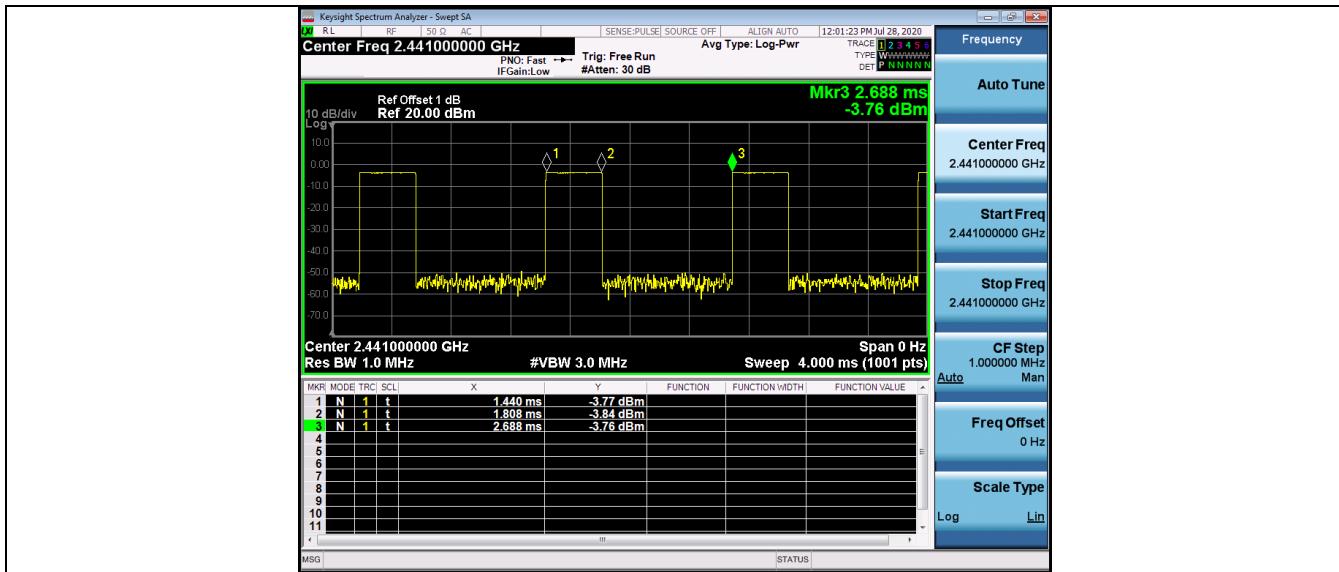
Modulation	Packet	Pulse time (ms)	Dwell time (s)	Limit (s)	Result
GFSK	DH1	0.368	0.117	0.40	Pass
	DH3	1.624	0.259		
	DH5	2.874	0.306		
$\pi/4$ DQPSK	2-DH1	0.380	0.122	0.40	Pass
	2-DH3	1.624	0.261		
	2-DH5	2.864	0.307		
8DPSK	3-DH1	0.376	0.123	0.40	Pass
	3-DH3	1.608	0.262		
	3-DH5	2.864	0.308		

Note:

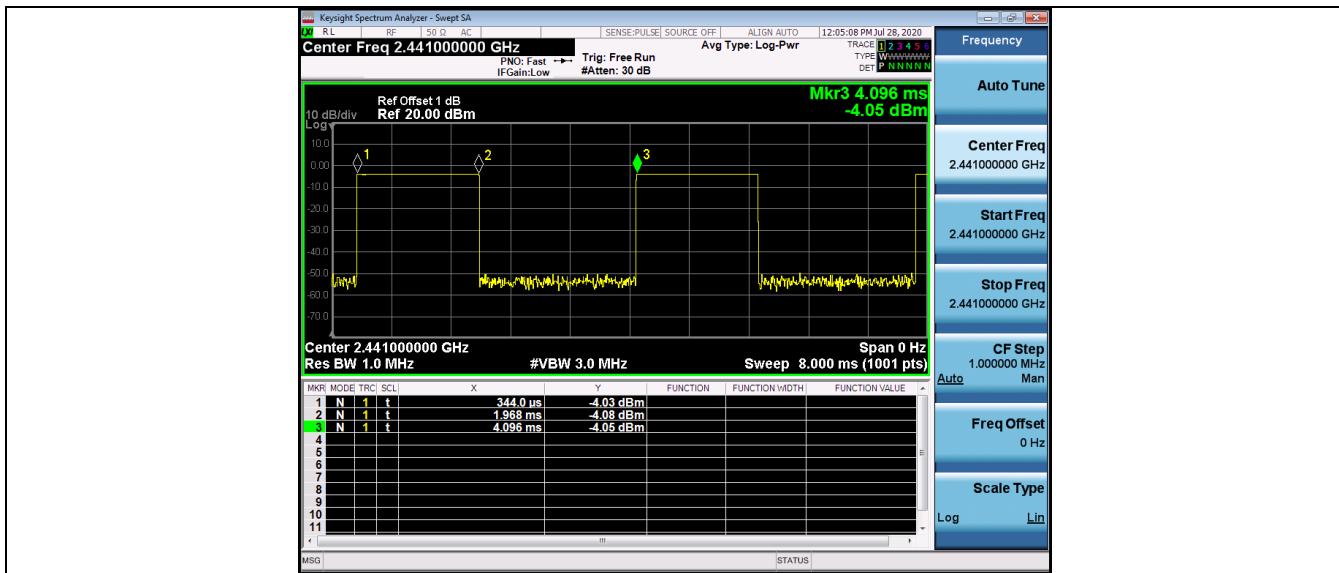
1. We have tested all mode at high, middle and low channel, and recorded worst case at middle channel.
2. Dwell time = Pulse time (ms) $\times (1600 \div 2 \div 79) \times 31.6$ Second for DH1, 2-DH1, 3-DH1
Dwell time = Pulse time (ms) $\times (1600 \div 4 \div 79) \times 31.6$ Second for DH3, 2-DH3, 3-DH3
Dwell time = Pulse time (ms) $\times (1600 \div 6 \div 79) \times 31.6$ Second for DH5, 2-DH5, 3-DH5

5.2 Test Graph

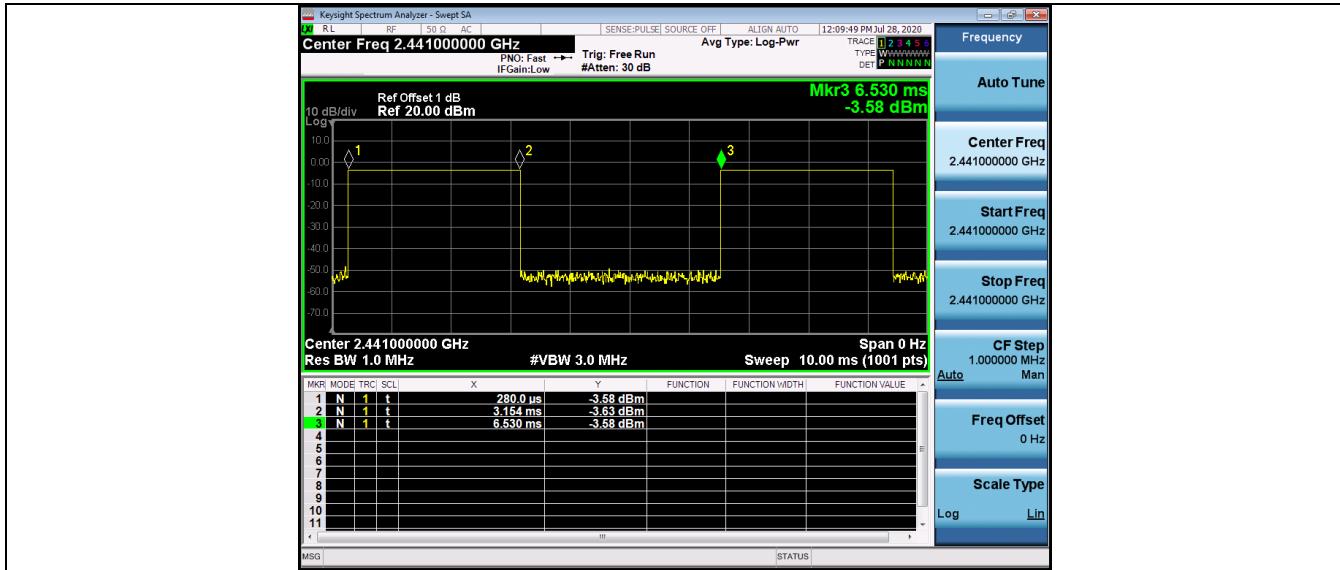
DH1



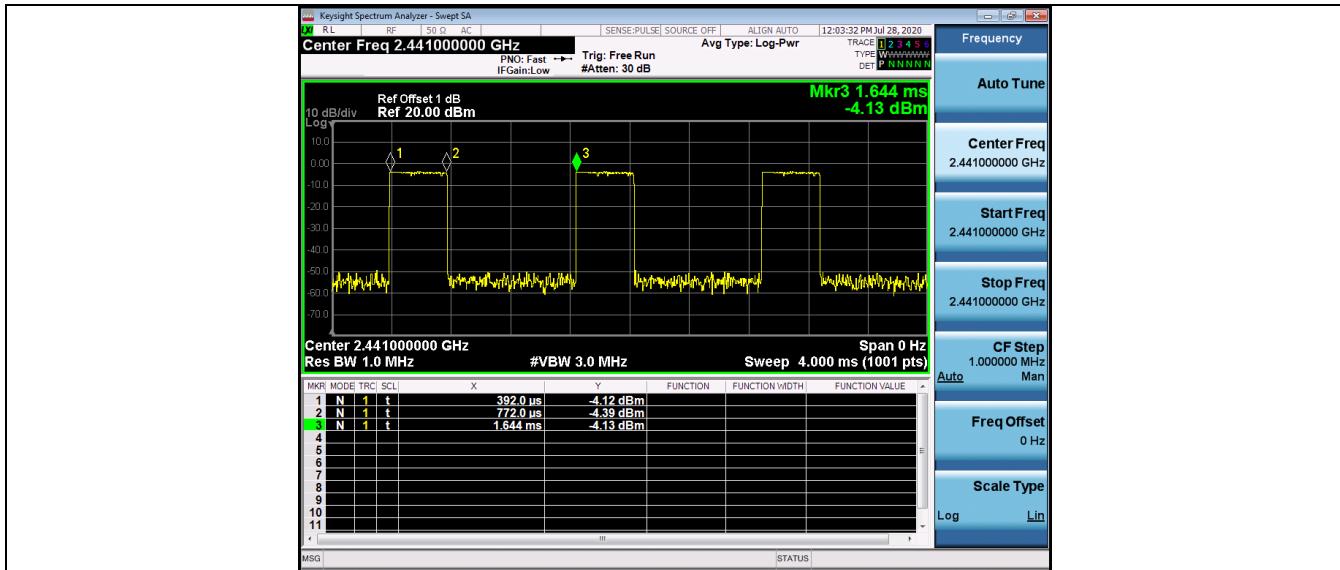
DH3



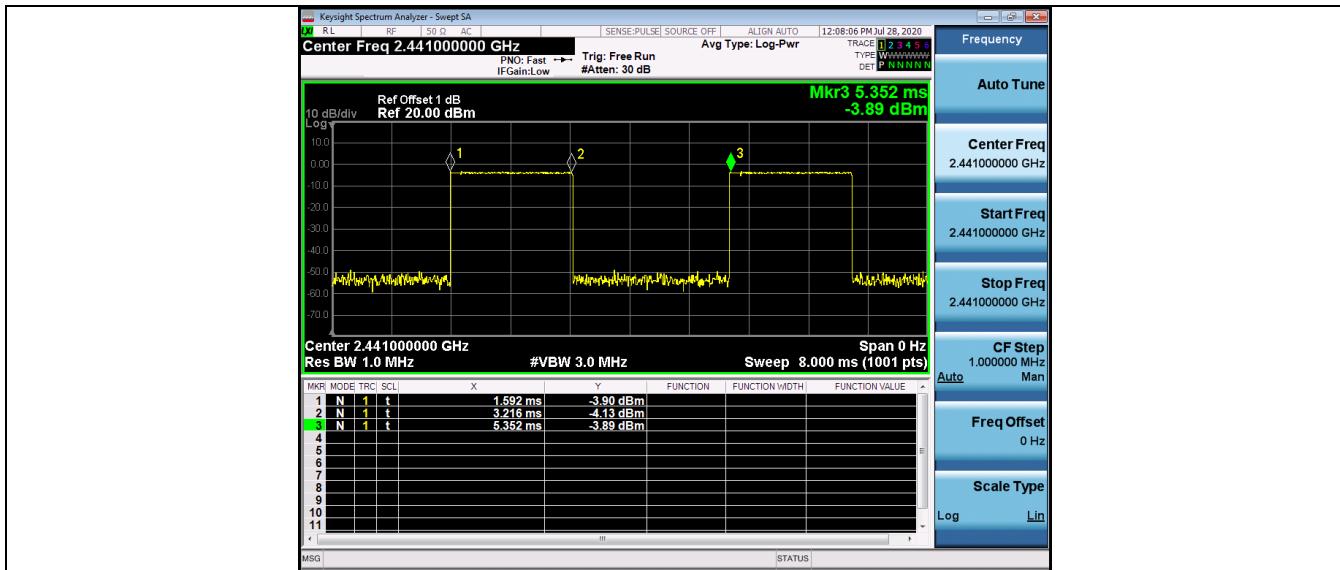
DH5



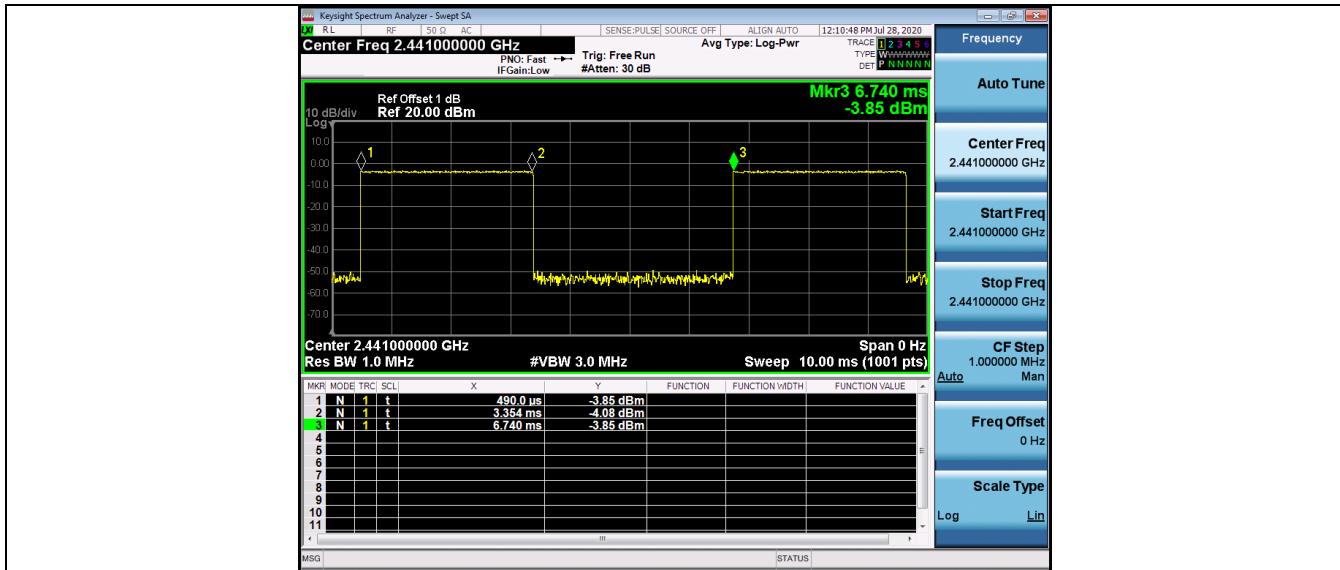
2DH1



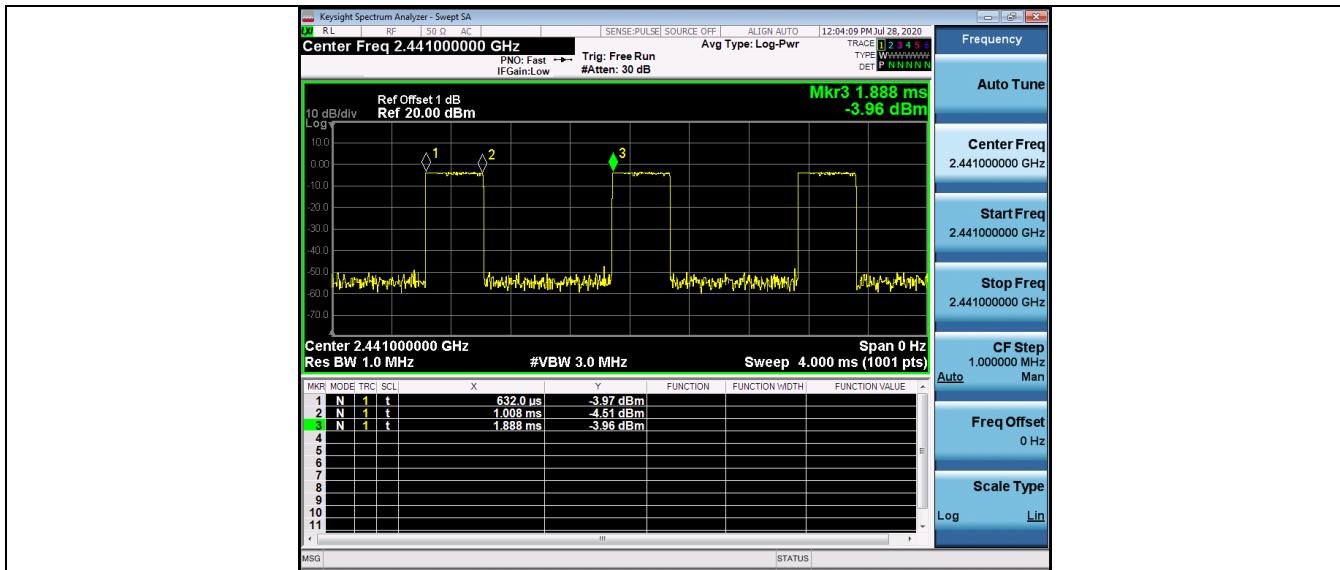
2DH3



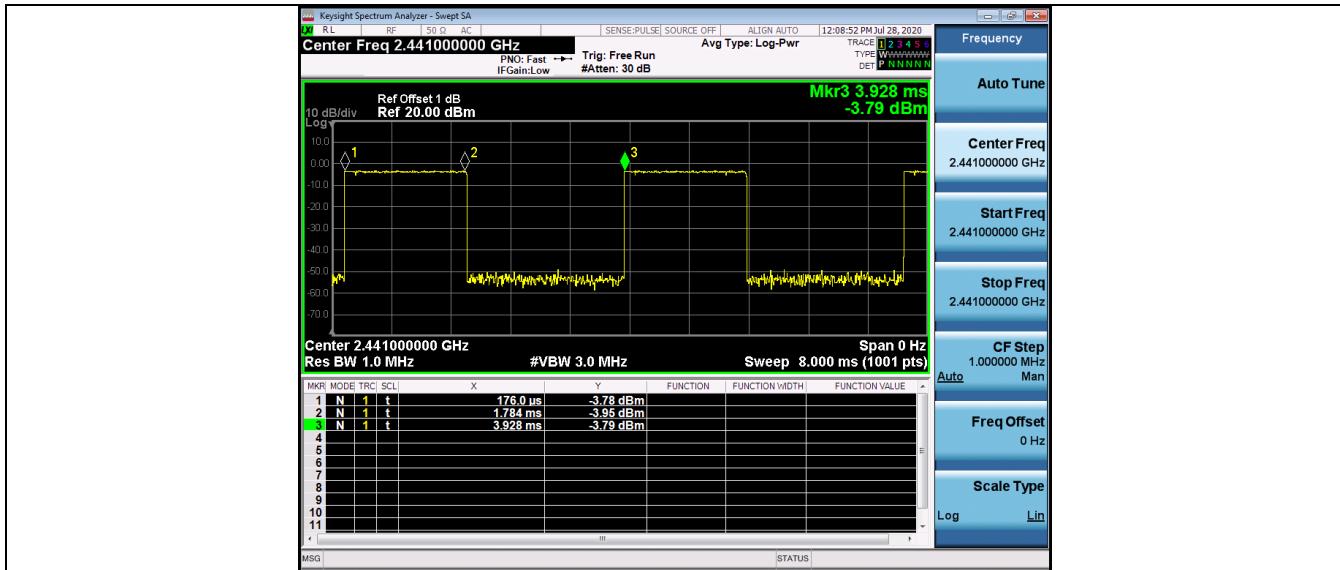
2DH5



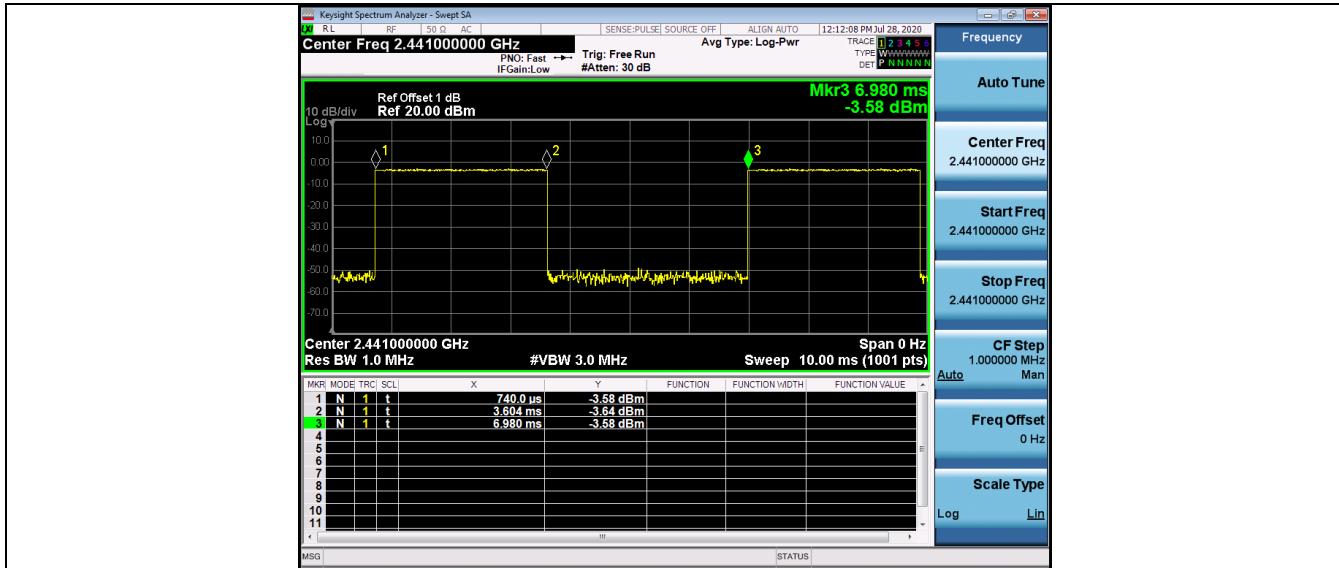
3DH1



3DH3



3DH5



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	-19.02	PASS
	2441	SISO	1	Refer to test graph	-19.02	PASS
	2480	SISO	1	Refer to test graph	-19.02	PASS
	Hopping	SISO	1	Refer to test graph	-19.02	PASS
Pi/4DQPSK	2402	SISO	1	Refer to test graph	-19.02	PASS
	2441	SISO	1	Refer to test graph	-19.02	PASS
	2480	SISO	1	Refer to test graph	-19.02	PASS
	Hopping	SISO	1	Refer to test graph	-19.02	PASS
8DPSK	2402	SISO	1	Refer to test graph	-19.07	PASS
	2441	SISO	1	Refer to test graph	-19.07	PASS
	2480	SISO	1	Refer to test graph	-19.07	PASS
	Hopping	SISO	1	Refer to test graph	-19.07	PASS

6.2 Test Graph

