



RF Test Report

For BTEK260702005A18E01

Project No.:	BTEK260702005A18E0101
Product Description:	22.3℃, 62%, 101.4kPa
Test Engineer:	Milo
Test Date:	2026-07-20



Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Carrier Frequency Separation	Pass
Number of Hopping Frequencies	Pass
Time of Occupancy (Dwell Time)	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass



1. Duty Cycle

1.1 Test Result

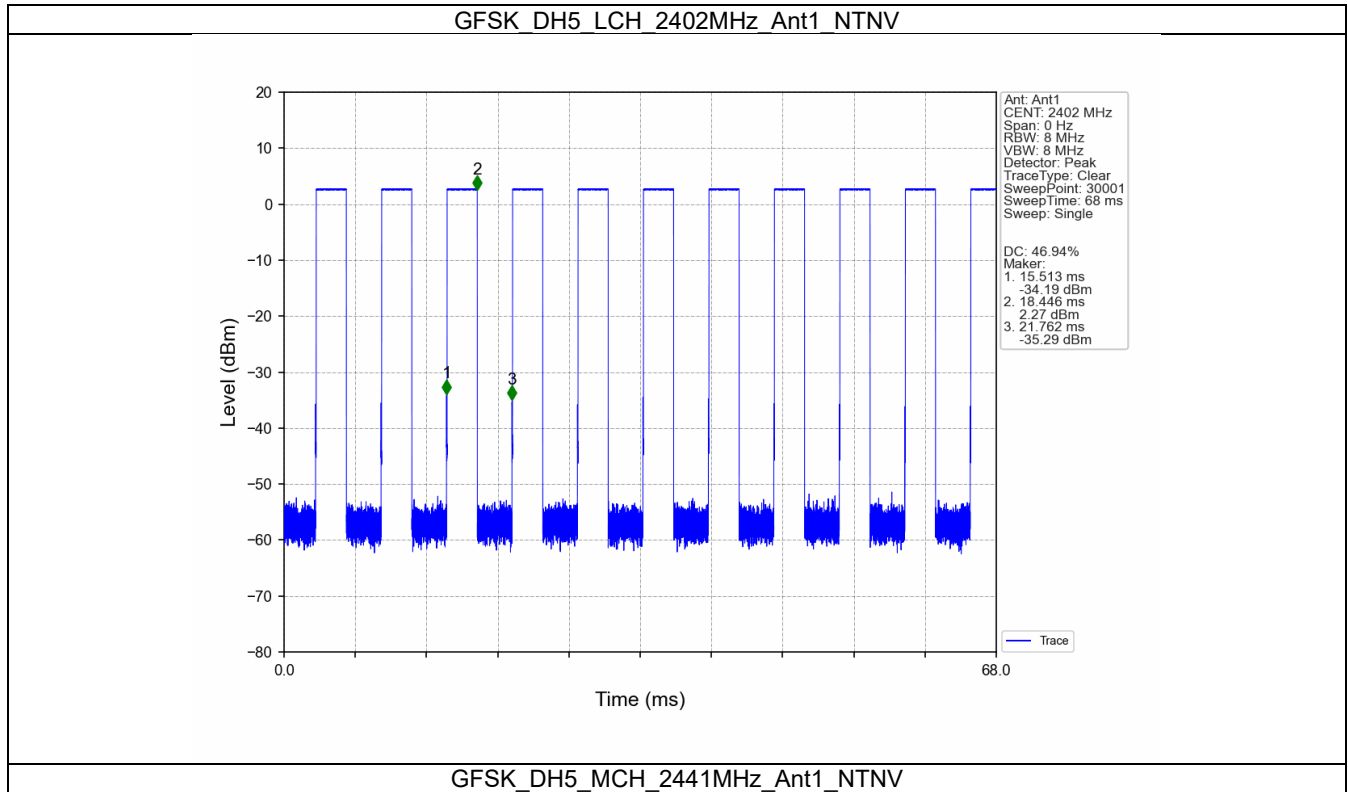
1.1.1 Ant1

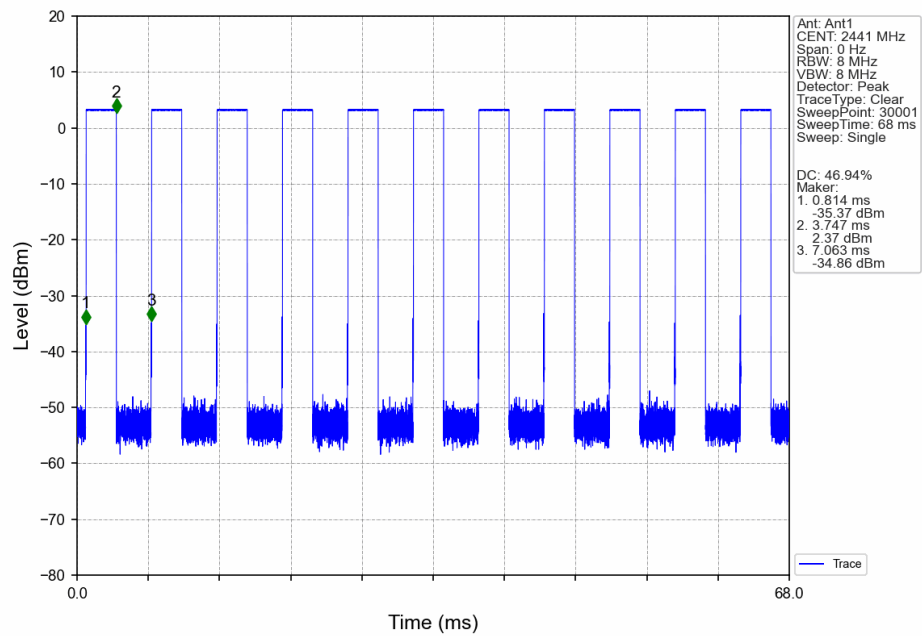
Ant1								
Mode	Tx Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.933	6.249	46.94	3.28	0.04
		2441	DH5	2.933	6.249	46.94	3.28	0.04
		2480	DH5	2.933	6.249	46.94	3.28	0.04
PI/4DQPSK	SISO	2402	2DH5	2.886	6.249	46.18	3.36	0.04
		2441	2DH5	2.940	6.251	47.03	3.28	0.04
		2480	2DH5	2.940	6.250	47.04	3.28	0.02



1.2 Test Graph

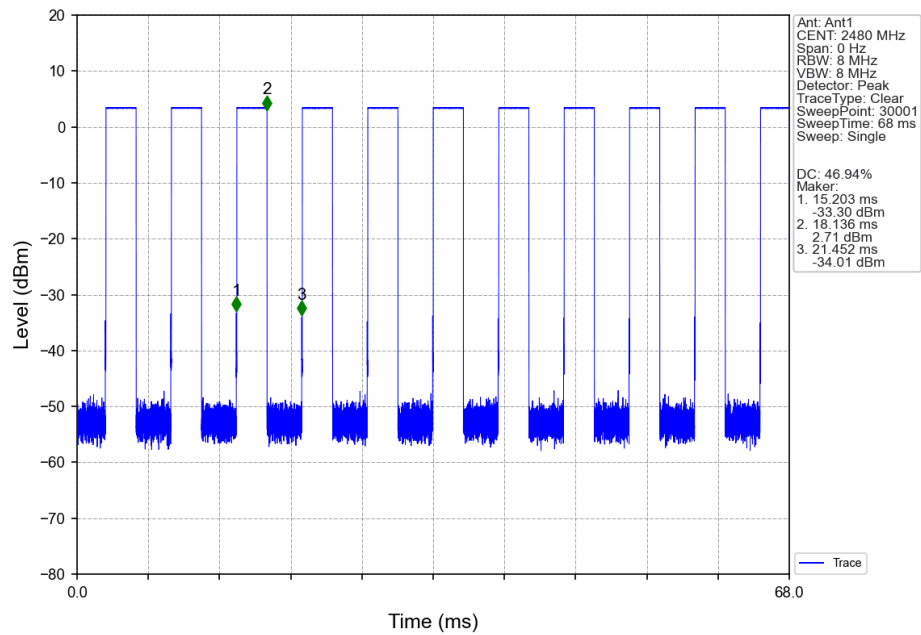
1.2.1 Ant1



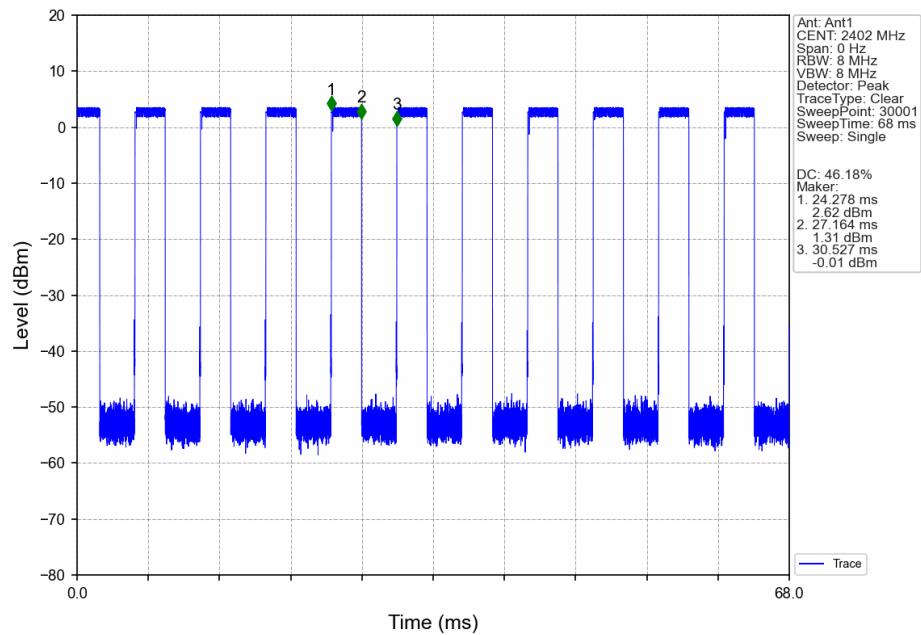




GFSK DH5 HCH 2480MHz_Ant1_NTNV

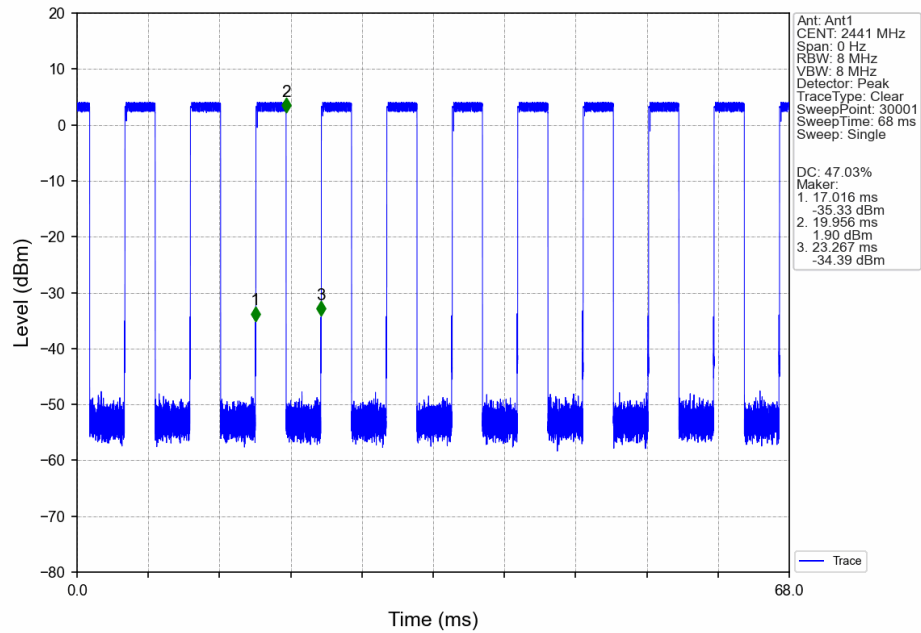


Pi/4DQPSK 2DH5 LCH 2402MHz_Ant1_NTNV

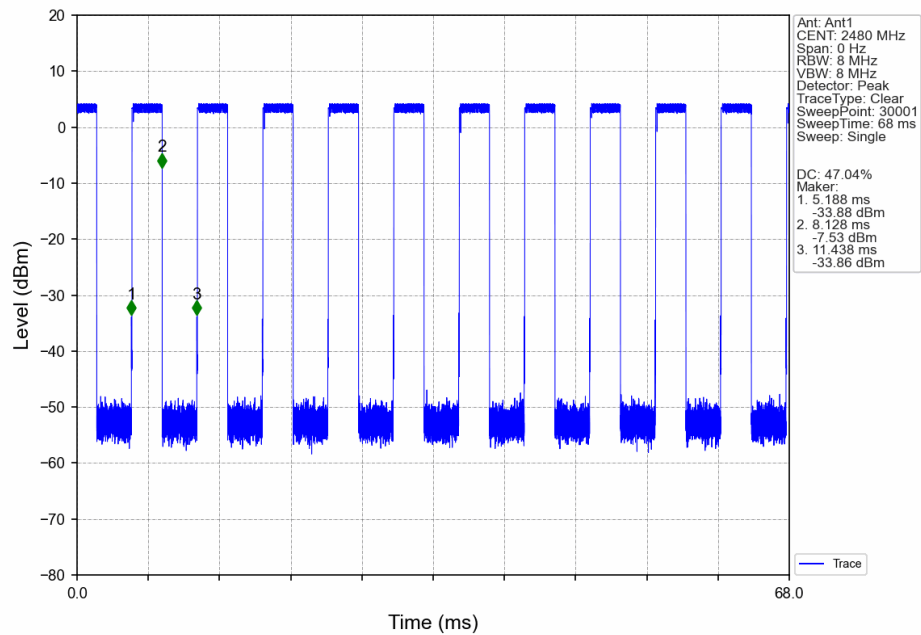




Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.822	/	Pass
		2441	DH5	1	0.820	/	Pass
		2480	DH5	1	0.821	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.187	/	Pass
		2441	2DH5	1	1.202	/	Pass
		2480	2DH5	1	1.199	/	Pass

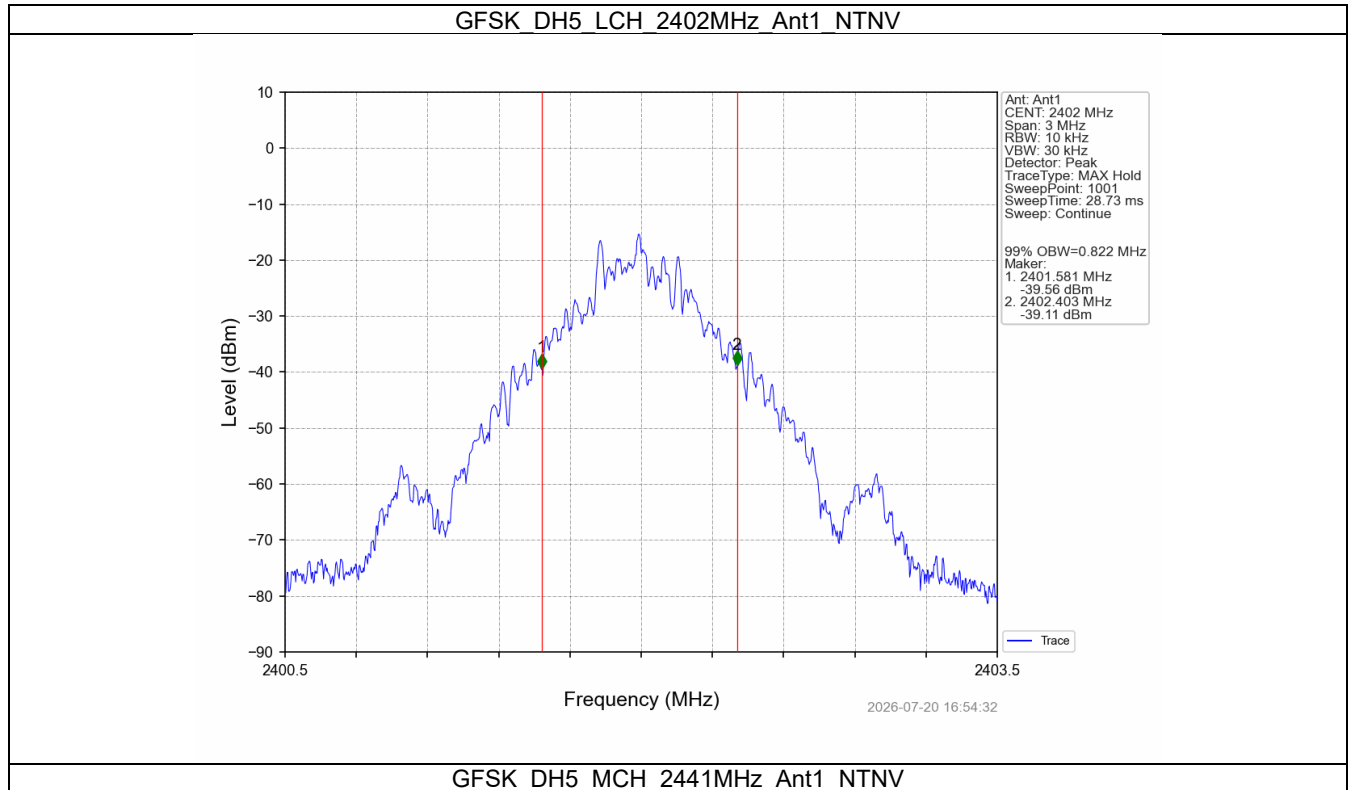
2.1.2 20dB BW

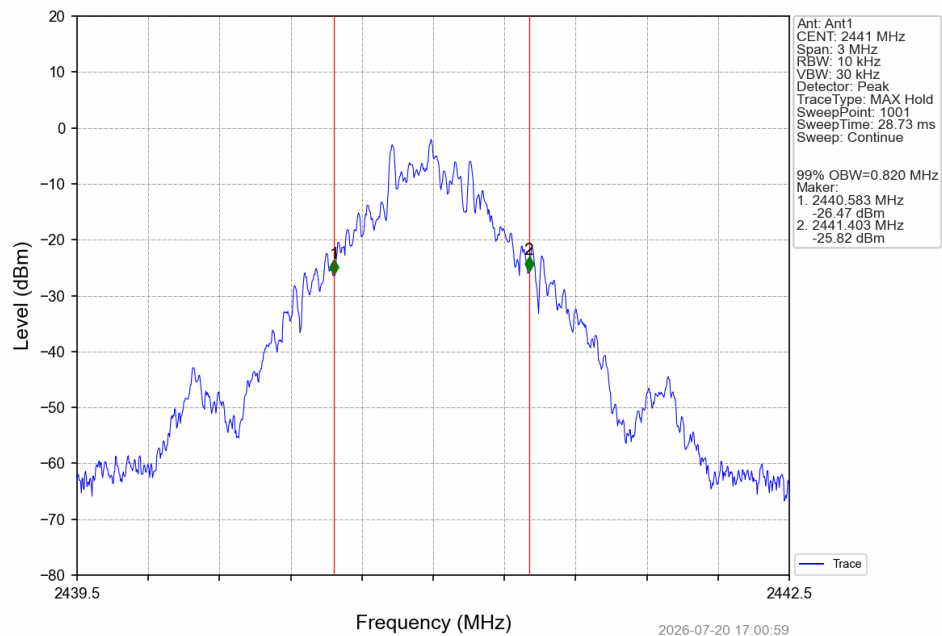
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.827	/	Pass
		2441	DH5	1	0.824	/	Pass
		2480	DH5	1	0.823	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.288	/	Pass
		2441	2DH5	1	1.283	/	Pass
		2480	2DH5	1	1.288	/	Pass



2.2 Test Graph

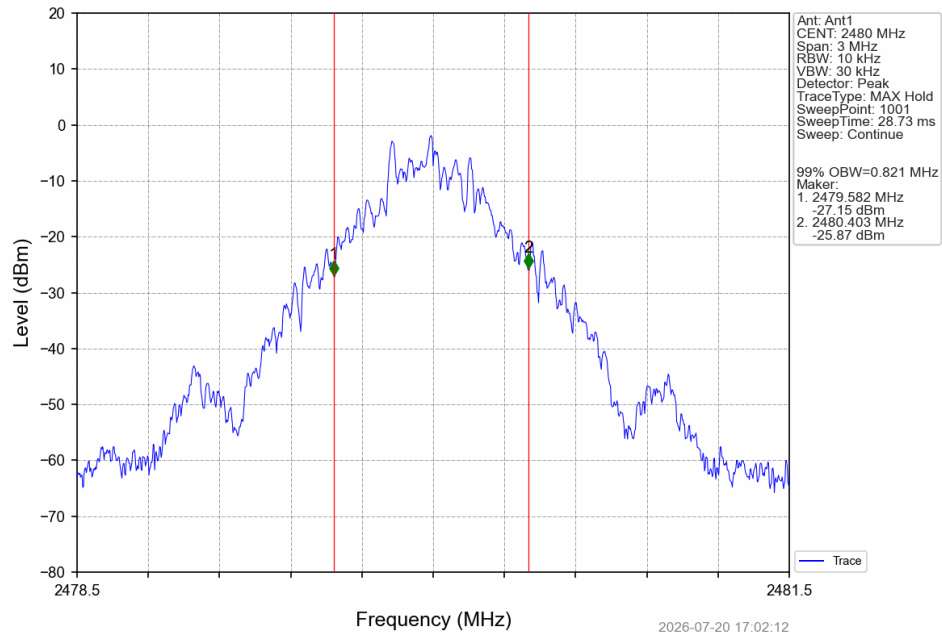
2.2.1 OBW



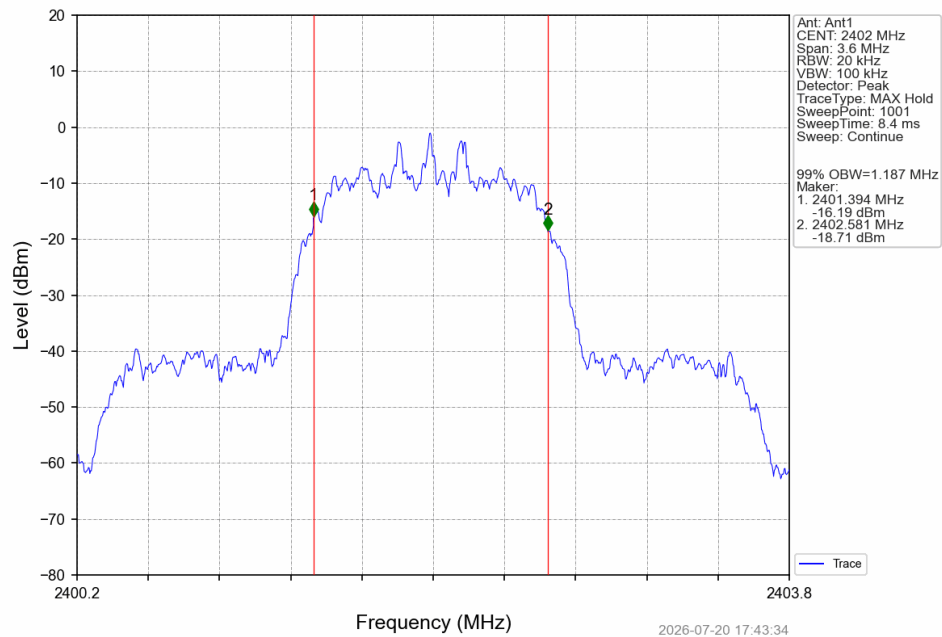




GFSK DH5_HCH_2480MHz_Ant1_NTNV

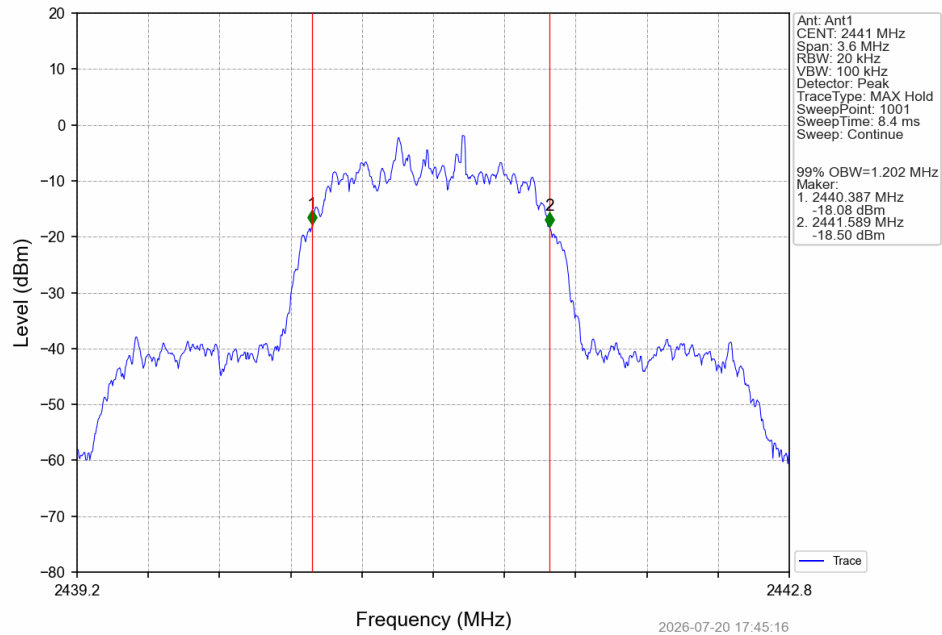


Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

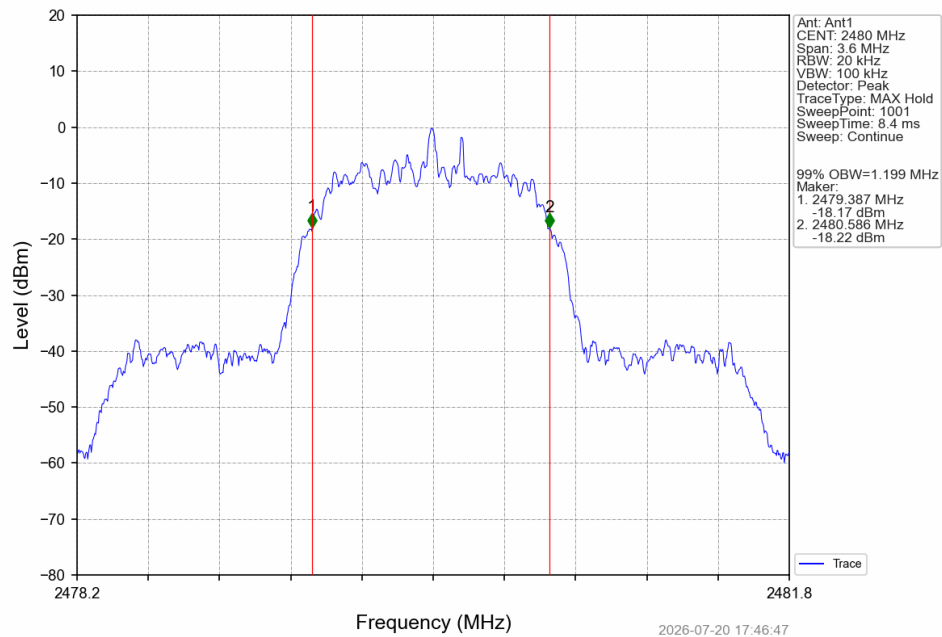




Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV

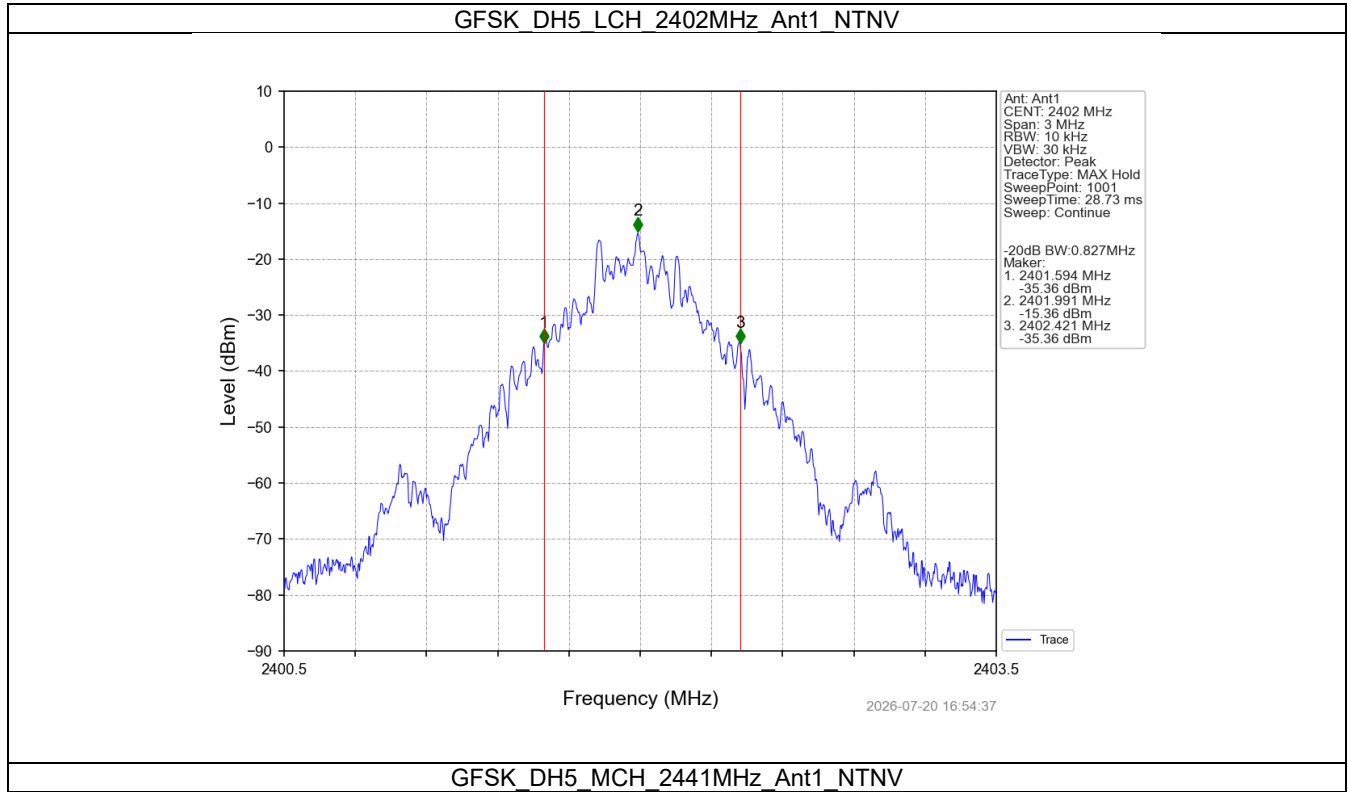


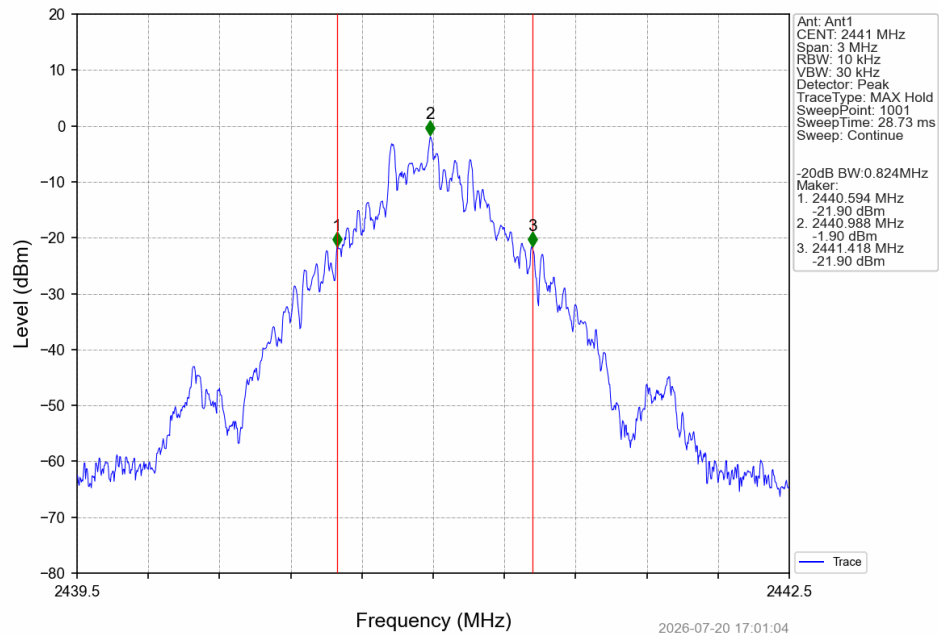
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





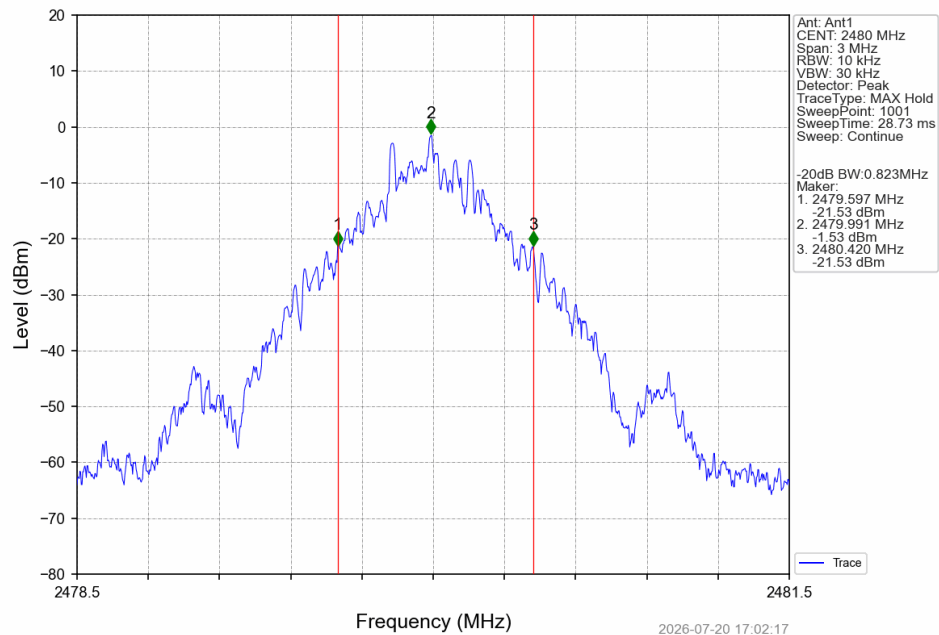
2.2.2 20dB BW



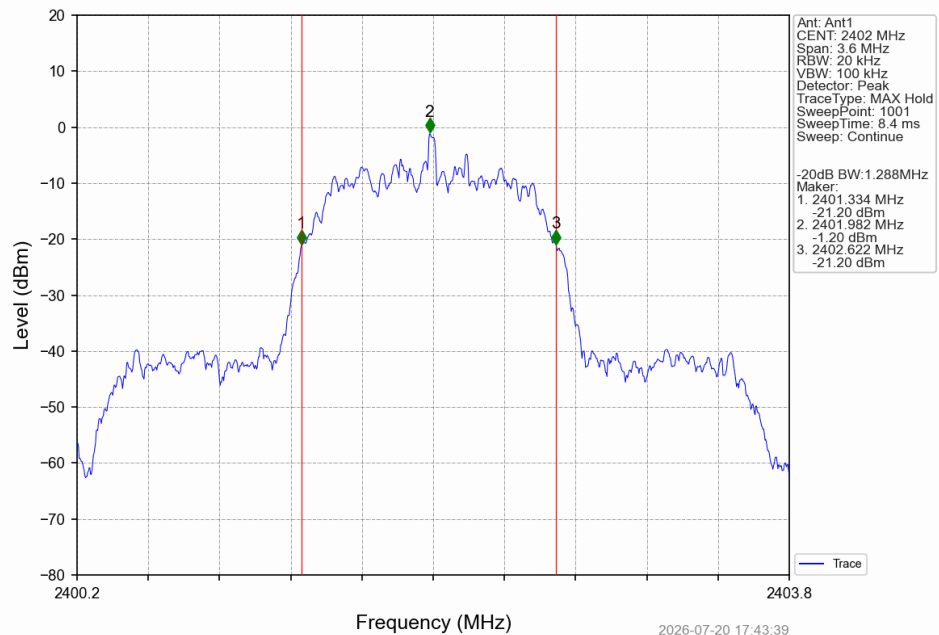




GFSK DH5 HCH 2480MHz Ant1 NTN

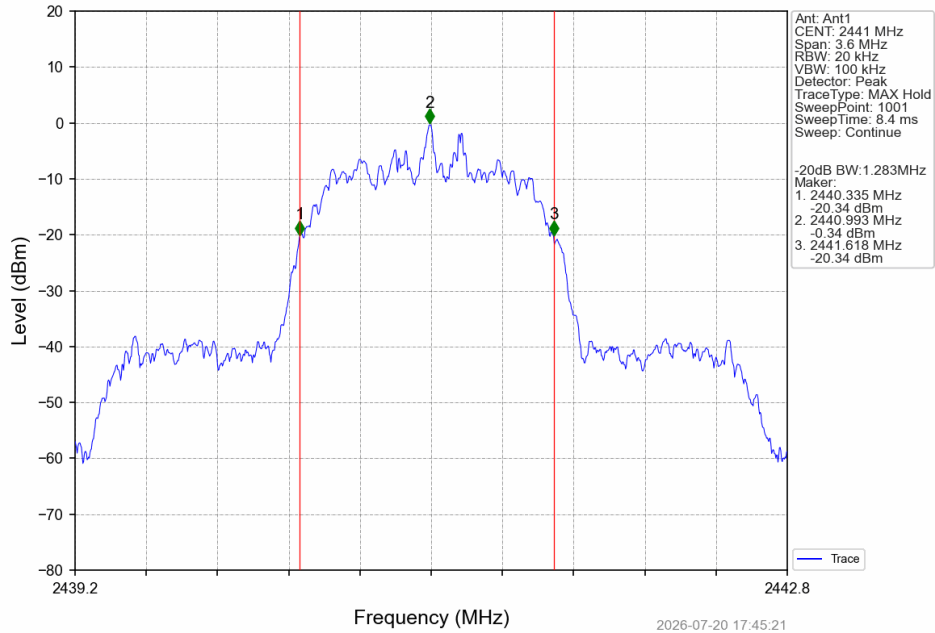


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN

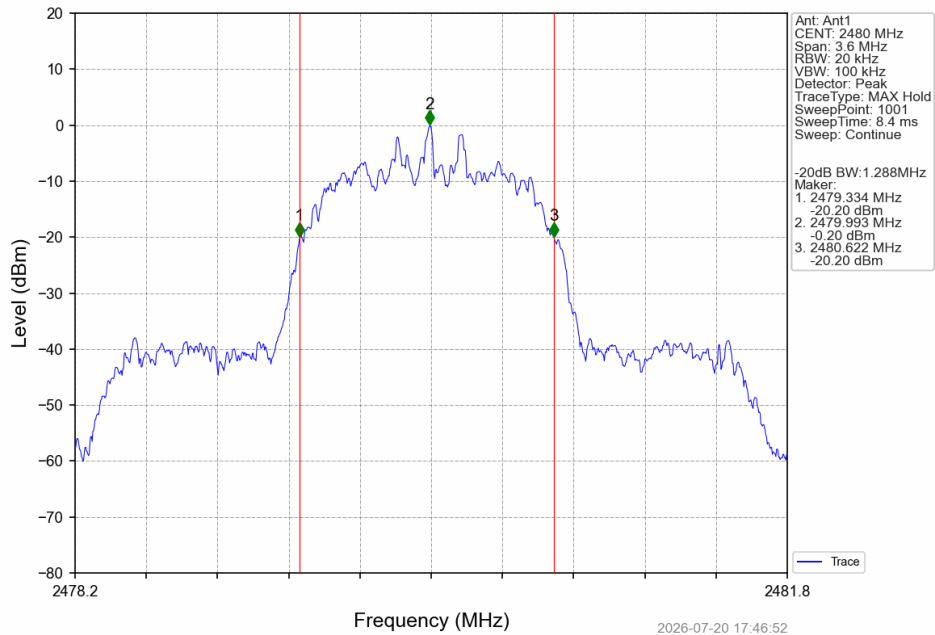




Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

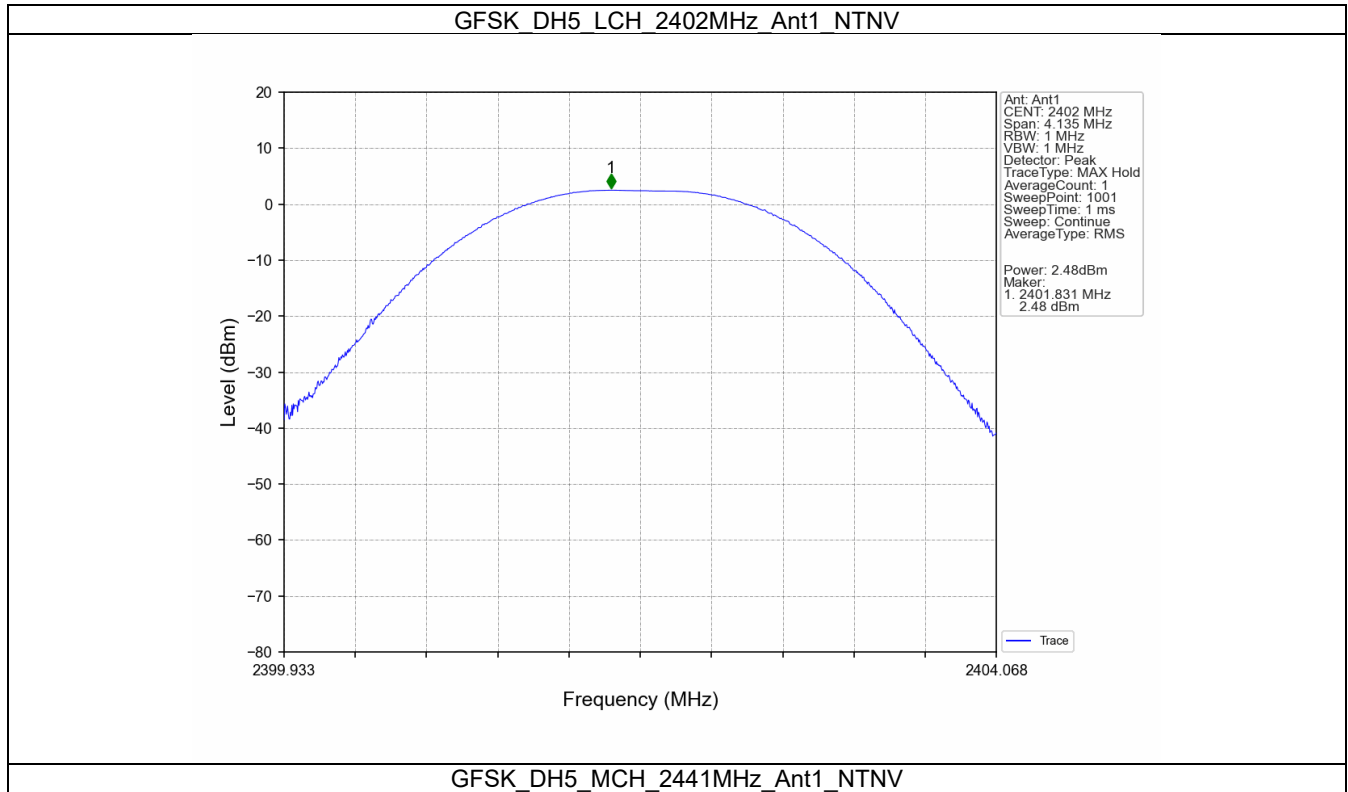
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	2.48	≤ 30	Pass
		2441	DH5	3.05	≤ 30	Pass
		2480	DH5	3.22	≤ 30	Pass
Pi/4DQPSK	SISO	2402	2DH5	3.29	≤ 20.97	Pass
		2441	2DH5	3.79	≤ 20.97	Pass
		2480	2DH5	3.95	≤ 20.97	Pass

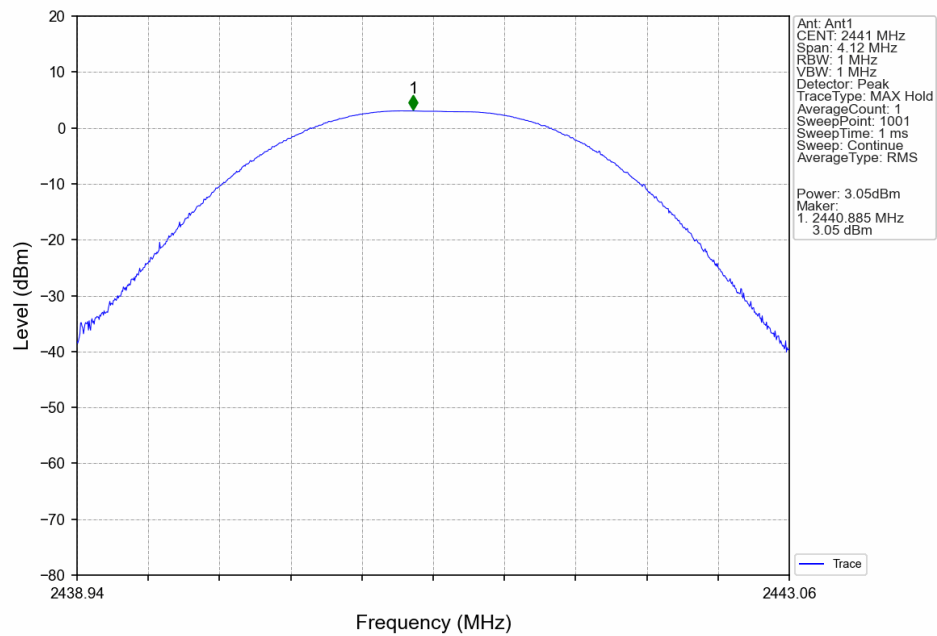
Note1: Antenna Gain: Ant1: -0.58dBi;



3.2 Test Graph

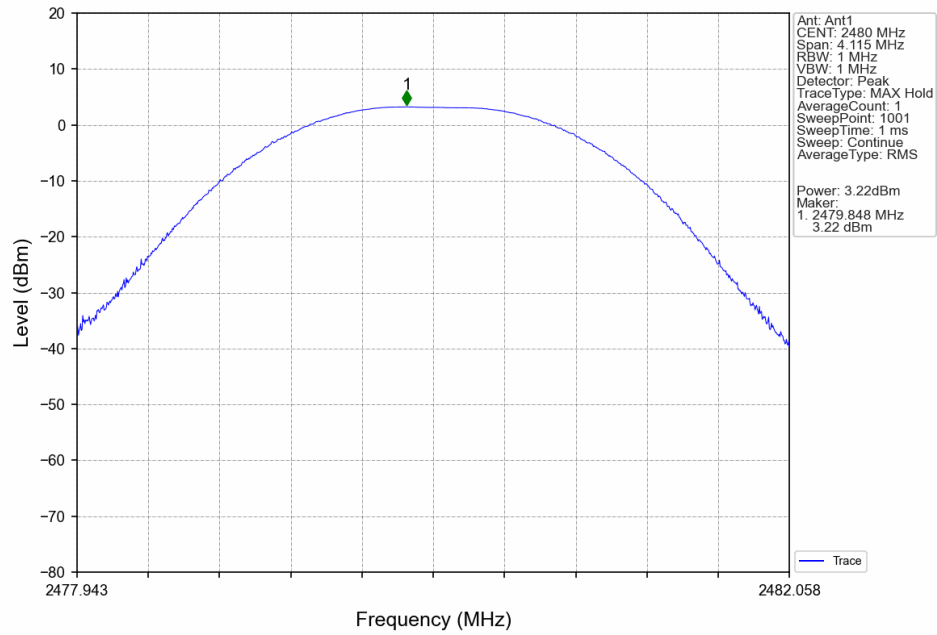
3.2.1 Power



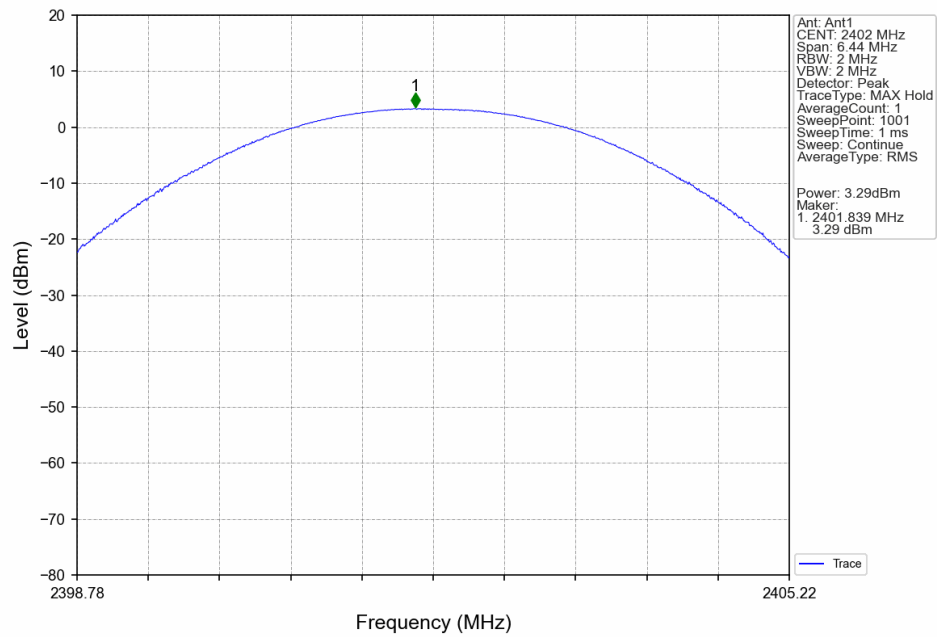




GFSK DH5 HCH 2480MHz Ant1 NTN

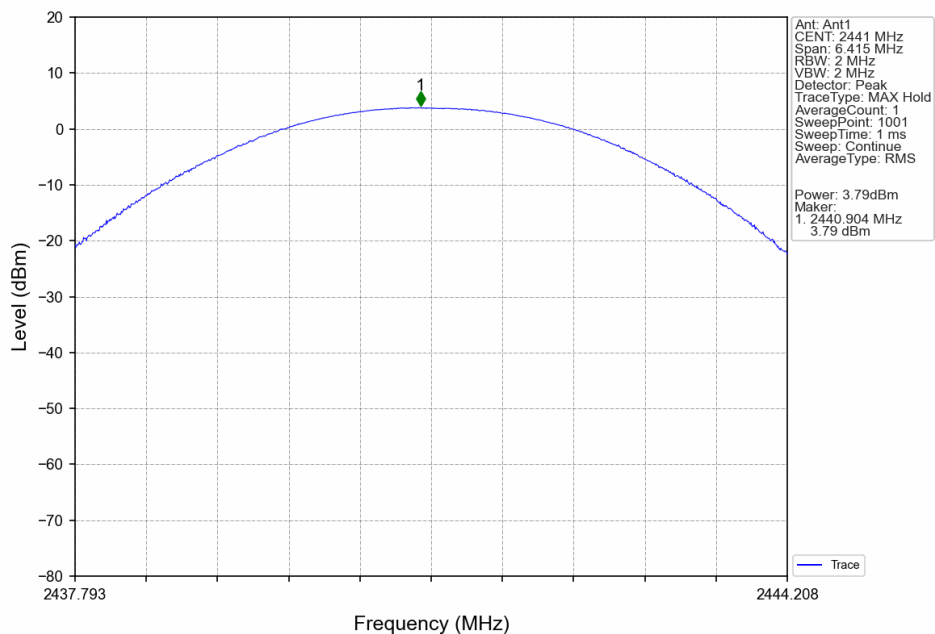


Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN

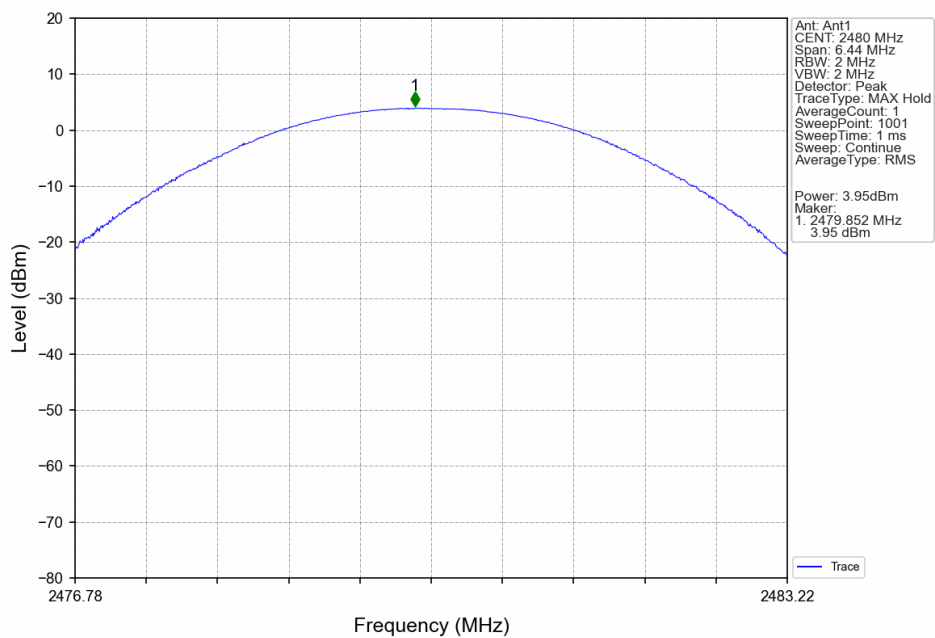




Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





4. Carrier Frequency Separation

4.1 Test Result

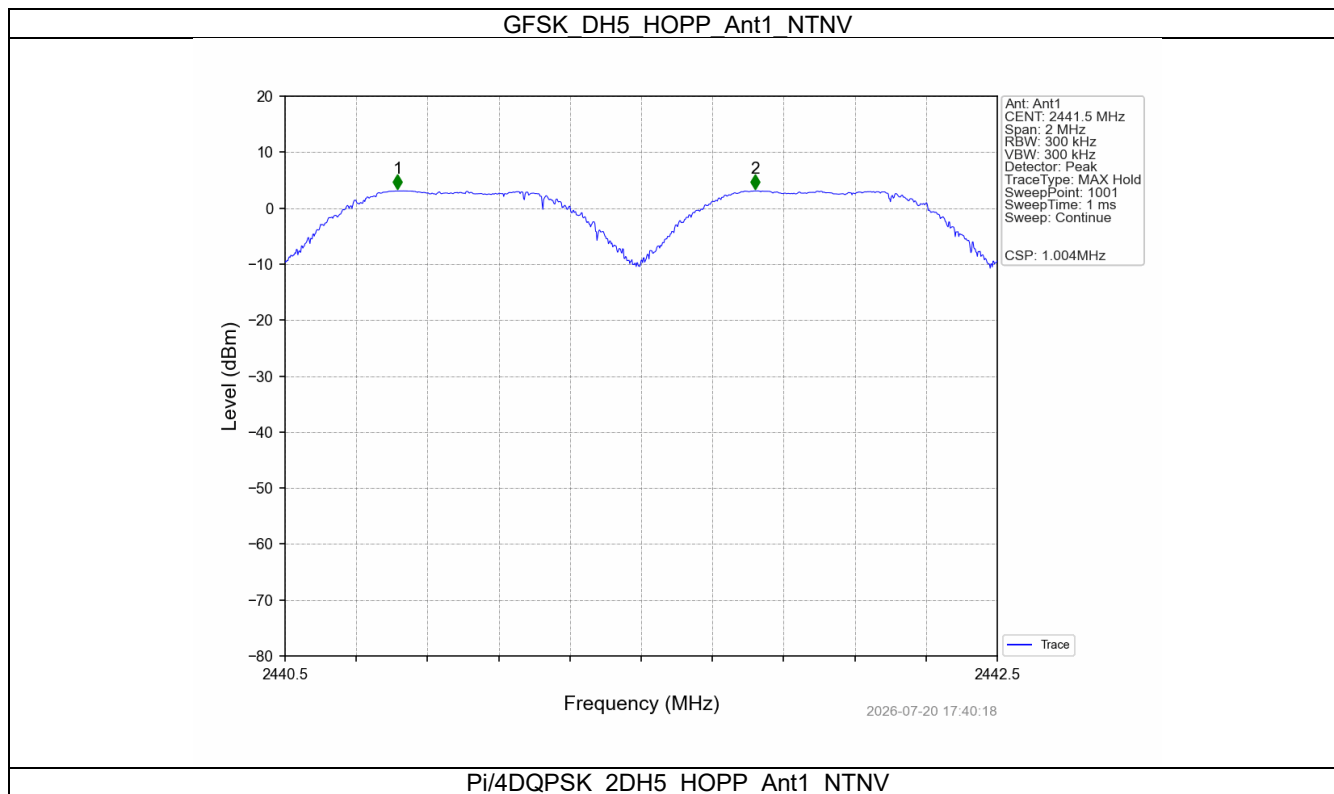
4.1.1 Ant1

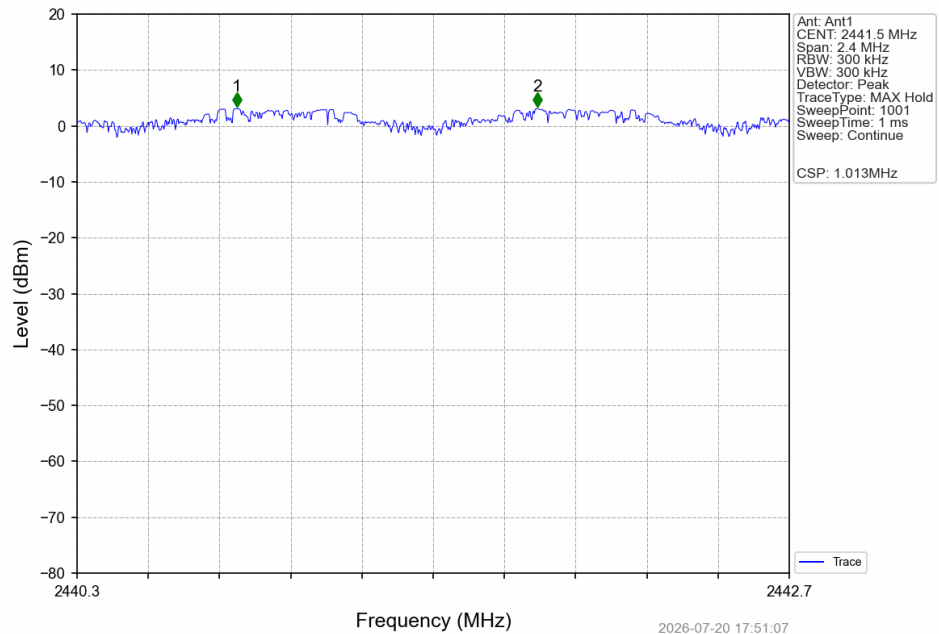
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.004	0.827	≥ 0.827	Pass
PI/4DQPSK	SISO	HOPP	2DH5	1.013	1.288	≥ 0.859	Pass



4.2 Test Graph

4.2.1 Ant1







5. Number of Hopping Frequencies

5.1 Test Result

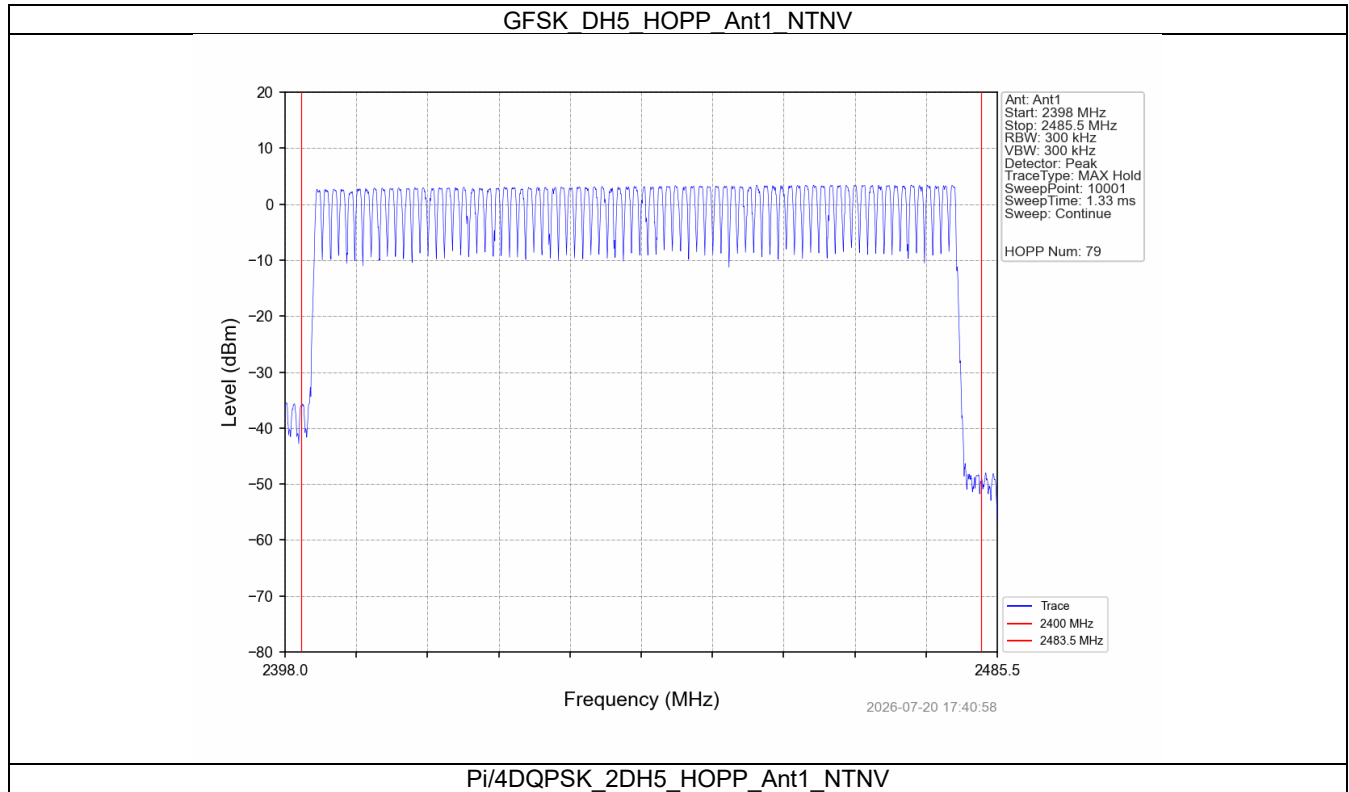
5.1.1 HoppNum

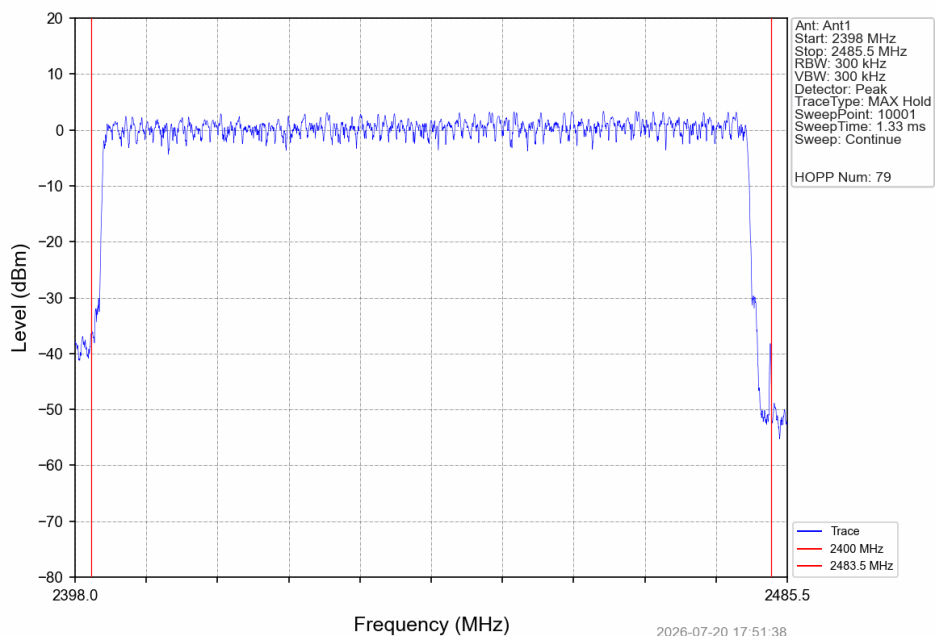
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	≥ 15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	≥ 15	Pass



5.2 Test Graph

5.2.1 HoppNum







6. Time of Occupancy (Dwell Time)

6.1 Test Result

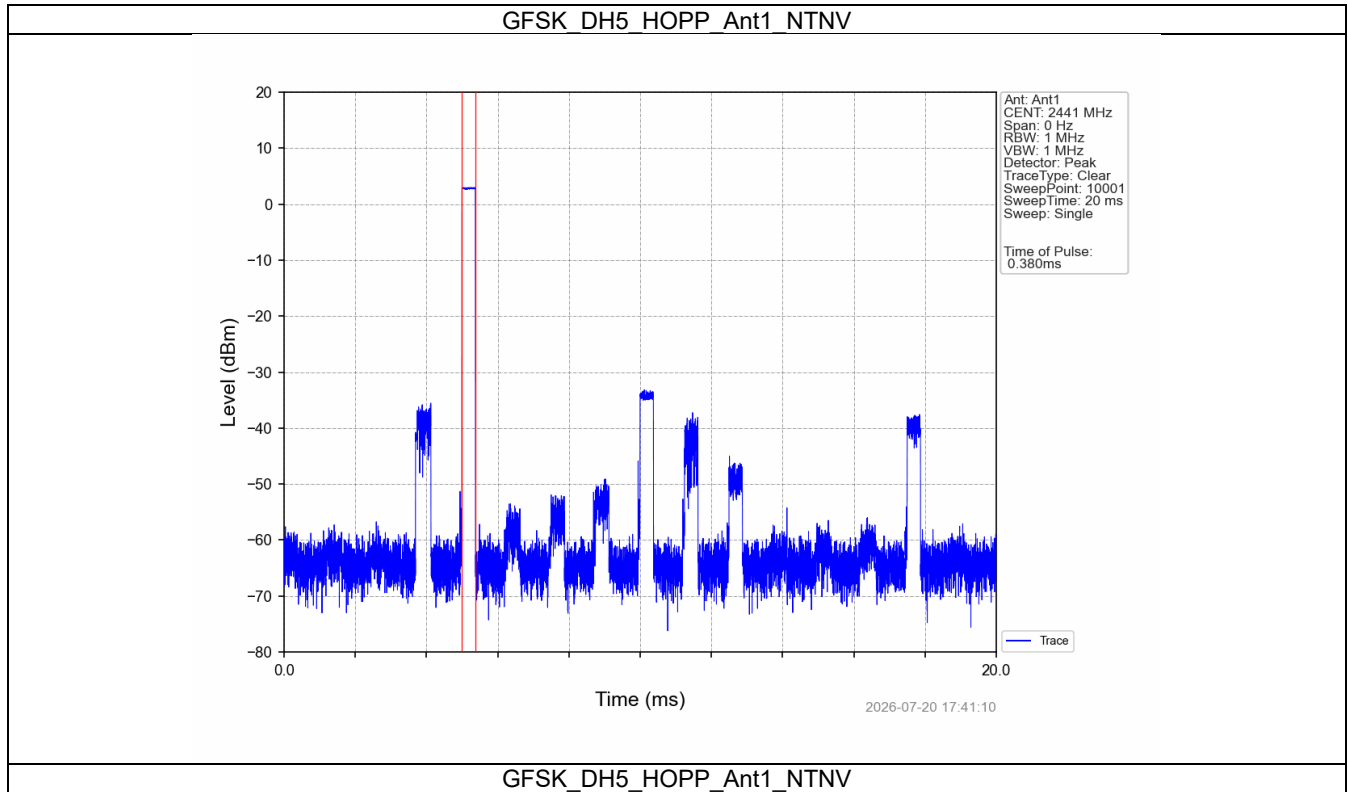
6.1.1 Ant1

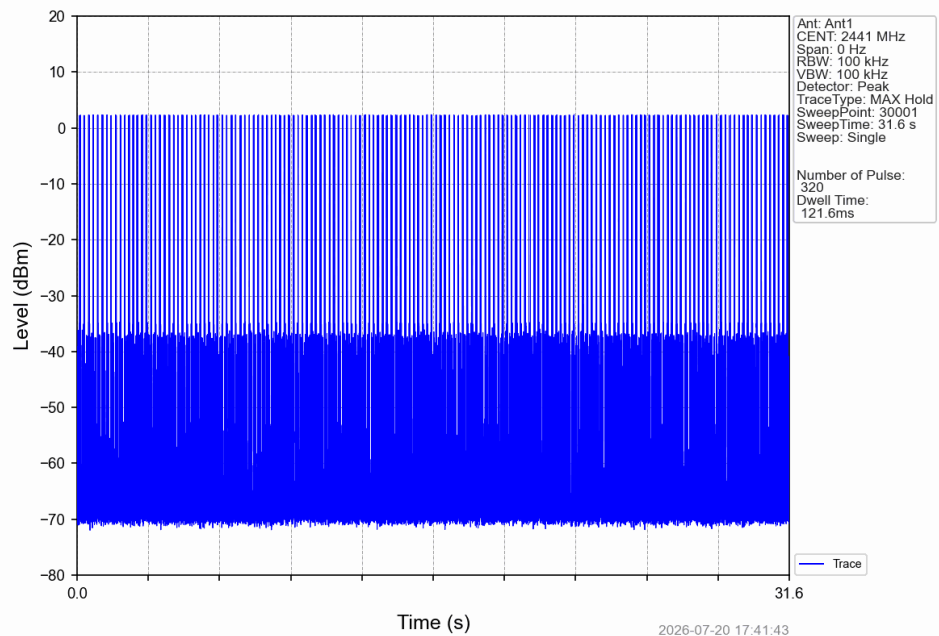
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH5	0.380	31.600	320	121.600	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	2.890	31.600	76	219.640	<=400	Pass



6.2 Test Graph

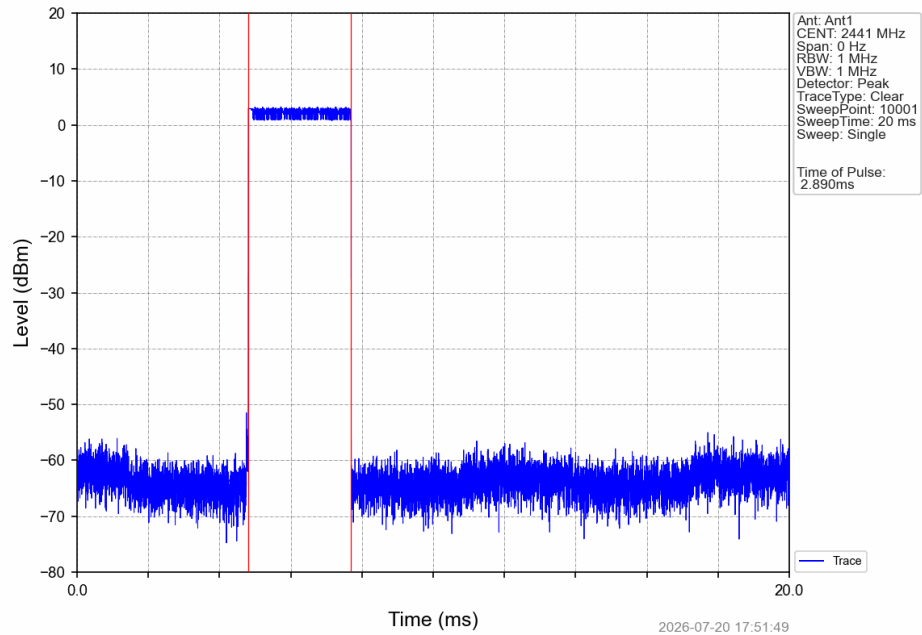
6.2.1 Ant1



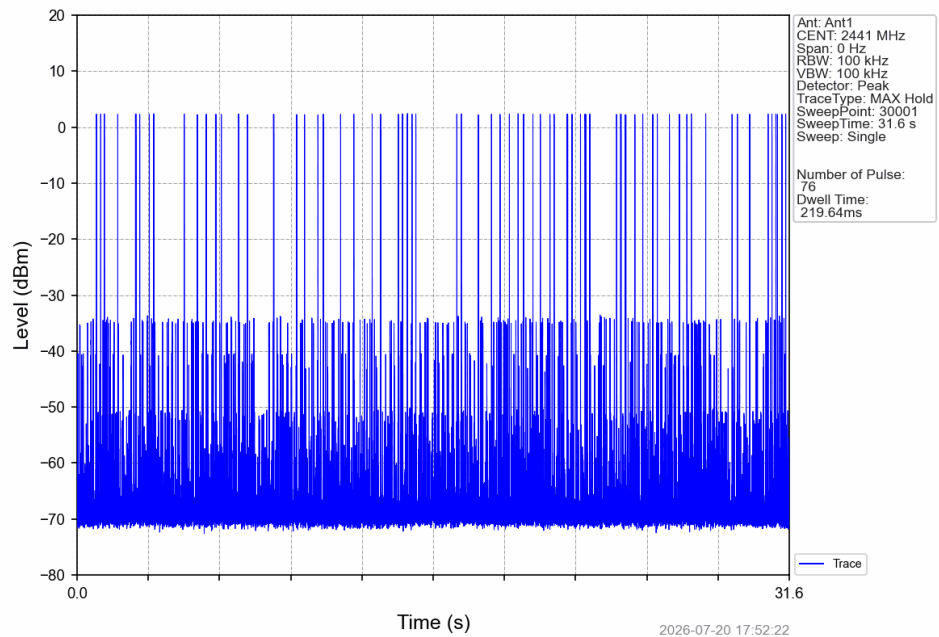




Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV





7. Unwanted Emissions In Non-restricted Frequency Bands

7.1 Test Result

7.1.1 Ref

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-10.45
		2441	DH5	1	3.01
		2480	DH5	1	3.19
Pi/4DQPSK	SISO	2402	2DH5	1	2.37
		2441	2DH5	1	2.89
		2480	2DH5	1	3.02

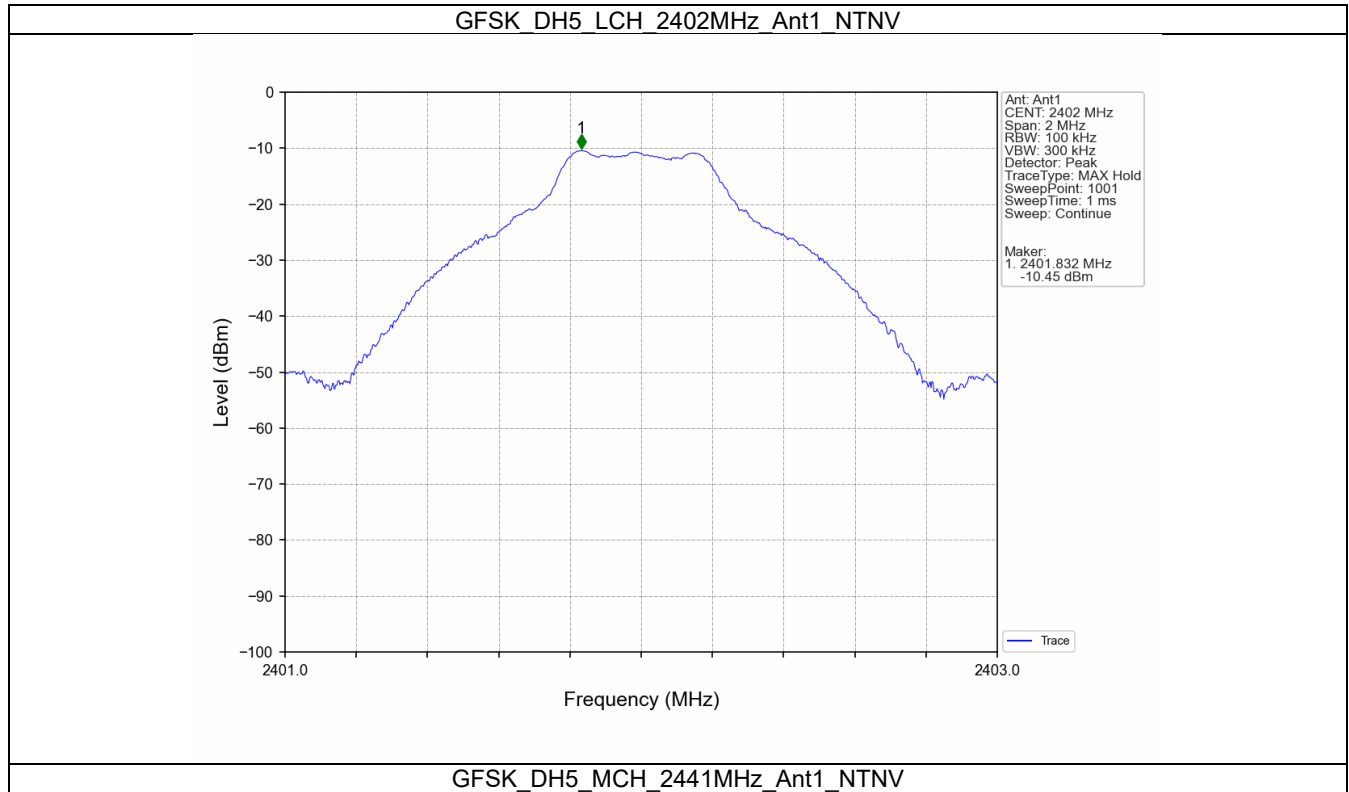
7.1.2 CSE

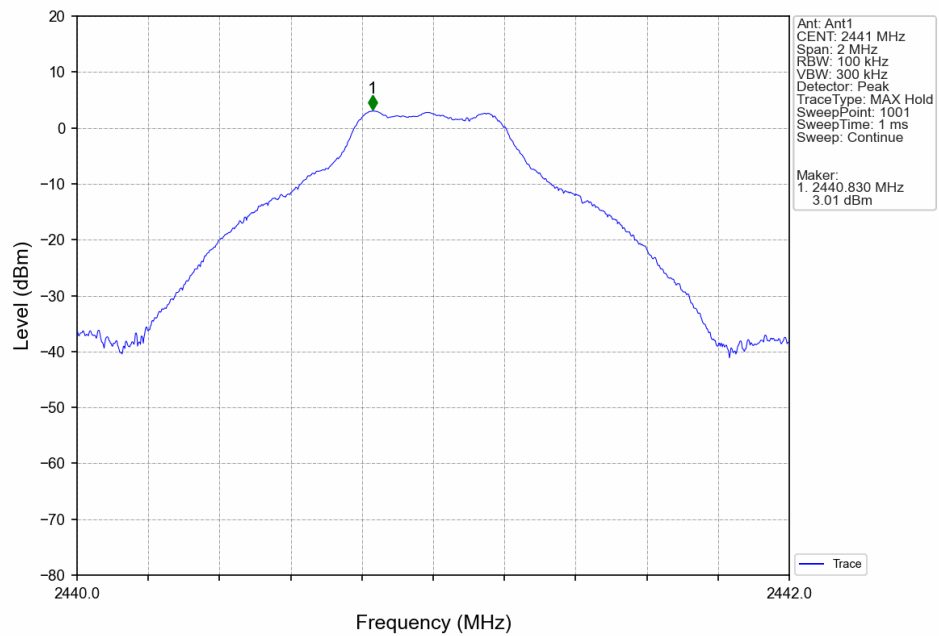
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	3.19	-16.81	Pass
		2441	DH5	1	3.19	-16.81	Pass
		2480	DH5	1	3.19	-16.81	Pass
		HOPP	DH5	1	3.19	-16.81	Pass
					3.19	-16.81	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	3.02	-16.98	Pass
		2441	2DH5	1	3.02	-16.98	Pass
		2480	2DH5	1	3.02	-16.98	Pass
		HOPP	2DH5	1	3.02	-16.98	Pass
					3.02	-16.98	Pass



7.2 Test Graph

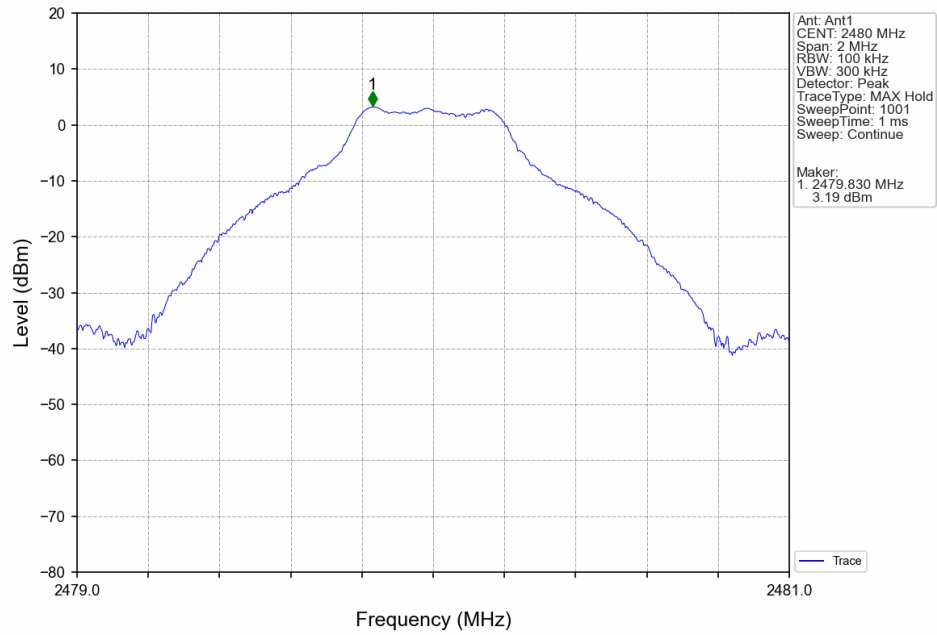
7.2.1 Ref



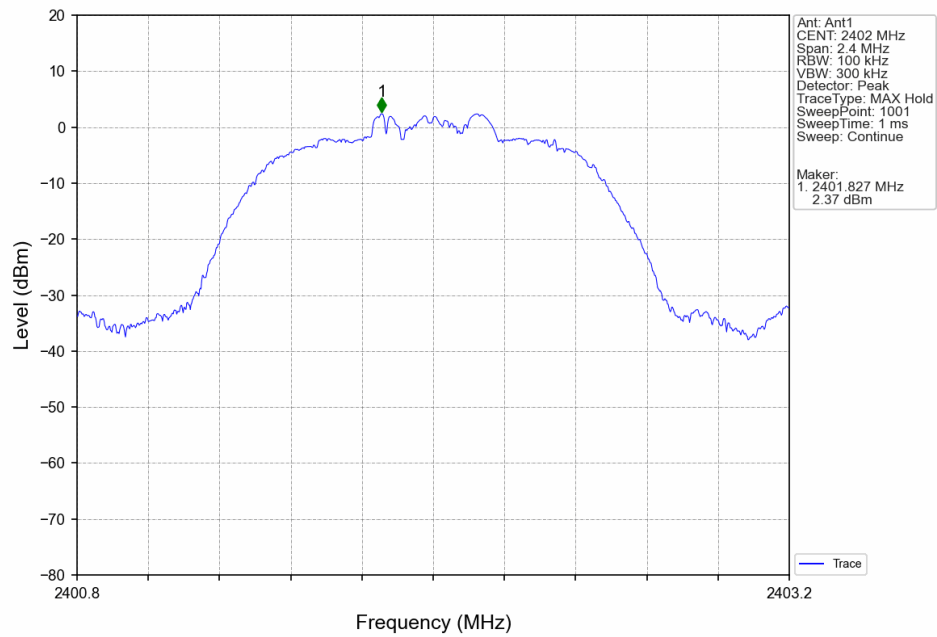




GFSK DH5_HCH_2480MHz_Ant1_NTNV

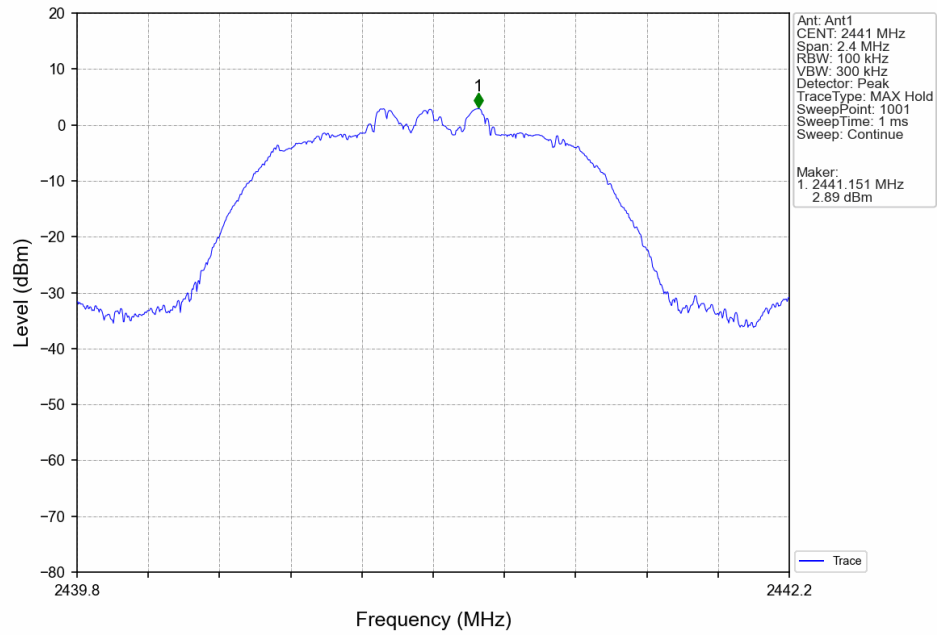


Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

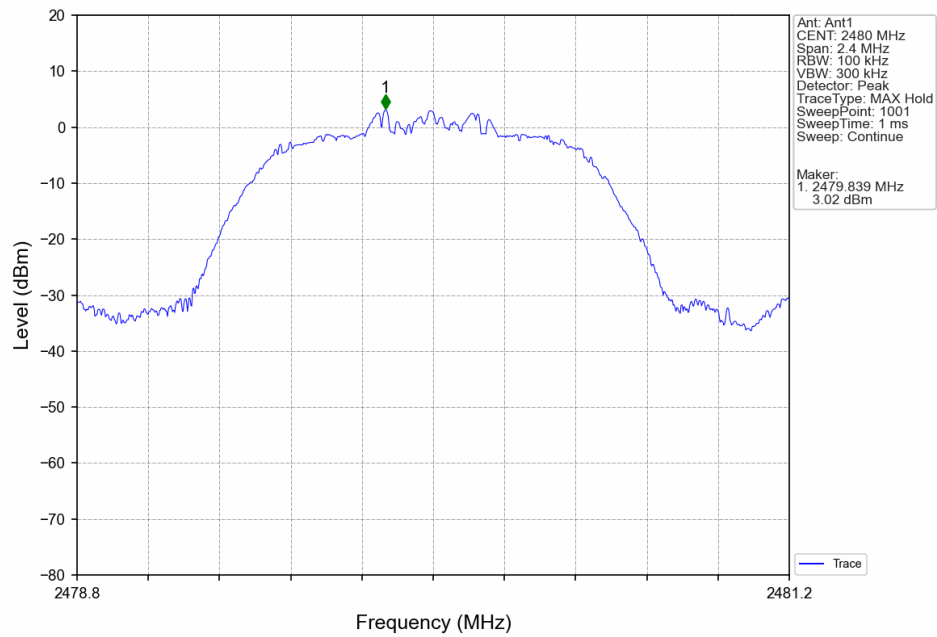




Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV

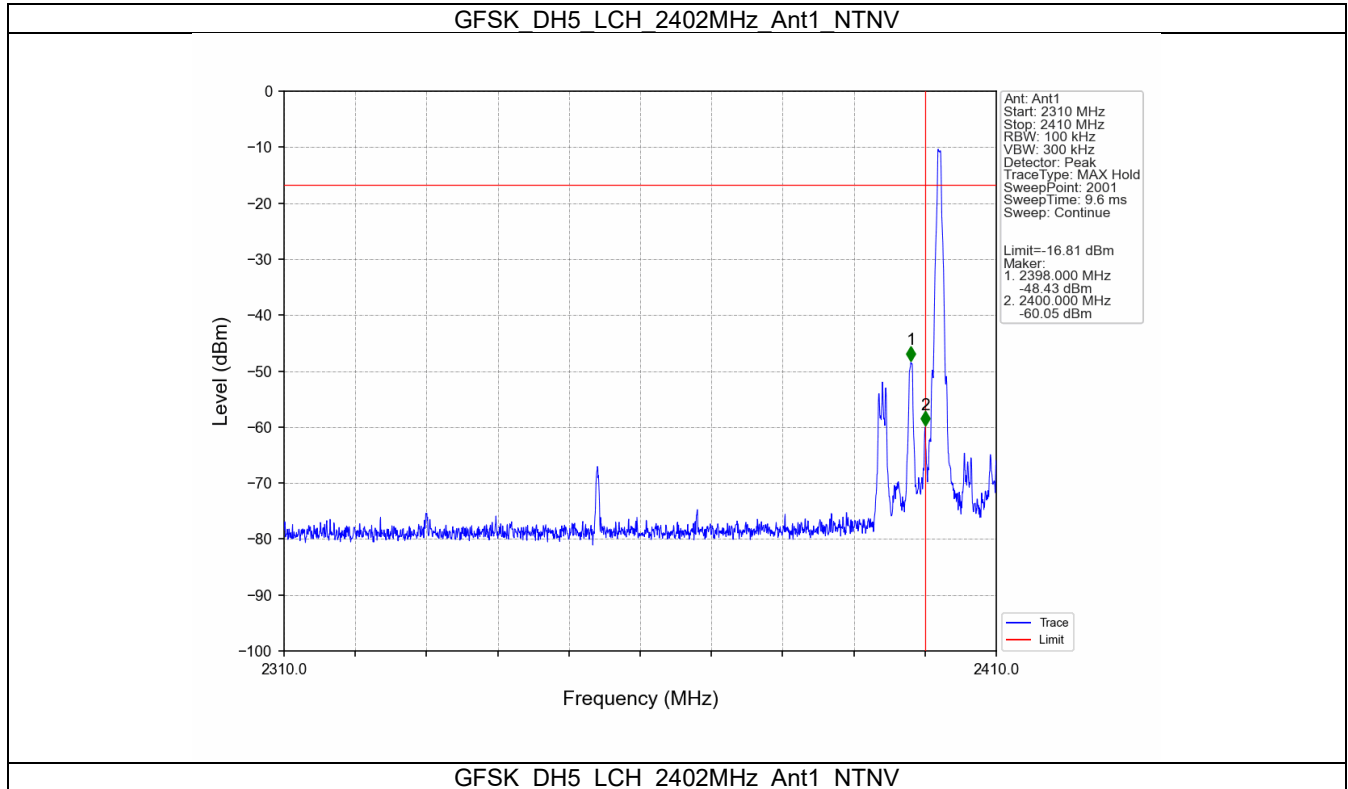


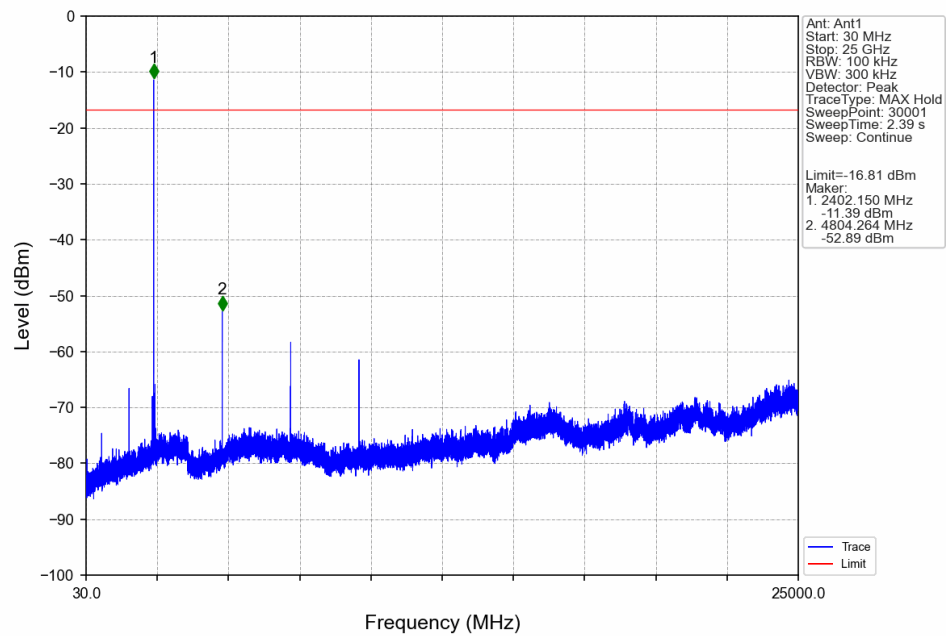
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





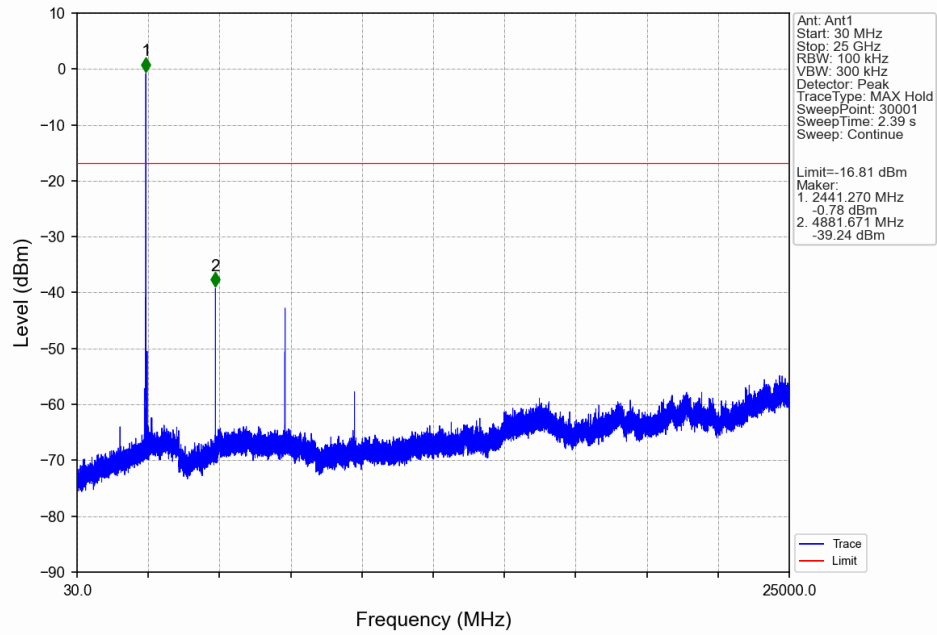
7.2.2 CSE



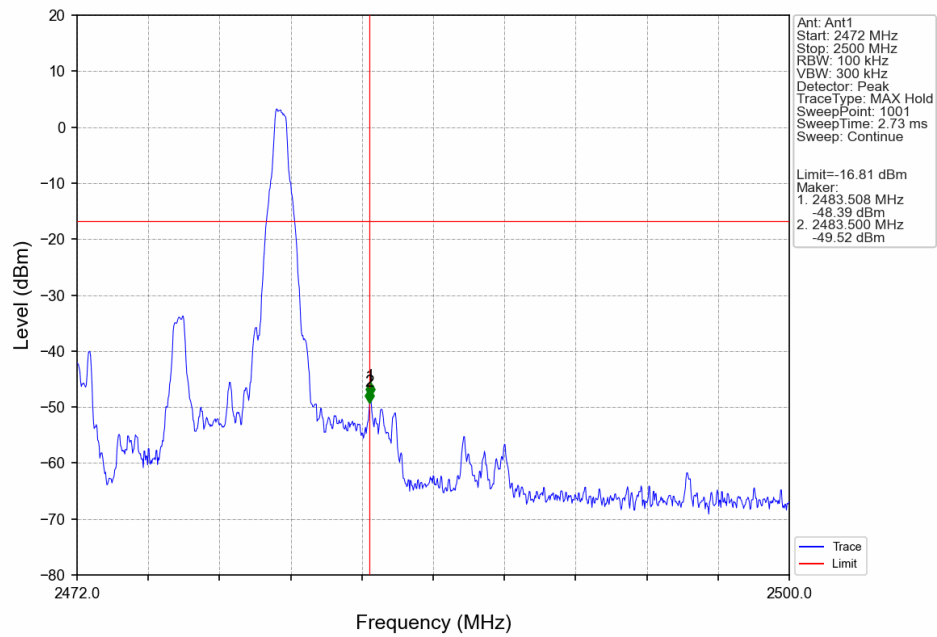




GFSK_DH5_MCH_2441MHz_Ant1_NTNV

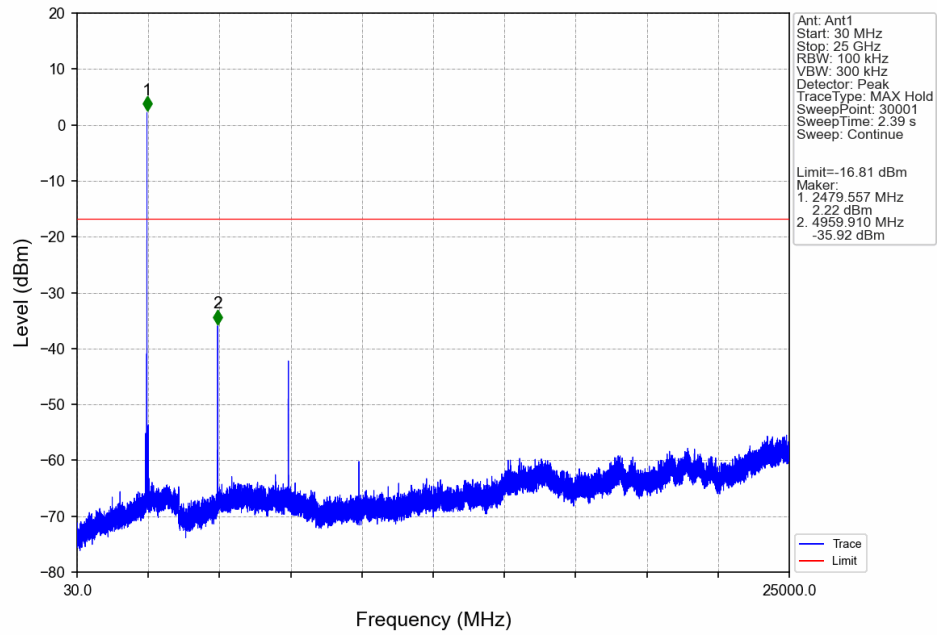


GFSK_DH5_HCH_2480MHz_Ant1_NTNV

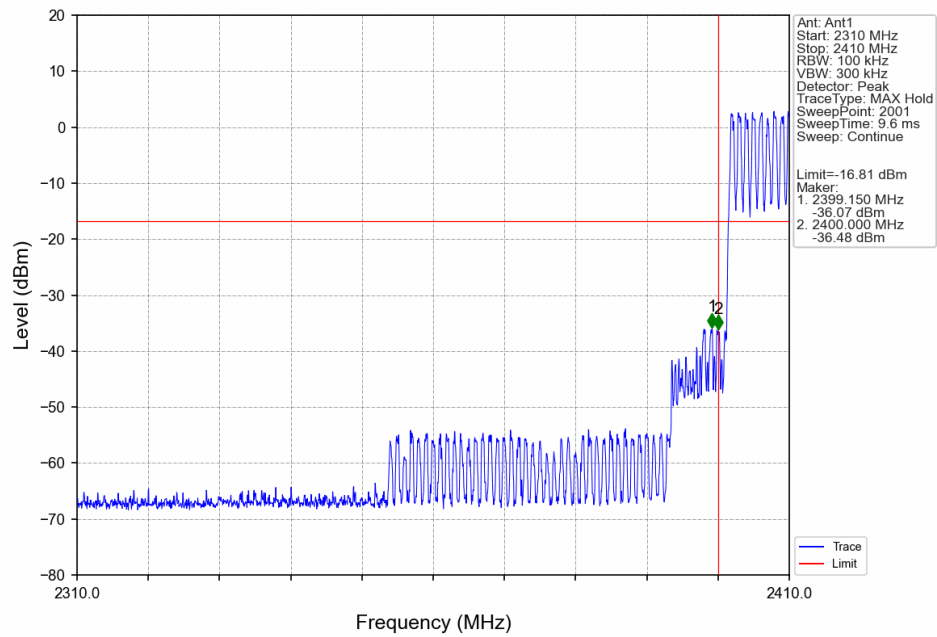




GFSK_DH5_HCH_2480MHz_Ant1_NTNV

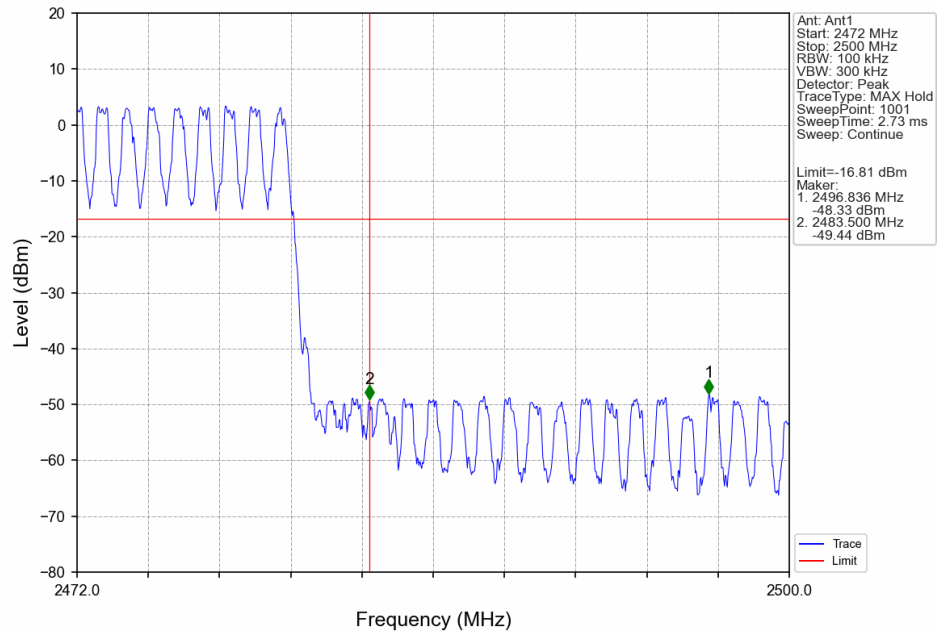


GFSK_DH5_HOPP_Ant1_NTNV

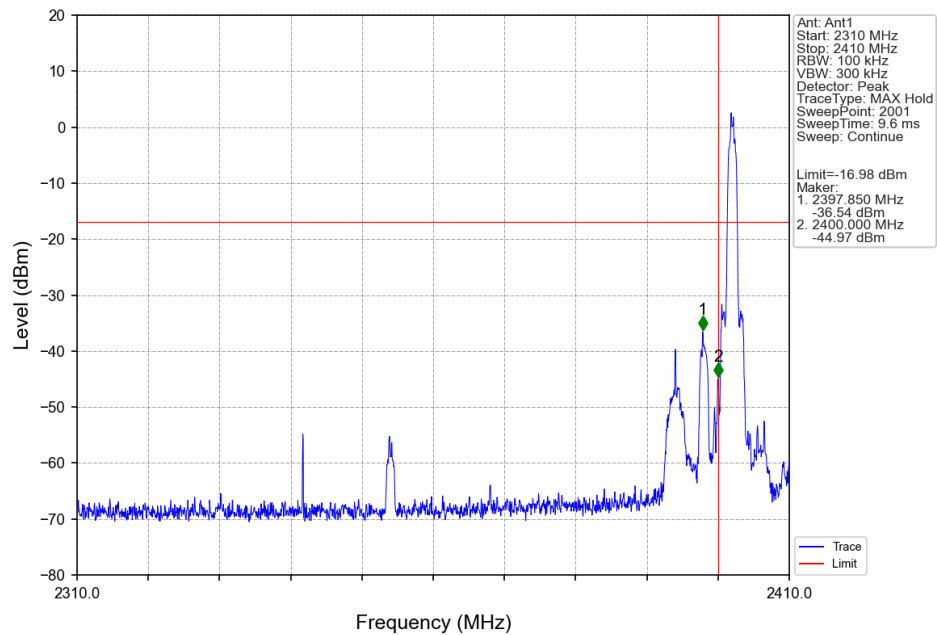




GFSK_DH5_HOPP_Ant1_NTNV

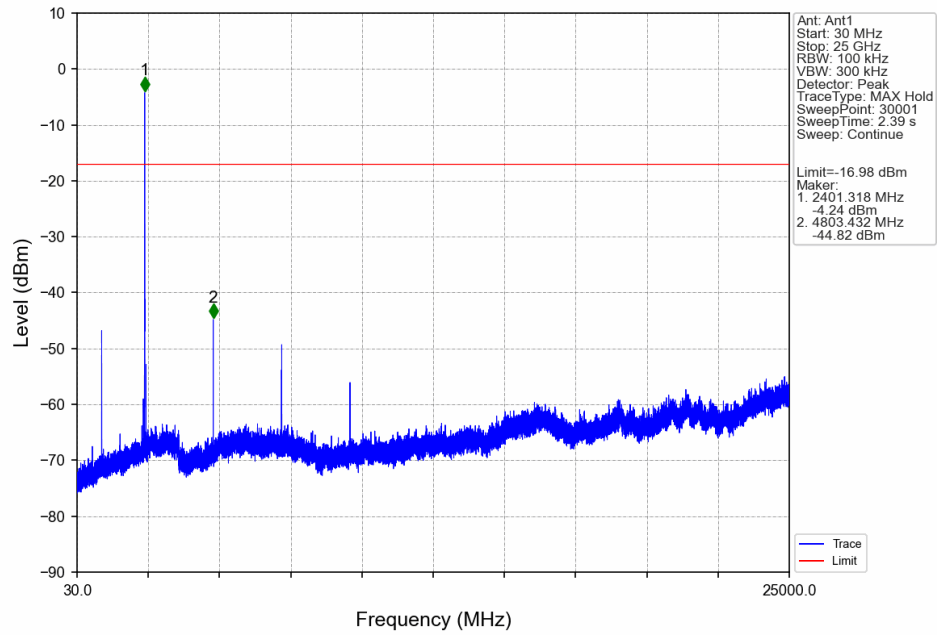


Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

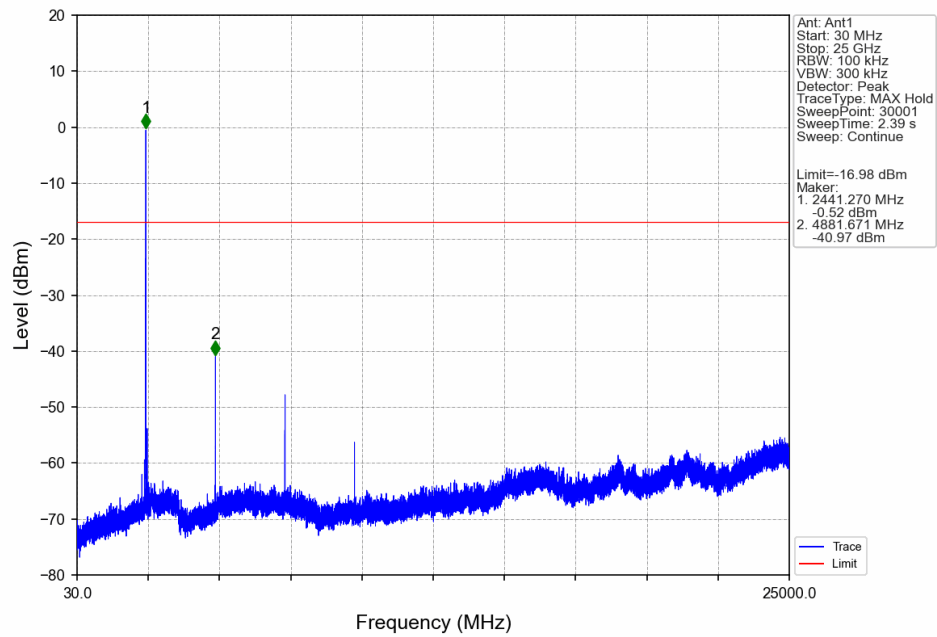




Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV

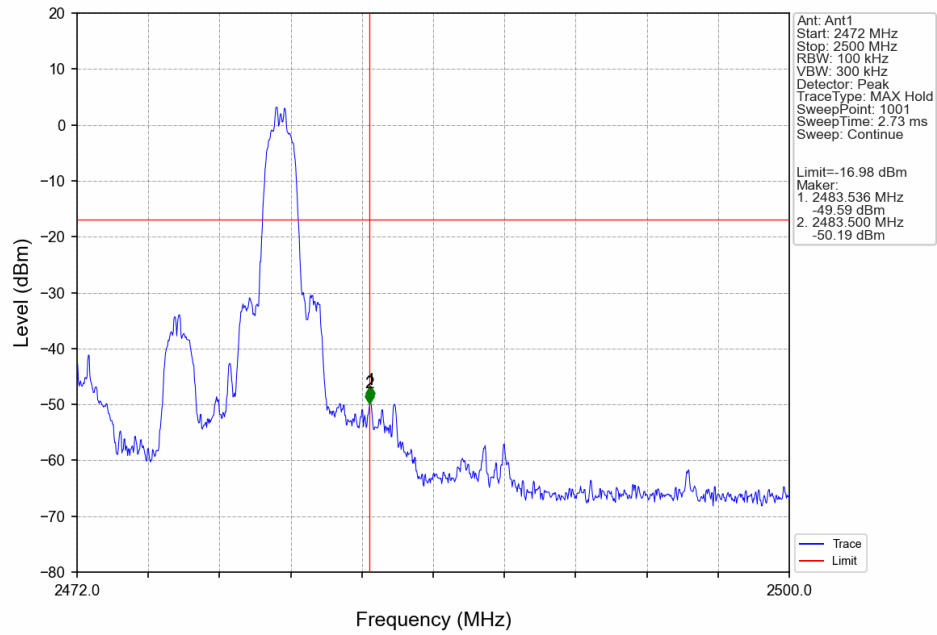


Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV

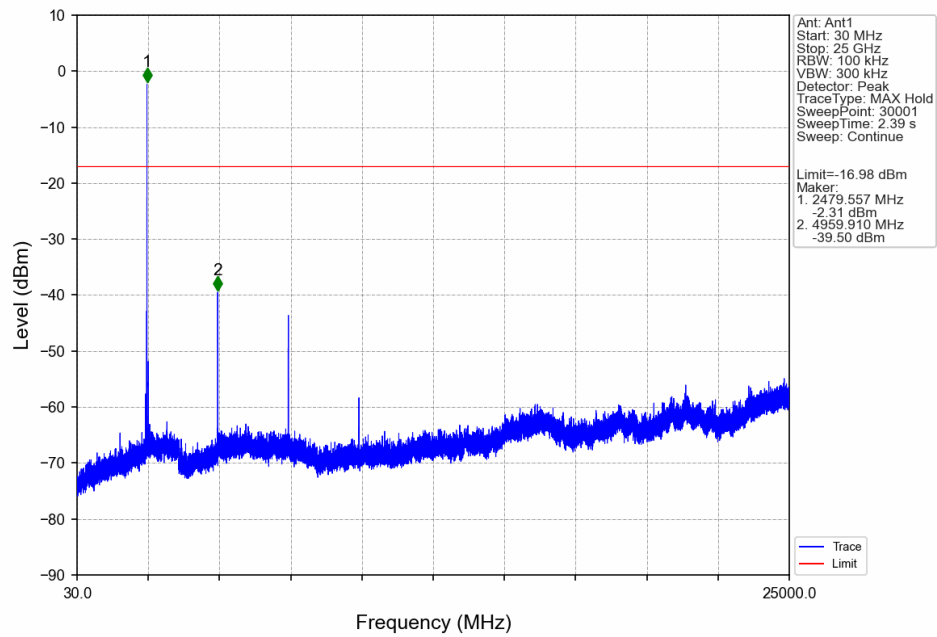




Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV

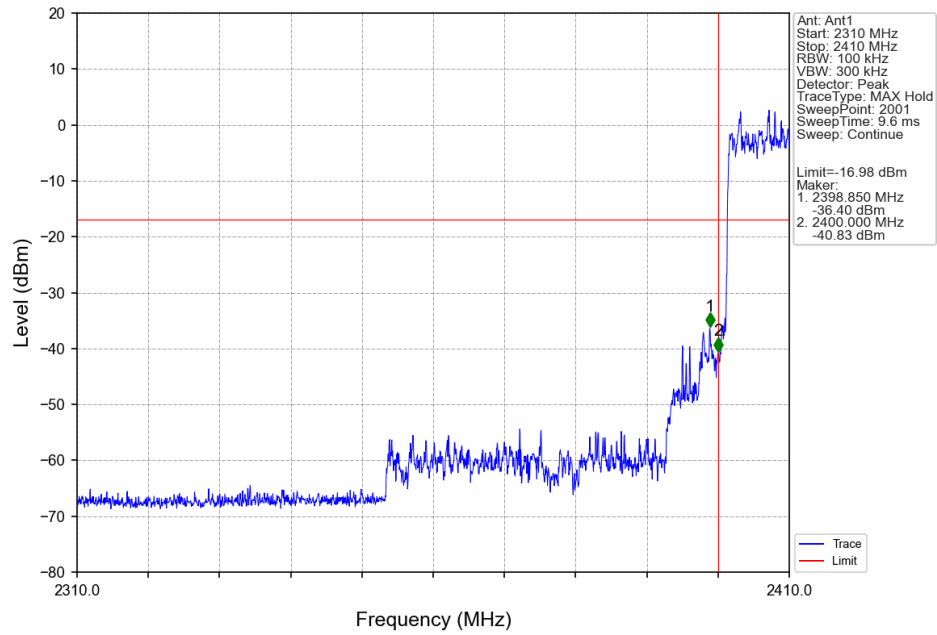


Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV





Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV

