# Appendix: Bluetooth Classic

# Content

# 1. Duty Cycle

## 1.1 Test Result

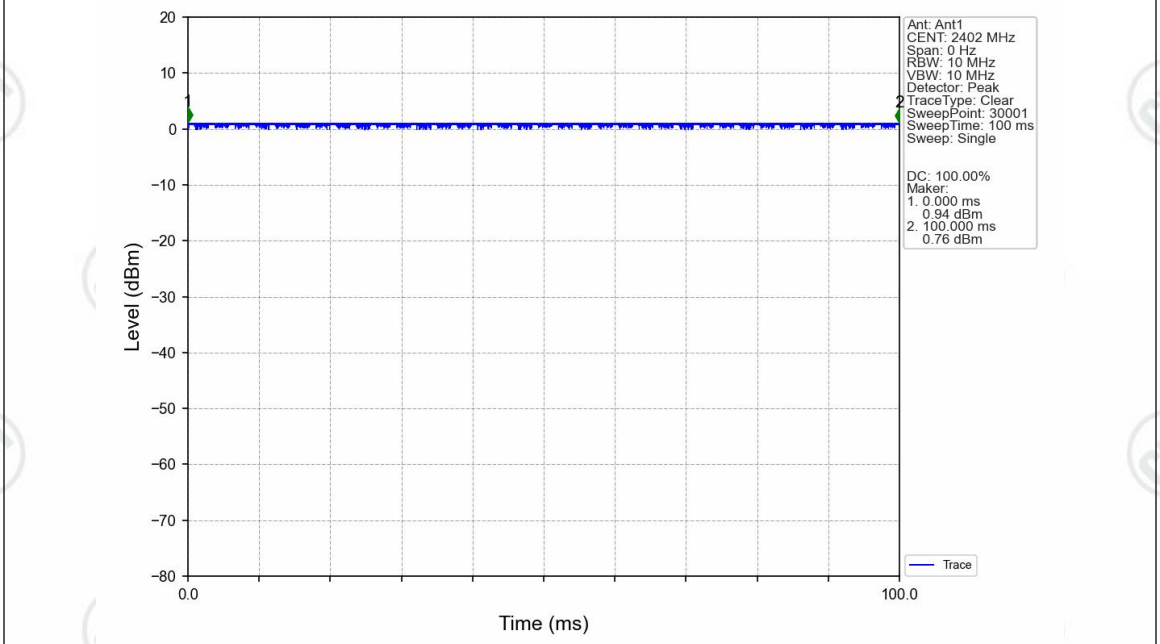
### 1.1.1 Ant1

| 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 | 100.000 | 100.000 | 100.00 | 0.00 | 0.00 |
| | | 2441 | DH5 | 100.000 | 100.000 | 100.00 | 0.00 | 0.00 |
| | | 2480 | DH5 | 100.000 | 100.000 | 100.00 | 0.00 | 0.00 |

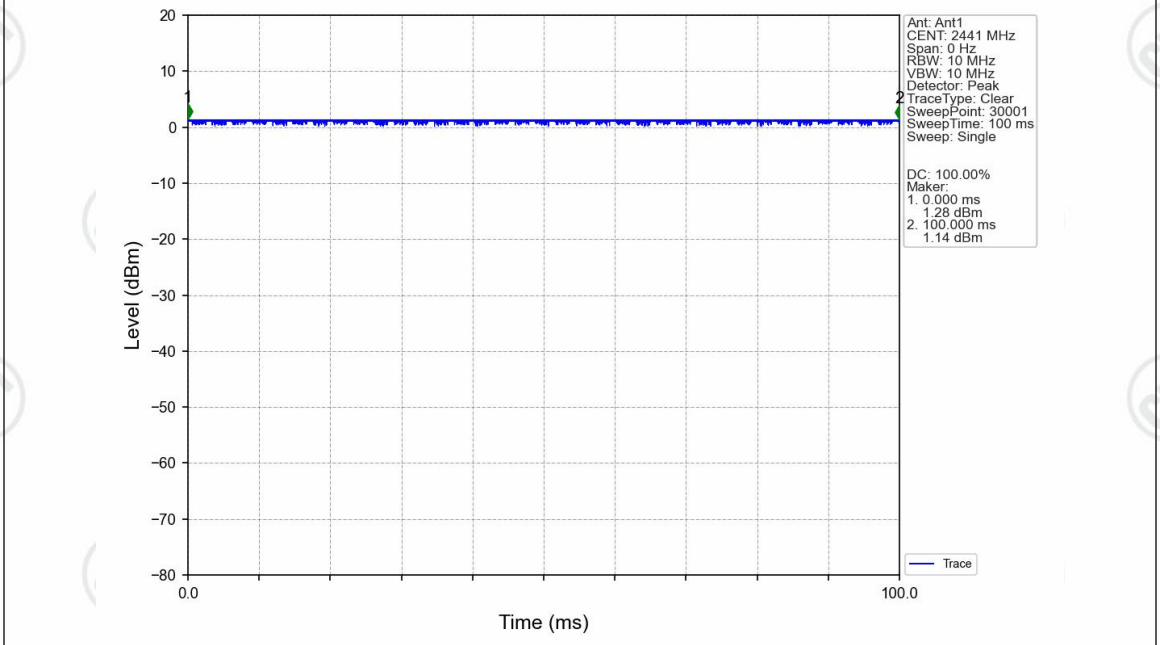
## 1.2 Test Graph

### 1.2.1 Ant1

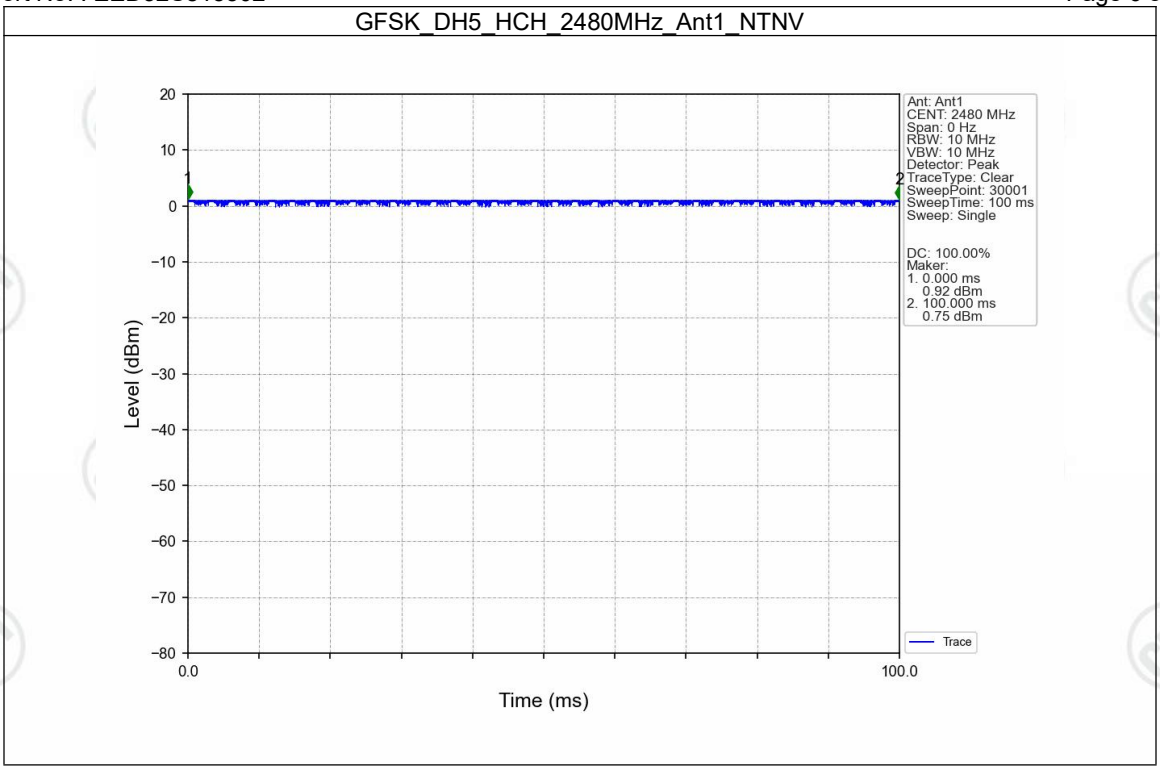
GFSK_DH5_LCH_2402MHz_Ant1_NTNV




GFSK_DH5_MCH_2441MHz_Ant1_NTNV



GFSK_DH5_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 | 0.875 | / | Pass |
| | | 2441 | DH5 | 1 | 0.884 | / | Pass |
| | | 2480 | DH5 | 1 | 0.884 | / | Pass |

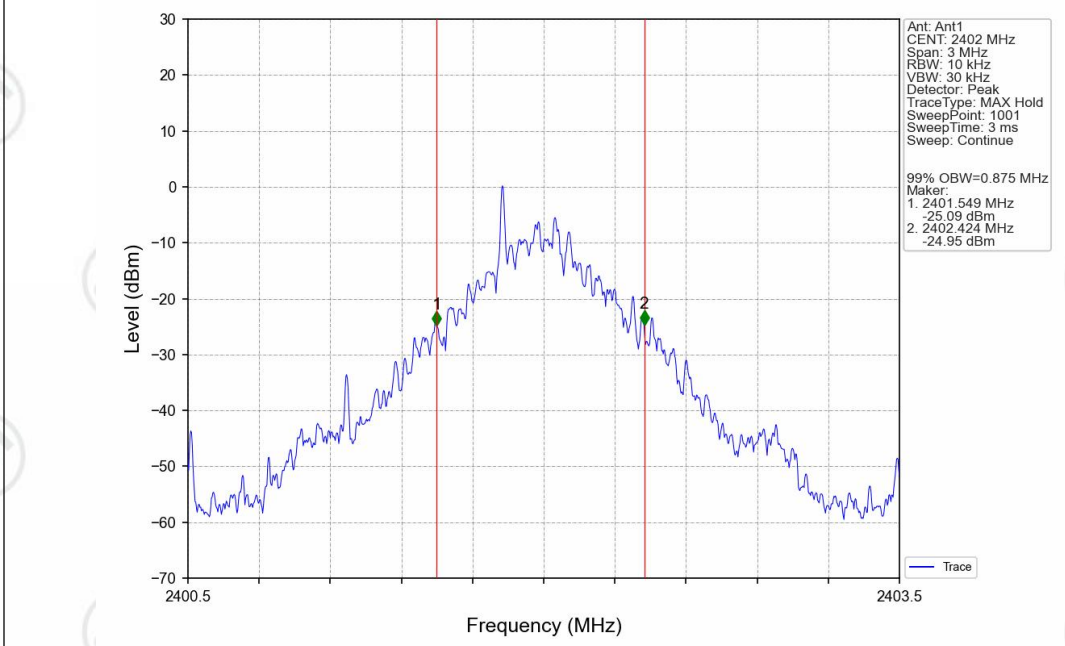
### 2.1.2 20dB BW

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | 20dB Bandwidth (MHz) | | Verdict |
|---|---|---|---|---|---|---|---|
| | | | | | Result | Limit | |
| GFSK | SISO | 2402 | DH5 | 1 | 0.702 | / | Pass |
| | | 2441 | DH5 | 1 | 0.701 | / | Pass |
| | | 2480 | DH5 | 1 | 0.702 | / | Pass |

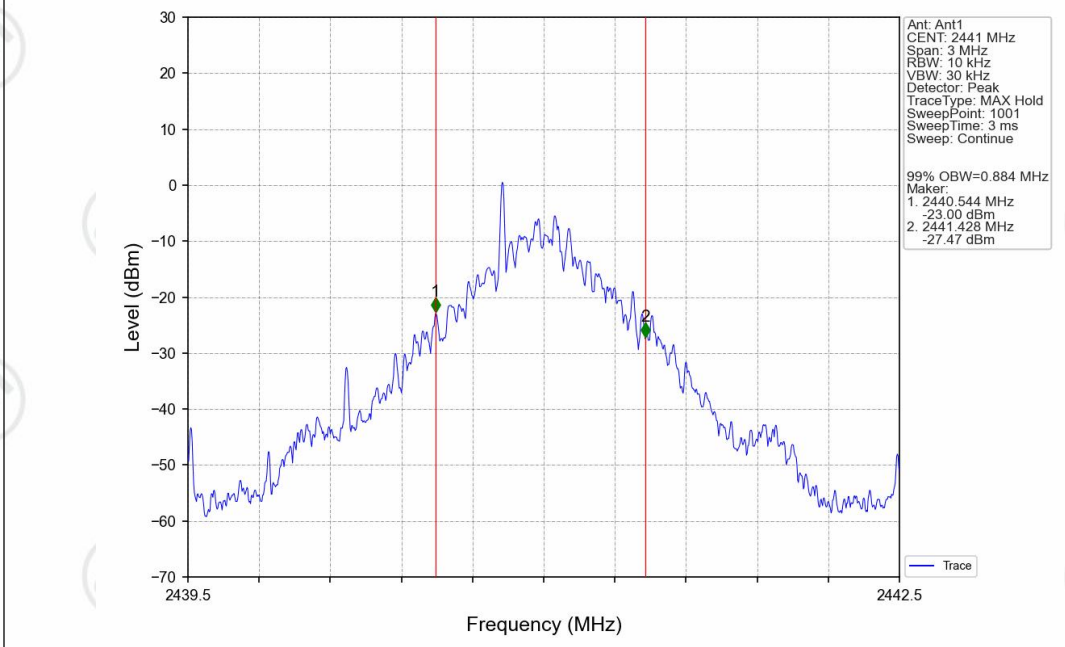
## 2.2 Test Graph

### 2.2.1 OBW

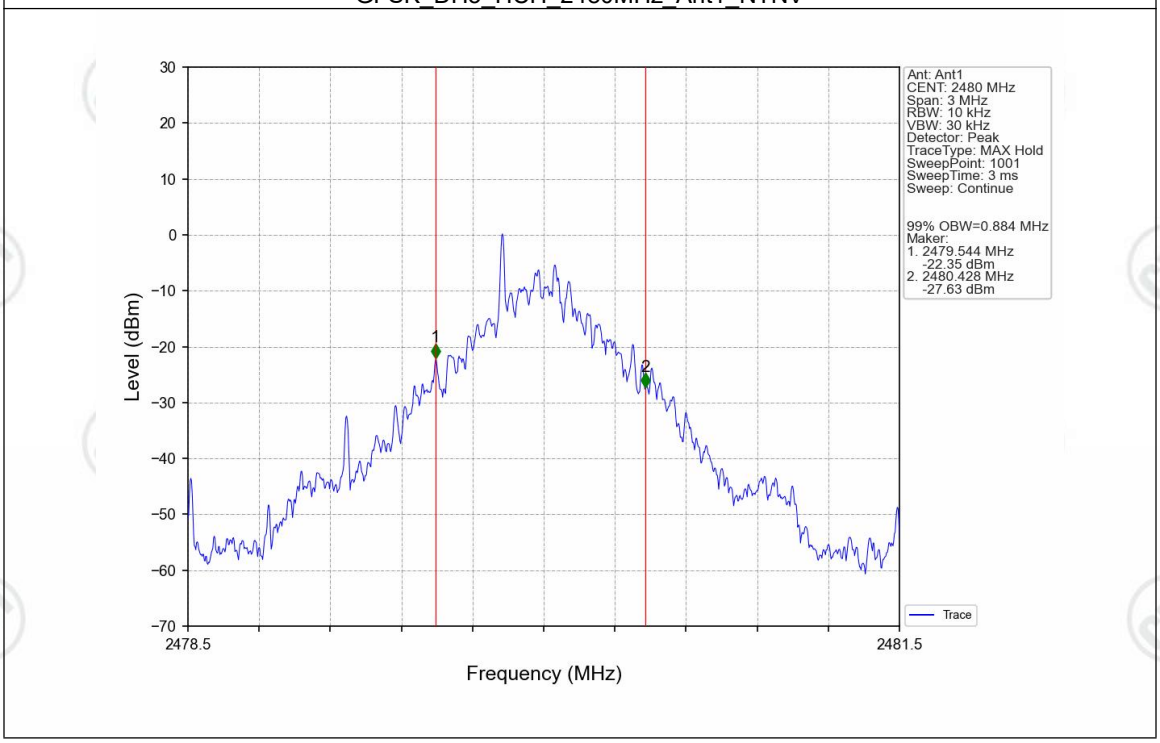
GFSK_DH5_LCH_2402MHz_Ant1_NTNV




GFSK_DH5_MCH_2441MHz_Ant1_NTNV

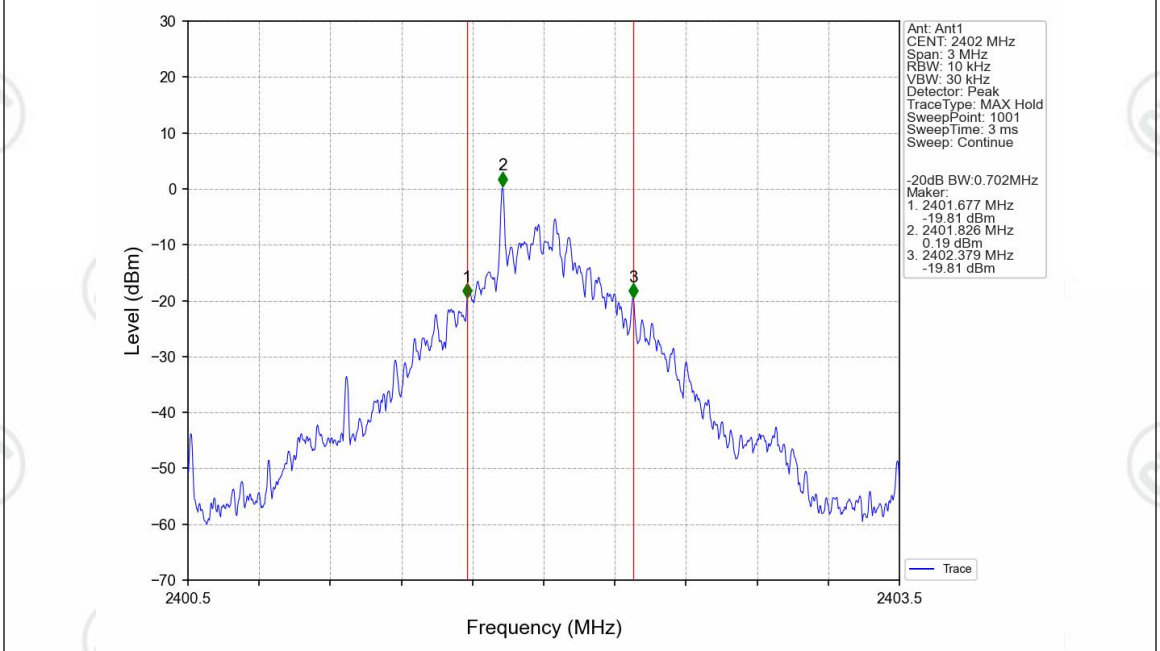


GFSK_DH5_HCH_2480MHz_Ant1_NTNV

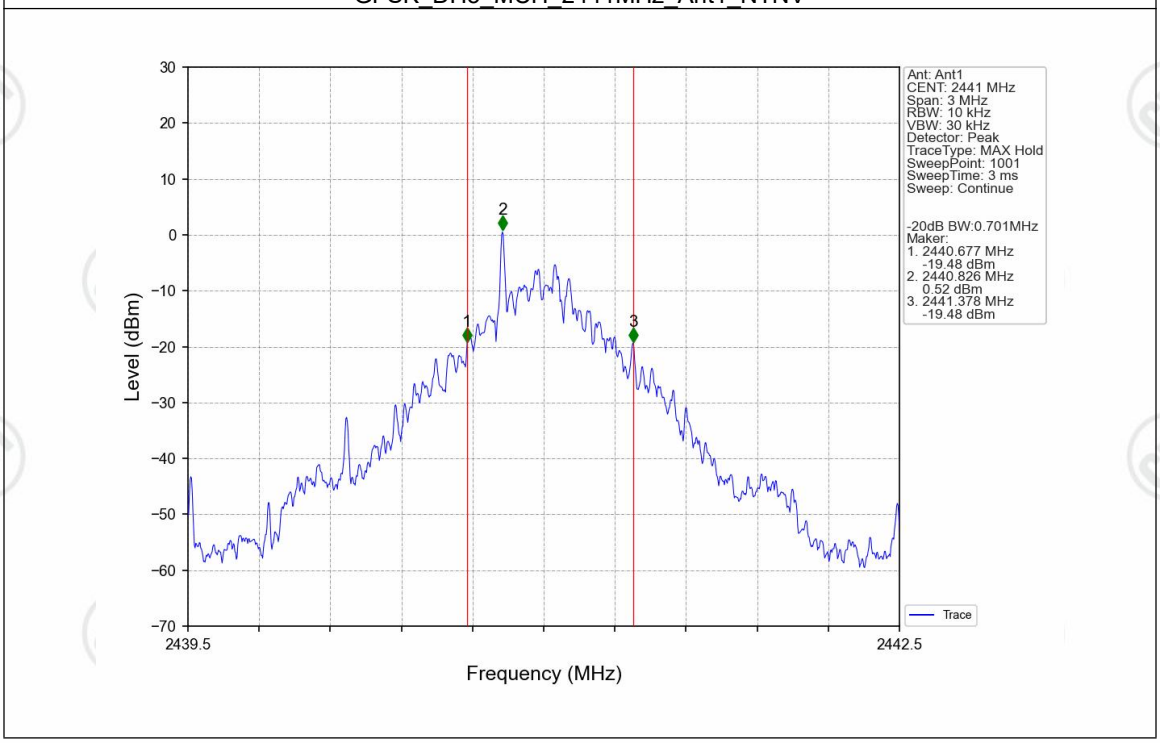


### 2.2.2 20dB BW

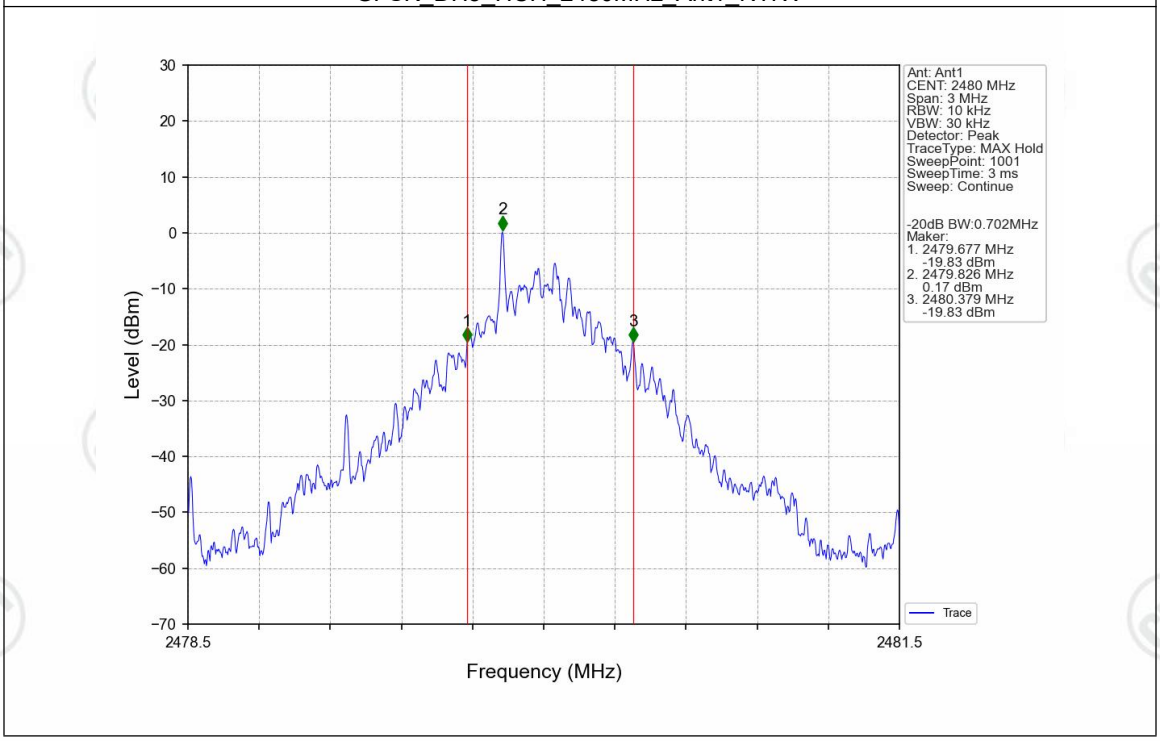
GFSK_DH5_LCH_2402MHz_Ant1_NTNV




GFSK_DH5_MCH_2441MHz_Ant1_NTNV



GFSK_DH5_HCH_2480MHz_Ant1_NTNV



# 3. Maximum Conducted Output Power

## 3.1 Test Result

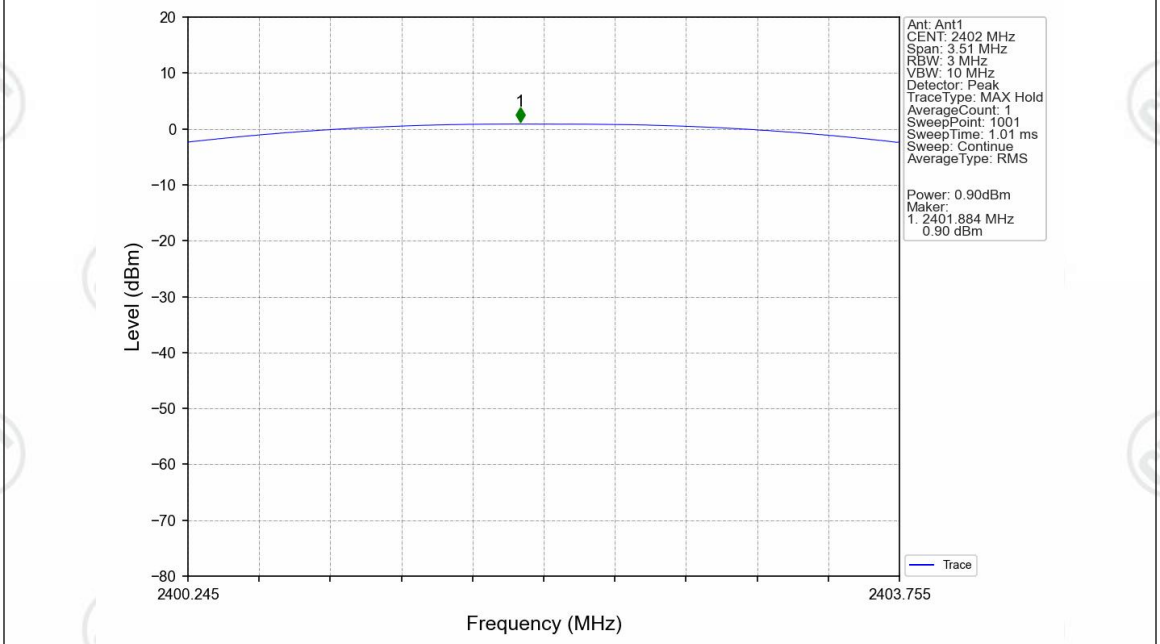
### 3.1.1 Power

| Mode | TX Type | Frequency (MHz) | Packet Type | Maximum Peak Conducted Output Power (dBm) | | Verdict |
|---|---|---|---|---|---|---|
| | | | | ANT1 | Limit | |
| GFSK | SISO | 2402 | DH5 | 0.90 | <=30 | Pass |
| | | 2441 | DH5 | 1.21 | <=30 | Pass |
| | | 2480 | DH5 | 0.87 | <=30 | Pass |
| Note1: Antenna Gain: Ant1: 2.58dBi; | | | | | | |

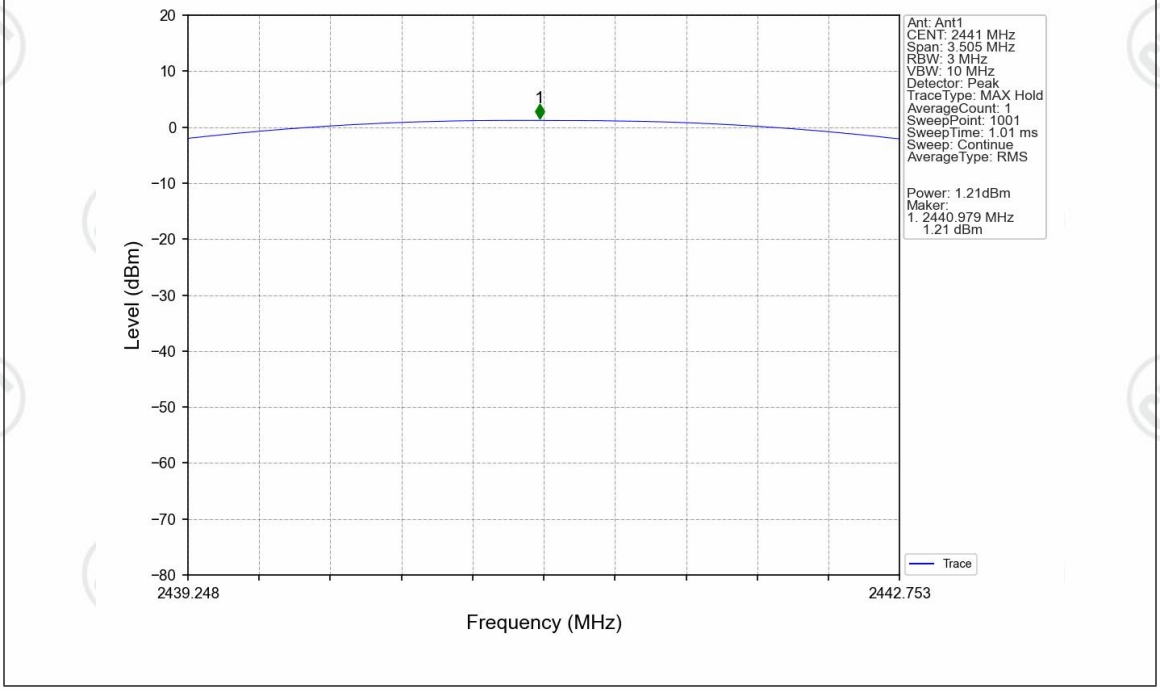
## 3.2 Test Graph

### 3.2.1 Power

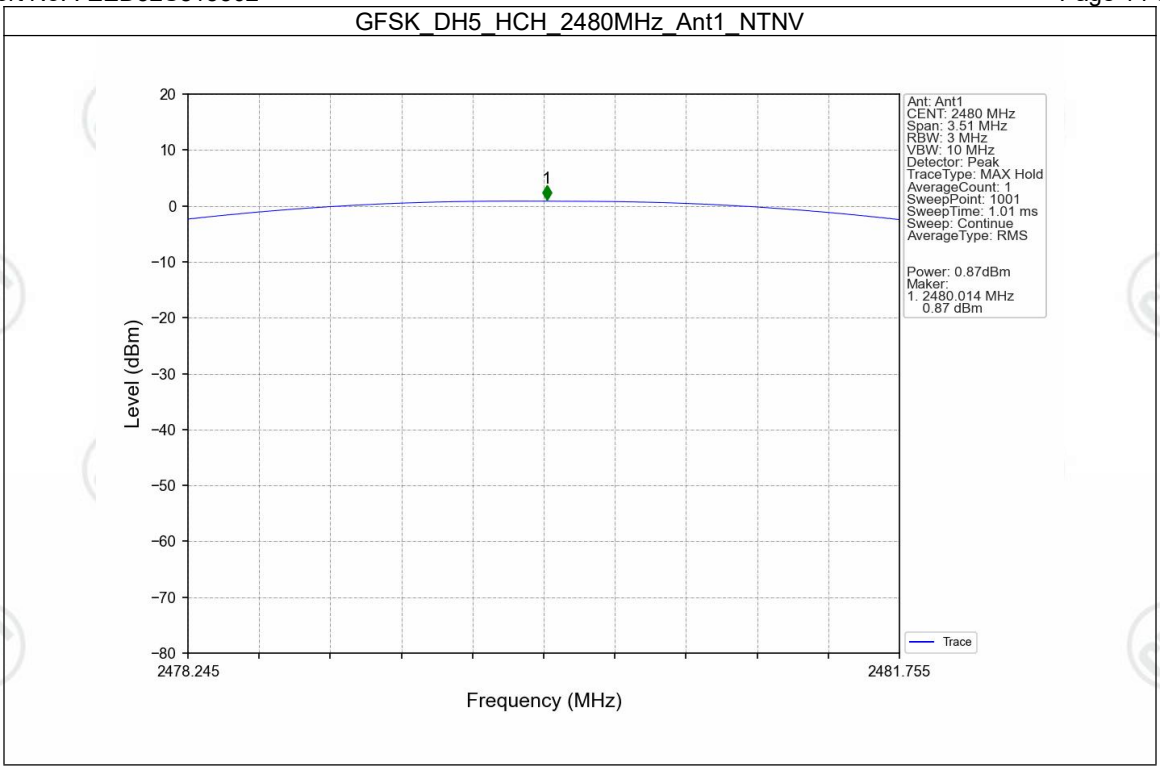
GFSK_DH5_LCH_2402MHz_Ant1_NTNV




GFSK_DH5_MCH_2441MHz_Ant1_NTNV



GFSK_DH5_HCH_2480MHz_Ant1_NTNV



# 4. Carrier Frequency Separation

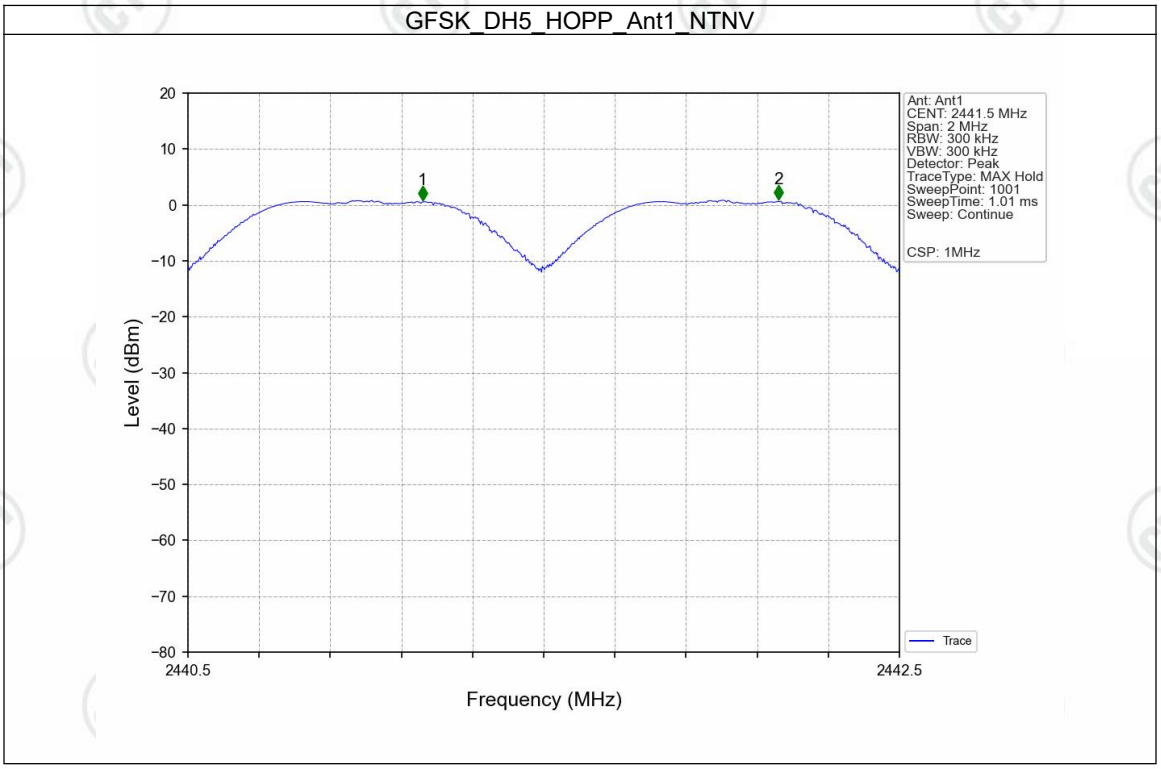
## 4.1 Test Result

### 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 | 1.000 | 0.702 | >=0.702 | Pass |

## 4.2 Test Graph

### 4.2.1 Ant1



# 5. Number of Hopping Frequencies

## 5.1 Test Result

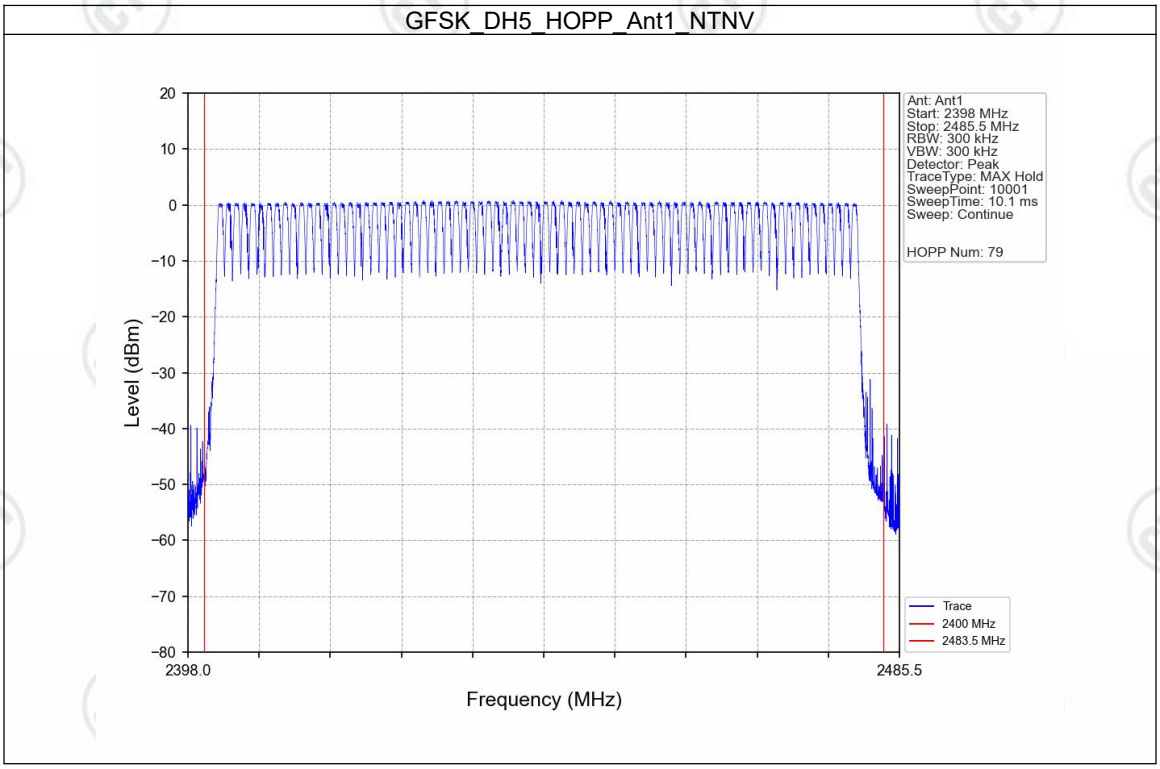
### 5.1.1 HoppNum

| Mode | TX Type | Frequency (MHz) | Packet Type | Num of Hopping Frequencies | | Verdict |
|---|---|---|---|---|---|---|
| | | | | ANT1 | Limit | |
| GFSK | SISO | HOPP | DH5 | 79 | >=15 | Pass |

## 5.2 Test Graph

### 5.2.1 HoppNum

GFSK_DH5_HOPP_Ant1_NTNV



# 6. Time of Occupancy (Dwell Time)

## 6.1 Test Result

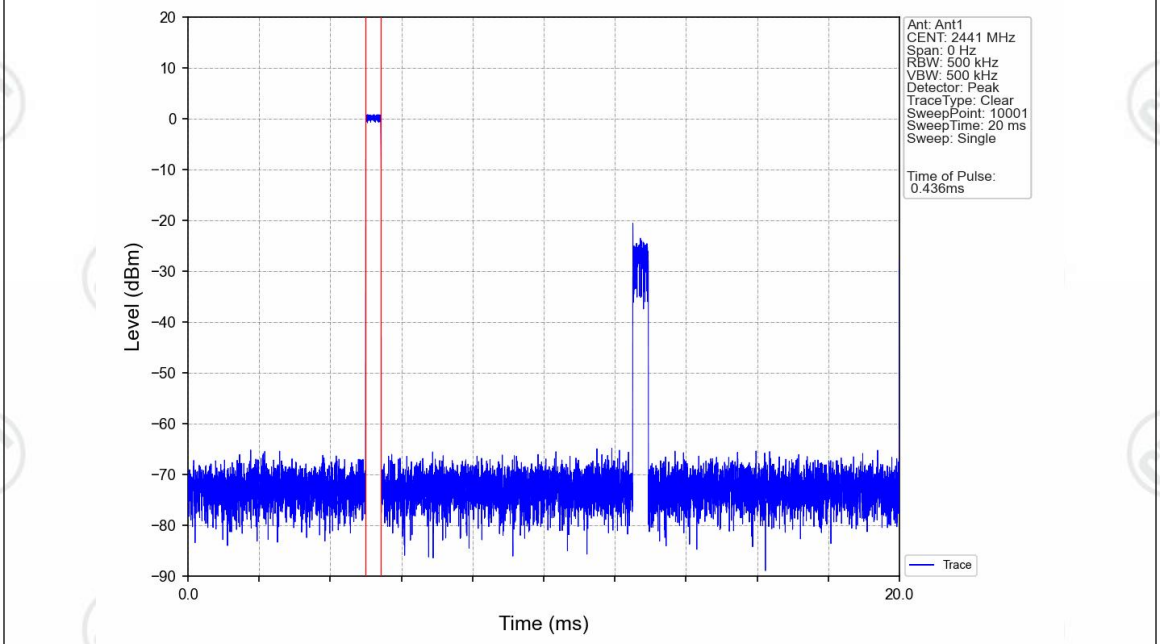
### 6.1.1 Ant1

| 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 | DH1 | 0.436 | 31.600 | 53 | 23.108 | <=400 | Pass |
| | | | DH3 | 1.634 | 31.600 | 45 | 73.530 | <=400 | Pass |
| | | | DH5 | 2.836 | 31.600 | 40 | 113.440 | <=400 | Pass |

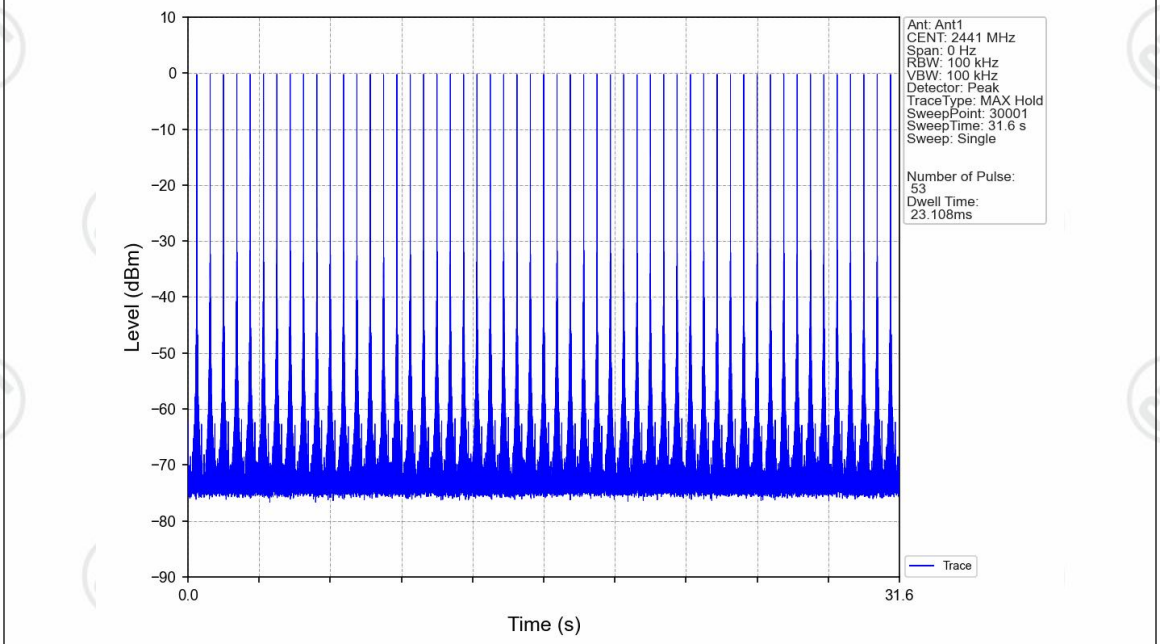
## 6.2 Test Graph

### 6.2.1 Ant1

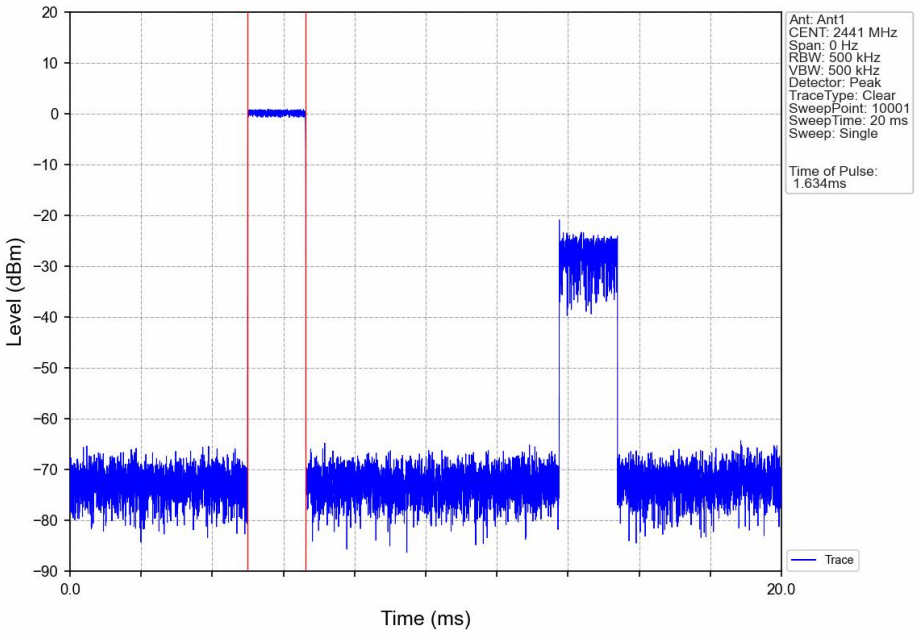
GFSK_DH1_HOPP_Ant1_NTNV



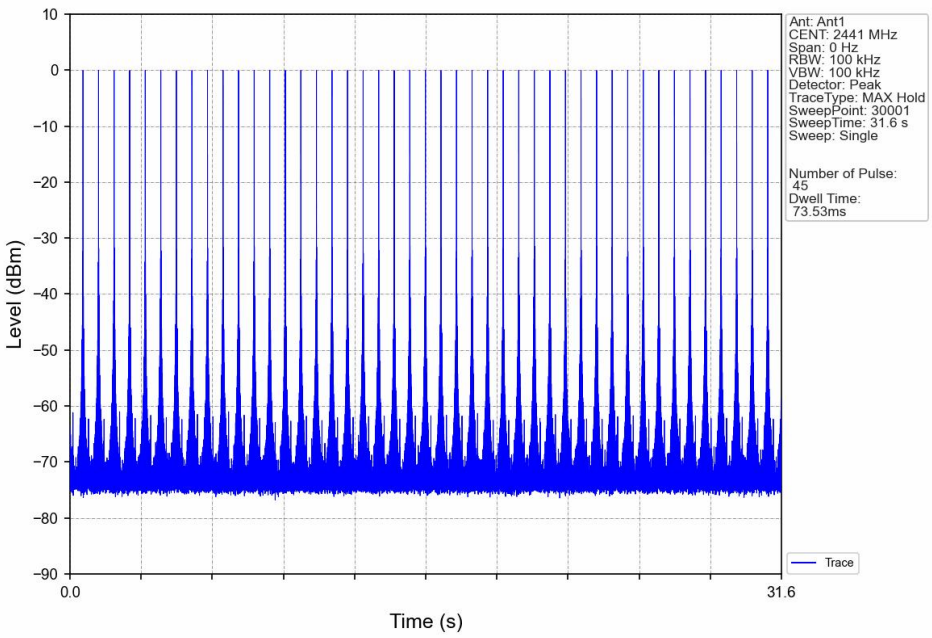

GFSK_DH1_HOPP_Ant1_NTNV



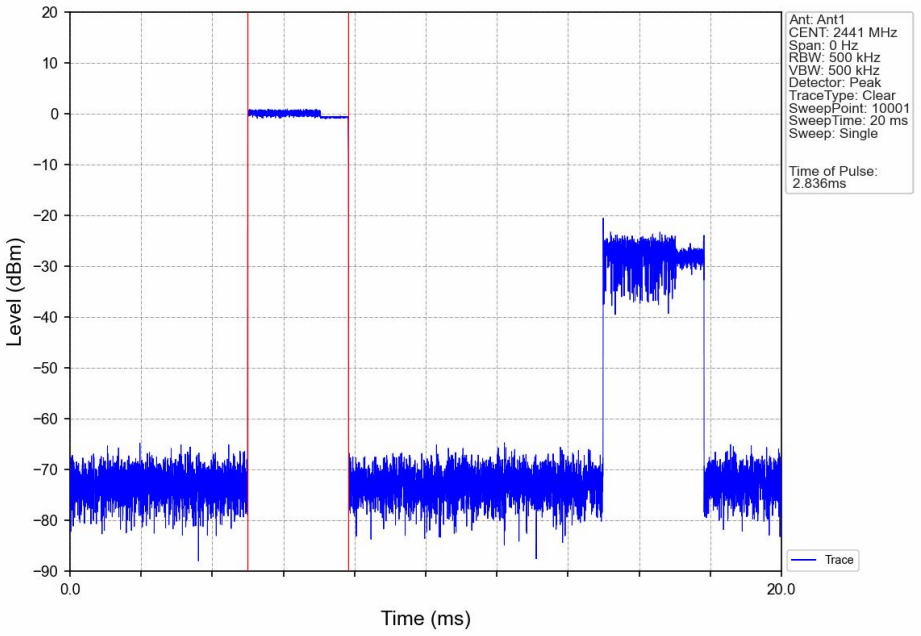
GFSK_DH3_HOPP_Ant1_NTNV



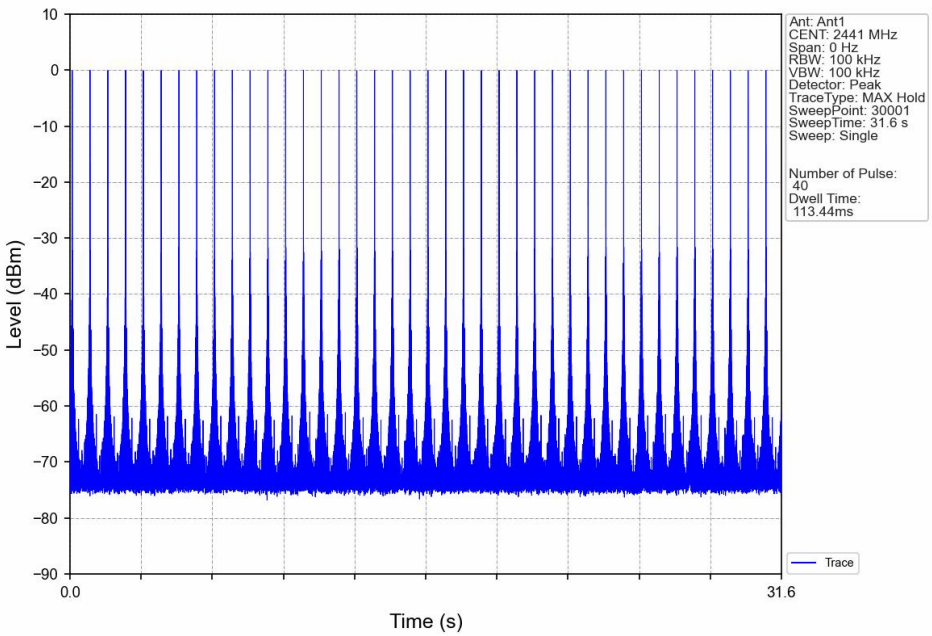

GFSK_DH3_HOPP_Ant1_NTNV



GFSK_DH5_HOPP_Ant1_NTNV




GFSK_DH5_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 | 0.09 |
| | | 2441 | DH5 | 1 | 0.42 |
| | | 2480 | DH5 | 1 | 0.07 |

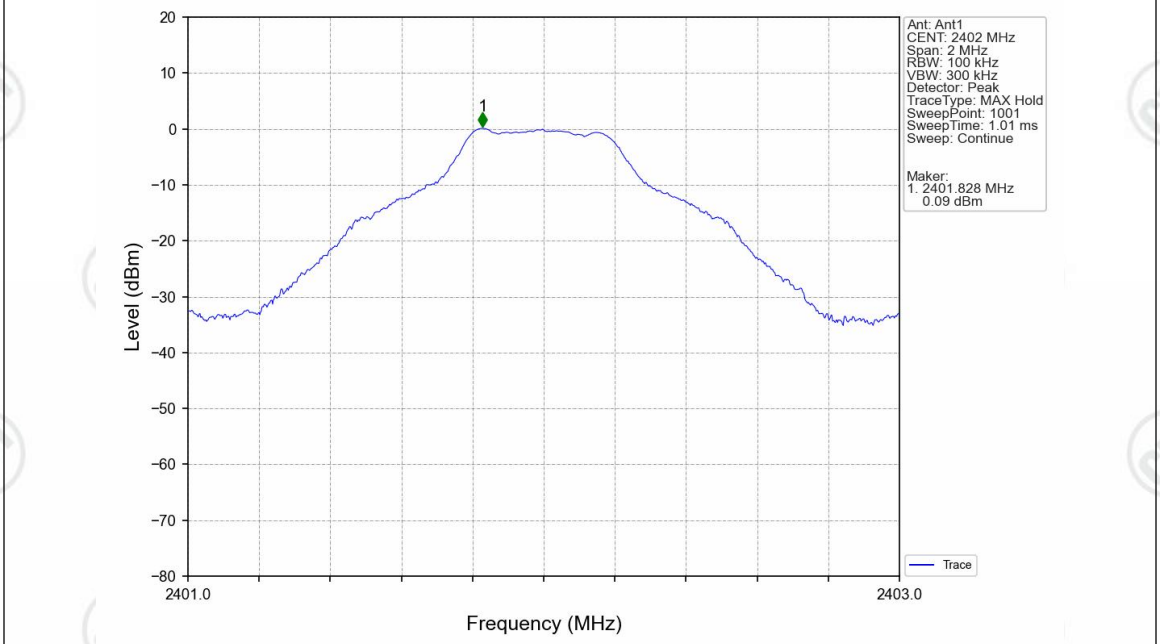
### 7.1.2 CSE

| Mode | TX Type | Frequency (MHz) | Packet Type | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|---|
| GFSK | SISO | 2402 | DH5 | 1 | 0.09 | -19.91 | Pass |
| | | 2441 | DH5 | 1 | 0.42 | -19.58 | Pass |
| | | 2480 | DH5 | 1 | 0.07 | -19.93 | Pass |
| | | HOPP | DH5 | 1 | 0.00 | -20.00 | Pass |
| | | | | | 0.00 | -20.00 | Pass |

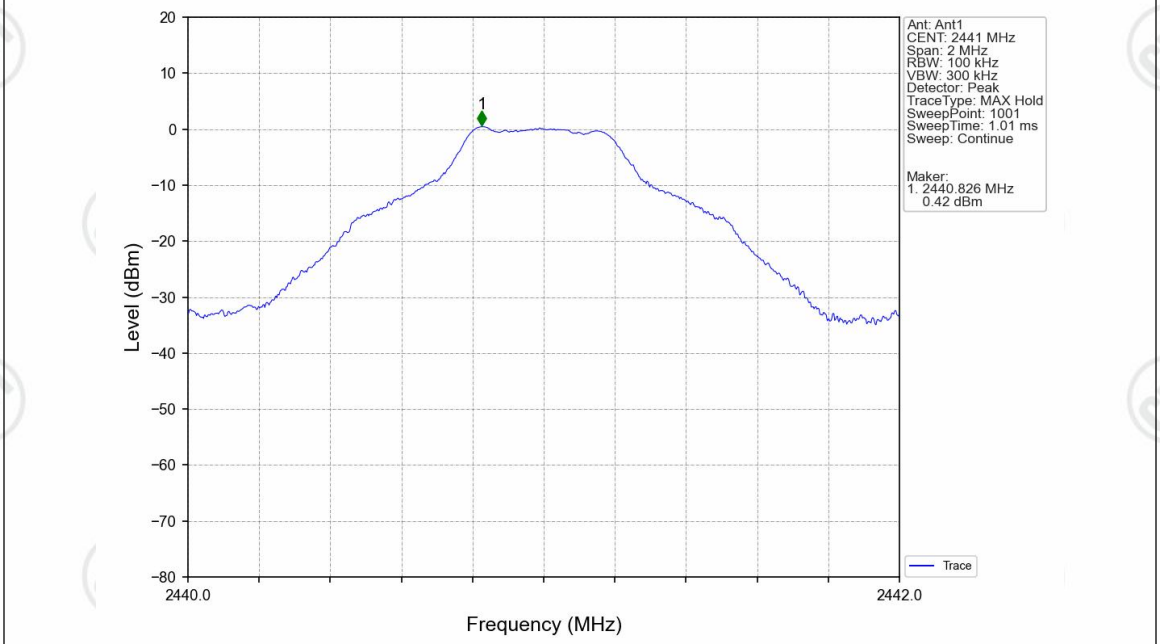
## 7.2 Test Graph

### 7.2.1 Ref

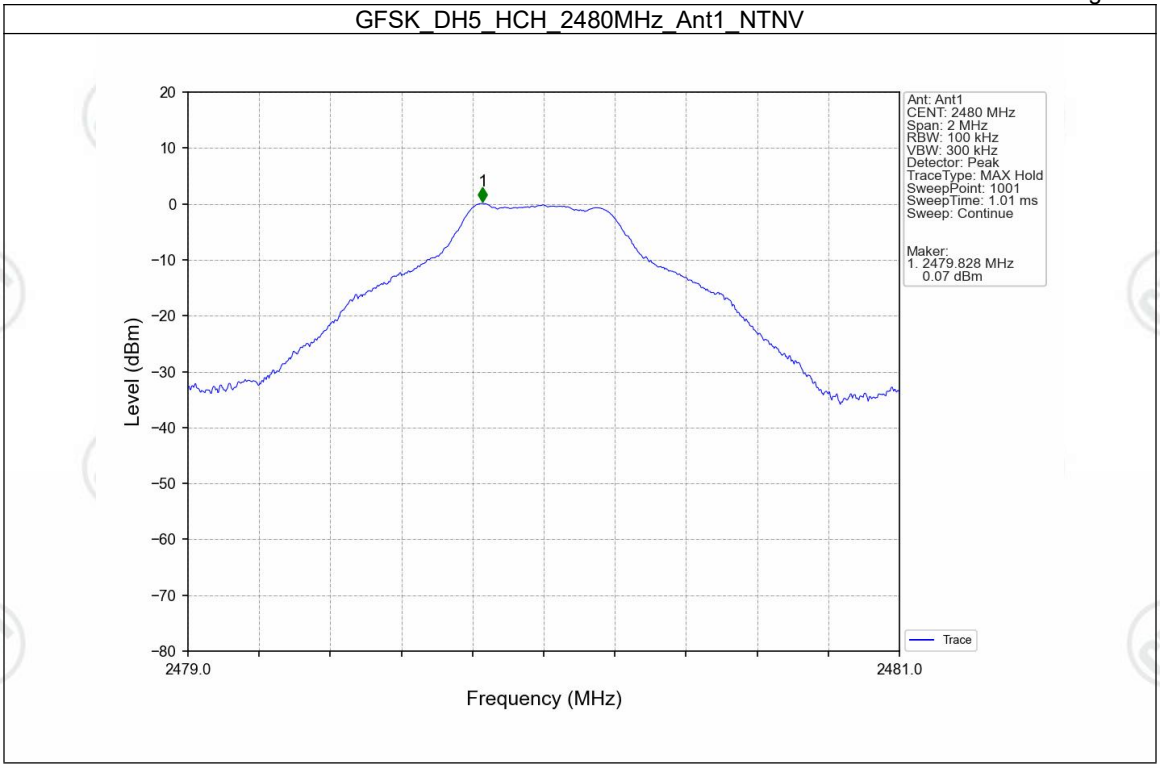
GFSK_DH5_LCH_2402MHz_Ant1_NTNV




GFSK_DH5_MCH_2441MHz_Ant1_NTNV

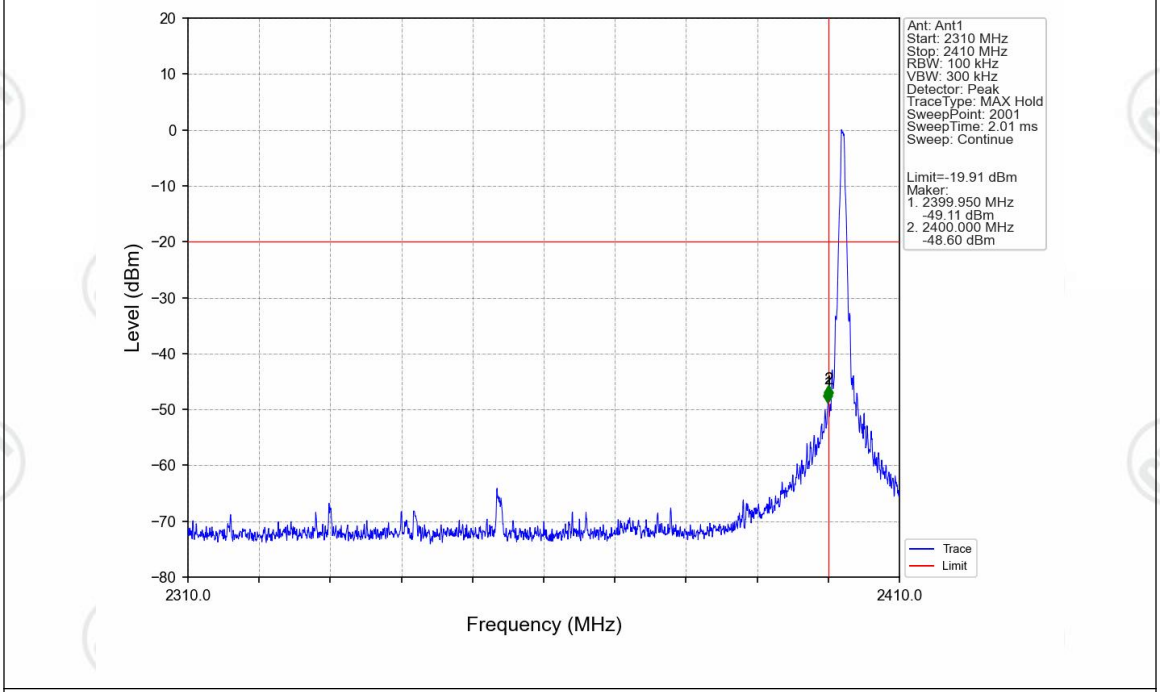


GFSK_DH5_HCH_2480MHz_Ant1_NTNV

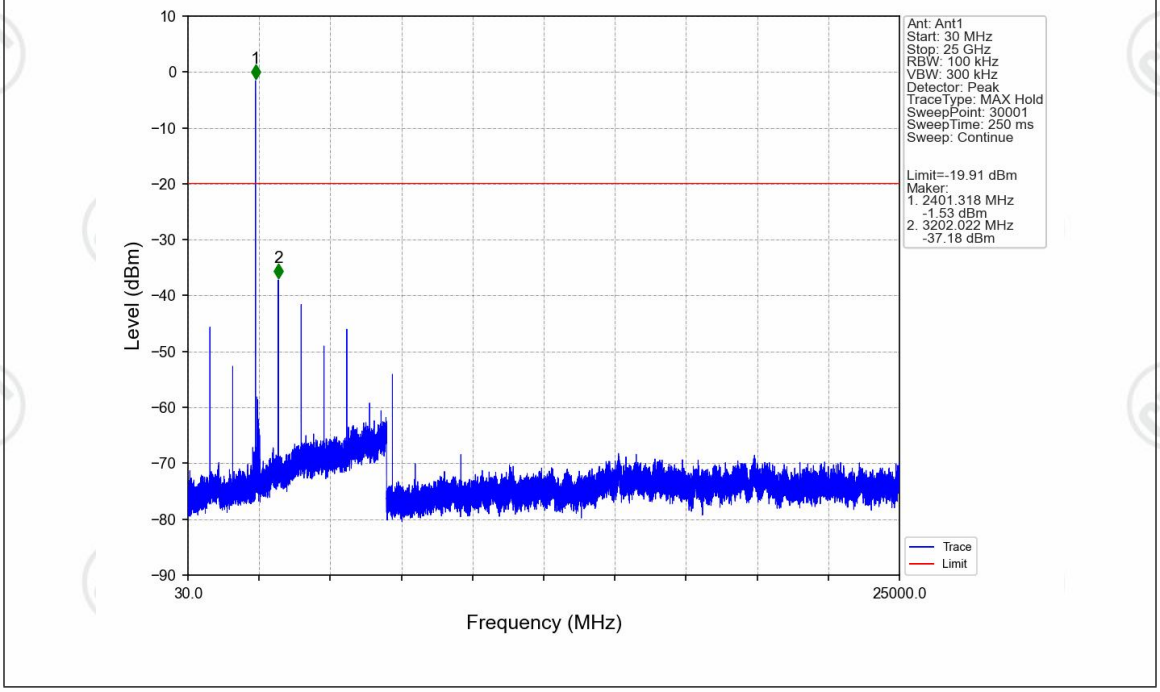


### 7.2.2 CSE

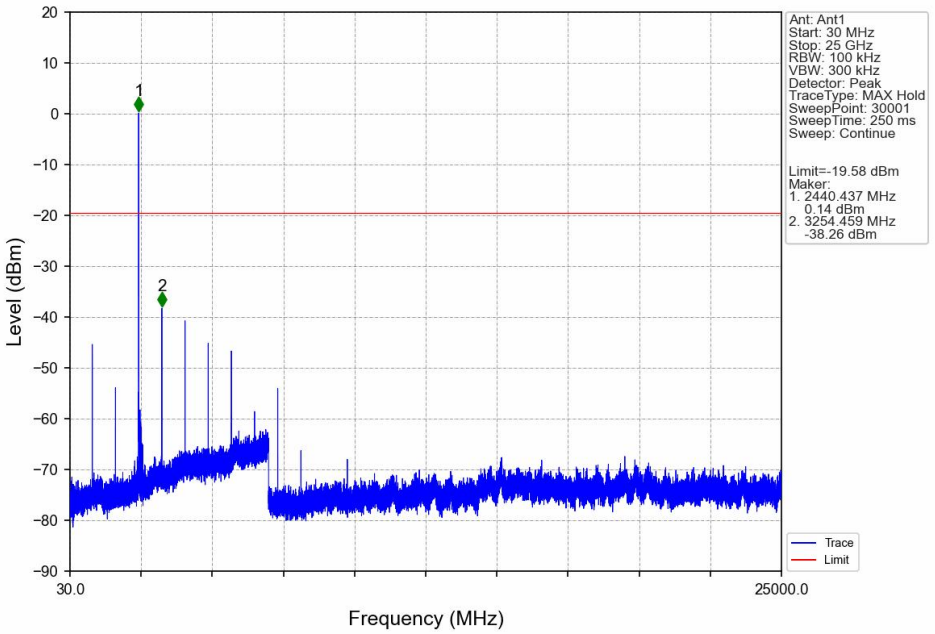
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



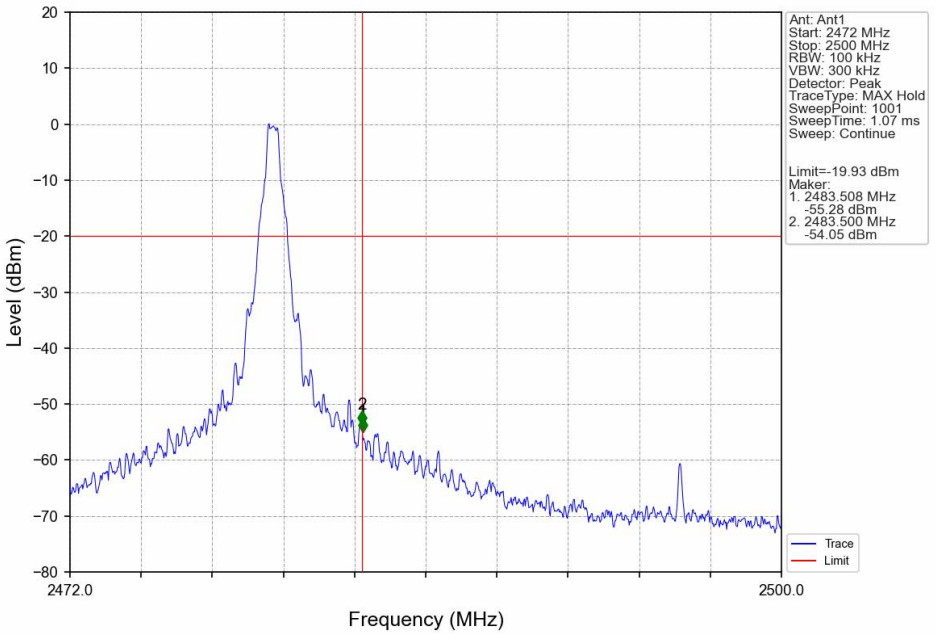

GFSK_DH5_LCH_2402MHz_Ant1_NTNV



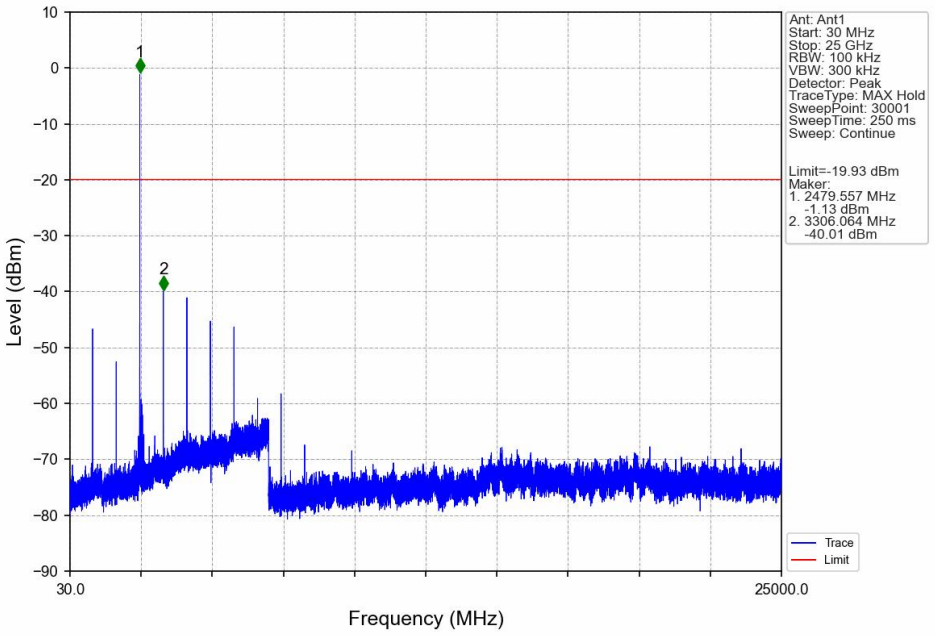
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



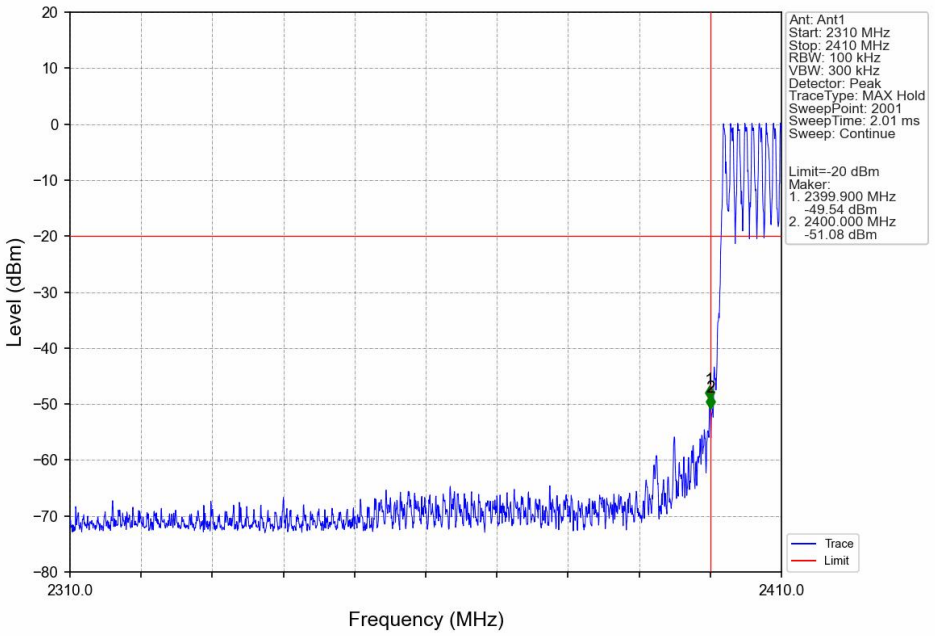

GFSK_DH5_HCH_2480MHz_Ant1_NTNV



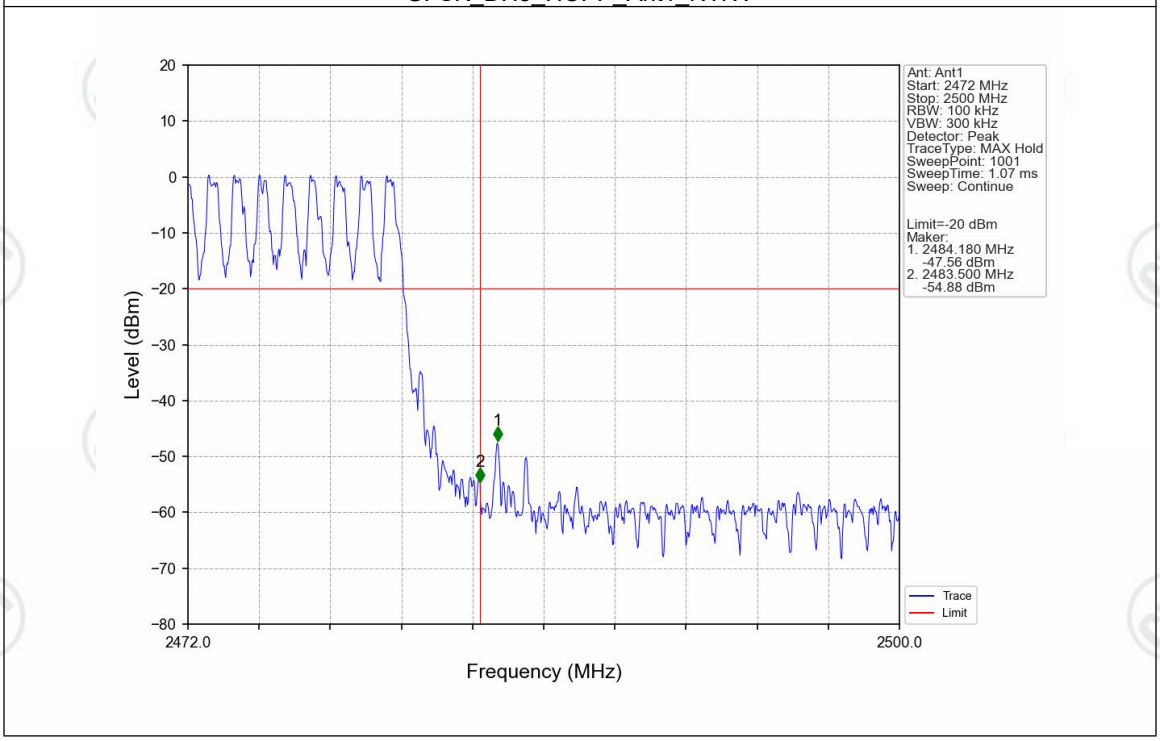
GFSK_DH5_HCH_2480MHz_Ant1_NTNV




GFSK_DH5_HOPP_Ant1_NTNV



GFSK_DH5_HOPP_Ant1_NTNV




*** End of Report ***