

# ANNEX TEST DATA WIFI2.4G

## FCC ID: 2A2F3-WCM-FWIP3PT-I

Applicant: QUNANJIE(HK) TRADING CO LIMITED

Address: ROOM H28G BLK EH 10TH FLOOR GOLDEN BEAR INDCTR6-82 CHAIWAN KOK ST  
TSUEN WAN NT, Hong Kong, China

Manufacturer: Telstar vietnam company limited

Address: Part of LOT CN-06, and CN-07, Van Trung Industrial Park, Nenh Ward, Bac Ninh Province  
Vietnam

Product Name: PT Indoor Camera

Trade Mark: 

Model Number: WCM-FWIP3PT-I-V2, CAM-FWIP3PT-IN

Date of Receipt: Sep. 14, 2026

Test Date: Sep. 14, 2026 - Sep. 22, 2026

Date of Report: Sep. 22, 2026

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1  
Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen,  
China

Applicable Standards: FCC PART 15 C 15.247  
ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024

Test Result: Pass

Report Number: DLE-260914005R

## 1. Duty Cycle

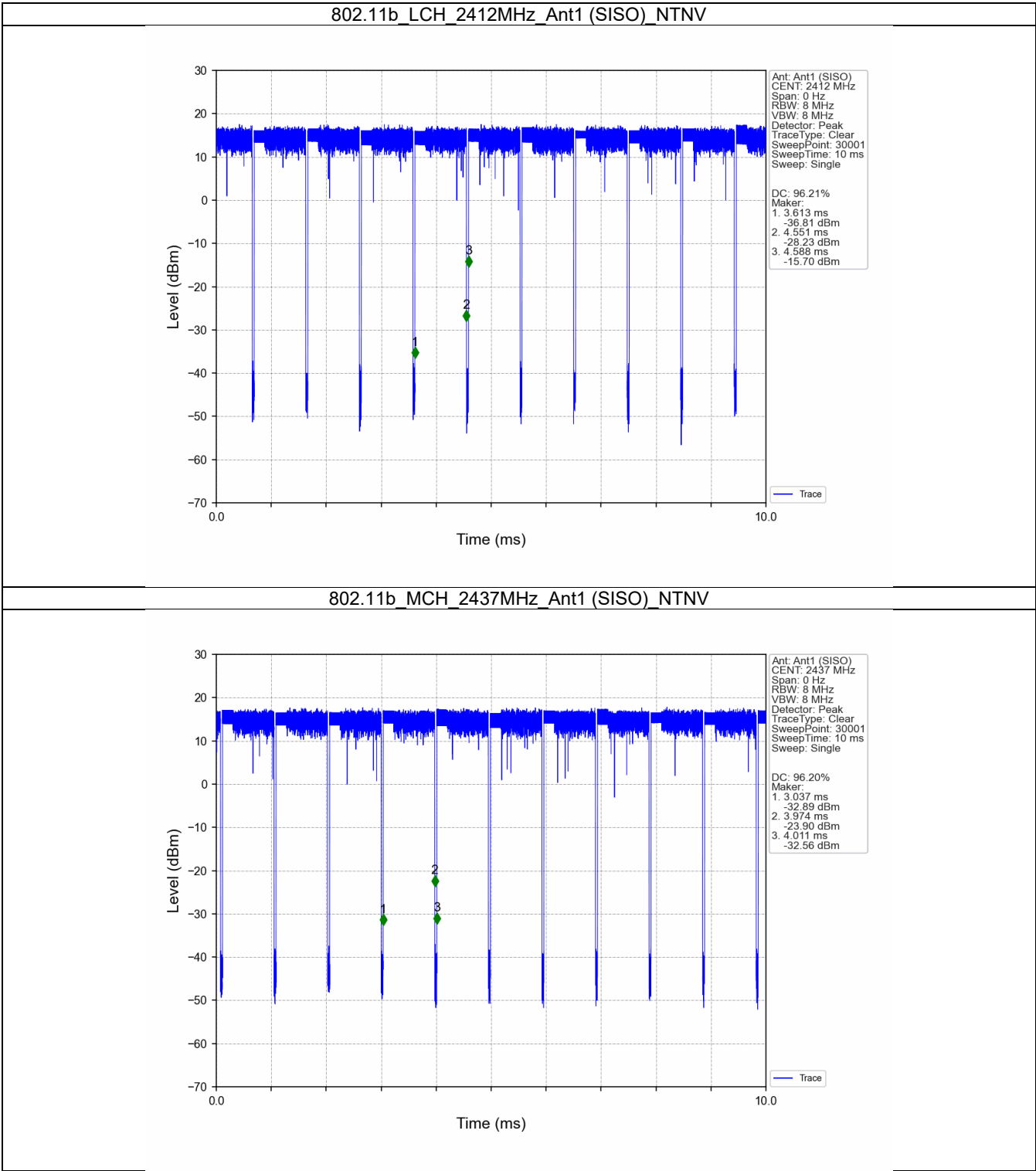
### 1.1 Test Result

#### 1.1.1 Ant1

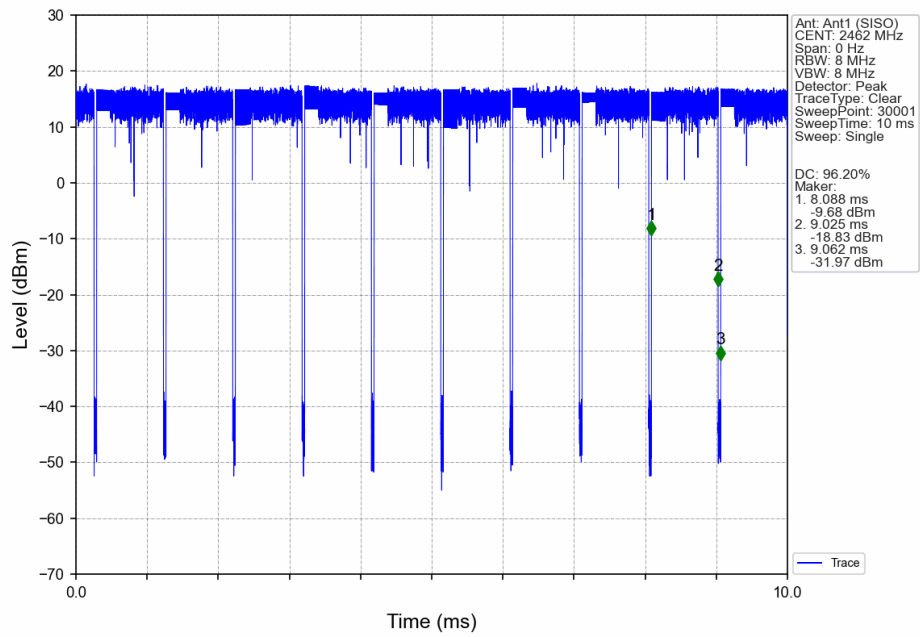
| Ant1           |         |                 |           |             |                |                                   |                       |
|----------------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode           | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| 802.11b        | SISO    | 2412            | 0.938     | 0.975       | 96.21          | 0.17                              | 0.03                  |
|                |         | 2437            | 0.937     | 0.974       | 96.20          | 0.17                              | 0.03                  |
|                |         | 2462            | 0.937     | 0.974       | 96.20          | 0.17                              | 0.03                  |
| 802.11g        | SISO    | 2412            | 0.153     | 0.196       | 78.06          | 1.08                              | 0.15                  |
|                |         | 2437            | 0.152     | 0.196       | 77.55          | 1.10                              | 0.10                  |
|                |         | 2462            | 0.153     | 0.197       | 77.66          | 1.10                              | 0.11                  |
| 802.11n (HT20) | SISO    | 2412            | 1.302     | 1.345       | 96.80          | 0.14                              | 0.10                  |
|                |         | 2437            | 0.164     | 0.209       | 78.47          | 1.05                              | 0.07                  |
|                |         | 2462            | 0.166     | 0.209       | 79.43          | 1.00                              | 0.19                  |
| 802.11n (HT40) | SISO    | 2422            | 0.100     | 0.144       | 69.44          | 1.58                              | 0.09                  |
|                |         | 2437            | 0.101     | 0.145       | 69.66          | 1.57                              | 0.04                  |
|                |         | 2452            | 0.100     | 0.144       | 69.44          | 1.58                              | 0.05                  |

# 1.2 Test Graph

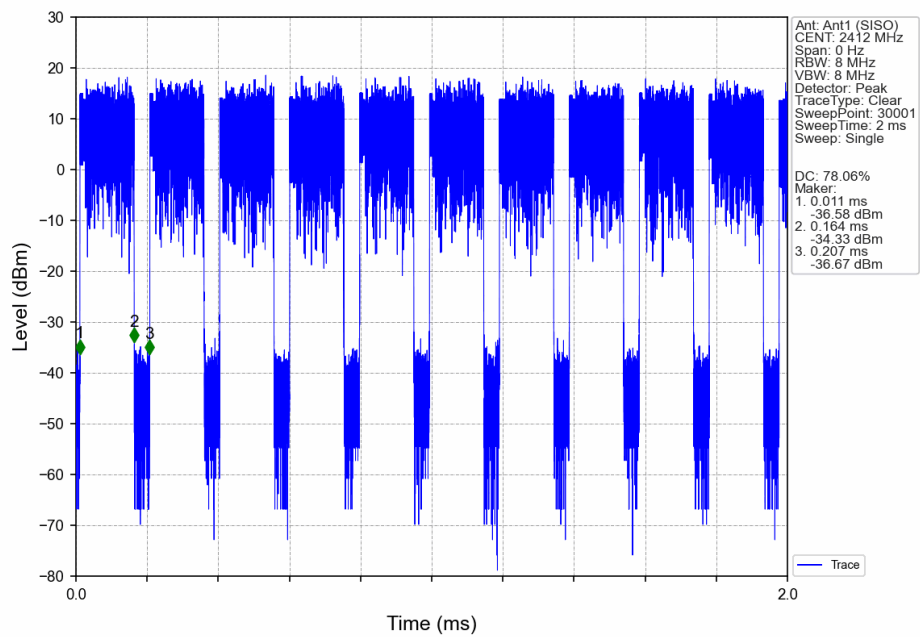
## 1.2.1 Ant1



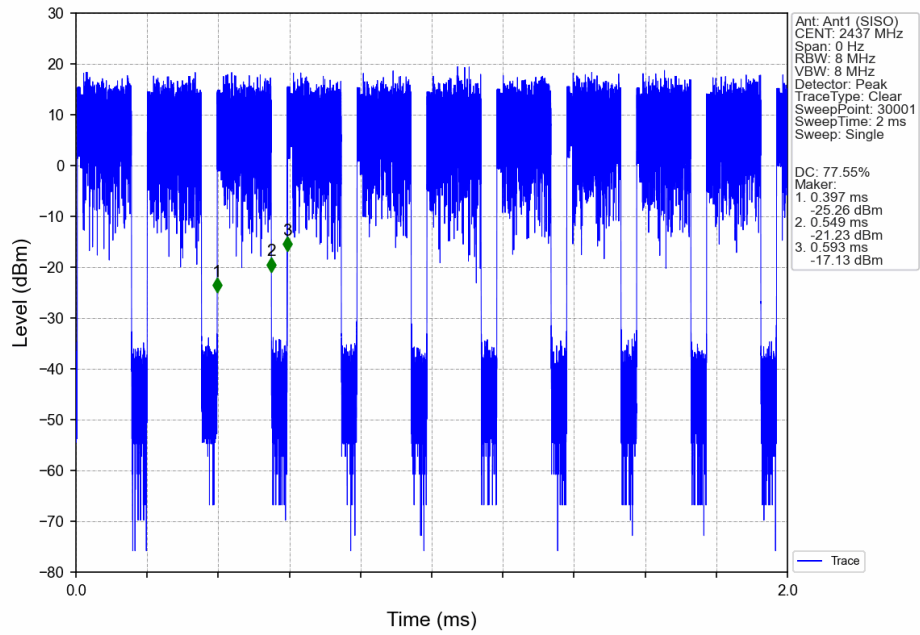
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



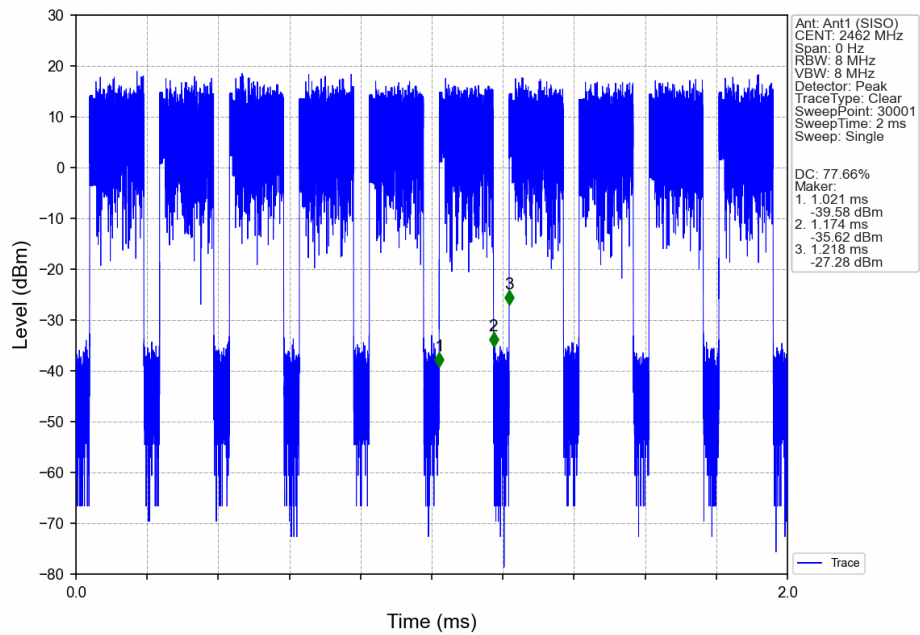
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



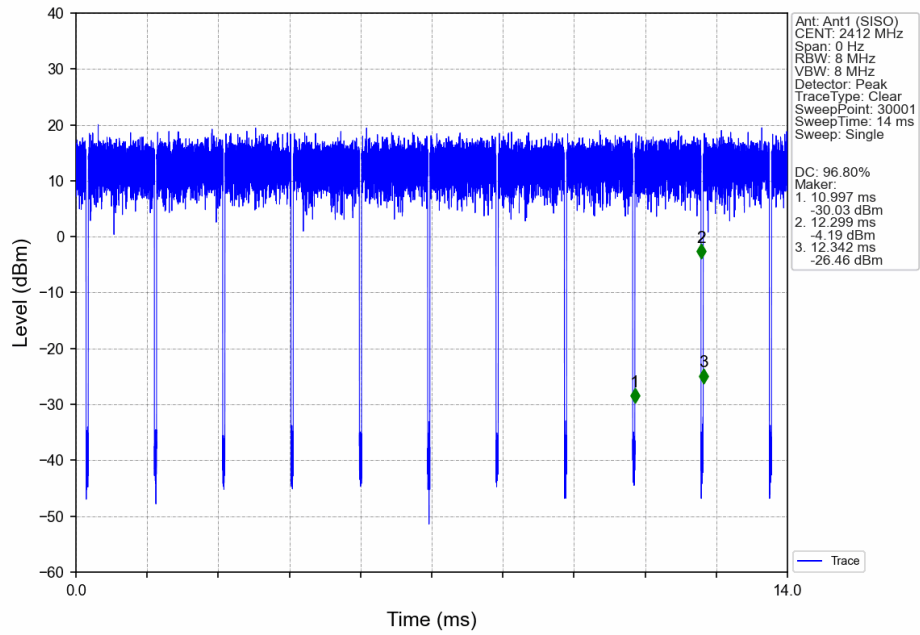
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



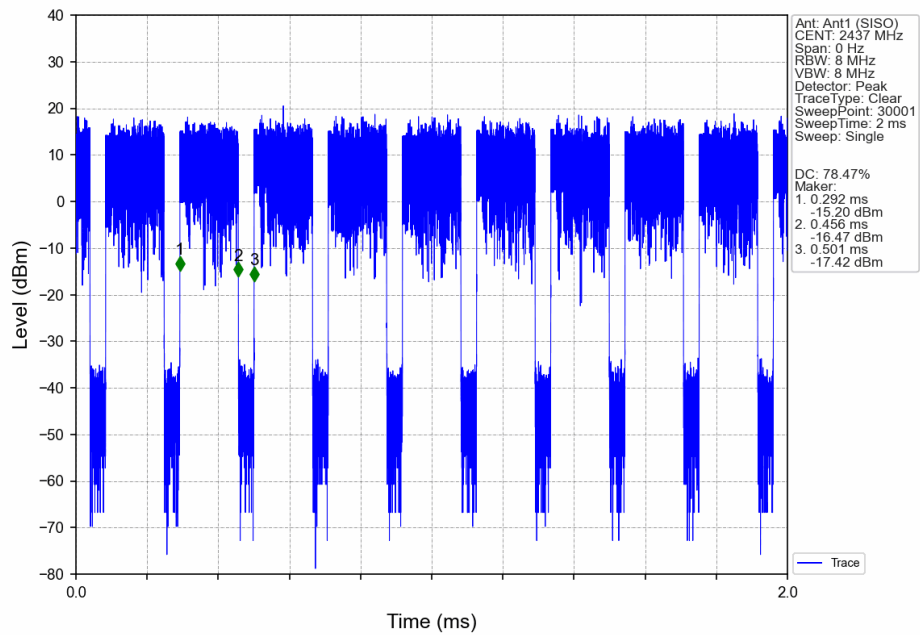
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



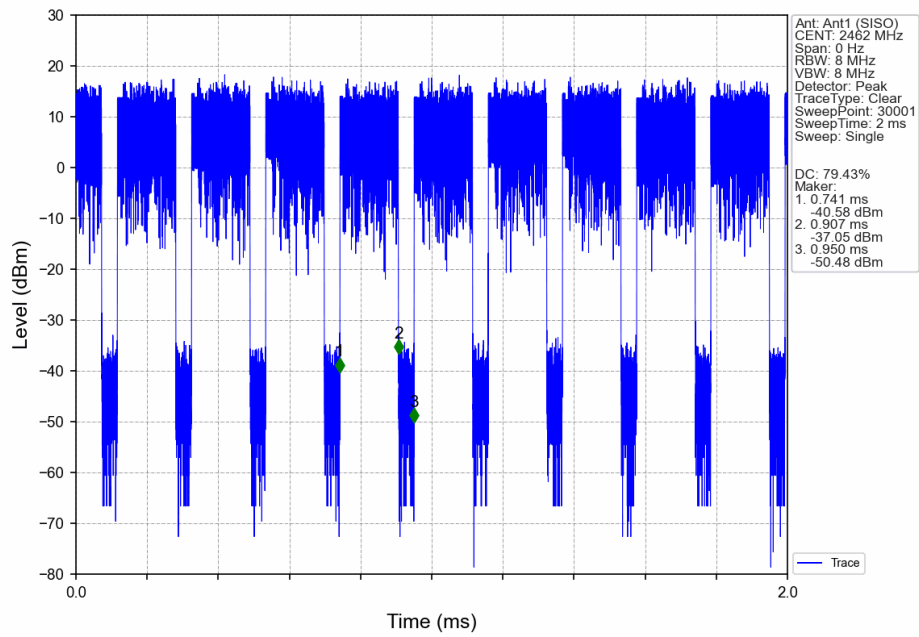
# 802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



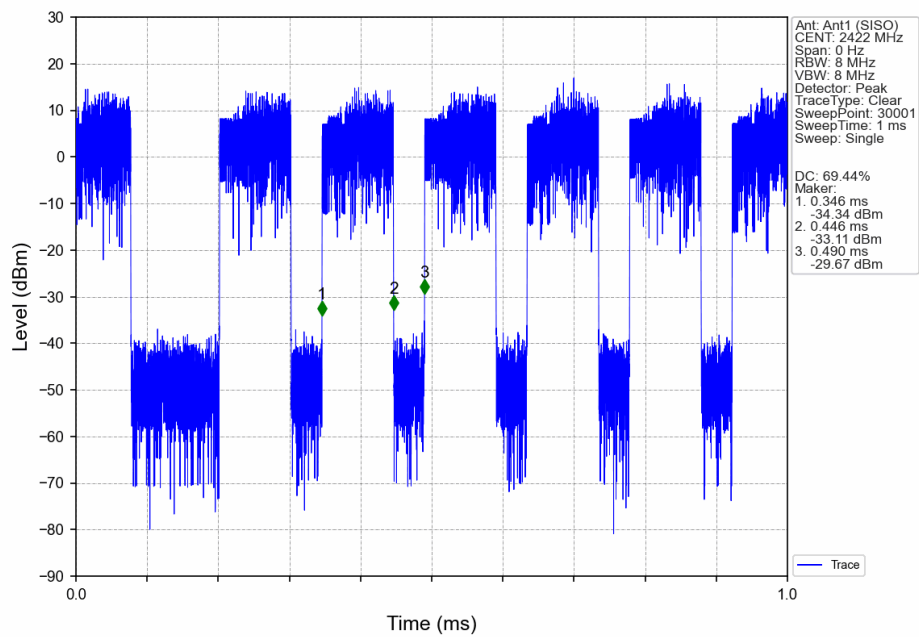
# 802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



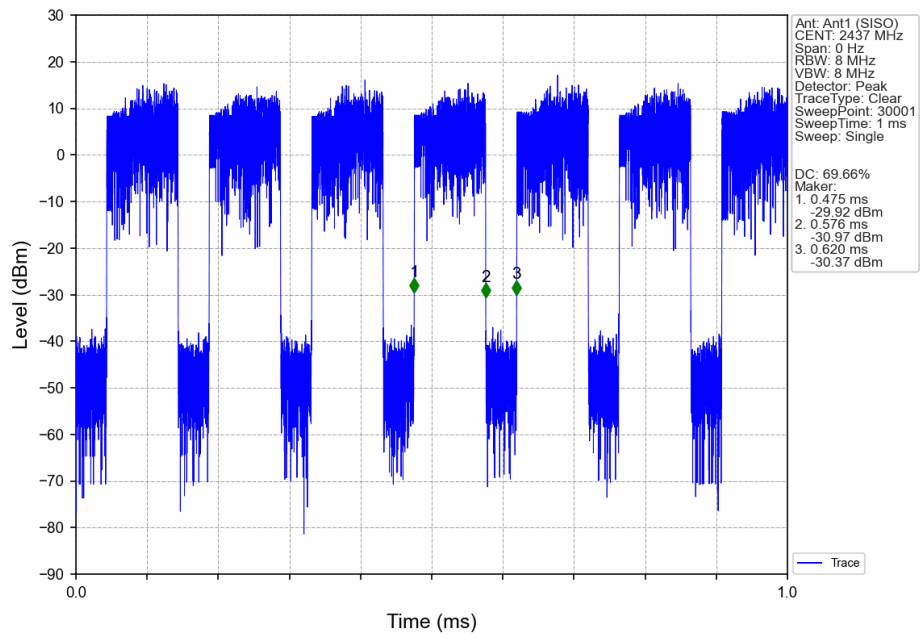
# 802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTV



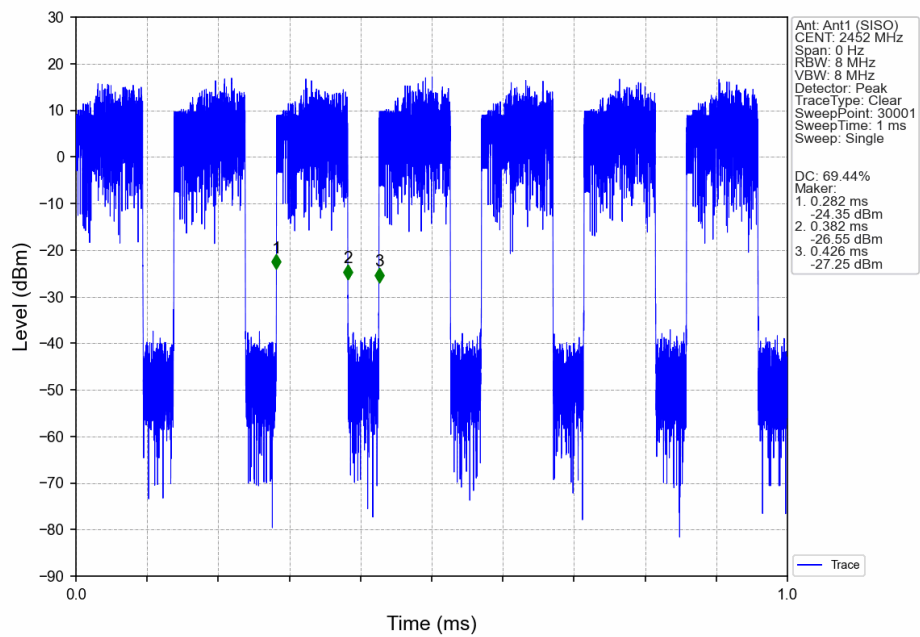
# 802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTV



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV



## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

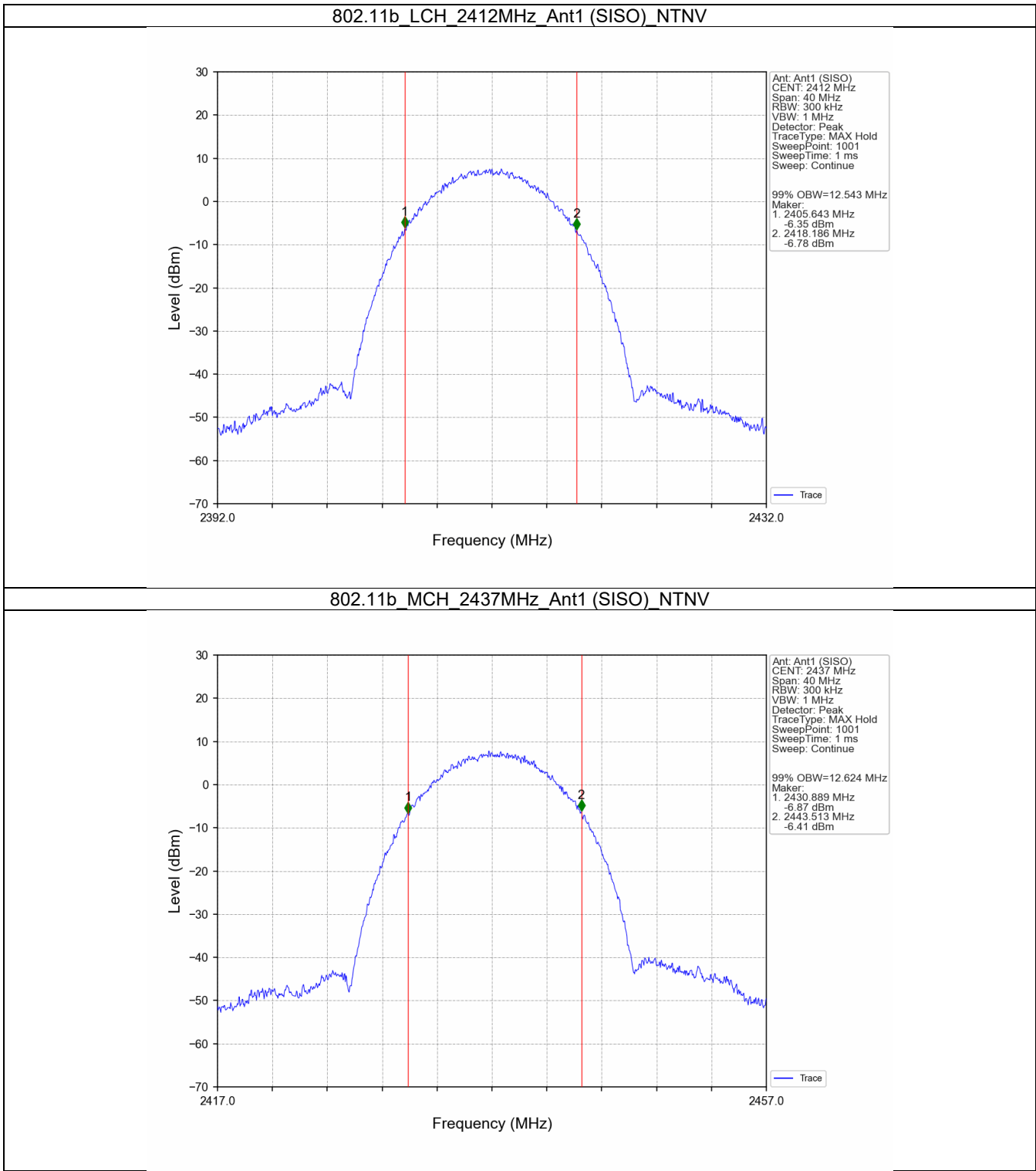
| Mode           | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|----------------|---------|-----------------|-----|------------------------------|-------|---------|
|                |         |                 |     | Result                       | Limit |         |
| 802.11b        | SISO    | 2412            | 1   | 12.543                       | /     | Pass    |
|                |         | 2437            | 1   | 12.624                       | /     | Pass    |
|                |         | 2462            | 1   | 12.681                       | /     | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.637                       | /     | Pass    |
|                |         | 2437            | 1   | 17.725                       | /     | Pass    |
|                |         | 2462            | 1   | 17.685                       | /     | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 17.688                       | /     | Pass    |
|                |         | 2437            | 1   | 17.663                       | /     | Pass    |
|                |         | 2462            | 1   | 17.714                       | /     | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 36.578                       | /     | Pass    |
|                |         | 2437            | 1   | 36.345                       | /     | Pass    |
|                |         | 2452            | 1   | 35.791                       | /     | Pass    |

#### 2.1.2 6dB BW

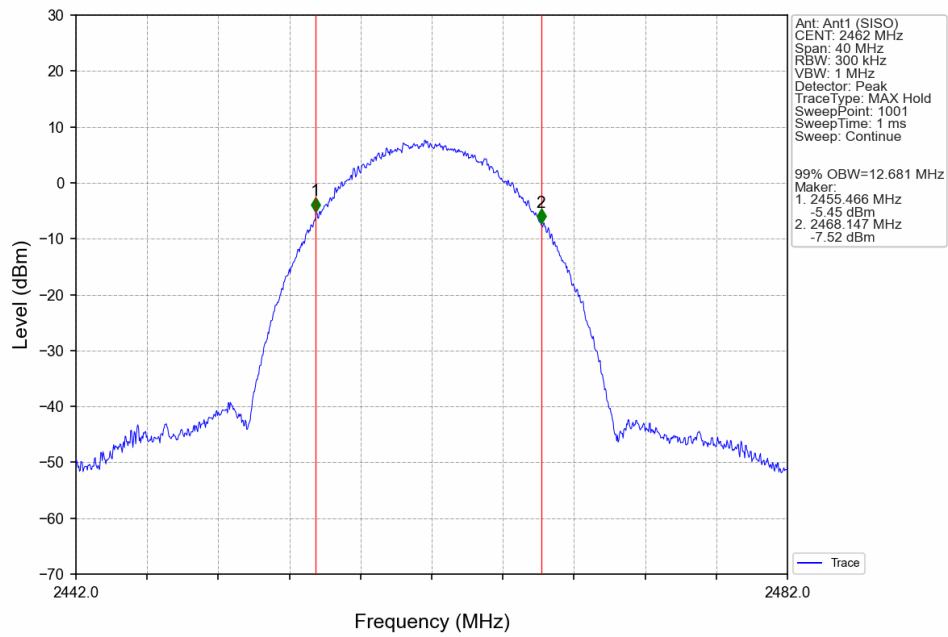
| Mode           | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|----------------|---------|-----------------|-----|---------------------|------------|---------|
|                |         |                 |     | Result              | Limit      |         |
| 802.11b        | SISO    | 2412            | 1   | 8.272               | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 8.072               | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 8.042               | $\geq 0.5$ | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 17.204              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 16.936              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 15.979              | $\geq 0.5$ | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 17.326              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 16.929              | $\geq 0.5$ | Pass    |
|                |         | 2462            | 1   | 16.904              | $\geq 0.5$ | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | 36.153              | $\geq 0.5$ | Pass    |
|                |         | 2437            | 1   | 35.085              | $\geq 0.5$ | Pass    |
|                |         | 2452            | 1   | 31.246              | $\geq 0.5$ | Pass    |

# 2.2 Test Graph

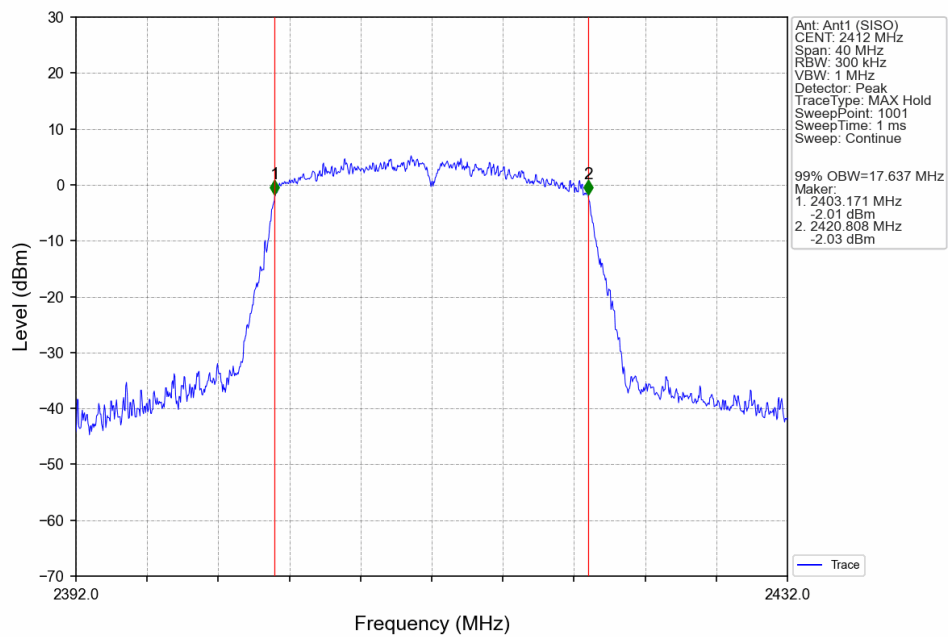
## 2.2.1 OBW



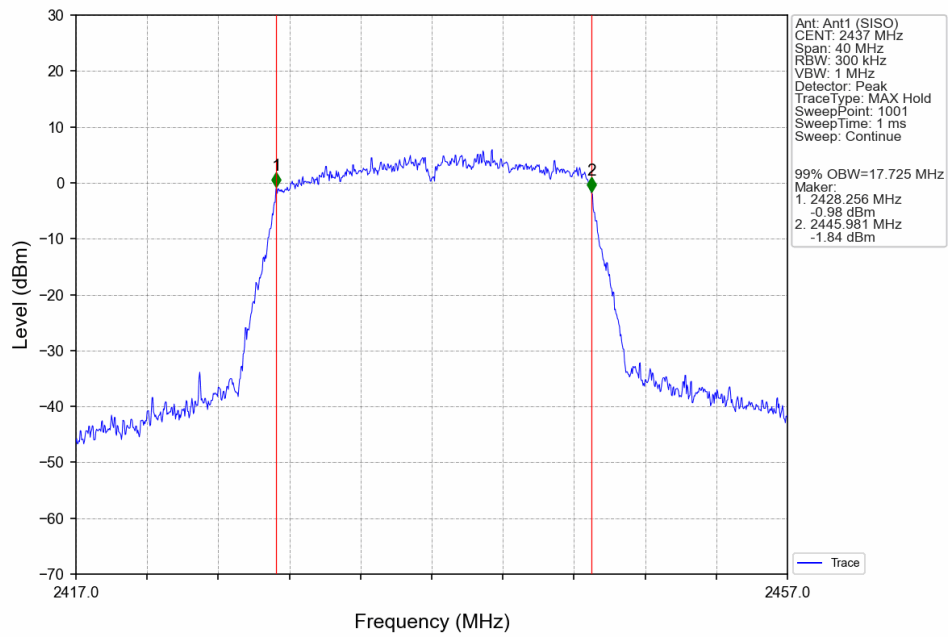
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



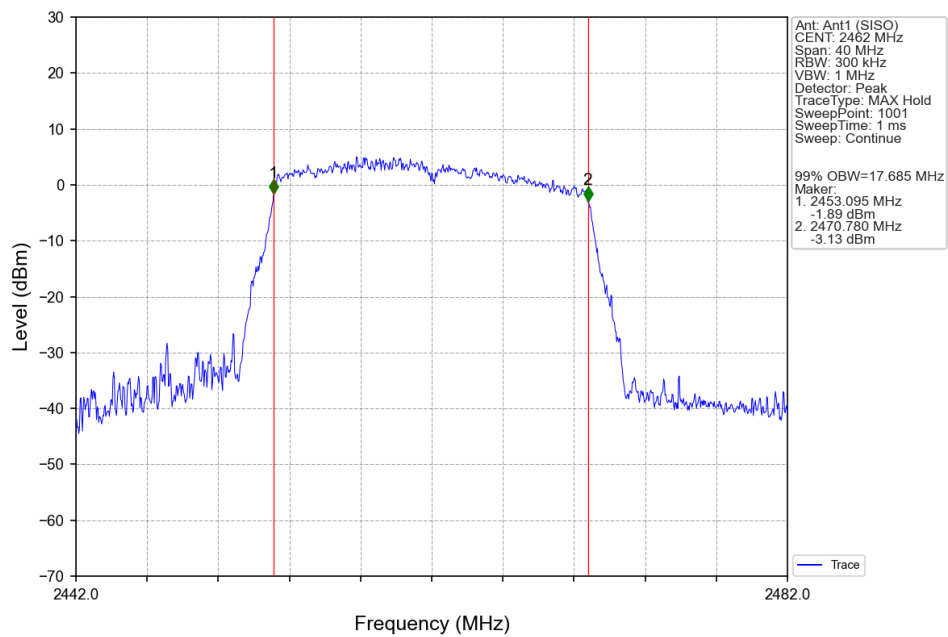
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



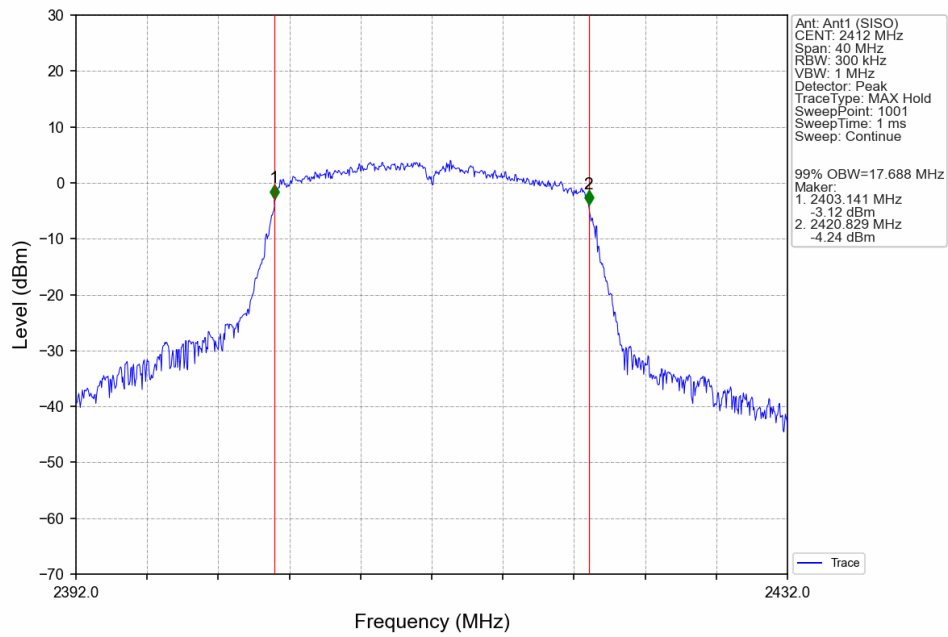
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



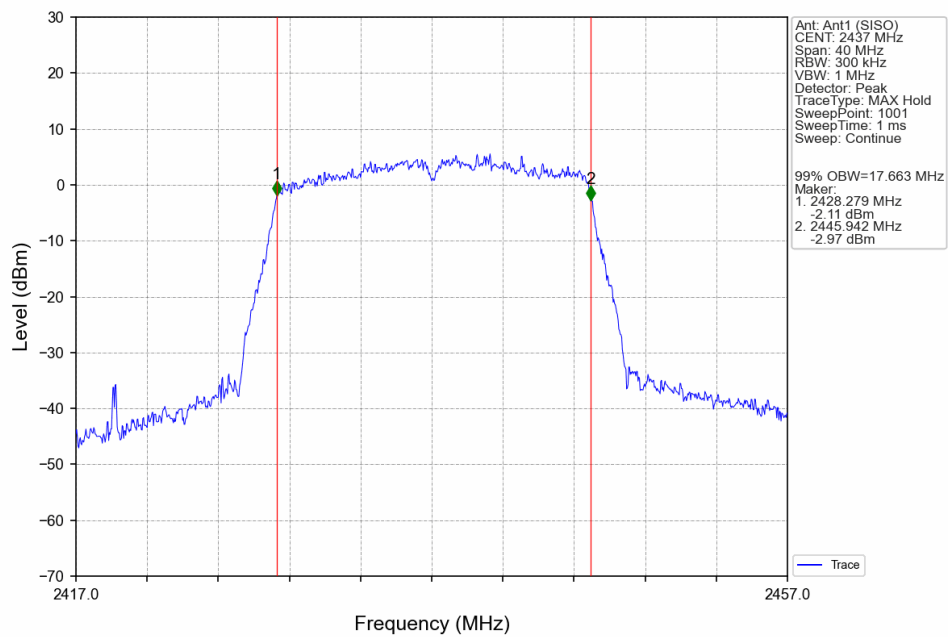
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



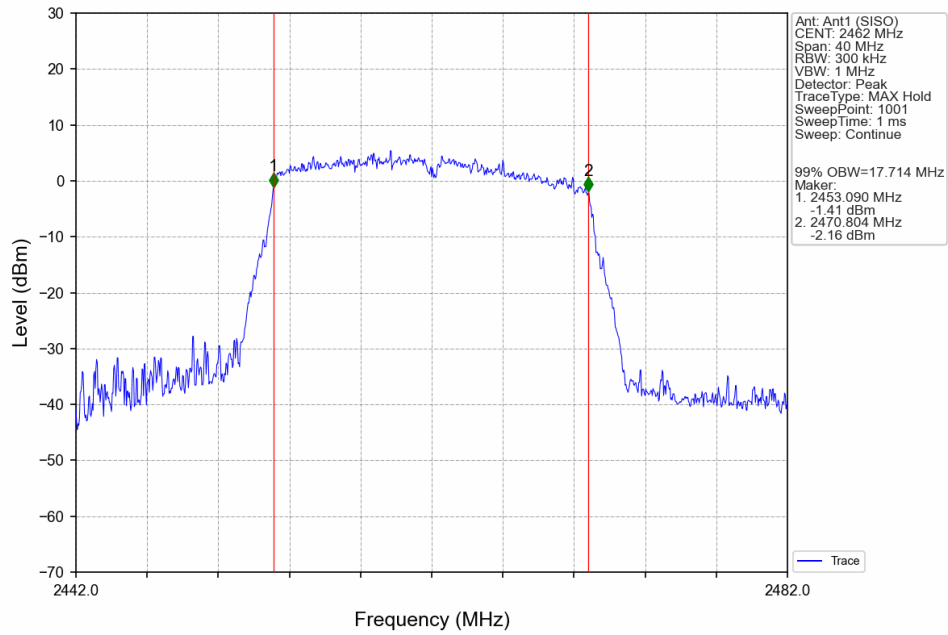
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



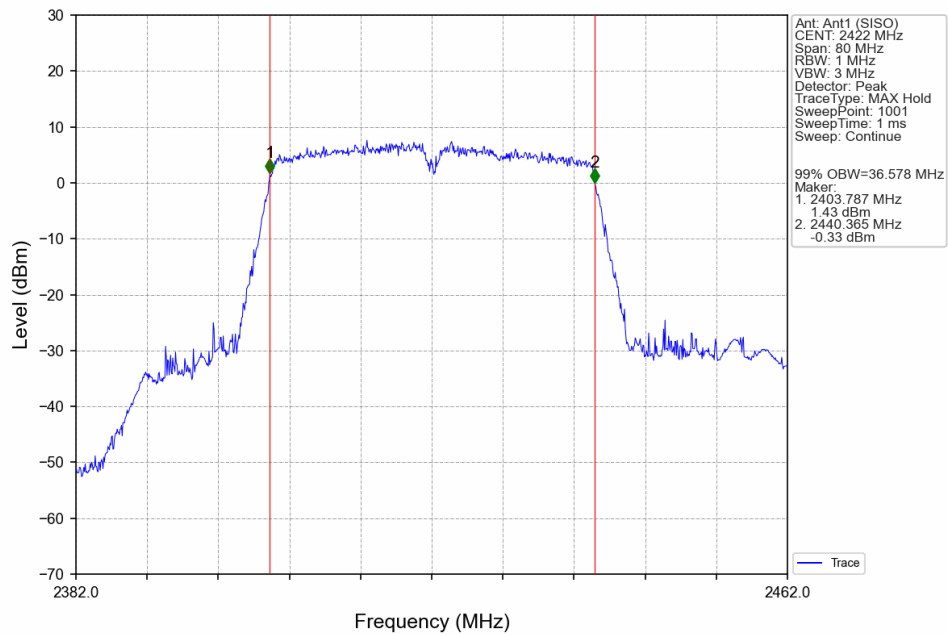
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



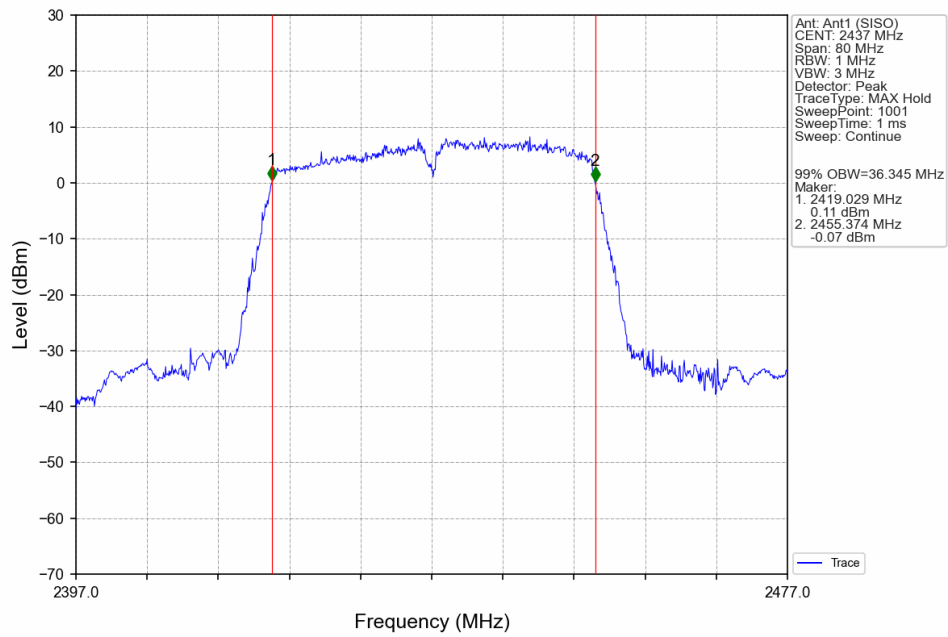
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



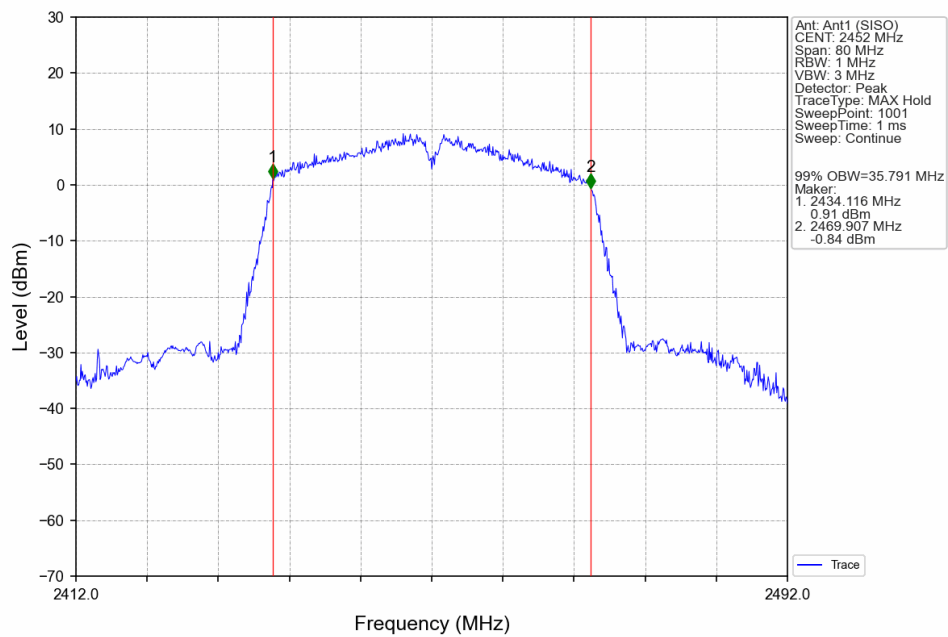
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



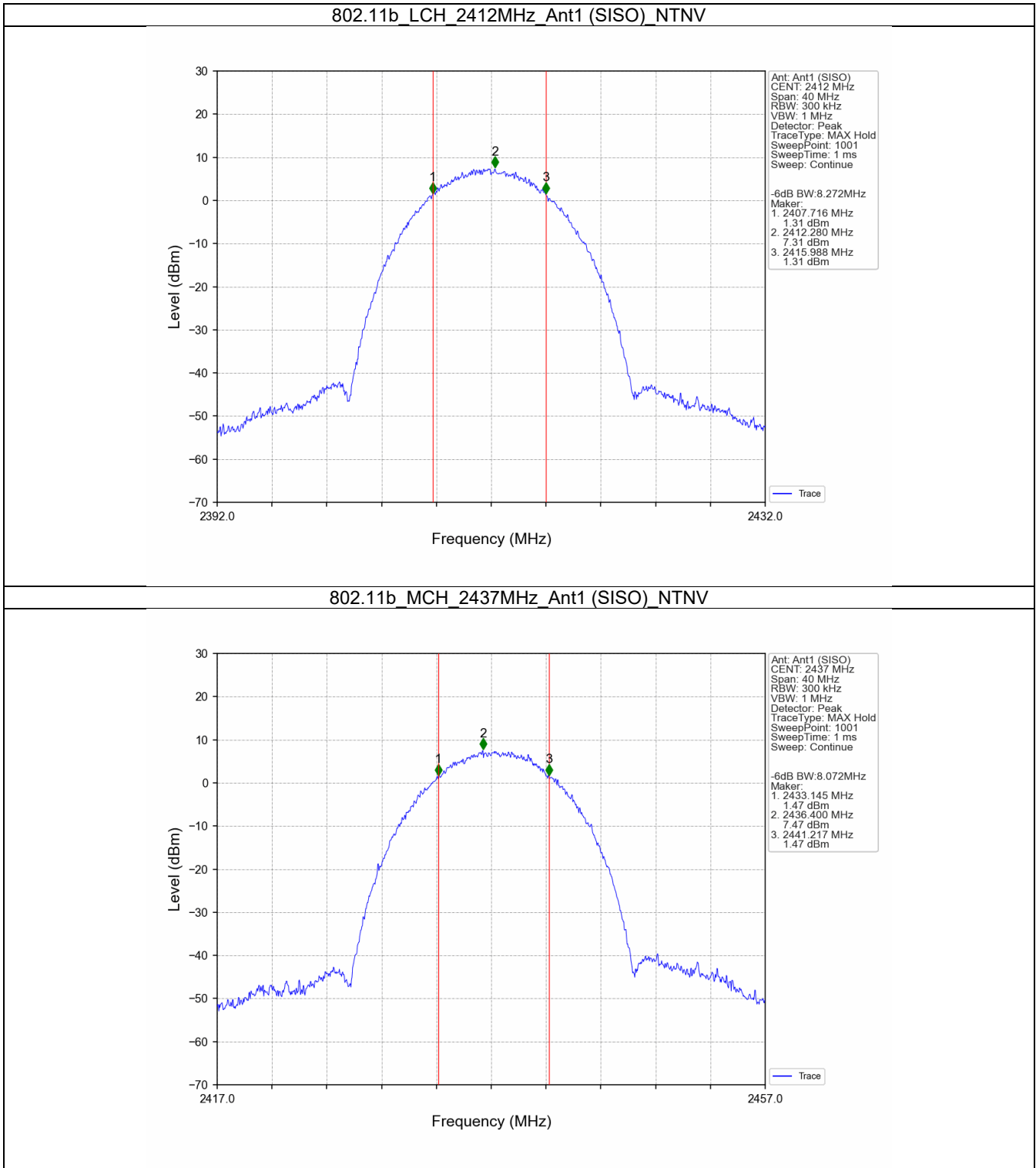
# 802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



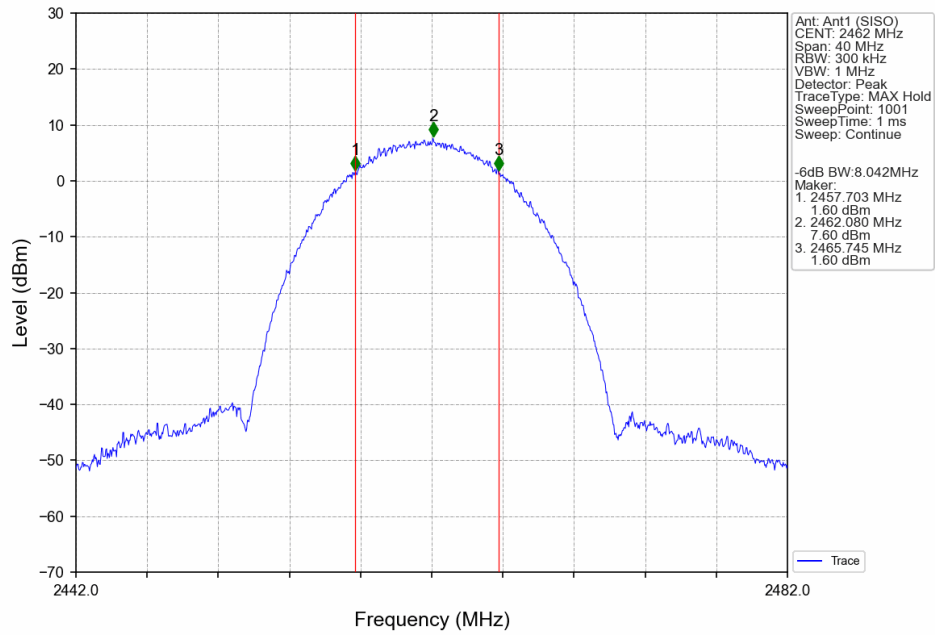
# 802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



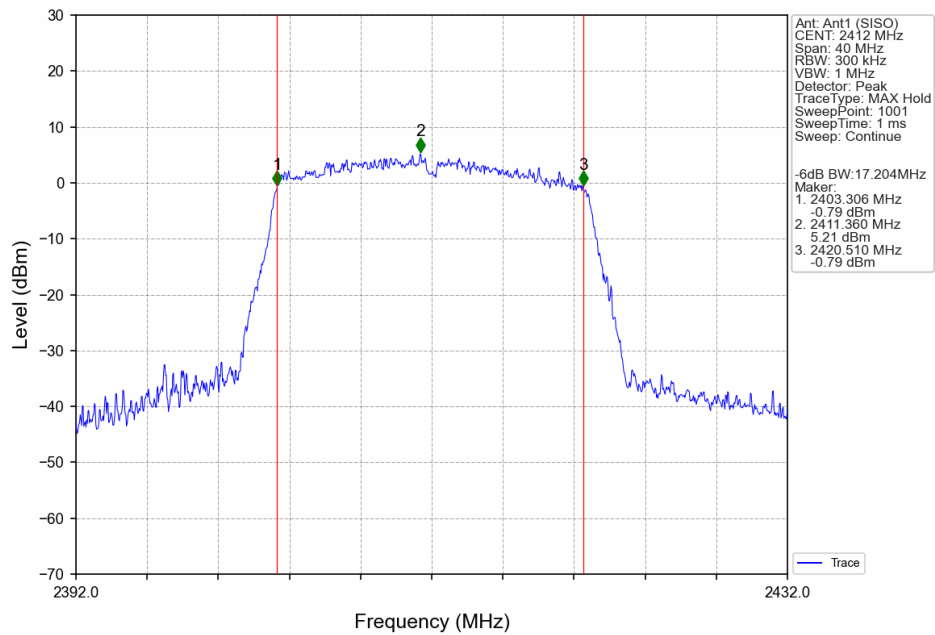
2.2.2 6dB BW



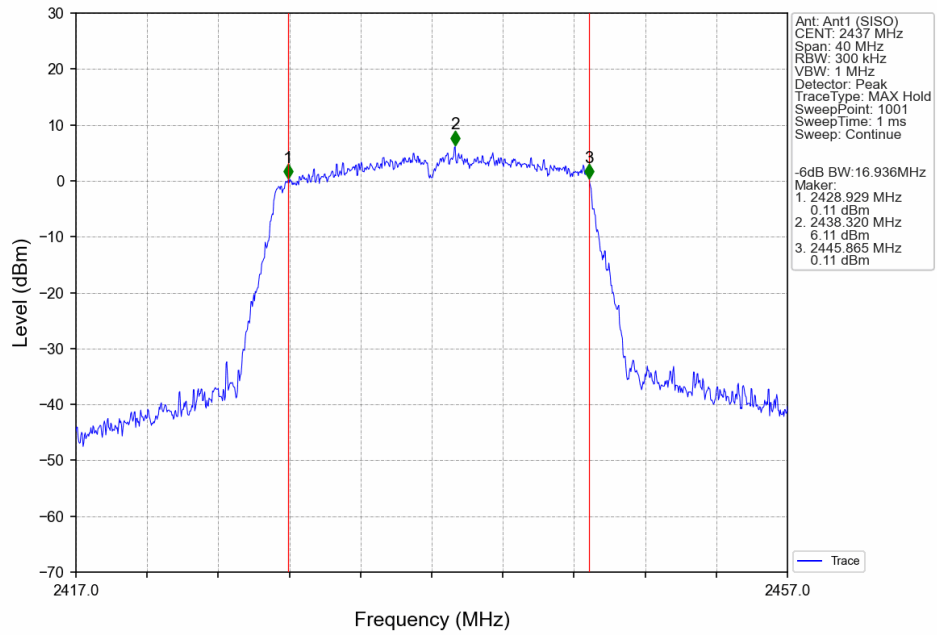
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



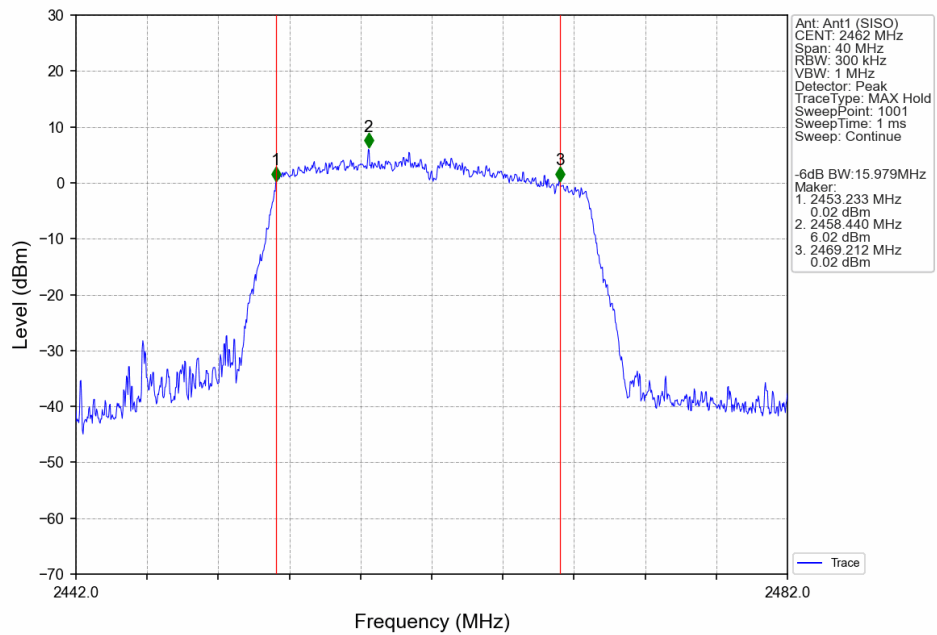
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



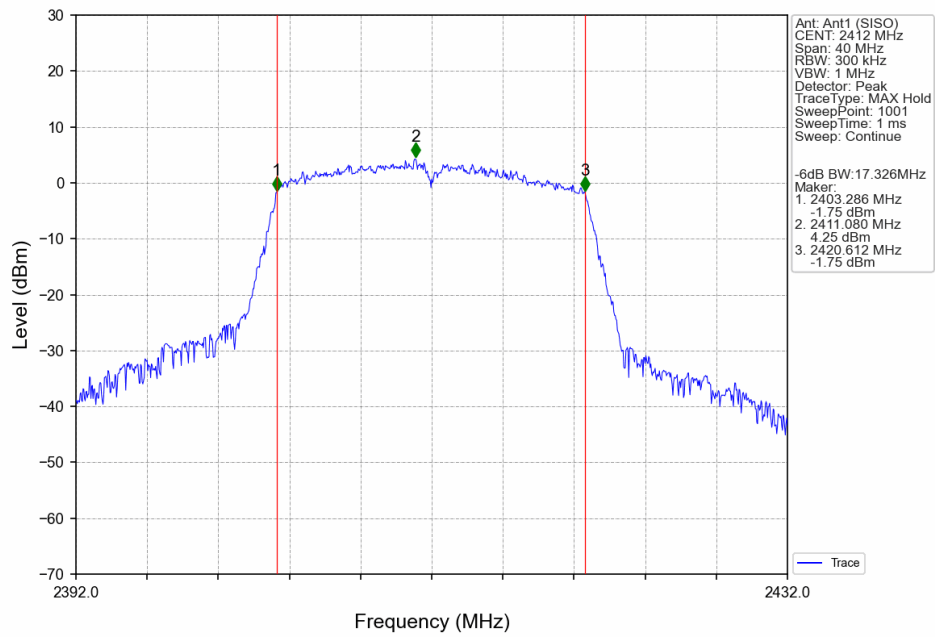
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



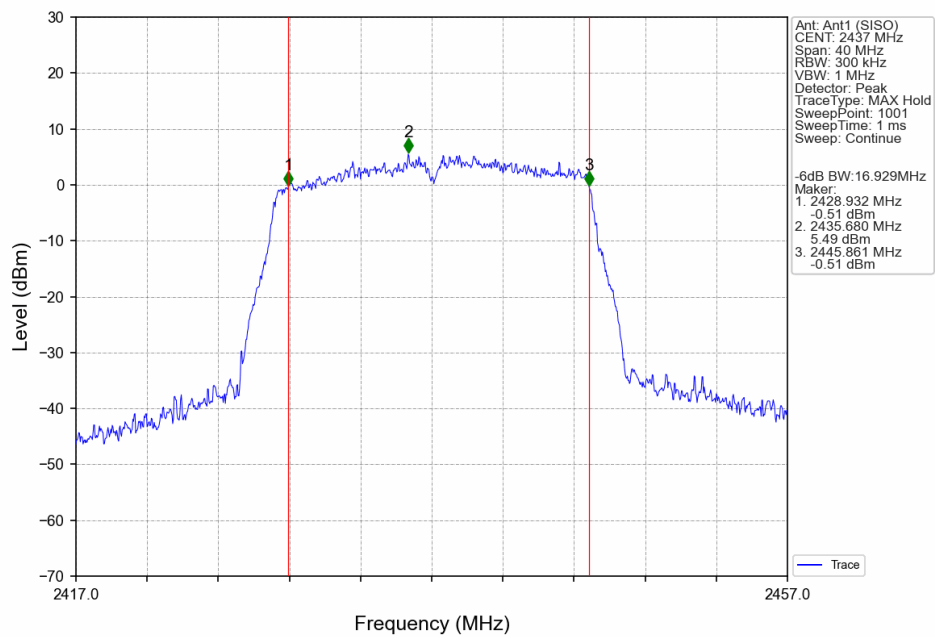
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



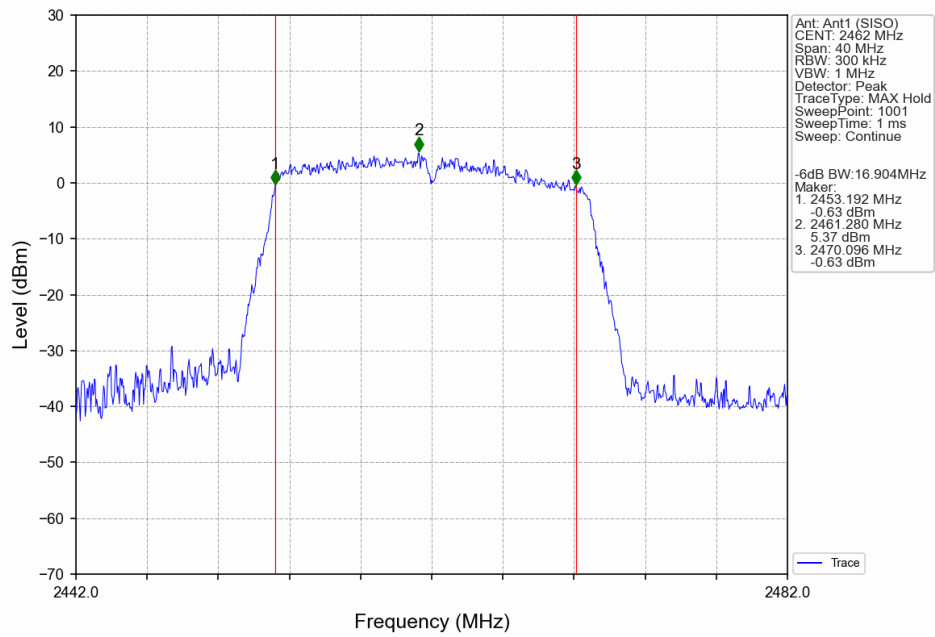
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



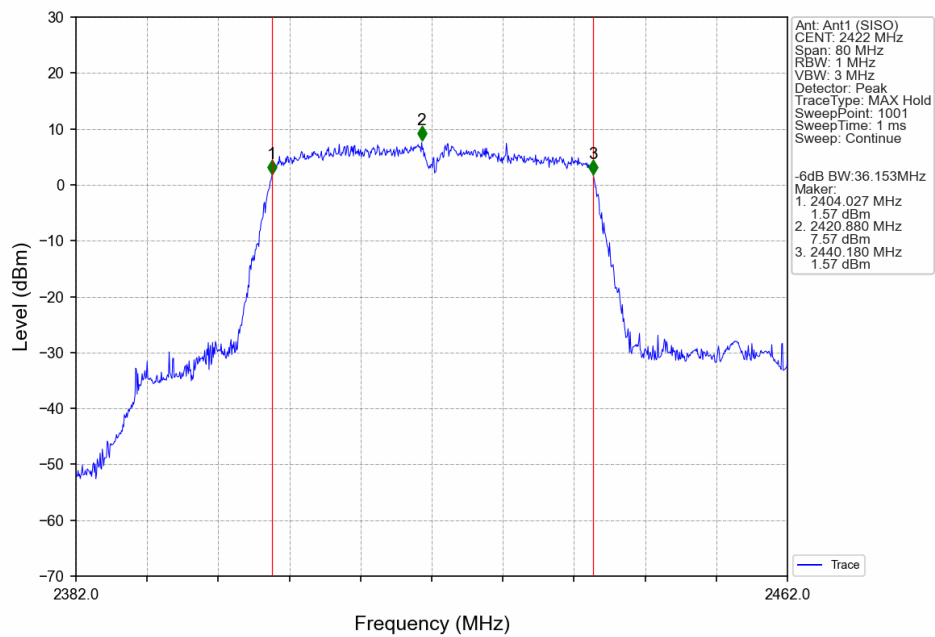
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



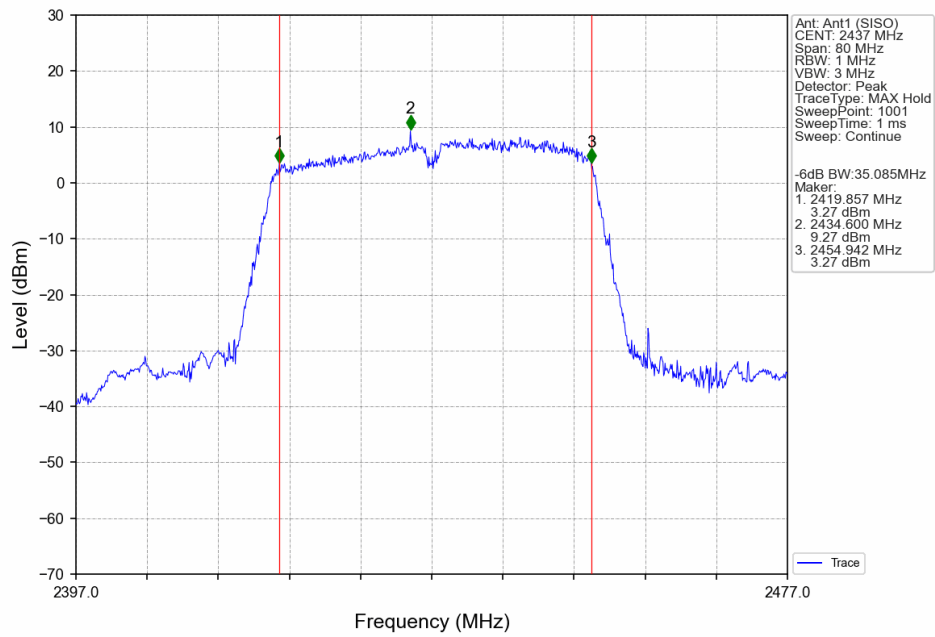
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



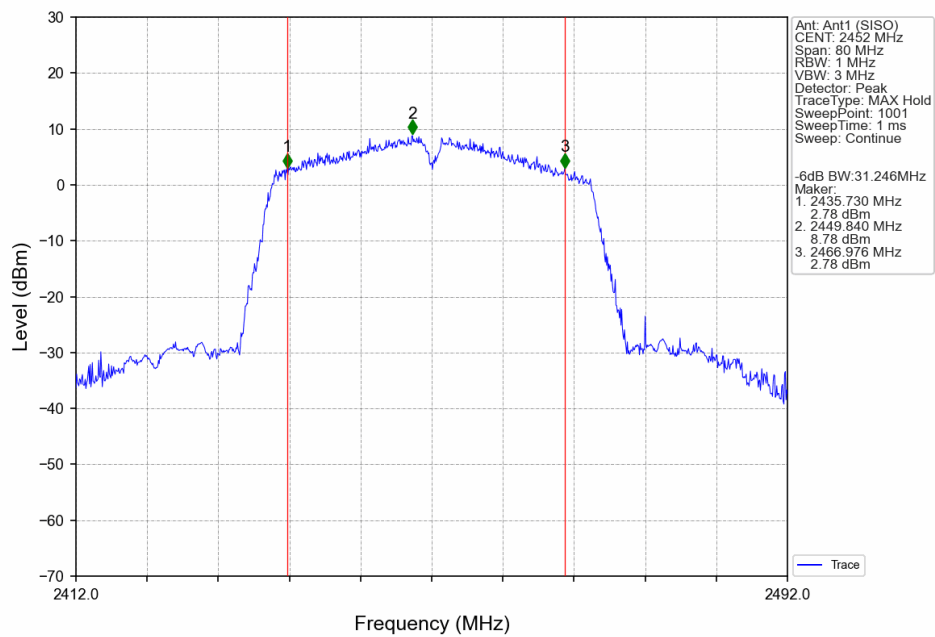
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



### 3. Maximum Conducted Output Power

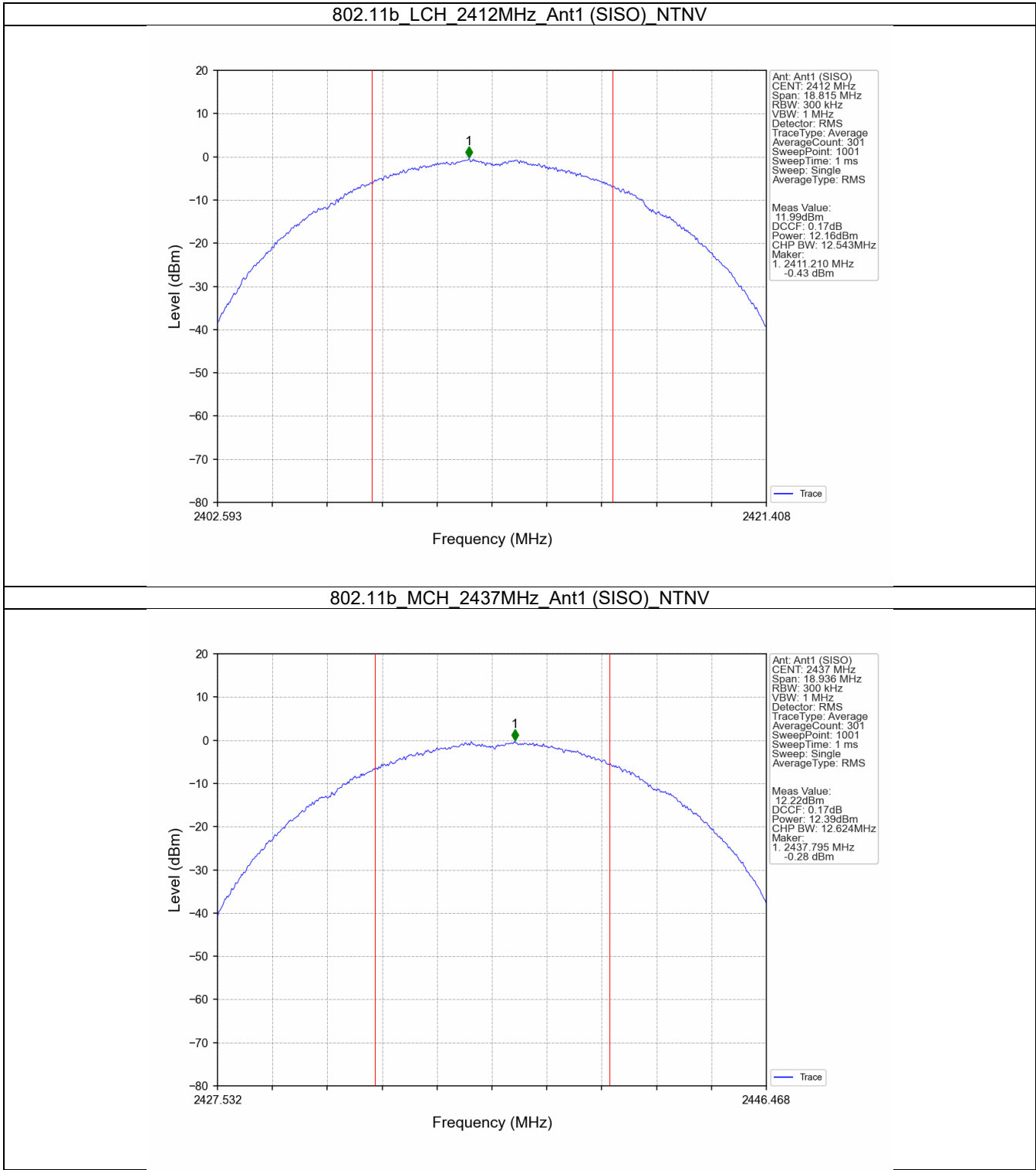
#### 3.1 Test Result

##### 3.1.1 Power

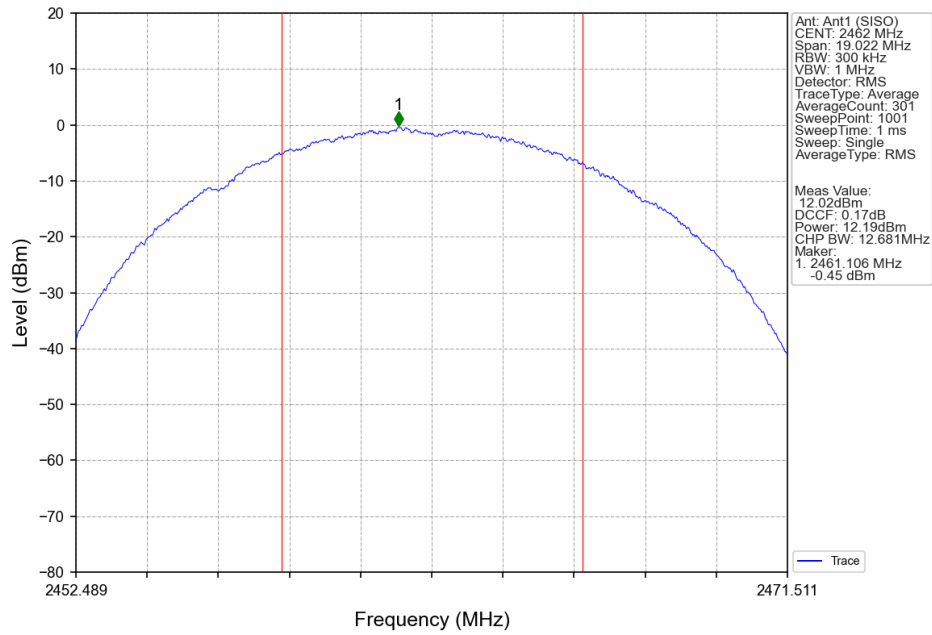
| Mode           | TX Type | Frequency (MHz) | Maximum Average Conducted Output Power (dBm) |       | Verdict |
|----------------|---------|-----------------|----------------------------------------------|-------|---------|
|                |         |                 | ANT1                                         | Limit |         |
| 802.11b        | SISO    | 2412            | 12.16                                        | <=30  | Pass    |
|                |         | 2437            | 12.39                                        | <=30  | Pass    |
|                |         | 2462            | 12.19                                        | <=30  | Pass    |
| 802.11g        | SISO    | 2412            | 12.13                                        | <=30  | Pass    |
|                |         | 2437            | 12.48                                        | <=30  | Pass    |
|                |         | 2462            | 12.04                                        | <=30  | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 11.95                                        | <=30  | Pass    |
|                |         | 2437            | 12.48                                        | <=30  | Pass    |
|                |         | 2462            | 12.24                                        | <=30  | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 12.18                                        | <=30  | Pass    |
|                |         | 2437            | 12.41                                        | <=30  | Pass    |
|                |         | 2452            | 12.24                                        | <=30  | Pass    |

3.2 Test Graph

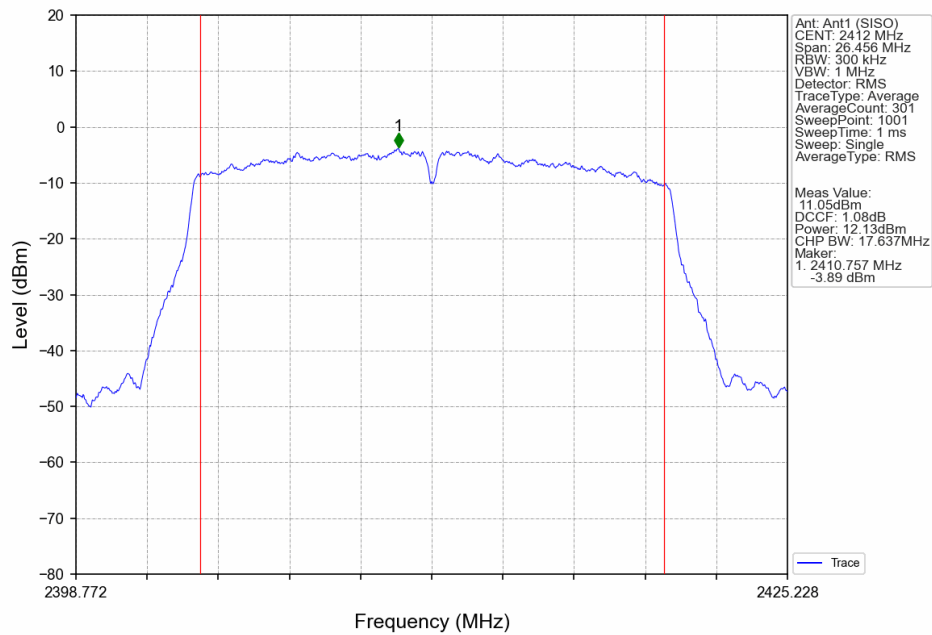
3.2.1 Power



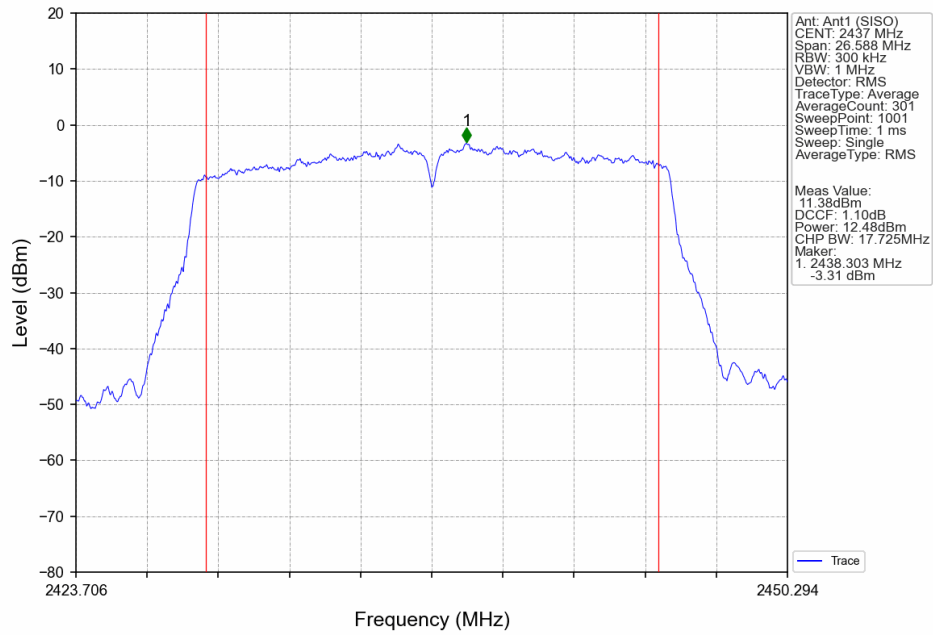
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



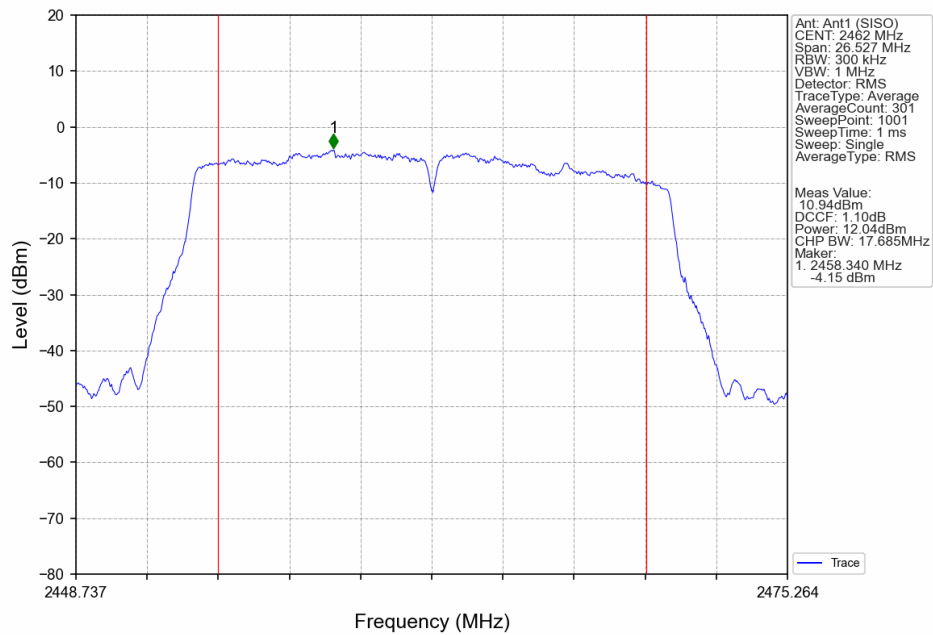
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



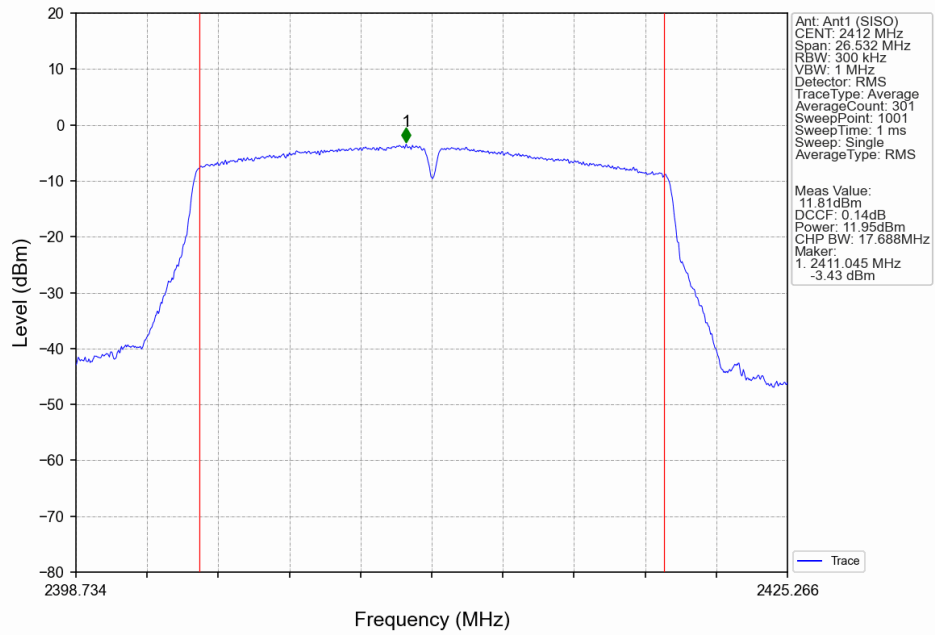
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



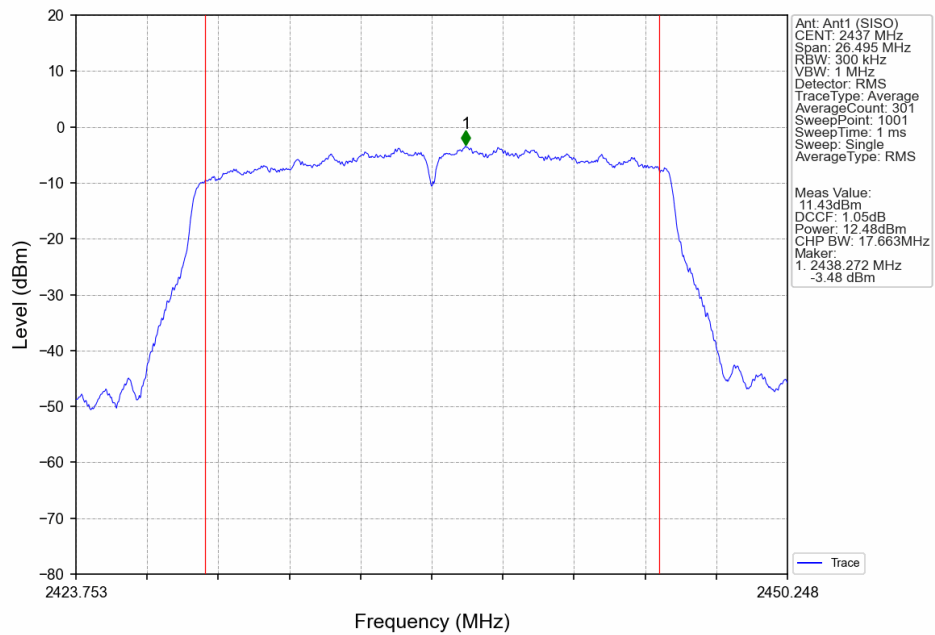
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



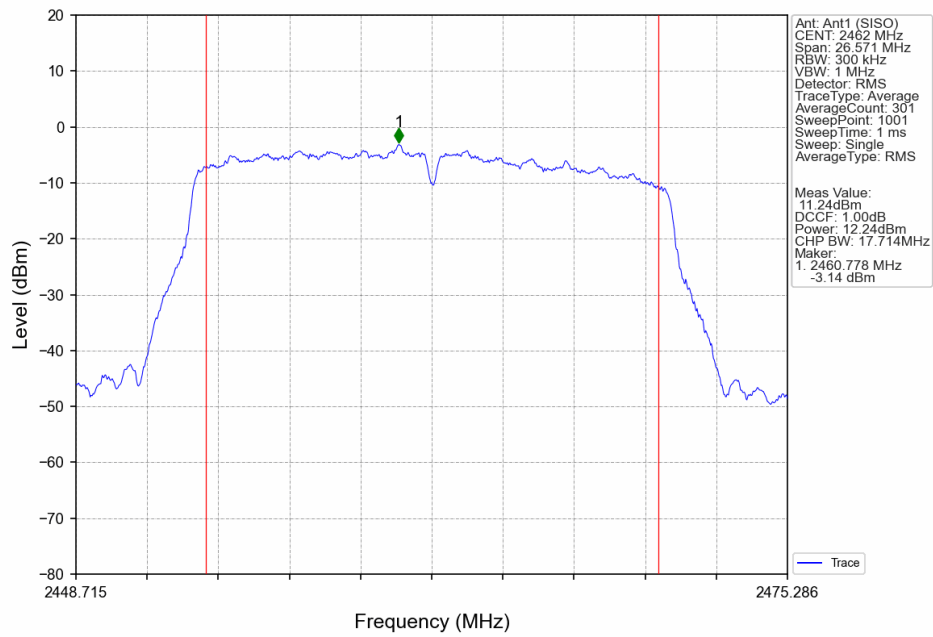
# 802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



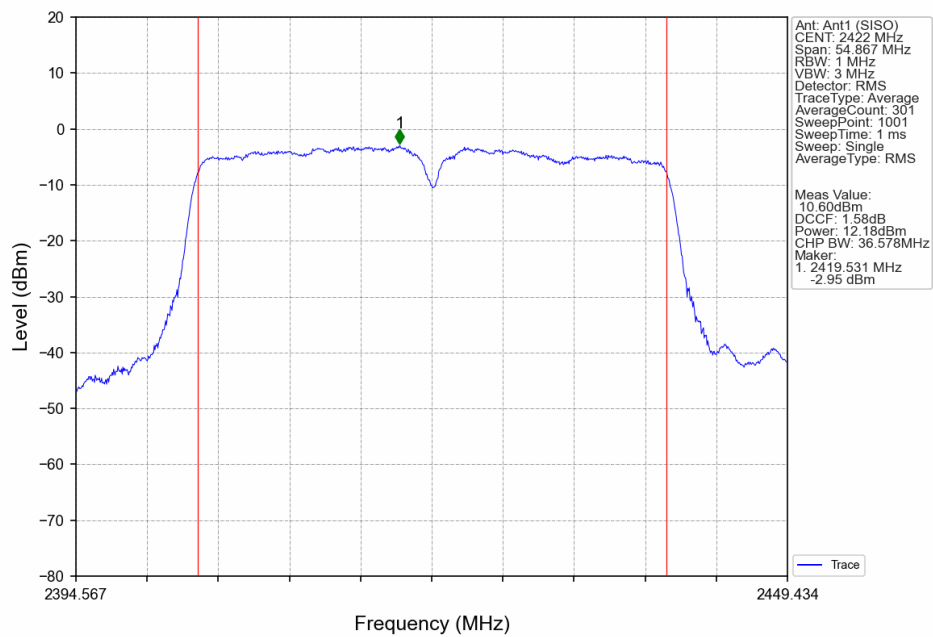
# 802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



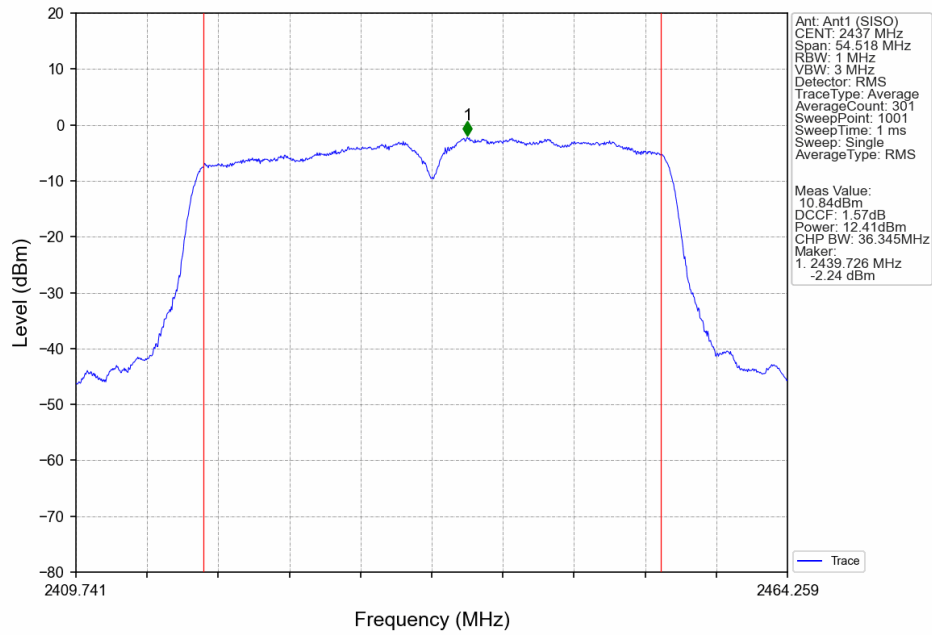
# 802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



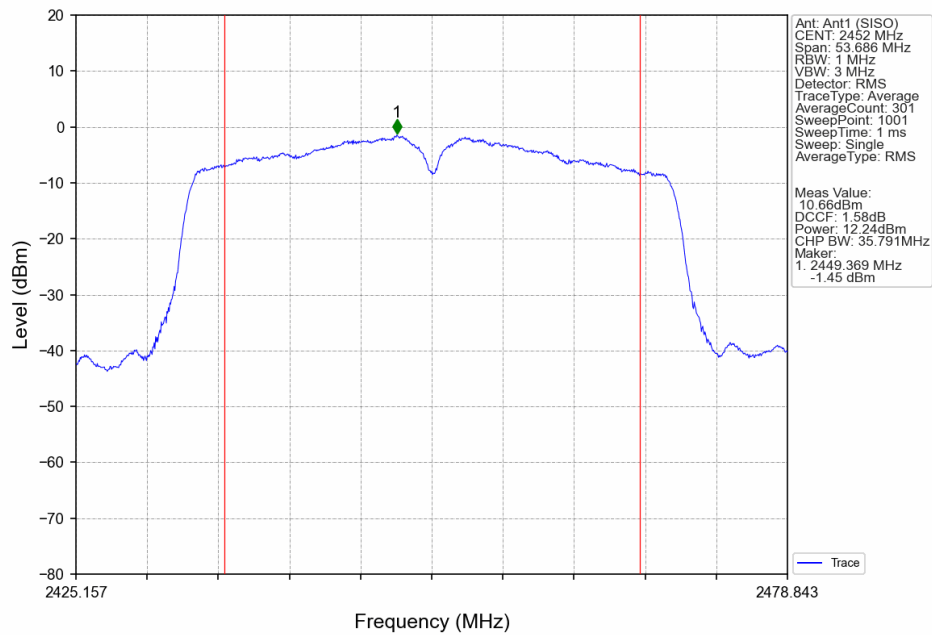
# 802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV



## 4. Maximum Power Spectral Density

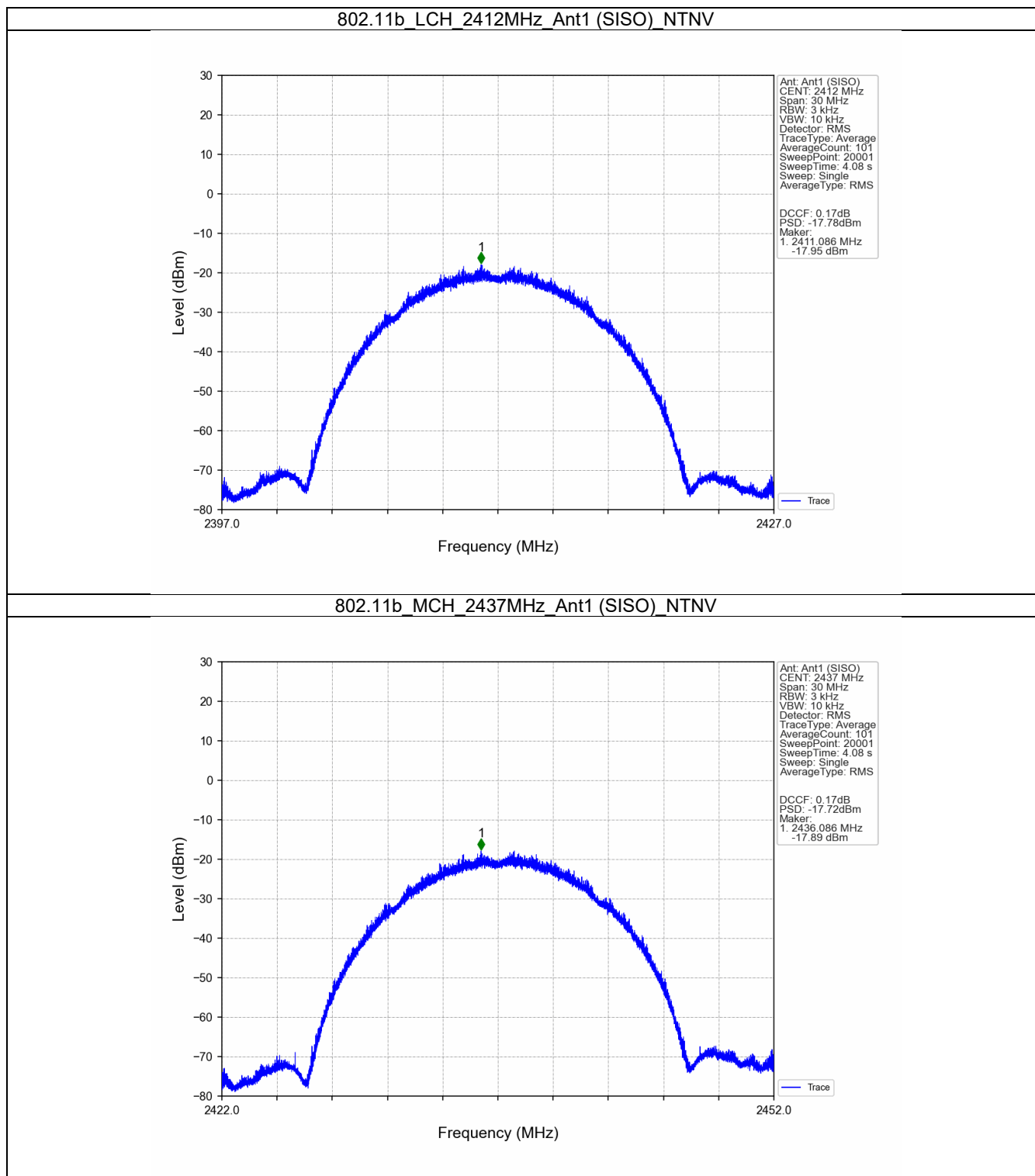
### 4.1 Test Result

#### 4.1.1 PSD

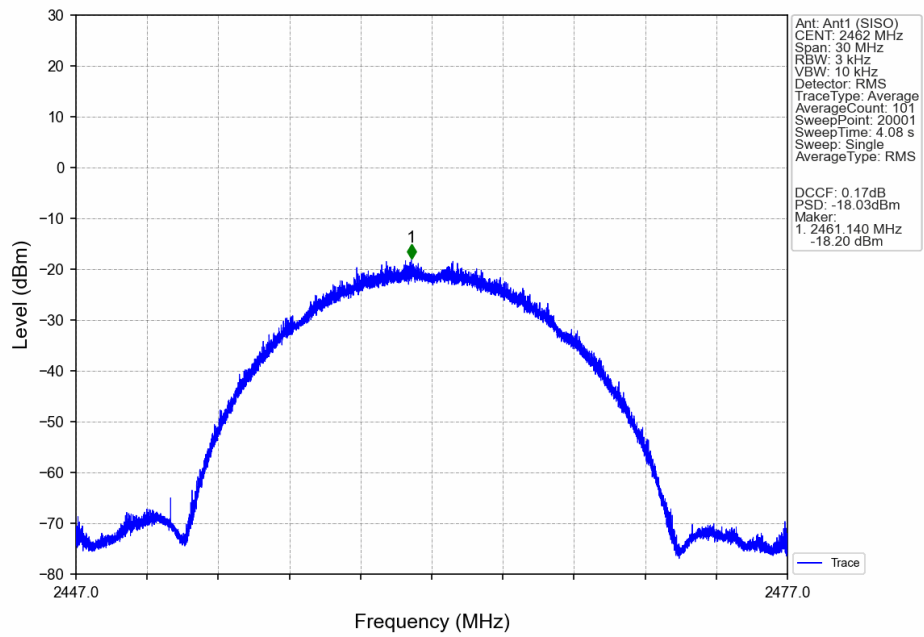
| Mode           | TX Type | Frequency (MHz) | Maximum PSD (dBm) |                 | Verdict |
|----------------|---------|-----------------|-------------------|-----------------|---------|
|                |         |                 | ANT1              | Limit(dBm/3kHz) |         |
| 802.11b        | SISO    | 2412            | -17.78dBm/3kHz    | <=8             | Pass    |
|                |         | 2437            | -17.72dBm/3kHz    | <=8             | Pass    |
|                |         | 2462            | -18.03dBm/3kHz    | <=8             | Pass    |
| 802.11g        | SISO    | 2412            | -14.55dBm/3kHz    | <=8             | Pass    |
|                |         | 2437            | -13.67dBm/3kHz    | <=8             | Pass    |
|                |         | 2462            | -15.16dBm/3kHz    | <=8             | Pass    |
| 802.11n (HT20) | SISO    | 2412            | -20.75dBm/3kHz    | <=8             | Pass    |
|                |         | 2437            | -15.98dBm/3kHz    | <=8             | Pass    |
|                |         | 2462            | -15.79dBm/3kHz    | <=8             | Pass    |
| 802.11n (HT40) | SISO    | 2422            | -8.55dBm/100kHz   | <=8             | Pass    |
|                |         | 2437            | -8.14dBm/100kHz   | <=8             | Pass    |
|                |         | 2452            | -7.63dBm/100kHz   | <=8             | Pass    |

## 4.2 Test Graph

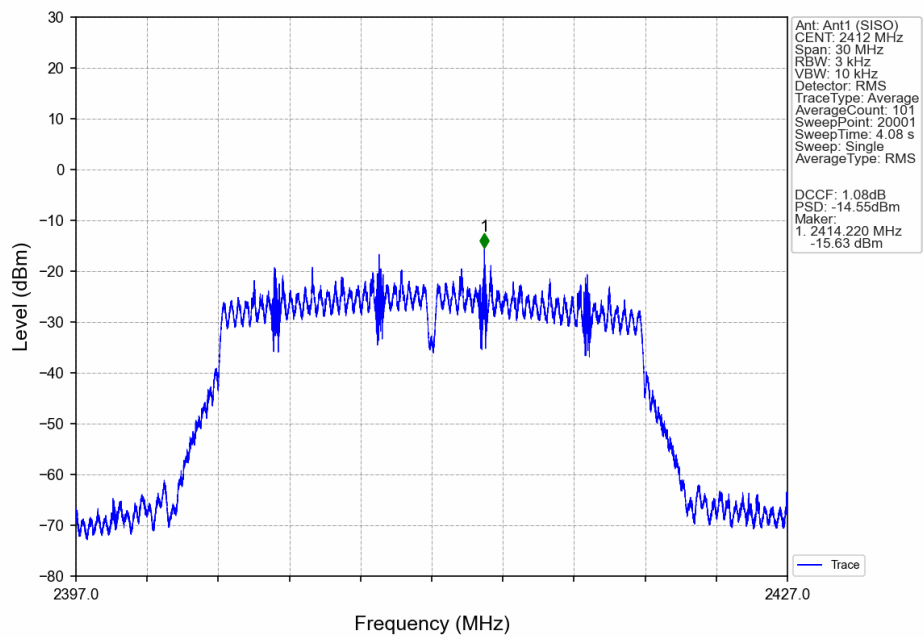
### 4.2.1 PSD



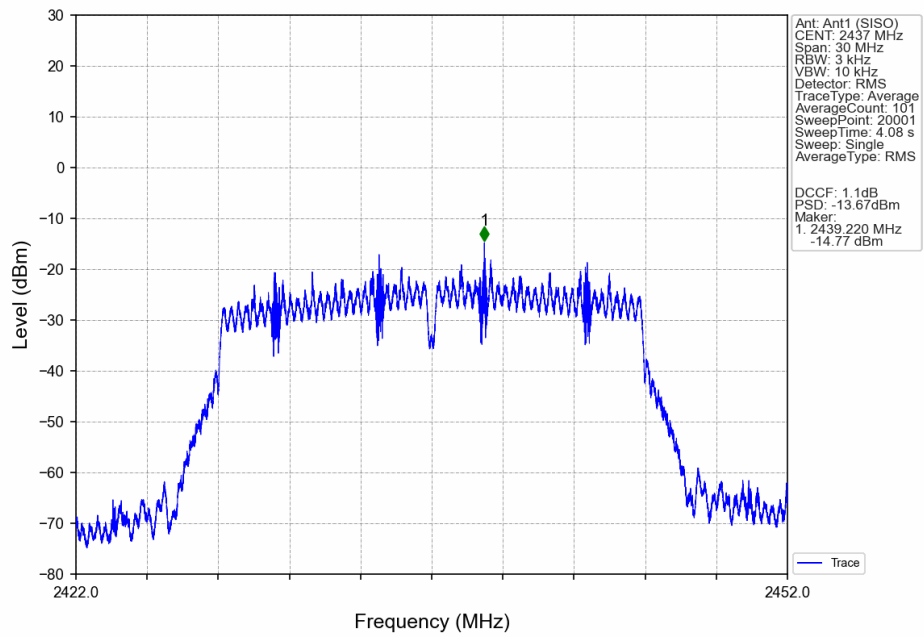
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



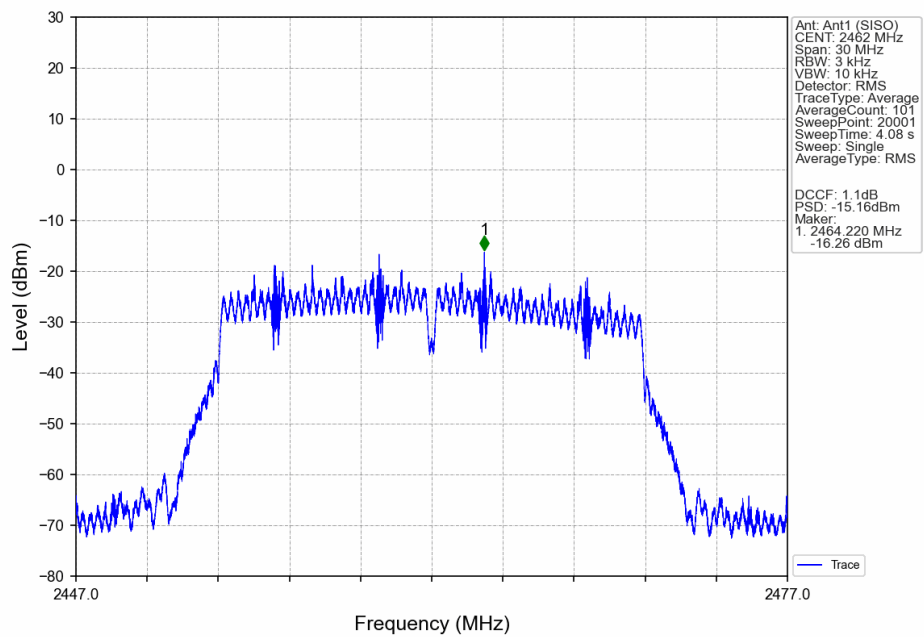
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



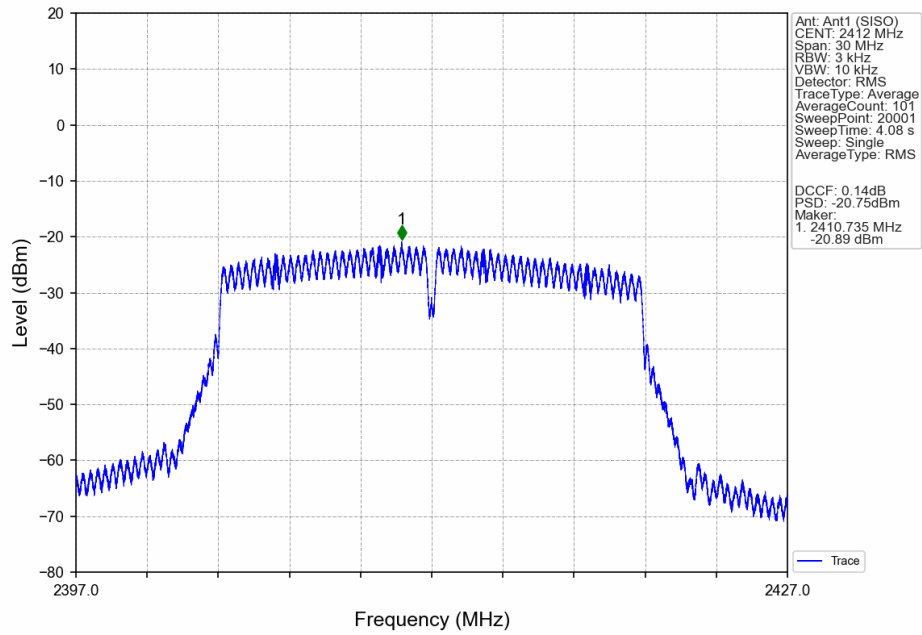
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



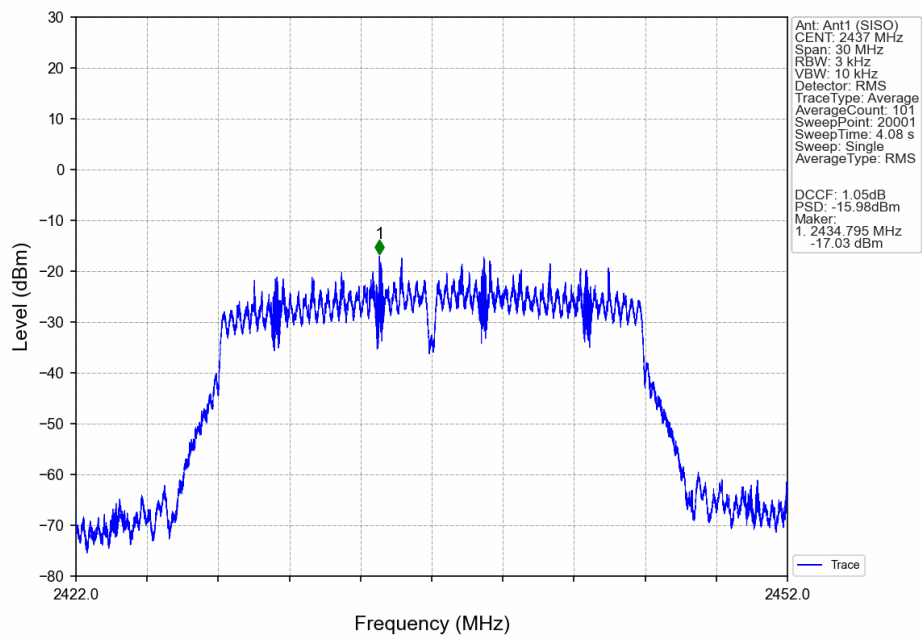
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



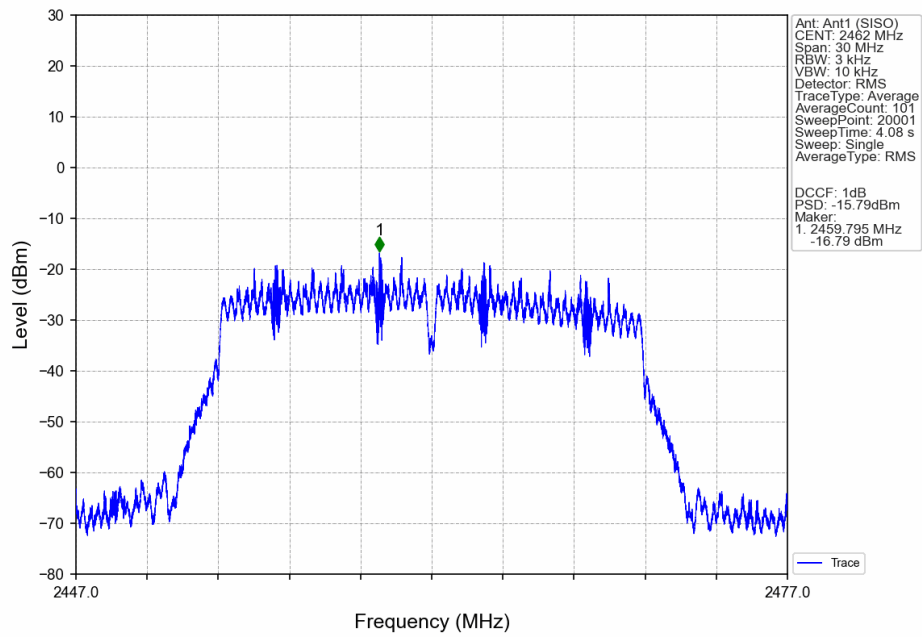
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



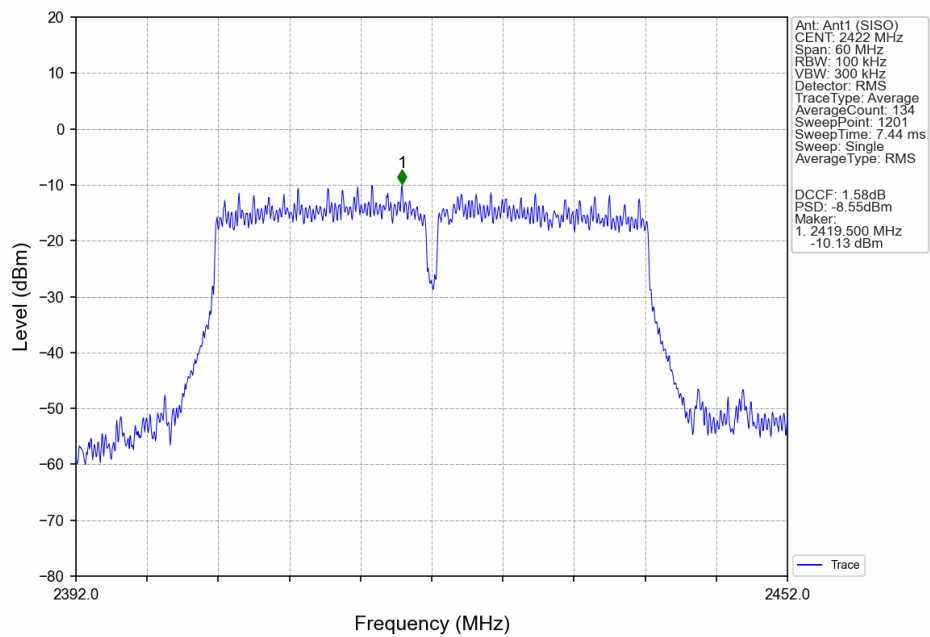
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



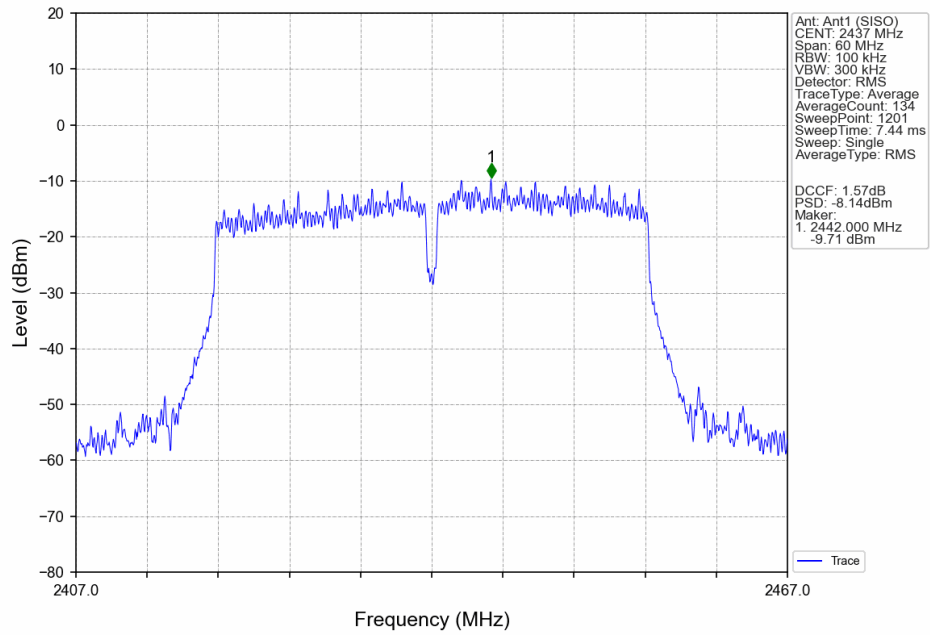
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



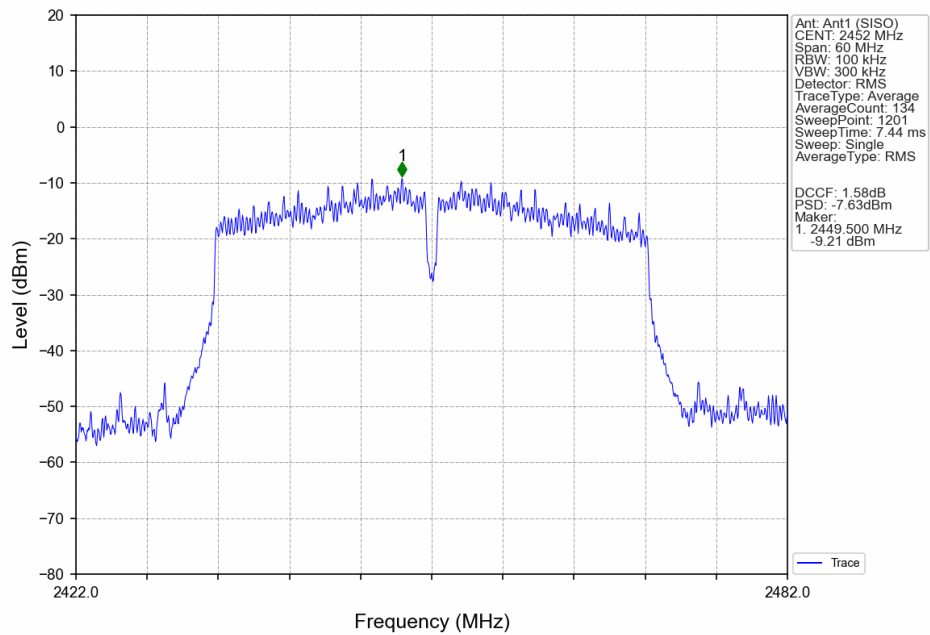
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV



## 5. Unwanted Emissions In Non-restricted Frequency Bands

### 5.1 Test Result

#### 5.1.1 Ref

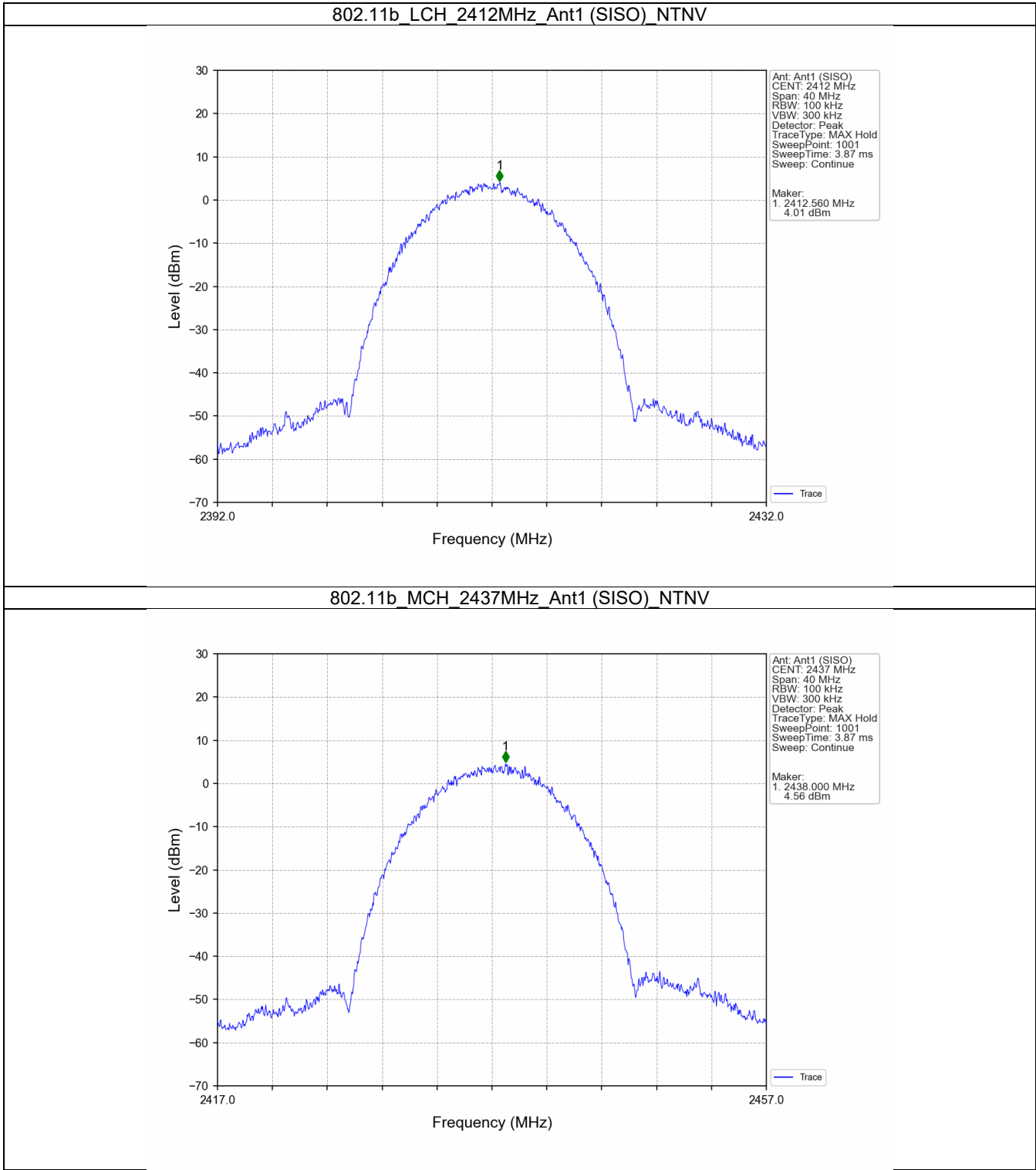
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) |
|----------------|---------|-----------------|-----|--------------------------|
| 802.11b        | SISO    | 2412            | 1   | 4.01                     |
|                |         | 2437            | 1   | 4.56                     |
|                |         | 2462            | 1   | 3.66                     |
| 802.11g        | SISO    | 2412            | 1   | 2.07                     |
|                |         | 2437            | 1   | 2.72                     |
|                |         | 2462            | 1   | 1.62                     |
| 802.11n (HT20) | SISO    | 2412            | 1   | 1.75                     |
|                |         | 2437            | 1   | 2.66                     |
|                |         | 2462            | 1   | 1.58                     |
| 802.11n (HT40) | SISO    | 2422            | 1   | -1.21                    |
|                |         | 2437            | 1   | -0.49                    |
|                |         | 2452            | 1   | 0.46                     |

#### 5.1.2 CSE

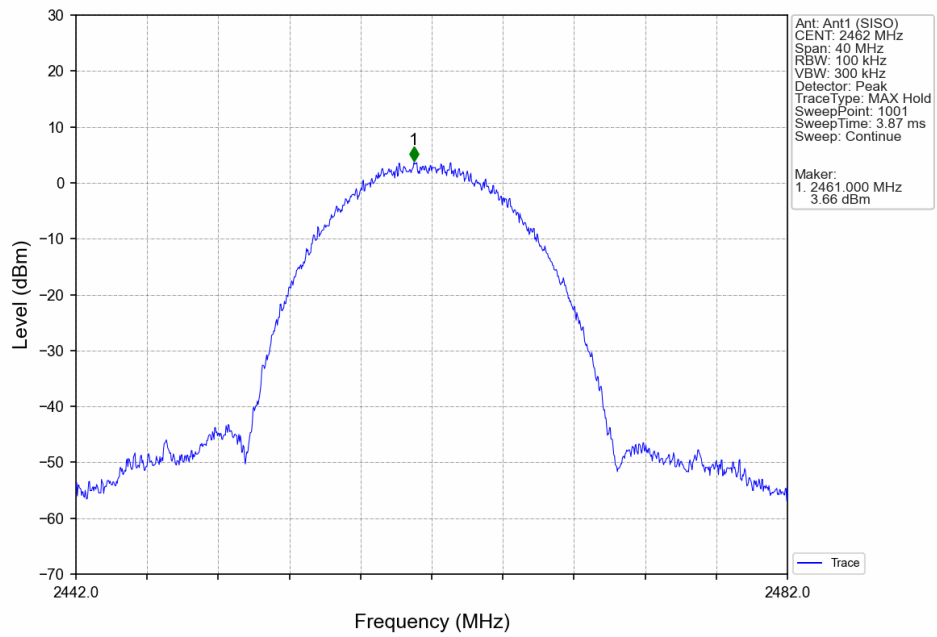
| Mode           | TX Type | Frequency (MHz) | ANT | Level of Reference (dBm) | Limit (dBm) | Verdict |
|----------------|---------|-----------------|-----|--------------------------|-------------|---------|
| 802.11b        | SISO    | 2412            | 1   | 4.01                     | -25.99      | Pass    |
|                |         | 2437            | 1   | 4.56                     | -25.44      | Pass    |
|                |         | 2462            | 1   | 3.66                     | -26.34      | Pass    |
| 802.11g        | SISO    | 2412            | 1   | 2.07                     | -27.93      | Pass    |
|                |         | 2437            | 1   | 2.72                     | -27.28      | Pass    |
|                |         | 2462            | 1   | 1.62                     | -28.38      | Pass    |
| 802.11n (HT20) | SISO    | 2412            | 1   | 1.75                     | -28.25      | Pass    |
|                |         | 2437            | 1   | 2.66                     | -27.34      | Pass    |
|                |         | 2462            | 1   | 1.58                     | -28.42      | Pass    |
| 802.11n (HT40) | SISO    | 2422            | 1   | -1.21                    | -31.21      | Pass    |
|                |         | 2437            | 1   | -0.49                    | -30.49      | Pass    |
|                |         | 2452            | 1   | 0.46                     | -29.54      | Pass    |

5.2 Test Graph

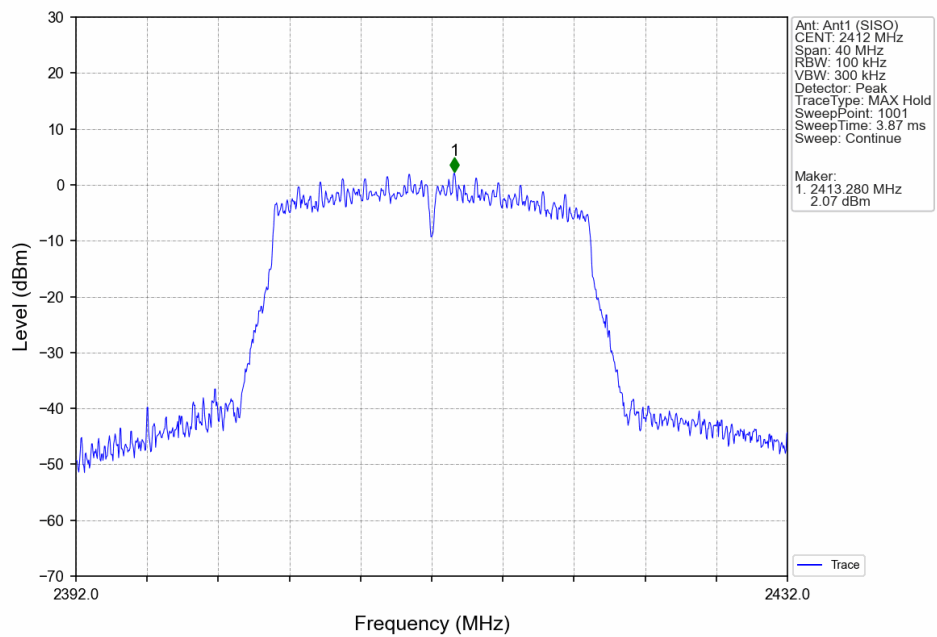
5.2.1 Ref



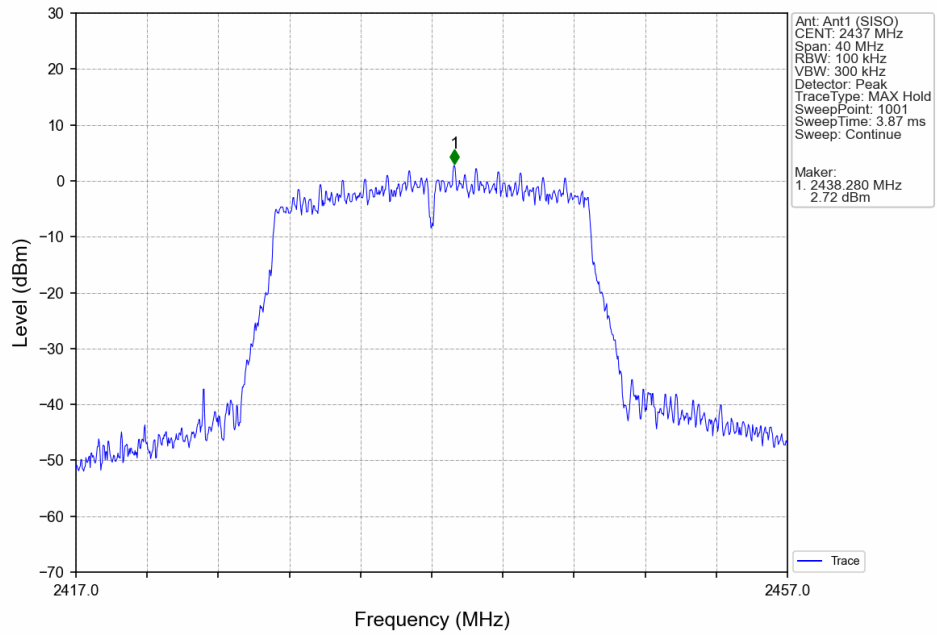
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



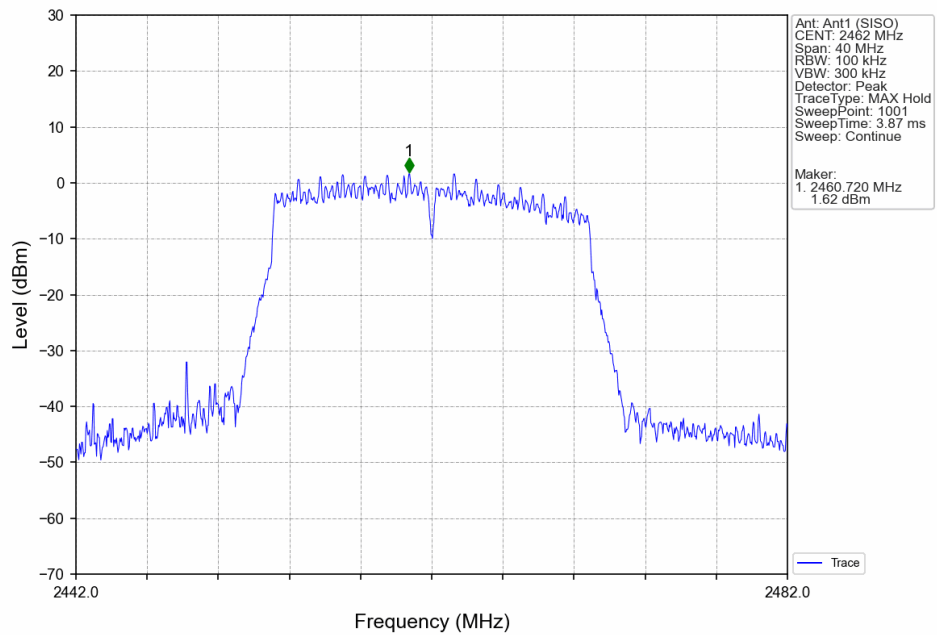
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



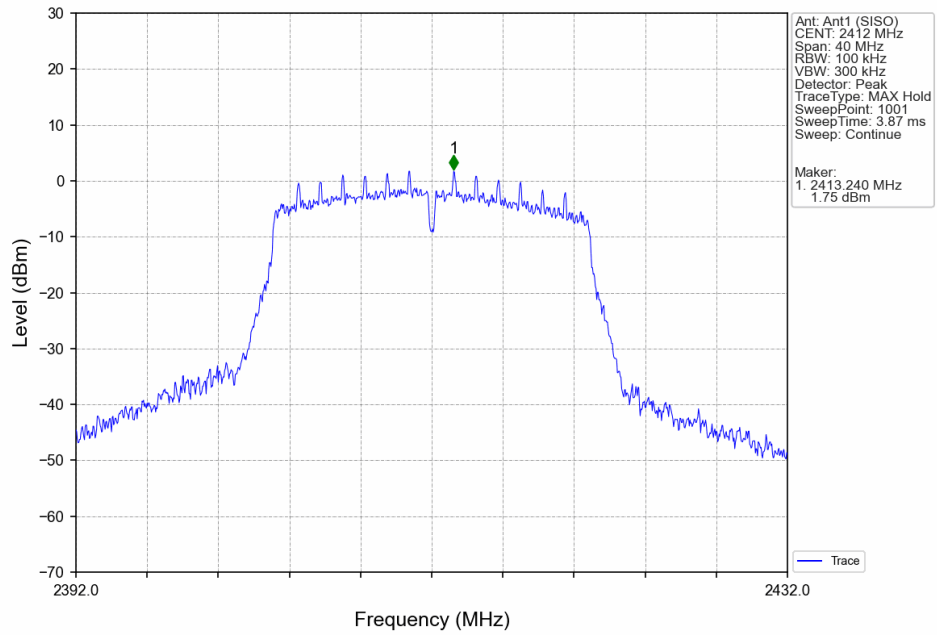
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



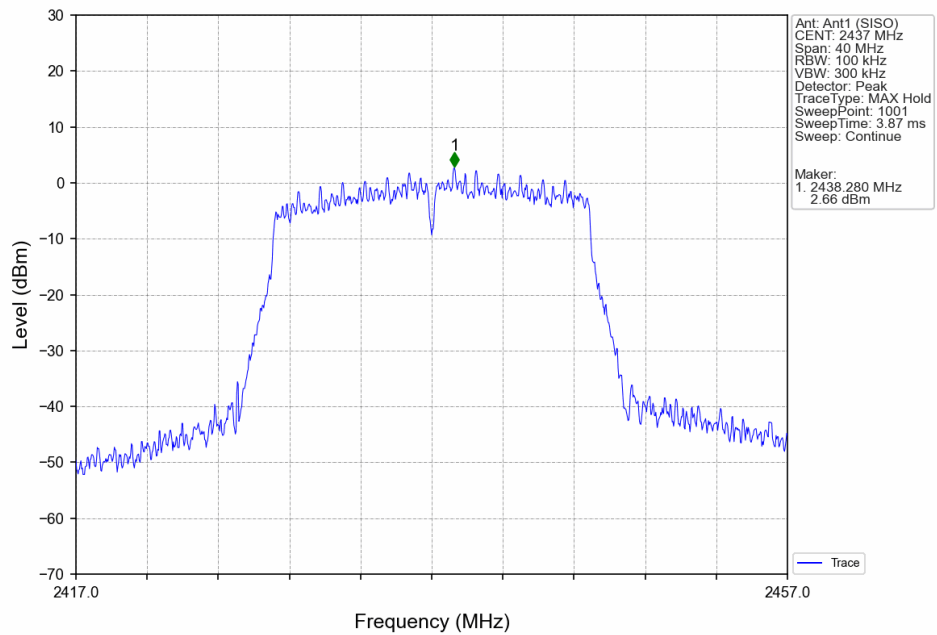
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



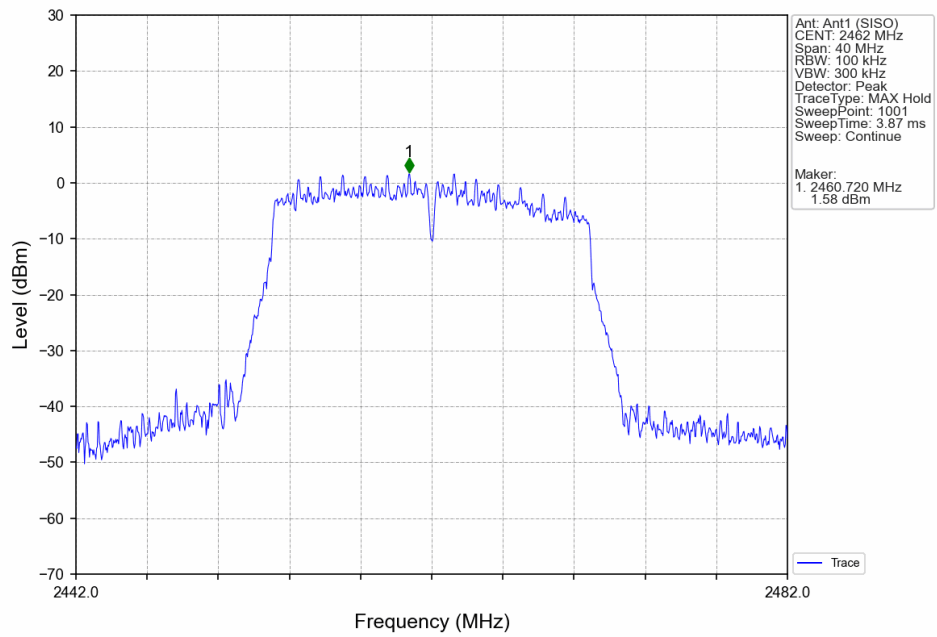
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



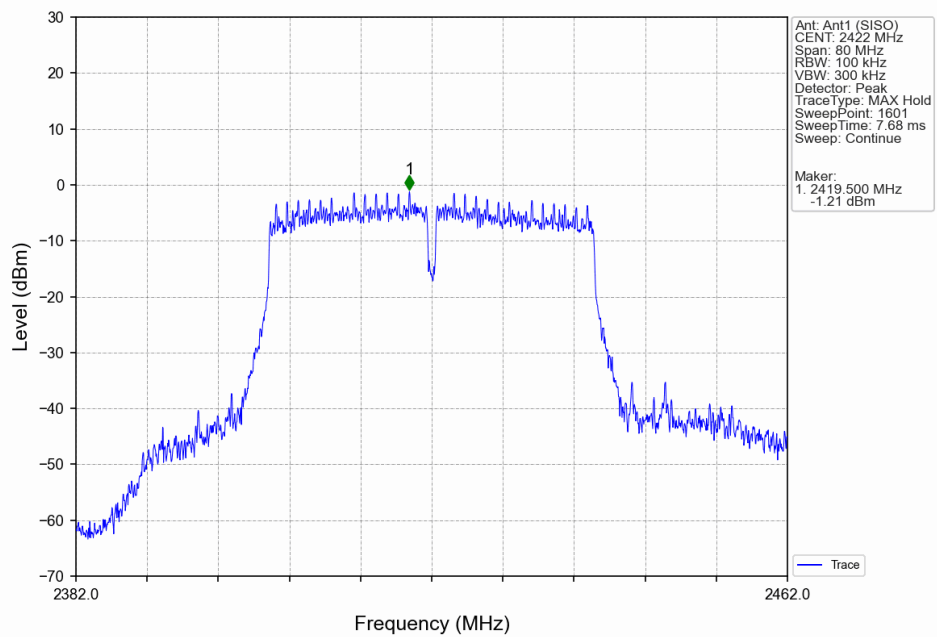
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



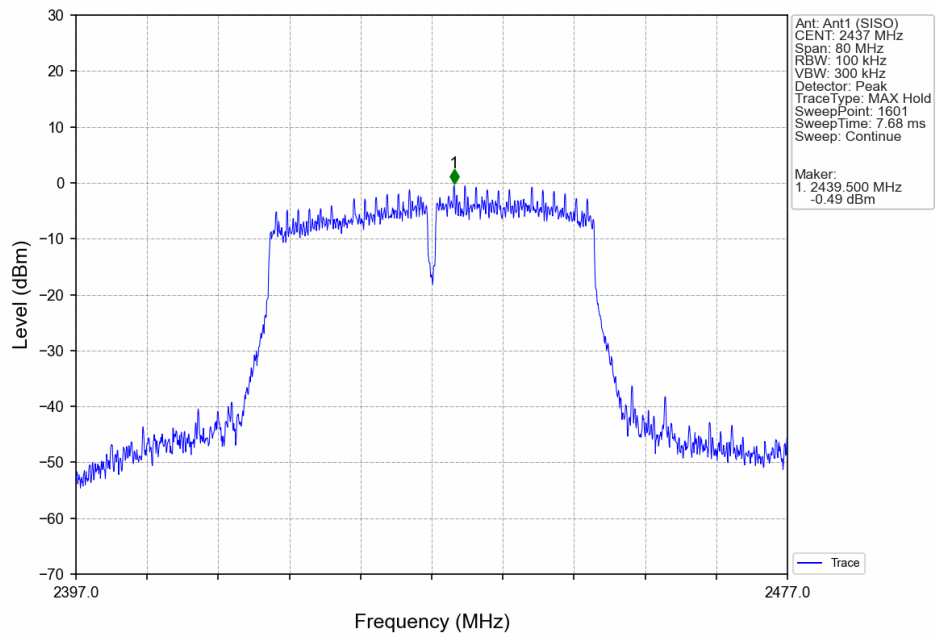
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



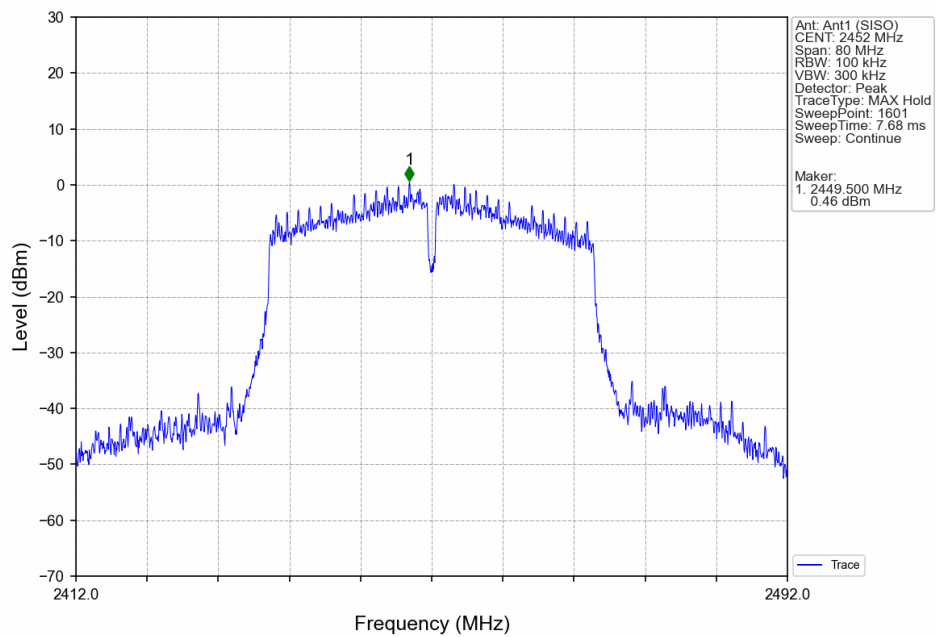
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



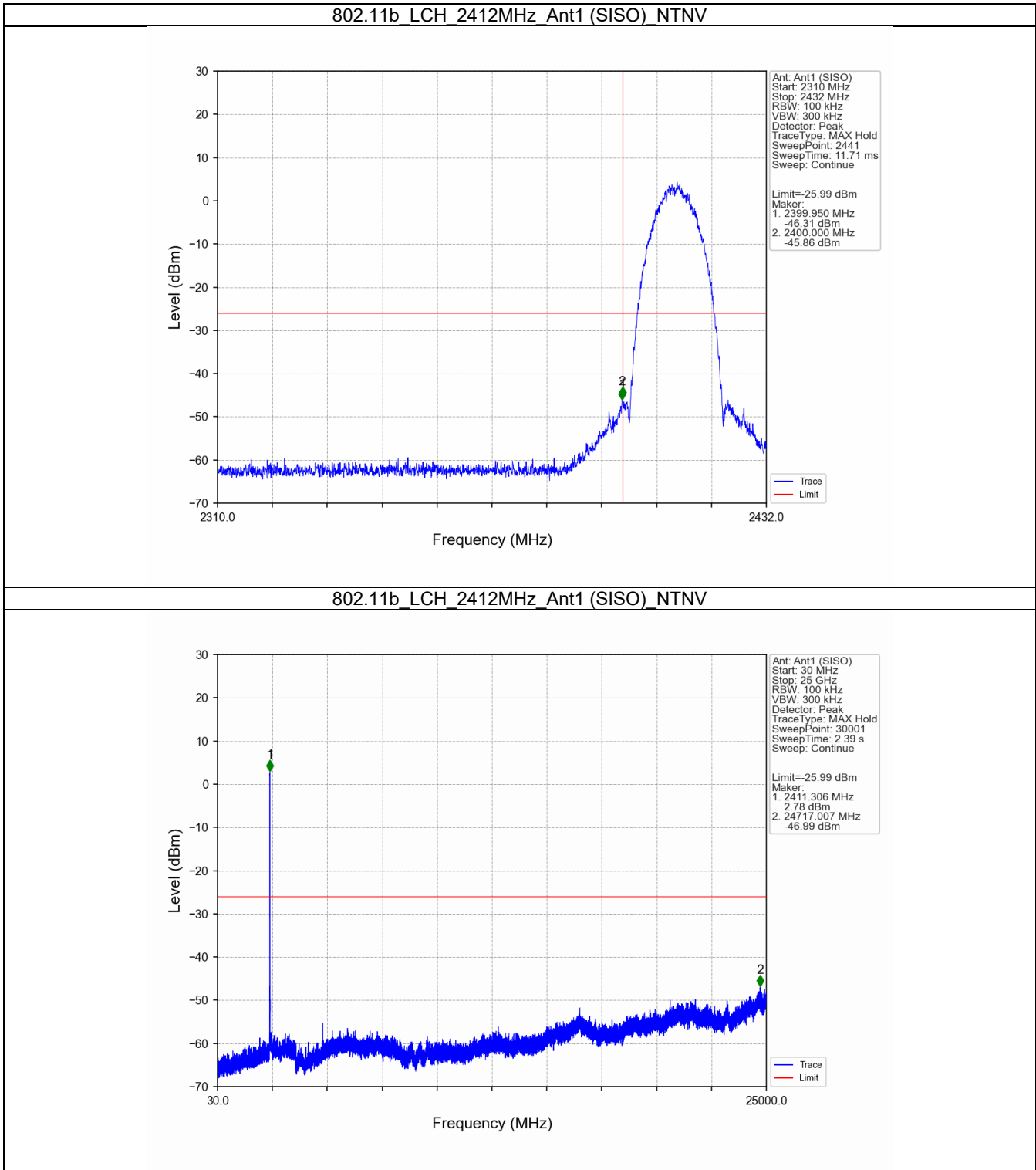
802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



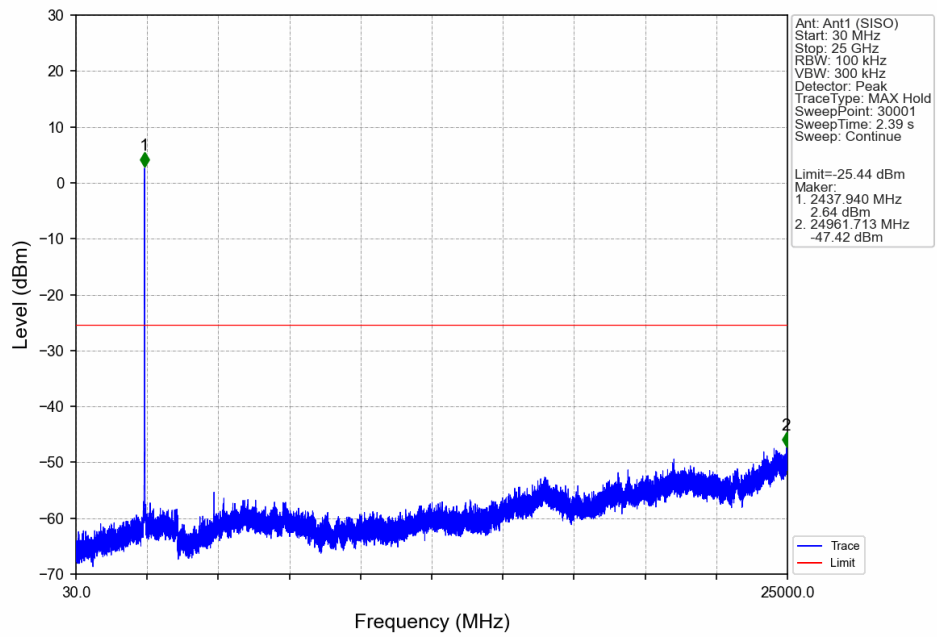
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV



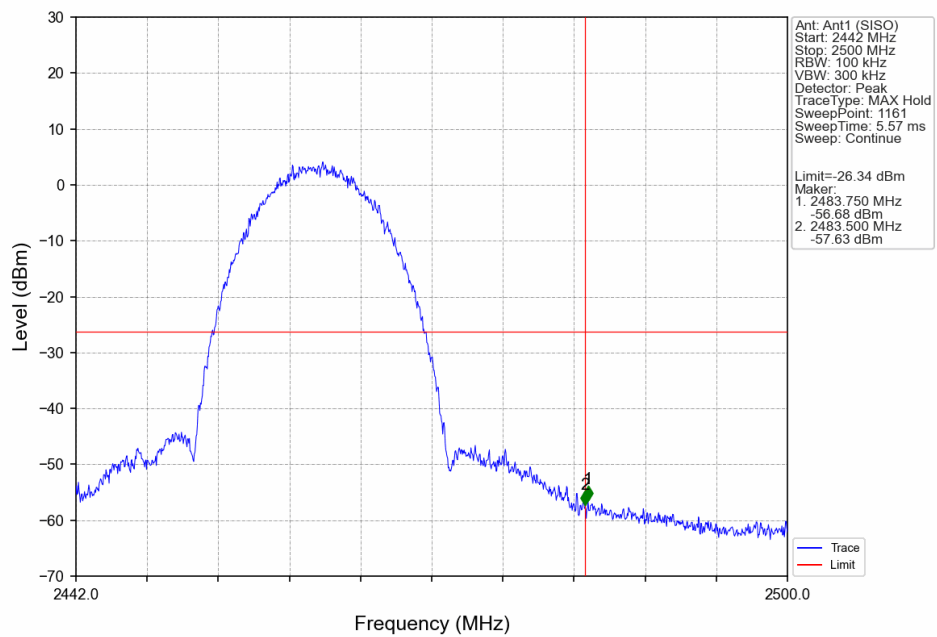
5.2.2 CSE



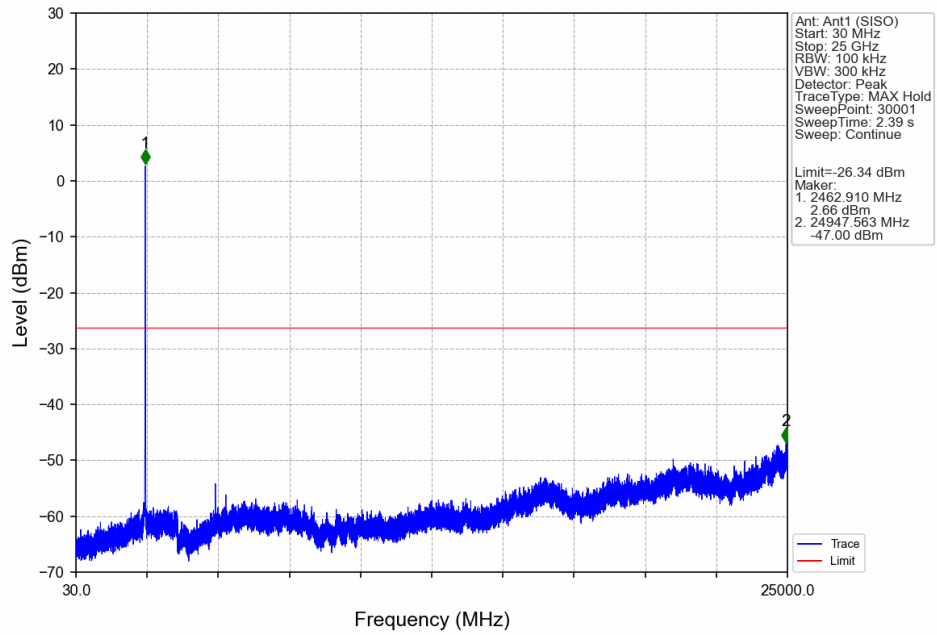
# 802.11b MCH 2437MHz Ant1 (SISO) NTN



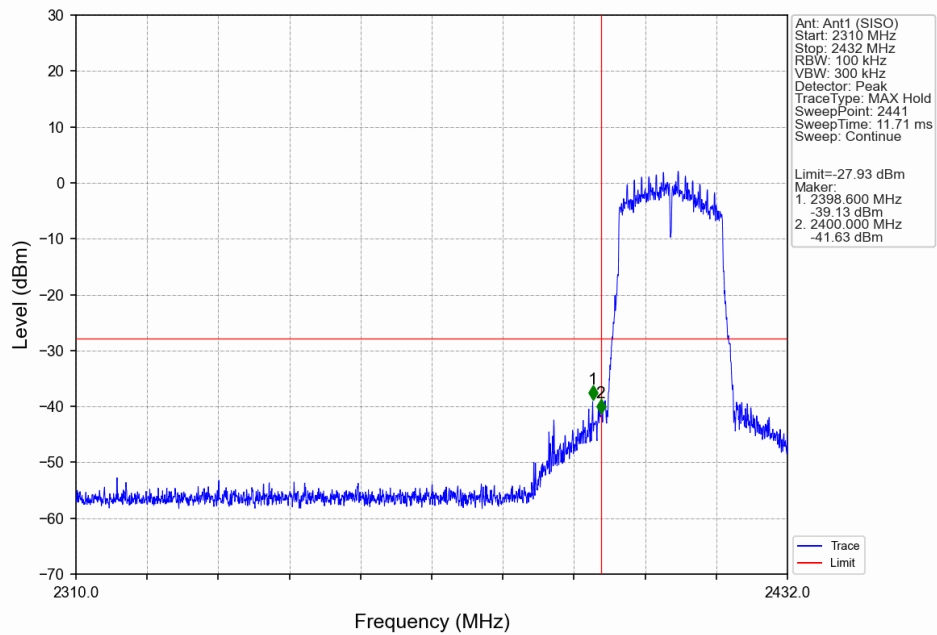
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



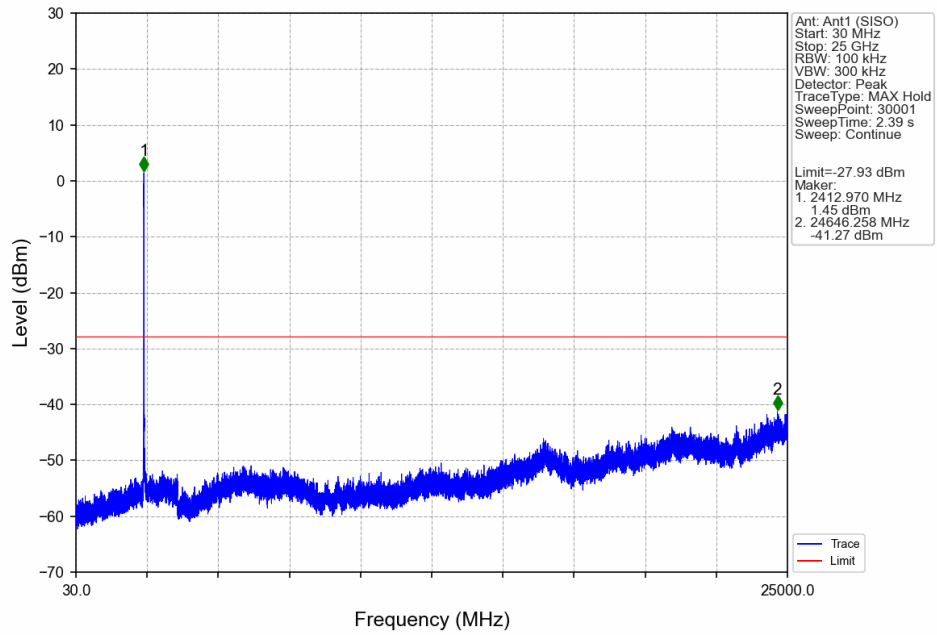
# 802.11b HCH 2462MHz Ant1 (SISO) NTN



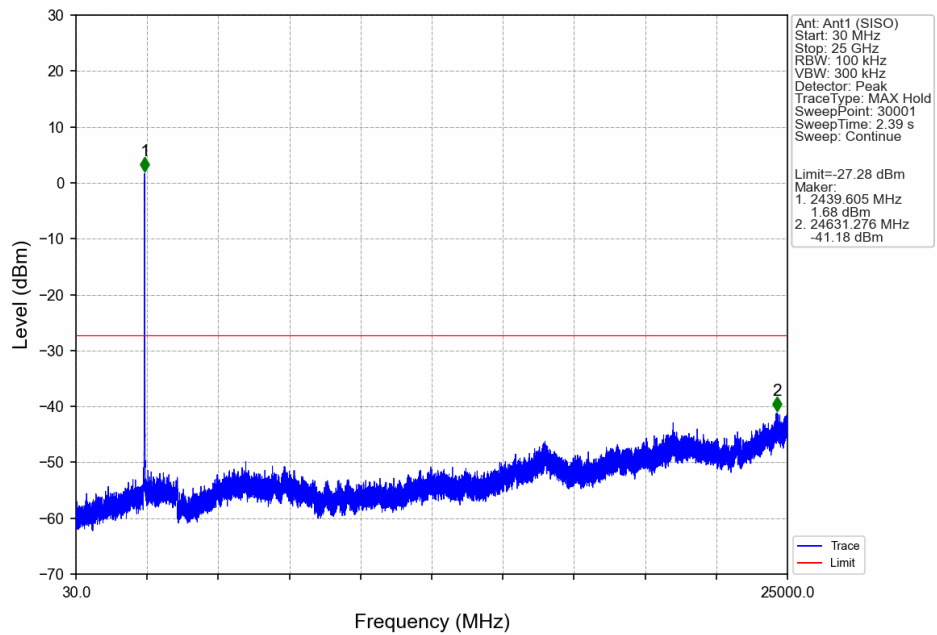
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



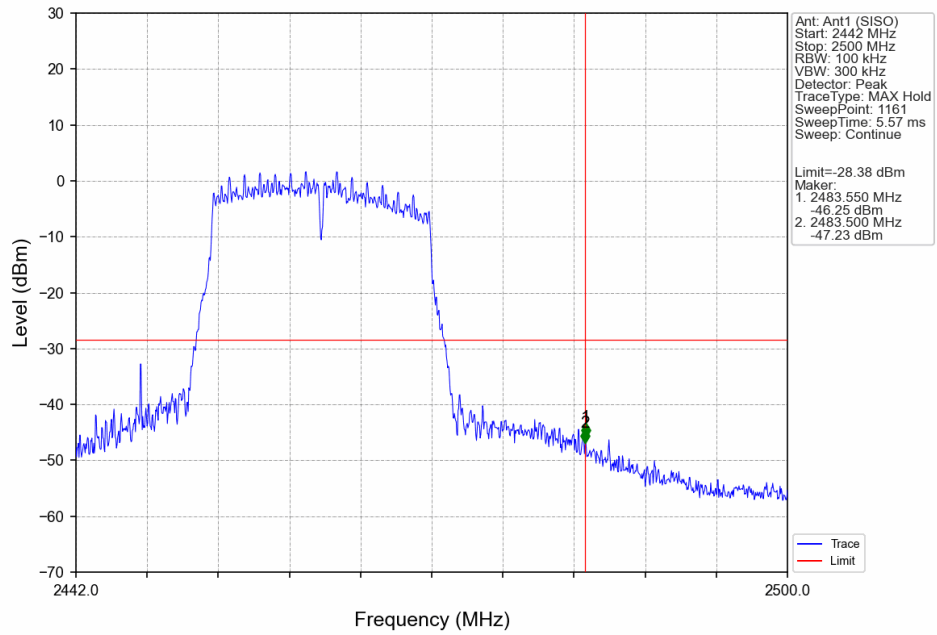
# 802.11g LCH 2412MHz Ant1 (SISO) NTN



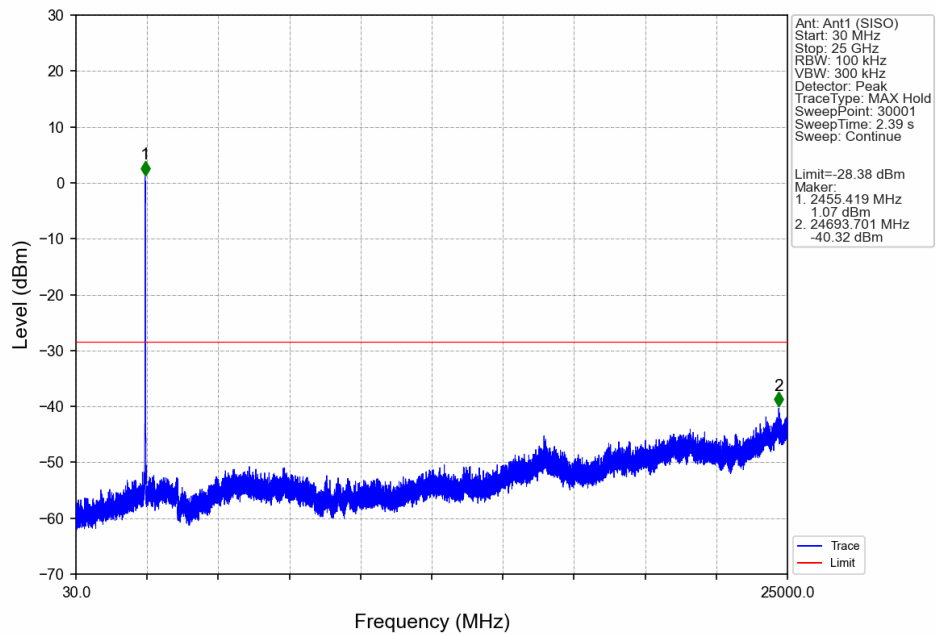
# 802.11g MCH 2437MHz Ant1 (SISO) NTN



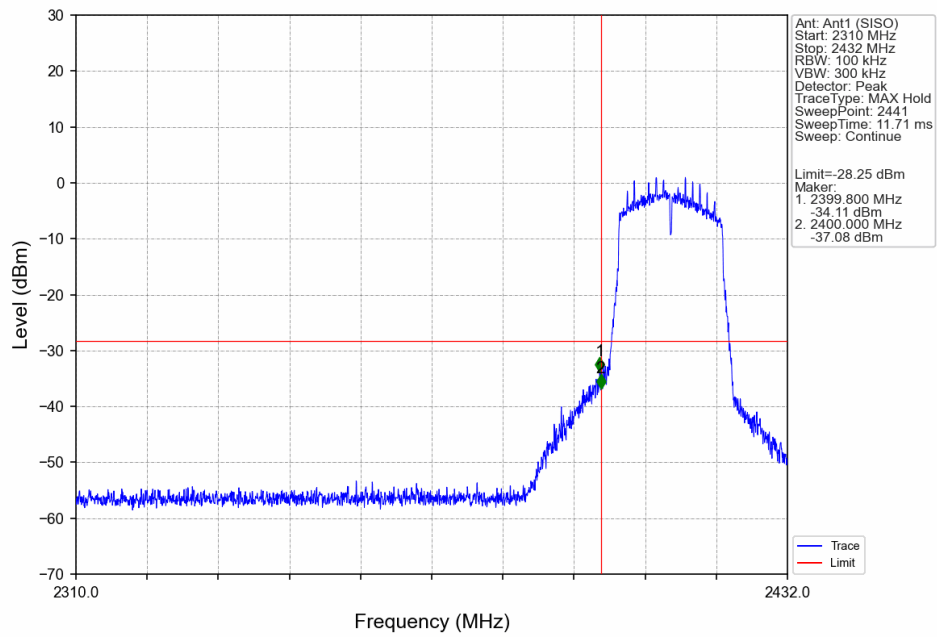
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



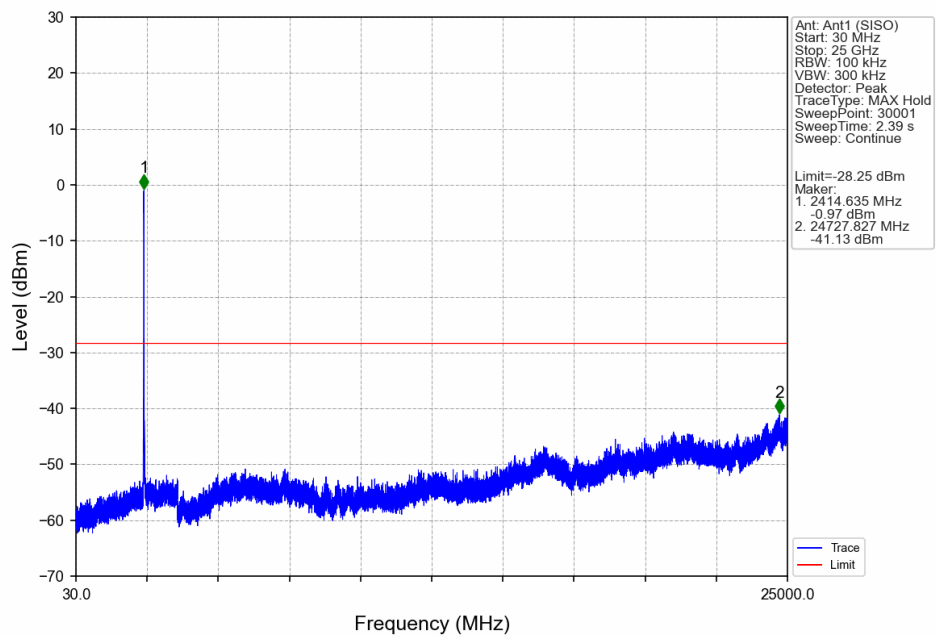
# 802.11g HCH 2462MHz Ant1 (SISO) NTN



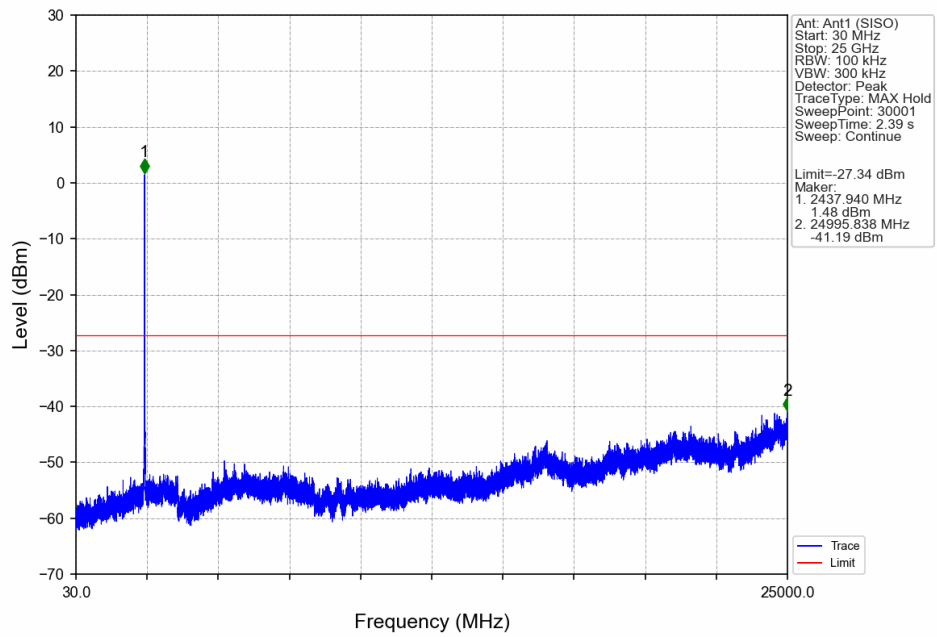
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



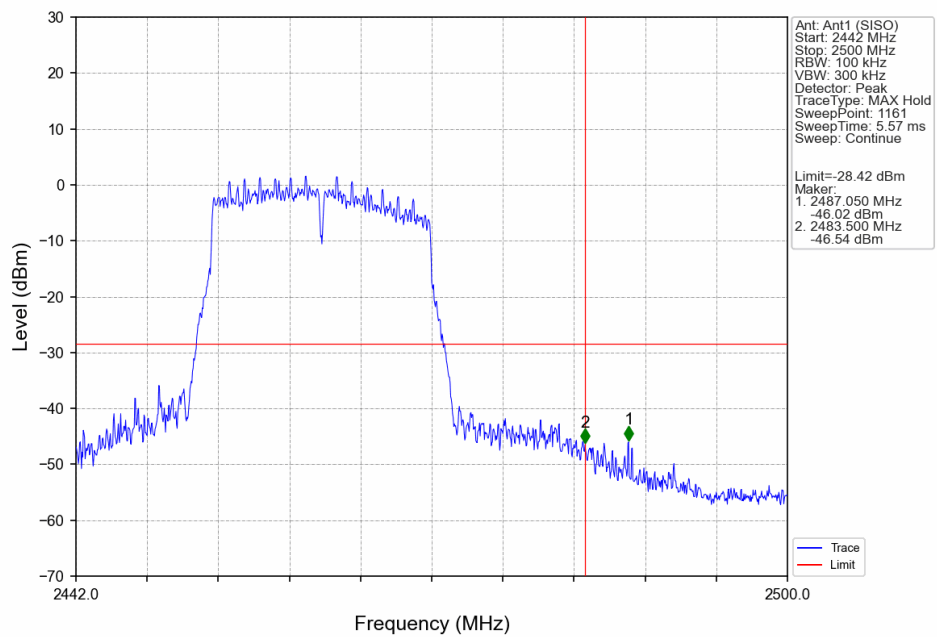
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



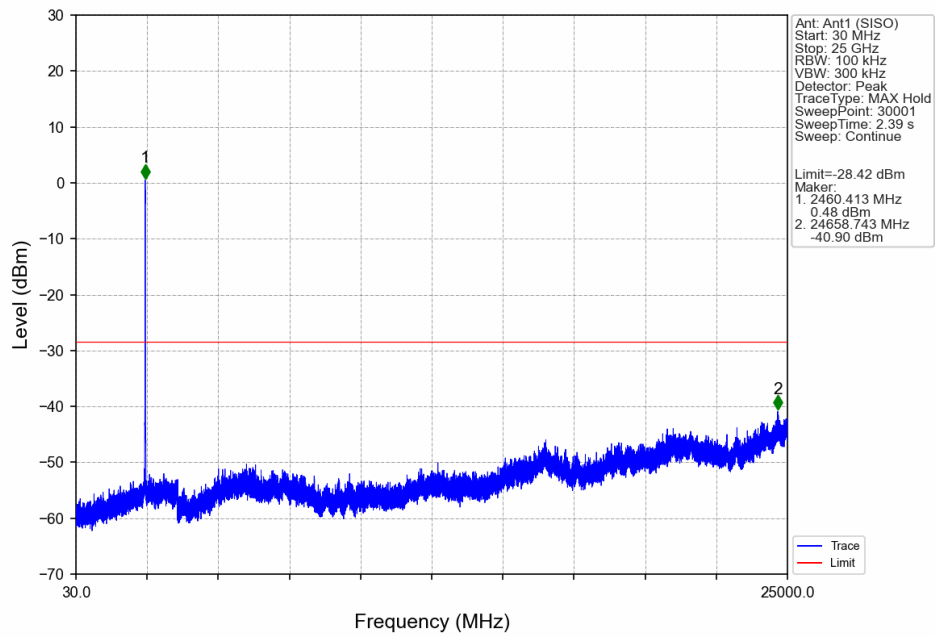
# 802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



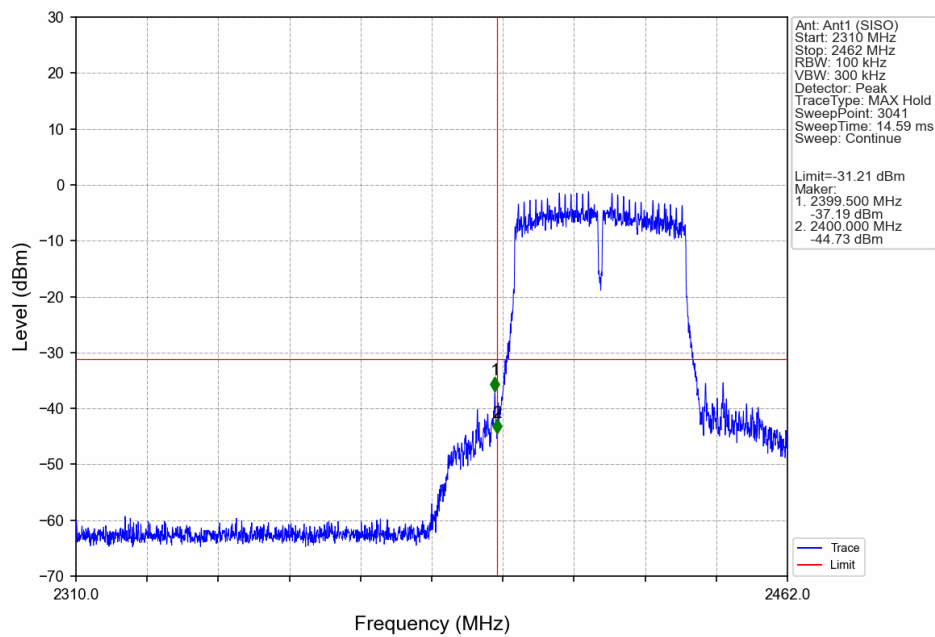
# 802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



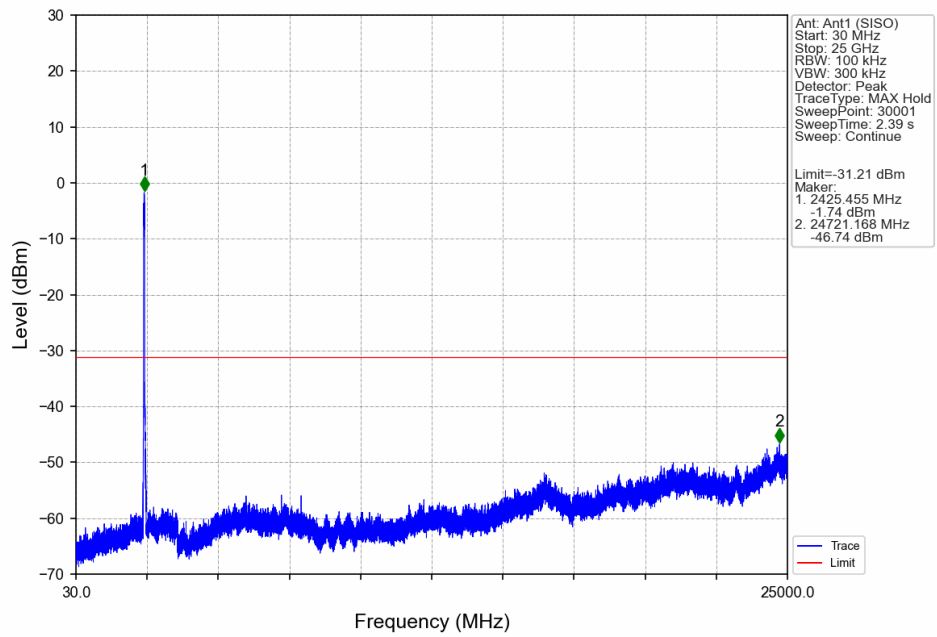
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



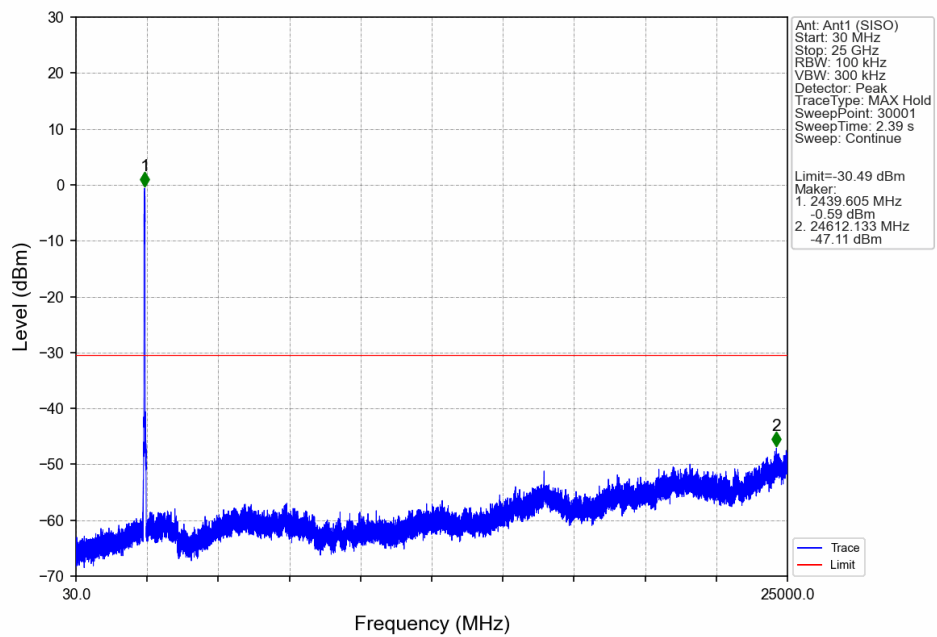
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



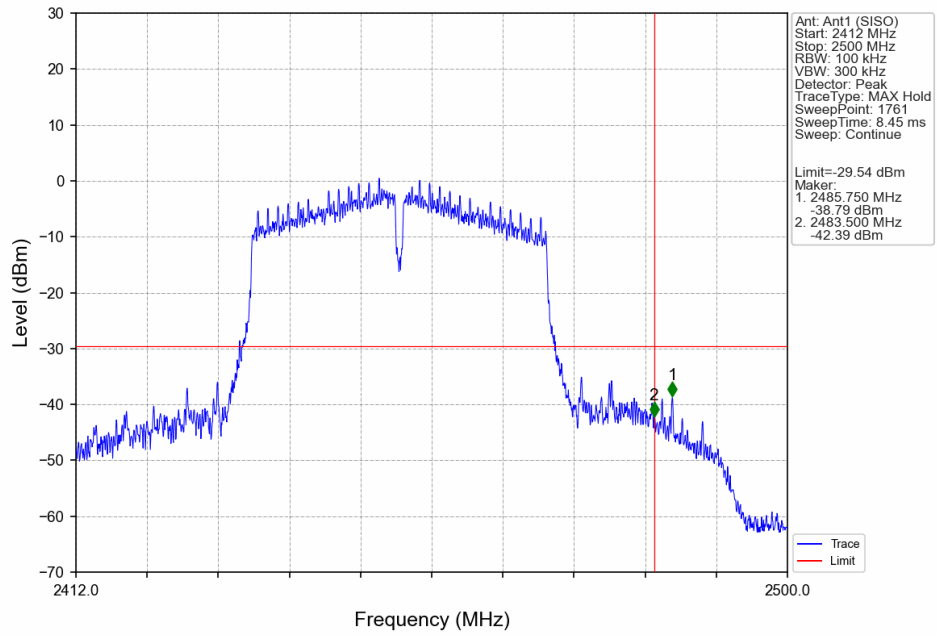
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV



802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTNV

