

# RF Test Data

## For

|                      |                          |
|----------------------|--------------------------|
| Project No.:         | RF251027002-01-001       |
| Client:              | Autel Robotics Co., Ltd. |
| Manufacturer:        | Autel Robotics Co., Ltd. |
| Product Description: | OmniLink                 |
| Model No.:           | Nest RF-6                |
| Test Engineer:       | Jason Huang              |
| Test Date:           | 2025-10-28               |

## Test Summary

| Item                                                 | Result |
|------------------------------------------------------|--------|
| Duty Cycle                                           | Pass   |
| Bandwidth                                            | Pass   |
| Maximum Conducted Output Power                       | Pass   |
| Maximum Power Spectral Density                       | Pass   |
| Unwanted Emissions In Non-restricted Frequency Bands | Pass   |

# 1. Duty Cycle

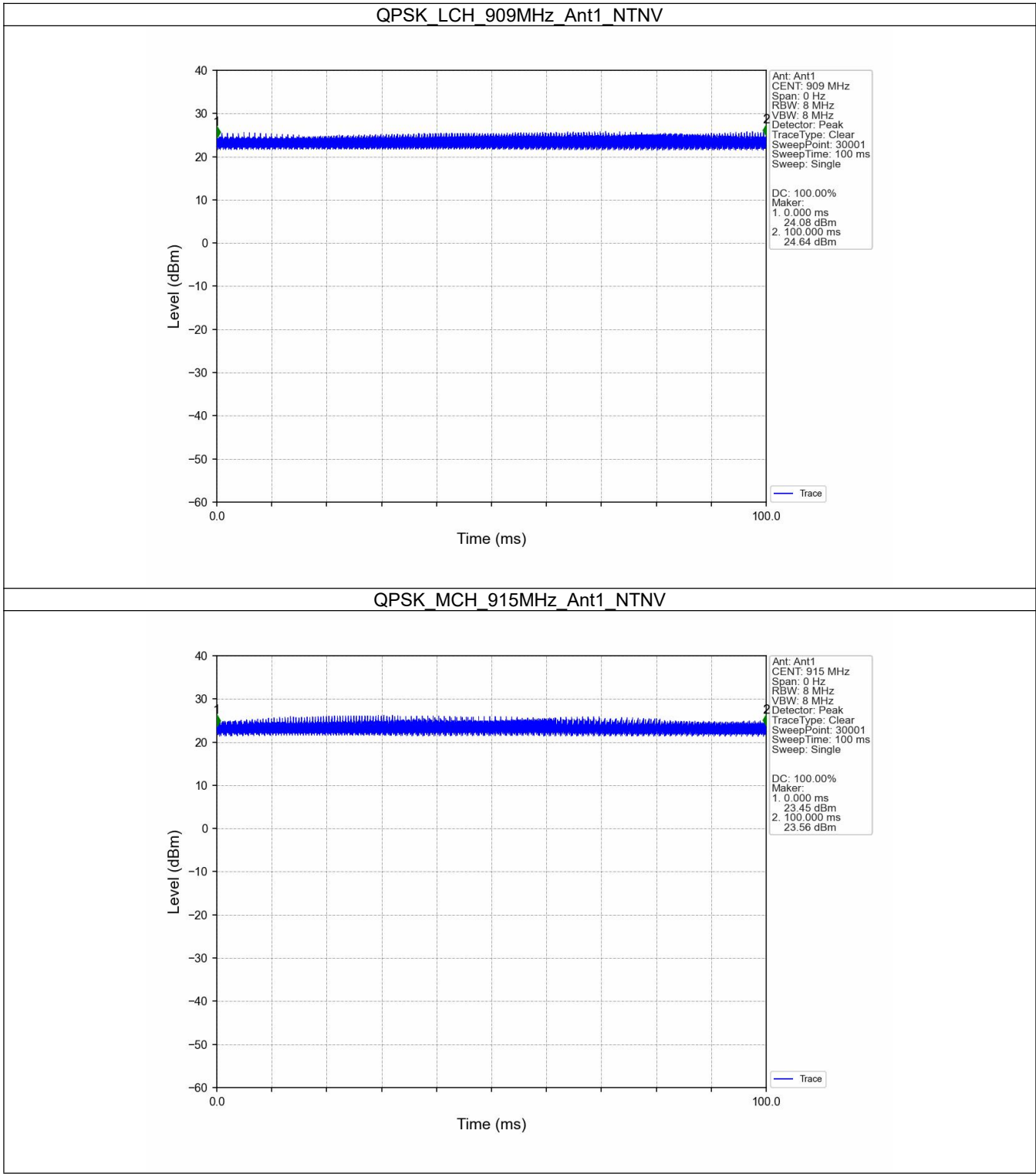
## 1.1 Test Result

### 1.1.1 Ant1

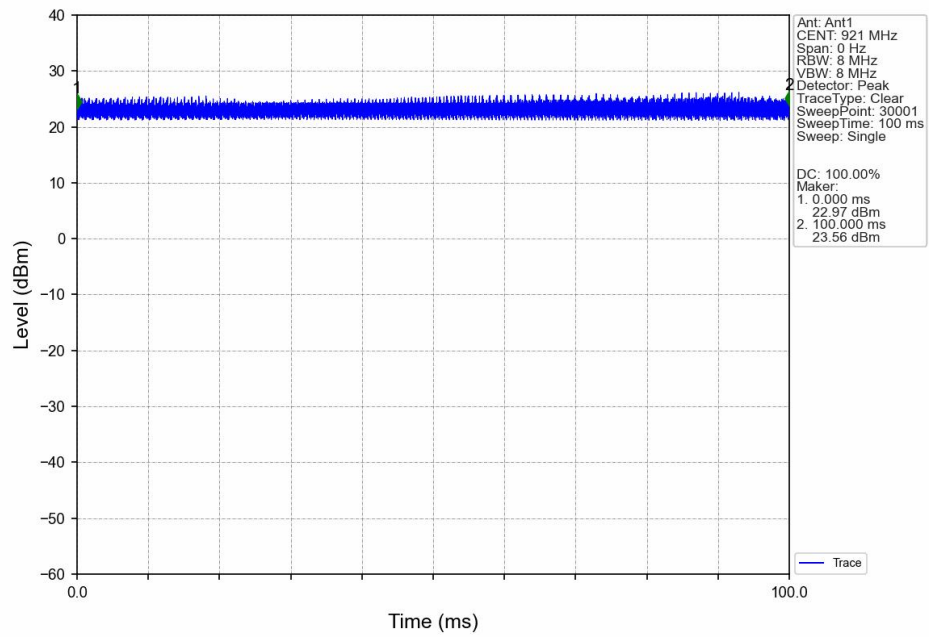
| Ant1  |         |                 |           |             |                |                                   |                       |
|-------|---------|-----------------|-----------|-------------|----------------|-----------------------------------|-----------------------|
| Mode  | TX Type | Frequency (MHz) | T_on (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | Max. DC Variation (%) |
| QPSK  | MIMO    | 909             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |
|       |         | 915             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |
|       |         | 921             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |
| 16QAM | MIMO    | 909             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |
|       |         | 915             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |
|       |         | 921             | 100.000   | 100.000     | 100.00         | 0.00                              | 0.00                  |

1.2 Test Graph

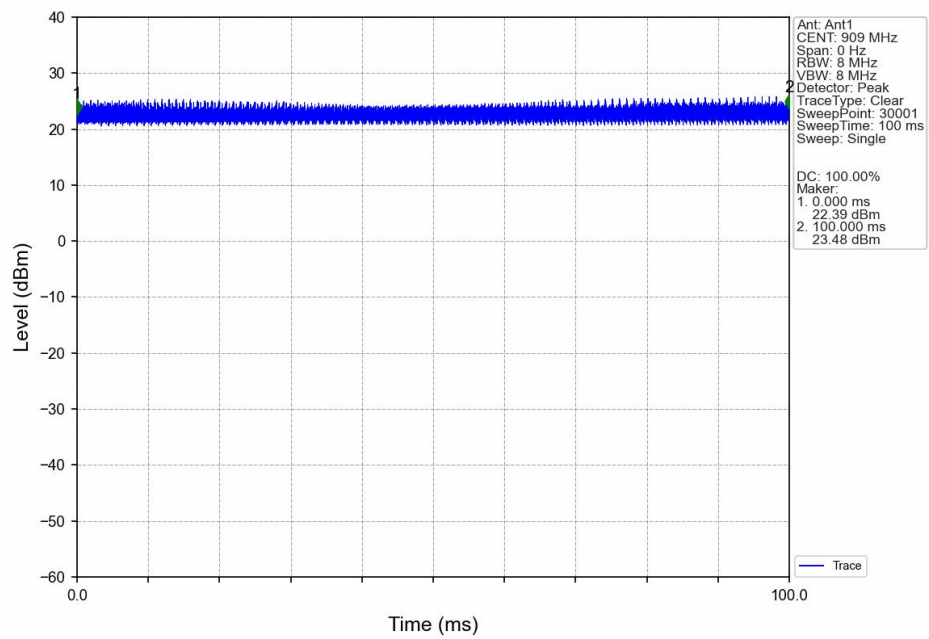
1.2.1 Ant1



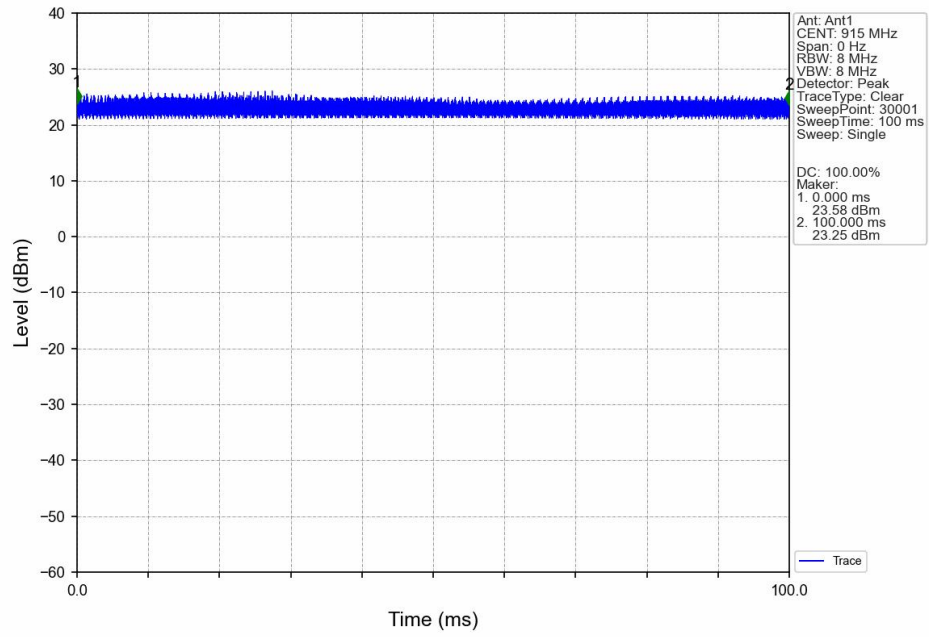
### QPSK\_HCH\_921MHz\_Ant1\_NTNV



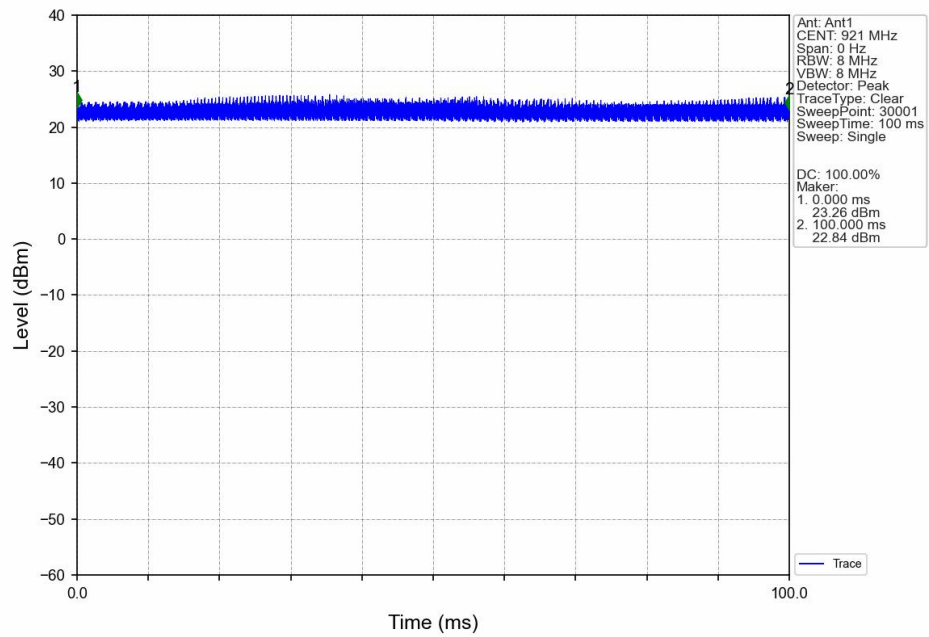
### 16QAM\_LCH\_909MHz\_Ant1\_NTNV



# 16QAM\_MCH\_915MHz\_Ant1\_NTNV



# 16QAM\_HCH\_921MHz\_Ant1\_NTNV



## 2. Bandwidth

### 2.1 Test Result

#### 2.1.1 OBW

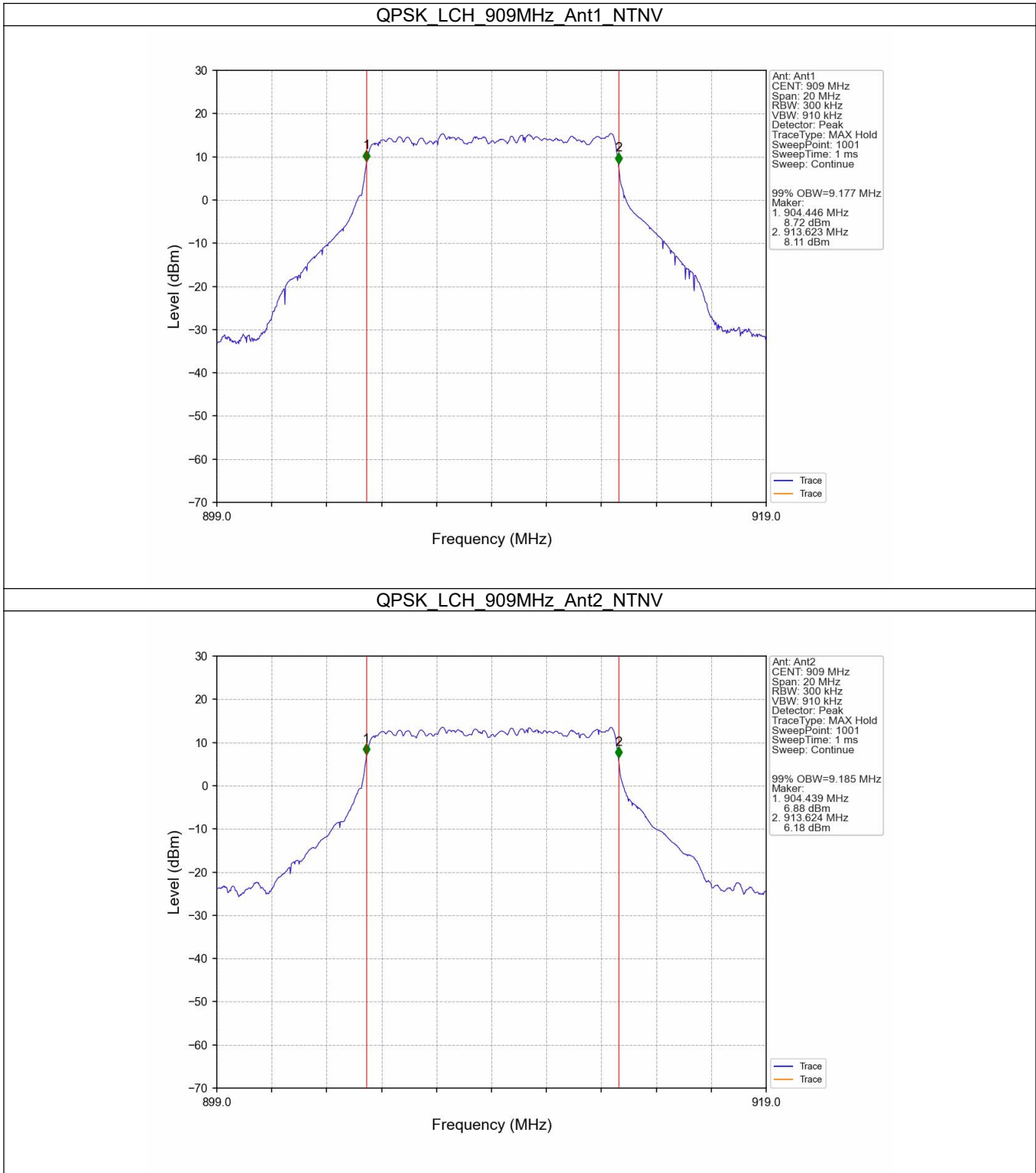
| Mode  | TX Type | Frequency (MHz) | ANT | 99% Occupied Bandwidth (MHz) |       | Verdict |
|-------|---------|-----------------|-----|------------------------------|-------|---------|
|       |         |                 |     | Result                       | Limit |         |
| QPSK  | MIMO    | 909             | 1   | 9.177                        | /     | Pass    |
|       |         |                 | 2   | 9.185                        | /     | Pass    |
|       |         | 915             | 1   | 9.171                        | /     | Pass    |
|       |         |                 | 2   | 9.188                        | /     | Pass    |
|       |         | 921             | 1   | 9.178                        | /     | Pass    |
|       |         |                 | 2   | 9.188                        | /     | Pass    |
| 16QAM | MIMO    | 909             | 1   | 9.176                        | /     | Pass    |
|       |         |                 | 2   | 9.185                        | /     | Pass    |
|       |         | 915             | 1   | 9.171                        | /     | Pass    |
|       |         |                 | 2   | 9.190                        | /     | Pass    |
|       |         | 921             | 1   | 9.179                        | /     | Pass    |
|       |         |                 | 2   | 9.187                        | /     | Pass    |

#### 2.1.2 6dB BW

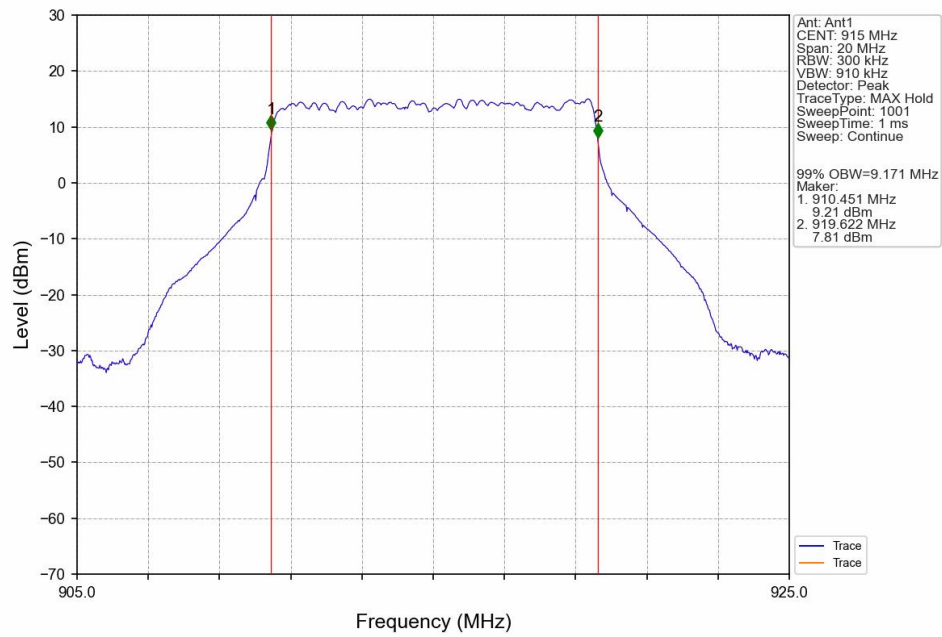
| Mode  | TX Type | Frequency (MHz) | ANT | 6dB Bandwidth (MHz) |            | Verdict |
|-------|---------|-----------------|-----|---------------------|------------|---------|
|       |         |                 |     | Result              | Limit      |         |
| QPSK  | MIMO    | 909             | 1   | 9.121               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.113               | $\geq 0.5$ | Pass    |
|       |         | 915             | 1   | 9.128               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.123               | $\geq 0.5$ | Pass    |
|       |         | 921             | 1   | 9.128               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.115               | $\geq 0.5$ | Pass    |
| 16QAM | MIMO    | 909             | 1   | 9.126               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.122               | $\geq 0.5$ | Pass    |
|       |         | 915             | 1   | 9.127               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.122               | $\geq 0.5$ | Pass    |
|       |         | 921             | 1   | 9.127               | $\geq 0.5$ | Pass    |
|       |         |                 | 2   | 9.121               | $\geq 0.5$ | Pass    |

## 2.2 Test Graph

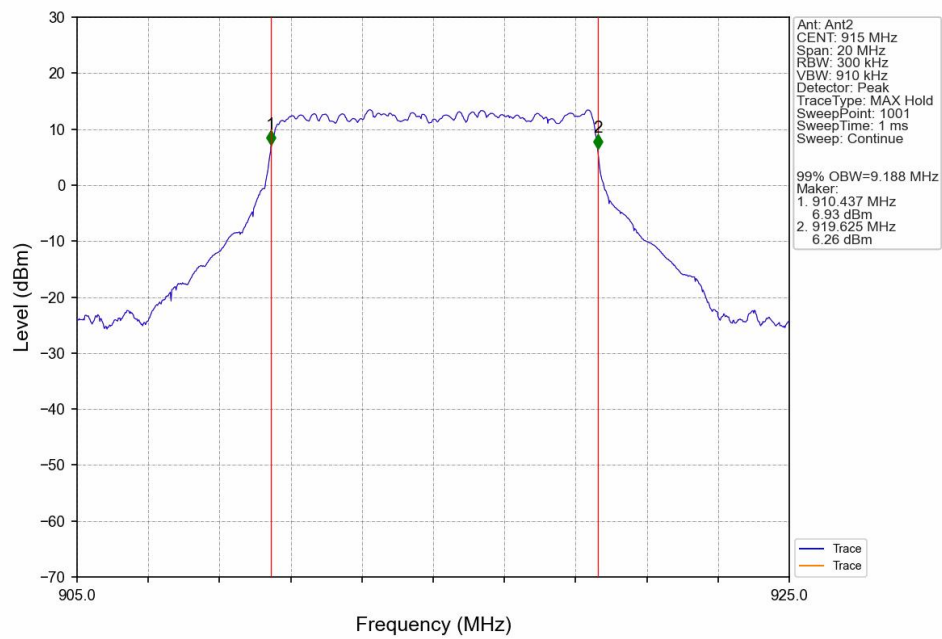
### 2.2.1 OBW



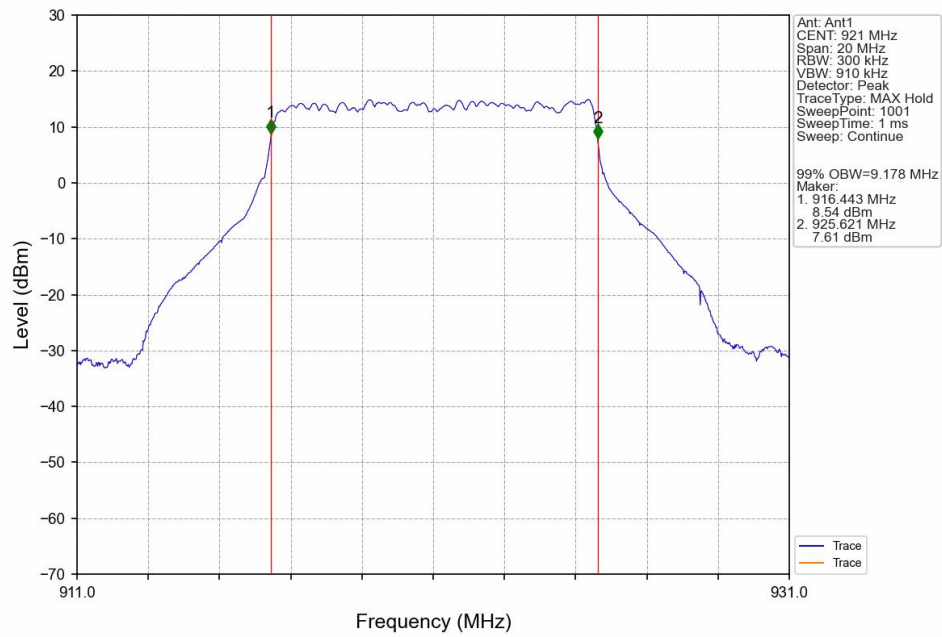
### QPSK\_MCH\_915MHz\_Ant1\_NTNV



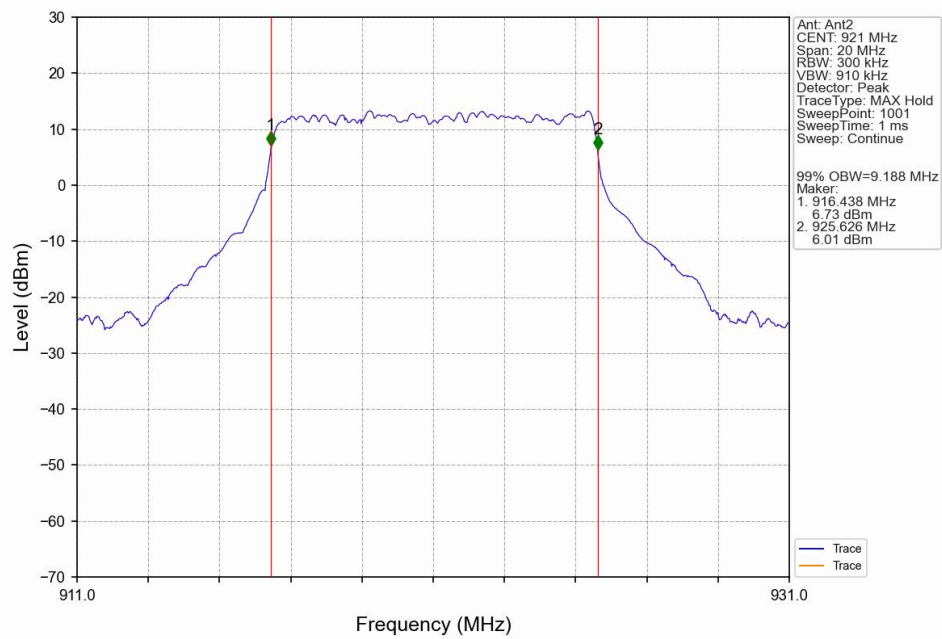
### QPSK\_MCH\_915MHz\_Ant2\_NTNV



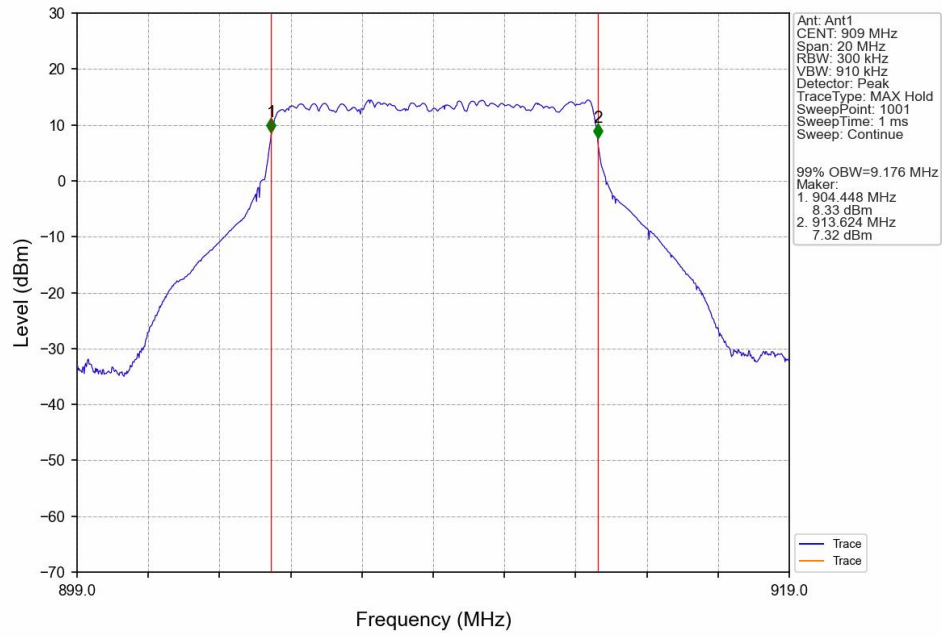
# QPSK\_HCH\_921MHz\_Ant1\_NTNV



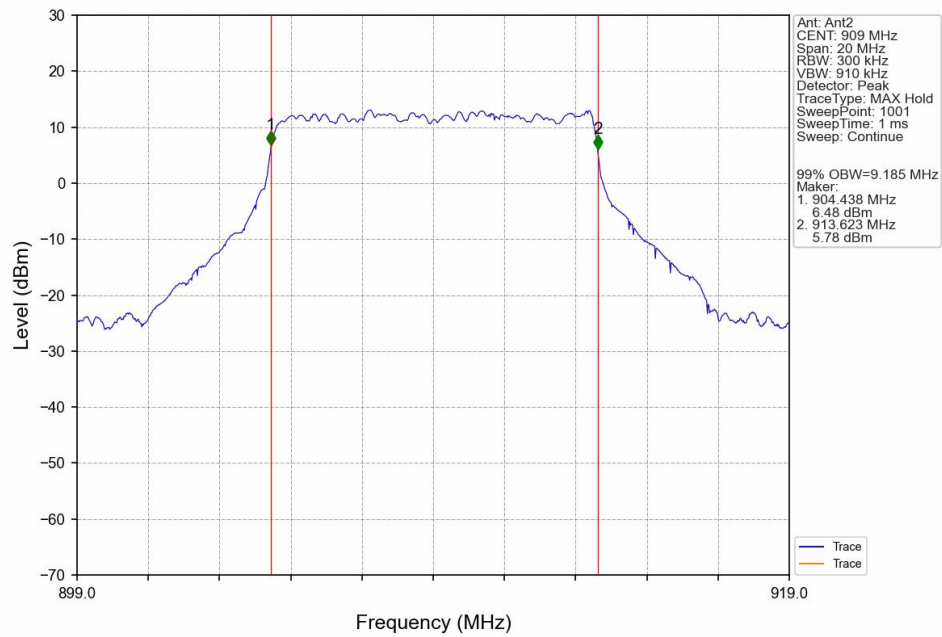
# QPSK\_HCH\_921MHz\_Ant2\_NTNV



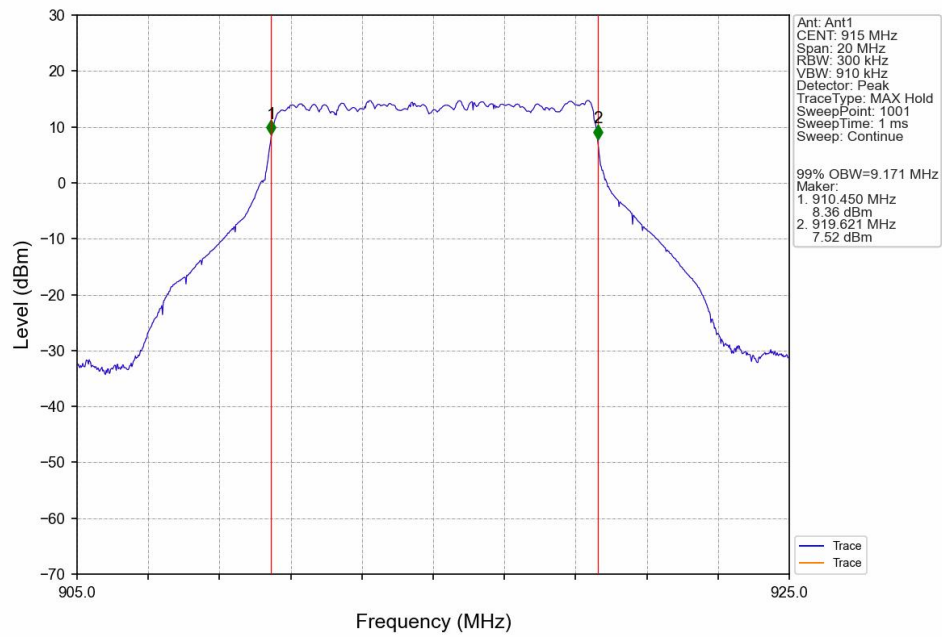
# 16QAM\_LCH\_909MHz\_Ant1\_NTNV



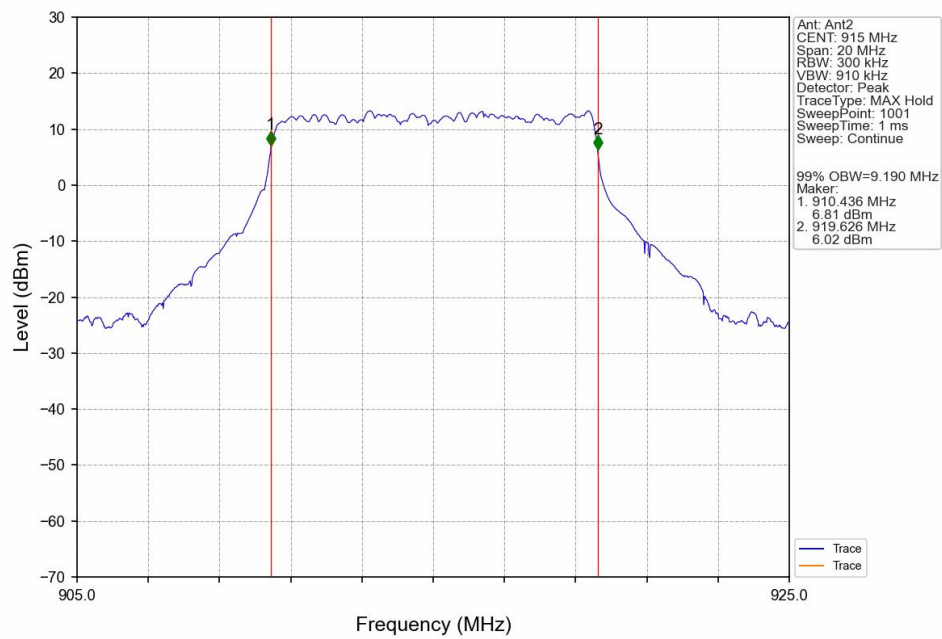
# 16QAM\_LCH\_909MHz\_Ant2\_NTNV



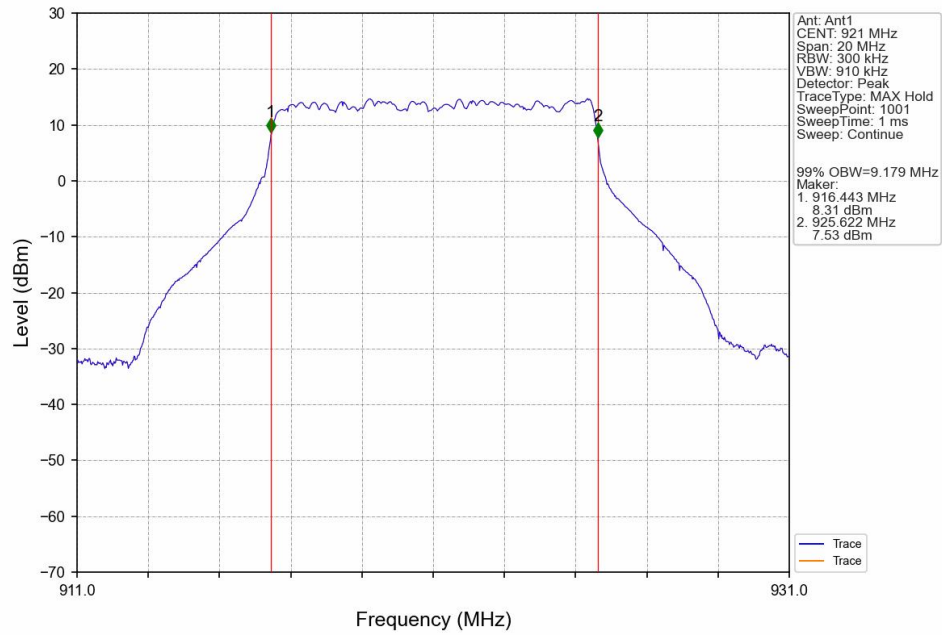
### 16QAM\_MCH\_915MHz\_Ant1\_NTNV



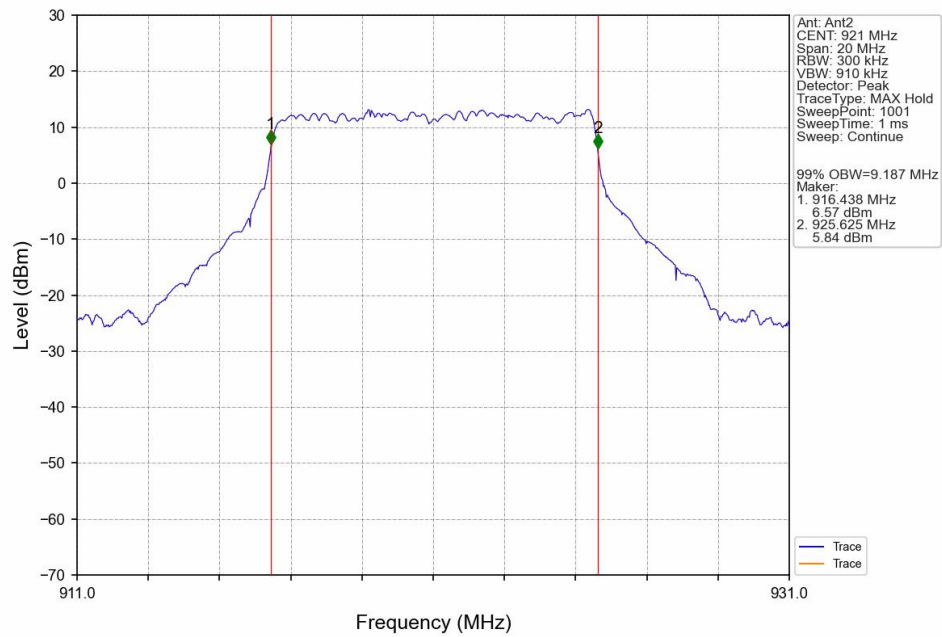
### 16QAM\_MCH\_915MHz\_Ant2\_NTNV



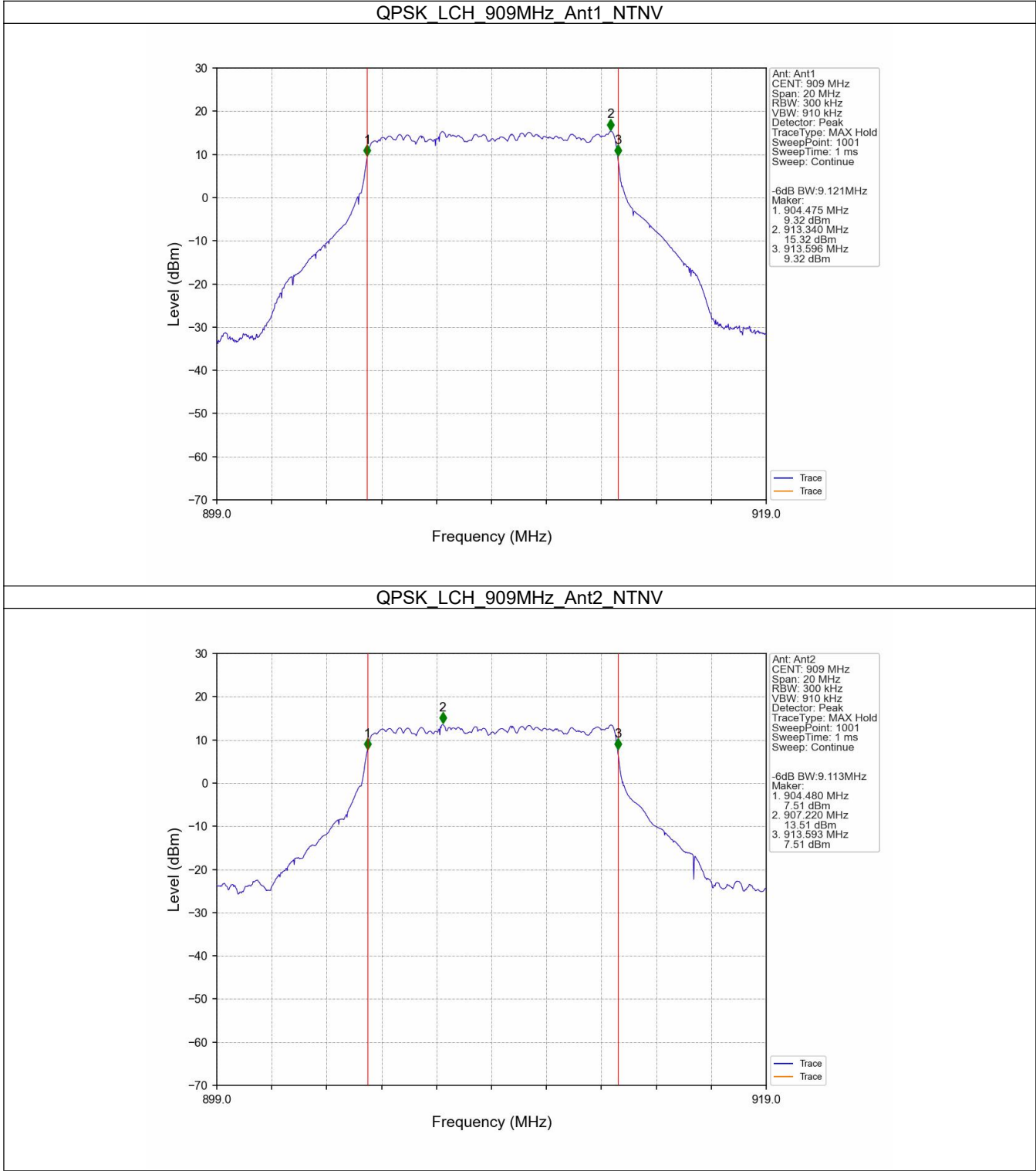
# 16QAM\_HCH\_921MHz\_Ant1\_NTNV



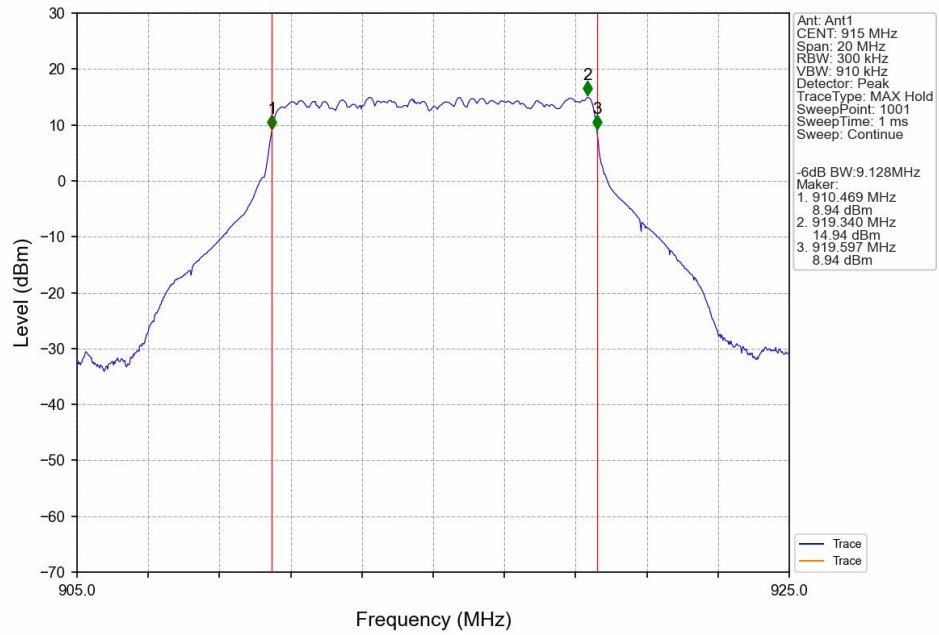
# 16QAM\_HCH\_921MHz\_Ant2\_NTNV



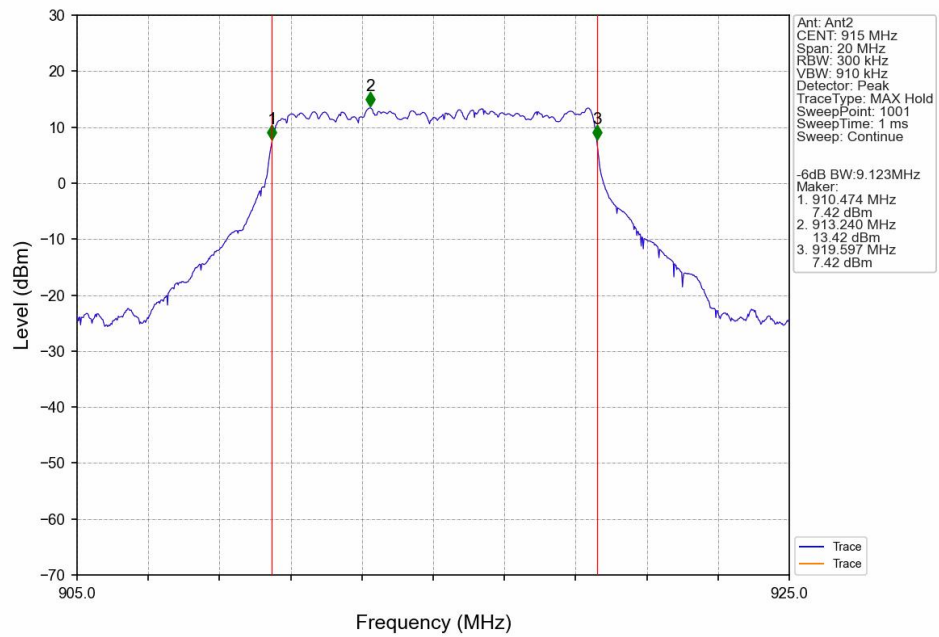
2.2.2 6dB BW



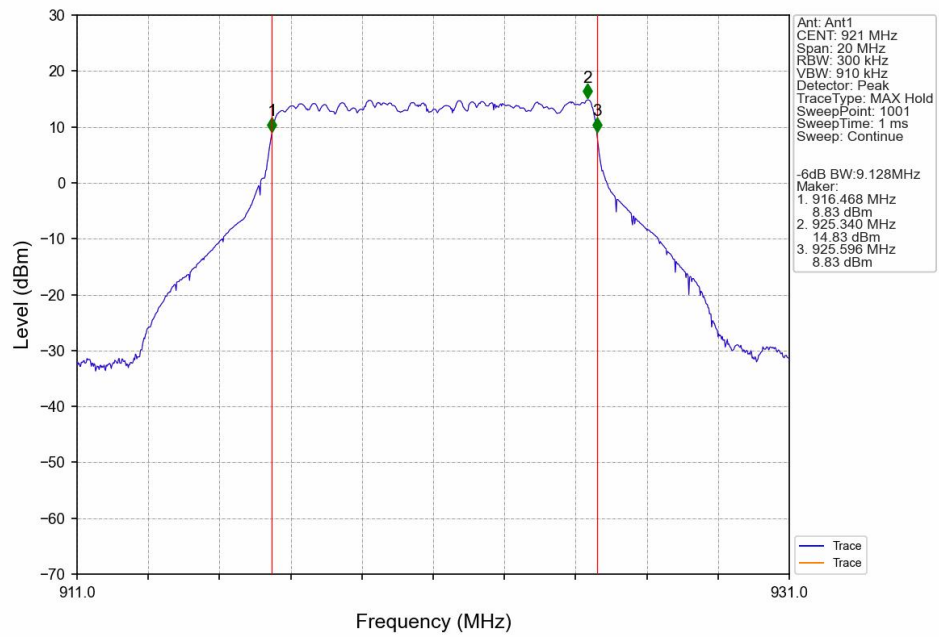
# QPSK\_MCH\_915MHz\_Ant1\_NTNV



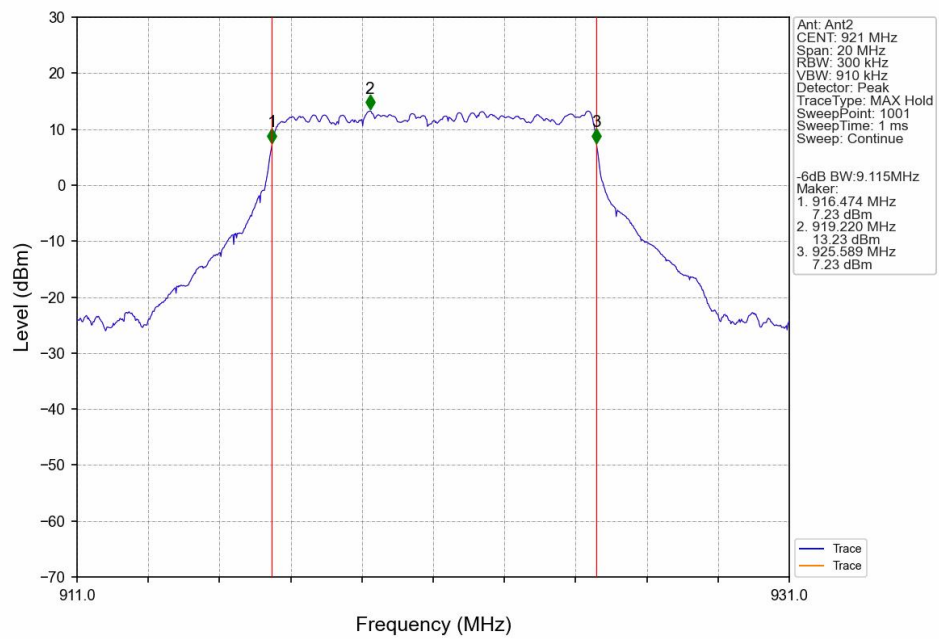
# QPSK\_MCH\_915MHz\_Ant2\_NTNV



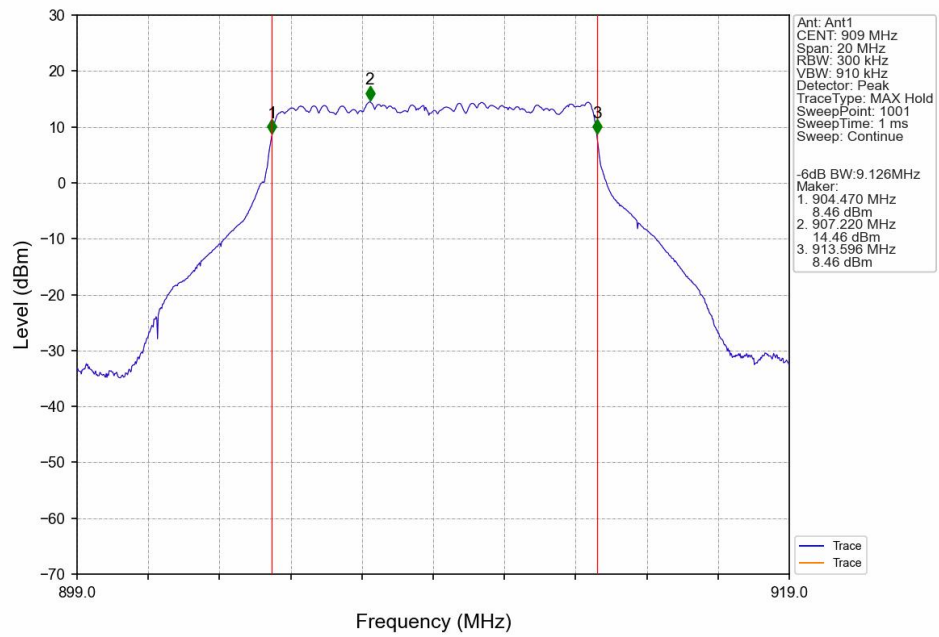
# QPSK\_HCH\_921MHz\_Ant1\_NTNV



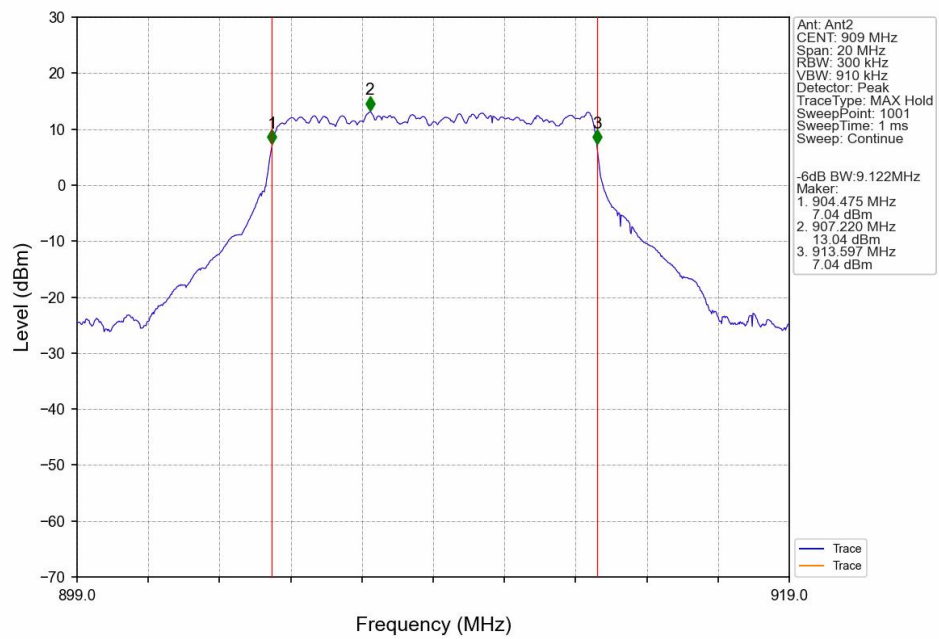
# QPSK\_HCH\_921MHz\_Ant2\_NTNV



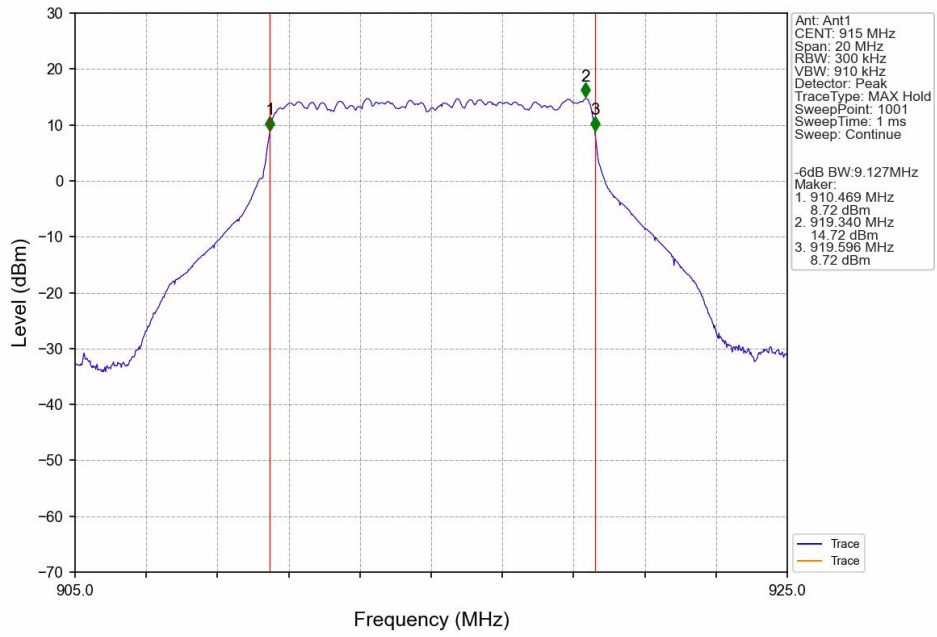
# 16QAM\_LCH\_909MHz\_Ant1\_NTNV



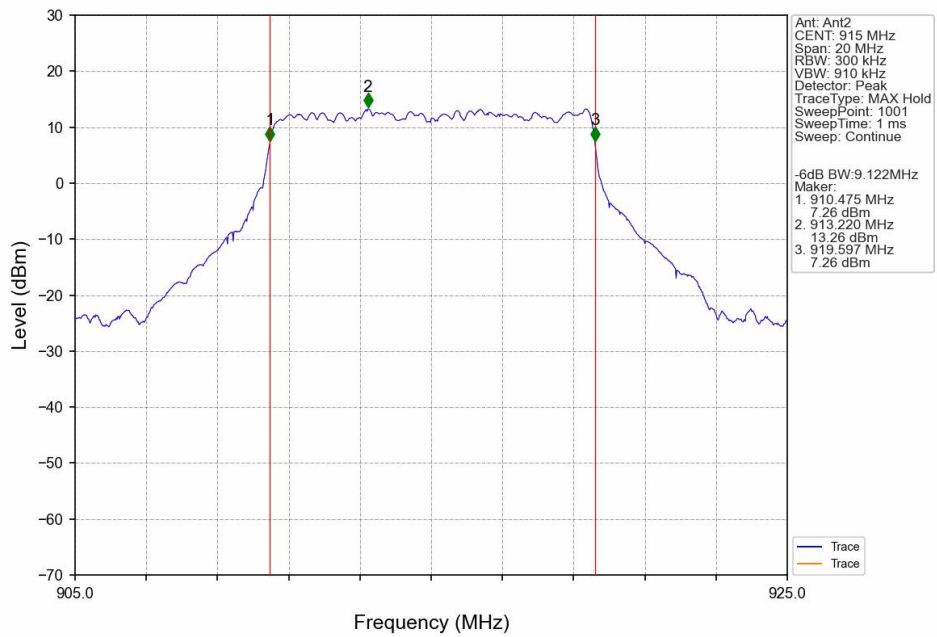
# 16QAM\_LCH\_909MHz\_Ant2\_NTNV



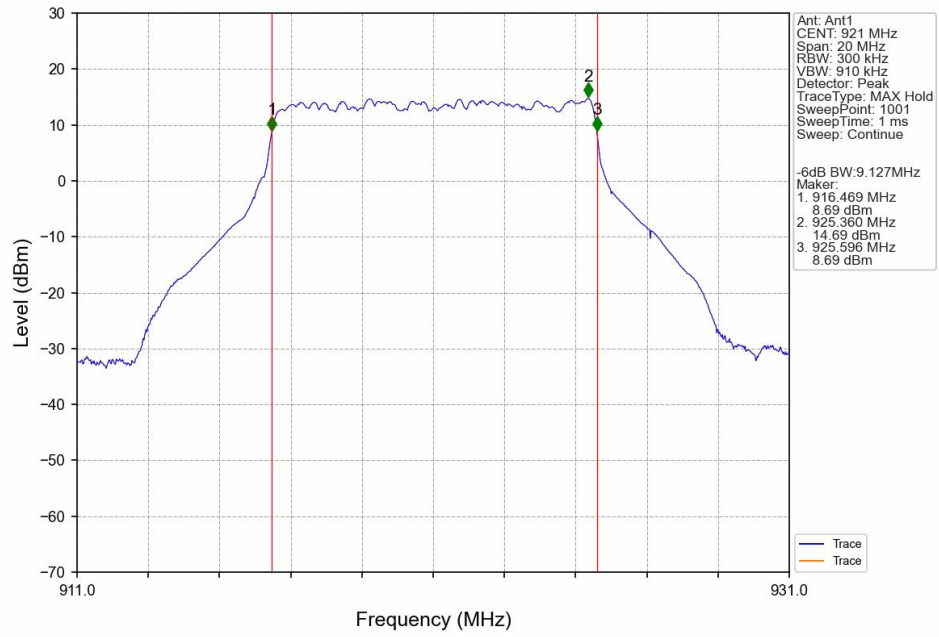
# 16QAM\_MCH\_915MHz\_Ant1\_NTNV



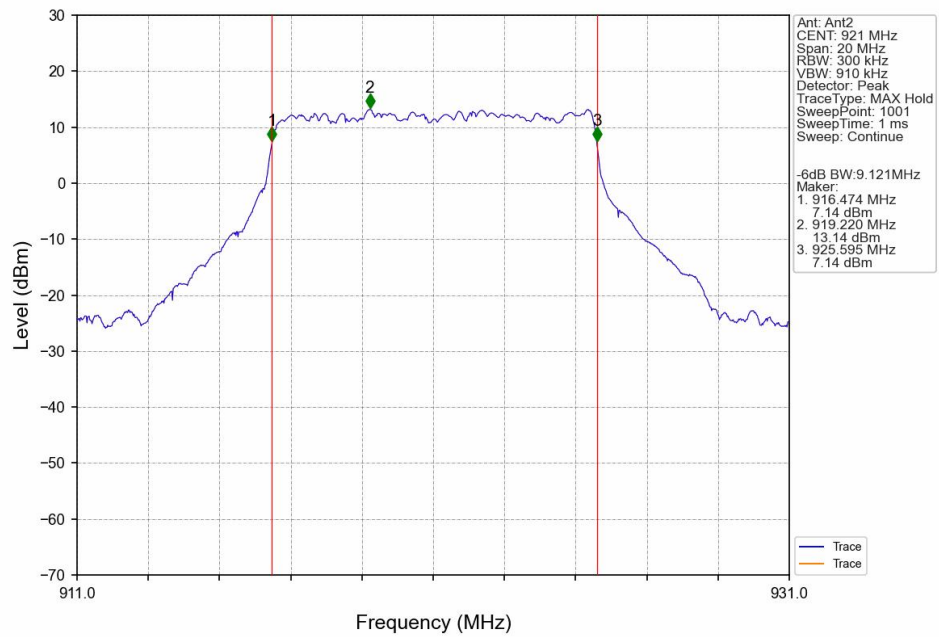
# 16QAM\_MCH\_915MHz\_Ant2\_NTNV



# 16QAM\_HCH\_921MHz\_Ant1\_NTNV



# 16QAM\_HCH\_921MHz\_Ant2\_NTNV



### 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                                         | ANT2  | MIMO  | Limit   |         |
| QPSK                                                                                          | MIMO    | 909             | 24.14                                        | 21.57 | 26.05 | <=29.69 | Pass    |
|                                                                                               |         | 915             | 24.01                                        | 21.56 | 25.97 | <=29.69 | Pass    |
|                                                                                               |         | 921             | 24.31                                        | 21.58 | 26.17 | <=29.69 | Pass    |
| 16QAM                                                                                         | MIMO    | 909             | 24.01                                        | 21.42 | 25.92 | <=29.69 | Pass    |
|                                                                                               |         | 915             | 24.03                                        | 21.46 | 25.94 | <=29.69 | Pass    |
|                                                                                               |         | 921             | 24.18                                        | 21.50 | 26.05 | <=29.69 | Pass    |
| Note1: Antenna Gain: Ant1: 3.30dBi; Ant2: 3.30dBi;<br>Note2: Directional Gain: Band1: 6.31dBi |         |                 |                                              |       |       |         |         |

## 4. Maximum Power Spectral Density

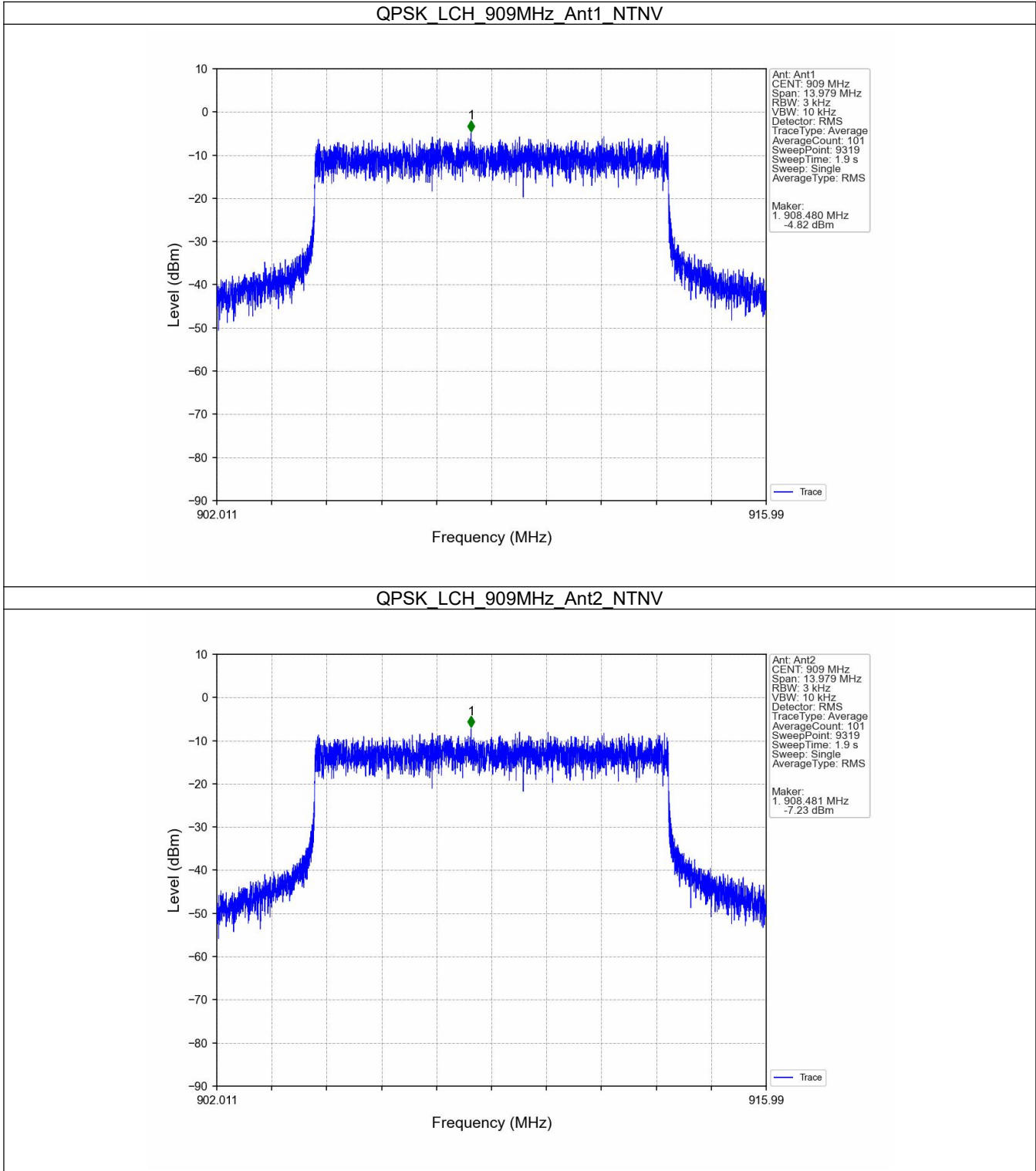
### 4.1 Test Result

#### 4.1.1 PSD

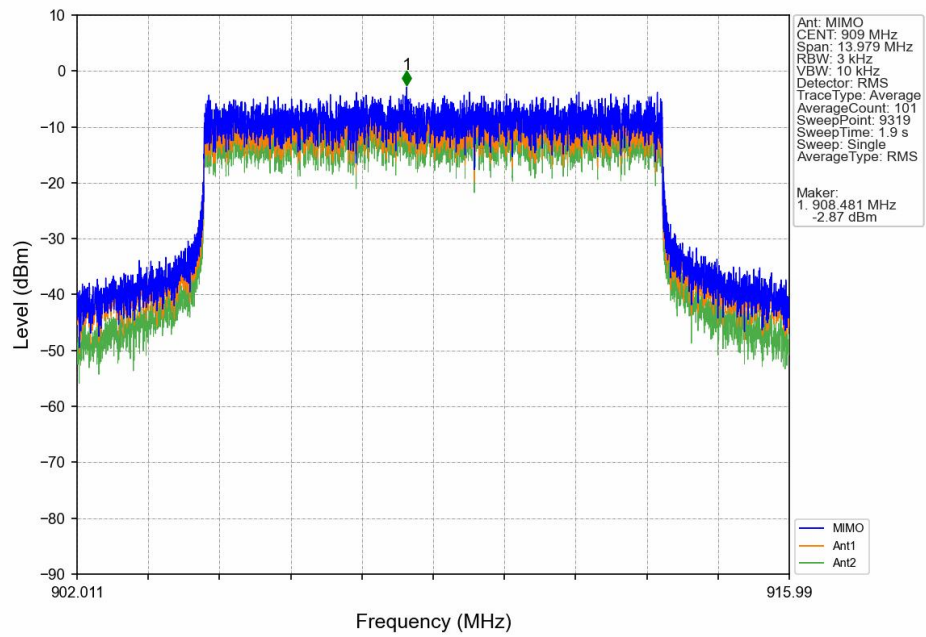
| Mode                                                                                          | TX Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) |       |       |        | Verdict |
|-----------------------------------------------------------------------------------------------|---------|-----------------|------------------------|-------|-------|--------|---------|
|                                                                                               |         |                 | ANT1                   | ANT2  | MIMO  | Limit  |         |
| QPSK                                                                                          | MIMO    | 909             | -4.82                  | -7.23 | -2.87 | <=7.69 | Pass    |
|                                                                                               |         | 915             | -4.40                  | -6.70 | -2.39 | <=7.69 | Pass    |
|                                                                                               |         | 921             | -4.31                  | -6.48 | -2.25 | <=7.69 | Pass    |
| 16QAM                                                                                         | MIMO    | 909             | -4.27                  | -7.23 | -2.49 | <=7.69 | Pass    |
|                                                                                               |         | 915             | -4.74                  | -7.25 | -2.81 | <=7.69 | Pass    |
|                                                                                               |         | 921             | -4.39                  | -7.12 | -2.53 | <=7.69 | Pass    |
| Note1: Antenna Gain: Ant1: 3.30dBi; Ant2: 3.30dBi;<br>Note2: Directional Gain: Band1: 6.31dBi |         |                 |                        |       |       |        |         |

# 4.2 Test Graph

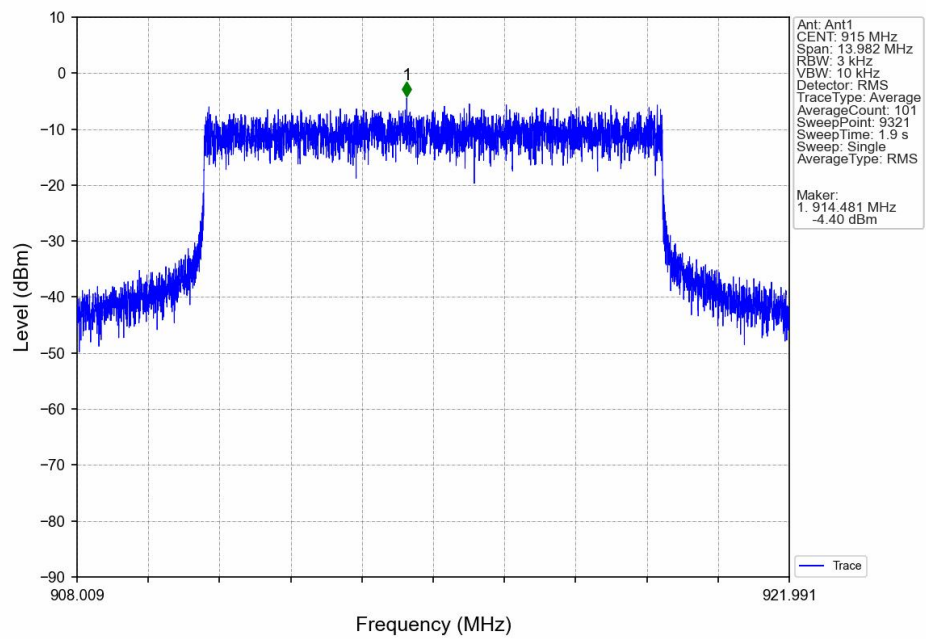
## 4.2.1 PSD



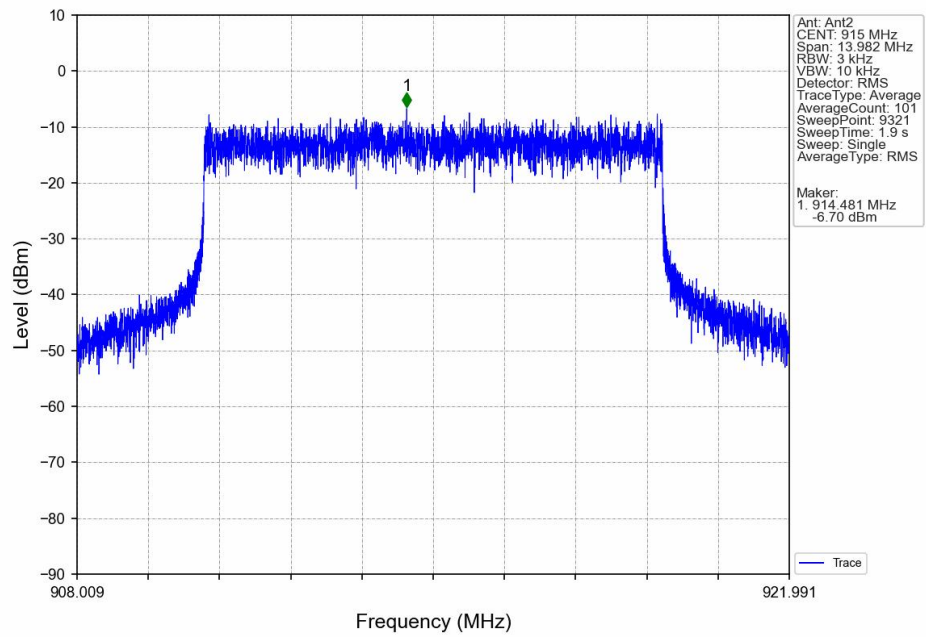
# QPSK\_LCH\_909MHz\_MIMO\_NTNV



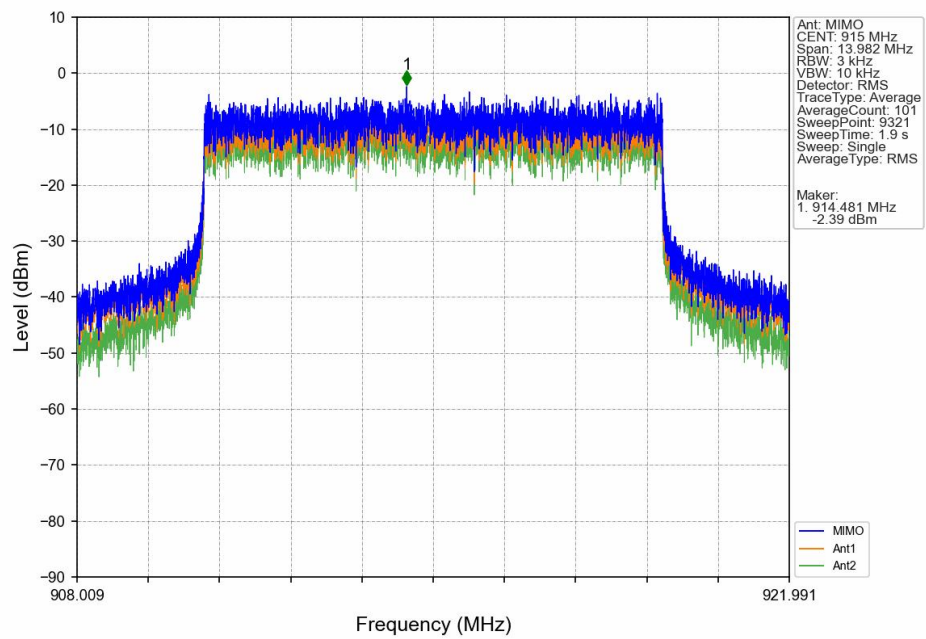
# QPSK\_MCH\_915MHz\_Ant1\_NTNV



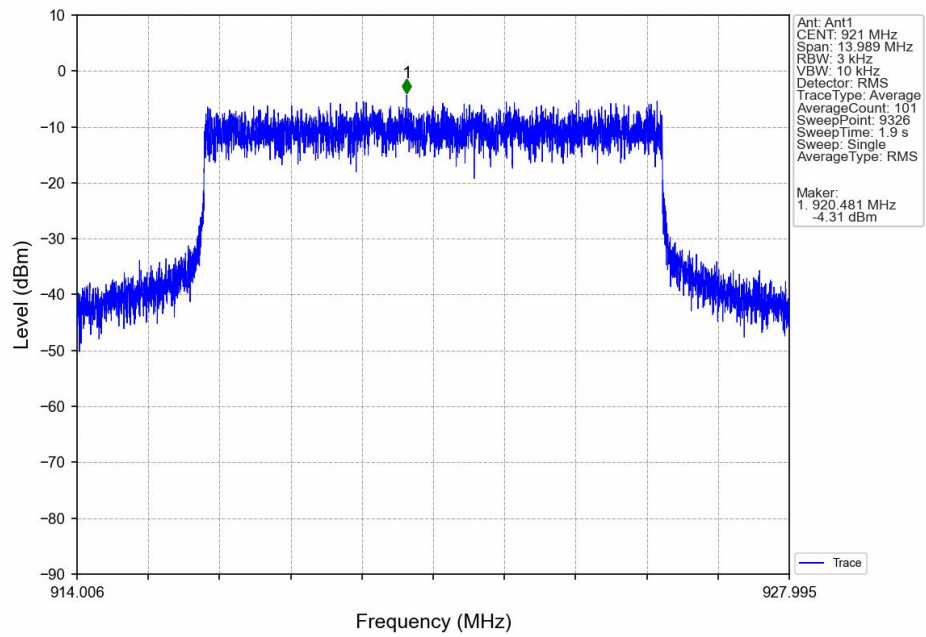
# QPSK\_MCH\_915MHz\_Ant2\_NTNV



# QPSK\_MCH\_915MHz\_MIMO\_NTNV



# QPSK\_HCH\_921MHz\_Ant1\_NTNV



# QPSK\_HCH\_921MHz\_Ant2\_NTNV

