

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 B13\_5MHz\_ERP

### 1.1.1 Test Result

| Band: 13 / Bandwidth: 5MHz / NTV             |                 |               |        |                       |            |           |         |         |
|----------------------------------------------|-----------------|---------------|--------|-----------------------|------------|-----------|---------|---------|
| Modulation                                   | Frequency (MHz) | RB Allocation |        | Conducted Power (dBm) | Gain (dbi) | ERP (dBm) |         | Verdict |
|                                              |                 | Size          | Offset |                       |            | Result    | Limit   |         |
| QPSK                                         | 779.5           | 1             | 0      | 24.03                 | 0.57       | 22.45     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 23.98                 | 0.57       | 22.40     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 23.12                 | 0.57       | 21.54     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.10                 | 0.57       | 21.52     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 23.06                 | 0.57       | 21.48     | <=34.77 | Pass    |
|                                              | 782             | 1             | 0      | 24.01                 | 0.57       | 22.43     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 24.12                 | 0.57       | 22.54     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 23.96                 | 0.57       | 22.38     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 23.06                 | 0.57       | 21.48     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 23.10                 | 0.57       | 21.52     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.05                 | 0.57       | 21.47     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 23.00                 | 0.57       | 21.42     | <=34.77 | Pass    |
|                                              | 784.5           | 1             | 0      | 23.95                 | 0.57       | 22.37     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 24.07                 | 0.57       | 22.49     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 23.91                 | 0.57       | 22.33     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 23.09                 | 0.57       | 21.51     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.02                 | 0.57       | 21.44     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
| 16QAM                                        | 779.5           | 1             | 0      | 23.09                 | 0.57       | 21.51     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.20                 | 0.57       | 21.62     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 23.07                 | 0.57       | 21.49     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 21.97                 | 0.57       | 20.39     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 22.10                 | 0.57       | 20.52     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 22.07                 | 0.57       | 20.49     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 22.07                 | 0.57       | 20.49     | <=34.77 | Pass    |
|                                              | 782             | 1             | 0      | 22.84                 | 0.57       | 21.26     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 22.93                 | 0.57       | 21.35     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 22.79                 | 0.57       | 21.21     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 22.03                 | 0.57       | 20.45     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 22.07                 | 0.57       | 20.49     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 22.04                 | 0.57       | 20.46     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 22.06                 | 0.57       | 20.48     | <=34.77 | Pass    |
|                                              | 784.5           | 1             | 0      | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 23.17                 | 0.57       | 21.59     | <=34.77 | Pass    |
|                                              |                 |               | 24     | 23.01                 | 0.57       | 21.43     | <=34.77 | Pass    |
|                                              |                 | 12            | 0      | 22.06                 | 0.57       | 20.48     | <=34.77 | Pass    |
|                                              |                 |               | 6      | 22.04                 | 0.57       | 20.46     | <=34.77 | Pass    |
|                                              |                 |               | 13     | 21.99                 | 0.57       | 20.41     | <=34.77 | Pass    |
|                                              |                 | 25            | 0      | 22.06                 | 0.57       | 20.48     | <=34.77 | Pass    |
| Note1: ERP=Conducted Power+Antenna Gain-2.15 |                 |               |        |                       |            |           |         |         |

## 1.2 B13\_10MHz\_ERP

### 1.2.1 Test Result

| Band: 13 / Bandwidth: 10MHz / NTNV |                 |               |        |                       |            |           |         |         |
|------------------------------------|-----------------|---------------|--------|-----------------------|------------|-----------|---------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation |        | Conducted Power (dBm) | Gain (dbi) | ERP (dBm) |         | Verdict |
|                                    |                 | Size          | Offset |                       |            | Result    | Limit   |         |
| QPSK                               | 782             | 1             | 0      | 24.13                 | 0.57       | 22.55     | <=34.77 | Pass    |
|                                    |                 |               | 25     | 24.18                 | 0.57       | 22.60     | <=34.77 | Pass    |
|                                    |                 |               | 49     | 23.96                 | 0.57       | 22.38     | <=34.77 | Pass    |
|                                    |                 | 25            | 0      | 23.03                 | 0.57       | 21.45     | <=34.77 | Pass    |
|                                    |                 |               | 13     | 23.07                 | 0.57       | 21.49     | <=34.77 | Pass    |
|                                    |                 |               | 25     | 23.03                 | 0.57       | 21.45     | <=34.77 | Pass    |
|                                    |                 | 50            | 0      | 23.04                 | 0.57       | 21.46     | <=34.77 | Pass    |
| 16QAM                              | 782             | 1             | 0      | 23.24                 | 0.57       | 21.66     | <=34.77 | Pass    |
|                                    |                 |               | 25     | 23.33                 | 0.57       | 21.75     | <=34.77 | Pass    |
|                                    |                 |               | 49     | 23.13                 | 0.57       | 21.55     | <=34.77 | Pass    |
|                                    |                 | 25            | 0      | 22.07                 | 0.57       | 20.49     | <=34.77 | Pass    |
|                                    |                 |               | 13     | 22.08                 | 0.57       | 20.50     | <=34.77 | Pass    |
|                                    |                 |               | 25     | 22.06                 | 0.57       | 20.48     | <=34.77 | Pass    |
|                                    |                 | 50            | 0      | 22.06                 | 0.57       | 20.48     | <=34.77 | Pass    |

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 2. Frequency Stability

### 2.1 B13\_5MHz

#### 2.1.1 Test Result

| Band: 13 / Bandwidth: 5MHz |                 |               |        |            |               |                  |                       |             |         |
|----------------------------|-----------------|---------------|--------|------------|---------------|------------------|-----------------------|-------------|---------|
| Modulation                 | Frequency (MHz) | RB Allocation |        | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) |             | Verdict |
|                            |                 | Size          | Offset |            |               |                  | Result                | Limit       |         |
| QPSK                       | 779.5           | 25            | 0      | 20         | 3.27          | -5.608           | -0.0072               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        |            | 3.85          | -5.693           | -0.0073               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        |            | 4.43          | -7.439           | -0.0095               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -30        | 3.85          | -5.608           | -0.0072               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -20        | 3.85          | -6.967           | -0.0089               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -10        | 3.85          | -4.621           | -0.0059               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 0          | 3.85          | -7.596           | -0.0097               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 10         | 3.85          | -7.682           | -0.0099               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 30         | 3.85          | -7.381           | -0.0095               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 40         | 3.85          | -4.435           | -0.0057               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 50         | 3.85          | -3.777           | -0.0048               | -2.5 to 2.5 | Pass    |
|                            | 782             | 25            | 0      | 20         | 3.27          | -3.819           | -0.0049               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        |            | 3.85          | -7.482           | -0.0096               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        |            | 4.43          | -9.642           | -0.0123               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -30        | 3.85          | -7.410           | -0.0095               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -20        | 3.85          | -5.064           | -0.0065               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | -10        | 3.85          | -5.808           | -0.0074               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 0          | 3.85          | -7.081           | -0.0091               | -2.5 to 2.5 | Pass    |
|                            |                 |               |        | 10         | 3.85          | -5.722           | -0.0073               | -2.5 to 2.5 | Pass    |

|       |       |    |   |     |      |         |         |             |      |
|-------|-------|----|---|-----|------|---------|---------|-------------|------|
|       |       |    |   | 30  | 3.85 | -6.223  | -0.0080 | -2.5 to 2.5 | Pass |
|       |       |    |   | 40  | 3.85 | -10.099 | -0.0129 | -2.5 to 2.5 | Pass |
|       |       |    |   | 50  | 3.85 | -8.440  | -0.0108 | -2.5 to 2.5 | Pass |
|       | 784.5 | 25 | 0 | 20  | 3.27 | -11.015 | -0.0140 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 3.85 | -8.612  | -0.0110 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 4.43 | -7.796  | -0.0099 | -2.5 to 2.5 | Pass |
|       |       |    |   | -30 | 3.85 | 0.615   | 0.0008  | -2.5 to 2.5 | Pass |
|       |       |    |   | -20 | 3.85 | -3.490  | -0.0044 | -2.5 to 2.5 | Pass |
|       |       |    |   | -10 | 3.85 | -10.414 | -0.0133 | -2.5 to 2.5 | Pass |
|       |       |    |   | 0   | 3.85 | -10.600 | -0.0135 | -2.5 to 2.5 | Pass |
|       |       |    |   | 10  | 3.85 | -10.614 | -0.0135 | -2.5 to 2.5 | Pass |
|       |       |    |   | 30  | 3.85 | -5.879  | -0.0075 | -2.5 to 2.5 | Pass |
|       |       |    |   | 40  | 3.85 | -7.811  | -0.0100 | -2.5 to 2.5 | Pass |
|       |       |    |   | 50  | 3.85 | -0.186  | -0.0002 | -2.5 to 2.5 | Pass |
| 16QAM | 779.5 | 25 | 0 | 20  | 3.27 | -4.821  | -0.0062 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 3.85 | -5.722  | -0.0073 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 4.43 | -5.622  | -0.0072 | -2.5 to 2.5 | Pass |
|       |       |    |   | -30 | 3.85 | -6.680  | -0.0086 | -2.5 to 2.5 | Pass |
|       |       |    |   | -20 | 3.85 | -5.922  | -0.0076 | -2.5 to 2.5 | Pass |
|       |       |    |   | -10 | 3.85 | -4.964  | -0.0064 | -2.5 to 2.5 | Pass |
|       |       |    |   | 0   | 3.85 | -4.420  | -0.0057 | -2.5 to 2.5 | Pass |
|       |       |    |   | 10  | 3.85 | -6.380  | -0.0082 | -2.5 to 2.5 | Pass |
|       |       |    |   | 30  | 3.85 | -9.785  | -0.0126 | -2.5 to 2.5 | Pass |
|       |       |    |   | 40  | 3.85 | -4.120  | -0.0053 | -2.5 to 2.5 | Pass |
|       |       |    |   | 50  | 3.85 | -7.453  | -0.0096 | -2.5 to 2.5 | Pass |
|       | 782   | 25 | 0 | 20  | 3.27 | -7.224  | -0.0092 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 3.85 | -5.035  | -0.0064 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 4.43 | -5.507  | -0.0070 | -2.5 to 2.5 | Pass |
|       |       |    |   | -30 | 3.85 | -8.326  | -0.0106 | -2.5 to 2.5 | Pass |
|       |       |    |   | -20 | 3.85 | -6.280  | -0.0080 | -2.5 to 2.5 | Pass |
|       |       |    |   | -10 | 3.85 | -10.214 | -0.0131 | -2.5 to 2.5 | Pass |
|       |       |    |   | 0   | 3.85 | -9.155  | -0.0117 | -2.5 to 2.5 | Pass |
|       |       |    |   | 10  | 3.85 | -8.240  | -0.0105 | -2.5 to 2.5 | Pass |
|       |       |    |   | 30  | 3.85 | -5.980  | -0.0076 | -2.5 to 2.5 | Pass |
|       |       |    |   | 40  | 3.85 | -5.264  | -0.0067 | -2.5 to 2.5 | Pass |
|       |       |    |   | 50  | 3.85 | -4.735  | -0.0061 | -2.5 to 2.5 | Pass |
|       | 784.5 | 25 | 0 | 20  | 3.27 | -5.937  | -0.0076 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 3.85 | -8.783  | -0.0112 | -2.5 to 2.5 | Pass |
|       |       |    |   |     | 4.43 | -7.596  | -0.0097 | -2.5 to 2.5 | Pass |
|       |       |    |   | -30 | 3.85 | -4.520  | -0.0058 | -2.5 to 2.5 | Pass |
|       |       |    |   | -20 | 3.85 | -9.370  | -0.0119 | -2.5 to 2.5 | Pass |
|       |       |    |   | -10 | 3.85 | -4.048  | -0.0052 | -2.5 to 2.5 | Pass |
|       |       |    |   | 0   | 3.85 | -4.435  | -0.0057 | -2.5 to 2.5 | Pass |
|       |       |    |   | 10  | 3.85 | -9.370  | -0.0119 | -2.5 to 2.5 | Pass |
|       |       |    |   | 30  | 3.85 | -7.281  | -0.0093 | -2.5 to 2.5 | Pass |
|       |       |    |   | 40  | 3.85 | -10.171 | -0.0130 | -2.5 to 2.5 | Pass |
|       |       |    |   | 50  | 3.85 | -6.638  | -0.0085 | -2.5 to 2.5 | Pass |

## 2.2 B13\_10MHz

### 2.2.1 Test Result

| Band: 13 / Bandwidth: 10MHz |                 |               |        |            |               |                  |                       |             |         |
|-----------------------------|-----------------|---------------|--------|------------|---------------|------------------|-----------------------|-------------|---------|
| Modulation                  | Frequency (MHz) | RB Allocation |        | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) |             | Verdict |
|                             |                 | Size          | Offset |            |               |                  | Result                | Limit       |         |
| QPSK                        | 782             | 50            | 0      | 20         | 3.27          | -9.570           | -0.0122               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        |            | 3.85          | -6.752           | -0.0086               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        |            | 4.43          | -6.180           | -0.0079               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -30        | 3.85          | -6.452           | -0.0083               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -20        | 3.85          | -9.584           | -0.0123               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -10        | 3.85          | -9.899           | -0.0127               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 0          | 3.85          | -6.709           | -0.0086               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 10         | 3.85          | -4.606           | -0.0059               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 30         | 3.85          | 0.730            | 0.0009                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 40         | 3.85          | 2.303            | 0.0029                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 50         | 3.85          | -1.888           | -0.0024               | -2.5 to 2.5 | Pass    |
| 16QAM                       | 782             | 50            | 0      | 20         | 3.27          | 1.574            | 0.0020                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        |            | 3.85          | 0.958            | 0.0012                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        |            | 4.43          | -1.445           | -0.0018               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -30        | 3.85          | -2.589           | -0.0033               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -20        | 3.85          | 0.272            | 0.0003                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | -10        | 3.85          | -4.134           | -0.0053               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 0          | 3.85          | 1.087            | 0.0014                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 10         | 3.85          | 0.601            | 0.0008                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 30         | 3.85          | 0.443            | 0.0006                | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 40         | 3.85          | -1.345           | -0.0017               | -2.5 to 2.5 | Pass    |
|                             |                 |               |        | 50         | 3.85          | 2.089            | 0.0027                | -2.5 to 2.5 | Pass    |

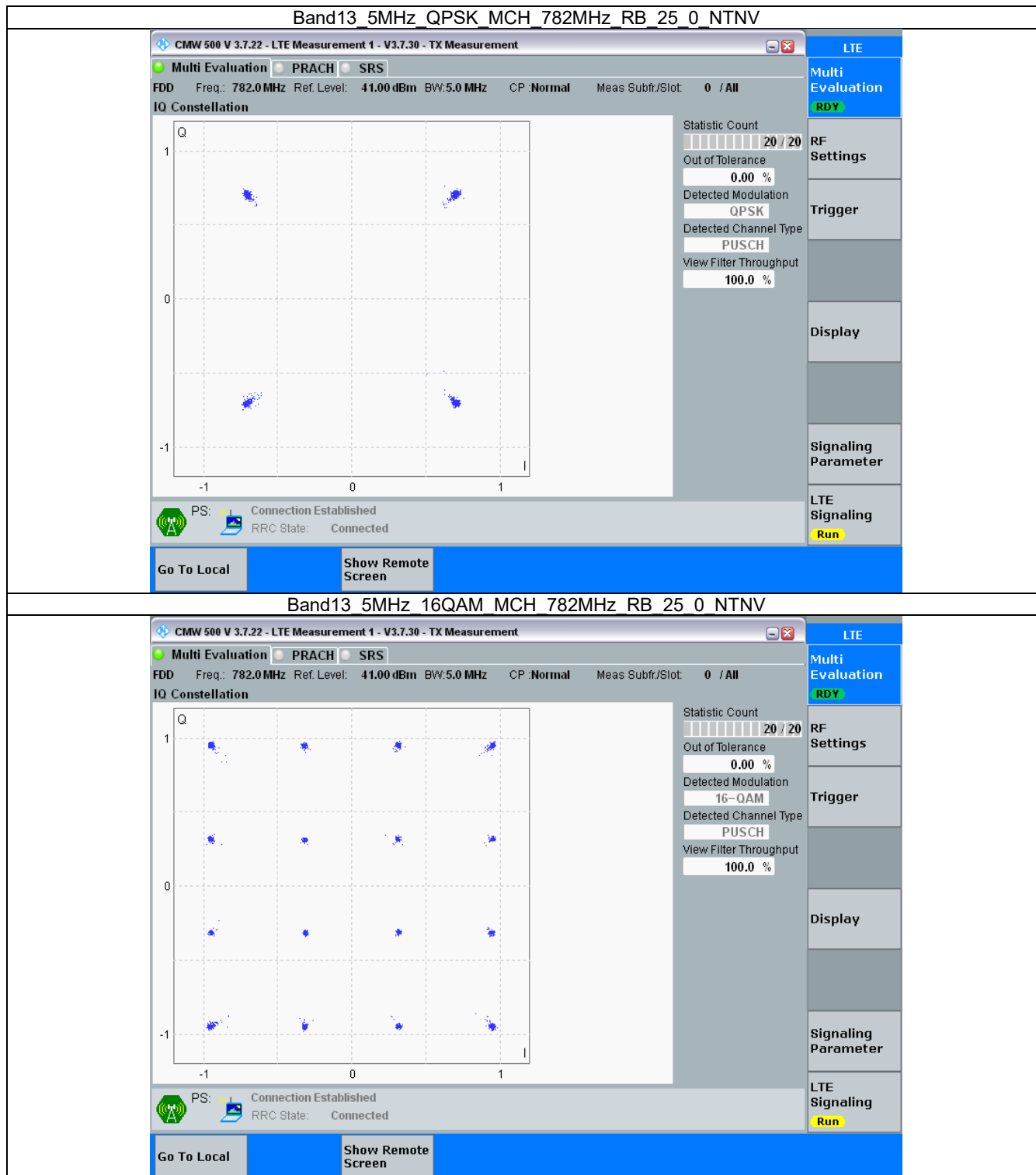
### 3. Modulation Characteristics

#### 3.1 B13\_5MHz

##### 3.1.1 Test Result

| Band: 13 / Bandwidth: 5MHz / NTNv |                 |               |        |                            |       |         |
|-----------------------------------|-----------------|---------------|--------|----------------------------|-------|---------|
| Modulation                        | Frequency (MHz) | RB Allocation |        | Modulation Characteristics |       | Verdict |
|                                   |                 | Size          | Offset | Result                     | Limit |         |
| QPSK                              | 782             | 25            | 0      | Refer To Test Graph        |       | Pass    |
| 16QAM                             | 782             | 25            | 0      | Refer To Test Graph        |       | Pass    |

### 3.1.2 Test Graph



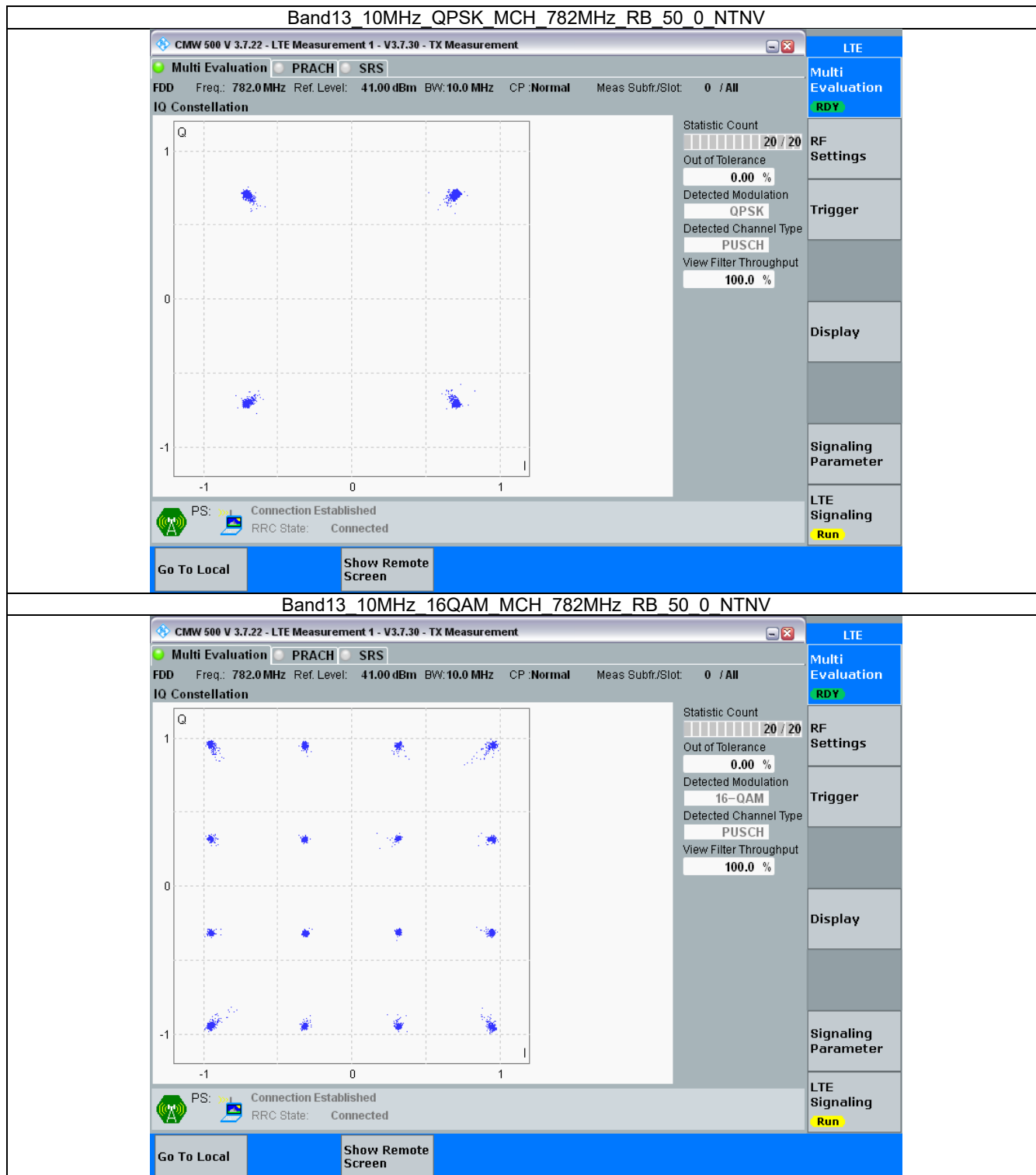


## 3.2 B13\_10MHz

### 3.2.1 Test Result

| Band: 13 / Bandwidth: 10MHz / NTV |                 |               |        |                            |       |         |
|-----------------------------------|-----------------|---------------|--------|----------------------------|-------|---------|
| Modulation                        | Frequency (MHz) | RB Allocation |        | Modulation Characteristics |       | Verdict |
|                                   |                 | Size          | Offset | Result                     | Limit |         |
| QPSK                              | 782             | 50            | 0      | Refer To Test Graph        |       | Pass    |
| 16QAM                             | 782             | 50            | 0      | Refer To Test Graph        |       | Pass    |

### 3.2.2 Test Graph







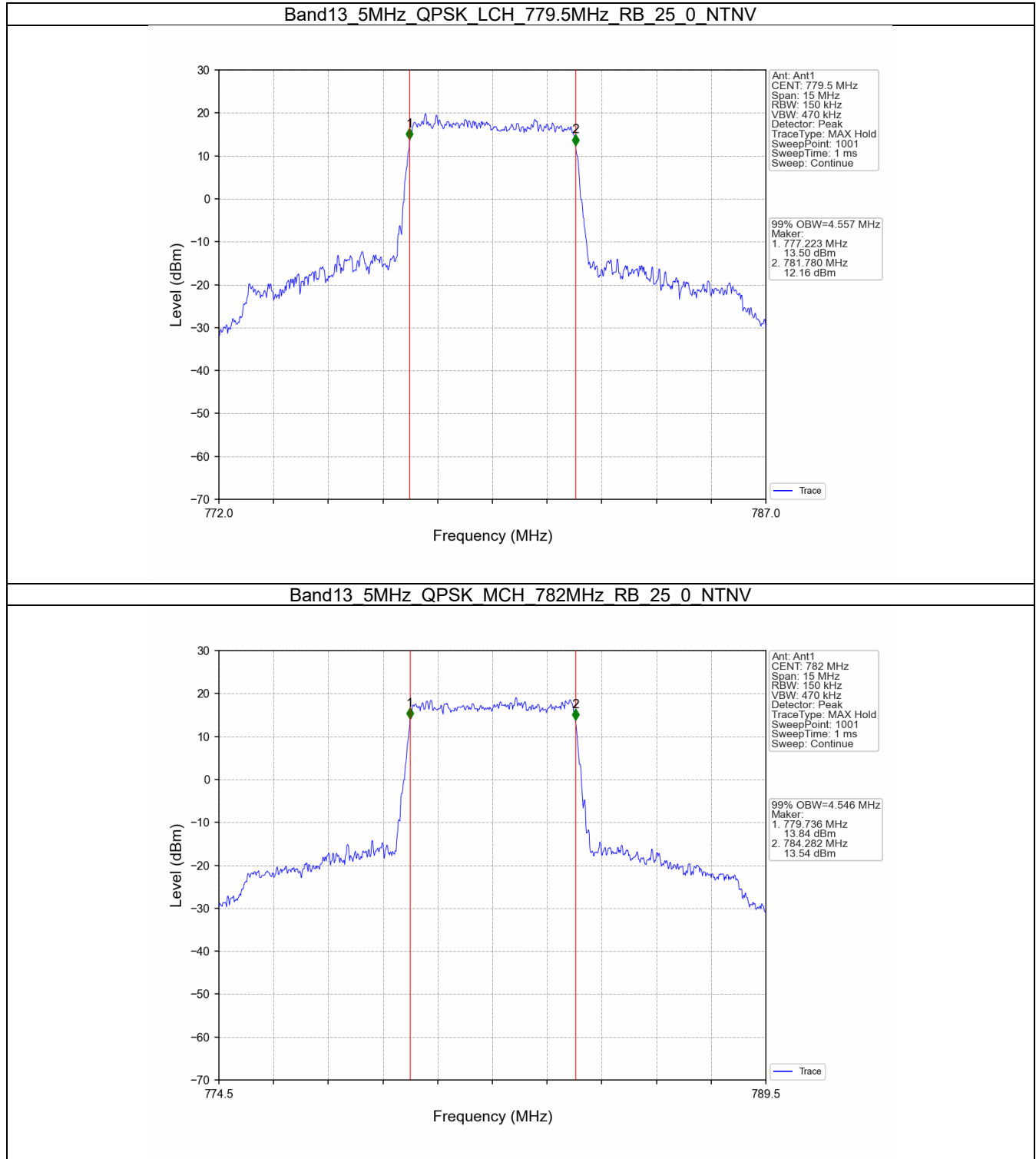
## 4. 99% & 26dB Bandwidth

### 4.1 Band13\_OBW

#### 4.1.1 Test Result

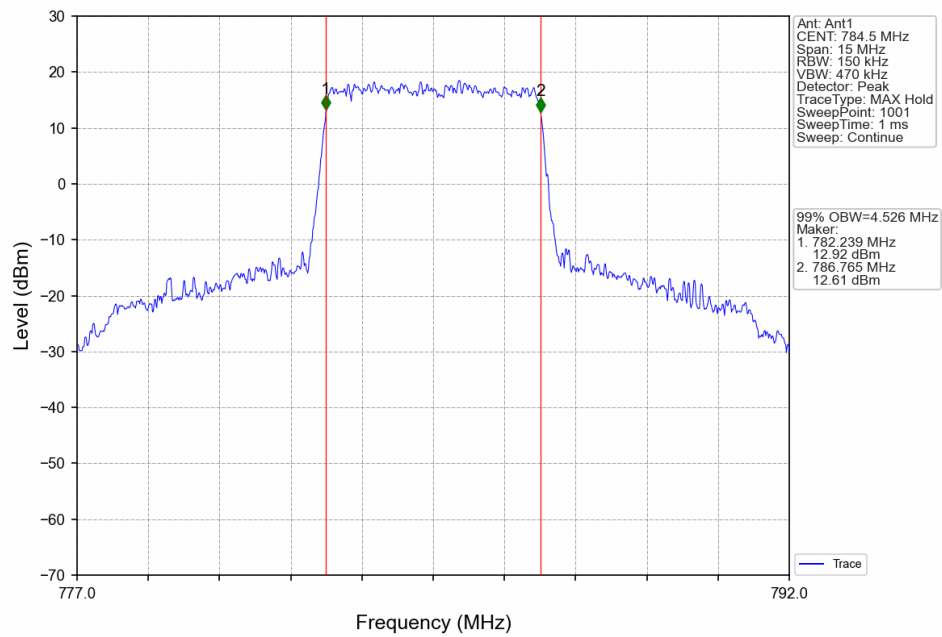
| Band: 13 / NTNV |            |                 |               |        |                              |         |
|-----------------|------------|-----------------|---------------|--------|------------------------------|---------|
| Bandwidth (MHz) | Modulation | Frequency (MHz) | RB Allocation |        | 99% Occupied Bandwidth (MHz) | Verdict |
|                 |            |                 | Size          | Offset | Result                       |         |
| 5               | QPSK       | 779.5           | 25            | 0      | 4.557                        | Pass    |
|                 |            | 782             | 25            | 0      | 4.546                        | Pass    |
|                 |            | 784.5           | 25            | 0      | 4.526                        | Pass    |
|                 | 16QAM      | 779.5           | 25            | 0      | 4.541                        | Pass    |
|                 |            | 782             | 25            | 0      | 4.548                        | Pass    |
|                 |            | 784.5           | 25            | 0      | 4.558                        | Pass    |
| 10              | QPSK       | 782             | 50            | 0      | 9.106                        | Pass    |
|                 | 16QAM      | 782             | 50            | 0      | 9.083                        | Pass    |

## 4.1.2 Test Graph

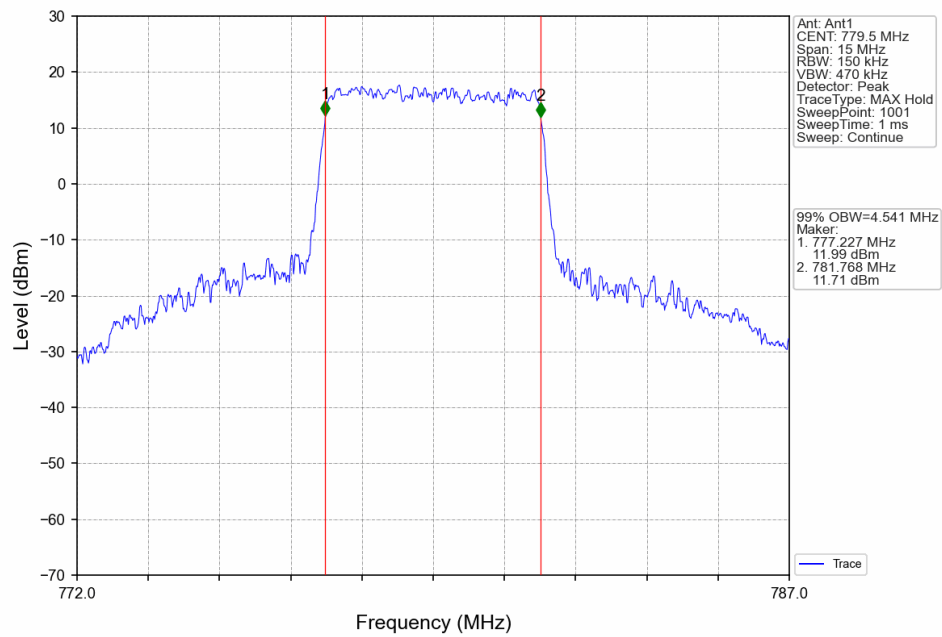




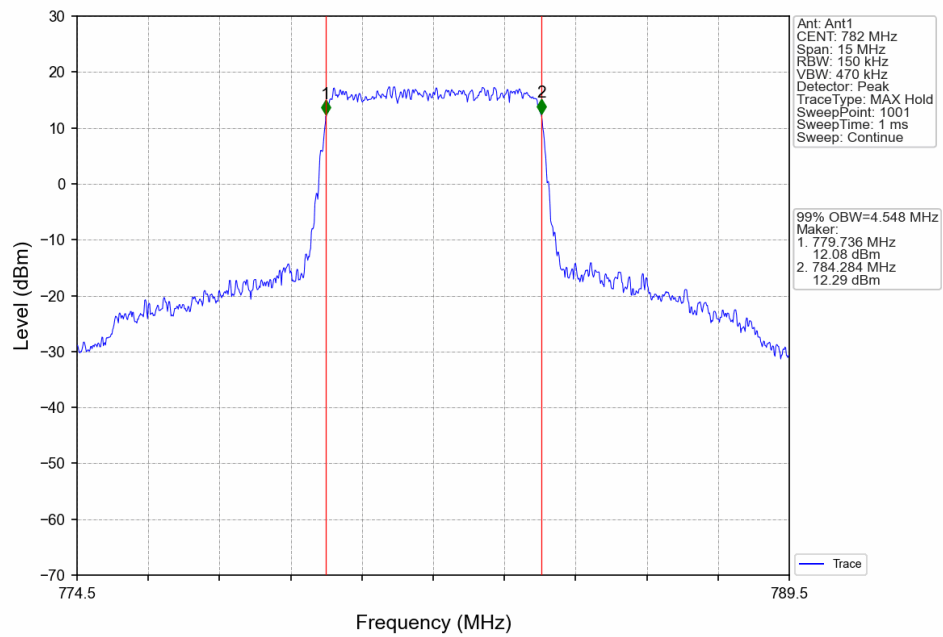
# Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



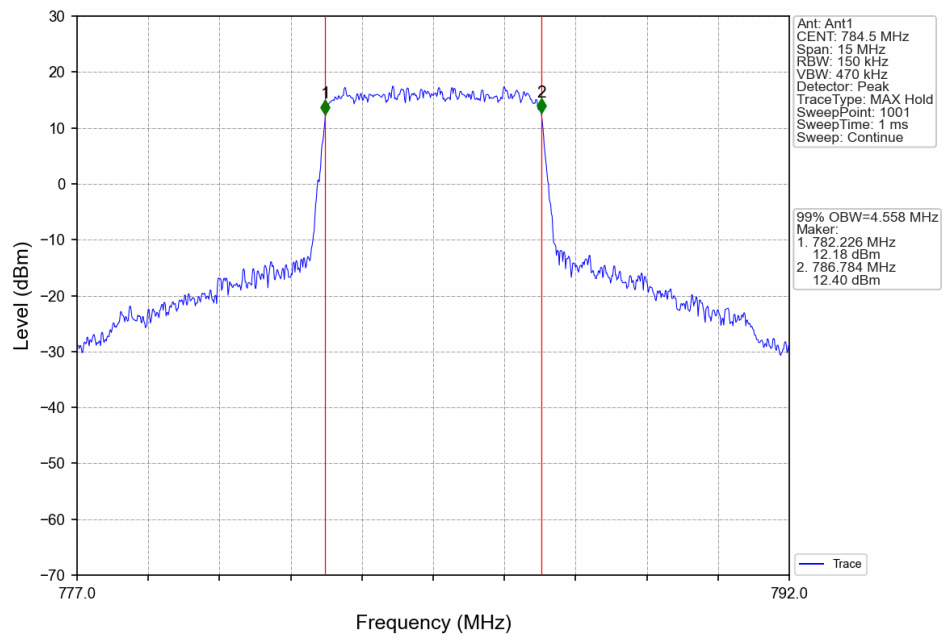
# Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_25\_0\_NTNV



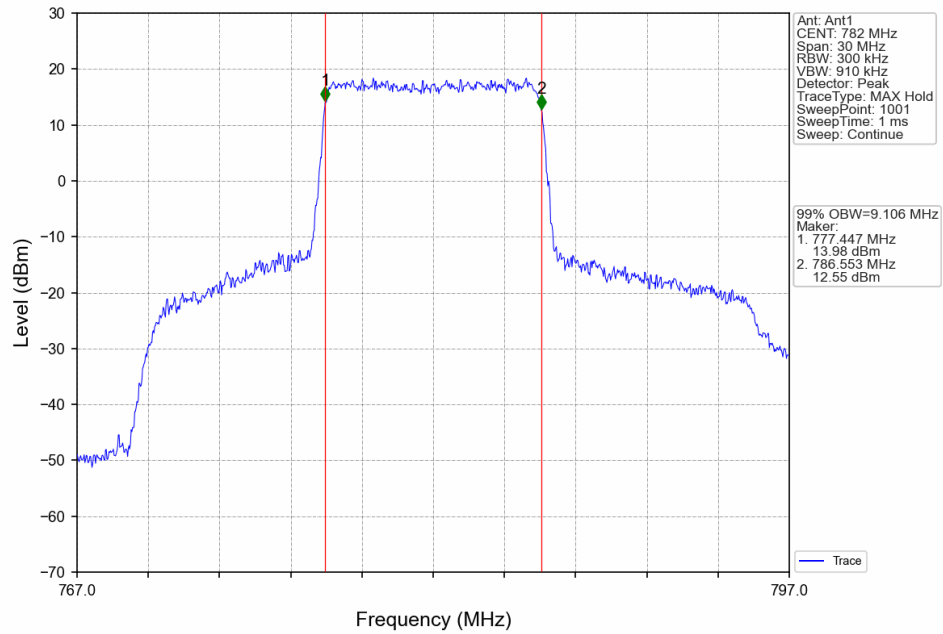
Band13\_5MHz\_16QAM\_MCH\_782MHz\_RB\_25\_0\_NTNV



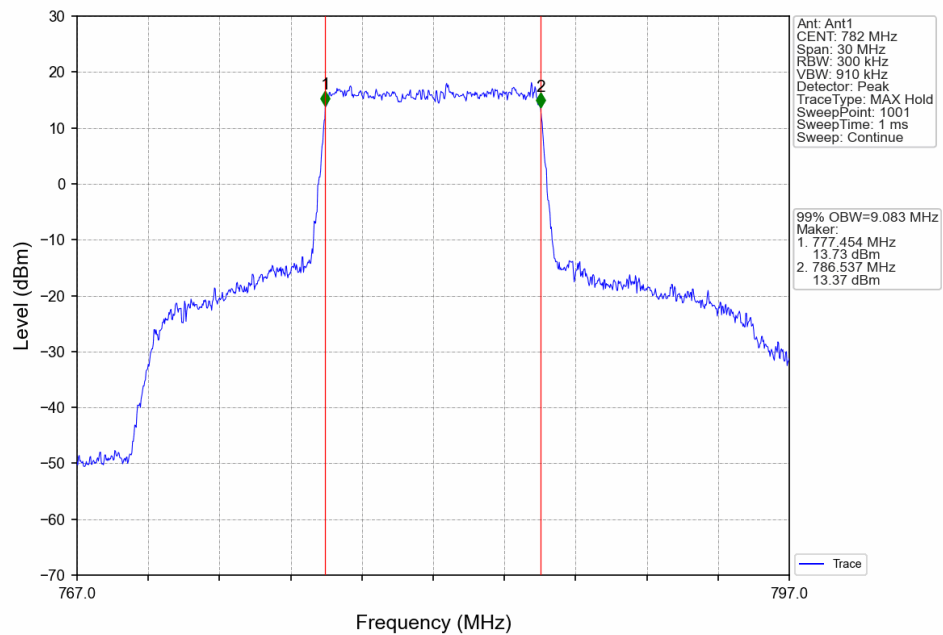
Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



# Band13\_10MHz\_QPSK\_MCH\_782MHz\_RB\_50\_0\_NTNV



# Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_50\_0\_NTNV



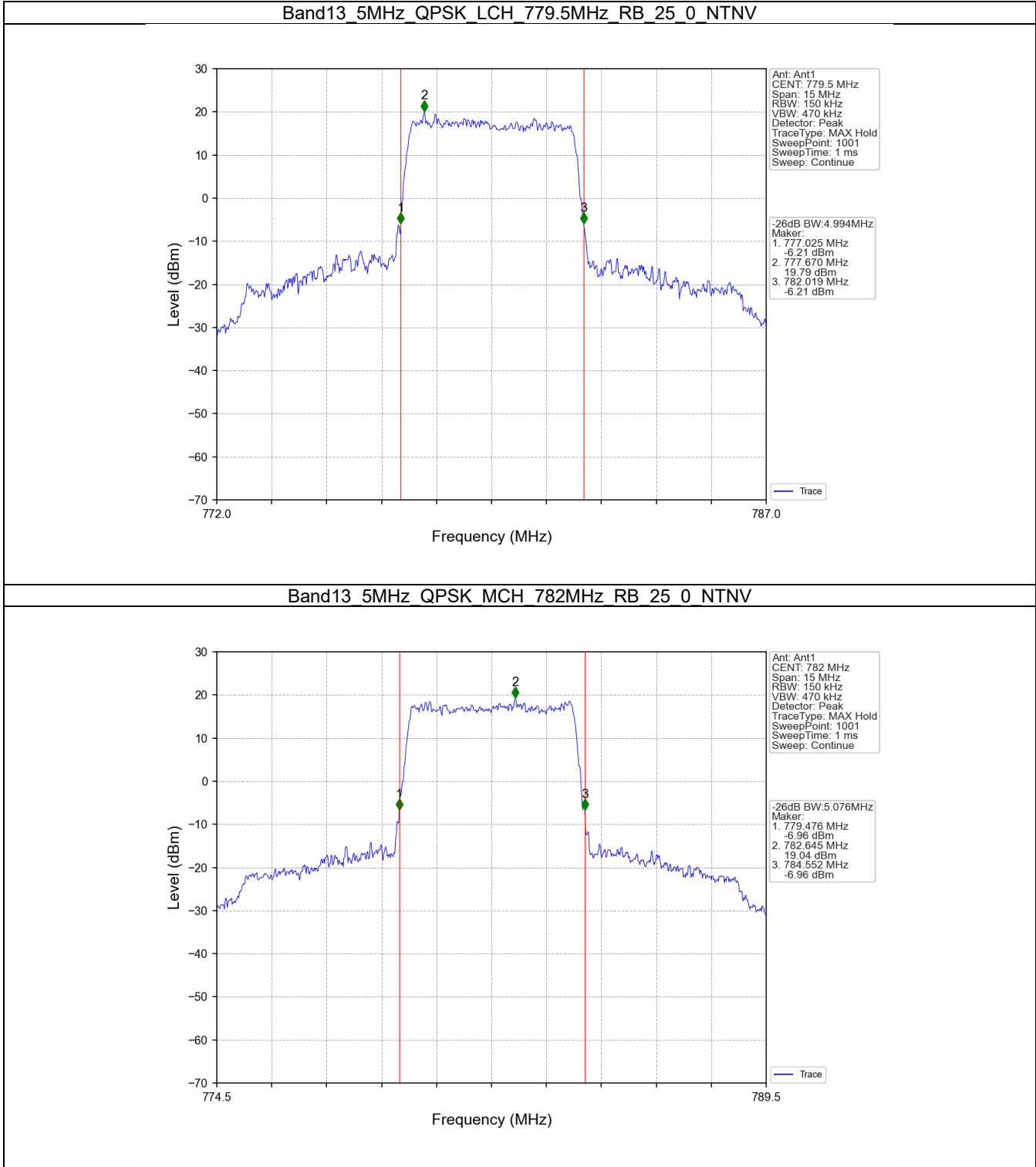
## 4.2 Band13\_XDB

### 4.2.1 Test Result

| Band: 13 / NTNV |            |                 |               |        |                      |         |
|-----------------|------------|-----------------|---------------|--------|----------------------|---------|
| Bandwidth (MHz) | Modulation | Frequency (MHz) | RB Allocation |        | 26dB Bandwidth (MHz) | Verdict |
|                 |            |                 | Size          | Offset | Result               |         |
| 5               | QPSK       | 779.5           | 25            | 0      | 4.994                | Pass    |
|                 |            | 782             | 25            | 0      | 5.076                | Pass    |
|                 |            | 784.5           | 25            | 0      | 5.056                | Pass    |
|                 | 16QAM      | 779.5           | 25            | 0      | 5.083                | Pass    |
|                 |            | 782             | 25            | 0      | 5.093                | Pass    |
|                 |            | 784.5           | 25            | 0      | 5.033                | Pass    |
| 10              | QPSK       | 782             | 50            | 0      | 9.982                | Pass    |
|                 | 16QAM      | 782             | 50            | 0      | 10.007               | Pass    |

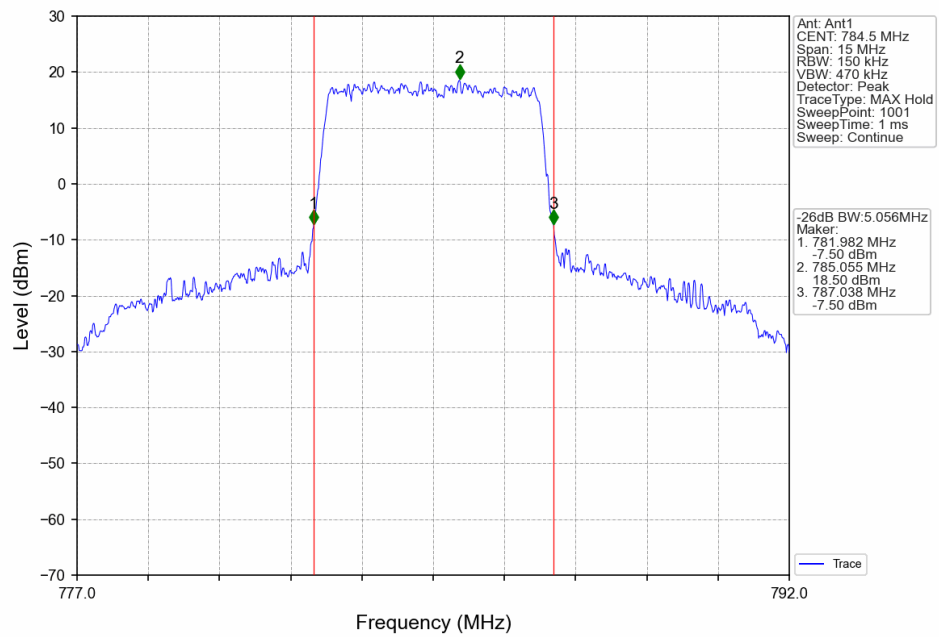


4.2.2 Test Graph

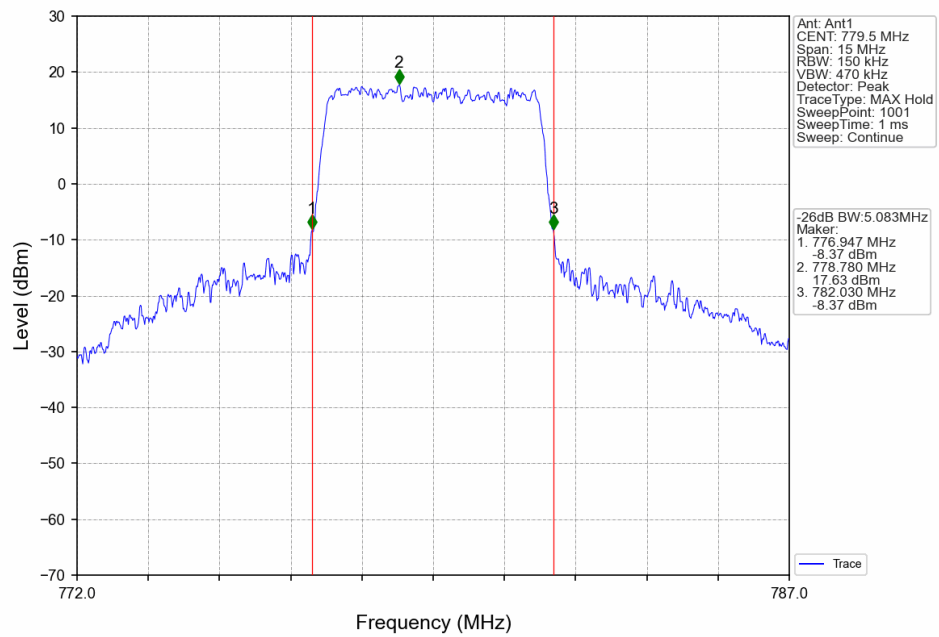




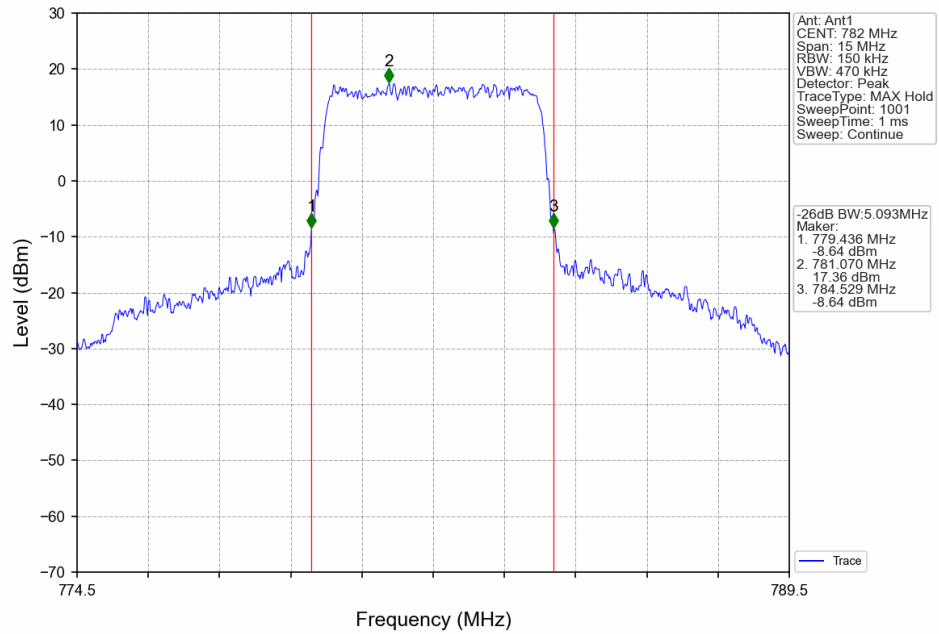
# Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



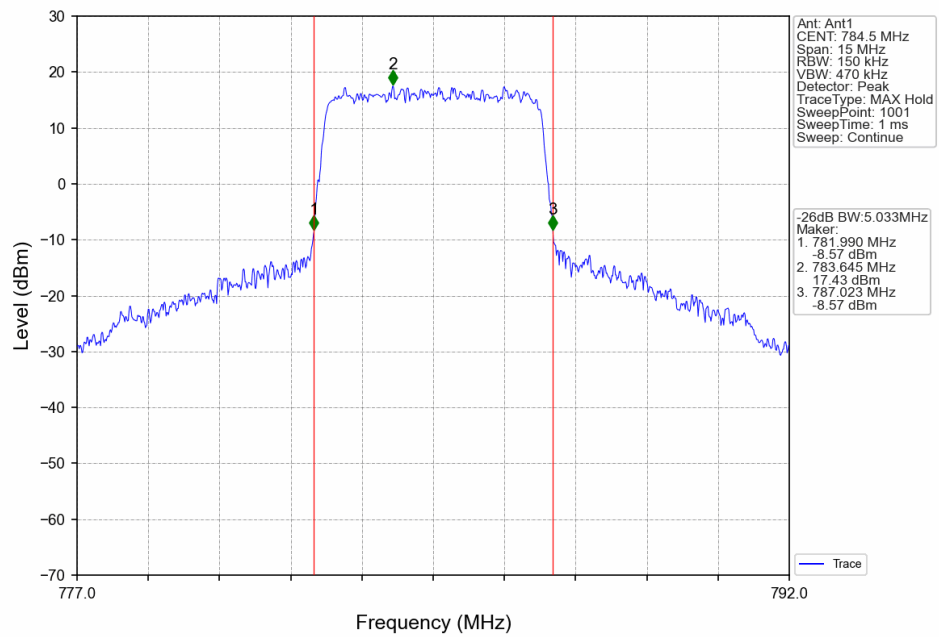
# Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_25\_0\_NTNV



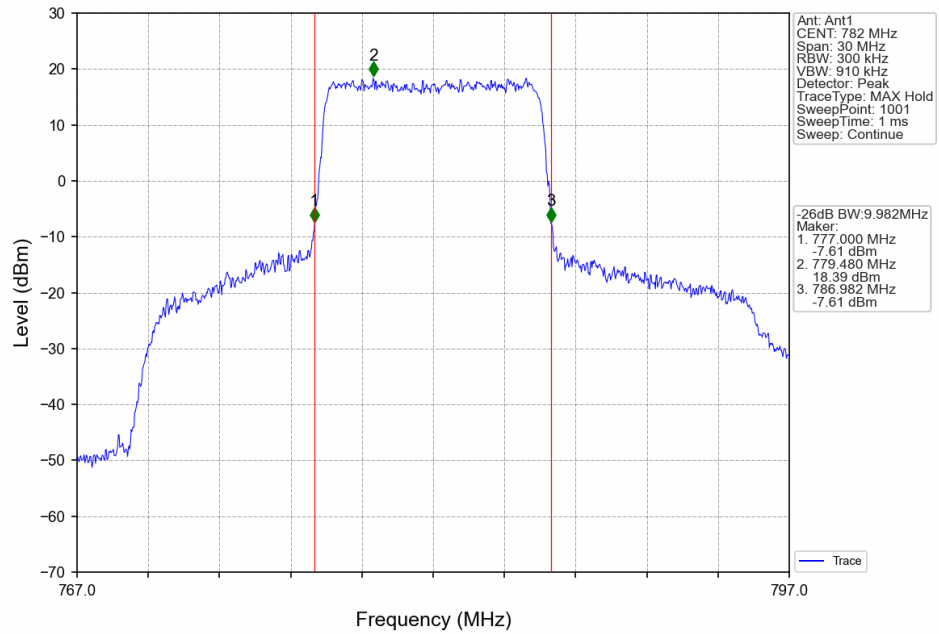
Band13\_5MHz\_16QAM\_MCH\_782MHz\_RB\_25\_0\_NTNV



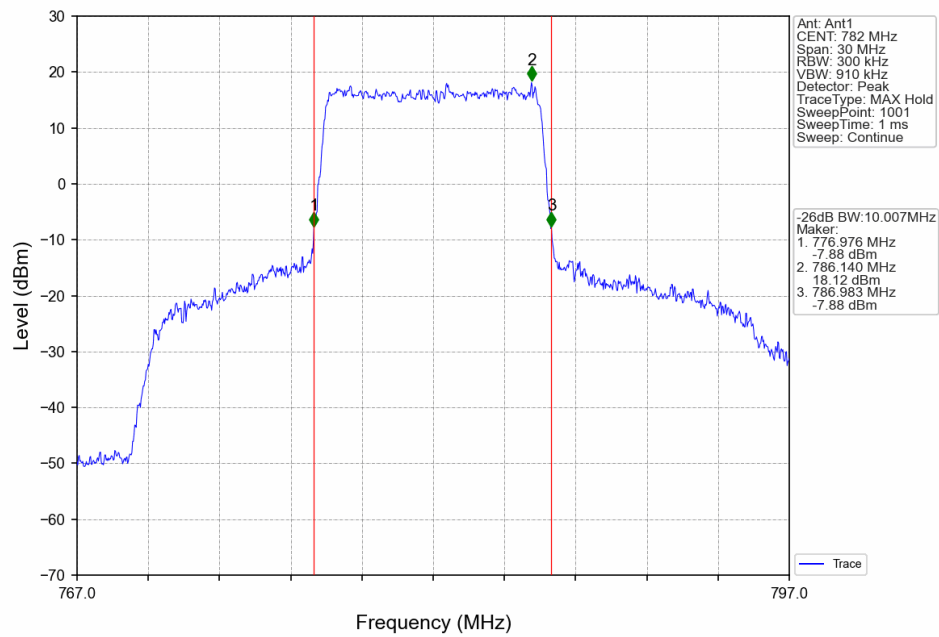
Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



# Band13\_10MHz\_QPSK\_MCH\_782MHz\_RB\_50\_0\_NTNV



# Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_50\_0\_NTNV



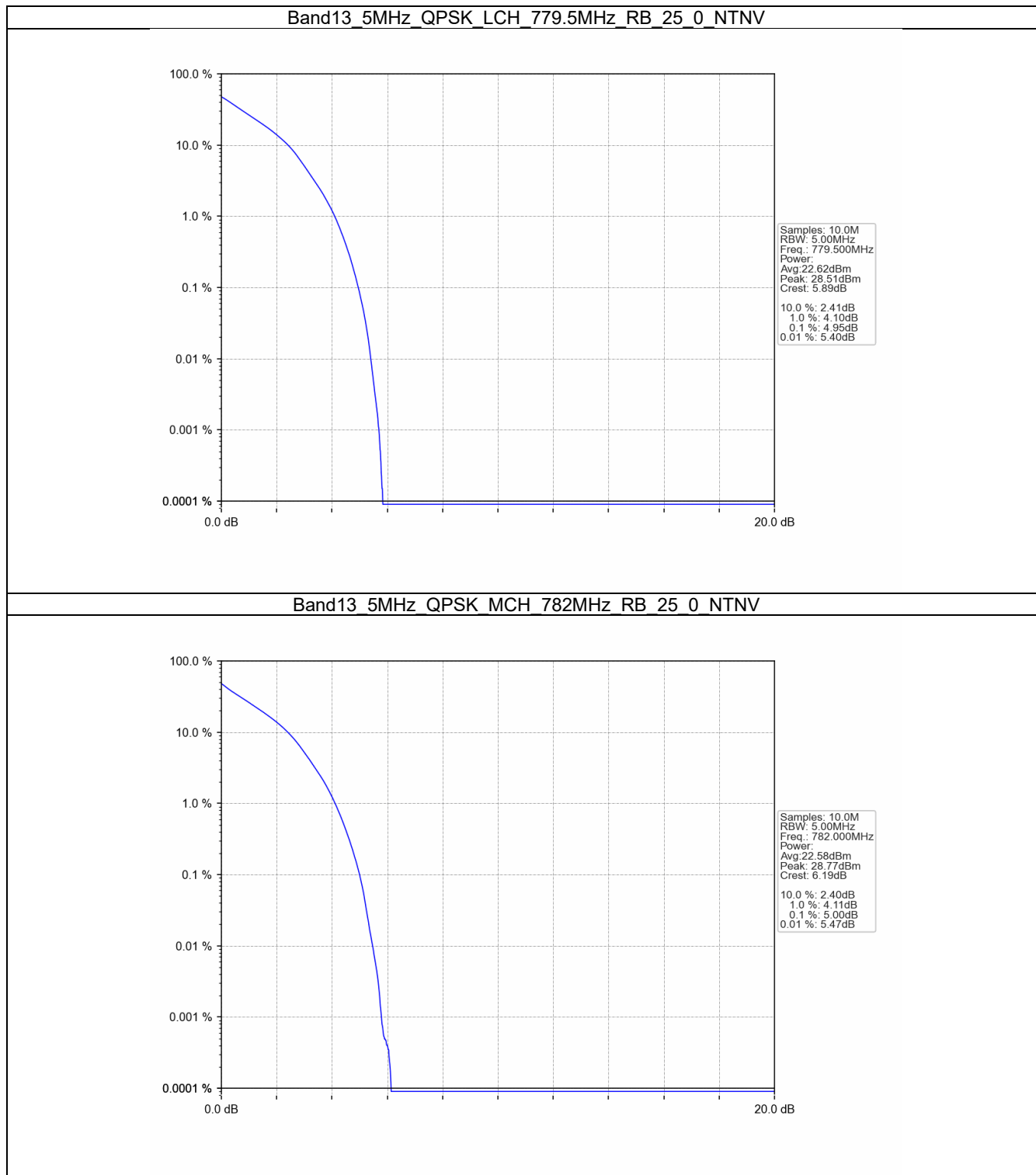
## 5. Peak-Average Ratio

### 5.1 B13\_5MHz

#### 5.1.1 Test Result

| Band: 13 / Bandwidth: 5MHz / NTNV |                 |               |        |                         |       |         |
|-----------------------------------|-----------------|---------------|--------|-------------------------|-------|---------|
| Modulation                        | Frequency (MHz) | RB Allocation |        | Peak-Average Ratio (dB) |       | Verdict |
|                                   |                 | Size          | Offset | Result                  | Limit |         |
| QPSK                              | 779.5           | 25            | 0      | 4.95                    | <=13  | Pass    |
|                                   | 782             | 25            | 0      | 5.00                    | <=13  | Pass    |
|                                   | 784.5           | 25            | 0      | 4.75                    | <=13  | Pass    |
| 16QAM                             | 779.5           | 25            | 0      | 5.66                    | <=13  | Pass    |
|                                   | 782             | 25            | 0      | 5.71                    | <=13  | Pass    |
|                                   | 784.5           | 25            | 0      | 5.45                    | <=13  | Pass    |

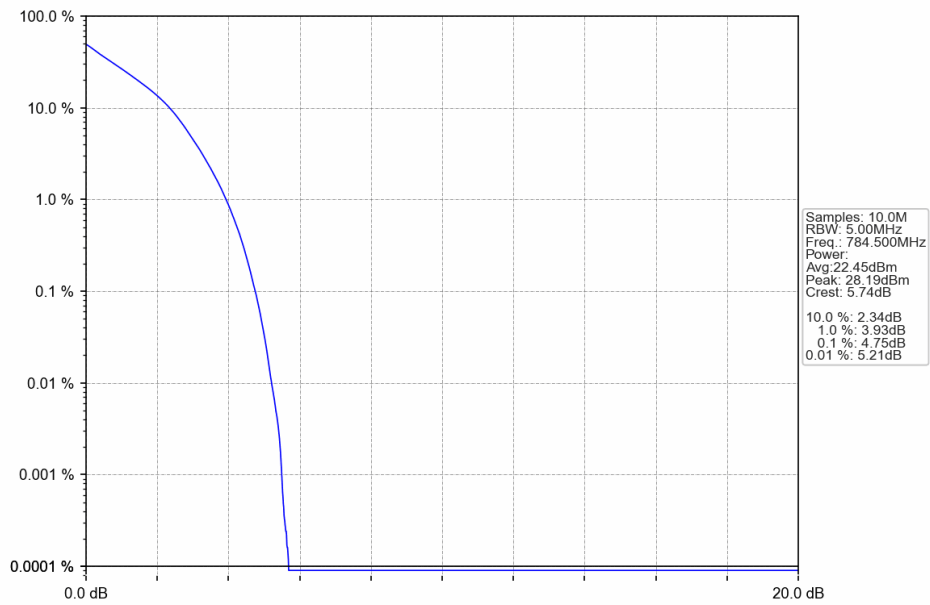
## 5.1.2 Test Graph



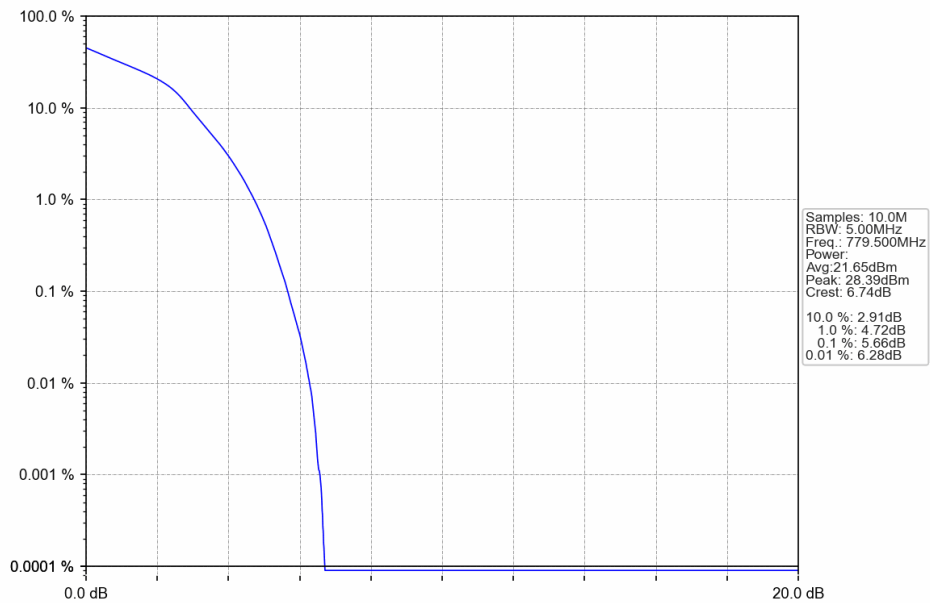




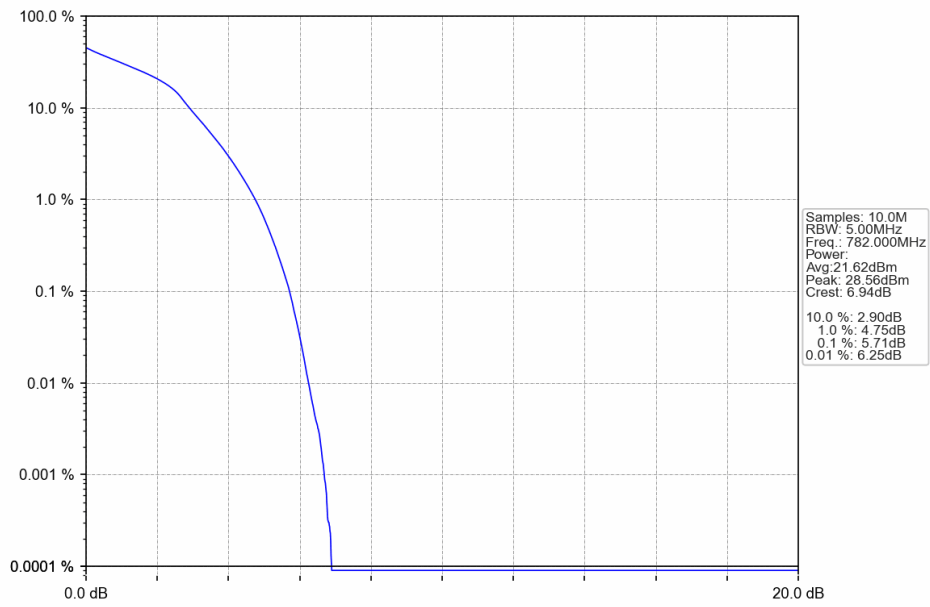
Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



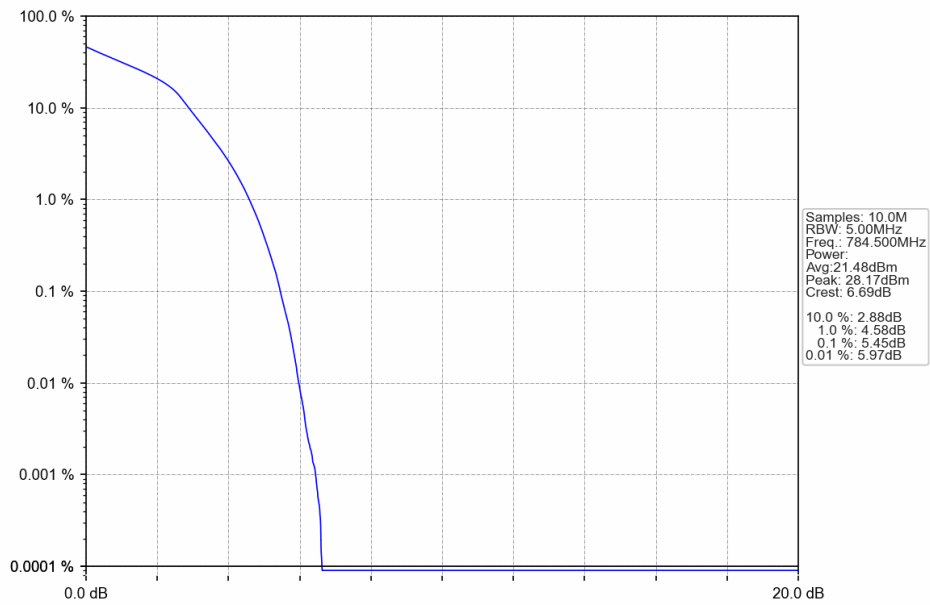
Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_25\_0\_NTNV



Band13\_5MHz\_16QAM\_MCH\_782MHz\_RB\_25\_0\_NTNV



Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_25\_0\_NTNV

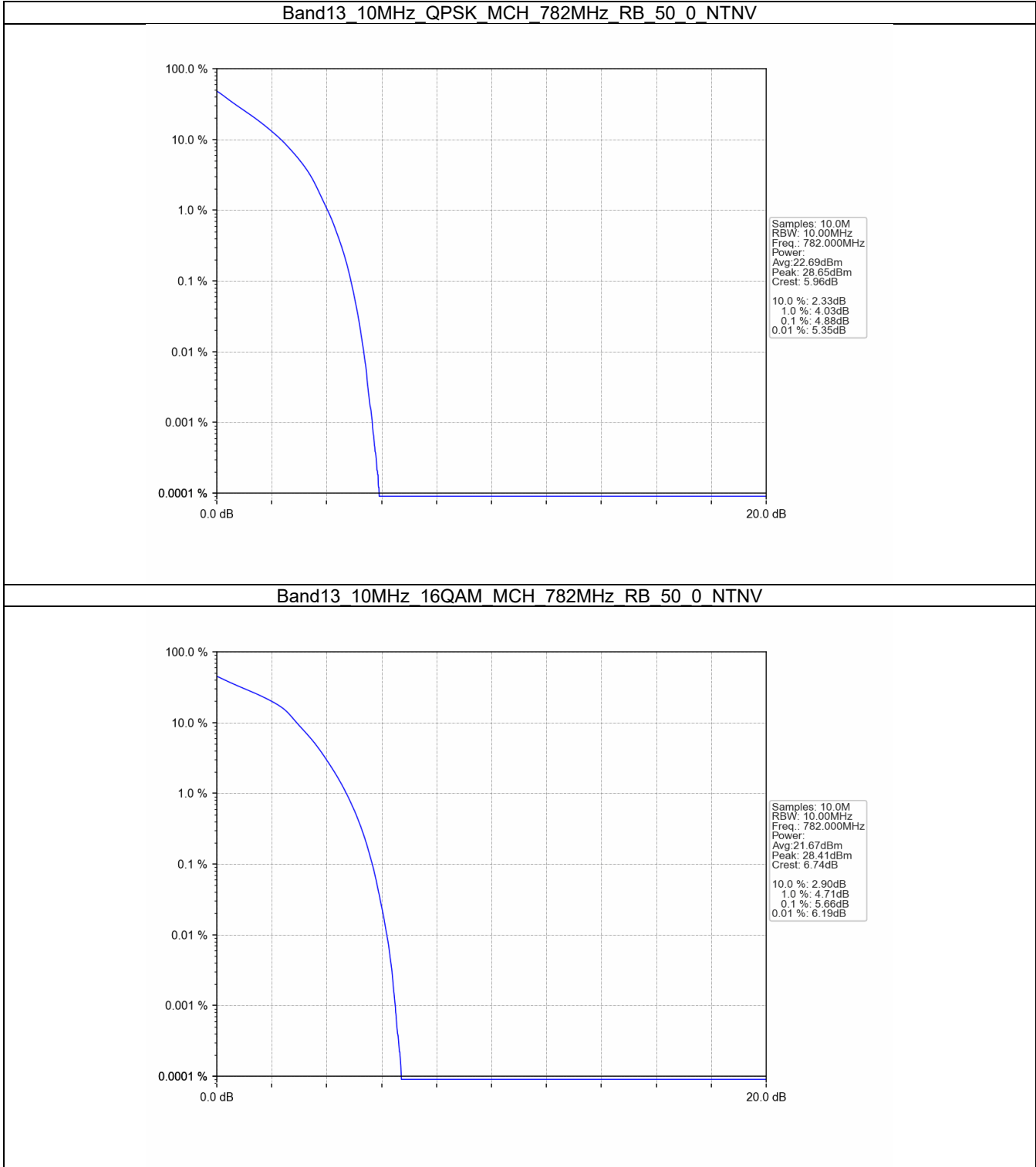


## 5.2 B13\_10MHz

### 5.2.1 Test Result

| Band: 13 / Bandwidth: 10MHz / NTNV |                    |               |        |                         |       |         |
|------------------------------------|--------------------|---------------|--------|-------------------------|-------|---------|
| Modulation                         | Frequency<br>(MHz) | RB Allocation |        | Peak-Average Ratio (dB) |       | Verdict |
|                                    |                    | Size          | Offset | Result                  | Limit |         |
| QPSK                               | 782                | 50            | 0      | 4.88                    | <=13  | Pass    |
| 16QAM                              | 782                | 50            | 0      | 5.66                    | <=13  | Pass    |

5.2.2 Test Graph





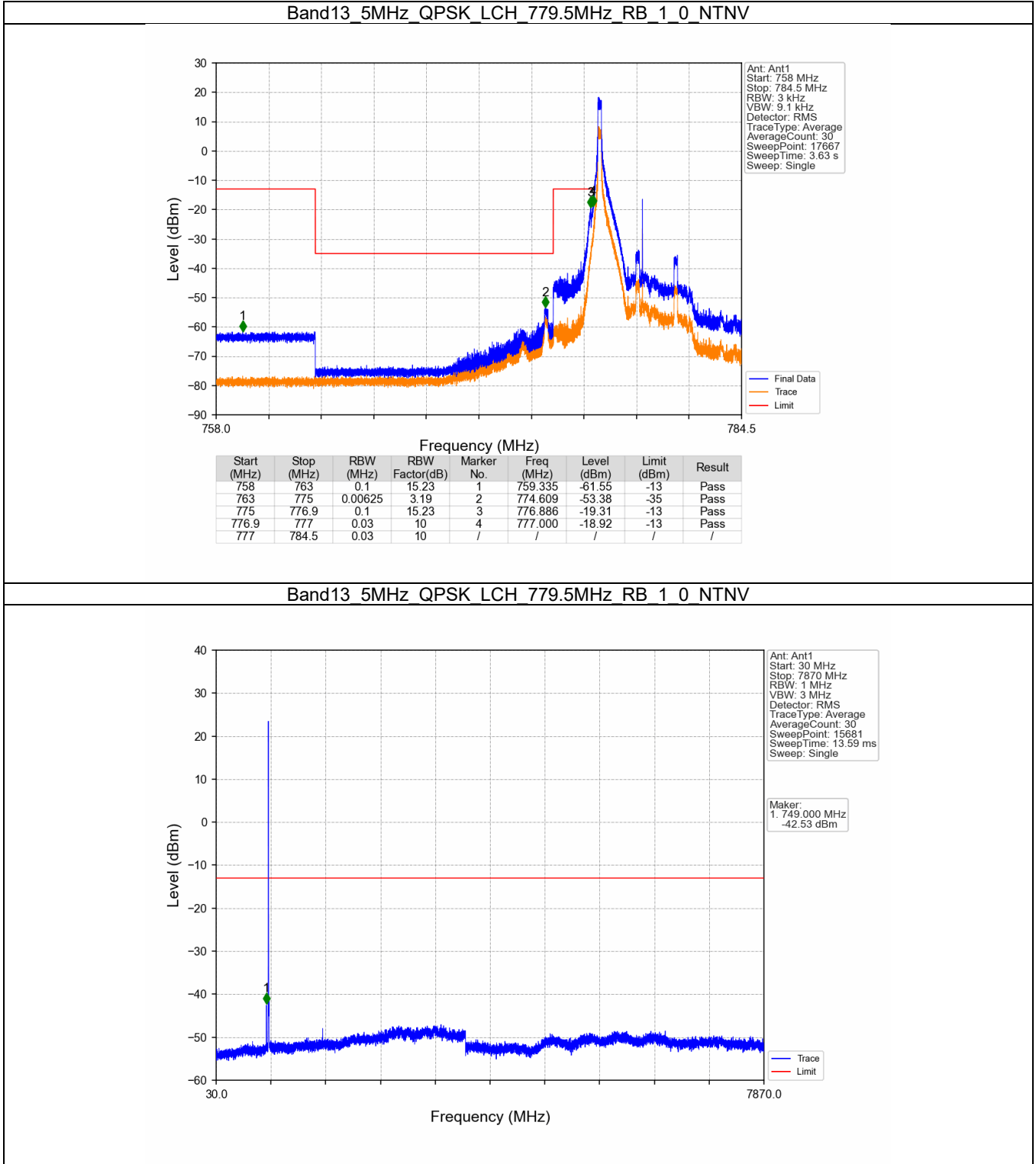
## 6. Spurious Emission

### 6.1 B13\_5MHz

#### 6.1.1 Test Result

| Band: 13 / Bandwidth: 5MHz / NTVN |                 |               |        |                     |       |         |
|-----------------------------------|-----------------|---------------|--------|---------------------|-------|---------|
| Modulation                        | Frequency (MHz) | RB Allocation |        | Spurious Emission   |       | Verdict |
|                                   |                 | Size          | Offset | Result              | Limit |         |
| QPSK                              | 779.5           | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 | 25            | 0      | Refer To Test Graph |       | Pass    |
|                                   | 782             | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   | 784.5           | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 |               | 24     | Refer To Test Graph |       | Pass    |
|                                   |                 | 25            | 0      | Refer To Test Graph |       | Pass    |
| 16QAM                             | 779.5           | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 | 25            | 0      | Refer To Test Graph |       | Pass    |
|                                   | 782             | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   | 784.5           | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 |               | 24     | Refer To Test Graph |       | Pass    |
|                                   |                 | 25            | 0      | Refer To Test Graph |       | Pass    |

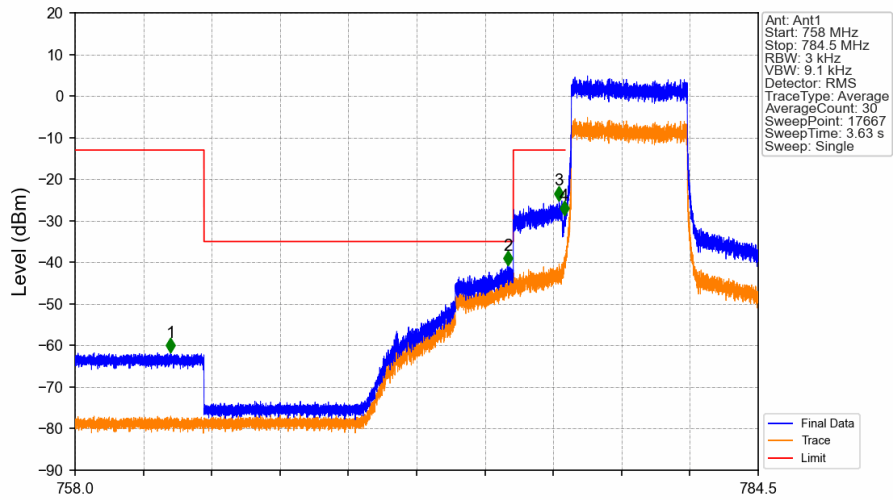
6.1.2 Test Graph





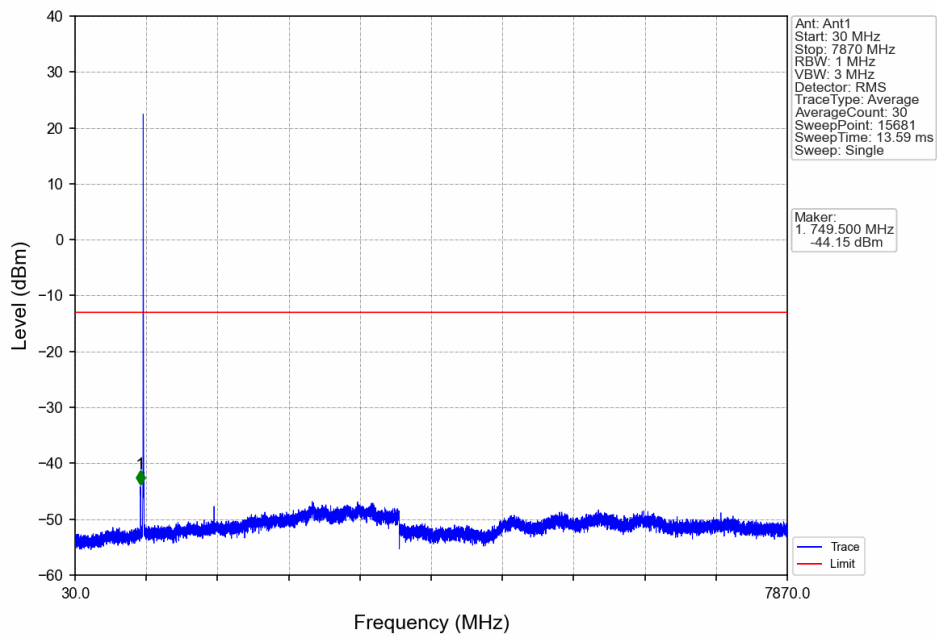


### Band13\_5MHz\_QPSK\_LCH\_779.5MHz\_RB\_25\_0\_NTNV

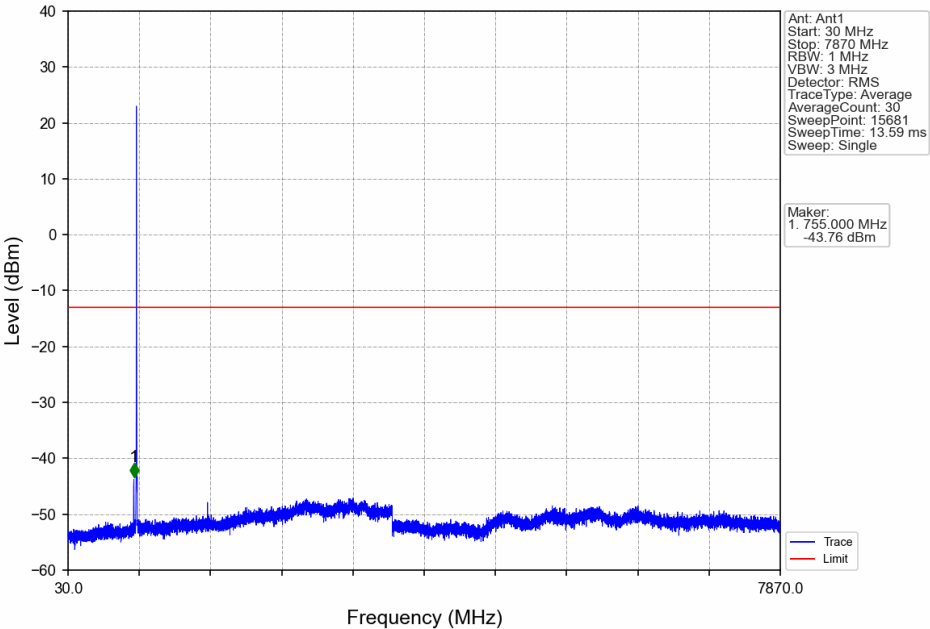


| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 758         | 763        | 0.1       | 15.23          | 1          | 761.710    | -61.74      | -13         | Pass   |
| 763         | 775        | 0.00625   | 3.19           | 2          | 774.789    | -40.77      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 3          | 776.776    | -25.11      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 4          | 776.983    | -28.76      | -13         | Pass   |
| 777         | 784.5      | 0.03      | 10             | /          | /          | /           | /           | /      |

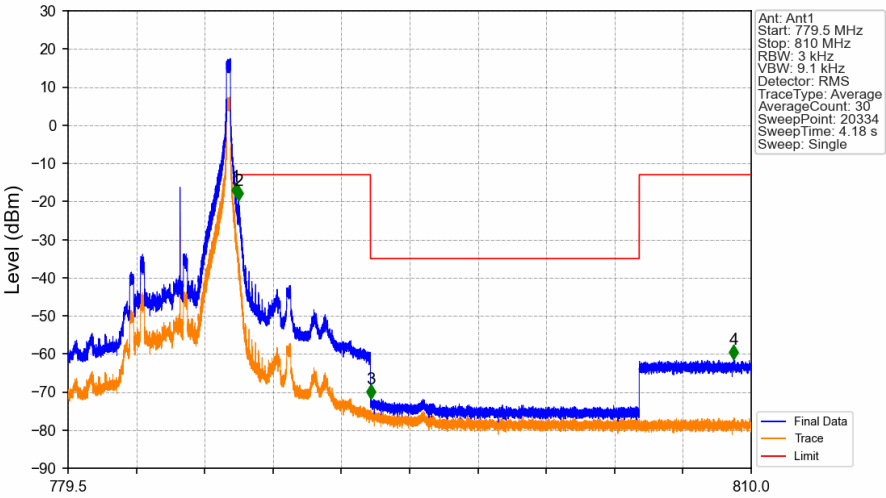
### Band13\_5MHz\_QPSK\_MCH\_782MHz\_RB\_1\_0\_NTNV



Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_1\_0\_NTNV

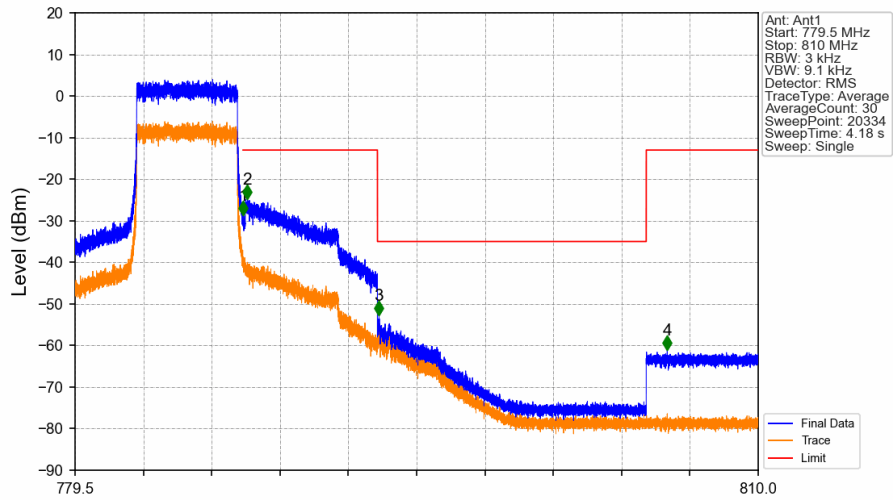


Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_1\_24\_NTNV



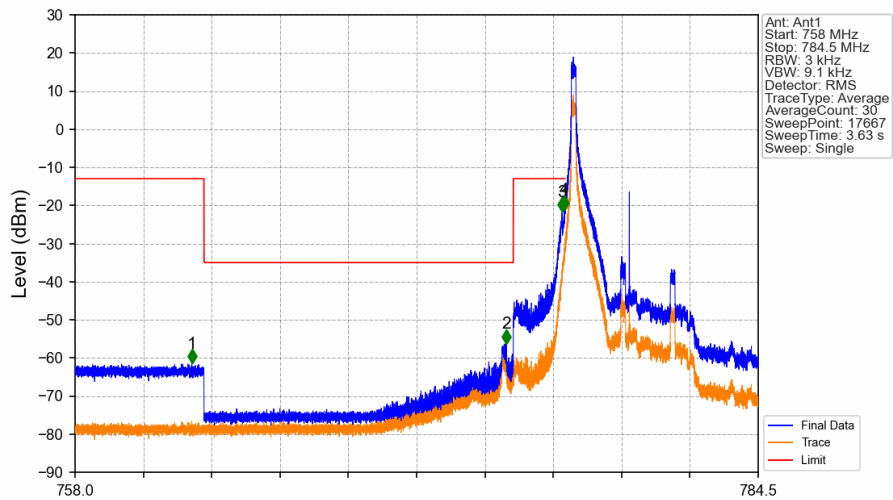
| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 779.5       | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 1          | 787.000    | -18.80      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 2          | 787.110    | -19.68      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 3          | 793.036    | -71.77      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 4          | 809.221    | -61.47      | -13         | Pass   |

### Band13\_5MHz\_QPSK\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



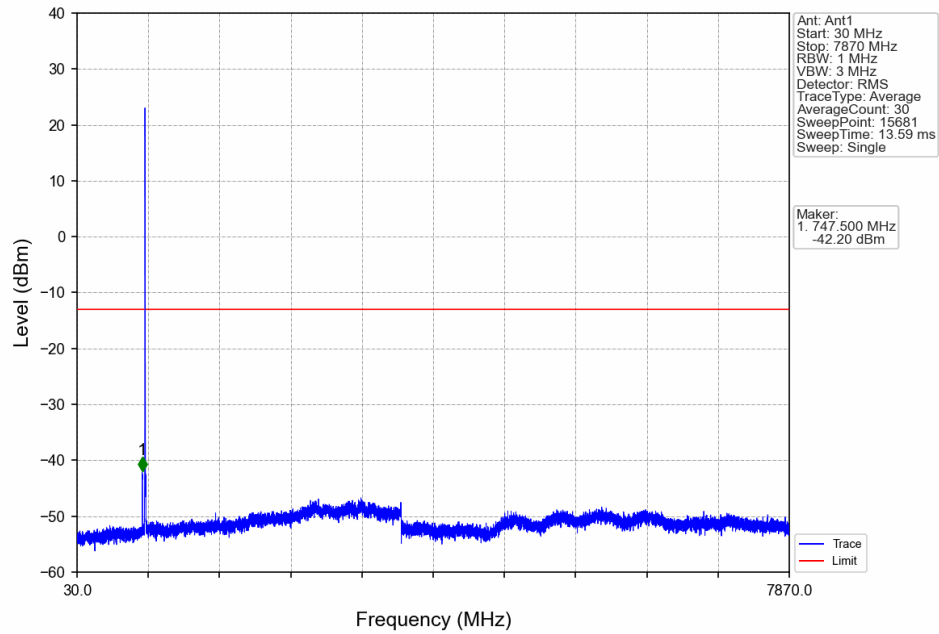
| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 779.5       | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 1          | 787.015    | -28.75      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 2          | 787.194    | -24.75      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 3          | 793.071    | -52.71      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 4          | 805.938    | -61.16      | -13         | Pass   |

### Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_1\_0\_NTNV

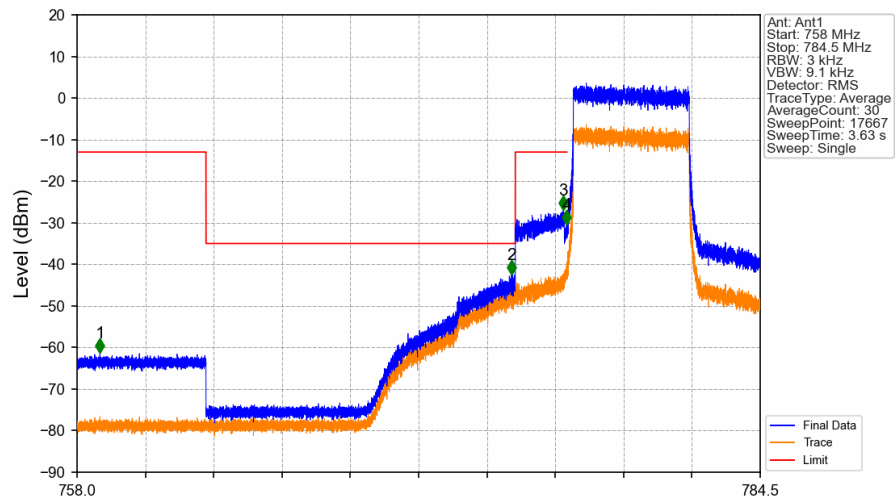


| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 758         | 763        | 0.1       | 15.23          | 1          | 762.529    | -61.36      | -13         | Pass   |
| 763         | 775        | 0.00625   | 3.19           | 2          | 774.729    | -56.24      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 3          | 776.892    | -21.68      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 4          | 776.977    | -21.11      | -13         | Pass   |
| 777         | 784.5      | 0.03      | 10             | /          | /          | /           | /           | /      |

# Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_1\_0\_NTNV

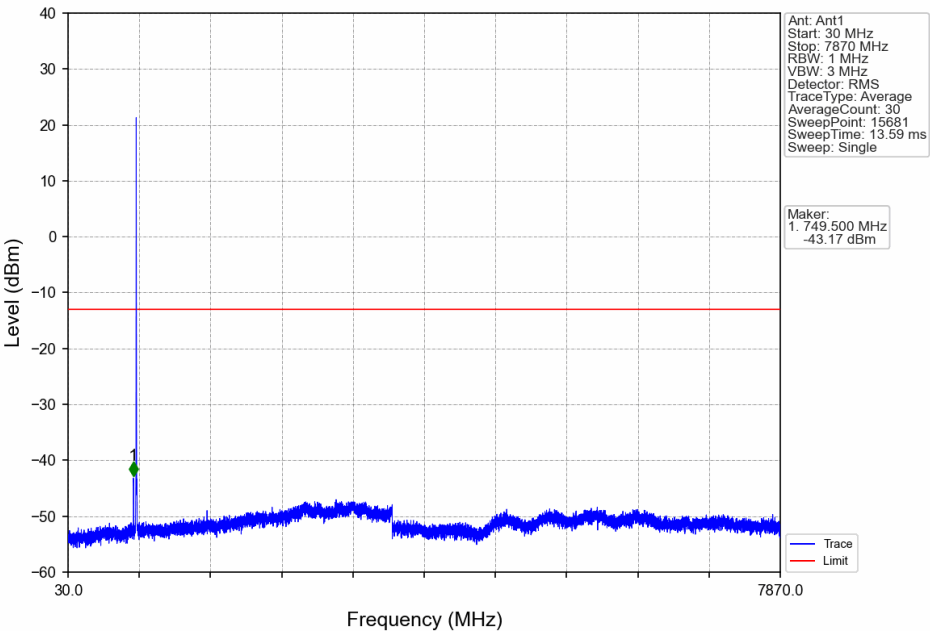


# Band13\_5MHz\_16QAM\_LCH\_779.5MHz\_RB\_25\_0\_NTNV

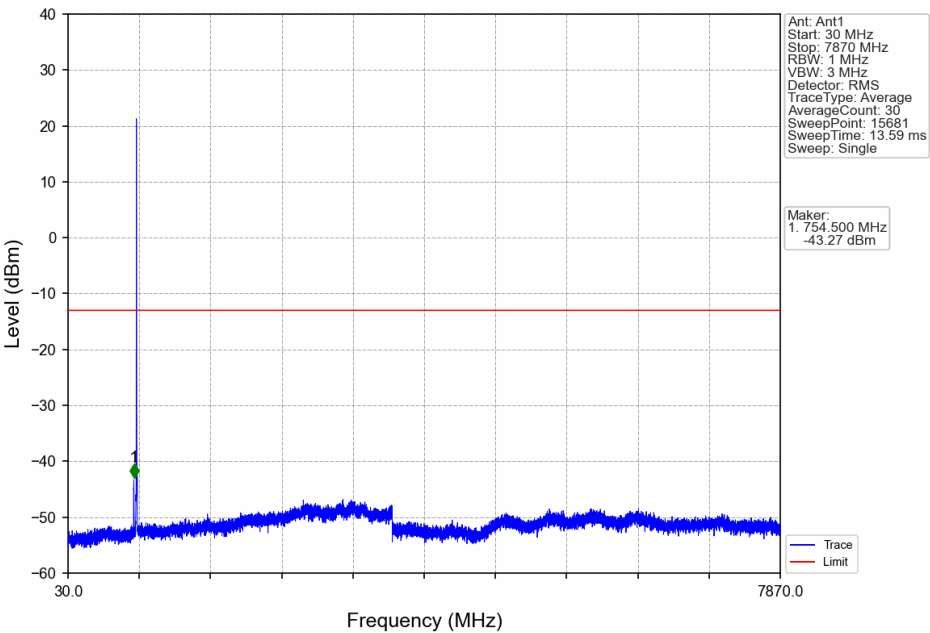


| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 758         | 763        | 0.1       | 15.23          | 1          | 758.888    | -61.37      | -13         | Pass   |
| 763         | 775        | 0.00625   | 3.19           | 2          | 774.856    | -42.43      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 3          | 776.869    | -27.01      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 4          | 776.986    | -30.41      | -13         | Pass   |
| 777         | 784.5      | 0.03      | 10             | /          | /          | /           | /           | /      |

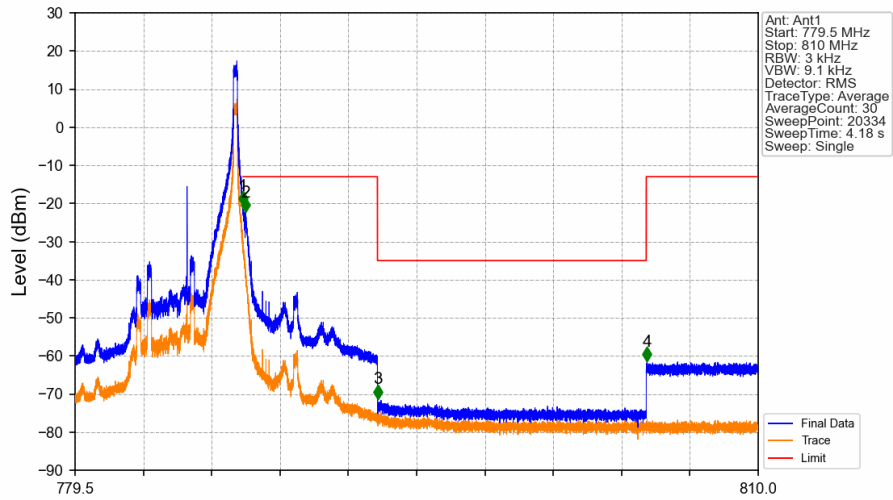
Band13\_5MHz\_16QAM\_MCH\_782MHz\_RB\_1\_0\_NTNV



Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_1\_0\_NTNV

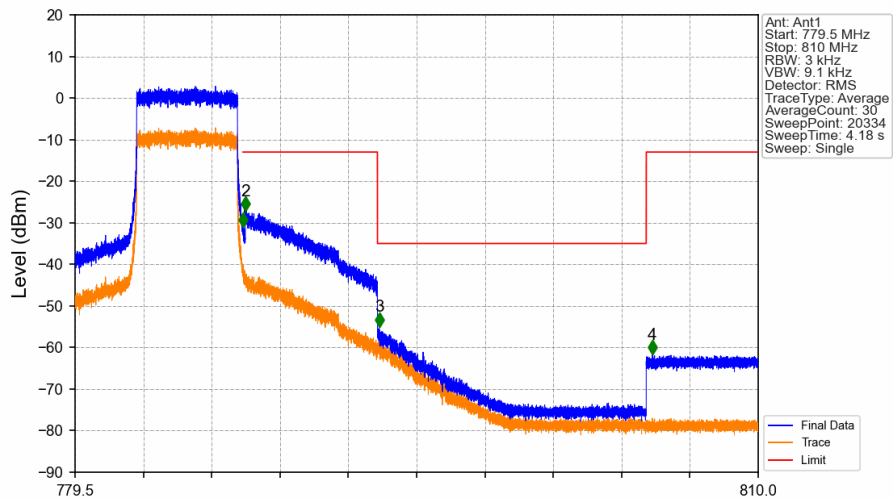


Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_1\_24\_NTNV



| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 779.5       | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 1          | 787.000    | -20.59      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 2          | 787.108    | -22.23      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 3          | 793.006    | -71.28      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 4          | 805.039    | -61.41      | -13         | Pass   |

Band13\_5MHz\_16QAM\_HCH\_784.5MHz\_RB\_25\_0\_NTNV



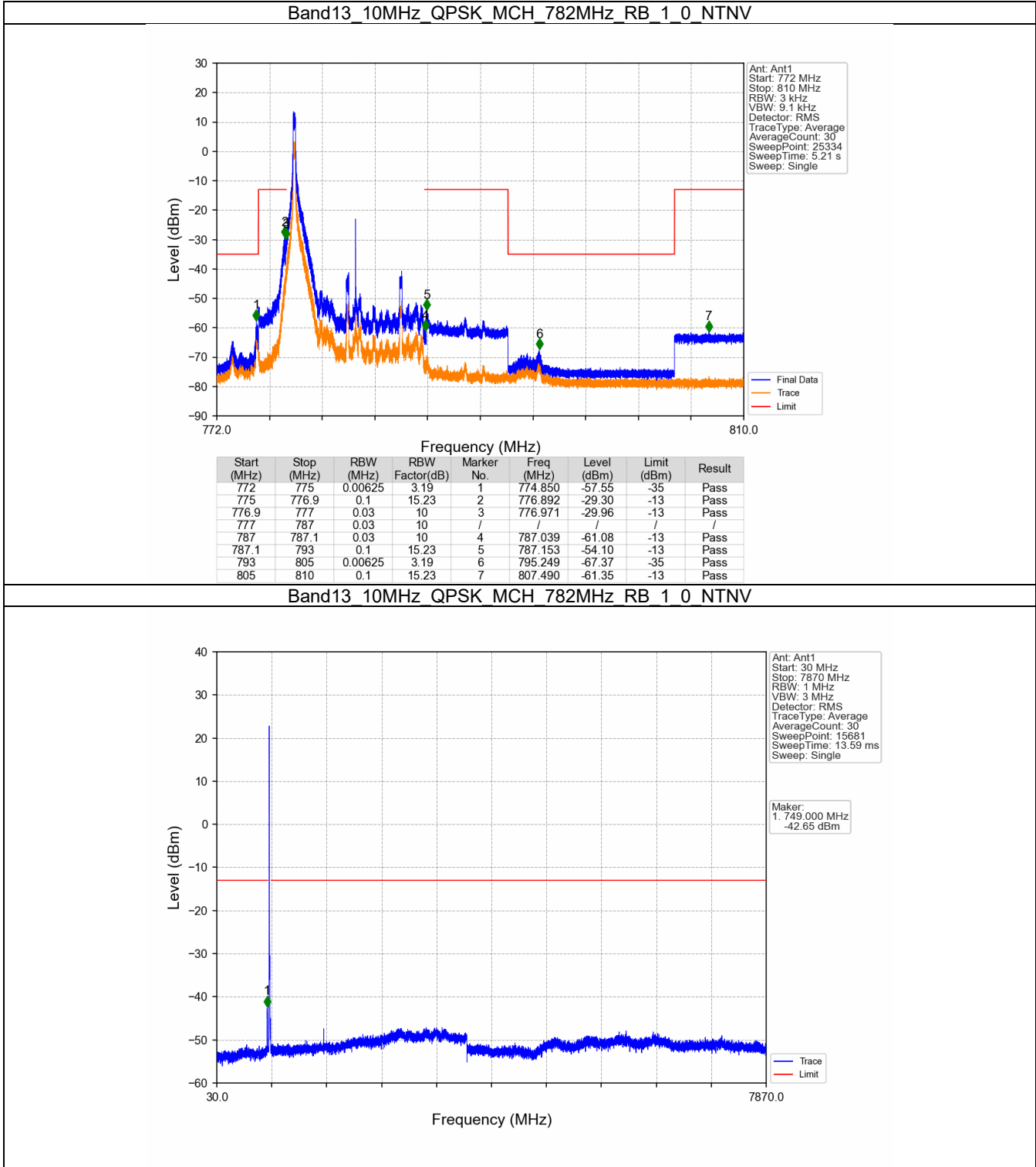
| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 779.5       | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 1          | 787.011    | -31.07      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 2          | 787.117    | -27.08      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 3          | 793.074    | -54.99      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 4          | 805.273    | -61.75      | -13         | Pass   |

## 6.2 B13\_10MHz

### 6.2.1 Test Result

| Band: 13 / Bandwidth: 10MHz / NTV |                 |               |        |                     |       |         |
|-----------------------------------|-----------------|---------------|--------|---------------------|-------|---------|
| Modulation                        | Frequency (MHz) | RB Allocation |        | Spurious Emission   |       | Verdict |
|                                   |                 | Size          | Offset | Result              | Limit |         |
| QPSK                              | 782             | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 |               | 49     | Refer To Test Graph |       | Pass    |
|                                   |                 | 50            | 0      | Refer To Test Graph |       | Pass    |
| 16QAM                             | 782             | 1             | 0      | Refer To Test Graph |       | Pass    |
|                                   |                 |               | 49     | Refer To Test Graph |       | Pass    |
|                                   |                 | 50            | 0      | Refer To Test Graph |       | Pass    |

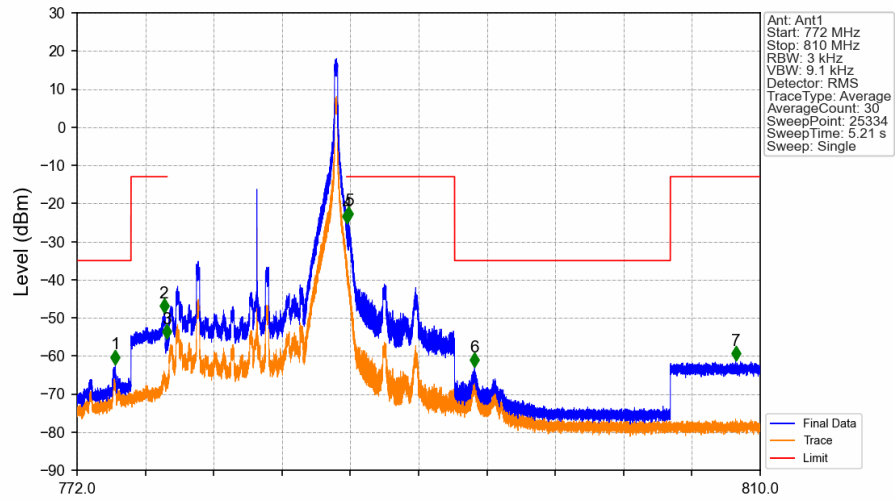
6.2.2 Test Graph





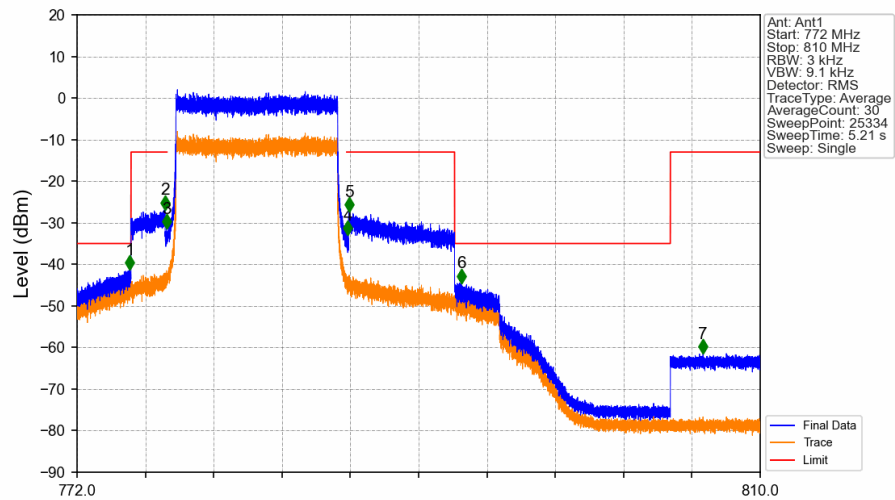


# Band13\_10MHz\_QPSK\_MCH\_782MHz\_RB\_1\_49\_NTNV



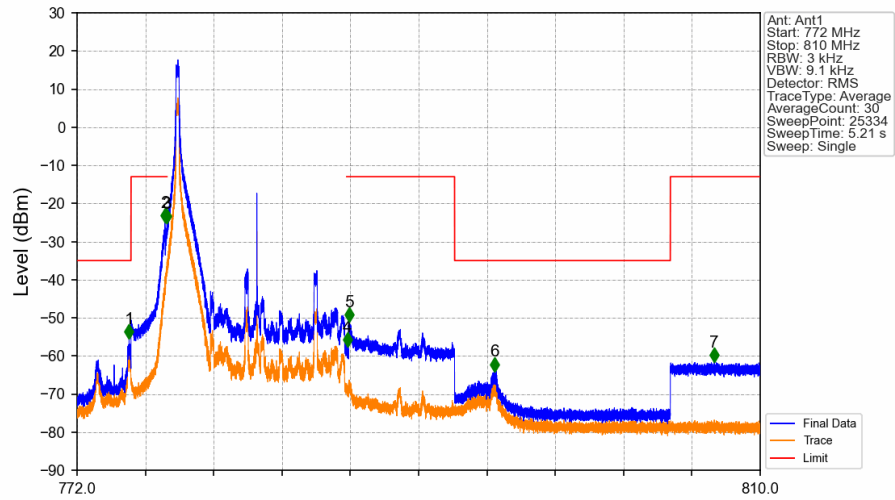
| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 772         | 775        | 0.00625   | 3.19           | 1          | 774.130    | -62.18      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 2          | 776.833    | -48.72      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 3          | 776.985    | -55.58      | -13         | Pass   |
| 777         | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 4          | 787.012    | -25.18      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 5          | 787.111    | -24.53      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 6          | 794.112    | -62.87      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 7          | 808.630    | -61.26      | -13         | Pass   |

# Band13\_10MHz\_QPSK\_MCH\_782MHz\_RB\_50\_0\_NTNV



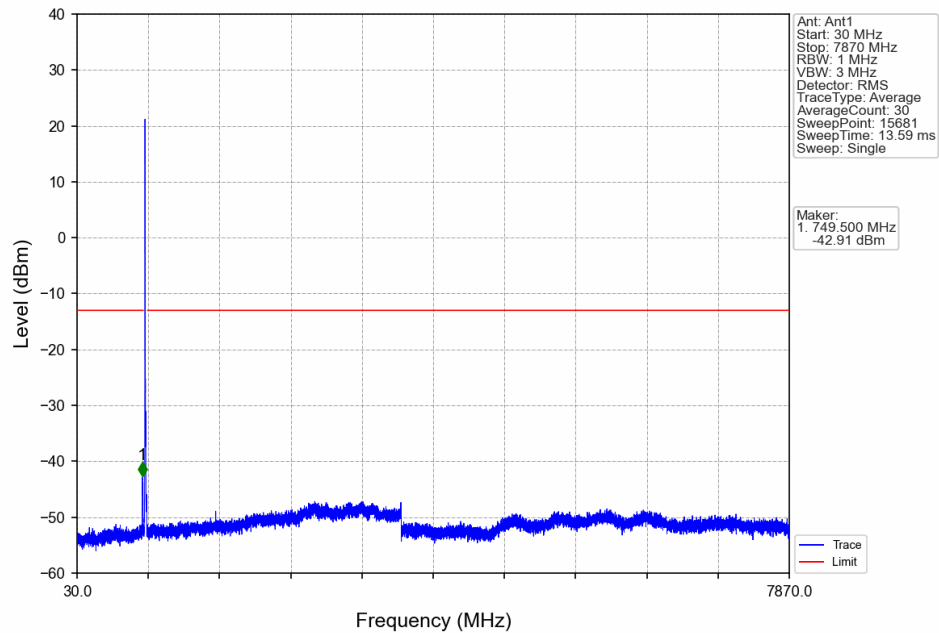
| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 772         | 775        | 0.00625   | 3.19           | 1          | 774.940    | -41.36      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 2          | 776.890    | -26.87      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 3          | 776.967    | -31.50      | -13         | Pass   |
| 777         | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 4          | 787.060    | -32.95      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 5          | 787.138    | -27.37      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 6          | 793.362    | -44.50      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 7          | 806.820    | -61.45      | -13         | Pass   |

# Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_1\_0\_NTNV

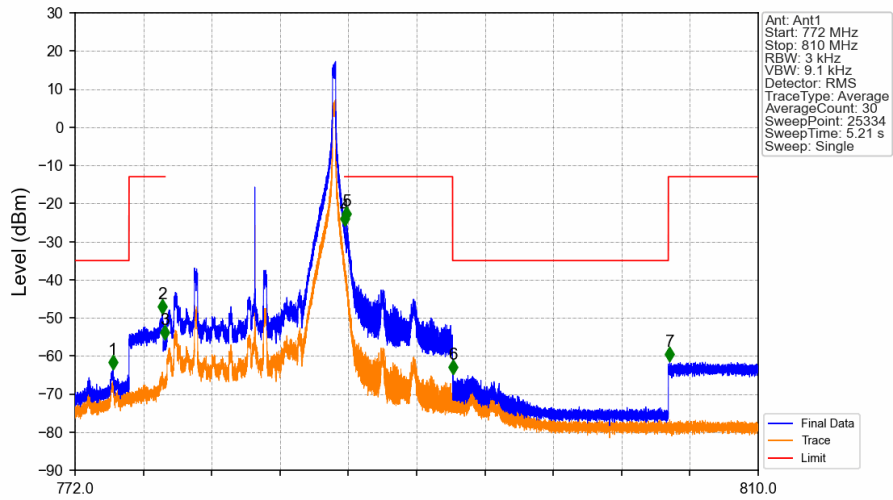


| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 772         | 775        | 0.00625   | 3.19           | 1          | 774.895    | -55.51      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 2          | 776.889    | -25.00      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 3          | 777.000    | -25.30      | -13         | Pass   |
| 777         | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 4          | 787.030    | -57.60      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 5          | 787.138    | -51.08      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 6          | 795.204    | -64.09      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 7          | 807.445    | -61.58      | -13         | Pass   |

# Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_1\_0\_NTNV

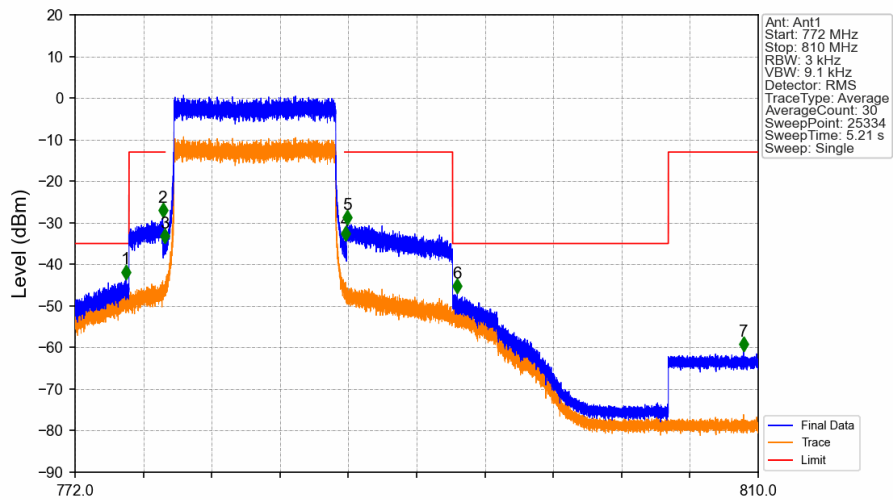


Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_1\_49\_NTNV



| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 772         | 775        | 0.00625   | 3.19           | 1          | 774.111    | -63.54      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 2          | 776.862    | -48.97      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 3          | 776.997    | -55.81      | -13         | Pass   |
| 777         | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 4          | 787.000    | -25.84      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 5          | 787.101    | -24.69      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 6          | 793.036    | -64.87      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 7          | 805.080    | -61.47      | -13         | Pass   |

Band13\_10MHz\_16QAM\_MCH\_782MHz\_RB\_50\_0\_NTNV



| Start (MHz) | Stop (MHz) | RBW (MHz) | RBW Factor(dB) | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|----------------|------------|------------|-------------|-------------|--------|
| 772         | 775        | 0.00625   | 3.19           | 1          | 774.808    | -43.54      | -35         | Pass   |
| 775         | 776.9      | 0.1       | 15.23          | 2          | 776.878    | -28.67      | -13         | Pass   |
| 776.9       | 777        | 0.03      | 10             | 3          | 776.971    | -34.91      | -13         | Pass   |
| 777         | 787        | 0.03      | 10             | /          | /          | /           | /           | /      |
| 787         | 787.1      | 0.03      | 10             | 4          | 787.044    | -34.27      | -13         | Pass   |
| 787.1       | 793        | 0.1       | 15.23          | 5          | 787.147    | -30.42      | -13         | Pass   |
| 793         | 805        | 0.00625   | 3.19           | 6          | 793.261    | -47.01      | -35         | Pass   |
| 805         | 810        | 0.1       | 15.23          | 7          | 809.188    | -60.87      | -13         | Pass   |

## 7. Form731

### 7.1 Form731\_Power

#### 7.1.1 Test Result

| Band | BW | Lower Freq | High Freq | MAX Power (W) | Value  | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|------|----|------------|-----------|---------------|--------|--------|---------------------|------------|-----------------|
| 13   | 5  | 779.5      | 784.5     | 0.2582        | 0.0140 | ppm    | 4M56G7D             | 27F        | 24.12           |
| 13   | 5  | 779.5      | 784.5     | 0.2089        | 0.0131 | ppm    | 4M56W7D             | 27F        | 23.20           |
| 13   | 10 | 782        | 782       | 0.2618        | 0.0127 | ppm    | 9M11G7D             | 27F        | 24.18           |
| 13   | 10 | 782        | 782       | 0.2153        | 0.0053 | ppm    | 9M08W7D             | 27F        | 23.33           |

### 7.2 Form731\_ERP

#### 7.2.1 Test Result

| Band | BW | Lower Freq | High Freq | MAX Power (W) | Value  | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|------|----|------------|-----------|---------------|--------|--------|---------------------|------------|-----------------|
| 13   | 5  | 779.5      | 784.5     | 0.1795        | 0.0140 | ppm    | 4M56G7D             | 27F        | 22.54           |
| 13   | 5  | 779.5      | 784.5     | 0.1452        | 0.0131 | ppm    | 4M56W7D             | 27F        | 21.62           |
| 13   | 10 | 782        | 782       | 0.1820        | 0.0127 | ppm    | 9M11G7D             | 27F        | 22.60           |
| 13   | 10 | 782        | 782       | 0.1496        | 0.0053 | ppm    | 9M08W7D             | 27F        | 21.75           |