# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 B12_1.4MHz_ERP

### 1.1.1 Test Result

| Band: 12 / Bandwidth: 1.4MHz / NTNV | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Conducted Power (dBm) | Gain (dBi) | ERP (dBm) | | Verdict |
| | | Size | Offset | | | Result | Limit | |
| QPSK | 699.7 | 1 | 0 | 23.52 | 2.36 | 23.73 | <=34.77 | Pass |
| | | | 2 | 23.68 | 2.36 | 23.89 | <=34.77 | Pass |
| | | | 5 | 23.59 | 2.36 | 23.80 | <=34.77 | Pass |
| | | 3 | 0 | 23.50 | 2.36 | 23.71 | <=34.77 | Pass |
| | | | 2 | 23.58 | 2.36 | 23.79 | <=34.77 | Pass |
| | | | 3 | 23.17 | 2.36 | 23.38 | <=34.77 | Pass |
| | | 6 | 0 | 22.16 | 2.36 | 22.37 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 23.15 | 2.36 | 23.36 | <=34.77 | Pass |
| | | | 2 | 23.31 | 2.36 | 23.52 | <=34.77 | Pass |
| | | | 5 | 23.18 | 2.36 | 23.39 | <=34.77 | Pass |
| | | 3 | 0 | 23.18 | 2.36 | 23.39 | <=34.77 | Pass |
| | | | 2 | 23.21 | 2.36 | 23.42 | <=34.77 | Pass |
| | | | 3 | 23.20 | 2.36 | 23.41 | <=34.77 | Pass |
| | | 6 | 0 | 22.35 | 2.36 | 22.56 | <=34.77 | Pass |
| | 715.3 | 1 | 0 | 23.24 | 2.36 | 23.45 | <=34.77 | Pass |
| | | | 2 | 23.33 | 2.36 | 23.54 | <=34.77 | Pass |
| | | | 5 | 23.23 | 2.36 | 23.44 | <=34.77 | Pass |
| | | 3 | 0 | 23.26 | 2.36 | 23.47 | <=34.77 | Pass |
| | | | 2 | 23.27 | 2.36 | 23.48 | <=34.77 | Pass |
| | | | 3 | 23.21 | 2.36 | 23.42 | <=34.77 | Pass |
| | | 6 | 0 | 22.41 | 2.36 | 22.62 | <=34.77 | Pass |
| 16QAM | 699.7 | 1 | 0 | 22.02 | 2.36 | 22.23 | <=34.77 | Pass |
| | | | 2 | 22.14 | 2.36 | 22.35 | <=34.77 | Pass |
| | | | 5 | 22.13 | 2.36 | 22.34 | <=34.77 | Pass |
| | | 3 | 0 | 22.10 | 2.36 | 22.31 | <=34.77 | Pass |
| | | | 2 | 22.15 | 2.36 | 22.36 | <=34.77 | Pass |
| | | | 3 | 22.13 | 2.36 | 22.34 | <=34.77 | Pass |
| | | 6 | 0 | 21.04 | 2.36 | 21.25 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 22.30 | 2.36 | 22.51 | <=34.77 | Pass |
| | | | 2 | 22.42 | 2.36 | 22.63 | <=34.77 | Pass |
| | | | 5 | 22.36 | 2.36 | 22.57 | <=34.77 | Pass |
| | | 3 | 0 | 22.17 | 2.36 | 22.38 | <=34.77 | Pass |
| | | | 2 | 22.22 | 2.36 | 22.43 | <=34.77 | Pass |
| | | | 3 | 22.22 | 2.36 | 22.43 | <=34.77 | Pass |
| | | 6 | 0 | 21.28 | 2.36 | 21.49 | <=34.77 | Pass |
| | 715.3 | 1 | 0 | 22.21 | 2.36 | 22.42 | <=34.77 | Pass |
| | | | 2 | 22.27 | 2.36 | 22.48 | <=34.77 | Pass |
| | | | 5 | 22.16 | 2.36 | 22.37 | <=34.77 | Pass |
| | | 3 | 0 | 22.43 | 2.36 | 22.64 | <=34.77 | Pass |
| | | | 2 | 22.46 | 2.36 | 22.67 | <=34.77 | Pass |
| | | | 3 | 22.40 | 2.36 | 22.61 | <=34.77 | Pass |
| | | 6 | 0 | 21.32 | 2.36 | 21.53 | <=34.77 | Pass |
| Note1: ERP=Conducted Power+Antenna Gain-2.15 | | | | | | | | |

## 1.2 B12_3MHz_ERP

### 1.2.1 Test Result

| Band: 12 / Bandwidth: 3MHz / NTNV | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Conducted Power (dBm) | Gain (dBi) | ERP (dBm) | | Verdict |
| | | Size | Offset | | | Result | Limit | |
| QPSK | 700.5 | 1 | 0 | 23.32 | 2.36 | 23.53 | <=34.77 | Pass |
| | | | 7 | 23.35 | 2.36 | 23.56 | <=34.77 | Pass |
| | | | 14 | 23.22 | 2.36 | 23.43 | <=34.77 | Pass |
| | | 8 | 0 | 22.23 | 2.36 | 22.44 | <=34.77 | Pass |
| | | | 4 | 22.27 | 2.36 | 22.48 | <=34.77 | Pass |
| | | | 7 | 22.23 | 2.36 | 22.44 | <=34.77 | Pass |
| | | 15 | 0 | 22.21 | 2.36 | 22.42 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 23.24 | 2.36 | 23.45 | <=34.77 | Pass |
| | | | 7 | 23.37 | 2.36 | 23.58 | <=34.77 | Pass |
| | | | 14 | 23.31 | 2.36 | 23.52 | <=34.77 | Pass |
| | | 8 | 0 | 22.32 | 2.36 | 22.53 | <=34.77 | Pass |
| | | | 4 | 22.41 | 2.36 | 22.62 | <=34.77 | Pass |
| | | | 7 | 22.38 | 2.36 | 22.59 | <=34.77 | Pass |
| | | 15 | 0 | 22.35 | 2.36 | 22.56 | <=34.77 | Pass |
| | 714.5 | 1 | 0 | 23.36 | 2.36 | 23.57 | <=34.77 | Pass |
| | | | 7 | 23.50 | 2.36 | 23.71 | <=34.77 | Pass |
| | | | 14 | 23.40 | 2.36 | 23.61 | <=34.77 | Pass |
| | | 8 | 0 | 22.42 | 2.36 | 22.63 | <=34.77 | Pass |
| | | | 4 | 22.46 | 2.36 | 22.67 | <=34.77 | Pass |
| | | | 7 | 22.46 | 2.36 | 22.67 | <=34.77 | Pass |
| | | 15 | 0 | 22.42 | 2.36 | 22.63 | <=34.77 | Pass |
| 16QAM | 700.5 | 1 | 0 | 22.15 | 2.36 | 22.36 | <=34.77 | Pass |
| | | | 7 | 22.39 | 2.36 | 22.60 | <=34.77 | Pass |
| | | | 14 | 22.26 | 2.36 | 22.47 | <=34.77 | Pass |
| | | 8 | 0 | 21.22 | 2.36 | 21.43 | <=34.77 | Pass |
| | | | 4 | 21.29 | 2.36 | 21.50 | <=34.77 | Pass |
| | | | 7 | 21.23 | 2.36 | 21.44 | <=34.77 | Pass |
| | | 15 | 0 | 21.20 | 2.36 | 21.41 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 22.41 | 2.36 | 22.62 | <=34.77 | Pass |
| | | | 7 | 22.55 | 2.36 | 22.76 | <=34.77 | Pass |
| | | | 14 | 22.47 | 2.36 | 22.68 | <=34.77 | Pass |
| | | 8 | 0 | 21.23 | 2.36 | 21.44 | <=34.77 | Pass |
| | | | 4 | 21.33 | 2.36 | 21.54 | <=34.77 | Pass |
| | | | 7 | 21.30 | 2.36 | 21.51 | <=34.77 | Pass |
| | | 15 | 0 | 21.25 | 2.36 | 21.46 | <=34.77 | Pass |
| | 714.5 | 1 | 0 | 22.87 | 2.36 | 23.08 | <=34.77 | Pass |
| | | | 7 | 22.98 | 2.36 | 23.19 | <=34.77 | Pass |
| | | | 14 | 22.77 | 2.36 | 22.98 | <=34.77 | Pass |
| | | 8 | 0 | 21.50 | 2.36 | 21.71 | <=34.77 | Pass |
| | | | 4 | 21.55 | 2.36 | 21.76 | <=34.77 | Pass |
| | | | 7 | 21.53 | 2.36 | 21.74 | <=34.77 | Pass |
| | | 15 | 0 | 21.42 | 2.36 | 21.63 | <=34.77 | Pass |
| Note1: ERP=Conducted Power+Antenna Gain-2.15 | | | | | | | | |

## 1.3 B12_5MHz_ERP

### 1.3.1 Test Result

| Band: 12 / Bandwidth: 5MHz / NTNV | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Conducted Power (dBm) | Gain (dBi) | ERP (dBm) | | Verdict |
| | | Size | Offset | | | Result | Limit | |
| QPSK | 701.5 | 1 | 0 | 22.98 | 2.36 | 23.19 | <=34.77 | Pass |
| | | | 13 | 23.17 | 2.36 | 23.38 | <=34.77 | Pass |
| | | | 24 | 23.14 | 2.36 | 23.35 | <=34.77 | Pass |
| | | 12 | 0 | 22.24 | 2.36 | 22.45 | <=34.77 | Pass |
| | | | 6 | 22.20 | 2.36 | 22.41 | <=34.77 | Pass |
| | | | 13 | 22.12 | 2.36 | 22.33 | <=34.77 | Pass |
| | | 25 | 0 | 22.18 | 2.36 | 22.39 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 23.07 | 2.36 | 23.28 | <=34.77 | Pass |
| | | | 13 | 23.21 | 2.36 | 23.42 | <=34.77 | Pass |
| | | | 24 | 23.18 | 2.36 | 23.39 | <=34.77 | Pass |
| | | 12 | 0 | 22.12 | 2.36 | 22.33 | <=34.77 | Pass |
| | | | 6 | 22.28 | 2.36 | 22.49 | <=34.77 | Pass |
| | | | 13 | 22.25 | 2.36 | 22.46 | <=34.77 | Pass |
| | | 25 | 0 | 22.20 | 2.36 | 22.41 | <=34.77 | Pass |
| | 713.5 | 1 | 0 | 23.20 | 2.36 | 23.41 | <=34.77 | Pass |
| | | | 13 | 23.31 | 2.36 | 23.52 | <=34.77 | Pass |
| | | | 24 | 23.21 | 2.36 | 23.42 | <=34.77 | Pass |
| | | 12 | 0 | 22.40 | 2.36 | 22.61 | <=34.77 | Pass |
| | | | 6 | 22.38 | 2.36 | 22.59 | <=34.77 | Pass |
| | | | 13 | 22.36 | 2.36 | 22.57 | <=34.77 | Pass |
| | | 25 | 0 | 22.40 | 2.36 | 22.61 | <=34.77 | Pass |
| 16QAM | 701.5 | 1 | 0 | 22.06 | 2.36 | 22.27 | <=34.77 | Pass |
| | | | 13 | 22.28 | 2.36 | 22.49 | <=34.77 | Pass |
| | | | 24 | 22.27 | 2.36 | 22.48 | <=34.77 | Pass |
| | | 12 | 0 | 21.18 | 2.36 | 21.39 | <=34.77 | Pass |
| | | | 6 | 21.18 | 2.36 | 21.39 | <=34.77 | Pass |
| | | | 13 | 21.12 | 2.36 | 21.33 | <=34.77 | Pass |
| | | 25 | 0 | 21.15 | 2.36 | 21.36 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 22.30 | 2.36 | 22.51 | <=34.77 | Pass |
| | | | 13 | 22.44 | 2.36 | 22.65 | <=34.77 | Pass |
| | | | 24 | 22.43 | 2.36 | 22.64 | <=34.77 | Pass |
| | | 12 | 0 | 21.15 | 2.36 | 21.36 | <=34.77 | Pass |
| | | | 6 | 21.27 | 2.36 | 21.48 | <=34.77 | Pass |
| | | | 13 | 21.27 | 2.36 | 21.48 | <=34.77 | Pass |
| | | 25 | 0 | 21.16 | 2.36 | 21.37 | <=34.77 | Pass |
| | 713.5 | 1 | 0 | 22.07 | 2.36 | 22.28 | <=34.77 | Pass |
| | | | 13 | 22.20 | 2.36 | 22.41 | <=34.77 | Pass |
| | | | 24 | 22.05 | 2.36 | 22.26 | <=34.77 | Pass |
| | | 12 | 0 | 21.36 | 2.36 | 21.57 | <=34.77 | Pass |
| | | | 6 | 21.35 | 2.36 | 21.56 | <=34.77 | Pass |
| | | | 13 | 21.38 | 2.36 | 21.59 | <=34.77 | Pass |
| | | 25 | 0 | 21.38 | 2.36 | 21.59 | <=34.77 | Pass |
| Note1: ERP=Conducted Power+Antenna Gain-2.15 | | | | | | | | |

## 1.4 B12_10MHz_ERP

### 1.4.1 Test Result

| Band: 12 / Bandwidth: 10MHz / NTNV | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Conducted Power (dBm) | Gain (dBi) | ERP (dBm) | | Verdict |
| | | Size | Offset | | | Result | Limit | |
| QPSK | 704 | 1 | 0 | 23.02 | 2.36 | 23.23 | <=34.77 | Pass |
| | | | 25 | 23.41 | 2.36 | 23.62 | <=34.77 | Pass |
| | | | 49 | 23.26 | 2.36 | 23.47 | <=34.77 | Pass |
| | | 25 | 0 | 22.35 | 2.36 | 22.56 | <=34.77 | Pass |
| | | | 13 | 22.31 | 2.36 | 22.52 | <=34.77 | Pass |
| | | | 25 | 22.52 | 2.36 | 22.73 | <=34.77 | Pass |
| | | 50 | 0 | 22.43 | 2.36 | 22.64 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 23.07 | 2.36 | 23.28 | <=34.77 | Pass |
| | | | 25 | 23.36 | 2.36 | 23.57 | <=34.77 | Pass |
| | | | 49 | 23.25 | 2.36 | 23.46 | <=34.77 | Pass |
| | | 25 | 0 | 22.09 | 2.36 | 22.30 | <=34.77 | Pass |
| | | | 13 | 22.33 | 2.36 | 22.54 | <=34.77 | Pass |
| | | | 25 | 22.18 | 2.36 | 22.39 | <=34.77 | Pass |
| | | 50 | 0 | 22.14 | 2.36 | 22.35 | <=34.77 | Pass |
| | 711 | 1 | 0 | 23.10 | 2.36 | 23.31 | <=34.77 | Pass |
| | | | 25 | 23.44 | 2.36 | 23.65 | <=34.77 | Pass |
| | | | 49 | 23.30 | 2.36 | 23.51 | <=34.77 | Pass |
| | | 25 | 0 | 22.34 | 2.36 | 22.55 | <=34.77 | Pass |
| | | | 13 | 22.38 | 2.36 | 22.59 | <=34.77 | Pass |
| | | | 25 | 22.35 | 2.36 | 22.56 | <=34.77 | Pass |
| | | 50 | 0 | 22.37 | 2.36 | 22.58 | <=34.77 | Pass |
| 16QAM | 704 | 1 | 0 | 22.01 | 2.36 | 22.22 | <=34.77 | Pass |
| | | | 25 | 22.41 | 2.36 | 22.62 | <=34.77 | Pass |
| | | | 49 | 22.25 | 2.36 | 22.46 | <=34.77 | Pass |
| | | 25 | 0 | 21.39 | 2.36 | 21.60 | <=34.77 | Pass |
| | | | 13 | 21.33 | 2.36 | 21.54 | <=34.77 | Pass |
| | | | 25 | 21.50 | 2.36 | 21.71 | <=34.77 | Pass |
| | | 50 | 0 | 21.39 | 2.36 | 21.60 | <=34.77 | Pass |
| | 707.5 | 1 | 0 | 22.25 | 2.36 | 22.46 | <=34.77 | Pass |
| | | | 25 | 22.54 | 2.36 | 22.75 | <=34.77 | Pass |
| | | | 49 | 22.43 | 2.36 | 22.64 | <=34.77 | Pass |
| | | 25 | 0 | 21.08 | 2.36 | 21.29 | <=34.77 | Pass |
| | | | 13 | 21.30 | 2.36 | 21.51 | <=34.77 | Pass |
| | | | 25 | 21.14 | 2.36 | 21.35 | <=34.77 | Pass |
| | | 50 | 0 | 21.09 | 2.36 | 21.30 | <=34.77 | Pass |
| | 711 | 1 | 0 | 22.62 | 2.36 | 22.83 | <=34.77 | Pass |
| | | | 25 | 23.03 | 2.36 | 23.24 | <=34.77 | Pass |
| | | | 49 | 22.73 | 2.36 | 22.94 | <=34.77 | Pass |
| | | 25 | 0 | 21.32 | 2.36 | 21.53 | <=34.77 | Pass |
| | | | 13 | 21.38 | 2.36 | 21.59 | <=34.77 | Pass |
| | | | 25 | 21.30 | 2.36 | 21.51 | <=34.77 | Pass |
| | | 50 | 0 | 21.26 | 2.36 | 21.47 | <=34.77 | Pass |
| Note1: ERP=Conducted Power+Antenna Gain-2.15 | | | | | | | | |

# 2. Frequency Stability

## 2.1 B12_1.4MHz

### 2.1.1 Test Result

| Band: 12 / Bandwidth: 1.4MHz | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) | | Verdict |
| | | Size | Offset | | | | Result | Limit | |
| QPSK | 699.7 | 6 | 0 | 20 | 3.27 | -8.726 | -0.0125 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -5.951 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -7.925 | -0.0113 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.223 | -0.0089 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -4.592 | -0.0066 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -6.695 | -0.0096 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -15.249 | -0.0218 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -9.298 | -0.0133 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -5.250 | -0.0075 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -7.567 | -0.0108 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -7.610 | -0.0109 | -2.5 to 2.5 | Pass |
| | 707.5 | 6 | 0 | 20 | 3.27 | -10.486 | -0.0148 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -9.899 | -0.0140 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -7.153 | -0.0101 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.881 | -0.0097 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -6.938 | -0.0098 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -11.287 | -0.0160 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -4.792 | -0.0068 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -3.533 | -0.0050 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -10.128 | -0.0143 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -8.397 | -0.0119 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.104 | -0.0044 | -2.5 to 2.5 | Pass |
| | 715.3 | 6 | 0 | 20 | 3.27 | -6.609 | -0.0092 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -8.698 | -0.0122 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.665 | -0.0079 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -5.636 | -0.0079 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -10.471 | -0.0146 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -4.778 | -0.0067 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -7.381 | -0.0103 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -11.358 | -0.0159 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -7.052 | -0.0099 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -4.907 | -0.0069 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -9.456 | -0.0132 | -2.5 to 2.5 | Pass |
| 16QAM | 699.7 | 6 | 0 | 20 | 3.27 | -3.719 | -0.0053 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -6.795 | -0.0097 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.779 | -0.0083 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.738 | -0.0096 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -6.967 | -0.0100 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -7.267 | -0.0104 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -3.719 | -0.0053 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -3.948 | -0.0056 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -9.098 | -0.0130 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -11.172 | -0.0160 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -4.177 | -0.0060 | -2.5 to 2.5 | Pass |
| | 707.5 | 6 | 0 | 20 | 3.27 | -4.263 | -0.0060 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -10.600 | -0.0150 | -2.5 to 2.5 | Pass |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 4.43 | -4.835 | -0.0068 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -8.254 | -0.0117 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -8.955 | -0.0127 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -6.595 | -0.0093 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -5.708 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -6.266 | -0.0089 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -3.934 | -0.0056 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -5.994 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.920 | -0.0055 | -2.5 to 2.5 | Pass |
| | 715.3 | 6 | 0 | 20 | 3.27 | -9.012 | -0.0126 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -4.377 | -0.0061 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -11.129 | -0.0156 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -7.510 | -0.0105 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -3.748 | -0.0052 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -6.137 | -0.0086 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -7.253 | -0.0101 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -3.362 | -0.0047 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -10.901 | -0.0152 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -7.324 | -0.0102 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -5.865 | -0.0082 | -2.5 to 2.5 | Pass |

## 2.2 B12_3MHz

### 2.2.1 Test Result

| Band: 12 / Bandwidth: 3MHz | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) | | Verdict |
| | | Size | Offset | | | | Result | Limit | |
| QPSK | 700.5 | 15 | 0 | 20 | 3.27 | -7.110 | -0.0101 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -3.390 | -0.0048 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.751 | -0.0082 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.995 | -0.0100 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -7.911 | -0.0113 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -4.077 | -0.0058 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -4.678 | -0.0067 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -12.159 | -0.0174 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -8.011 | -0.0114 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -4.392 | -0.0063 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -4.320 | -0.0062 | -2.5 to 2.5 | Pass |
| | 707.5 | 15 | 0 | 20 | 3.27 | -7.610 | -0.0108 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -4.978 | -0.0070 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -2.890 | -0.0041 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -9.012 | -0.0127 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -7.696 | -0.0109 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -7.095 | -0.0100 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -6.995 | -0.0099 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -7.796 | -0.0110 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -4.206 | -0.0059 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -3.519 | -0.0050 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -6.909 | -0.0098 | -2.5 to 2.5 | Pass |
| | 714.5 | 15 | 0 | 20 | 3.27 | -5.808 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -6.151 | -0.0086 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -7.482 | -0.0105 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -3.219 | -0.0045 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -8.812 | -0.0123 | -2.5 to 2.5 | Pass |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | -10 | 3.85 | -3.204 | -0.0045 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -8.998 | -0.0126 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -5.193 | -0.0073 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -4.592 | -0.0064 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -2.074 | -0.0029 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.462 | -0.0048 | -2.5 to 2.5 | Pass |
| 16QAM | 700.5 | 15 | 0 | 20 | 3.27 | -6.866 | -0.0098 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -13.762 | -0.0196 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -6.695 | -0.0096 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -7.653 | -0.0109 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -8.283 | -0.0118 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -8.025 | -0.0115 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -6.967 | -0.0099 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -1.760 | -0.0025 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -12.445 | -0.0178 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -8.311 | -0.0119 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -5.822 | -0.0083 | -2.5 to 2.5 | Pass |
| | 707.5 | 15 | 0 | 20 | 3.27 | -4.034 | -0.0057 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -6.509 | -0.0092 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -1.688 | -0.0024 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.480 | -0.0092 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -4.821 | -0.0068 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -1.416 | -0.0020 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -9.069 | -0.0128 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -0.343 | -0.0005 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -5.722 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -5.980 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -7.410 | -0.0105 | -2.5 to 2.5 | Pass |
| | 714.5 | 15 | 0 | 20 | 3.27 | -5.608 | -0.0078 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -4.592 | -0.0064 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -7.925 | -0.0111 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -8.254 | -0.0116 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -4.764 | -0.0067 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -8.268 | -0.0116 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -1.888 | -0.0026 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -11.358 | -0.0159 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -8.698 | -0.0122 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -7.682 | -0.0108 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -7.124 | -0.0100 | -2.5 to 2.5 | Pass |

## 2.3 B12_5MHz

### 2.3.1 Test Result

| Band: 12 / Bandwidth: 5MHz | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) | | Verdict |
| | | Size | Offset | | | | Result | Limit | |
| QPSK | 701.5 | 25 | 0 | 20 | 3.27 | -5.136 | -0.0073 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -5.393 | -0.0077 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.608 | -0.0080 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -5.150 | -0.0073 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -7.110 | -0.0101 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -13.118 | -0.0187 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -5.965 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -6.595 | -0.0094 | -2.5 to 2.5 | Pass |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 30 | 3.85 | -7.310 | -0.0104 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -2.975 | -0.0042 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -6.166 | -0.0088 | -2.5 to 2.5 | Pass |
| | 707.5 | 25 | 0 | 20 | 3.27 | -6.480 | -0.0092 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -2.618 | -0.0037 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -2.403 | -0.0034 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -2.360 | -0.0033 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -1.330 | -0.0019 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -1.702 | -0.0024 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -8.898 | -0.0126 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -9.484 | -0.0134 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -3.648 | -0.0052 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -6.409 | -0.0091 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.762 | -0.0053 | -2.5 to 2.5 | Pass |
| | 713.5 | 25 | 0 | 20 | 3.27 | -7.238 | -0.0101 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -4.048 | -0.0057 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -7.911 | -0.0111 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -9.785 | -0.0137 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -6.166 | -0.0086 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -4.306 | -0.0060 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -8.283 | -0.0116 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -4.435 | -0.0062 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -5.479 | -0.0077 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -7.381 | -0.0103 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.247 | -0.0046 | -2.5 to 2.5 | Pass |
| 16QAM | 701.5 | 25 | 0 | 20 | 3.27 | -8.740 | -0.0125 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -8.197 | -0.0117 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -6.137 | -0.0087 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -6.895 | -0.0098 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -6.123 | -0.0087 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -11.644 | -0.0166 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -6.537 | -0.0093 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -4.950 | -0.0071 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -2.875 | -0.0041 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -10.414 | -0.0148 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -12.875 | -0.0184 | -2.5 to 2.5 | Pass |
| | 707.5 | 25 | 0 | 20 | 3.27 | -10.242 | -0.0145 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -5.035 | -0.0071 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -4.263 | -0.0060 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -7.639 | -0.0108 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -4.992 | -0.0071 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -3.877 | -0.0055 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -1.702 | -0.0024 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -7.210 | -0.0102 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | 0.687 | 0.0010 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -6.108 | -0.0086 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -3.748 | -0.0053 | -2.5 to 2.5 | Pass |
| | 713.5 | 25 | 0 | 20 | 3.27 | -4.420 | -0.0062 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -11.158 | -0.0156 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -6.223 | -0.0087 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -9.813 | -0.0138 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -10.014 | -0.0140 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -8.311 | -0.0116 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -3.633 | -0.0051 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -6.094 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -2.460 | -0.0034 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -2.003 | -0.0028 | -2.5 to 2.5 | Pass |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 50 | 3.85 | -4.334 | -0.0061 | -2.5 to 2.5 | Pass |

## 2.4 B12_10MHz

### 2.4.1 Test Result

| Band: 12 / Bandwidth: 10MHz | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Temp. (°C) | Voltage (VDC) | Freq. Error (Hz) | Freq. vs. Rated (ppm) | | Verdict |
| | | Size | Offset | | | | Result | Limit | |
| QPSK | 704 | 50 | 0 | 20 | 3.27 | -6.166 | -0.0088 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -3.791 | -0.0054 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -2.675 | -0.0038 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -9.499 | -0.0135 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -7.610 | -0.0108 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -5.035 | -0.0072 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -5.965 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -5.593 | -0.0079 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -8.554 | -0.0122 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -6.781 | -0.0096 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -4.463 | -0.0063 | -2.5 to 2.5 | Pass |
| | 707.5 | 50 | 0 | 20 | 3.27 | -5.765 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -5.836 | -0.0082 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -4.706 | -0.0067 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -7.868 | -0.0111 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -8.755 | -0.0124 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -7.482 | -0.0106 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -4.320 | -0.0061 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -7.367 | -0.0104 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -6.022 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -6.380 | -0.0090 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -2.933 | -0.0041 | -2.5 to 2.5 | Pass |
| | 711 | 50 | 0 | 20 | 3.27 | -6.895 | -0.0097 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -7.854 | -0.0110 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -8.340 | -0.0117 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -4.320 | -0.0061 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -5.107 | -0.0072 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -2.689 | -0.0038 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -6.223 | -0.0088 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -7.353 | -0.0103 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -6.051 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -2.975 | -0.0042 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -6.709 | -0.0094 | -2.5 to 2.5 | Pass |
| 16QAM | 704 | 50 | 0 | 20 | 3.27 | -5.522 | -0.0078 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -7.496 | -0.0106 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.922 | -0.0084 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -7.167 | -0.0102 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -5.250 | -0.0075 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -9.828 | -0.0140 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -10.157 | -0.0144 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -5.679 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -8.082 | -0.0115 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -5.736 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -5.965 | -0.0085 | -2.5 to 2.5 | Pass |
| | 707.5 | 50 | 0 | 20 | 3.27 | -4.063 | -0.0057 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -5.021 | -0.0071 | -2.5 to 2.5 | Pass |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 4.43 | -5.994 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -8.082 | -0.0114 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -5.965 | -0.0084 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -3.977 | -0.0056 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -7.210 | -0.0102 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -5.965 | -0.0084 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -6.552 | -0.0093 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -3.905 | -0.0055 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -4.678 | -0.0066 | -2.5 to 2.5 | Pass |
| | 711 | 50 | 0 | 20 | 3.27 | -8.597 | -0.0121 | -2.5 to 2.5 | Pass |
| | | | | | 3.85 | -3.848 | -0.0054 | -2.5 to 2.5 | Pass |
| | | | | | 4.43 | -5.236 | -0.0074 | -2.5 to 2.5 | Pass |
| | | | | -30 | 3.85 | -5.779 | -0.0081 | -2.5 to 2.5 | Pass |
| | | | | -20 | 3.85 | -4.463 | -0.0063 | -2.5 to 2.5 | Pass |
| | | | | -10 | 3.85 | -6.065 | -0.0085 | -2.5 to 2.5 | Pass |
| | | | | 0 | 3.85 | -5.436 | -0.0076 | -2.5 to 2.5 | Pass |
| | | | | 10 | 3.85 | -4.692 | -0.0066 | -2.5 to 2.5 | Pass |
| | | | | 30 | 3.85 | -6.137 | -0.0086 | -2.5 to 2.5 | Pass |
| | | | | 40 | 3.85 | -6.924 | -0.0097 | -2.5 to 2.5 | Pass |
| | | | | 50 | 3.85 | -5.679 | -0.0080 | -2.5 to 2.5 | Pass |

# 3. Modulation Characteristics

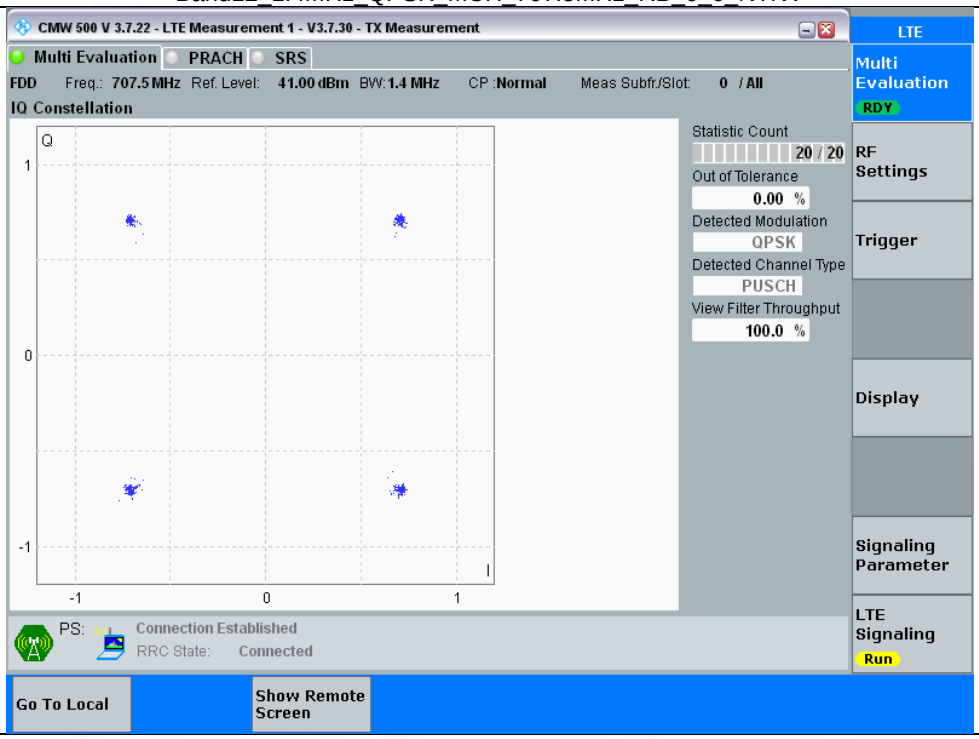
## 3.1 B12_1.4MHz

### 3.1.1 Test Result

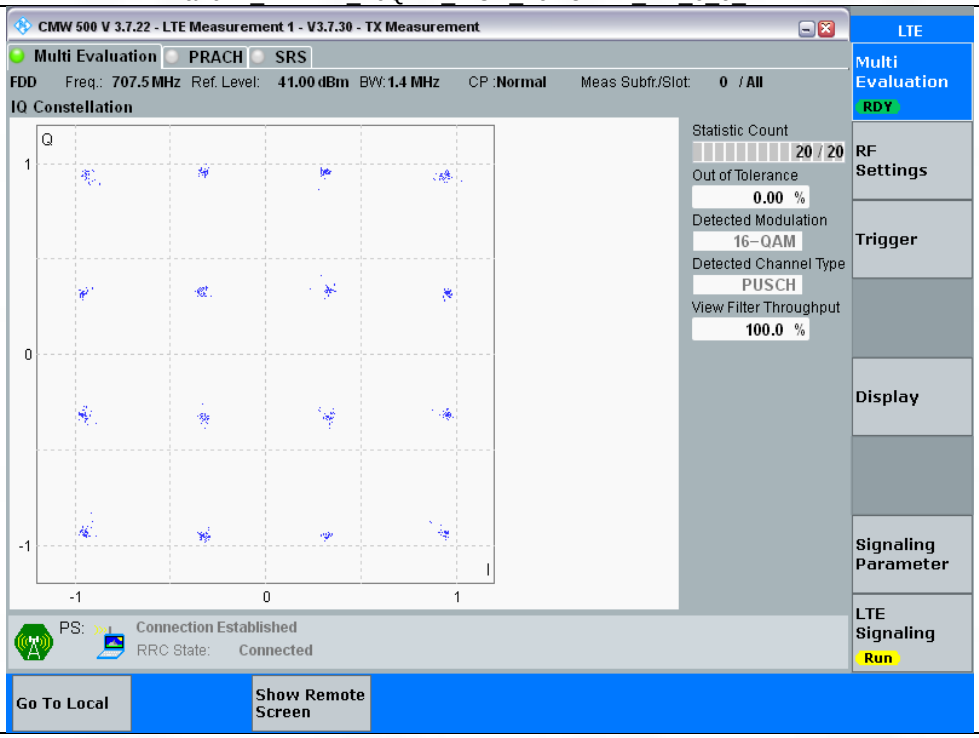
| Band: 12 / Bandwidth: 1.4MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Modulation Characteristics | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 707.5 | 6 | 0 | Refer To Test Graph | | Pass |
| 16QAM | 707.5 | 6 | 0 | Refer To Test Graph | | Pass |

## 3.1.2 Test Graph

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV




Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



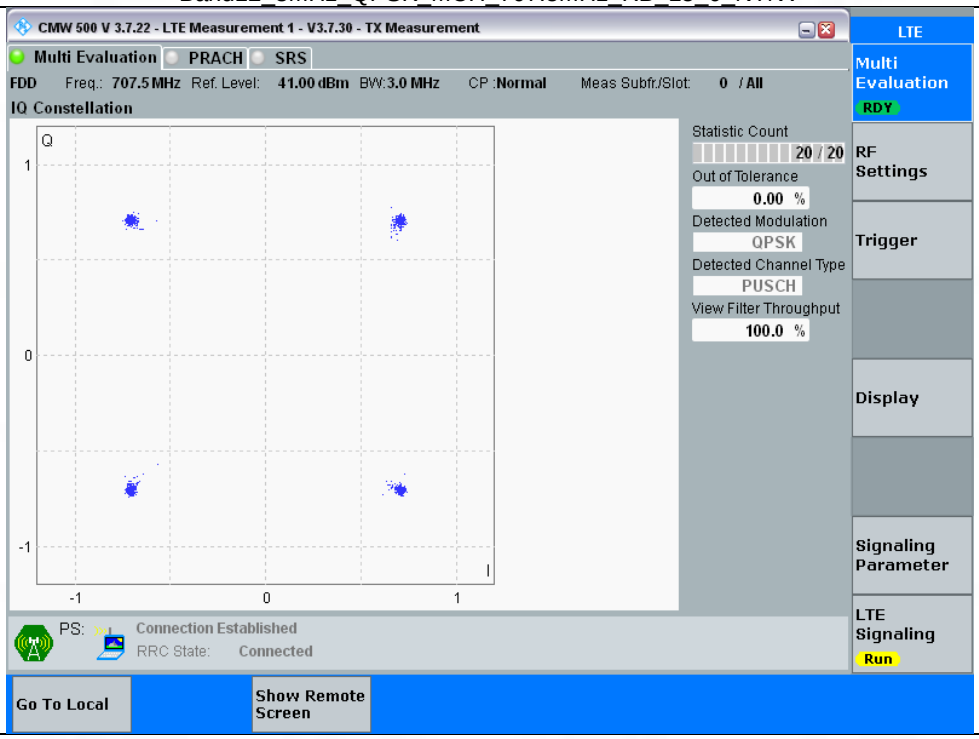
## 3.2 B12_3MHz

### 3.2.1 Test Result

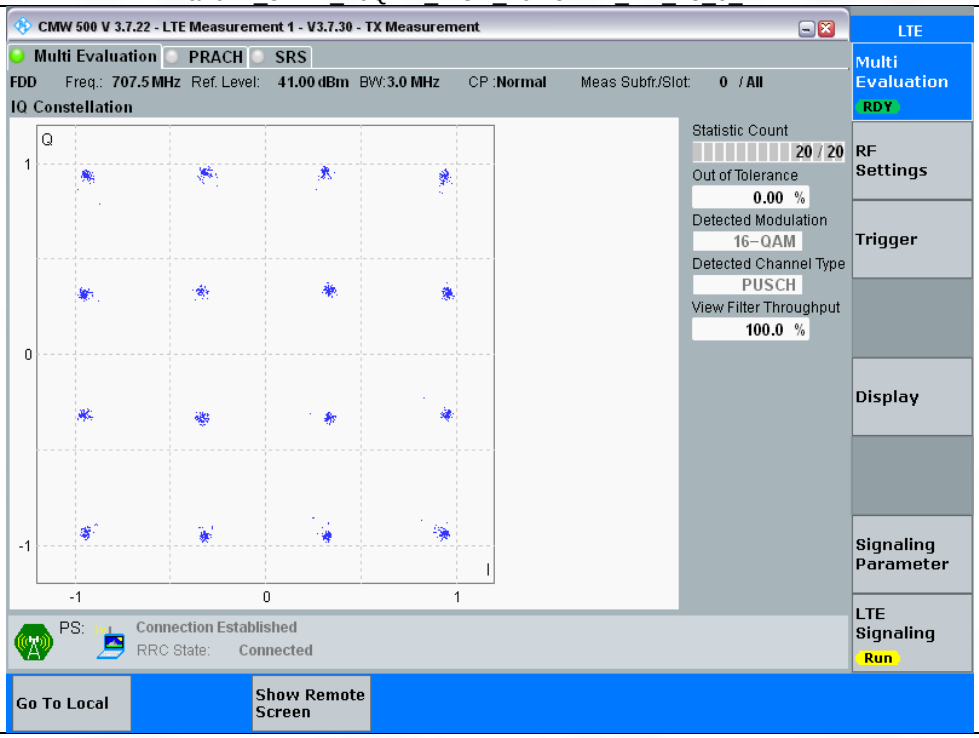
| Band: 12 / Bandwidth: 3MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Modulation Characteristics | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 707.5 | 15 | 0 | Refer To Test Graph | | Pass |
| 16QAM | 707.5 | 15 | 0 | Refer To Test Graph | | Pass |

## 3.2.2 Test Graph

Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV




Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



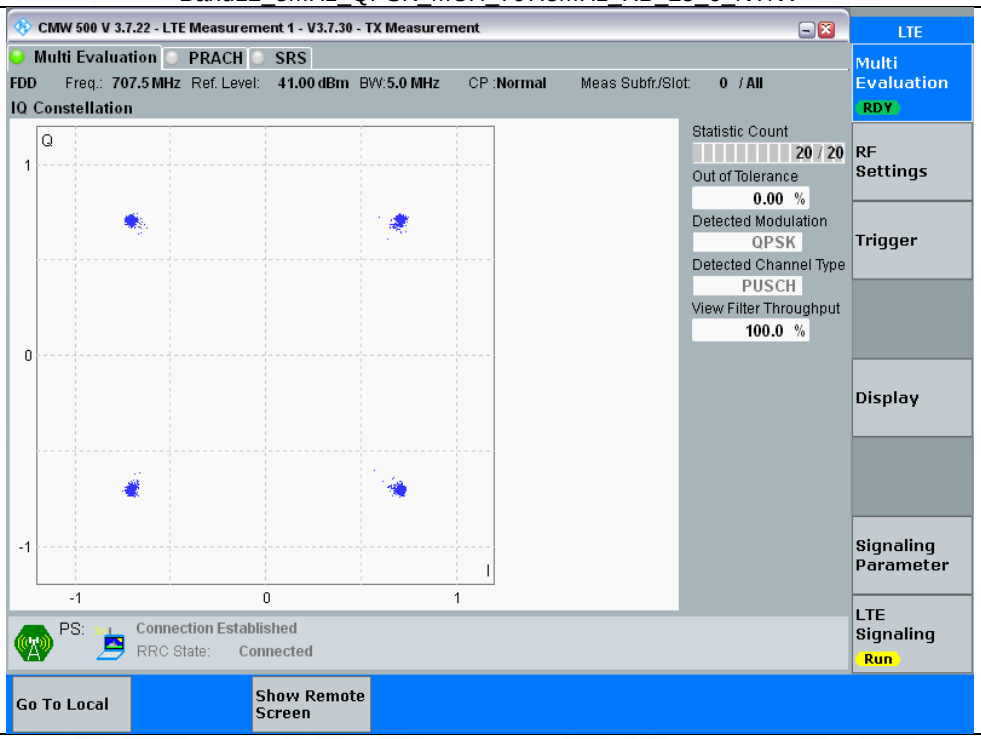
## 3.3 B12_5MHz

### 3.3.1 Test Result

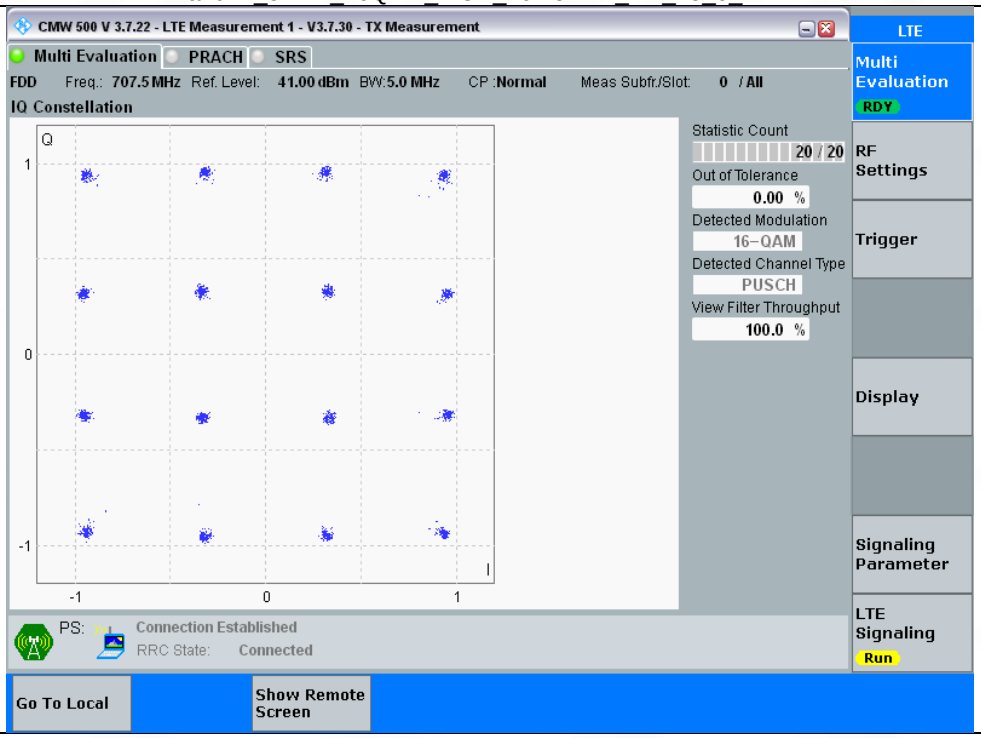
| Band: 12 / Bandwidth: 5MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Modulation Characteristics | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 707.5 | 25 | 0 | Refer To Test Graph | | Pass |
| 16QAM | 707.5 | 25 | 0 | Refer To Test Graph | | Pass |

### 3.3.2 Test Graph

Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV




Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



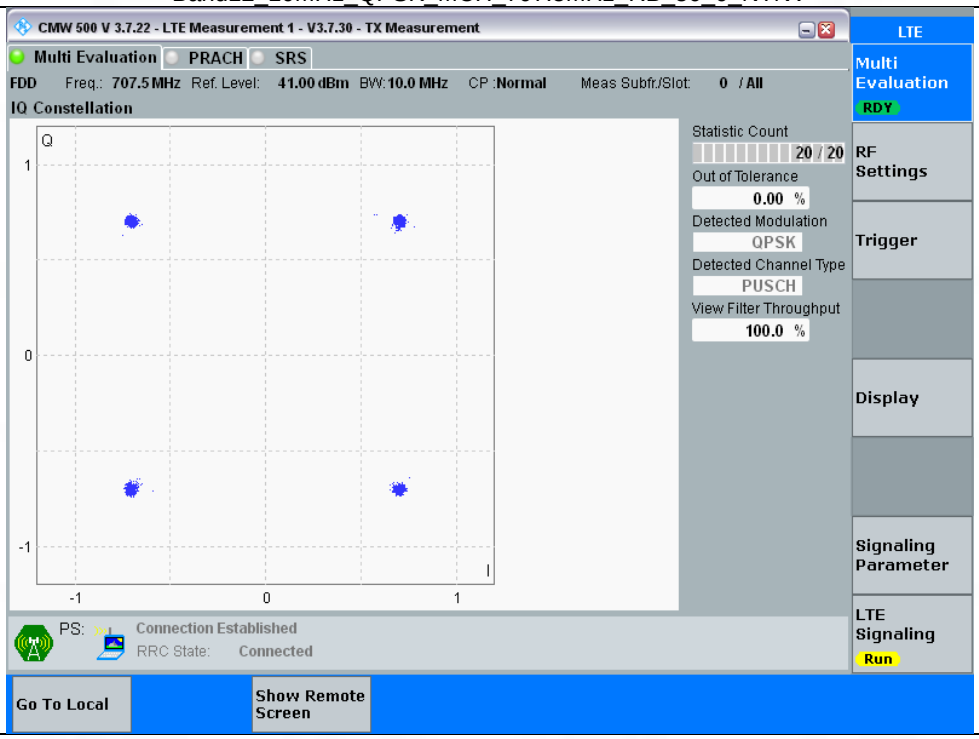
## 3.4 B12_10MHz

### 3.4.1 Test Result

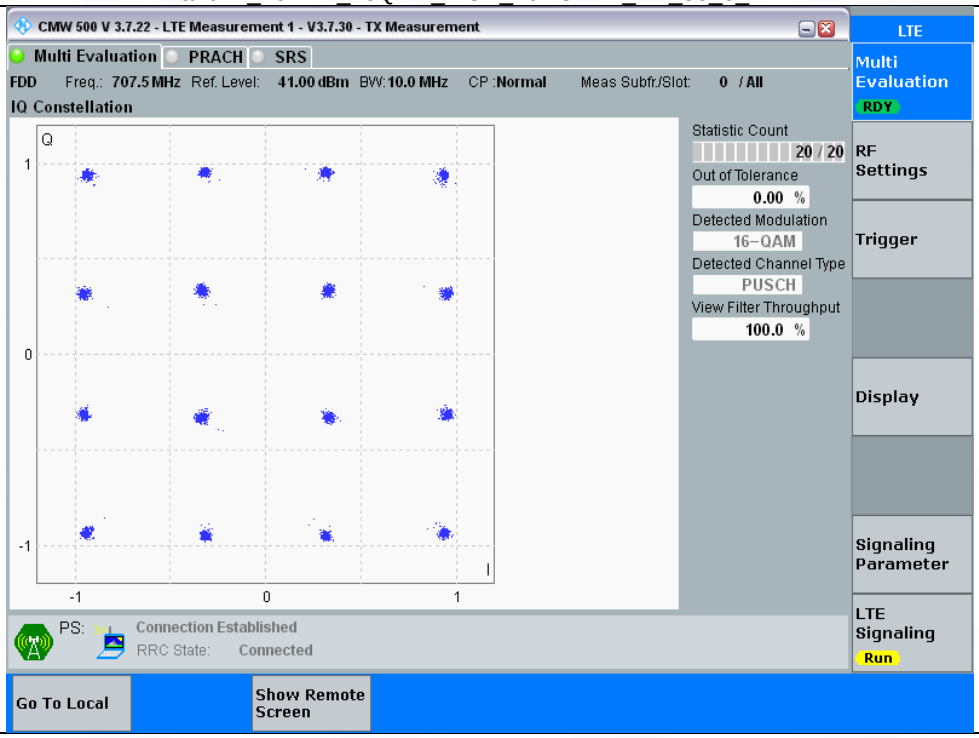
| Band: 12 / Bandwidth: 10MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Modulation Characteristics | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 707.5 | 50 | 0 | Refer To Test Graph | | Pass |
| 16QAM | 707.5 | 50 | 0 | Refer To Test Graph | | Pass |

## 3.4.2 Test Graph

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV




Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV



# 4. 99% & 26dB Bandwidth

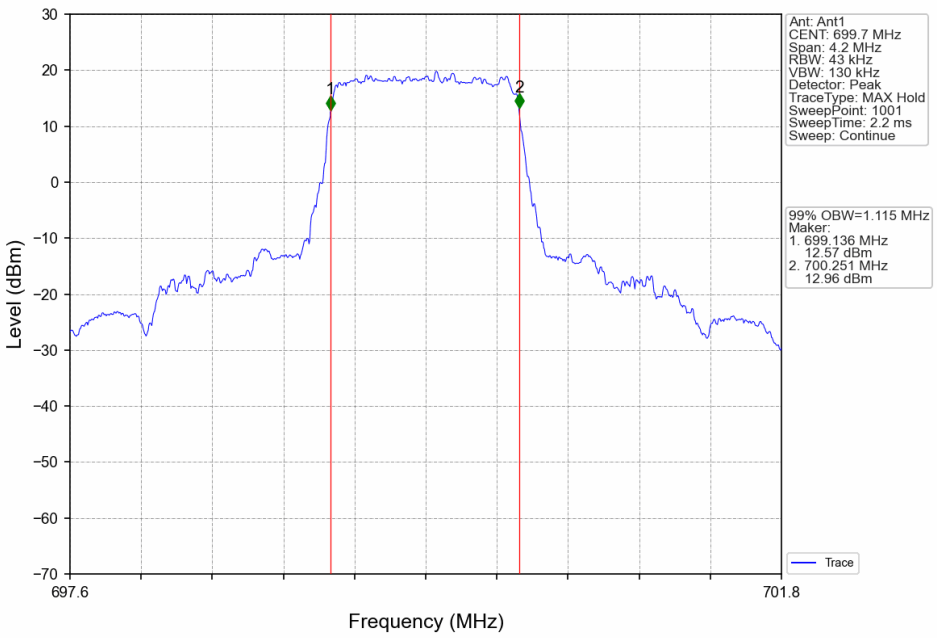
## 4.1 Band12_OBW

### 4.1.1 Test Result

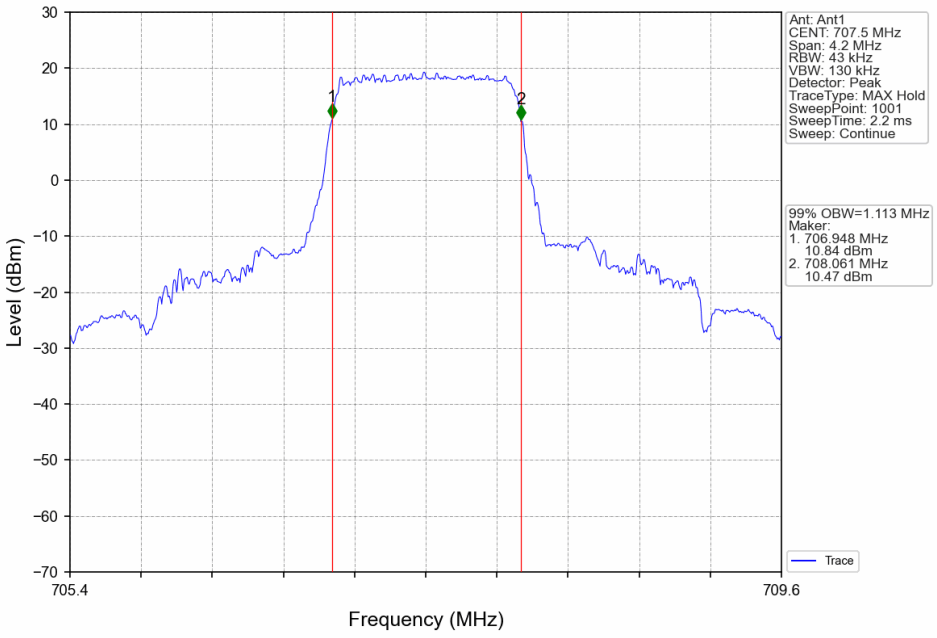
| Band: 12 / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Bandwidth (MHz) | Modulation | Frequency (MHz) | RB Allocation | | 99% Occupied Bandwidth (MHz) | Verdict |
| | | | Size | Offset | Result | |
| 1.4 | QPSK | 699.7 | 6 | 0 | 1.115 | Pass |
| | | 707.5 | 6 | 0 | 1.113 | Pass |
| | | 715.3 | 6 | 0 | 1.121 | Pass |
| | 16QAM | 699.7 | 6 | 0 | 1.108 | Pass |
| | | 707.5 | 6 | 0 | 1.106 | Pass |
| | | 715.3 | 6 | 0 | 1.117 | Pass |
| 3 | QPSK | 700.5 | 15 | 0 | 2.726 | Pass |
| | | 707.5 | 15 | 0 | 2.730 | Pass |
| | | 714.5 | 15 | 0 | 2.739 | Pass |
| | 16QAM | 700.5 | 15 | 0 | 2.719 | Pass |
| | | 707.5 | 15 | 0 | 2.722 | Pass |
| | | 714.5 | 15 | 0 | 2.722 | Pass |
| 5 | QPSK | 701.5 | 25 | 0 | 4.588 | Pass |
| | | 707.5 | 25 | 0 | 4.552 | Pass |
| | | 713.5 | 25 | 0 | 4.619 | Pass |
| | 16QAM | 701.5 | 25 | 0 | 4.588 | Pass |
| | | 707.5 | 25 | 0 | 4.579 | Pass |
| | | 713.5 | 25 | 0 | 4.583 | Pass |
| 10 | QPSK | 704 | 50 | 0 | 9.153 | Pass |
| | | 707.5 | 50 | 0 | 9.035 | Pass |
| | | 711 | 50 | 0 | 9.104 | Pass |
| | 16QAM | 704 | 50 | 0 | 9.141 | Pass |
| | | 707.5 | 50 | 0 | 9.008 | Pass |
| | | 711 | 50 | 0 | 9.041 | Pass |

## 4.1.2 Test Graph

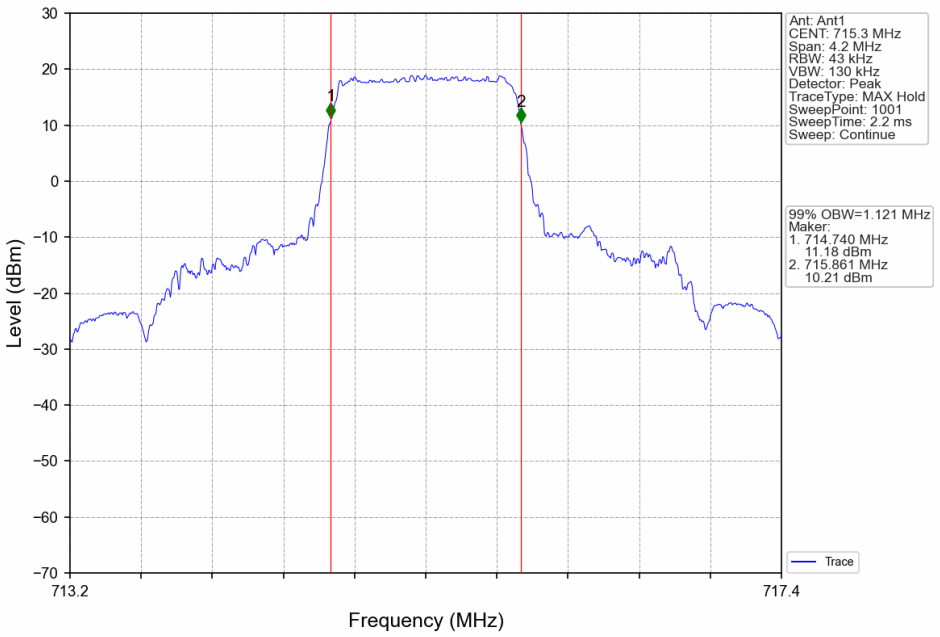
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV



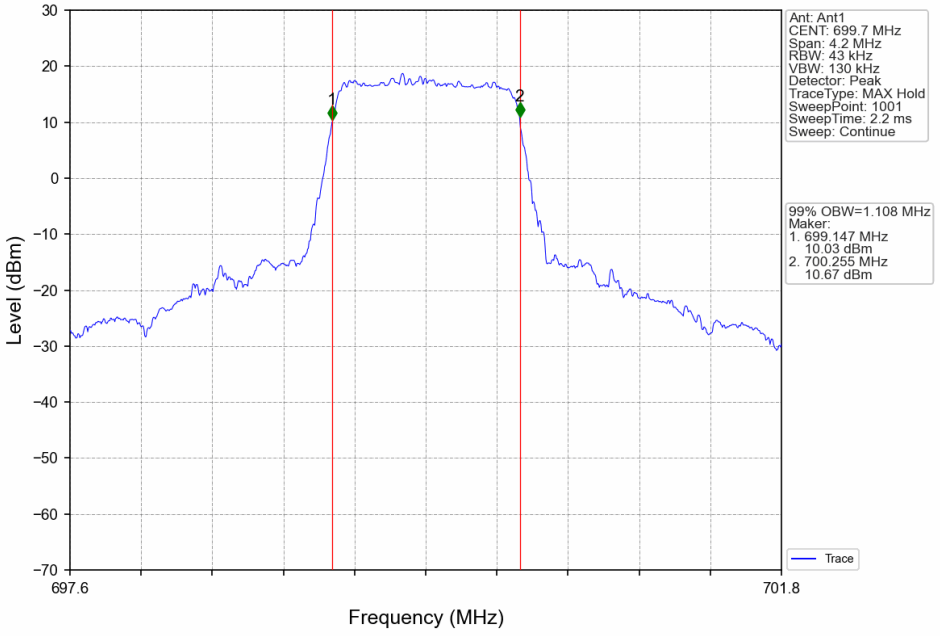

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



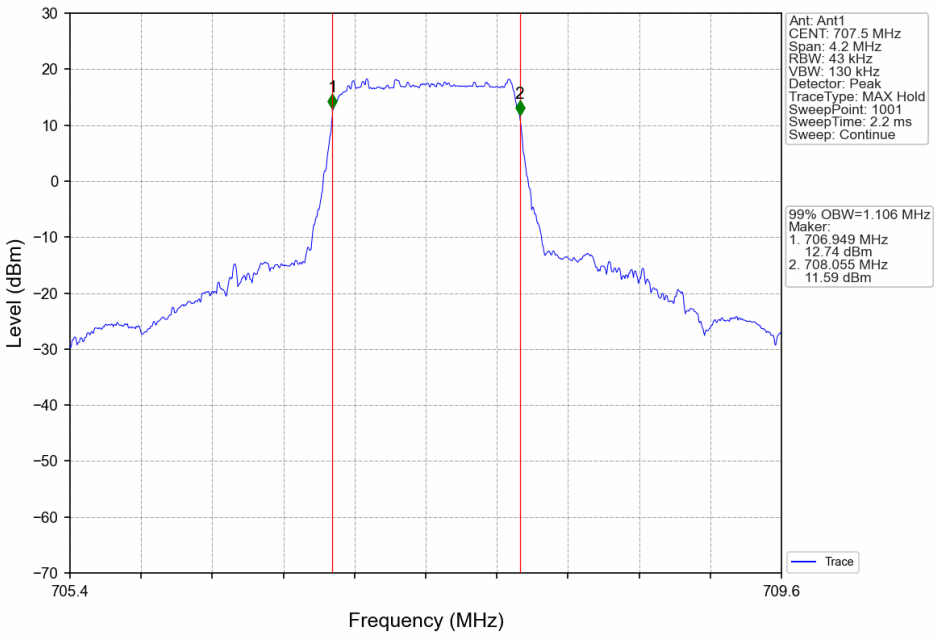
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



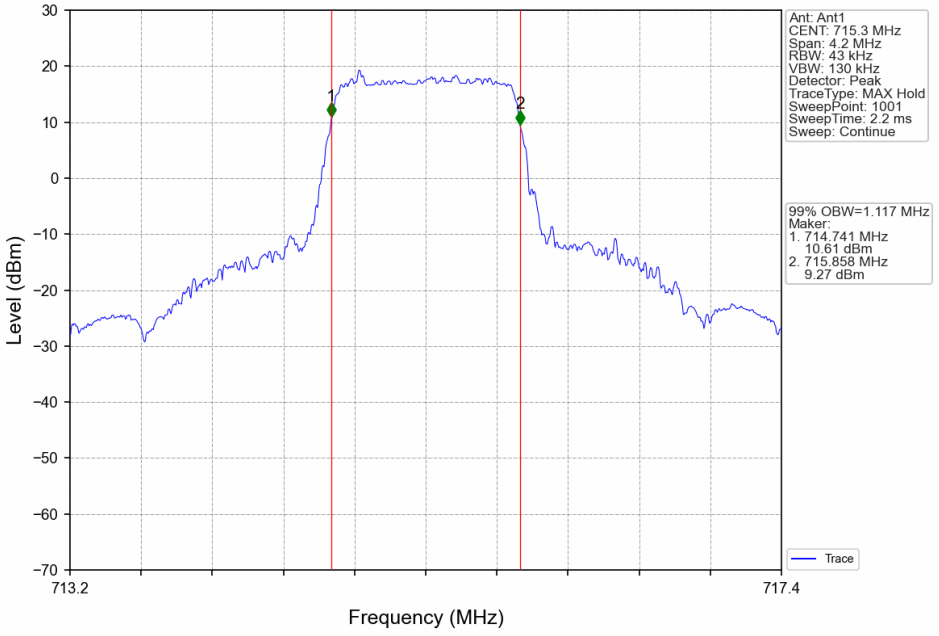

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



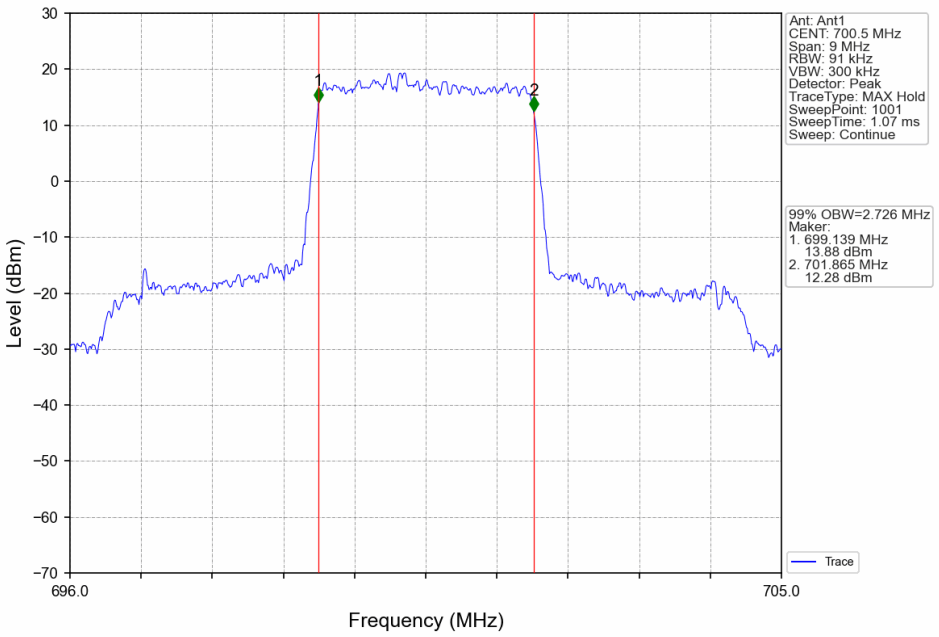
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



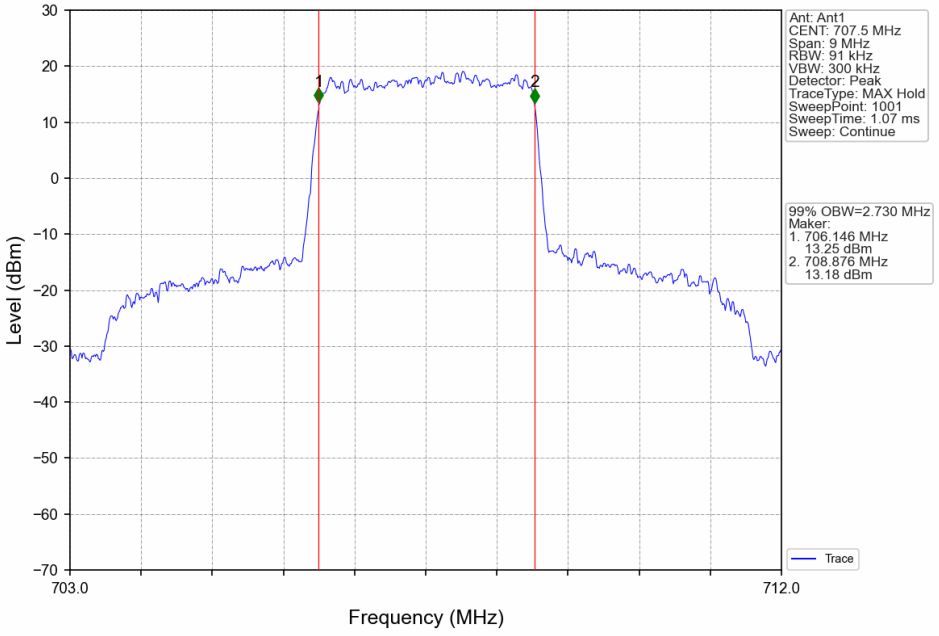

Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



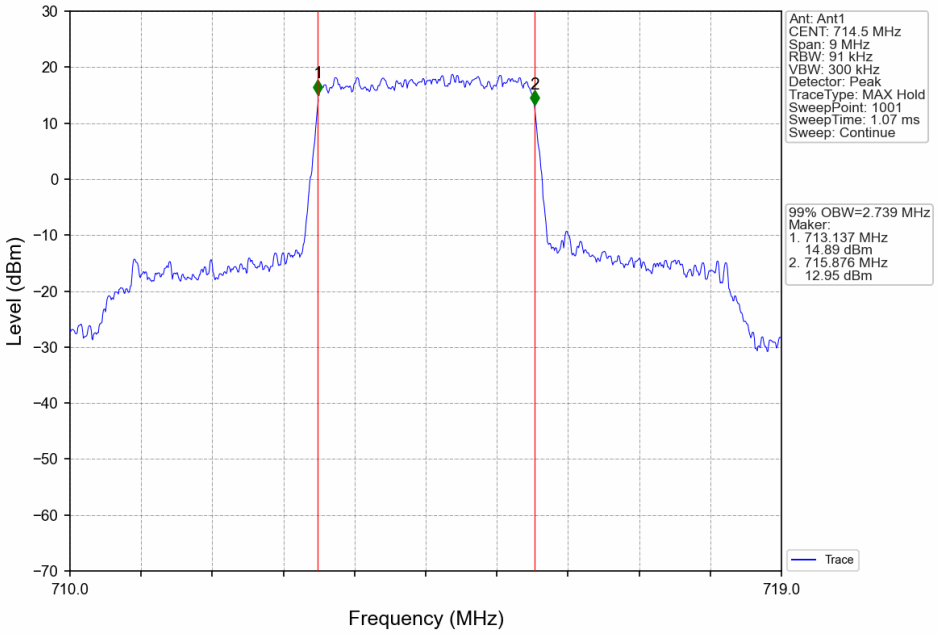
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



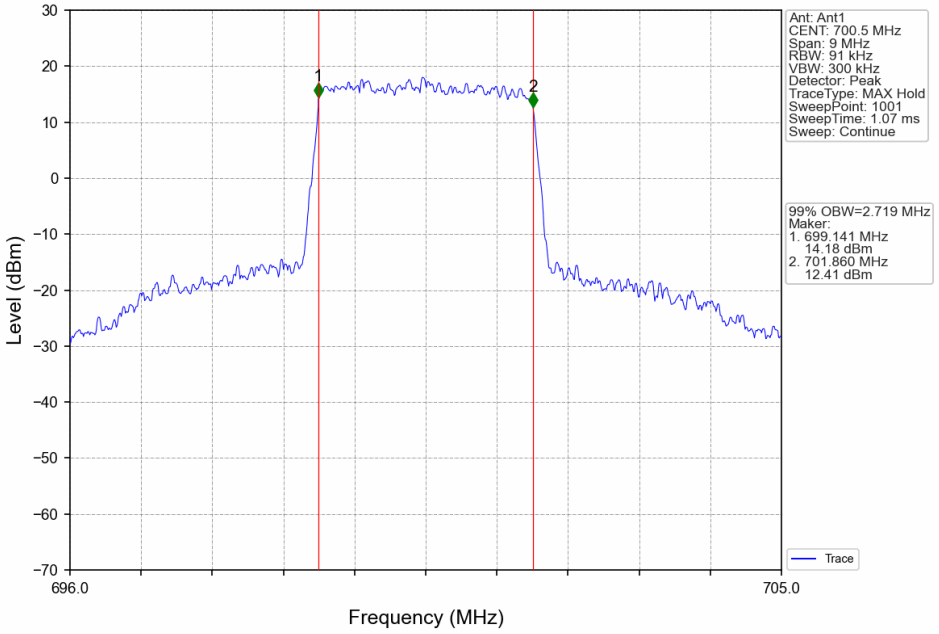

Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



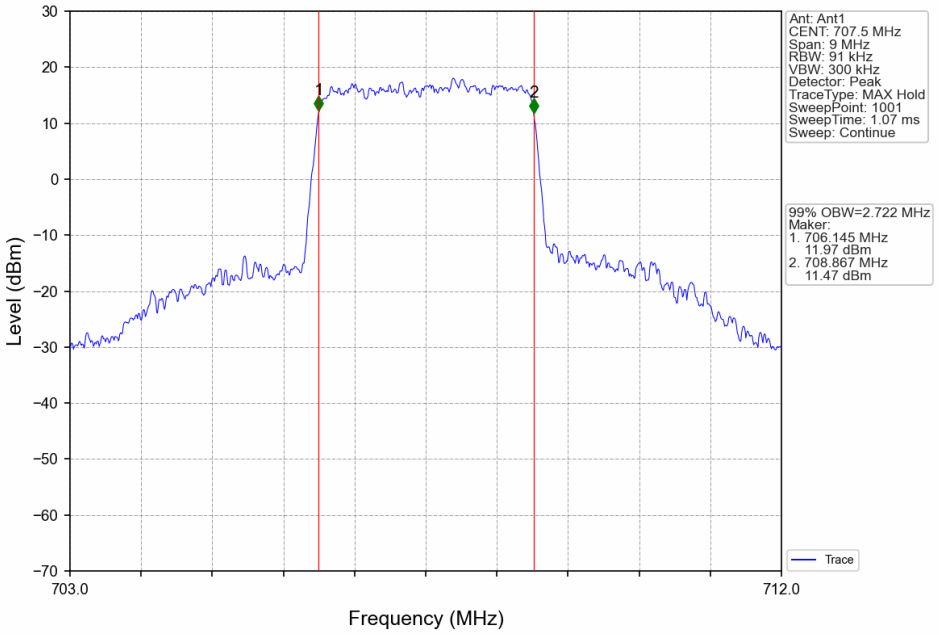
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



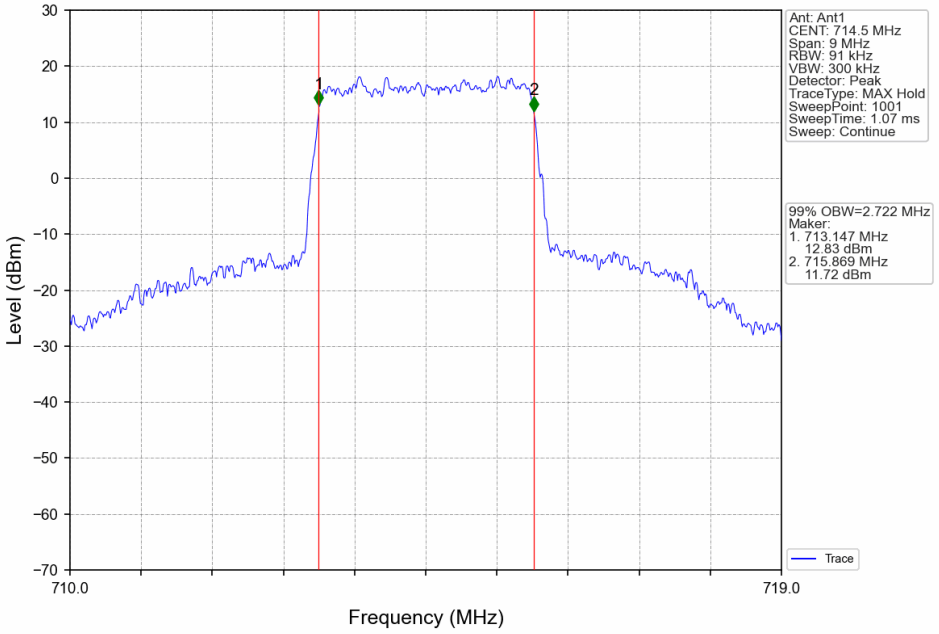

Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



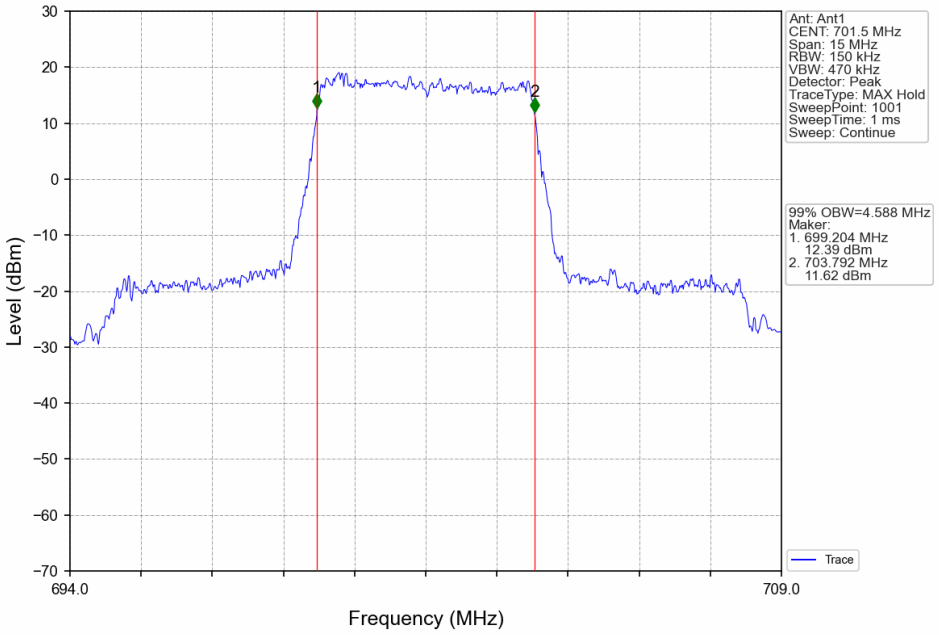
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



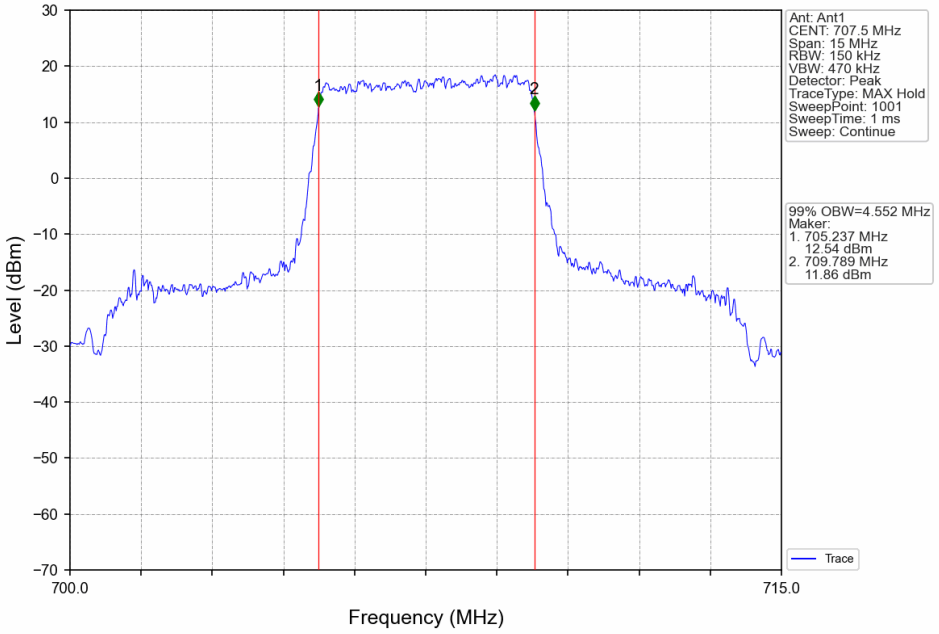

Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



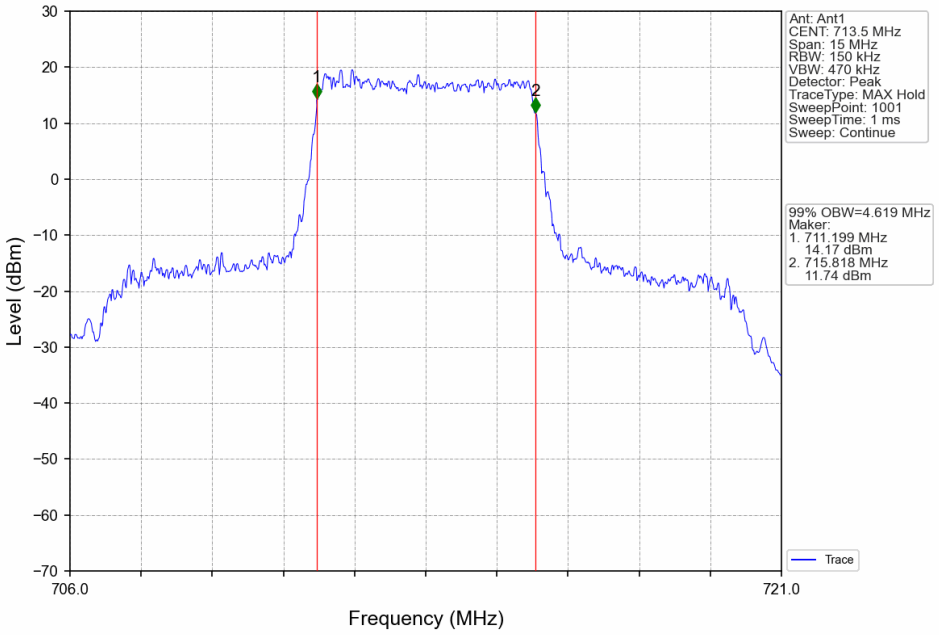
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



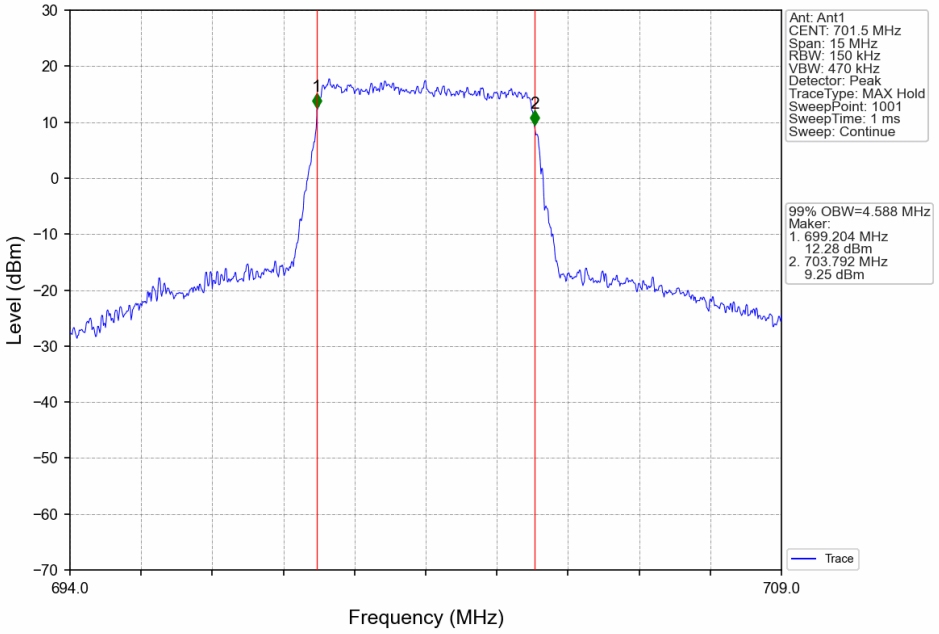

Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



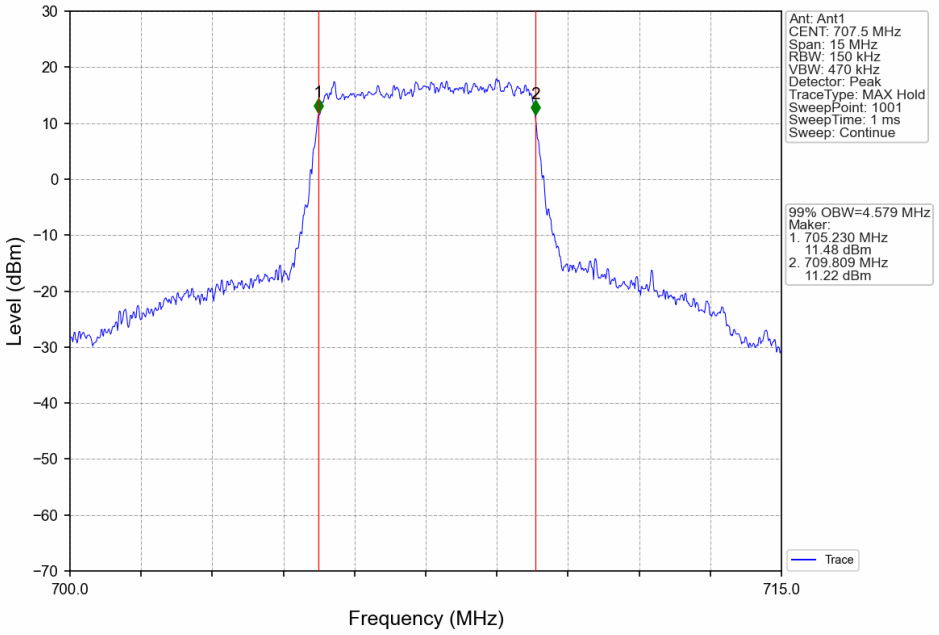
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



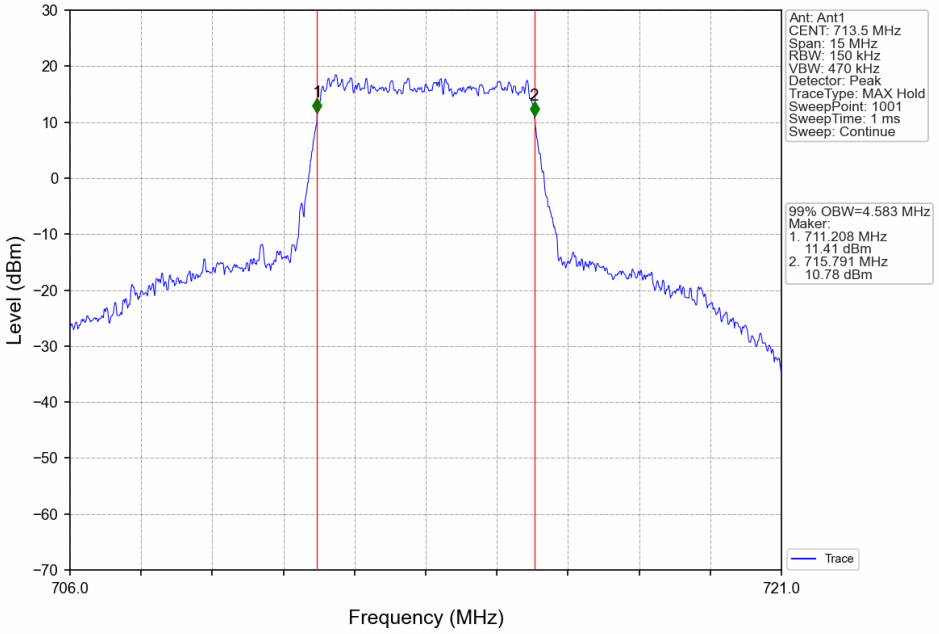

Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



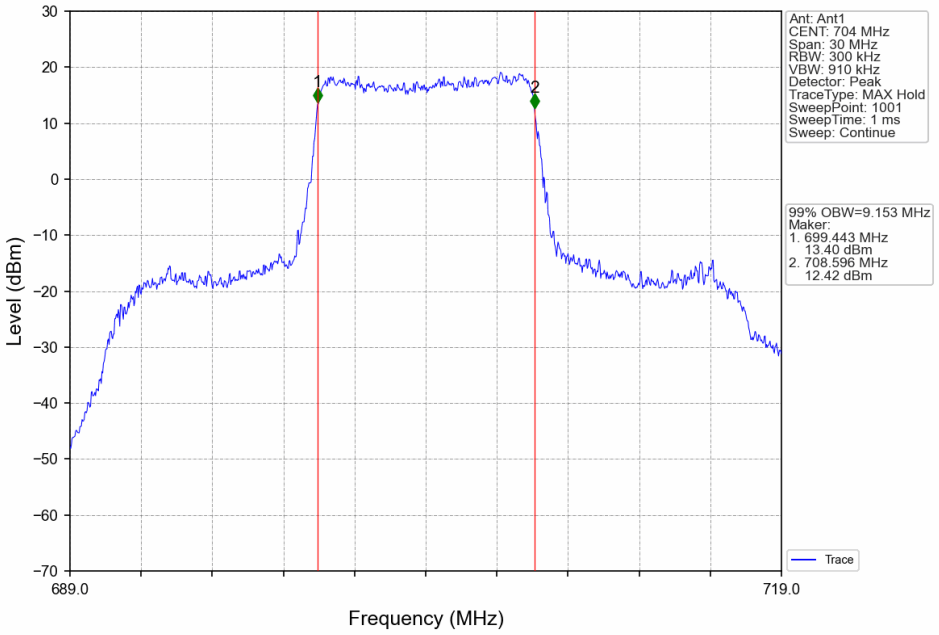
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



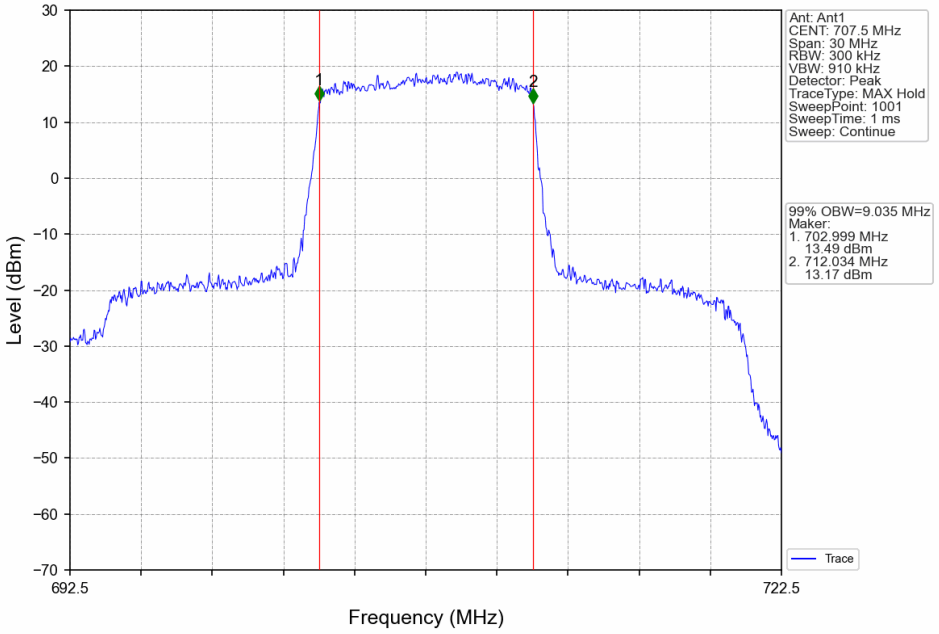

Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



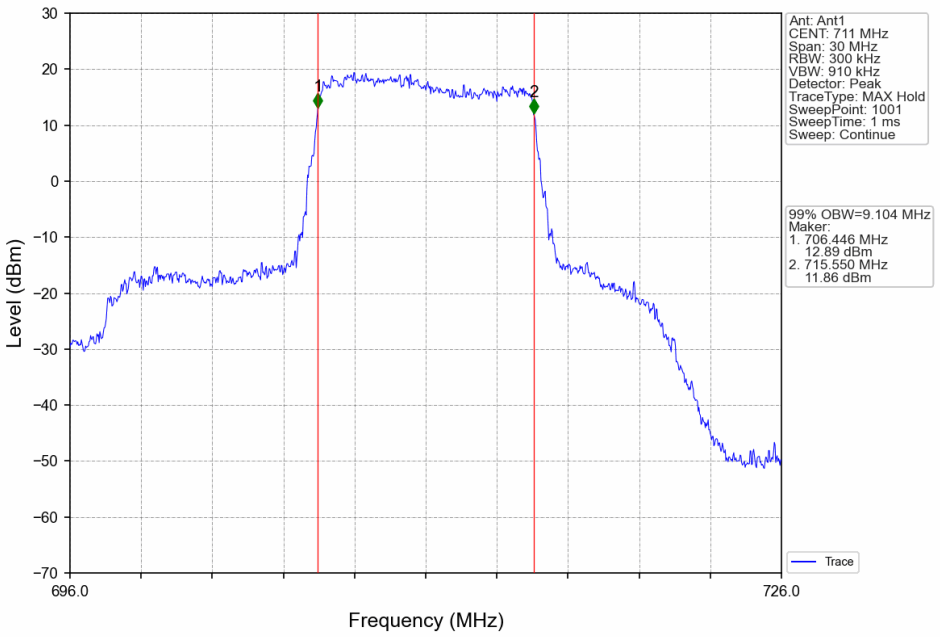
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



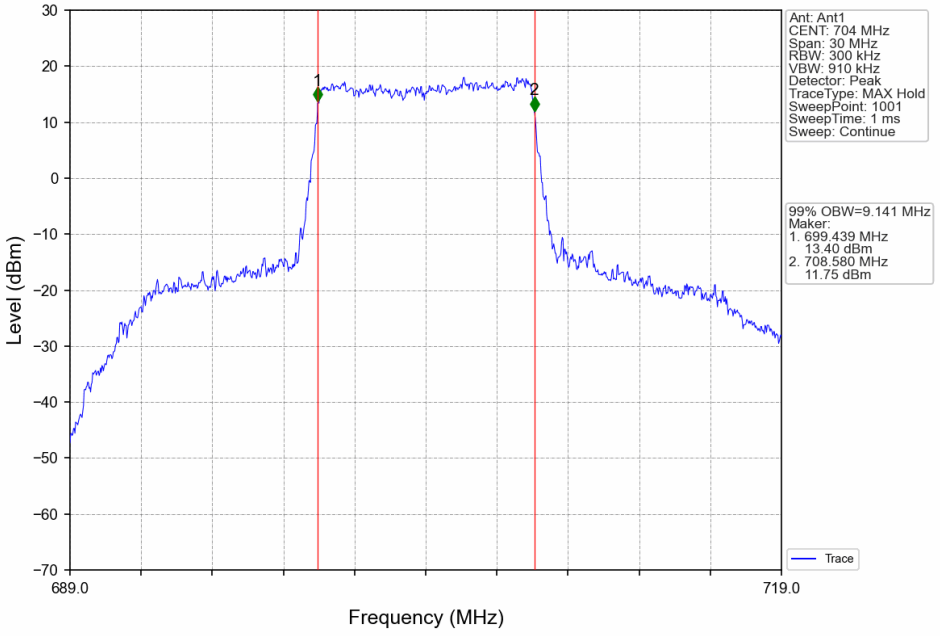

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



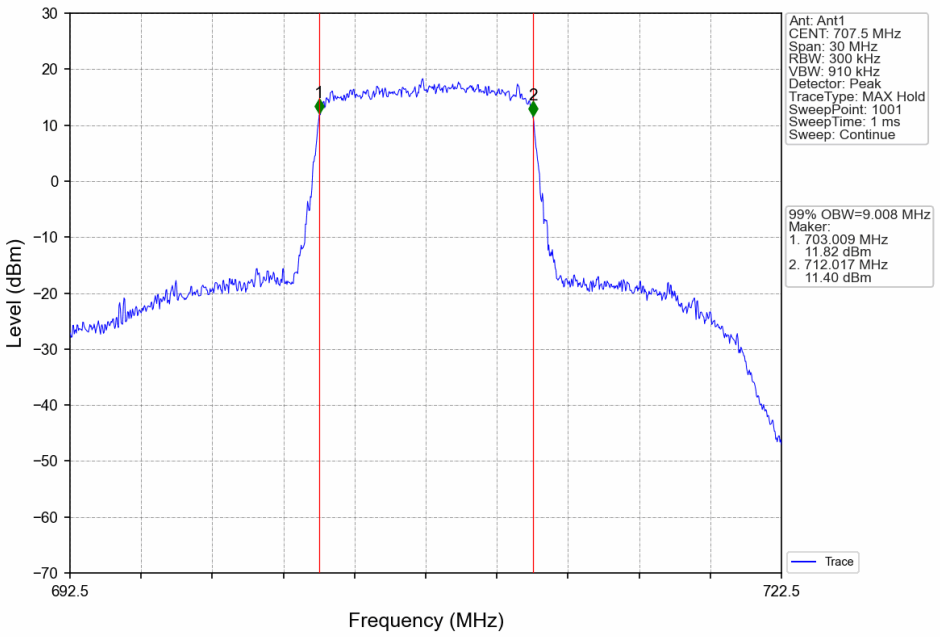
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



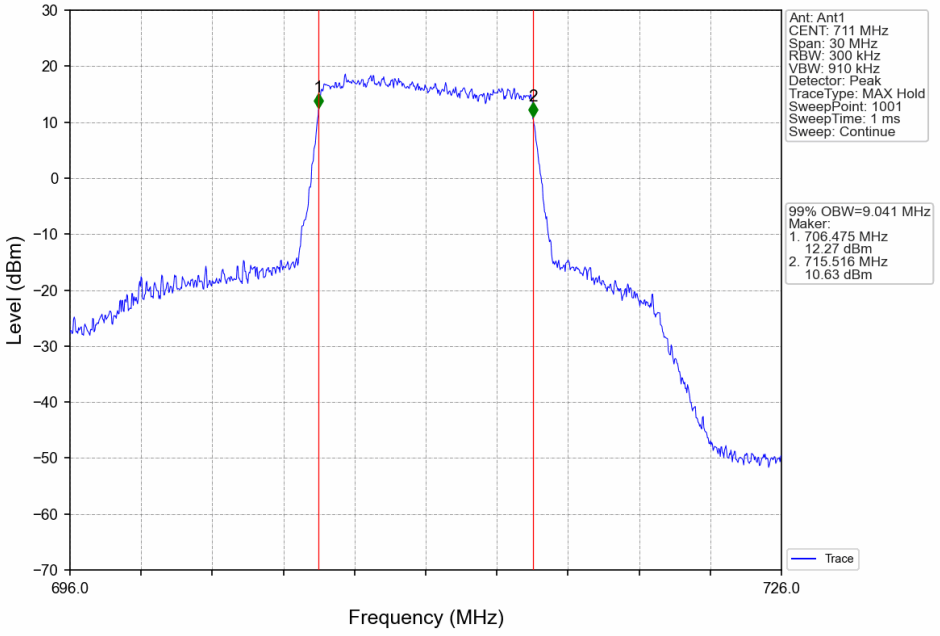

Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV




Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



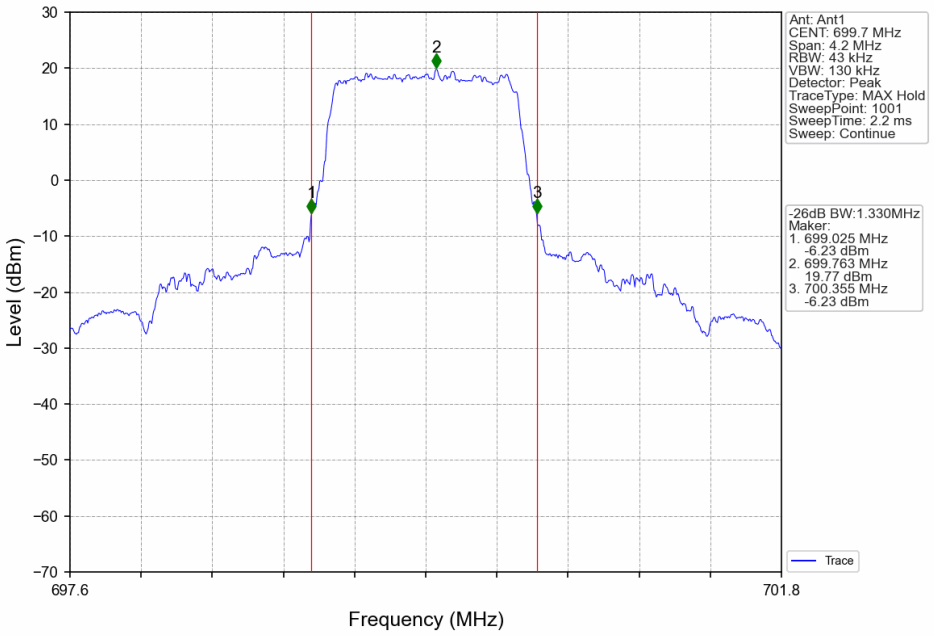
## 4.2 Band12_XDB

### 4.2.1 Test Result

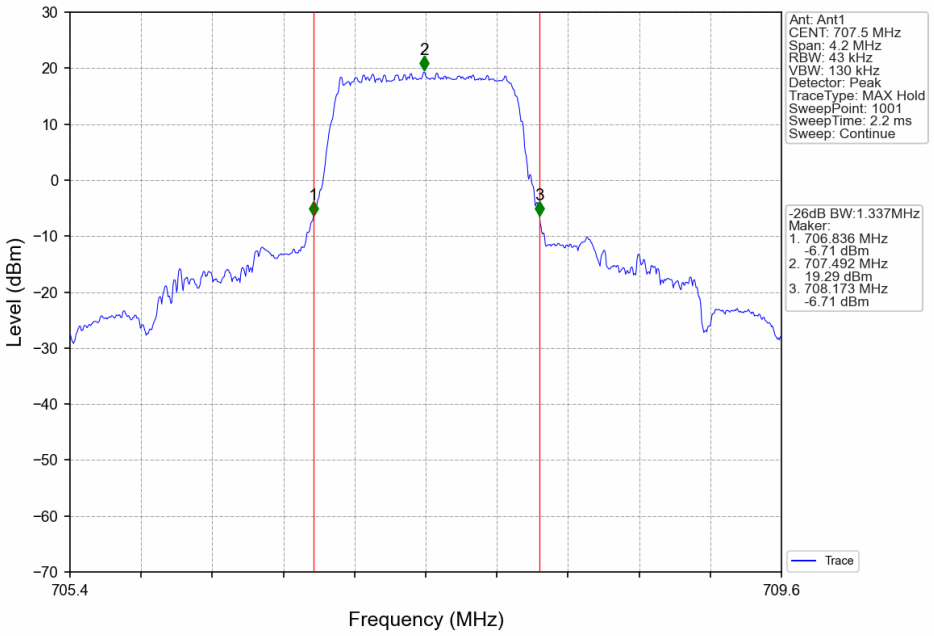
| Band: 12 / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Bandwidth (MHz) | Modulation | Frequency (MHz) | RB Allocation | | 26dB Bandwidth (MHz) | Verdict |
| | | | Size | Offset | Result | |
| 1.4 | QPSK | 699.7 | 6 | 0 | 1.330 | Pass |
| | | 707.5 | 6 | 0 | 1.337 | Pass |
| | | 715.3 | 6 | 0 | 1.380 | Pass |
| | 16QAM | 699.7 | 6 | 0 | 1.311 | Pass |
| | | 707.5 | 6 | 0 | 1.326 | Pass |
| | | 715.3 | 6 | 0 | 1.322 | Pass |
| 3 | QPSK | 700.5 | 15 | 0 | 3.009 | Pass |
| | | 707.5 | 15 | 0 | 3.001 | Pass |
| | | 714.5 | 15 | 0 | 3.028 | Pass |
| | 16QAM | 700.5 | 15 | 0 | 2.993 | Pass |
| | | 707.5 | 15 | 0 | 2.999 | Pass |
| | | 714.5 | 15 | 0 | 3.029 | Pass |
| 5 | QPSK | 701.5 | 25 | 0 | 5.307 | Pass |
| | | 707.5 | 25 | 0 | 5.236 | Pass |
| | | 713.5 | 25 | 0 | 5.328 | Pass |
| | 16QAM | 701.5 | 25 | 0 | 5.274 | Pass |
| | | 707.5 | 25 | 0 | 5.245 | Pass |
| | | 713.5 | 25 | 0 | 5.344 | Pass |
| 10 | QPSK | 704 | 50 | 0 | 10.334 | Pass |
| | | 707.5 | 50 | 0 | 10.145 | Pass |
| | | 711 | 50 | 0 | 10.313 | Pass |
| | 16QAM | 704 | 50 | 0 | 10.291 | Pass |
| | | 707.5 | 50 | 0 | 10.190 | Pass |
| | | 711 | 50 | 0 | 10.178 | Pass |

## 4.2.2 Test Graph

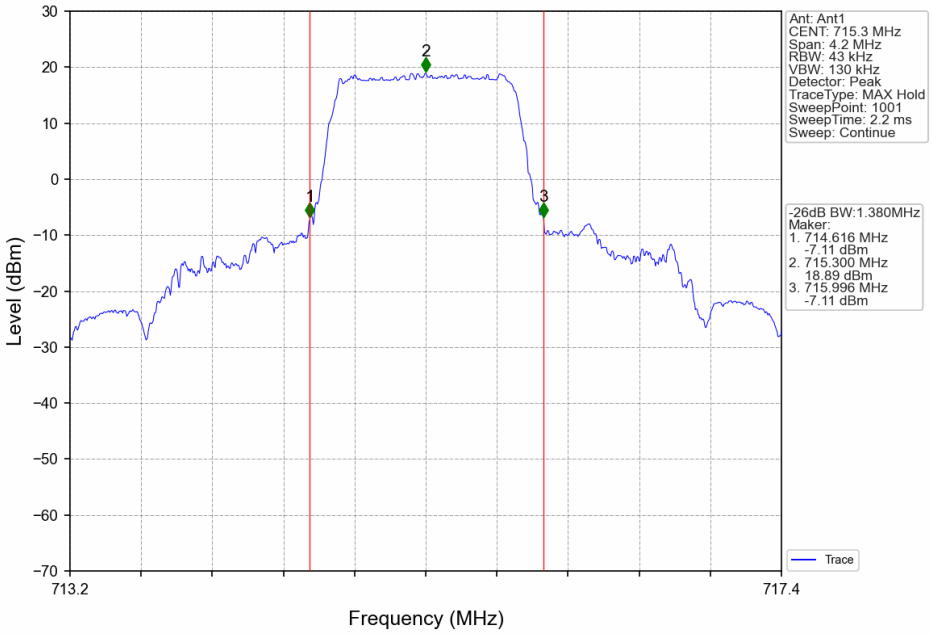
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV



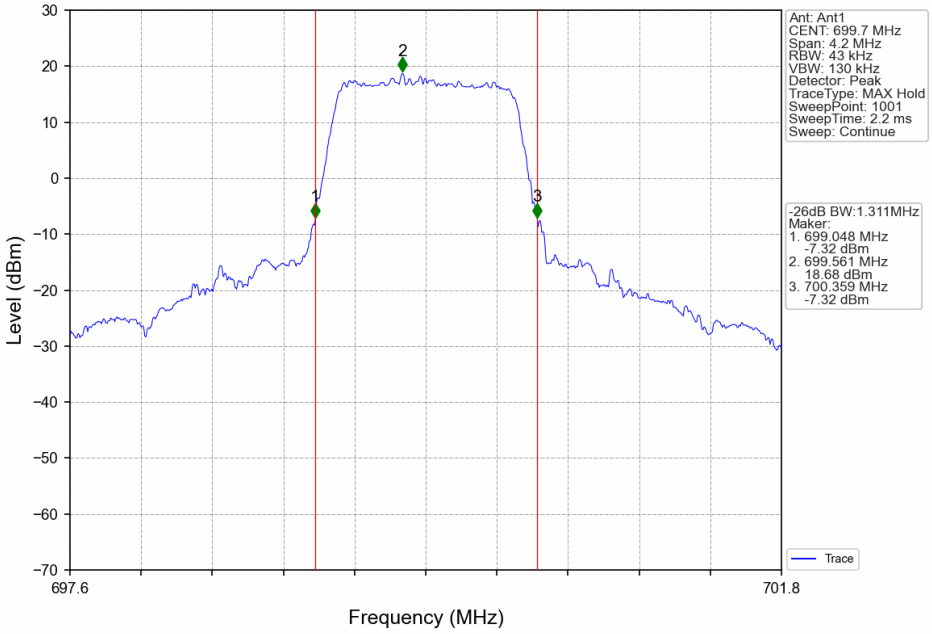

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



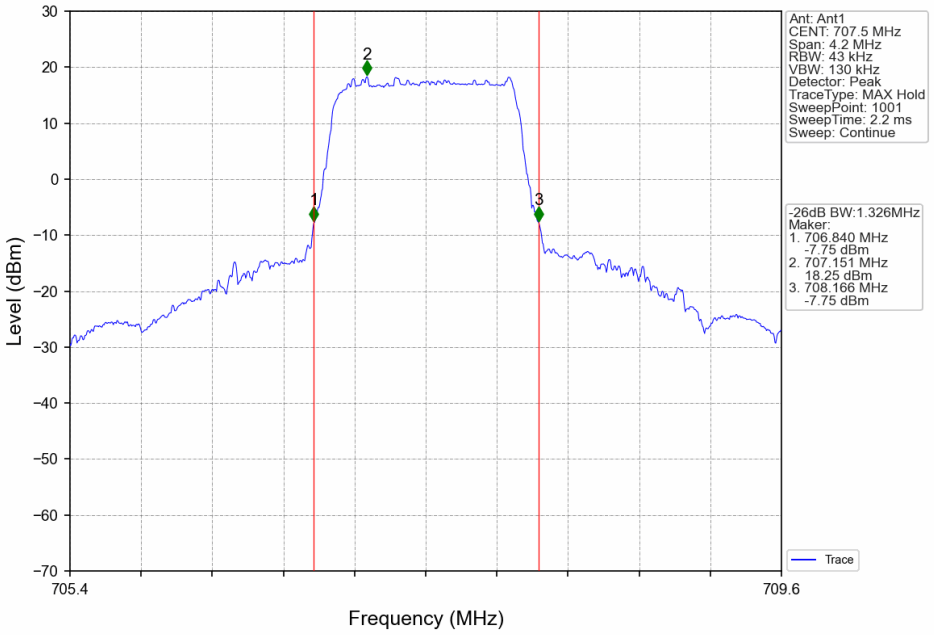
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



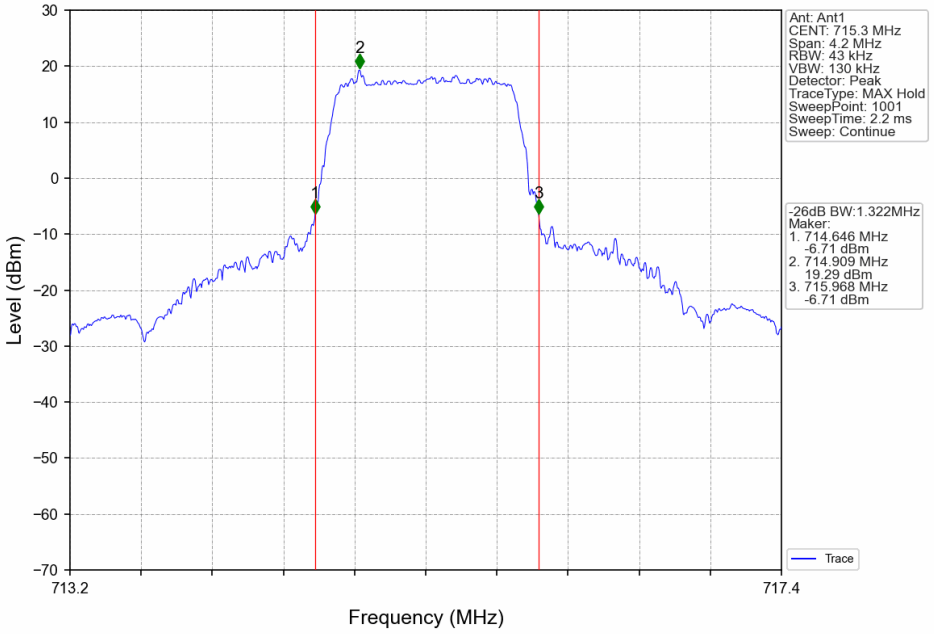

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



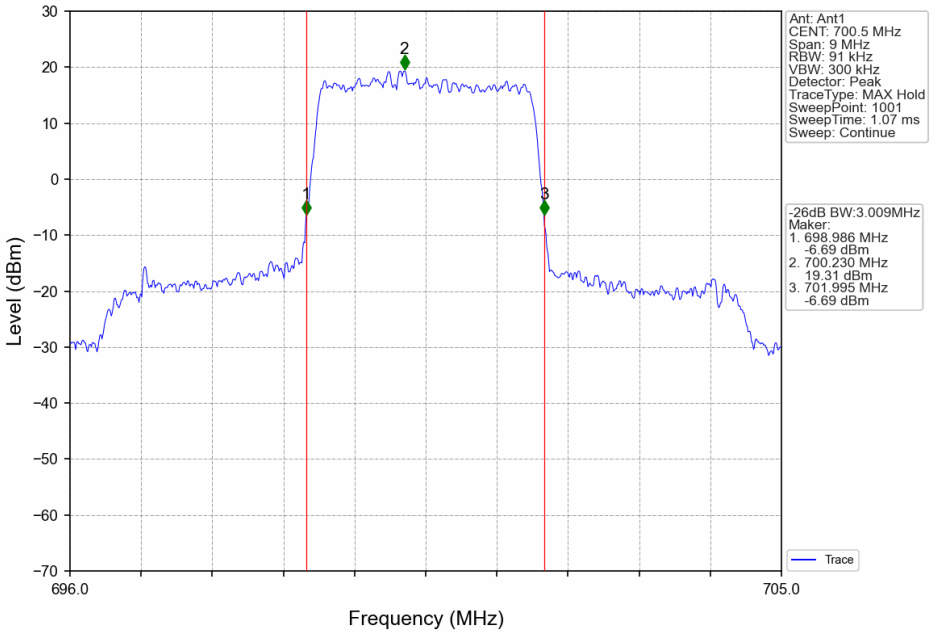
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV



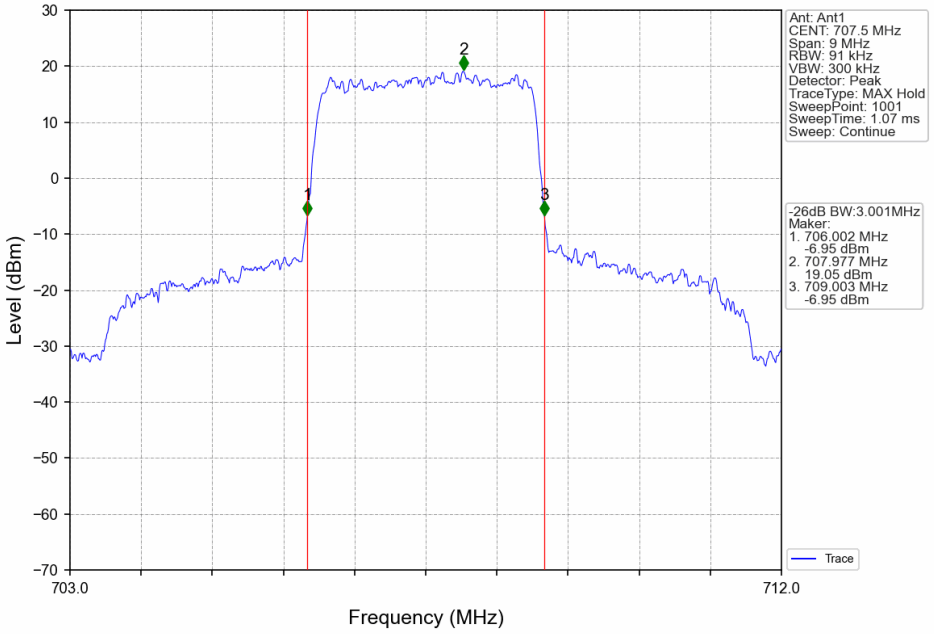

Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



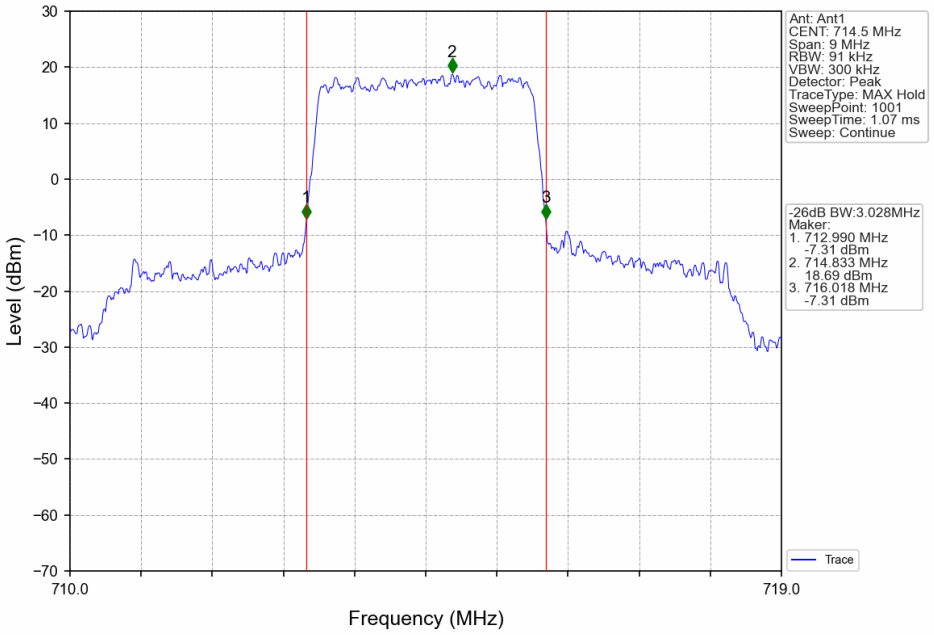
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



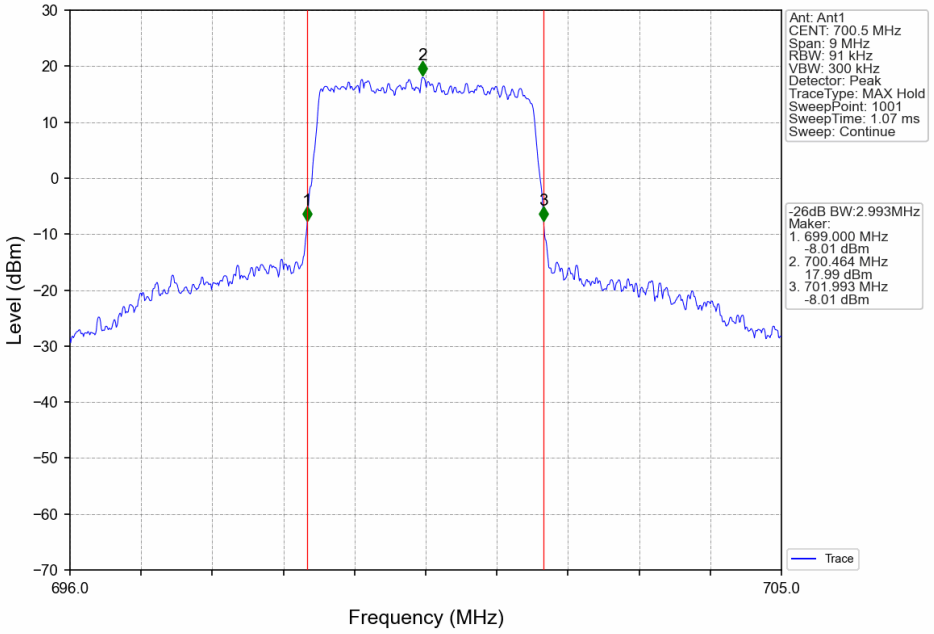

Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



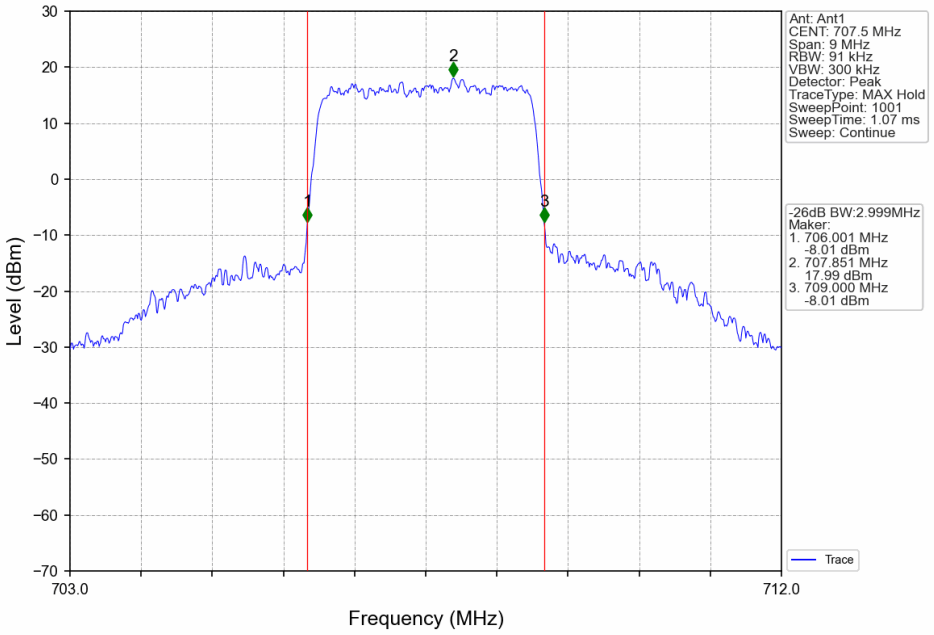
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



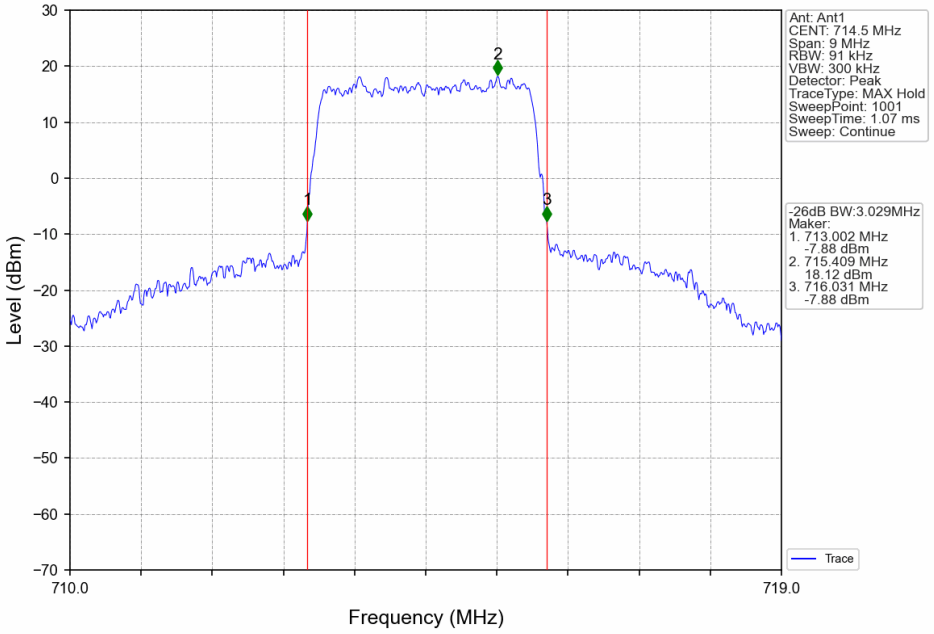

Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



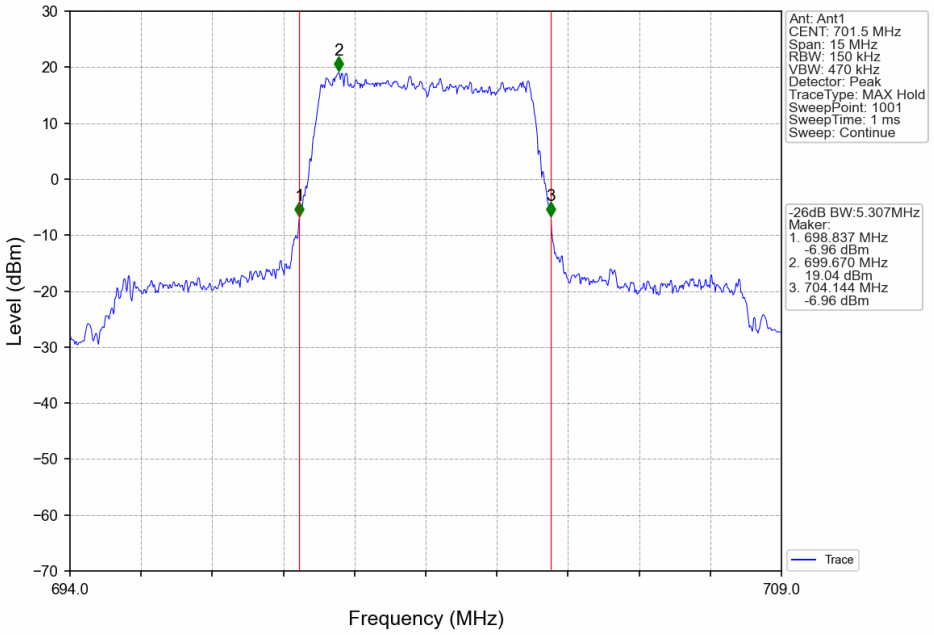
Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV



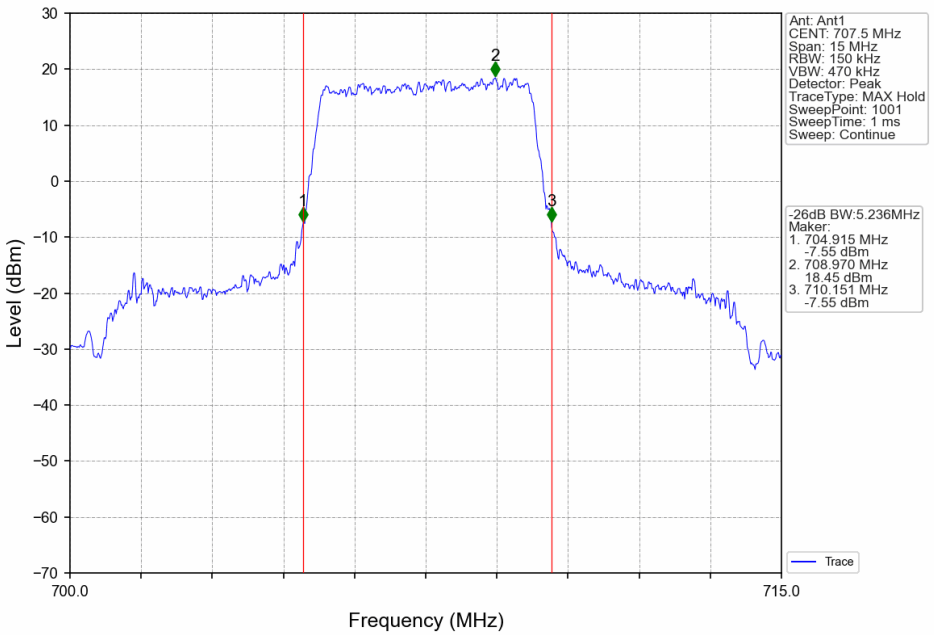

Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



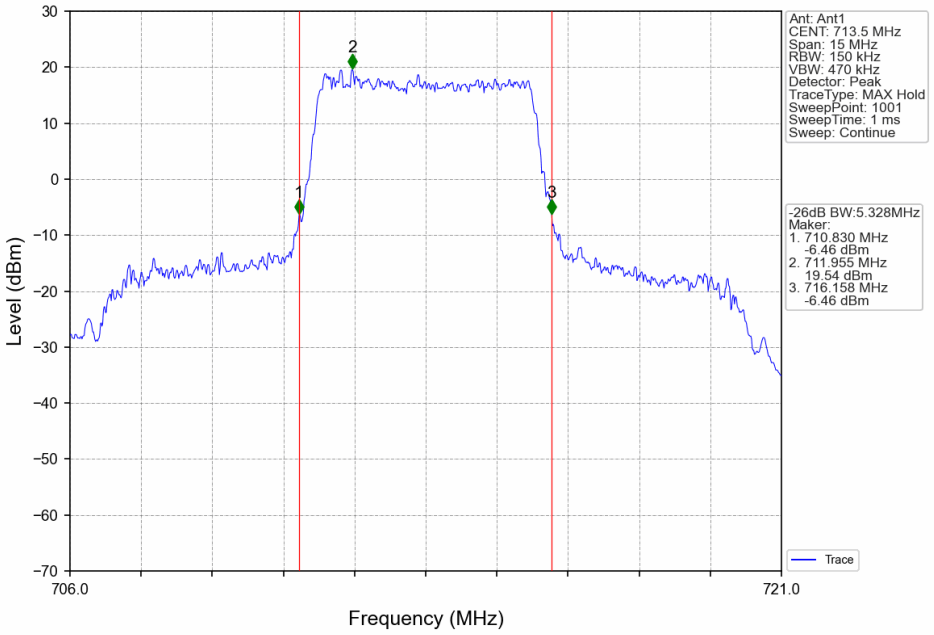
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



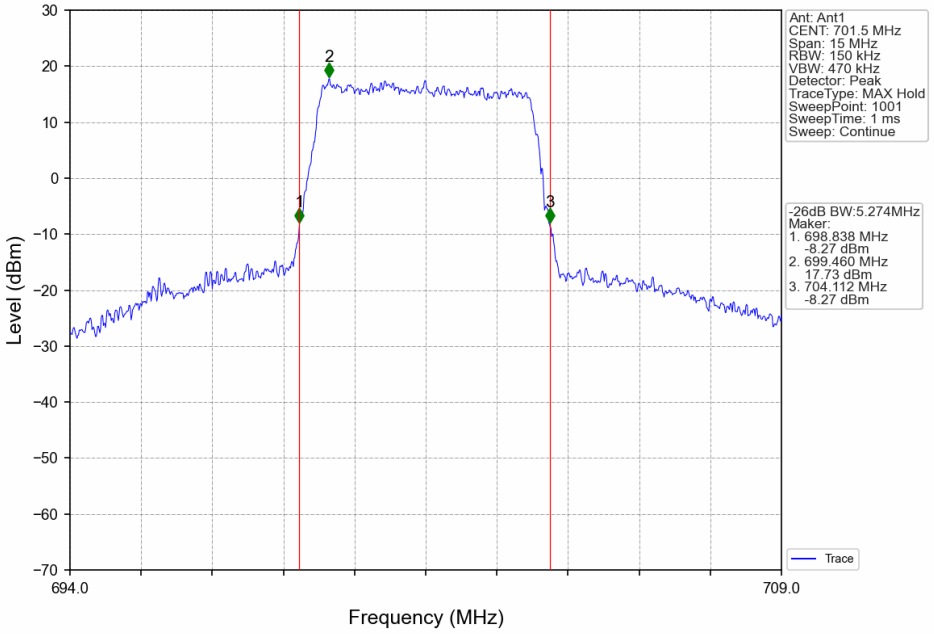

Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



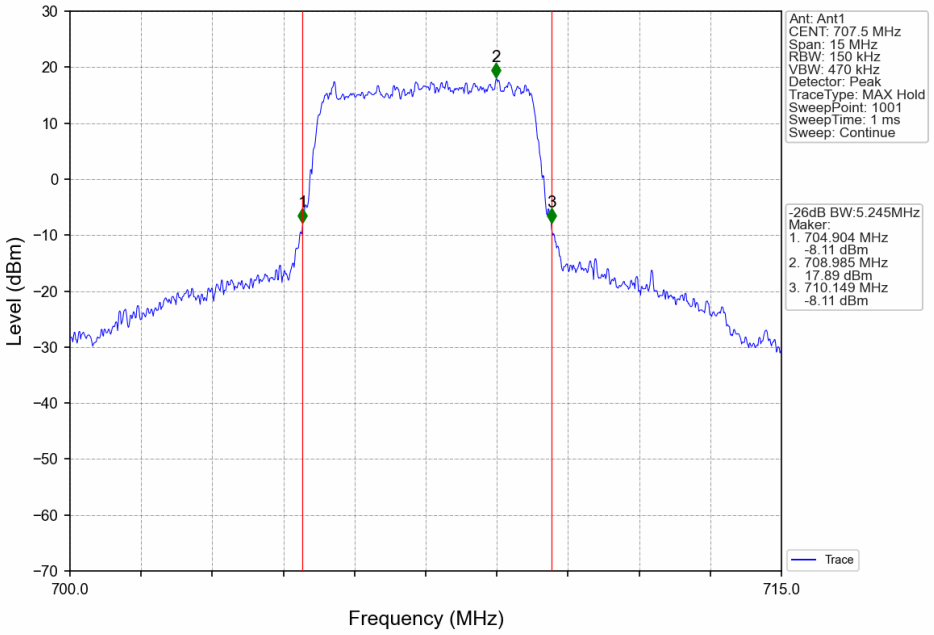
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



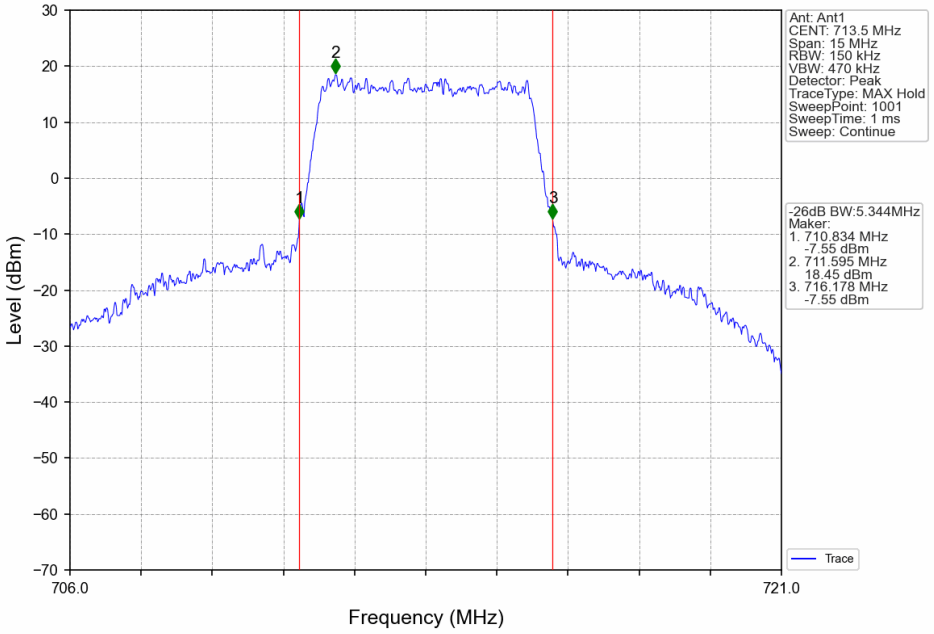

Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



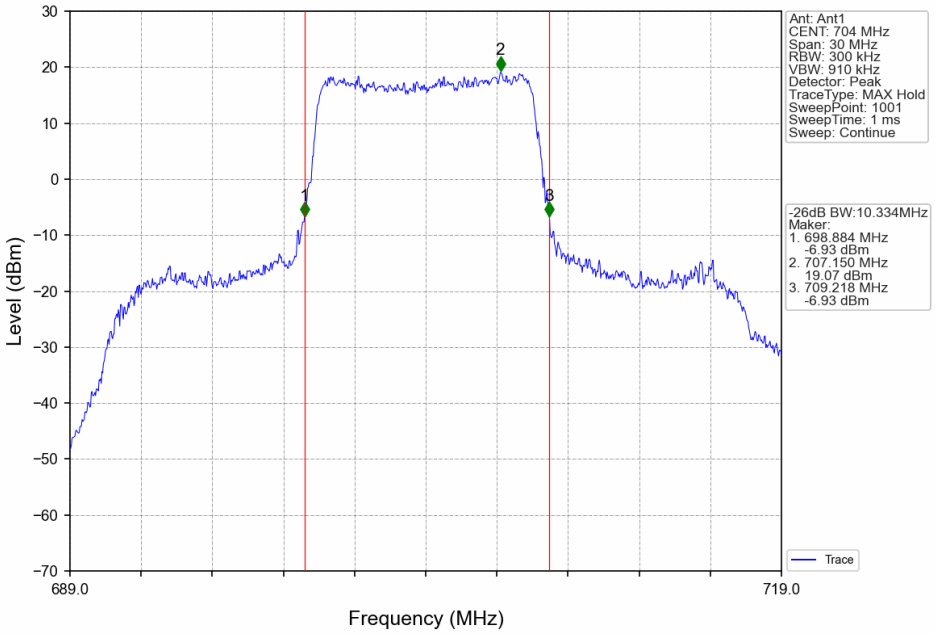
Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV



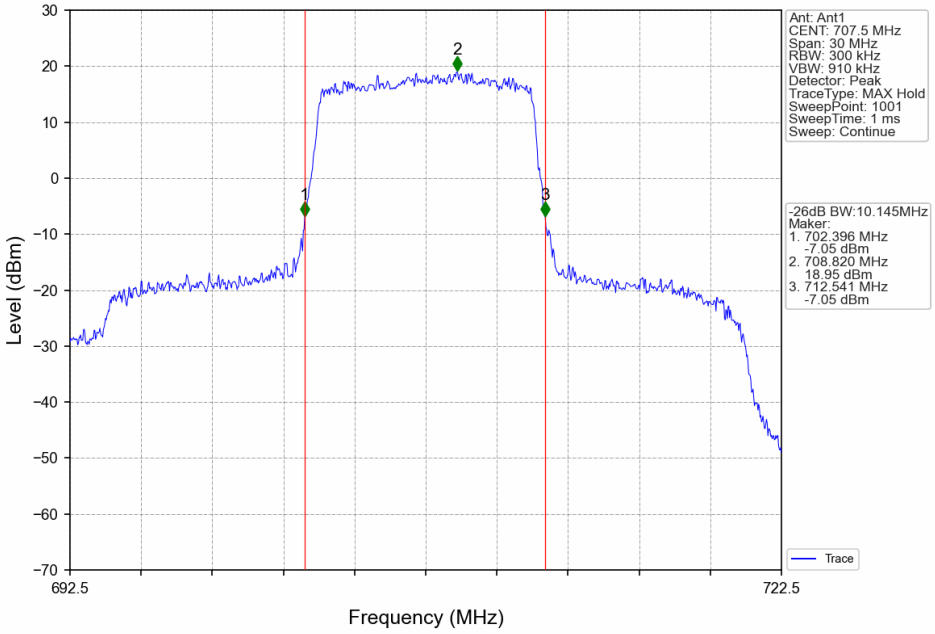

Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



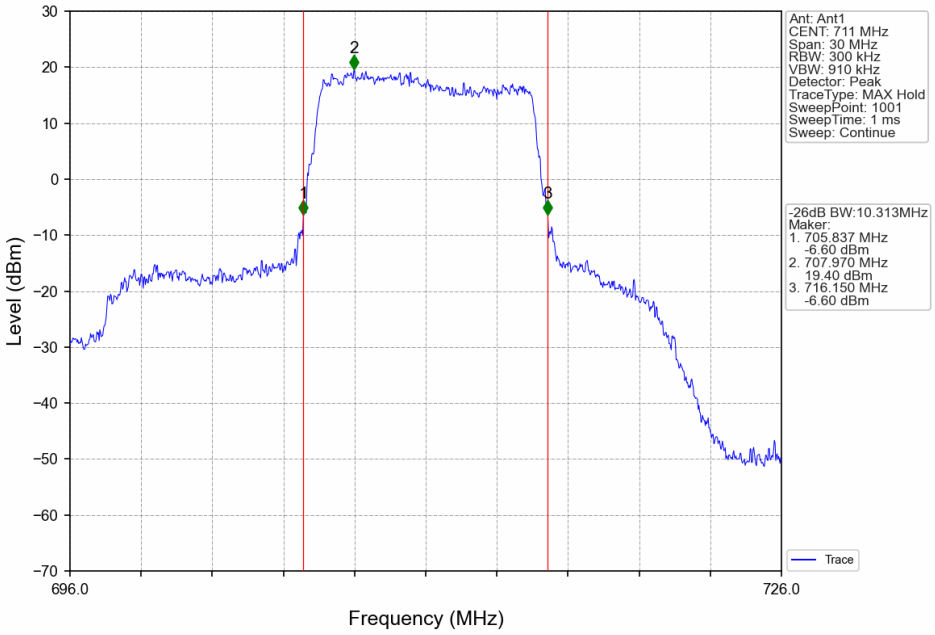
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



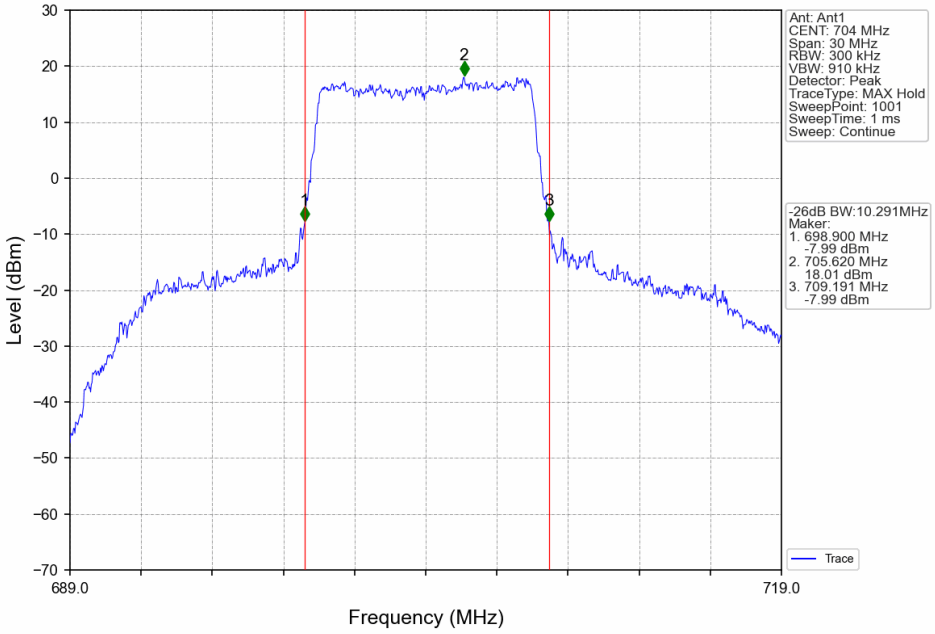

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



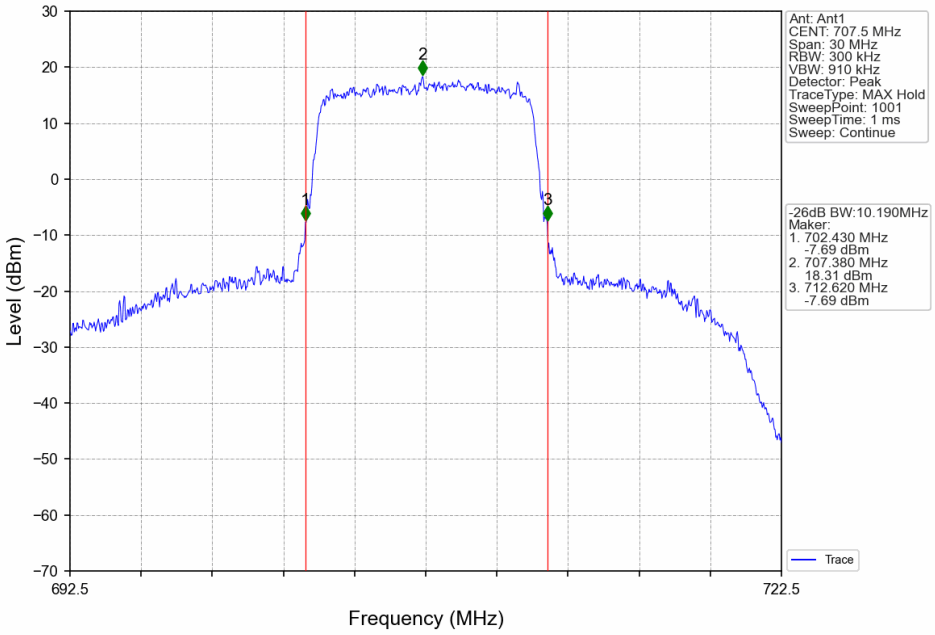
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



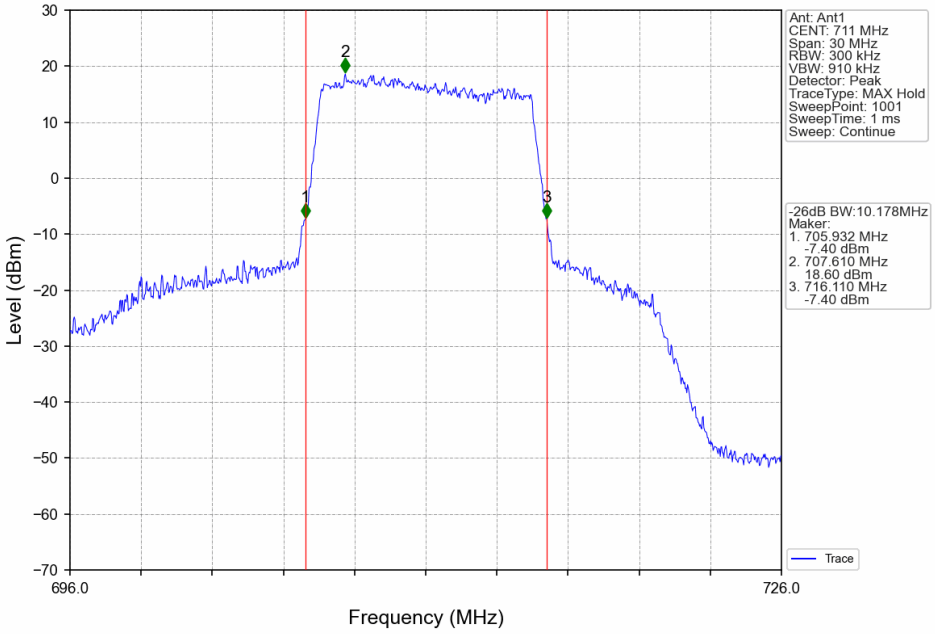

Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV




Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



# 5. Peak-Average Ratio

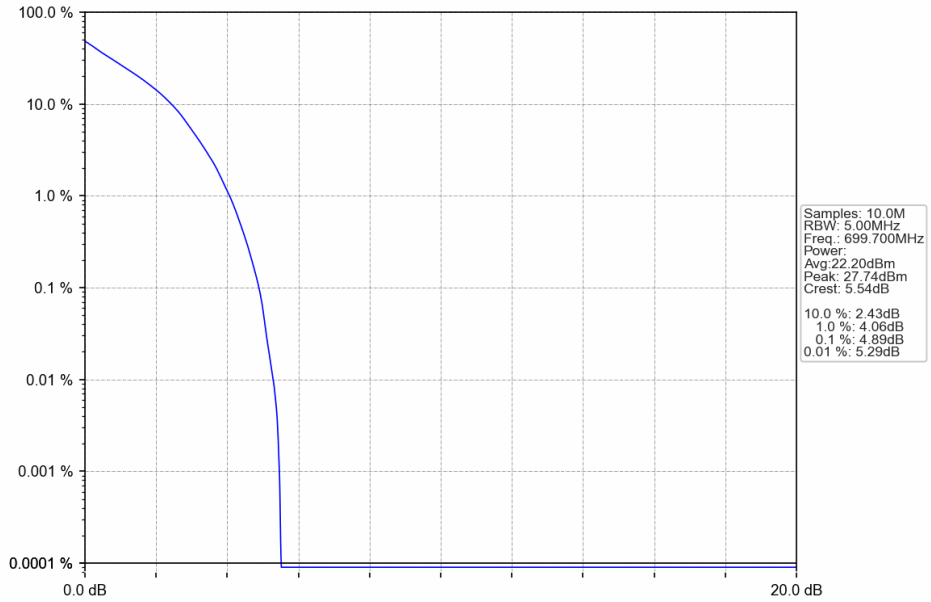
## 5.1 B12_1.4MHz

### 5.1.1 Test Result

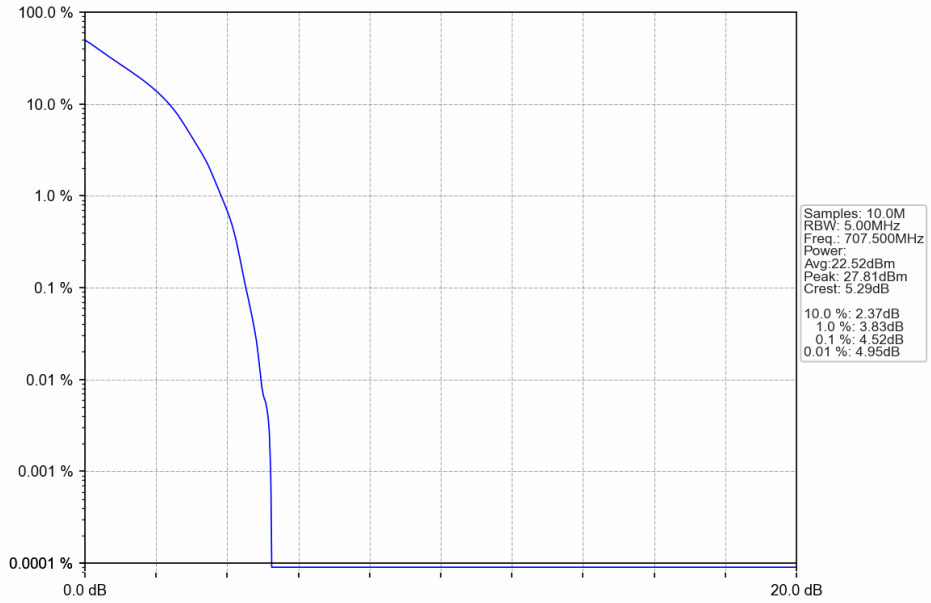
| Band: 12 / Bandwidth: 1.4MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Peak-Average Ratio (dB) | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 699.7 | 6 | 0 | 4.89 | <=13 | Pass |
| | 707.5 | 6 | 0 | 4.52 | <=13 | Pass |
| | 715.3 | 6 | 0 | 4.12 | <=13 | Pass |
| 16QAM | 699.7 | 6 | 0 | 5.70 | <=13 | Pass |
| | 707.5 | 6 | 0 | 5.40 | <=13 | Pass |
| | 715.3 | 6 | 0 | 5.02 | <=13 | Pass |

## 5.1.2 Test Graph

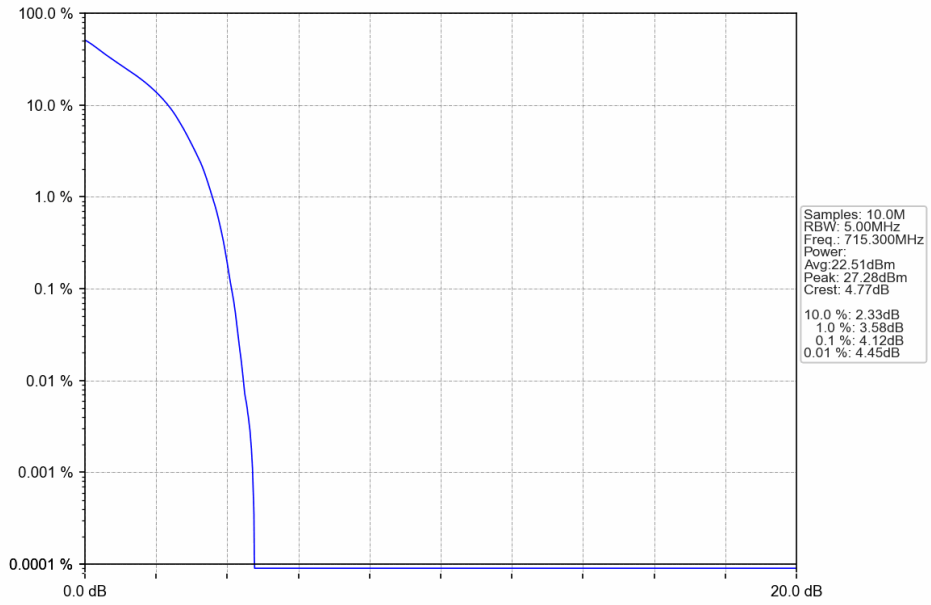
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV



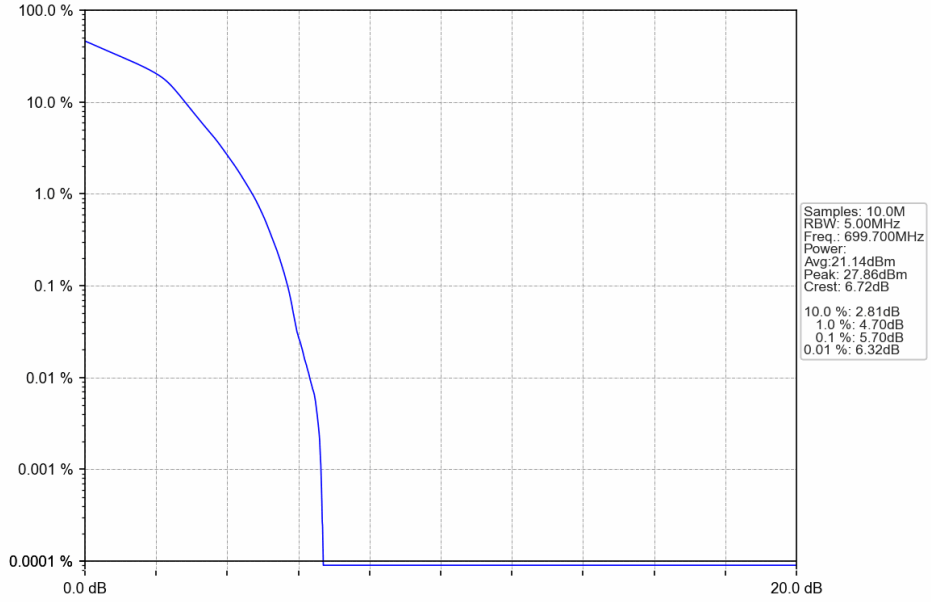

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_6_0_NTNV



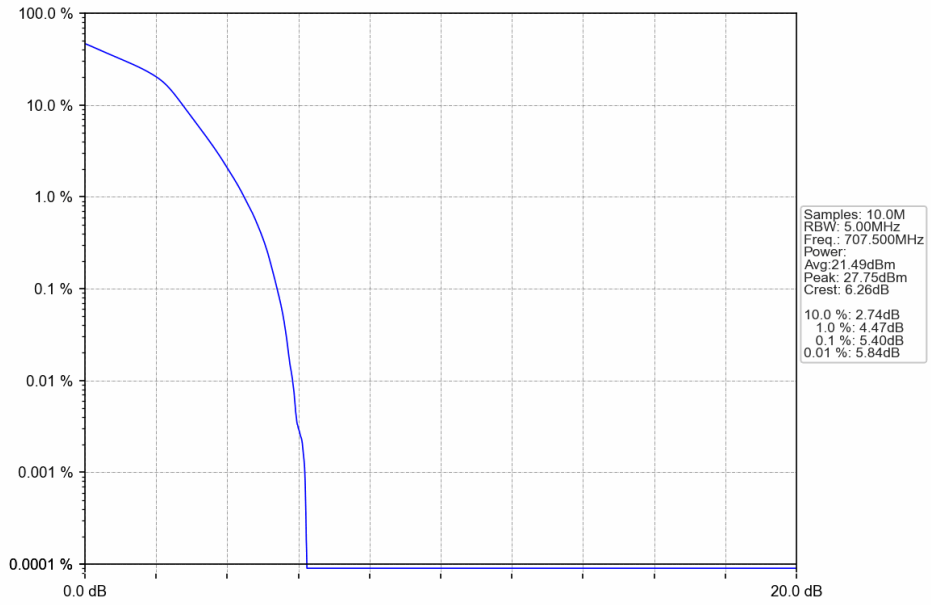
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



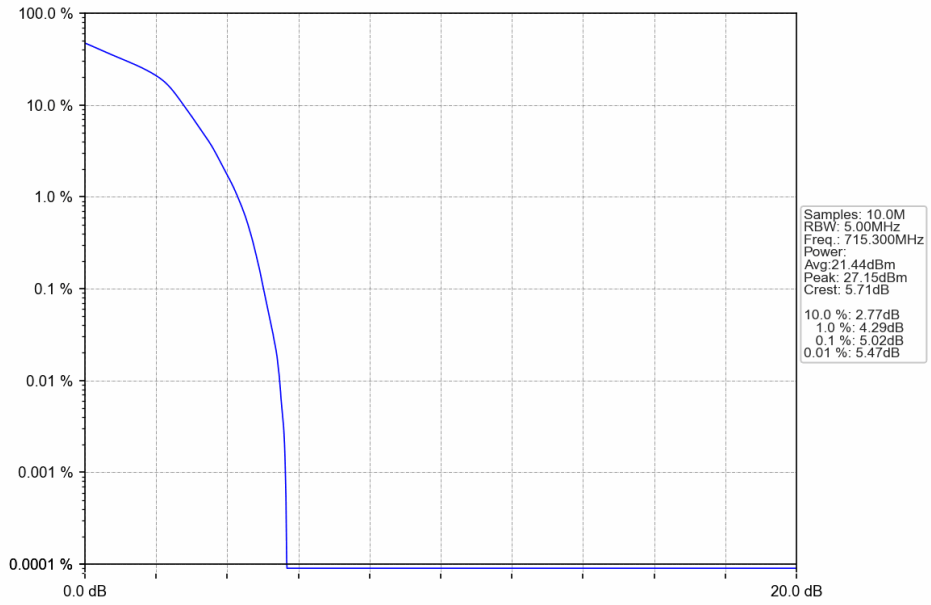

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV



Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_6_0_NTNV




Band12_1.4MHz_16QAM_HCH_715.3MHz_RB_6_0_NTNV



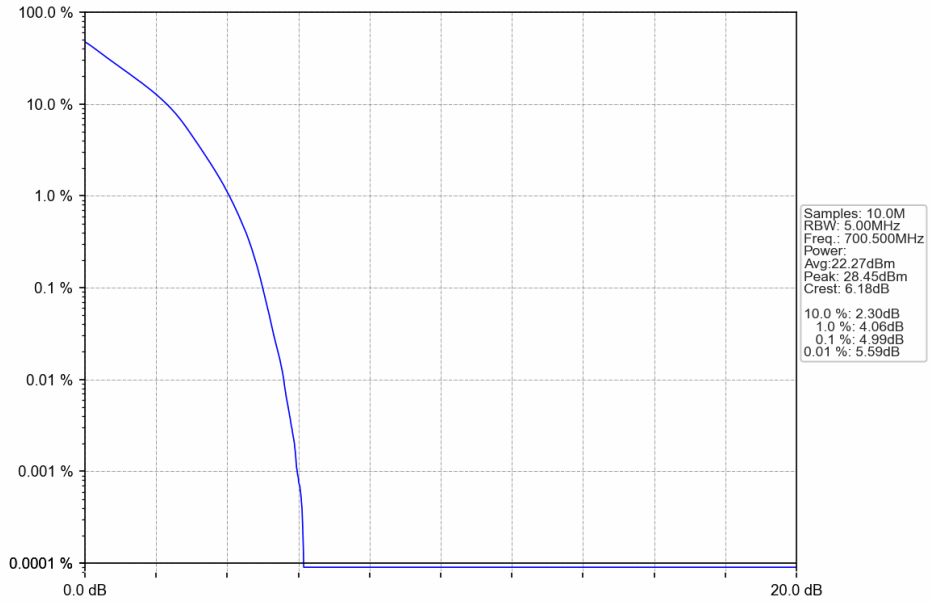
## 5.2 B12_3MHz

### 5.2.1 Test Result

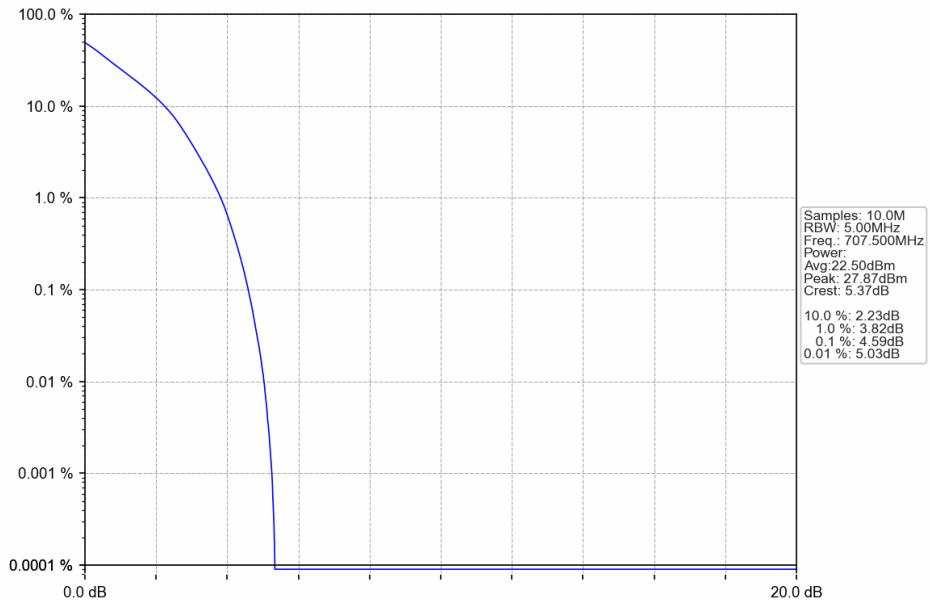
| Band: 12 / Bandwidth: 3MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Peak-Average Ratio (dB) | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 700.5 | 15 | 0 | 4.99 | <=13 | Pass |
| | 707.5 | 15 | 0 | 4.59 | <=13 | Pass |
| | 714.5 | 15 | 0 | 4.58 | <=13 | Pass |
| 16QAM | 700.5 | 15 | 0 | 5.81 | <=13 | Pass |
| | 707.5 | 15 | 0 | 5.48 | <=13 | Pass |
| | 714.5 | 15 | 0 | 5.46 | <=13 | Pass |

## 5.2.2 Test Graph

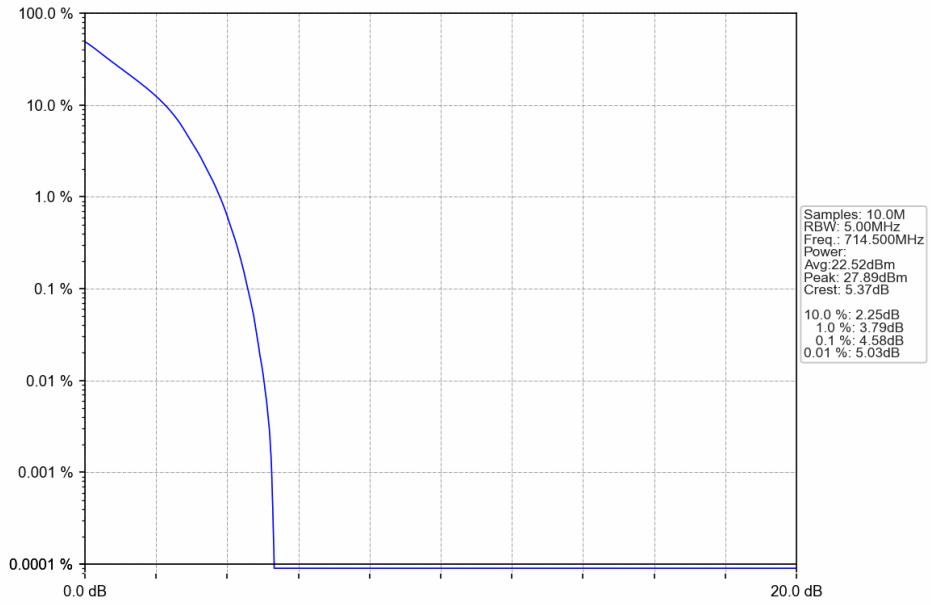
Band12_3MHz_QPSK_LCH_700.5MHz_RB_15_0_NTNV



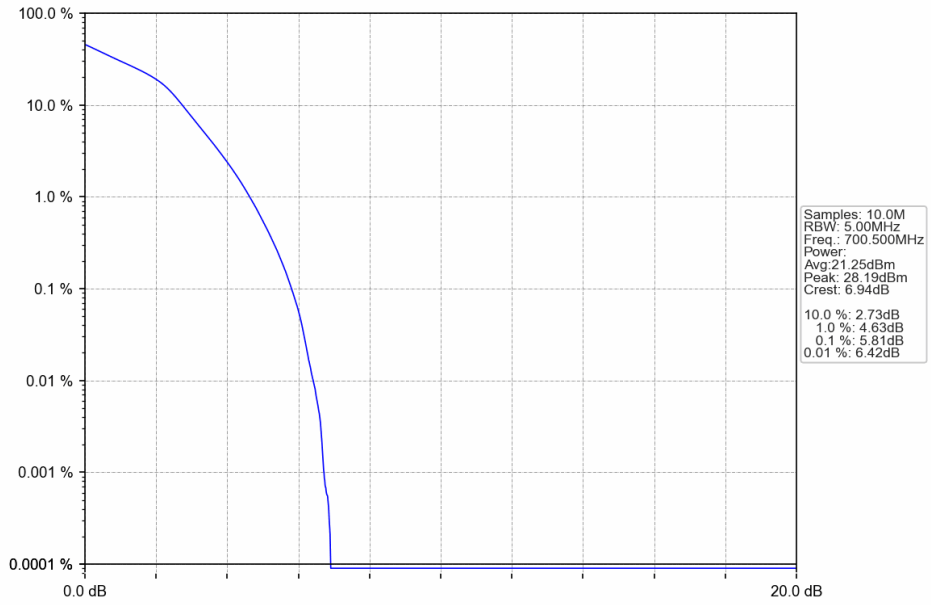

Band12_3MHz_QPSK_MCH_707.5MHz_RB_15_0_NTNV



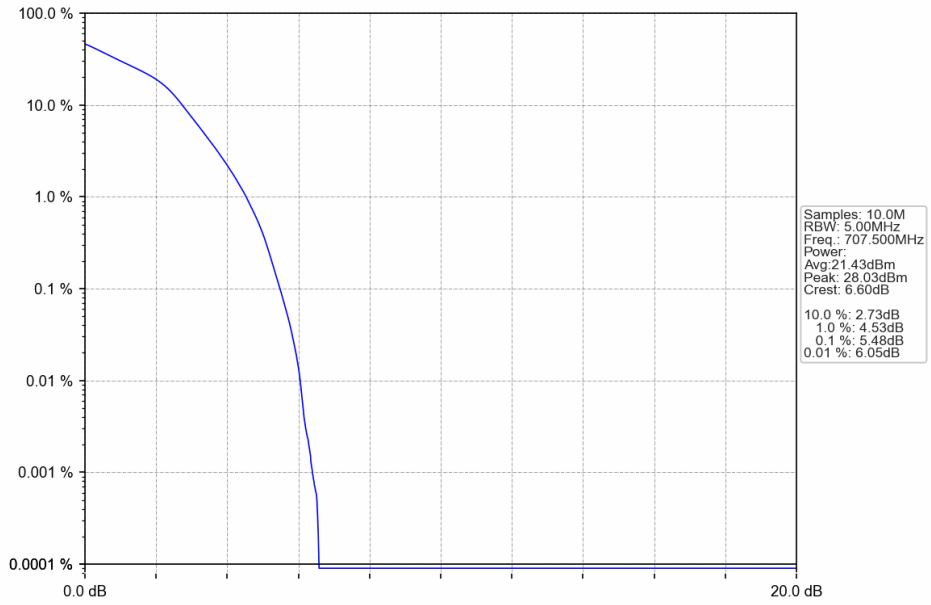
Band12_3MHz_QPSK_HCH_714.5MHz_RB_15_0_NTNV



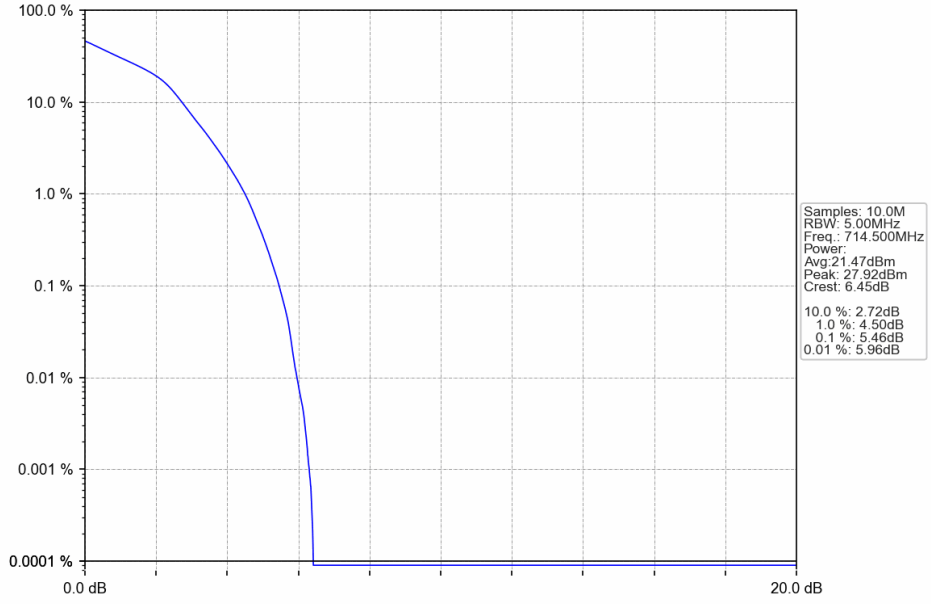

Band12_3MHz_16QAM_LCH_700.5MHz_RB_15_0_NTNV



Band12_3MHz_16QAM_MCH_707.5MHz_RB_15_0_NTNV




Band12_3MHz_16QAM_HCH_714.5MHz_RB_15_0_NTNV



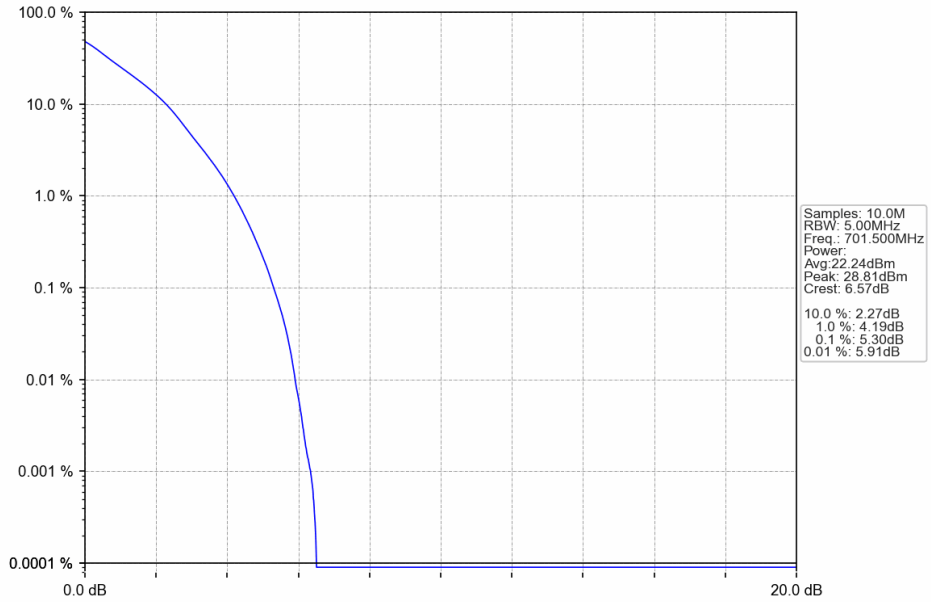
## 5.3 B12_5MHz

### 5.3.1 Test Result

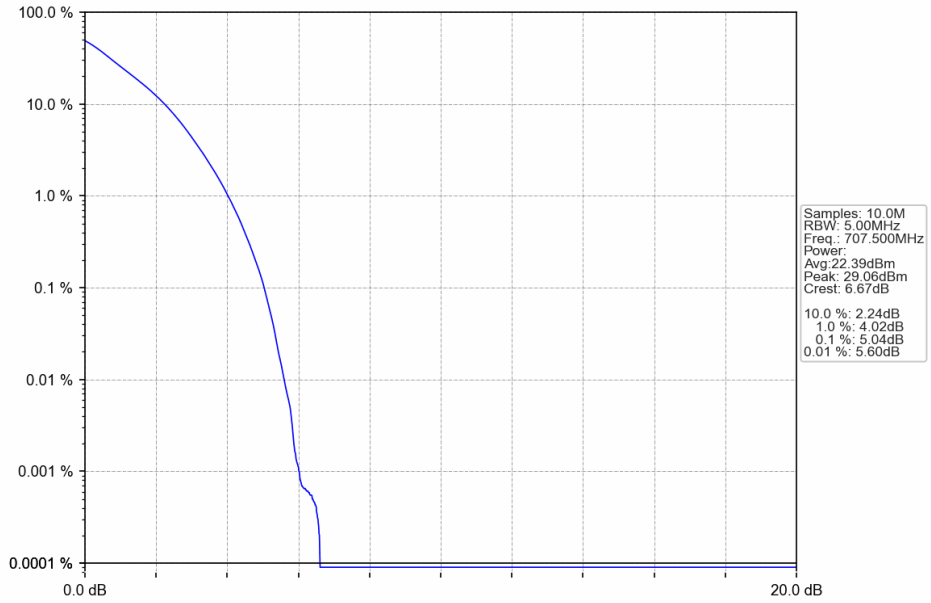
| Band: 12 / Bandwidth: 5MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Peak-Average Ratio (dB) | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 701.5 | 25 | 0 | 5.30 | <=13 | Pass |
| | 707.5 | 25 | 0 | 5.04 | <=13 | Pass |
| | 713.5 | 25 | 0 | 5.21 | <=13 | Pass |
| 16QAM | 701.5 | 25 | 0 | 5.99 | <=13 | Pass |
| | 707.5 | 25 | 0 | 5.71 | <=13 | Pass |
| | 713.5 | 25 | 0 | 5.87 | <=13 | Pass |

## 5.3.2 Test Graph

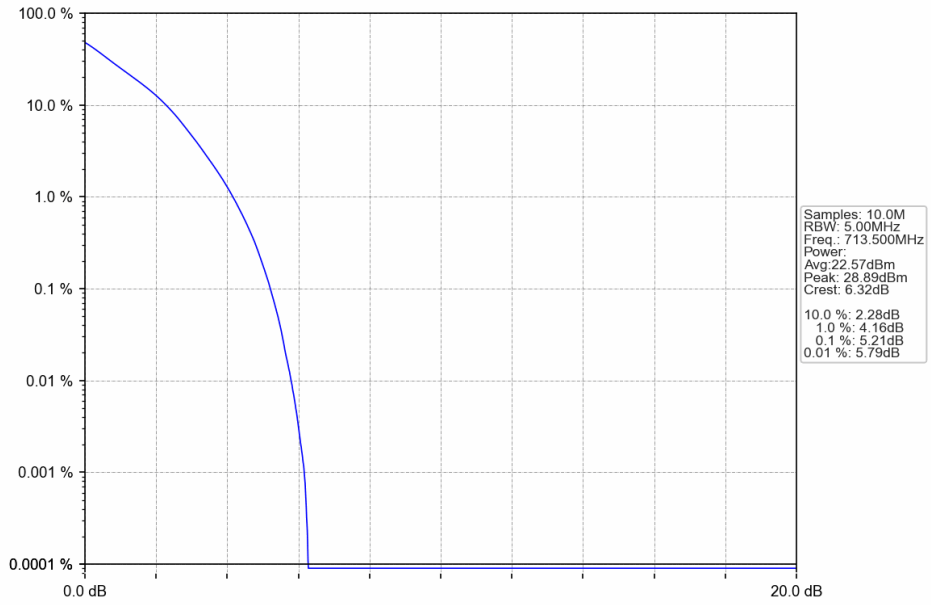
Band12_5MHz_QPSK_LCH_701.5MHz_RB_25_0_NTNV



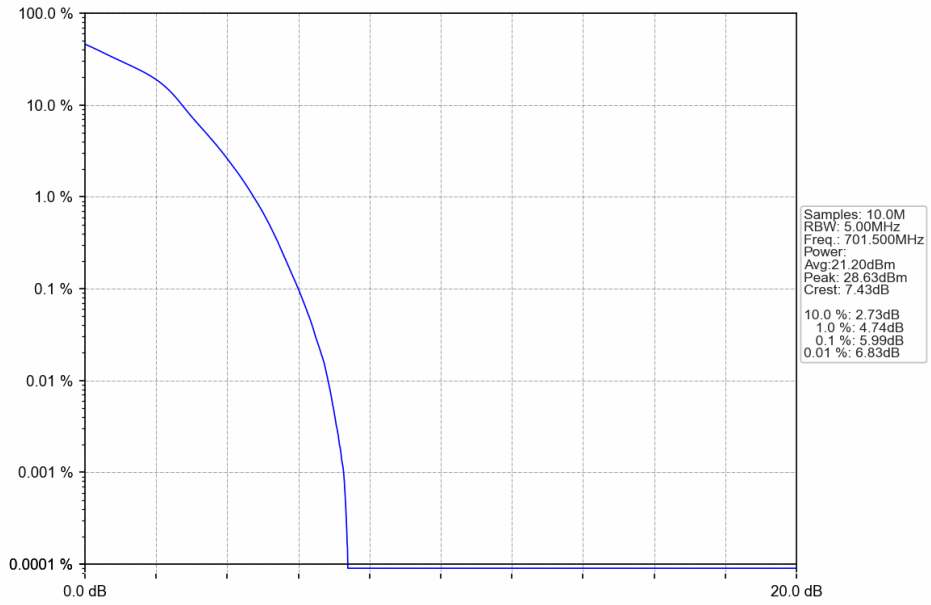

Band12_5MHz_QPSK_MCH_707.5MHz_RB_25_0_NTNV



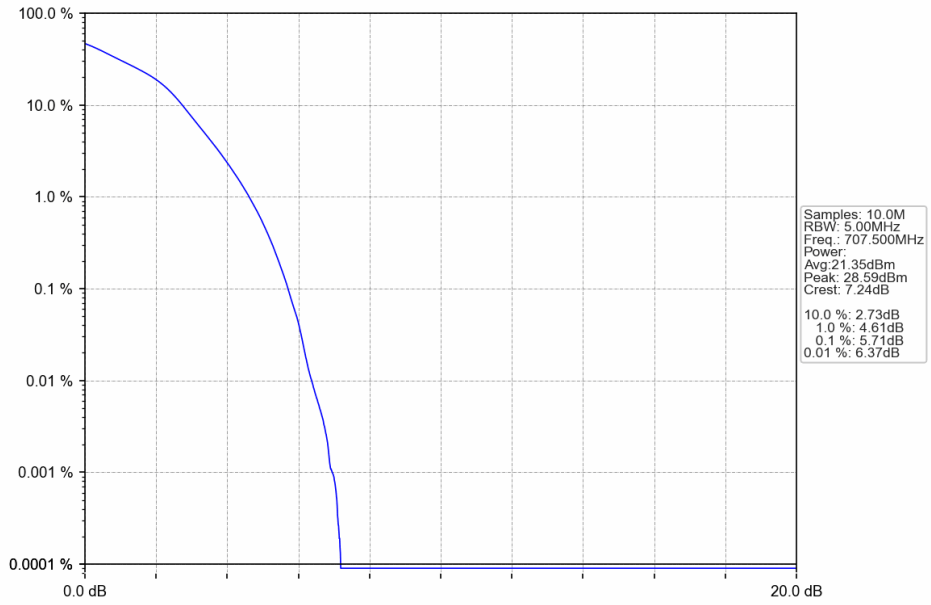
Band12_5MHz_QPSK_HCH_713.5MHz_RB_25_0_NTNV



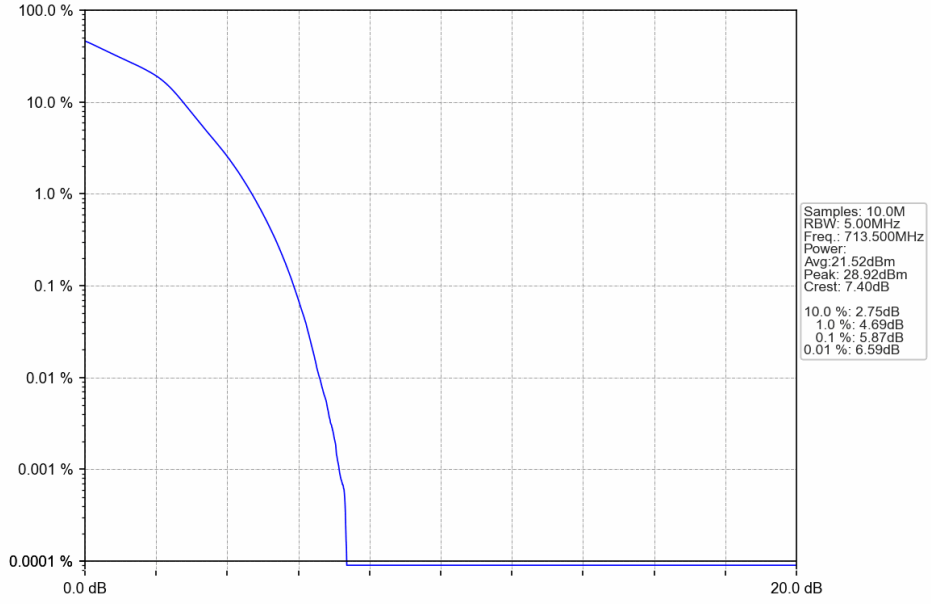

Band12_5MHz_16QAM_LCH_701.5MHz_RB_25_0_NTNV



Band12_5MHz_16QAM_MCH_707.5MHz_RB_25_0_NTNV




Band12_5MHz_16QAM_HCH_713.5MHz_RB_25_0_NTNV



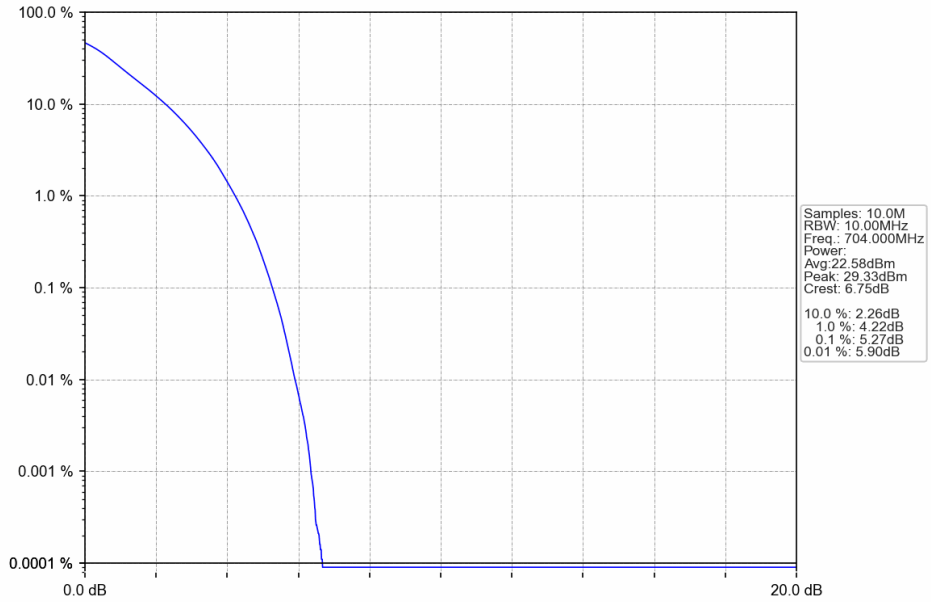
## 5.4 B12_10MHz

### 5.4.1 Test Result

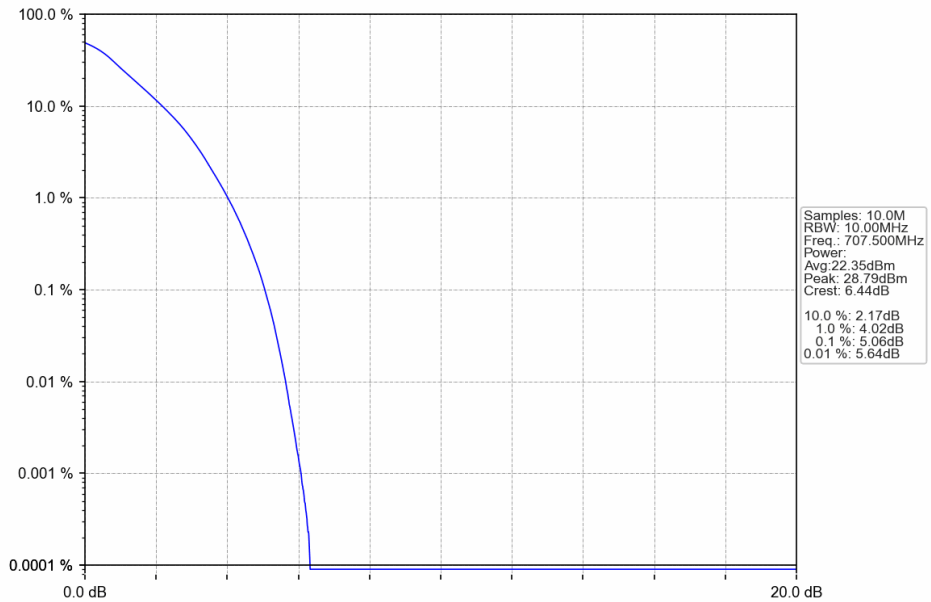
| Band: 12 / Bandwidth: 10MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Peak-Average Ratio (dB) | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 704 | 50 | 0 | 5.27 | <=13 | Pass |
| | 707.5 | 50 | 0 | 5.06 | <=13 | Pass |
| | 711 | 50 | 0 | 5.06 | <=13 | Pass |
| 16QAM | 704 | 50 | 0 | 5.96 | <=13 | Pass |
| | 707.5 | 50 | 0 | 5.83 | <=13 | Pass |
| | 711 | 50 | 0 | 5.79 | <=13 | Pass |

## 5.4.2 Test Graph

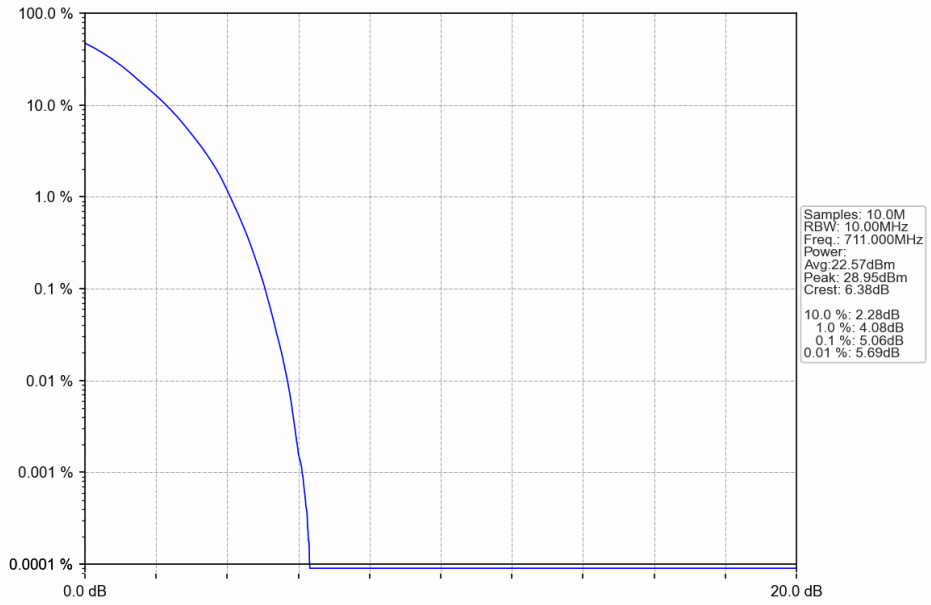
Band12_10MHz_QPSK_LCH_704MHz_RB_50_0_NTNV



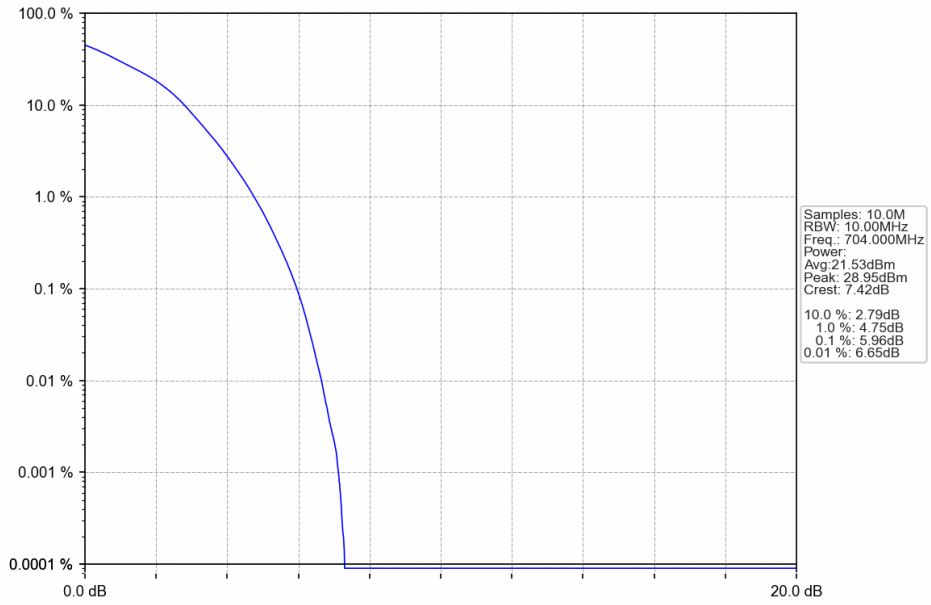

Band12_10MHz_QPSK_MCH_707.5MHz_RB_50_0_NTNV



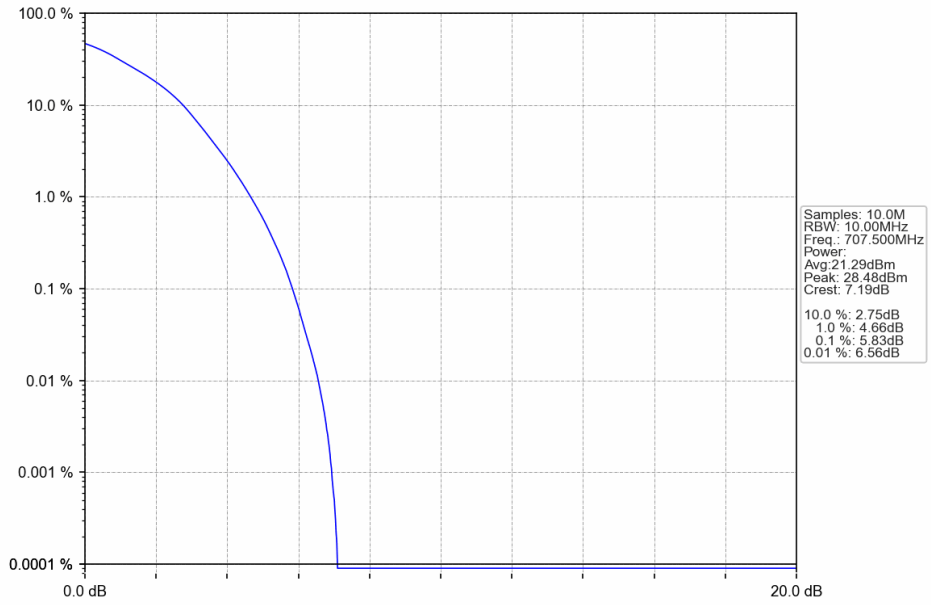
Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



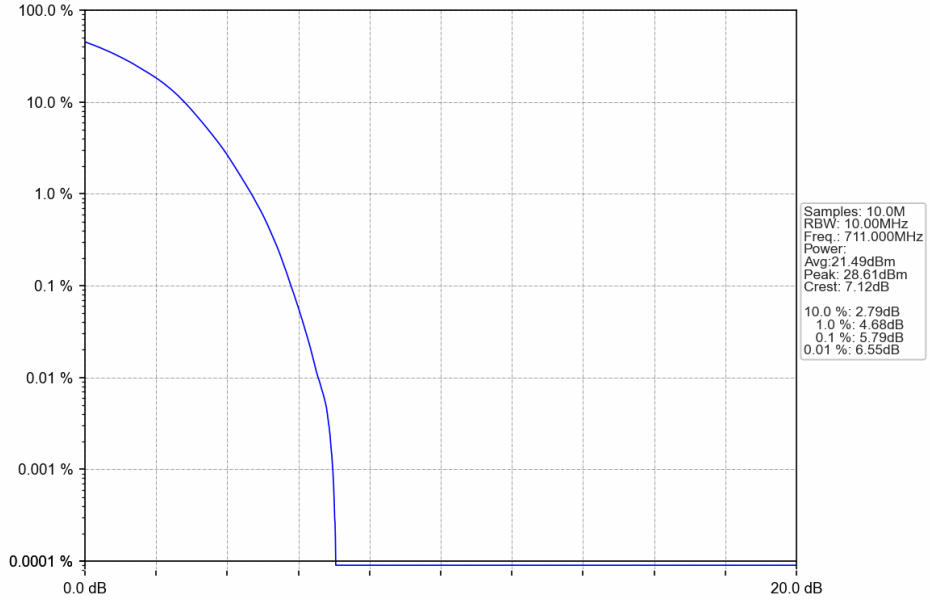

Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV



Band12_10MHz_16QAM_MCH_707.5MHz_RB_50_0_NTNV




Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



# 6. Spurious Emission

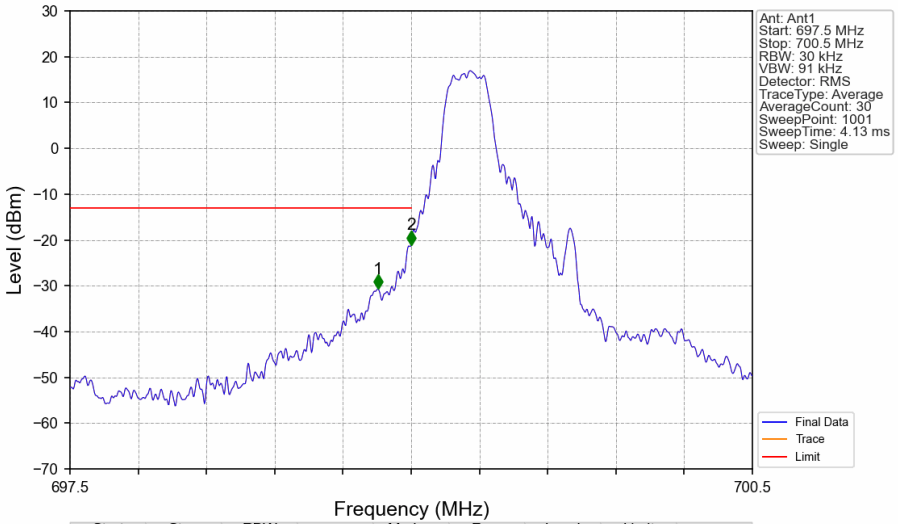
## 6.1 B12_1.4MHz

### 6.1.1 Test Result

| Band: 12 / Bandwidth: 1.4MHz / NTNV | | | | | | |
|---|---|---|---|---|---|---|
| Modulation | Frequency (MHz) | RB Allocation | | Spurious Emission | | Verdict |
| | | Size | Offset | Result | Limit | |
| QPSK | 699.7 | 1 | 0 | Refer To Test Graph | | Pass |
| | | 6 | 0 | Refer To Test Graph | | Pass |
| | 707.5 | 1 | 0 | Refer To Test Graph | | Pass |
| | 715.3 | 1 | 0 | Refer To Test Graph | | Pass |
| | | | 5 | Refer To Test Graph | | Pass |
| | | 6 | 0 | Refer To Test Graph | | Pass |
| 16QAM | 699.7 | 1 | 0 | Refer To Test Graph | | Pass |
| | | 6 | 0 | Refer To Test Graph | | Pass |
| | 707.5 | 1 | 0 | Refer To Test Graph | | Pass |
| | 715.3 | 1 | 0 | Refer To Test Graph | | Pass |
| | | | 5 | Refer To Test Graph | | Pass |
| | | 6 | 0 | Refer To Test Graph | | Pass |

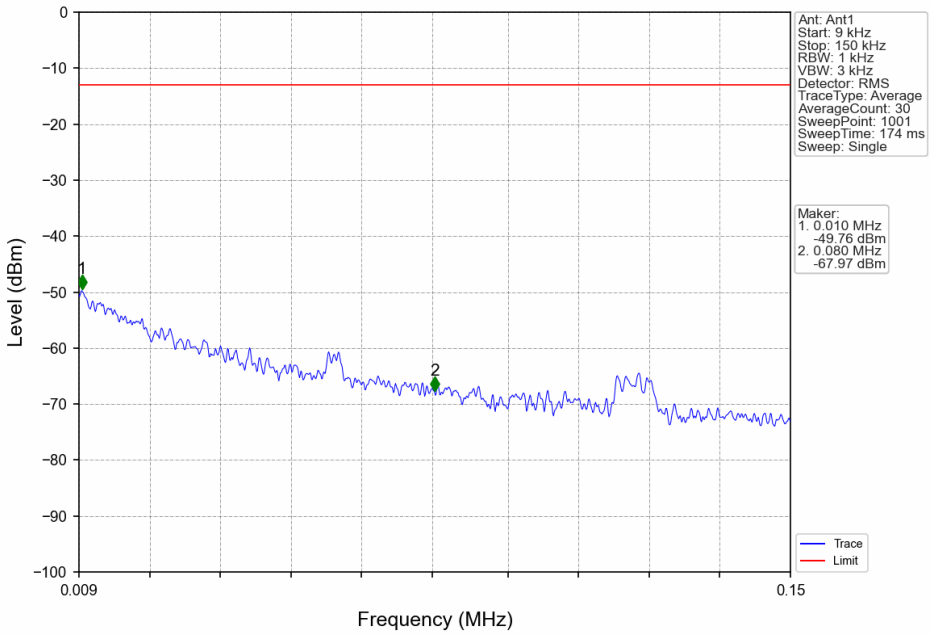
## 6.1.2 Test Graph

Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV

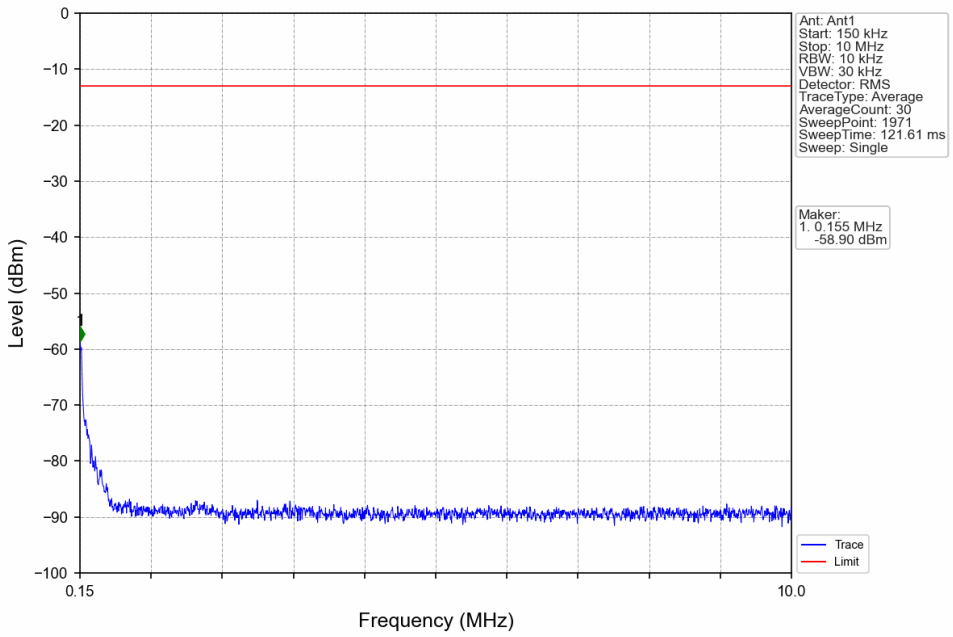



| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 697.5 | 698.9 | 0.1 | / | 1 | 698.853 | -30.72 | -13 | Pass |
| 698.9 | 699 | 0.03 | / | 2 | 699.000 | -21.08 | -13 | Pass |
| 699 | 700.5 | 0.03 | / | / | / | / | / | / |

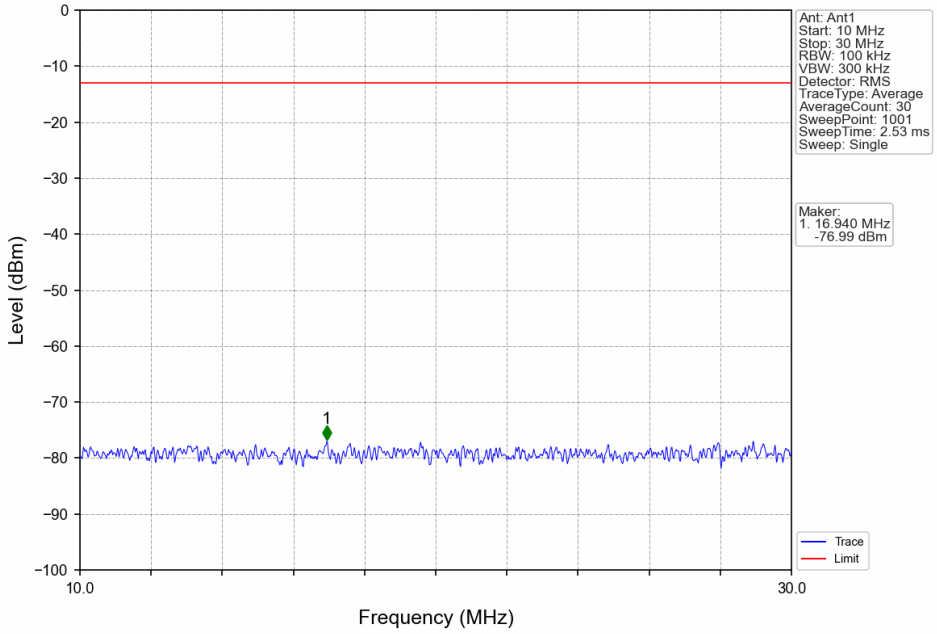
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV



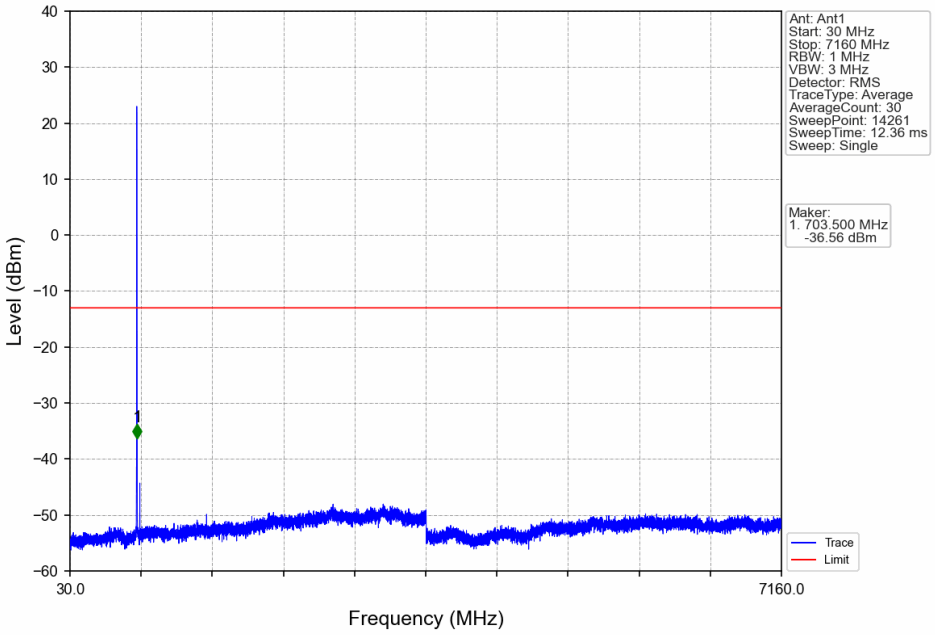
Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV



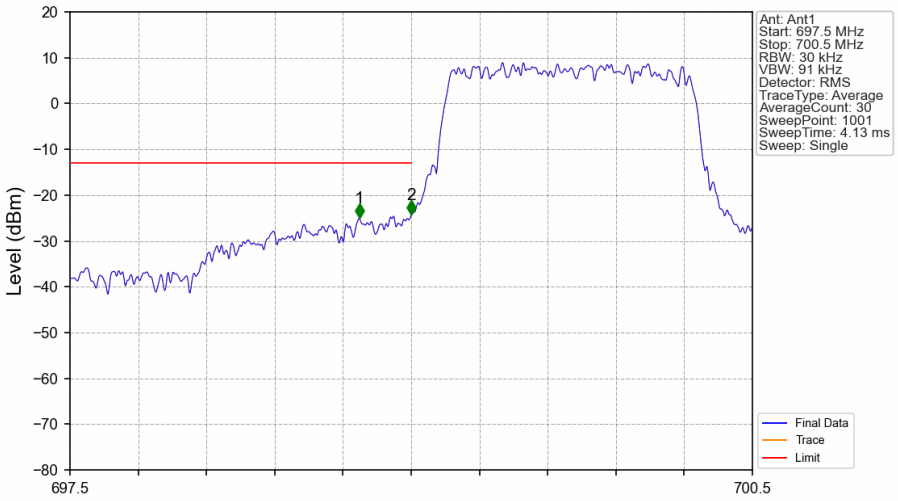

Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV



Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_1_0_NTNV

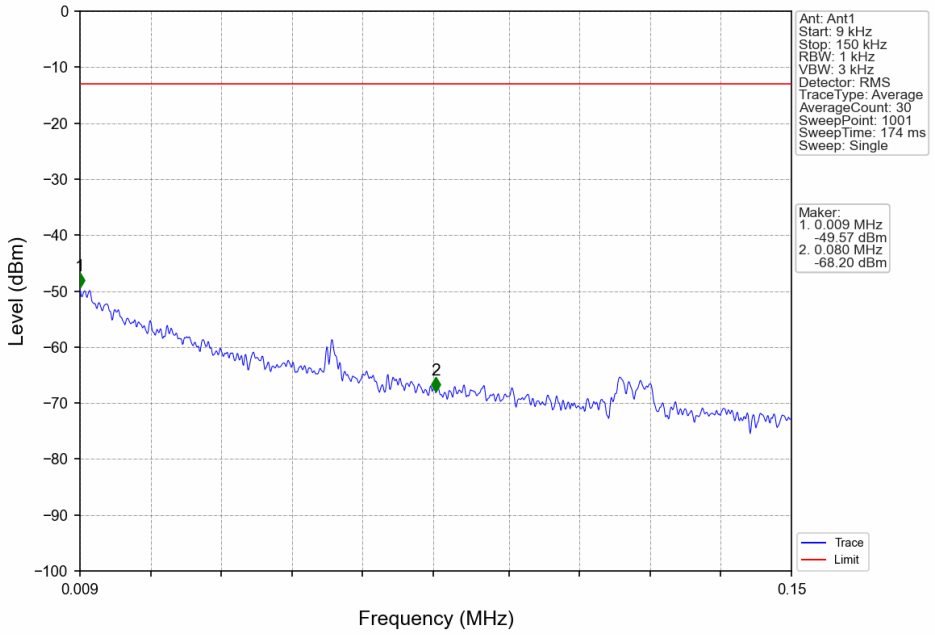



Band12_1.4MHz_QPSK_LCH_699.7MHz_RB_6_0_NTNV

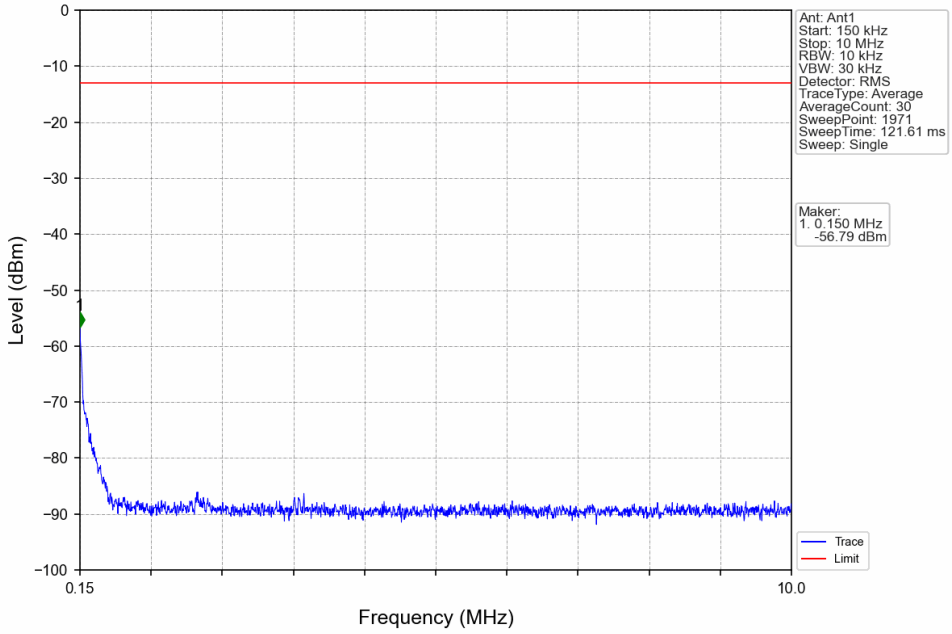



| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 697.5 | 698.9 | 0.1 | / | 1 | 698.772 | -25.02 | -13 | Pass |
| 698.9 | 699 | 0.03 | / | 2 | 699.000 | -24.32 | -13 | Pass |
| 699 | 700.5 | 0.03 | / | / | / | / | / | / |

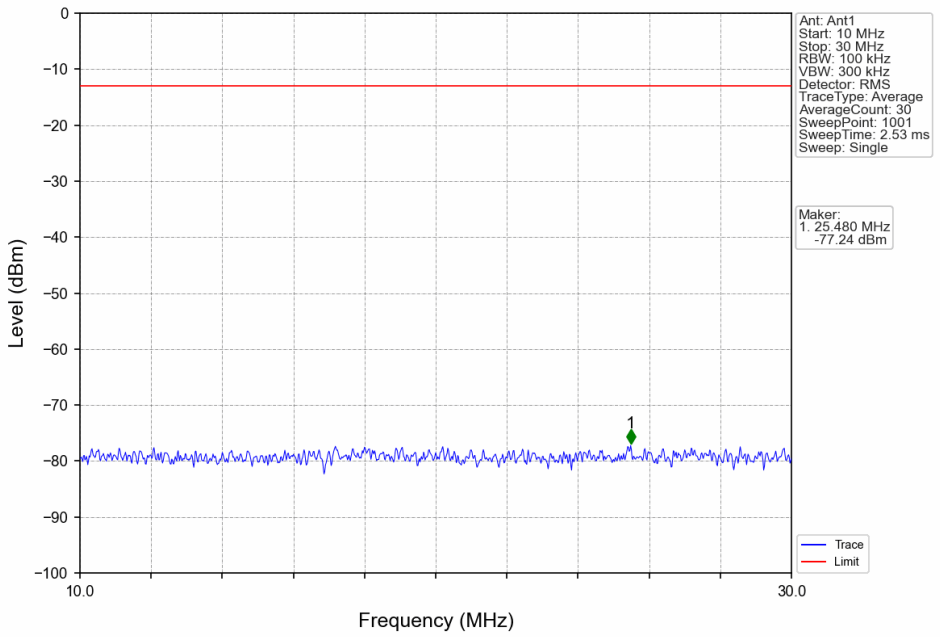
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



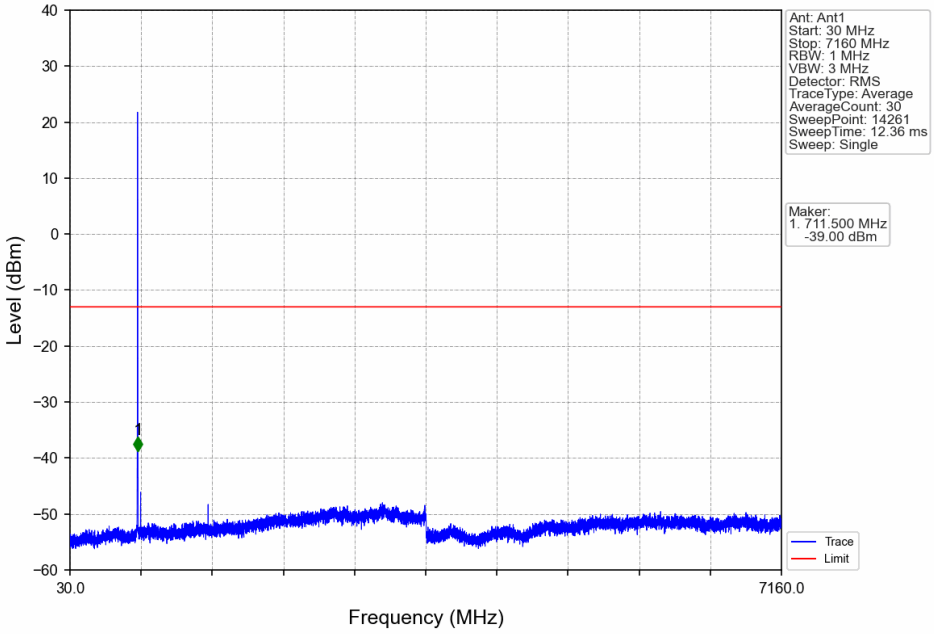

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



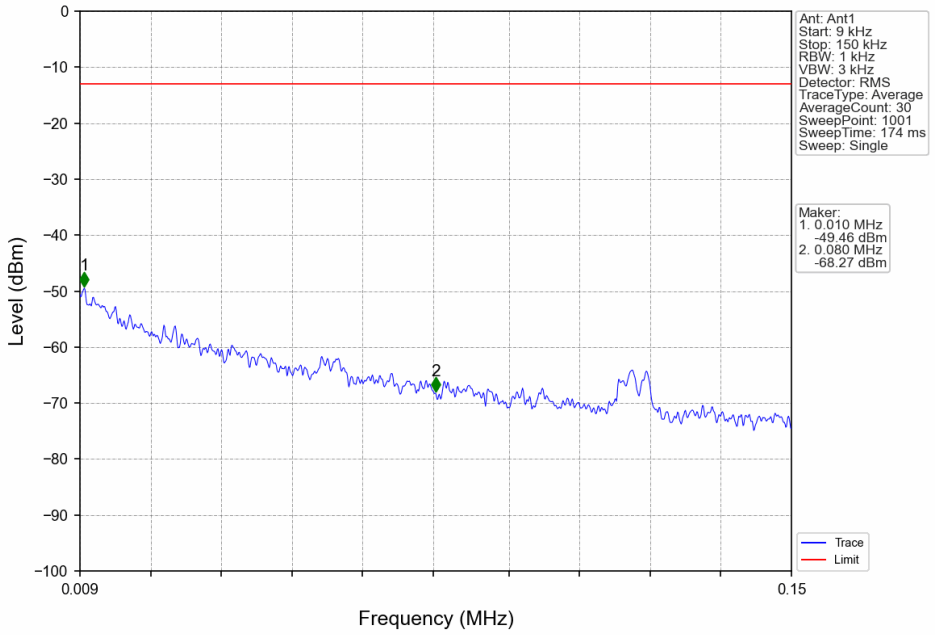
Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



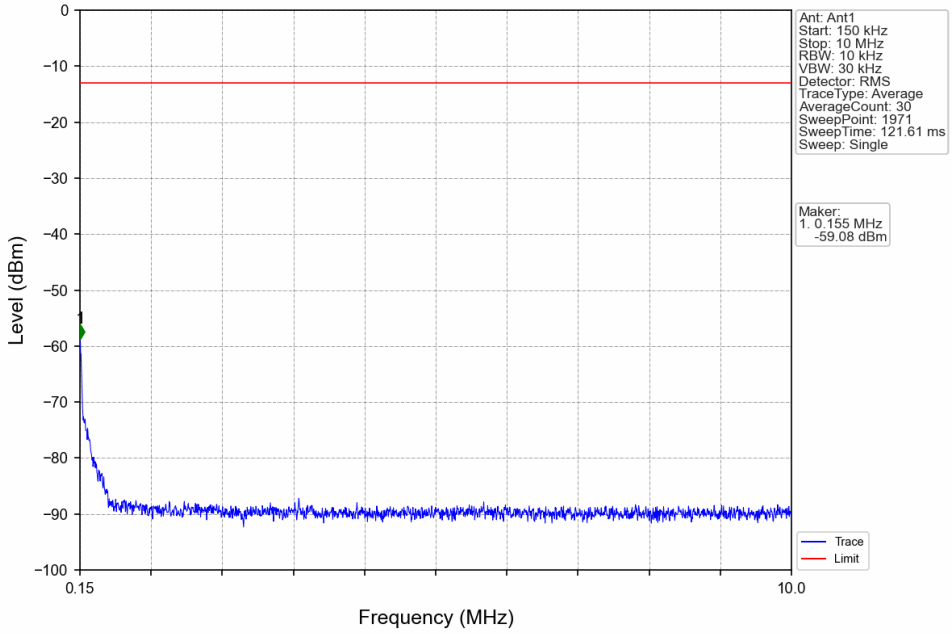

Band12_1.4MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



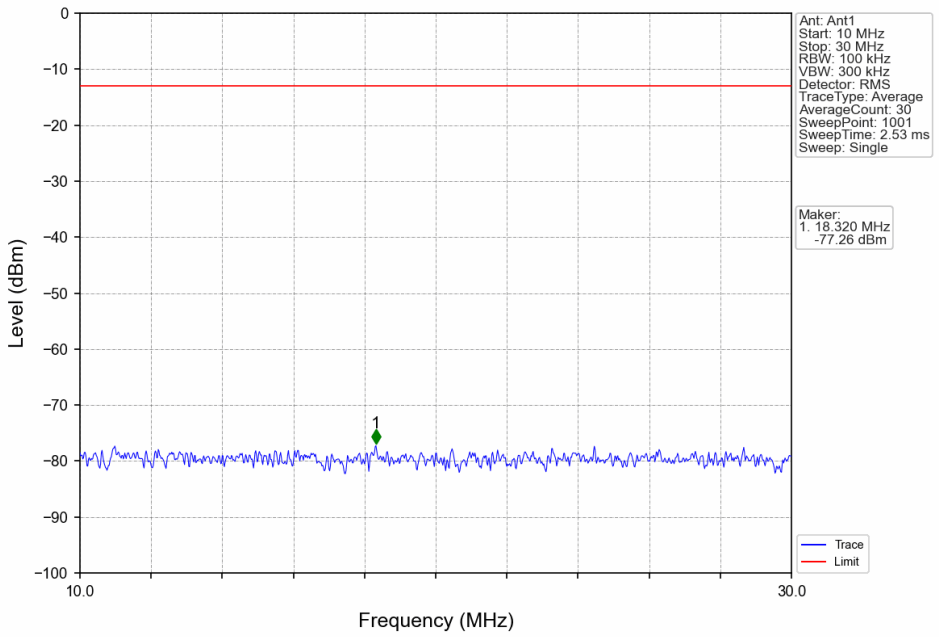
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTNV



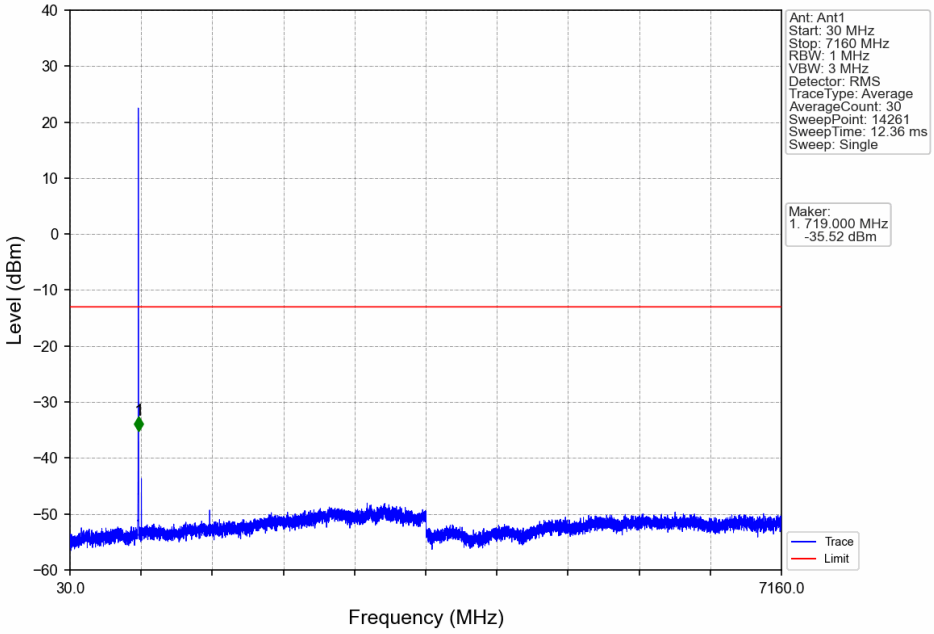

Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTNV



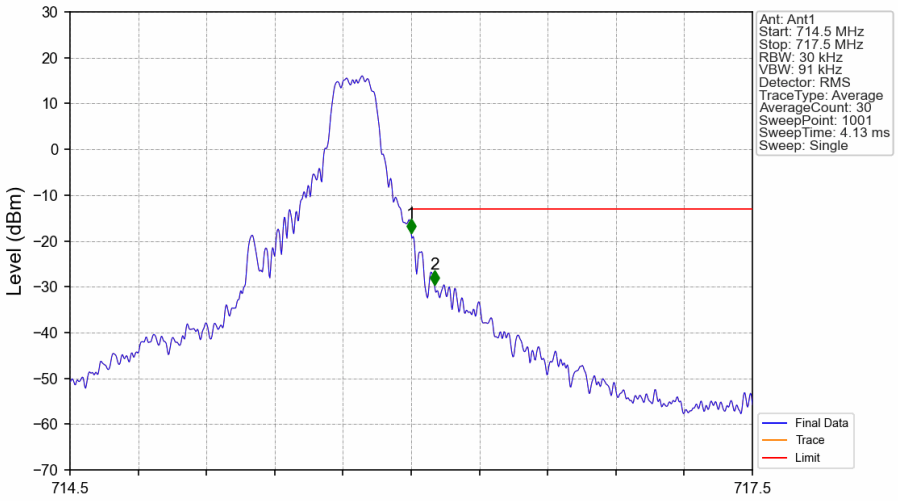
Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTNV




Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_0_NTNV

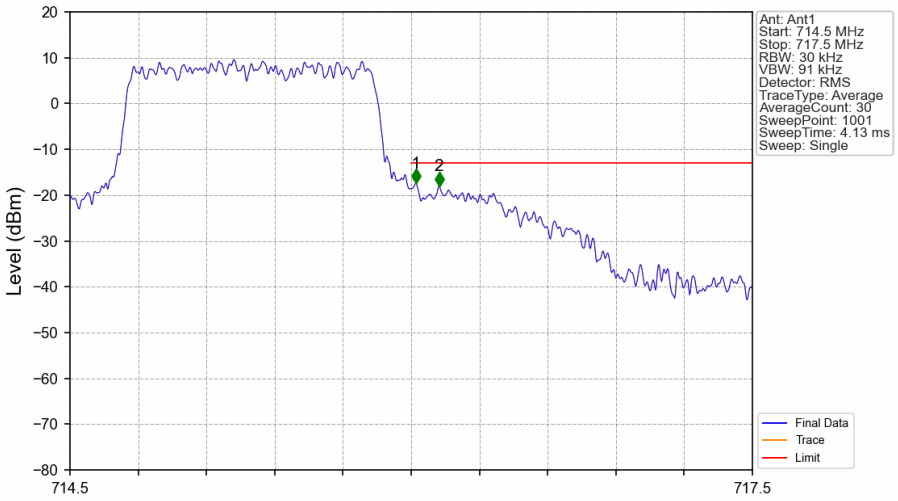


Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_1_5_NTNV



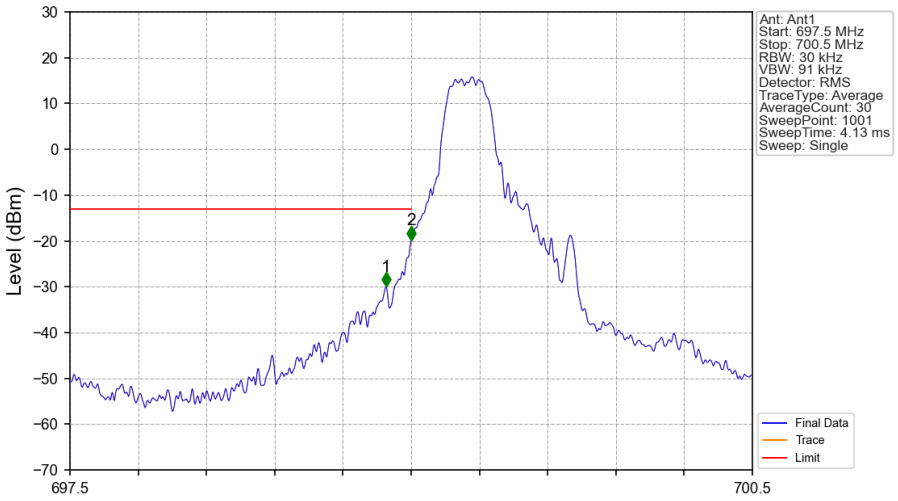

| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 714.5 | 716 | 0.03 | / | / | / | / | / | / |
| 716 | 716.1 | 0.03 | / | 1 | 716.000 | -18.27 | -13 | Pass |
| 716.1 | 717.5 | 0.1 | / | 2 | 716.102 | -29.52 | -13 | Pass |

Band12_1.4MHz_QPSK_HCH_715.3MHz_RB_6_0_NTNV



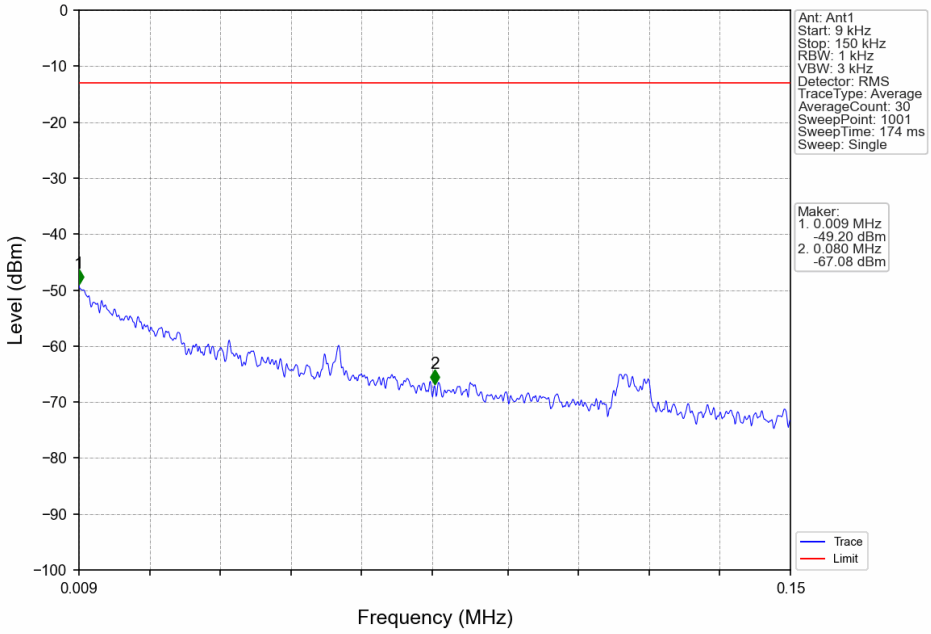

| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 714.5 | 716 | 0.03 | / | / | / | / | / | / |
| 716 | 716.1 | 0.03 | / | 1 | 716.021 | -17.42 | -13 | Pass |
| 716.1 | 717.5 | 0.1 | / | 2 | 716.123 | -18.00 | -13 | Pass |

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV

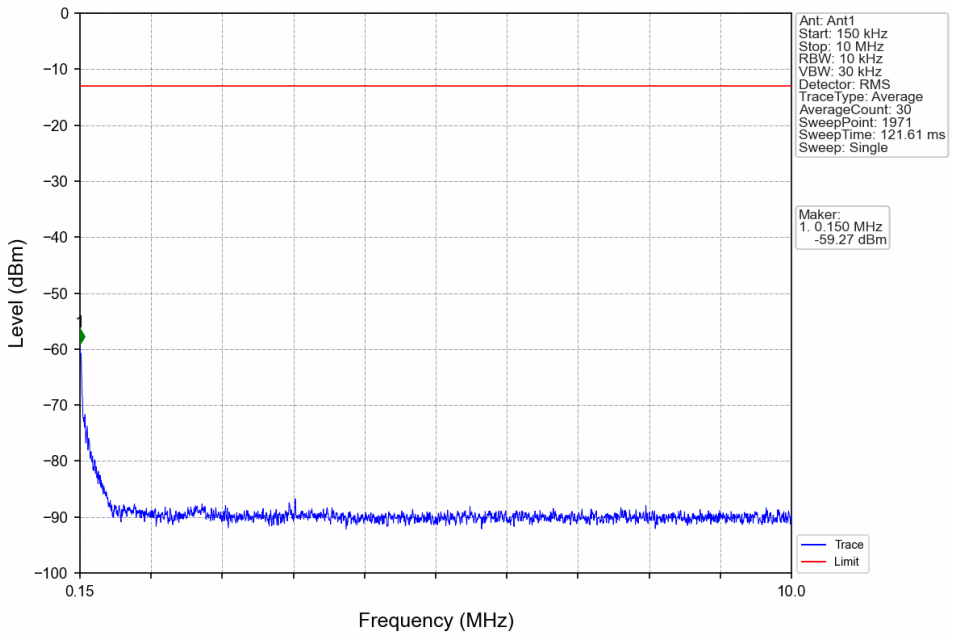



| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 697.5 | 698.9 | 0.1 | / | 1 | 698.889 | -29.95 | -13 | Pass |
| 698.9 | 699 | 0.03 | / | 2 | 699.000 | -19.83 | -13 | Pass |
| 699 | 700.5 | 0.03 | / | / | / | / | / | / |

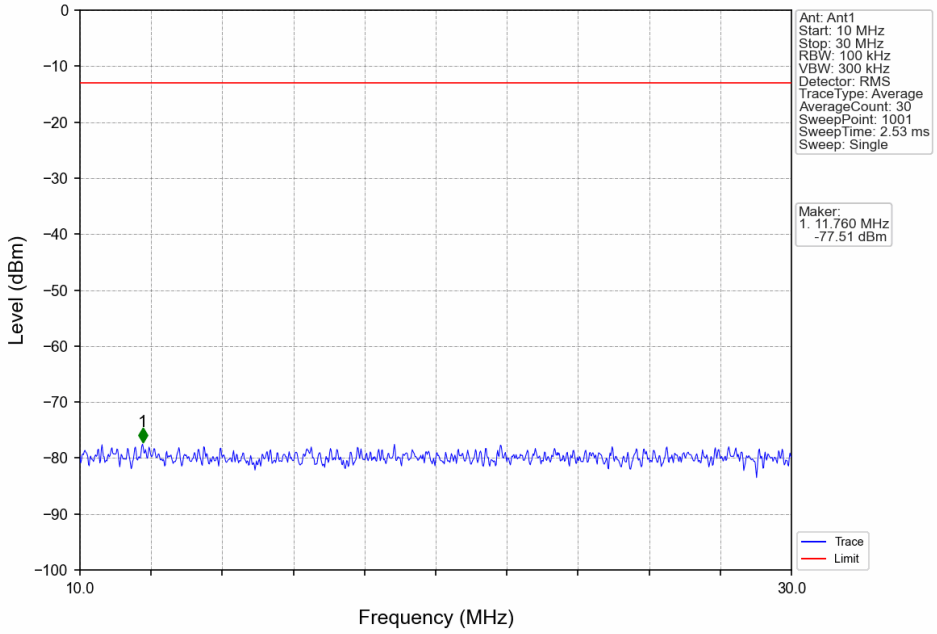
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV



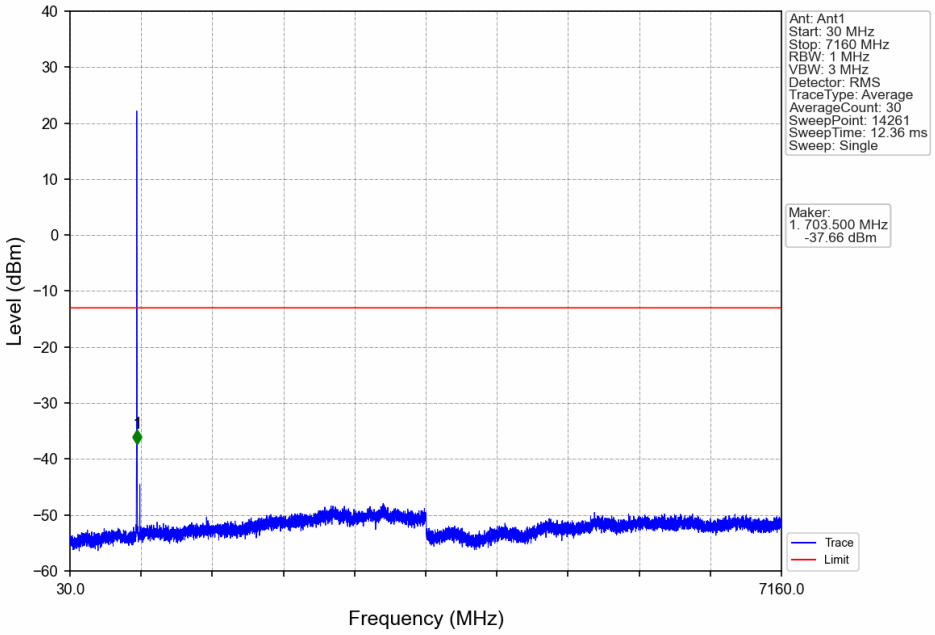
Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV



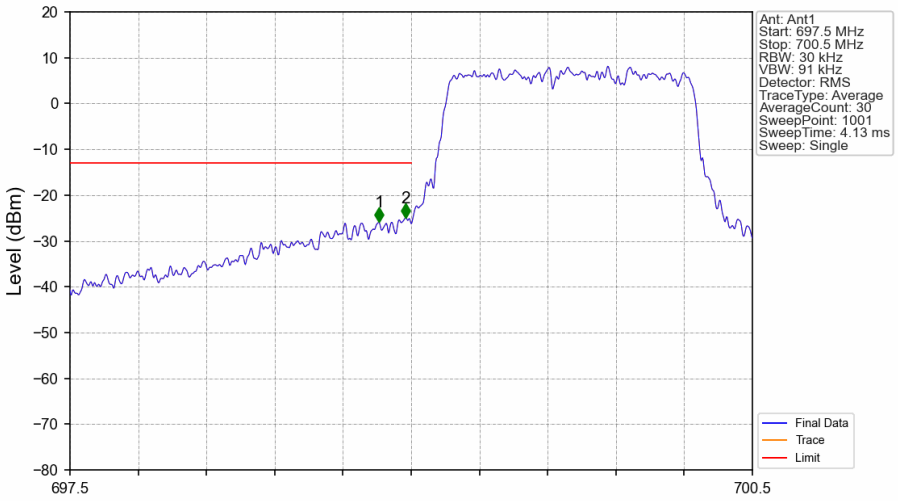

Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV



Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_1_0_NTNV

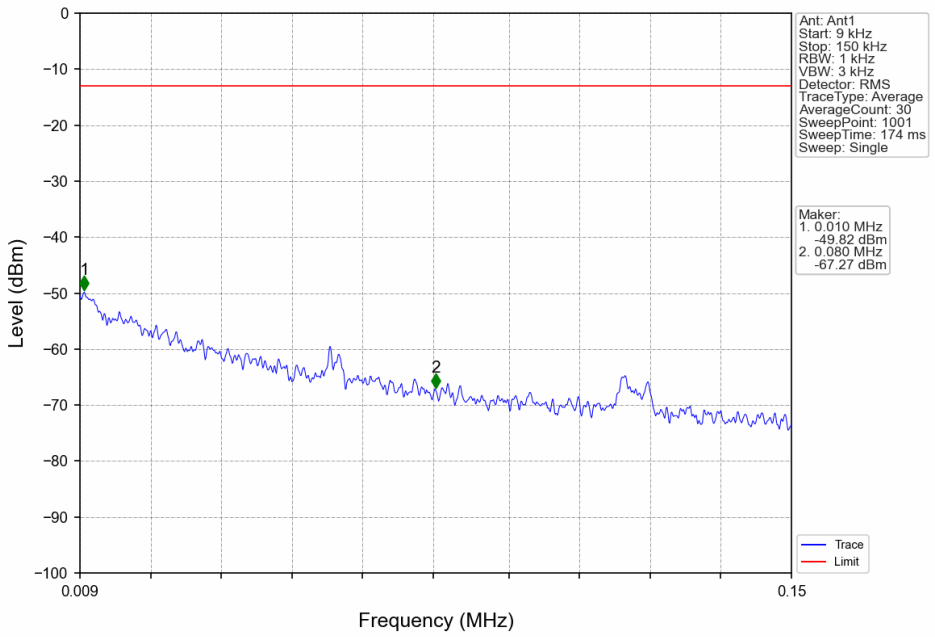



Band12_1.4MHz_16QAM_LCH_699.7MHz_RB_6_0_NTNV

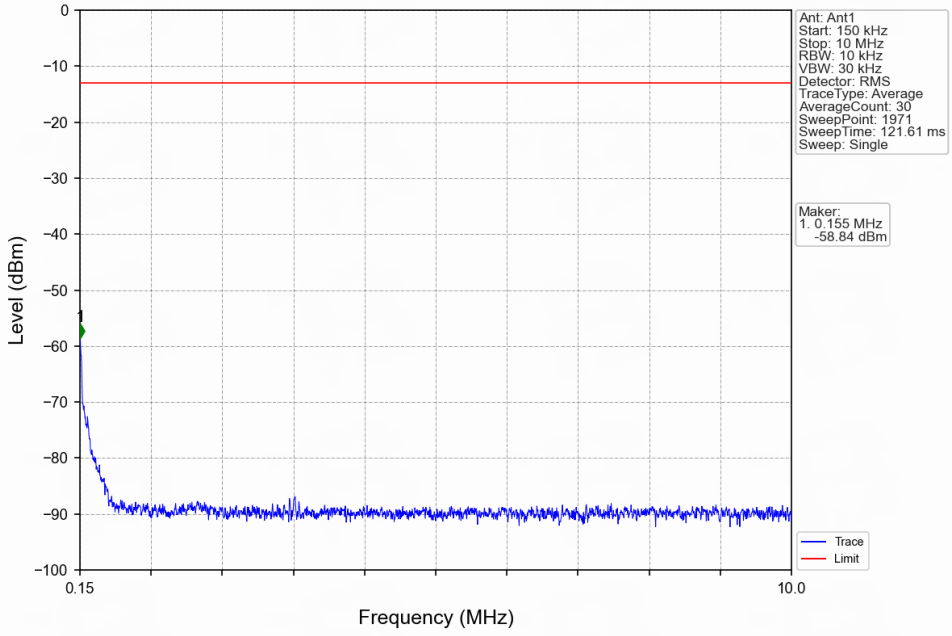



| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|---|
| 697.5 | 698.9 | 0.1 | / | 1 | 698.859 | -25.94 | -13 | Pass |
| 698.9 | 699 | 0.03 | / | 2 | 698.976 | -24.93 | -13 | Pass |
| 699 | 700.5 | 0.03 | / | / | / | / | / | / |

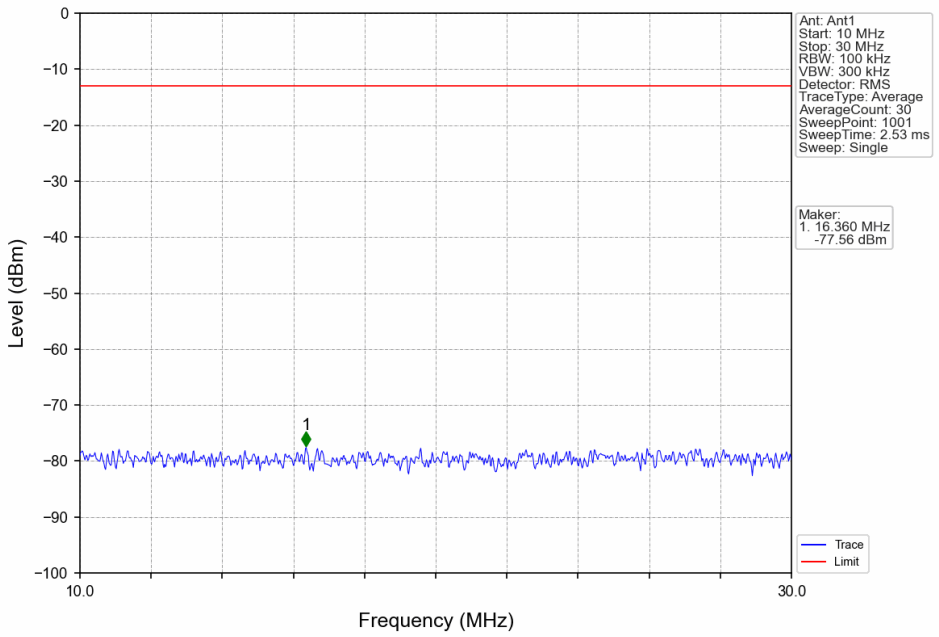
Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV




Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV




Band12_1.4MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV