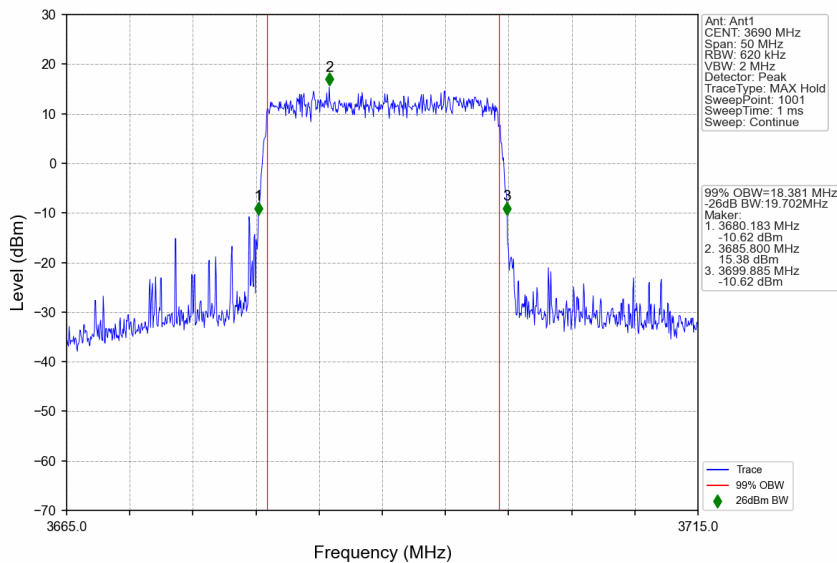


n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 256 QAM\_3690MHz\_Outer\_Full



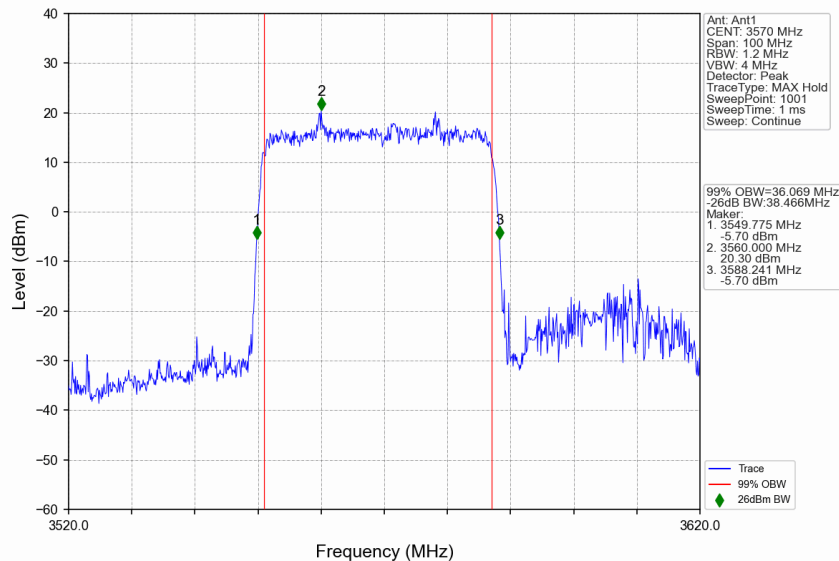
## 4.2 30k\_SISO\_40MHz\_NTNV

### 4.2.1 Test Result

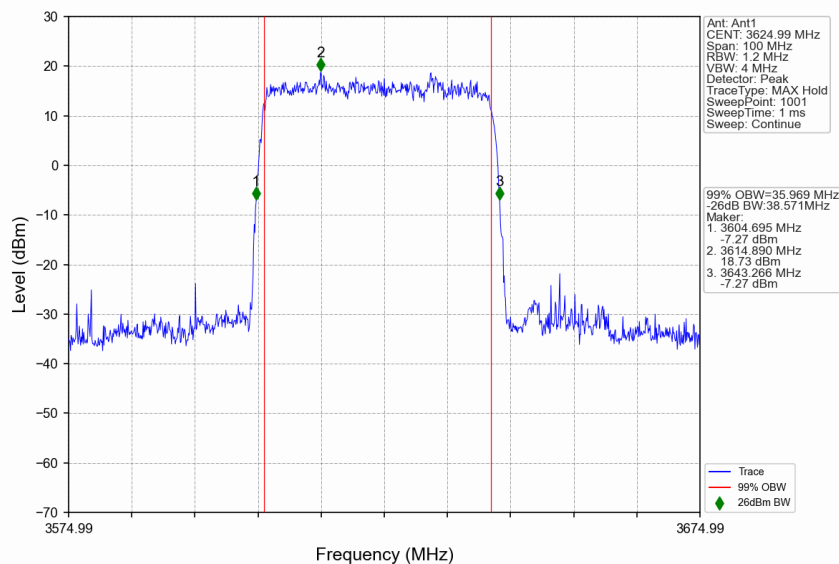
| 5G NR n48 SCS=30kHz SISO 40MHz NTN |                 |               |                     |                      |             |         |
|------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM PI/2 BPSK               | 3570            | Outer_Full    | 36.07               | 38.47                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 35.97               | 38.57                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 35.92               | 38.63                | /           | Pass    |
| DFT-s-OFDM QPSK                    | 3570            | Outer_Full    | 35.98               | 38.71                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 36.04               | 38.67                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.07               | 38.63                | /           | Pass    |
| DFT-s-OFDM 16 QAM                  | 3570            | Outer_Full    | 36.16               | 38.61                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 35.93               | 38.64                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.03               | 38.55                | /           | Pass    |
| DFT-s-OFDM 64 QAM                  | 3570            | Outer_Full    | 36.07               | 38.51                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 36.14               | 38.66                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.05               | 38.60                | /           | Pass    |
| DFT-s-OFDM 256 QAM                 | 3570            | Outer_Full    | 36.03               | 38.56                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 35.90               | 38.60                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.00               | 38.49                | /           | Pass    |
| CP-OFDM QPSK                       | 3570            | Outer_Full    | 37.99               | 40.70                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.13               | 40.62                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 37.98               | 40.56                | /           | Pass    |
| CP-OFDM 16 QAM                     | 3570            | Outer_Full    | 38.20               | 40.61                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.10               | 40.70                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.10               | 40.69                | /           | Pass    |
| CP-OFDM 64 QAM                     | 3570            | Outer_Full    | 38.08               | 40.77                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.02               | 40.72                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.04               | 40.65                | /           | Pass    |
| CP-OFDM 256 QAM                    | 3570            | Outer_Full    | 38.04               | 40.85                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 37.98               | 40.63                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.10               | 40.78                | /           | Pass    |

4.2.2 Test Graph

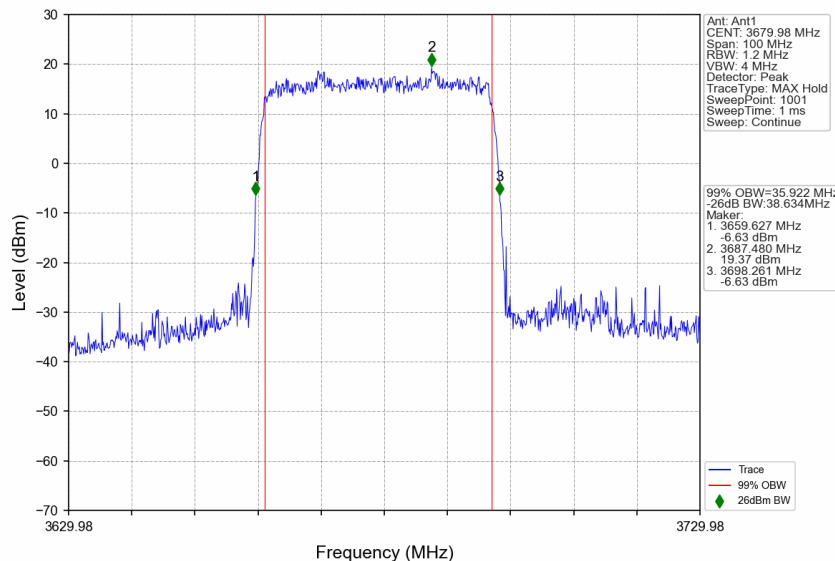
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3570MHz\_Outer\_Full



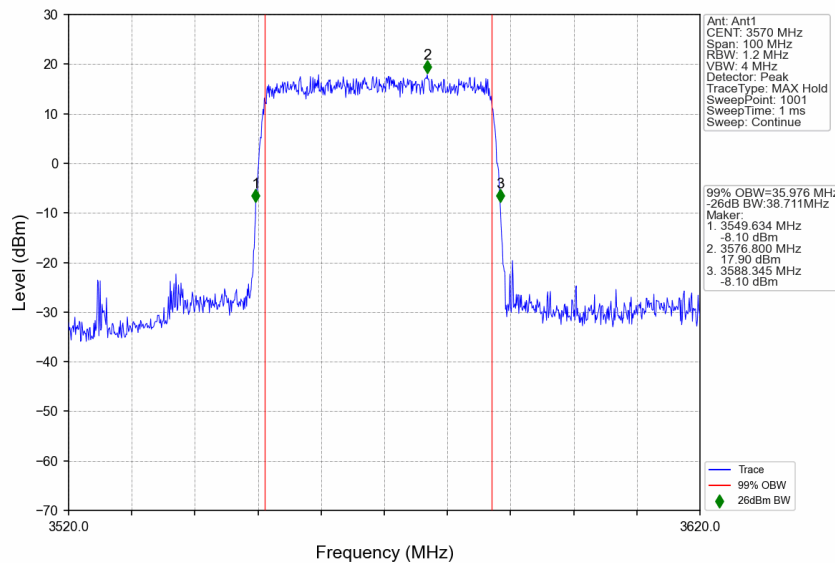
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Outer\_Full



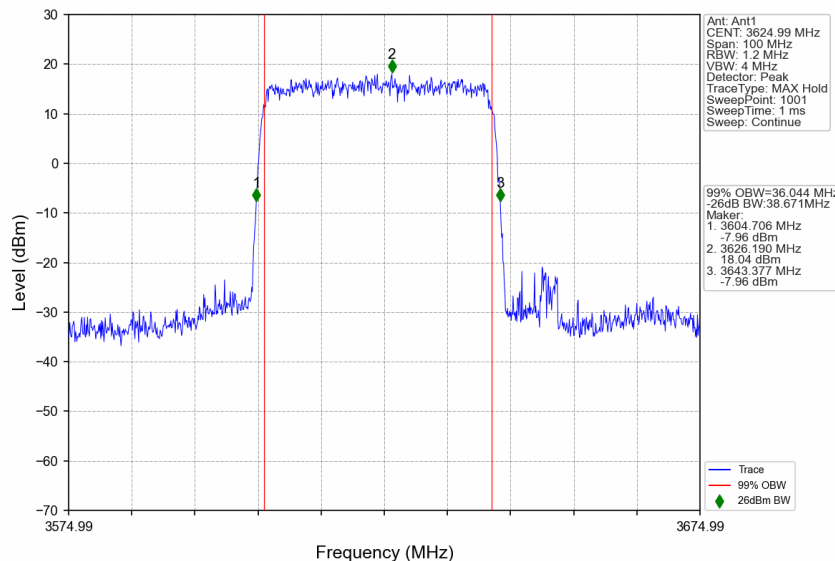
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3679.98MHz\_Outer\_Full



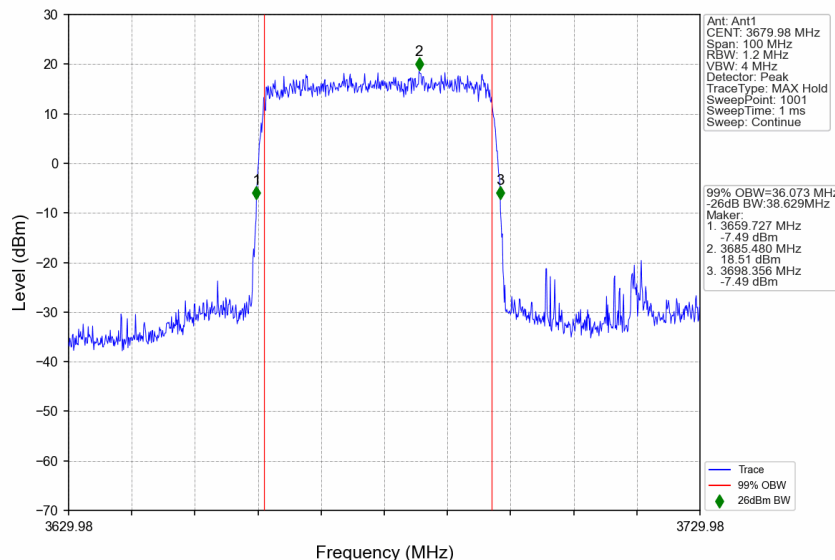
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3570MHz\_Outer\_Full



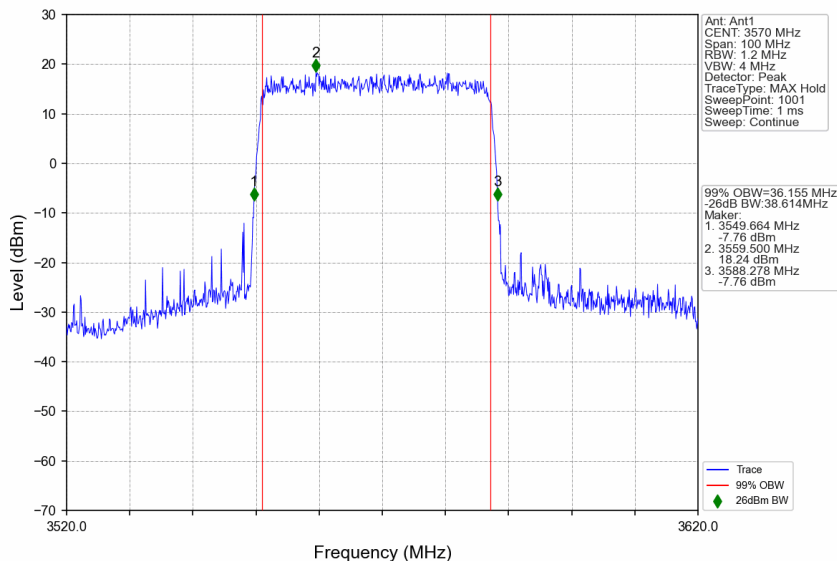
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3624.99MHz\_Outer\_Full



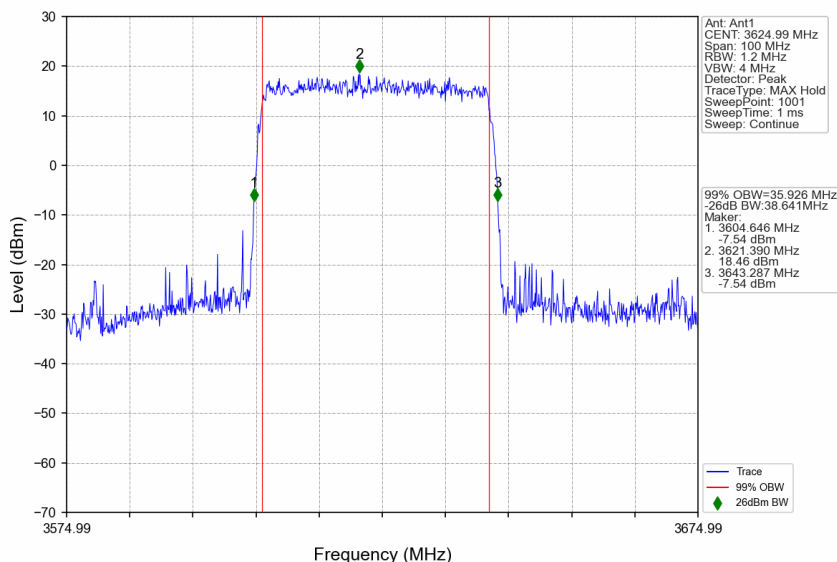
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3679.98MHz\_Outer\_Full



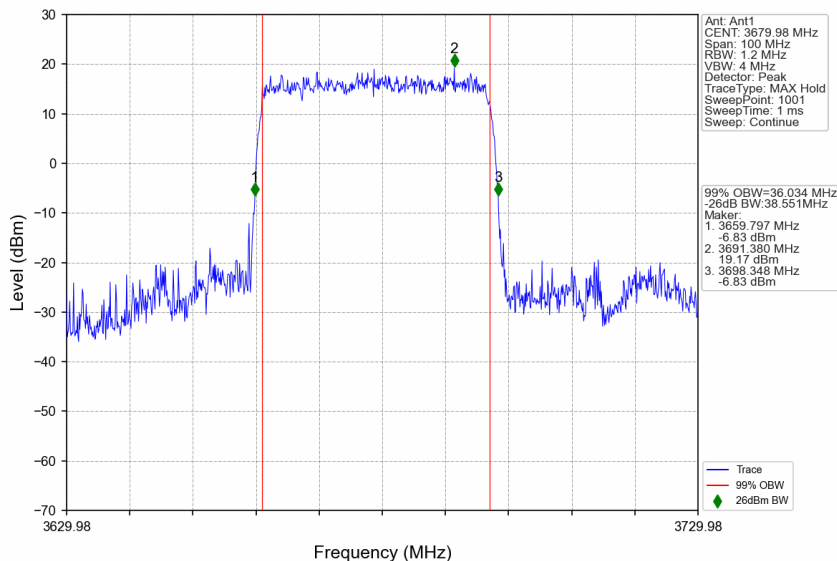
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3570MHz\_Outer\_Full



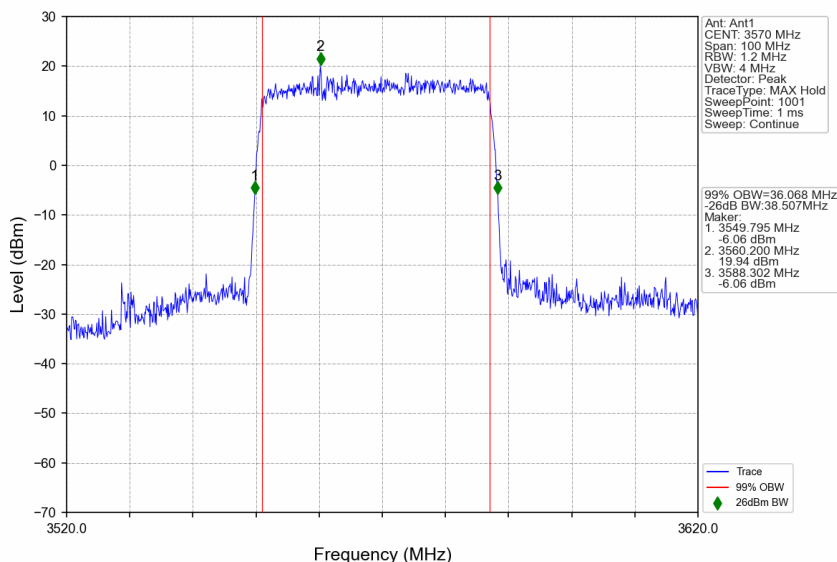
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



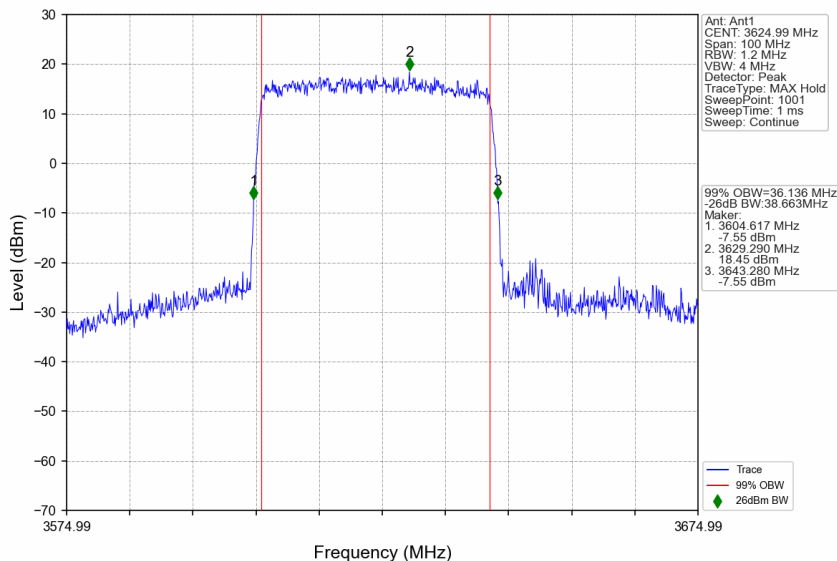
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3679.98MHz\_Outer\_Full



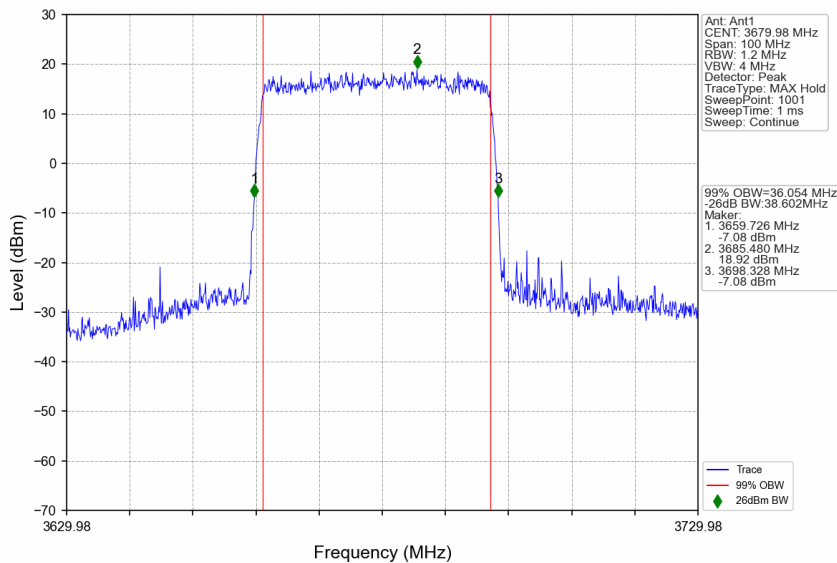
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3570MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3624.99MHz\_Outer\_Full

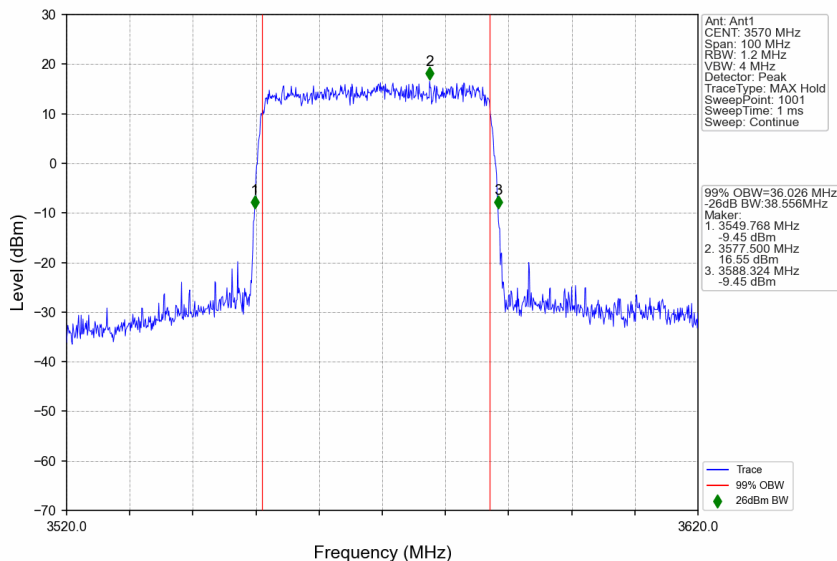


n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3679.98MHz\_Outer\_Full

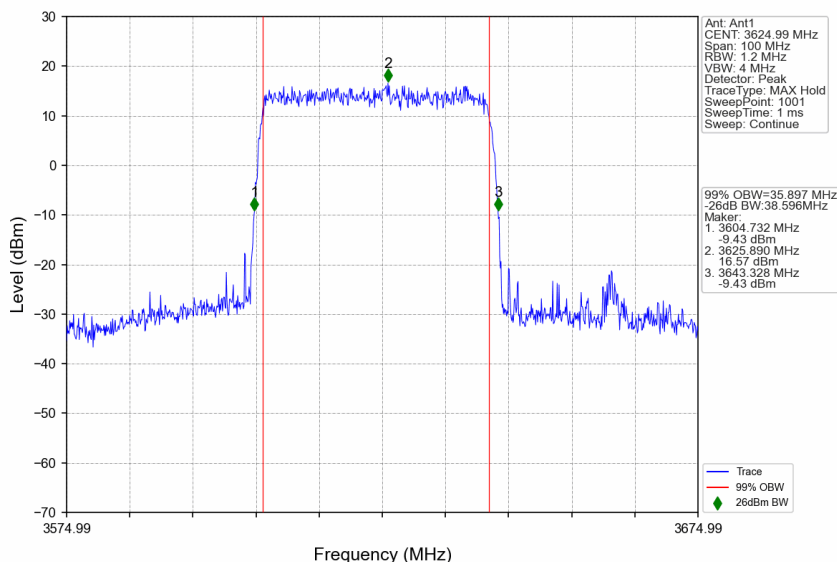




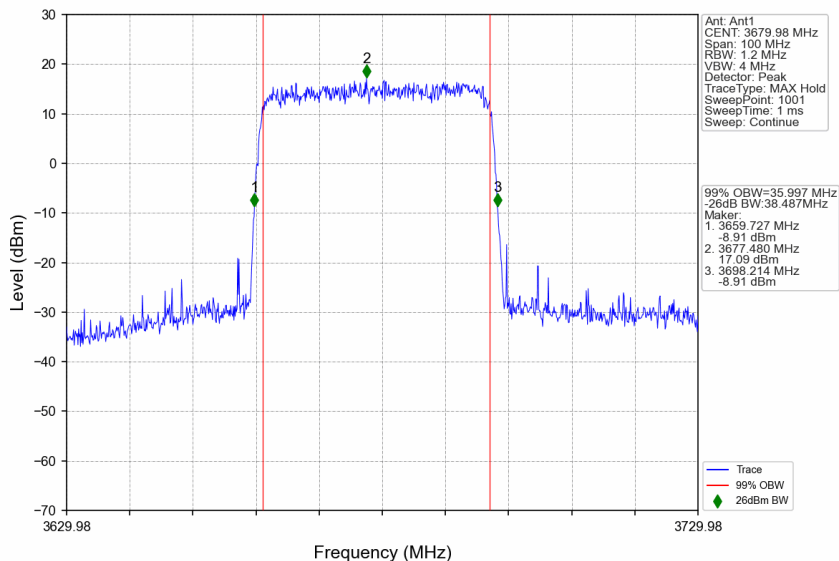
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3570MHz\_Outer\_Full



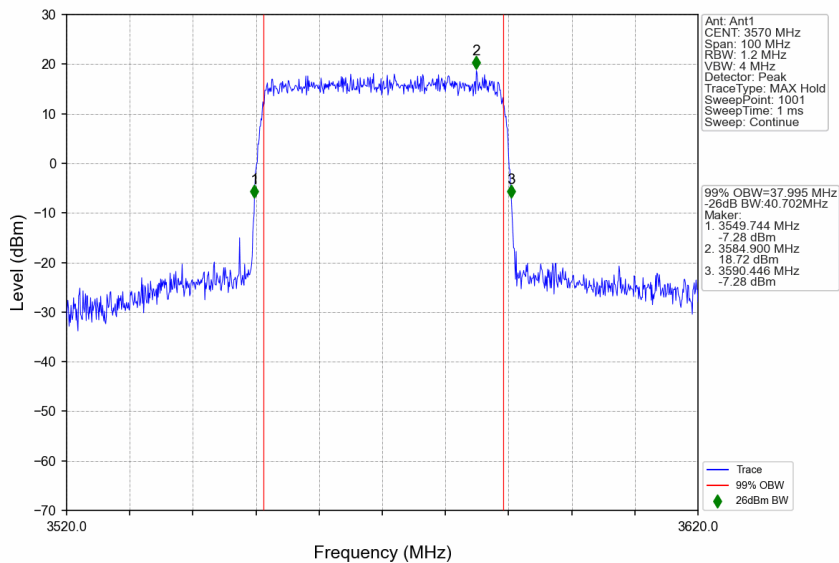
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



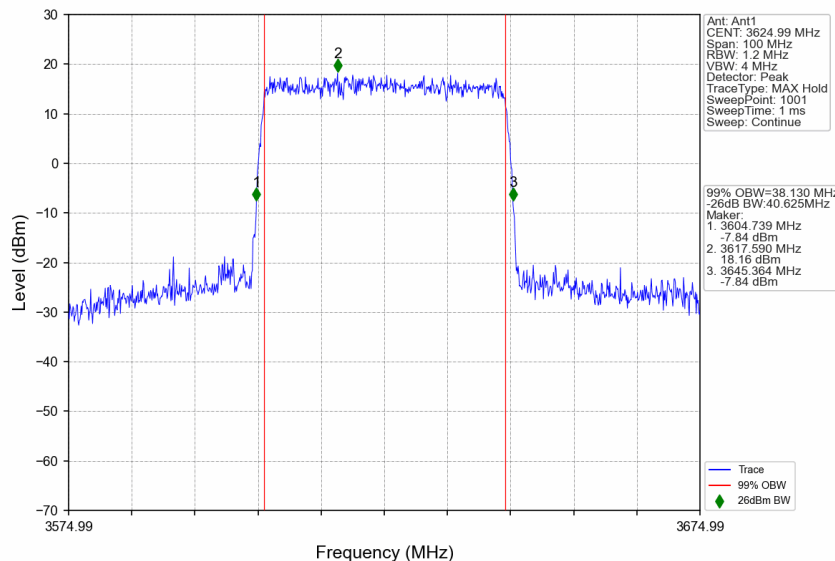
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3679.98MHz\_Outer\_Full



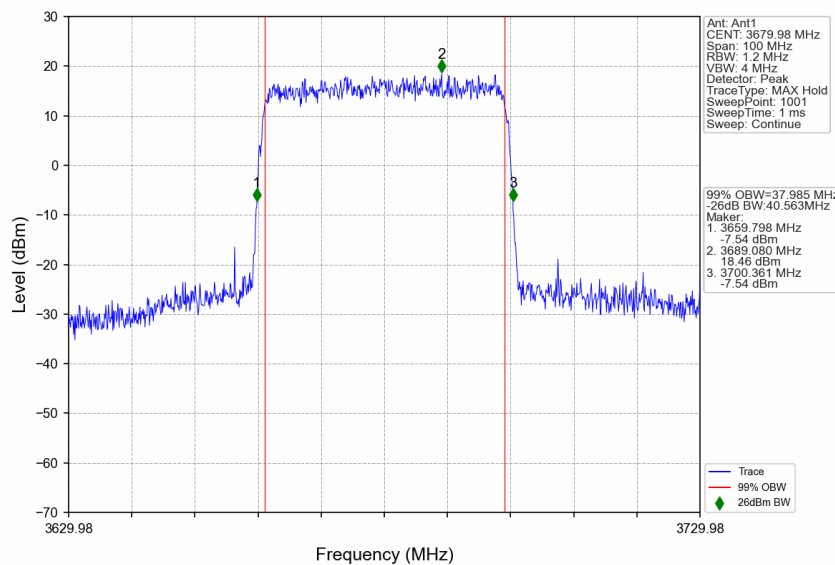
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3570MHz\_Outer\_Full



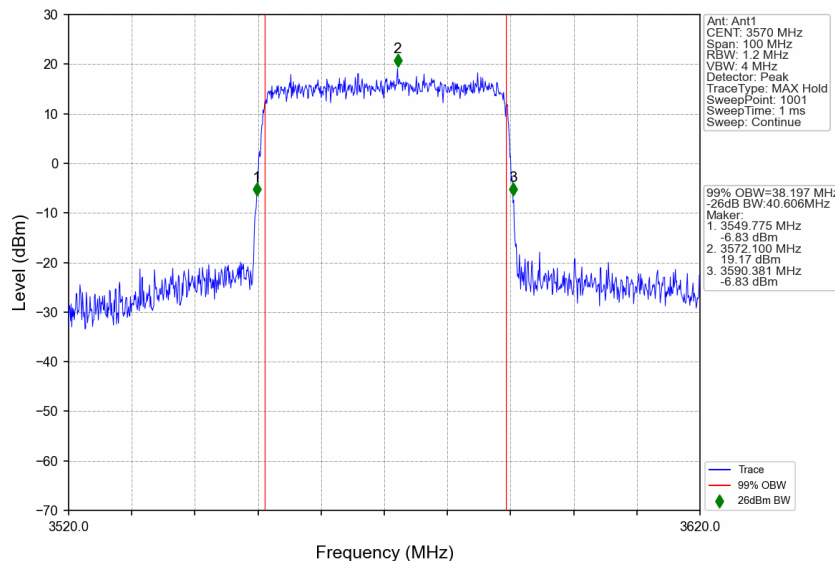
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3624.99MHz\_Outer\_Full



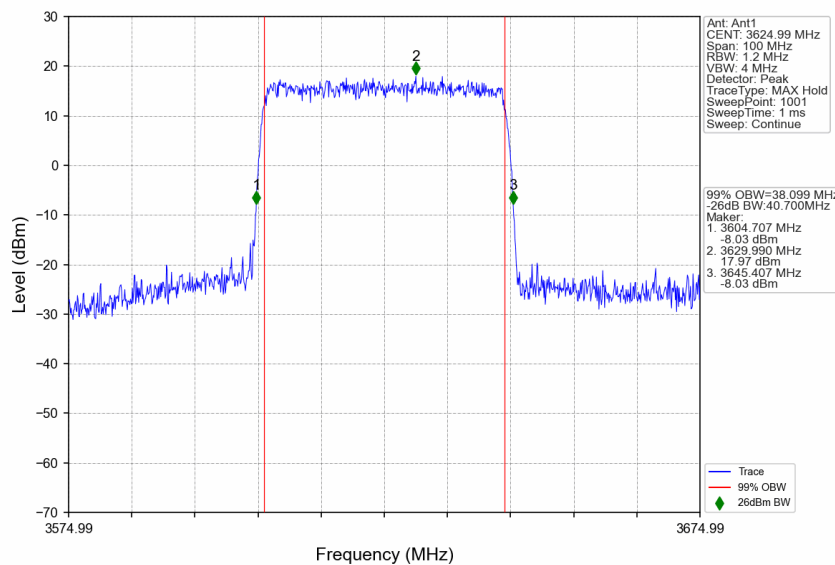
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3679.98MHz\_Outer\_Full



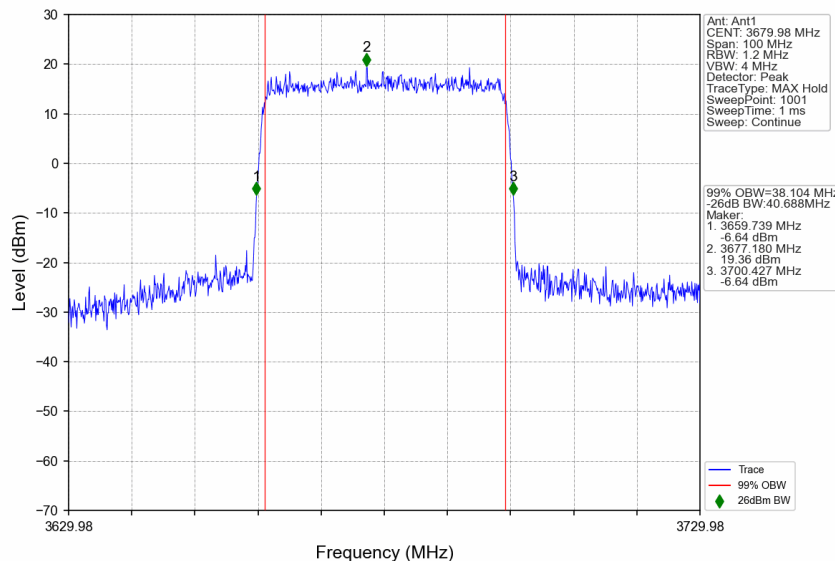
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3570MHz\_Outer\_Full



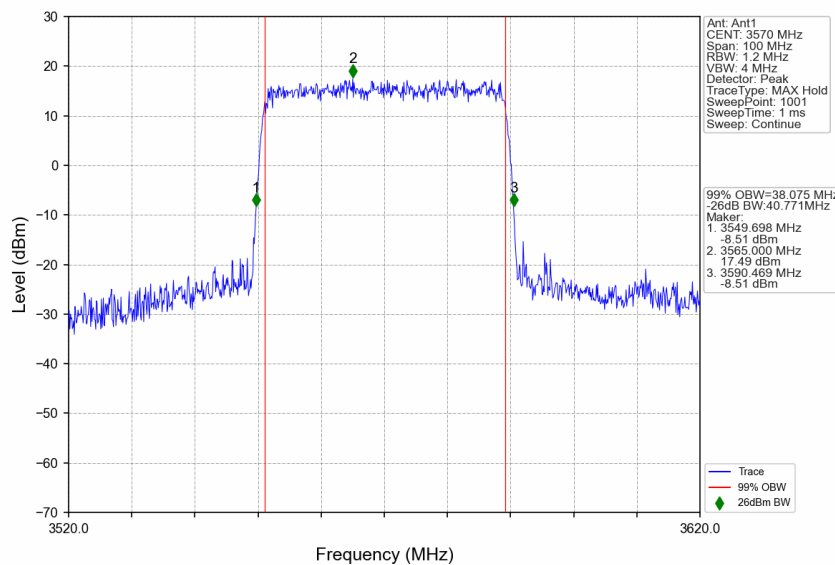
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



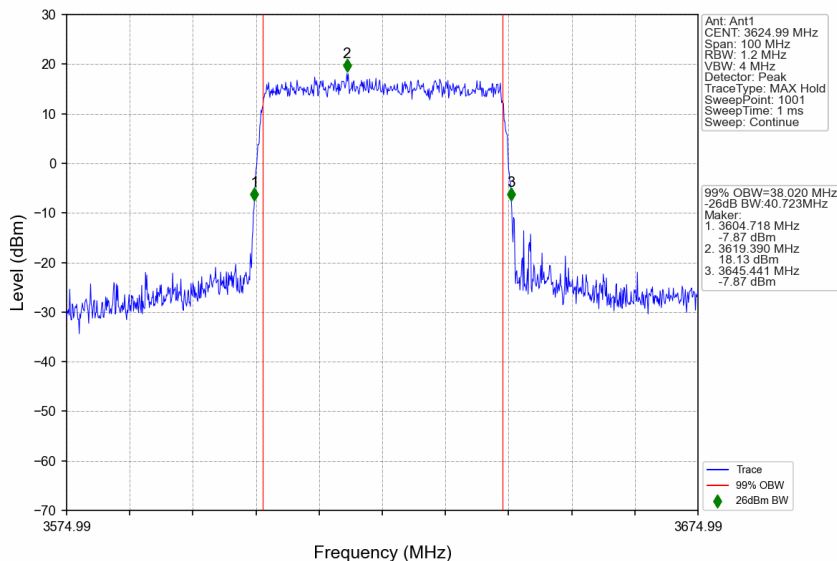
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3679.98MHz\_Outer\_Full



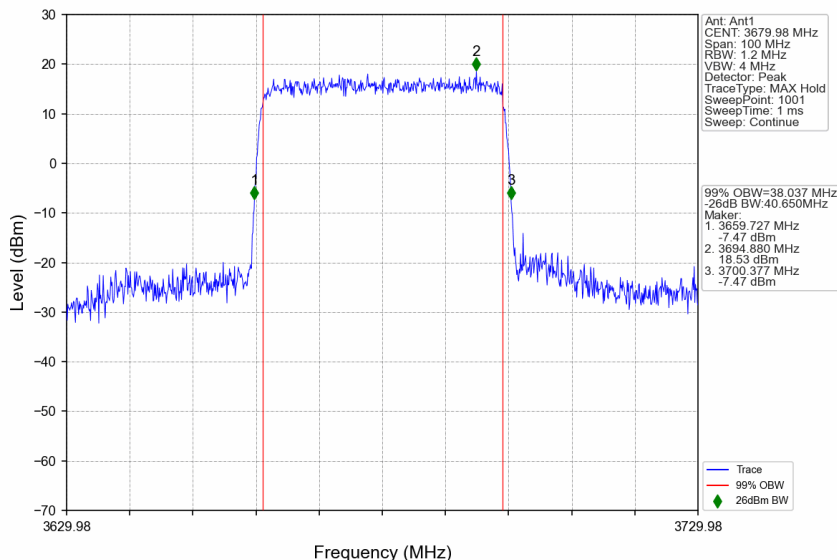
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3570MHz\_Outer\_Full



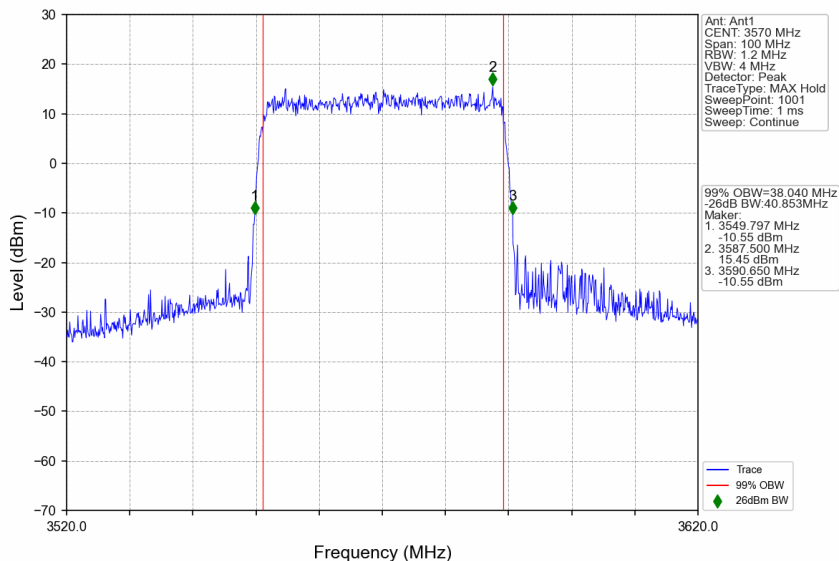
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3624.99MHz\_Outer\_Full



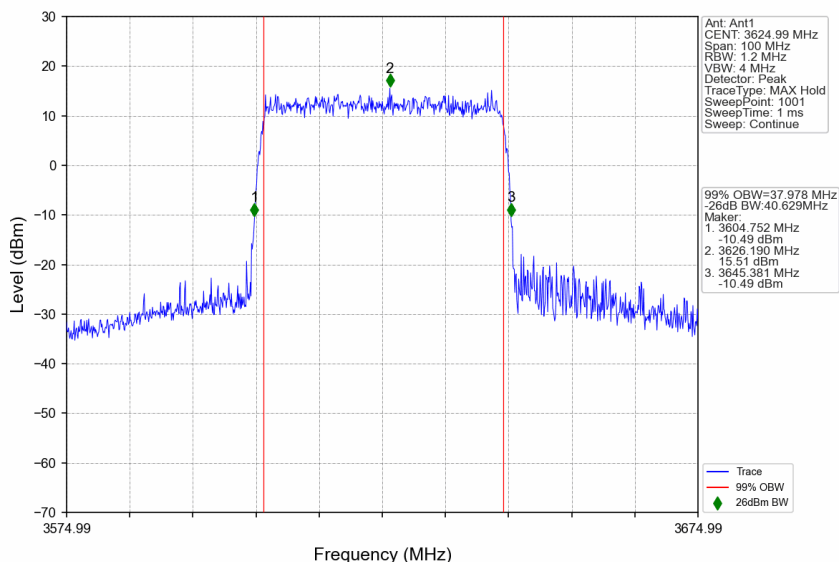
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3679.98MHz\_Outer\_Full



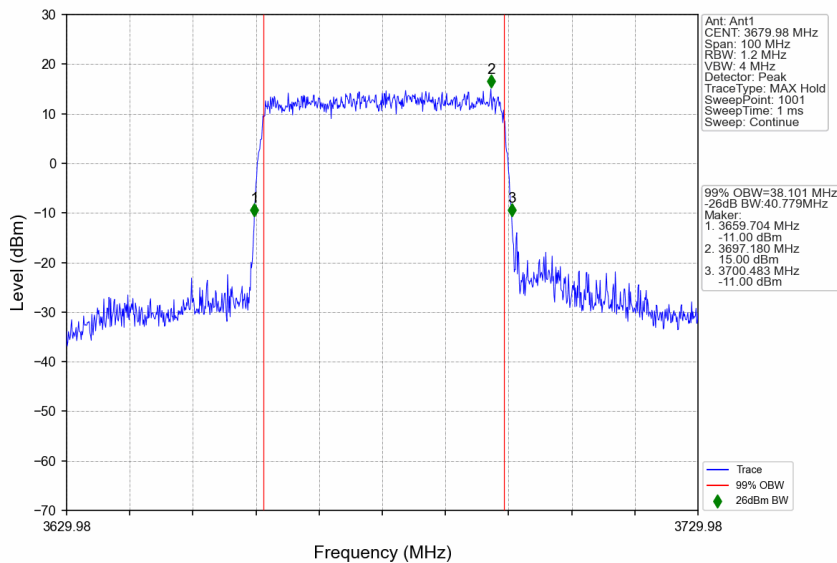
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3570MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3679.98MHz\_Outer\_Full





## 5. Peak-Average Ratio

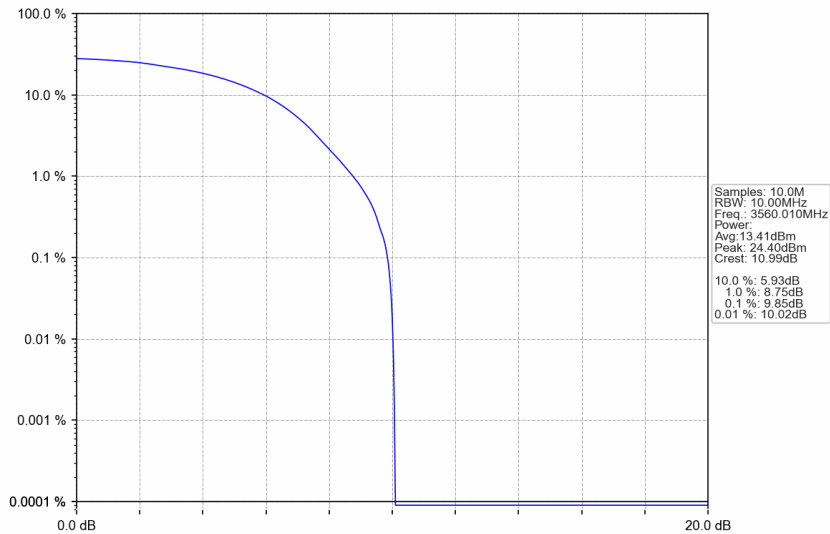
### 5.1 30k\_SISO\_20MHz\_NTNV

#### 5.1.1 Test Result

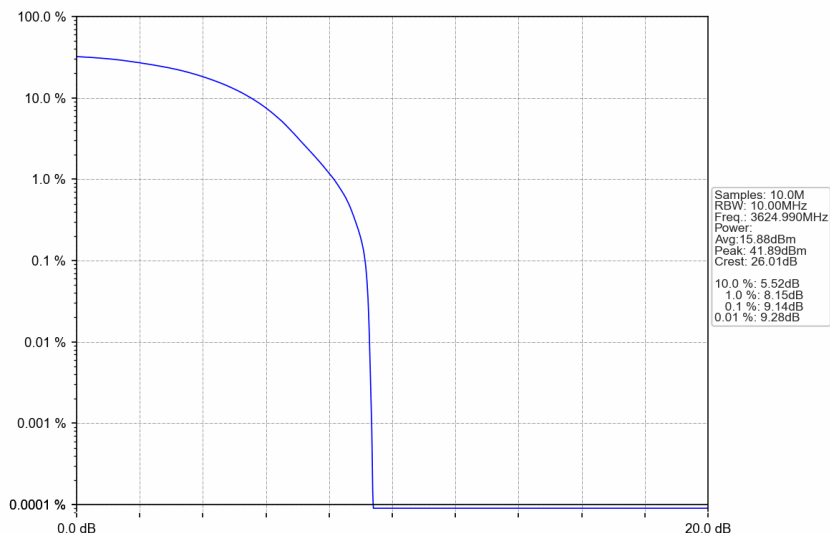
| 5G NR n48 SCS=30kHz SISO 20MHz NTN |                 |               |                         |      |     |       |         |
|------------------------------------|-----------------|---------------|-------------------------|------|-----|-------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation | Peak-Average Ratio (dB) |      |     |       | Verdict |
|                                    |                 |               | Ant1                    | Ant2 | Sum | Limit |         |
| DFT-s-OFDM PI/2 BPSK               | 3560.01         | Outer_Full    | 9.85                    | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 9.14                    | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 8.81                    | /    | /   | <=13  | Pass    |
| DFT-s-OFDM QPSK                    | 3560.01         | Outer_Full    | 9.65                    | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 9.52                    | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 9.77                    | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 16 QAM                  | 3560.01         | Outer_Full    | 10.51                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 9.65                    | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 10.83                   | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 64 QAM                  | 3560.01         | Outer_Full    | 10.52                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 10.91                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 11.50                   | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 256 QAM                 | 3560.01         | Outer_Full    | 12.31                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.23                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 11.69                   | /    | /   | <=13  | Pass    |
| CP-OFDM QPSK                       | 3560.01         | Outer_Full    | 12.34                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 12.37                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 12.38                   | /    | /   | <=13  | Pass    |
| CP-OFDM 16 QAM                     | 3560.01         | Outer_Full    | 12.29                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 12.20                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 12.04                   | /    | /   | <=13  | Pass    |
| CP-OFDM 64 QAM                     | 3560.01         | Outer_Full    | 11.73                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 12.14                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 12.01                   | /    | /   | <=13  | Pass    |
| CP-OFDM 256 QAM                    | 3560.01         | Outer_Full    | 11.94                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.96                   | /    | /   | <=13  | Pass    |
|                                    | 3690            | Outer_Full    | 11.78                   | /    | /   | <=13  | Pass    |

5.1.2 Test Graph

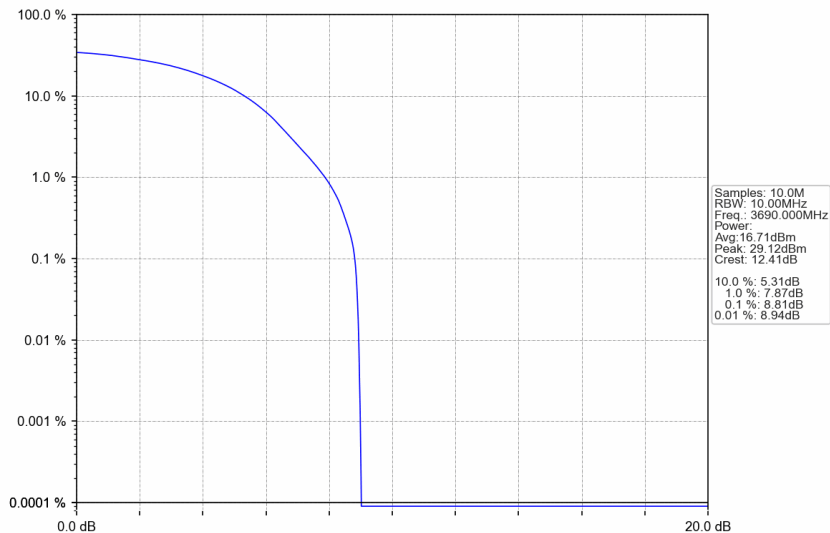
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full



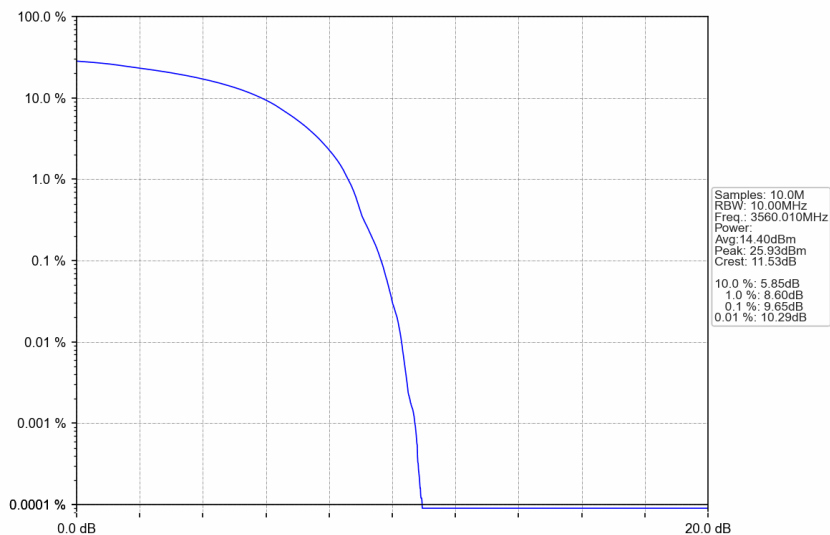
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Outer\_Full



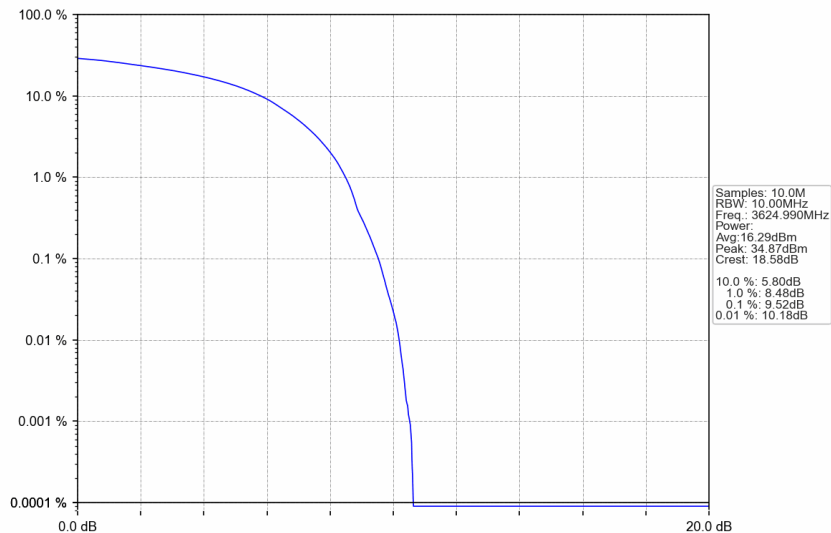
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3690MHz\_Outer\_Full



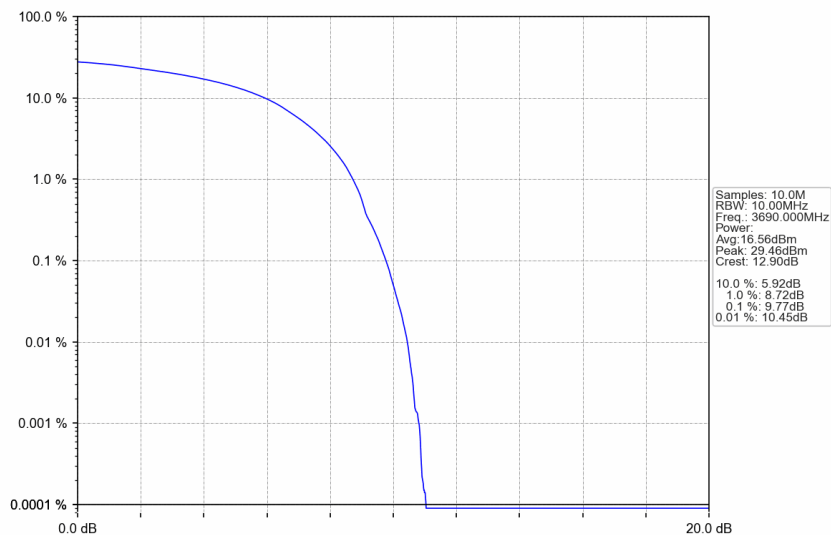
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM QPSK\_3560.01MHz\_Outer\_Full



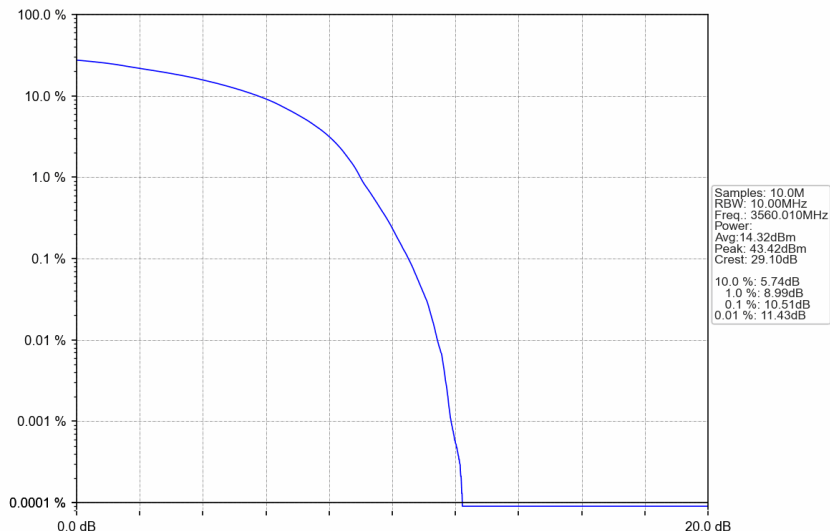
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM QPSK\_3624.99MHz\_Outer\_Full



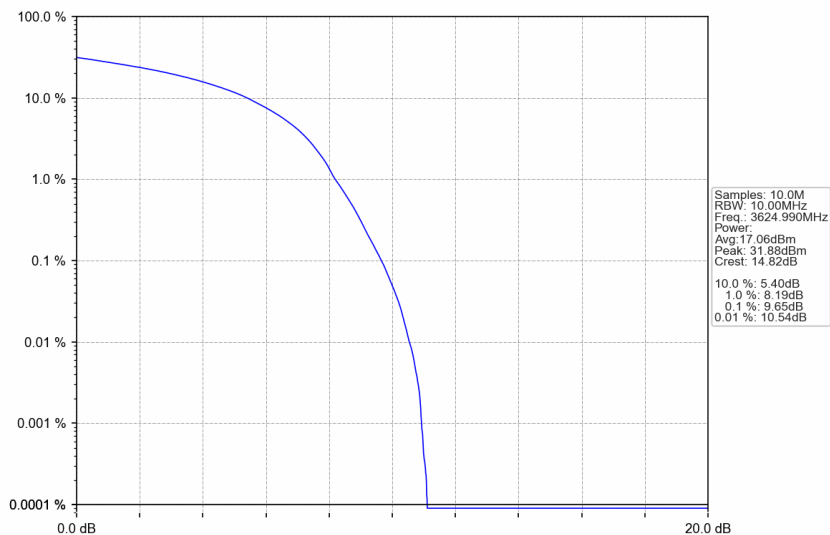
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM QPSK\_3690MHz\_Outer\_Full



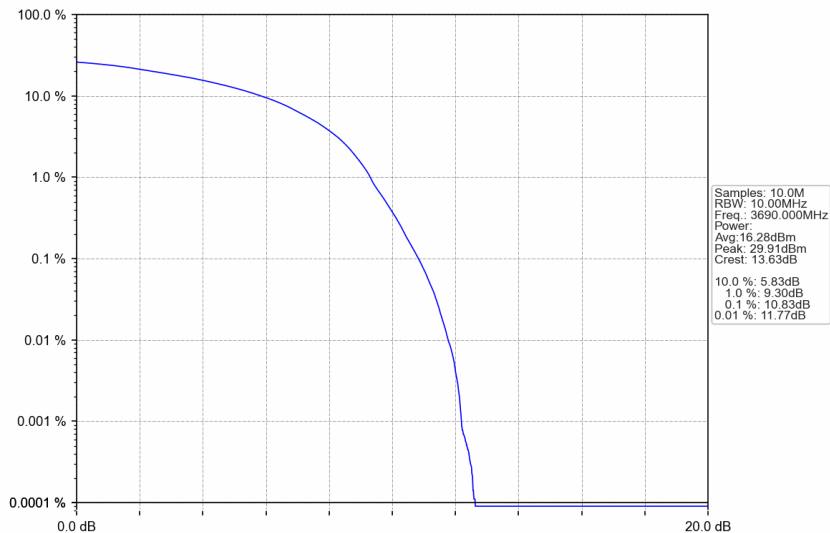
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_3560.01MHz\_Outer\_Full



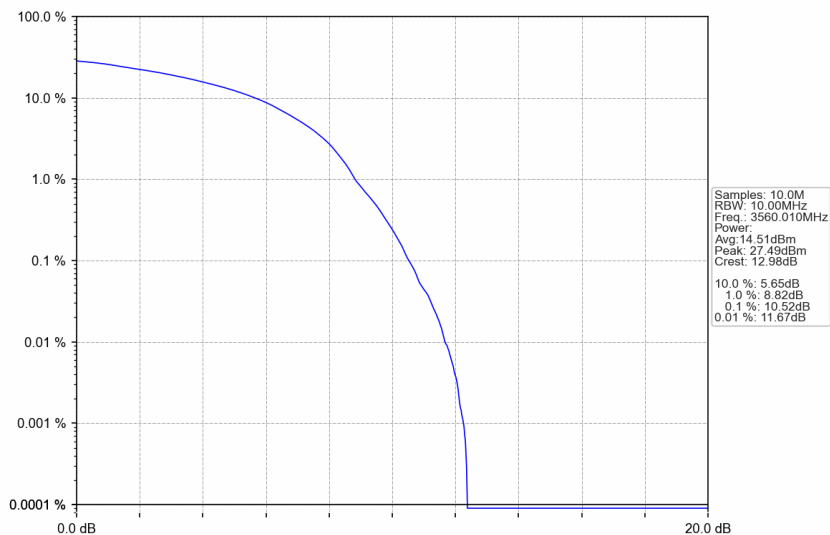
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



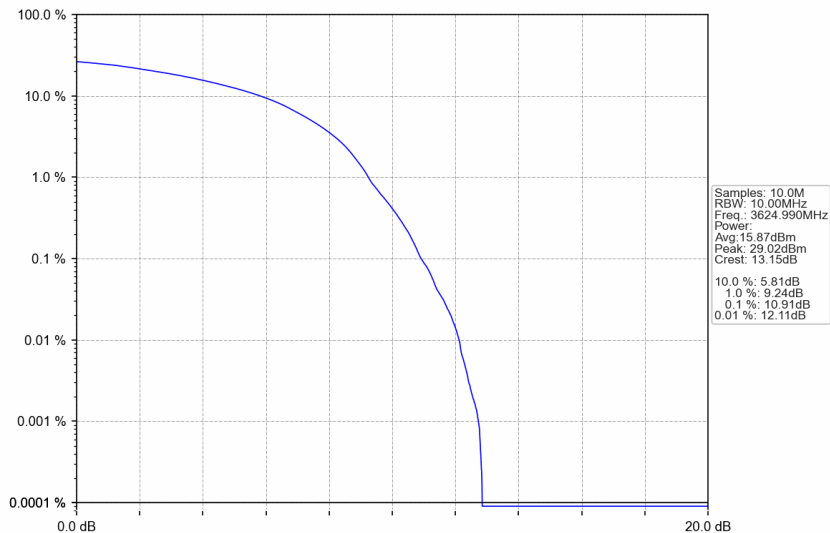
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_3690MHz\_Outer\_Full



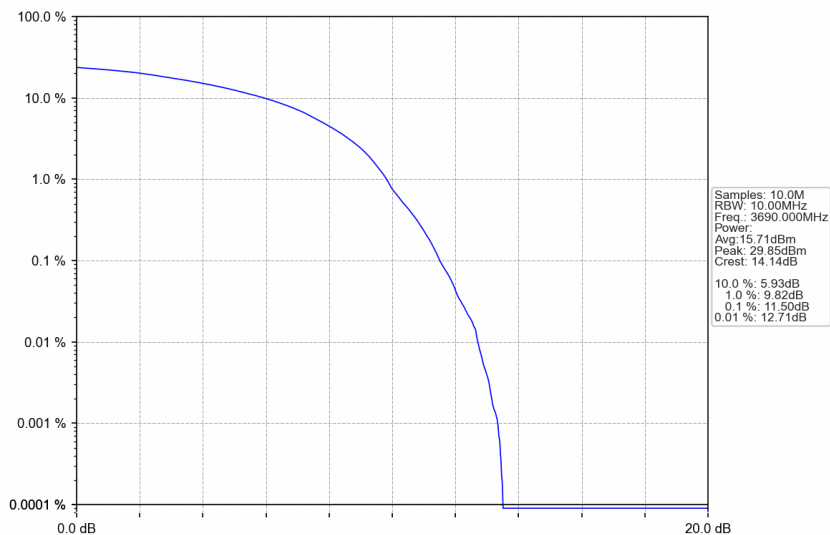
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 64 QAM\_3560.01MHz\_Outer\_Full



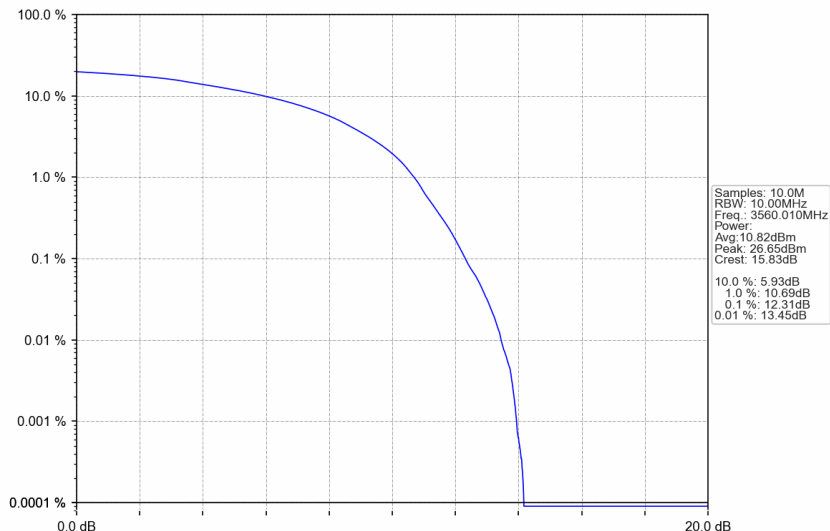
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 64 QAM\_3624.99MHz\_Outer\_Full



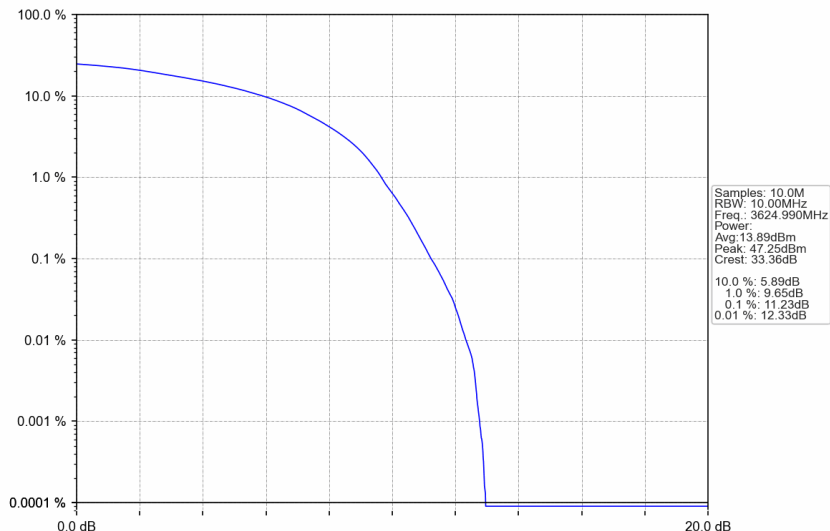
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 64 QAM\_3690MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 256 QAM\_3560.01MHz\_Outer\_Full

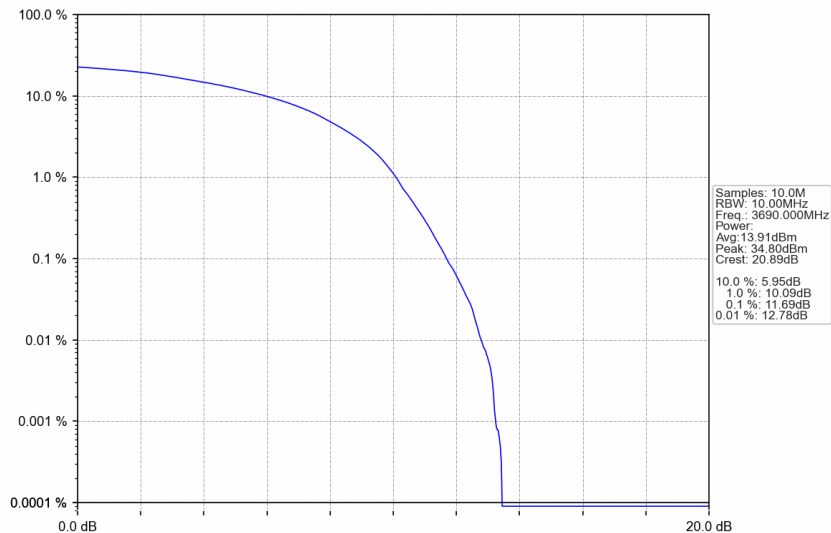


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 256 QAM\_3624.99MHz\_Outer\_Full

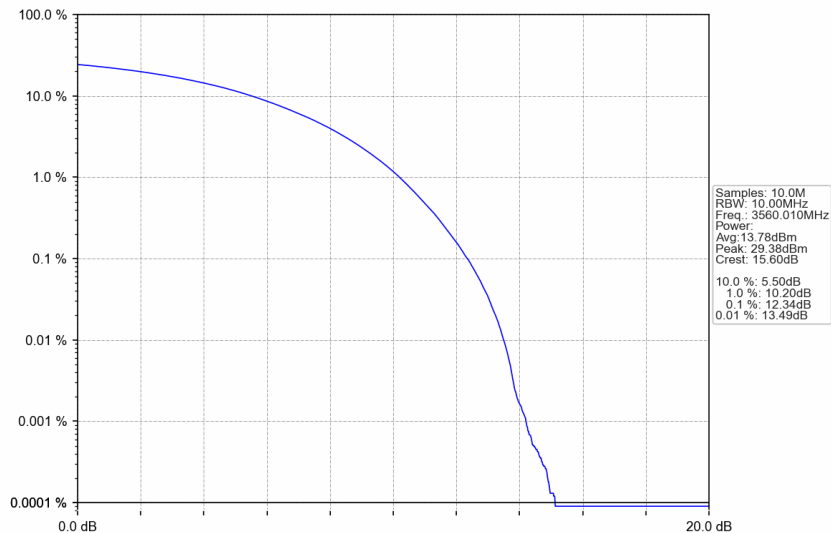




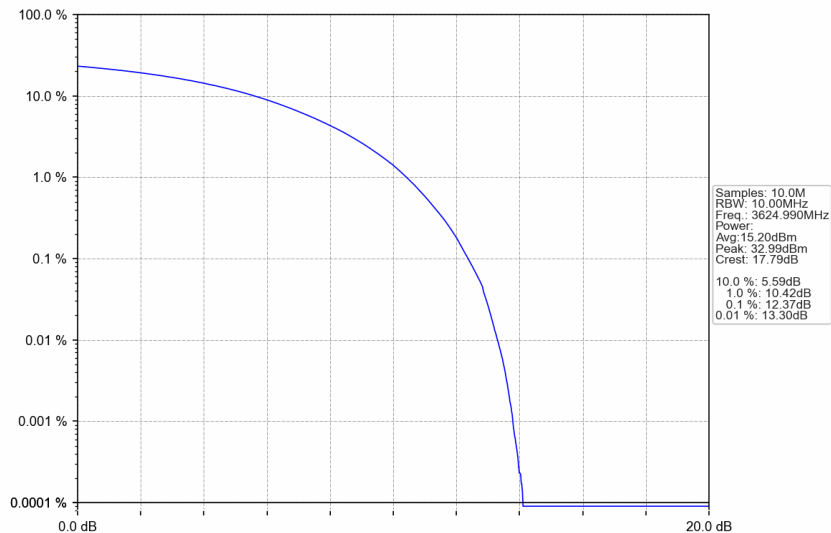
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 256 QAM\_3690MHz\_Outer\_Full



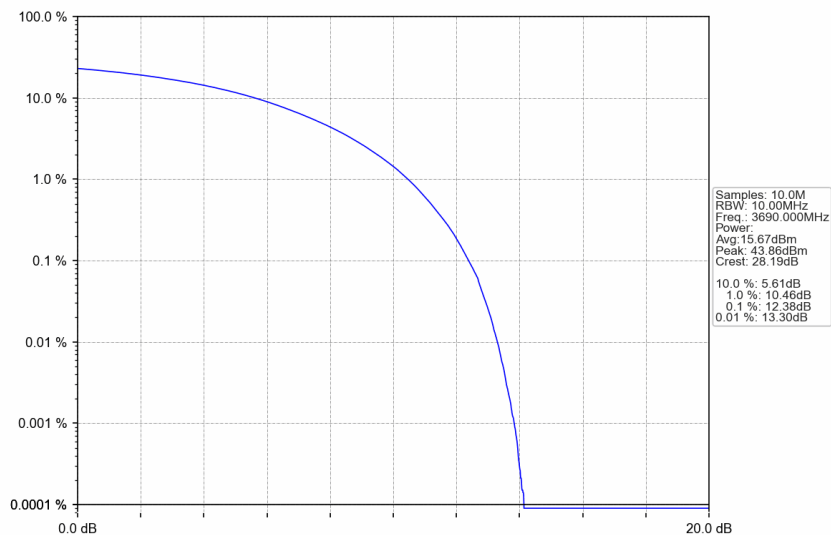
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM QPSK\_3560.01MHz\_Outer\_Full



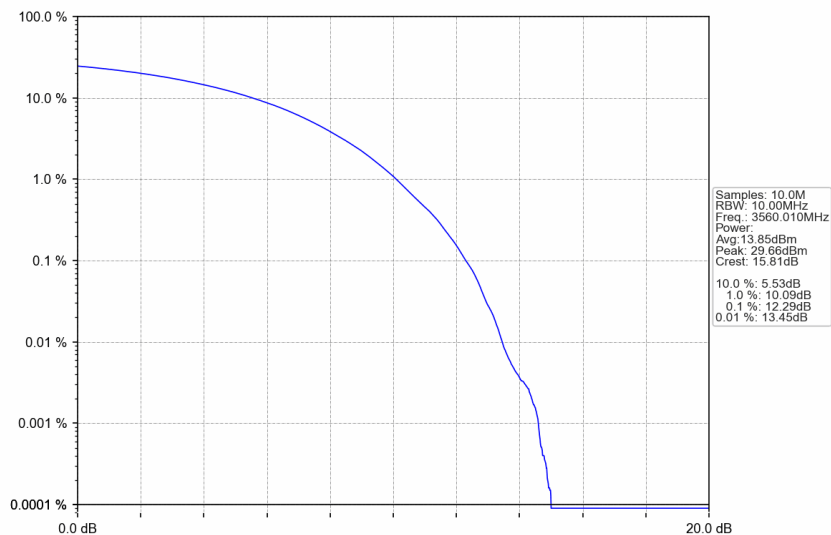
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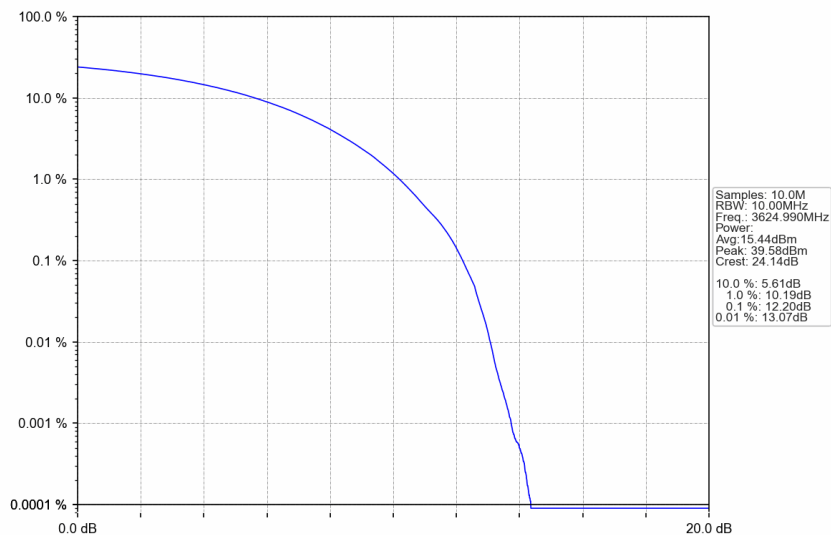
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM QPSK\_3690MHz\_Outer\_Full



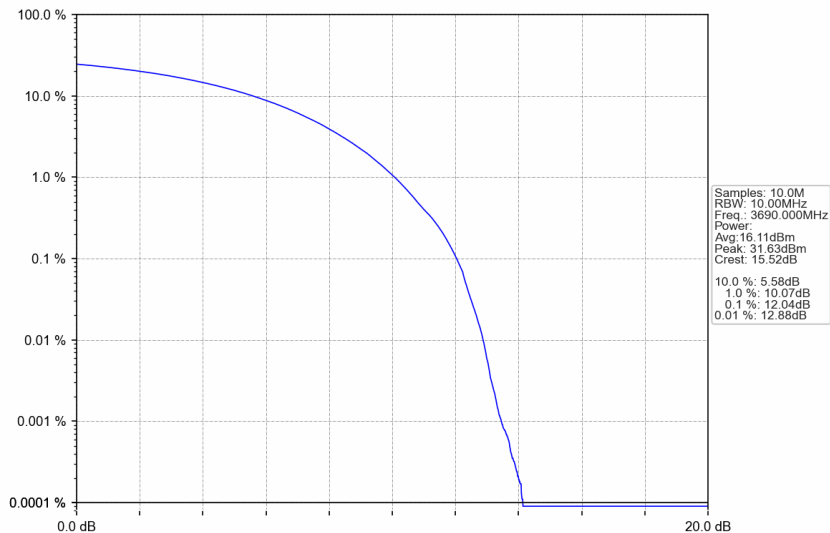
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 16 QAM\_3560.01MHz\_Outer\_Full



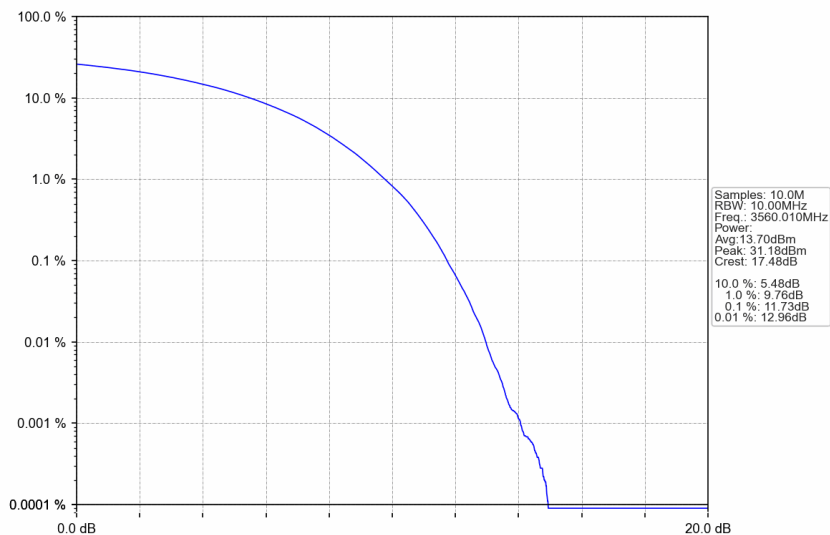
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



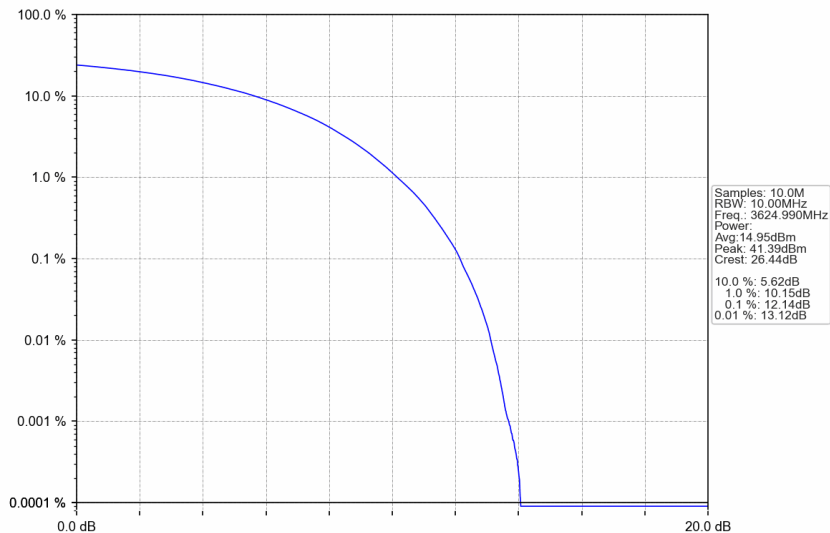
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 16 QAM\_3690MHz\_Outer\_Full



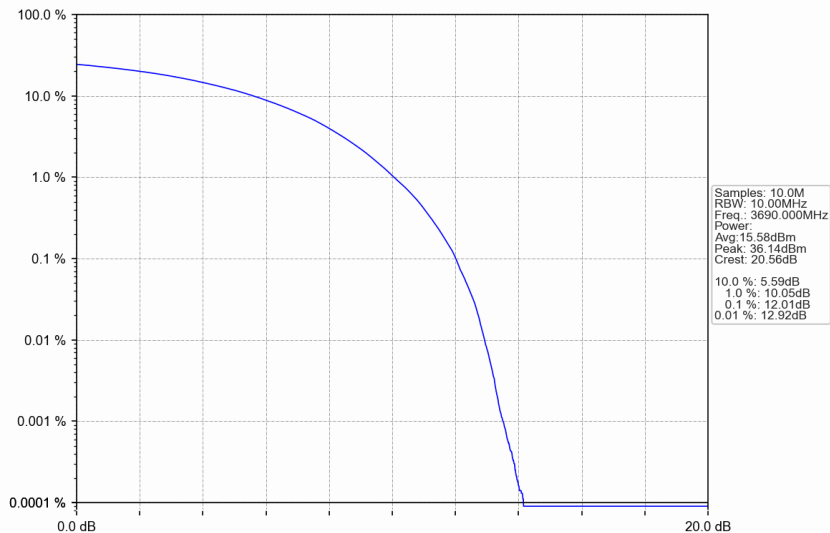
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 64 QAM\_3560.01MHz\_Outer\_Full



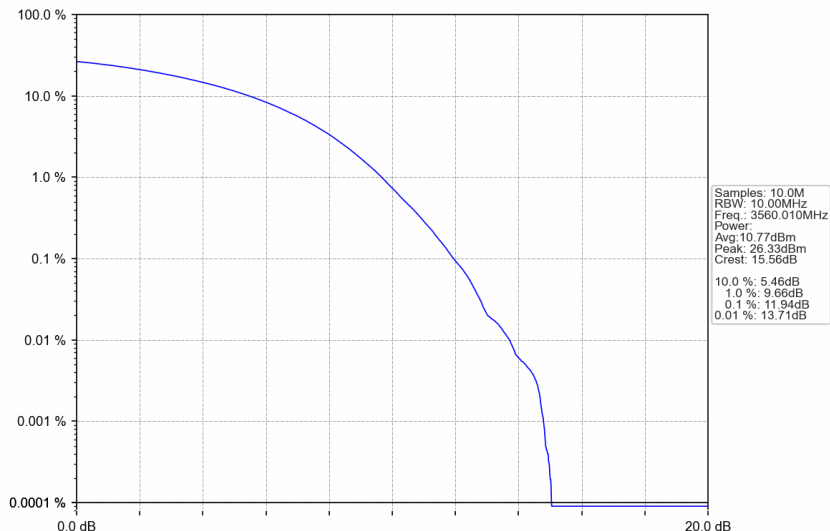
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 64 QAM\_3624.99MHz\_Outer\_Full



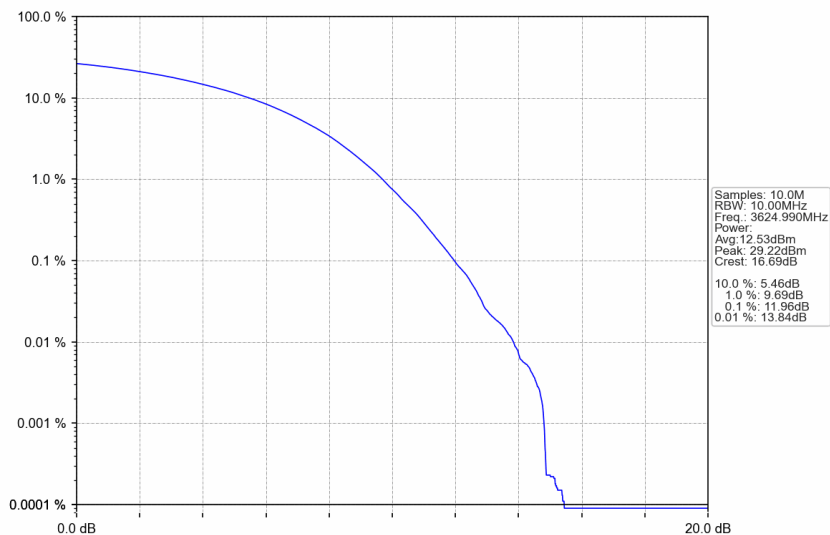
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 64 QAM\_3690MHz\_Outer\_Full



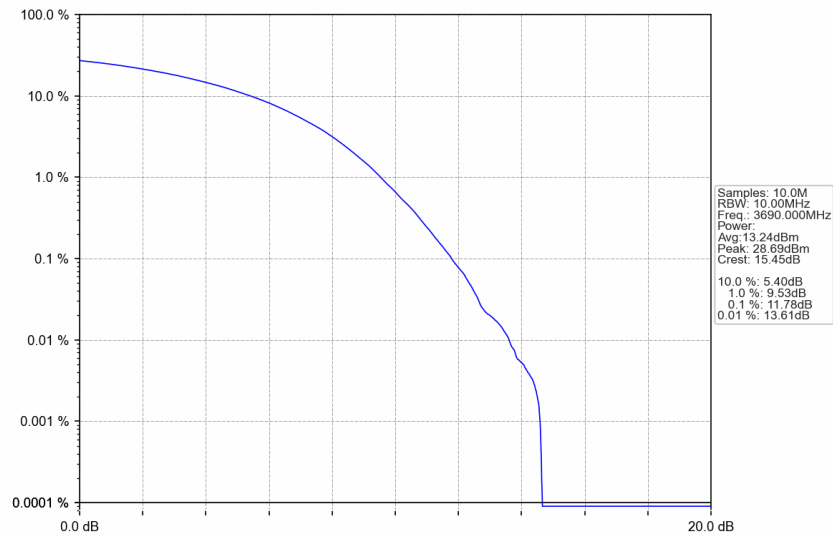
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 256 QAM\_3560.01MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 256 QAM\_3690MHz\_Outer\_Full



## 5.2 30k\_SISO\_40MHz\_NTNV

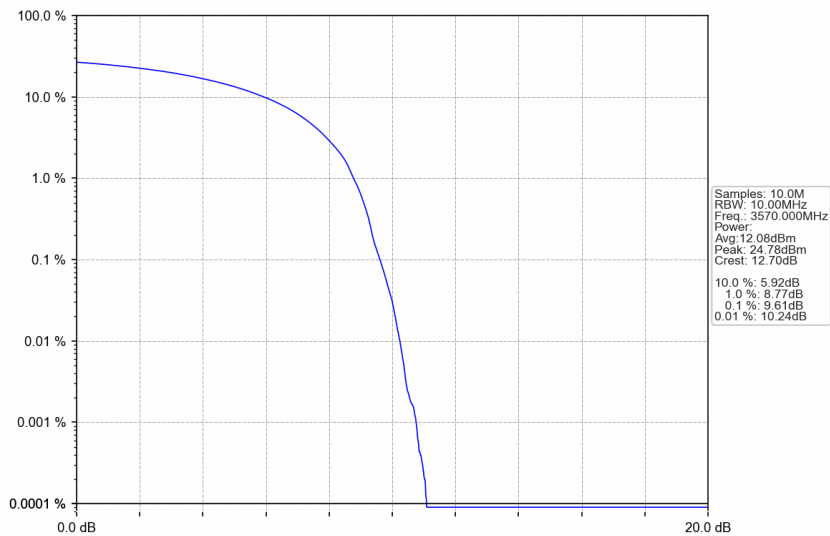
### 5.2.1 Test Result

| 5G NR n48 SCS=30kHz SISO 40MHz NTN |                 |               |                         |      |     |       |         |
|------------------------------------|-----------------|---------------|-------------------------|------|-----|-------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation | Peak-Average Ratio (dB) |      |     |       | Verdict |
|                                    |                 |               | Ant1                    | Ant2 | Sum | Limit |         |
| DFT-s-OFDM PI/2 BPSK               | 3570            | Outer_Full    | 9.61                    | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 9.37                    | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 9.46                    | /    | /   | <=13  | Pass    |
| DFT-s-OFDM QPSK                    | 3570            | Outer_Full    | 10.53                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 10.39                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 10.45                   | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 16 QAM                  | 3570            | Outer_Full    | 11.03                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 10.99                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.00                   | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 64 QAM                  | 3570            | Outer_Full    | 11.20                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.28                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.12                   | /    | /   | <=13  | Pass    |
| DFT-s-OFDM 256 QAM                 | 3570            | Outer_Full    | 11.12                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.09                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.15                   | /    | /   | <=13  | Pass    |
| CP-OFDM QPSK                       | 3570            | Outer_Full    | 11.80                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 12.87                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.79                   | /    | /   | <=13  | Pass    |
| CP-OFDM 16 QAM                     | 3570            | Outer_Full    | 12.05                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 12.08                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.98                   | /    | /   | <=13  | Pass    |
| CP-OFDM 64 QAM                     | 3570            | Outer_Full    | 12.07                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.72                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 12.25                   | /    | /   | <=13  | Pass    |
| CP-OFDM 256 QAM                    | 3570            | Outer_Full    | 11.47                   | /    | /   | <=13  | Pass    |
|                                    | 3624.99         | Outer_Full    | 11.56                   | /    | /   | <=13  | Pass    |
|                                    | 3679.98         | Outer_Full    | 11.53                   | /    | /   | <=13  | Pass    |

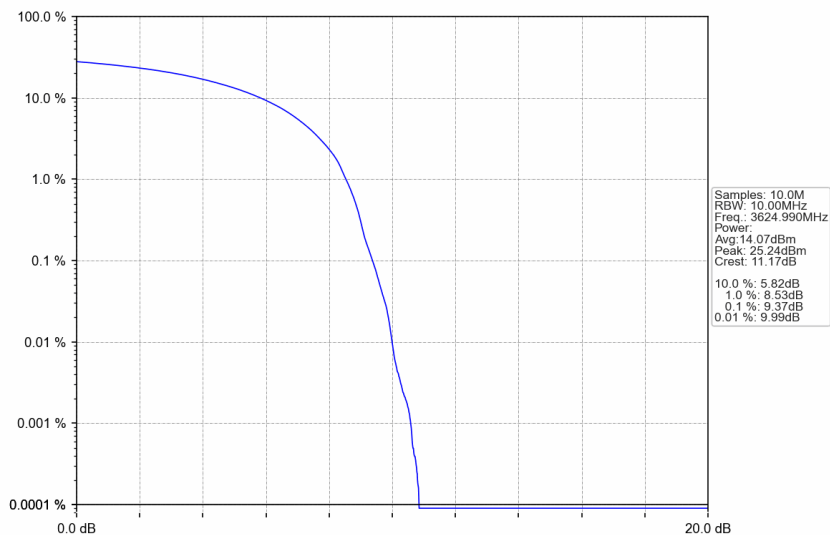


5.2.2 Test Graph

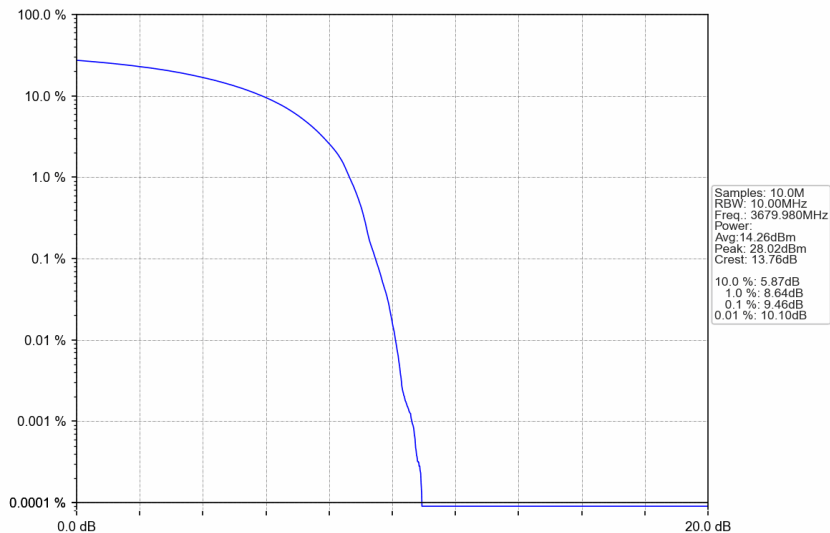
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3570MHz\_Outer\_Full



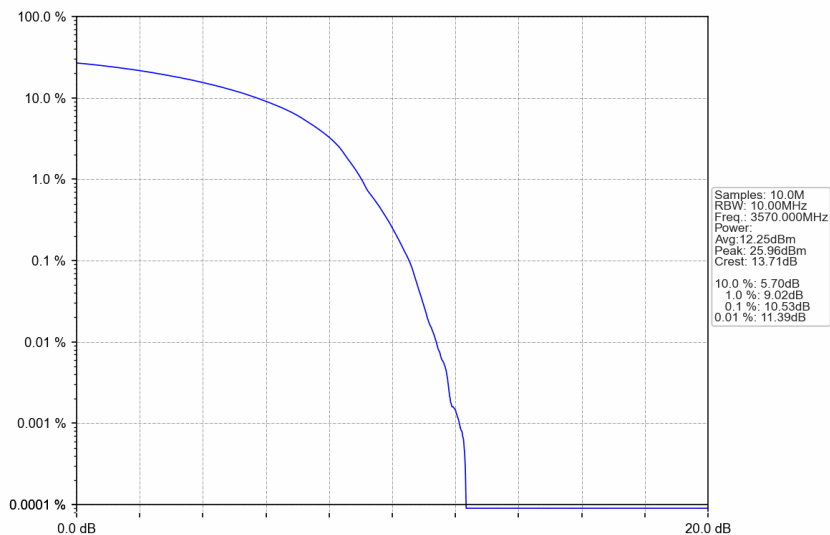
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Outer\_Full



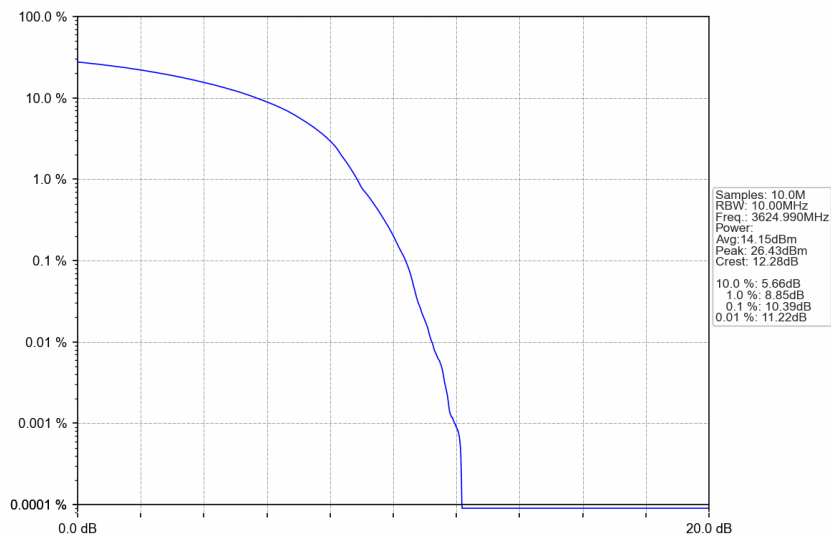
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM PI/2 BPSK\_3679.98MHz\_Outer\_Full



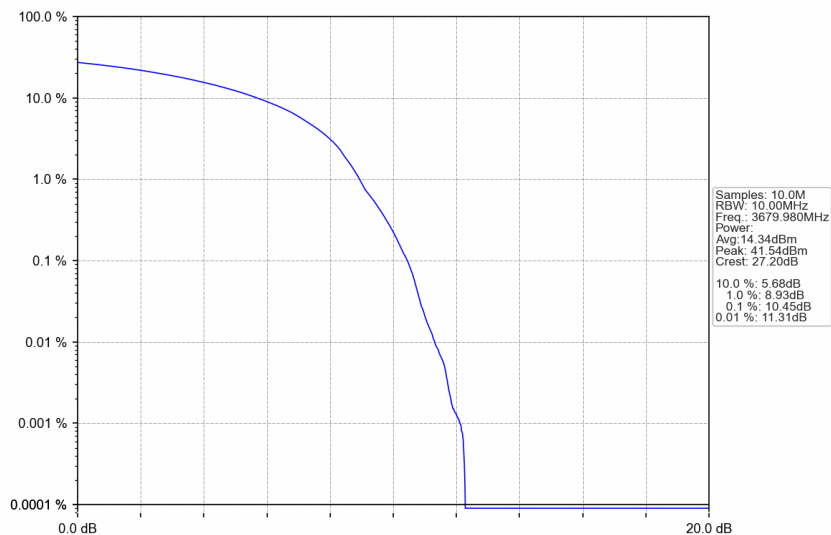
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3570MHz\_Outer\_Full



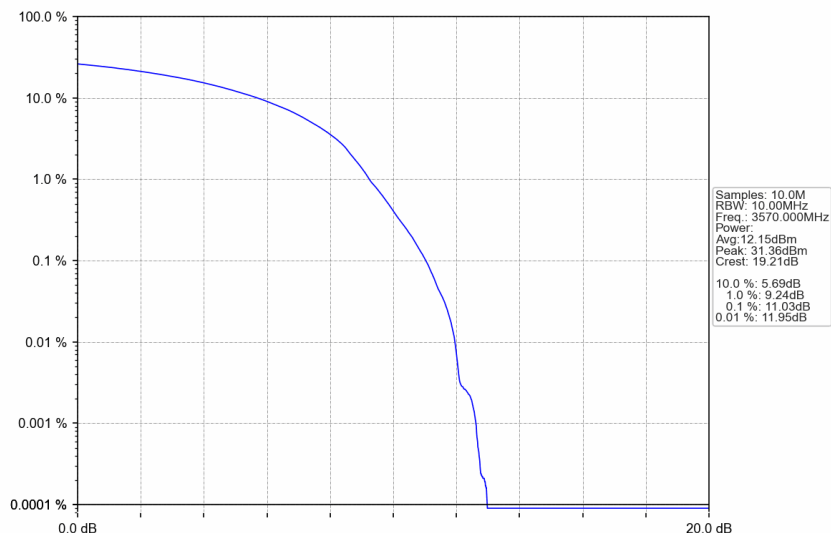
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3624.99MHz\_Outer\_Full



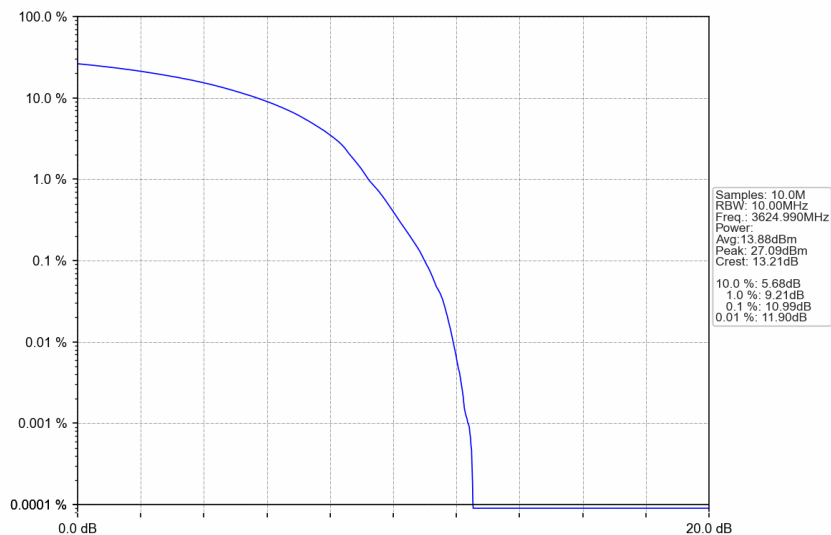
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3679.98MHz\_Outer\_Full



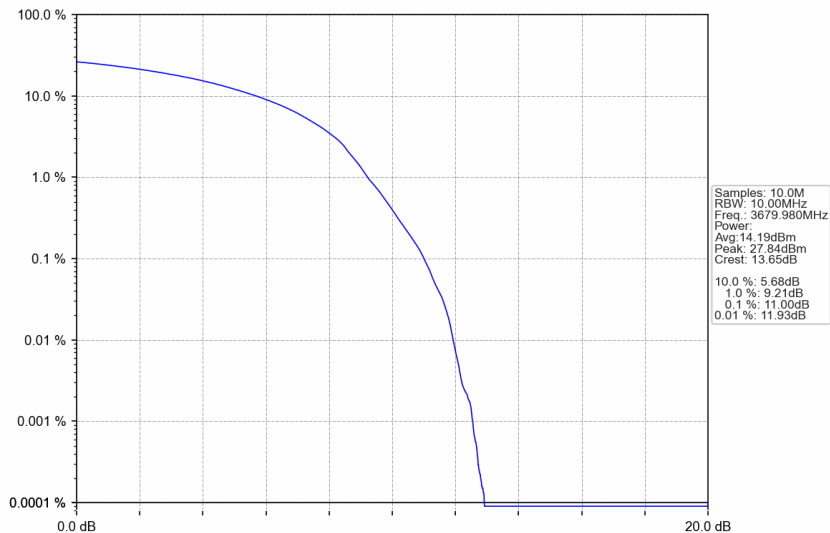
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3570MHz\_Outer\_Full



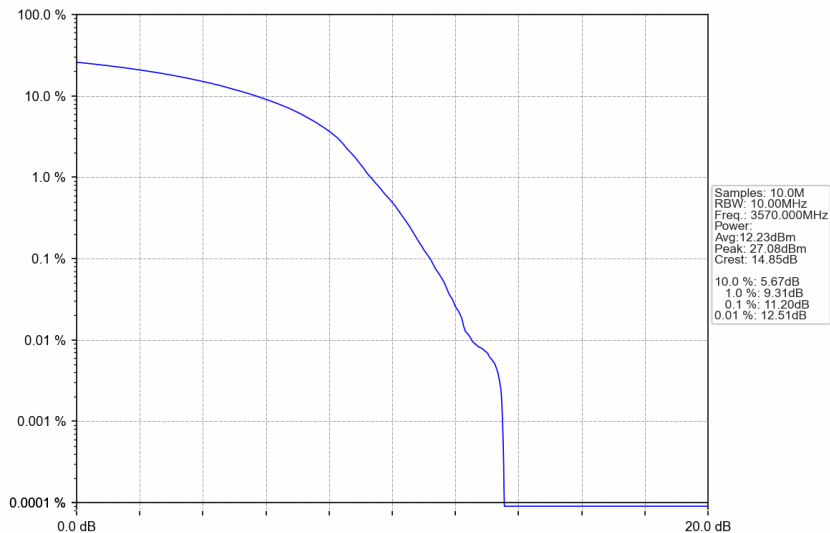
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



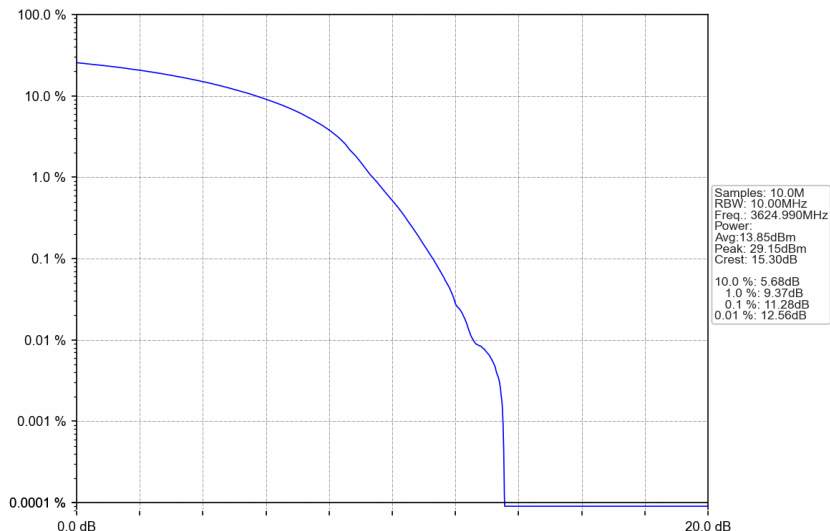
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3679.98MHz\_Outer\_Full



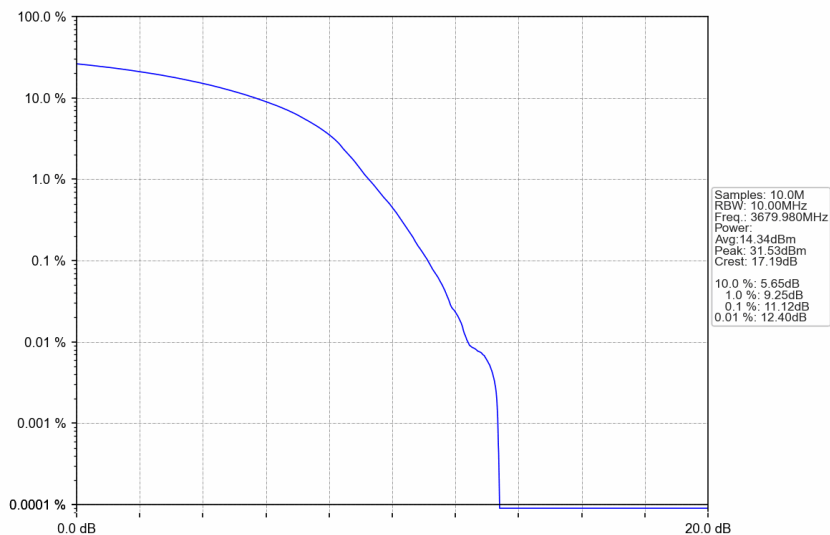
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3570MHz\_Outer\_Full



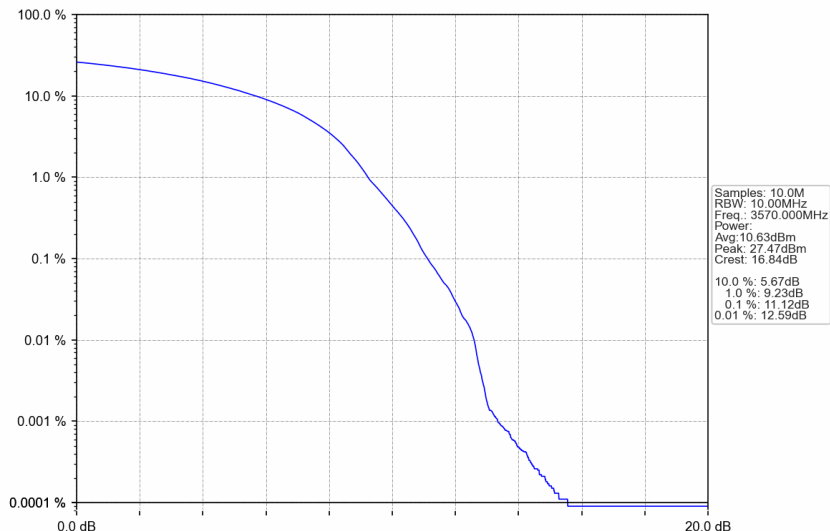
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3624.99MHz\_Outer\_Full



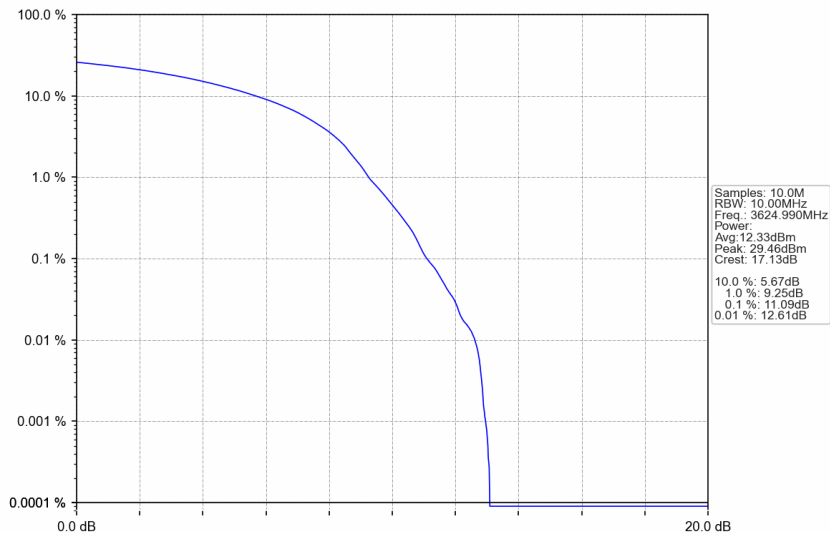
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 64 QAM\_3679.98MHz\_Outer\_Full



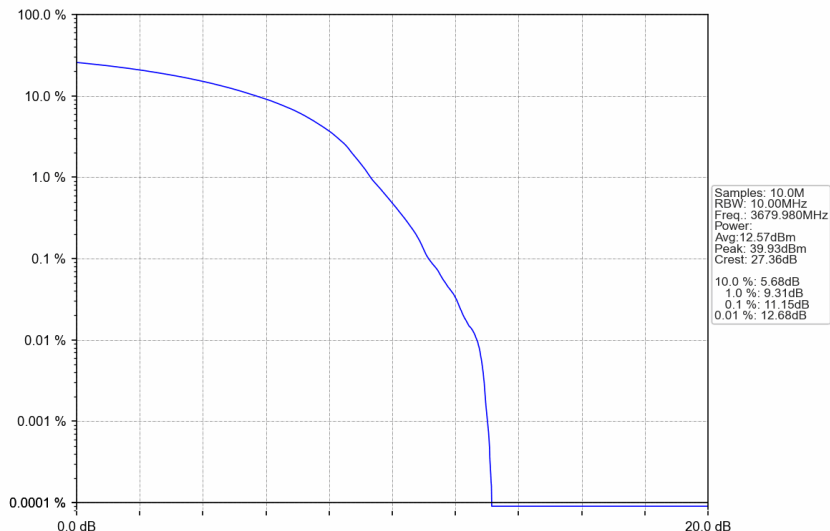
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3570MHz\_Outer\_Full



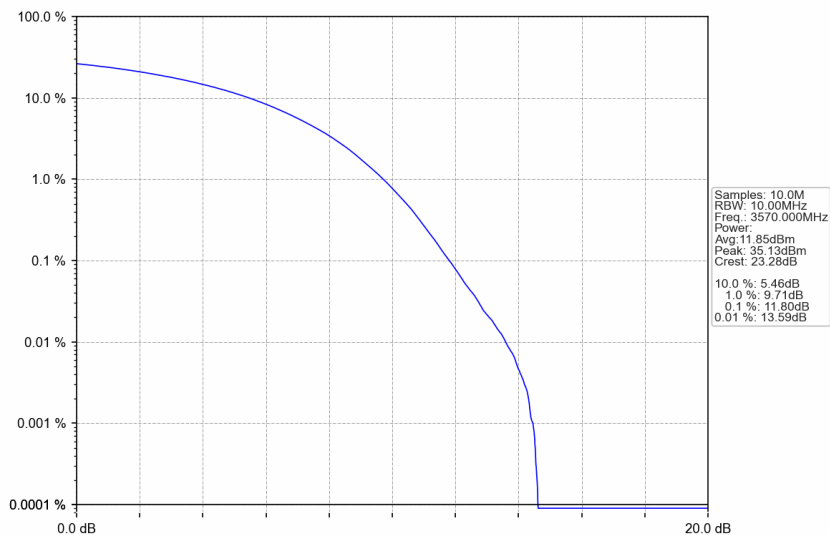
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3679.98MHz\_Outer\_Full

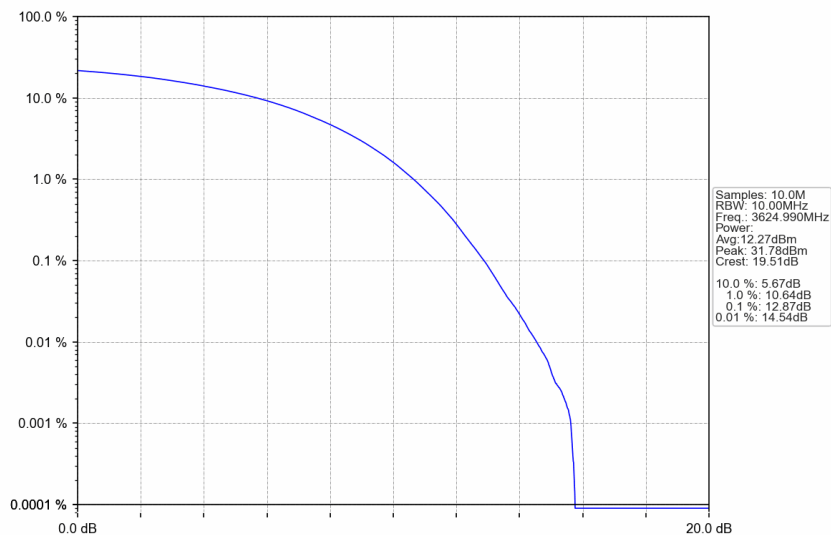


n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3570MHz\_Outer\_Full

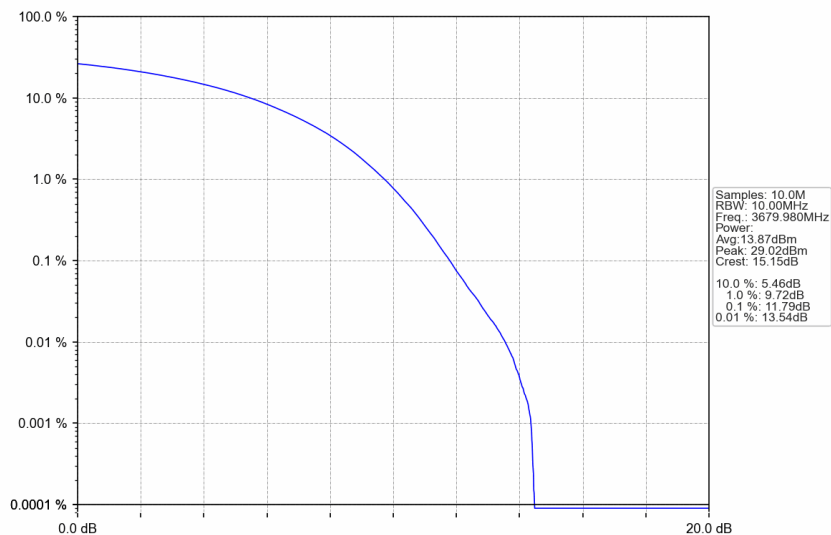




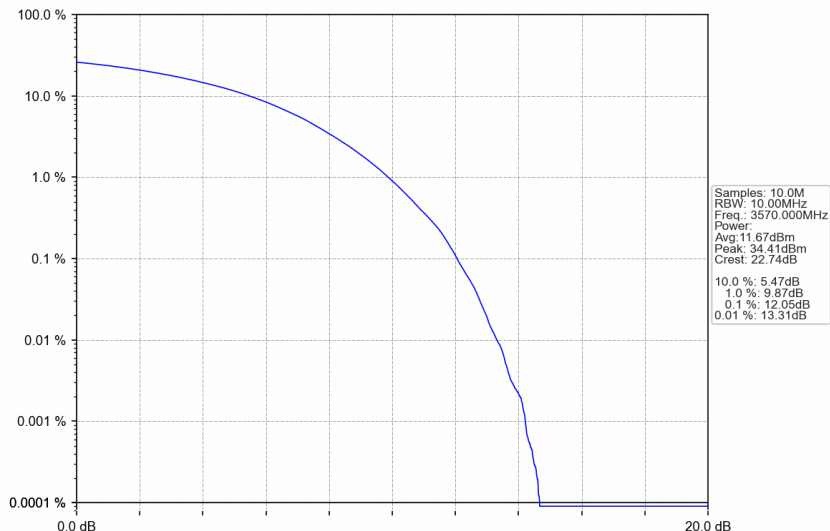
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3624.99MHz\_Outer\_Full



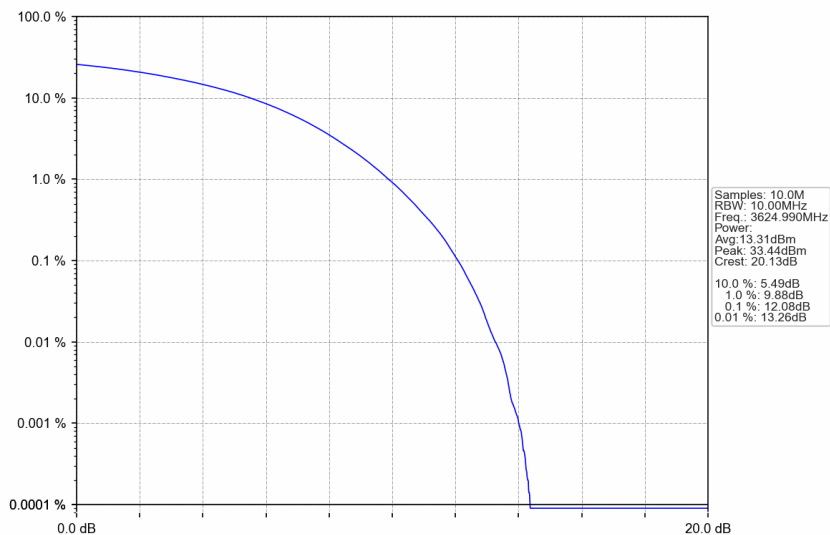
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM QPSK\_3679.98MHz\_Outer\_Full



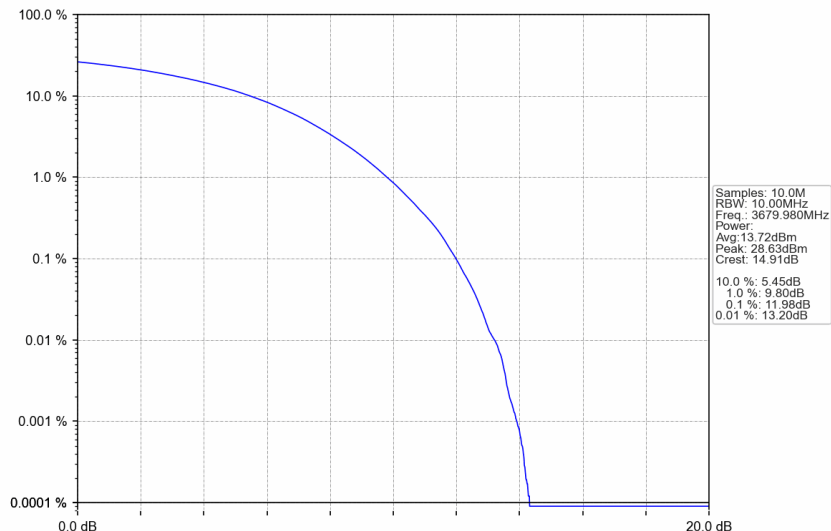
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3570MHz\_Outer\_Full



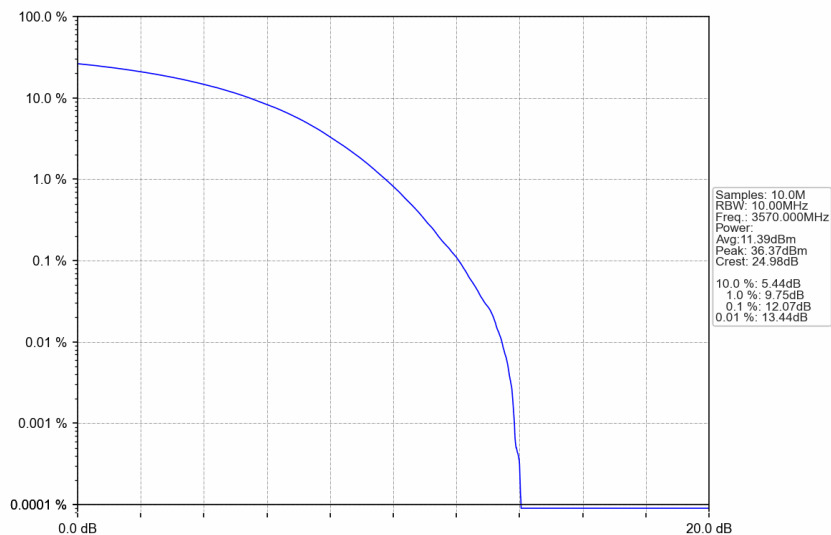
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3624.99MHz\_Outer\_Full



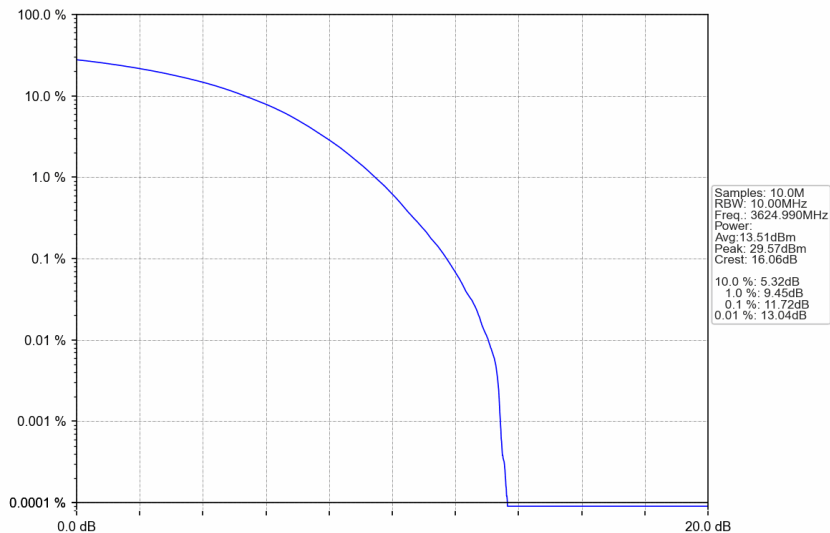
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3679.98MHz\_Outer\_Full



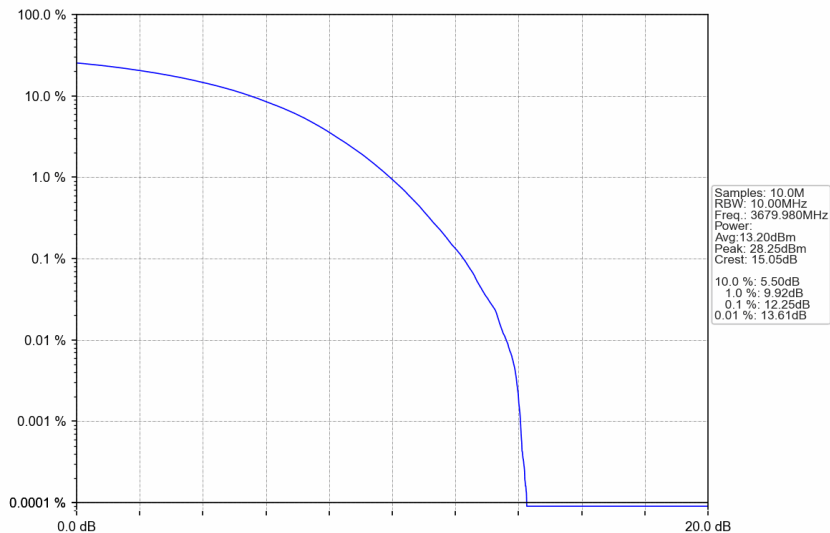
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3570MHz\_Outer\_Full



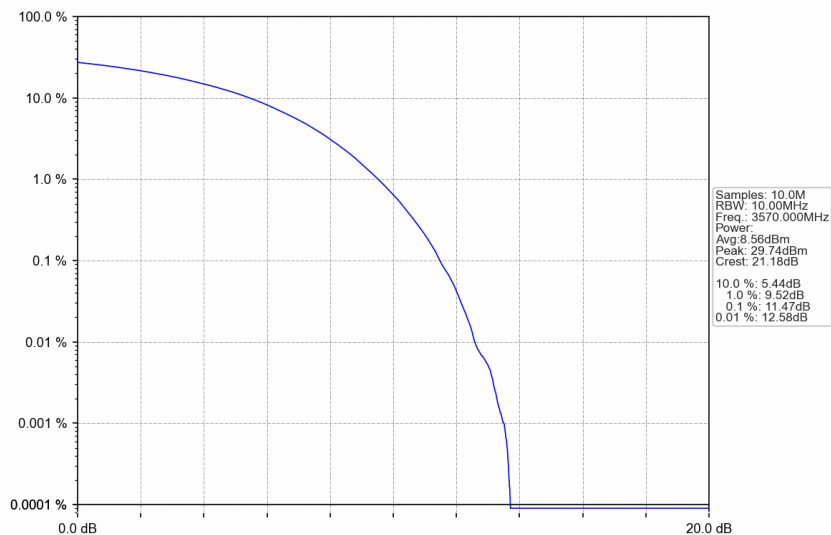
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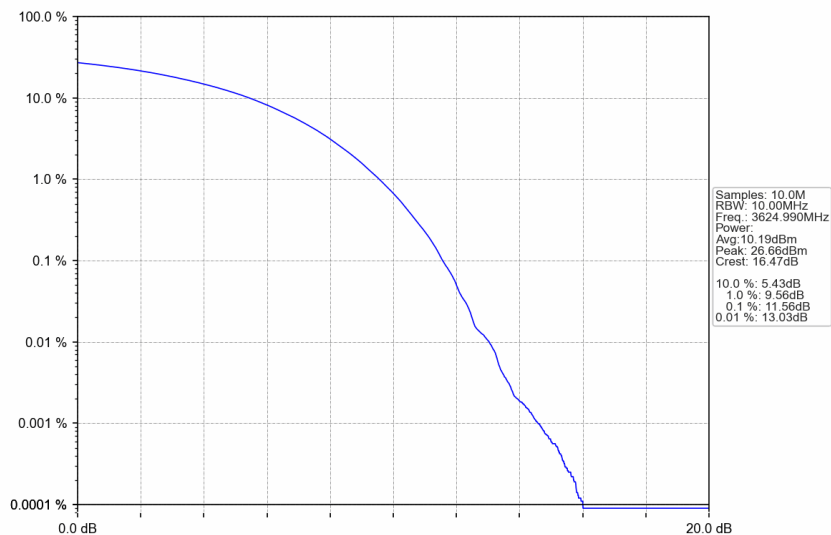
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3679.98MHz\_Outer\_Full



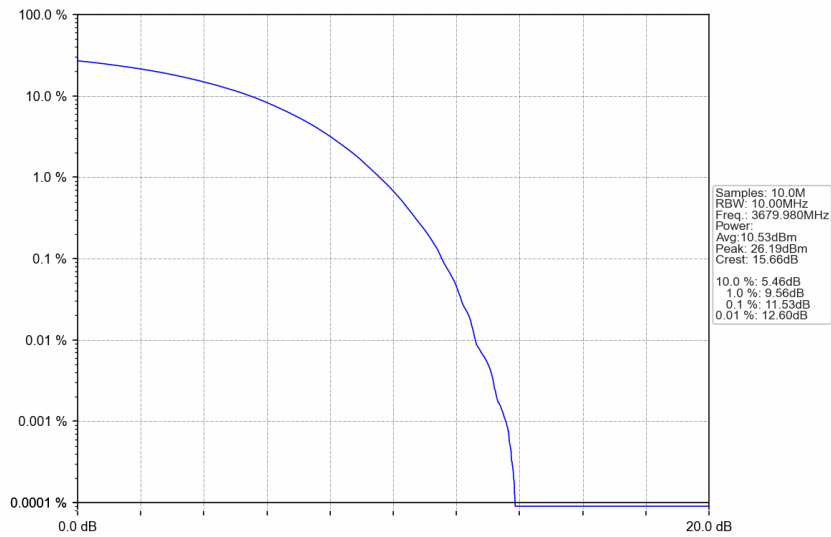
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3570MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 256 QAM\_3679.98MHz\_Outer\_Full



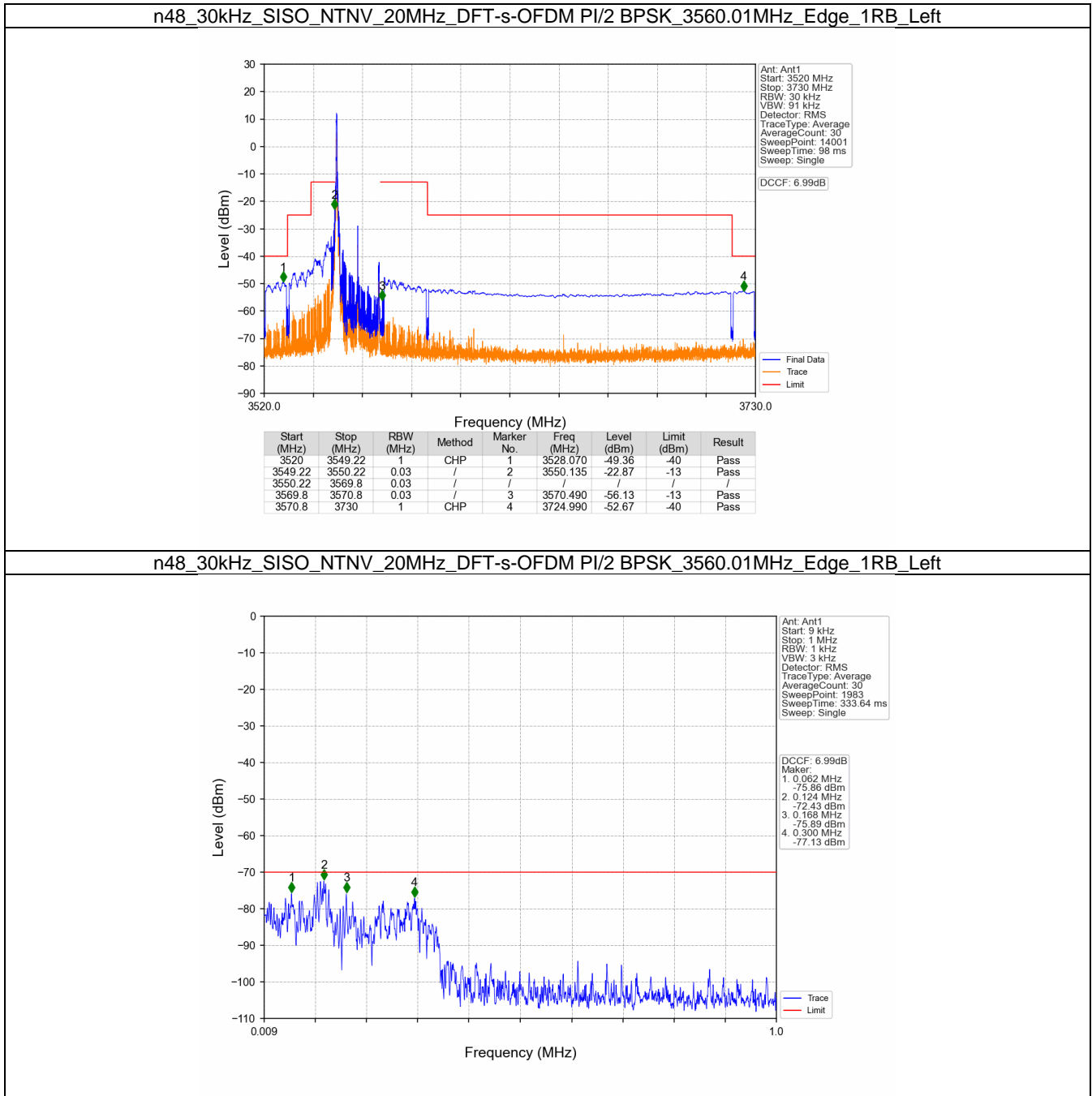
## 6. Spurious Emission

### 6.1 30k\_SISO\_20MHz\_NTNV

#### 6.1.1 Test Result

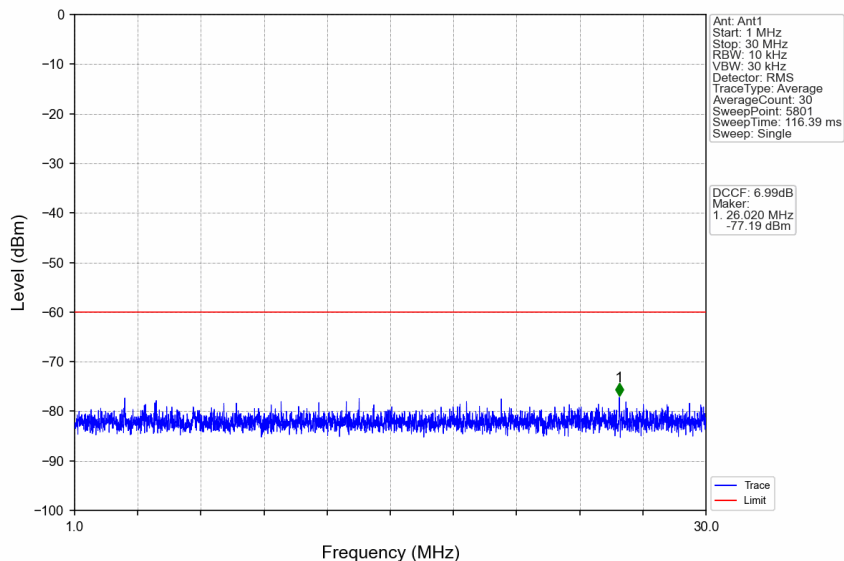
| 5G NR n48 SCS=30kHz SISO 20MHz NTN |                 |                     |                     |      |      |         |
|------------------------------------|-----------------|---------------------|---------------------|------|------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation       | Spurious Emission   |      |      | Verdict |
|                                    |                 |                     | Ant1                | Ant2 | Sum  |         |
| DFT-s-OFDM PI/2 BPSK               | 3560.01         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Outer_Full          | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Left      | Refer To Test Graph |      |      | Pass    |
|                                    | 3624.99         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Edge_1RB_Right      | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Right     | Refer To Test Graph |      |      | Pass    |
| DFT-s-OFDM QPSK                    | 3560.01         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Outer_Full          | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Left      | Refer To Test Graph |      |      | Pass    |
|                                    | 3624.99         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Edge_1RB_Right      | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Right     | Refer To Test Graph |      |      | Pass    |
| CP-OFDM QPSK                       | 3560.01         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Outer_Full          | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Left      | Refer To Test Graph |      |      | Pass    |
|                                    | 3624.99         | Edge_1RB_Left       | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Edge_1RB_Right      | Refer To Test Graph |      |      | Pass    |
|                                    |                 | Inner_1RB_Right     | Refer To Test Graph |      |      | Pass    |
| 3690                               | Edge_1RB_Left   | Refer To Test Graph |                     |      | Pass |         |
|                                    | Outer_Full      | Refer To Test Graph |                     |      | Pass |         |
|                                    | Inner_1RB_Right | Refer To Test Graph |                     |      | Pass |         |

6.1.2 Test Graph

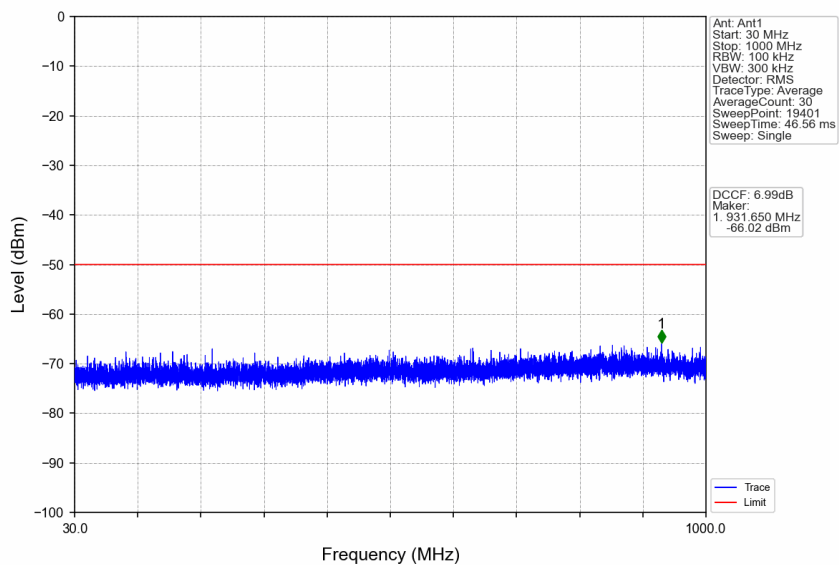




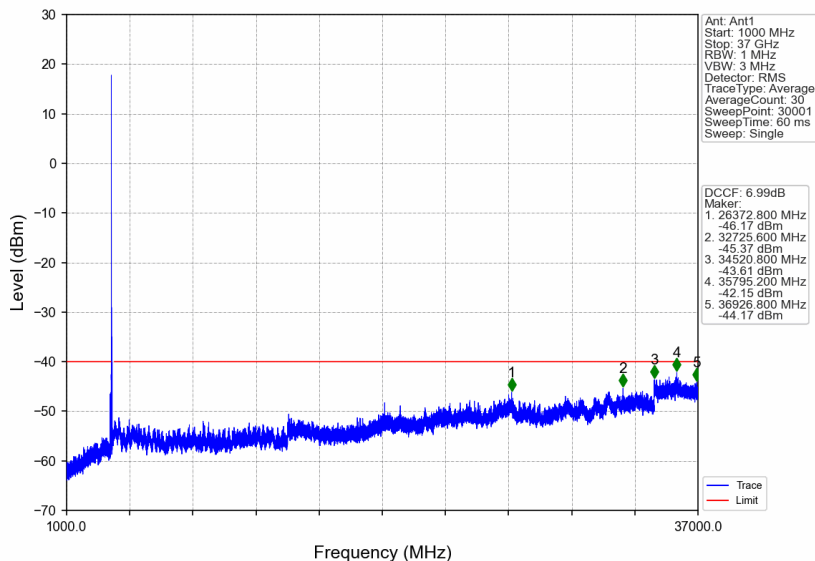
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Edge\_1RB\_Left



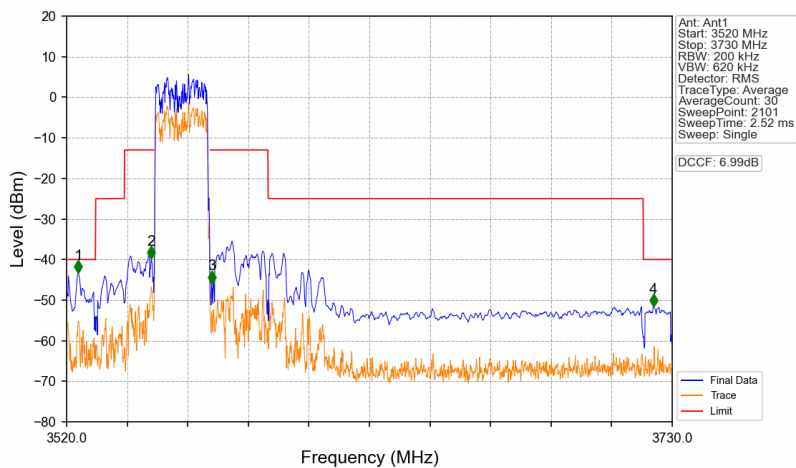
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Edge\_1RB\_Left



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Edge\_1RB\_Left

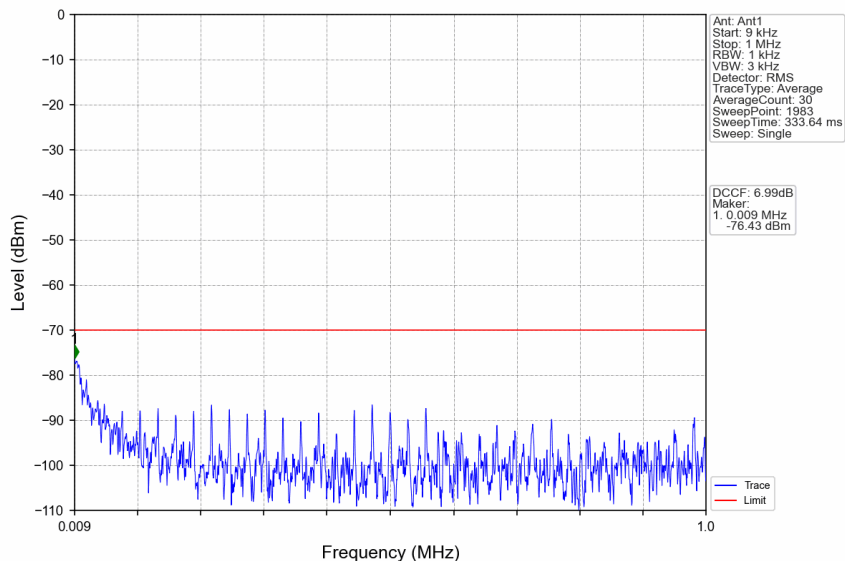


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full

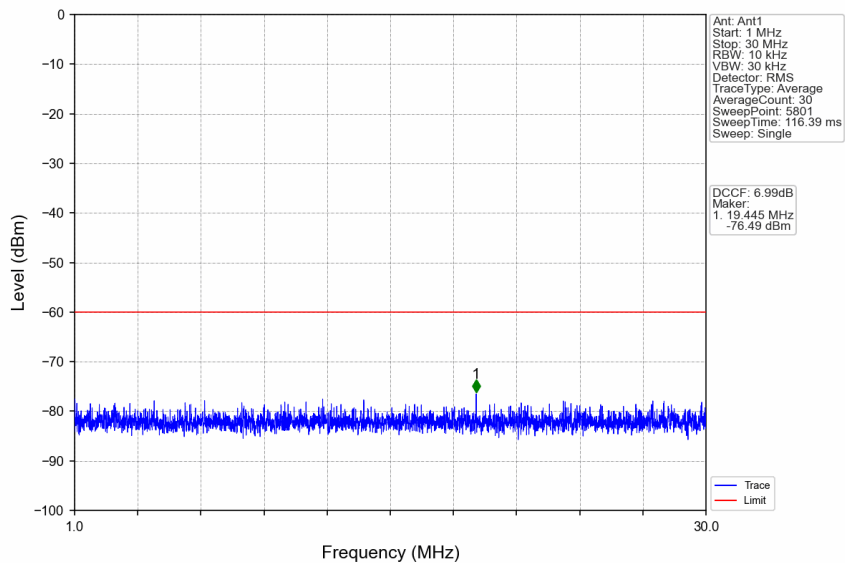


| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|--------|------------|------------|-------------|-------------|--------|
| 3520        | 3549.22    | 1         | CHP    | 1          | 3524.000   | -43.30      | -40         | Pass   |
| 3549.22     | 3550.22    | 0.2       | /      | 2          | 3549.400   | -39.80      | -13         | Pass   |
| 3550.22     | 3569.8     | 0.2       | /      | /          | /          | /           | /           | /      |
| 3569.8      | 3570.8     | 0.2       | /      | 3          | 3570.300   | -45.88      | -13         | Pass   |
| 3570.8      | 3730       | 1         | CHP    | 4          | 3723.500   | -51.68      | -40         | Pass   |

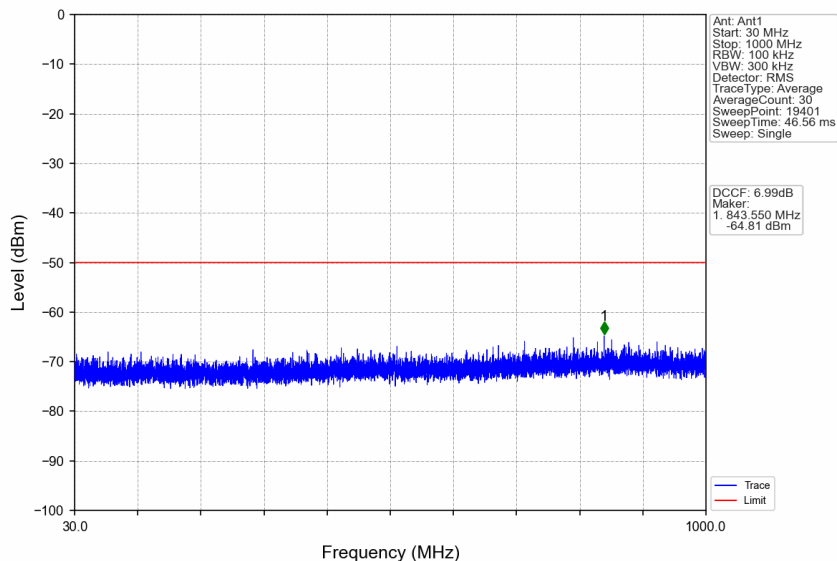
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full



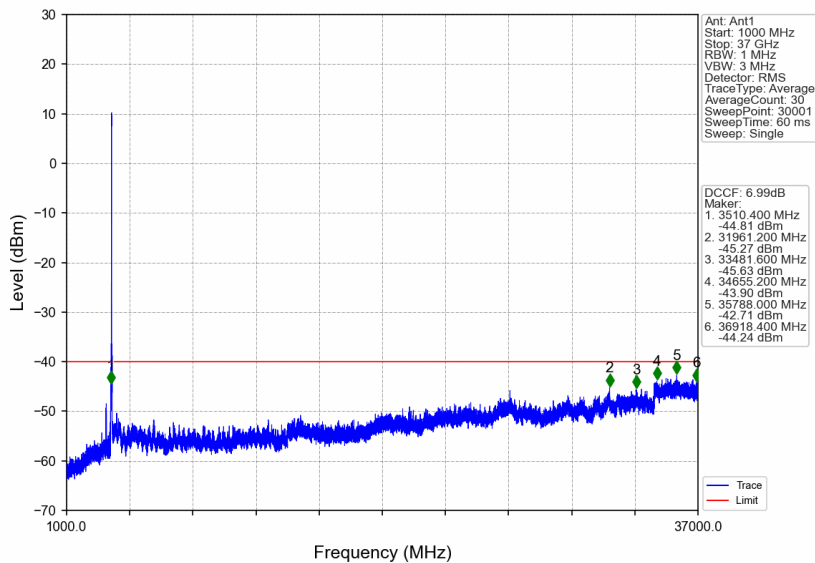
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full



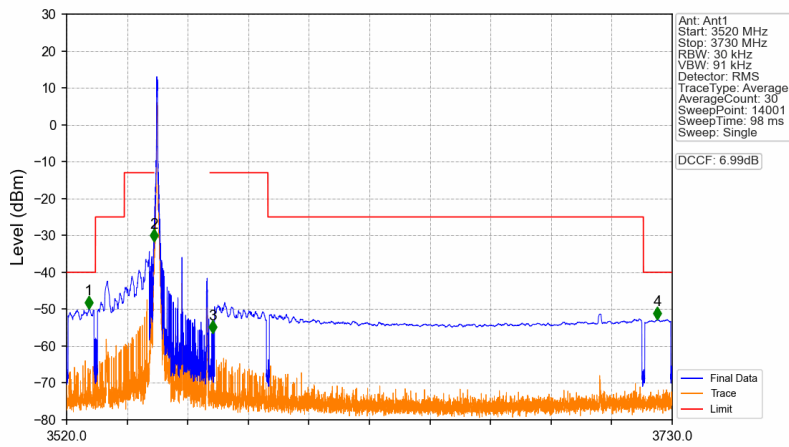
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Outer\_Full

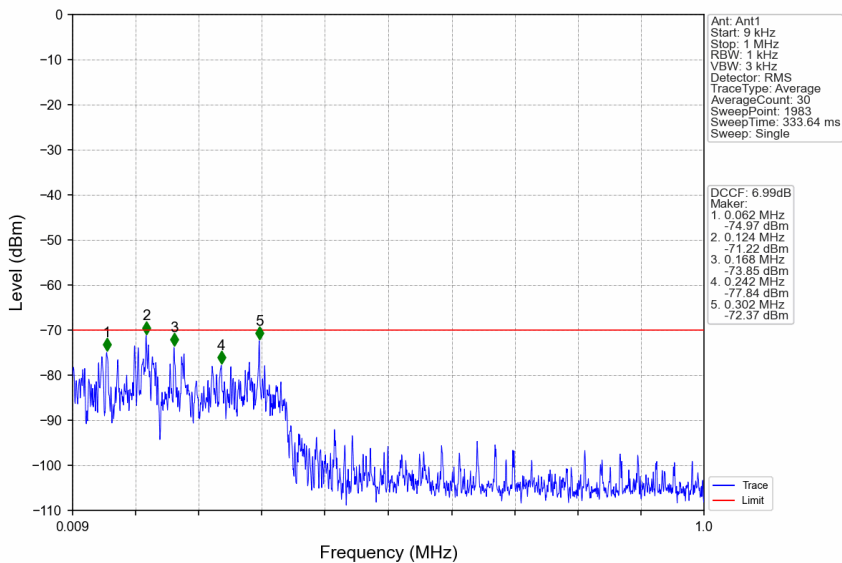


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Inner\_1RB\_Left

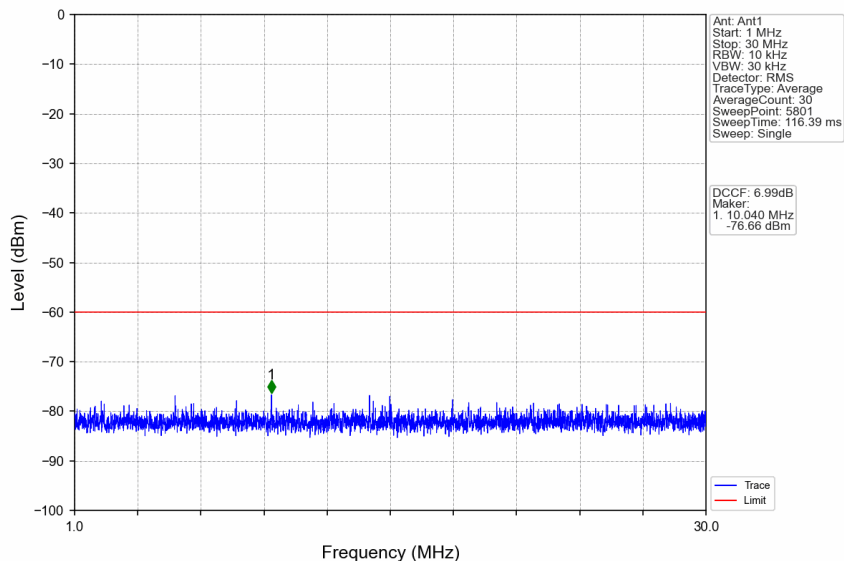


| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|--------|------------|------------|-------------|-------------|--------|
| 3520        | 3549.22    | 1         | CHP    | 1          | 3527.665   | -49.86      | -40         | Pass   |
| 3549.22     | 3550.22    | 0.03      | /      | 2          | 3550.210   | -31.67      | -13         | Pass   |
| 3550.22     | 3569.8     | 0.03      | /      | /          | /          | /           | /           | /      |
| 3569.8      | 3570.8     | 0.03      | /      | 3          | 3570.565   | -56.55      | -13         | Pass   |
| 3570.8      | 3730       | 1         | CHP    | 4          | 3724.870   | -52.77      | -40         | Pass   |

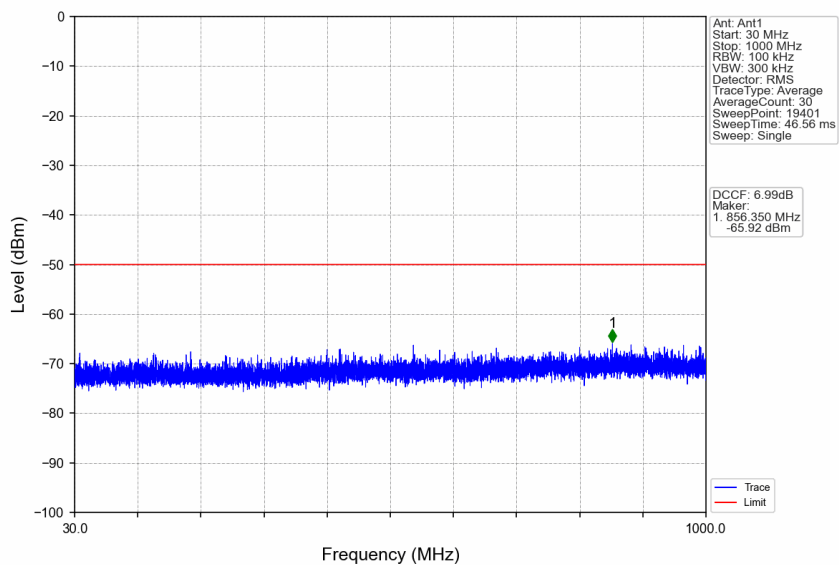
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Inner\_1RB\_Left



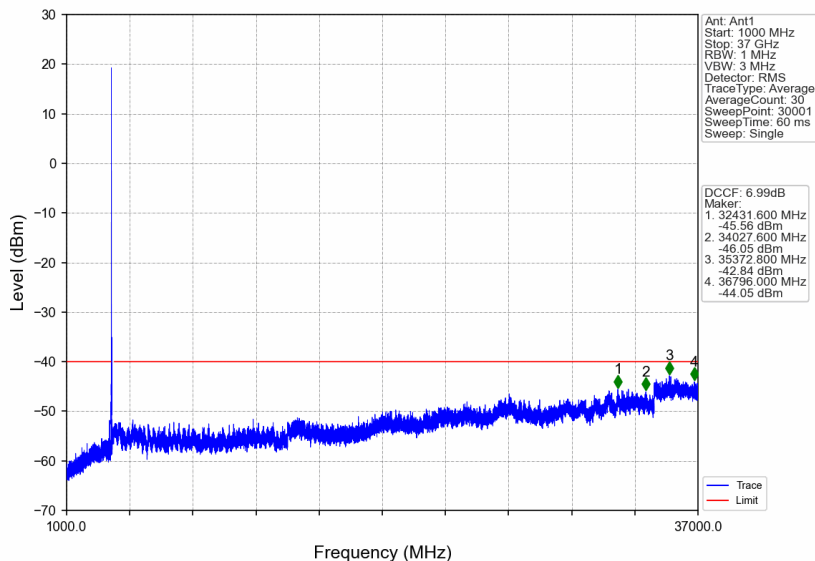
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Inner\_1RB\_Left



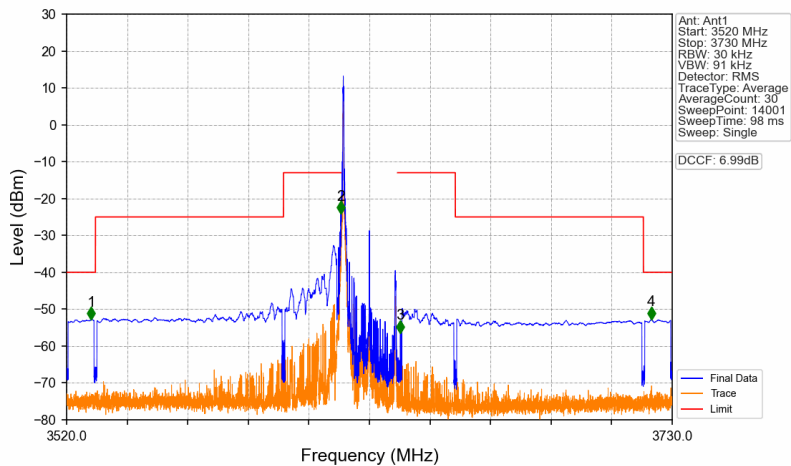
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Inner\_1RB\_Left



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3560.01MHz\_Inner\_1RB\_Left

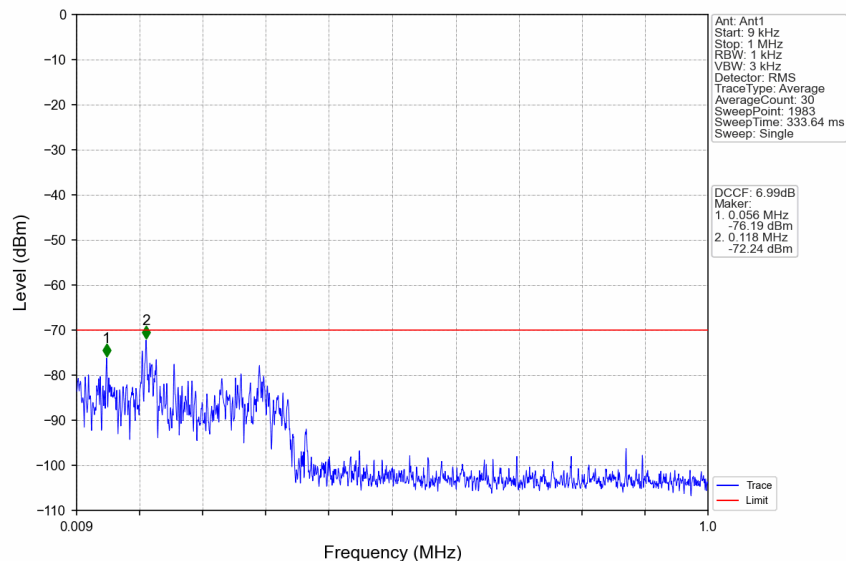


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Edge\_1RB\_Left

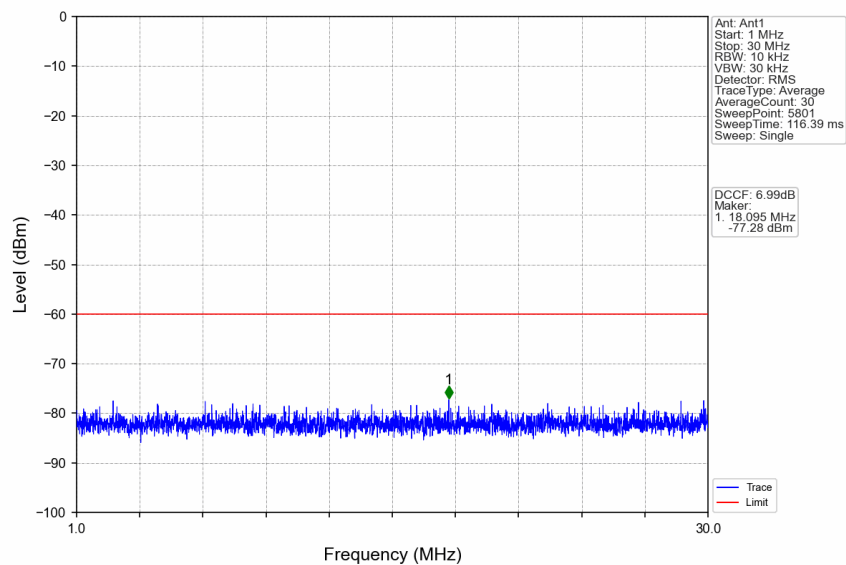


| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|--------|------------|------------|-------------|-------------|--------|
| 3520        | 3614.203   | 1         | CHP    | 1          | 3528.460   | -52.83      | -40         | Pass   |
| 3614.203    | 3615.203   | 0.03      | /      | 2          | 3615.085   | -24.10      | -13         | Pass   |
| 3615.203    | 3634.777   | 0.03      | /      | 3          | /          | /           | /           | /      |
| 3634.777    | 3635.777   | 0.03      | /      | 3          | 3635.740   | -56.45      | -13         | Pass   |
| 3635.777    | 3730       | 1         | CHP    | 4          | 3722.725   | -52.77      | -40         | Pass   |

n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Edge\_1RB\_Left

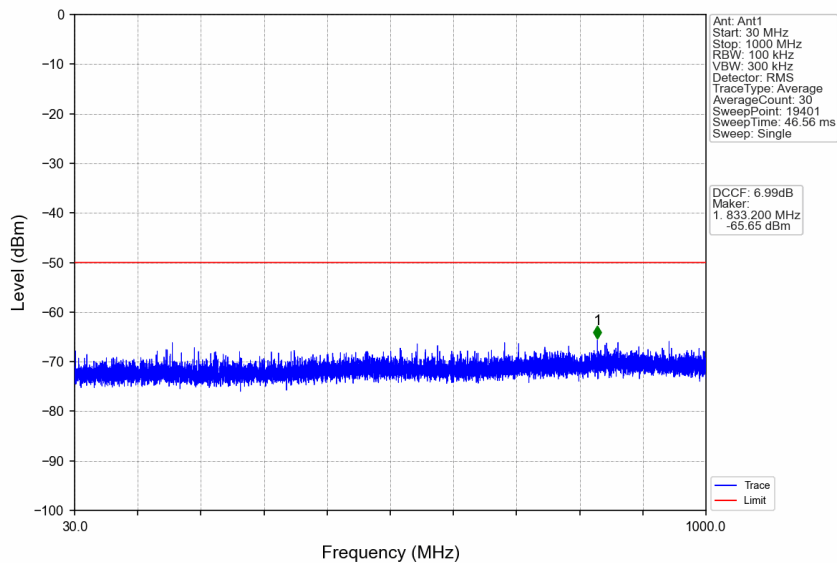


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Edge\_1RB\_Left

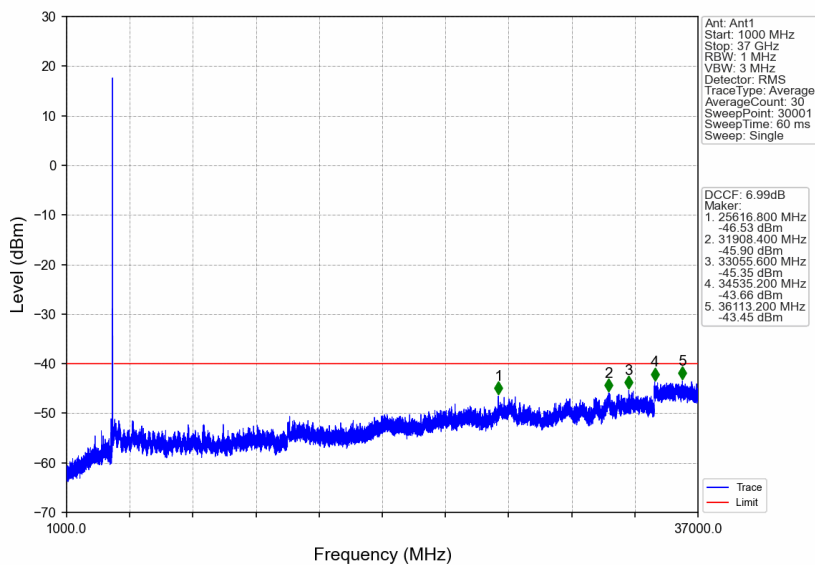




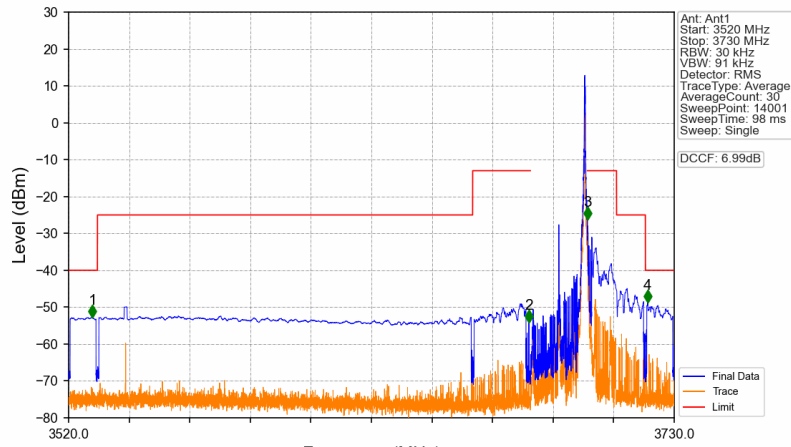
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Edge\_1RB\_Left



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3624.99MHz\_Edge\_1RB\_Left

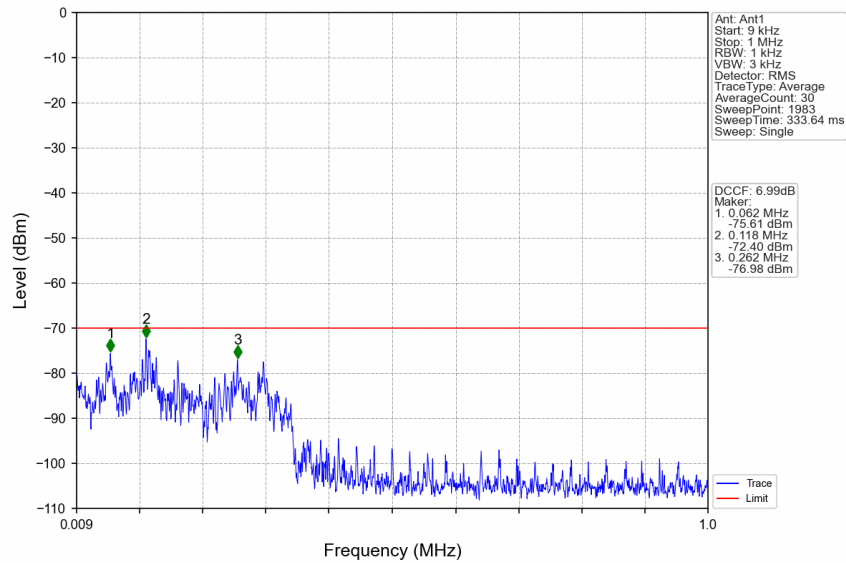


n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3690MHz\_Edge\_1RB\_Right

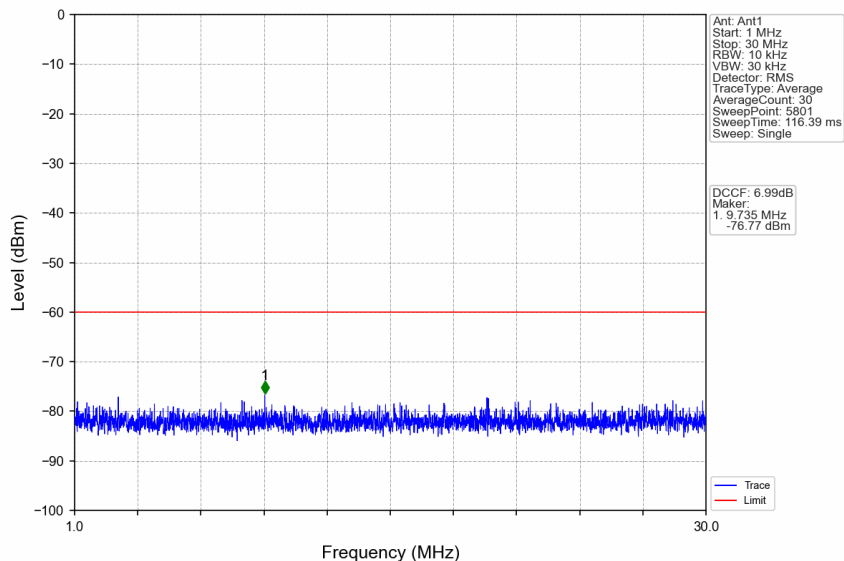


| Start (MHz) | Stop (MHz) | RBW (MHz) | Method | Marker No. | Freq (MHz) | Level (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|--------|------------|------------|-------------|-------------|--------|
| 3520        | 3679.107   | 1         | CHP    | 1          | 3528.265   | -52.78      | -40         | Pass   |
| 3679.107    | 3680.107   | 0.03      | /      | 2          | 3679.615   | -54.19      | -13         | Pass   |
| 3680.107    | 3699.893   | 0.03      | /      | /          | /          | /           | /           | /      |
| 3699.893    | 3700.893   | 0.03      | /      | 3          | 3699.895   | -26.33      | -13         | Pass   |
| 3700.893    | 3730       | 1         | CHP    | 4          | 3720.805   | -48.75      | -40         | Pass   |

n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3690MHz\_Edge\_1RB\_Right



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3690MHz\_Edge\_1RB\_Right



n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM PI/2 BPSK\_3690MHz\_Edge\_1RB\_Right

