

## 5G NR N48

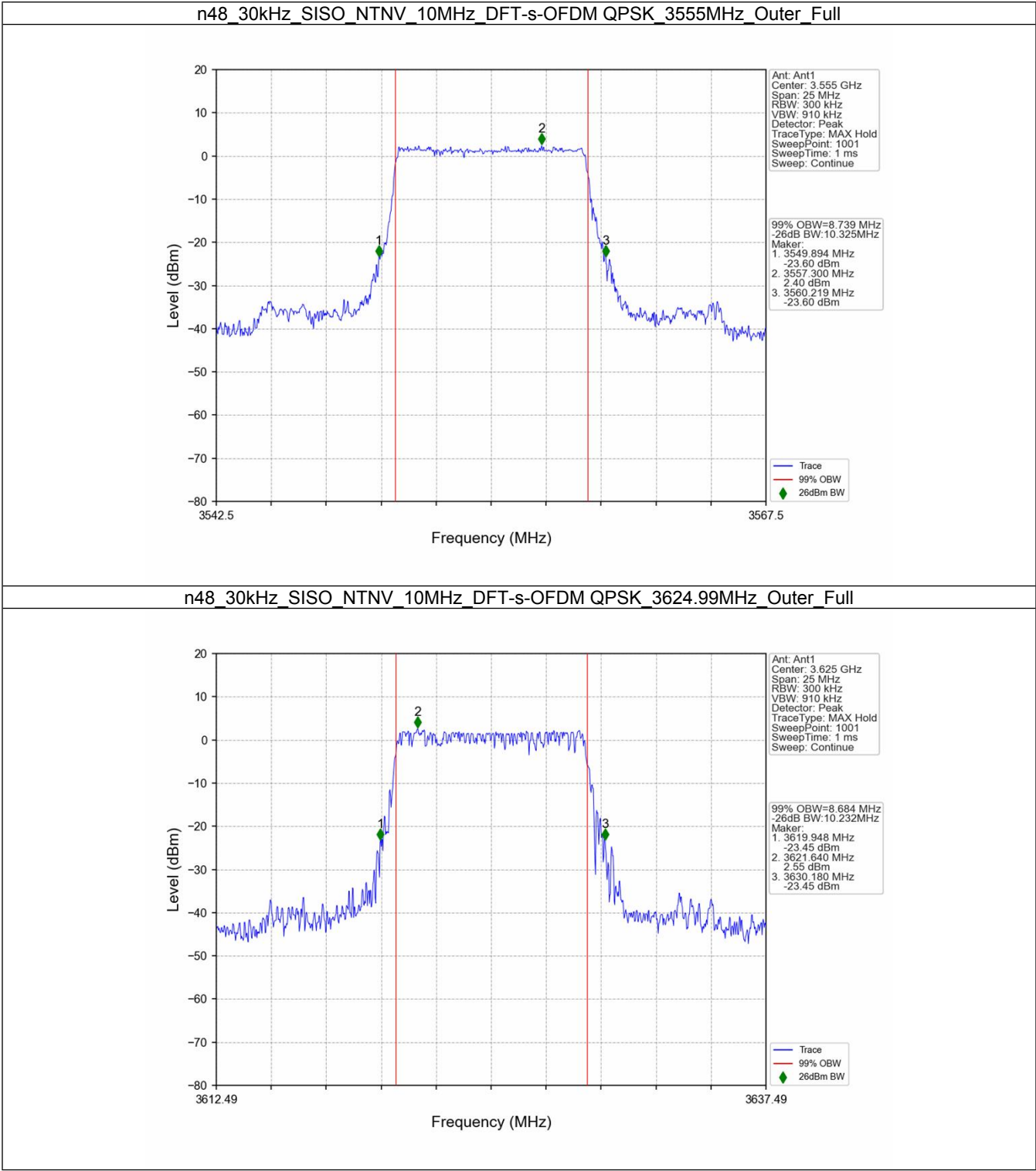
### 1. 99% & 26dB Bandwidth

#### 1.1 30k\_SISO\_10MHz\_NTNV

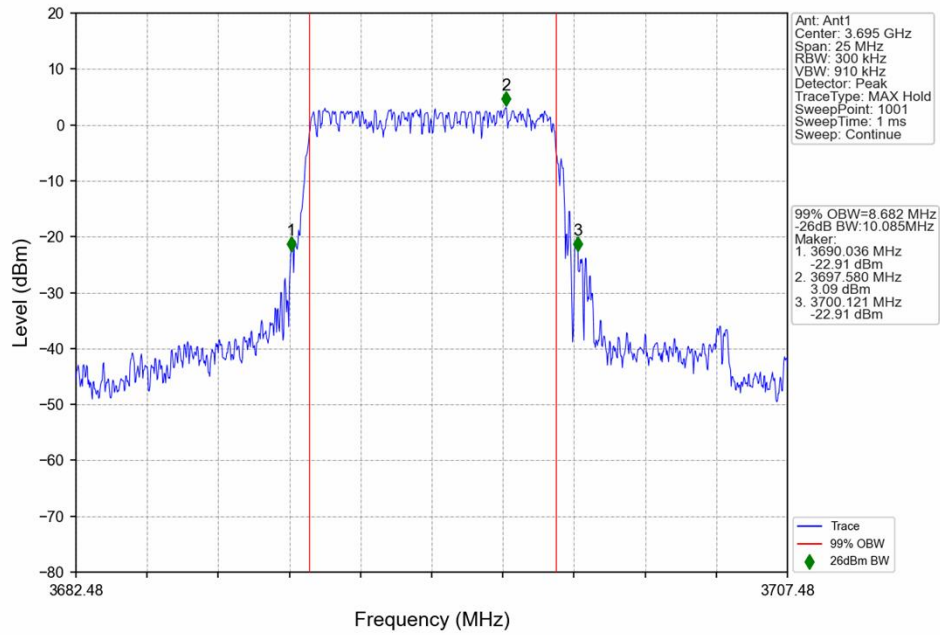
##### 1.1.1 Test Result

| 5G NR n48 SCS=30kHz SISO 10MHz NTNv |                 |               |                     |                      |             |         |
|-------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation                          | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM QPSK                     | 3555            | Outer_Full    | 8.74                | 10.32                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.68                | 10.23                | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.68                | 10.09                | /           | Pass    |
| DFT-s-OFDM 16 QAM                   | 3555            | Outer_Full    | 8.80                | 10.09                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.71                | 10.05                | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.68                | 10.04                | /           | Pass    |
| DFT-s-OFDM 64 QAM                   | 3555            | Outer_Full    | 8.71                | 10.19                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.68                | 10.20                | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.69                | 10.17                | /           | Pass    |
| DFT-s-OFDM 256 QAM                  | 3555            | Outer_Full    | 8.70                | 10.11                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.62                | 10.05                | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.67                | 10.08                | /           | Pass    |
| CP-OFDM QPSK                        | 3555            | Outer_Full    | 8.75                | 10.47                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.71                | 9.94                 | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.72                | 10.13                | /           | Pass    |
| CP-OFDM 16 QAM                      | 3555            | Outer_Full    | 8.73                | 10.05                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.72                | 9.96                 | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.66                | 10.05                | /           | Pass    |
| CP-OFDM 64 QAM                      | 3555            | Outer_Full    | 8.71                | 10.11                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.65                | 10.08                | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.71                | 9.81                 | /           | Pass    |
| CP-OFDM 256 QAM                     | 3555            | Outer_Full    | 8.71                | 10.02                | /           | Pass    |
|                                     | 3624.99         | Outer_Full    | 8.64                | 9.77                 | /           | Pass    |
|                                     | 3694.98         | Outer_Full    | 8.68                | 10.01                | /           | Pass    |

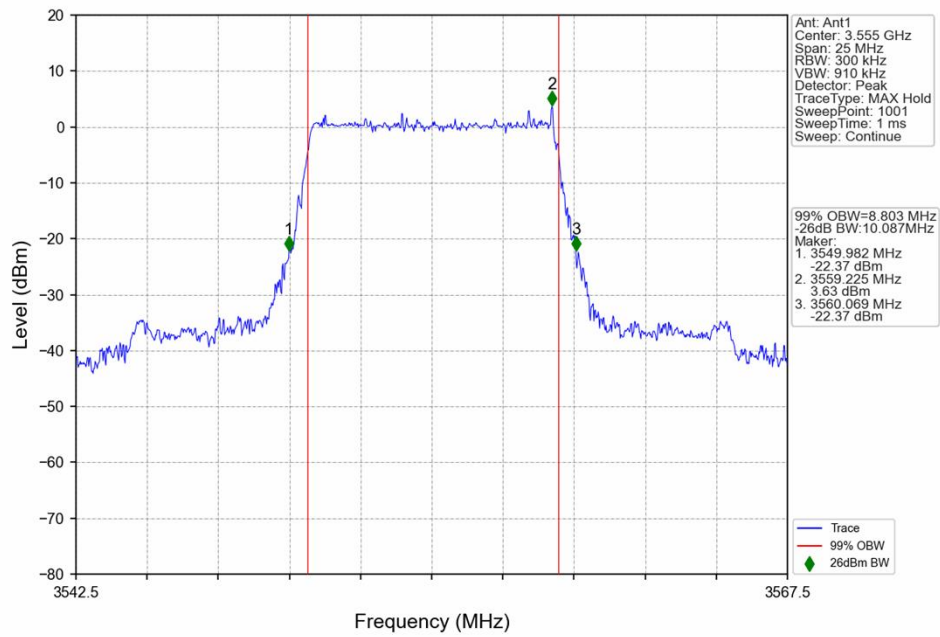
# 1.1.2 Test Graph



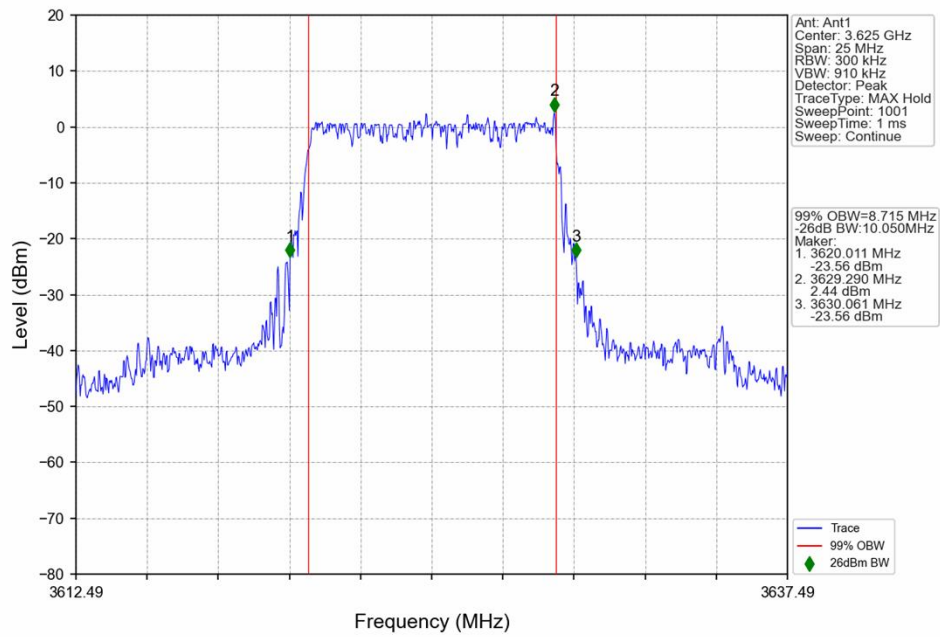
n48\_30kHz\_SISO\_NTNV\_10MHz\_DFT-s-OFDM QPSK\_3694.98MHz\_Outer\_Full



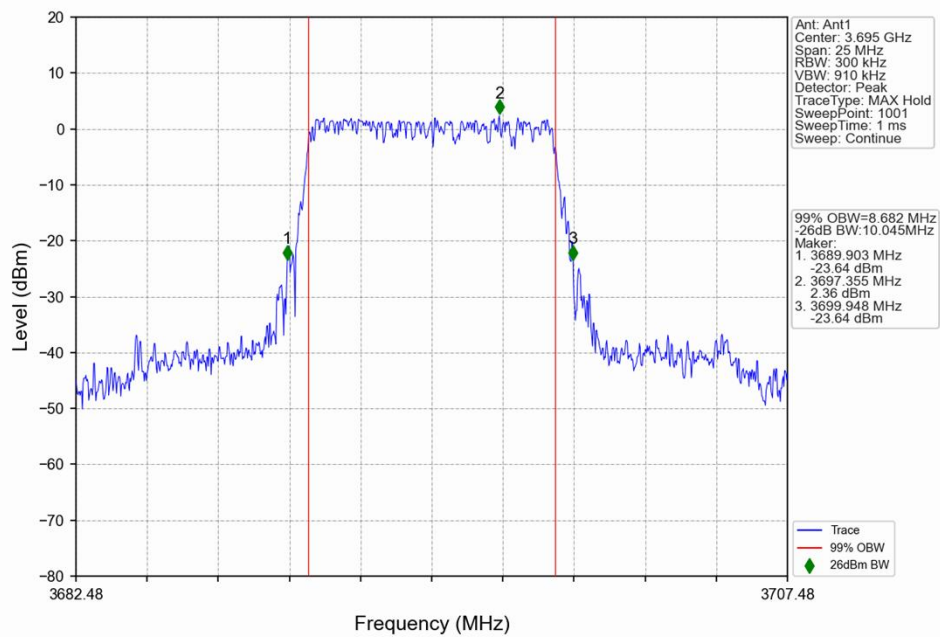
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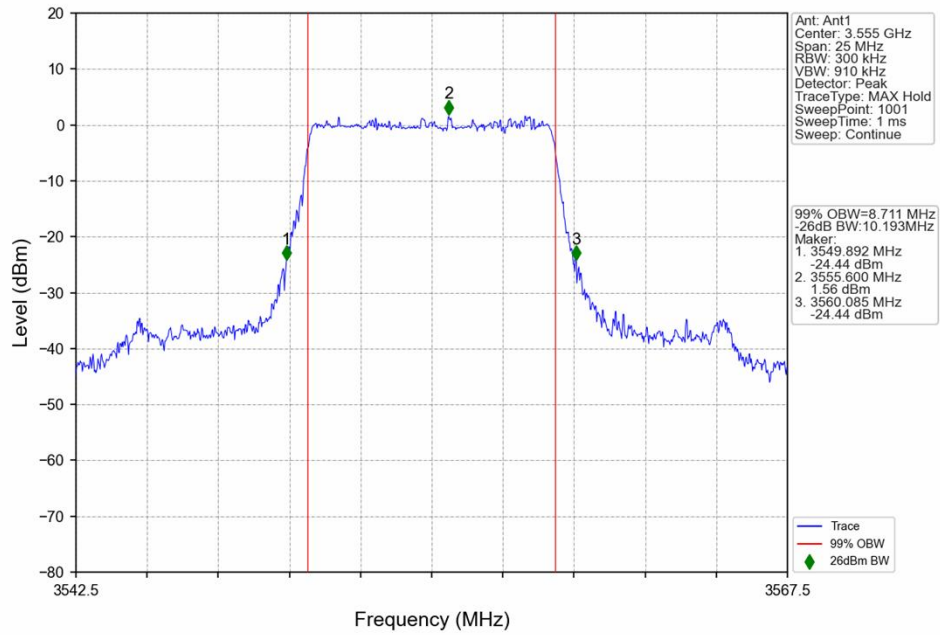
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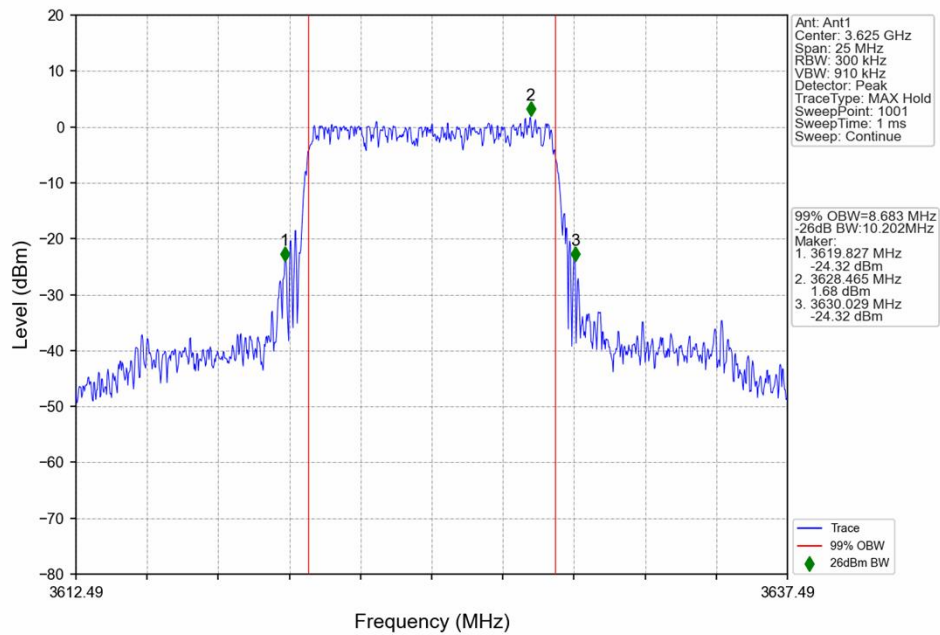
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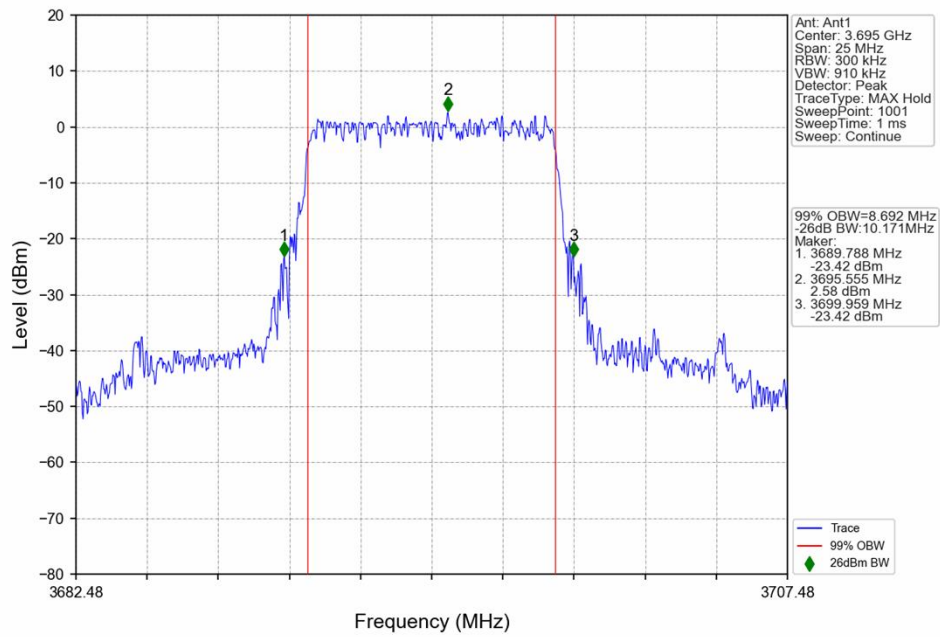
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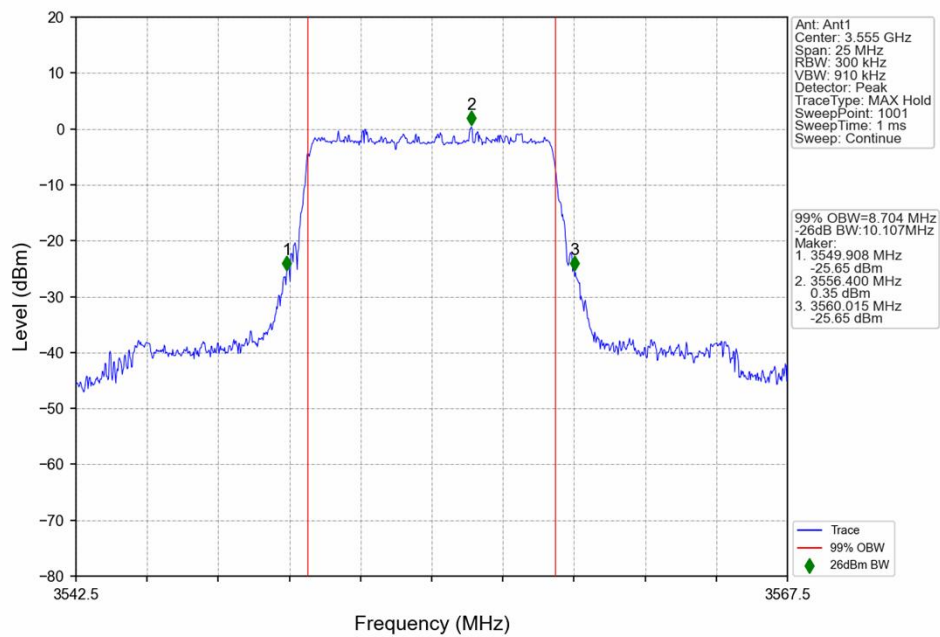
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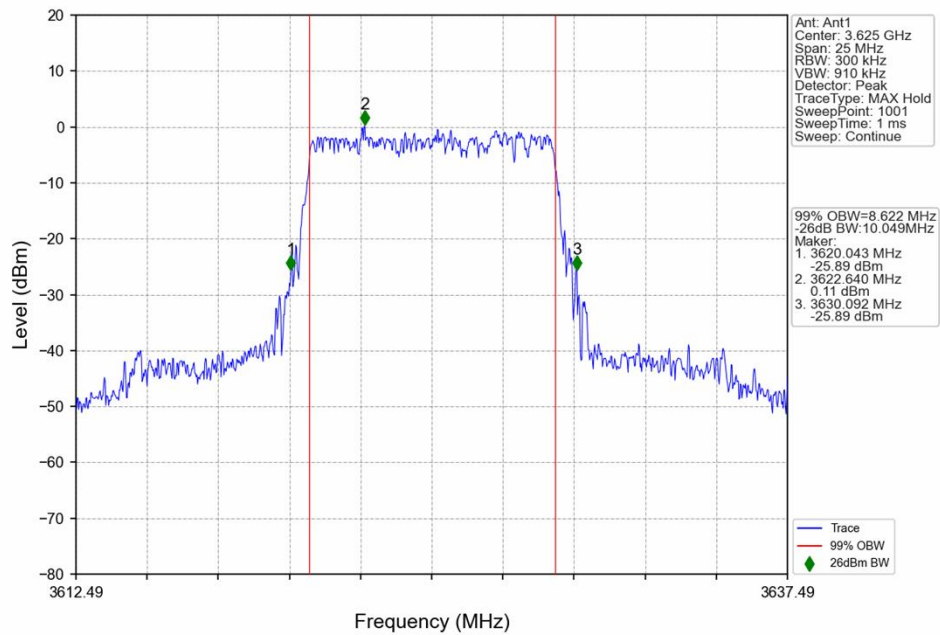
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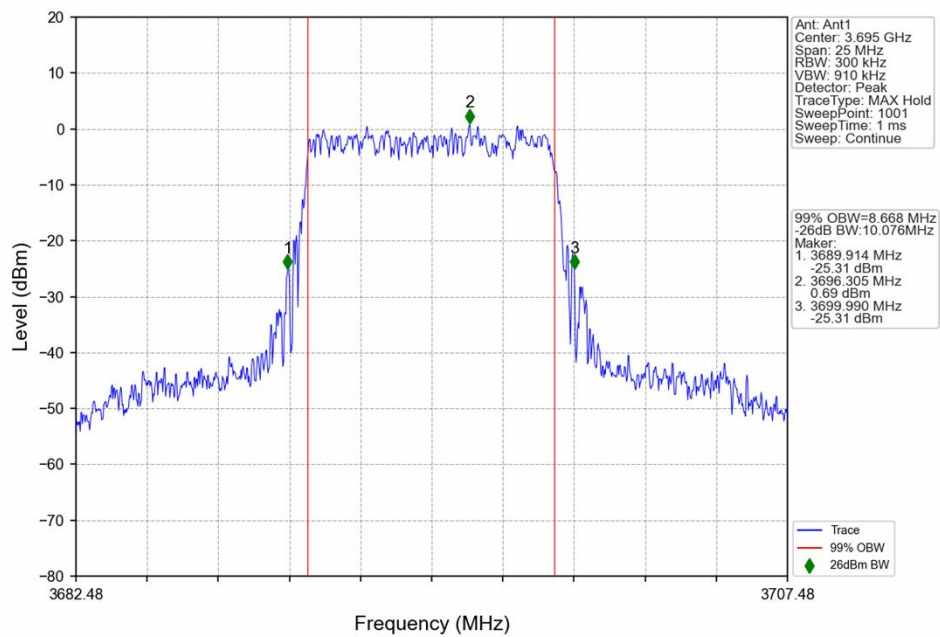
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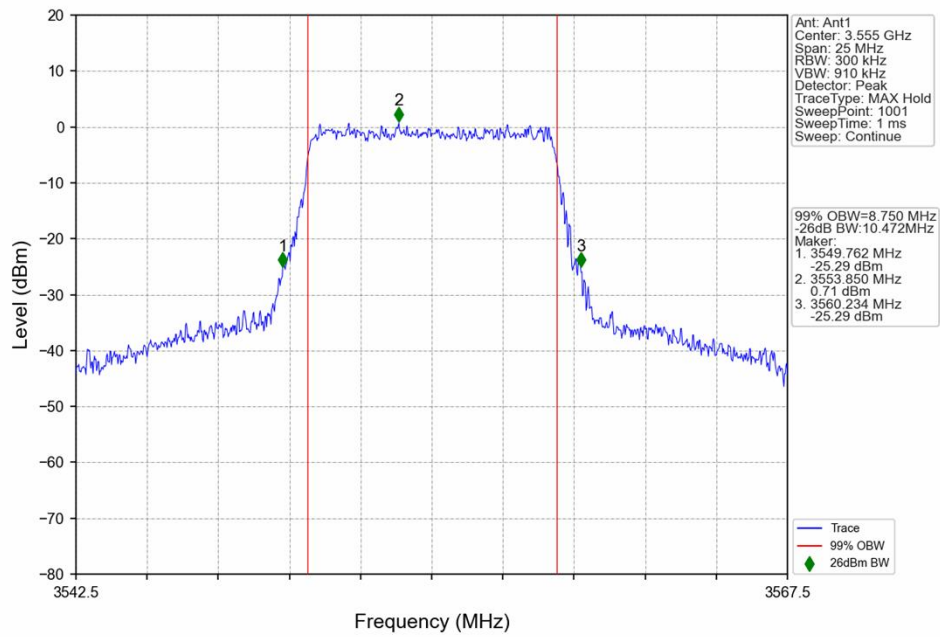
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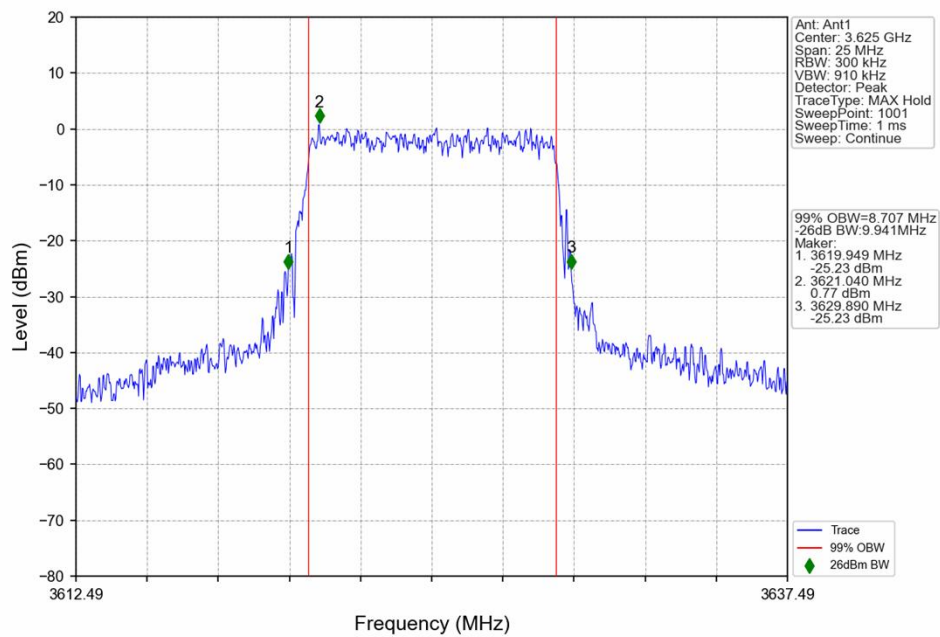
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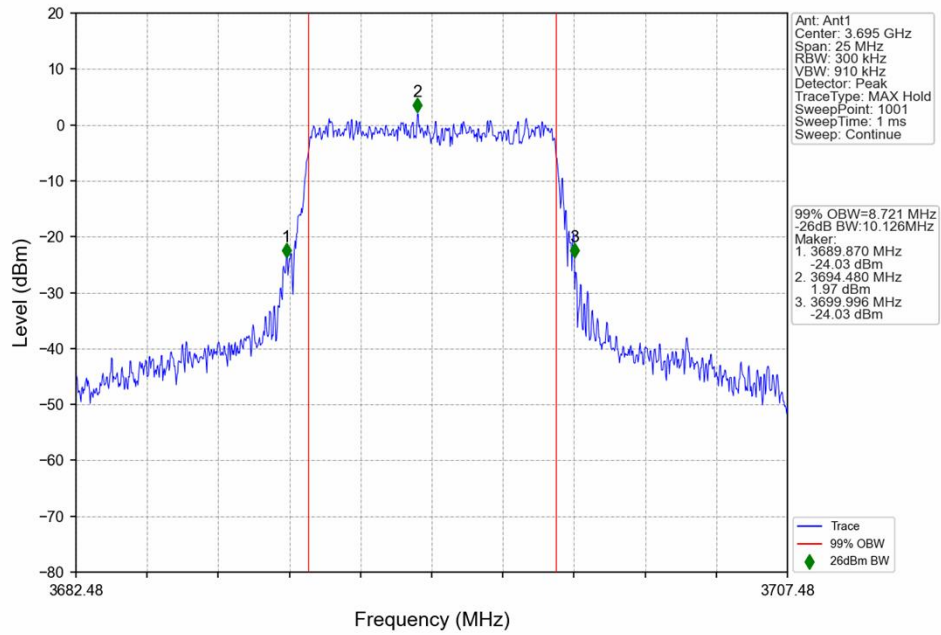
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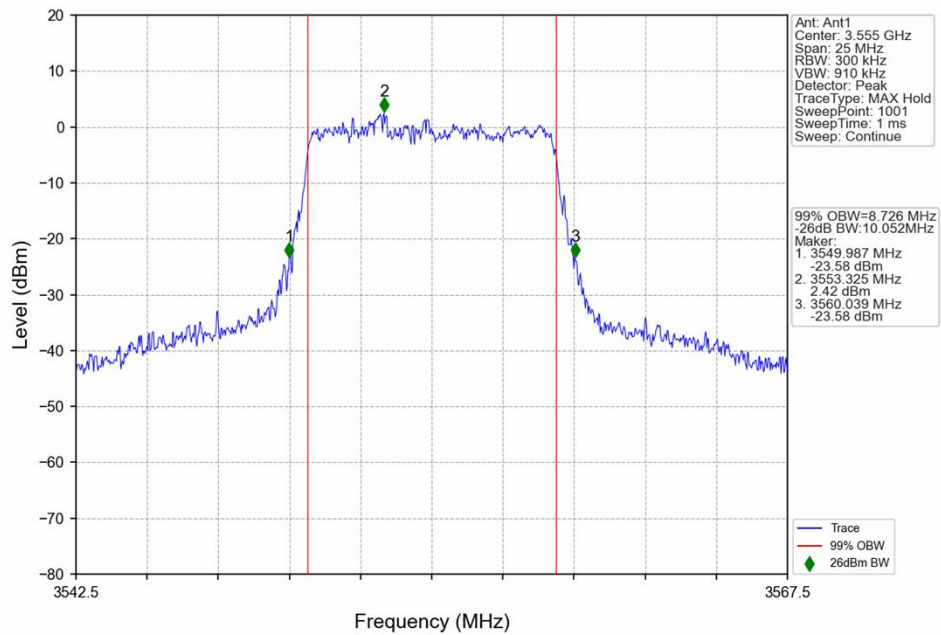
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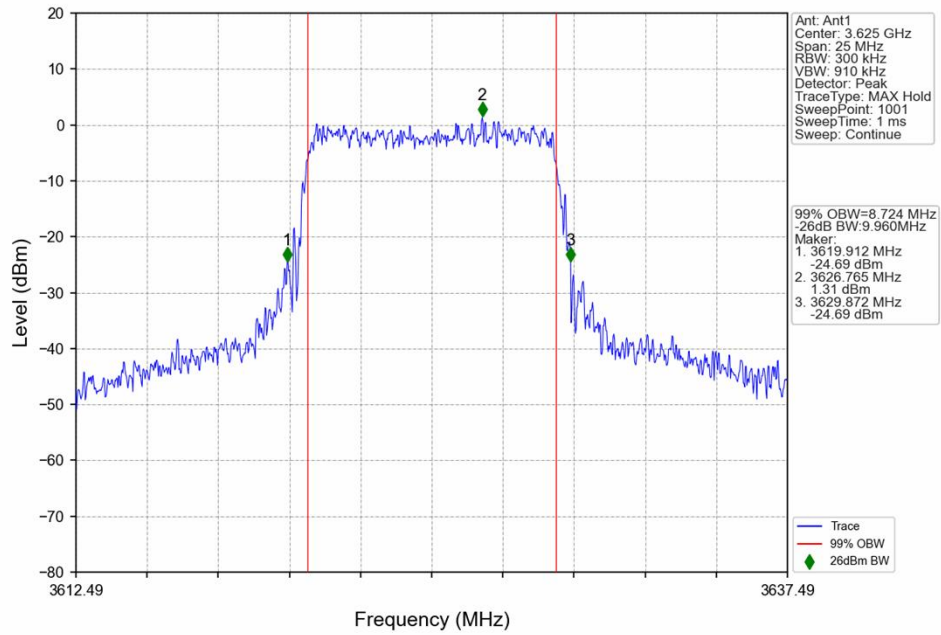
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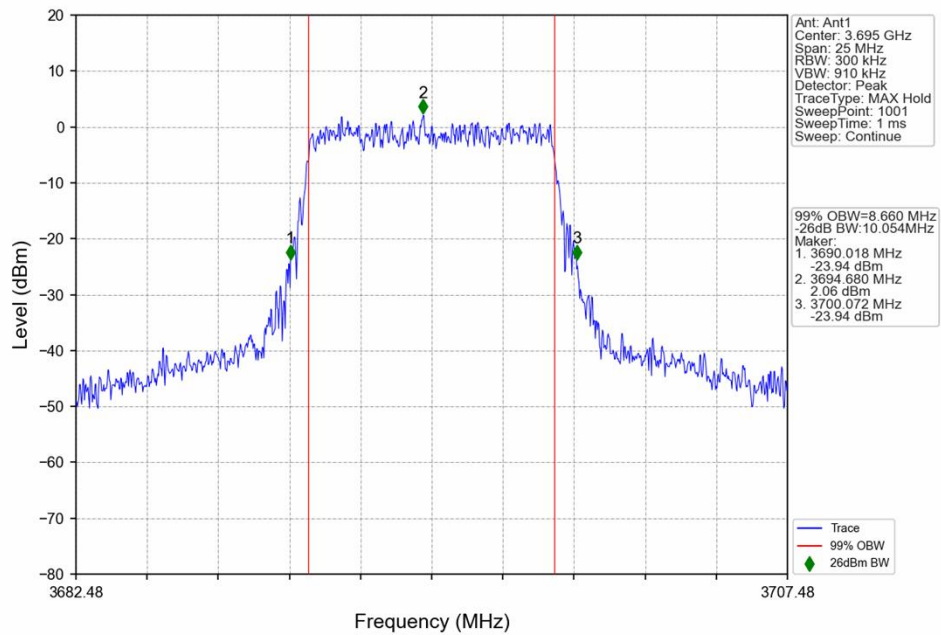
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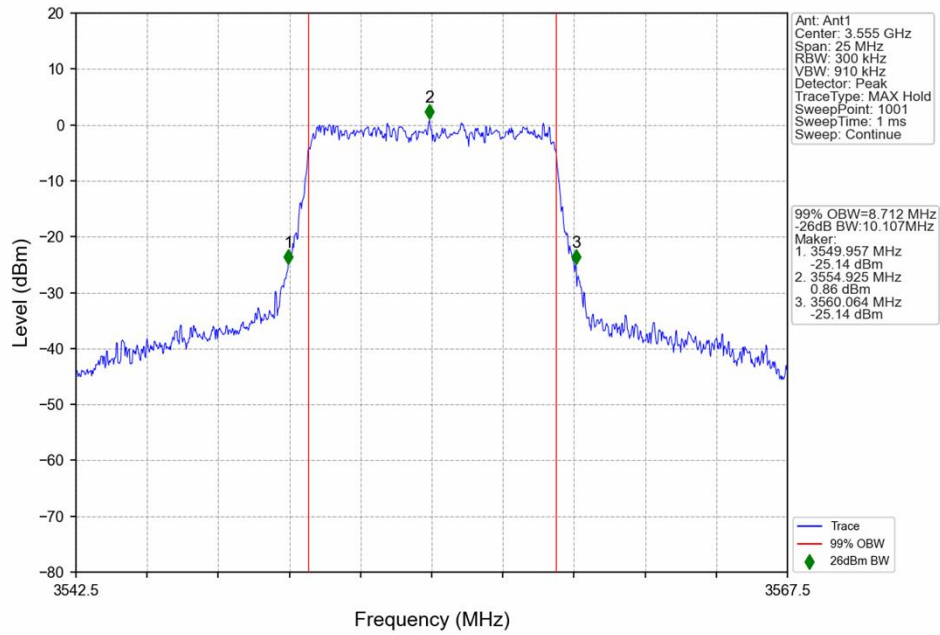
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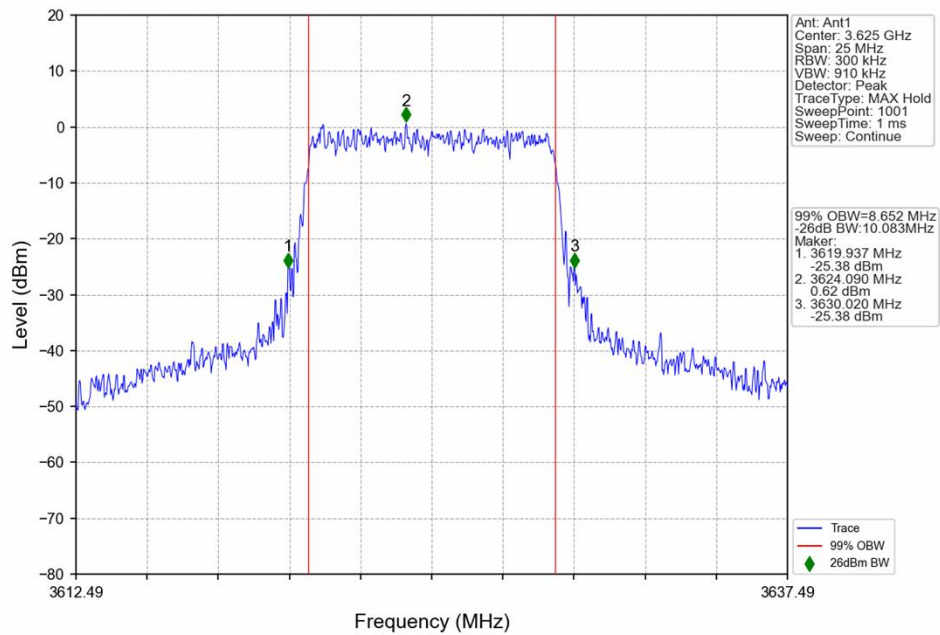
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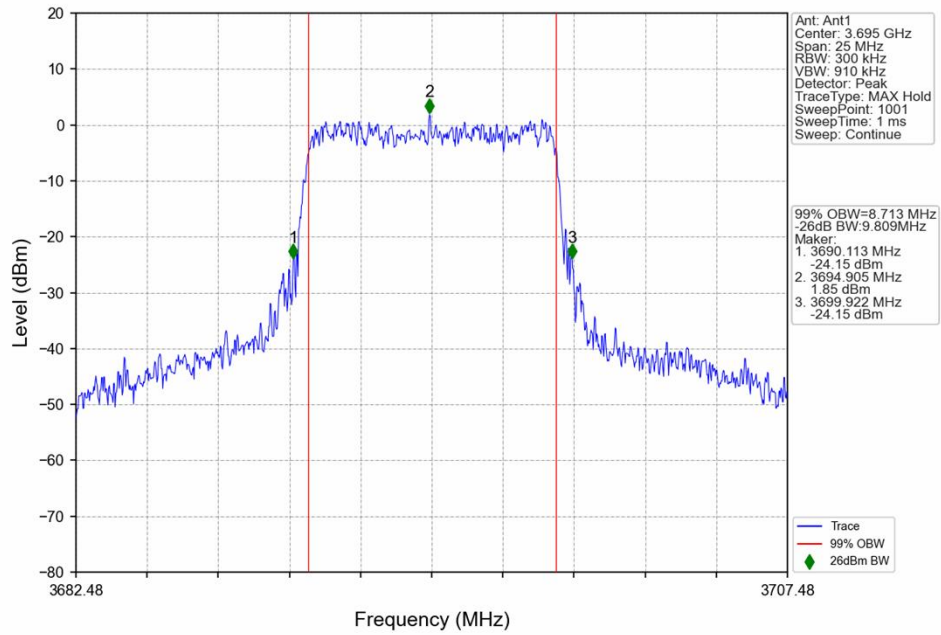
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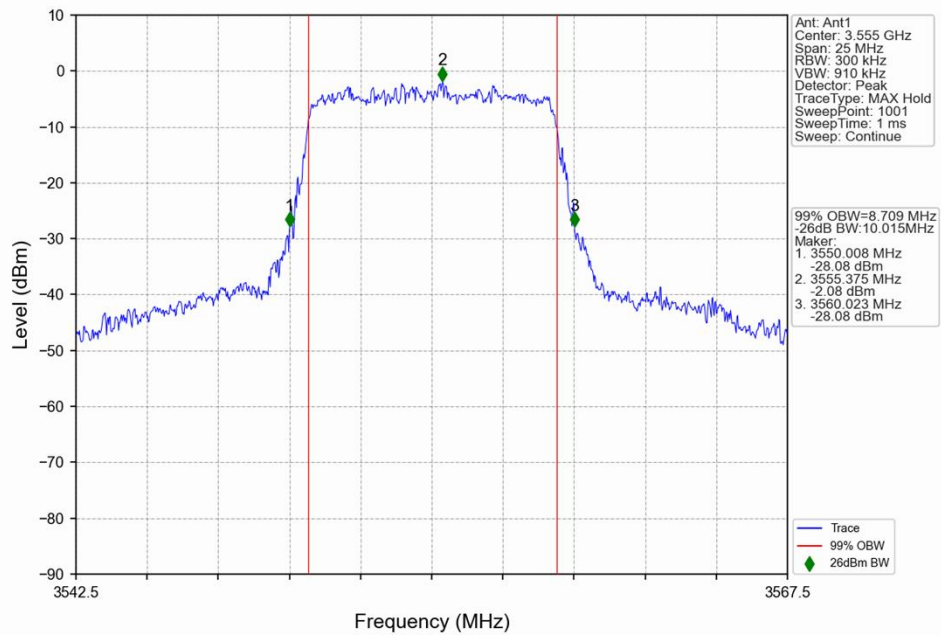
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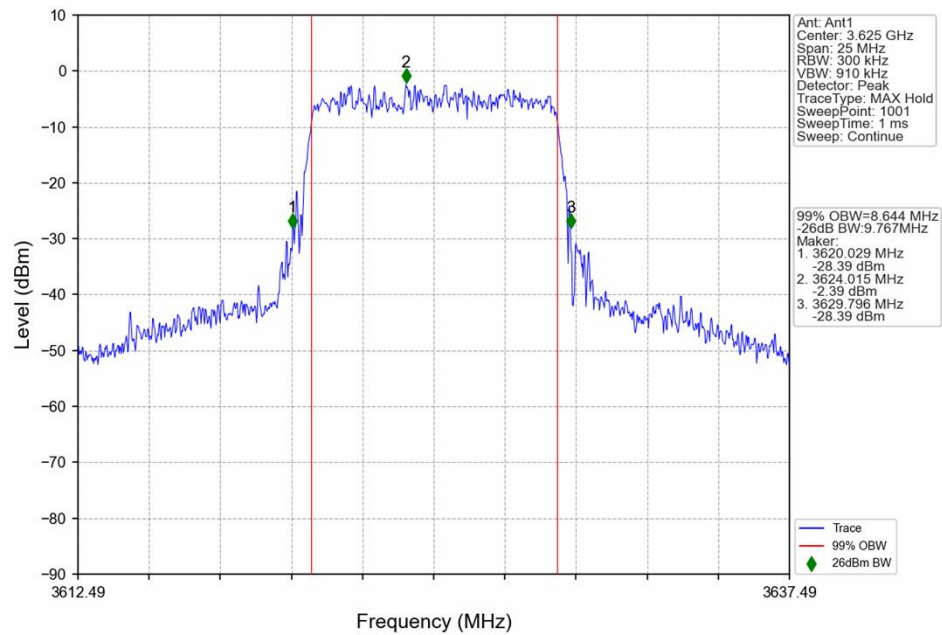
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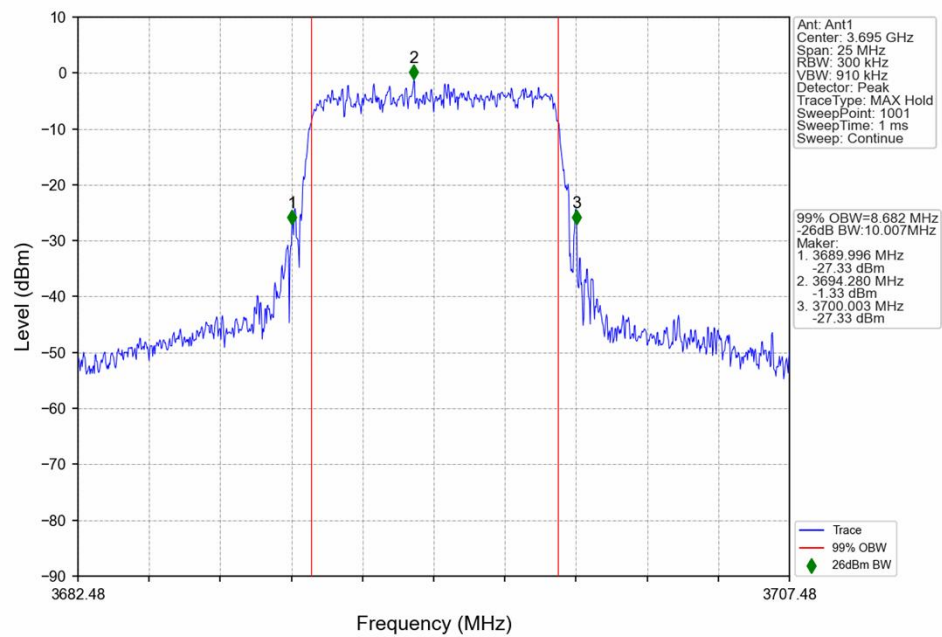
n48\_30kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_3555MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_3624.99MHz\_Outer\_Full



n48\_30kHz\_SISO\_NTNV\_10MHz\_CP-OFDM 256 QAM\_3694.98MHz\_Outer\_Full

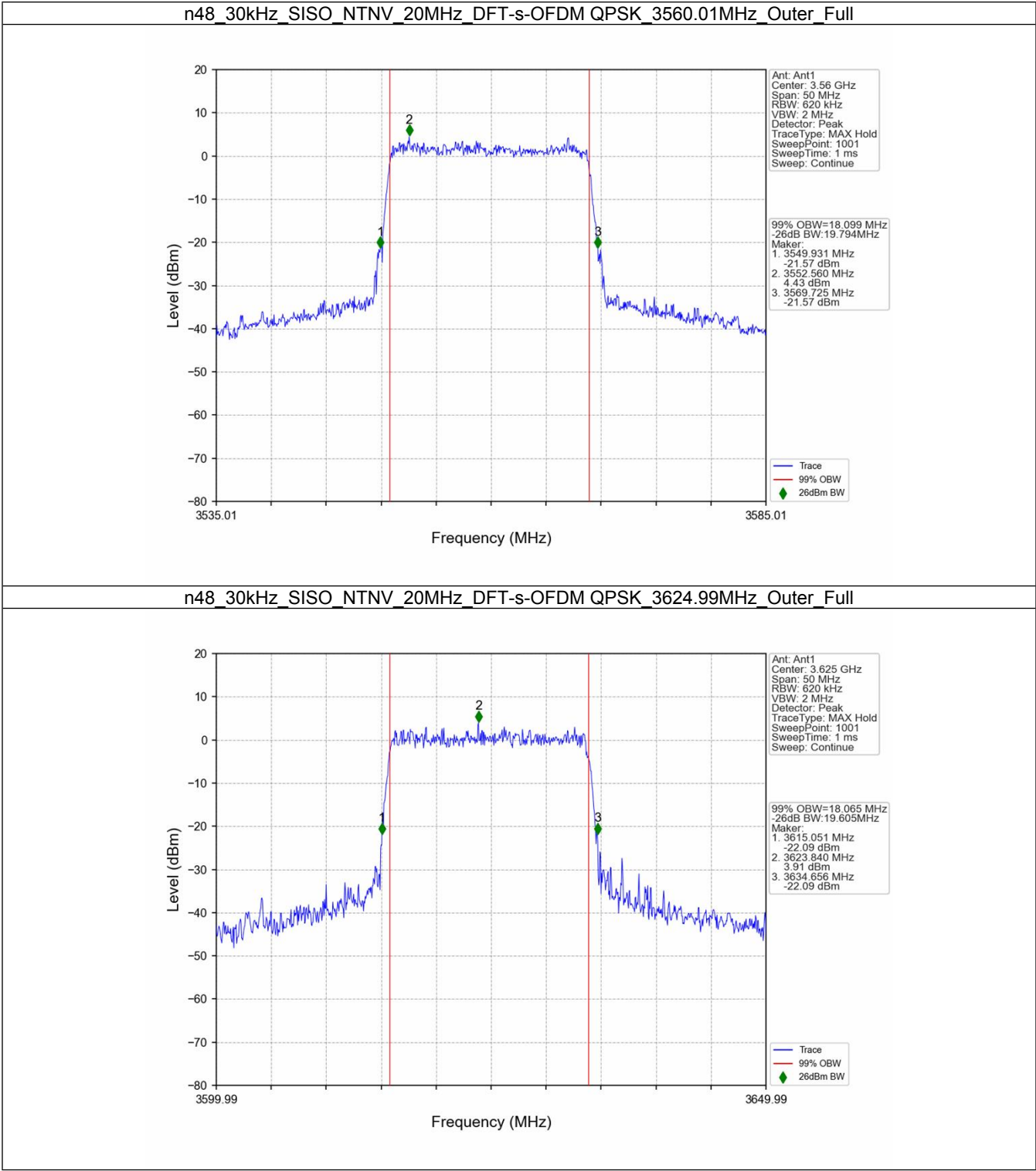


## 1.2 30k\_SISO\_20MHz\_NTNV

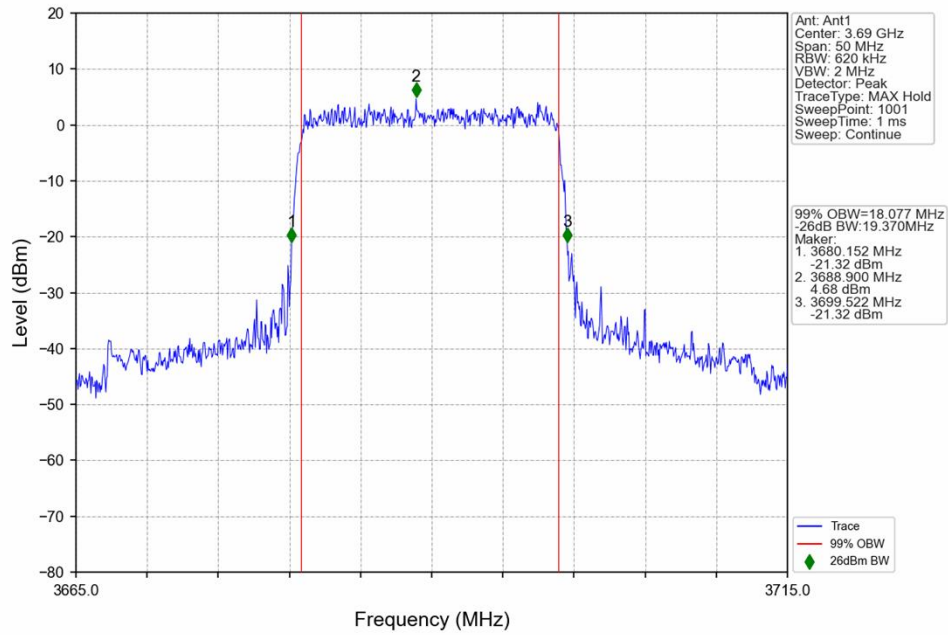
### 1.2.1 Test Result

| 5G NR n48 SCS=30kHz SISO 20MHz NTN |                 |               |                     |                      |             |         |
|------------------------------------|-----------------|---------------|---------------------|----------------------|-------------|---------|
| Modulation                         | Frequency (MHz) | RB Allocation | 99% Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
| DFT-s-OFDM QPSK                    | 3560.01         | Outer_Full    | 18.10               | 19.79                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.07               | 19.61                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.08               | 19.37                | /           | Pass    |
| DFT-s-OFDM 16 QAM                  | 3560.01         | Outer_Full    | 18.12               | 20.11                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.05               | 19.67                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.09               | 19.75                | /           | Pass    |
| DFT-s-OFDM 64 QAM                  | 3560.01         | Outer_Full    | 18.14               | 19.90                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.14               | 19.84                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.16               | 19.76                | /           | Pass    |
| DFT-s-OFDM 256 QAM                 | 3560.01         | Outer_Full    | 18.14               | 19.94                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.12               | 19.57                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.08               | 19.35                | /           | Pass    |
| CP-OFDM QPSK                       | 3560.01         | Outer_Full    | 18.39               | 20.24                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.36               | 20.06                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.36               | 20.33                | /           | Pass    |
| CP-OFDM 16 QAM                     | 3560.01         | Outer_Full    | 18.43               | 20.77                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.44               | 19.90                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.45               | 19.99                | /           | Pass    |
| CP-OFDM 64 QAM                     | 3560.01         | Outer_Full    | 18.37               | 20.24                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.43               | 19.70                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.38               | 20.08                | /           | Pass    |
| CP-OFDM 256 QAM                    | 3560.01         | Outer_Full    | 18.42               | 20.36                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 18.34               | 20.03                | /           | Pass    |
|                                    | 3690            | Outer_Full    | 18.39               | 20.15                | /           | Pass    |

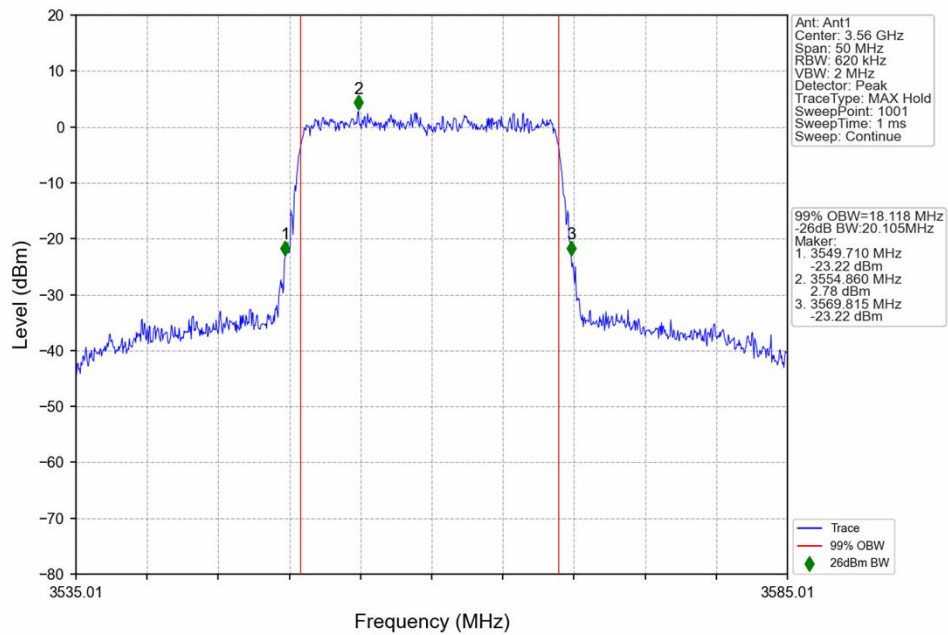
# 1.2.2 Test Graph



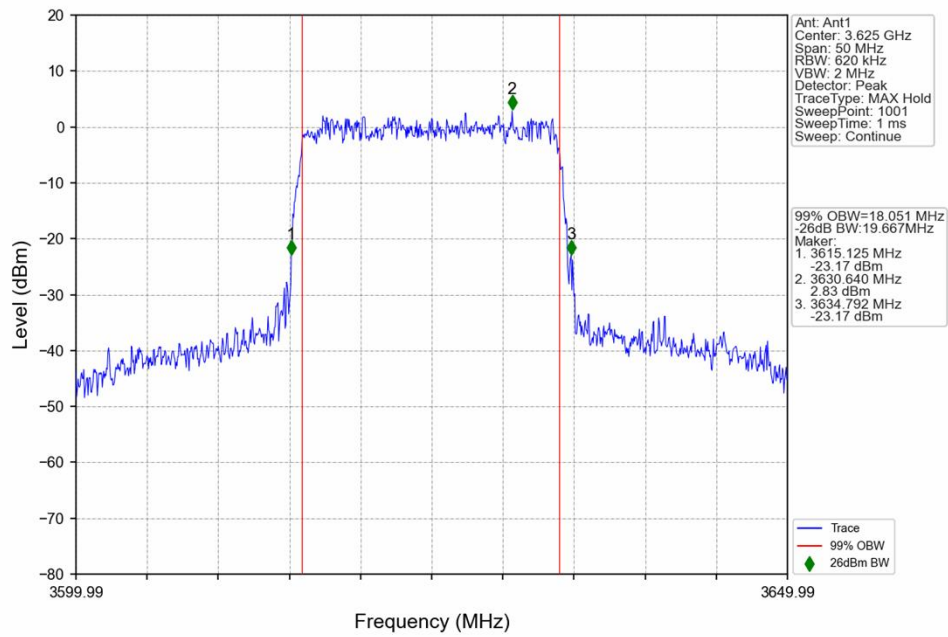
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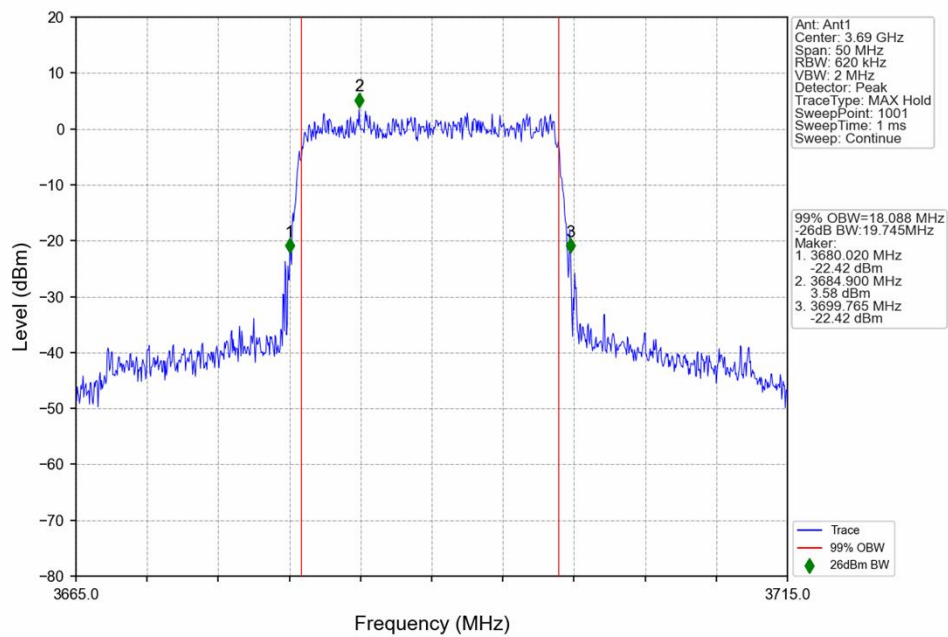
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 16 QAM\_3560.01MHz\_Outer\_Full



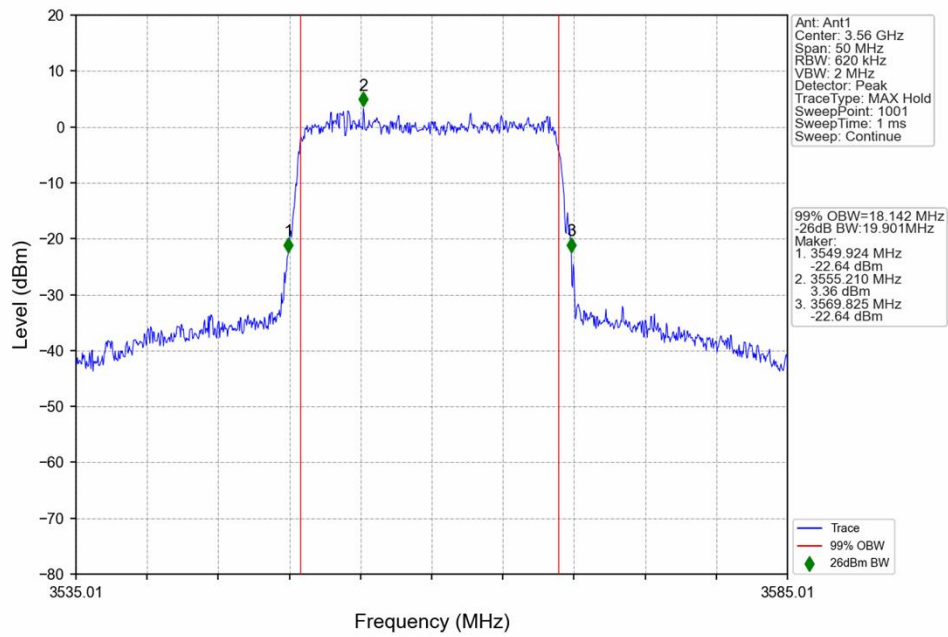
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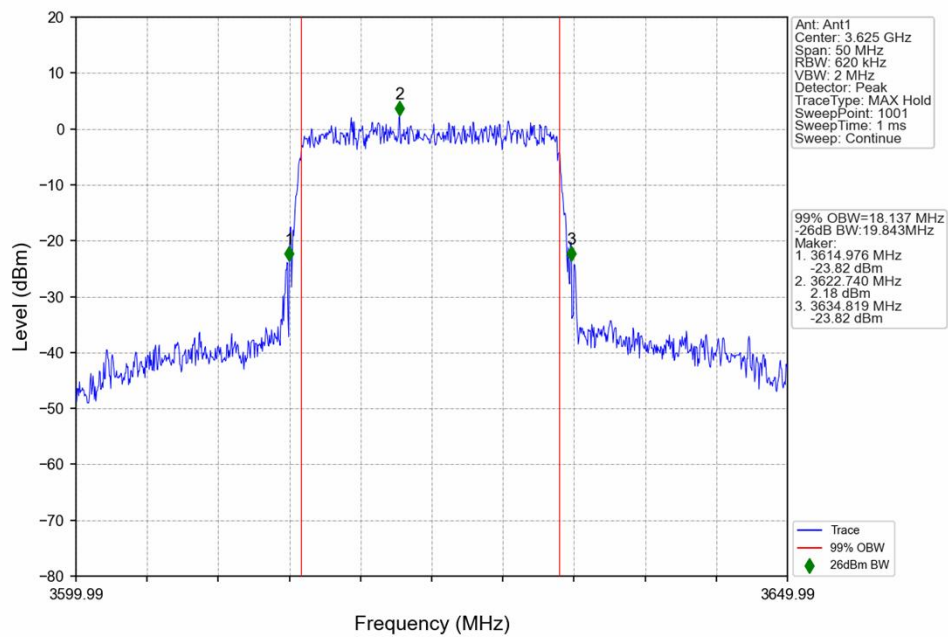
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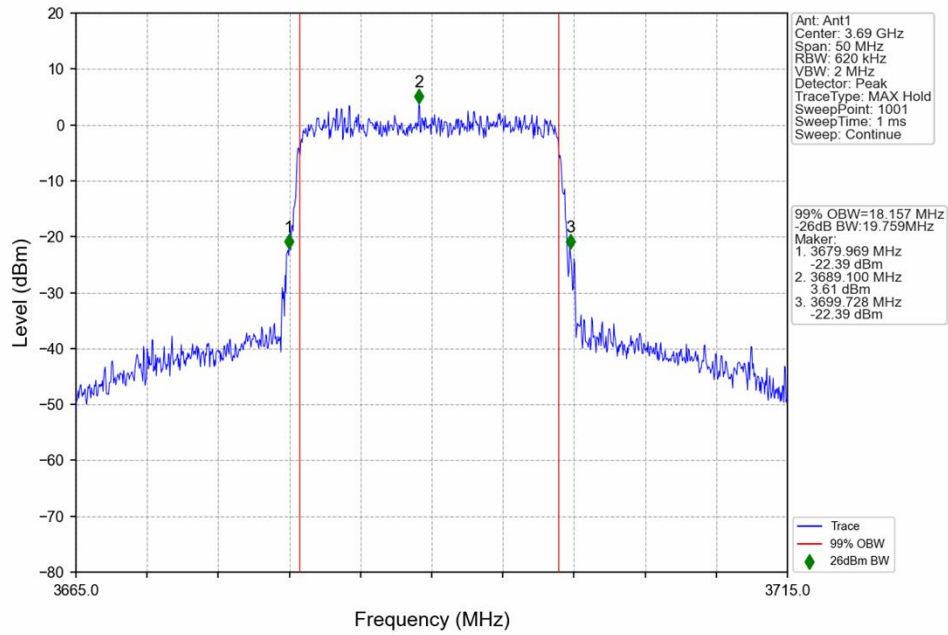
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM\_64\_QAM\_3560.01MHz\_Outer\_Full



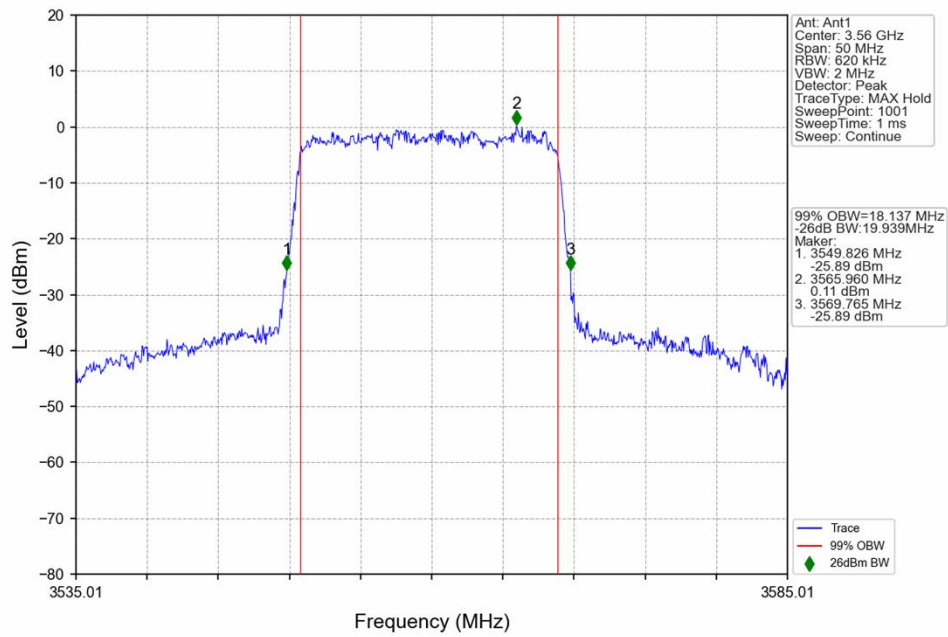
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM\_64\_QAM\_3624.99MHz\_Outer\_Full



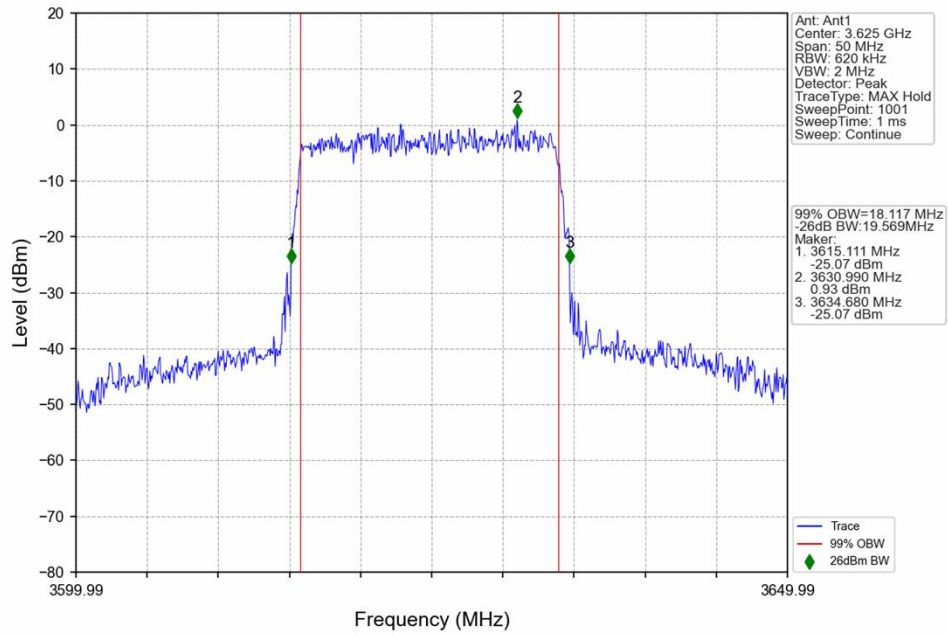
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 64 QAM\_3690MHz\_Outer\_Full



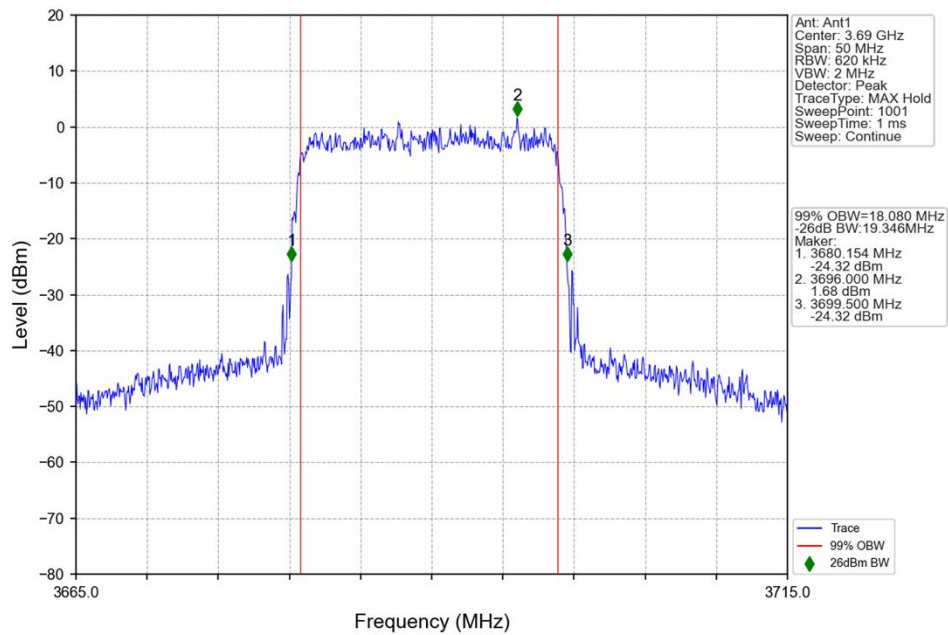
n48\_30kHz\_SISO\_NTNV\_20MHz\_DFT-s-OFDM 256 QAM\_3560.01MHz\_Outer\_Full



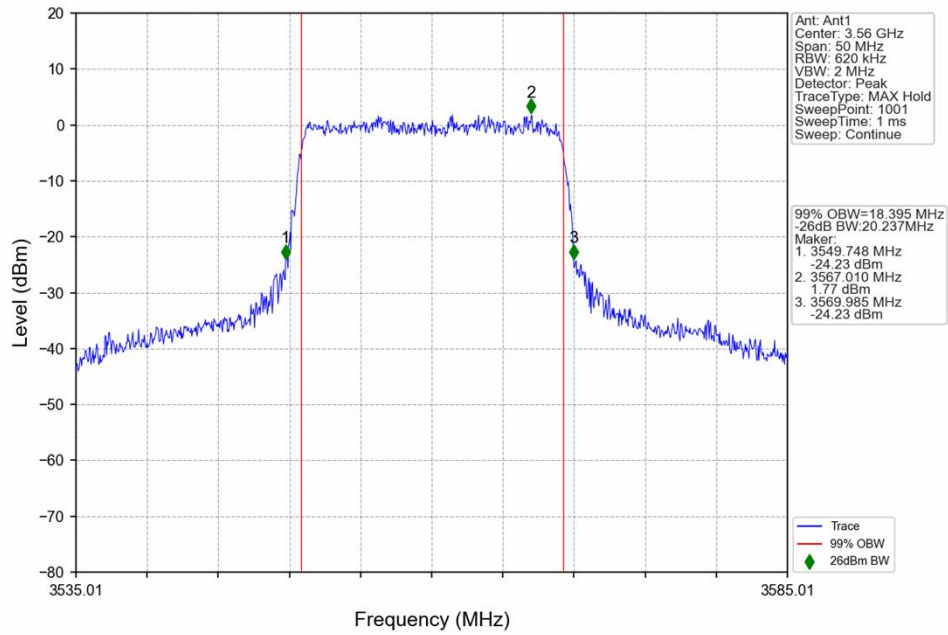
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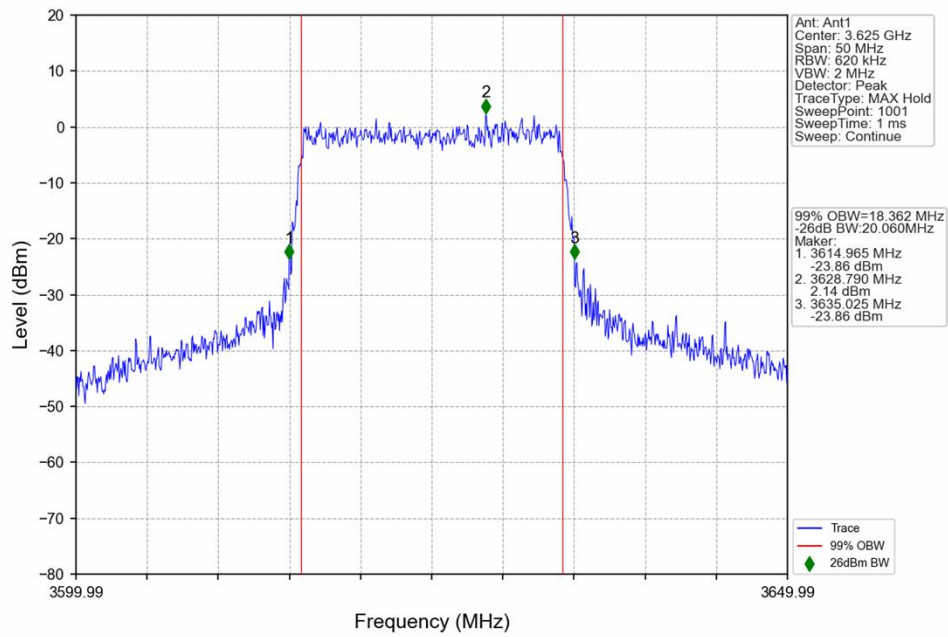
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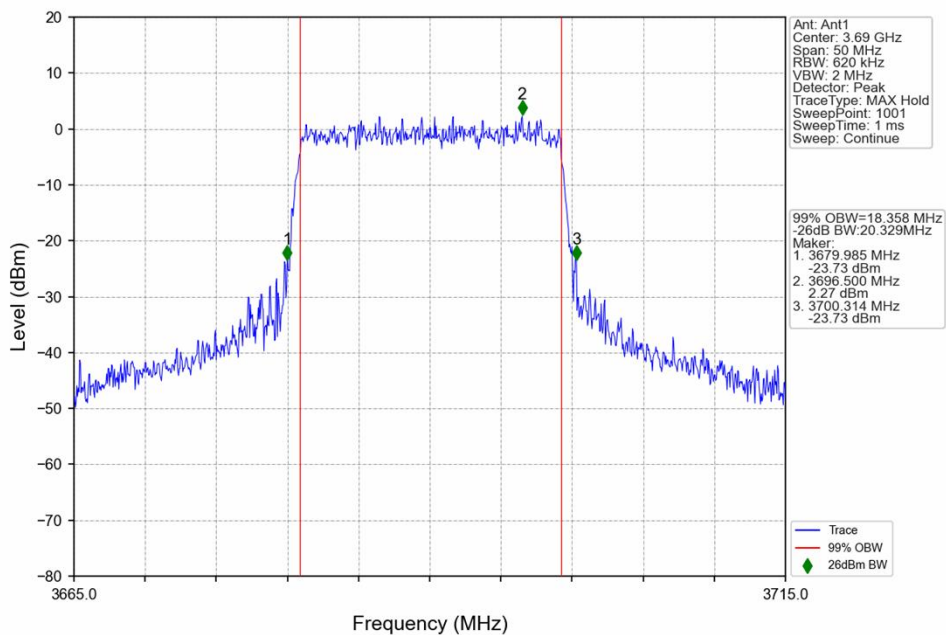
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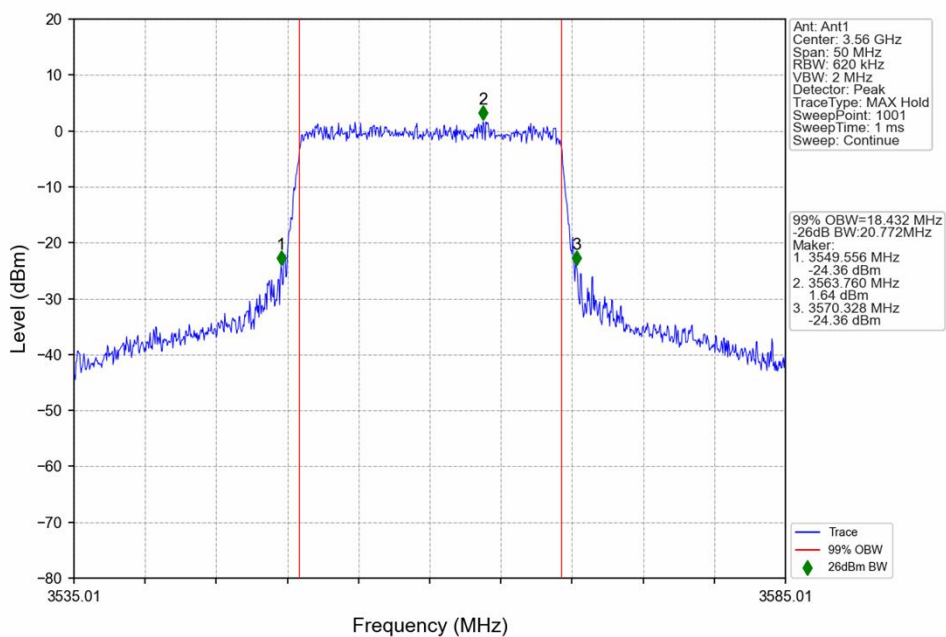
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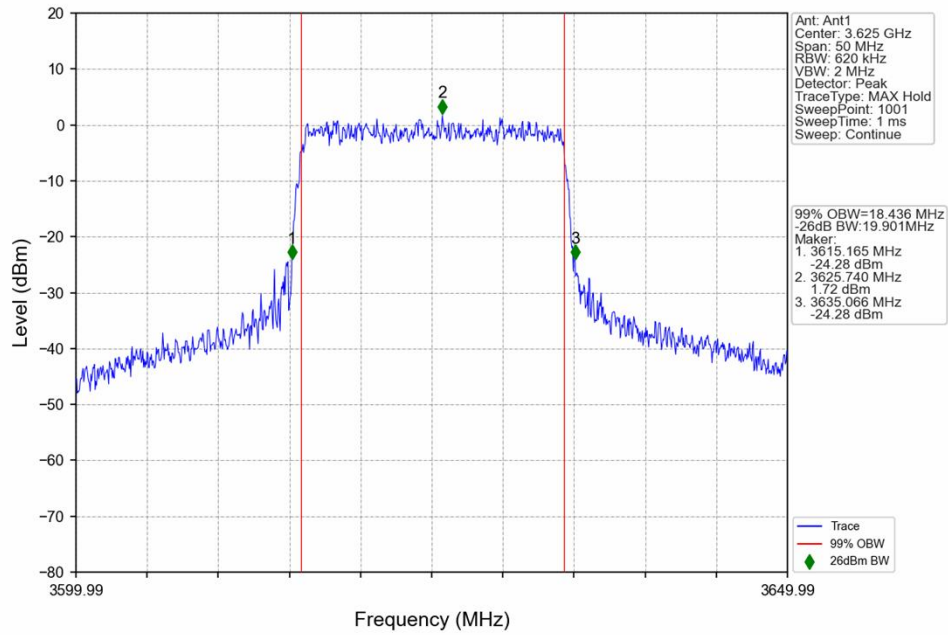
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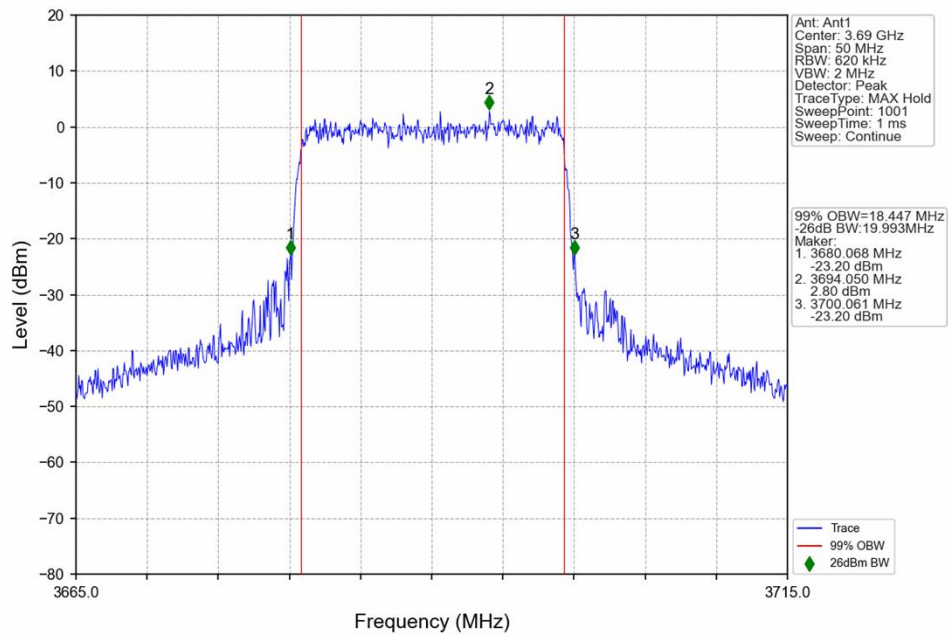
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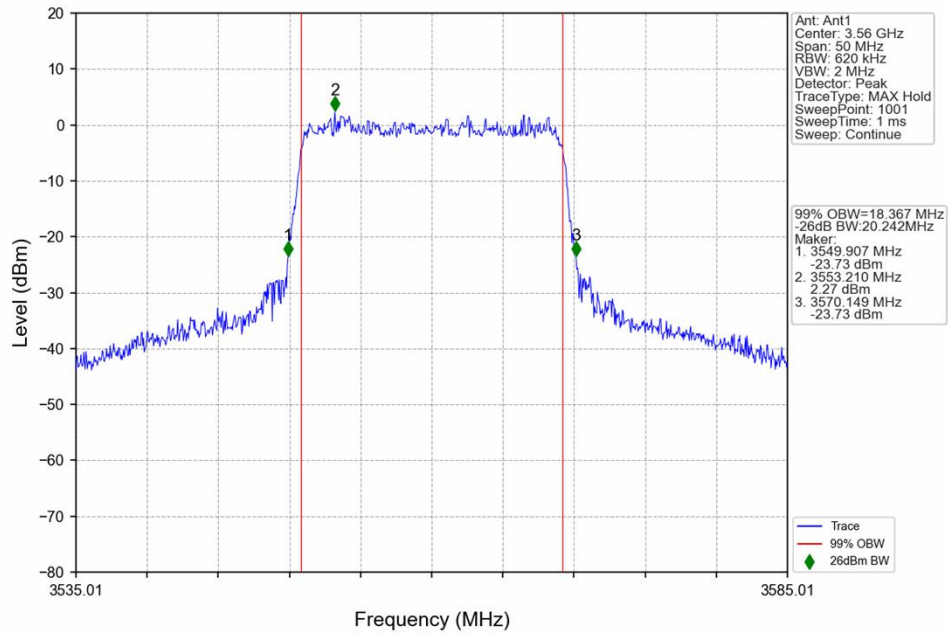
# n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM\_16\_QAM\_3624.99MHz\_Outer\_Full



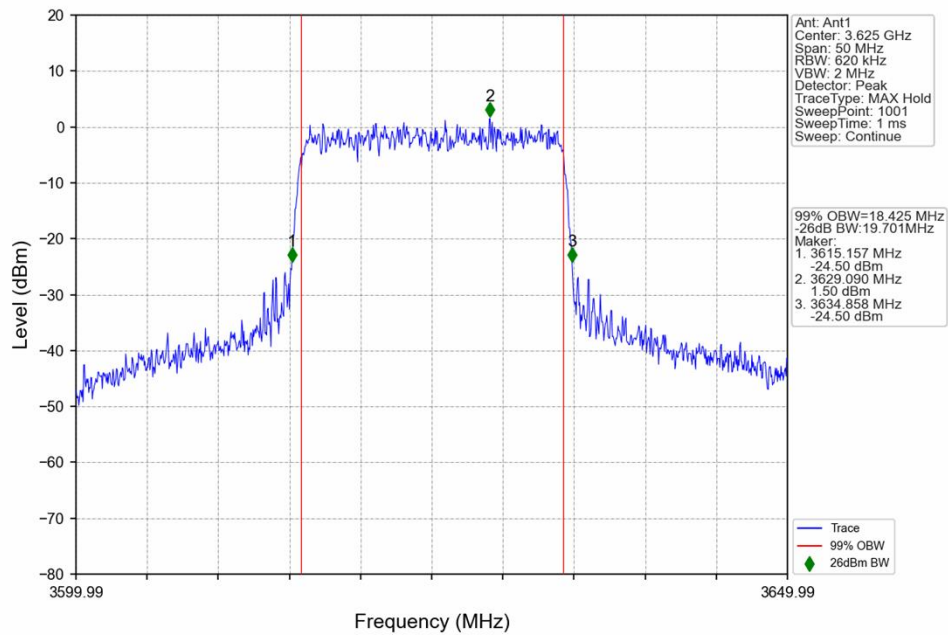
# n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM\_16\_QAM\_3690MHz\_Outer\_Full



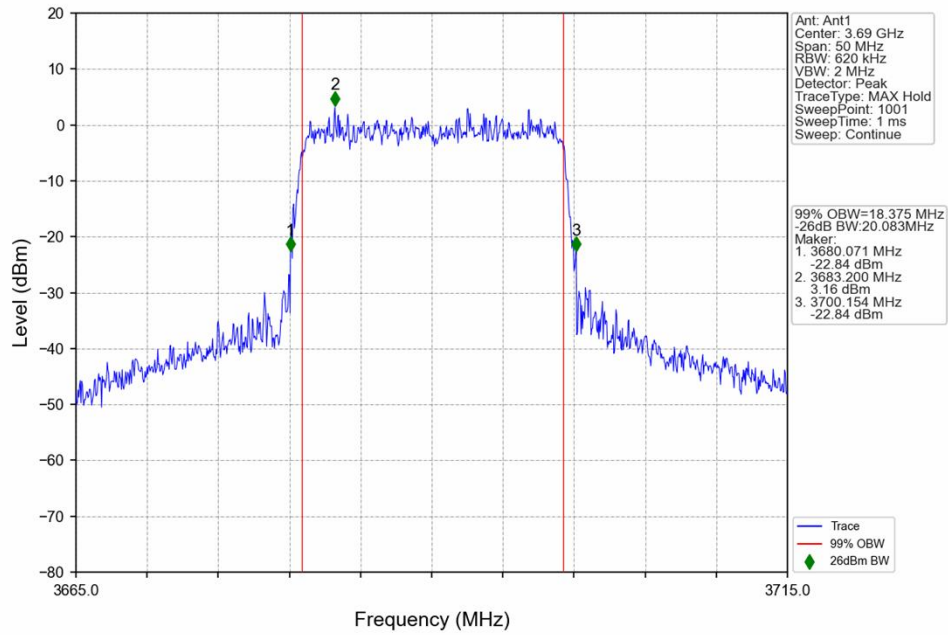
n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM\_64\_QAM\_3560.01MHz\_Outer\_Full



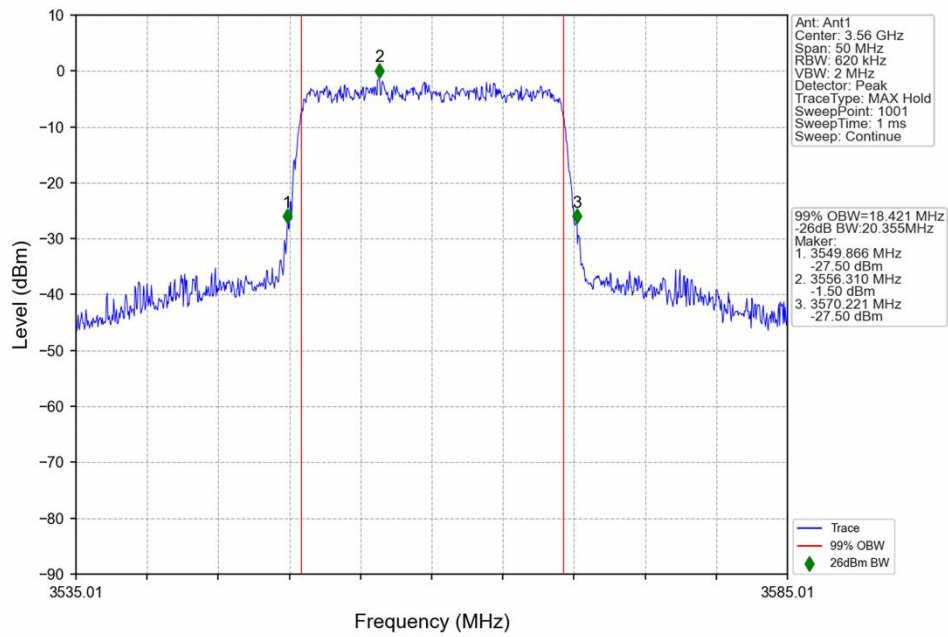
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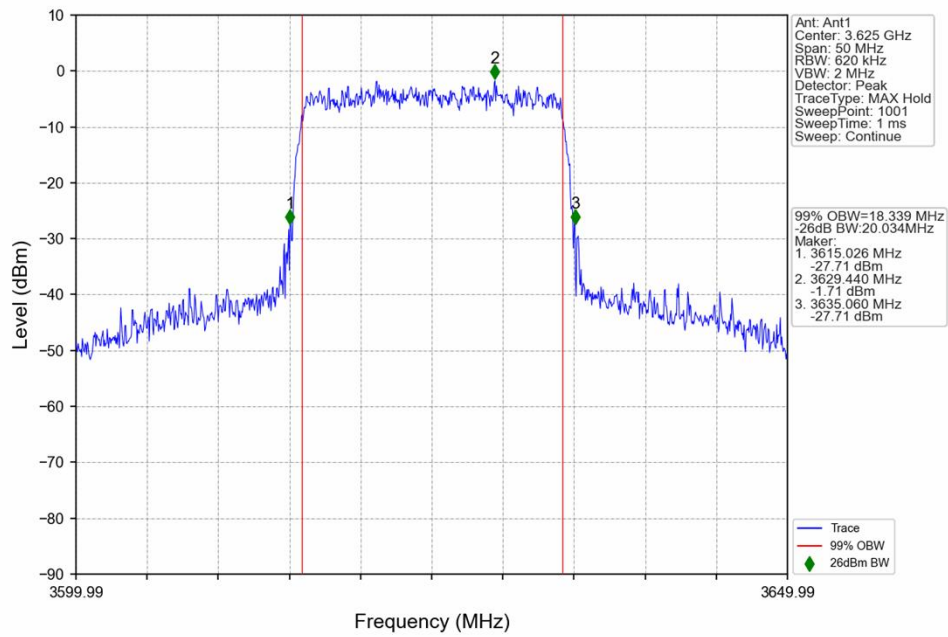
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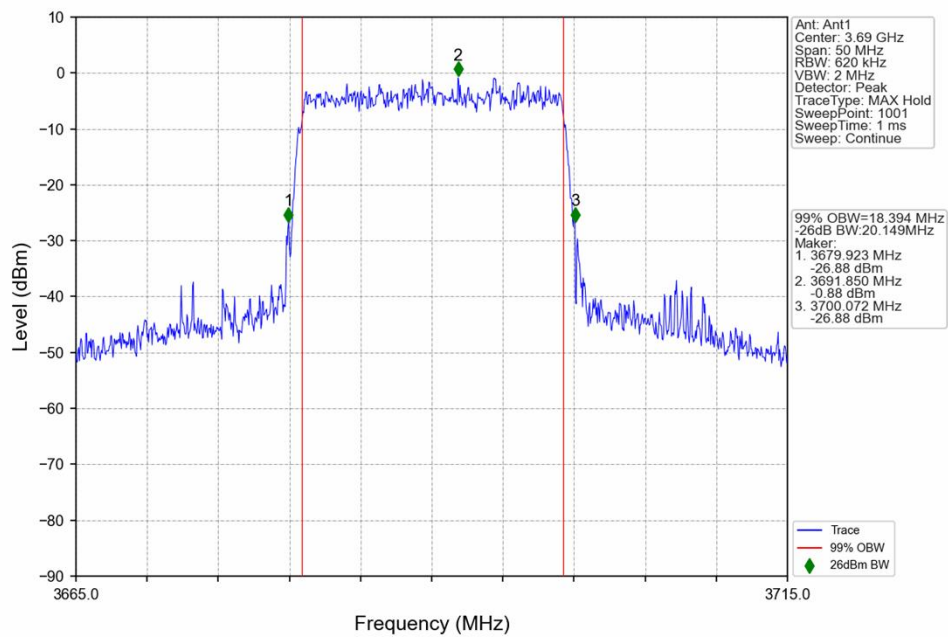
# n48\_30kHz\_SISO\_NTNV\_20MHz\_CP-OFDM 256 QAM\_3560.01MHz\_Outer\_Full



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

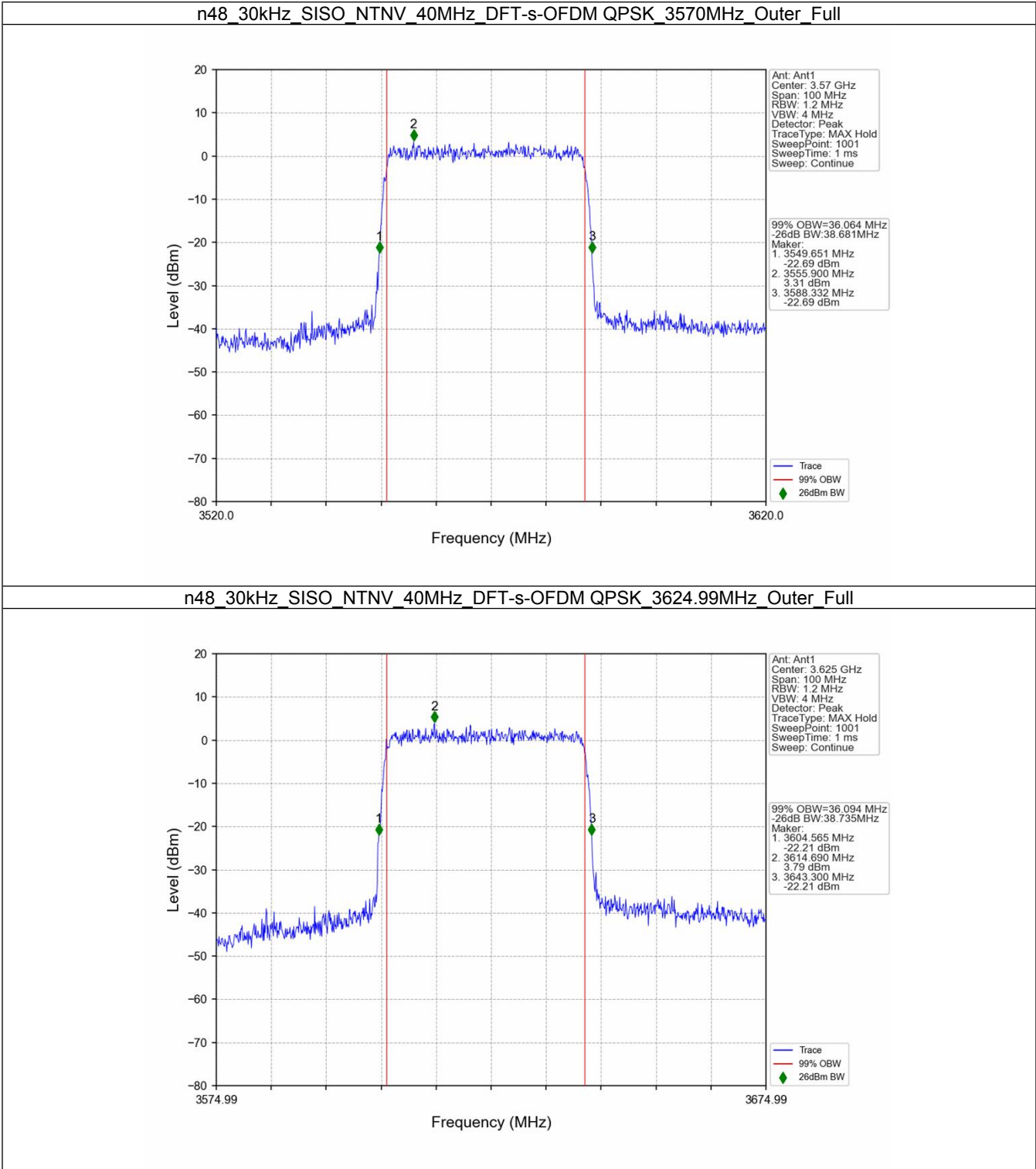


### 1.3 30k\_SISO\_40MHz\_NTNV

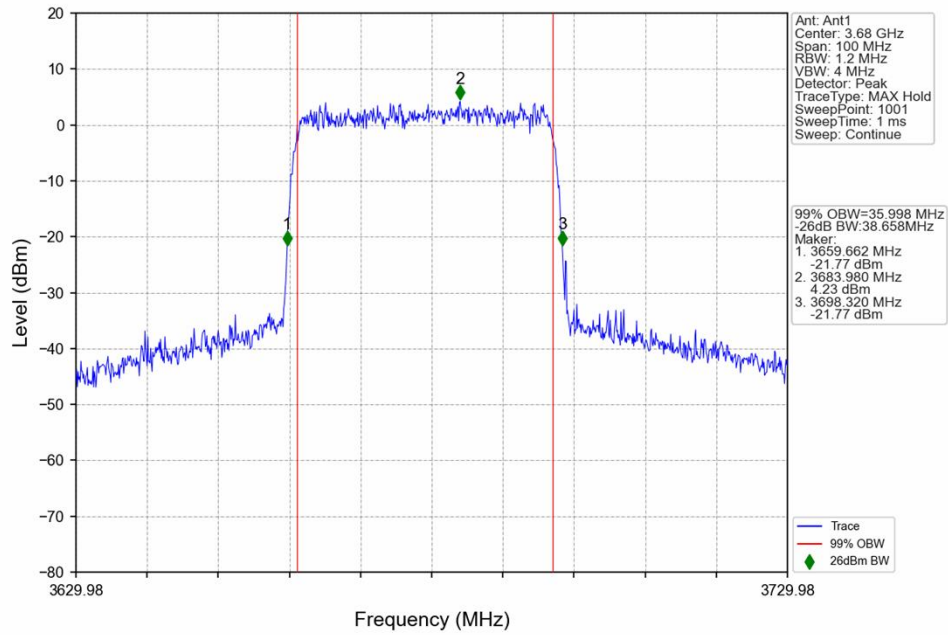
#### 1.3.1 Test Result

| 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 QPSK                    | 3570            | Outer_Full    | 36.06               | 38.68                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 36.09               | 38.73                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.00               | 38.66                | /           | Pass    |
| DFT-s-OFDM 16 QAM                  | 3570            | Outer_Full    | 35.95               | 38.71                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 36.14               | 38.66                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.04               | 38.68                | /           | Pass    |
| DFT-s-OFDM 64 QAM                  | 3570            | Outer_Full    | 36.06               | 38.58                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 36.05               | 38.67                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 36.05               | 38.75                | /           | Pass    |
| DFT-s-OFDM 256 QAM                 | 3570            | Outer_Full    | 36.17               | 38.53                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 35.98               | 38.65                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 35.99               | 38.65                | /           | Pass    |
| CP-OFDM QPSK                       | 3570            | Outer_Full    | 38.15               | 41.05                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.10               | 40.76                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.17               | 40.70                | /           | Pass    |
| CP-OFDM 16 QAM                     | 3570            | Outer_Full    | 38.27               | 40.68                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.10               | 40.76                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.09               | 40.84                | /           | Pass    |
| CP-OFDM 64 QAM                     | 3570            | Outer_Full    | 38.09               | 40.76                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.02               | 40.93                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.16               | 40.89                | /           | Pass    |
| CP-OFDM 256 QAM                    | 3570            | Outer_Full    | 38.14               | 41.12                | /           | Pass    |
|                                    | 3624.99         | Outer_Full    | 38.06               | 40.57                | /           | Pass    |
|                                    | 3679.98         | Outer_Full    | 38.12               | 40.88                | /           | Pass    |

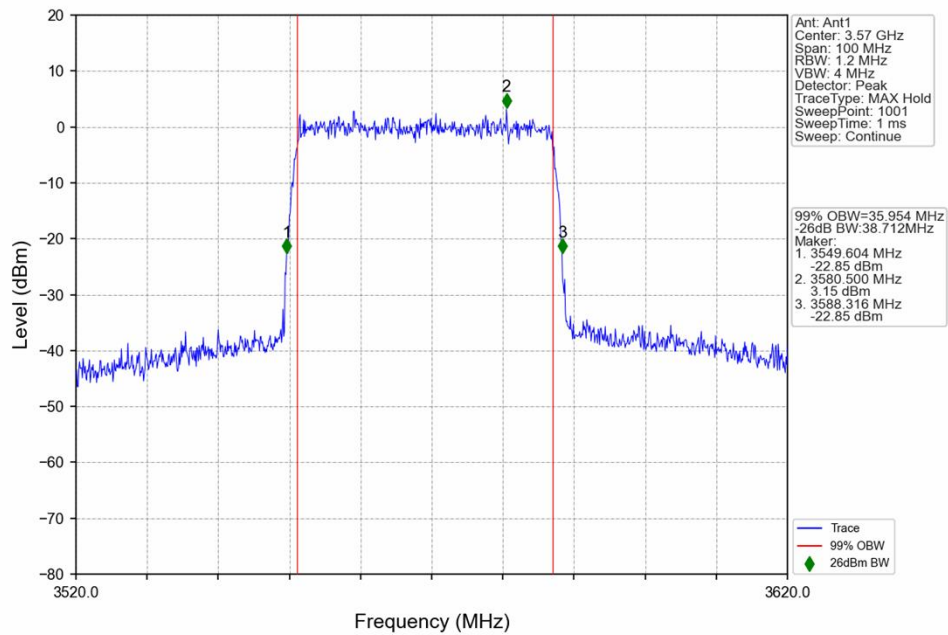
### 1.3.2 Test Graph



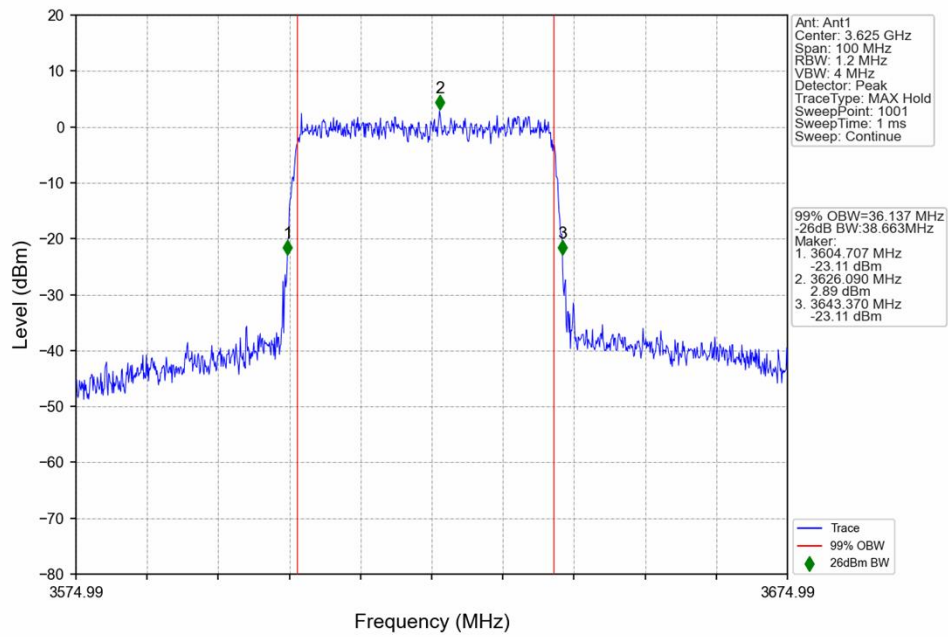
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM QPSK\_3679.98MHz\_Outer\_Full



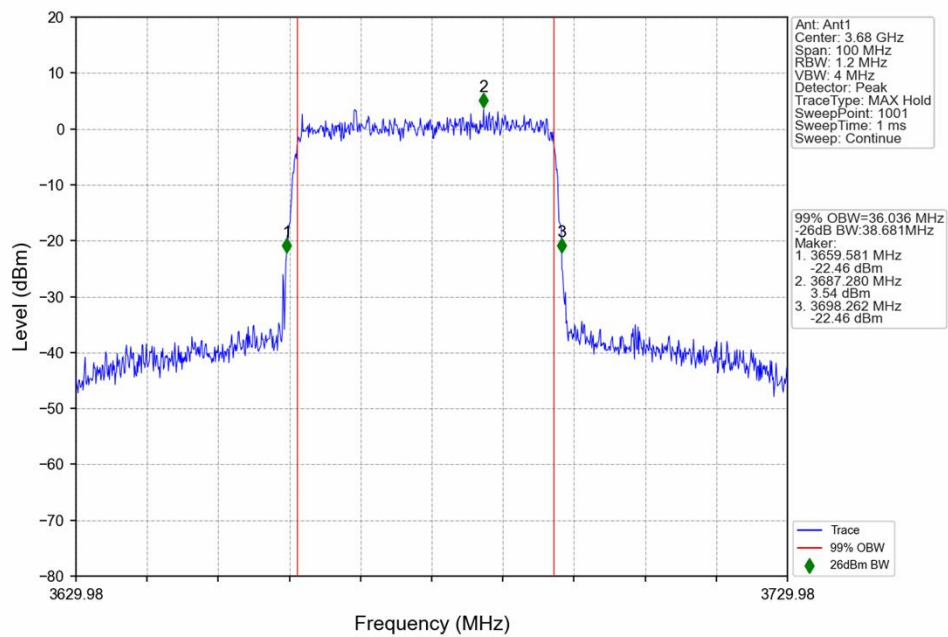
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 16 QAM\_3570MHz\_Outer\_Full



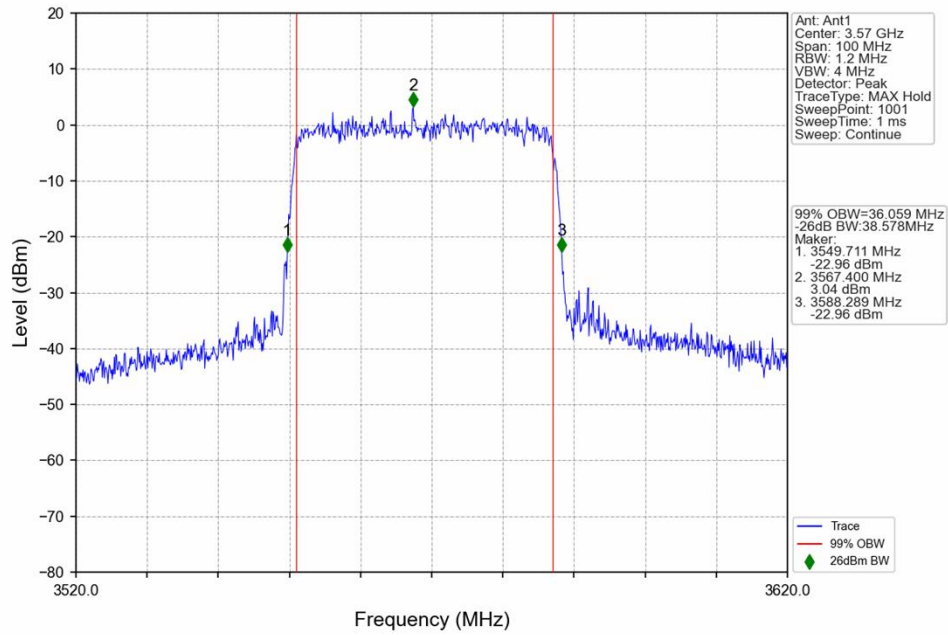
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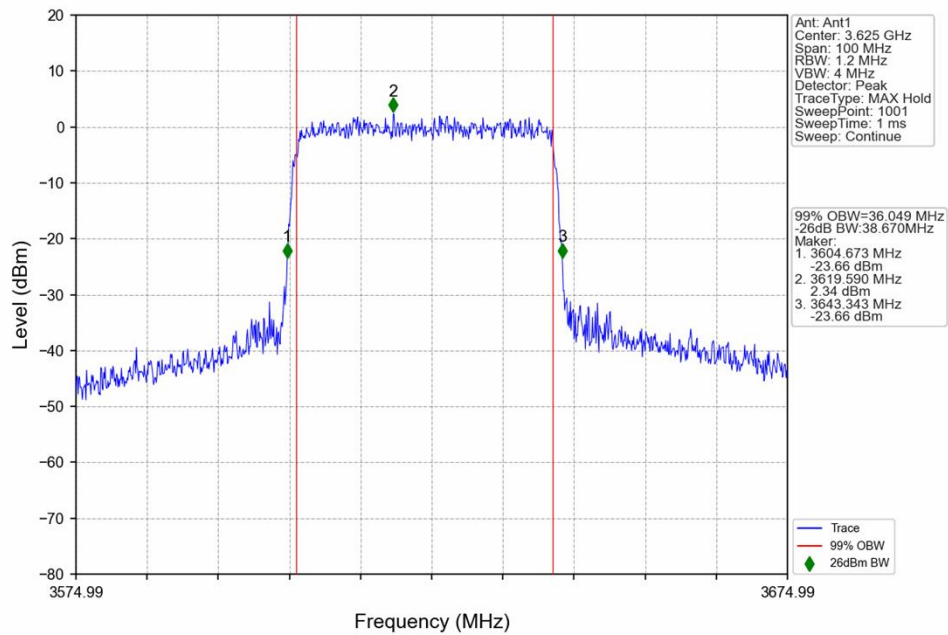
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM\_16\_QAM\_3679.98MHz\_Outer\_Full



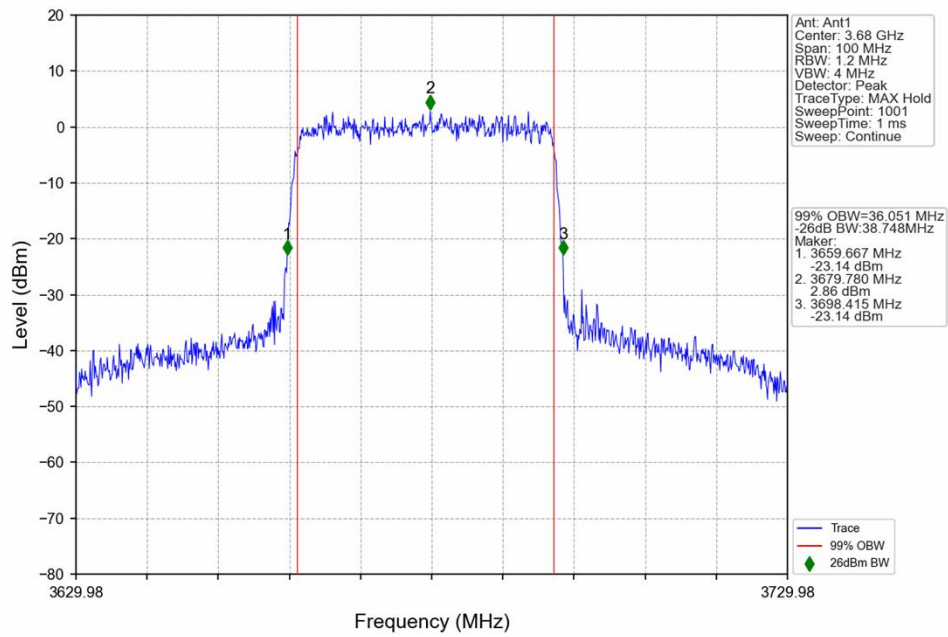
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM\_64\_QAM\_3570MHz\_Outer\_Full



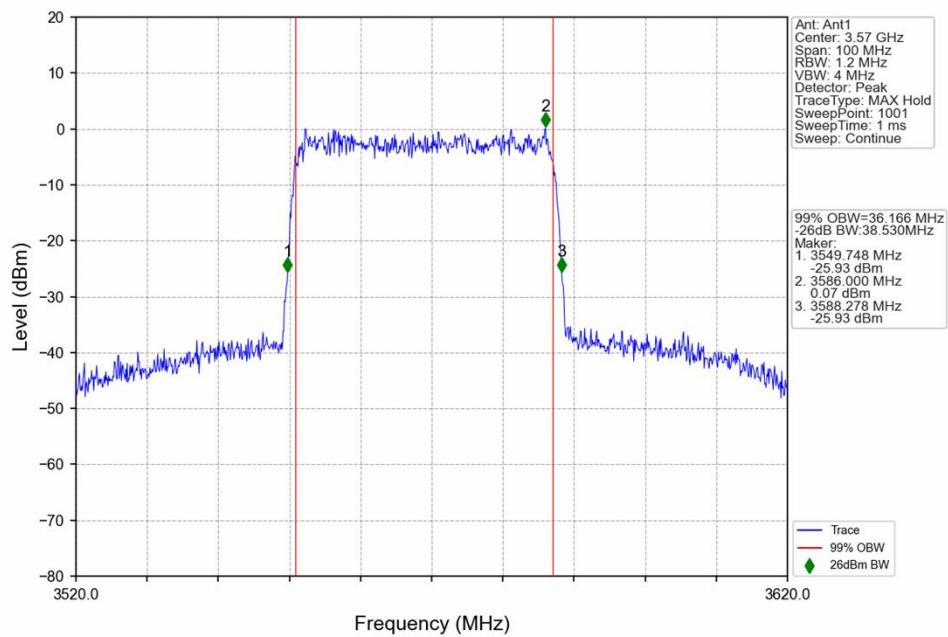
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM\_64\_QAM\_3624.99MHz\_Outer\_Full



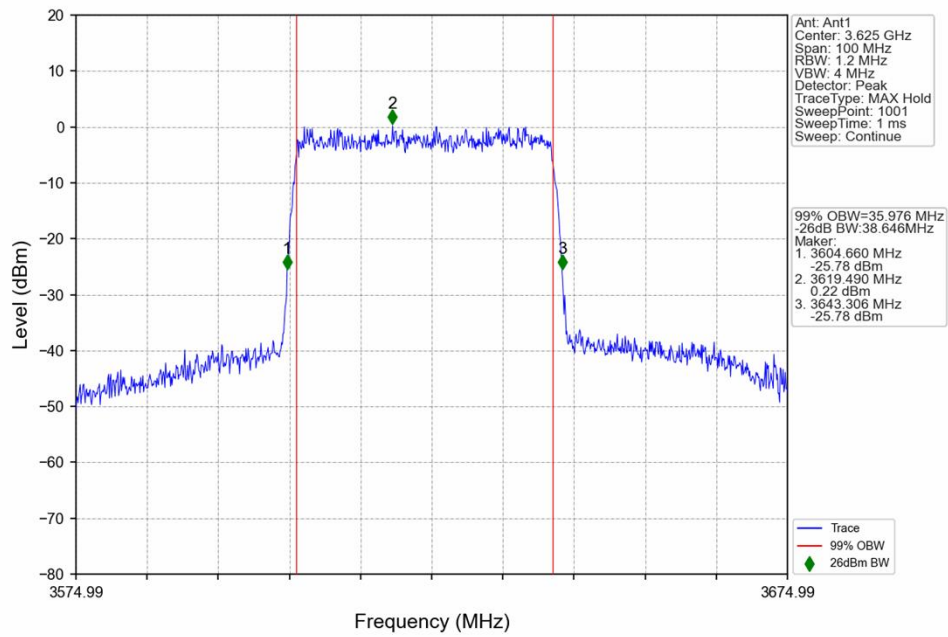
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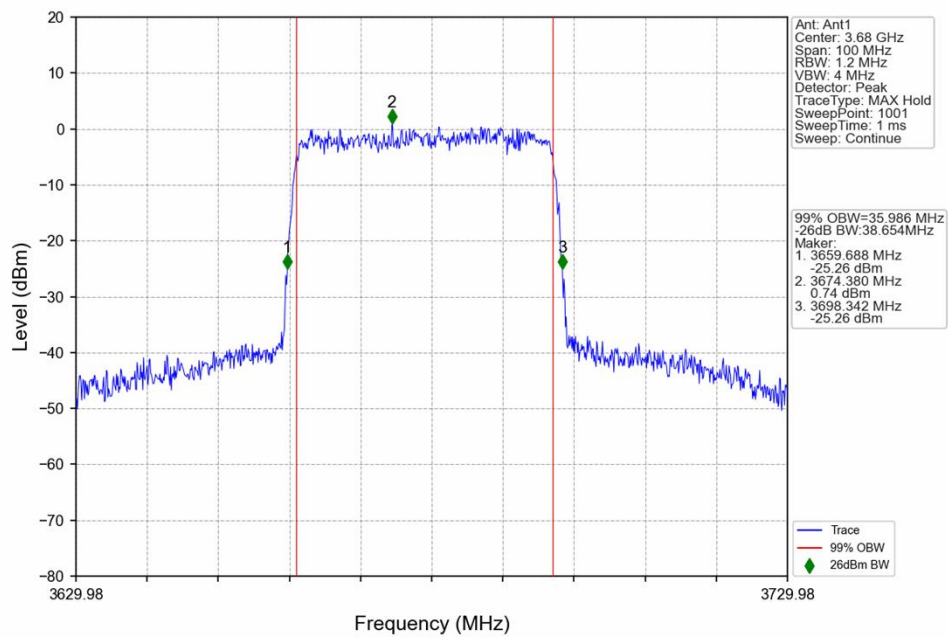
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM 256 QAM\_3570MHz\_Outer\_Full



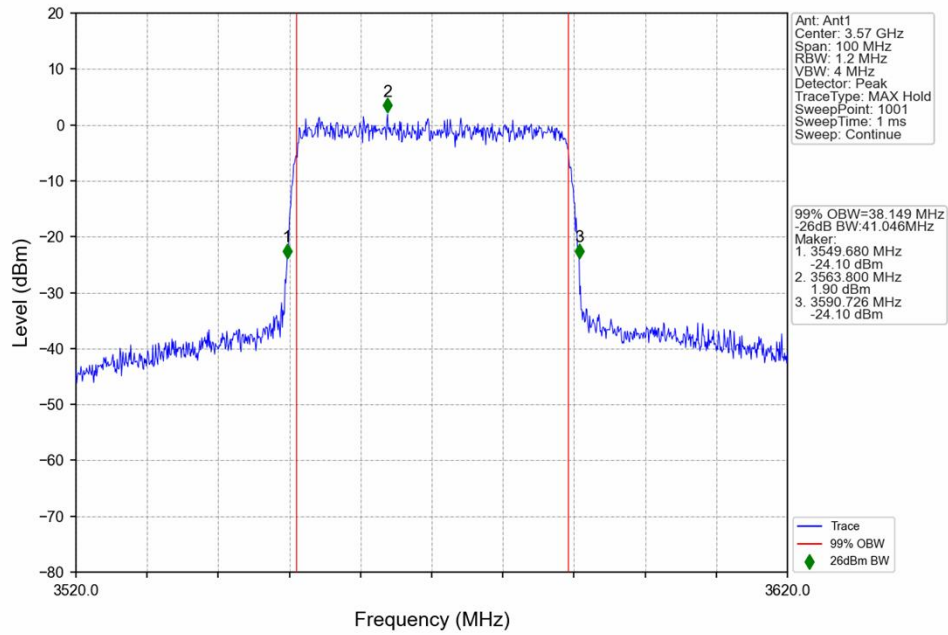
n48\_30kHz\_SISO\_NTNV\_40MHz\_DFT-s-OFDM\_256\_QAM\_3624.99MHz\_Outer\_Full



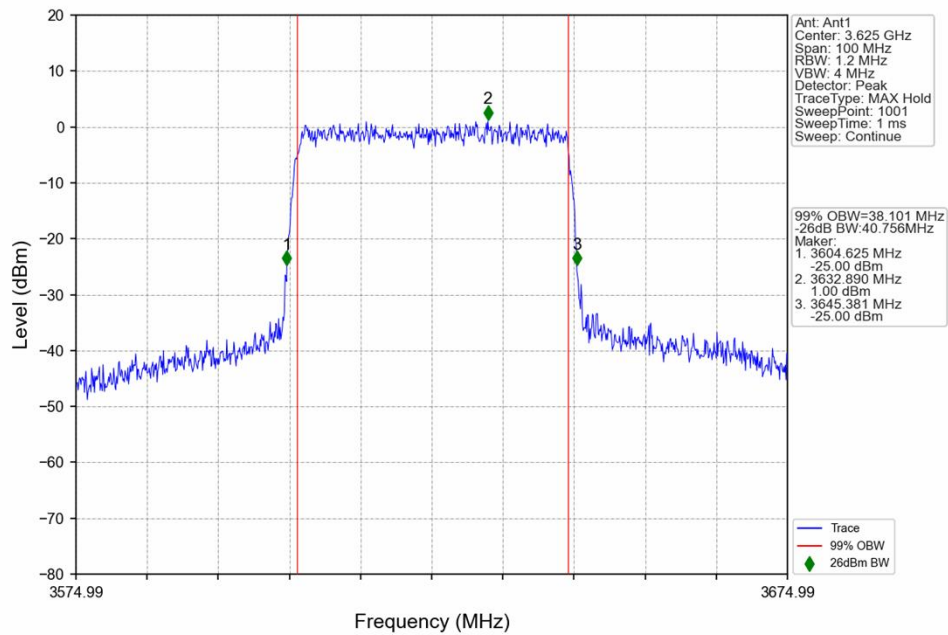
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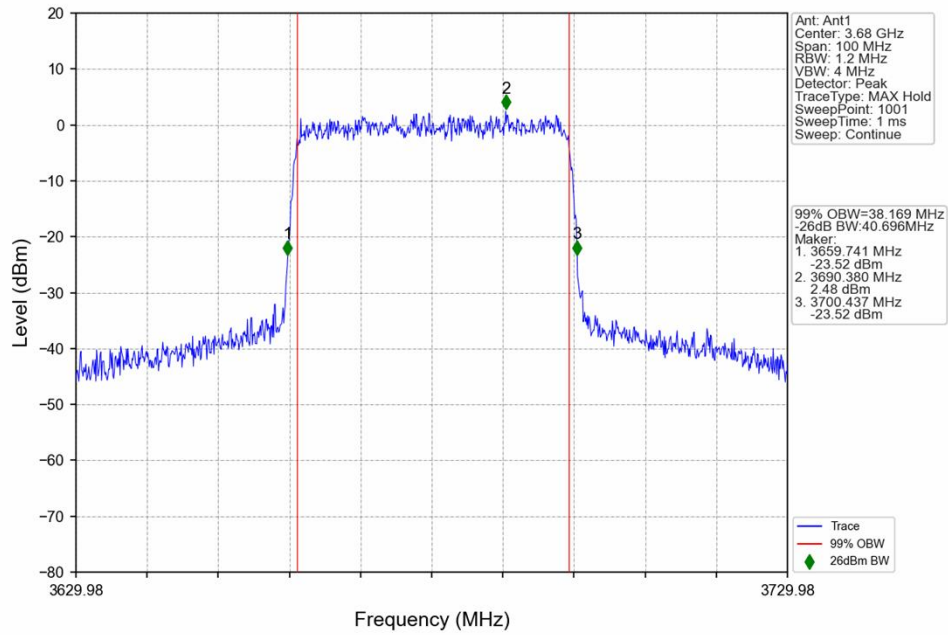
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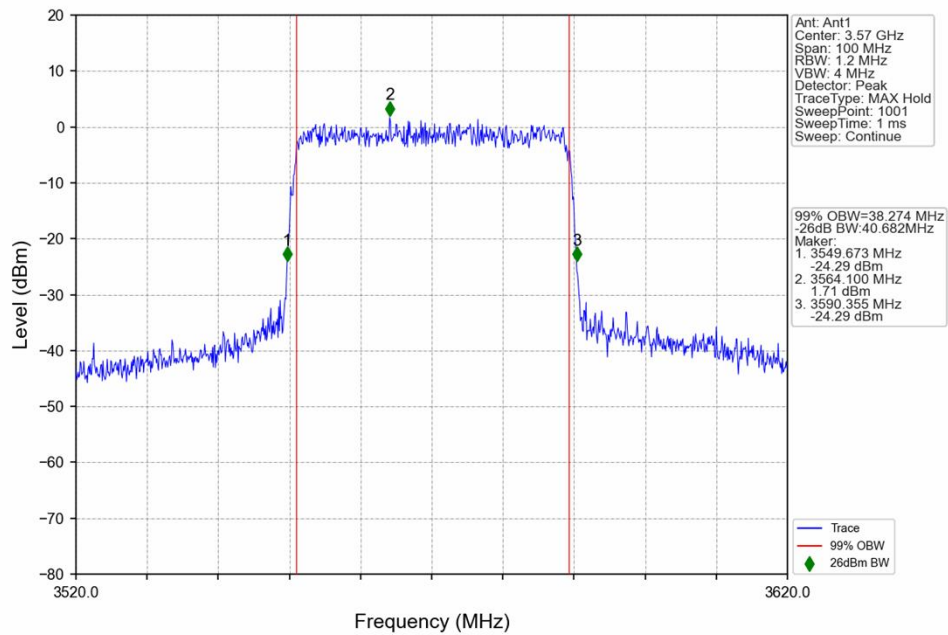
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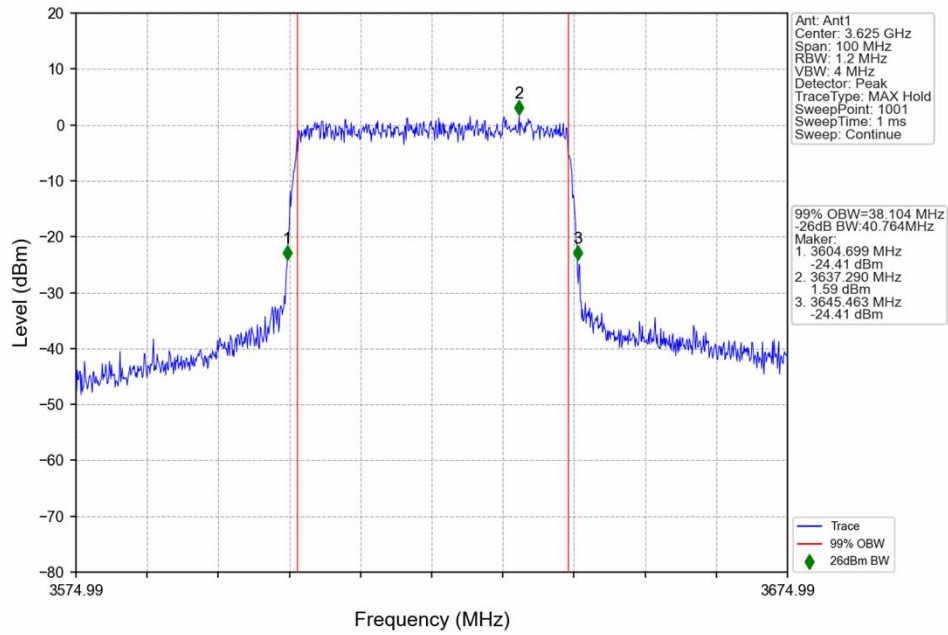
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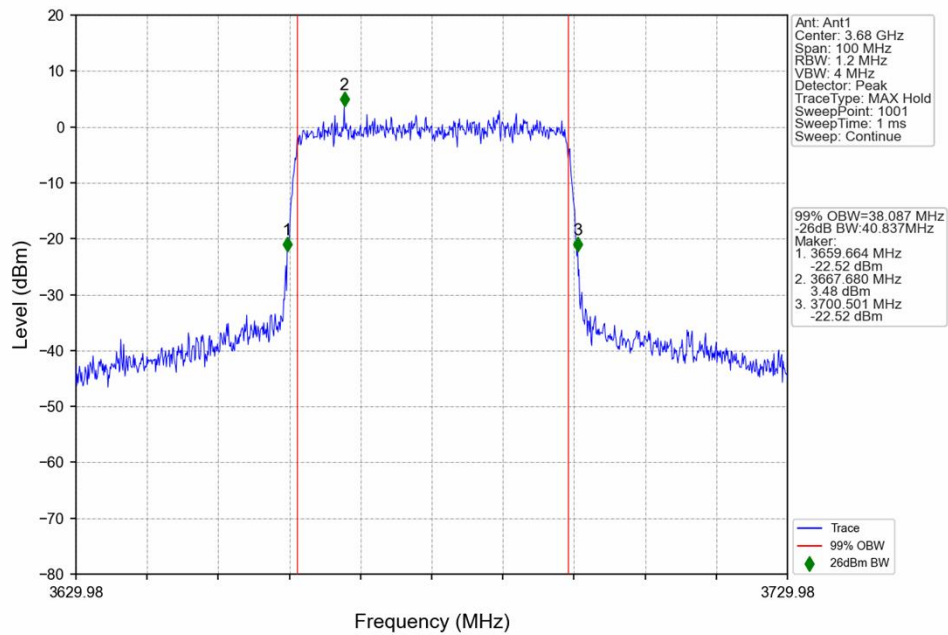
# n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 16 QAM\_3570MHz\_Outer\_Full



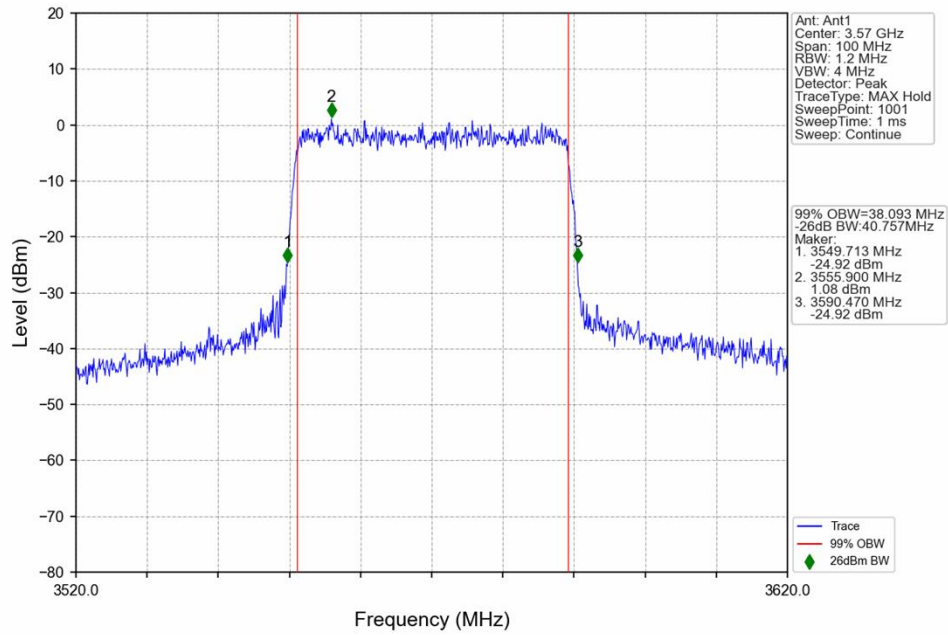
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM\_16 QAM\_3624.99MHz\_Outer\_Full



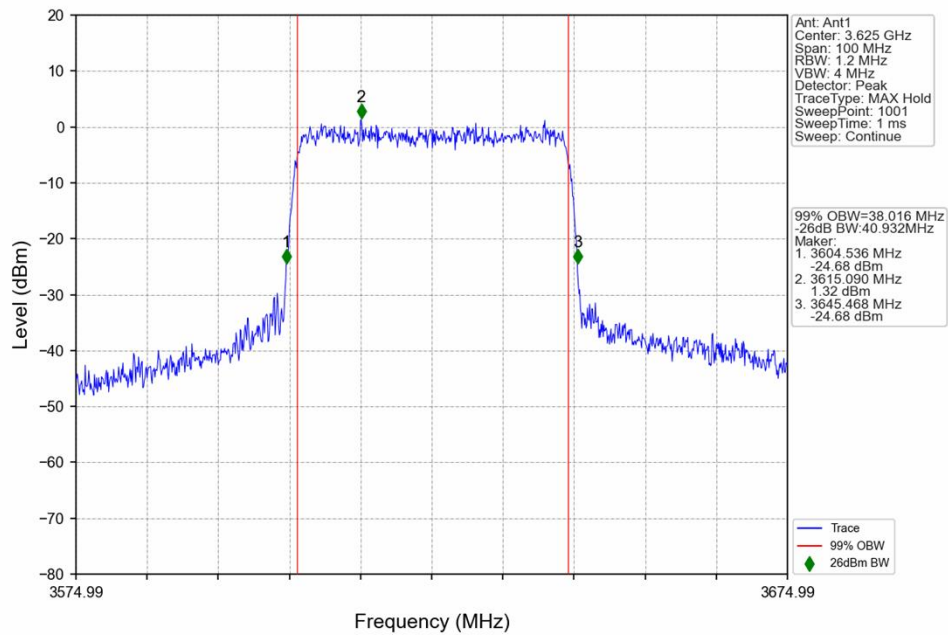
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM\_16 QAM\_3679.98MHz\_Outer\_Full



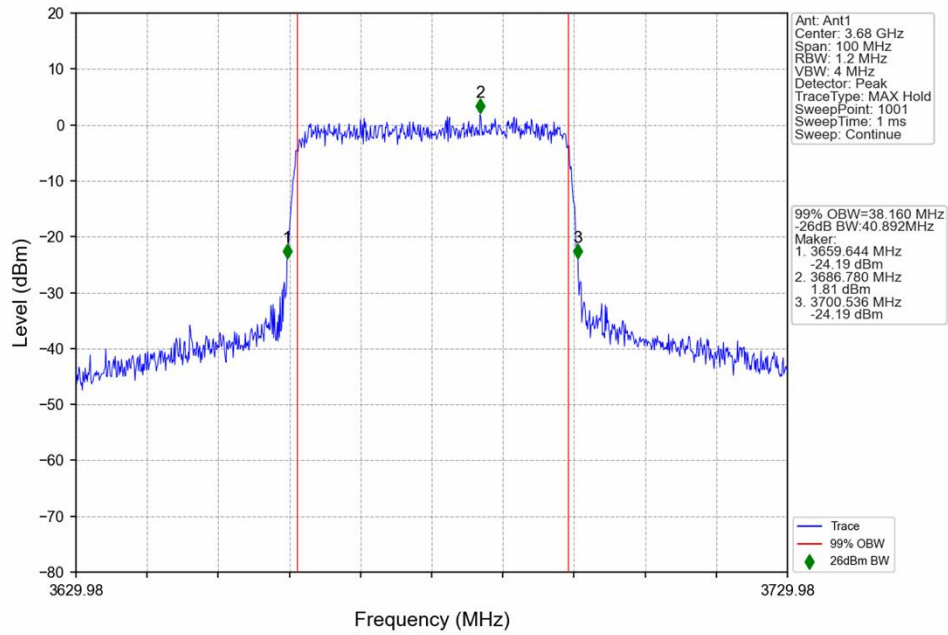
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3570MHz\_Outer\_Full



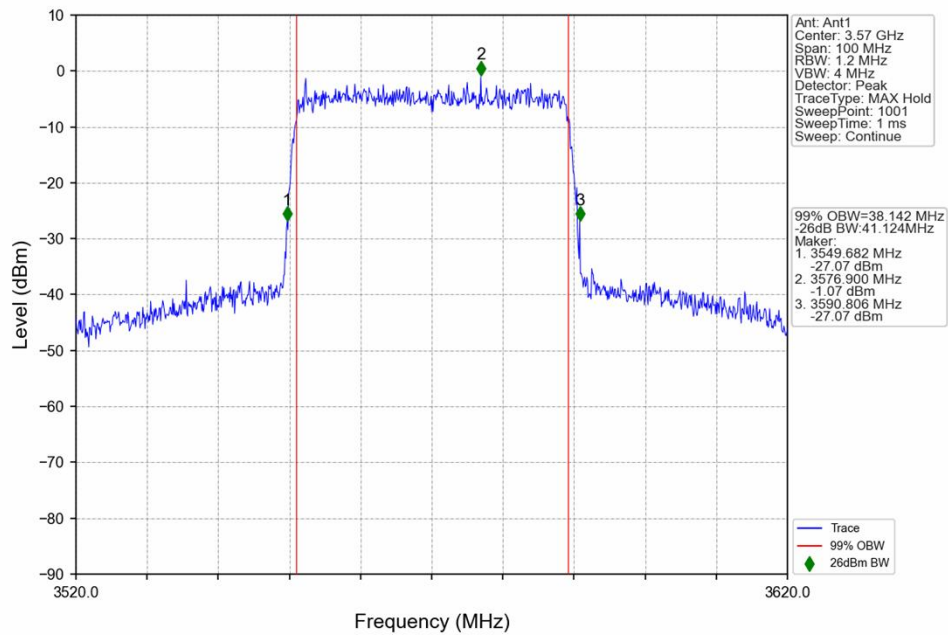
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3624.99MHz\_Outer\_Full



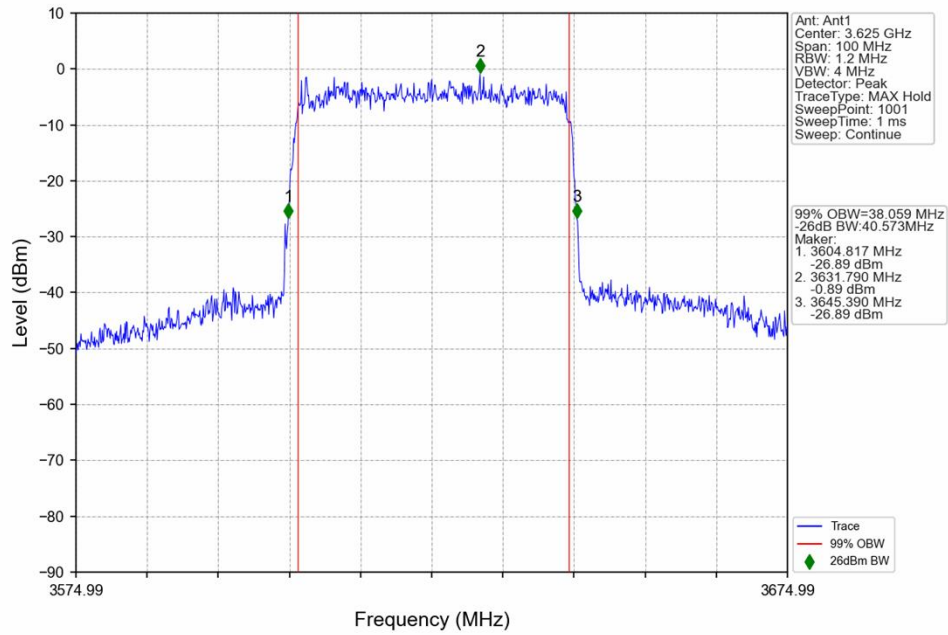
n48\_30kHz\_SISO\_NTNV\_40MHz\_CP-OFDM 64 QAM\_3679.98MHz\_Outer\_Full



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

