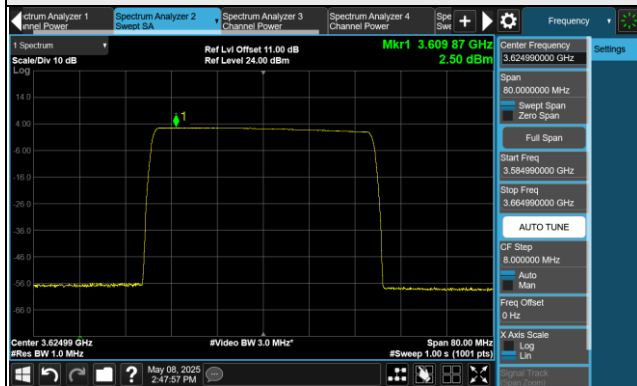


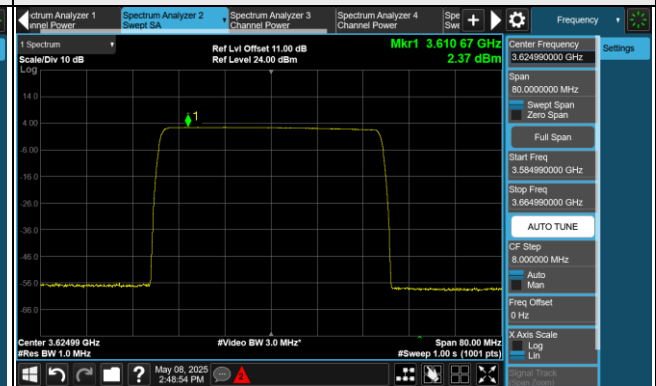
## Spectrum Plot of Worst Value

40MHz / QPSK

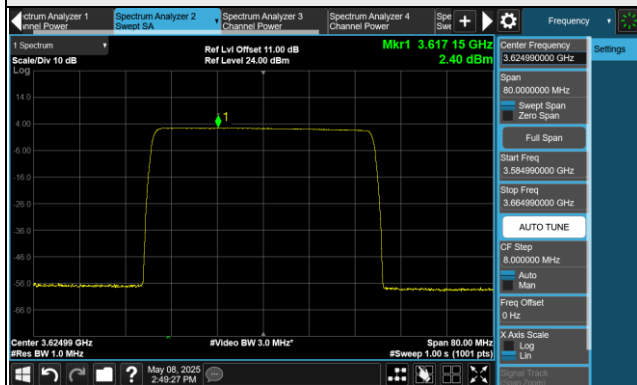
Ant.1



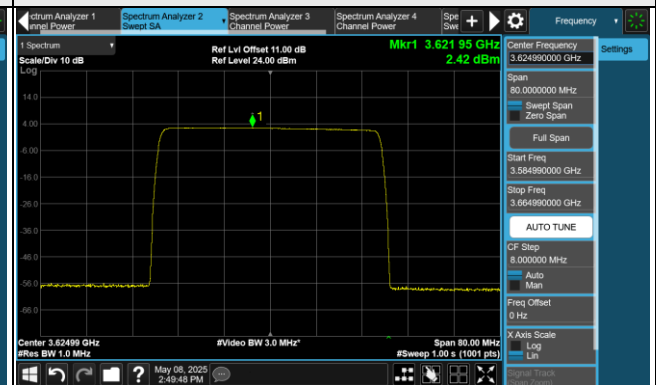
Ant.2



Ant.3



Ant.4



### Mode B2 / B3

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 10M+20M   | 3555+3690       | QPSK       | CC0     | -1.24   | -0.19 | -0.86 | -0.62 | 5.31  | 19.63          | PASS    |
|           |                 |            | CC1     | -1.16   | -0.95 | -1.42 | -1.08 | 4.87  |                |         |
|           |                 | 64QAM      | CC0     | -1.29   | -0.22 | -0.93 | -0.69 | 5.26  | 19.54          | PASS    |
|           |                 |            | CC1     | -1.18   | -1.13 | -1.55 | -1.23 | 4.75  |                |         |
|           |                 | 256QAM     | CC0     | -1.32   | -0.29 | -1.09 | -0.75 | 5.18  | 19.46          | PASS    |
|           |                 |            | CC1     | -1.22   | -1.26 | -1.57 | -1.37 | 4.67  |                |         |
|           | 3595.02+3660    | QPSK       | CC0     | 0.05    | 0.06  | -0.32 | -0.65 | 5.82  | 19.72          | PASS    |
|           |                 |            | CC1     | -1.82   | -1.38 | -1.63 | -1.48 | 4.45  |                |         |
|           |                 | 64QAM      | CC0     | -0.04   | -0.09 | -0.43 | -0.73 | 5.71  | 19.61          | PASS    |
|           |                 |            | CC1     | -1.93   | -1.45 | -1.79 | -1.55 | 4.34  |                |         |
|           |                 | 256QAM     | CC0     | -0.16   | -0.23 | -0.55 | -0.84 | 5.58  | 19.50          | PASS    |
|           |                 |            | CC1     | -2.11   | -1.56 | -1.84 | -1.62 | 4.24  |                |         |
|           | 3617.52+3637.53 | QPSK       | CC0     | -0.48   | -0.64 | -0.75 | -0.95 | 5.32  | 19.71          | PASS    |
|           |                 |            | CC1     | -1      | -0.9  | -1    | -1.06 | 5.03  |                |         |
|           |                 | 64QAM      | CC0     | -0.55   | -0.74 | -0.84 | -1.14 | 5.21  | 19.59          | PASS    |
|           |                 |            | CC1     | -1.13   | -1.12 | -1.09 | -1.16 | 4.90  |                |         |
|           |                 | 256QAM     | CC0     | -0.64   | -0.81 | -0.91 | -1.23 | 5.13  | 19.48          | PASS    |
|           |                 |            | CC1     | -1.29   | -1.23 | -1.24 | -1.29 | 4.76  |                |         |
|           | 3555+3570       | QPSK       | CC0     | -0.56   | -0.56 | -0.55 | -0.68 | 5.43  | 19.96          | PASS    |
|           |                 |            | CC1     | -0.04   | -0.73 | -0.85 | -0.78 | 5.43  |                |         |
|           |                 | 64QAM      | CC0     | -0.59   | -0.63 | -0.61 | -0.74 | 5.38  | 19.91          | PASS    |
|           |                 |            | CC1     | -0.13   | -0.81 | -0.89 | -0.81 | 5.37  |                |         |
|           |                 | 256QAM     | CC0     | -0.62   | -0.69 | -0.64 | -0.79 | 5.34  | 19.86          | PASS    |
|           |                 |            | CC1     | -0.22   | -0.89 | -0.93 | -0.83 | 5.31  |                |         |
|           | 3675+3690       | QPSK       | CC0     | -0.62   | -0.61 | -0.59 | -0.73 | 5.38  | 19.91          | PASS    |
|           |                 |            | CC1     | -0.09   | -0.79 | -0.94 | -0.82 | 5.37  |                |         |
|           |                 | 64QAM      | CC0     | -0.69   | -0.68 | -0.61 | -0.81 | 5.32  | 19.85          | PASS    |
|           |                 |            | CC1     | -0.13   | -0.84 | -0.97 | -0.95 | 5.31  |                |         |
|           |                 | 256QAM     | CC0     | -0.72   | -0.72 | -0.72 | -0.86 | 5.27  | 19.77          | PASS    |
|           |                 |            | CC1     | -0.24   | -0.93 | -1.14 | -0.99 | 5.21  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+10M   | 3560.01+3694.98 | QPSK       | CC0     | 0.21    | 0.3   | 0.11  | 0.03  | 6.18  | 19.99          | PASS    |
|           |                 |            | CC1     | -1.68   | -1.15 | -1.72 | -1.21 | 4.59  |                |         |
|           |                 | 64QAM      | CC0     | 0.19    | 0.21  | 0.07  | -0.09 | 6.12  | 19.92          | PASS    |
|           |                 |            | CC1     | -1.73   | -1.19 | -1.84 | -1.27 | 4.52  |                |         |
|           |                 | 256QAM     | CC0     | 0.14    | 0.17  | 0.02  | -0.14 | 6.07  | 19.87          | PASS    |
|           |                 |            | CC1     | -1.81   | -1.23 | -1.93 | -1.32 | 4.46  |                |         |
|           | 3590.01+3655.02 | QPSK       | CC0     | 0.21    | 0.28  | 0.01  | -0.36 | 6.06  | 19.95          | PASS    |
|           |                 |            | CC1     | -1.71   | -1.2  | -1.35 | -1.21 | 4.66  |                |         |
|           |                 | 64QAM      | CC0     | 0.17    | 0.24  | -0.09 | -0.42 | 6.00  | 19.87          | PASS    |
|           |                 |            | CC1     | -1.84   | -1.32 | -1.42 | -1.29 | 4.56  |                |         |
|           |                 | 256QAM     | CC0     | 0.12    | 0.19  | -0.16 | -0.49 | 5.94  | 19.81          | PASS    |
|           |                 |            | CC1     | -1.94   | -1.36 | -1.49 | -1.33 | 4.50  |                |         |
|           | 3612.51+3632.52 | QPSK       | CC0     | -0.54   | -0.58 | -0.92 | -0.72 | 5.33  | 19.71          | PASS    |
|           |                 |            | CC1     | -1.03   | -0.8  | -1.22 | -0.96 | 5.02  |                |         |
|           |                 | 64QAM      | CC0     | -0.63   | -0.65 | -0.98 | -0.79 | 5.26  | 19.62          | PASS    |
|           |                 |            | CC1     | -1.17   | -0.91 | -1.27 | -1.06 | 4.92  |                |         |
|           |                 | 256QAM     | CC0     | -0.79   | -0.73 | -1.08 | -0.81 | 5.17  | 19.55          | PASS    |
|           |                 |            | CC1     | -1.23   | -0.94 | -1.35 | -1.12 | 4.86  |                |         |
|           | 3560.01+3575.01 | QPSK       | CC0     | -0.04   | -0.78 | -0.69 | -0.79 | 5.46  | 19.92          | PASS    |
|           |                 |            | CC1     | 0.07    | -0.99 | -0.96 | -0.99 | 5.33  |                |         |
|           |                 | 64QAM      | CC0     | -0.09   | -0.84 | -0.74 | -0.82 | 5.41  | 19.84          | PASS    |
|           |                 |            | CC1     | 0.01    | -1.13 | -1.09 | -1.17 | 5.20  |                |         |
|           |                 | 256QAM     | CC0     | -0.12   | -0.89 | -0.77 | -0.94 | 5.35  | 19.78          | PASS    |
|           |                 |            | CC1     | -0.07   | -1.21 | -1.14 | -1.23 | 5.14  |                |         |
|           | 3679.98+3694.98 | QPSK       | CC0     | -0.16   | -0.83 | -0.76 | -0.85 | 5.38  | 19.83          | PASS    |
|           |                 |            | CC1     | 0.03    | -1.12 | -1.11 | -1.18 | 5.21  |                |         |
|           |                 | 64QAM      | CC0     | -0.23   | -0.91 | -0.83 | -0.93 | 5.31  | 19.75          | PASS    |
|           |                 |            | CC1     | -0.08   | -1.19 | -1.16 | -1.22 | 5.14  |                |         |
|           |                 | 256QAM     | CC0     | -0.27   | -1.16 | -0.91 | -0.99 | 5.20  | 19.66          | PASS    |
|           |                 |            | CC1     | -0.16   | -1.29 | -1.27 | -1.27 | 5.05  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+20M   | 3560.01+3690    | QPSK       | CC0     | -0.47   | -0.05 | -0.87 | -1.24 | 5.39  | 19.62          | PASS    |
|           |                 |            | CC1     | -1.07   | -0.93 | -1.34 | -1.72 | 4.77  |                |         |
|           |                 | 64QAM      | CC0     | -0.53   | -0.12 | -0.93 | -1.29 | 5.33  | 19.53          | PASS    |
|           |                 |            | CC1     | -1.12   | -1.13 | -1.42 | -1.83 | 4.66  |                |         |
|           |                 | 256QAM     | CC0     | -0.64   | -0.17 | -0.97 | -1.34 | 5.26  | 19.46          | PASS    |
|           |                 |            | CC1     | -1.22   | -1.19 | -1.55 | -1.92 | 4.56  |                |         |
|           | 3595.02+3655.02 | QPSK       | CC0     | 0.15    | 0.24  | 0.08  | -0.52 | 6.02  | 19.96          | PASS    |
|           |                 |            | CC1     | -1.63   | -1.15 | -1.13 | -1.2  | 4.75  |                |         |
|           |                 | 64QAM      | CC0     | 0.13    | 0.21  | 0.01  | -0.59 | 5.97  | 19.89          | PASS    |
|           |                 |            | CC1     | -1.69   | -1.23 | -1.29 | -1.35 | 4.63  |                |         |
|           |                 | 256QAM     | CC0     | 0.11    | 0.19  | -0.05 | -0.63 | 5.94  | 19.84          | PASS    |
|           |                 |            | CC1     | -1.73   | -1.29 | -1.35 | -1.39 | 4.58  |                |         |
|           | 3612.51+3637.53 | QPSK       | CC0     | -0.07   | -0.8  | -0.67 | -0.88 | 5.43  | 19.76          | PASS    |
|           |                 |            | CC1     | -0.76   | -1.1  | -1.03 | -1.08 | 5.03  |                |         |
|           |                 | 64QAM      | CC0     | -0.13   | -0.85 | -0.73 | -0.92 | 5.37  | 19.69          | PASS    |
|           |                 |            | CC1     | -0.84   | -1.19 | -1.15 | -1.15 | 4.94  |                |         |
|           |                 | 256QAM     | CC0     | -0.19   | -0.94 | -0.81 | -1.07 | 5.28  | 19.61          | PASS    |
|           |                 |            | CC1     | -0.91   | -1.23 | -1.23 | -1.22 | 4.88  |                |         |
|           | 3560.01+3580.02 | QPSK       | CC0     | -0.54   | -0.89 | -1.03 | -1.22 | 5.11  | 19.64          | PASS    |
|           |                 |            | CC1     | -0.31   | -0.73 | -1.29 | -1.39 | 5.11  |                |         |
|           |                 | 64QAM      | CC0     | -0.59   | -0.94 | -1.13 | -1.29 | 5.04  | 19.58          | PASS    |
|           |                 |            | CC1     | -0.36   | -0.81 | -1.36 | -1.45 | 5.05  |                |         |
|           |                 | 256QAM     | CC0     | -0.63   | -0.99 | -1.19 | -1.33 | 4.99  | 19.52          | PASS    |
|           |                 |            | CC1     | -0.44   | -0.85 | -1.45 | -1.51 | 4.98  |                |         |
|           | 3670.02+3690    | QPSK       | CC0     | -0.59   | -0.97 | -1.23 | -1.29 | 5.01  | 19.55          | PASS    |
|           |                 |            | CC1     | -0.37   | -0.76 | -1.46 | -1.46 | 5.03  |                |         |
|           |                 | 64QAM      | CC0     | -0.62   | -1.13 | -1.29 | -1.35 | 4.93  | 19.48          | PASS    |
|           |                 |            | CC1     | -0.44   | -0.81 | -1.54 | -1.53 | 4.97  |                |         |
|           |                 | 256QAM     | CC0     | -0.69   | -1.26 | -1.36 | -1.39 | 4.86  | 19.40          | PASS    |
|           |                 |            | CC1     | -0.49   | -0.89 | -1.66 | -1.62 | 4.88  |                |         |

Note:

1. Correlated Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{G4/20})^2/4] = 11.52\text{dBi}$
2. EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

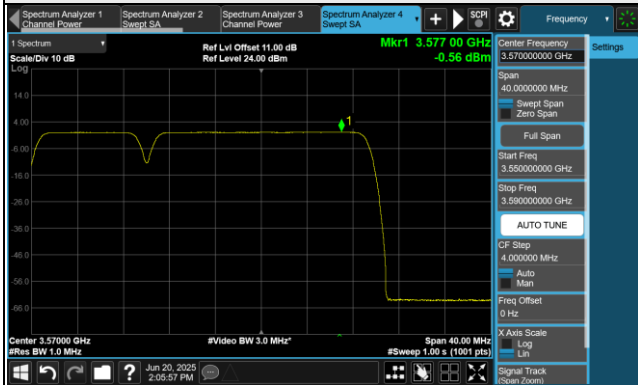
## Spectrum Plot of Worst Value

10MHz+20MHz / QPSK

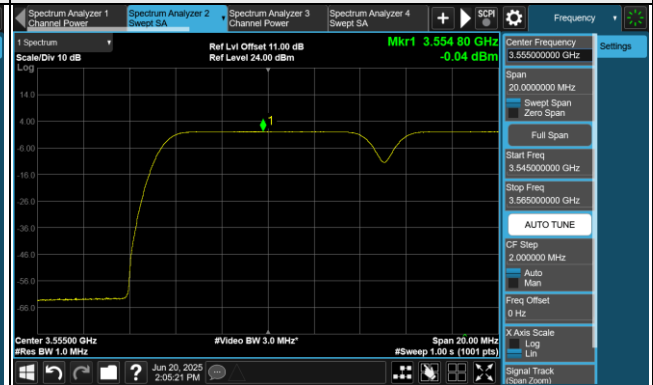
3555 MHz+ 3570 MHz

Ant.1

3555 MHz

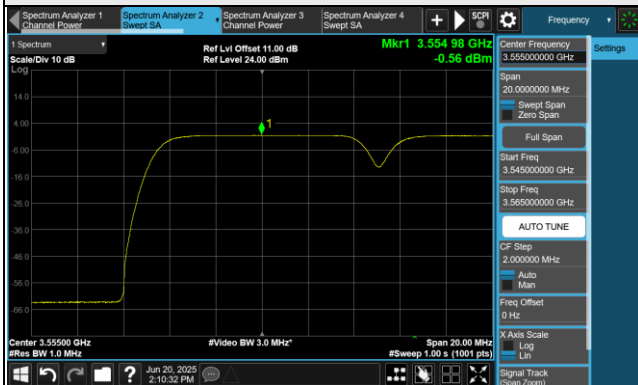


3570 MHz

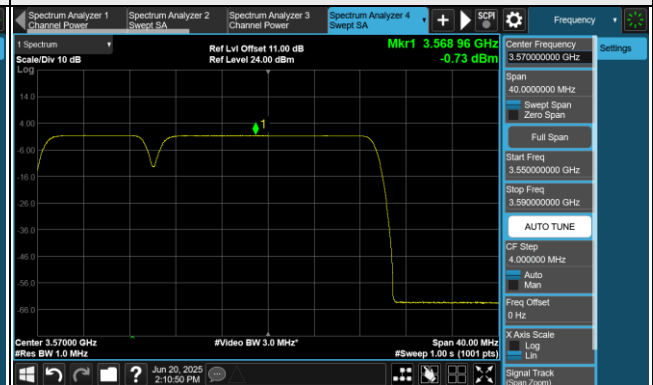


Ant.2

3555 MHz

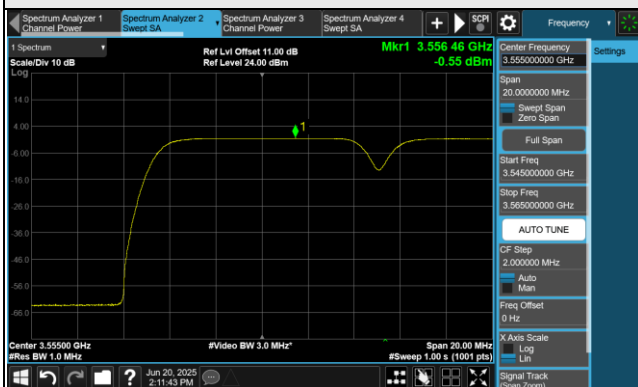


3570 MHz

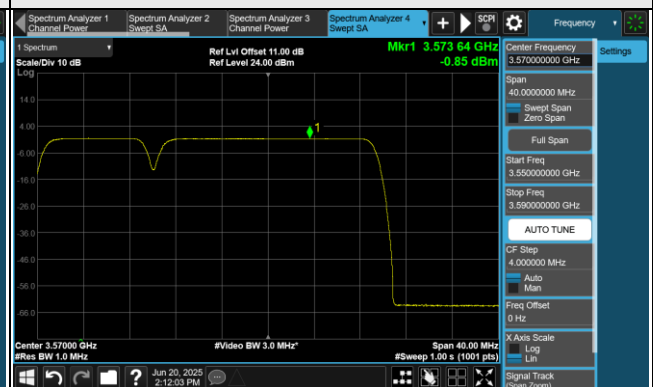


Ant.3

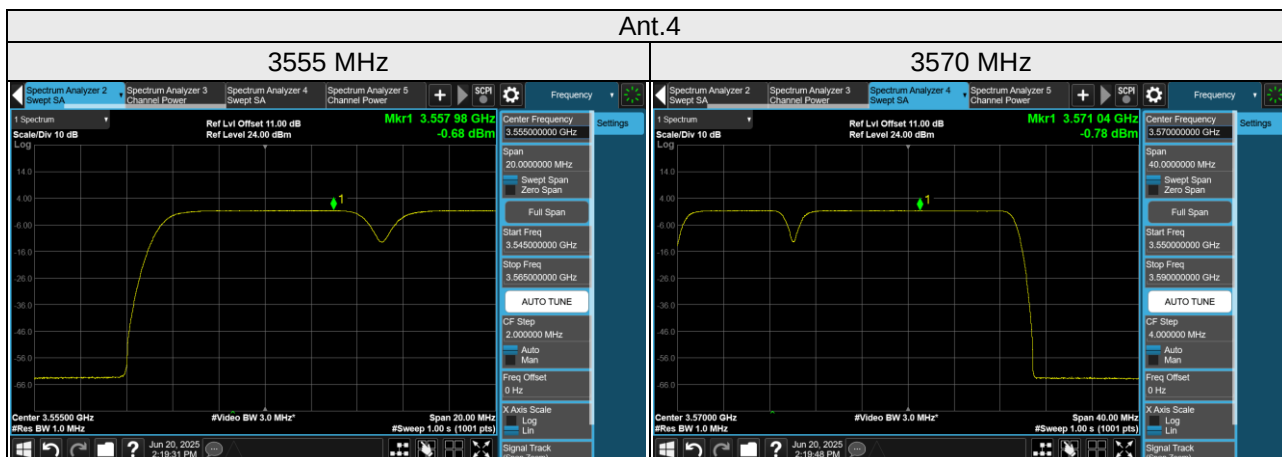
3555 MHz



3570 MHz



# Ant.4



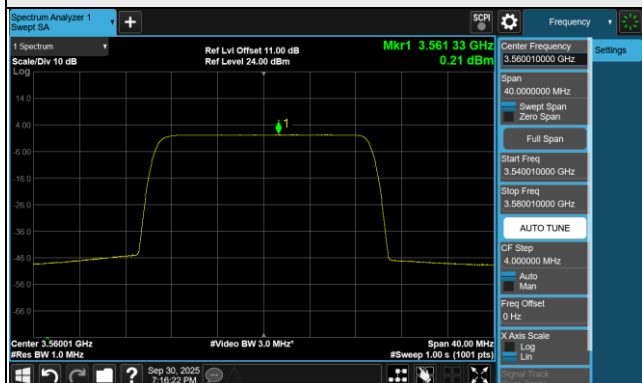
## Spectrum Plot of Worst Value

20MHz+10MHz / QPSK

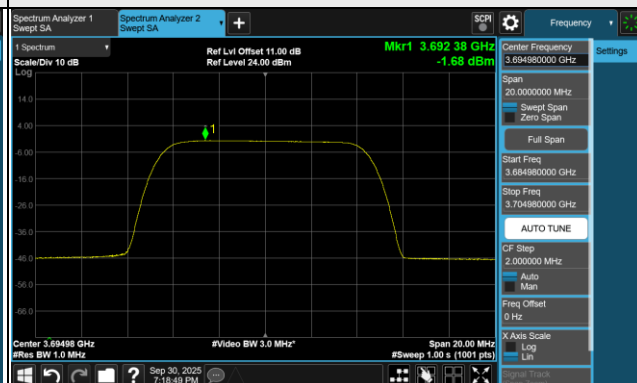
3560.01 MHz+3694.98 MHz

Ant.1

3560.01 MHz

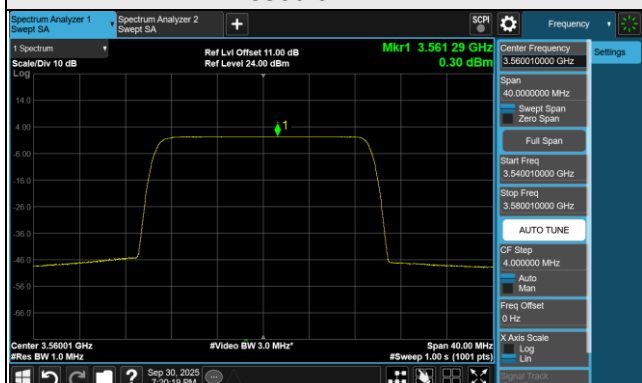


3694.98 MHz

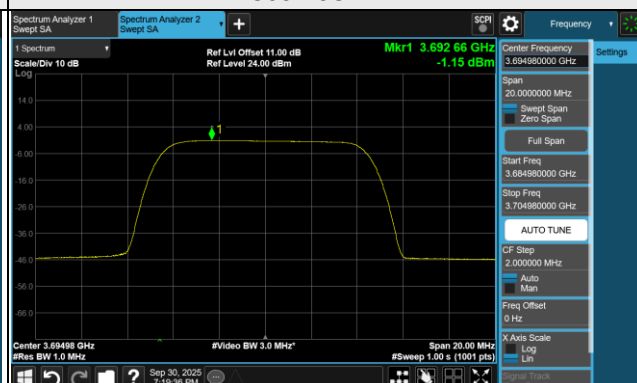


Ant.2

3560.01 MHz

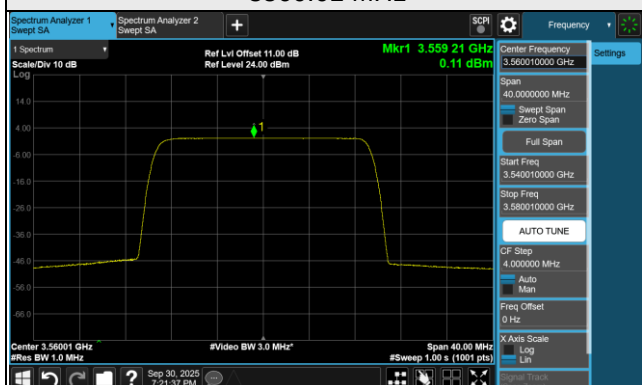


3694.98 MHz

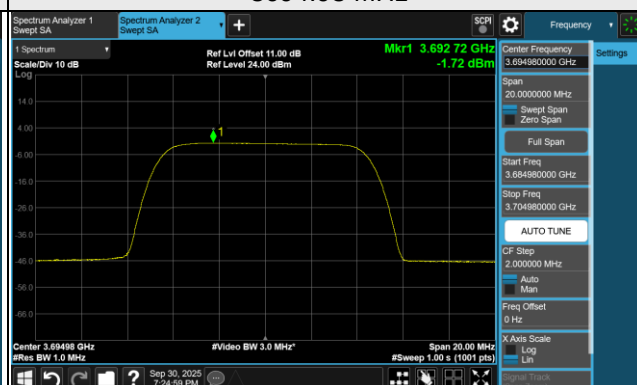


Ant.3

3560.01 MHz

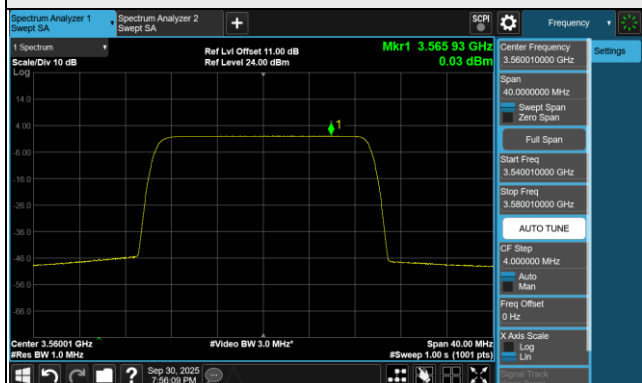


3694.98 MHz

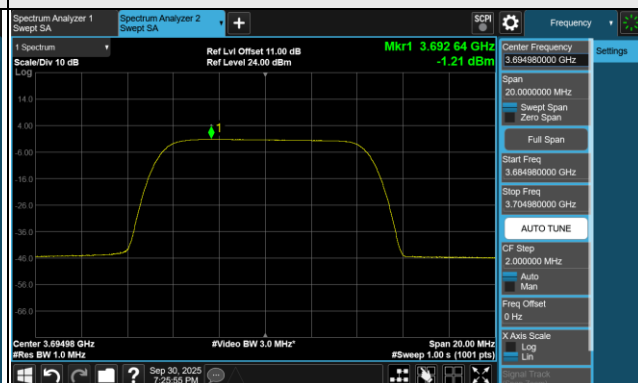


# Ant.4

3560.01 MHz



3694.98 MHz



## Mode C1

### Power Spectral Density (dBm/MHz)

| Bandwidth | Frequency (MHz) | Modulation | Antenna |      |      |      | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|------|------|------|-------|----------------|---------|
|           |                 |            | 1       | 2    | 3    | 4    |       |                |         |
| 10M       | 3555            | QPSK       | 2.40    | 2.65 | 1.97 | 2.10 | 8.31  | 19.53          | PASS    |
|           |                 | 64QAM      | 2.37    | 2.61 | 1.94 | 2.04 | 8.27  | 19.49          | PASS    |
|           |                 | 256QAM     | 2.32    | 2.59 | 1.92 | 2.01 | 8.24  | 19.46          | PASS    |
|           | 3624.99         | QPSK       | 2.71    | 2.68 | 2.47 | 2.51 | 8.62  | 19.84          | PASS    |
|           |                 | 64QAM      | 2.67    | 2.64 | 2.43 | 2.49 | 8.58  | 19.80          | PASS    |
|           |                 | 256QAM     | 2.62    | 2.61 | 2.41 | 2.45 | 8.54  | 19.76          | PASS    |
|           | 3694.98         | QPSK       | 2.72    | 2.54 | 2.50 | 2.83 | 8.67  | 19.89          | PASS    |
|           |                 | 64QAM      | 2.69    | 2.51 | 2.43 | 2.79 | 8.63  | 19.85          | PASS    |
|           |                 | 256QAM     | 2.67    | 2.45 | 2.41 | 2.74 | 8.59  | 19.81          | PASS    |
| 20M       | 3560.01         | QPSK       | 2.72    | 3.17 | 2.42 | 2.50 | 8.73  | <b>19.95</b>   | PASS    |
|           |                 | 64QAM      | 2.65    | 3.06 | 2.37 | 2.45 | 8.69  | 19.91          | PASS    |
|           |                 | 256QAM     | 2.61    | 3.01 | 2.32 | 2.41 | 8.64  | 19.86          | PASS    |
|           | 3624.99         | QPSK       | 2.53    | 2.86 | 2.39 | 2.47 | 8.59  | 19.81          | PASS    |
|           |                 | 64QAM      | 2.48    | 2.81 | 2.31 | 2.42 | 8.53  | 19.75          | PASS    |
|           |                 | 256QAM     | 2.46    | 2.79 | 2.25 | 2.36 | 8.49  | 19.71          | PASS    |
|           | 3690            | QPSK       | 2.16    | 2.26 | 2.18 | 2.43 | 8.28  | 19.50          | PASS    |
|           |                 | 64QAM      | 2.14    | 2.21 | 2.16 | 2.39 | 8.25  | 19.47          | PASS    |
|           |                 | 256QAM     | 2.12    | 2.17 | 2.11 | 2.35 | 8.21  | 19.43          | PASS    |
| 40M       | 3570            | QPSK       | 2.25    | 2.61 | 2.25 | 2.24 | 8.36  | 19.58          | PASS    |
|           |                 | 64QAM      | 2.21    | 2.55 | 2.21 | 2.21 | 8.32  | 19.54          | PASS    |
|           |                 | 256QAM     | 2.19    | 2.51 | 2.19 | 2.19 | 8.29  | 19.51          | PASS    |
|           | 3624.99         | QPSK       | 2.46    | 2.36 | 2.32 | 2.25 | 8.37  | 19.59          | PASS    |
|           |                 | 64QAM      | 2.43    | 2.31 | 2.24 | 2.22 | 8.32  | 19.54          | PASS    |
|           |                 | 256QAM     | 2.39    | 2.27 | 2.21 | 2.18 | 8.28  | 19.50          | PASS    |
|           | 3679.98         | QPSK       | 2.61    | 2.57 | 2.53 | 2.65 | 8.61  | 19.83          | PASS    |
|           |                 | 64QAM      | 2.55    | 2.54 | 2.47 | 2.61 | 8.56  | 19.78          | PASS    |
|           |                 | 256QAM     | 2.51    | 2.49 | 2.42 | 2.55 | 8.51  | 19.73          | PASS    |

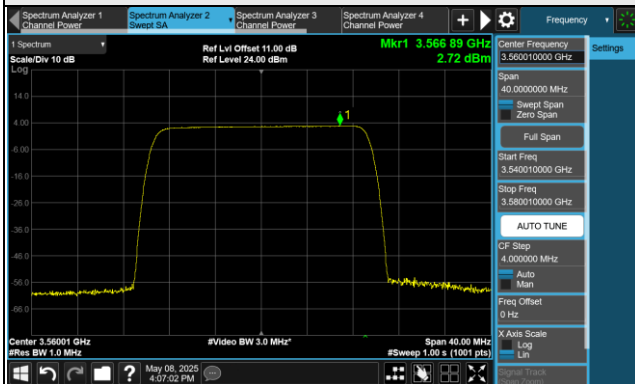
Note:

1. Correlated Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{G4/20})^2/4] = 11.22 \text{ dBi}$
2. EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

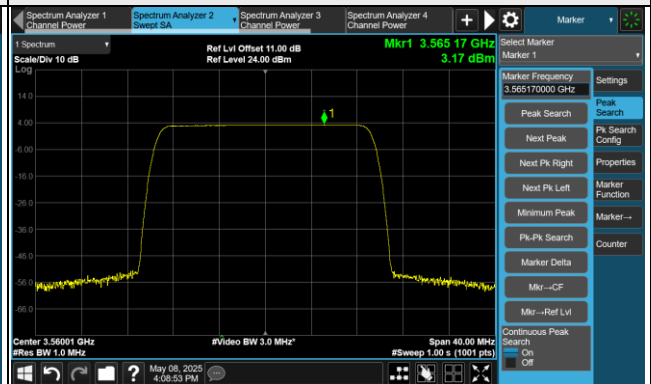
## Spectrum Plot of Worst Value

20MHz / QPSK

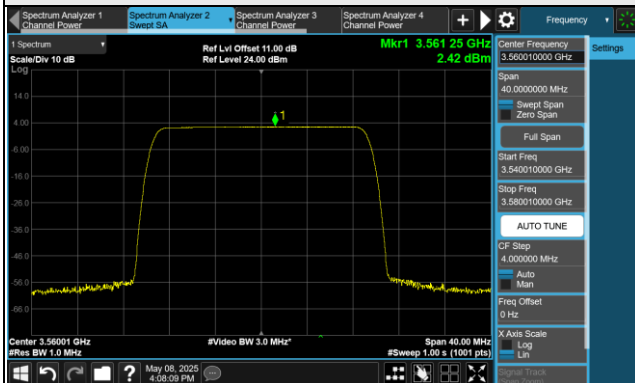
Ant.1



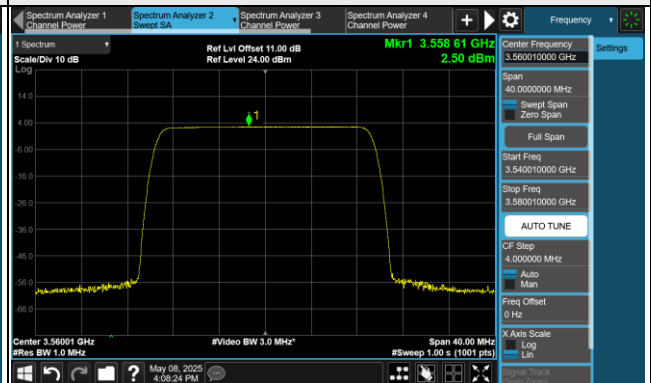
Ant.2



Ant.3



Ant.4



### Mode C2 / C3

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 10M+20M   | 3555+3690       | QPSK       | CC0     | -0.77   | 0.29  | -0.38 | -0.17 | 5.78  | 19.80          | PASS    |
|           |                 |            | CC1     | -0.69   | -0.49 | -0.96 | -0.59 | 5.34  |                |         |
|           |                 | 64QAM      | CC0     | -0.79   | 0.24  | -0.42 | -0.23 | 5.74  | 19.75          | PASS    |
|           |                 |            | CC1     | -0.74   | -0.53 | -1.03 | -0.62 | 5.29  |                |         |
|           |                 | 256QAM     | CC0     | -0.81   | 0.21  | -0.49 | -0.25 | 5.70  | 19.70          | PASS    |
|           |                 |            | CC1     | -0.78   | -0.59 | -1.16 | -0.67 | 5.23  |                |         |
|           | 3595.02+3660    | QPSK       | CC0     | 0.13    | 0.11  | 0.15  | -0.18 | 6.08  | 19.77          | PASS    |
|           |                 |            | CC1     | -1.35   | -0.92 | -1.17 | -0.99 | 4.92  |                |         |
|           |                 | 64QAM      | CC0     | 0.09    | 0.04  | 0.09  | -0.23 | 6.02  | 19.69          | PASS    |
|           |                 |            | CC1     | -1.42   | -1.09 | -1.23 | -1.11 | 4.81  |                |         |
|           |                 | 256QAM     | CC0     | 0.05    | 0.01  | 0.03  | -0.35 | 5.96  | 19.60          | PASS    |
|           |                 |            | CC1     | -1.55   | -1.22 | -1.35 | -1.26 | 4.68  |                |         |
|           | 3617.52+3637.53 | QPSK       | CC0     | 0.01    | -0.18 | -0.27 | -0.48 | 5.79  | 19.77          | PASS    |
|           |                 |            | CC1     | -0.97   | -0.91 | -0.54 | -0.59 | 5.27  |                |         |
|           |                 | 64QAM      | CC0     | -0.13   | -0.23 | -0.37 | -0.53 | 5.71  | 19.68          | PASS    |
|           |                 |            | CC1     | -1.05   | -1.11 | -0.62 | -0.66 | 5.17  |                |         |
|           |                 | 256QAM     | CC0     | -0.22   | -0.31 | -0.42 | -0.65 | 5.62  | 19.59          | PASS    |
|           |                 |            | CC1     | -1.09   | -1.19 | -0.74 | -0.73 | 5.09  |                |         |
|           | 3555+3570       | QPSK       | CC0     | -0.17   | -0.97 | -0.78 | -0.85 | 5.34  | 19.59          | PASS    |
|           |                 |            | CC1     | -0.01   | -0.68 | -0.97 | -0.95 | 5.39  |                |         |
|           |                 | 64QAM      | CC0     | -0.21   | -1.16 | -0.84 | -0.94 | 5.25  | 19.47          | PASS    |
|           |                 |            | CC1     | -0.12   | -0.72 | -1.29 | -1.09 | 5.24  |                |         |
|           |                 | 256QAM     | CC0     | -0.26   | -1.23 | -0.89 | -0.99 | 5.19  | 19.42          | PASS    |
|           |                 |            | CC1     | -0.17   | -0.77 | -1.35 | -1.16 | 5.18  |                |         |
|           | 3675+3690       | QPSK       | CC0     | -0.21   | -1.17 | -0.84 | -0.93 | 5.25  | 19.45          | PASS    |
|           |                 |            | CC1     | -0.14   | -0.79 | -1.26 | -1.23 | 5.19  |                |         |
|           |                 | 64QAM      | CC0     | -0.26   | -1.23 | -0.93 | -0.98 | 5.19  | 19.38          | PASS    |
|           |                 |            | CC1     | -0.21   | -0.84 | -1.33 | -1.36 | 5.11  |                |         |
|           |                 | 256QAM     | CC0     | -0.32   | -1.29 | -0.98 | -1.09 | 5.12  | 19.32          | PASS    |
|           |                 |            | CC1     | -0.22   | -0.88 | -1.38 | -1.43 | 5.07  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+10M   | 3560.01+3694.98 | QPSK       | CC0     | 0.21    | 0.3   | 0.11  | 0.03  | 6.18  | 19.69          | PASS    |
|           |                 |            | CC1     | -1.68   | -1.15 | -1.72 | -1.21 | 4.59  |                |         |
|           |                 | 64QAM      | CC0     | 0.19    | 0.27  | 0.09  | 0.01  | 6.16  | 19.63          | PASS    |
|           |                 |            | CC1     | -1.93   | -1.21 | -1.78 | -1.27 | 4.48  |                |         |
|           |                 | 256QAM     | CC0     | 0.14    | 0.24  | 0.04  | -0.13 | 6.10  | 19.57          | PASS    |
|           |                 |            | CC1     | -2.07   | -1.26 | -1.83 | -1.33 | 4.41  |                |         |
|           | 3590.01+3655.02 | QPSK       | CC0     | 0.21    | 0.28  | 0.01  | -0.36 | 6.06  | 19.65          | PASS    |
|           |                 |            | CC1     | -1.71   | -1.2  | -1.35 | -1.21 | 4.66  |                |         |
|           |                 | 64QAM      | CC0     | 0.19    | 0.24  | -0.09 | -0.44 | 6.00  | 19.57          | PASS    |
|           |                 |            | CC1     | -1.74   | -1.33 | -1.42 | -1.35 | 4.56  |                |         |
|           |                 | 256QAM     | CC0     | 0.14    | 0.21  | -0.14 | -0.49 | 5.96  | 19.53          | PASS    |
|           |                 |            | CC1     | -1.78   | -1.39 | -1.49 | -1.39 | 4.51  |                |         |
|           | 3612.51+3632.52 | QPSK       | CC0     | -0.07   | -0.13 | -0.46 | -0.25 | 5.80  | 19.83          | PASS    |
|           |                 |            | CC1     | -0.73   | -0.55 | -0.77 | -0.48 | 5.39  |                |         |
|           |                 | 64QAM      | CC0     | -0.13   | -0.26 | -0.59 | -0.33 | 5.70  | 19.75          | PASS    |
|           |                 |            | CC1     | -0.81   | -0.62 | -0.81 | -0.55 | 5.32  |                |         |
|           |                 | 256QAM     | CC0     | -0.26   | -0.33 | -0.62 | -0.42 | 5.62  | 19.67          | PASS    |
|           |                 |            | CC1     | -0.85   | -0.73 | -0.84 | -0.67 | 5.25  |                |         |
|           | 3560.01+3575.01 | QPSK       | CC0     | -0.06   | -0.75 | -0.61 | -1.01 | 5.43  | 19.65          | PASS    |
|           |                 |            | CC1     | 0.07    | -0.58 | -0.86 | -1.17 | 5.41  |                |         |
|           |                 | 64QAM      | CC0     | -0.13   | -0.79 | -0.69 | -1.16 | 5.34  | 19.58          | PASS    |
|           |                 |            | CC1     | 0.02    | -0.62 | -0.93 | -1.23 | 5.36  |                |         |
|           |                 | 256QAM     | CC0     | -0.19   | -0.84 | -0.74 | -1.19 | 5.30  | 19.50          | PASS    |
|           |                 |            | CC1     | -0.06   | -0.69 | -1.16 | -1.35 | 5.23  |                |         |
|           | 3679.98+3694.98 | QPSK       | CC0     | -0.13   | -0.84 | -0.72 | -1.16 | 5.32  | 19.56          | PASS    |
|           |                 |            | CC1     | 0.01    | -0.67 | -0.93 | -1.26 | 5.33  |                |         |
|           |                 | 64QAM      | CC0     | -0.19   | -0.91 | -0.75 | -1.23 | 5.27  | 19.50          | PASS    |
|           |                 |            | CC1     | -0.05   | -0.72 | -0.98 | -1.36 | 5.27  |                |         |
|           |                 | 256QAM     | CC0     | -0.23   | -0.96 | -0.77 | -1.29 | 5.23  | 19.42          | PASS    |
|           |                 |            | CC1     | -0.16   | -0.77 | -1.21 | -1.45 | 5.15  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+20M   | 3560.01+3690    | QPSK       | CC0     | 0.01    | 0.43  | -0.39 | -0.76 | 5.87  | 19.80          | PASS    |
|           |                 |            | CC1     | -0.59   | -0.45 | -0.86 | -1.25 | 5.24  |                |         |
|           |                 | 64QAM      | CC0     | -0.09   | 0.37  | -0.45 | -0.84 | 5.79  | 19.72          | PASS    |
|           |                 |            | CC1     | -0.62   | -0.55 | -0.93 | -1.33 | 5.17  |                |         |
|           |                 | 256QAM     | CC0     | -0.14   | 0.31  | -0.57 | -0.92 | 5.72  | 19.64          | PASS    |
|           |                 |            | CC1     | -0.73   | -0.65 | -0.97 | -1.45 | 5.08  |                |         |
|           | 3595.02+3655.02 | QPSK       | CC0     | 0.26    | 0.32  | -0.11 | -0.52 | 6.02  | 19.62          | PASS    |
|           |                 |            | CC1     | -1.63   | -1.16 | -1.35 | -1.37 | 4.65  |                |         |
|           |                 | 64QAM      | CC0     | -0.21   | 0.29  | -0.23 | -0.61 | 5.84  | 19.47          | PASS    |
|           |                 |            | CC1     | -1.79   | -1.23 | -1.49 | -1.42 | 4.54  |                |         |
|           |                 | 256QAM     | CC0     | -0.26   | 0.19  | -0.35 | -0.69 | 5.75  | 19.38          | PASS    |
|           |                 |            | CC1     | -1.84   | -1.39 | -1.55 | -1.55 | 4.44  |                |         |
|           | 3612.51+3637.53 | QPSK       | CC0     | 0.14    | -0.45 | -0.34 | -0.4  | 5.76  | 19.86          | PASS    |
|           |                 |            | CC1     | -0.16   | -0.67 | -0.68 | -0.68 | 5.48  |                |         |
|           |                 | 64QAM      | CC0     | 0.11    | -0.53 | -0.42 | -0.55 | 5.68  | 19.78          | PASS    |
|           |                 |            | CC1     | -0.23   | -0.74 | -0.77 | -0.72 | 5.41  |                |         |
|           |                 | 256QAM     | CC0     | 0.05    | -0.62 | -0.51 | -0.63 | 5.60  | 19.70          | PASS    |
|           |                 |            | CC1     | -0.29   | -0.82 | -0.83 | -0.84 | 5.33  |                |         |
|           | 3560.01+3580.02 | QPSK       | CC0     | -0.03   | -0.6  | -0.6  | -0.81 | 5.52  | 19.73          | PASS    |
|           |                 |            | CC1     | 0.15    | -0.47 | -0.88 | -1.07 | 5.48  |                |         |
|           |                 | 64QAM      | CC0     | -0.09   | -0.72 | -0.69 | -0.89 | 5.43  | 19.66          | PASS    |
|           |                 |            | CC1     | 0.11    | -0.53 | -0.93 | -1.16 | 5.42  |                |         |
|           |                 | 256QAM     | CC0     | -0.14   | -0.81 | -0.74 | -0.94 | 5.37  | 19.59          | PASS    |
|           |                 |            | CC1     | 0.03    | -0.62 | -0.99 | -1.21 | 5.35  |                |         |
|           | 3670.02+3690    | QPSK       | CC0     | -0.12   | -0.64 | -0.62 | -0.86 | 5.47  | 19.67          | PASS    |
|           |                 |            | CC1     | 0.06    | -0.53 | -0.93 | -1.19 | 5.40  |                |         |
|           |                 | 64QAM      | CC0     | -0.19   | -0.74 | -0.67 | -0.94 | 5.39  | 19.57          | PASS    |
|           |                 |            | CC1     | -0.07   | -0.62 | -1.12 | -1.26 | 5.28  |                |         |
|           |                 | 256QAM     | CC0     | -0.23   | -0.79 | -0.73 | -0.99 | 5.34  | 19.51          | PASS    |
|           |                 |            | CC1     | -0.15   | -0.66 | -1.16 | -1.37 | 5.21  |                |         |

Note:

1. Correlated Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{G4/20})^2/4] = 11.22\text{dBi}$
2. EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

# Spectrum Plot of Worst Value

20MHz+20MHz / QPSK

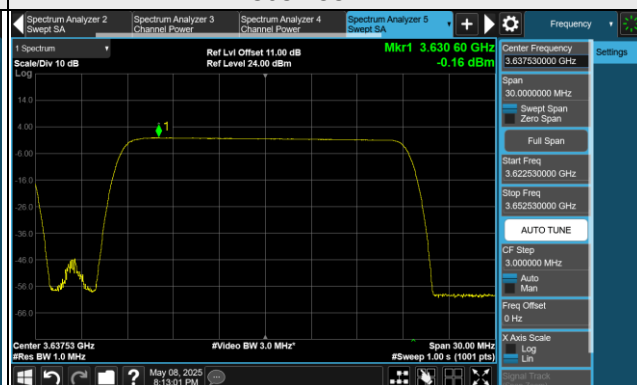
3612.51 MHz+ 3637.53 MHz

Ant.1

3612.51 MHz

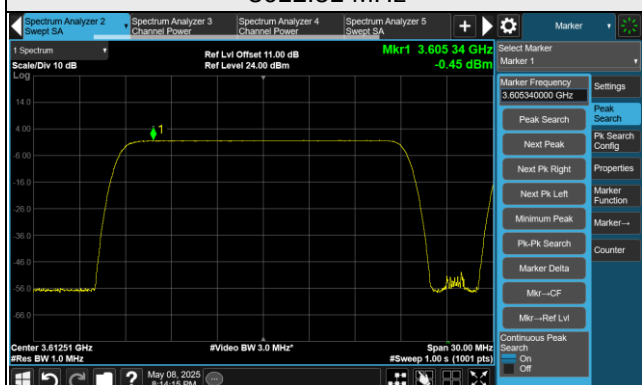


3637.53 MHz

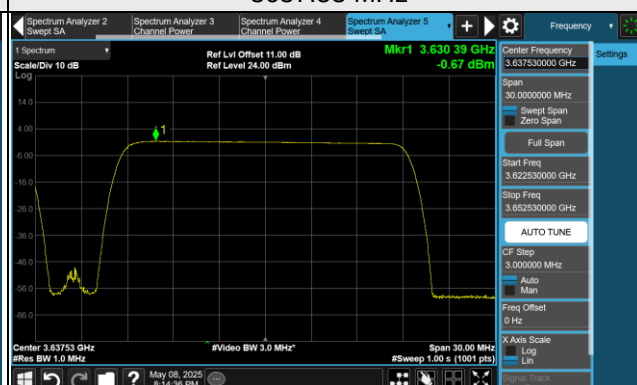


Ant.2

3612.51 MHz

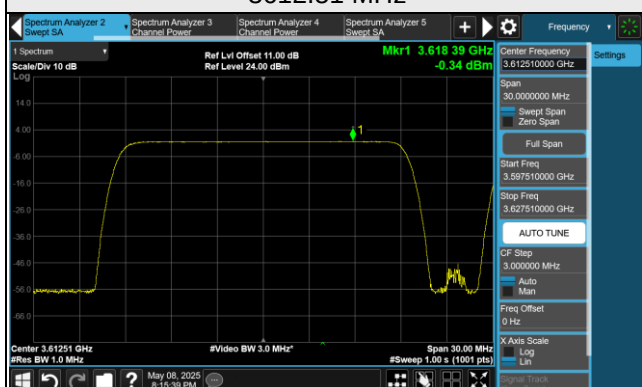


3637.53 MHz

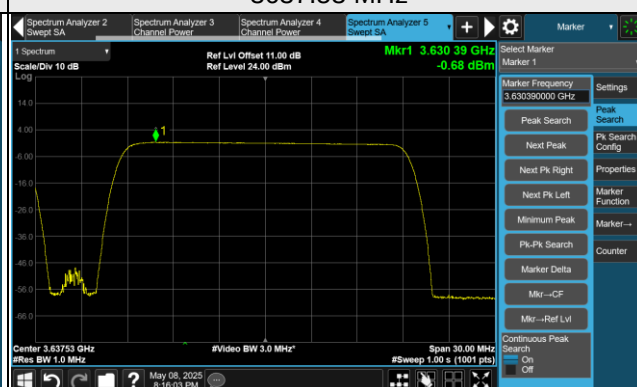


Ant.3

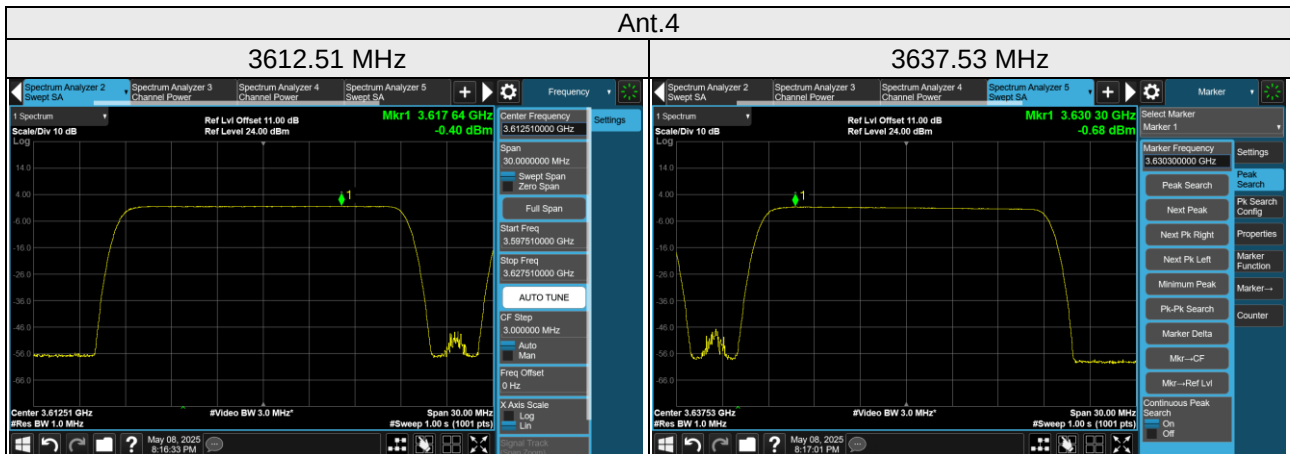
3612.51 MHz



3637.53 MHz



# Ant.4



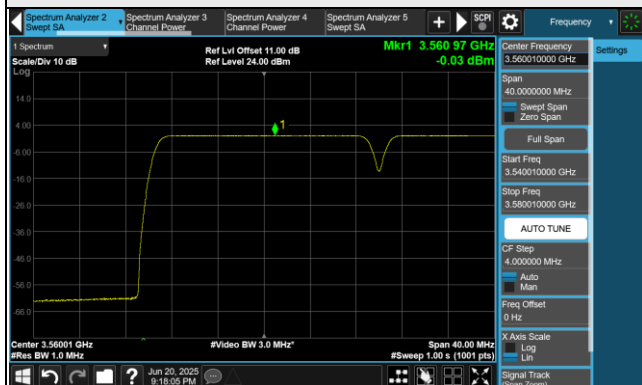
## Spectrum Plot of Worst Value

20MHz+10MHz / QPSK

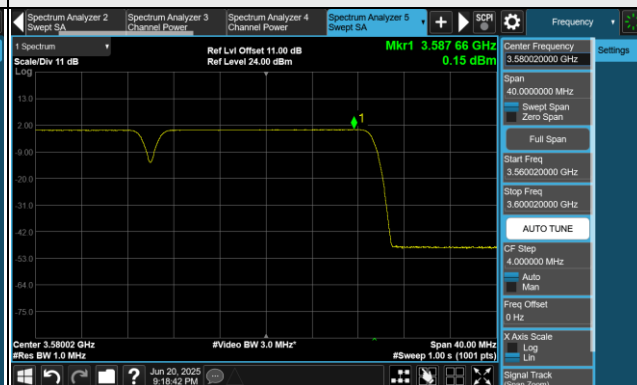
3560.01 MHz+3580.02 MHz

Ant.1

3560.01 MHz

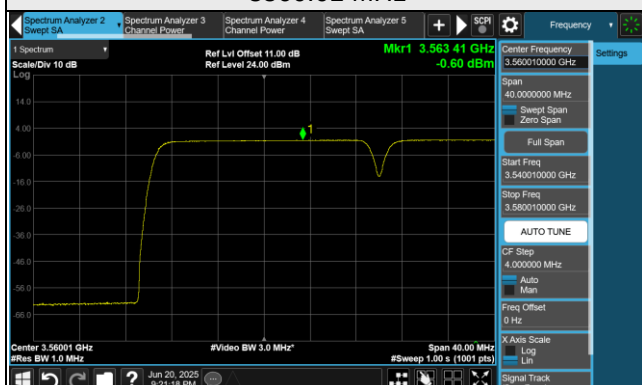


3580.02 MHz

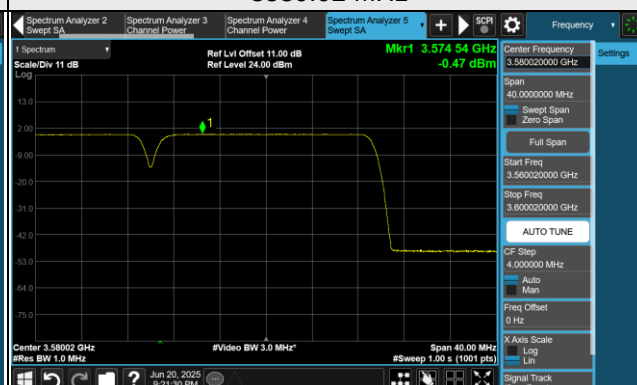


Ant.2

3560.01 MHz

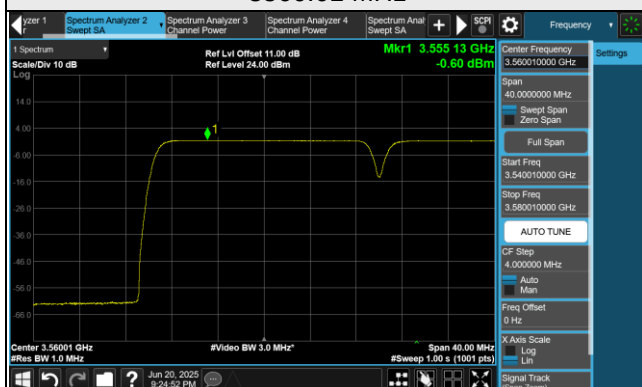


3580.02 MHz

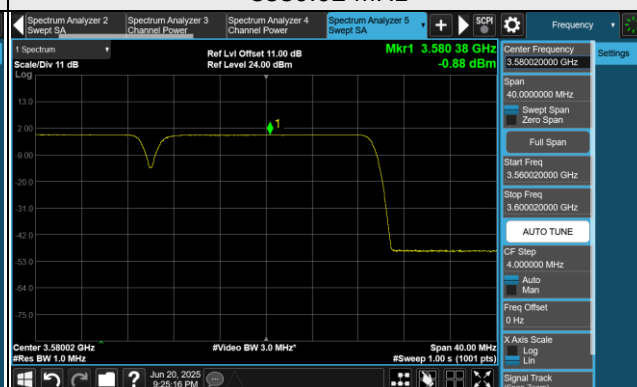


Ant.3

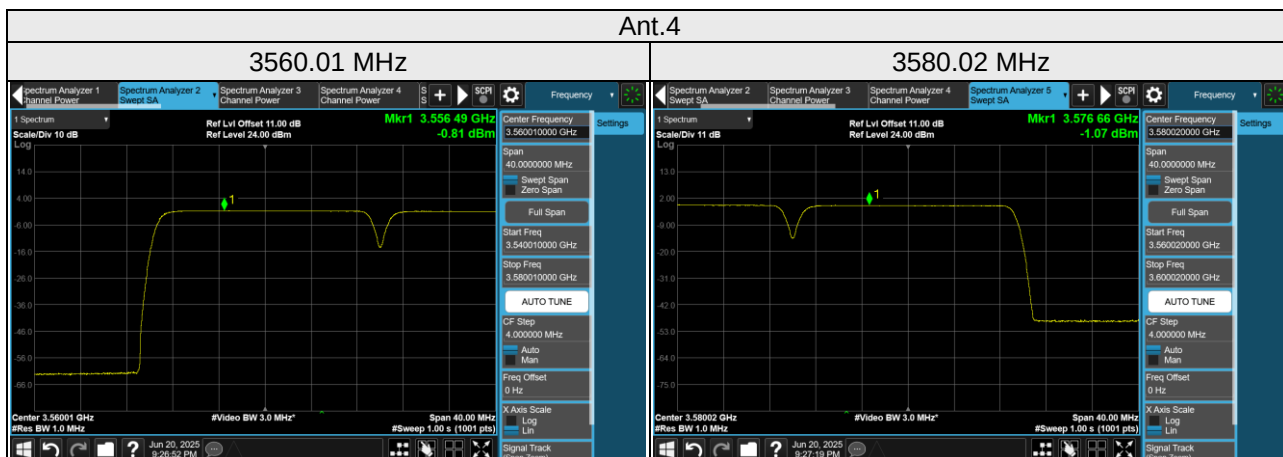
3560.01 MHz



3580.02 MHz



# Ant.4



## Mode D1

### Power Spectral Density (dBm/MHz)

| Bandwidth | Frequency (MHz) | Modulation | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            | 1       | 2     | 3     | 4     |       |                |         |
| 10M       | 3555            | QPSK       | -0.17   | 0.27  | -0.34 | -0.53 | 5.84  | 19.56          | PASS    |
|           |                 | 64QAM      | -0.21   | 0.23  | -0.39 | -0.62 | 5.78  | 19.50          | PASS    |
|           |                 | 256QAM     | -0.25   | 0.19  | -0.43 | -0.66 | 5.74  | 19.46          | PASS    |
|           | 3624.99         | QPSK       | 0.13    | 0.02  | -0.12 | -0.08 | 6.01  | 19.73          | PASS    |
|           |                 | 64QAM      | 0.11    | -0.07 | -0.19 | -0.14 | 5.95  | 19.67          | PASS    |
|           |                 | 256QAM     | 0.06    | -0.13 | -0.22 | -0.19 | 5.90  | 19.62          | PASS    |
|           | 3694.98         | QPSK       | -0.01   | -0.14 | -0.27 | 0.05  | 5.93  | 19.65          | PASS    |
|           |                 | 64QAM      | -0.09   | -0.23 | -0.34 | 0.11  | 5.89  | 19.61          | PASS    |
|           |                 | 256QAM     | -0.13   | -0.26 | -0.37 | 0.16  | 5.88  | 19.60          | PASS    |
| 20M       | 3560.01         | QPSK       | 0.26    | 0.60  | -0.11 | 0.04  | 6.23  | 19.95          | PASS    |
|           |                 | 64QAM      | 0.19    | 0.54  | -0.16 | -0.09 | 6.15  | 19.87          | PASS    |
|           |                 | 256QAM     | 0.14    | 0.43  | -0.19 | -0.14 | 6.09  | 19.81          | PASS    |
|           | 3624.99         | QPSK       | 0.50    | 0.30  | -0.10 | 0.23  | 6.26  | <b>19.98</b>   | PASS    |
|           |                 | 64QAM      | 0.49    | 0.19  | -0.05 | 0.11  | 6.21  | 19.93          | PASS    |
|           |                 | 256QAM     | 0.47    | 0.14  | -0.13 | 0.09  | 6.17  | 19.89          | PASS    |
|           | 3690            | QPSK       | 0.23    | 0.17  | 0.25  | 0.28  | 6.25  | 19.97          | PASS    |
|           |                 | 64QAM      | 0.17    | 0.12  | 0.21  | 0.24  | 6.21  | 19.93          | PASS    |
|           |                 | 256QAM     | 0.14    | 0.09  | 0.15  | 0.16  | 6.16  | 19.88          | PASS    |
| 40M       | 3570            | QPSK       | 0.03    | 0.07  | -0.06 | -0.24 | 5.97  | 19.69          | PASS    |
|           |                 | 64QAM      | -0.07   | 0.01  | -0.14 | -0.36 | 5.88  | 19.60          | PASS    |
|           |                 | 256QAM     | -0.09   | -0.05 | -0.19 | -0.41 | 5.84  | 19.56          | PASS    |
|           | 3624.99         | QPSK       | -0.17   | -0.34 | -0.24 | -0.17 | 5.79  | 19.51          | PASS    |
|           |                 | 64QAM      | -0.22   | -0.39 | -0.33 | -0.22 | 5.73  | 19.45          | PASS    |
|           |                 | 256QAM     | -0.29   | -0.45 | -0.41 | -0.26 | 5.67  | 19.39          | PASS    |
|           | 3679.98         | QPSK       | -0.10   | -0.51 | -0.21 | -0.13 | 5.79  | 19.51          | PASS    |
|           |                 | 64QAM      | -0.16   | -0.54 | -0.29 | -0.22 | 5.72  | 19.44          | PASS    |
|           |                 | 256QAM     | -0.23   | -0.65 | -0.33 | -0.27 | 5.65  | 19.37          | PASS    |

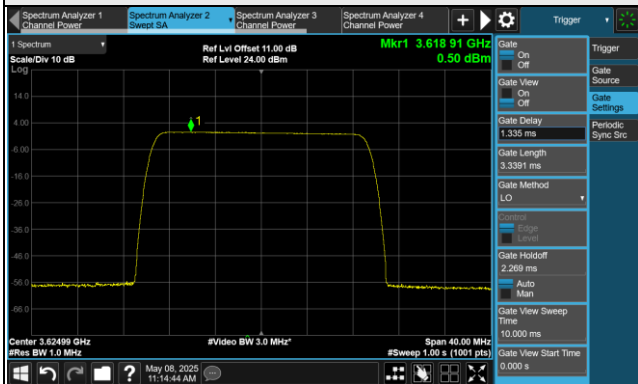
Note:

1. Correlated Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{G4/20})^2/4] = 13.72 \text{ dBi}$
2. EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

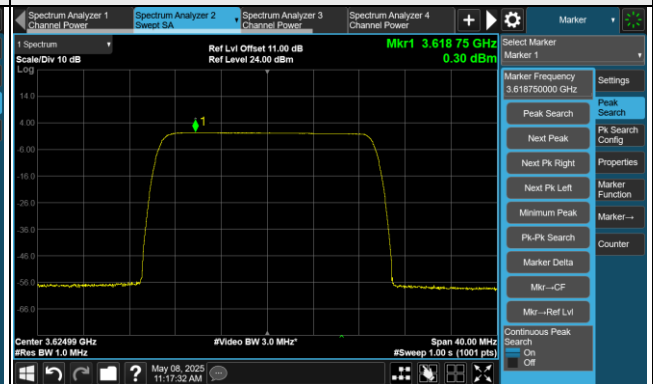
## Spectrum Plot of Worst Value

20MHz / QPSK

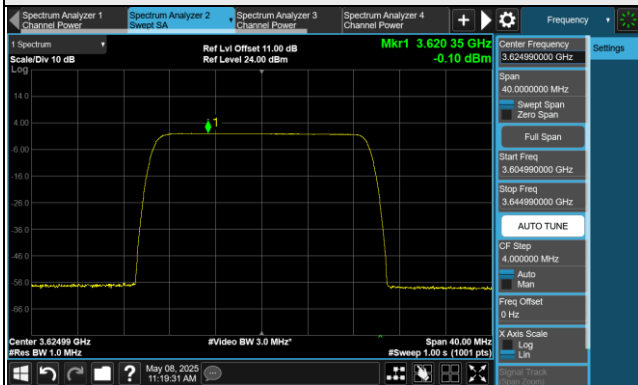
Ant.1



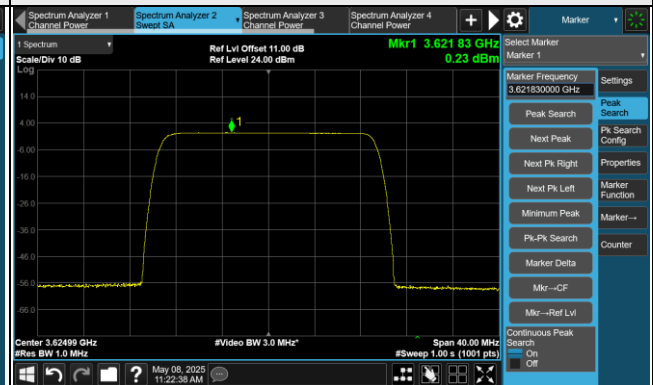
Ant.2



Ant.3



Ant.4



### Mode D2 / D3

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 10M+20M   | 3555+3690       | QPSK       | CC0     | -2.68   | -2.45 | -3.04 | -2.85 | 3.27  | 19.76          | PASS    |
|           |                 |            | CC1     | -3.2    | -3.11 | -3.46 | -3.21 | 2.78  |                |         |
|           |                 | 64QAM      | CC0     | -2.73   | -2.53 | -3.11 | -2.93 | 3.20  | 19.70          | PASS    |
|           |                 |            | CC1     | -3.33   | -3.17 | -3.49 | -3.24 | 2.71  |                |         |
|           |                 | 256QAM     | CC0     | -2.79   | -2.59 | -3.17 | -2.99 | 3.14  | 19.64          | PASS    |
|           |                 |            | CC1     | -3.38   | -3.19 | -3.54 | -3.32 | 2.66  |                |         |
|           | 3595.02+3660    | QPSK       | CC0     | -1.88   | -1.97 | -2.25 | -2.69 | 3.83  | 19.90          | PASS    |
|           |                 |            | CC1     | -3.87   | -3.51 | -3.66 | -3.56 | 2.37  |                |         |
|           |                 | 64QAM      | CC0     | -1.92   | -1.99 | -2.32 | -2.77 | 3.78  | 19.83          | PASS    |
|           |                 |            | CC1     | -3.94   | -3.59 | -3.73 | -3.65 | 2.30  |                |         |
|           |                 | 256QAM     | CC0     | -1.99   | -2.03 | -2.39 | -2.79 | 3.73  | 19.79          | PASS    |
|           |                 |            | CC1     | -3.97   | -3.62 | -3.78 | -3.67 | 2.26  |                |         |
|           | 3617.52+3637.53 | QPSK       | CC0     | -2.56   | -2.76 | -2.68 | -2.93 | 3.29  | 19.84          | PASS    |
|           |                 |            | CC1     | -3.14   | -3.02 | -3.08 | -3.15 | 2.92  |                |         |
|           |                 | 64QAM      | CC0     | -2.64   | -2.84 | -2.73 | -3.09 | 3.20  | 19.74          | PASS    |
|           |                 |            | CC1     | -3.27   | -3.13 | -3.14 | -3.27 | 2.82  |                |         |
|           |                 | 256QAM     | CC0     | -2.69   | -2.91 | -2.79 | -3.14 | 3.14  | 19.66          | PASS    |
|           |                 |            | CC1     | -3.35   | -3.26 | -3.32 | -3.34 | 2.70  |                |         |
|           | 3555+3570       | QPSK       | CC0     | -2.81   | -2.85 | -3.17 | -3.34 | 2.98  | 19.65          | PASS    |
|           |                 |            | CC1     | -2.68   | -3.22 | -3.36 | -3.46 | 2.85  |                |         |
|           |                 | 64QAM      | CC0     | -2.85   | -2.91 | -3.26 | -3.42 | 2.92  | 19.58          | PASS    |
|           |                 |            | CC1     | -2.73   | -3.33 | -3.43 | -3.51 | 2.78  |                |         |
|           |                 | 256QAM     | CC0     | -2.94   | -3.16 | -3.39 | -3.51 | 2.78  | 19.47          | PASS    |
|           |                 |            | CC1     | -2.81   | -3.43 | -3.51 | -3.59 | 2.70  |                |         |
|           | 3675+3690       | QPSK       | CC0     | -2.83   | -2.88 | -3.22 | -3.39 | 2.95  | 19.64          | PASS    |
|           |                 |            | CC1     | -2.74   | -2.93 | -3.43 | -3.51 | 2.88  |                |         |
|           |                 | 64QAM      | CC0     | -2.92   | -2.94 | -3.26 | -3.43 | 2.89  | 19.58          | PASS    |
|           |                 |            | CC1     | -2.88   | -2.99 | -3.47 | -3.56 | 2.81  |                |         |
|           |                 | 256QAM     | CC0     | -2.96   | -2.97 | -3.29 | -3.47 | 2.85  | 19.53          | PASS    |
|           |                 |            | CC1     | -2.94   | -3.04 | -3.53 | -3.62 | 2.75  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+10M   | 3560.01+3694.98 | QPSK       | CC0     | -2.92   | -2.5  | -3    | -3.02 | 3.17  | 19.56          | PASS    |
|           |                 |            | CC1     | -3.59   | -3.37 | -3.61 | -3.68 | 2.46  |                |         |
|           |                 | 64QAM      | CC0     | -3.04   | -2.61 | -3.04 | -3.14 | 3.07  | 19.48          | PASS    |
|           |                 |            | CC1     | -3.64   | -3.43 | -3.64 | -3.73 | 2.41  |                |         |
|           |                 | 256QAM     | CC0     | -3.11   | -2.69 | -3.14 | -3.19 | 2.99  | 19.41          | PASS    |
|           |                 |            | CC1     | -3.73   | -3.49 | -3.69 | -3.84 | 2.33  |                |         |
|           | 3590.01+3655.02 | QPSK       | CC0     | -2.89   | -2.79 | -2.93 | -3.34 | 3.04  | 19.51          | PASS    |
|           |                 |            | CC1     | -3.61   | -3.29 | -3.55 | -3.61 | 2.51  |                |         |
|           |                 | 64QAM      | CC0     | -2.94   | -2.84 | -3.07 | -3.39 | 2.97  | 19.44          | PASS    |
|           |                 |            | CC1     | -3.73   | -3.33 | -3.62 | -3.69 | 2.43  |                |         |
|           |                 | 256QAM     | CC0     | -2.97   | -2.91 | -3.14 | -3.42 | 2.92  | 19.37          | PASS    |
|           |                 |            | CC1     | -3.84   | -3.39 | -3.72 | -3.75 | 2.35  |                |         |
|           | 3612.51+3632.52 | QPSK       | CC0     | -2.93   | -2.61 | -2.85 | -3.26 | 3.11  | 19.57          | PASS    |
|           |                 |            | CC1     | -3.51   | -3.39 | -3.42 | -3.59 | 2.54  |                |         |
|           |                 | 64QAM      | CC0     | -3.14   | -2.69 | -2.89 | -3.33 | 3.01  | 19.49          | PASS    |
|           |                 |            | CC1     | -3.54   | -3.43 | -3.55 | -3.65 | 2.48  |                |         |
|           |                 | 256QAM     | CC0     | -3.22   | -2.72 | -2.91 | -3.39 | 2.97  | 19.42          | PASS    |
|           |                 |            | CC1     | -3.61   | -3.55 | -3.62 | -3.73 | 2.39  |                |         |
|           | 3560.01+3575.01 | QPSK       | CC0     | -2.67   | -2.96 | -3.34 | -3.43 | 2.93  | 19.64          | PASS    |
|           |                 |            | CC1     | -2.56   | -2.88 | -3.57 | -3.64 | 2.88  |                |         |
|           |                 | 64QAM      | CC0     | -2.69   | -2.99 | -3.46 | -3.47 | 2.88  | 19.58          | PASS    |
|           |                 |            | CC1     | -2.66   | -2.97 | -3.62 | -3.69 | 2.81  |                |         |
|           |                 | 256QAM     | CC0     | -2.77   | -3.06 | -3.53 | -3.55 | 2.81  | 19.52          | PASS    |
|           |                 |            | CC1     | -2.74   | -3.01 | -3.61 | -3.72 | 2.77  |                |         |
|           | 3679.98+3694.98 | QPSK       | CC0     | -2.72   | -2.99 | -3.37 | -3.51 | 2.88  | 19.58          | PASS    |
|           |                 |            | CC1     | -2.66   | -2.93 | -3.61 | -3.68 | 2.82  |                |         |
|           |                 | 64QAM      | CC0     | -2.74   | -3.04 | -3.43 | -3.54 | 2.84  | 19.54          | PASS    |
|           |                 |            | CC1     | -2.69   | -2.99 | -3.67 | -3.72 | 2.78  |                |         |
|           |                 | 256QAM     | CC0     | -2.79   | -3.13 | -3.49 | -3.59 | 2.78  | 19.48          | PASS    |
|           |                 |            | CC1     | -2.75   | -3.04 | -3.69 | -3.79 | 2.73  |                |         |

| Bandwidth | Frequency (MHz) | Modulation | Carrier | Antenna |       |       |       | Total | EIRP (dBm/MHz) | Verdict |
|-----------|-----------------|------------|---------|---------|-------|-------|-------|-------|----------------|---------|
|           |                 |            |         | 1       | 2     | 3     | 4     |       |                |         |
| 20M+20M   | 3560.01+3690    | QPSK       | CC0     | -2.64   | -2.65 | -3.02 | -2.71 | 3.27  | 19.75          | PASS    |
|           |                 |            | CC1     | -3.22   | -3.12 | -3.61 | -3.12 | 2.76  |                |         |
|           |                 | 64QAM      | CC0     | -2.79   | -2.79 | -3.14 | -2.84 | 3.13  | 19.62          | PASS    |
|           |                 |            | CC1     | -3.39   | -3.24 | -3.69 | -3.24 | 2.63  |                |         |
|           |                 | 256QAM     | CC0     | -2.81   | -2.84 | -3.27 | -2.91 | 3.07  | 19.55          | PASS    |
|           |                 |            | CC1     | -3.42   | -3.37 | -3.75 | -3.36 | 2.55  |                |         |
|           | 3595.02+3655.02 | QPSK       | CC0     | -2.2    | -2.28 | -2.94 | -2.41 | 3.57  | 19.96          | PASS    |
|           |                 |            | CC1     | -3.11   | -3.13 | -3.26 | -3.17 | 2.85  |                |         |
|           |                 | 64QAM      | CC0     | -2.31   | -2.35 | -3.06 | -2.55 | 3.46  | 19.87          | PASS    |
|           |                 |            | CC1     | -3.14   | -3.16 | -3.33 | -3.26 | 2.80  |                |         |
|           |                 | 256QAM     | CC0     | -2.37   | -2.42 | -3.17 | -2.59 | 3.39  | 19.80          | PASS    |
|           |                 |            | CC1     | -3.19   | -3.22 | -3.42 | -3.42 | 2.71  |                |         |
|           | 3612.51+3637.53 | QPSK       | CC0     | -2.6    | -2.71 | -2.69 | -2.97 | 3.28  | 19.82          | PASS    |
|           |                 |            | CC1     | -3.18   | -3.04 | -3.08 | -3.21 | 2.89  |                |         |
|           |                 | 64QAM      | CC0     | -2.65   | -2.77 | -2.74 | -3.06 | 3.22  | 19.76          | PASS    |
|           |                 |            | CC1     | -3.22   | -3.14 | -3.15 | -3.29 | 2.82  |                |         |
|           |                 | 256QAM     | CC0     | -2.68   | -2.84 | -2.79 | -3.17 | 3.15  | 19.69          | PASS    |
|           |                 |            | CC1     | -3.27   | -3.26 | -3.21 | -3.33 | 2.75  |                |         |
|           | 3560.01+3580.02 | QPSK       | CC0     | -2.72   | -2.79 | -2.91 | -3.1  | 3.14  | 19.59          | PASS    |
|           |                 |            | CC1     | -3.35   | -3.22 | -3.58 | -3.77 | 2.55  |                |         |
|           |                 | 64QAM      | CC0     | -2.79   | -2.85 | -2.99 | -3.18 | 3.07  | 19.52          | PASS    |
|           |                 |            | CC1     | -3.38   | -3.29 | -3.62 | -3.84 | 2.49  |                |         |
|           |                 | 256QAM     | CC0     | -2.81   | -2.91 | -3.09 | -3.22 | 3.02  | 19.46          | PASS    |
|           |                 |            | CC1     | -3.44   | -3.33 | -3.74 | -3.89 | 2.43  |                |         |
|           | 3670.02+3690    | QPSK       | CC0     | -2.76   | -2.81 | -2.94 | -3.19 | 3.10  | 19.54          | PASS    |
|           |                 |            | CC1     | -3.39   | -3.26 | -3.62 | -3.84 | 2.50  |                |         |
|           |                 | 64QAM      | CC0     | -2.79   | -2.89 | -2.97 | -3.22 | 3.06  | 19.49          | PASS    |
|           |                 |            | CC1     | -3.43   | -3.33 | -3.69 | -3.91 | 2.44  |                |         |
|           |                 | 256QAM     | CC0     | -2.82   | -2.94 | -3.09 | -3.26 | 3.00  | 19.43          | PASS    |
|           |                 |            | CC1     | -3.49   | -3.38 | -3.74 | -3.95 | 2.39  |                |         |

Note:

1. Correlated Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{G4/20})^2/4] = 13.72\text{dBi}$
2. EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

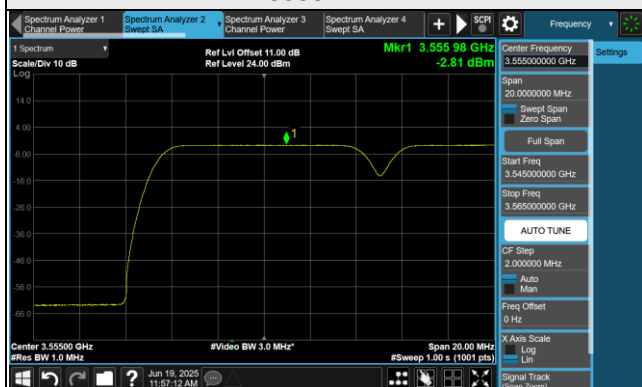
## Spectrum Plot of Worst Value

10MHz+20MHz / QPSK

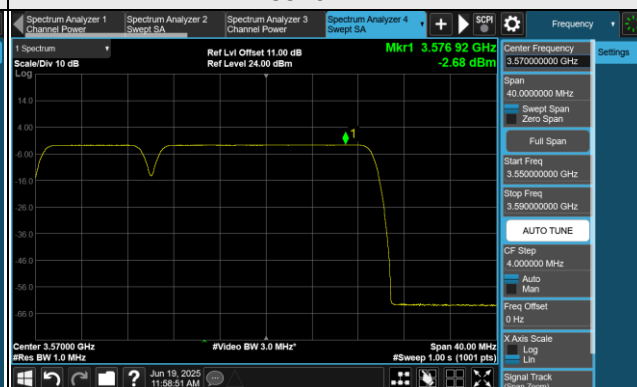
3555 MHz+ 3570 MHz

Ant.1

3555 MHz

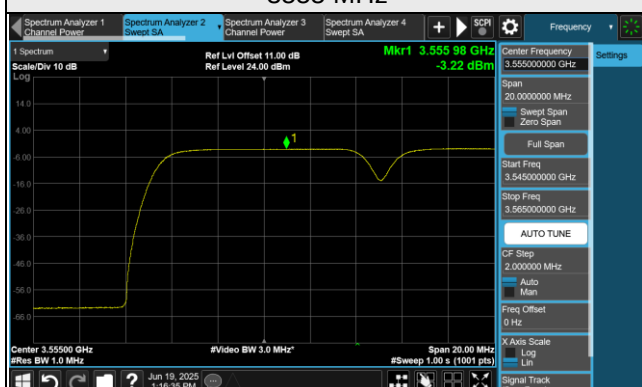


3570 MHz

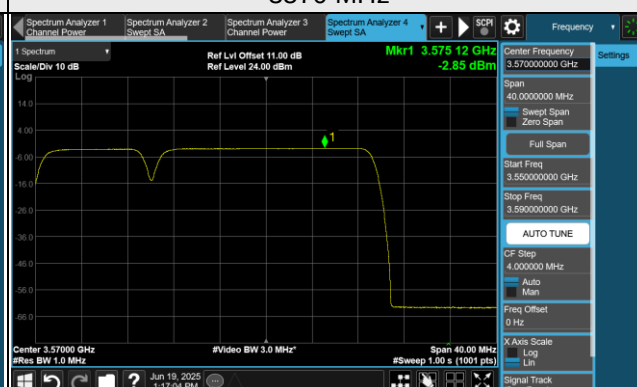


Ant.2

3555 MHz

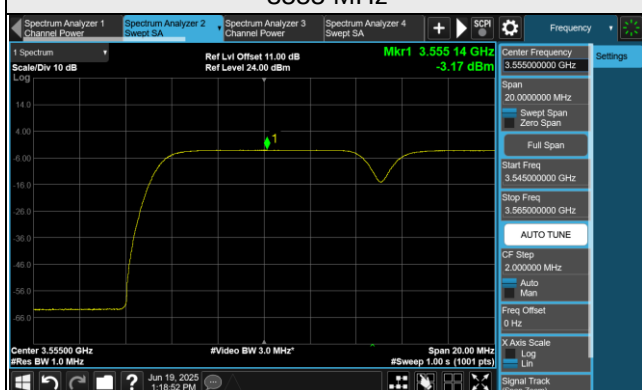


3570 MHz

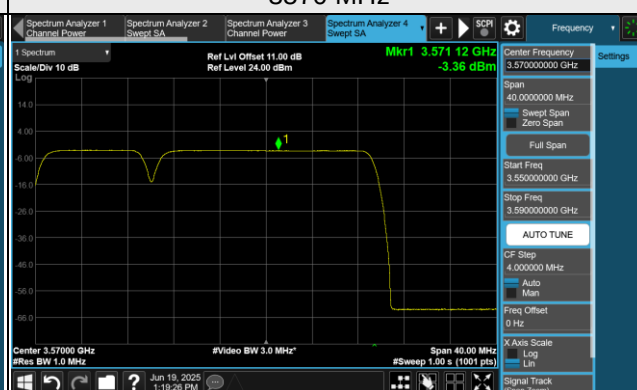


Ant.3

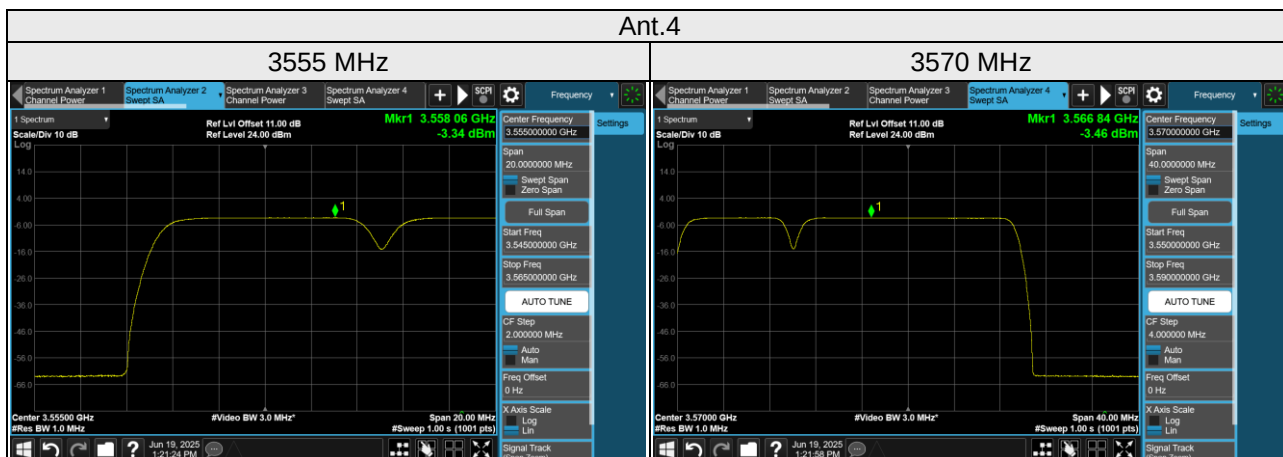
3555 MHz



3570 MHz



# Ant.4



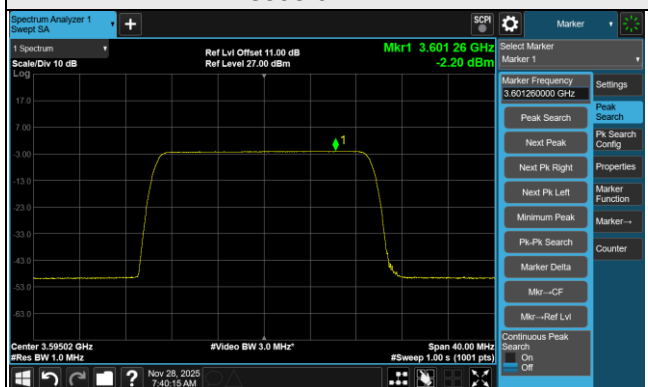
## Spectrum Plot of Worst Value

20MHz+20MHz / QPSK

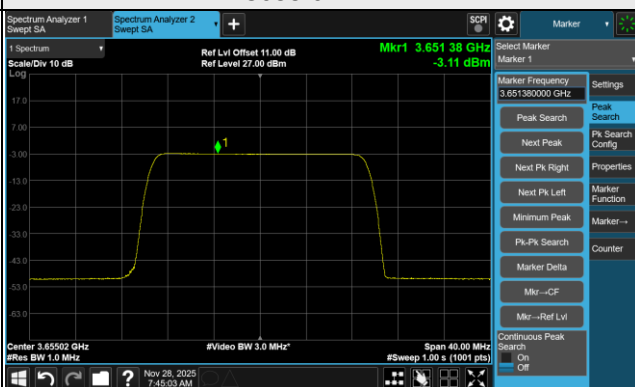
3595.02 MHz+3655.02 MHz

Ant.1

3595.02 MHz

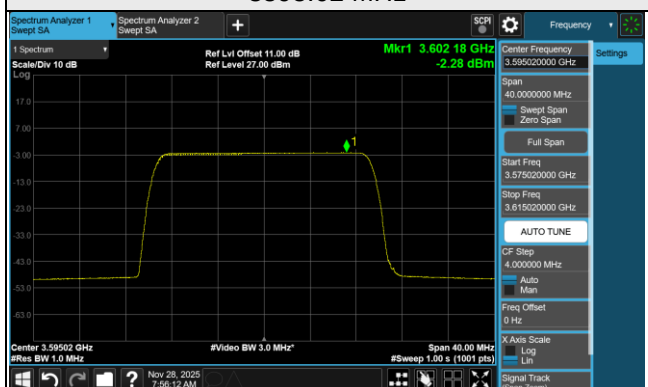


3655.02 MHz

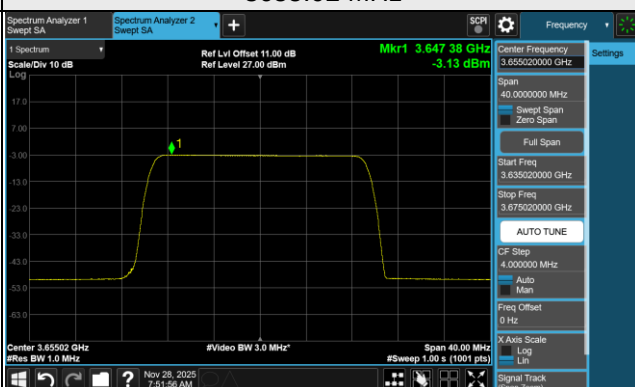


Ant.2

3595.02 MHz

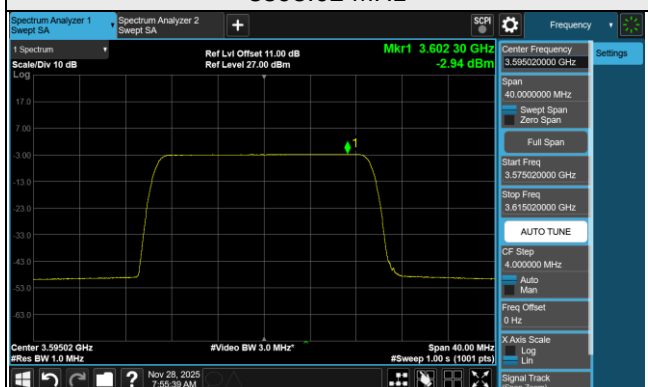


3655.02 MHz

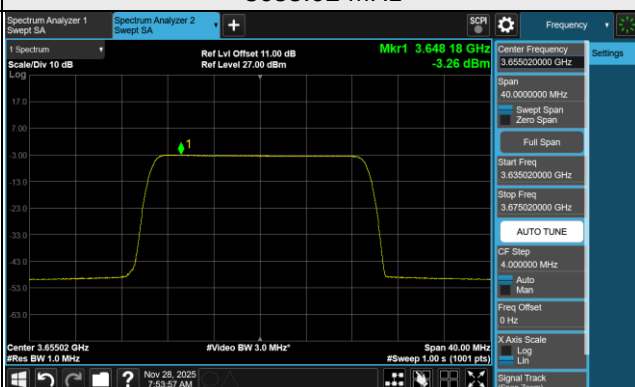


Ant.3

3595.02 MHz

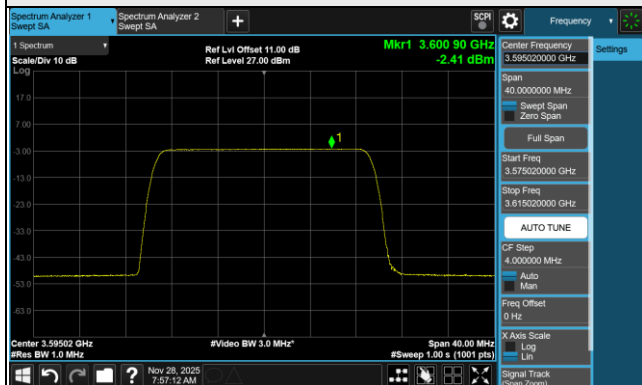


3655.02 MHz

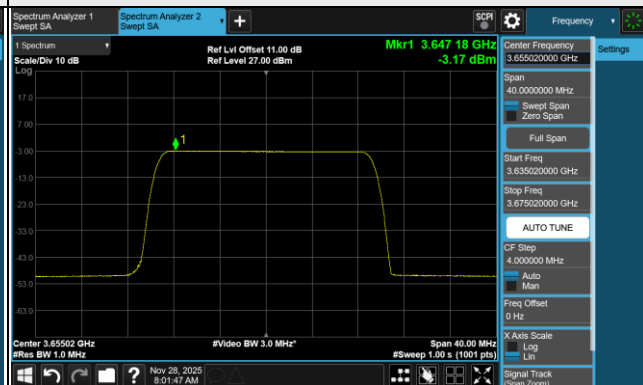


# Ant.4

3595.02 MHz



3655.02 MHz

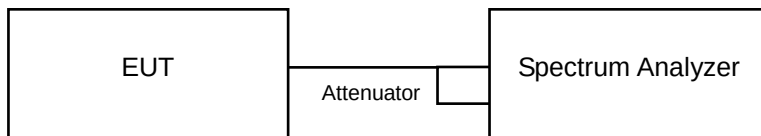


### 4.3 Modulation Characteristics Measurement

#### 4.3.1 Limits of Modulation Characteristics

N/A

#### 4.3.2 Test Setup



#### 4.3.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

#### 4.3.4 Deviation from Test Standard

No deviation.

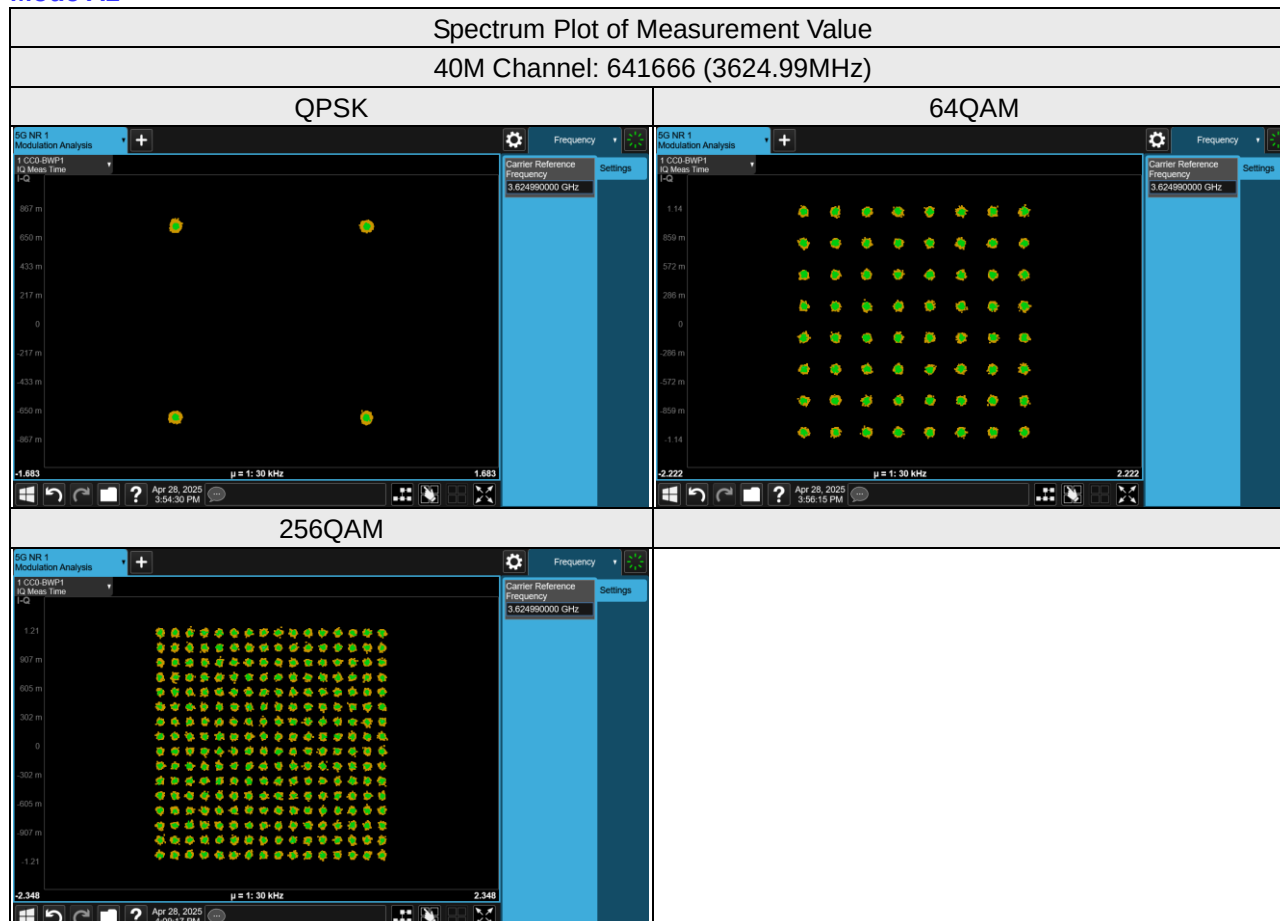
#### 4.3.5 EUT Operating Conditions

Connect the EUT to Spectrum Analyze via the antenna connector, the frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

### 4.3.6 Test Results

|              |        |                           |              |            |            |
|--------------|--------|---------------------------|--------------|------------|------------|
| Input Power: | 12 Vdc | Environmental Conditions: | 22°C, 73% RH | Tested By: | Noah Chang |
|--------------|--------|---------------------------|--------------|------------|------------|

#### Mode A1

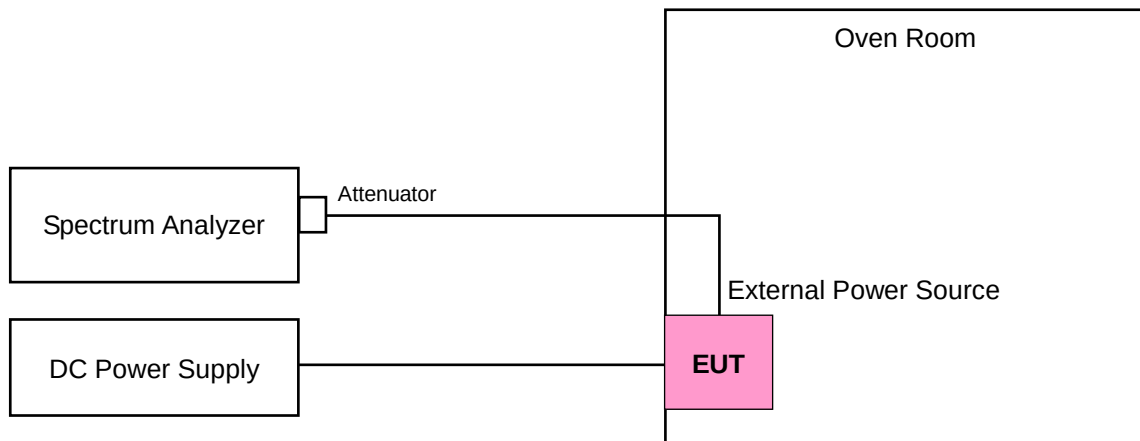


#### 4.4 Frequency Stability Measurement

##### 4.4.1 Limits of Frequency Stability Measurement

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency band.

##### 4.4.2 Test Setup



##### 4.4.3 Test Instruments

| Description & Manufacturer                            | Model No. | Serial No. | Cal. Date  | Cal. Due   |
|-------------------------------------------------------|-----------|------------|------------|------------|
| PXA Signal Analyzer<br>Keysight                       | N9030B    | MY57140938 | 2025/3/24  | 2026/3/23  |
| STANDARD TEMPERATURE<br>& HUMIDITY CHAMBER<br>TERCHY  | MHU-225AU | 911033     | 2024/10/29 | 2025/10/28 |
| Three-phase coupling /<br>decoupling network<br>TESEQ | CDN 3063  | 4006       | 2025/3/6   | 2026/3/5   |
| DC Power Supply<br>Topward                            | 6306A     | 727263     | NA         | NA         |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. Test date: 2025/4/28

##### 4.4.4 Test Procedure

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the Spectrum Analyzer.

#### 4.4.5 Test Results

|                           |              |            |            |
|---------------------------|--------------|------------|------------|
| Environmental Conditions: | 20°C, 73% RH | Tested By: | Noah Chang |
|---------------------------|--------------|------------|------------|

#### Mode A1

#### Antenna 1

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3554.999999                          | -0.000281             | 3694.980002     | 0.000541              |
| 56            | 3554.999998                          | -0.000563             | 3694.979998     | -0.000541             |
| 44            | 3554.999997                          | -0.000844             | 3694.979998     | -0.000541             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999996                          | -0.001125             | 3694.979997     | -0.000812             |
| -20        | 3554.999996                          | -0.001125             | 3694.979998     | -0.000541             |
| -10        | 3554.999999                          | -0.000281             | 3694.980003     | 0.000812              |
| 0          | 3555.000001                          | 0.000281              | 3694.979996     | -0.001083             |
| 10         | 3554.999999                          | -0.000281             | 3694.979997     | -0.000812             |
| 20         | 3554.999998                          | -0.000563             | 3694.979996     | -0.001083             |
| 30         | 3555.000002                          | 0.000563              | 3694.979999     | -0.000271             |
| 40         | 3555.000003                          | 0.000844              | 3694.979996     | -0.001083             |
| 50         | 3555.000004                          | 0.001125              | 3694.980003     | 0.000812              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.009998                          | -0.000562             | 3690.000003     | 0.000813              |
| 56            | 3560.010002                          | 0.000562              | 3689.999998     | -0.000542             |
| 44            | 3560.009996                          | -0.001124             | 3689.999999     | -0.000271             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009997                          | -0.000843             | 3690.000002     | 0.000542              |
| -20        | 3560.010003                          | 0.000843              | 3690.000001     | 0.000271              |
| -10        | 3560.009999                          | -0.000281             | 3690.000002     | 0.000542              |
| 0          | 3560.010001                          | 0.000281              | 3690.000004     | 0.001084              |
| 10         | 3560.009999                          | -0.000281             | 3690.000003     | 0.000813              |
| 20         | 3560.009998                          | -0.000562             | 3689.999999     | -0.000271             |
| 30         | 3560.010001                          | 0.000281              | 3690.000002     | 0.000542              |
| 40         | 3560.009997                          | -0.000843             | 3690.000002     | 0.000542              |
| 50         | 3560.009998                          | -0.000562             | 3690.000002     | 0.000542              |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|------------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                          |                       | High Channel    |                       |
|                  | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3570.000002                          | 0.000560              | 3679.980002     | 0.000543              |
| 56               | 3569.999999                          | -0.000280             | 3679.980001     | 0.000272              |
| 44               | 3569.999999                          | -0.000280             | 3679.979998     | -0.000543             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3570.000002                          | 0.000560              | 3679.980004     | 0.001087              |
| -20        | 3569.999996                          | -0.001120             | 3679.979997     | -0.000815             |
| -10        | 3570.000001                          | 0.000280              | 3679.980001     | 0.000272              |
| 0          | 3570.000002                          | 0.000560              | 3679.980003     | 0.000815              |
| 10         | 3569.999997                          | -0.000840             | 3679.979998     | -0.000543             |
| 20         | 3570.000003                          | 0.000840              | 3679.980002     | 0.000543              |
| 30         | 3569.999997                          | -0.000840             | 3679.980004     | 0.001087              |
| 40         | 3569.999998                          | -0.000560             | 3679.980002     | 0.000543              |
| 50         | 3570.000001                          | 0.000280              | 3679.979998     | -0.000543             |

## Antenna 2

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3554.999997                          | -0.000844             | 3694.979997     | -0.000812             |
| 56            | 3555.000003                          | 0.000844              | 3694.979999     | -0.000271             |
| 44            | 3554.999997                          | -0.000844             | 3694.979997     | -0.000812             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                          | -0.000563             | 3694.980003     | 0.000812              |
| -20        | 3555.000001                          | 0.000281              | 3694.980002     | 0.000541              |
| -10        | 3555.000001                          | 0.000281              | 3694.980001     | 0.000271              |
| 0          | 3554.999998                          | -0.000563             | 3694.980003     | 0.000812              |
| 10         | 3554.999999                          | -0.000281             | 3694.980002     | 0.000541              |
| 20         | 3554.999998                          | -0.000563             | 3694.979996     | -0.001083             |
| 30         | 3554.999998                          | -0.000563             | 3694.979995     | -0.001353             |
| 40         | 3555.000001                          | 0.000281              | 3694.980002     | 0.000541              |
| 50         | 3554.999998                          | -0.000563             | 3694.980004     | 0.001083              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010002                          | 0.000562              | 3689.999995     | -0.001355             |
| 56            | 3560.009997                          | -0.000843             | 3689.999998     | -0.000542             |
| 44            | 3560.009997                          | -0.000843             | 3690.000004     | 0.001084              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009995                          | -0.001404             | 3690.000004     | 0.001084              |
| -20        | 3560.009997                          | -0.000843             | 3689.999996     | -0.001084             |
| -10        | 3560.009997                          | -0.000843             | 3690.000001     | 0.000271              |
| 0          | 3560.010005                          | 0.001404              | 3690.000003     | 0.000813              |
| 10         | 3560.009995                          | -0.001404             | 3690.000001     | 0.000271              |
| 20         | 3560.009996                          | -0.001124             | 3690.000002     | 0.000542              |
| 30         | 3560.010005                          | 0.001404              | 3689.999999     | -0.000271             |
| 40         | 3560.010002                          | 0.000562              | 3690.000004     | 0.001084              |
| 50         | 3560.010004                          | 0.001124              | 3690.000002     | 0.000542              |

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3569.999999                          | -0.000280             | 3679.979996     | -0.001087             |
| 56            | 3570.000003                          | 0.000840              | 3679.980004     | 0.001087              |
| 44            | 3569.999997                          | -0.000840             | 3679.979998     | -0.000543             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3570.000002                          | 0.000560              | 3679.979996     | -0.001087             |
| -20        | 3569.999999                          | -0.000280             | 3679.979998     | -0.000543             |
| -10        | 3569.999997                          | -0.000840             | 3679.979996     | -0.001087             |
| 0          | 3569.999998                          | -0.000560             | 3679.980004     | 0.001087              |
| 10         | 3570.000001                          | 0.000280              | 3679.979999     | -0.000272             |
| 20         | 3569.999999                          | -0.000280             | 3679.979998     | -0.000543             |
| 30         | 3570.000002                          | 0.000560              | 3679.980001     | 0.000272              |
| 40         | 3570.000001                          | 0.000280              | 3679.979997     | -0.000815             |
| 50         | 3569.999998                          | -0.000560             | 3679.980004     | 0.001087              |

### Antenna 3

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|------------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                          |                       | High Channel    |                       |
|                  | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3555.000001                          | 0.000281              | 3694.979997     | -0.000812             |
| 56               | 3555.000004                          | 0.001125              | 3694.979998     | -0.000541             |
| 44               | 3555.000001                          | 0.000281              | 3694.980001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999997                          | -0.000844             | 3694.980002     | 0.000541              |
| -20        | 3554.999996                          | -0.001125             | 3694.980002     | 0.000541              |
| -10        | 3554.999998                          | -0.000563             | 3694.979998     | -0.000541             |
| 0          | 3555.000004                          | 0.001125              | 3694.979997     | -0.000812             |
| 10         | 3555.000004                          | 0.001125              | 3694.979996     | -0.001083             |
| 20         | 3554.999998                          | -0.000563             | 3694.979997     | -0.000812             |
| 30         | 3555.000004                          | 0.001125              | 3694.979998     | -0.000541             |
| 40         | 3555.000002                          | 0.000563              | 3694.980001     | 0.000271              |
| 50         | 3555.000003                          | 0.000844              | 3694.979996     | -0.001083             |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|------------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                          |                       | High Channel    |                       |
|                  | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.009997                          | -0.000843             | 3690.000002     | 0.000542              |
| 56               | 3560.010001                          | 0.000281              | 3689.999996     | -0.001084             |
| 44               | 3560.009997                          | -0.000843             | 3690.000002     | 0.000542              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010002                          | 0.000562              | 3689.999996     | -0.001084             |
| -20        | 3560.009998                          | -0.000562             | 3690.000003     | 0.000813              |
| -10        | 3560.010002                          | 0.000562              | 3689.999998     | -0.000542             |
| 0          | 3560.009998                          | -0.000562             | 3690.000001     | 0.000271              |
| 10         | 3560.010003                          | 0.000843              | 3689.999998     | -0.000542             |
| 20         | 3560.009999                          | -0.000281             | 3690.000004     | 0.001084              |
| 30         | 3560.009996                          | -0.001124             | 3689.999999     | -0.000271             |
| 40         | 3560.009996                          | -0.001124             | 3689.999999     | -0.000271             |
| 50         | 3560.010004                          | 0.001124              | 3690.000004     | 0.001084              |

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3569.999998                          | -0.000560             | 3679.980002     | 0.000543              |
| 56            | 3569.999998                          | -0.000560             | 3679.979997     | -0.000815             |
| 44            | 3569.999997                          | -0.000840             | 3679.979998     | -0.000543             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3569.999998                          | -0.000560             | 3679.980004     | 0.001087              |
| -20        | 3570.000002                          | 0.000561              | 3679.979997     | -0.000815             |
| -10        | 3570.000001                          | 0.000281              | 3679.980002     | 0.000543              |
| 0          | 3570.000002                          | 0.000561              | 3679.980004     | 0.001087              |
| 10         | 3570.000004                          | 0.001122              | 3679.979997     | -0.000815             |
| 20         | 3569.999999                          | -0.000281             | 3679.979998     | -0.000543             |
| 30         | 3570.000003                          | 0.000842              | 3679.979996     | -0.001087             |
| 40         | 3570.000003                          | 0.000842              | 3679.979998     | -0.000543             |
| 50         | 3569.999997                          | -0.000842             | 3679.980003     | 0.000815              |

#### Antenna 4

##### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3554.999998                          | -0.000563             | 3694.979996     | -0.001083             |
| 56            | 3554.999998                          | -0.000563             | 3694.979999     | -0.000271             |
| 44            | 3555.000002                          | 0.000563              | 3694.980001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                          | -0.000563             | 3694.980003     | 0.000812              |
| -20        | 3554.999998                          | -0.000563             | 3694.979997     | -0.000812             |
| -10        | 3554.999997                          | -0.000844             | 3694.980001     | 0.000271              |
| 0          | 3554.999998                          | -0.000563             | 3694.980002     | 0.000541              |
| 10         | 3554.999998                          | -0.000563             | 3694.979997     | -0.000812             |
| 20         | 3554.999999                          | -0.000281             | 3694.979998     | -0.000541             |
| 30         | 3555.000002                          | 0.000563              | 3694.980001     | 0.000271              |
| 40         | 3555.000001                          | 0.000281              | 3694.980001     | 0.000271              |
| 50         | 3555.000003                          | 0.000844              | 3694.980001     | 0.000271              |

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010002                          | 0.000562              | 3689.999999     | -0.000271             |
| 56            | 3560.009998                          | -0.000562             | 3690.000003     | 0.000813              |
| 44            | 3560.009999                          | -0.000281             | 3689.999998     | -0.000542             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010002                          | 0.000562              | 3689.999999     | -0.000271             |
| -20        | 3560.009998                          | -0.000562             | 3690.000003     | 0.000813              |
| -10        | 3560.010003                          | 0.000843              | 3689.999996     | -0.001084             |
| 0          | 3560.010001                          | 0.000281              | 3690.000004     | 0.001084              |
| 10         | 3560.010003                          | 0.000843              | 3689.999998     | -0.000542             |
| 20         | 3560.009998                          | -0.000562             | 3689.999996     | -0.001084             |
| 30         | 3560.010004                          | 0.001124              | 3690.000004     | 0.001084              |
| 40         | 3560.009997                          | -0.000843             | 3690.000001     | 0.000271              |
| 50         | 3560.010004                          | 0.001124              | 3690.000002     | 0.000542              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|---------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                          |                       | High Channel    |                       |
|               | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3570.000002                          | 0.000560              | 3679.979999     | -0.000272             |
| 56            | 3570.000003                          | 0.000840              | 3679.979999     | -0.000272             |
| 44            | 3570.000002                          | 0.000560              | 3679.980002     | 0.000543              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 40MHz |                       |                 |                       |
|------------|--------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                          |                       | High Channel    |                       |
|            | Frequency (MHz)                      | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3569.999997                          | -0.000840             | 3679.979998     | -0.000543             |
| -20        | 3569.999996                          | -0.001120             | 3679.979998     | -0.000543             |
| -10        | 3570.000003                          | 0.000840              | 3679.980003     | 0.000815              |
| 0          | 3570.000001                          | 0.000280              | 3679.979999     | -0.000272             |
| 10         | 3569.999998                          | -0.000560             | 3679.979996     | -0.001087             |
| 20         | 3569.999998                          | -0.000560             | 3679.979996     | -0.001087             |
| 30         | 3570.000002                          | 0.000560              | 3679.979997     | -0.000815             |
| 40         | 3569.999997                          | -0.000840             | 3679.979999     | -0.000272             |
| 50         | 3570.000003                          | 0.000840              | 3679.979998     | -0.000543             |

## Mode A2

### Antenna 1

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3555.000002                                | 0.000563              | 3690.000002     | 0.000542              |
| 56               | 3554.999999                                | -0.000281             | 3689.999999     | -0.000271             |
| 44               | 3555.000001                                | 0.000281              | 3690.000003     | 0.000813              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |
| -20        | 3555.000001                                | 0.000281              | 3689.999999     | -0.000271             |
| -10        | 3555.000003                                | 0.000844              | 3690.000003     | 0.000813              |
| 0          | 3555.000002                                | 0.000563              | 3690.000002     | 0.000542              |
| 10         | 3554.999999                                | -0.000281             | 3689.999999     | -0.000271             |
| 20         | 3554.999999                                | -0.000281             | 3690.000002     | 0.000542              |
| 30         | 3555.000003                                | 0.000844              | 3690.000002     | 0.000542              |
| 40         | 3555.000002                                | 0.000563              | 3689.999999     | -0.000271             |
| 50         | 3555.000001                                | 0.000281              | 3689.999999     | -0.000271             |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.009997                                | -0.000843             | 3694.979998     | -0.000541             |
| 56            | 3560.009999                                | -0.000281             | 3694.979999     | -0.000271             |
| 44            | 3560.009998                                | -0.000562             | 3694.979997     | -0.000812             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009998                                | -0.000562             | 3694.980001     | 0.000271              |
| -20        | 3560.010001                                | 0.000281              | 3694.980003     | 0.000812              |
| -10        | 3560.010002                                | 0.000562              | 3694.980001     | 0.000271              |
| 0          | 3560.010003                                | 0.000843              | 3694.980003     | 0.000812              |
| 10         | 3560.009999                                | -0.000281             | 3694.980002     | 0.000541              |
| 20         | 3560.009997                                | -0.000843             | 3694.979999     | -0.000271             |
| 30         | 3560.010002                                | 0.000562              | 3694.979997     | -0.000812             |
| 40         | 3560.009996                                | -0.001124             | 3694.979998     | -0.000541             |
| 50         | 3560.009999                                | -0.000281             | 3694.980001     | 0.000271              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010002                                | 0.000562              | 3689.999999     | -0.000271             |
| 56            | 3560.010001                                | 0.000281              | 3690.000003     | 0.000813              |
| 44            | 3560.009997                                | -0.000843             | 3689.999998     | -0.000542             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010003                                | 0.000843              | 3690.000003     | 0.000813              |
| -20        | 3560.010001                                | 0.000281              | 3689.999999     | -0.000271             |
| -10        | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| 0          | 3560.009999                                | -0.000281             | 3690.000003     | 0.000813              |
| 10         | 3560.009998                                | -0.000562             | 3689.999999     | -0.000271             |
| 20         | 3560.010002                                | 0.000562              | 3690.000001     | 0.000271              |
| 30         | 3560.010001                                | 0.000281              | 3690.000001     | 0.000271              |
| 40         | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| 50         | 3560.009999                                | -0.000281             | 3690.000003     | 0.000813              |

## Antenna 2

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3555.000001                                | 0.000281              | 3689.999997     | -0.000813             |
| 56            | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| 44            | 3555.000001                                | 0.000281              | 3690.000001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| -20        | 3555.000001                                | 0.000281              | 3689.999999     | -0.000271             |
| -10        | 3555.000001                                | 0.000281              | 3690.000002     | 0.000542              |
| 0          | 3555.000001                                | 0.000281              | 3689.999997     | -0.000813             |
| 10         | 3555.000003                                | 0.000844              | 3689.999999     | -0.000271             |
| 20         | 3555.000002                                | 0.000563              | 3689.999997     | -0.000813             |
| 30         | 3555.000001                                | 0.000281              | 3689.999999     | -0.000271             |
| 40         | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |
| 50         | 3554.999997                                | -0.000844             | 3690.000003     | 0.000813              |

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.009999                                | -0.000281             | 3694.979996     | -0.001083             |
| 56               | 3560.010002                                | 0.000562              | 3694.979998     | -0.000541             |
| 44               | 3560.009996                                | -0.001124             | 3694.979997     | -0.000812             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010003                                | 0.000843              | 3694.979997     | -0.000812             |
| -20        | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| -10        | 3560.010003                                | 0.000843              | 3694.980002     | 0.000541              |
| 0          | 3560.010003                                | 0.000843              | 3694.980001     | 0.000271              |
| 10         | 3560.010001                                | 0.000281              | 3694.980003     | 0.000812              |
| 20         | 3560.009998                                | -0.000562             | 3694.979999     | -0.000271             |
| 30         | 3560.009998                                | -0.000562             | 3694.979998     | -0.000541             |
| 40         | 3560.009997                                | -0.000843             | 3694.980003     | 0.000812              |
| 50         | 3560.010001                                | 0.000281              | 3694.979999     | -0.000271             |

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.010001                                | 0.000281              | 3689.999997     | -0.000813             |
| 56               | 3560.010002                                | 0.000562              | 3690.000002     | 0.000542              |
| 44               | 3560.009998                                | -0.000562             | 3689.999999     | -0.000271             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010001                                | 0.000281              | 3689.999998     | -0.000542             |
| -20        | 3560.009999                                | -0.000281             | 3689.999999     | -0.000271             |
| -10        | 3560.010000                                | 0.000000              | 3689.999997     | -0.000813             |
| 0          | 3560.010002                                | 0.000562              | 3690.000003     | 0.000813              |
| 10         | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| 20         | 3560.009999                                | -0.000281             | 3690.000002     | 0.000542              |
| 30         | 3560.010003                                | 0.000843              | 3690.000003     | 0.000813              |
| 40         | 3560.010003                                | 0.000843              | 3689.999999     | -0.000271             |
| 50         | 3560.009999                                | -0.000281             | 3689.999996     | -0.001084             |

### Antenna 3

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3555.000002                                | 0.000563              | 3689.999998     | -0.000542             |
| 56               | 3554.999999                                | -0.000281             | 3690.000001     | 0.000271              |
| 44               | 3555.000002                                | 0.000563              | 3690.000003     | 0.000813              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3555.000002                                | 0.000563              | 3690.000001     | 0.000271              |
| -20        | 3555.000001                                | 0.000281              | 3689.999998     | -0.000542             |
| -10        | 3554.999999                                | -0.000281             | 3689.999999     | -0.000271             |
| 0          | 3554.999998                                | -0.000563             | 3689.999997     | -0.000813             |
| 10         | 3554.999997                                | -0.000844             | 3689.999996     | -0.001084             |
| 20         | 3554.999999                                | -0.000281             | 3689.999999     | -0.000271             |
| 30         | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |
| 40         | 3555.000002                                | 0.000563              | 3689.999999     | -0.000271             |
| 50         | 3555.000001                                | 0.000281              | 3689.999997     | -0.000813             |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.009999                                | -0.000281             | 3694.980001     | 0.000271              |
| 56               | 3560.010002                                | 0.000562              | 3694.979998     | -0.000541             |
| 44               | 3560.009998                                | -0.000562             | 3694.980003     | 0.000812              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010001                                | 0.000281              | 3694.979997     | -0.000812             |
| -20        | 3560.010003                                | 0.000843              | 3694.980002     | 0.000541              |
| -10        | 3560.010002                                | 0.000562              | 3694.979999     | -0.000271             |
| 0          | 3560.009999                                | -0.000281             | 3694.980002     | 0.000541              |
| 10         | 3560.010003                                | 0.000843              | 3694.980002     | 0.000541              |
| 20         | 3560.009998                                | -0.000562             | 3694.979996     | -0.001083             |
| 30         | 3560.010003                                | 0.000843              | 3694.979999     | -0.000271             |
| 40         | 3560.009997                                | -0.000843             | 3694.979997     | -0.000812             |
| 50         | 3560.010002                                | 0.000562              | 3694.979998     | -0.000541             |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.010002                                | 0.000561              | 3689.999999     | -0.000271             |
| 56               | 3560.009999                                | -0.000281             | 3689.999998     | -0.000542             |
| 44               | 3560.009996                                | -0.001122             | 3689.999997     | -0.000813             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| -20        | 3560.010001                                | 0.000281              | 3689.999999     | -0.000271             |
| -10        | 3560.010001                                | 0.000281              | 3689.999997     | -0.000813             |
| 0          | 3560.010002                                | 0.000561              | 3690.000003     | 0.000813              |
| 10         | 3560.009998                                | -0.000561             | 3689.999999     | -0.000271             |
| 20         | 3560.009996                                | -0.001122             | 3689.999998     | -0.000542             |
| 30         | 3560.009997                                | -0.000842             | 3689.999999     | -0.000271             |
| 40         | 3560.009998                                | -0.000561             | 3689.999997     | -0.000813             |
| 50         | 3560.009998                                | -0.000561             | 3689.999999     | -0.000271             |

#### Antenna 4

##### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3554.999998                                | -0.000563             | 3689.999997     | -0.000813             |
| 56               | 3554.999999                                | -0.000281             | 3689.999998     | -0.000542             |
| 44               | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                                | -0.000563             | 3689.999997     | -0.000813             |
| -20        | 3554.999999                                | -0.000281             | 3689.999999     | -0.000271             |
| -10        | 3555.000003                                | 0.000844              | 3690.000002     | 0.000542              |
| 0          | 3555.000003                                | 0.000844              | 3689.999998     | -0.000542             |
| 10         | 3554.999999                                | -0.000281             | 3689.999997     | -0.000813             |
| 20         | 3554.999998                                | -0.000563             | 3689.999999     | -0.000271             |
| 30         | 3554.999997                                | -0.000844             | 3689.999997     | -0.000813             |
| 40         | 3554.999996                                | -0.001125             | 3689.999998     | -0.000542             |
| 50         | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010001                                | 0.000281              | 3694.979998     | -0.000541             |
| 56            | 3560.009998                                | -0.000562             | 3694.979999     | -0.000271             |
| 44            | 3560.009997                                | -0.000843             | 3694.979997     | -0.000812             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010001                                | 0.000281              | 3694.979998     | -0.000541             |
| -20        | 3560.009997                                | -0.000843             | 3694.980001     | 0.000271              |
| -10        | 3560.010001                                | 0.000281              | 3694.979997     | -0.000812             |
| 0          | 3560.010002                                | 0.000562              | 3694.980003     | 0.000812              |
| 10         | 3560.010001                                | 0.000281              | 3694.979999     | -0.000271             |
| 20         | 3560.009997                                | -0.000843             | 3694.979998     | -0.000541             |
| 30         | 3560.009999                                | -0.000281             | 3694.980003     | 0.000812              |
| 40         | 3560.009998                                | -0.000562             | 3694.980002     | 0.000541              |
| 50         | 3560.010003                                | 0.000843              | 3694.980001     | 0.000271              |

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.010002                                | 0.000562              | 3689.999998     | -0.000542             |
| 56               | 3560.010001                                | 0.000281              | 3689.999997     | -0.000813             |
| 44               | 3560.010004                                | 0.001124              | 3690.000002     | 0.000542              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009998                                | -0.000562             | 3689.999997     | -0.000813             |
| -20        | 3560.009999                                | -0.000281             | 3689.999999     | -0.000271             |
| -10        | 3560.009997                                | -0.000843             | 3689.999998     | -0.000542             |
| 0          | 3560.009998                                | -0.000562             | 3689.999998     | -0.000542             |
| 10         | 3560.009999                                | -0.000281             | 3689.999999     | -0.000271             |
| 20         | 3560.009997                                | -0.000843             | 3689.999999     | -0.000271             |
| 30         | 3560.009999                                | -0.000281             | 3689.999998     | -0.000542             |
| 40         | 3560.010002                                | 0.000562              | 3689.999997     | -0.000813             |
| 50         | 3560.009997                                | -0.000843             | 3689.999999     | -0.000271             |

### Mode A3

#### Antenna 1

##### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3555.000004                                | 0.001125              | 3690.000004     | 0.001084              |
| 56               | 3555.000003                                | 0.000844              | 3689.999997     | -0.000813             |
| 44               | 3555.000001                                | 0.000281              | 3690.000004     | 0.001084              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                                | -0.000563             | 3690.000001     | 0.000271              |
| -20        | 3554.999999                                | -0.000281             | 3690.000002     | 0.000542              |
| -10        | 3555.000002                                | 0.000563              | 3689.999998     | -0.000542             |
| 0          | 3555.000003                                | 0.000844              | 3690.000003     | 0.000813              |
| 10         | 3555.000001                                | 0.000281              | 3689.999996     | -0.001084             |
| 20         | 3554.999998                                | -0.000563             | 3689.999997     | -0.000813             |
| 30         | 3554.999999                                | -0.000281             | 3689.999998     | -0.000542             |
| 40         | 3555.000002                                | 0.000563              | 3690.000004     | 0.001084              |
| 50         | 3555.000001                                | 0.000281              | 3690.000003     | 0.000813              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.009998                                | -0.000562             | 3694.979997     | -0.000812             |
| 56            | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| 44            | 3560.010003                                | 0.000843              | 3694.979999     | -0.000271             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010002                                | 0.000562              | 3694.980002     | 0.000541              |
| -20        | 3560.009999                                | -0.000281             | 3694.979996     | -0.001083             |
| -10        | 3560.010002                                | 0.000562              | 3694.979999     | -0.000271             |
| 0          | 3560.010002                                | 0.000562              | 3694.979997     | -0.000812             |
| 10         | 3560.010001                                | 0.000281              | 3694.980003     | 0.000812              |
| 20         | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| 30         | 3560.009996                                | -0.001124             | 3694.979998     | -0.000541             |
| 40         | 3560.010002                                | 0.000562              | 3694.980003     | 0.000812              |
| 50         | 3560.009998                                | -0.000562             | 3694.980001     | 0.000271              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010002                                | 0.000562              | 3690.000003     | 0.000813              |
| 56            | 3560.010001                                | 0.000281              | 3690.000002     | 0.000542              |
| 44            | 3560.009999                                | -0.000281             | 3690.000001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009997                                | -0.000843             | 3690.000003     | 0.000813              |
| -20        | 3560.009998                                | -0.000562             | 3689.999999     | -0.000271             |
| -10        | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| 0          | 3560.010001                                | 0.000281              | 3690.000002     | 0.000542              |
| 10         | 3560.009996                                | -0.001124             | 3690.000004     | 0.001084              |
| 20         | 3560.009999                                | -0.000281             | 3690.000001     | 0.000271              |
| 30         | 3560.009999                                | -0.000281             | 3690.000003     | 0.000813              |
| 40         | 3560.010003                                | 0.000843              | 3689.999997     | -0.000813             |
| 50         | 3560.010002                                | 0.000562              | 3690.000001     | 0.000271              |

## Antenna 2

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3555.000004                                | 0.001125              | 3690.000003     | 0.000813              |
| 56            | 3555.000002                                | 0.000563              | 3690.000002     | 0.000542              |
| 44            | 3554.999997                                | -0.000844             | 3690.000001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3555.000001                                | 0.000281              | 3689.999999     | -0.000271             |
| -20        | 3554.999997                                | -0.000844             | 3689.999998     | -0.000542             |
| -10        | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| 0          | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| 10         | 3554.999997                                | -0.000844             | 3690.000001     | 0.000271              |
| 20         | 3555.000004                                | 0.001125              | 3689.999996     | -0.001084             |
| 30         | 3554.999999                                | -0.000281             | 3690.000004     | 0.001084              |
| 40         | 3555.000003                                | 0.000844              | 3689.999996     | -0.001084             |
| 50         | 3555.000002                                | 0.000563              | 3690.000003     | 0.000813              |

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.009997                                | -0.000843             | 3694.980002     | 0.000541              |
| 56            | 3560.010002                                | 0.000562              | 3694.979999     | -0.000271             |
| 44            | 3560.009999                                | -0.000281             | 3694.979997     | -0.000812             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009997                                | -0.000843             | 3694.980004     | 0.001083              |
| -20        | 3560.010003                                | 0.000843              | 3694.980002     | 0.000541              |
| -10        | 3560.010001                                | 0.000281              | 3694.979997     | -0.000812             |
| 0          | 3560.010004                                | 0.001124              | 3694.979997     | -0.000812             |
| 10         | 3560.009998                                | -0.000562             | 3694.980004     | 0.001083              |
| 20         | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| 30         | 3560.009996                                | -0.001124             | 3694.979999     | -0.000271             |
| 40         | 3560.010002                                | 0.000562              | 3694.980002     | 0.000541              |
| 50         | 3560.009999                                | -0.000281             | 3694.979996     | -0.001083             |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.009998                                | -0.000562             | 3689.999999     | -0.000271             |
| 56            | 3560.010001                                | 0.000281              | 3690.000003     | 0.000813              |
| 44            | 3560.010002                                | 0.000562              | 3690.000002     | 0.000542              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010003                                | 0.000843              | 3690.000002     | 0.000542              |
| -20        | 3560.009999                                | -0.000281             | 3689.999999     | -0.000271             |
| -10        | 3560.009998                                | -0.000562             | 3690.000003     | 0.000813              |
| 0          | 3560.009999                                | -0.000281             | 3690.000002     | 0.000542              |
| 10         | 3560.010002                                | 0.000562              | 3690.000001     | 0.000271              |
| 20         | 3560.010002                                | 0.000562              | 3690.000003     | 0.000813              |
| 30         | 3560.010003                                | 0.000843              | 3690.000002     | 0.000542              |
| 40         | 3560.010003                                | 0.000843              | 3690.000001     | 0.000271              |
| 50         | 3560.009999                                | -0.000281             | 3689.999999     | -0.000271             |

### Antenna 3

#### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3554.999996                                | -0.001125             | 3689.999999     | -0.000271             |
| 56               | 3555.000002                                | 0.000563              | 3689.999997     | -0.000813             |
| 44               | 3555.000001                                | 0.000281              | 3690.000001     | 0.000271              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999998                                | -0.000563             | 3689.999999     | -0.000271             |
| -20        | 3554.999997                                | -0.000844             | 3689.999996     | -0.001084             |
| -10        | 3555.000002                                | 0.000563              | 3689.999997     | -0.000813             |
| 0          | 3555.000003                                | 0.000844              | 3689.999998     | -0.000542             |
| 10         | 3554.999998                                | -0.000563             | 3690.000003     | 0.000813              |
| 20         | 3555.000003                                | 0.000844              | 3689.999998     | -0.000542             |
| 30         | 3554.999996                                | -0.001125             | 3690.000001     | 0.000271              |
| 40         | 3555.000002                                | 0.000563              | 3689.999999     | -0.000271             |
| 50         | 3554.999997                                | -0.000844             | 3690.000002     | 0.000542              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010002                                | 0.000562              | 3694.980001     | 0.000271              |
| 56            | 3560.010001                                | 0.000281              | 3694.979999     | -0.000271             |
| 44            | 3560.010003                                | 0.000843              | 3694.980003     | 0.000812              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009997                                | -0.000843             | 3694.980003     | 0.000812              |
| -20        | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| -10        | 3560.009997                                | -0.000843             | 3694.980004     | 0.001083              |
| 0          | 3560.009999                                | -0.000281             | 3694.980002     | 0.000541              |
| 10         | 3560.009998                                | -0.000562             | 3694.979999     | -0.000271             |
| 20         | 3560.009998                                | -0.000562             | 3694.979998     | -0.000541             |
| 30         | 3560.009998                                | -0.000562             | 3694.980002     | 0.000541              |
| 40         | 3560.009997                                | -0.000843             | 3694.980002     | 0.000541              |
| 50         | 3560.010001                                | 0.000281              | 3694.980001     | 0.000271              |

### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010003                                | 0.000843              | 3689.999998     | -0.000542             |
| 56            | 3560.009999                                | -0.000281             | 3690.000002     | 0.000542              |
| 44            | 3560.009998                                | -0.000562             | 3689.999997     | -0.000813             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.009999                                | -0.000281             | 3690.000002     | 0.000542              |
| -20        | 3560.009998                                | -0.000562             | 3689.999999     | -0.000271             |
| -10        | 3560.009999                                | -0.000281             | 3689.999998     | -0.000542             |
| 0          | 3560.009999                                | -0.000281             | 3690.000002     | 0.000542              |
| 10         | 3560.009997                                | -0.000843             | 3690.000001     | 0.000271              |
| 20         | 3560.010001                                | 0.000281              | 3689.999999     | -0.000271             |
| 30         | 3560.010003                                | 0.000843              | 3689.999999     | -0.000271             |
| 40         | 3560.009998                                | -0.000562             | 3689.999996     | -0.001084             |
| 50         | 3560.009999                                | -0.000281             | 3689.999998     | -0.000542             |

#### Antenna 4

##### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3554.999997                                | -0.000844             | 3690.000002     | 0.000542              |
| 56               | 3554.999999                                | -0.000281             | 3690.000001     | 0.000271              |
| 44               | 3554.999998                                | -0.000563             | 3690.000003     | 0.000813              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

##### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 10MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3554.999999                                | -0.000281             | 3690.000003     | 0.000813              |
| -20        | 3554.999997                                | -0.000844             | 3689.999999     | -0.000271             |
| -10        | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| 0          | 3554.999998                                | -0.000563             | 3690.000002     | 0.000542              |
| 10         | 3555.000001                                | 0.000281              | 3690.000001     | 0.000271              |
| 20         | 3555.000002                                | 0.000563              | 3690.000001     | 0.000271              |
| 30         | 3555.000003                                | 0.000844              | 3690.000003     | 0.000813              |
| 40         | 3554.999999                                | -0.000281             | 3689.999998     | -0.000542             |
| 50         | 3554.999998                                | -0.000563             | 3689.999998     | -0.000542             |

### Frequency Error vs. Voltage

| Voltage<br>(Vdc) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|                  | Low Channel                                |                       | High Channel    |                       |
|                  | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57               | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| 56               | 3560.009999                                | -0.000281             | 3694.979998     | -0.000541             |
| 44               | 3560.010002                                | 0.000562              | 3694.980002     | 0.000541              |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

### Frequency Error vs. Temperature

| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+10MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010001                                | 0.000281              | 3694.979996     | -0.001083             |
| -20        | 3560.010004                                | 0.001124              | 3694.980002     | 0.000541              |
| -10        | 3560.010002                                | 0.000562              | 3694.979998     | -0.000541             |
| 0          | 3560.009996                                | -0.001124             | 3694.980002     | 0.000541              |
| 10         | 3560.010004                                | 0.001124              | 3694.980002     | 0.000541              |
| 20         | 3560.009998                                | -0.000562             | 3694.980001     | 0.000271              |
| 30         | 3560.009997                                | -0.000843             | 3694.980002     | 0.000541              |
| 40         | 3560.010002                                | 0.000562              | 3694.980003     | 0.000812              |
| 50         | 3560.009999                                | -0.000281             | 3694.979999     | -0.000271             |

#### Frequency Error vs. Voltage

| Voltage (Vdc) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|---------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|               | Low Channel                                |                       | High Channel    |                       |
|               | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 57            | 3560.010004                                | 0.001124              | 3690.000002     | 0.000542              |
| 56            | 3560.010003                                | 0.000843              | 3689.999996     | -0.001084             |
| 44            | 3560.009999                                | -0.000281             | 3689.999997     | -0.000813             |

Note: The applicant defined the normal working voltage is from 44Vdc to 57Vdc.

#### Frequency Error vs. Temperature

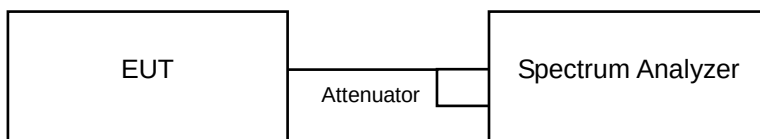
| Temp. (°C) | NR Band 48, Channel Bandwidth: 20MHz+20MHz |                       |                 |                       |
|------------|--------------------------------------------|-----------------------|-----------------|-----------------------|
|            | Low Channel                                |                       | High Channel    |                       |
|            | Frequency (MHz)                            | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30        | 3560.010002                                | 0.000562              | 3690.000003     | 0.000813              |
| -20        | 3560.010002                                | 0.000562              | 3690.000002     | 0.000542              |
| -10        | 3560.009997                                | -0.000843             | 3690.000002     | 0.000542              |
| 0          | 3560.010003                                | 0.000843              | 3690.000001     | 0.000271              |
| 10         | 3560.010001                                | 0.000281              | 3690.000002     | 0.000542              |
| 20         | 3560.010002                                | 0.000562              | 3689.999996     | -0.001084             |
| 30         | 3560.010002                                | 0.000562              | 3689.999997     | -0.000813             |
| 40         | 3560.009997                                | -0.000843             | 3689.999997     | -0.000813             |
| 50         | 3560.010001                                | 0.000281              | 3690.000001     | 0.000271              |

## 4.5 Emission Bandwidth Measurement

### 4.5.1 Limits of Emission Bandwidth Measurement

According to FCC 47 CFR part 2.1049, the occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

### 4.5.4 Test Procedure

For the 26 dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set  $\geq 3 \times \text{RBW}$ .
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f. Determine the following reference values: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- g. Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- h. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- i. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

For the occupied bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set  $\geq 3 \times \text{RBW}$ .
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f. Determine the reference value by either of the following:
  - 1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
  - 2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- g. Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- h. If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).
- i. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the “-X dB amplitude” at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the “-X dB amplitude.”
- j. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### **4.5.5 Deviation from Test Standard**

No deviation.

#### **4.5.6 EUT Operating Conditions**

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 4.5.7 Test Result

|              |        |                           |              |            |            |
|--------------|--------|---------------------------|--------------|------------|------------|
| Input Power: | 12 Vdc | Environmental Conditions: | 22°C, 73% RH | Tested By: | Noah Chang |
|--------------|--------|---------------------------|--------------|------------|------------|

#### Mode A1

#### Occupied Bandwidth

| NR Band 48, Channel Bandwidth 10MHz |                 |                              |              |        |           |       |        |
|-------------------------------------|-----------------|------------------------------|--------------|--------|-----------|-------|--------|
| Channel                             | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |              |        |           |       |        |
|                                     |                 | Antenna 1                    |              |        | Antenna 2 |       |        |
|                                     |                 | QPSK                         | 64QAM        | 256QAM | QPSK      | 64QAM | 256QAM |
| 637000                              | 3555.00         | 8.605                        | <b>8.611</b> | 8.608  | 8.599     | 8.603 | 8.600  |
| 641666                              | 3624.99         | 8.610                        | 8.610        | 8.609  | 8.605     | 8.601 | 8.601  |
| 646332                              | 3694.98         | 8.609                        | 8.608        | 8.607  | 8.606     | 8.606 | 8.604  |
| Channel                             | Frequency (MHz) | Antenna 3                    |              |        | Antenna 4 |       |        |
|                                     |                 | QPSK                         | 64QAM        | 256QAM | QPSK      | 64QAM | 256QAM |
|                                     |                 | QPSK                         | 64QAM        | 256QAM | QPSK      | 64QAM | 256QAM |
| 637000                              | 3555.00         | 8.602                        | 8.602        | 8.600  | 8.607     | 8.605 | 8.605  |
| 641666                              | 3624.99         | 8.598                        | 8.600        | 8.600  | 8.608     | 8.608 | 8.610  |
| 646332                              | 3694.98         | 8.600                        | 8.599        | 8.601  | 8.610     | 8.607 | 8.606  |

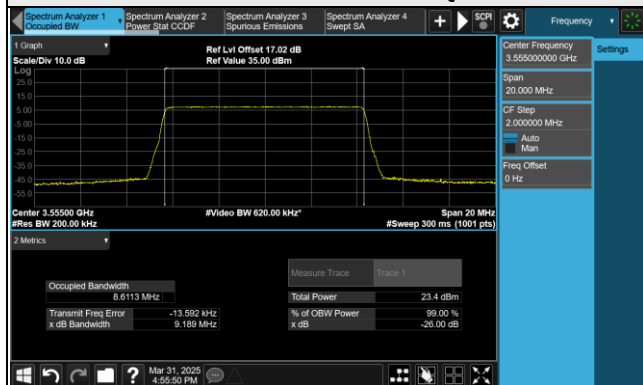
| NR Band 48, Channel Bandwidth 20MHz |                 |                              |               |        |           |        |        |
|-------------------------------------|-----------------|------------------------------|---------------|--------|-----------|--------|--------|
| Channel                             | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |               |        |           |        |        |
|                                     |                 | Antenna 1                    |               |        | Antenna 2 |        |        |
|                                     |                 | QPSK                         | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334                              | 3560.01         | 18.280                       | <b>18.286</b> | 18.285 | 18.280    | 18.281 | 18.280 |
| 641666                              | 3624.99         | 18.189                       | 18.189        | 18.189 | 18.173    | 18.172 | 18.171 |
| 646000                              | 3690.00         | 18.177                       | 18.172        | 18.174 | 18.166    | 18.169 | 18.167 |
| Channel                             | Frequency (MHz) | Antenna 3                    |               |        | Antenna 4 |        |        |
|                                     |                 | QPSK                         | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
|                                     |                 | QPSK                         | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334                              | 3560.01         | 18.268                       | 18.267        | 18.271 | 18.277    | 18.271 | 18.275 |
| 641666                              | 3624.99         | 18.171                       | 18.171        | 18.171 | 18.170    | 18.170 | 18.171 |
| 646000                              | 3690.00         | 18.151                       | 18.151        | 18.152 | 18.156    | 18.160 | 18.158 |

## NR Band 48, Channel Bandwidth 40MHz

| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |        |               |           |        |        |
|---------|-----------------|------------------------------|--------|---------------|-----------|--------|--------|
|         |                 | Antenna 1                    |        |               | Antenna 2 |        |        |
|         |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 638000  | 3570.00         | 37.930                       | 37.934 | <b>37.936</b> | 37.888    | 37.886 | 37.888 |
| 641666  | 3624.99         | 37.905                       | 37.907 | 37.903        | 37.878    | 37.879 | 37.876 |
| 645332  | 3679.98         | 37.911                       | 37.909 | 37.908        | 37.925    | 37.923 | 37.926 |
| Channel | Frequency (MHz) | Antenna 3                    |        |               | Antenna 4 |        |        |
|         |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
|         |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 638000  | 3570.00         | 37.934                       | 37.932 | 37.932        | 37.906    | 37.905 | 37.904 |
| 641666  | 3624.99         | 37.879                       | 37.874 | 37.879        | 37.889    | 37.893 | 37.891 |
| 645332  | 3679.98         | 37.866                       | 37.866 | 37.865        | 37.867    | 37.871 | 37.866 |

## Spectrum Plot of Worst Value

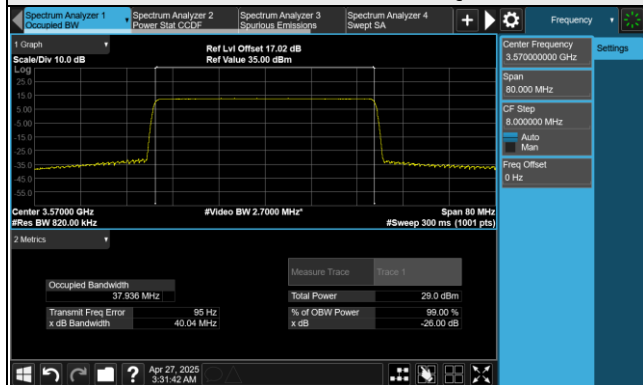
## 10MHz / Antenna 1 / 64QAM



## 20MHz / Antenna 1 / 64QAM



## 40MHz / Antenna 1 / 256QAM



## 26dB Bandwidth

| NR Band 48, Channel Bandwidth 10MHz |                 |                      |       |        |           |       |        |
|-------------------------------------|-----------------|----------------------|-------|--------|-----------|-------|--------|
| Channel                             | Frequency (MHz) | 26dB Bandwidth (MHz) |       |        |           |       |        |
|                                     |                 | Antenna 1            |       |        | Antenna 2 |       |        |
|                                     |                 | QPSK                 | 64QAM | 256QAM | QPSK      | 64QAM | 256QAM |
| 637000                              | 3555.00         | 9.182                | 9.189 | 9.189  | 9.174     | 9.160 | 9.219  |
| 641666                              | 3624.99         | 9.196                | 9.222 | 9.209  | 9.201     | 9.205 | 9.159  |
| 646332                              | 3694.98         | 9.198                | 9.206 | 9.195  | 9.229     | 9.201 | 9.218  |
| Channel                             | Frequency (MHz) | Antenna 3            |       |        | Antenna 4 |       |        |
|                                     |                 | QPSK                 | 64QAM | 256QAM | QPSK      | 64QAM | 256QAM |
|                                     |                 | QPSK                 | 64QAM | 256QAM | QPSK      | 64QAM | 256QAM |
| 637000                              | 3555.00         | 9.188                | 9.205 | 9.176  | 9.253     | 9.235 | 9.224  |
| 641666                              | 3624.99         | 9.182                | 9.158 | 9.174  | 9.227     | 9.231 | 9.210  |
| 646332                              | 3694.98         | 9.172                | 9.212 | 9.155  | 9.261     | 9.286 | 9.221  |

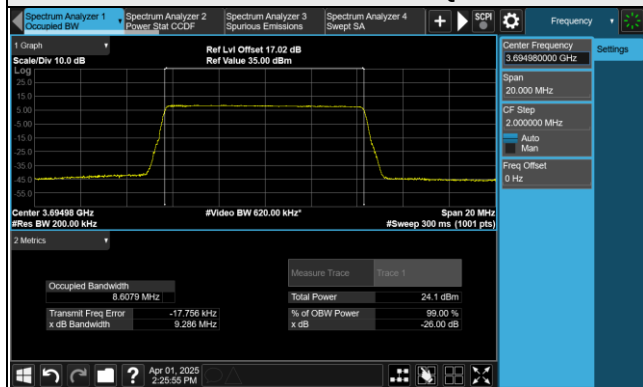
| NR Band 48, Channel Bandwidth 20MHz |                 |                      |        |        |           |        |        |
|-------------------------------------|-----------------|----------------------|--------|--------|-----------|--------|--------|
| Channel                             | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |           |        |        |
|                                     |                 | Antenna 1            |        |        | Antenna 2 |        |        |
|                                     |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334                              | 3560.01         | 19.380               | 19.370 | 19.380 | 19.360    | 19.370 | 19.370 |
| 641666                              | 3624.99         | 18.890               | 18.890 | 18.890 | 18.920    | 18.880 | 18.880 |
| 646000                              | 3690.00         | 18.870               | 18.870 | 18.880 | 18.860    | 18.850 | 18.870 |
| Channel                             | Frequency (MHz) | Antenna 3            |        |        | Antenna 4 |        |        |
|                                     |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
|                                     |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334                              | 3560.01         | 19.350               | 19.350 | 19.360 | 19.370    | 19.360 | 19.370 |
| 641666                              | 3624.99         | 18.880               | 18.870 | 18.880 | 18.900    | 18.900 | 18.880 |
| 646000                              | 3690.00         | 18.860               | 18.860 | 18.880 | 18.890    | 18.890 | 18.880 |

## NR Band 48, Channel Bandwidth 40MHz

| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |           |        |        |
|---------|-----------------|----------------------|--------|--------|-----------|--------|--------|
|         |                 | Antenna 1            |        |        | Antenna 2 |        |        |
|         |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
| 638000  | 3570.00         | 40.040               | 40.030 | 40.040 | 40.010    | 40.000 | 40.010 |
| 641666  | 3624.99         | 40.010               | 40.020 | 40.010 | 40.010    | 40.000 | 40.000 |
| 645332  | 3679.98         | 40.000               | 40.000 | 40.000 | 40.000    | 39.990 | 39.990 |
| Channel | Frequency (MHz) | Antenna 3            |        |        | Antenna 4 |        |        |
|         |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
|         |                 | QPSK                 | 64QAM  | 256QAM | QPSK      | 64QAM  | 256QAM |
| 638000  | 3570.00         | 40.040               | 40.040 | 40.030 | 40.010    | 40.010 | 40.010 |
| 641666  | 3624.99         | 40.000               | 40.010 | 40.000 | 40.010    | 40.020 | 40.010 |
| 645332  | 3679.98         | 39.980               | 39.980 | 39.990 | 39.990    | 39.990 | 39.990 |

## Spectrum Plot of Worst Value

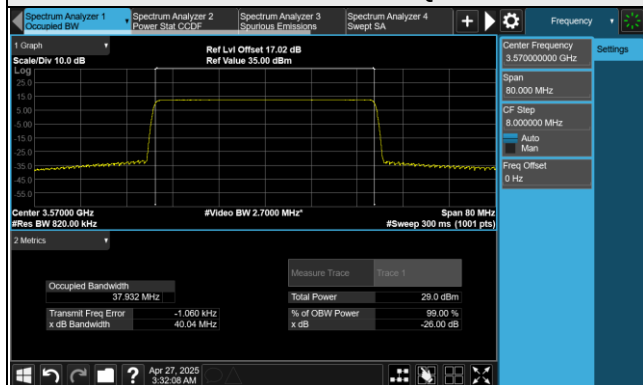
## 10MHz / Antenna 4 / 64QAM



## 20MHz / Antenna 1 / QPSK



## 40MHz / Antenna 1 / QPSK



## Mode A2

### Occupied Bandwidth

| NR Band 48, Channel Bandwidth 10MHz+20MHz |                 |                              |        |               |           |        |        |
|-------------------------------------------|-----------------|------------------------------|--------|---------------|-----------|--------|--------|
| Channel                                   | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |        |               |           |        |        |
|                                           |                 | Antenna 1                    |        |               | Antenna 2 |        |        |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637000+638000                             | 3555+3570       | <b>28.392</b>                | 28.391 | <b>28.392</b> | 28.344    | 28.345 | 28.346 |
| 645000+646000                             | 3675+3690       | 28.330                       | 28.329 | 28.328        | 28.337    | 28.337 | 28.338 |
| Channel                                   | Frequency (MHz) | Antenna 3                    |        |               | Antenna 4 |        |        |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637000+638000                             | 3555+3570       | 28.357                       | 28.361 | 28.360        | 28.356    | 28.354 | 28.354 |
| 645000+646000                             | 3675+3690       | 28.303                       | 28.302 | 28.301        | 28.322    | 28.317 | 28.319 |

| NR Band 48, Channel Bandwidth 20MHz+10MHz |                 |                              |        |               |           |        |        |
|-------------------------------------------|-----------------|------------------------------|--------|---------------|-----------|--------|--------|
| Channel                                   | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |        |               |           |        |        |
|                                           |                 | Antenna 1                    |        |               | Antenna 2 |        |        |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638334                             | 3560.01+3575.01 | <b>28.389</b>                | 28.387 | <b>28.389</b> | 28.355    | 28.353 | 28.353 |
| 645332+646332                             | 3679.98+3694.98 | 28.323                       | 28.323 | 28.323        | 28.334    | 28.338 | 28.331 |
| Channel                                   | Frequency (MHz) | Antenna 3                    |        |               | Antenna 4 |        |        |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
|                                           |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638334                             | 3560.01+3575.01 | 28.365                       | 28.365 | 28.365        | 28.353    | 28.354 | 28.350 |
| 645332+646332                             | 3679.98+3694.98 | 28.297                       | 28.295 | 28.296        | 28.305    | 28.303 | 28.309 |

### NR Band 48, Channel Bandwidth 20MHz+20MHz

| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |        |               |           |        |        |
|---------------|-----------------|------------------------------|--------|---------------|-----------|--------|--------|
|               |                 | Antenna 1                    |        |               | Antenna 2 |        |        |
|               |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638668 | 3560.01+3580.02 | 38.188                       | 38.190 | <b>38.191</b> | 38.114    | 38.110 | 38.109 |
| 644668+646000 | 3670.02+3690    | 38.097                       | 38.097 | 38.096        | 38.124    | 38.130 | 38.127 |
| Channel       | Frequency (MHz) | Antenna 3                    |        |               | Antenna 4 |        |        |
|               |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
|               |                 | QPSK                         | 64QAM  | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638668 | 3560.01+3580.02 | 38.153                       | 38.155 | 38.154        | 38.131    | 38.131 | 38.134 |
| 644668+646000 | 3670.02+3690    | 38.075                       | 38.077 | 38.078        | 38.082    | 38.083 | 38.084 |

### Spectrum Plot of Worst Value



## 26dB Bandwidth

| NR Band 48, Channel Bandwidth 10MHz+20MHz |                 |                      |               |        |           |        |        |
|-------------------------------------------|-----------------|----------------------|---------------|--------|-----------|--------|--------|
| Channel                                   | Frequency (MHz) | 26dB Bandwidth (MHz) |               |        |           |        |        |
|                                           |                 | Antenna 1            |               |        | Antenna 2 |        |        |
|                                           |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637000+638000                             | 3555+3570       | 29.930               | <b>29.940</b> | 29.930 | 29.910    | 29.900 | 29.900 |
| 645000+646000                             | 3675+3690       | 29.910               | 29.910        | 29.910 | 29.910    | 29.900 | 29.910 |
| Channel                                   | Frequency (MHz) | Antenna 3            |               |        | Antenna 4 |        |        |
|                                           |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
|                                           |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637000+638000                             | 3555+3570       | 29.910               | 29.910        | 29.910 | 29.920    | 29.910 | 29.920 |
| 645000+646000                             | 3675+3690       | 29.900               | 29.900        | 29.900 | 29.910    | 29.910 | 29.910 |

| NR Band 48, Channel Bandwidth 20MHz+10MHz |                 |                      |               |               |           |        |        |
|-------------------------------------------|-----------------|----------------------|---------------|---------------|-----------|--------|--------|
| Channel                                   | Frequency (MHz) | 26dB Bandwidth (MHz) |               |               |           |        |        |
|                                           |                 | Antenna 1            |               |               | Antenna 2 |        |        |
|                                           |                 | QPSK                 | 64QAM         | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638334                             | 3560.01+3575.01 | <b>29.950</b>        | <b>29.950</b> | <b>29.950</b> | 29.940    | 29.940 | 29.940 |
| 645332+646332                             | 3679.98+3694.98 | 29.900               | 29.910        | 29.900        | 29.900    | 29.900 | 29.900 |
| Channel                                   | Frequency (MHz) | Antenna 3            |               |               | Antenna 4 |        |        |
|                                           |                 | QPSK                 | 64QAM         | 256QAM        | QPSK      | 64QAM  | 256QAM |
|                                           |                 | QPSK                 | 64QAM         | 256QAM        | QPSK      | 64QAM  | 256QAM |
| 637334+638334                             | 3560.01+3575.01 | 29.940               | <b>29.950</b> | <b>29.950</b> | 29.940    | 29.940 | 29.940 |
| 645332+646332                             | 3679.98+3694.98 | 29.900               | 29.890        | 29.890        | 29.910    | 29.910 | 29.910 |

### NR Band 48, Channel Bandwidth 20MHz+20MHz

| Channel       | Frequency (MHz) | 26dB Bandwidth (MHz) |               |        |           |        |        |
|---------------|-----------------|----------------------|---------------|--------|-----------|--------|--------|
|               |                 | Antenna 1            |               |        | Antenna 2 |        |        |
|               |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334+638668 | 3560.01+3580.02 | 40.260               | <b>40.270</b> | 40.260 | 40.220    | 40.240 | 36.710 |
| 644668+646000 | 3670.02+3690    | 40.190               | 40.190        | 40.190 | 40.190    | 40.200 | 40.190 |
| Channel       | Frequency (MHz) | Antenna 3            |               |        | Antenna 4 |        |        |
|               |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
|               |                 | QPSK                 | 64QAM         | 256QAM | QPSK      | 64QAM  | 256QAM |
| 637334+638668 | 3560.01+3580.02 | 40.250               | 40.260        | 40.260 | 40.240    | 40.240 | 40.240 |
| 644668+646000 | 3670.02+3690    | 40.170               | 40.180        | 40.170 | 40.180    | 40.190 | 40.190 |

### Spectrum Plot of Worst Value



**Mode A3**  
**Occupied Bandwidth**

| Bandwidth | Frequency       | Modulation | Antenna | CC0   | CC1    | Total (MHz)  |
|-----------|-----------------|------------|---------|-------|--------|--------------|
| 10M+20M   | 3555+3690       | QPSK       | 0       | 8.611 | 18.265 | 26.876       |
|           |                 |            | 1       | 8.601 | 18.247 | 26.848       |
|           |                 |            | 2       | 8.604 | 18.238 | 26.842       |
|           |                 |            | 3       | 8.598 | 18.251 | 26.849       |
|           |                 | 64QAM      | 0       | 8.61  | 18.264 | 26.874       |
|           |                 |            | 1       | 8.603 | 18.249 | 26.852       |
|           |                 |            | 2       | 8.604 | 18.238 | 26.842       |
|           |                 |            | 3       | 8.602 | 18.25  | 26.852       |
|           |                 | 256QAM     | 0       | 8.611 | 18.263 | 26.874       |
|           |                 |            | 1       | 8.602 | 18.244 | 26.846       |
|           |                 |            | 2       | 8.601 | 18.241 | 26.842       |
|           |                 |            | 3       | 8.597 | 18.249 | 26.846       |
|           | 3595.02+3660    | QPSK       | 0       | 8.609 | 18.3   | 26.909       |
|           |                 |            | 1       | 8.605 | 18.276 | 26.881       |
|           |                 |            | 2       | 8.602 | 18.274 | 26.876       |
|           |                 |            | 3       | 8.603 | 18.269 | 26.872       |
|           |                 | 64QAM      | 0       | 8.608 | 18.3   | 26.908       |
|           |                 |            | 1       | 8.605 | 18.274 | 26.879       |
|           |                 |            | 2       | 8.604 | 18.274 | 26.878       |
|           |                 |            | 3       | 8.601 | 18.269 | 26.87        |
|           |                 | 256QAM     | 0       | 8.609 | 18.301 | <b>26.91</b> |
|           |                 |            | 1       | 8.602 | 18.275 | 26.877       |
|           |                 |            | 2       | 8.601 | 18.274 | 26.875       |
|           |                 |            | 3       | 8.602 | 18.27  | 26.872       |
|           | 3617.52+3637.53 | QPSK       | 0       | 8.611 | 18.288 | 26.899       |
|           |                 |            | 1       | 8.609 | 18.26  | 26.869       |
|           |                 |            | 2       | 8.602 | 18.267 | 26.869       |
|           |                 |            | 3       | 8.601 | 18.266 | 26.867       |
|           |                 | 64QAM      | 0       | 8.608 | 18.287 | 26.895       |
|           |                 |            | 1       | 8.605 | 18.261 | 26.866       |
|           |                 |            | 2       | 8.599 | 18.267 | 26.866       |
|           |                 |            | 3       | 8.6   | 18.266 | 26.866       |
|           |                 | 256QAM     | 0       | 8.609 | 18.285 | 26.894       |
|           |                 |            | 1       | 8.604 | 18.261 | 26.865       |
|           |                 |            | 2       | 8.598 | 18.265 | 26.863       |
|           |                 |            | 3       | 8.598 | 18.265 | 26.863       |

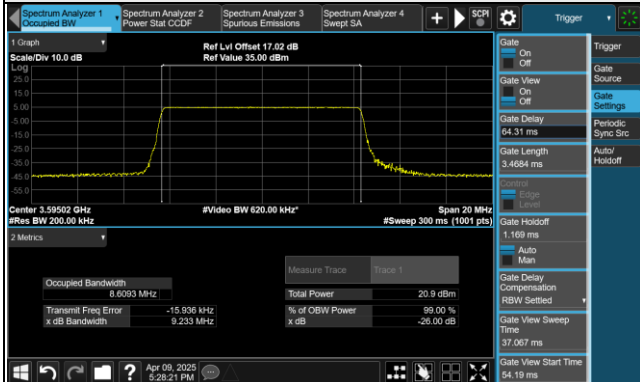
| Bandwidth | Frequency       | Modulation | Antenna | CC0    | CC1   | Total (MHz)   |
|-----------|-----------------|------------|---------|--------|-------|---------------|
| 20M+10M   | 3560.01+3694.98 | QPSK       | 0       | 18.261 | 8.754 | <b>27.015</b> |
|           |                 |            | 1       | 18.255 | 8.596 | 26.851        |
|           |                 |            | 2       | 18.26  | 8.593 | 26.853        |
|           |                 |            | 3       | 18.255 | 8.597 | 26.852        |
|           |                 | 64QAM      | 0       | 18.26  | 8.606 | 26.866        |
|           |                 |            | 1       | 18.258 | 8.593 | 26.851        |
|           |                 |            | 2       | 18.259 | 8.597 | 26.856        |
|           |                 |            | 3       | 18.252 | 8.595 | 26.847        |
|           |                 | 256QAM     | 0       | 18.262 | 8.607 | 26.869        |
|           |                 |            | 1       | 18.257 | 8.597 | 26.854        |
|           |                 |            | 2       | 18.261 | 8.595 | 26.856        |
|           |                 |            | 3       | 18.252 | 8.595 | 26.847        |
|           | 3590.01+3655.02 | QPSK       | 0       | 18.288 | 8.615 | 26.903        |
|           |                 |            | 1       | 18.265 | 8.6   | 26.865        |
|           |                 |            | 2       | 18.266 | 8.599 | 26.865        |
|           |                 |            | 3       | 18.267 | 8.6   | 26.867        |
|           |                 | 64QAM      | 0       | 18.289 | 8.613 | 26.902        |
|           |                 |            | 1       | 18.266 | 8.6   | 26.866        |
|           |                 |            | 2       | 18.266 | 8.598 | 26.864        |
|           |                 |            | 3       | 18.266 | 8.601 | 26.867        |
|           |                 | 256QAM     | 0       | 18.288 | 8.612 | 26.9          |
|           |                 |            | 1       | 18.268 | 8.6   | 26.868        |
|           |                 |            | 2       | 18.266 | 8.597 | 26.863        |
|           |                 |            | 3       | 18.266 | 8.599 | 26.865        |
|           | 3612.51+3632.52 | QPSK       | 0       | 18.28  | 8.612 | 26.892        |
|           |                 |            | 1       | 18.263 | 8.601 | 26.864        |
|           |                 |            | 2       | 18.256 | 8.597 | 26.853        |
|           |                 |            | 3       | 18.264 | 8.598 | 26.862        |
|           |                 | 64QAM      | 0       | 18.283 | 8.609 | 26.892        |
|           |                 |            | 1       | 18.262 | 8.599 | 26.861        |
|           |                 |            | 2       | 18.256 | 8.599 | 26.855        |
|           |                 |            | 3       | 18.263 | 8.598 | 26.861        |
|           |                 | 256QAM     | 0       | 18.282 | 8.612 | 26.894        |
|           |                 |            | 1       | 18.262 | 8.6   | 26.862        |
|           |                 |            | 2       | 18.258 | 8.596 | 26.854        |
|           |                 |            | 3       | 18.262 | 8.598 | 26.86         |

| Bandwidth | Frequency       | Modulation | Antenna | CC0    | CC1    | Total (MHz)   |
|-----------|-----------------|------------|---------|--------|--------|---------------|
| 20M+20M   | 3560.01+3690    | QPSK       | 0       | 18.28  | 18.253 | 36.533        |
|           |                 |            | 1       | 18.263 | 18.245 | 36.508        |
|           |                 |            | 2       | 18.27  | 18.237 | 36.507        |
|           |                 |            | 3       | 18.264 | 18.242 | 36.506        |
|           |                 | 64QAM      | 0       | 18.279 | 18.253 | 36.532        |
|           |                 |            | 1       | 18.264 | 18.247 | 36.511        |
|           |                 |            | 2       | 18.273 | 18.237 | 36.51         |
|           |                 |            | 3       | 18.263 | 18.242 | 36.505        |
|           |                 | 256QAM     | 0       | 18.281 | 18.254 | 36.535        |
|           |                 |            | 1       | 18.257 | 18.246 | 36.503        |
|           |                 |            | 2       | 18.271 | 18.236 | 36.507        |
|           |                 |            | 3       | 18.263 | 18.244 | 36.507        |
|           | 3595.02+3655.02 | QPSK       | 0       | 18.285 | 18.297 | <b>36.582</b> |
|           |                 |            | 1       | 18.278 | 18.274 | 36.552        |
|           |                 |            | 2       | 18.274 | 18.275 | 36.549        |
|           |                 |            | 3       | 18.276 | 18.273 | 36.549        |
|           |                 | 64QAM      | 0       | 18.283 | 18.294 | 36.577        |
|           |                 |            | 1       | 18.276 | 18.275 | 36.551        |
|           |                 |            | 2       | 18.277 | 18.273 | 36.55         |
|           |                 |            | 3       | 18.274 | 18.27  | 36.544        |
|           |                 | 256QAM     | 0       | 18.285 | 18.297 | <b>36.582</b> |
|           |                 |            | 1       | 18.275 | 18.275 | 36.55         |
|           |                 |            | 2       | 18.277 | 18.273 | 36.55         |
|           |                 |            | 3       | 18.276 | 18.267 | 36.543        |
|           | 3612.51+3637.53 | QPSK       | 0       | 18.281 | 18.285 | 36.566        |
|           |                 |            | 1       | 18.268 | 18.259 | 36.527        |
|           |                 |            | 2       | 18.267 | 18.259 | 36.526        |
|           |                 |            | 3       | 18.274 | 18.262 | 36.536        |
|           |                 | 64QAM      | 0       | 18.279 | 18.286 | 36.565        |
|           |                 |            | 1       | 18.267 | 18.259 | 36.526        |
|           |                 |            | 2       | 18.268 | 18.259 | 36.527        |
|           |                 |            | 3       | 18.274 | 18.261 | 36.535        |
|           |                 | 256QAM     | 0       | 18.281 | 18.286 | 36.567        |
|           |                 |            | 1       | 18.268 | 18.259 | 36.527        |
|           |                 |            | 2       | 18.268 | 18.259 | 36.527        |
|           |                 |            | 3       | 18.272 | 18.262 | 36.534        |

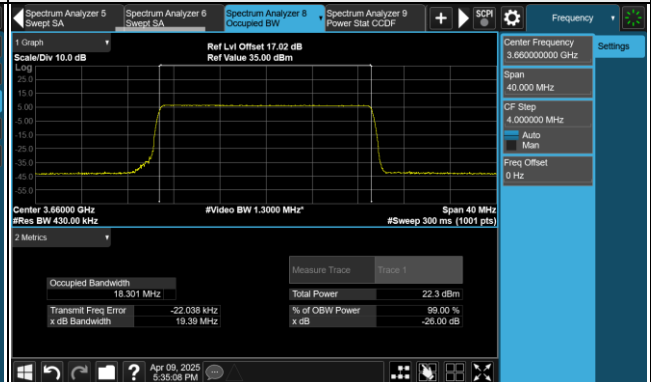
## Spectrum Plot of Worst Value

10MHz+20MHz / Antenna 1 / 256QAM

3595.02 MHz

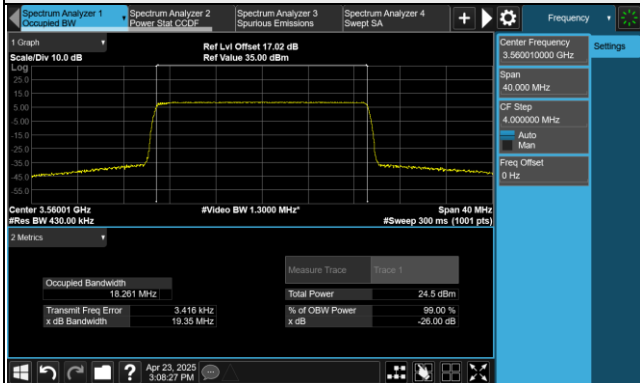


3660 MHz

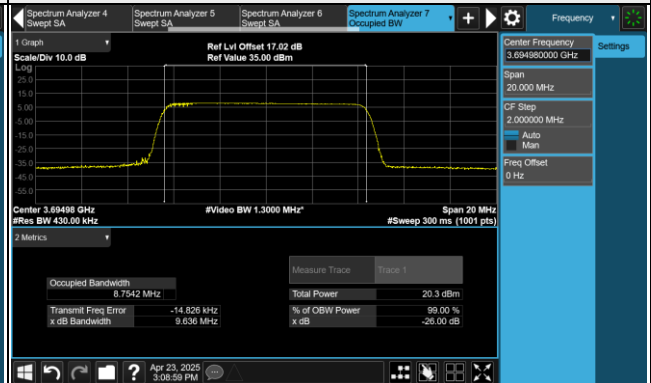


20MHz+10MHz / Antenna 1 / QPSK

3560.01 MHz



3694.98 MHz

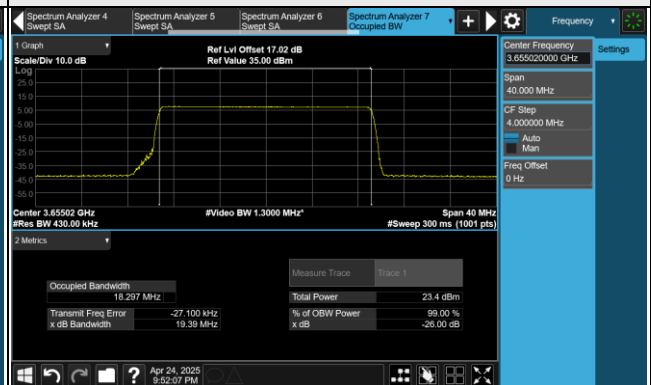


20MHz+20MHz / Antenna 1 / QPSK

3595.02 MHz



3655.02 MHz



## 26dB Bandwidth

| Bandwidth | Frequency       | Modulation | Antenna | CC0   | CC1   | Total (MHz)   |
|-----------|-----------------|------------|---------|-------|-------|---------------|
| 10M+20M   | 3555+3690       | QPSK       | 0       | 9.19  | 19.37 | 28.56         |
|           |                 |            | 1       | 9.204 | 19.35 | 28.554        |
|           |                 |            | 2       | 9.218 | 19.34 | 28.558        |
|           |                 |            | 3       | 9.164 | 19.34 | 28.504        |
|           |                 | 64QAM      | 0       | 9.173 | 19.37 | 28.543        |
|           |                 |            | 1       | 9.219 | 19.34 | 28.559        |
|           |                 |            | 2       | 9.242 | 19.34 | 28.582        |
|           |                 |            | 3       | 9.167 | 19.35 | 28.517        |
|           |                 | 256QAM     | 0       | 9.182 | 19.37 | 28.552        |
|           |                 |            | 1       | 9.176 | 19.34 | 28.516        |
|           |                 |            | 2       | 9.189 | 19.34 | 28.529        |
|           |                 |            | 3       | 9.21  | 19.35 | 28.56         |
|           | 3595.02+3660    | QPSK       | 0       | 9.192 | 19.39 | 28.582        |
|           |                 |            | 1       | 9.275 | 19.37 | 28.645        |
|           |                 |            | 2       | 9.172 | 19.38 | 28.552        |
|           |                 |            | 3       | 9.172 | 19.37 | 28.542        |
|           |                 | 64QAM      | 0       | 9.172 | 19.39 | 28.562        |
|           |                 |            | 1       | 9.276 | 19.37 | <b>28.646</b> |
|           |                 |            | 2       | 9.187 | 19.38 | 28.567        |
|           |                 |            | 3       | 9.183 | 19.38 | 28.563        |
|           |                 | 256QAM     | 0       | 9.233 | 19.39 | 28.623        |
|           |                 |            | 1       | 9.18  | 19.37 | 28.55         |
|           |                 |            | 2       | 9.172 | 19.38 | 28.552        |
|           |                 |            | 3       | 9.221 | 19.37 | 28.591        |
|           | 3617.52+3637.53 | QPSK       | 0       | 9.215 | 19.35 | 28.565        |
|           |                 |            | 1       | 9.231 | 19.36 | 28.591        |
|           |                 |            | 2       | 9.188 | 19.36 | 28.548        |
|           |                 |            | 3       | 9.23  | 19.36 | 28.59         |
|           |                 | 64QAM      | 0       | 9.169 | 19.36 | 28.529        |
|           |                 |            | 1       | 9.201 | 19.36 | 28.561        |
|           |                 |            | 2       | 9.154 | 19.37 | 28.524        |
|           |                 |            | 3       | 9.197 | 19.37 | 28.567        |
|           |                 | 256QAM     | 0       | 9.184 | 19.38 | 28.564        |
|           |                 |            | 1       | 9.195 | 19.36 | 28.555        |
|           |                 |            | 2       | 9.136 | 19.36 | 28.496        |
|           |                 |            | 3       | 9.194 | 19.37 | 28.564        |

| Bandwidth | Frequency       | Modulation | Antenna | CC0   | CC1   | Total (MHz)   |
|-----------|-----------------|------------|---------|-------|-------|---------------|
| 20M+10M   | 3560.01+3694.98 | QPSK       | 0       | 19.35 | 9.636 | <b>28.986</b> |
|           |                 |            | 1       | 19.35 | 9.184 | 28.534        |
|           |                 |            | 2       | 19.35 | 9.149 | 28.499        |
|           |                 |            | 3       | 19.35 | 9.198 | 28.548        |
|           |                 | 64QAM      | 0       | 19.35 | 9.192 | 28.542        |
|           |                 |            | 1       | 19.36 | 9.189 | 28.549        |
|           |                 |            | 2       | 19.35 | 9.198 | 28.548        |
|           |                 |            | 3       | 19.35 | 9.195 | 28.545        |
|           |                 | 256QAM     | 0       | 19.36 | 9.188 | 28.548        |
|           |                 |            | 1       | 19.35 | 9.202 | 28.552        |
|           |                 |            | 2       | 19.35 | 9.149 | 28.499        |
|           |                 |            | 3       | 19.35 | 9.2   | 28.55         |
|           | 3590.01+3655.02 | QPSK       | 0       | 19.37 | 9.23  | 28.6          |
|           |                 |            | 1       | 19.36 | 9.179 | 28.539        |
|           |                 |            | 2       | 19.35 | 9.193 | 28.543        |
|           |                 |            | 3       | 19.36 | 9.458 | 28.818        |
|           |                 | 64QAM      | 0       | 19.38 | 9.206 | 28.586        |
|           |                 |            | 1       | 19.36 | 9.18  | 28.54         |
|           |                 |            | 2       | 19.35 | 9.184 | 28.534        |
|           |                 |            | 3       | 19.35 | 9.162 | 28.512        |
|           |                 | 256QAM     | 0       | 19.38 | 9.183 | 28.563        |
|           |                 |            | 1       | 19.36 | 9.179 | 28.539        |
|           |                 |            | 2       | 19.35 | 9.181 | 28.531        |
|           |                 |            | 3       | 19.35 | 9.195 | 28.545        |
|           | 3612.51+3632.52 | QPSK       | 0       | 19.38 | 9.229 | 28.609        |
|           |                 |            | 1       | 19.35 | 9.204 | 28.554        |
|           |                 |            | 2       | 19.35 | 9.181 | 28.531        |
|           |                 |            | 3       | 19.36 | 9.174 | 28.534        |
|           |                 | 64QAM      | 0       | 19.38 | 9.2   | 28.58         |
|           |                 |            | 1       | 19.35 | 9.197 | 28.547        |
|           |                 |            | 2       | 19.35 | 9.188 | 28.538        |
|           |                 |            | 3       | 19.36 | 9.182 | 28.542        |
|           |                 | 256QAM     | 0       | 19.37 | 9.224 | 28.594        |
|           |                 |            | 1       | 19.35 | 9.198 | 28.548        |
|           |                 |            | 2       | 19.36 | 9.197 | 28.557        |
|           |                 |            | 3       | 19.36 | 9.194 | 28.554        |

| Bandwidth | Frequency       | Modulation | Antenna | CC0   | CC1   | Total (MHz)  |
|-----------|-----------------|------------|---------|-------|-------|--------------|
| 20M+20M   | 3560.01+3690    | QPSK       | 0       | 19.38 | 19.36 | 38.74        |
|           |                 |            | 1       | 19.35 | 19.36 | 38.71        |
|           |                 |            | 2       | 19.36 | 19.36 | 38.72        |
|           |                 |            | 3       | 19.36 | 19.36 | 38.72        |
|           |                 | 64QAM      | 0       | 19.38 | 19.36 | 38.74        |
|           |                 |            | 1       | 19.37 | 19.37 | 38.74        |
|           |                 |            | 2       | 19.35 | 19.36 | 38.71        |
|           |                 |            | 3       | 19.36 | 19.36 | 38.72        |
|           |                 | 256QAM     | 0       | 19.37 | 19.35 | 38.72        |
|           |                 |            | 1       | 19.36 | 19.36 | 38.72        |
|           |                 |            | 2       | 19.37 | 19.35 | 38.72        |
|           |                 |            | 3       | 19.36 | 19.36 | 38.72        |
|           | 3595.02+3655.02 | QPSK       | 0       | 19.38 | 19.39 | 38.77        |
|           |                 |            | 1       | 19.36 | 19.37 | 38.73        |
|           |                 |            | 2       | 19.38 | 19.39 | 38.77        |
|           |                 |            | 3       | 19.36 | 19.38 | 38.74        |
|           |                 | 64QAM      | 0       | 19.36 | 19.38 | 38.74        |
|           |                 |            | 1       | 19.37 | 19.36 | 38.73        |
|           |                 |            | 2       | 19.38 | 19.39 | 38.77        |
|           |                 |            | 3       | 19.38 | 19.38 | 38.76        |
|           |                 | 256QAM     | 0       | 19.37 | 19.38 | 38.75        |
|           |                 |            | 1       | 19.37 | 19.37 | 38.74        |
|           |                 |            | 2       | 19.39 | 19.39 | <b>38.78</b> |
|           |                 |            | 3       | 19.39 | 19.38 | 38.77        |
|           | 3612.51+3637.53 | QPSK       | 0       | 19.37 | 19.37 | 38.74        |
|           |                 |            | 1       | 19.36 | 19.35 | 38.71        |
|           |                 |            | 2       | 19.38 | 19.36 | 38.74        |
|           |                 |            | 3       | 19.37 | 19.35 | 38.72        |
|           |                 | 64QAM      | 0       | 19.37 | 19.38 | 38.75        |
|           |                 |            | 1       | 19.36 | 19.35 | 38.71        |
|           |                 |            | 2       | 19.37 | 19.36 | 38.73        |
|           |                 |            | 3       | 19.37 | 19.37 | 38.74        |
|           |                 | 256QAM     | 0       | 19.37 | 19.38 | 38.75        |
|           |                 |            | 1       | 19.37 | 19.34 | 38.71        |
|           |                 |            | 2       | 19.36 | 19.36 | 38.72        |
|           |                 |            | 3       | 19.36 | 19.36 | 38.72        |