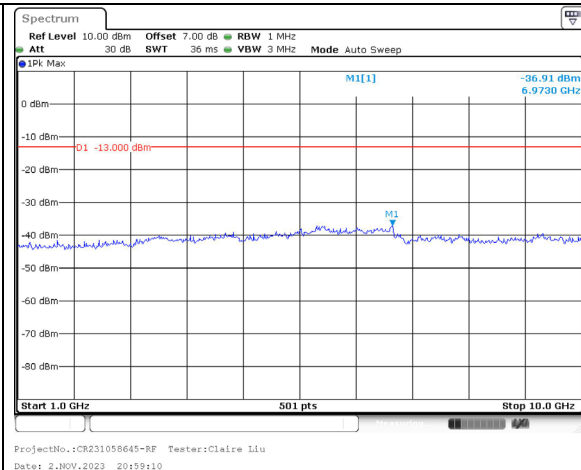
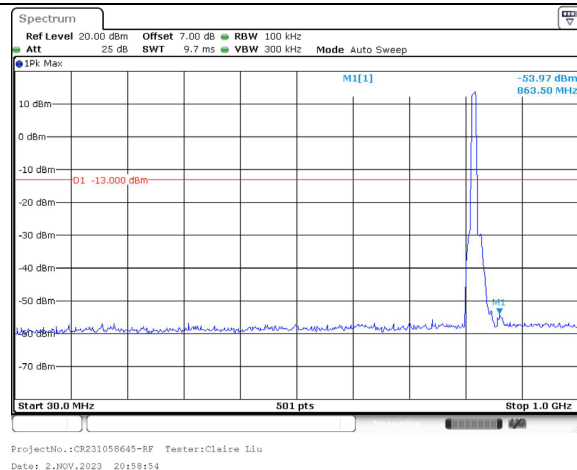
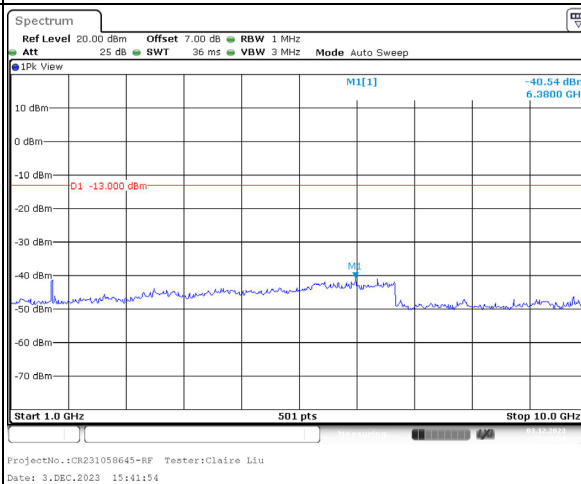
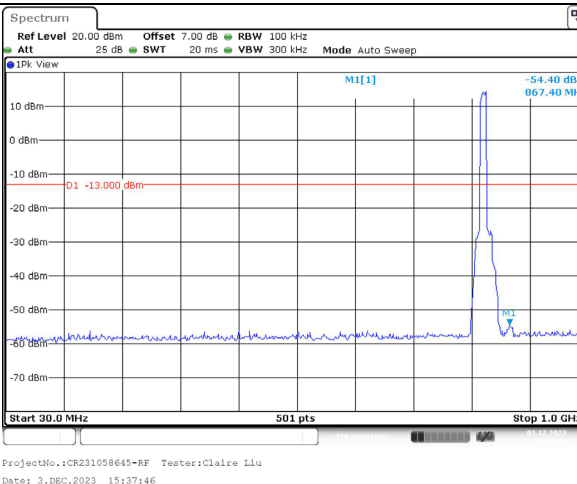


## Spurious Emissions at Antenna Terminal

Channel

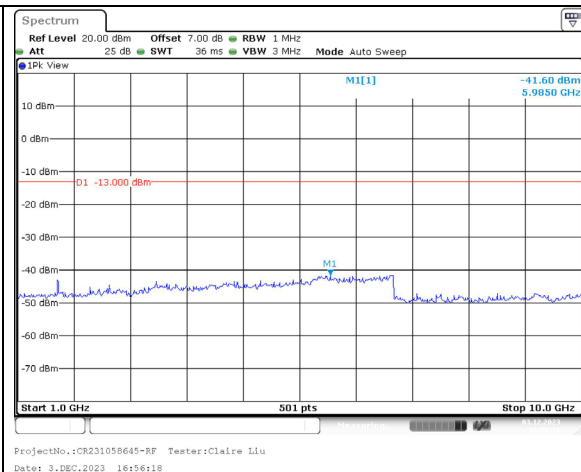
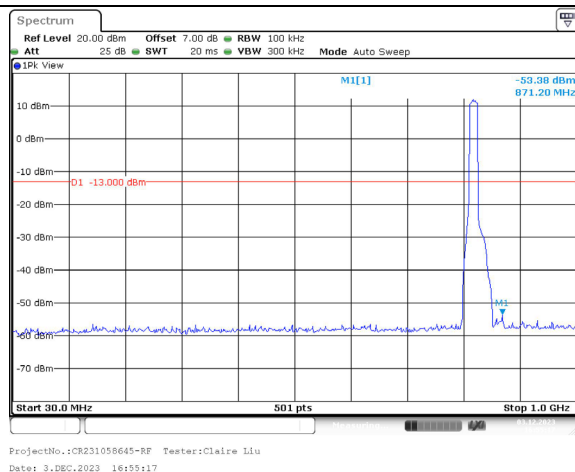
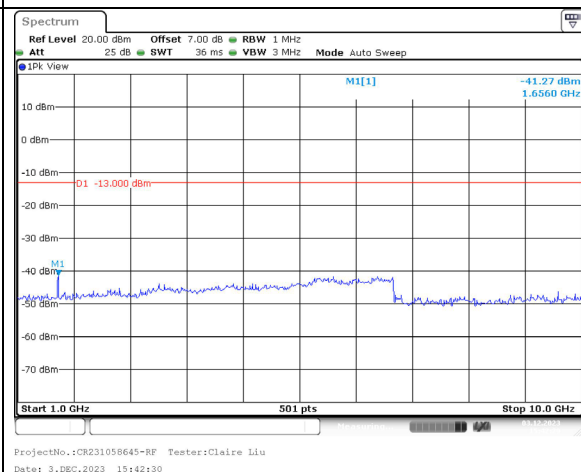
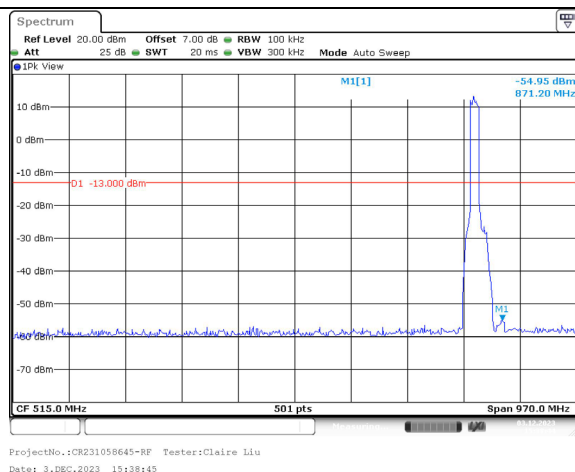
10MHz Bandwidth QPSK

Lowest  
For 90SCross  
Channel

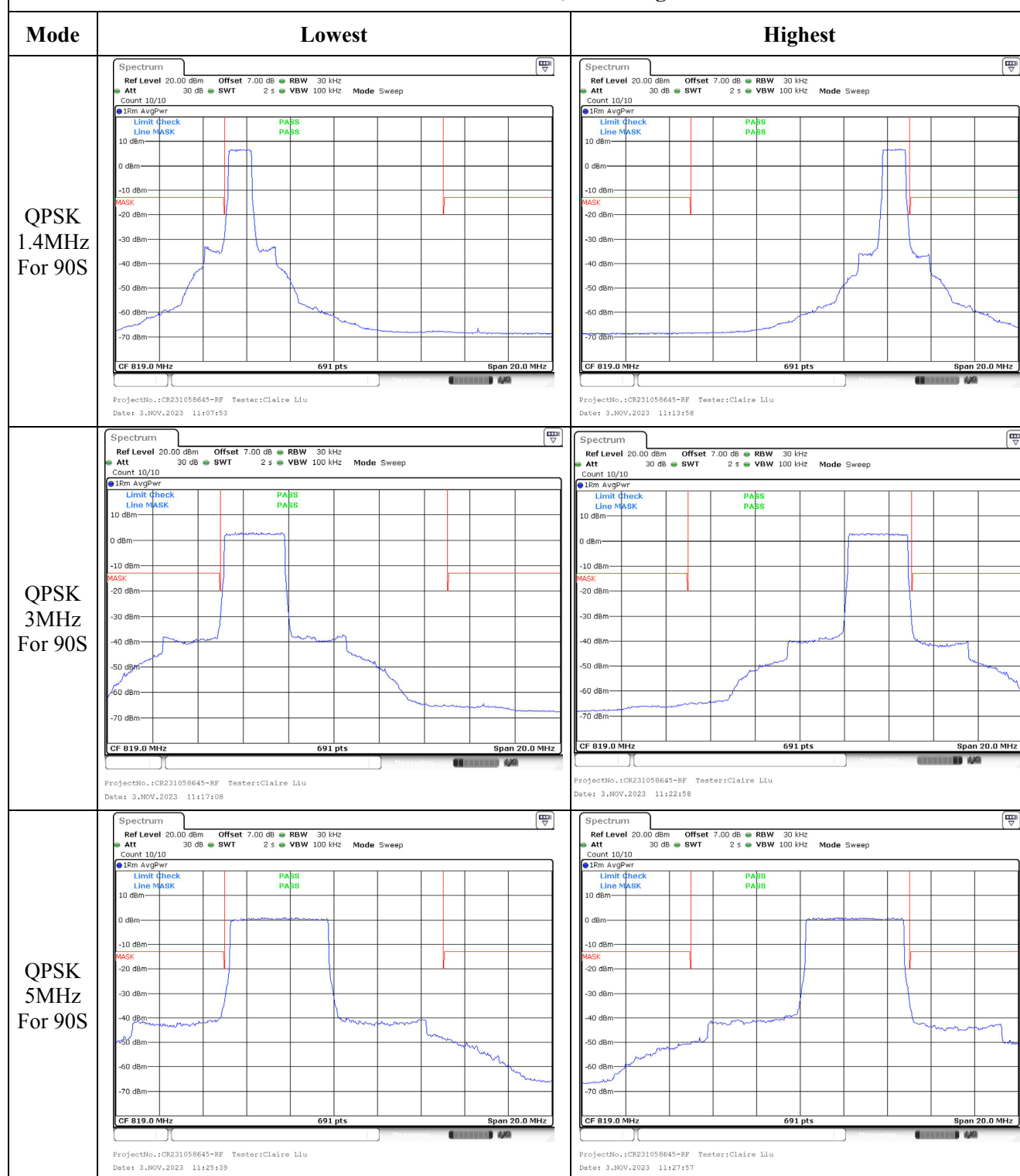
## Spurious Emissions at Antenna Terminal

Channel

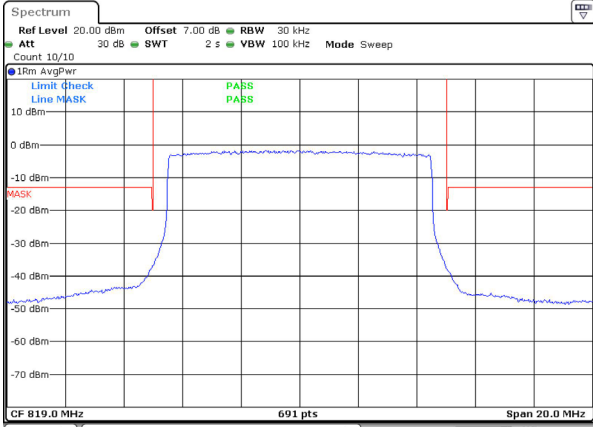
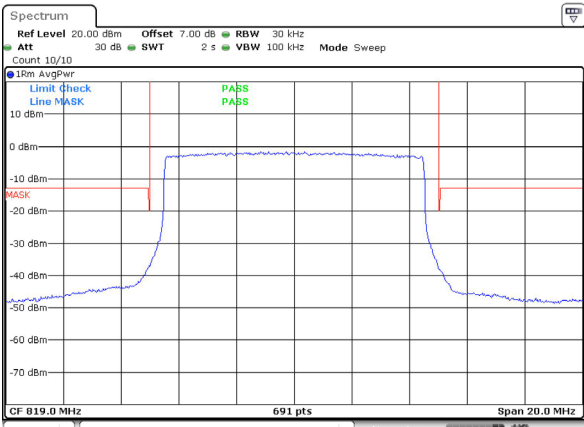
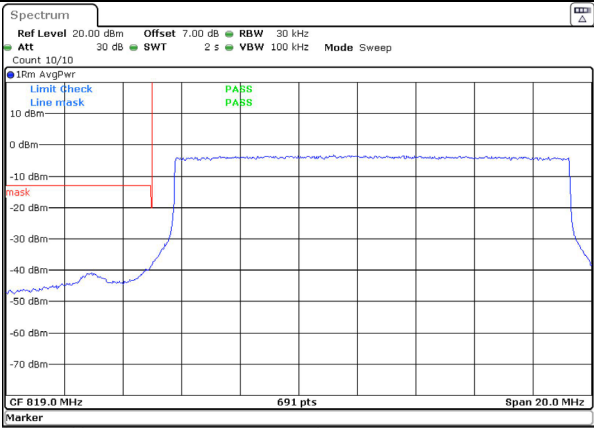
15MHz Bandwidth QPSK

Lowest  
For 90SCross  
Channel

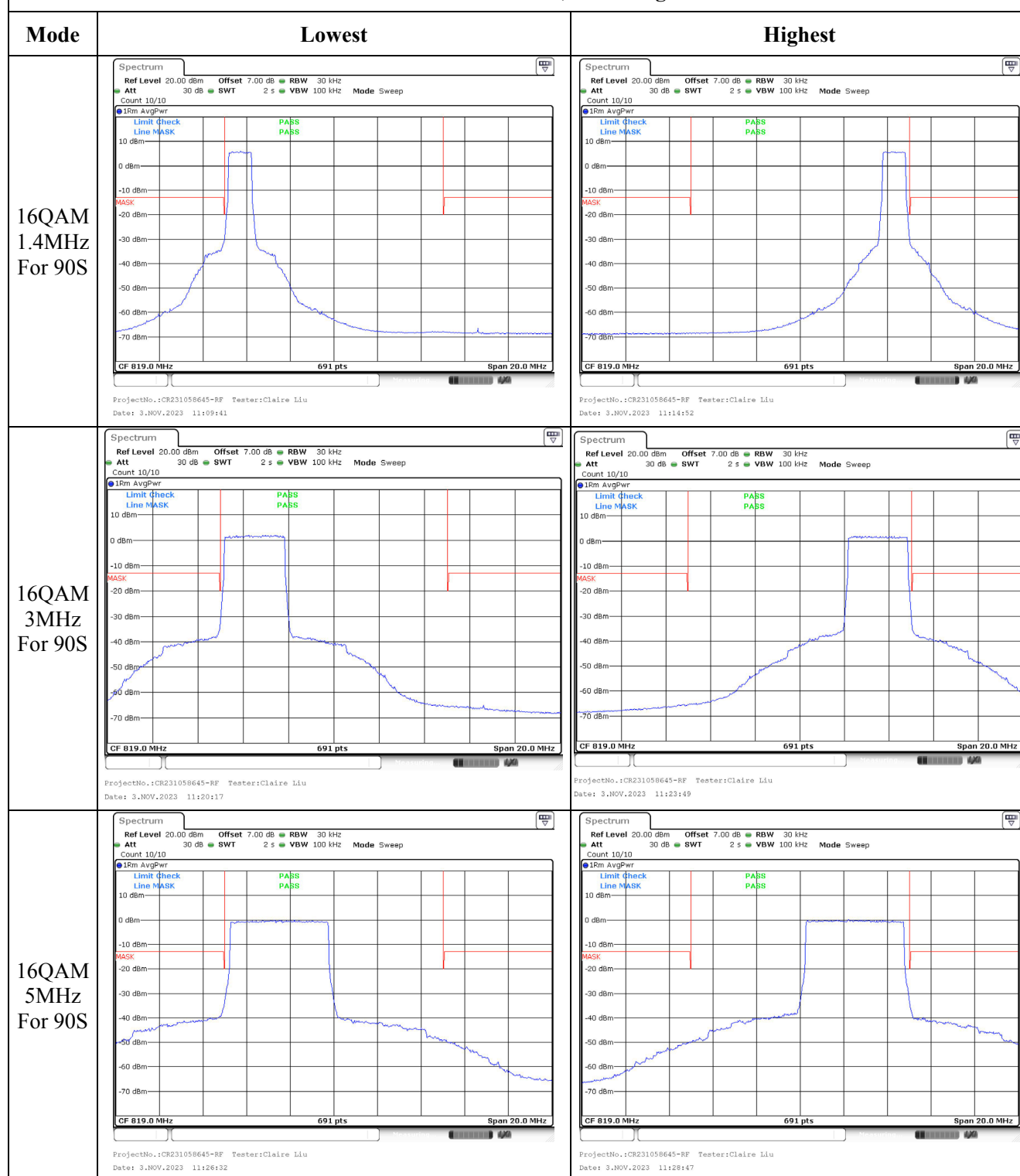
## Out of band emission, Band Edge



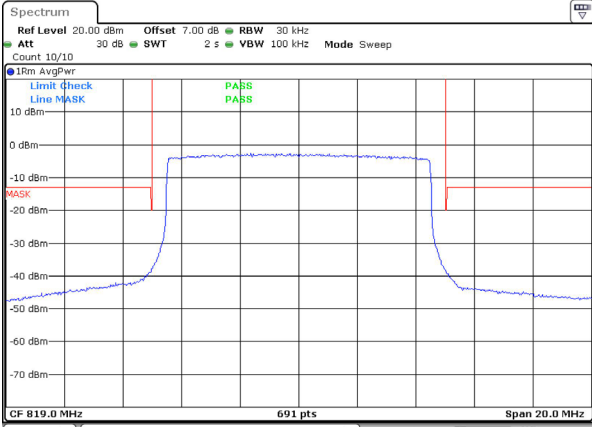
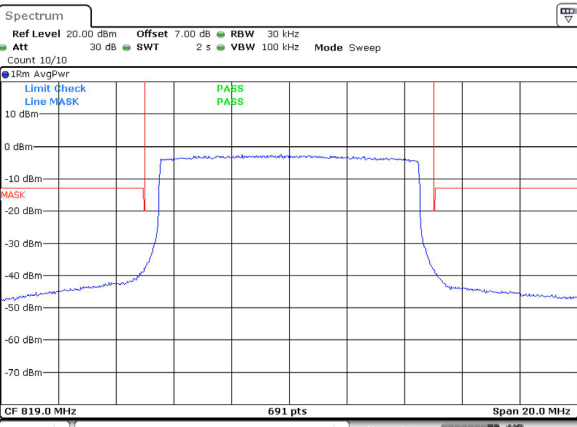
## Out of band emission, Band Edge

| Mode                                     | Lowest                                                                                                                                                                | Highest                                                                                                                                                              |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| QPSK<br>10MHz<br>For 90S                 |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 11:30:11</p>   |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 11:32:38</p> |
| QPSK<br>15MHz<br>Cross<br>90S and<br>22H |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 14:29:39</p> |                                                                                                                                                                      |

## Out of band emission, Band Edge



## Out of band emission, Band Edge

| Mode                                       | Lowest                                                                                                                                                                | Highest                                                                                                                                                              |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16QAM<br>10MHz<br>For 90S                  |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 11:31:21</p>   |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 11:33:30</p> |
| 16QAM<br>15MHz<br>Across<br>90S and<br>22H |  <p>ProjectNo.:CR231058645-RF Tester: Claire Liu<br/>Date: 3.NOV.2023 14:40:28</p> |                                                                                                                                                                      |

## 4.11.3 Test Data for Part 22H:

| RF Output Power             |                            |                                     |                          |                           |                   |                 |
|-----------------------------|----------------------------|-------------------------------------|--------------------------|---------------------------|-------------------|-----------------|
| Test Bandwidth & Modulation | Resource Block & RB offset | Conducted Average Output Power(dBm) |                          |                           | Maximum ERP (dBm) | ERP Limit (dBm) |
|                             |                            | Lowest Frequency For 22H            | Middle Frequency For 22H | Highest Frequency For 22H |                   |                 |
| 1.4MHz QPSK                 | RB1#0                      | 24.39                               | 24.06                    | 24.09                     | 21.93             | 38.45           |
|                             | RB1#3                      | 24.5                                | 24.26                    | 24.3                      |                   |                 |
|                             | RB1#5                      | <b>24.55</b>                        | 24.01                    | 24.05                     |                   |                 |
|                             | RB3#0                      | 24.37                               | 24.31                    | 24.11                     |                   |                 |
|                             | RB3#3                      | 24.43                               | 24.26                    | 24.16                     |                   |                 |
|                             | RB6#0                      | 23.28                               | 23.13                    | 23.35                     |                   |                 |
| 1.4MHz 16QAM                | RB1#0                      | 23.38                               | 23.82                    | 23.28                     | 21.31             | 38.45           |
|                             | RB1#3                      | 23.89                               | <b>23.93</b>             | 23.29                     |                   |                 |
|                             | RB1#5                      | 23.49                               | 23.83                    | 23.13                     |                   |                 |
|                             | RB3#0                      | 23.41                               | 23.18                    | 23.31                     |                   |                 |
|                             | RB3#3                      | 23.47                               | 23.25                    | 23.2                      |                   |                 |
|                             | RB6#0                      | 22.37                               | 22.22                    | 22.33                     |                   |                 |
| 3MHz QPSK                   | RB1#0                      | 24.5                                | 24.24                    | 24.2                      | 21.9              | 38.45           |
|                             | RB1#8                      | 24.1                                | 24.08                    | 24.16                     |                   |                 |
|                             | RB1#14                     | 24.44                               | <b>24.52</b>             | 24.25                     |                   |                 |
|                             | RB6#0                      | 23.28                               | 23.12                    | 23.17                     |                   |                 |
|                             | RB6#9                      | 23.14                               | 22.99                    | 23.22                     |                   |                 |
|                             | RB15#0                     | 23.21                               | 23.17                    | 23.4                      |                   |                 |
| 3MHz 16QAM                  | RB1#0                      | 23.41                               | 23.64                    | <b>23.67</b>              | 21.05             | 38.45           |
|                             | RB1#8                      | 23.09                               | 23.39                    | 23.22                     |                   |                 |
|                             | RB1#14                     | 23.17                               | 23.58                    | 23.33                     |                   |                 |
|                             | RB6#0                      | 22.21                               | 22.14                    | 22.21                     |                   |                 |
|                             | RB6#9                      | 21.95                               | 22.12                    | 22.38                     |                   |                 |
|                             | RB15#0                     | 22.33                               | 22.19                    | 22.14                     |                   |                 |
| 5MHz QPSK                   | RB1#0                      | 24.33                               | 24.31                    | 24.18                     | 21.75             | 38.45           |
|                             | RB1#13                     | 24.17                               | 24.23                    | 24.27                     |                   |                 |
|                             | RB1#24                     | <b>24.37</b>                        | 24.06                    | 24.17                     |                   |                 |
|                             | RB15#0                     | 23.33                               | 23.15                    | 23.23                     |                   |                 |
|                             | RB15#10                    | 23.29                               | 23.06                    | 23.05                     |                   |                 |
|                             | RB25#0                     | 23.31                               | 23.29                    | 23.22                     |                   |                 |
| 5MHz 16QAM                  | RB1#0                      | 22.94                               | 22.63                    | <b>23.66</b>              | 21.04             | 38.45           |
|                             | RB1#13                     | 22.76                               | 22.63                    | 23.46                     |                   |                 |
|                             | RB1#24                     | 22.95                               | 22.75                    | 23.47                     |                   |                 |
|                             | RB15#0                     | 22.2                                | 22.19                    | 22.01                     |                   |                 |
|                             | RB15#10                    | 22.35                               | 22.11                    | 21.95                     |                   |                 |
|                             | RB25#0                     | 22.34                               | 22.31                    | 22.31                     |                   |                 |

|             |         |              |              |       |       |       |
|-------------|---------|--------------|--------------|-------|-------|-------|
| 10MHz QPSK  | RB1#0   | 24.38        | 24.31        | 24.15 | 21.78 | 38.45 |
|             | RB1#25  | 24.25        | 24.33        | 24.02 |       |       |
|             | RB1#49  | 24.24        | <b>24.4</b>  | 24.26 |       |       |
|             | RB25#0  | 23.14        | 23.2         | 23.31 |       |       |
|             | RB25#25 | 23.06        | 23.25        | 23.23 |       |       |
|             | RB50#0  | 23.09        | 23.13        | 23.24 |       |       |
| 10MHz 16QAM | RB1#0   | 23.66        | 23.34        | 23.44 | 21.28 | 38.45 |
|             | RB1#25  | <b>23.9</b>  | 23.07        | 23.47 |       |       |
|             | RB1#49  | 23.49        | 23.22        | 23.35 |       |       |
|             | RB25#0  | 22.32        | 22.34        | 22.32 |       |       |
|             | RB25#25 | 22.09        | 22.72        | 22.28 |       |       |
|             | RB50#0  | 22.13        | 22.17        | 22.24 |       |       |
| 15MHz QPSK  | RB1#0   | <b>24.33</b> | 24.24        | 24.26 | 21.71 | 38.45 |
|             | RB1#38  | 24.01        | 24.09        | 24.05 |       |       |
|             | RB1#74  | 24.15        | 24.11        | 24.08 |       |       |
|             | RB36#0  | 23.02        | 23.1         | 23.26 |       |       |
|             | RB36#39 | 23.12        | 23.31        | 23.13 |       |       |
|             | RB75#0  | 23.21        | 23.03        | 23.28 |       |       |
| 15MHz 16QAM | RB1#0   | 24.16        | 23.65        | 23.31 | 21.65 | 38.45 |
|             | RB1#38  | 23.37        | 23.42        | 23.2  |       |       |
|             | RB1#74  | 23.49        | <b>24.27</b> | 23.06 |       |       |
|             | RB36#0  | 22.2         | 22.08        | 22.17 |       |       |
|             | RB36#39 | 22.29        | 22.42        | 22.12 |       |       |
|             | RB75#0  | 22.2         | 22.15        | 22.29 |       |       |

Note:

ERP= Conducted Power(dBm) - Lc(dB) + G<sub>T</sub>(dBd)G<sub>T</sub>(dBd)=G<sub>T</sub>(dBi)-2.15**Result:****Pass****Peak-to-average Ratio(PAR)**

| Test Bandwidth & Modulation | Resource Block & RB offset | Peak-to-average Ratio(dB) |                          |                           | Limit (dB)  |
|-----------------------------|----------------------------|---------------------------|--------------------------|---------------------------|-------------|
|                             |                            | Lowest Frequency For 22H  | Middle Frequency For 22H | Highest Frequency For 22H |             |
| 15MHz QPSK                  | RB1#0                      | 3.57                      | 3.36                     | 3.33                      | 13          |
|                             | RB75#0                     | 4.26                      | 4.29                     | 4.17                      | 13          |
| 15MHz 16QAM                 | RB1#0                      | 4.41                      | 4.23                     | 4.17                      | 13          |
|                             | RB75#0                     | 5.51                      | 5.54                     | 5.51                      | 13          |
|                             |                            |                           |                          | <b>Result:</b>            | <b>Pass</b> |

| Operation Mode | 99% Occupied Bandwidth (MHz) |                          |                           | 26 dB Occupied Bandwidth (MHz) |                          |                           |
|----------------|------------------------------|--------------------------|---------------------------|--------------------------------|--------------------------|---------------------------|
|                | Lowest Frequency For 22H     | Middle Frequency For 22H | Highest Frequency For 22H | Lowest Frequency For 22H       | Middle Frequency For 22H | Highest Frequency For 22H |
| 1.4MHz QPSK    | 1.096                        | 1.102                    | 1.102                     | 1.314                          | 1.314                    | 1.308                     |
| 1.4MHz 16QAM   | 1.096                        | 1.096                    | 1.102                     | 1.308                          | 1.296                    | 1.302                     |
| 3MHz QPSK      | 2.695                        | 2.683                    | 2.695                     | 2.94                           | 2.964                    | 2.94                      |
| 3MHz 16QAM     | 2.683                        | 2.683                    | 2.683                     | 2.952                          | 2.94                     | 2.976                     |
| 5MHz QPSK      | 4.511                        | 4.511                    | 4.511                     | 5.04                           | 5.02                     | 5.04                      |
| 5MHz 16QAM     | 4.511                        | 4.511                    | 4.491                     | 5.04                           | 5.06                     | 5.02                      |
| 10MHz QPSK     | 8.942                        | 8.942                    | 8.902                     | 9.72                           | 9.72                     | 9.76                      |
| 10MHz 16QAM    | 8.942                        | 8.942                    | 8.902                     | 9.64                           | 9.72                     | 9.68                      |
| 15MHz QPSK     | 13.473                       | 13.413                   | 13.473                    | 14.82                          | 14.7                     | 14.82                     |
| 15MHz 16QAM    | 13.473                       | 13.413                   | 13.473                    | 14.76                          | 14.7                     | 14.76                     |

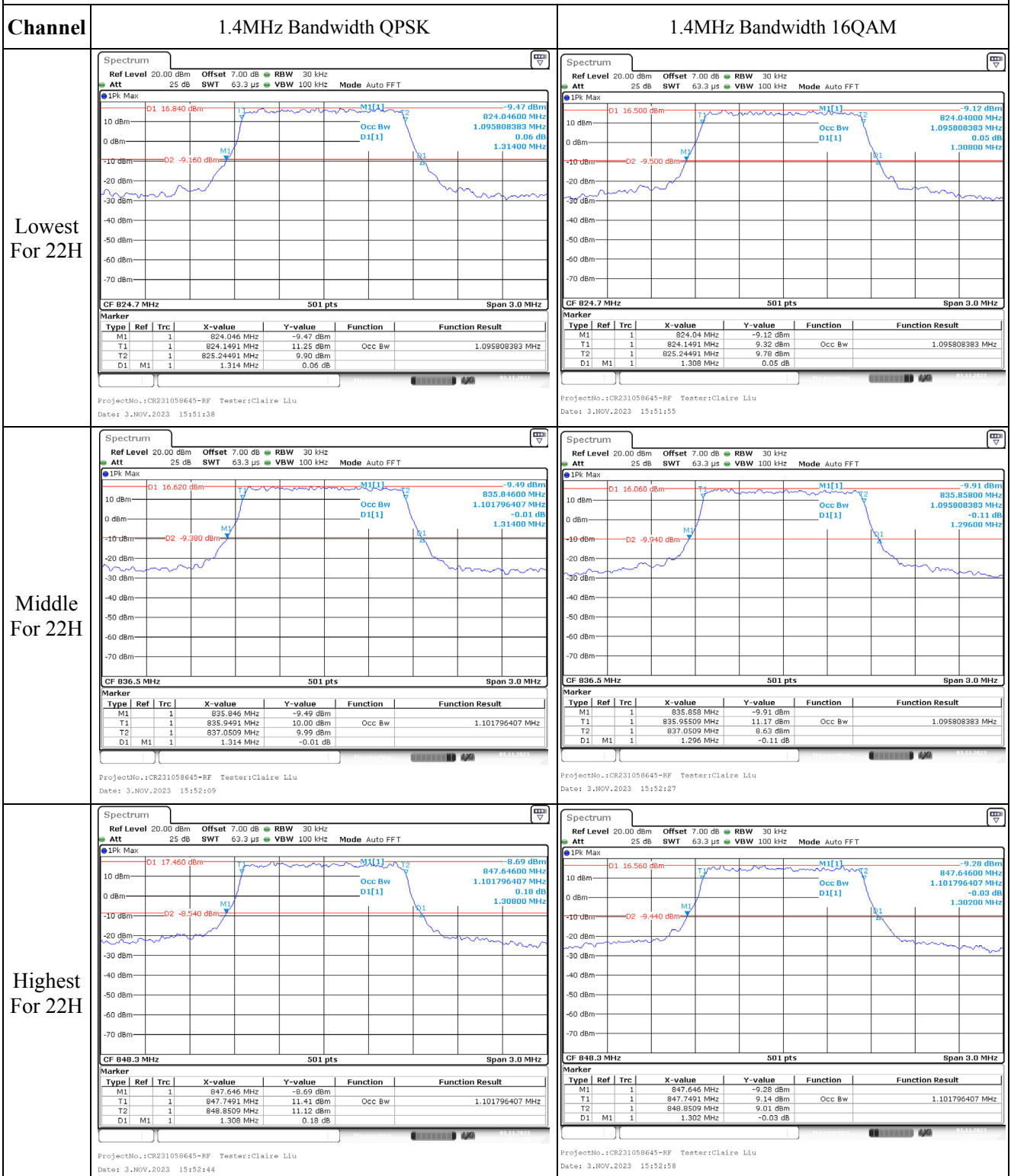
Note: The test plots please refer to the Plots of Occupied Bandwidth

| Frequency Stability                 |                  |                            |                 |        |       |
|-------------------------------------|------------------|----------------------------|-----------------|--------|-------|
| Test Modulation:                    | 15 MHz QPSK      |                            | Test Channel:   | 831.5  | MHz   |
| Test Item                           | Temperature (°C) | Voltage (V <sub>DC</sub> ) | Frequency Error |        | Limit |
|                                     |                  |                            | (Hz)            | (ppm)  | (ppm) |
| Frequency Stability vs. Temperature | -30              | 7.6                        | -0.78           | -0.001 | 2.5   |
|                                     | -20              | 7.6                        | -2.31           | -0.003 | 2.5   |
|                                     | -10              | 7.6                        | -3.27           | -0.004 | 2.5   |
|                                     | 0                | 7.6                        | -0.26           | 0.000  | 2.5   |
|                                     | 10               | 7.6                        | 0.23            | 0.000  | 2.5   |
|                                     | 20               | 7.6                        | -0.86           | -0.001 | 2.5   |
|                                     | 30               | 7.6                        | 0.73            | 0.001  | 2.5   |
|                                     | 40               | 7.6                        | -1.77           | -0.002 | 2.5   |
|                                     | 50               | 7.6                        | -1.65           | -0.002 | 2.5   |
| Frequency Stability vs. Voltage     | 20               | 6.8                        | 1.53            | 0.002  | 2.5   |
|                                     | 20               | 8.7                        | -1.76           | -0.002 | 2.5   |
| Result:                             |                  |                            |                 | Pass   |       |

| FCC §2.1055, §22.355, §90.213: Frequency Stability |                     |                               |                 |                |             |
|----------------------------------------------------|---------------------|-------------------------------|-----------------|----------------|-------------|
| Test Modulation:                                   | 15 MHz 16QAM        |                               | Test Channel:   | 831.5          | MHz         |
| Test Item                                          | Temperature<br>(°C) | Voltage<br>(V <sub>DC</sub> ) | Frequency Error |                | Limit       |
|                                                    |                     |                               | (Hz)            | (ppm)          | (ppm)       |
| Frequency Stability vs.<br>Temperature             | -30                 | 7.6                           | -1.12           | -0.001         | 2.5         |
|                                                    | -20                 | 7.6                           | -1.69           | -0.002         | 2.5         |
|                                                    | -10                 | 7.6                           | -0.04           | 0.000          | 2.5         |
|                                                    | 0                   | 7.6                           | -2.59           | -0.003         | 2.5         |
|                                                    | 10                  | 7.6                           | -2.03           | -0.002         | 2.5         |
|                                                    | 20                  | 7.6                           | -2.39           | -0.003         | 2.5         |
|                                                    | 30                  | 7.6                           | -4.79           | -0.006         | 2.5         |
|                                                    | 40                  | 7.6                           | 0.06            | 0.000          | 2.5         |
|                                                    | 50                  | 7.6                           | -3.44           | -0.004         | 2.5         |
| Frequency Stability vs.<br>Voltage                 | 20                  | 6.8                           | -4.17           | -0.005         | 2.5         |
|                                                    | 20                  | 8.7                           | -3.96           | -0.005         | 2.5         |
|                                                    |                     |                               |                 | <b>Result:</b> | <b>Pass</b> |

**4.11.4 Test Plots for Part 22H:**

(Note: The 7dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer);

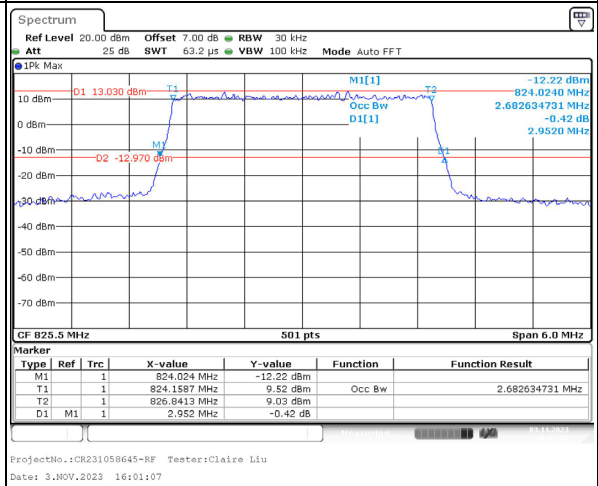
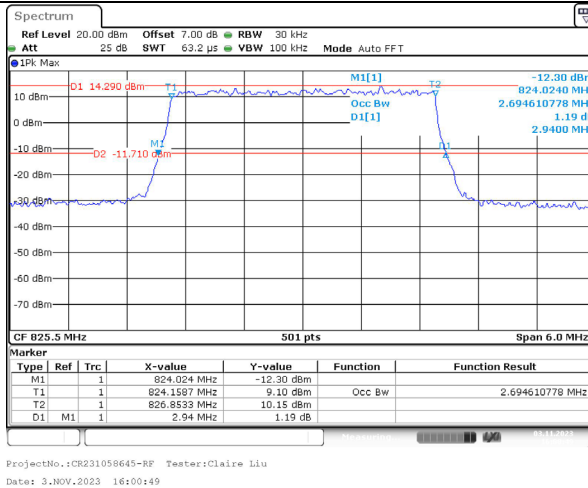
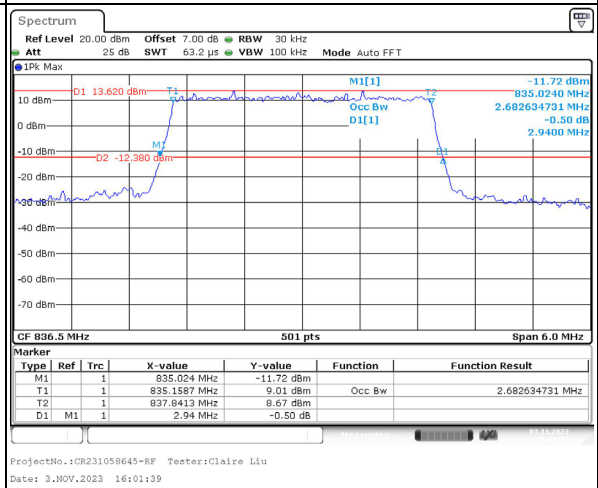
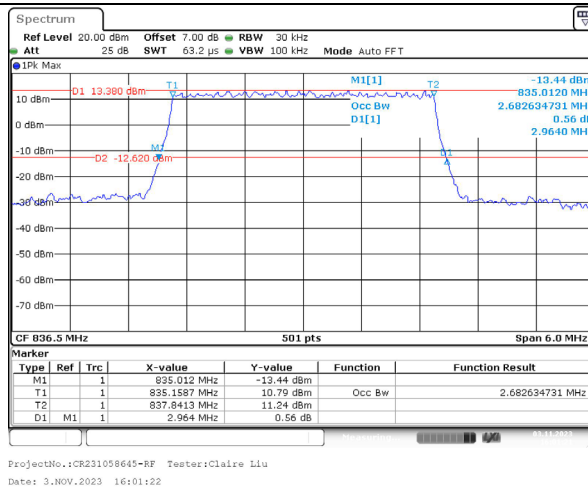
**Occupied Bandwidth**

## Occupied Bandwidth

## Channel

## 3MHz Bandwidth QPSK

## 3MHz Bandwidth 16QAM

Lowest  
For 22HMiddle  
For 22HHighest  
For 22H