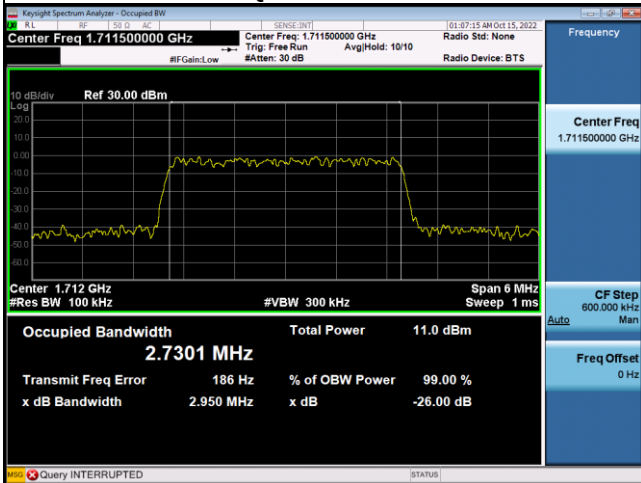




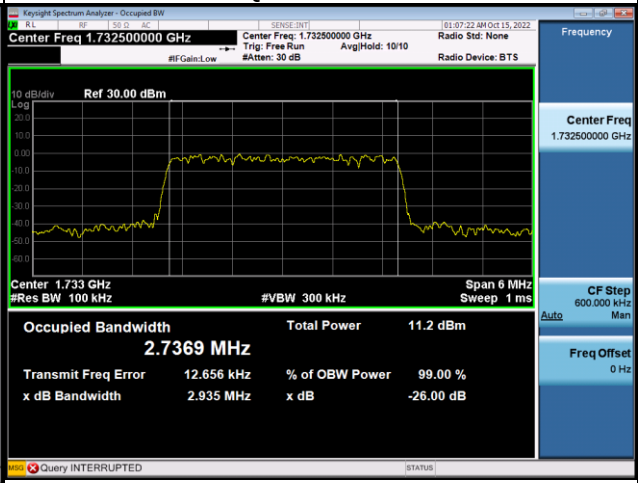
| LTE Band 4_3M |                 |                              |         |                 |                      |
|---------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK          |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19965         | 1711.5          | 2.7301                       | 19965   | 1711.5          | 2.950                |
| 20175         | 1732.5          | 2.7369                       | 20175   | 1732.5          | 2.935                |
| 20385         | 1753.5          | 2.7220                       | 20385   | 1753.5          | 2.936                |
| 16QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19965         | 1711.5          | 2.7046                       | 19965   | 1711.5          | 2.931                |
| 20175         | 1732.5          | 2.7279                       | 20175   | 1732.5          | 2.938                |
| 20385         | 1753.5          | 2.7191                       | 20385   | 1753.5          | 2.926                |
| 64QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19965         | 1711.5          | 2.7035                       | 19965   | 1711.5          | 2.952                |
| 20175         | 1732.5          | 2.7198                       | 20175   | 1732.5          | 2.946                |
| 20385         | 1753.5          | 2.7196                       | 20385   | 1753.5          | 2.956                |

## Spectrum Plot

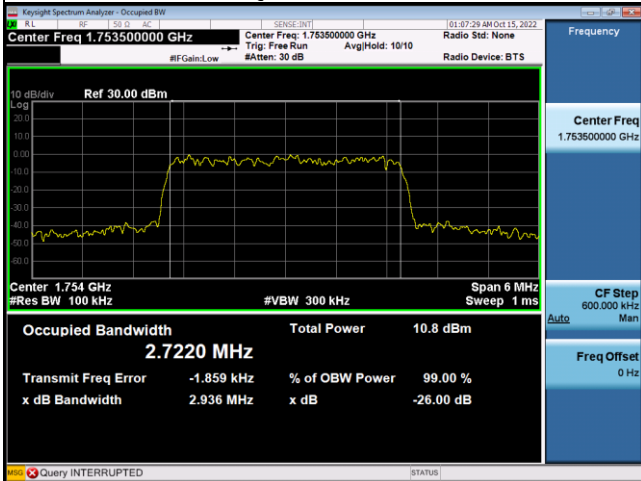
### QPSK-19965



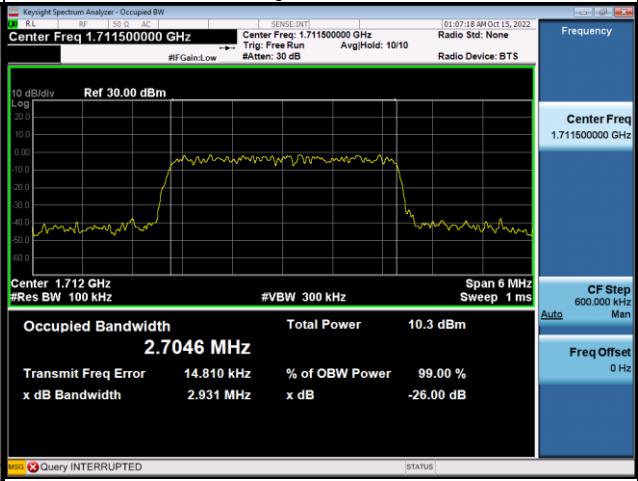
### QPSK-20175



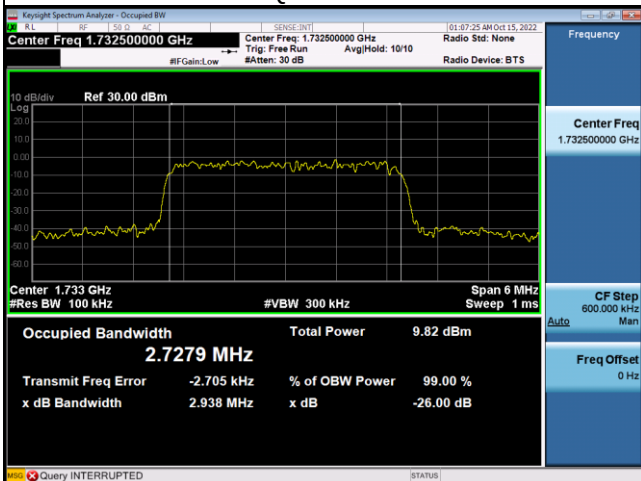
### QPSK-20385



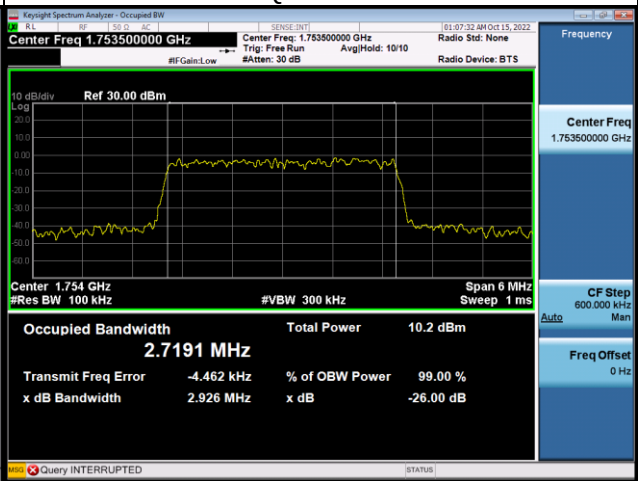
### 16QAM-19965



### 16QAM-20175



### 16QAM-20385

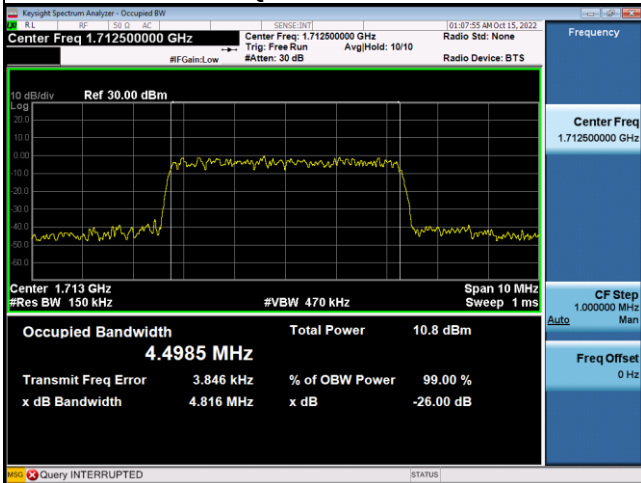




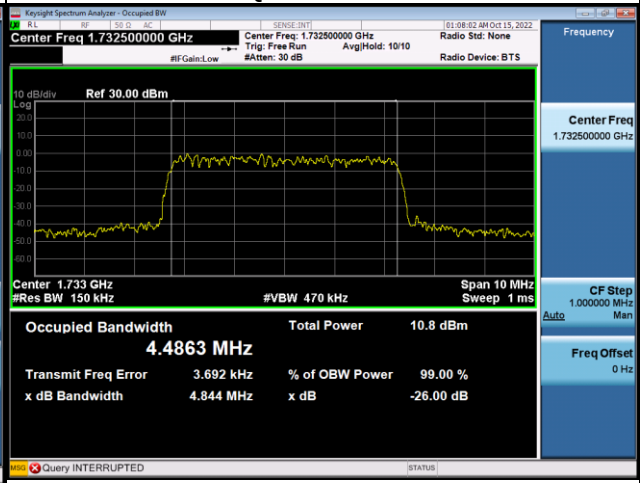
| LTE Band 4_5M |                 |                              |         |                 |                      |
|---------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK          |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19975         | 1712.5          | 4.4985                       | 19975   | 1712.5          | 4.816                |
| 20175         | 1732.5          | 4.4863                       | 20175   | 1732.5          | 4.844                |
| 20375         | 1752.5          | 4.5115                       | 20375   | 1752.5          | 4.802                |
| 16QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19975         | 1712.5          | 4.5163                       | 19975   | 1712.5          | 4.814                |
| 20175         | 1732.5          | 4.4931                       | 20175   | 1732.5          | 4.863                |
| 20375         | 1752.5          | 4.4812                       | 20375   | 1752.5          | 4.802                |
| 64QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19975         | 1712.5          | 4.5138                       | 19975   | 1712.5          | 4.847                |
| 20175         | 1732.5          | 4.5235                       | 20175   | 1732.5          | 4.861                |
| 20375         | 1752.5          | 4.5334                       | 20375   | 1752.5          | 4.842                |

## Spectrum Plot

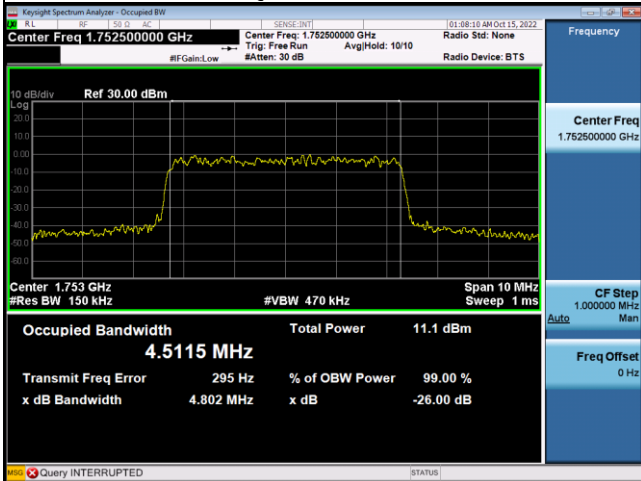
### QPSK-19975



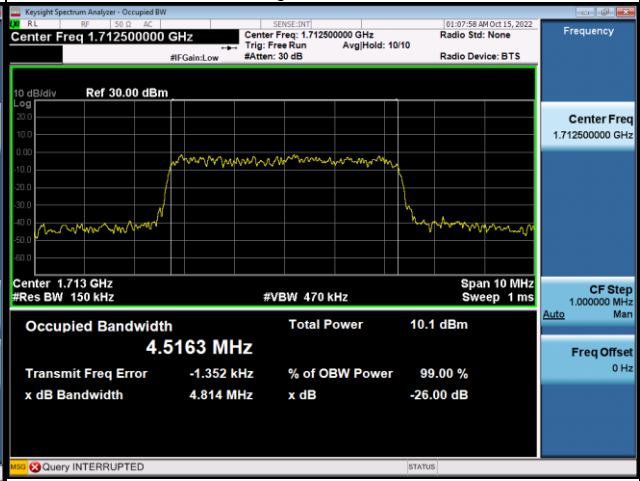
### QPSK-20175



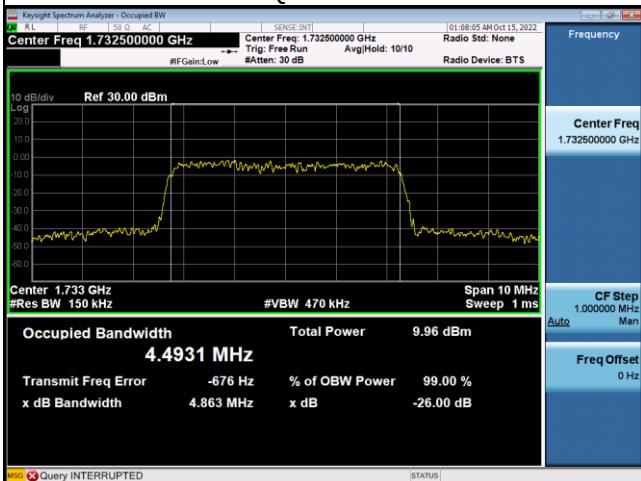
### QPSK-20375



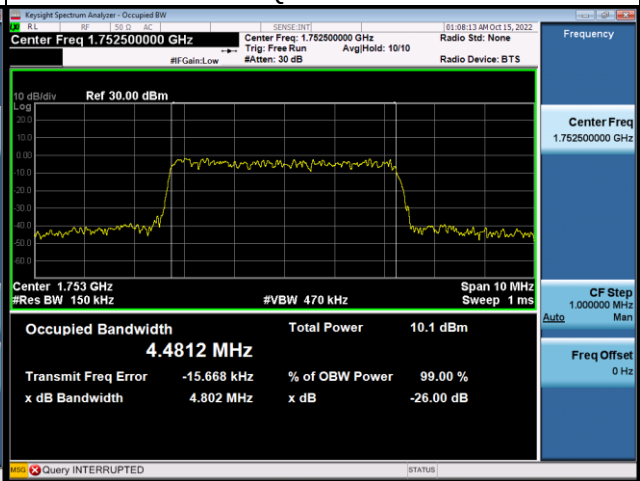
### 16QAM-19975



### 16QAM-20175



### 16QAM-20375

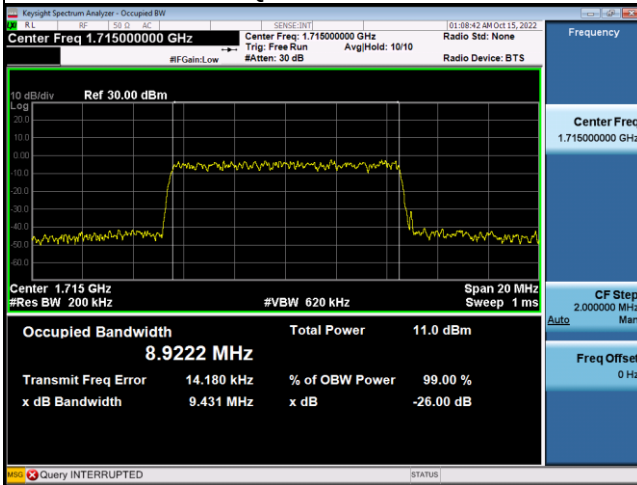




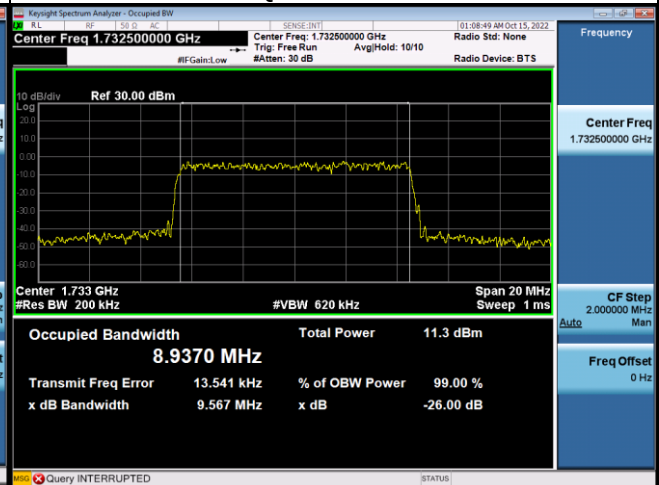
| LTE Band 4_10M |                 |                              |         |                 |                      |
|----------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK           |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20000          | 1715            | 8.9222                       | 20000   | 1715            | 9.431                |
| 20175          | 1732.5          | 8.9370                       | 20175   | 1732.5          | 9.567                |
| 20350          | 1750            | 8.9200                       | 20350   | 1750            | 9.426                |
| 16QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20000          | 1715            | 8.9732                       | 20000   | 1715            | 9.503                |
| 20175          | 1732.5          | 8.9855                       | 20175   | 1732.5          | 9.459                |
| 20350          | 1750            | 8.9837                       | 20350   | 1750            | 9.492                |
| 64QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20000          | 1715            | 8.9588                       | 20000   | 1715            | 9.609                |
| 20175          | 1732.5          | 8.9721                       | 20175   | 1732.5          | 9.425                |
| 20350          | 1750            | 8.9579                       | 20350   | 1750            | 9.435                |

## Spectrum Plot

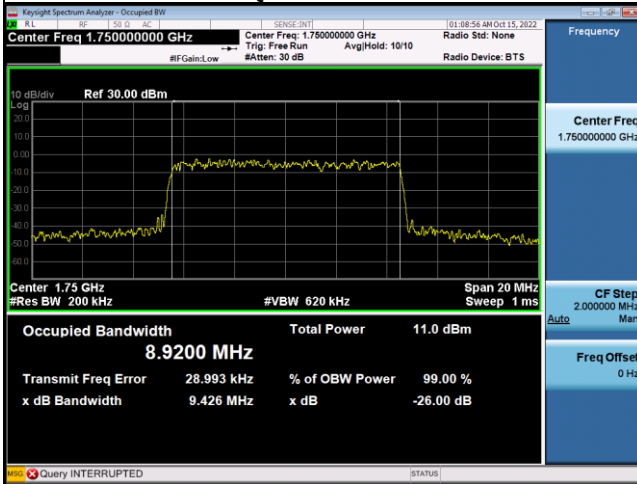
### QPSK-20000



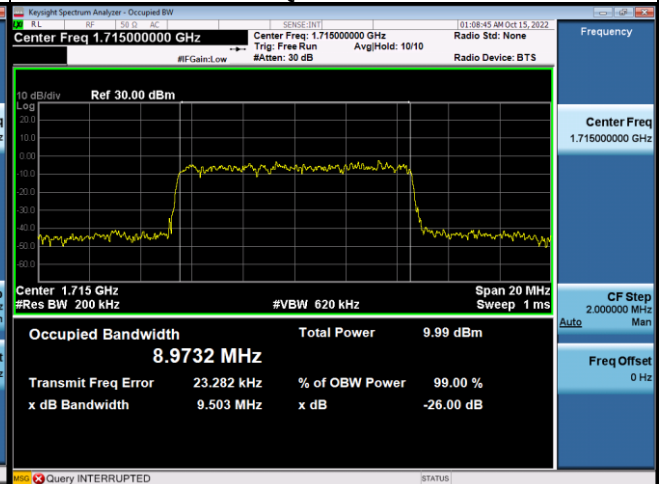
### QPSK-20175



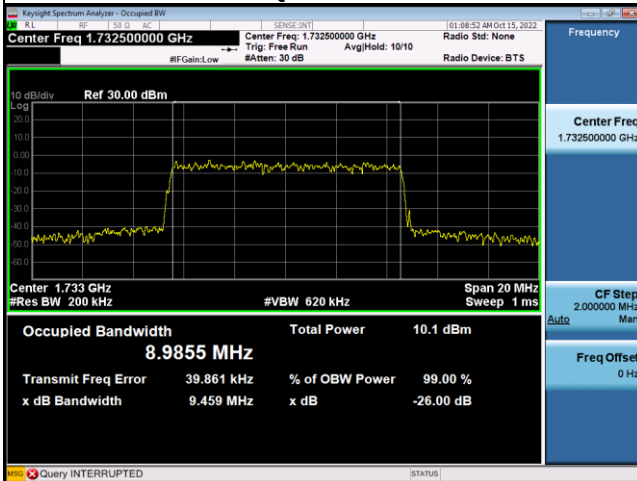
### QPSK-20350



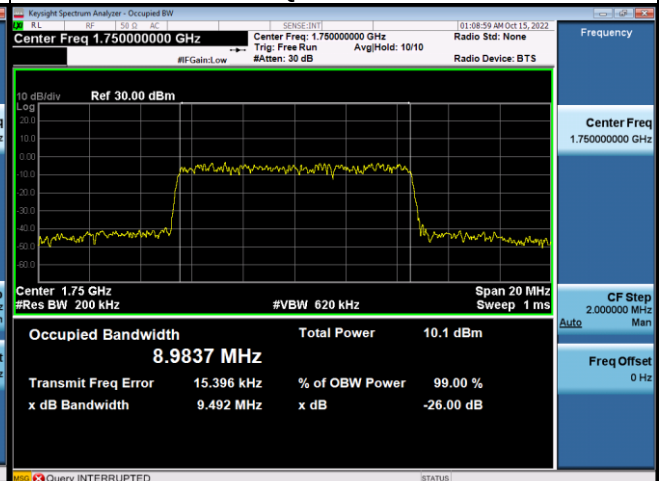
### 16QAM-20000



### 16QAM-20175



### 16QAM-20350

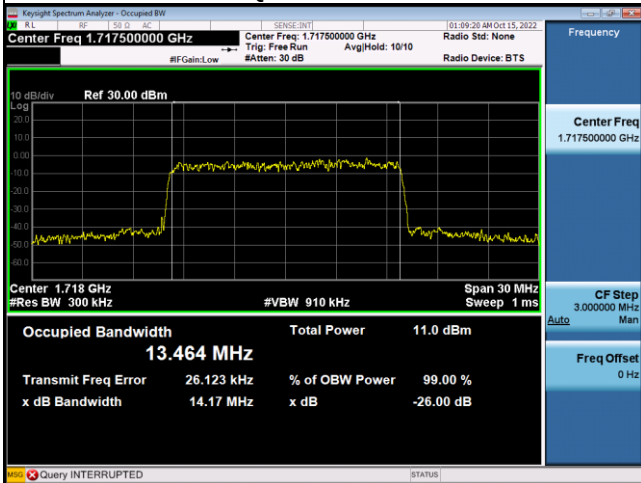




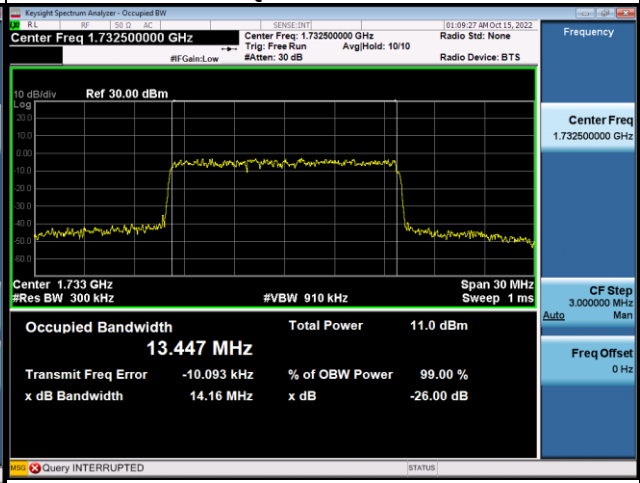
| LTE Band 4_15M |                 |                              |         |                 |                      |
|----------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK           |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20025          | 1717.5          | 13.464                       | 20025   | 1717.5          | 14.17                |
| 20175          | 1732.5          | 13.447                       | 20175   | 1732.5          | 14.16                |
| 20325          | 1747.5          | 13.463                       | 20325   | 1747.5          | 14.17                |
| 16QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20025          | 1717.5          | 13.428                       | 20025   | 1717.5          | 14.13                |
| 20175          | 1732.5          | 13.436                       | 20175   | 1732.5          | 14.18                |
| 20325          | 1747.5          | 13.471                       | 20325   | 1747.5          | 14.26                |
| 64QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20025          | 1717.5          | 13.410                       | 20025   | 1717.5          | 14.13                |
| 20175          | 1732.5          | 13.488                       | 20175   | 1732.5          | 14.17                |
| 20325          | 1747.5          | 13.449                       | 20325   | 1747.5          | 14.20                |

## Spectrum Plot

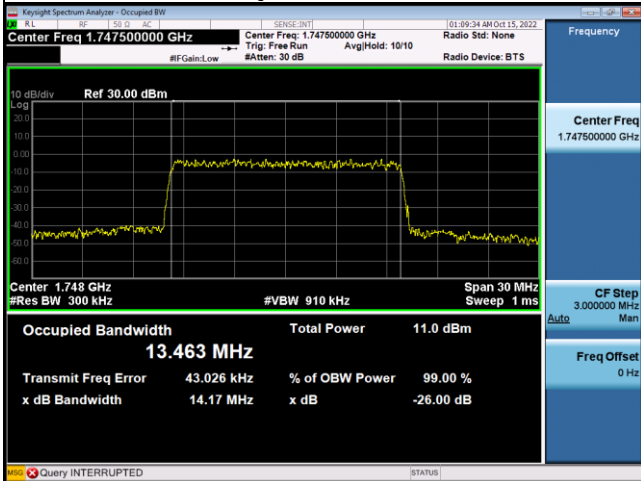
### QPSK-20025



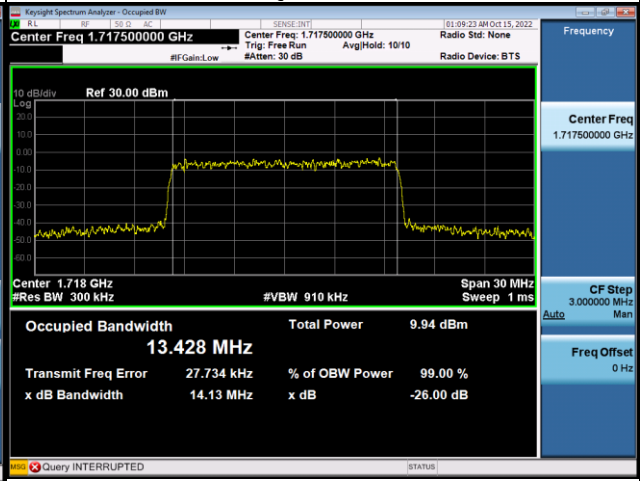
### QPSK-20175



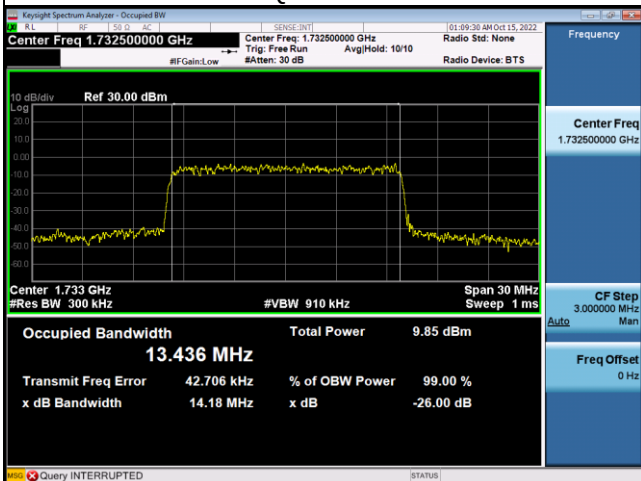
### QPSK-20325



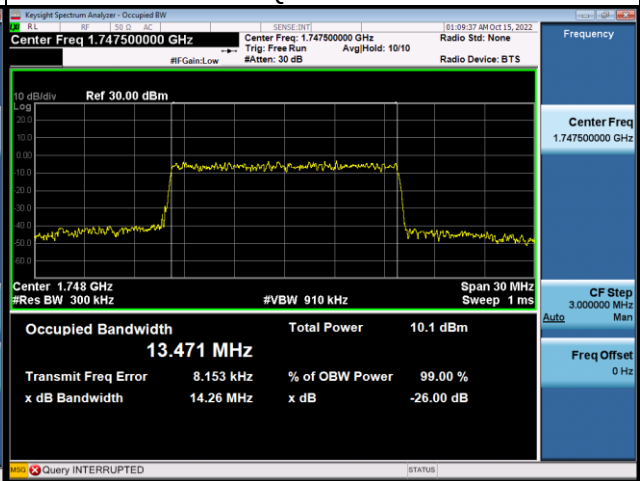
### 16QAM-20025

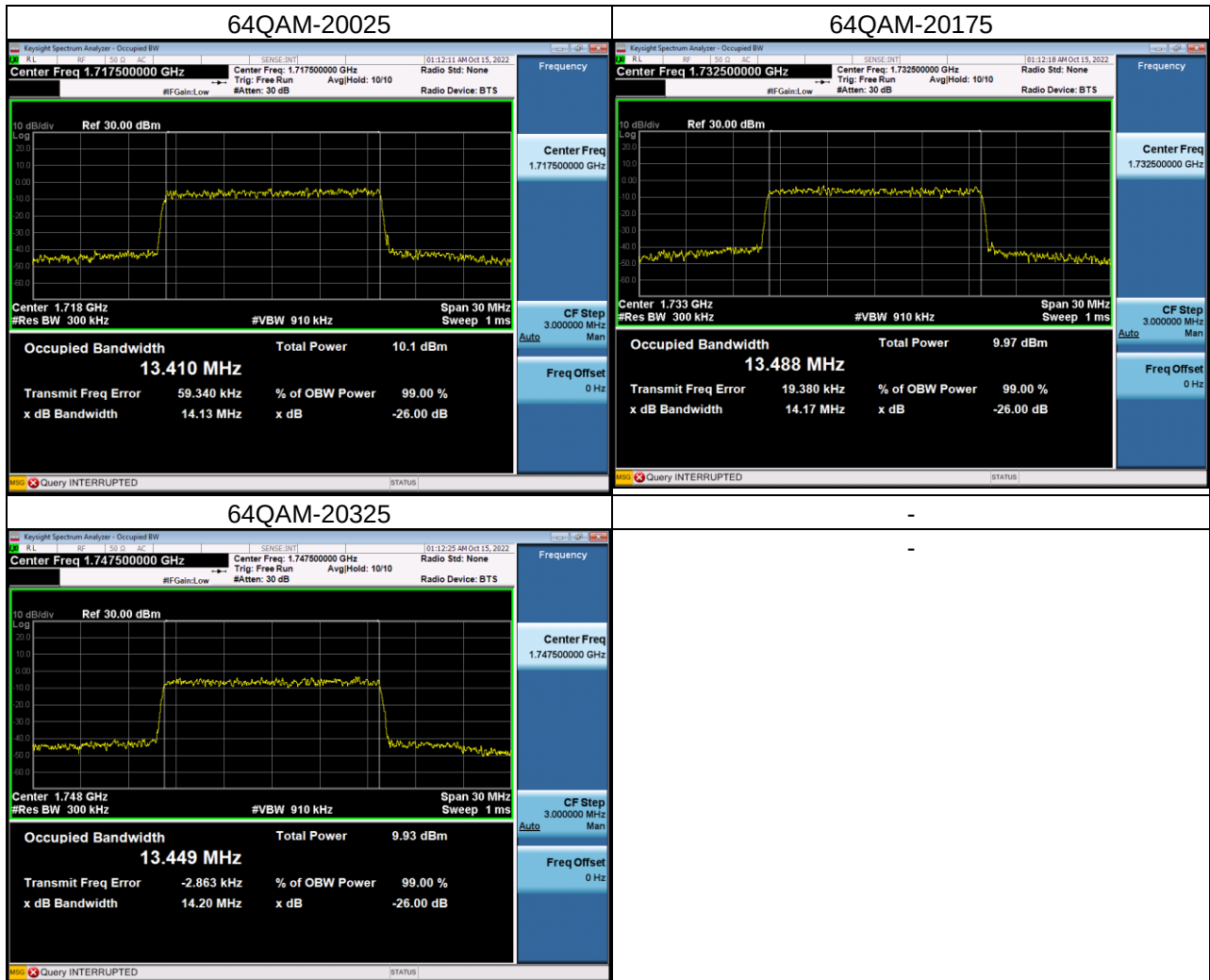


### 16QAM-20175



### 16QAM-20325

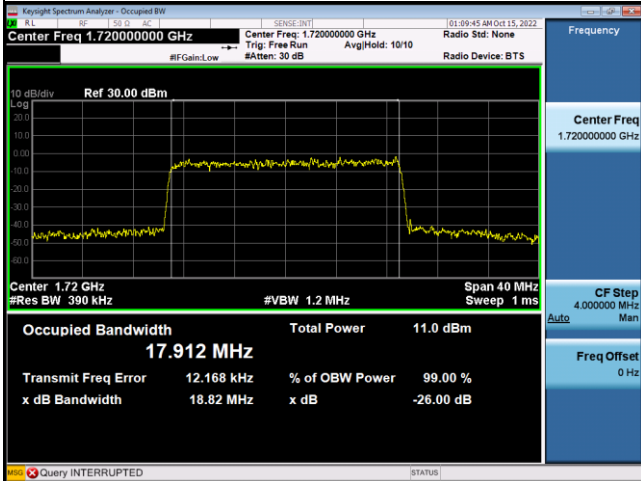




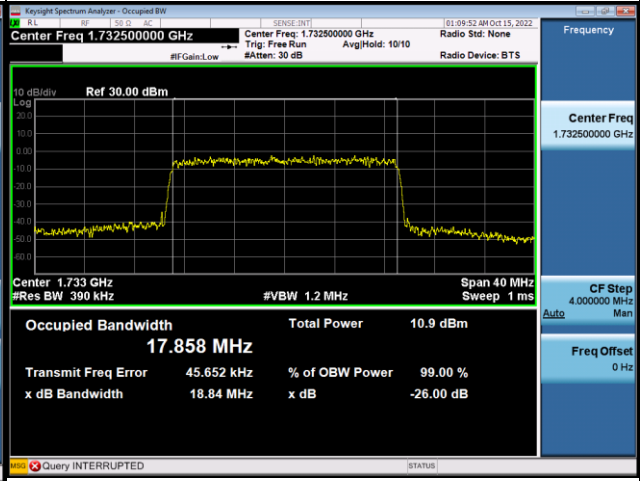
| LTE Band 4_20M |                 |                              |         |                 |                      |
|----------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK           |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20050          | 1720            | 17.912                       | 20050   | 1720            | 18.82                |
| 20175          | 1732.5          | 17.858                       | 20175   | 1732.5          | 18.84                |
| 20300          | 1745            | 17.986                       | 20300   | 1745            | 18.87                |
| 16QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20050          | 1720            | 17.838                       | 20050   | 1720            | 18.94                |
| 20175          | 1732.5          | 17.939                       | 20175   | 1732.5          | 18.86                |
| 20300          | 1745            | 17.828                       | 20300   | 1745            | 18.87                |
| 64QAM          |                 |                              |         |                 |                      |
| Channel        | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20050          | 1720            | 17.911                       | 20050   | 1720            | 18.84                |
| 20175          | 1732.5          | 17.872                       | 20175   | 1732.5          | 18.88                |
| 20300          | 1745            | 17.957                       | 20300   | 1745            | 18.88                |

## Spectrum Plot

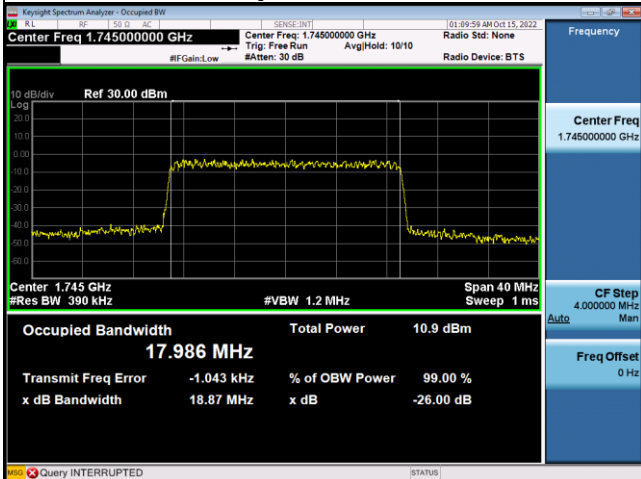
### QPSK-20050



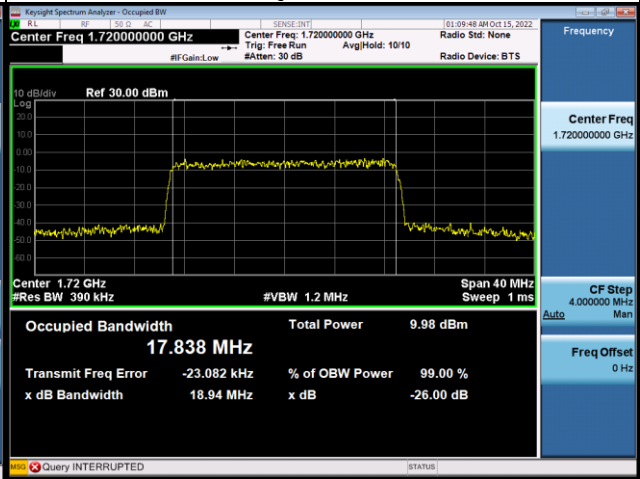
### QPSK-20175



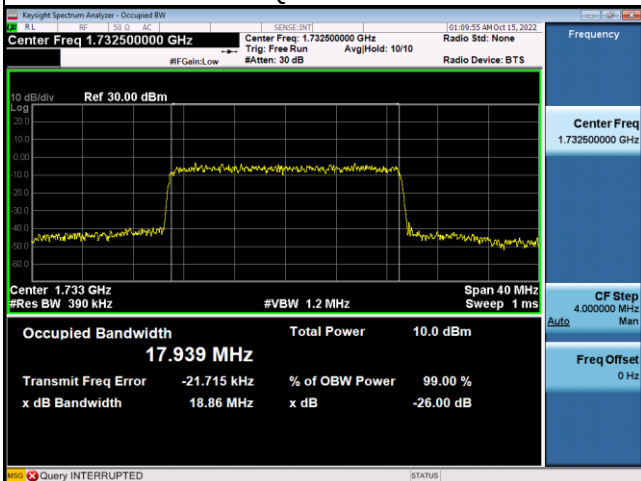
### QPSK-20300



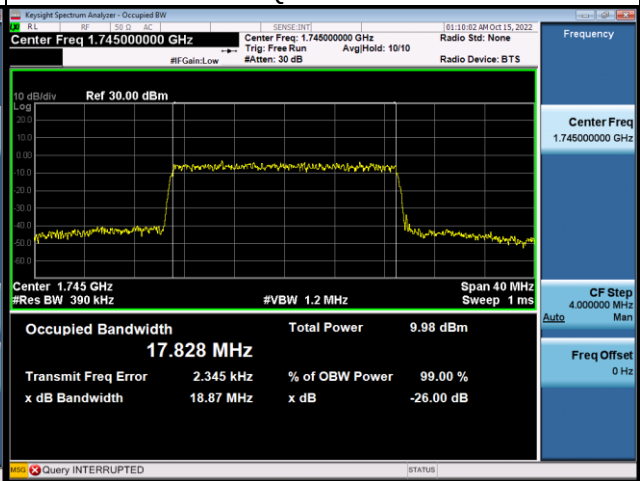
### 16QAM-20050



### 16QAM-20175



### 16QAM-20300





| LTE Band 7_5M |                 |                              |         |                 |                      |
|---------------|-----------------|------------------------------|---------|-----------------|----------------------|
| QPSK          |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20775         | 2502.5          | 4.5303                       | 20775   | 2502.5          | 4.830                |
| 21100         | 2535            | 4.5174                       | 21100   | 2535            | 4.839                |
| 21425         | 2567.5          | 4.5133                       | 21425   | 2567.5          | 4.816                |
| 16QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20775         | 2502.5          | 4.5176                       | 20775   | 2502.5          | 4.806                |
| 21100         | 2535            | 4.5096                       | 21100   | 2535            | 4.831                |
| 21425         | 2567.5          | 4.5016                       | 21425   | 2567.5          | 4.813                |
| 64QAM         |                 |                              |         |                 |                      |
| Channel       | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20775         | 2502.5          | 4.5259                       | 20775   | 2502.5          | 4.829                |
| 21100         | 2535            | 4.5242                       | 21100   | 2535            | 4.837                |
| 21425         | 2567.5          | 4.5170                       | 21425   | 2567.5          | 4.823                |