# Appendix Test Data for LTE band 4 (Conducted Measurement)

**Product Name: Voter Identification Unit**

**Trade Mark: SMARTMATIC**

**Test Model: VIU-500 Model 700**

**FCC ID: 2AGVK-VIU-500A70-R2**

# Environmental Conditions

| | |
|---|---|
| **Temperature:** | 23.5℃ |
| **Relative Humidity:** | 58% |
| **ATM Pressure:** | 100.0 kPa |
| **Test Engineer:** | Allen Lai |
| **Supervised by:** | Max Zhang |
| **NOTE** | N/A |

## Appendix A: RF output power

### Test Result

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1.4 | 1710.7 | QPSK | 6 | LOW | 21.81 | 27.76 | 5.95 | 13 | 1.34 | 23.15 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 3 | LOW | 22.86 | 28.44 | 5.58 | 13 | 1.34 | 24.20 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 3 | MID | 22.93 | 28.52 | 5.58 | 13 | 1.34 | 24.27 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 3 | HIGH | 22.86 | 28.39 | 5.53 | 13 | 1.34 | 24.20 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 1 | LOW | 22.72 | 27.55 | 4.84 | 13 | 1.34 | 24.06 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 1 | MID | 22.92 | 27.69 | 4.77 | 13 | 1.34 | 24.26 | 30 | Pass |
| 4 | 1.4 | 1710.7 | QPSK | 1 | HIGH | 22.71 | 27.56 | 4.86 | 13 | 1.34 | 24.05 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 6 | LOW | 20.82 | 27.77 | 6.95 | 13 | 1.34 | 22.16 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 3 | LOW | 22.00 | 28.09 | 6.09 | 13 | 1.34 | 23.34 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 3 | MID | 22.06 | 28.15 | 6.10 | 13 | 1.34 | 23.40 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 3 | HIGH | 22.02 | 28.02 | 6.00 | 13 | 1.34 | 23.36 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 1 | LOW | 21.83 | 27.34 | 5.51 | 13 | 1.34 | 23.17 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 1 | MID | 22.02 | 27.44 | 5.41 | 13 | 1.34 | 23.36 | 30 | Pass |
| 4 | 1.4 | 1710.7 | 16QAM | 1 | HIGH | 21.81 | 27.23 | 5.42 | 13 | 1.34 | 23.15 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 6 | LOW | 21.64 | 27.46 | 5.82 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 3 | LOW | 22.68 | 27.61 | 4.93 | 13 | 1.34 | 24.02 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 3 | MID | 22.67 | 27.61 | 4.94 | 13 | 1.34 | 24.01 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 3 | HIGH | 22.67 | 27.61 | 4.94 | 13 | 1.34 | 24.01 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 1 | LOW | 22.61 | 27.45 | 4.84 | 13 | 1.34 | 23.95 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 1 | MID | 22.75 | 27.54 | 4.79 | 13 | 1.34 | 24.09 | 30 | Pass |
| 4 | 1.4 | 1732.5 | QPSK | 1 | HIGH | 22.52 | 27.49 | 4.97 | 13 | 1.34 | 23.86 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 6 | LOW | 20.70 | 27.47 | 6.77 | 13 | 1.34 | 22.04 | 30 | Pass |

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 1.4 | 1732.5 | 16QAM | 3 | LOW | 21.90 | 27.44 | 5.54 | 13 | 1.34 | 23.24 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 3 | MID | 21.87 | 27.43 | 5.56 | 13 | 1.34 | 23.21 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 3 | HIGH | 21.88 | 27.51 | 5.63 | 13 | 1.34 | 23.22 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 1 | LOW | 21.59 | 26.98 | 5.39 | 13 | 1.34 | 22.93 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 1 | MID | 21.76 | 27.09 | 5.33 | 13 | 1.34 | 23.10 | 30 | Pass |
| 4 | 1.4 | 1732.5 | 16QAM | 1 | HIGH | 21.59 | 27.01 | 5.42 | 13 | 1.34 | 22.93 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 6 | LOW | 21.60 | 26.99 | 5.39 | 13 | 1.34 | 22.94 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 3 | LOW | 22.61 | 27.20 | 4.59 | 13 | 1.34 | 23.95 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 3 | MID | 22.65 | 27.20 | 4.55 | 13 | 1.34 | 23.99 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 3 | HIGH | 22.61 | 27.12 | 4.51 | 13 | 1.34 | 23.95 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 1 | LOW | 22.53 | 26.94 | 4.41 | 13 | 1.34 | 23.87 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 1 | MID | 22.71 | 26.95 | 4.24 | 13 | 1.34 | 24.05 | 30 | Pass |
| 4 | 1.4 | 1754.3 | QPSK | 1 | HIGH | 22.53 | 26.84 | 4.31 | 13 | 1.34 | 23.87 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 6 | LOW | 20.67 | 26.84 | 6.17 | 13 | 1.34 | 22.01 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 3 | LOW | 21.55 | 27.16 | 5.60 | 13 | 1.34 | 22.89 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 3 | MID | 21.54 | 27.15 | 5.61 | 13 | 1.34 | 22.88 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 3 | HIGH | 21.60 | 27.07 | 5.47 | 13 | 1.34 | 22.94 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 1 | LOW | 21.66 | 26.27 | 4.61 | 13 | 1.34 | 23.00 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 1 | MID | 21.87 | 26.36 | 4.49 | 13 | 1.34 | 23.21 | 30 | Pass |
| 4 | 1.4 | 1754.3 | 16QAM | 1 | HIGH | 21.66 | 26.21 | 4.55 | 13 | 1.34 | 23.00 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 15 | LOW | 21.79 | 28.16 | 6.37 | 13 | 1.34 | 23.13 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 8 | LOW | 21.83 | 27.85 | 6.03 | 13 | 1.34 | 23.17 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 8 | MID | 21.80 | 27.85 | 6.04 | 13 | 1.34 | 23.14 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 8 | HIGH | 21.81 | 27.79 | 5.98 | 13 | 1.34 | 23.15 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 1 | LOW | 22.83 | 27.62 | 4.79 | 13 | 1.34 | 24.17 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 1 | MID | 22.80 | 27.63 | 4.83 | 13 | 1.34 | 24.14 | 30 | Pass |
| 4 | 3 | 1711.5 | QPSK | 1 | HIGH | 22.77 | 27.57 | 4.81 | 13 | 1.34 | 24.11 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 15 | LOW | 20.94 | 27.91 | 6.97 | 13 | 1.34 | 22.28 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 8 | LOW | 20.94 | 27.63 | 6.69 | 13 | 1.34 | 22.28 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 8 | MID | 20.95 | 27.63 | 6.68 | 13 | 1.34 | 22.29 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 8 | HIGH | 20.95 | 27.62 | 6.66 | 13 | 1.34 | 22.29 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 1 | LOW | 21.92 | 27.37 | 5.45 | 13 | 1.34 | 23.26 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 1 | MID | 21.85 | 27.30 | 5.45 | 13 | 1.34 | 23.19 | 30 | Pass |
| 4 | 3 | 1711.5 | 16QAM | 1 | HIGH | 21.86 | 27.31 | 5.45 | 13 | 1.34 | 23.20 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 15 | LOW | 21.65 | 27.60 | 5.95 | 13 | 1.34 | 22.99 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 8 | LOW | 21.61 | 27.28 | 5.67 | 13 | 1.34 | 22.95 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 8 | MID | 21.62 | 27.29 | 5.67 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 8 | HIGH | 21.60 | 27.29 | 5.69 | 13 | 1.34 | 22.94 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 1 | LOW | 22.64 | 26.97 | 4.33 | 13 | 1.34 | 23.98 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 1 | MID | 22.54 | 27.01 | 4.47 | 13 | 1.34 | 23.88 | 30 | Pass |
| 4 | 3 | 1732.5 | QPSK | 1 | HIGH | 22.54 | 27.07 | 4.53 | 13 | 1.34 | 23.88 | 30 | Pass |

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 3 | 1732.5 | 16QAM | 15 | LOW | 20.80 | 27.63 | 6.84 | 13 | 1.34 | 22.14 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 8 | LOW | 20.84 | 27.33 | 6.49 | 13 | 1.34 | 22.18 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 8 | MID | 20.85 | 27.32 | 6.46 | 13 | 1.34 | 22.19 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 8 | HIGH | 20.85 | 27.33 | 6.48 | 13 | 1.34 | 22.19 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 1 | LOW | 22.19 | 27.35 | 5.17 | 13 | 1.34 | 23.53 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 1 | MID | 22.19 | 27.45 | 5.27 | 13 | 1.34 | 23.53 | 30 | Pass |
| **4** | 3 | 1732.5 | 16QAM | 1 | HIGH | 22.16 | 27.51 | 5.35 | 13 | 1.34 | 23.50 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 15 | LOW | 21.58 | 27.44 | 5.85 | 13 | 1.34 | 22.92 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 8 | LOW | 21.58 | 27.29 | 5.70 | 13 | 1.34 | 22.92 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 8 | MID | 21.59 | 27.28 | 5.69 | 13 | 1.34 | 22.93 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 8 | HIGH | 21.56 | 27.18 | 5.62 | 13 | 1.34 | 22.90 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 1 | LOW | 22.59 | 27.12 | 4.53 | 13 | 1.34 | 23.93 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 1 | MID | 22.60 | 26.99 | 4.39 | 13 | 1.34 | 23.94 | 30 | Pass |
| **4** | 3 | 1753.5 | QPSK | 1 | HIGH | 22.56 | 26.86 | 4.30 | 13 | 1.34 | 23.90 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 15 | LOW | 20.58 | 26.91 | 6.32 | 13 | 1.34 | 21.92 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 8 | LOW | 20.62 | 26.88 | 6.26 | 13 | 1.34 | 21.96 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 8 | MID | 20.62 | 26.87 | 6.25 | 13 | 1.34 | 21.96 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 8 | HIGH | 20.60 | 26.79 | 6.20 | 13 | 1.34 | 21.94 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 1 | LOW | 21.72 | 26.43 | 4.71 | 13 | 1.34 | 23.06 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 1 | MID | 21.74 | 26.35 | 4.62 | 13 | 1.34 | 23.08 | 30 | Pass |
| **4** | 3 | 1753.5 | 16QAM | 1 | HIGH | 21.68 | 26.23 | 4.55 | 13 | 1.34 | 23.02 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 25 | LOW | 21.78 | 28.19 | 6.41 | 13 | 1.34 | 23.12 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 12 | LOW | 21.74 | 27.67 | 5.93 | 13 | 1.34 | 23.08 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 12 | MID | 21.75 | 27.68 | 5.94 | 13 | 1.34 | 23.09 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 12 | HIGH | 21.76 | 27.65 | 5.89 | 13 | 1.34 | 23.10 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 1 | LOW | 22.71 | 27.86 | 5.14 | 13 | 1.34 | 24.05 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 1 | MID | 22.83 | 27.85 | 5.02 | 13 | 1.34 | 24.17 | 30 | Pass |
| **4** | 5 | 1712.5 | QPSK | 1 | HIGH | 22.73 | 27.69 | 4.97 | 13 | 1.34 | 24.07 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 25 | LOW | 20.88 | 28.10 | 7.22 | 13 | 1.34 | 22.22 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 12 | LOW | 20.75 | 27.83 | 7.08 | 13 | 1.34 | 22.09 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 12 | MID | 20.73 | 27.76 | 7.04 | 13 | 1.34 | 22.07 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 12 | HIGH | 20.79 | 27.79 | 6.99 | 13 | 1.34 | 22.13 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 1 | LOW | 21.83 | 27.84 | 6.01 | 13 | 1.34 | 23.17 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 1 | MID | 21.93 | 27.82 | 5.89 | 13 | 1.34 | 23.27 | 30 | Pass |
| **4** | 5 | 1712.5 | 16QAM | 1 | HIGH | 21.76 | 27.63 | 5.86 | 13 | 1.34 | 23.10 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 25 | LOW | 21.60 | 27.49 | 5.89 | 13 | 1.34 | 22.94 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 12 | LOW | 21.60 | 27.11 | 5.51 | 13 | 1.34 | 22.94 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 12 | MID | 21.59 | 27.11 | 5.51 | 13 | 1.34 | 22.93 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 12 | HIGH | 21.57 | 27.17 | 5.59 | 13 | 1.34 | 22.91 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 1 | LOW | 22.52 | 27.31 | 4.80 | 13 | 1.34 | 23.86 | 30 | Pass |
| **4** | 5 | 1732.5 | QPSK | 1 | MID | 22.64 | 27.51 | 4.87 | 13 | 1.34 | 23.98 | 30 | Pass |

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 1732.5 | QPSK | 1 | HIGH | 22.52 | 27.58 | 5.07 | 13 | 1.34 | 23.86 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 25 | LOW | 20.72 | 27.89 | 7.17 | 13 | 1.34 | 22.06 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 12 | LOW | 20.67 | 27.48 | 6.81 | 13 | 1.34 | 22.01 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 12 | MID | 20.65 | 27.48 | 6.82 | 13 | 1.34 | 21.99 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 12 | HIGH | 20.60 | 27.56 | 6.96 | 13 | 1.34 | 21.94 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 1 | LOW | 21.43 | 26.59 | 5.15 | 13 | 1.34 | 22.77 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 1 | MID | 21.52 | 26.74 | 5.22 | 13 | 1.34 | 22.86 | 30 | Pass |
| 4 | 5 | 1732.5 | 16QAM | 1 | HIGH | 21.44 | 26.77 | 5.33 | 13 | 1.34 | 22.78 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 25 | LOW | 21.54 | 27.87 | 6.33 | 13 | 1.34 | 22.88 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 12 | LOW | 21.55 | 27.41 | 5.85 | 13 | 1.34 | 22.89 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 12 | MID | 21.55 | 27.41 | 5.85 | 13 | 1.34 | 22.89 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 12 | HIGH | 21.56 | 27.20 | 5.64 | 13 | 1.34 | 22.90 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 1 | LOW | 22.50 | 27.29 | 4.80 | 13 | 1.34 | 23.84 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 1 | MID | 22.64 | 27.12 | 4.48 | 13 | 1.34 | 23.98 | 30 | Pass |
| 4 | 5 | 1752.5 | QPSK | 1 | HIGH | 22.50 | 26.86 | 4.36 | 13 | 1.34 | 23.84 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 25 | LOW | 20.60 | 27.56 | 6.96 | 13 | 1.34 | 21.94 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 12 | LOW | 20.63 | 27.17 | 6.53 | 13 | 1.34 | 21.97 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 12 | MID | 20.63 | 27.17 | 6.54 | 13 | 1.34 | 21.97 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 12 | HIGH | 20.61 | 27.02 | 6.41 | 13 | 1.34 | 21.95 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 1 | LOW | 21.79 | 27.12 | 5.33 | 13 | 1.34 | 23.13 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 1 | MID | 21.91 | 26.97 | 5.06 | 13 | 1.34 | 23.25 | 30 | Pass |
| 4 | 5 | 1752.5 | 16QAM | 1 | HIGH | 21.76 | 26.72 | 4.96 | 13 | 1.34 | 23.10 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 50 | LOW | 21.79 | 28.05 | 6.26 | 13 | 1.34 | 23.13 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 25 | LOW | 21.70 | 28.40 | 6.70 | 13 | 1.34 | 23.04 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 25 | MID | 21.73 | 28.40 | 6.67 | 13 | 1.34 | 23.07 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 25 | HIGH | 21.74 | 28.16 | 6.42 | 13 | 1.34 | 23.08 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 1 | LOW | 22.80 | 27.70 | 4.90 | 13 | 1.34 | 24.14 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 1 | MID | 22.87 | 27.50 | 4.63 | 13 | 1.34 | 24.21 | 30 | Pass |
| 4 | 10 | 1715 | QPSK | 1 | HIGH | 22.67 | 27.14 | 4.47 | 13 | 1.34 | 24.01 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 50 | LOW | 20.86 | 28.25 | 7.39 | 13 | 1.34 | 22.20 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 25 | LOW | 20.88 | 28.15 | 7.27 | 13 | 1.34 | 22.22 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 25 | MID | 20.90 | 28.16 | 7.26 | 13 | 1.34 | 22.24 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 25 | HIGH | 20.89 | 27.94 | 7.04 | 13 | 1.34 | 22.23 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 1 | LOW | 21.83 | 27.36 | 5.53 | 13 | 1.34 | 23.17 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 1 | MID | 21.93 | 27.23 | 5.29 | 13 | 1.34 | 23.27 | 30 | Pass |
| 4 | 10 | 1715 | 16QAM | 1 | HIGH | 21.67 | 26.83 | 5.16 | 13 | 1.34 | 23.01 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 50 | LOW | 21.66 | 27.62 | 5.96 | 13 | 1.34 | 23.00 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 25 | LOW | 21.65 | 27.48 | 5.83 | 13 | 1.34 | 22.99 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 25 | MID | 21.64 | 27.47 | 5.82 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 25 | HIGH | 21.62 | 27.70 | 6.09 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 1 | LOW | 22.64 | 26.91 | 4.27 | 13 | 1.34 | 23.98 | 30 | Pass |

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 10 | 1732.5 | QPSK | 1 | MID | 22.77 | 27.11 | 4.35 | 13 | 1.34 | 24.11 | 30 | Pass |
| 4 | 10 | 1732.5 | QPSK | 1 | HIGH | 22.80 | 27.43 | 4.63 | 13 | 1.34 | 24.14 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 50 | LOW | 20.76 | 27.78 | 7.02 | 13 | 1.34 | 22.10 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 25 | LOW | 20.81 | 27.48 | 6.68 | 13 | 1.34 | 22.15 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 25 | MID | 20.80 | 27.45 | 6.66 | 13 | 1.34 | 22.14 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 25 | HIGH | 20.73 | 27.61 | 6.88 | 13 | 1.34 | 22.07 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 1 | LOW | 22.19 | 27.25 | 5.07 | 13 | 1.34 | 23.53 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 1 | MID | 22.35 | 27.49 | 5.14 | 13 | 1.34 | 23.69 | 30 | Pass |
| 4 | 10 | 1732.5 | 16QAM | 1 | HIGH | 22.33 | 27.84 | 5.51 | 13 | 1.34 | 23.67 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 50 | LOW | 21.64 | 27.70 | 6.06 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 25 | LOW | 21.64 | 27.73 | 6.09 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 25 | MID | 21.63 | 27.74 | 6.11 | 13 | 1.34 | 22.97 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 25 | HIGH | 21.56 | 27.34 | 5.79 | 13 | 1.34 | 22.90 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 1 | LOW | 22.57 | 27.66 | 5.09 | 13 | 1.34 | 23.91 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 1 | MID | 22.72 | 27.42 | 4.70 | 13 | 1.34 | 24.06 | 30 | Pass |
| 4 | 10 | 1750 | QPSK | 1 | HIGH | 22.60 | 26.94 | 4.34 | 13 | 1.34 | 23.94 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 50 | LOW | 20.69 | 27.42 | 6.73 | 13 | 1.34 | 22.03 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 25 | LOW | 20.74 | 27.86 | 7.12 | 13 | 1.34 | 22.08 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 25 | MID | 20.75 | 27.91 | 7.16 | 13 | 1.34 | 22.09 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 25 | HIGH | 20.69 | 27.52 | 6.83 | 13 | 1.34 | 22.03 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 1 | LOW | 21.70 | 26.74 | 5.04 | 13 | 1.34 | 23.04 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 1 | MID | 21.90 | 26.67 | 4.77 | 13 | 1.34 | 23.24 | 30 | Pass |
| 4 | 10 | 1750 | 16QAM | 1 | HIGH | 21.70 | 26.27 | 4.57 | 13 | 1.34 | 23.04 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 75 | LOW | 21.76 | 28.16 | 6.40 | 13 | 1.34 | 23.10 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 38 | LOW | 21.76 | 28.15 | 6.40 | 13 | 1.34 | 23.10 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 38 | MID | 21.76 | 28.17 | 6.41 | 13 | 1.34 | 23.10 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 38 | HIGH | 21.77 | 28.18 | 6.40 | 13 | 1.34 | 23.11 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 1 | LOW | 22.69 | 27.38 | 4.68 | 13 | 1.34 | 24.03 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 1 | MID | 22.69 | 27.04 | 4.35 | 13 | 1.34 | 24.03 | 30 | Pass |
| 4 | 15 | 1717.5 | QPSK | 1 | HIGH | 22.49 | 26.65 | 4.16 | 13 | 1.34 | 23.83 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 75 | LOW | 20.77 | 27.99 | 7.22 | 13 | 1.34 | 22.11 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 38 | LOW | 20.77 | 27.98 | 7.21 | 13 | 1.34 | 22.11 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 38 | MID | 20.78 | 27.92 | 7.15 | 13 | 1.34 | 22.12 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 38 | HIGH | 20.78 | 27.95 | 7.17 | 13 | 1.34 | 22.12 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 1 | LOW | 22.18 | 27.38 | 5.20 | 13 | 1.34 | 23.52 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 1 | MID | 22.17 | 27.05 | 4.88 | 13 | 1.34 | 23.51 | 30 | Pass |
| 4 | 15 | 1717.5 | 16QAM | 1 | HIGH | 22.03 | 26.69 | 4.66 | 13 | 1.34 | 23.37 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 75 | LOW | 21.71 | 28.25 | 6.54 | 13 | 1.34 | 23.05 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 38 | LOW | 21.67 | 28.26 | 6.59 | 13 | 1.34 | 23.01 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 38 | MID | 21.68 | 28.28 | 6.60 | 13 | 1.34 | 23.02 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 38 | HIGH | 21.57 | 27.69 | 6.12 | 13 | 1.34 | 22.91 | 30 | Pass |

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 15 | 1732.5 | QPSK | 1 | LOW | 22.52 | 26.84 | 4.32 | 13 | 1.34 | 23.86 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 1 | MID | 22.65 | 27.08 | 4.43 | 13 | 1.34 | 23.99 | 30 | Pass |
| 4 | 15 | 1732.5 | QPSK | 1 | HIGH | 22.43 | 27.27 | 4.84 | 13 | 1.34 | 23.77 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 75 | LOW | 20.73 | 27.70 | 6.97 | 13 | 1.34 | 22.07 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 38 | LOW | 20.72 | 27.70 | 6.98 | 13 | 1.34 | 22.06 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 38 | MID | 20.74 | 27.81 | 7.06 | 13 | 1.34 | 22.08 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 38 | HIGH | 20.71 | 27.86 | 7.15 | 13 | 1.34 | 22.05 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 1 | LOW | 22.14 | 27.22 | 5.08 | 13 | 1.34 | 23.48 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 1 | MID | 22.23 | 27.48 | 5.25 | 13 | 1.34 | 23.57 | 30 | Pass |
| 4 | 15 | 1732.5 | 16QAM | 1 | HIGH | 22.09 | 27.86 | 5.77 | 13 | 1.34 | 23.43 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 75 | LOW | 21.62 | 28.16 | 6.54 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 38 | LOW | 21.65 | 28.14 | 6.49 | 13 | 1.34 | 22.99 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 38 | MID | 21.62 | 28.07 | 6.45 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 38 | HIGH | 21.64 | 28.10 | 6.47 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 1 | LOW | 22.50 | 27.62 | 5.12 | 13 | 1.34 | 23.84 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 1 | MID | 22.67 | 27.61 | 4.94 | 13 | 1.34 | 24.01 | 30 | Pass |
| 4 | 15 | 1747.5 | QPSK | 1 | HIGH | 22.49 | 26.92 | 4.44 | 13 | 1.34 | 23.83 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 75 | LOW | 20.66 | 27.87 | 7.21 | 13 | 1.34 | 22.00 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 38 | LOW | 20.67 | 27.88 | 7.22 | 13 | 1.34 | 22.01 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 38 | MID | 20.67 | 27.89 | 7.23 | 13 | 1.34 | 22.01 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 38 | HIGH | 20.68 | 27.96 | 7.28 | 13 | 1.34 | 22.02 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 1 | LOW | 21.66 | 26.70 | 5.04 | 13 | 1.34 | 23.00 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 1 | MID | 21.82 | 26.76 | 4.94 | 13 | 1.34 | 23.16 | 30 | Pass |
| 4 | 15 | 1747.5 | 16QAM | 1 | HIGH | 21.62 | 26.25 | 4.63 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 100 | LOW | 21.68 | 28.05 | 6.37 | 13 | 1.34 | 23.02 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 50 | LOW | 21.62 | 27.95 | 6.33 | 13 | 1.34 | 22.96 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 50 | MID | 21.64 | 27.96 | 6.32 | 13 | 1.34 | 22.98 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 50 | HIGH | 21.65 | 27.57 | 5.92 | 13 | 1.34 | 22.99 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 1 | LOW | 22.51 | 27.71 | 5.20 | 13 | 1.34 | 23.85 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 1 | MID | 22.87 | 27.34 | 4.47 | 13 | 1.34 | 24.21 | 30 | Pass |
| 4 | 20 | 1720 | QPSK | 1 | HIGH | 22.37 | 26.95 | 4.58 | 13 | 1.34 | 23.71 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 100 | LOW | 20.75 | 27.85 | 7.10 | 13 | 1.34 | 22.09 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 50 | LOW | 20.71 | 27.92 | 7.21 | 13 | 1.34 | 22.05 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 50 | MID | 20.73 | 27.96 | 7.23 | 13 | 1.34 | 22.07 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 50 | HIGH | 20.71 | 27.49 | 6.78 | 13 | 1.34 | 22.05 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 1 | LOW | 22.14 | 27.67 | 5.52 | 13 | 1.34 | 23.48 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 1 | MID | 22.45 | 27.28 | 4.83 | 13 | 1.34 | 23.79 | 30 | Pass |
| 4 | 20 | 1720 | 16QAM | 1 | HIGH | 21.97 | 26.92 | 4.94 | 13 | 1.34 | 23.31 | 30 | Pass |
| 4 | 20 | 1732.5 | QPSK | 100 | LOW | 21.72 | 27.97 | 6.25 | 13 | 1.34 | 23.06 | 30 | Pass |
| 4 | 20 | 1732.5 | QPSK | 50 | LOW | 21.73 | 27.59 | 5.86 | 13 | 1.34 | 23.07 | 30 | Pass |
| 4 | 20 | 1732.5 | QPSK | 50 | MID | 21.69 | 27.55 | 5.86 | 13 | 1.34 | 23.03 | 30 | Pass |

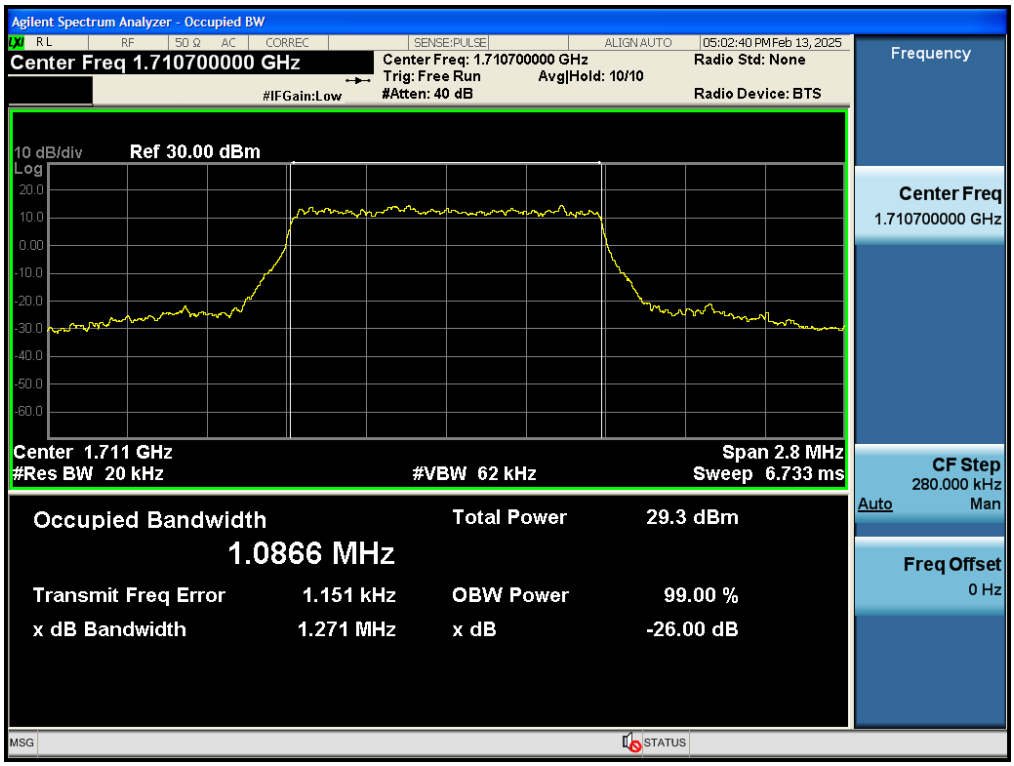
| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) | Peak Power (dBm) | PAR (dB) | Limit (dB) | AntGain (dBi) | EIRP (dBm) | Limit (dBm) | Conclusion |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 20 | 1732.5 | QPSK | 50 | HIGH | 21.61 | 27.89 | 6.28 | 13 | 1.34 | 22.95 | 30 | Pass |
| **4** | 20 | 1732.5 | QPSK | 1 | LOW | 22.42 | 27.09 | 4.68 | 13 | 1.34 | 23.76 | 30 | Pass |
| **4** | 20 | 1732.5 | QPSK | 1 | MID | 22.82 | 27.37 | 4.55 | 13 | 1.34 | 24.16 | 30 | Pass |
| **4** | 20 | 1732.5 | QPSK | 1 | HIGH | 22.40 | 27.68 | 5.27 | 13 | 1.34 | 23.74 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 100 | LOW | 20.79 | 27.98 | 7.19 | 13 | 1.34 | 22.13 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 50 | LOW | 20.80 | 27.76 | 6.95 | 13 | 1.34 | 22.14 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 50 | MID | 20.79 | 27.67 | 6.87 | 13 | 1.34 | 22.13 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 50 | HIGH | 20.70 | 28.02 | 7.32 | 13 | 1.34 | 22.04 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 1 | LOW | 21.70 | 26.90 | 5.20 | 13 | 1.34 | 23.04 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 1 | MID | 22.14 | 27.20 | 5.06 | 13 | 1.34 | 23.48 | 30 | Pass |
| **4** | 20 | 1732.5 | 16QAM | 1 | HIGH | 21.72 | 27.46 | 5.73 | 13 | 1.34 | 23.06 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 100 | LOW | 21.63 | 28.07 | 6.44 | 13 | 1.34 | 22.97 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 50 | LOW | 21.65 | 27.98 | 6.33 | 13 | 1.34 | 22.99 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 50 | MID | 21.63 | 27.95 | 6.32 | 13 | 1.34 | 22.97 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 50 | HIGH | 21.65 | 27.80 | 6.15 | 13 | 1.34 | 22.99 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 1 | LOW | 22.38 | 27.19 | 4.81 | 13 | 1.34 | 23.72 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 1 | MID | 22.81 | 27.61 | 4.81 | 13 | 1.34 | 24.15 | 30 | Pass |
| **4** | 20 | 1745 | QPSK | 1 | HIGH | 22.39 | 26.80 | 4.40 | 13 | 1.34 | 23.73 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 100 | LOW | 20.68 | 27.99 | 7.30 | 13 | 1.34 | 22.02 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 50 | LOW | 20.73 | 27.84 | 7.11 | 13 | 1.34 | 22.07 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 50 | MID | 20.70 | 27.82 | 7.12 | 13 | 1.34 | 22.04 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 50 | HIGH | 20.71 | 27.65 | 6.94 | 13 | 1.34 | 22.05 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 1 | LOW | 21.60 | 27.38 | 5.78 | 13 | 1.34 | 22.94 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 1 | MID | 22.04 | 27.84 | 5.80 | 13 | 1.34 | 23.38 | 30 | Pass |
| **4** | 20 | 1745 | 16QAM | 1 | HIGH | 21.56 | 26.96 | 5.40 | 13 | 1.34 | 22.90 | 30 | Pass |

# Appendix B: Occupied bandwidth

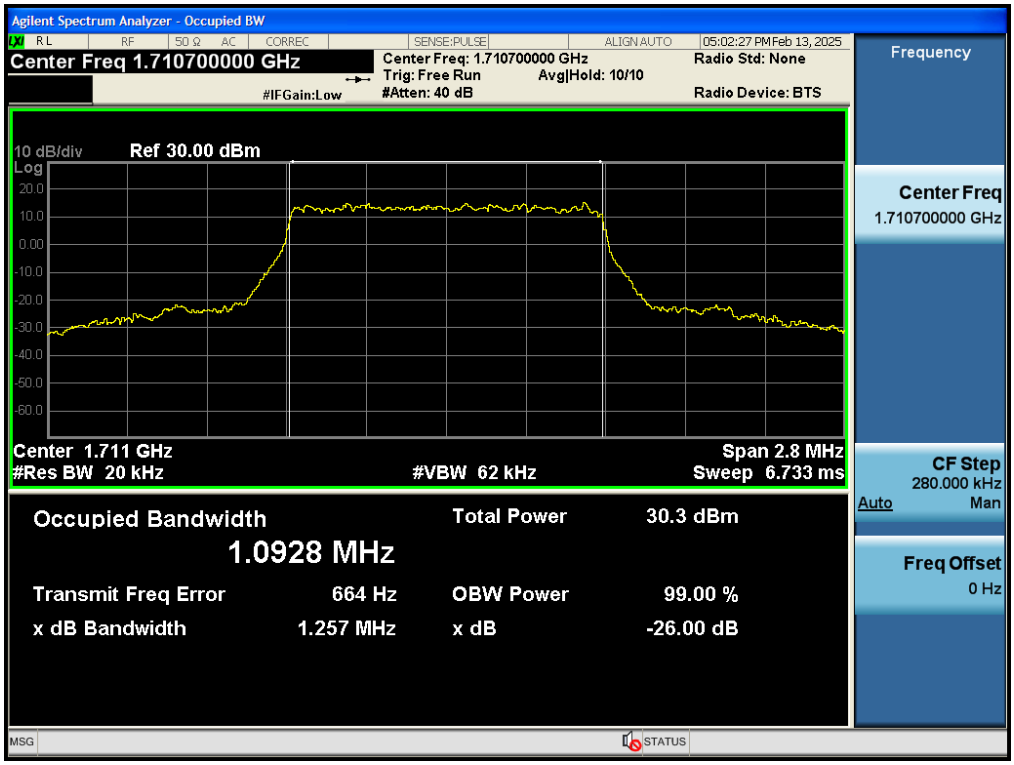
## Test Result

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Occupied Bandwidth (MHz) | Emission Bandwidth (MHz) | Limit |
|---|---|---|---|---|---|---|---|---|
| 4 | 1.4 | 1710.7 | QPSK | 6 | LOW | 1.093 | 1.257 | No limit |
| 4 | 1.4 | 1710.7 | 16QAM | 6 | LOW | 1.087 | 1.271 | No limit |
| 4 | 1.4 | 1732.5 | QPSK | 6 | LOW | 1.083 | 1.252 | No limit |
| 4 | 1.4 | 1732.5 | 16QAM | 6 | LOW | 1.088 | 1.285 | No limit |
| 4 | 1.4 | 1754.3 | QPSK | 6 | LOW | 1.086 | 1.285 | No limit |
| 4 | 1.4 | 1754.3 | 16QAM | 6 | LOW | 1.081 | 1.247 | No limit |
| 4 | 3 | 1711.5 | QPSK | 15 | LOW | 2.682 | 2.866 | No limit |
| 4 | 3 | 1711.5 | 16QAM | 15 | LOW | 2.676 | 2.872 | No limit |
| 4 | 3 | 1732.5 | QPSK | 15 | LOW | 2.678 | 2.854 | No limit |
| 4 | 3 | 1732.5 | 16QAM | 15 | LOW | 2.678 | 2.858 | No limit |
| 4 | 3 | 1753.5 | QPSK | 15 | LOW | 2.686 | 2.862 | No limit |
| 4 | 3 | 1753.5 | 16QAM | 15 | LOW | 2.678 | 2.859 | No limit |
| 4 | 5 | 1712.5 | QPSK | 25 | LOW | 4.466 | 4.846 | No limit |
| 4 | 5 | 1712.5 | 16QAM | 25 | LOW | 4.469 | 4.852 | No limit |
| 4 | 5 | 1732.5 | QPSK | 25 | LOW | 4.482 | 4.845 | No limit |
| 4 | 5 | 1732.5 | 16QAM | 25 | LOW | 4.467 | 4.781 | No limit |
| 4 | 5 | 1752.5 | QPSK | 25 | LOW | 4.485 | 4.817 | No limit |
| 4 | 5 | 1752.5 | 16QAM | 25 | LOW | 4.48 | 4.852 | No limit |
| 4 | 10 | 1715 | QPSK | 50 | LOW | 8.945 | 9.598 | No limit |
| 4 | 10 | 1715 | 16QAM | 50 | LOW | 8.945 | 9.58 | No limit |
| 4 | 10 | 1732.5 | QPSK | 50 | LOW | 8.96 | 9.618 | No limit |
| 4 | 10 | 1732.5 | 16QAM | 50 | LOW | 8.949 | 9.522 | No limit |
| 4 | 10 | 1750 | QPSK | 50 | LOW | 8.946 | 9.554 | No limit |
| 4 | 10 | 1750 | 16QAM | 50 | LOW | 8.953 | 9.581 | No limit |
| 4 | 15 | 1717.5 | QPSK | 75 | LOW | 13.408 | 14.419 | No limit |
| 4 | 15 | 1717.5 | 16QAM | 75 | LOW | 13.426 | 14.281 | No limit |
| 4 | 15 | 1732.5 | QPSK | 75 | LOW | 13.424 | 14.374 | No limit |
| 4 | 15 | 1732.5 | 16QAM | 75 | LOW | 13.415 | 14.337 | No limit |
| 4 | 15 | 1747.5 | QPSK | 75 | LOW | 13.396 | 14.306 | No limit |
| 4 | 15 | 1747.5 | 16QAM | 75 | LOW | 13.407 | 14.3 | No limit |
| 4 | 20 | 1720 | QPSK | 100 | LOW | 17.913 | 19.303 | No limit |
| 4 | 20 | 1720 | 16QAM | 100 | LOW | 17.863 | 18.982 | No limit |
| 4 | 20 | 1732.5 | QPSK | 100 | LOW | 17.883 | 18.965 | No limit |
| 4 | 20 | 1732.5 | 16QAM | 100 | LOW | 17.927 | 19.041 | No limit |
| 4 | 20 | 1745 | QPSK | 100 | LOW | 17.883 | 18.983 | No limit |
| 4 | 20 | 1745 | 16QAM | 100 | LOW | 17.898 | 19.022 | No limit |

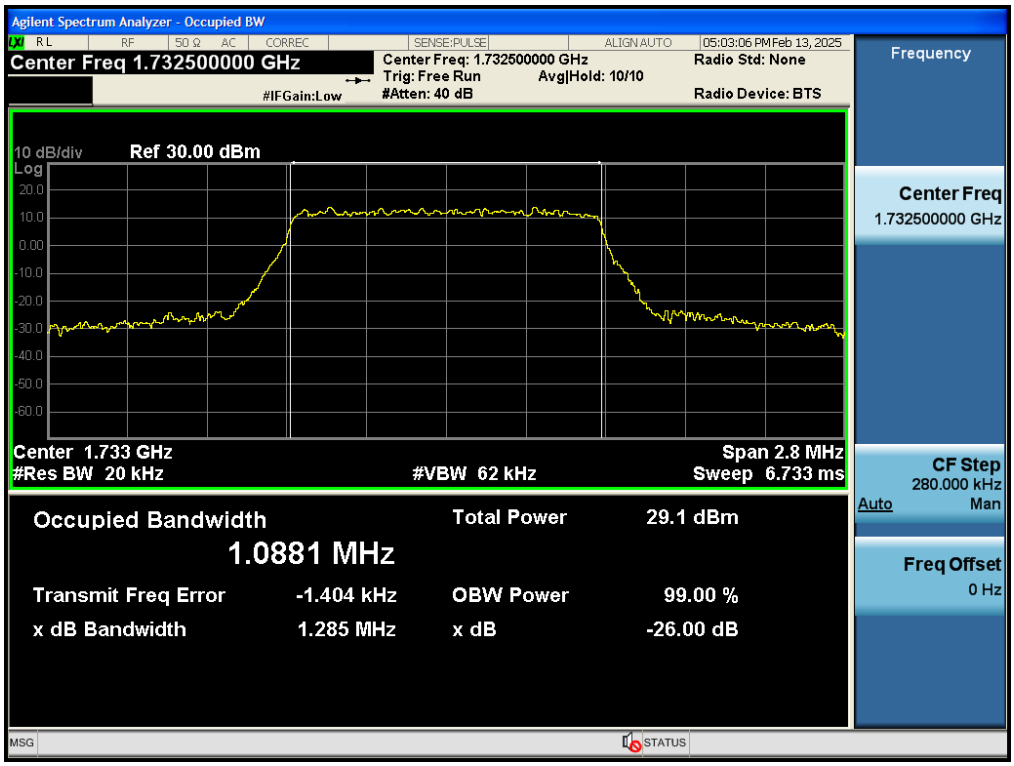
## Test Graphs



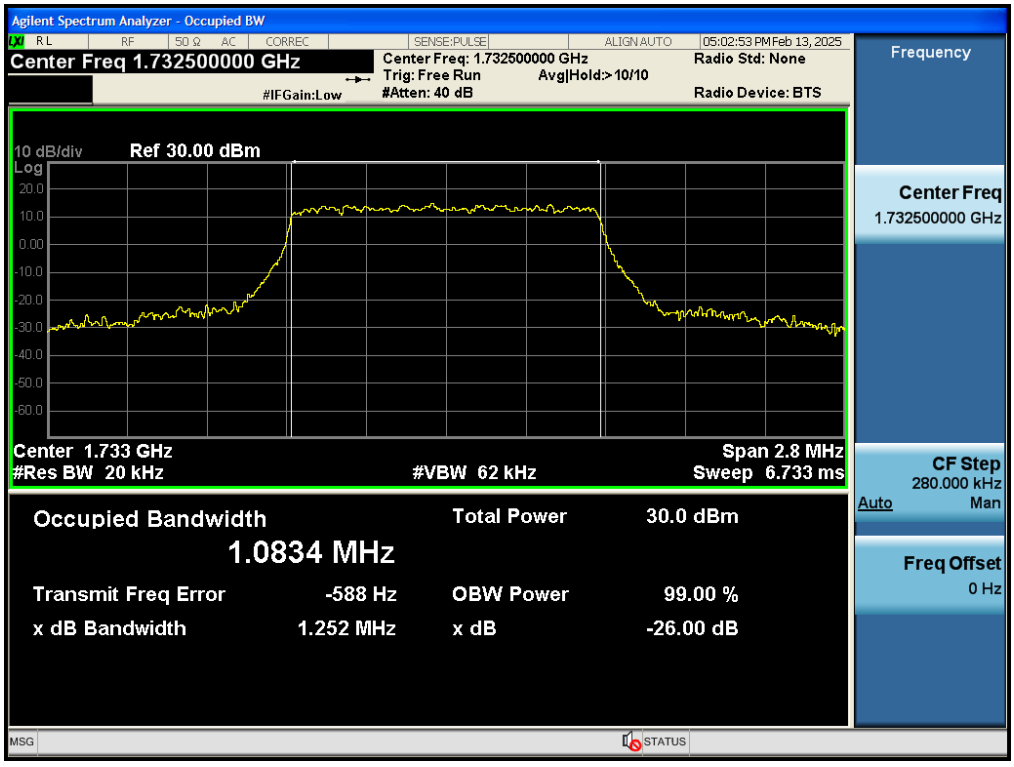

Test_Graph_band4_1710.7MHz_1.4M_16QAM_6RB#LOW_OBW&EBW



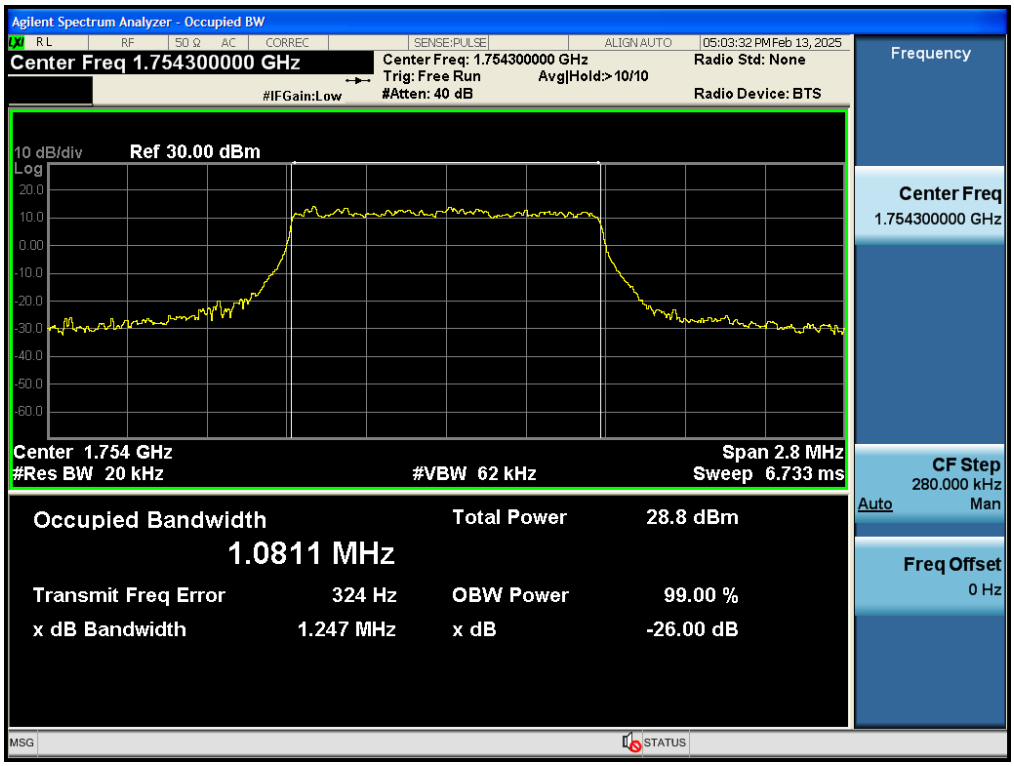

Test_Graph_band4_1710.7MHz_1.4M_QPSK_6RB#LOW_OBW&EBW



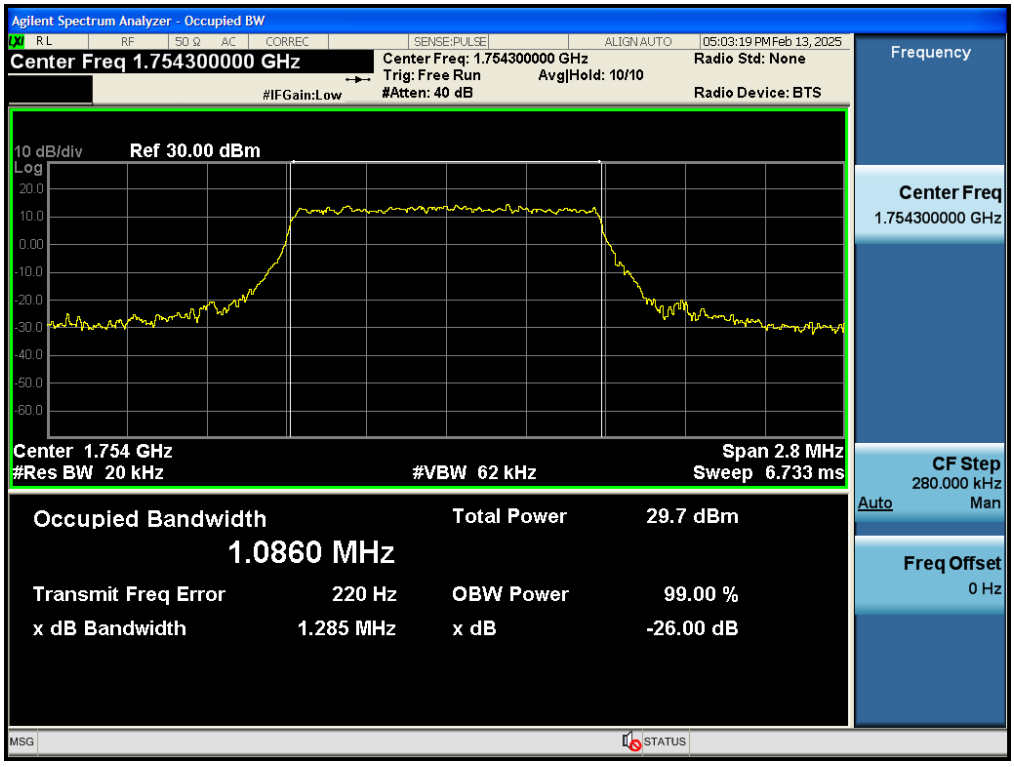

Test_Graph_band4_1732.5MHz_1.4M_16QAM_6RB#LOW_OBW&EBW



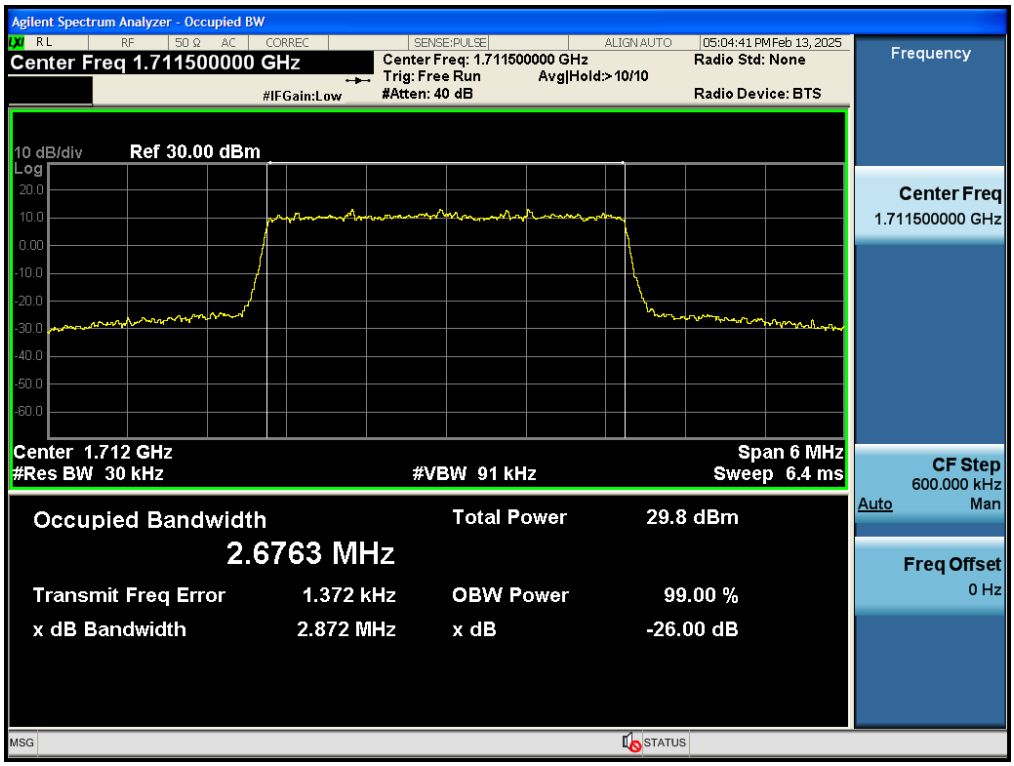

Test_Graph_band4_1732.5MHz_1.4M_QPSK_6RB#LOW_OBW&EBW



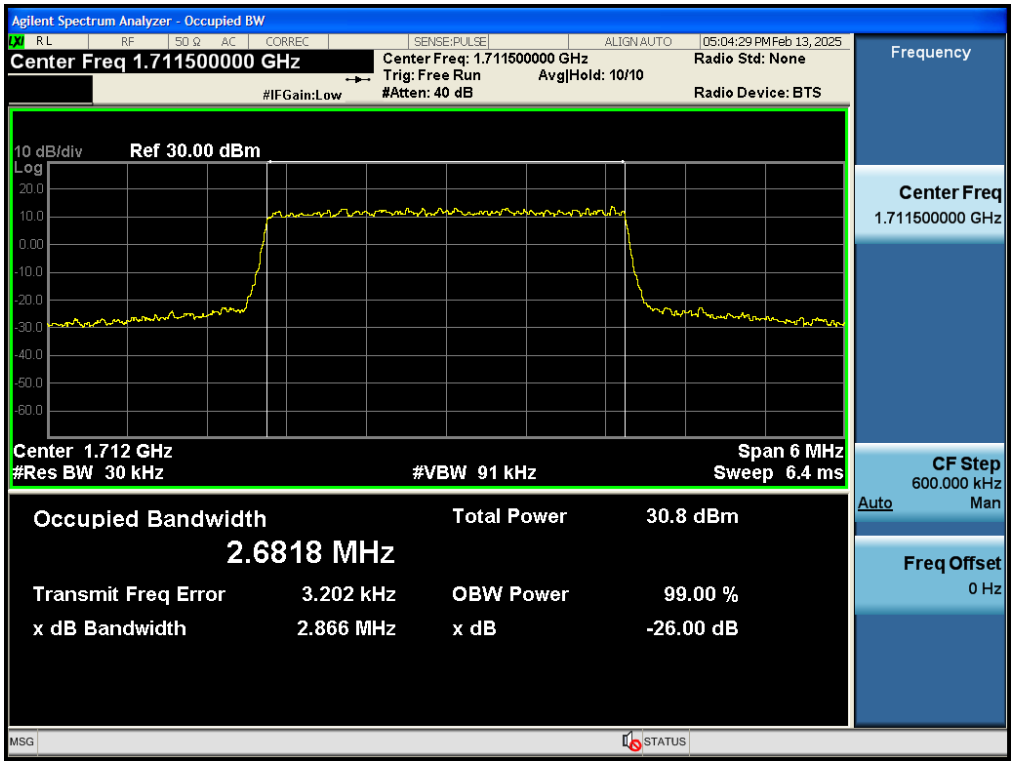

Test_Graph_band4_1754.3MHz_1.4M_16QAM_6RB#LOW_OBW&EBW




Test_Graph_band4_1754.3MHz_1.4M_QPSK_6RB#LOW_OBW&EBW




Test_Graph_band4_1711.5MHz_3M_16QAM_15RB#LOW_OBW&EBW

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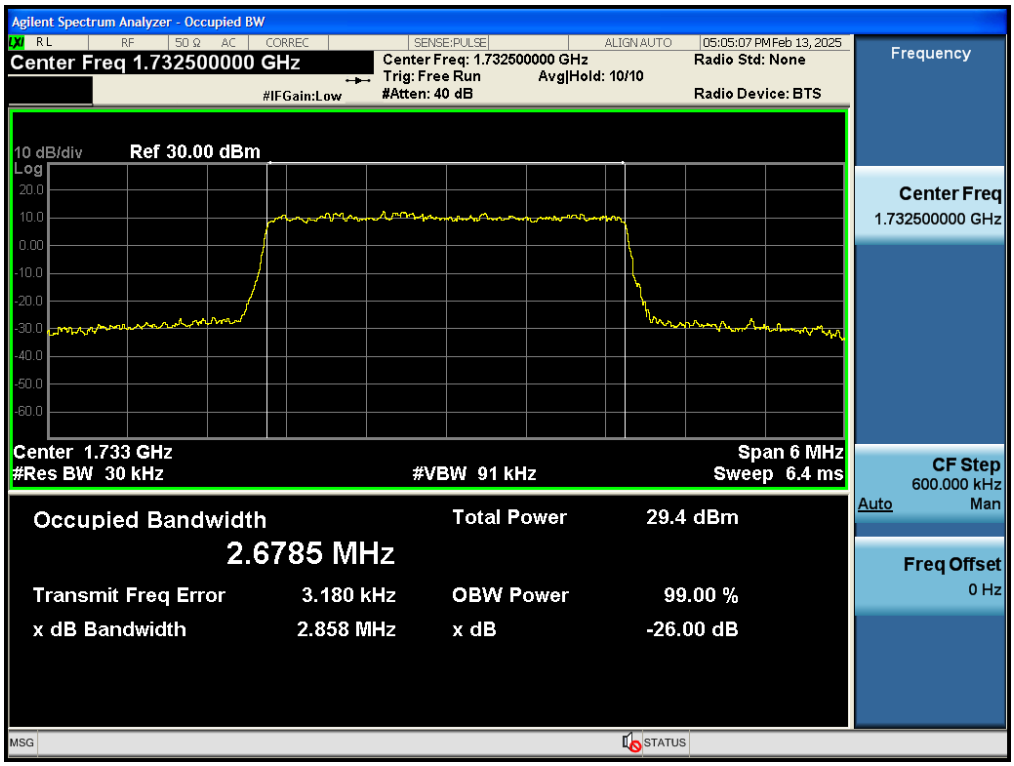
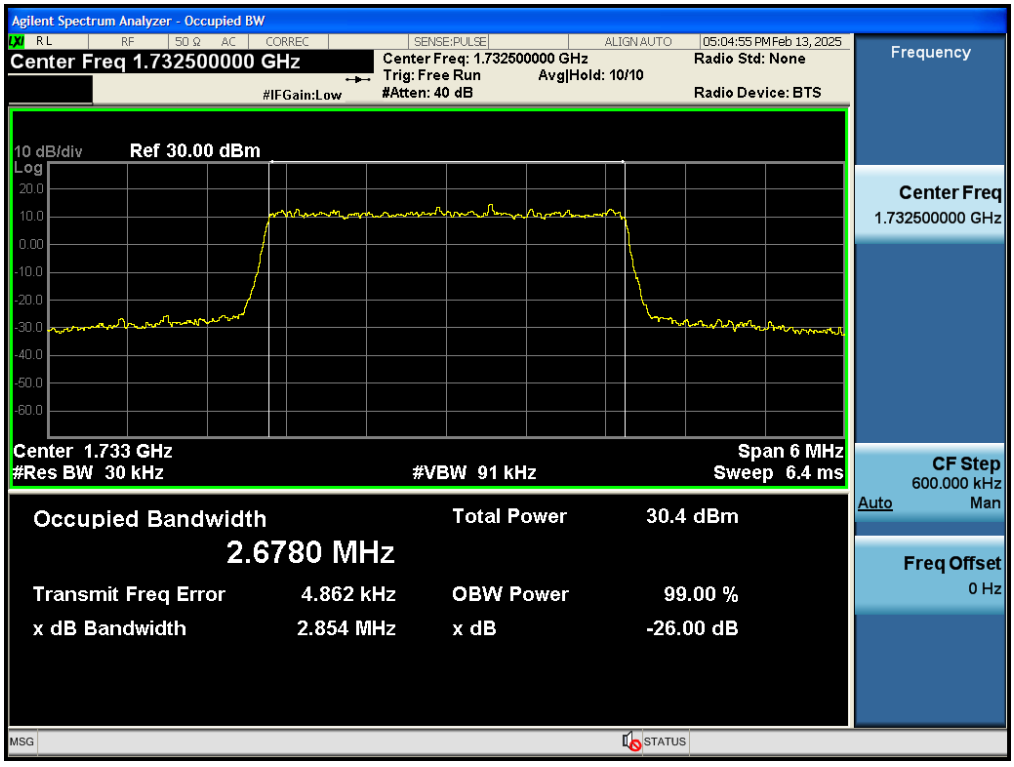
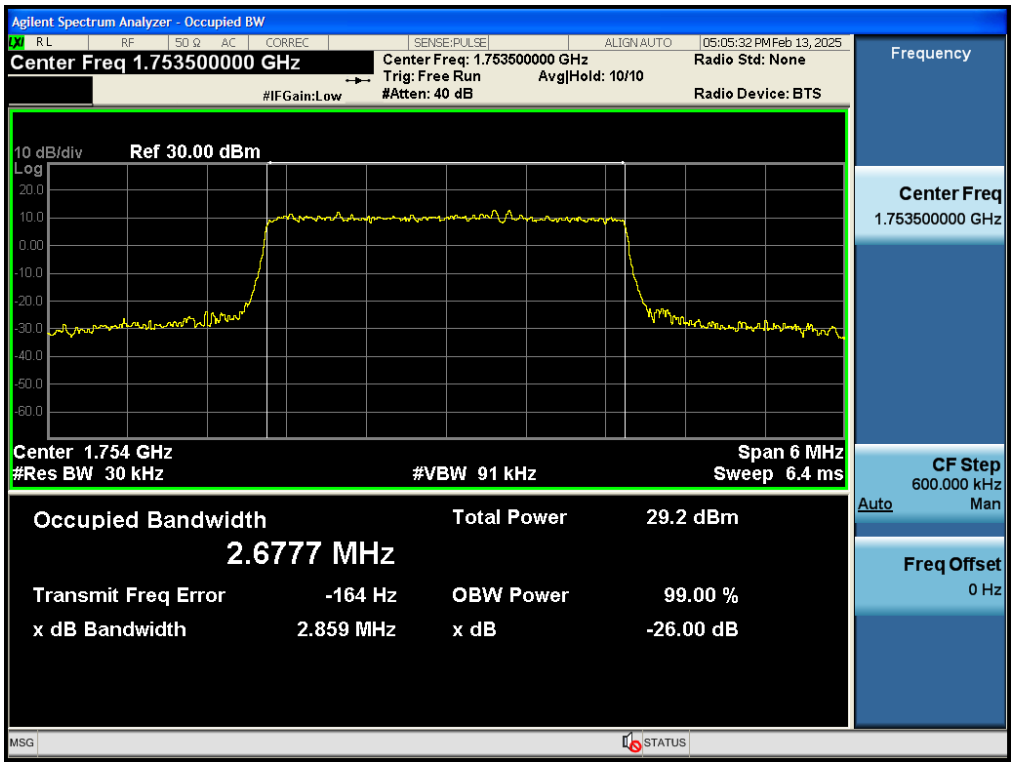


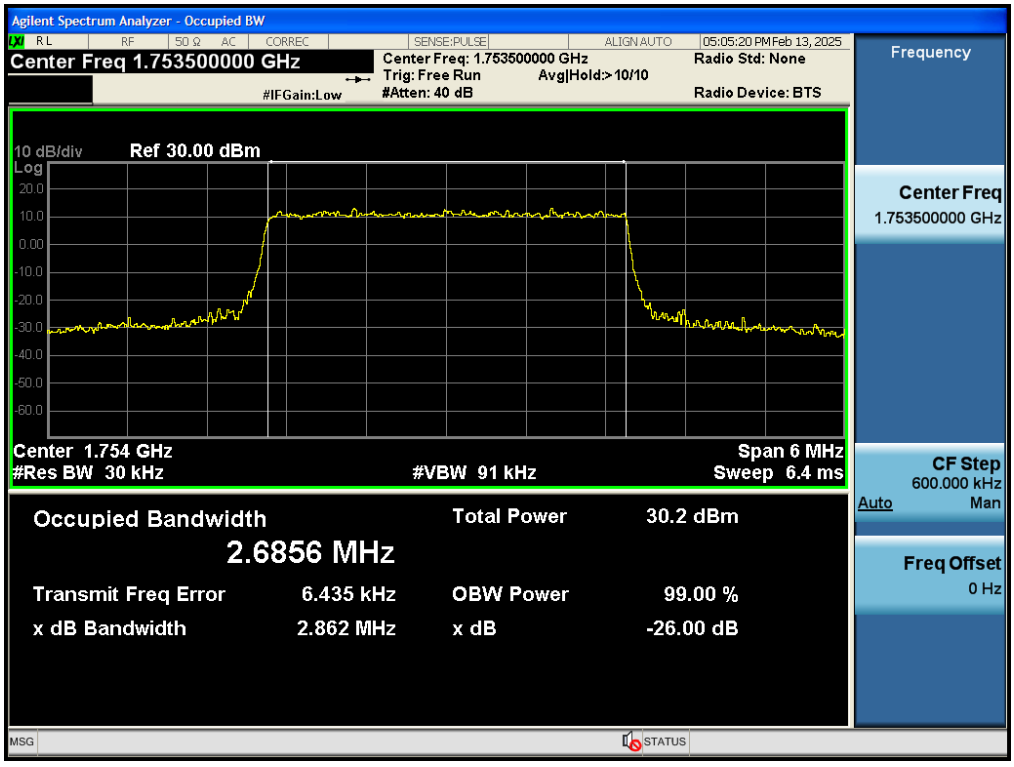

Test_Graph_band4_1732.5MHz_3M_16QAM_15RB#LOW_OBW&EBW



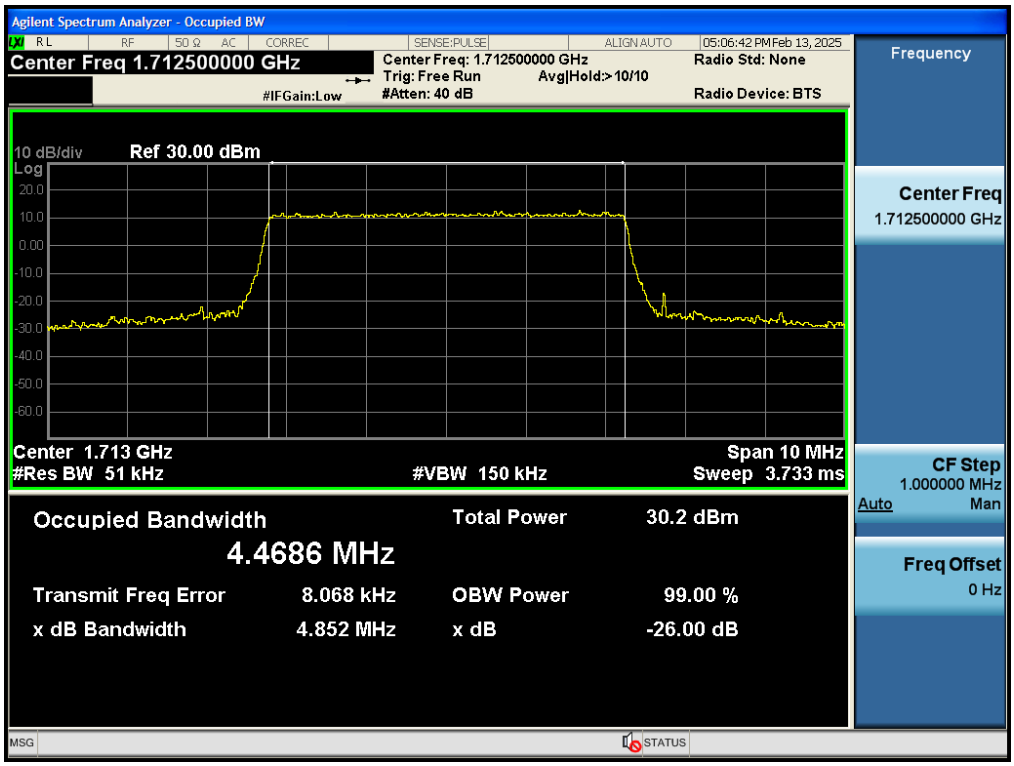

Test_Graph_band4_1732.5MHz_3M_QPSK_15RB#LOW_OBW&EBW



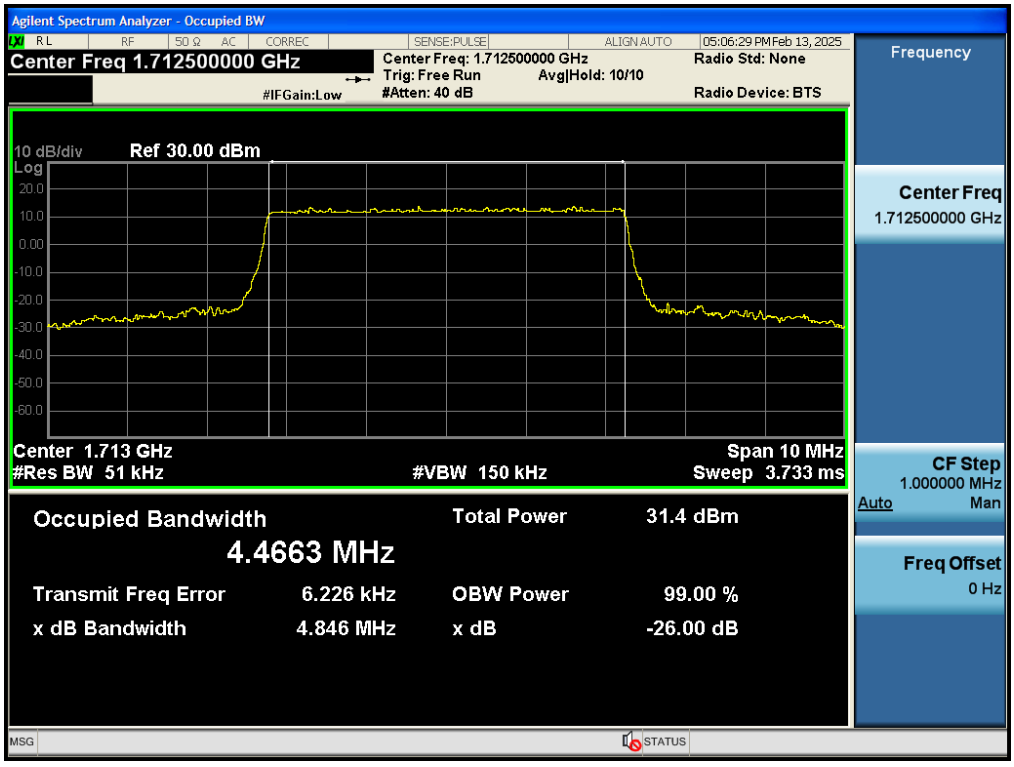

Test_Graph_band4_1753.5MHz_3M_16QAM_15RB#LOW_OBW&EBW



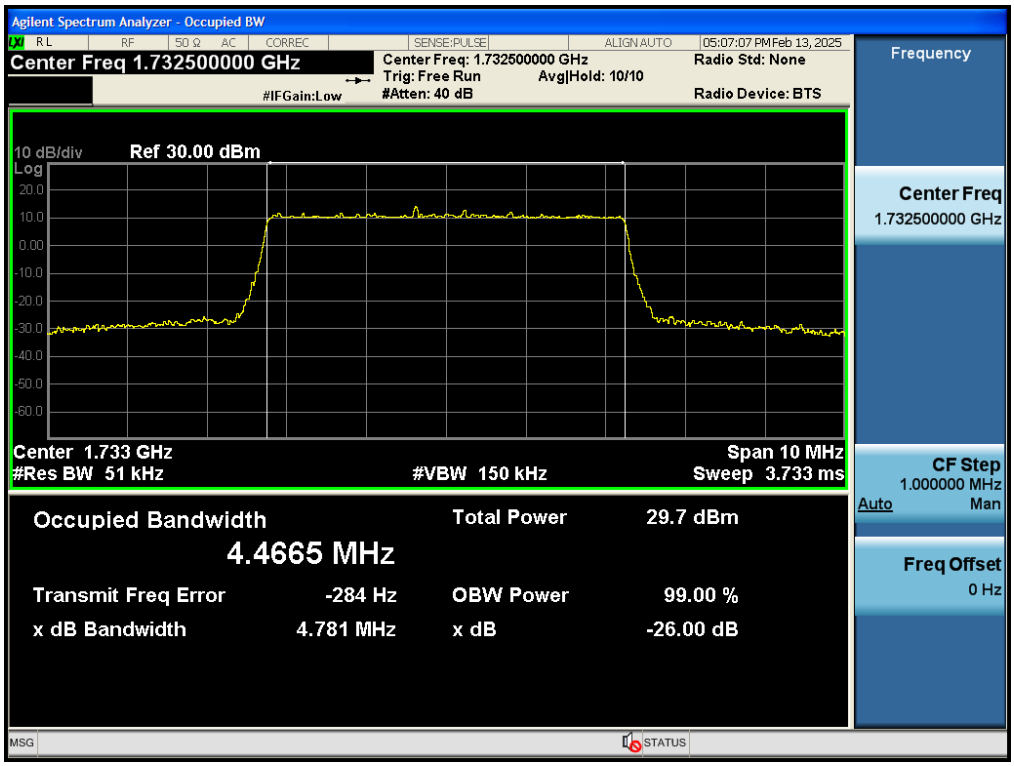

Test_Graph_band4_1753.5MHz_3M_QPSK_15RB#LOW_OBW&EBW



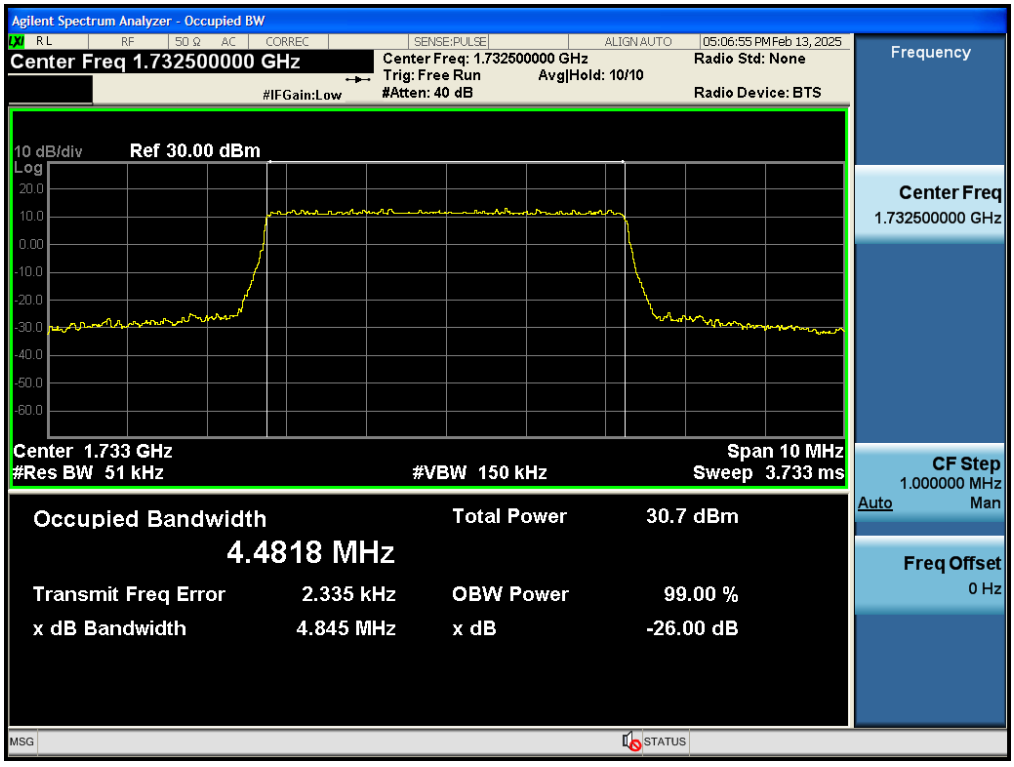

Test_Graph_band4_1712.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



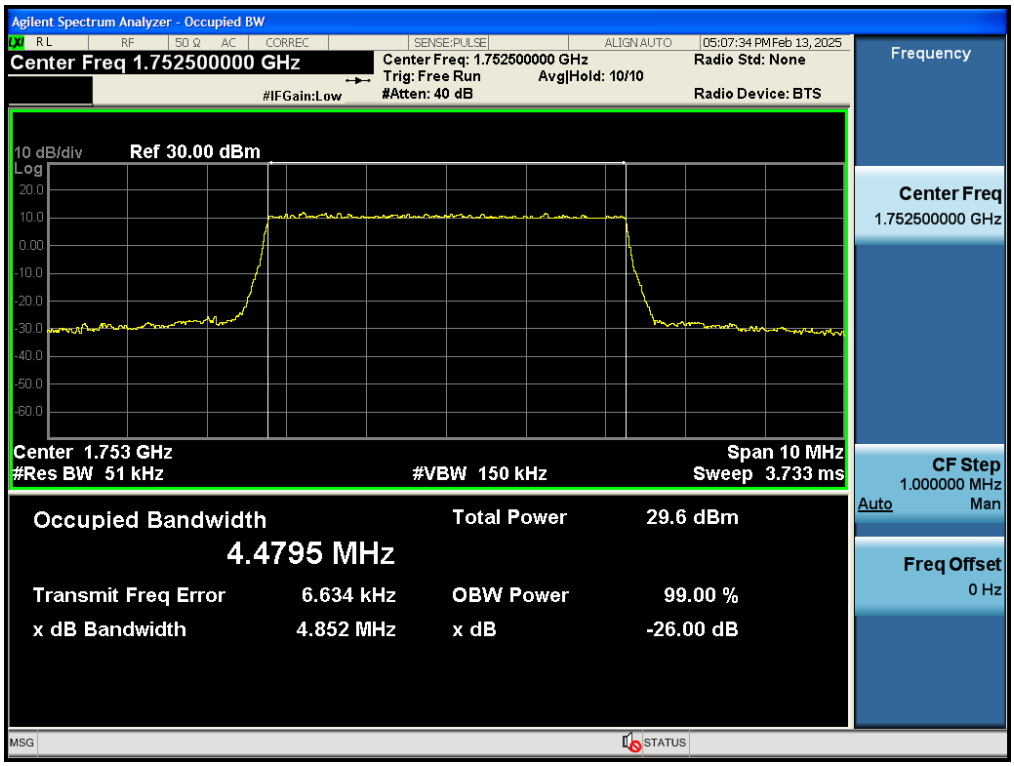

Test_Graph_band4_1712.5MHz_5M_QPSK_25RB#LOW_OBW&EBW



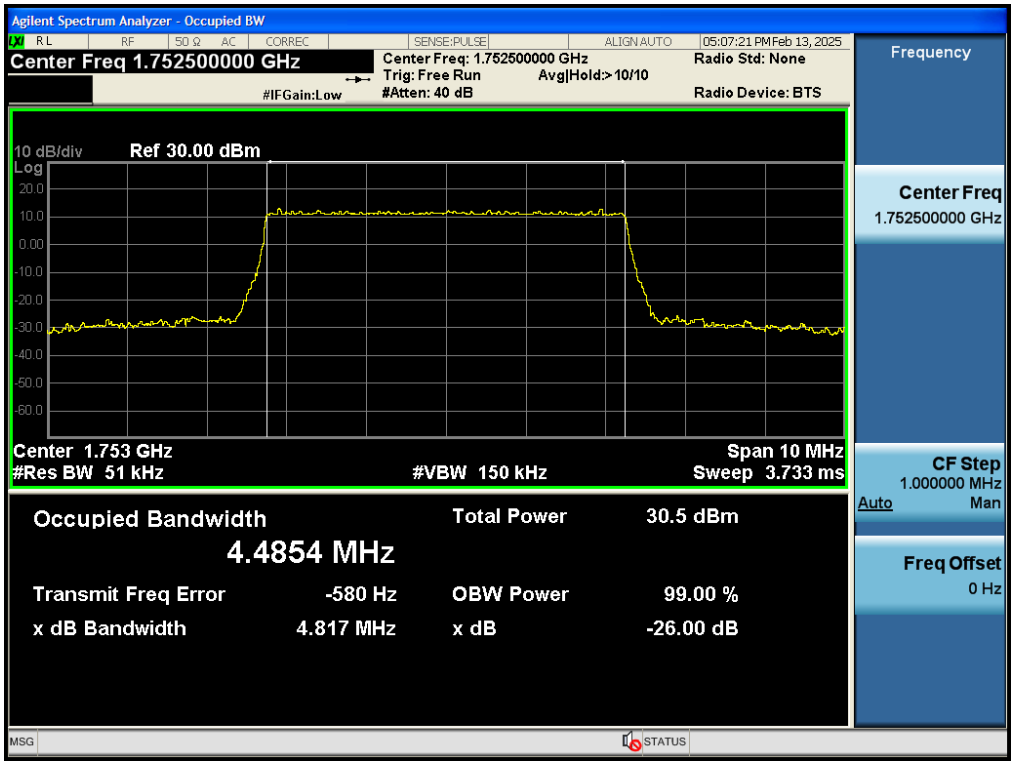

Test_Graph_band4_1732.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



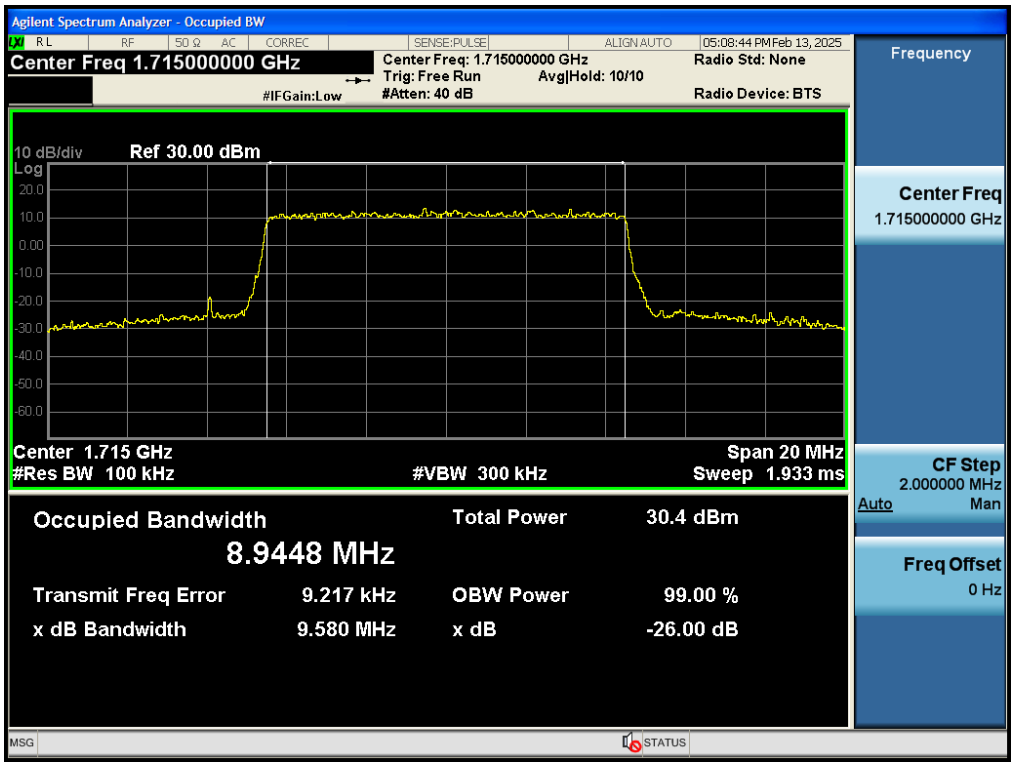

Test_Graph_band4_1732.5MHz_5M_QPSK_25RB#LOW_OBW&EBW



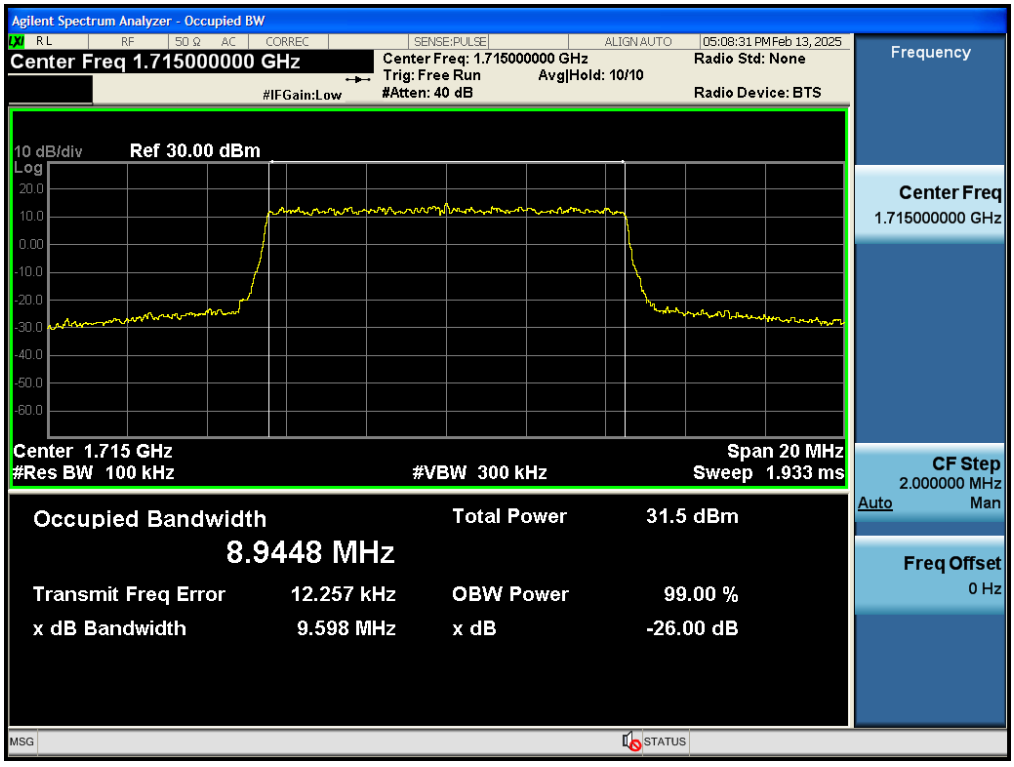

Test_Graph_band4_1752.5MHz_5M_16QAM_25RB#LOW_OBW&EBW



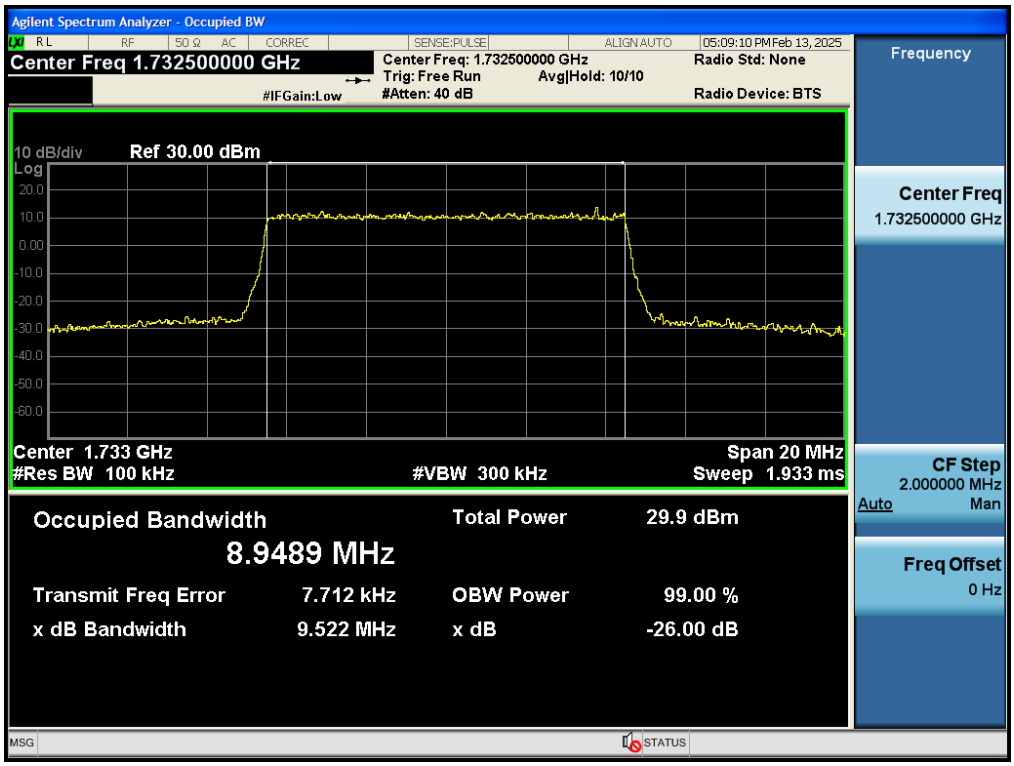

Test_Graph_band4_1752.5MHz_5M_QPSK_25RB#LOW_OBW&EBW



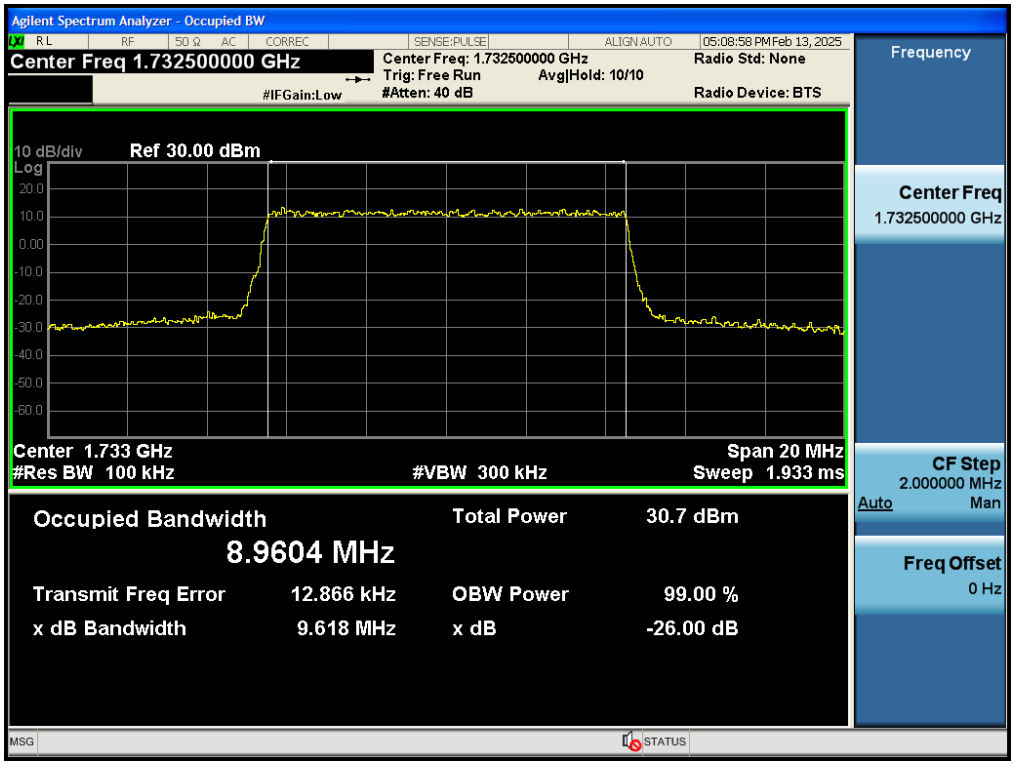

Test_Graph_band4_1715MHz_10M_16QAM_50RB#LOW_OBW&EBW



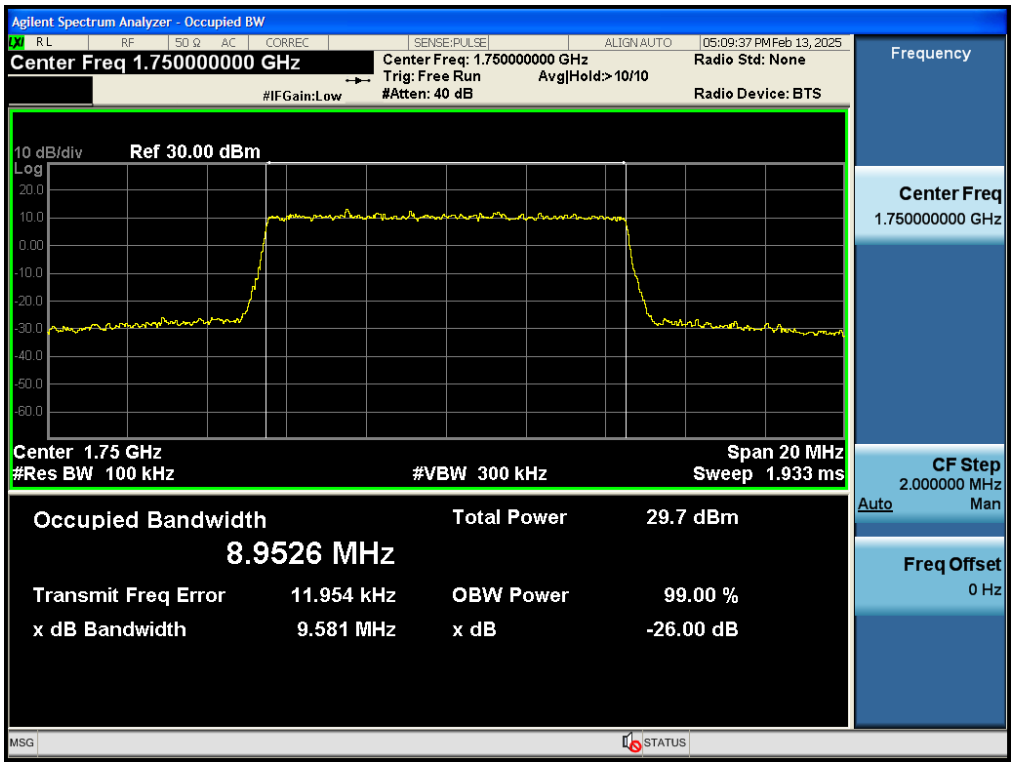

Test_Graph_band4_1715MHz_10M_QPSK_50RB#LOW_OBW&EBW



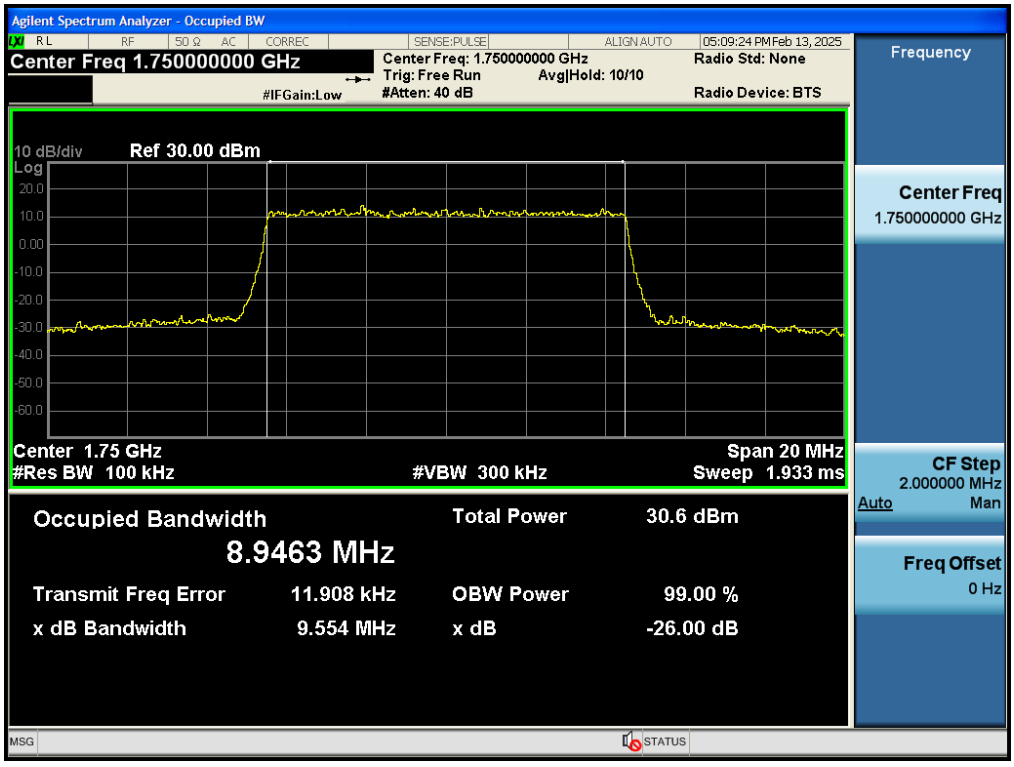

Test_Graph_band4_1732.5MHz_10M_16QAM_50RB#LOW_OBW&EBW



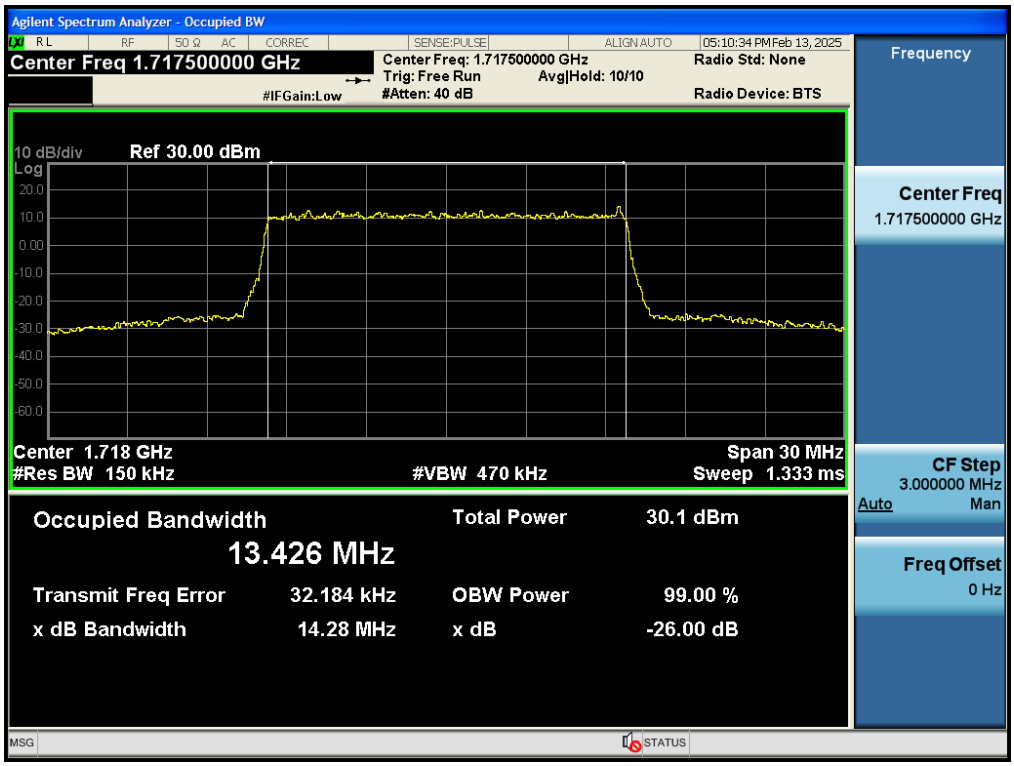

Test_Graph_band4_1732.5MHz_10M_QPSK_50RB#LOW_OBW&EBW



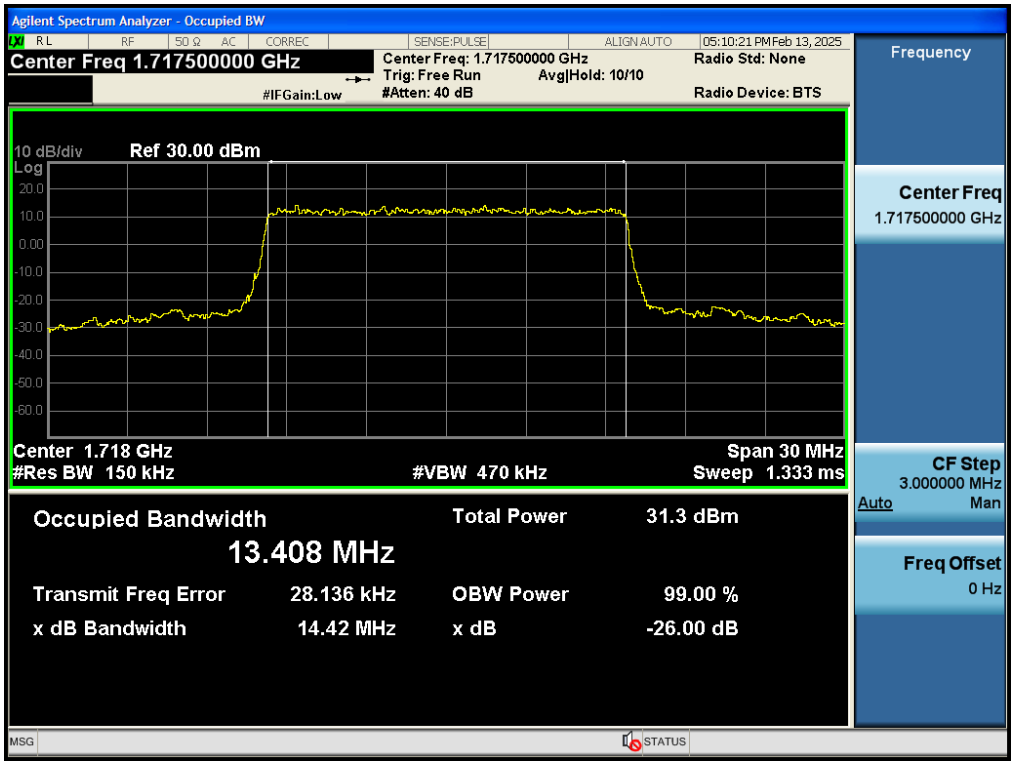

Test_Graph_band4_1750MHz_10M_16QAM_50RB#LOW_OBW&EBW



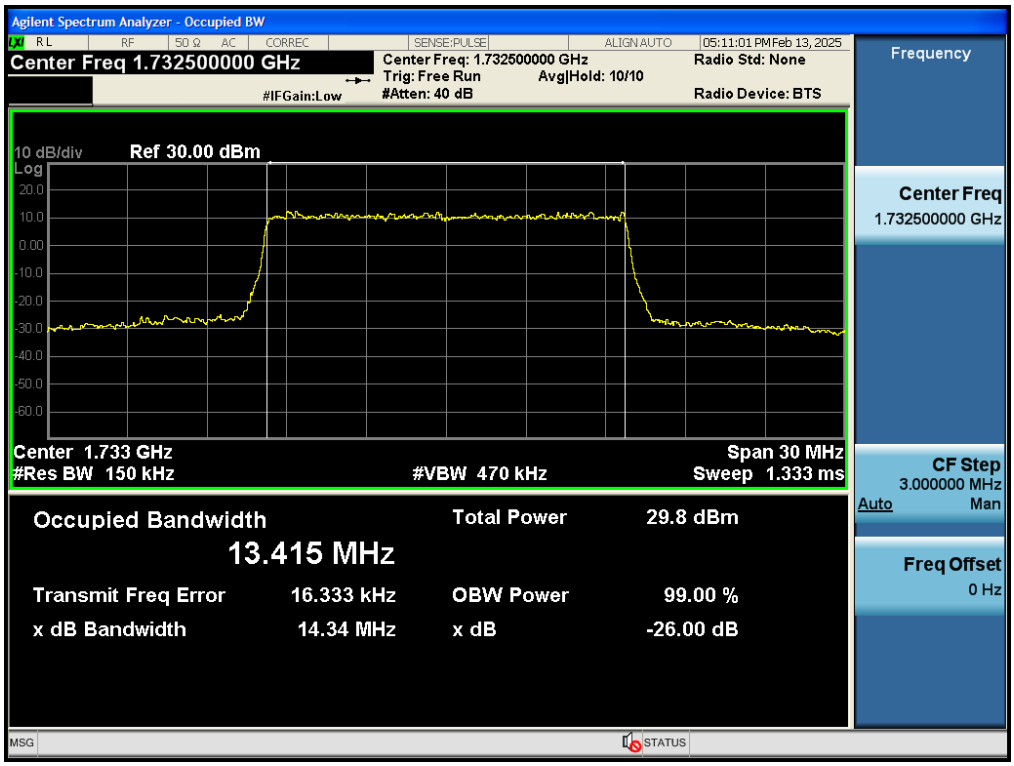

Test_Graph_band4_1750MHz_10M_QPSK_50RB#LOW_OBW&EBW



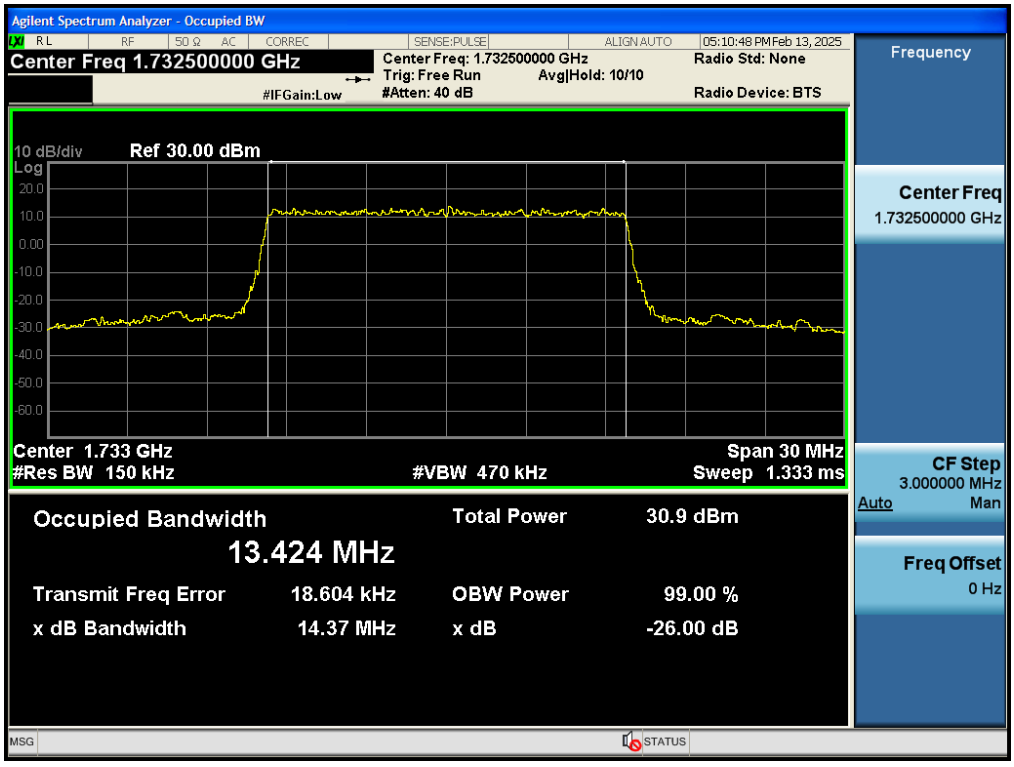

Test_Graph_band4_1717.5MHz_15M_16QAM_75RB#LOW_OBW&EBW



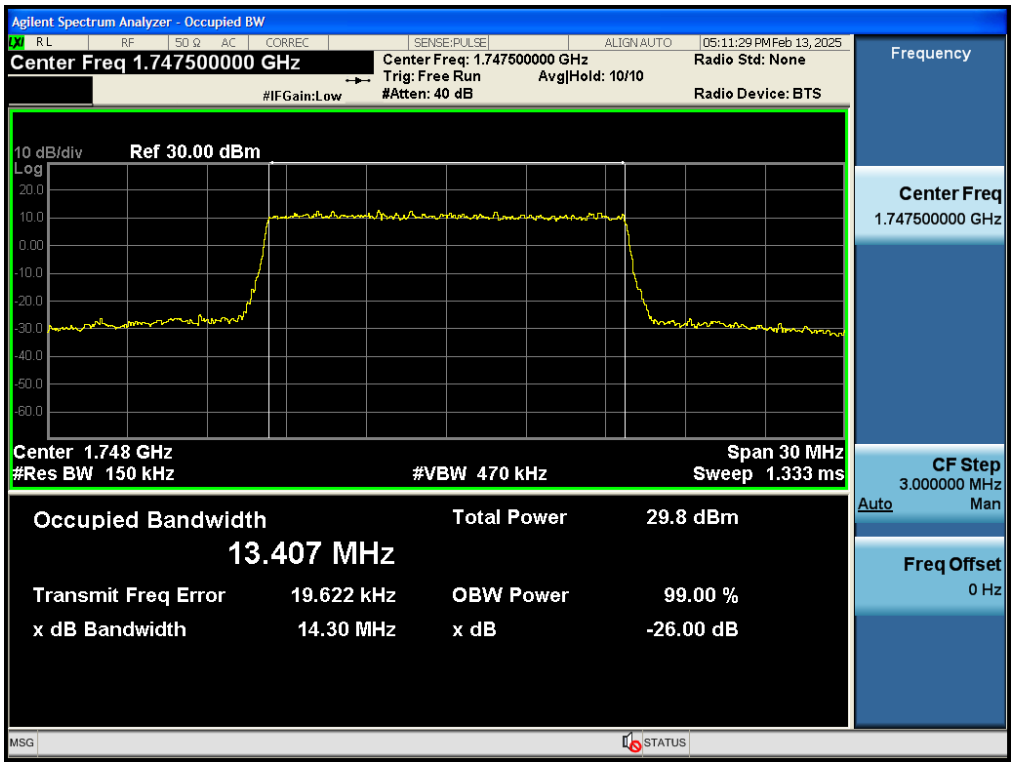

Test_Graph_band4_1717.5MHz_15M_QPSK_75RB#LOW_OBW&EBW



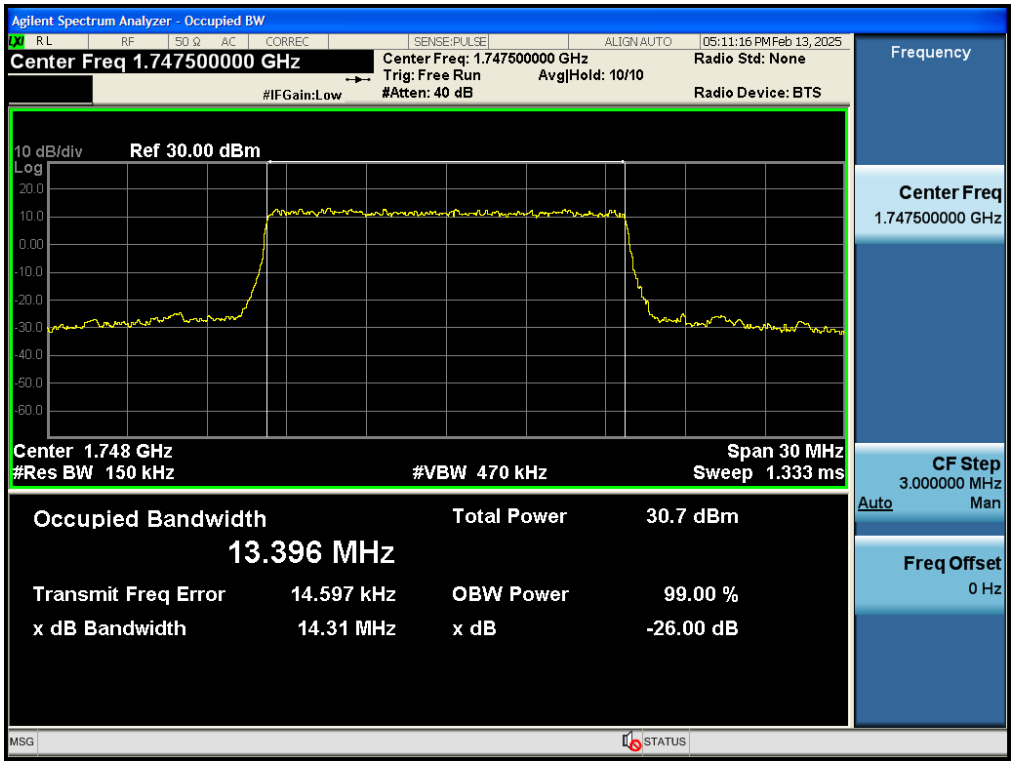

Test_Graph_band4_1732.5MHz_15M_16QAM_75RB#LOW_OBW&EBW



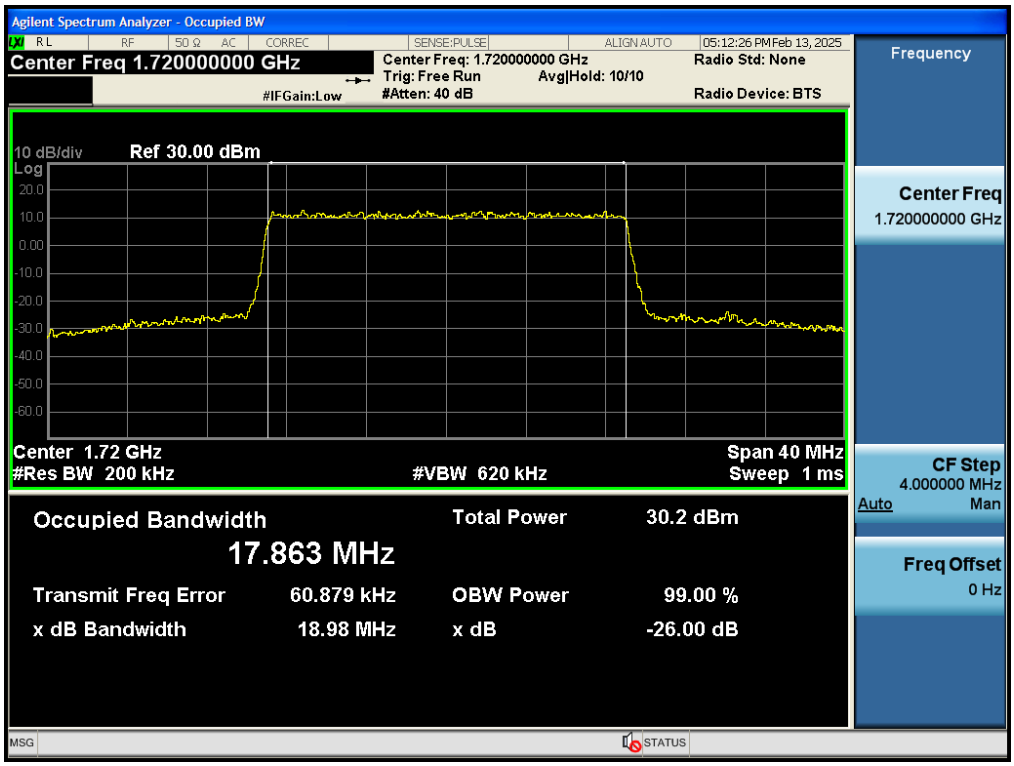

Test_Graph_band4_1732.5MHz_15M_QPSK_75RB#LOW_OBW&EBW



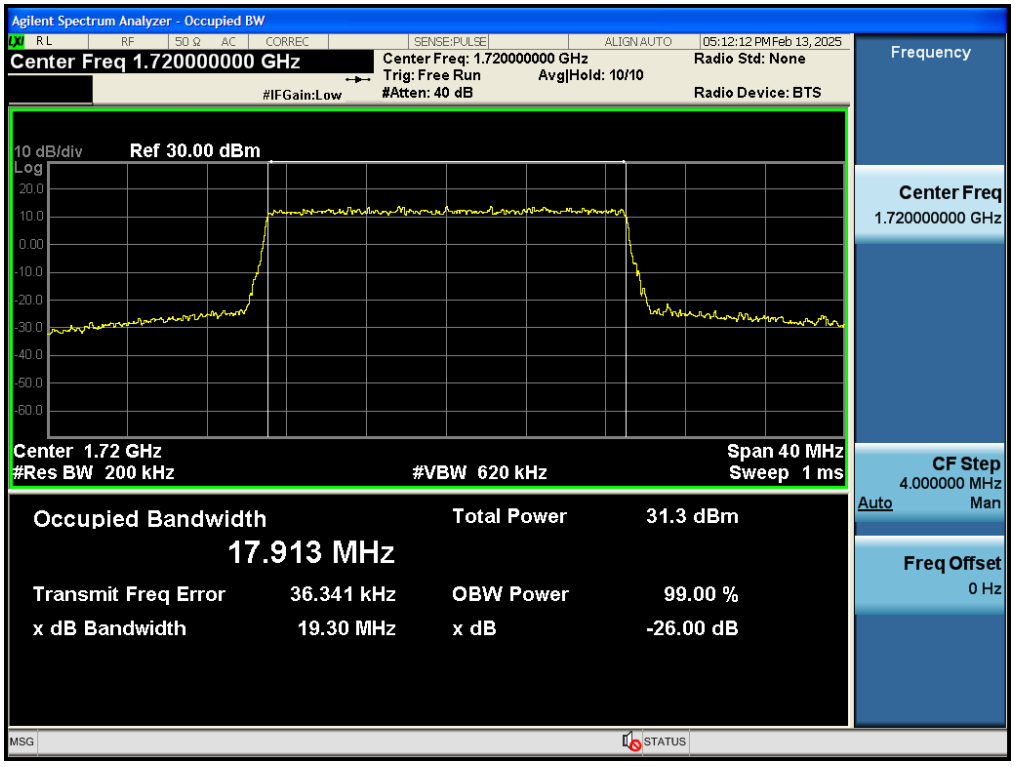

Test_Graph_band4_1747.5MHz_15M_16QAM_75RB#LOW_OBW&EBW



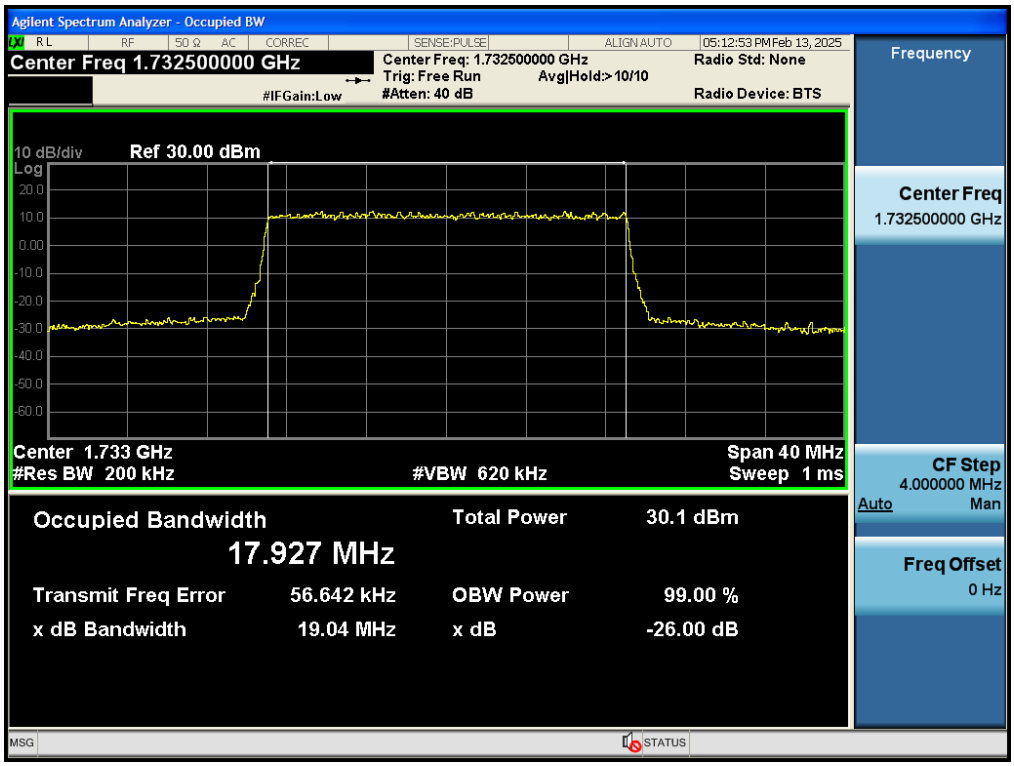

Test_Graph_band4_1747.5MHz_15M_QPSK_75RB#LOW_OBW&EBW



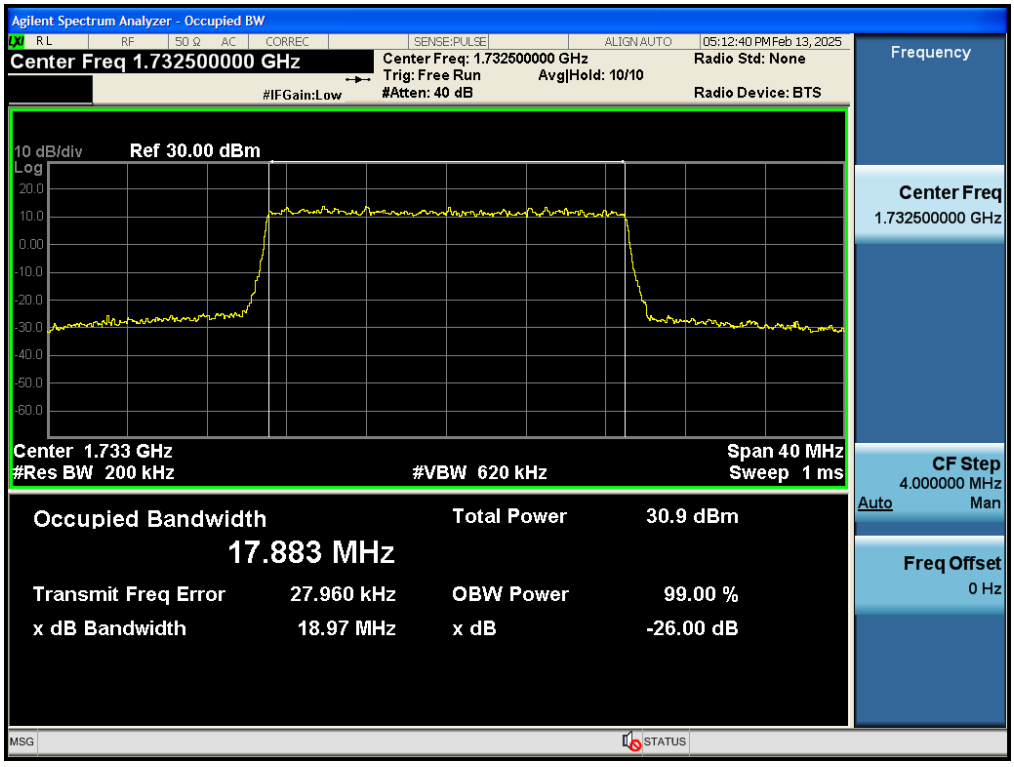

Test_Graph_band4_1720MHz_20M_16QAM_100RB#LOW_OBW&EBW



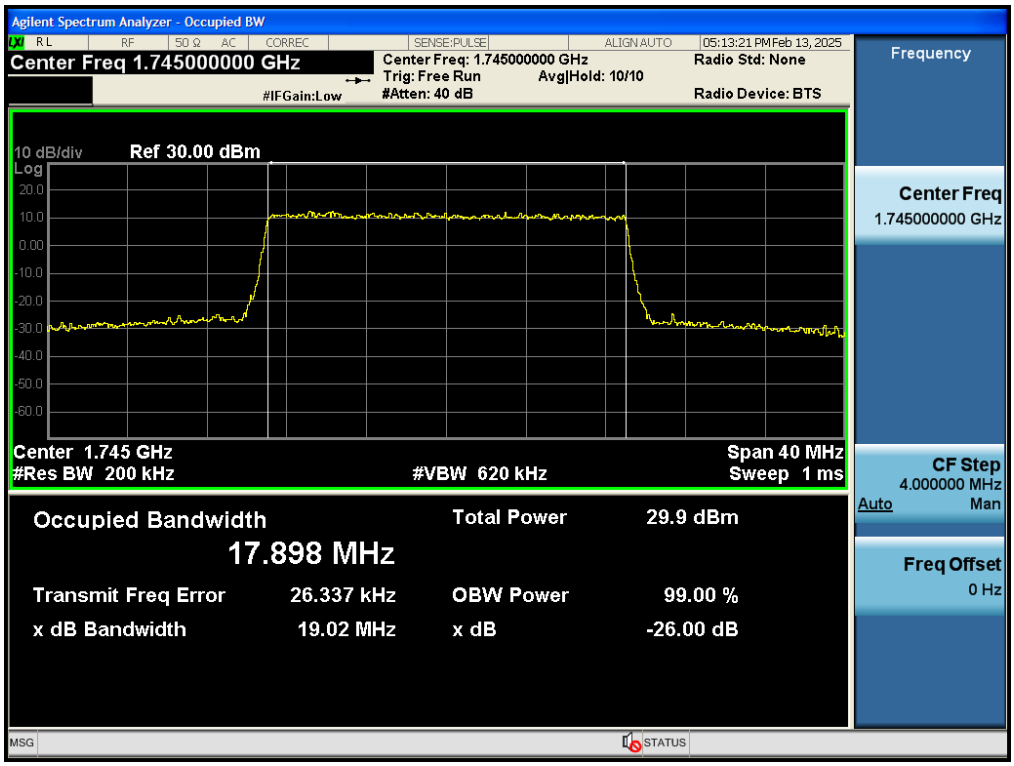

Test_Graph_band4_1720MHz_20M_QPSK_100RB#LOW_OBW&EBW



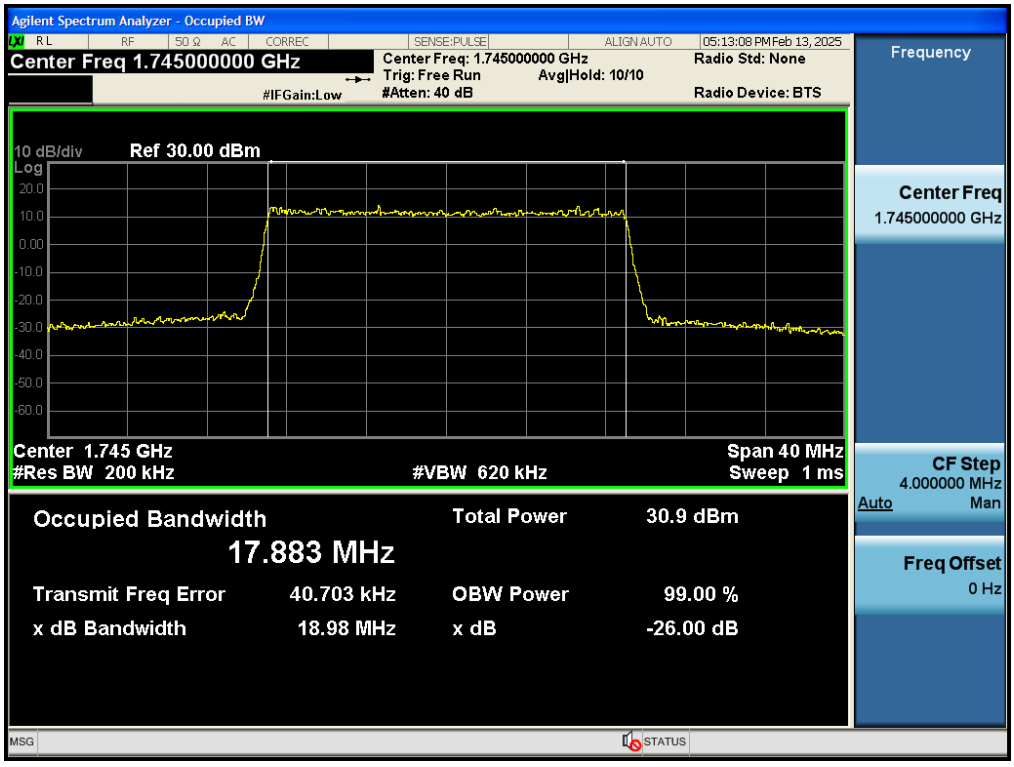

Test_Graph_band4_1732.5MHz_20M_16QAM_100RB#LOW_OBW&EBW




Test_Graph_band4_1732.5MHz_20M_QPSK_100RB#LOW_OBW&EBW




Test_Graph_band4_1745MHz_20M_16QAM_100RB#LOW_OBW&EBW




Test_Graph_band4_1745MHz_20M_QPSK_100RB#LOW_OBW&EBW

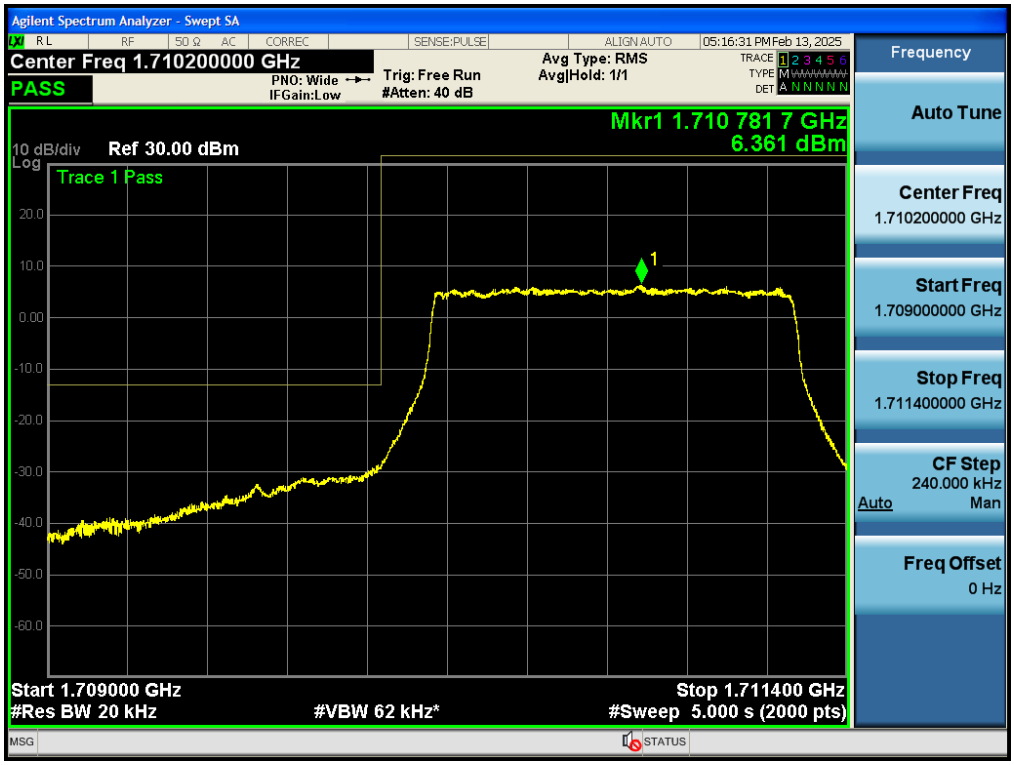
# Appendix C: Band edge emissions

## Test Result

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Conclusion |
|---|---|---|---|---|---|---|
| **4** | 1.4 | 1710.7 | QPSK | 6 | LOW | Pass |
| **4** | 1.4 | 1710.7 | 16QAM | 6 | LOW | Pass |
| **4** | 1.4 | 1754.3 | QPSK | 6 | LOW | Pass |
| **4** | 1.4 | 1754.3 | 16QAM | 6 | LOW | Pass |
| **4** | 3 | 1711.5 | QPSK | 15 | LOW | Pass |
| **4** | 3 | 1711.5 | 16QAM | 15 | LOW | Pass |
| **4** | 3 | 1753.5 | QPSK | 15 | LOW | Pass |
| **4** | 3 | 1753.5 | 16QAM | 15 | LOW | Pass |
| **4** | 5 | 1712.5 | QPSK | 25 | LOW | Pass |
| **4** | 5 | 1712.5 | 16QAM | 25 | LOW | Pass |
| **4** | 5 | 1752.5 | QPSK | 25 | LOW | Pass |
| **4** | 5 | 1752.5 | 16QAM | 25 | LOW | Pass |
| **4** | 10 | 1715 | QPSK | 50 | LOW | Pass |
| **4** | 10 | 1715 | 16QAM | 50 | LOW | Pass |
| **4** | 10 | 1750 | QPSK | 50 | LOW | Pass |
| **4** | 10 | 1750 | 16QAM | 50 | HIGH | Pass |
| **4** | 15 | 1717.5 | QPSK | 75 | LOW | Pass |
| **4** | 15 | 1717.5 | 16QAM | 75 | LOW | Pass |
| **4** | 15 | 1747.5 | QPSK | 75 | LOW | Pass |
| **4** | 15 | 1747.5 | 16QAM | 75 | HIGH | Pass |
| **4** | 20 | 1720 | QPSK | 100 | LOW | Pass |
| **4** | 20 | 1720 | 16QAM | 100 | LOW | Pass |
| **4** | 20 | 1745 | QPSK | 100 | LOW | Pass |
| **4** | 20 | 1745 | 16QAM | 100 | HIGH | Pass |

## Test Graphs


Test_Graph_band4_1710.7MHz_1.4M_16QAM_6RB#LOW_Band edge




Test_Graph_band4_1710.7MHz_1.4M_QPSK_6RB#LOW_Band edge


Test_Graph_band4_1754.3MHz_1.4M_16QAM_6RB#LOW_Band edge


Test_Graph_band4_1754.3MHz_1.4M_QPSK_6RB#LOW_Band edge

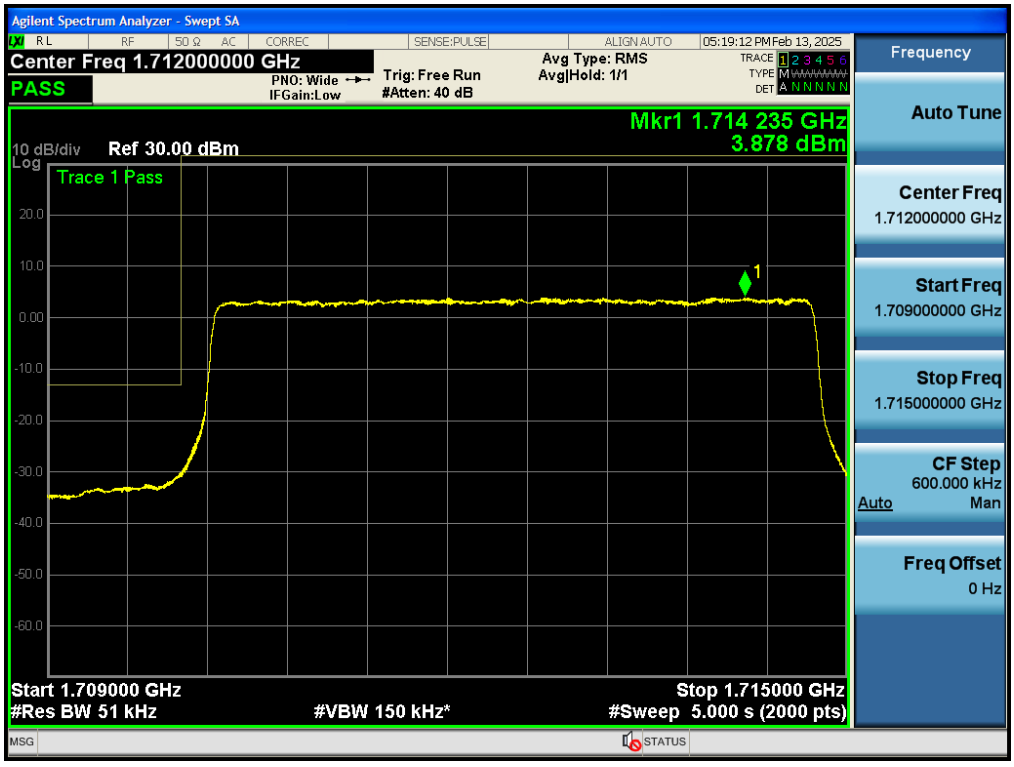

Test_Graph_band4_1711.5MHz_3M_16QAM_15RB#LOW_Band edge


Test_Graph_band4_1711.5MHz_3M_QPSK_15RB#LOW_Band edge


Test_Graph_band4_1753.5MHz_3M_16QAM_15RB#LOW_Band edge


Test_Graph_band4_1753.5MHz_3M_QPSK_15RB#LOW_Band edge


Test_Graph_band4_1712.5MHz_5M_16QAM_25RB#LOW_Band edge




Test_Graph_band4_1712.5MHz_5M_QPSK_25RB#LOW_Band edge


Test_Graph_band4_1752.5MHz_5M_16QAM_25RB#LOW_Band edge


Test_Graph_band4_1752.5MHz_5M_QPSK_25RB#LOW_Band edge


Test_Graph_band4_1715MHz_10M_16QAM_50RB#LOW_Band edge


Test_Graph_band4_1715MHz_10M_QPSK_50RB#LOW_Band edge


Test_Graph_band4_1750MHz_10M_16QAM_50RB#LOW_Band edge


Test_Graph_band4_1750MHz_10M_QPSK_50RB#LOW_Band edge


Test_Graph_band4_1717.5MHz_15M_16QAM_75RB#LOW_Band edge


Test_Graph_band4_1717.5MHz_15M_QPSK_75RB#LOW_Band edge


Test_Graph_band4_1747.5MHz_15M_16QAM_75RB#LOW_Band edge


Test_Graph_band4_1747.5MHz_15M_QPSK_75RB#LOW_Band edge


Test_Graph_band4_1720MHz_20M_16QAM_100RB#LOW_Band edge


Test_Graph_band4_1720MHz_20M_QPSK_100RB#LOW_Band edge


Test_Graph_band4_1745MHz_20M_16QAM_100RB#LOW_Band edge


Test_Graph_band4_1745MHz_20M_QPSK_100RB#LOW_Band edge

# Appendix D: Unwanted spurious emissions at antenna terminals

## Test Result

| Band | Bandwidth (MHz) | UL Frequency (MHz) | Modulation | RB Size | RB Offset | Conclusion |
|---|---|---|---|---|---|---|
| **4** | 1.4 | 1710.7 | QPSK | 6 | LOW | Pass |
| **4** | 1.4 | 1732.5 | QPSK | 6 | LOW | Pass |
| **4** | 1.4 | 1754.3 | QPSK | 6 | LOW | Pass |
| **4** | 3 | 1711.5 | QPSK | 15 | LOW | Pass |
| **4** | 3 | 1732.5 | QPSK | 15 | LOW | Pass |
| **4** | 3 | 1753.5 | QPSK | 15 | LOW | Pass |
| **4** | 5 | 1712.5 | QPSK | 25 | LOW | Pass |
| **4** | 5 | 1752.5 | QPSK | 25 | LOW | Pass |
| **4** | 5 | 1752.5 | QPSK | 25 | LOW | Pass |
| **4** | 10 | 1715 | QPSK | 50 | LOW | Pass |
| **4** | 10 | 1732.5 | QPSK | 50 | LOW | Pass |
| **4** | 10 | 1750 | QPSK | 50 | LOW | Pass |
| **4** | 15 | 1717.5 | QPSK | 75 | LOW | Pass |
| **4** | 15 | 1732.5 | QPSK | 75 | LOW | Pass |
| **4** | 15 | 1747.5 | QPSK | 75 | LOW | Pass |
| **4** | 20 | 1720 | QPSK | 100 | LOW | Pass |
| **4** | 20 | 1732.5 | QPSK | 100 | LOW | Pass |
| **4** | 20 | 1745 | QPSK | 100 | LOW | Pass |

## Test Graphs


Test_Graph_band4_1710.7MHz_1.4M_QPSK_6RB#LOW_30M_1G_TX


Test_Graph_band4_1710.7MHz_1.4M_QPSK_6RB#LOW_1G_10G_TX


Test_Graph_band4_1710.7MHz_1.4M_QPSK_6RB#LOW_10G_20.0G_TX


Test_Graph_band4_1732.5MHz_1.4M_QPSK_6RB#LOW_30M_1G_TX


Test_Graph_band4_1732.5MHz_1.4M_QPSK_6RB#LOW_1G_10G_TX


Test_Graph_band4_1732.5MHz_1.4M_QPSK_6RB#LOW_10G_20.0G_TX


Test_Graph_band4_1754.3MHz_1.4M_QPSK_6RB#LOW_30M_1G_TX


Test_Graph_band4_1754.3MHz_1.4M_QPSK_6RB#LOW_1G_10G_TX


Test_Graph_band4_1754.3MHz_1.4M_QPSK_6RB#LOW_10G_20.0G_TX


Test_Graph_band4_1711.5MHz_3M_QPSK_15RB#LOW_30M_1G_TX


Test_Graph_band4_1711.5MHz_3M_QPSK_15RB#LOW_1G_10G_TX


Test_Graph_band4_1711.5MHz_3M_QPSK_15RB#LOW_10G_20.0G_TX


Test_Graph_band4_1732.5MHz_3M_QPSK_15RB#LOW_30M_1G_TX


Test_Graph_band4_1732.5MHz_3M_QPSK_15RB#LOW_1G_10G_TX


Test_Graph_band4_1732.5MHz_3M_QPSK_15RB#LOW_10G_20.0G_TX


Test_Graph_band4_1753.5MHz_3M_QPSK_15RB#LOW_30M_1G_TX


Test_Graph_band4_1753.5MHz_3M_QPSK_15RB#LOW_1G_10G_TX


Test_Graph_band4_1753.5MHz_3M_QPSK_15RB#LOW_10G_20.0G_TX


Test_Graph_band4_1712.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX


Test_Graph_band4_1712.5MHz_5M_QPSK_25RB#LOW_1G_10G_TX


Test_Graph_band4_1712.5MHz_5M_QPSK_25RB#LOW_10G_20.0G_TX


Test_Graph_band4_1752.5MHz_5M_QPSK_25RB#LOW_30M_1G_TX


Test_Graph_band4_1752.5MHz_5M_QPSK_25RB#LOW_1G_10G_TX


Test_Graph_band4_1752.5MHz_5M_QPSK_25RB#LOW_10G_20.0G_TX


Test_Graph_band4_1715MHz_10M_QPSK_50RB#LOW_30M_1G_TX


Test_Graph_band4_1715MHz_10M_QPSK_50RB#LOW_1G_10G_TX


Test_Graph_band4_1715MHz_10M_QPSK_50RB#LOW_10G_20.0G_TX


Test_Graph_band4_1732.5MHz_10M_QPSK_50RB#LOW_30M_1G_TX


Test_Graph_band4_1732.5MHz_10M_QPSK_50RB#LOW_1G_10G_TX


Test_Graph_band4_1732.5MHz_10M_QPSK_50RB#LOW_10G_20.0G_TX


Test_Graph_band4_1750MHz_10M_QPSK_50RB#LOW_30M_1G_TX


Test_Graph_band4_1750MHz_10M_QPSK_50RB#LOW_1G_10G_TX


Test_Graph_band4_1750MHz_10M_QPSK_50RB#LOW_10G_20.0G_TX


Test_Graph_band4_1717.5MHz_15M_QPSK_75RB#LOW_30M_1G_TX


Test_Graph_band4_1717.5MHz_15M_QPSK_75RB#LOW_1G_10G_TX


Test_Graph_band4_1717.5MHz_15M_QPSK_75RB#LOW_10G_20.0G_TX


Test_Graph_band4_1732.5MHz_15M_QPSK_75RB#LOW_30M_1G_TX


Test_Graph_band4_1732.5MHz_15M_QPSK_75RB#LOW_1G_10G_TX


Test_Graph_band4_1732.5MHz_15M_QPSK_75RB#LOW_10G_20.0G_TX


Test_Graph_band4_1747.5MHz_15M_QPSK_75RB#LOW_30M_1G_TX


Test_Graph_band4_1747.5MHz_15M_QPSK_75RB#LOW_1G_10G_TX


Test_Graph_band4_1747.5MHz_15M_QPSK_75RB#LOW_10G_20.0G_TX


Test_Graph_band4_1720MHz_20M_QPSK_100RB#LOW_30M_1G_TX


Test_Graph_band4_1720MHz_20M_QPSK_100RB#LOW_1G_10G_TX


Test_Graph_band4_1720MHz_20M_QPSK_100RB#LOW_10G_20.0G_TX


Test_Graph_band4_1732.5MHz_20M_QPSK_100RB#LOW_30M_1G_TX


Test_Graph_band4_1732.5MHz_20M_QPSK_100RB#LOW_1G_10G_TX


Test_Graph_band4_1732.5MHz_20M_QPSK_100RB#LOW_10G_20.0G_TX


Test_Graph_band4_1745MHz_20M_QPSK_100RB#LOW_30M_1G_TX


Test_Graph_band4_1745MHz_20M_QPSK_100RB#LOW_1G_10G_TX


Test_Graph_band4_1745MHz_20M_QPSK_100RB#LOW_10G_20.0G_TX

# Appendix E: Frequency stability

## Test Result

| Test Conditions | | LTE Band 4(QPSK) / Middle Channel | Limit |
|---|---|---|---|
| Temperature (°C) | Voltage (Volt) | BW 5MHz | 2.5ppm |
| | | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0725 | PASS |
| 40 | Normal Voltage | 0.0436 | |
| 30 | Normal Voltage | 0.0236 | |
| 20(Ref.) | Normal Voltage | 0.0348 | |
| 10 | Normal Voltage | 0.0696 | |
| 0 | Normal Voltage | 0.0269 | |
| -10 | Normal Voltage | 0.0448 | |
| -20 | Normal Voltage | 0.0480 | |
| -30 | Normal Voltage | 0.0208 | |
| 20 | Maximum Voltage | 0.0246 | |
| 20 | Normal Voltage | 0.0356 | |
| 20 | Battery End Point | 0.0619 | |