Test Mode: 64QAM

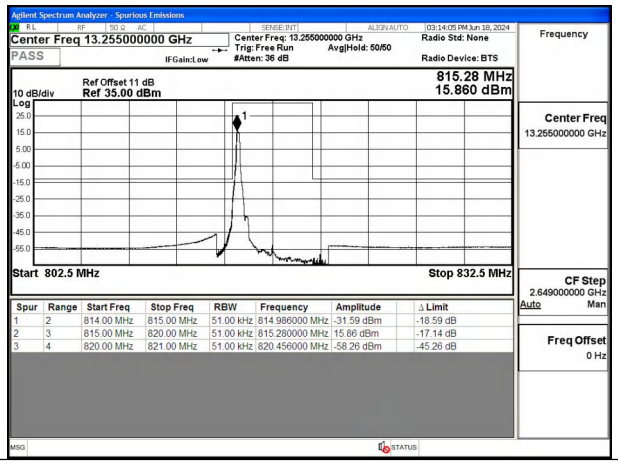


Fig.25

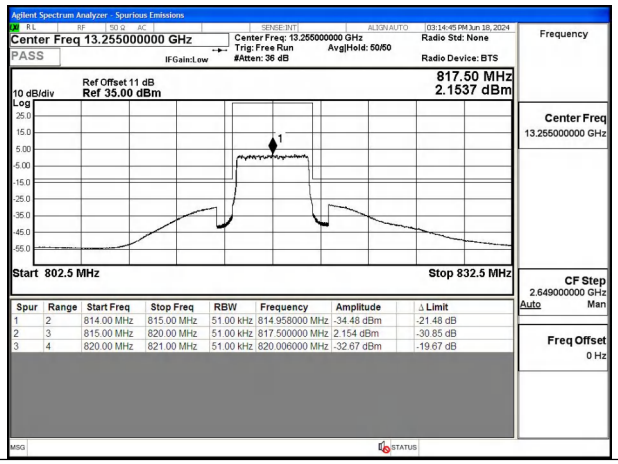


Fig.26

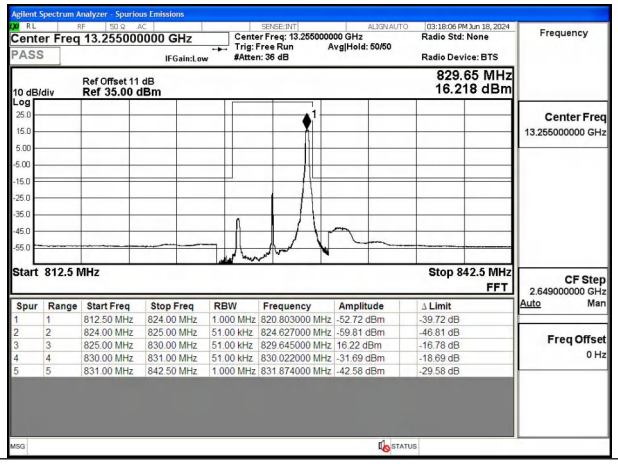


Fig.27

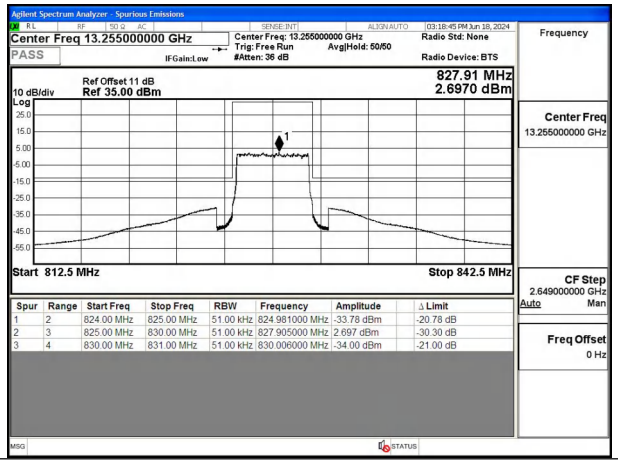


Fig.28

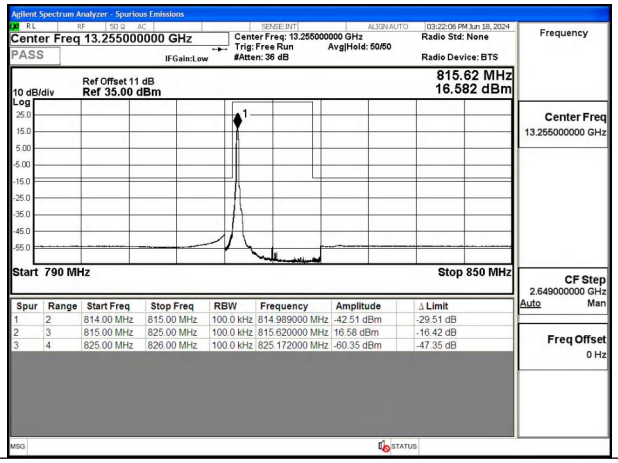


Fig.29

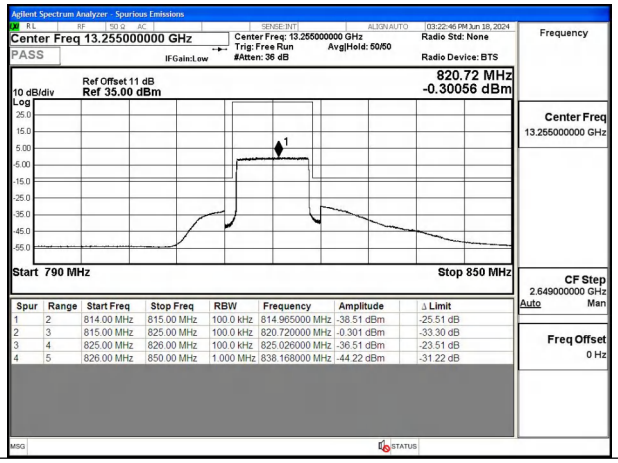


Fig.30

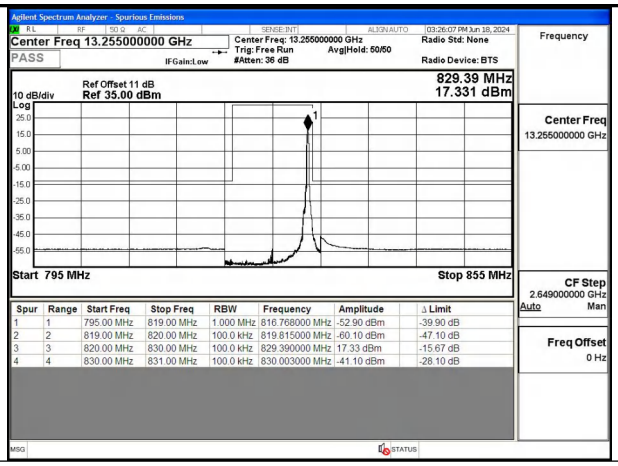


Fig.31

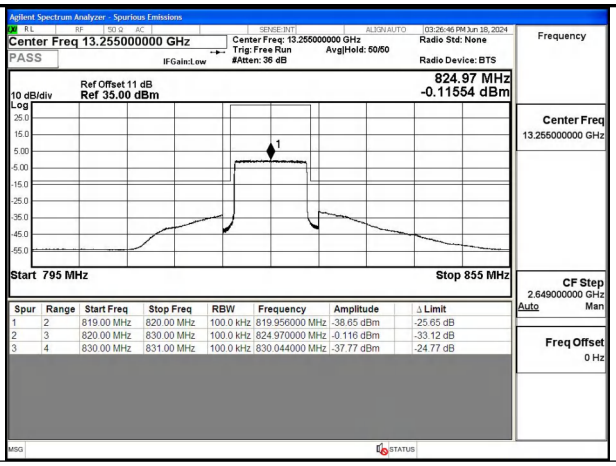


Fig.32

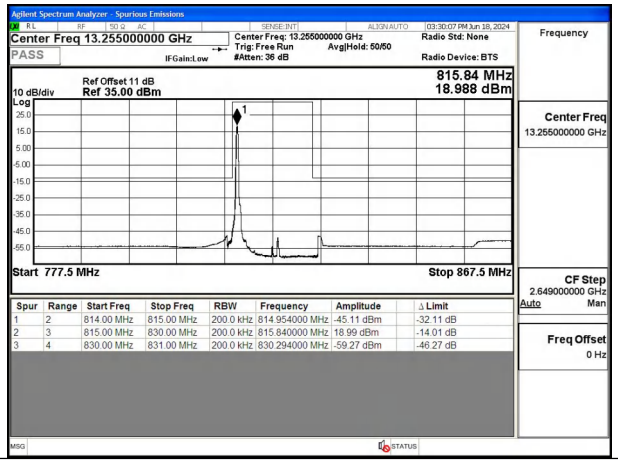


Fig.33

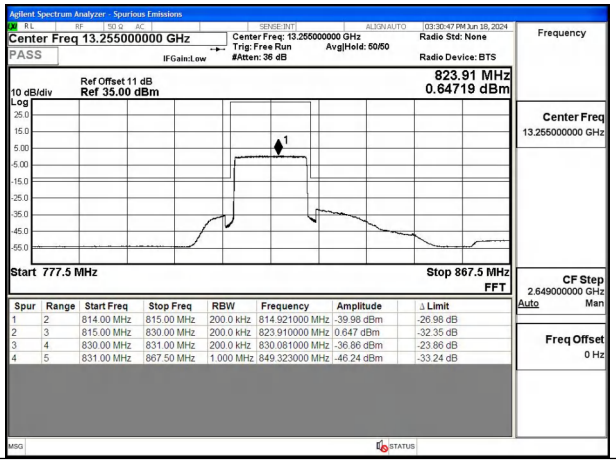


Fig.34

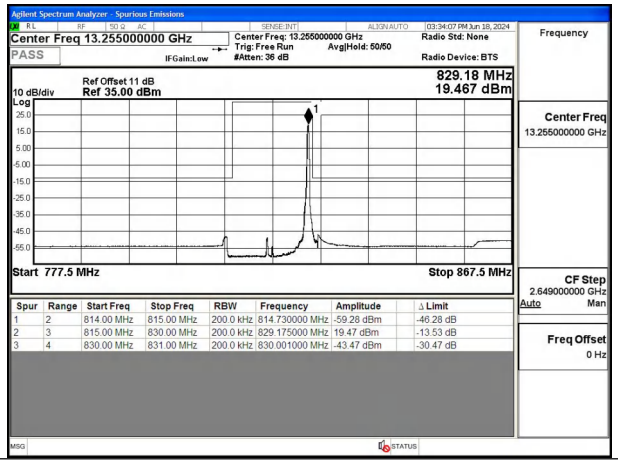


Fig.35

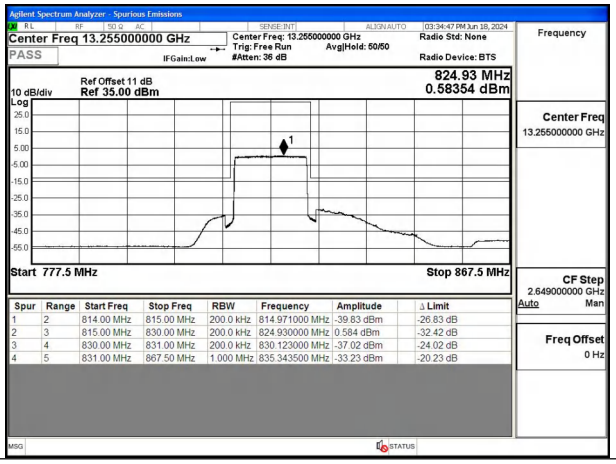


Fig.36

## 7 Frequency Stability

| Temperature(°C) | Voltage | Test Result (ppm) Band 18 Low Channel QPSK | | |
|---|---|---|---|---|
| | | 5M | 10M | 15M |
| -30 | NV | 0.006 | 0.004 | -0.005 |
| -20 | NV | 0.006 | -0.007 | -0.006 |
| -10 | NV | -0.007 | -0.006 | -0.007 |
| 0 | NV | 0.004 | 0.005 | -0.006 |
| +10 | NV | -0.004 | 0.005 | -0.008 |
| +20 | NV | -0.006 | -0.005 | 0.006 |
| +30 | NV | -0.007 | 0.006 | 0.005 |
| +40 | NV | 0.004 | -0.006 | -0.006 |
| +50 | NV | 0.005 | 0.006 | -0.004 |
| +20 | LV | -0.008 | -0.006 | -0.004 |
| +20 | HV | 0.006 | 0.007 | -0.004 |

| Temperature(°C) | Voltage | Test Result (ppm) Band 18 High Channel QPSK | | |
|---|---|---|---|---|
| | | 5M | 10M | 15M |
| -30 | NV | 0.002 | 0.004 | -0.006 |
| -20 | NV | 0.003 | 0.004 | -0.006 |
| -10 | NV | -0.003 | 0.006 | -0.006 |
| 0 | NV | 0.000 | 0.004 | -0.003 |
| +10 | NV | -0.002 | 0.006 | -0.004 |
| +20 | NV | -0.001 | -0.004 | -0.004 |
| +30 | NV | 0.001 | 0.006 | -0.007 |
| +40 | NV | -0.001 | 0.004 | -0.006 |
| +50 | NV | -0.001 | -0.005 | -0.006 |
| +20 | LV | 0.001 | 0.005 | -0.005 |
| +20 | HV | 0.003 | -0.006 | -0.009 |

## 8 Effective Radiated Power and Effective Isotropic Radiated Power

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| QPSK | 817.5 | 23875 | 5 | 1 | 0 | 22.47 | 24.82 | 0.303 |
| QPSK | 817.5 | 23875 | 5 | 1 | 12 | 22.69 | 25.04 | 0.319 |
| QPSK | 817.5 | 23875 | 5 | 1 | 24 | 22.90 | 25.25 | 0.335 |
| QPSK | 817.5 | 23875 | 5 | 12 | 0 | 21.31 | 23.66 | 0.232 |
| QPSK | 817.5 | 23875 | 5 | 12 | 7 | 21.53 | 23.88 | 0.244 |
| QPSK | 817.5 | 23875 | 5 | 12 | 13 | 21.68 | 24.03 | 0.253 |
| QPSK | 817.5 | 23875 | 5 | 25 | 0 | 21.47 | 23.82 | 0.241 |
| QPSK | 822.5 | 23925 | 5 | 1 | 0 | 22.87 | 25.22 | 0.333 |
| QPSK | 822.5 | 23925 | 5 | 1 | 12 | 22.76 | 25.11 | 0.324 |
| QPSK | 822.5 | 23925 | 5 | 1 | 24 | 22.97 | 25.32 | 0.340 |
| QPSK | 822.5 | 23925 | 5 | 12 | 0 | 21.82 | 24.17 | 0.261 |
| QPSK | 822.5 | 23925 | 5 | 12 | 7 | 21.84 | 24.19 | 0.262 |
| QPSK | 822.5 | 23925 | 5 | 12 | 13 | 21.85 | 24.20 | 0.263 |
| QPSK | 822.5 | 23925 | 5 | 25 | 0 | 21.84 | 24.19 | 0.262 |
| QPSK | 827.5 | 23975 | 5 | 1 | 0 | 23.03 | 25.38 | 0.345 |
| QPSK | 827.5 | 23975 | 5 | 1 | 12 | 22.95 | 25.30 | 0.339 |
| QPSK | 827.5 | 23975 | 5 | 1 | 24 | 22.96 | 25.31 | 0.340 |
| QPSK | 827.5 | 23975 | 5 | 12 | 0 | 21.94 | 24.29 | 0.269 |
| QPSK | 827.5 | 23975 | 5 | 12 | 7 | 21.89 | 24.24 | 0.265 |
| QPSK | 827.5 | 23975 | 5 | 12 | 13 | 21.91 | 24.26 | 0.267 |
| QPSK | 827.5 | 23975 | 5 | 25 | 0 | 21.94 | 24.29 | 0.269 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| 16QAM | 817.5 | 23875 | 5 | 1 | 0 | 21.25 | 23.60 | 0.229 |
| 16QAM | 817.5 | 23875 | 5 | 1 | 12 | 21.62 | 23.97 | 0.249 |
| 16QAM | 817.5 | 23875 | 5 | 1 | 24 | 22.00 | 24.35 | 0.272 |
| 16QAM | 817.5 | 23875 | 5 | 12 | 0 | 20.37 | 22.72 | 0.187 |
| 16QAM | 817.5 | 23875 | 5 | 12 | 7 | 20.56 | 22.91 | 0.195 |
| 16QAM | 817.5 | 23875 | 5 | 12 | 13 | 20.64 | 22.99 | 0.199 |
| 16QAM | 817.5 | 23875 | 5 | 25 | 0 | 20.50 | 22.85 | 0.193 |
| 16QAM | 822.5 | 23925 | 5 | 1 | 0 | 22.20 | 24.55 | 0.285 |
| 16QAM | 822.5 | 23925 | 5 | 1 | 12 | 21.87 | 24.22 | 0.264 |
| 16QAM | 822.5 | 23925 | 5 | 1 | 24 | 22.16 | 24.51 | 0.282 |
| 16QAM | 822.5 | 23925 | 5 | 12 | 0 | 20.85 | 23.20 | 0.209 |
| 16QAM | 822.5 | 23925 | 5 | 12 | 7 | 20.83 | 23.18 | 0.208 |
| 16QAM | 822.5 | 23925 | 5 | 12 | 13 | 20.94 | 23.29 | 0.213 |
| 16QAM | 822.5 | 23925 | 5 | 25 | 0 | 20.89 | 23.24 | 0.211 |
| 16QAM | 827.5 | 23975 | 5 | 1 | 0 | 22.19 | 24.54 | 0.284 |
| 16QAM | 827.5 | 23975 | 5 | 1 | 12 | 21.89 | 24.24 | 0.265 |
| 16QAM | 827.5 | 23975 | 5 | 1 | 24 | 21.96 | 24.31 | 0.270 |
| 16QAM | 827.5 | 23975 | 5 | 12 | 0 | 20.99 | 23.34 | 0.216 |
| 16QAM | 827.5 | 23975 | 5 | 12 | 7 | 20.98 | 23.33 | 0.215 |
| 16QAM | 827.5 | 23975 | 5 | 12 | 13 | 21.11 | 23.46 | 0.222 |
| 16QAM | 827.5 | 23975 | 5 | 25 | 0 | 20.97 | 23.32 | 0.215 |
| 64QAM | 817.5 | 23875 | 5 | 1 | 0 | 20.90 | 23.25 | 0.211 |
| 64QAM | 817.5 | 23875 | 5 | 1 | 12 | 21.78 | 24.13 | 0.259 |
| 64QAM | 817.5 | 23875 | 5 | 1 | 24 | 21.59 | 23.94 | 0.248 |
| 64QAM | 817.5 | 23875 | 5 | 12 | 0 | 20.31 | 22.66 | 0.185 |
| 64QAM | 817.5 | 23875 | 5 | 12 | 7 | 20.52 | 22.87 | 0.194 |
| 64QAM | 817.5 | 23875 | 5 | 12 | 13 | 20.67 | 23.02 | 0.200 |
| 64QAM | 817.5 | 23875 | 5 | 25 | 0 | 20.48 | 22.83 | 0.192 |
| 64QAM | 822.5 | 23925 | 5 | 1 | 0 | 21.33 | 23.68 | 0.233 |
| 64QAM | 822.5 | 23925 | 5 | 1 | 12 | 21.89 | 24.24 | 0.265 |
| 64QAM | 822.5 | 23925 | 5 | 1 | 24 | 22.09 | 24.44 | 0.278 |
| 64QAM | 822.5 | 23925 | 5 | 12 | 0 | 20.80 | 23.15 | 0.207 |
| 64QAM | 822.5 | 23925 | 5 | 12 | 7 | 20.91 | 23.26 | 0.212 |
| 64QAM | 822.5 | 23925 | 5 | 12 | 13 | 20.85 | 23.20 | 0.209 |
| 64QAM | 822.5 | 23925 | 5 | 25 | 0 | 20.86 | 23.21 | 0.209 |
| 64QAM | 827.5 | 23975 | 5 | 1 | 0 | 21.99 | 24.34 | 0.272 |
| 64QAM | 827.5 | 23975 | 5 | 1 | 12 | 21.71 | 24.06 | 0.255 |
| 64QAM | 827.5 | 23975 | 5 | 1 | 24 | 22.21 | 24.56 | 0.286 |
| 64QAM | 827.5 | 23975 | 5 | 12 | 0 | 20.91 | 23.26 | 0.212 |
| 64QAM | 827.5 | 23975 | 5 | 12 | 7 | 20.97 | 23.32 | 0.215 |
| 64QAM | 827.5 | 23975 | 5 | 12 | 13 | 20.93 | 23.28 | 0.213 |
| 64QAM | 827.5 | 23975 | 5 | 25 | 0 | 21.04 | 23.39 | 0.218 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| QPSK | 820 | 23900 | 10 | 1 | 0 | 22.49 | 24.84 | 0.305 |
| QPSK | 820 | 23900 | 10 | 1 | 25 | 23.00 | 25.35 | 0.343 |
| QPSK | 820 | 23900 | 10 | 1 | 49 | 23.14 | 25.49 | 0.354 |
| QPSK | 820 | 23900 | 10 | 25 | 0 | 21.62 | 23.97 | 0.249 |
| QPSK | 820 | 23900 | 10 | 25 | 12 | 21.88 | 24.23 | 0.265 |
| QPSK | 820 | 23900 | 10 | 25 | 25 | 21.96 | 24.31 | 0.270 |
| QPSK | 820 | 23900 | 10 | 50 | 0 | 21.78 | 24.13 | 0.259 |
| QPSK | 822.5 | 23925 | 10 | 1 | 0 | 22.57 | 24.92 | 0.310 |
| QPSK | 822.5 | 23925 | 10 | 1 | 25 | 22.76 | 25.11 | 0.324 |
| QPSK | 822.5 | 23925 | 10 | 1 | 49 | 23.02 | 25.37 | 0.344 |
| QPSK | 822.5 | 23925 | 10 | 25 | 0 | 21.80 | 24.15 | 0.260 |
| QPSK | 822.5 | 23925 | 10 | 25 | 12 | 21.91 | 24.26 | 0.267 |
| QPSK | 822.5 | 23925 | 10 | 25 | 25 | 21.96 | 24.31 | 0.270 |
| QPSK | 822.5 | 23925 | 10 | 50 | 0 | 21.88 | 24.23 | 0.265 |
| QPSK | 825 | 23950 | 10 | 1 | 0 | 22.82 | 25.17 | 0.329 |
| QPSK | 825 | 23950 | 10 | 1 | 25 | 22.93 | 25.28 | 0.337 |
| QPSK | 825 | 23950 | 10 | 1 | 49 | 22.90 | 25.25 | 0.335 |
| QPSK | 825 | 23950 | 10 | 25 | 0 | 21.88 | 24.23 | 0.265 |
| QPSK | 825 | 23950 | 10 | 25 | 12 | 21.96 | 24.31 | 0.270 |
| QPSK | 825 | 23950 | 10 | 25 | 25 | 21.96 | 24.31 | 0.270 |
| QPSK | 825 | 23950 | 10 | 50 | 0 | 21.92 | 24.27 | 0.267 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| 16QAM | 820 | 23900 | 10 | 1 | 0 | 21.40 | 23.75 | 0.237 |
| 16QAM | 820 | 23900 | 10 | 1 | 25 | 22.22 | 24.57 | 0.286 |
| 16QAM | 820 | 23900 | 10 | 1 | 49 | 22.16 | 24.51 | 0.282 |
| 16QAM | 820 | 23900 | 10 | 25 | 0 | 20.59 | 22.94 | 0.197 |
| 16QAM | 820 | 23900 | 10 | 25 | 12 | 20.86 | 23.21 | 0.209 |
| 16QAM | 820 | 23900 | 10 | 25 | 25 | 20.93 | 23.28 | 0.213 |
| 16QAM | 820 | 23900 | 10 | 50 | 0 | 20.69 | 23.04 | 0.201 |
| 16QAM | 822.5 | 23925 | 10 | 1 | 0 | 21.83 | 24.18 | 0.262 |
| 16QAM | 822.5 | 23925 | 10 | 1 | 25 | 21.77 | 24.12 | 0.258 |
| 16QAM | 822.5 | 23925 | 10 | 1 | 49 | 22.18 | 24.53 | 0.284 |
| 16QAM | 822.5 | 23925 | 10 | 25 | 0 | 20.85 | 23.20 | 0.209 |
| 16QAM | 822.5 | 23925 | 10 | 25 | 12 | 20.96 | 23.31 | 0.214 |
| 16QAM | 822.5 | 23925 | 10 | 25 | 25 | 21.08 | 23.43 | 0.220 |
| 16QAM | 822.5 | 23925 | 10 | 50 | 0 | 20.87 | 23.22 | 0.210 |
| 16QAM | 825 | 23950 | 10 | 1 | 0 | 22.40 | 24.75 | 0.299 |
| 16QAM | 825 | 23950 | 10 | 1 | 25 | 22.23 | 24.58 | 0.287 |
| 16QAM | 825 | 23950 | 10 | 1 | 49 | 22.31 | 24.66 | 0.292 |
| 16QAM | 825 | 23950 | 10 | 25 | 0 | 20.86 | 23.21 | 0.209 |
| 16QAM | 825 | 23950 | 10 | 25 | 12 | 20.98 | 23.33 | 0.215 |
| 16QAM | 825 | 23950 | 10 | 25 | 25 | 20.99 | 23.34 | 0.216 |
| 16QAM | 825 | 23950 | 10 | 50 | 0 | 20.95 | 23.30 | 0.214 |
| 64QAM | 820 | 23900 | 10 | 1 | 0 | 21.31 | 23.66 | 0.232 |
| 64QAM | 820 | 23900 | 10 | 1 | 25 | 21.95 | 24.30 | 0.269 |
| 64QAM | 820 | 23900 | 10 | 1 | 49 | 21.92 | 24.27 | 0.267 |
| 64QAM | 820 | 23900 | 10 | 25 | 0 | 20.63 | 22.98 | 0.199 |
| 64QAM | 820 | 23900 | 10 | 25 | 12 | 20.83 | 23.18 | 0.208 |
| 64QAM | 820 | 23900 | 10 | 25 | 25 | 20.85 | 23.20 | 0.209 |
| 64QAM | 820 | 23900 | 10 | 50 | 0 | 20.76 | 23.11 | 0.205 |
| 64QAM | 822.5 | 23925 | 10 | 1 | 0 | 21.86 | 24.21 | 0.264 |
| 64QAM | 822.5 | 23925 | 10 | 1 | 25 | 21.78 | 24.13 | 0.259 |
| 64QAM | 822.5 | 23925 | 10 | 1 | 49 | 22.03 | 24.38 | 0.274 |
| 64QAM | 822.5 | 23925 | 10 | 25 | 0 | 20.84 | 23.19 | 0.208 |
| 64QAM | 822.5 | 23925 | 10 | 25 | 12 | 20.93 | 23.28 | 0.213 |
| 64QAM | 822.5 | 23925 | 10 | 25 | 25 | 20.95 | 23.30 | 0.214 |
| 64QAM | 822.5 | 23925 | 10 | 50 | 0 | 20.86 | 23.21 | 0.209 |
| 64QAM | 825 | 23950 | 10 | 1 | 0 | 22.05 | 24.40 | 0.275 |
| 64QAM | 825 | 23950 | 10 | 1 | 25 | 22.00 | 24.35 | 0.272 |
| 64QAM | 825 | 23950 | 10 | 1 | 49 | 22.02 | 24.37 | 0.274 |
| 64QAM | 825 | 23950 | 10 | 25 | 0 | 20.96 | 23.31 | 0.214 |
| 64QAM | 825 | 23950 | 10 | 25 | 12 | 20.97 | 23.32 | 0.215 |
| 64QAM | 825 | 23950 | 10 | 25 | 25 | 21.03 | 23.38 | 0.218 |
| 64QAM | 825 | 23950 | 10 | 50 | 0 | 20.97 | 23.32 | 0.215 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| QPSK | 822.5 | 23925 | 15 | 1 | 0 | 23.04 | 25.39 | 0.346 |
| QPSK | 822.5 | 23925 | 15 | 1 | 37 | 23.57 | 25.92 | 0.391 |
| QPSK | 822.5 | 23925 | 15 | 1 | 74 | 23.55 | 25.90 | 0.389 |
| QPSK | 822.5 | 23925 | 15 | 36 | 0 | 22.31 | 24.66 | 0.292 |
| QPSK | 822.5 | 23925 | 15 | 36 | 29 | 22.60 | 24.95 | 0.313 |
| QPSK | 822.5 | 23925 | 15 | 36 | 30 | 22.59 | 24.94 | 0.312 |
| QPSK | 822.5 | 23925 | 15 | 75 | 0 | 22.46 | 24.81 | 0.303 |

| Modulation | Carrier frequency (MHz) | UL Channel | BW | RB Size | RB Offset | Conducted power (dBm) | ERP/ EIRP (dBm) | ERP/ EIRP (W) |
|---|---|---|---|---|---|---|---|---|
| 16QAM | 822.5 | 23925 | 15 | 1 | 0 | 22.02 | 24.37 | 0.274 |
| 16QAM | 822.5 | 23925 | 15 | 1 | 37 | 22.81 | 25.16 | 0.328 |
| 16QAM | 822.5 | 23925 | 15 | 1 | 74 | 22.63 | 24.98 | 0.315 |
| 16QAM | 822.5 | 23925 | 15 | 36 | 0 | 21.19 | 23.54 | 0.226 |
| 16QAM | 822.5 | 23925 | 15 | 36 | 29 | 21.47 | 23.82 | 0.241 |
| 16QAM | 822.5 | 23925 | 15 | 36 | 30 | 21.54 | 23.89 | 0.245 |
| 16QAM | 822.5 | 23925 | 15 | 75 | 0 | 21.40 | 23.75 | 0.237 |
| 64QAM | 822.5 | 23925 | 15 | 1 | 0 | 21.40 | 23.75 | 0.237 |
| 64QAM | 822.5 | 23925 | 15 | 1 | 37 | 22.45 | 24.80 | 0.302 |
| 64QAM | 822.5 | 23925 | 15 | 1 | 74 | 22.56 | 24.91 | 0.310 |
| 64QAM | 822.5 | 23925 | 15 | 36 | 0 | 21.12 | 23.47 | 0.222 |
| 64QAM | 822.5 | 23925 | 15 | 36 | 29 | 21.45 | 23.80 | 0.240 |
| 64QAM | 822.5 | 23925 | 15 | 36 | 30 | 21.42 | 23.77 | 0.238 |
| 64QAM | 822.5 | 23925 | 15 | 75 | 0 | 21.34 | 23.69 | 0.234 |