



REPORT No.: SZ22010020S01

## Annex E Conducted Power

## Full Power

| GSM850          | Burst Average Power (dBm) |       |       | Tune-up Limit (dBm) | Frame-Average Power (dBm) |       |       | Tune-up Limit (dBm) | Ch Delta > 0.5 |
|-----------------|---------------------------|-------|-------|---------------------|---------------------------|-------|-------|---------------------|----------------|
| TX Channel      | 128                       | 189   | 251   |                     | 128                       | 189   | 251   |                     |                |
| Frequency (MHz) | 824.2                     | 836.4 | 848.8 |                     | 824.2                     | 836.4 | 848.8 |                     |                |
| GSM 1 Tx slot   | 32.45                     | 32.48 | 32.46 | 33.50               | 23.45                     | 23.48 | 23.46 | 24.50               | 0.05           |
| GPRS 1 Tx slot  | 32.44                     | 32.49 | 32.47 | 33.50               | 23.44                     | 23.49 | 23.47 | 24.50               |                |
| GPRS 2 Tx slots | 30.14                     | 30.19 | 30.15 | 31.00               | 24.14                     | 24.19 | 24.15 | 25.00               | 0.05           |
| GPRS 3 Tx slots | 28.09                     | 28.11 | 28.04 | 29.00               | 23.83                     | 23.85 | 23.78 | 24.74               | 0.07           |
| GPRS 4 Tx slots | 27.11                     | 27.14 | 27.13 | 28.00               | 24.11                     | 24.14 | 24.13 | 25.00               | 0.03           |
| EDGE 1 Tx slot  | 27.08                     | 27.10 | 27.18 | 28.00               | 18.08                     | 18.10 | 18.18 | 19.00               | 0.10           |
| EDGE 2 Tx slots | 24.06                     | 24.05 | 24.02 | 25.00               | 18.06                     | 18.05 | 18.02 | 19.00               | 0.04           |
| EDGE 3 Tx slots | 22.34                     | 22.22 | 22.26 | 23.00               | 18.08                     | 17.96 | 18.00 | 18.74               | 0.12           |
| EDGE 4 Tx slots | 21.69                     | 21.54 | 21.68 | 22.50               | 18.69                     | 18.54 | 18.68 | 19.50               | 0.15           |
| Mode            |                           | Max.  | 32.49 |                     |                           | Max.  | 24.19 |                     |                |
| Attenuator      | Cable Loss : 0.6          |       |       |                     |                           |       |       |                     |                |
| Date            | 2022.1.17                 |       |       |                     |                           |       |       |                     |                |

| GSM1900         | Burst Average Power (dBm) |       |        | Tune-up Limit (dBm) | Frame-Average Power (dBm) |       |        | Tune-up Limit (dBm) | Ch Delta > 0.5 |
|-----------------|---------------------------|-------|--------|---------------------|---------------------------|-------|--------|---------------------|----------------|
| TX Channel      | 512                       | 661   | 810    |                     | 512                       | 661   | 810    |                     |                |
| Frequency (MHz) | 1850.2                    | 1880  | 1909.8 |                     | 1850.2                    | 1880  | 1909.8 |                     |                |
| GSM 1 Tx slot   | 29.45                     | 29.57 | 29.48  | 30.50               | 20.45                     | 20.57 | 20.48  | 21.50               | 0.13           |
| GPRS 1 Tx slot  | 29.47                     | 29.58 | 29.50  | 30.50               | 20.47                     | 20.58 | 20.50  | 21.50               |                |
| GPRS 2 Tx slots | 27.18                     | 27.21 | 27.16  | 28.00               | 21.18                     | 21.21 | 21.16  | 22.00               | 0.05           |
| GPRS 3 Tx slots | 25.10                     | 25.13 | 25.10  | 26.00               | 20.84                     | 20.87 | 20.84  | 21.74               | 0.03           |
| GPRS 4 Tx slots | 24.13                     | 24.19 | 24.16  | 25.00               | 21.13                     | 21.19 | 21.16  | 22.00               | 0.06           |
| EDGE 1 Tx slot  | 26.22                     | 26.23 | 26.19  | 27.00               | 17.22                     | 17.23 | 17.19  | 18.00               | 0.04           |
| EDGE 2 Tx slots | 23.26                     | 23.15 | 23.24  | 24.00               | 17.26                     | 17.15 | 17.24  | 18.00               | 0.11           |
| EDGE 3 Tx slots | 21.14                     | 21.19 | 21.15  | 22.00               | 16.88                     | 16.93 | 16.89  | 17.74               | 0.05           |
| EDGE 4 Tx slots | 20.56                     | 20.53 | 20.41  | 21.50               | 17.56                     | 17.53 | 17.41  | 18.50               | 0.15           |
| Mode            |                           | Max.  | 29.58  |                     |                           | Max.  | 21.21  |                     |                |
| Attenuator      | Cable Loss : 0.8          |       |        |                     |                           |       |        |                     |                |
| Date            | 2022.1.17                 |       |        |                     |                           |       |        |                     |                |

| Band                               | WCDMA Band II |            |        | Tune-up Limit (dBm) | WCDMA Band IV |            |        | Tune-up Limit (dBm) | WCDMA Band V |            |       | Tune-up Limit (dBm) |
|------------------------------------|---------------|------------|--------|---------------------|---------------|------------|--------|---------------------|--------------|------------|-------|---------------------|
| TX Channel                         | 9262          | 9400       | 9538   |                     | 1312          | 1413       | 1513   |                     | 4132         | 4182       | 4233  |                     |
| Rx Channel                         | 9662          | 9800       | 9938   |                     | 1537          | 1638       | 1738   |                     | 4357         | 4407       | 4458  |                     |
| Frequency (MHz)                    | 1852.4        | 1880       | 1907.6 |                     | 1712.4        | 1732.6     | 1752.6 |                     | 826.4        | 836.4      | 846.6 |                     |
| 3GPP Rel 99 RMC 12.2Kbps           | 23.14         | 23.16      | 23.11  | 24.00               | 23.12         | 23.15      | 23.13  | 24.00               | 23.55        | 23.57      | 23.51 | 24.50               |
| 3GPP Rel 6 HSDPA Subtest-1         | 21.59         | 21.57      | 21.53  | 22.50               | 21.87         | 21.80      | 21.85  | 22.50               | 22.37        | 22.45      | 22.34 | 23.50               |
| 3GPP Rel 6 HSDPA Subtest-2         | 21.72         | 21.59      | 21.54  | 22.50               | 21.88         | 21.82      | 21.86  | 22.50               | 22.39        | 22.47      | 22.54 | 23.50               |
| 3GPP Rel 6 HSDPA Subtest-3         | 21.24         | 21.20      | 21.17  | 22.00               | 21.50         | 21.45      | 21.38  | 22.50               | 21.71        | 21.99      | 22.03 | 23.00               |
| 3GPP Rel 6 HSDPA Subtest-4         | 21.25         | 21.22      | 21.18  | 22.00               | 21.60         | 21.33      | 21.35  | 22.50               | 21.72        | 21.91      | 21.95 | 23.00               |
| 3GPP Rel 8 DC-HSDPA Subtest-1      | 21.99         | 21.89      | 21.89  | 22.50               | 22.22         | 22.09      | 22.20  | 23.00               | 22.61        | 22.60      | 22.53 | 23.50               |
| 3GPP Rel 8 DC-HSDPA Subtest-2      | 22.01         | 21.91      | 21.90  | 22.50               | 22.21         | 22.10      | 22.16  | 23.00               | 22.63        | 22.60      | 22.51 | 23.50               |
| 3GPP Rel 8 DC-HSDPA Subtest-3      | 21.24         | 21.36      | 21.38  | 22.00               | 21.71         | 21.58      | 21.67  | 22.50               | 22.13        | 22.18      | 22.17 | 23.00               |
| 3GPP Rel 8 DC-HSDPA Subtest-4      | 21.23         | 21.41      | 21.38  | 22.00               | 21.72         | 21.58      | 21.68  | 22.50               | 22.13        | 22.19      | 22.17 | 23.00               |
| 3GPP Rel 6 HSUPA Subtest-1         | 21.61         | 21.63      | 21.56  | 22.50               | 21.96         | 21.92      | 21.90  | 22.50               | 22.44        | 22.53      | 22.62 | 23.50               |
| 3GPP Rel 6 HSUPA Subtest-2         | 21.05         | 21.17      | 21.01  | 22.00               | 21.45         | 21.38      | 21.40  | 22.50               | 21.90        | 21.99      | 21.96 | 22.50               |
| 3GPP Rel 6 HSUPA Subtest-3         | 21.80         | 21.76      | 21.67  | 22.50               | 22.09         | 21.94      | 21.92  | 22.50               | 22.47        | 22.52      | 22.49 | 23.50               |
| 3GPP Rel 6 HSUPA Subtest-4         | 21.63         | 21.68      | 21.60  | 22.50               | 21.96         | 21.89      | 21.92  | 22.50               | 22.41        | 22.50      | 22.43 | 23.50               |
| 3GPP Rel 6 HSUPA Subtest-5         | 21.77         | 21.72      | 21.63  | 22.50               | 22.07         | 22.01      | 21.91  | 23.00               | 22.44        | 22.50      | 22.56 | 23.50               |
| 3GPP Rel 7 HSPA+ (16QAM) Subtest-1 | 21.74         | 21.66      | 21.70  | 22.50               | 21.66         | 21.57      | 21.55  | 22.50               | 22.23        | 22.30      | 22.52 | 23.50               |
| Attenuator                         |               | Cable Loss | 0.8    |                     |               | Cable Loss | 0.8    |                     |              | Cable Loss | 0.6   |                     |
| Mode                               |               | Max.       | 23.16  |                     |               | Max.       | 23.15  |                     |              | Max.       | 23.57 |                     |
| Date                               | 2022.1.17     |            |        |                     | 2022.1.17     |            |        |                     | 2022.1.17    |            |       |                     |

| Band 2 (1900MHz Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 18700       | 18900          | 19100        |                     |
| Frequency (MHz)       |            |         |           | 1860        | 1880           | 1900         |                     |
| 20                    | QPSK       | 1       | 0         | 22.50       | 22.53          | 22.47        | 23.5                |
| 20                    | QPSK       | 1       | 49        | 22.48       | 22.42          | 22.35        |                     |
| 20                    | QPSK       | 1       | 99        | 22.42       | 22.38          | 22.36        |                     |
| 20                    | QPSK       | 50      | 0         | 21.58       | 21.67          | 21.60        |                     |
| 20                    | QPSK       | 50      | 24        | 21.59       | 21.64          | 21.64        | 22.5                |
| 20                    | QPSK       | 50      | 50        | 21.64       | 21.60          | 21.66        |                     |
| 20                    | QPSK       | 100     | 0         | 21.57       | 21.66          | 21.62        |                     |
| 20                    | 16QAM      | 1       | 0         | 21.63       | 21.63          | 21.65        |                     |
| 20                    | 16QAM      | 1       | 49        | 21.47       | 21.77          | 21.73        | 22.5                |
| 20                    | 16QAM      | 1       | 99        | 21.72       | 21.57          | 21.97        |                     |
| 20                    | 16QAM      | 50      | 0         | 21.65       | 21.62          | 21.60        |                     |
| 20                    | 16QAM      | 50      | 24        | 21.61       | 21.66          | 21.67        |                     |
| 20                    | 16QAM      | 50      | 50        | 21.69       | 21.66          | 21.73        | 22.5                |
| 20                    | 16QAM      | 100     | 0         | 21.72       | 21.73          | 21.60        |                     |
| 20                    | 64QAM      | 1       | 0         | 20.67       | 20.86          | 20.60        |                     |
| 20                    | 64QAM      | 1       | 49        | 20.62       | 20.80          | 20.71        |                     |
| 20                    | 64QAM      | 1       | 99        | 20.57       | 20.90          | 20.90        | 21.5                |
| 20                    | 64QAM      | 50      | 0         | 20.67       | 20.59          | 20.64        |                     |
| 20                    | 64QAM      | 50      | 24        | 20.70       | 20.64          | 20.69        |                     |
| 20                    | 64QAM      | 50      | 50        | 20.69       | 20.70          | 20.64        |                     |
| 20                    | 64QAM      | 100     | 0         | 20.57       | 20.54          | 20.55        |                     |
| Channel               |            |         |           | 18675       | 18900          | 19125        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1857.5      | 1880           | 1902.5       |                     |
| 15                    | QPSK       | 1       | 0         | 22.31       | 22.34          | 22.25        | 23.5                |
| 15                    | QPSK       | 1       | 37        | 22.10       | 22.46          | 22.34        |                     |
| 15                    | QPSK       | 1       | 74        | 22.47       | 22.39          | 22.47        |                     |
| 15                    | QPSK       | 36      | 0         | 21.44       | 21.53          | 21.52        |                     |
| 15                    | QPSK       | 36      | 20        | 21.43       | 21.62          | 21.59        | 22.5                |
| 15                    | QPSK       | 36      | 39        | 21.55       | 21.56          | 21.53        |                     |
| 15                    | QPSK       | 75      | 0         | 21.47       | 21.53          | 21.49        |                     |
| 15                    | 16QAM      | 1       | 0         | 21.56       | 21.64          | 21.58        |                     |
| 15                    | 16QAM      | 1       | 37        | 21.69       | 21.72          | 21.58        | 22.5                |
| 15                    | 16QAM      | 1       | 74        | 21.64       | 21.76          | 21.76        |                     |
| 15                    | 16QAM      | 36      | 0         | 21.43       | 21.48          | 21.51        |                     |
| 15                    | 16QAM      | 36      | 20        | 21.52       | 21.45          | 21.58        |                     |
| 15                    | 16QAM      | 36      | 39        | 21.57       | 21.66          | 21.63        | 22.5                |
| 15                    | 16QAM      | 75      | 0         | 21.44       | 21.46          | 21.55        |                     |
| 15                    | 64QAM      | 1       | 0         | 20.64       | 20.40          | 20.46        |                     |
| 15                    | 64QAM      | 1       | 37        | 20.63       | 20.44          | 20.86        |                     |
| 15                    | 64QAM      | 1       | 74        | 20.52       | 20.56          | 20.71        | 21.5                |
| 15                    | 64QAM      | 36      | 0         | 20.37       | 20.54          | 20.42        |                     |
| 15                    | 64QAM      | 36      | 20        | 20.57       | 20.59          | 20.49        |                     |
| 15                    | 64QAM      | 36      | 39        | 20.45       | 20.50          | 20.59        |                     |
| 15                    | 64QAM      | 75      | 0         | 20.44       | 20.51          | 20.50        |                     |
| Channel               |            |         |           | 18650       | 18900          | 19150        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1855        | 1880           | 1905         |                     |
| 10                    | QPSK       | 1       | 0         | 22.35       | 22.34          | 22.44        | 23.5                |
| 10                    | QPSK       | 1       | 25        | 22.39       | 22.42          | 22.37        |                     |
| 10                    | QPSK       | 1       | 49        | 22.35       | 22.36          | 22.35        |                     |
| 10                    | QPSK       | 25      | 0         | 21.62       | 21.63          | 21.59        |                     |
| 10                    | QPSK       | 25      | 12        | 21.58       | 21.70          | 21.63        | 22.5                |
| 10                    | QPSK       | 25      | 25        | 21.49       | 21.62          | 21.58        |                     |
| 10                    | QPSK       | 50      | 0         | 21.55       | 21.64          | 21.62        |                     |
| 10                    | 16QAM      | 1       | 0         | 22.03       | 21.96          | 21.95        |                     |
| 10                    | 16QAM      | 1       | 25        | 21.72       | 21.68          | 21.75        | 22.5                |
| 10                    | 16QAM      | 1       | 49        | 21.67       | 21.75          | 21.54        |                     |
| 10                    | 16QAM      | 25      | 0         | 21.57       | 21.56          | 21.53        |                     |
| 10                    | 16QAM      | 25      | 12        | 21.73       | 21.53          | 21.53        |                     |
| 10                    | 16QAM      | 25      | 25        | 21.53       | 21.73          | 21.83        | 22.5                |
| 10                    | 16QAM      | 50      | 0         | 22.10       | 22.03          | 22.07        |                     |
| 10                    | 64QAM      | 1       | 0         | 20.61       | 20.66          | 20.66        |                     |
| 10                    | 64QAM      | 1       | 25        | 20.64       | 20.69          | 20.73        |                     |
| 10                    | 64QAM      | 1       | 49        | 20.31       | 20.44          | 20.41        | 21.5                |
| 10                    | 64QAM      | 25      | 0         | 20.61       | 20.65          | 20.66        |                     |
| 10                    | 64QAM      | 25      | 12        | 20.64       | 20.62          | 20.63        |                     |
| 10                    | 64QAM      | 25      | 25        | 20.57       | 20.35          | 20.57        |                     |
| 10                    | 64QAM      | 50      | 0         | 20.58       | 20.58          | 20.55        |                     |
| Channel               |            |         |           | 18625       | 18900          | 19175        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1852.5      | 1880           | 1907.5       |                     |
| 5                     | QPSK       | 1       | 0         | 22.35       | 22.40          | 22.34        | 23.5                |
| 5                     | QPSK       | 1       | 12        | 22.34       | 22.29          | 22.32        |                     |
| 5                     | QPSK       | 1       | 24        | 22.30       | 22.38          | 22.39        |                     |
| 5                     | QPSK       | 12      | 0         | 21.47       | 21.38          | 21.45        |                     |
| 5                     | QPSK       | 12      | 7         | 21.48       | 21.53          | 21.45        | 22.5                |
| 5                     | QPSK       | 12      | 13        | 21.47       | 21.46          | 21.49        |                     |
| 5                     | QPSK       | 25      | 0         | 21.46       | 21.44          | 21.46        |                     |
| 5                     | 16QAM      | 1       | 0         | 21.59       | 21.49          | 21.87        |                     |
| 5                     | 16QAM      | 1       | 12        | 21.57       | 21.50          | 21.87        | 22.5                |
| 5                     | 16QAM      | 1       | 24        | 21.60       | 21.47          | 21.86        |                     |
| 5                     | 16QAM      | 12      | 0         | 21.69       | 21.83          | 21.69        |                     |
| 5                     | 16QAM      | 12      | 7         | 21.59       | 21.59          | 21.39        |                     |
| 5                     | 16QAM      | 12      | 13        | 21.39       | 21.72          | 21.49        | 22.5                |
| 5                     | 16QAM      | 25      | 0         | 21.49       | 21.95          | 21.93        |                     |
| 5                     | 64QAM      | 1       | 0         | 20.69       | 20.41          | 20.46        |                     |
| 5                     | 64QAM      | 1       | 12        | 20.85       | 20.51          | 20.62        |                     |
| 5                     | 64QAM      | 1       | 24        | 20.86       | 20.50          | 20.52        | 21.5                |
| 5                     | 64QAM      | 12      | 0         | 20.51       | 20.44          | 20.43        |                     |
| 5                     | 64QAM      | 12      | 7         | 20.57       | 20.41          | 20.41        |                     |
| 5                     | 64QAM      | 12      | 13        | 20.54       | 20.50          | 20.48        |                     |
| 5                     | 64QAM      | 25      | 0         | 20.61       | 20.41          | 20.48        |                     |
| Channel               |            |         |           | 18615       | 18900          | 19185        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1851.5      | 1880           | 1908.5       |                     |
| 3                     | QPSK       | 1       | 0         | 22.29       | 22.36          | 22.28        | 23.5                |
| 3                     | QPSK       | 1       | 8         | 22.39       | 22.42          | 22.25        |                     |
| 3                     | QPSK       | 1       | 14        | 22.40       | 22.27          | 22.27        |                     |
| 3                     | QPSK       | 8       | 0         | 21.35       | 21.30          | 21.32        |                     |
| 3                     | QPSK       | 8       | 4         | 21.41       | 21.35          | 21.36        | 22.5                |
| 3                     | QPSK       | 8       | 7         | 21.41       | 21.35          | 21.31        |                     |
| 3                     | QPSK       | 15      | 0         | 21.33       | 21.41          | 21.34        |                     |
| 3                     | 16QAM      | 1       | 0         | 21.49       | 21.40          | 21.34        |                     |
| 3                     | 16QAM      | 1       | 8         | 21.53       | 21.47          | 21.43        | 22.5                |
| 3                     | 16QAM      | 1       | 14        | 21.46       | 21.43          | 21.31        |                     |

| Band 4 (AWS Band) |            |         |           |             |                |              |                     |
|-------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]          | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel           |            |         |           | 20050       | 20175          | 20300        |                     |
| Frequency (MHz)   |            |         |           | 1720        | 1732.5         | 1745         |                     |
| 20                | QPSK       | 1       | 0         | 22.48       | 22.56          | 22.55        | 23.5                |
| 20                | QPSK       | 1       | 49        | 22.34       | 22.42          | 22.41        |                     |
| 20                | QPSK       | 1       | 99        | 22.26       | 22.39          | 22.51        |                     |
| 20                | QPSK       | 50      | 0         | 21.64       | 21.68          | 21.65        |                     |
| 20                | QPSK       | 50      | 24        | 21.55       | 21.63          | 21.63        | 22.5                |
| 20                | QPSK       | 50      | 50        | 21.44       | 21.55          | 21.56        |                     |
| 20                | QPSK       | 100     | 0         | 21.54       | 21.58          | 21.65        |                     |
| 20                | 16QAM      | 1       | 0         | 21.41       | 21.71          | 21.58        |                     |
| 20                | 16QAM      | 1       | 49        | 21.56       | 21.33          | 21.47        | 22.5                |
| 20                | 16QAM      | 1       | 99        | 21.35       | 21.57          | 21.41        |                     |
| 20                | 16QAM      | 50      | 0         | 21.54       | 21.47          | 21.61        |                     |
| 20                | 16QAM      | 50      | 24        | 21.80       | 21.91          | 21.80        |                     |
| 20                | 16QAM      | 50      | 50        | 21.76       | 21.77          | 21.77        | 22.5                |
| 20                | 16QAM      | 100     | 0         | 21.78       | 21.86          | 21.87        |                     |
| 20                | 64QAM      | 1       | 0         | 20.52       | 20.63          | 20.85        |                     |
| 20                | 64QAM      | 1       | 49        | 20.56       | 20.49          | 20.37        |                     |
| 20                | 64QAM      | 1       | 99        | 20.83       | 20.40          | 20.87        | 21.5                |
| 20                | 64QAM      | 50      | 0         | 20.53       | 20.62          | 20.57        |                     |
| 20                | 64QAM      | 50      | 24        | 20.55       | 20.66          | 20.60        |                     |
| 20                | 64QAM      | 50      | 50        | 20.59       | 20.54          | 20.56        |                     |
| 20                | 64QAM      | 100     | 0         | 20.62       | 20.60          | 20.69        |                     |
| Channel           |            |         |           | 20025       | 20175          | 20325        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1717.5      | 1732.5         | 1747.5       |                     |
| 15                | QPSK       | 1       | 0         | 22.35       | 22.39          | 22.49        | 23.5                |
| 15                | QPSK       | 1       | 37        | 22.39       | 22.48          | 22.40        |                     |
| 15                | QPSK       | 1       | 74        | 22.26       | 22.48          | 22.51        |                     |
| 15                | QPSK       | 36      | 0         | 21.49       | 21.56          | 21.59        |                     |
| 15                | QPSK       | 36      | 20        | 21.53       | 21.66          | 21.62        | 22.5                |
| 15                | QPSK       | 36      | 39        | 21.58       | 21.57          | 21.66        |                     |
| 15                | QPSK       | 75      | 0         | 21.53       | 21.55          | 21.56        |                     |
| 15                | 16QAM      | 1       | 0         | 21.47       | 21.69          | 21.41        |                     |
| 15                | 16QAM      | 1       | 37        | 21.55       | 21.55          | 21.39        | 22.5                |
| 15                | 16QAM      | 1       | 74        | 21.41       | 21.71          | 21.50        |                     |
| 15                | 16QAM      | 36      | 0         | 21.42       | 21.44          | 21.63        |                     |
| 15                | 16QAM      | 36      | 20        | 21.37       | 21.44          | 21.50        |                     |
| 15                | 16QAM      | 36      | 39        | 21.33       | 21.42          | 21.48        | 22.5                |
| 15                | 16QAM      | 75      | 0         | 21.44       | 21.45          | 21.54        |                     |
| 15                | 64QAM      | 1       | 0         | 20.39       | 20.70          | 20.75        |                     |
| 15                | 64QAM      | 1       | 37        | 20.81       | 20.57          | 20.63        |                     |
| 15                | 64QAM      | 1       | 74        | 20.85       | 20.56          | 20.60        | 21.5                |
| 15                | 64QAM      | 36      | 0         | 20.50       | 20.57          | 20.61        |                     |
| 15                | 64QAM      | 36      | 20        | 20.56       | 20.58          | 20.60        |                     |
| 15                | 64QAM      | 36      | 39        | 20.59       | 20.55          | 20.57        |                     |
| 15                | 64QAM      | 75      | 0         | 20.52       | 20.63          | 20.56        |                     |
| Channel           |            |         |           | 20000       | 20175          | 20350        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1715        | 1732.5         | 1750         |                     |
| 10                | QPSK       | 1       | 0         | 22.47       | 22.46          | 22.29        | 23.5                |
| 10                | QPSK       | 1       | 25        | 22.45       | 22.38          | 22.39        |                     |
| 10                | QPSK       | 1       | 49        | 22.33       | 22.16          | 22.39        |                     |
| 10                | QPSK       | 25      | 0         | 21.32       | 21.54          | 21.56        |                     |
| 10                | QPSK       | 25      | 12        | 21.44       | 21.50          | 21.54        | 22.5                |
| 10                | QPSK       | 25      | 25        | 21.33       | 21.44          | 21.51        |                     |
| 10                | QPSK       | 50      | 0         | 21.39       | 21.49          | 21.41        |                     |
| 10                | 16QAM      | 1       | 0         | 21.38       | 21.53          | 21.29        |                     |
| 10                | 16QAM      | 1       | 25        | 21.65       | 21.39          | 21.71        | 22.5                |
| 10                | 16QAM      | 1       | 49        | 21.72       | 21.62          | 21.61        |                     |
| 10                | 16QAM      | 25      | 0         | 21.38       | 21.37          | 21.36        |                     |
| 10                | 16QAM      | 25      | 12        | 21.30       | 21.40          | 21.37        |                     |
| 10                | 16QAM      | 25      | 25        | 21.64       | 21.55          | 21.64        | 22.5                |
| 10                | 16QAM      | 50      | 0         | 21.58       | 21.62          | 21.74        |                     |
| 10                | 64QAM      | 1       | 0         | 20.44       | 20.52          | 20.42        |                     |
| 10                | 64QAM      | 1       | 25        | 20.51       | 20.80          | 20.89        |                     |
| 10                | 64QAM      | 1       | 49        | 20.49       | 20.53          | 20.48        | 21.5                |
| 10                | 64QAM      | 25      | 0         | 20.33       | 20.47          | 20.46        |                     |
| 10                | 64QAM      | 25      | 12        | 20.42       | 20.53          | 20.57        |                     |
| 10                | 64QAM      | 25      | 25        | 20.30       | 20.42          | 20.44        |                     |
| 10                | 64QAM      | 50      | 0         | 20.36       | 20.43          | 20.42        |                     |
| Channel           |            |         |           | 19975       | 20175          | 20375        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1712.5      | 1732.5         | 1752.5       |                     |
| 5                 | QPSK       | 1       | 0         | 22.44       | 22.39          | 22.44        | 23.5                |
| 5                 | QPSK       | 1       | 12        | 22.43       | 22.38          | 22.35        |                     |
| 5                 | QPSK       | 1       | 24        | 22.18       | 22.30          | 22.29        |                     |
| 5                 | QPSK       | 12      | 0         | 21.40       | 21.40          | 21.44        |                     |
| 5                 | QPSK       | 12      | 7         | 21.40       | 21.51          | 21.48        | 22.5                |
| 5                 | QPSK       | 12      | 13        | 21.35       | 21.52          | 21.44        |                     |
| 5                 | QPSK       | 25      | 0         | 21.38       | 21.42          | 21.46        |                     |
| 5                 | 16QAM      | 1       | 0         | 21.28       | 21.69          | 21.37        |                     |
| 5                 | 16QAM      | 1       | 12        | 21.39       | 21.74          | 21.33        | 22.5                |
| 5                 | 16QAM      | 1       | 24        | 21.33       | 21.68          | 21.28        |                     |
| 5                 | 16QAM      | 12      | 0         | 21.32       | 21.26          | 21.29        |                     |
| 5                 | 16QAM      | 12      | 7         | 21.35       | 21.39          | 21.37        |                     |
| 5                 | 16QAM      | 12      | 13        | 21.62       | 21.69          | 21.73        | 22.5                |
| 5                 | 16QAM      | 25      | 0         | 21.63       | 21.74          | 21.67        |                     |
| 5                 | 64QAM      | 1       | 0         | 20.40       | 20.84          | 20.82        |                     |
| 5                 | 64QAM      | 1       | 12        | 20.78       | 20.54          | 20.81        |                     |
| 5                 | 64QAM      | 1       | 24        | 20.74       | 20.44          | 20.51        | 21.5                |
| 5                 | 64QAM      | 12      | 0         | 20.41       | 20.48          | 20.50        |                     |
| 5                 | 64QAM      | 12      | 7         | 20.40       | 20.49          | 20.55        |                     |
| 5                 | 64QAM      | 12      | 13        | 20.41       | 20.47          | 20.46        |                     |
| 5                 | 64QAM      | 25      | 0         | 20.36       | 20.50          | 20.41        |                     |
| Channel           |            |         |           | 19965       | 20175          | 20385        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1711.5      | 1732.5         | 1753.5       |                     |
| 3                 | QPSK       | 1       | 0         | 22.29       | 22.30          | 22.42        | 23.5                |
| 3                 | QPSK       | 1       | 8         | 22.38       | 22.52          | 22.46        |                     |
| 3                 | QPSK       | 1       | 14        | 22.18       | 22.37          | 22.37        |                     |
| 3                 | QPSK       | 8       | 0         | 21.38       | 21.44          | 21.45        |                     |
| 3                 | QPSK       | 8       | 4         | 21.44       | 21.52          | 21.54        | 22.5                |
| 3                 | QPSK       | 8       | 7         | 21.40       | 21.50          | 21.50        |                     |
| 3                 | QPSK       | 15      | 0         | 21.40       | 21.46          | 21.40        |                     |
| 3                 | 16QAM      | 1       | 0         | 21.48       | 21.57          | 21.61        |                     |
| 3                 | 16QAM      | 1       | 8         | 21.70       | 21.70          | 21.44        | 22.5                |
| 3                 | 16QAM      | 1       | 14        | 21.61       | 21.39          | 21.47        |                     |



| Band 5 (Celluar Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 20450       | 20525          | 20600        |                     |
| Frequency (MHz)       |            |         |           | 829         | 836.5          | 844          | 24.5                |
| 10                    | QPSK       | 1       | 0         | 23.47       | 23.48          | 23.40        |                     |
| 10                    | QPSK       | 1       | 25        | 23.33       | 23.36          | 23.16        |                     |
| 10                    | QPSK       | 1       | 49        | 23.25       | 23.37          | 23.05        |                     |
| 10                    | QPSK       | 25      | 0         | 22.56       | 22.58          | 22.39        | 23.5                |
| 10                    | QPSK       | 25      | 12        | 22.32       | 22.34          | 22.39        |                     |
| 10                    | QPSK       | 25      | 25        | 22.32       | 22.43          | 22.48        |                     |
| 10                    | QPSK       | 50      | 0         | 22.38       | 22.26          | 22.40        |                     |
| 10                    | 16QAM      | 1       | 0         | 22.42       | 22.61          | 22.32        | 23.5                |
| 10                    | 16QAM      | 1       | 25        | 22.65       | 22.68          | 22.36        |                     |
| 10                    | 16QAM      | 1       | 49        | 22.48       | 22.54          | 22.61        |                     |
| 10                    | 16QAM      | 25      | 0         | 22.57       | 22.58          | 22.40        |                     |
| 10                    | 16QAM      | 25      | 12        | 22.51       | 22.59          | 22.37        | 23.5                |
| 10                    | 16QAM      | 25      | 25        | 22.54       | 22.47          | 22.50        |                     |
| 10                    | 16QAM      | 50      | 0         | 22.55       | 22.46          | 22.36        |                     |
| 10                    | 64QAM      | 1       | 0         | 21.51       | 21.61          | 21.49        |                     |
| 10                    | 64QAM      | 1       | 25        | 21.48       | 21.68          | 21.48        | 22.5                |
| 10                    | 64QAM      | 1       | 49        | 21.37       | 21.59          | 21.50        |                     |
| 10                    | 64QAM      | 25      | 0         | 21.48       | 21.59          | 21.26        |                     |
| 10                    | 64QAM      | 25      | 12        | 21.47       | 21.64          | 21.35        |                     |
| 10                    | 64QAM      | 25      | 25        | 21.59       | 21.48          | 21.18        | 22.5                |
| 10                    | 64QAM      | 50      | 0         | 21.55       | 21.51          | 21.37        |                     |
| Channel               |            |         |           | 20425       | 20525          | 20625        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 826.5       | 836.5          | 846.5        |                     |
| 5                     | QPSK       | 1       | 0         | 23.42       | 23.38          | 23.36        | 24.5                |
| 5                     | QPSK       | 1       | 12        | 23.32       | 23.43          | 23.27        |                     |
| 5                     | QPSK       | 1       | 24        | 23.32       | 23.27          | 23.27        |                     |
| 5                     | QPSK       | 12      | 0         | 22.47       | 22.52          | 22.38        |                     |
| 5                     | QPSK       | 12      | 7         | 22.54       | 22.55          | 22.47        | 23.5                |
| 5                     | QPSK       | 12      | 13        | 22.59       | 22.43          | 22.38        |                     |
| 5                     | QPSK       | 25      | 0         | 22.50       | 22.46          | 22.38        |                     |
| 5                     | 16QAM      | 1       | 0         | 22.79       | 22.72          | 22.48        |                     |
| 5                     | 16QAM      | 1       | 12        | 22.49       | 22.71          | 22.47        | 23.5                |
| 5                     | 16QAM      | 1       | 24        | 22.36       | 22.71          | 22.54        |                     |
| 5                     | 16QAM      | 12      | 0         | 22.45       | 22.54          | 22.53        |                     |
| 5                     | 16QAM      | 12      | 7         | 22.52       | 22.55          | 22.37        |                     |
| 5                     | 16QAM      | 12      | 13        | 22.52       | 22.43          | 22.48        | 23.5                |
| 5                     | 16QAM      | 25      | 0         | 22.53       | 22.58          | 22.53        |                     |
| 5                     | 64QAM      | 1       | 0         | 21.60       | 21.48          | 21.59        |                     |
| 5                     | 64QAM      | 1       | 12        | 21.48       | 21.42          | 21.56        |                     |
| 5                     | 64QAM      | 1       | 24        | 21.62       | 21.46          | 21.40        | 22.5                |
| 5                     | 64QAM      | 12      | 0         | 21.34       | 21.48          | 21.28        |                     |
| 5                     | 64QAM      | 12      | 7         | 21.38       | 21.54          | 21.32        |                     |
| 5                     | 64QAM      | 12      | 13        | 21.56       | 21.51          | 21.08        |                     |
| 5                     | 64QAM      | 25      | 0         | 21.44       | 21.51          | 21.12        | 22.5                |
| Channel               |            |         |           | 20415       | 20525          | 20635        |                     |
| Frequency (MHz)       |            |         |           | 825.5       | 836.5          | 847.5        | Tune-up limit (dBm) |
| 3                     | QPSK       | 1       | 0         | 23.41       | 23.42          | 23.27        |                     |
| 3                     | QPSK       | 1       | 8         | 23.37       | 23.38          | 23.29        |                     |
| 3                     | QPSK       | 1       | 14        | 23.38       | 23.36          | 23.10        |                     |
| 3                     | QPSK       | 8       | 0         | 22.40       | 22.53          | 22.51        |                     |
| 3                     | QPSK       | 8       | 4         | 22.54       | 22.60          | 22.57        | 23.5                |
| 3                     | QPSK       | 8       | 7         | 22.49       | 22.51          | 22.38        |                     |
| 3                     | QPSK       | 15      | 0         | 22.47       | 22.53          | 22.52        |                     |
| 3                     | 16QAM      | 1       | 0         | 22.49       | 22.60          | 22.67        |                     |
| 3                     | 16QAM      | 1       | 8         | 22.42       | 22.68          | 22.52        | 23.5                |
| 3                     | 16QAM      | 1       | 14        | 22.47       | 22.73          | 22.48        |                     |
| 3                     | 16QAM      | 8       | 0         | 22.43       | 22.52          | 22.26        |                     |
| 3                     | 16QAM      | 8       | 4         | 22.59       | 22.70          | 22.27        |                     |
| 3                     | 16QAM      | 8       | 7         | 22.51       | 22.57          | 22.31        | 23.5                |
| 3                     | 16QAM      | 15      | 0         | 22.45       | 22.47          | 22.02        |                     |
| 3                     | 64QAM      | 1       | 0         | 21.40       | 21.28          | 21.49        |                     |
| 3                     | 64QAM      | 1       | 8         | 21.28       | 21.52          | 21.28        |                     |
| 3                     | 64QAM      | 1       | 14        | 21.30       | 21.48          | 21.29        | 22.5                |
| 3                     | 64QAM      | 8       | 0         | 21.40       | 21.50          | 21.48        |                     |
| 3                     | 64QAM      | 8       | 4         | 21.62       | 21.46          | 21.40        |                     |
| 3                     | 64QAM      | 8       | 7         | 21.57       | 21.49          | 21.46        |                     |
| 3                     | 64QAM      | 15      | 0         | 21.46       | 21.56          | 21.36        | 22.5                |
| Channel               |            |         |           | 20407       | 20525          | 20643        |                     |
| Frequency (MHz)       |            |         |           | 824.7       | 836.5          | 848.3        | Tune-up limit (dBm) |
| 1.4                   | QPSK       | 1       | 0         | 23.42       | 23.39          | 23.43        |                     |
| 1.4                   | QPSK       | 1       | 3         | 23.45       | 23.38          | 23.45        |                     |
| 1.4                   | QPSK       | 1       | 5         | 23.34       | 23.28          | 23.29        |                     |
| 1.4                   | QPSK       | 3       | 0         | 23.35       | 23.41          | 23.37        |                     |
| 1.4                   | QPSK       | 3       | 1         | 23.41       | 23.28          | 23.38        | 23.5                |
| 1.4                   | QPSK       | 3       | 3         | 23.42       | 23.34          | 23.34        |                     |
| 1.4                   | QPSK       | 6       | 0         | 22.45       | 22.44          | 22.43        |                     |
| 1.4                   | 16QAM      | 1       | 0         | 22.58       | 22.39          | 22.56        |                     |
| 1.4                   | 16QAM      | 1       | 3         | 22.38       | 22.62          | 22.51        | 23.5                |
| 1.4                   | 16QAM      | 1       | 5         | 22.77       | 22.45          | 22.51        |                     |
| 1.4                   | 16QAM      | 3       | 0         | 22.30       | 22.28          | 22.42        |                     |
| 1.4                   | 16QAM      | 3       | 1         | 22.33       | 22.60          | 22.46        |                     |
| 1.4                   | 16QAM      | 3       | 3         | 22.41       | 22.52          | 22.40        | 23.5                |
| 1.4                   | 16QAM      | 6       | 0         | 22.60       | 22.47          | 22.51        |                     |
| 1.4                   | 64QAM      | 1       | 0         | 21.13       | 21.30          | 21.32        |                     |
| 1.4                   | 64QAM      | 1       | 3         | 21.44       | 21.45          | 21.40        |                     |
| 1.4                   | 64QAM      | 1       | 5         | 21.39       | 21.38          | 21.26        | 22.5                |
| 1.4                   | 64QAM      | 3       | 0         | 21.05       | 21.32          | 21.33        |                     |
| 1.4                   | 64QAM      | 3       | 1         | 21.33       | 21.27          | 21.28        |                     |
| 1.4                   | 64QAM      | 3       | 3         | 21.23       | 21.40          | 21.44        |                     |
| 1.4                   | 64QAM      | 6       | 0         | 21.44       | 21.56          | 21.45        | 22.5                |

| Band 7 (2600MHz Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 20850       | 21100          | 21350        |                     |
| Frequency (MHz)       |            |         |           | 2510        | 2535           | 2560         |                     |
| 20                    | QPSK       | 1       | 0         | 22.53       | 22.54          | 22.46        | 23.5                |
| 20                    | QPSK       | 1       | 49        | 22.48       | 22.52          | 22.41        |                     |
| 20                    | QPSK       | 1       | 99        | 22.43       | 22.38          | 22.43        |                     |
| 20                    | QPSK       | 50      | 0         | 21.59       | 21.66          | 21.63        |                     |
| 20                    | QPSK       | 50      | 24        | 21.35       | 21.32          | 21.22        | 22.5                |
| 20                    | QPSK       | 50      | 50        | 21.45       | 21.48          | 21.45        |                     |
| 20                    | QPSK       | 100     | 0         | 21.40       | 21.42          | 21.38        |                     |
| 20                    | 16QAM      | 1       | 0         | 21.21       | 21.31          | 21.49        |                     |
| 20                    | 16QAM      | 1       | 49        | 21.36       | 21.22          | 21.50        | 22.5                |
| 20                    | 16QAM      | 1       | 99        | 21.30       | 21.61          | 21.26        |                     |
| 20                    | 16QAM      | 50      | 0         | 21.15       | 21.25          | 21.18        |                     |
| 20                    | 16QAM      | 50      | 24        | 21.20       | 21.12          | 21.23        |                     |
| 20                    | 16QAM      | 50      | 50        | 21.28       | 21.33          | 21.16        | 22.5                |
| 20                    | 16QAM      | 100     | 0         | 21.16       | 21.28          | 21.26        |                     |
| 20                    | 64QAM      | 1       | 0         | 20.04       | 20.20          | 20.22        |                     |
| 20                    | 64QAM      | 1       | 49        | 20.32       | 20.29          | 20.34        |                     |
| 20                    | 64QAM      | 1       | 99        | 20.30       | 20.35          | 20.26        | 21.5                |
| 20                    | 64QAM      | 50      | 0         | 20.24       | 20.25          | 20.30        |                     |
| 20                    | 64QAM      | 50      | 24        | 20.29       | 20.30          | 20.30        |                     |
| 20                    | 64QAM      | 50      | 50        | 20.33       | 20.40          | 20.25        |                     |
| 20                    | 64QAM      | 100     | 0         | 20.26       | 20.23          | 20.35        | 21.5                |
| Channel               |            |         |           | 20825       | 21100          | 21375        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2507.5      | 2535           | 2562.5       |                     |
| 15                    | QPSK       | 1       | 0         | 22.36       | 22.45          | 22.45        | 23.5                |
| 15                    | QPSK       | 1       | 37        | 22.46       | 22.43          | 22.47        |                     |
| 15                    | QPSK       | 1       | 74        | 22.40       | 22.47          | 22.47        |                     |
| 15                    | QPSK       | 36      | 0         | 21.18       | 21.27          | 21.29        |                     |
| 15                    | QPSK       | 36      | 20        | 21.28       | 21.33          | 21.28        | 22.5                |
| 15                    | QPSK       | 36      | 39        | 21.29       | 21.32          | 21.36        |                     |
| 15                    | QPSK       | 75      | 0         | 21.35       | 21.28          | 21.30        |                     |
| 15                    | 16QAM      | 1       | 0         | 21.71       | 21.82          | 21.89        |                     |
| 15                    | 16QAM      | 1       | 37        | 21.53       | 21.64          | 21.62        | 22.5                |
| 15                    | 16QAM      | 1       | 74        | 21.57       | 21.57          | 21.79        |                     |
| 15                    | 16QAM      | 36      | 0         | 21.16       | 21.27          | 21.29        |                     |
| 15                    | 16QAM      | 36      | 20        | 21.23       | 21.26          | 21.25        |                     |
| 15                    | 16QAM      | 36      | 39        | 21.29       | 21.27          | 21.16        | 22.5                |
| 15                    | 16QAM      | 75      | 0         | 21.24       | 21.32          | 21.24        |                     |
| 15                    | 64QAM      | 1       | 0         | 20.14       | 20.11          | 19.99        |                     |
| 15                    | 64QAM      | 1       | 37        | 20.04       | 20.19          | 20.28        |                     |
| 15                    | 64QAM      | 1       | 74        | 20.03       | 20.15          | 20.21        | 21.5                |
| 15                    | 64QAM      | 36      | 0         | 20.22       | 20.30          | 20.29        |                     |
| 15                    | 64QAM      | 36      | 20        | 20.33       | 20.32          | 20.39        |                     |
| 15                    | 64QAM      | 36      | 39        | 20.37       | 20.28          | 20.30        |                     |
| 15                    | 64QAM      | 75      | 0         | 20.22       | 20.32          | 20.27        | 21.5                |
| Channel               |            |         |           | 20800       | 21100          | 21400        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2505        | 2535           | 2565         |                     |
| 10                    | QPSK       | 1       | 0         | 22.35       | 22.22          | 22.25        | 23.5                |
| 10                    | QPSK       | 1       | 25        | 22.38       | 22.28          | 22.30        |                     |
| 10                    | QPSK       | 1       | 49        | 22.31       | 22.28          | 22.30        |                     |
| 10                    | QPSK       | 25      | 0         | 21.10       | 21.10          | 21.09        |                     |
| 10                    | QPSK       | 25      | 12        | 21.06       | 21.18          | 21.23        | 22.5                |
| 10                    | QPSK       | 25      | 25        | 20.99       | 21.17          | 21.17        |                     |
| 10                    | QPSK       | 50      | 0         | 21.08       | 21.20          | 21.19        |                     |
| 10                    | 16QAM      | 1       | 0         | 21.33       | 21.51          | 21.36        |                     |
| 10                    | 16QAM      | 1       | 25        | 21.32       | 21.34          | 21.39        | 22.5                |
| 10                    | 16QAM      | 1       | 49        | 21.79       | 21.69          | 21.60        |                     |
| 10                    | 16QAM      | 25      | 0         | 21.22       | 21.10          | 21.18        |                     |
| 10                    | 16QAM      | 25      | 12        | 21.04       | 21.21          | 21.14        |                     |
| 10                    | 16QAM      | 25      | 25        | 21.09       | 21.12          | 21.04        | 22.5                |
| 10                    | 16QAM      | 50      | 0         | 21.12       | 21.21          | 21.06        |                     |
| 10                    | 64QAM      | 1       | 0         | 20.14       | 20.10          | 20.08        |                     |
| 10                    | 64QAM      | 1       | 25        | 20.17       | 20.42          | 20.25        |                     |
| 10                    | 64QAM      | 1       | 49        | 20.28       | 20.52          | 20.33        | 21.5                |
| 10                    | 64QAM      | 25      | 0         | 20.14       | 20.12          | 20.16        |                     |
| 10                    | 64QAM      | 25      | 12        | 20.16       | 20.27          | 20.20        |                     |
| 10                    | 64QAM      | 25      | 25        | 20.09       | 19.99          | 19.98        |                     |
| 10                    | 64QAM      | 50      | 0         | 20.03       | 20.09          | 20.01        | 21.5                |
| Channel               |            |         |           | 20775       | 21100          | 21425        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2502.5      | 2535           | 2567.5       |                     |
| 5                     | QPSK       | 1       | 0         | 22.39       | 22.30          | 22.20        | 23.5                |
| 5                     | QPSK       | 1       | 12        | 22.26       | 22.19          | 22.27        |                     |
| 5                     | QPSK       | 1       | 24        | 22.20       | 22.26          | 22.30        |                     |
| 5                     | QPSK       | 12      | 0         | 20.90       | 20.98          | 20.90        |                     |
| 5                     | QPSK       | 12      | 7         | 20.97       | 21.12          | 21.04        | 22.5                |
| 5                     | QPSK       | 12      | 13        | 20.99       | 21.15          | 21.00        |                     |
| 5                     | QPSK       | 25      | 0         | 21.00       | 21.01          | 20.96        |                     |
| 5                     | 16QAM      | 1       | 0         | 21.18       | 21.16          | 21.22        |                     |
| 5                     | 16QAM      | 1       | 12        | 21.23       | 21.45          | 21.35        | 22.5                |
| 5                     | 16QAM      | 1       | 24        | 21.29       | 21.48          | 21.30        |                     |
| 5                     | 16QAM      | 12      | 0         | 21.20       | 21.26          | 21.17        |                     |
| 5                     | 16QAM      | 12      | 7         | 21.09       | 21.11          | 21.07        |                     |
| 5                     | 16QAM      | 12      | 13        | 21.09       | 21.15          | 21.28        | 22.5                |
| 5                     | 16QAM      | 25      | 0         | 21.06       | 21.11          | 21.13        |                     |
| 5                     | 64QAM      | 1       | 0         | 20.24       | 20.29          | 20.25        |                     |
| 5                     | 64QAM      | 1       | 12        | 20.29       | 20.41          | 20.29        |                     |
| 5                     | 64QAM      | 1       | 24        | 20.33       | 20.43          | 20.39        | 21.5                |
| 5                     | 64QAM      | 12      | 0         | 20.04       | 20.01          | 20.06        |                     |
| 5                     | 64QAM      | 12      | 7         | 20.13       | 20.18          | 19.97        |                     |
| 5                     | 64QAM      | 12      | 13        | 20.08       | 20.17          | 20.03        |                     |
| 5                     | 64QAM      | 25      | 0         | 20.03       | 20.02          | 20.07        | 21.5                |

| Band 12 (700MHz Low Band) |            |         |           |             |                |              |                     |
|---------------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]                  | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel                   |            |         |           | 23060       | 23095          | 23130        |                     |
| Frequency (MHz)           |            |         |           | 704         | 707.5          | 711          |                     |
| 10                        | QPSK       | 1       | 0         | 23.42       | 23.58          | 23.47        | 24.5                |
| 10                        | QPSK       | 1       | 25        | 23.28       | 23.41          | 23.44        |                     |
| 10                        | QPSK       | 1       | 49        | 23.38       | 23.39          | 23.38        |                     |
| 10                        | QPSK       | 25      | 0         | 22.67       | 22.77          | 22.68        | 23.5                |
| 10                        | QPSK       | 25      | 12        | 22.64       | 22.58          | 22.37        |                     |
| 10                        | QPSK       | 25      | 25        | 22.69       | 22.75          | 22.68        |                     |
| 10                        | QPSK       | 50      | 0         | 22.70       | 22.72          | 22.63        | 23.5                |
| 10                        | 16QAM      | 1       | 0         | 22.63       | 22.18          | 22.31        |                     |
| 10                        | 16QAM      | 1       | 25        | 22.38       | 22.33          | 22.47        |                     |
| 10                        | 16QAM      | 1       | 49        | 22.47       | 22.52          | 22.41        | 23.5                |
| 10                        | 16QAM      | 25      | 0         | 22.36       | 22.38          | 22.32        |                     |
| 10                        | 16QAM      | 25      | 12        | 22.40       | 22.44          | 22.33        |                     |
| 10                        | 16QAM      | 25      | 25        | 22.45       | 22.46          | 22.40        | 23.5                |
| 10                        | 16QAM      | 50      | 0         | 22.35       | 22.43          | 22.48        |                     |
| 10                        | 64QAM      | 1       | 0         | 21.20       | 21.32          | 21.66        |                     |
| 10                        | 64QAM      | 1       | 25        | 21.64       | 21.70          | 21.29        | 22.5                |
| 10                        | 64QAM      | 1       | 49        | 21.66       | 21.34          | 21.27        |                     |
| 10                        | 64QAM      | 25      | 0         | 21.17       | 21.11          | 21.08        |                     |
| 10                        | 64QAM      | 25      | 12        | 21.22       | 21.25          | 21.17        | 22.5                |
| 10                        | 64QAM      | 25      | 25        | 21.27       | 21.24          | 21.24        |                     |
| 10                        | 64QAM      | 50      | 0         | 21.19       | 21.12          | 21.23        |                     |
| Channel                   |            |         |           | 23035       | 23095          | 23155        | Tune-up limit (dBm) |
| Frequency (MHz)           |            |         |           | 701.5       | 707.5          | 713.5        |                     |
| 5                         | QPSK       | 1       | 0         | 23.17       | 23.50          | 23.28        | 24.5                |
| 5                         | QPSK       | 1       | 12        | 23.33       | 23.49          | 23.33        |                     |
| 5                         | QPSK       | 1       | 24        | 23.29       | 23.48          | 23.34        |                     |
| 5                         | QPSK       | 12      | 0         | 22.40       | 22.47          | 22.46        | 23.5                |
| 5                         | QPSK       | 12      | 7         | 22.51       | 22.53          | 22.50        |                     |
| 5                         | QPSK       | 12      | 13        | 22.46       | 22.49          | 22.46        |                     |
| 5                         | QPSK       | 25      | 0         | 22.42       | 22.54          | 22.50        | 23.5                |
| 5                         | 16QAM      | 1       | 0         | 22.43       | 22.45          | 22.47        |                     |
| 5                         | 16QAM      | 1       | 12        | 22.60       | 22.55          | 22.56        |                     |
| 5                         | 16QAM      | 1       | 24        | 22.56       | 22.54          | 22.50        | 23.5                |
| 5                         | 16QAM      | 12      | 0         | 22.30       | 22.27          | 22.30        |                     |
| 5                         | 16QAM      | 12      | 7         | 22.44       | 22.49          | 22.33        |                     |
| 5                         | 16QAM      | 12      | 13        | 22.39       | 22.36          | 22.41        | 23.5                |
| 5                         | 16QAM      | 25      | 0         | 22.40       | 22.36          | 22.38        |                     |
| 5                         | 64QAM      | 1       | 0         | 21.18       | 21.19          | 21.24        |                     |
| 5                         | 64QAM      | 1       | 12        | 21.63       | 21.33          | 21.26        | 22.5                |
| 5                         | 64QAM      | 1       | 24        | 21.61       | 21.30          | 21.35        |                     |
| 5                         | 64QAM      | 12      | 0         | 21.15       | 21.17          | 21.12        |                     |
| 5                         | 64QAM      | 12      | 7         | 21.25       | 21.13          | 21.19        | 22.5                |
| 5                         | 64QAM      | 12      | 13        | 21.12       | 21.22          | 21.27        |                     |
| 5                         | 64QAM      | 25      | 0         | 21.27       | 21.23          | 21.20        |                     |
| Channel                   |            |         |           | 23025       | 23095          | 23165        | Tune-up limit (dBm) |
| Frequency (MHz)           |            |         |           | 700.5       | 707.5          | 714.5        |                     |
| 3                         | QPSK       | 1       | 0         | 23.25       | 23.52          | 23.19        | 24.5                |
| 3                         | QPSK       | 1       | 8         | 23.43       | 23.42          | 23.32        |                     |
| 3                         | QPSK       | 1       | 14        | 23.37       | 23.48          | 23.43        |                     |
| 3                         | QPSK       | 8       | 0         | 22.48       | 22.46          | 22.46        | 23.5                |
| 3                         | QPSK       | 8       | 4         | 22.51       | 22.54          | 22.55        |                     |
| 3                         | QPSK       | 8       | 7         | 22.46       | 22.54          | 22.48        |                     |
| 3                         | QPSK       | 15      | 0         | 22.45       | 22.53          | 22.39        | 23.5                |
| 3                         | 16QAM      | 1       | 0         | 22.46       | 22.82          | 22.41        |                     |
| 3                         | 16QAM      | 1       | 8         | 22.66       | 22.64          | 22.59        |                     |
| 3                         | 16QAM      | 1       | 14        | 22.49       | 22.54          | 22.40        | 23.5                |
| 3                         | 16QAM      | 8       | 0         | 22.46       | 22.35          | 22.38        |                     |
| 3                         | 16QAM      | 8       | 4         | 22.51       | 22.48          | 22.59        |                     |
| 3                         | 16QAM      | 8       | 7         | 22.35       | 22.38          | 22.44        | 23.5                |
| 3                         | 16QAM      | 15      | 0         | 22.33       | 22.26          | 22.25        |                     |
| 3                         | 64QAM      | 1       | 0         | 21.19       | 21.53          | 21.52        |                     |
| 3                         | 64QAM      | 1       | 8         | 21.48       | 21.38          | 21.39        | 22.5                |
| 3                         | 64QAM      | 1       | 14        | 21.41       | 21.26          | 21.37        |                     |
| 3                         | 64QAM      | 8       | 0         | 21.08       | 21.16          | 21.07        |                     |
| 3                         | 64QAM      | 8       | 4         | 21.17       | 21.21          | 21.20        | 22.5                |
| 3                         | 64QAM      | 8       | 7         | 21.16       | 21.08          | 21.23        |                     |
| 3                         | 64QAM      | 15      | 0         | 21.15       | 21.17          | 21.09        |                     |
| Channel                   |            |         |           | 23017       | 23095          | 23173        | Tune-up limit (dBm) |
| Frequency (MHz)           |            |         |           | 699.7       | 707.5          | 715.3        |                     |
| 1.4                       | QPSK       | 1       | 0         | 23.28       | 23.45          | 23.25        | 24.5                |
| 1.4                       | QPSK       | 1       | 3         | 23.39       | 23.38          | 23.40        |                     |
| 1.4                       | QPSK       | 1       | 5         | 23.28       | 23.33          | 23.29        |                     |
| 1.4                       | QPSK       | 3       | 0         | 23.23       | 23.36          | 23.34        | 23.5                |
| 1.4                       | QPSK       | 3       | 1         | 23.44       | 23.44          | 23.11        |                     |
| 1.4                       | QPSK       | 3       | 3         | 23.39       | 23.41          | 23.37        |                     |
| 1.4                       | QPSK       | 6       | 0         | 22.45       | 22.42          | 22.40        | 23.5                |
| 1.4                       | 16QAM      | 1       | 0         | 22.49       | 22.43          | 22.28        |                     |
| 1.4                       | 16QAM      | 1       | 3         | 22.30       | 22.73          | 22.40        |                     |
| 1.4                       | 16QAM      | 1       | 5         | 22.42       | 22.43          | 22.42        | 23.5                |
| 1.4                       | 16QAM      | 3       | 0         | 22.26       | 22.29          | 22.30        |                     |
| 1.4                       | 16QAM      | 3       | 1         | 22.42       | 22.50          | 22.34        |                     |
| 1.4                       | 16QAM      | 3       | 3         | 22.25       | 22.39          | 22.39        | 23.5                |
| 1.4                       | 16QAM      | 6       | 0         | 22.18       | 22.38          | 22.28        |                     |
| 1.4                       | 64QAM      | 1       | 0         | 21.03       | 21.18          | 21.02        |                     |
| 1.4                       | 64QAM      | 1       | 3         | 21.15       | 21.08          | 21.13        | 22.5                |
| 1.4                       | 64QAM      | 1       | 5         | 21.31       | 21.34          | 21.30        |                     |
| 1.4                       | 64QAM      | 3       | 0         | 21.21       | 21.22          | 21.05        |                     |
| 1.4                       | 64QAM      | 3       | 1         | 21.19       | 21.43          | 21.28        | 22.5                |
| 1.4                       | 64QAM      | 3       | 3         | 21.21       | 21.05          | 21.21        |                     |
| 1.4                       | 64QAM      | 6       | 0         | 21.17       | 21.18          | 21.05        |                     |

| Band 17 (700MHz Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 23780       | 23790          | 23800        |                     |
| Frequency (MHz)       |            |         |           | 709         | 710            | 711          |                     |
| 10                    | QPSK       | 1       | 0         | 23.48       | 23.51          | 23.48        |                     |
| 10                    | QPSK       | 1       | 25        | 23.36       | 23.32          | 23.38        |                     |
| 10                    | QPSK       | 1       | 49        | 23.29       | 23.32          | 23.27        |                     |
| 10                    | QPSK       | 25      | 0         | 22.59       | 22.65          | 22.57        | 23.5                |
| 10                    | QPSK       | 25      | 12        | 22.44       | 22.38          | 22.52        |                     |
| 10                    | QPSK       | 25      | 25        | 22.42       | 22.42          | 22.51        |                     |
| 10                    | QPSK       | 50      | 0         | 22.55       | 22.42          | 22.43        | 23.5                |
| 10                    | 16QAM      | 1       | 0         | 22.28       | 22.47          | 22.61        |                     |
| 10                    | 16QAM      | 1       | 25        | 22.49       | 22.78          | 22.62        |                     |
| 10                    | 16QAM      | 1       | 49        | 22.45       | 22.70          | 22.75        | 23.5                |
| 10                    | 16QAM      | 25      | 0         | 22.39       | 22.63          | 22.62        |                     |
| 10                    | 16QAM      | 25      | 12        | 22.45       | 22.60          | 22.58        |                     |
| 10                    | 16QAM      | 25      | 25        | 22.28       | 22.54          | 22.59        | 23.5                |
| 10                    | 16QAM      | 50      | 0         | 22.32       | 22.61          | 22.58        |                     |
| 10                    | 64QAM      | 1       | 0         | 21.29       | 21.62          | 21.30        |                     |
| 10                    | 64QAM      | 1       | 25        | 21.52       | 21.42          | 21.32        | 22.5                |
| 10                    | 64QAM      | 1       | 49        | 21.26       | 21.29          | 21.29        |                     |
| 10                    | 64QAM      | 25      | 0         | 21.44       | 21.61          | 21.59        |                     |
| 10                    | 64QAM      | 25      | 12        | 21.36       | 21.44          | 21.61        | 22.5                |
| 10                    | 64QAM      | 25      | 25        | 21.30       | 21.51          | 21.67        |                     |
| 10                    | 64QAM      | 50      | 0         | 21.37       | 21.60          | 21.61        |                     |
| Channel               |            |         |           | 23755       | 23790          | 23825        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 706.5       | 710            | 713.5        |                     |
| 5                     | QPSK       | 1       | 0         | 23.42       | 23.38          | 23.34        | 24.5                |
| 5                     | QPSK       | 1       | 12        | 23.41       | 23.37          | 23.36        |                     |
| 5                     | QPSK       | 1       | 24        | 23.33       | 23.39          | 23.38        |                     |
| 5                     | QPSK       | 12      | 0         | 22.49       | 22.67          | 22.83        | 23.5                |
| 5                     | QPSK       | 12      | 7         | 22.61       | 22.70          | 22.78        |                     |
| 5                     | QPSK       | 12      | 13        | 22.44       | 22.72          | 22.78        |                     |
| 5                     | QPSK       | 25      | 0         | 22.47       | 22.64          | 22.77        | 23.5                |
| 5                     | 16QAM      | 1       | 0         | 22.95       | 23.00          | 22.72        |                     |
| 5                     | 16QAM      | 1       | 12        | 23.12       | 22.68          | 23.05        |                     |
| 5                     | 16QAM      | 1       | 24        | 22.96       | 23.01          | 23.17        | 23.5                |
| 5                     | 16QAM      | 12      | 0         | 22.40       | 22.43          | 22.64        |                     |
| 5                     | 16QAM      | 12      | 7         | 22.40       | 22.47          | 22.59        |                     |
| 5                     | 16QAM      | 12      | 13        | 22.31       | 22.56          | 22.59        | 23.5                |
| 5                     | 16QAM      | 25      | 0         | 22.41       | 22.53          | 22.57        |                     |
| 5                     | 64QAM      | 1       | 0         | 21.21       | 21.22          | 21.22        |                     |
| 5                     | 64QAM      | 1       | 12        | 21.25       | 21.22          | 21.30        | 22.5                |
| 5                     | 64QAM      | 1       | 24        | 21.30       | 21.30          | 21.22        |                     |
| 5                     | 64QAM      | 12      | 0         | 21.36       | 21.41          | 21.65        |                     |
| 5                     | 64QAM      | 12      | 7         | 21.49       | 21.57          | 21.51        | 22.5                |
| 5                     | 64QAM      | 12      | 13        | 21.34       | 21.52          | 21.54        |                     |
| 5                     | 64QAM      | 25      | 0         | 21.31       | 21.50          | 21.66        |                     |

| Band 26 for FCC |            |         |           |             |                |              |                     |  |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|
| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |
| Channel         |            |         |           | 26765       | 26865          | 26965        |                     |  |
| Frequency (MHz) |            |         |           | 821.5       | 831.5          | 841.5        |                     |  |
| 15              | QPSK       | 1       | 0         | 23.05       | 23.09          | 23.06        | 24                  |  |
| 15              | QPSK       | 1       | 37        | 23.03       | 23.00          | 23.06        |                     |  |
| 15              | QPSK       | 1       | 74        | 23.01       | 22.99          | 23.01        |                     |  |
| 15              | QPSK       | 36      | 0         | 22.37       | 22.45          | 22.33        | 23                  |  |
| 15              | QPSK       | 36      | 20        | 22.26       | 22.20          | 22.05        |                     |  |
| 15              | QPSK       | 36      | 39        | 22.28       | 22.07          | 22.13        |                     |  |
| 15              | QPSK       | 75      | 0         | 22.34       | 22.08          | 22.15        | 23                  |  |
| 15              | 16QAM      | 1       | 0         | 22.06       | 22.21          | 22.49        |                     |  |
| 15              | 16QAM      | 1       | 37        | 22.02       | 22.13          | 22.27        |                     |  |
| 15              | 16QAM      | 1       | 74        | 22.17       | 22.06          | 22.07        | 23                  |  |
| 15              | 16QAM      | 36      | 0         | 22.17       | 22.03          | 22.06        |                     |  |
| 15              | 16QAM      | 36      | 20        | 22.12       | 21.92          | 22.07        |                     |  |
| 15              | 16QAM      | 36      | 39        | 22.19       | 21.99          | 22.07        | 23                  |  |
| 15              | 16QAM      | 75      | 0         | 22.07       | 22.09          | 22.09        |                     |  |
| 15              | 64QAM      | 1       | 0         | 21.49       | 21.36          | 21.18        |                     |  |
| 15              | 64QAM      | 1       | 37        | 21.14       | 21.18          | 21.28        | 22                  |  |
| 15              | 64QAM      | 1       | 74        | 21.18       | 21.14          | 21.46        |                     |  |
| 15              | 64QAM      | 36      | 0         | 21.54       | 21.35          | 21.34        |                     |  |
| 15              | 64QAM      | 36      | 20        | 21.63       | 21.35          | 21.26        | 22                  |  |
| 15              | 64QAM      | 36      | 39        | 21.61       | 21.41          | 21.17        |                     |  |
| 15              | 64QAM      | 75      | 0         | 21.55       | 21.38          | 21.31        |                     |  |
| Channel         |            |         |           | 26740       | 26865          | 26990        | Tune-up limit (dBm) |  |
| Frequency (MHz) |            |         |           | 819         | 831.5          | 844          |                     |  |
| 10              | QPSK       | 1       | 0         | 22.97       | 23.01          | 22.98        | 24                  |  |
| 10              | QPSK       | 1       | 25        | 23.00       | 22.99          | 22.92        |                     |  |
| 10              | QPSK       | 1       | 49        | 22.86       | 22.99          | 22.91        |                     |  |
| 10              | QPSK       | 25      | 0         | 22.39       | 22.20          | 22.06        | 23                  |  |
| 10              | QPSK       | 25      | 12        | 22.35       | 22.17          | 21.96        |                     |  |
| 10              | QPSK       | 25      | 25        | 22.34       | 22.18          | 22.03        |                     |  |
| 10              | QPSK       | 50      | 0         | 22.35       | 22.23          | 22.05        | 23                  |  |
| 10              | 16QAM      | 1       | 0         | 22.07       | 22.39          | 22.16        |                     |  |
| 10              | 16QAM      | 1       | 25        | 22.16       | 22.25          | 22.30        |                     |  |
| 10              | 16QAM      | 1       | 49        | 22.10       | 22.09          | 22.07        | 23                  |  |
| 10              | 16QAM      | 25      | 0         | 22.11       | 22.25          | 22.54        |                     |  |
| 10              | 16QAM      | 25      | 12        | 22.12       | 22.28          | 22.36        |                     |  |
| 10              | 16QAM      | 25      | 25        | 22.29       | 22.17          | 22.23        | 23                  |  |
| 10              | 16QAM      | 50      | 0         | 22.46       | 22.33          | 22.35        |                     |  |
| 10              | 64QAM      | 1       | 0         | 21.44       | 21.44          | 21.26        |                     |  |
| 10              | 64QAM      | 1       | 25        | 21.54       | 21.26          | 21.28        | 22                  |  |
| 10              | 64QAM      | 1       | 49        | 21.26       | 21.25          | 21.25        |                     |  |
| 10              | 64QAM      | 25      | 0         | 21.61       | 21.38          | 21.33        |                     |  |
| 10              | 64QAM      | 25      | 12        | 21.37       | 21.39          | 21.32        | 22                  |  |
| 10              | 64QAM      | 25      | 25        | 21.27       | 21.40          | 21.15        |                     |  |
| 10              | 64QAM      | 50      | 0         | 21.57       | 21.36          | 21.29        |                     |  |
| Channel         |            |         |           | 26715       | 26865          | 27015        | Tune-up limit (dBm) |  |
| Frequency (MHz) |            |         |           | 816.5       | 831.5          | 846.5        |                     |  |
| 5               | QPSK       | 1       | 0         | 22.96       | 23.01          | 22.97        | 24                  |  |
| 5               | QPSK       | 1       | 12        | 22.91       | 22.95          | 22.97        |                     |  |
| 5               | QPSK       | 1       | 24        | 22.87       | 22.99          | 22.99        |                     |  |
| 5               | QPSK       | 12      | 0         | 22.33       | 22.15          | 22.04        | 23                  |  |
| 5               | QPSK       | 12      | 7         | 22.43       | 22.14          | 22.14        |                     |  |
| 5               | QPSK       | 12      | 13        | 22.32       | 22.09          | 22.03        |                     |  |
| 5               | QPSK       | 25      | 0         | 22.36       | 22.17          | 22.22        | 23                  |  |
| 5               | 16QAM      | 1       | 0         | 22.07       | 22.07          | 22.08        |                     |  |
| 5               | 16QAM      | 1       | 12        | 22.11       | 22.01          | 21.98        |                     |  |
| 5               | 16QAM      | 1       | 24        | 22.16       | 22.16          | 22.21        | 23                  |  |
| 5               | 16QAM      | 12      | 0         | 22.44       | 22.26          | 22.24        |                     |  |
| 5               | 16QAM      | 12      | 7         | 22.29       | 22.31          | 22.00        |                     |  |
| 5               | 16QAM      | 12      | 13        | 22.41       | 22.26          | 22.05        | 23                  |  |
| 5               | 16QAM      | 25      | 0         | 21.96       | 22.10          | 22.07        |                     |  |
| 5               | 64QAM      | 1       | 0         | 21.45       | 21.27          | 21.25        |                     |  |
| 5               | 64QAM      | 1       | 12        | 21.34       | 21.45          | 21.26        | 22                  |  |
| 5               | 64QAM      | 1       | 24        | 21.28       | 21.25          | 21.25        |                     |  |
| 5               | 64QAM      | 12      | 0         | 21.55       | 21.33          | 21.16        |                     |  |
| 5               | 64QAM      | 12      | 7         | 21.14       | 21.46          | 21.17        | 22                  |  |
| 5               | 64QAM      | 12      | 13        | 21.54       | 21.43          | 21.09        |                     |  |
| 5               | 64QAM      | 25      | 0         | 21.54       | 21.33          | 21.15        |                     |  |
| Channel         |            |         |           | 26705       | 26865          | 27025        | Tune-up limit (dBm) |  |
| Frequency (MHz) |            |         |           | 815.5       | 831.5          | 847.5        |                     |  |
| 3               | QPSK       | 1       | 0         | 23.00       | 22.97          | 23.02        | 24                  |  |
| 3               | QPSK       | 1       | 8         | 22.91       | 22.99          | 22.91        |                     |  |
| 3               | QPSK       | 1       | 14        | 22.96       | 22.92          | 22.98        |                     |  |
| 3               | QPSK       | 8       | 0         | 22.23       | 22.07          | 22.26        | 23                  |  |
| 3               | QPSK       | 8       | 4         | 22.40       | 22.14          | 22.03        |                     |  |
| 3               | QPSK       | 8       | 7         | 22.40       | 22.13          | 22.24        |                     |  |
| 3               | QPSK       | 15      | 0         | 22.25       | 22.05          | 22.15        | 23                  |  |
| 3               | 16QAM      | 1       | 0         | 22.36       | 22.30          | 22.31        |                     |  |
| 3               | 16QAM      | 1       | 8         | 22.35       | 22.24          | 22.27        |                     |  |
| 3               | 16QAM      | 1       | 14        | 22.33       | 22.18          | 22.18        | 23                  |  |
| 3               | 16QAM      | 8       | 0         | 22.42       | 22.05          | 22.12        |                     |  |
| 3               | 16QAM      | 8       | 4         | 22.36       | 22.03          | 22.07        |                     |  |
| 3               | 16QAM      | 8       | 7         | 22.12       | 22.09          | 22.03        | 23                  |  |
| 3               | 16QAM      | 15      | 0         | 22.19       | 22.06          | 22.16        |                     |  |
| 3               | 64QAM      | 1       | 0         | 21.14       | 21.58          | 21.37        |                     |  |
| 3               | 64QAM      | 1       | 8         | 21.44       | 21.54          | 21.28        | 22                  |  |
| 3               | 64QAM      | 1       | 14        | 21.38       | 21.54          | 21.44        |                     |  |
| 3               | 64QAM      | 8       | 0         | 21.27       | 21.32          | 21.22        |                     |  |
| 3               | 64QAM      | 6       | 4         | 21.27       | 21.36          | 21.22        | 22                  |  |
| 3               | 64QAM      | 8       | 7         | 21.54       | 21.42          | 21.21        |                     |  |
| 3               | 64QAM      | 15      | 0         | 21.54       | 21.40          | 21.19        |                     |  |
| Channel         |            |         |           | 26697       | 26865          | 27033        | Tune-up limit (dBm) |  |
| Frequency (MHz) |            |         |           | 814.7       | 831.5          | 848.3        |                     |  |
| 1.4             | QPSK       | 1       | 0         | 22.87       | 22.97          | 22.97        | 24                  |  |
| 1.4             | QPSK       | 1       | 3         | 22.86       | 22.97          | 22.89        |                     |  |
| 1.4             | QPSK       | 1       | 5         | 22.86       | 22.88          | 22.88        |                     |  |
| 1.4             | QPSK       | 3       | 0         | 23.00       | 22.88          | 22.90        | 23                  |  |
| 1.4             | QPSK       | 3       | 1         | 22.91       | 22.91          | 22.96        |                     |  |
| 1.4             | QPSK       | 3       | 3         | 22.91       | 22.97          | 22.99        |                     |  |
| 1.4             | QPSK       | 6       | 0         | 22.01       | 22.23          | 22.26        | 23                  |  |
| 1.4             | 16QAM      | 1       | 0         | 22.06       | 22.13          | 22.13        |                     |  |
| 1.4             | 16QAM      | 1       | 3         | 22.13       | 22.07          | 22.07        |                     |  |
| 1.4             | 16QAM      | 1       | 5         | 22.22       | 22.36          | 22.17        | 23                  |  |

| Band 66         |            |         |           |             |                |              |                     |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel         |            |         |           | 132072      | 132322         | 132572       |                     |
| Frequency (MHz) |            |         |           | 1720        | 1745           | 1770         |                     |
| 20              | QPSK       | 1       | 0         | 23.00       | 23.06          | 23.04        | 24                  |
| 20              | QPSK       | 1       | 49        | 22.85       | 22.84          | 22.80        |                     |
| 20              | QPSK       | 1       | 99        | 22.78       | 22.77          | 22.80        |                     |
| 20              | QPSK       | 50      | 0         | 22.23       | 22.30          | 22.26        | 23                  |
| 20              | QPSK       | 50      | 24        | 22.04       | 22.06          | 22.19        |                     |
| 20              | QPSK       | 50      | 50        | 22.08       | 22.16          | 22.04        |                     |
| 20              | QPSK       | 100     | 0         | 22.06       | 22.06          | 21.98        | 23                  |
| 20              | 16QAM      | 1       | 0         | 22.11       | 21.87          | 22.15        |                     |
| 20              | 16QAM      | 1       | 49        | 22.16       | 21.90          | 21.96        |                     |
| 20              | 16QAM      | 1       | 99        | 22.16       | 22.34          | 22.13        | 23                  |
| 20              | 16QAM      | 50      | 0         | 22.28       | 22.25          | 22.22        |                     |
| 20              | 16QAM      | 50      | 24        | 22.17       | 22.17          | 22.18        |                     |
| 20              | 16QAM      | 50      | 50        | 22.14       | 22.06          | 22.02        | 23                  |
| 20              | 16QAM      | 100     | 0         | 22.10       | 22.13          | 22.19        |                     |
| 20              | 64QAM      | 1       | 0         | 21.43       | 21.20          | 21.53        |                     |
| 20              | 64QAM      | 1       | 49        | 21.20       | 21.53          | 21.52        | 22                  |
| 20              | 64QAM      | 1       | 99        | 21.43       | 21.55          | 21.63        |                     |
| 20              | 64QAM      | 50      | 0         | 21.39       | 21.29          | 21.42        |                     |
| 20              | 64QAM      | 50      | 24        | 21.33       | 21.27          | 21.39        | 22                  |
| 20              | 64QAM      | 50      | 50        | 21.35       | 21.23          | 21.29        |                     |
| 20              | 64QAM      | 100     | 0         | 21.34       | 21.34          | 21.32        |                     |
| Channel         |            |         |           | 132047      | 132322         | 132597       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1717.5      | 1745           | 1772.5       |                     |
| 15              | QPSK       | 1       | 0         | 22.98       | 23.02          | 23.00        | 24                  |
| 15              | QPSK       | 1       | 37        | 23.02       | 22.98          | 22.96        |                     |
| 15              | QPSK       | 1       | 74        | 22.96       | 22.92          | 22.90        |                     |
| 15              | QPSK       | 36      | 0         | 22.17       | 22.14          | 22.18        | 23                  |
| 15              | QPSK       | 36      | 20        | 22.17       | 22.09          | 22.19        |                     |
| 15              | QPSK       | 36      | 39        | 22.03       | 22.08          | 22.05        |                     |
| 15              | QPSK       | 75      | 0         | 22.12       | 22.16          | 22.09        | 23                  |
| 15              | 16QAM      | 1       | 0         | 22.11       | 21.98          | 22.28        |                     |
| 15              | 16QAM      | 1       | 37        | 21.98       | 22.28          | 22.21        |                     |
| 15              | 16QAM      | 1       | 74        | 22.08       | 21.98          | 21.98        | 23                  |
| 15              | 16QAM      | 36      | 0         | 22.29       | 22.29          | 22.20        |                     |
| 15              | 16QAM      | 36      | 20        | 22.32       | 22.31          | 22.37        |                     |
| 15              | 16QAM      | 36      | 39        | 22.24       | 22.39          | 22.33        | 23                  |
| 15              | 16QAM      | 75      | 0         | 22.34       | 22.32          | 22.28        |                     |
| 15              | 64QAM      | 1       | 0         | 21.65       | 21.55          | 21.65        |                     |
| 15              | 64QAM      | 1       | 37        | 21.67       | 21.45          | 21.55        | 22                  |
| 15              | 64QAM      | 1       | 74        | 21.32       | 21.58          | 21.65        |                     |
| 15              | 64QAM      | 36      | 0         | 21.44       | 21.43          | 21.56        |                     |
| 15              | 64QAM      | 36      | 20        | 21.54       | 21.50          | 21.51        | 22                  |
| 15              | 64QAM      | 36      | 39        | 21.43       | 21.37          | 21.41        |                     |
| 15              | 64QAM      | 75      | 0         | 21.45       | 21.47          | 21.44        |                     |
| Channel         |            |         |           | 132022      | 132322         | 132622       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1715        | 1745           | 1775         |                     |
| 10              | QPSK       | 1       | 0         | 23.01       | 23.01          | 23.02        | 24                  |
| 10              | QPSK       | 1       | 25        | 22.91       | 22.89          | 22.97        |                     |
| 10              | QPSK       | 1       | 49        | 23.05       | 22.93          | 22.83        |                     |
| 10              | QPSK       | 25      | 0         | 22.48       | 22.41          | 22.48        | 23                  |
| 10              | QPSK       | 25      | 12        | 22.45       | 22.64          | 22.42        |                     |
| 10              | QPSK       | 25      | 25        | 22.41       | 22.37          | 22.29        |                     |
| 10              | QPSK       | 50      | 0         | 22.49       | 22.34          | 22.53        | 23                  |
| 10              | 16QAM      | 1       | 0         | 22.41       | 22.41          | 22.61        |                     |
| 10              | 16QAM      | 1       | 25        | 22.41       | 22.50          | 22.62        |                     |
| 10              | 16QAM      | 1       | 49        | 22.24       | 22.44          | 22.32        | 23                  |
| 10              | 16QAM      | 25      | 0         | 22.25       | 22.42          | 22.30        |                     |
| 10              | 16QAM      | 25      | 12        | 22.24       | 22.44          | 22.35        |                     |
| 10              | 16QAM      | 25      | 25        | 22.15       | 22.20          | 22.20        | 23                  |
| 10              | 16QAM      | 50      | 0         | 22.31       | 22.35          | 22.36        |                     |
| 10              | 64QAM      | 1       | 0         | 21.48       | 21.48          | 21.15        |                     |
| 10              | 64QAM      | 1       | 25        | 21.15       | 21.28          | 21.18        | 22                  |
| 10              | 64QAM      | 1       | 49        | 21.15       | 21.15          | 21.15        |                     |
| 10              | 64QAM      | 25      | 0         | 21.48       | 21.46          | 21.48        |                     |
| 10              | 64QAM      | 25      | 12        | 21.47       | 21.51          | 21.55        | 22                  |
| 10              | 64QAM      | 25      | 25        | 21.47       | 21.40          | 21.42        |                     |
| 10              | 64QAM      | 50      | 0         | 21.37       | 21.47          | 21.48        |                     |
| Channel         |            |         |           | 131997      | 132322         | 132647       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1712.5      | 1745           | 1777.5       |                     |
| 5               | QPSK       | 1       | 0         | 22.90       | 22.93          | 22.98        | 24                  |
| 5               | QPSK       | 1       | 12        | 22.93       | 22.93          | 22.92        |                     |
| 5               | QPSK       | 1       | 24        | 23.01       | 22.91          | 22.97        |                     |
| 5               | QPSK       | 12      | 0         | 22.17       | 22.19          | 22.15        | 23                  |
| 5               | QPSK       | 12      | 7         | 22.19       | 22.27          | 22.20        |                     |
| 5               | QPSK       | 12      | 13        | 22.05       | 22.11          | 22.12        |                     |
| 5               | QPSK       | 25      | 0         | 22.15       | 22.16          | 22.15        | 23                  |
| 5               | 16QAM      | 1       | 0         | 22.64       | 22.33          | 22.34        |                     |
| 5               | 16QAM      | 1       | 12        | 22.27       | 22.56          | 22.51        |                     |
| 5               | 16QAM      | 1       | 24        | 22.39       | 22.28          | 22.63        | 23                  |
| 5               | 16QAM      | 12      | 0         | 22.28       | 22.39          | 22.35        |                     |
| 5               | 16QAM      | 12      | 7         | 22.45       | 22.37          | 22.49        |                     |
| 5               | 16QAM      | 12      | 13        | 22.36       | 22.30          | 22.37        | 23                  |
| 5               | 16QAM      | 25      | 0         | 22.37       | 22.39          | 22.31        |                     |
| 5               | 64QAM      | 1       | 0         | 21.15       | 21.55          | 21.35        |                     |
| 5               | 64QAM      | 1       | 12        | 21.45       | 21.45          | 21.45        | 22                  |
| 5               | 64QAM      | 1       | 24        | 21.28       | 21.32          | 21.28        |                     |
| 5               | 64QAM      | 12      | 0         | 21.52       | 21.27          | 21.48        |                     |
| 5               | 64QAM      | 12      | 7         | 21.60       | 21.19          | 21.50        | 22                  |
| 5               | 64QAM      | 12      | 13        | 21.43       | 21.55          | 21.50        |                     |
| 5               | 64QAM      | 25      | 0         | 21.50       | 21.58          | 21.45        |                     |
| Channel         |            |         |           | 131987      | 132322         | 132657       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1711.5      | 1745           | 1778.5       |                     |
| 3               | QPSK       | 1       | 0         | 22.97       | 22.88          | 22.87        | 24                  |
| 3               | QPSK       | 1       | 8         | 22.84       | 22.85          | 22.93        |                     |
| 3               | QPSK       | 1       | 14        | 22.75       | 22.56          | 22.86        |                     |
| 3               | QPSK       | 8       | 0         | 22.43       | 22.40          | 22.44        | 23                  |
| 3               | QPSK       | 8       | 4         | 22.38       | 22.30          | 22.40        |                     |
| 3               | QPSK       | 8       | 7         | 22.24       | 22.29          | 22.26        |                     |
| 3               | QPSK       | 15      | 0         | 22.33       | 22.37          | 22.30        | 23                  |
| 3               | 16QAM      | 1       | 0         | 22.02       | 22.43          | 22.19        |                     |
| 3               | 16QAM      | 1       | 8         | 22.35       | 22.29          | 22.28        |                     |
| 3               | 16QAM      | 1       | 14        | 22.39       | 22.28          | 21.98        | 23                  |

|     |       |   |   |       |       |       |    |
|-----|-------|---|---|-------|-------|-------|----|
| 1.4 | 16QAM | 3 | 0 | 22.23 | 21.99 | 22.24 | 23 |
| 1.4 | 16QAM | 3 | 1 | 22.23 | 22.02 | 22.15 |    |
| 1.4 | 16QAM | 3 | 3 | 22.23 | 22.00 | 21.96 |    |
| 1.4 | 16QAM | 6 | 0 | 22.59 | 22.56 | 22.54 | 23 |
| 1.4 | 64QAM | 1 | 0 | 21.48 | 21.45 | 21.50 | 22 |
| 1.4 | 64QAM | 1 | 3 | 21.54 | 21.54 | 21.54 |    |
| 1.4 | 64QAM | 1 | 5 | 21.44 | 21.47 | 21.58 |    |
| 1.4 | 64QAM | 3 | 0 | 21.53 | 21.54 | 21.54 |    |
| 1.4 | 64QAM | 3 | 1 | 21.58 | 21.46 | 21.50 |    |
| 1.4 | 64QAM | 3 | 3 | 21.50 | 21.54 | 21.45 | 22 |
| 1.4 | 64QAM | 6 | 0 | 21.57 | 21.50 | 21.21 |    |

|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 22.20  | 22.20  | 22.11  | 23                     |
| 3               | 16QAM | 8  | 4  | 22.23  | 22.22  | 22.28  |                        |
| 3               | 16QAM | 8  | 7  | 22.15  | 22.30  | 22.24  |                        |
| 3               | 16QAM | 15 | 0  | 22.25  | 22.23  | 22.19  | 22                     |
| 3               | 64QAM | 1  | 0  | 21.56  | 21.46  | 21.56  |                        |
| 3               | 64QAM | 1  | 8  | 21.58  | 21.36  | 21.46  |                        |
| 3               | 64QAM | 1  | 14 | 21.23  | 21.49  | 21.56  | 22                     |
| 3               | 64QAM | 8  | 0  | 21.35  | 21.34  | 21.47  |                        |
| 3               | 64QAM | 8  | 4  | 21.45  | 21.41  | 21.42  |                        |
| 3               | 64QAM | 8  | 7  | 21.34  | 21.28  | 21.32  |                        |
| 3               | 64QAM | 15 | 0  | 21.36  | 21.38  | 21.35  |                        |
| Channel         |       |    |    | 131979 | 132322 | 132665 | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1745   | 1779.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 22.91  | 22.82  | 22.83  | 24                     |
| 1.4             | QPSK  | 1  | 3  | 22.97  | 22.99  | 22.99  |                        |
| 1.4             | QPSK  | 1  | 5  | 22.89  | 22.77  | 22.93  |                        |
| 1.4             | QPSK  | 3  | 0  | 22.88  | 22.81  | 22.88  |                        |
| 1.4             | QPSK  | 3  | 1  | 22.85  | 22.91  | 22.82  |                        |
| 1.4             | QPSK  | 3  | 3  | 22.86  | 22.82  | 22.74  |                        |
| 1.4             | QPSK  | 6  | 0  | 22.46  | 22.31  | 22.50  | 23                     |
| 1.4             | 16QAM | 1  | 0  | 22.33  | 22.33  | 22.53  | 23                     |
| 1.4             | 16QAM | 1  | 3  | 22.33  | 22.42  | 22.54  |                        |
| 1.4             | 16QAM | 1  | 5  | 22.16  | 22.36  | 22.24  |                        |
| 1.4             | 16QAM | 3  | 0  | 22.11  | 22.08  | 22.34  |                        |
| 1.4             | 16QAM | 3  | 1  | 22.20  | 22.10  | 22.22  |                        |
| 1.4             | 16QAM | 3  | 3  | 22.21  | 22.22  | 22.16  | 23                     |
| 1.4             | 16QAM | 6  | 0  | 22.10  | 22.01  | 22.02  |                        |
| 1.4             | 64QAM | 1  | 0  | 21.61  | 21.46  | 21.62  |                        |
| 1.4             | 64QAM | 1  | 3  | 21.34  | 21.43  | 21.43  |                        |
| 1.4             | 64QAM | 1  | 5  | 21.31  | 21.31  | 21.42  |                        |
| 1.4             | 64QAM | 3  | 0  | 21.40  | 21.38  | 21.40  | 22                     |
| 1.4             | 64QAM | 3  | 1  | 21.39  | 21.43  | 21.47  |                        |
| 1.4             | 64QAM | 3  | 3  | 21.39  | 21.32  | 21.34  |                        |
| 1.4             | 64QAM | 6  | 0  | 21.29  | 21.39  | 21.40  | 22                     |



| Band 38(only on channel required) |            |         |           |             |                |              |                     |                     |
|-----------------------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|---------------------|
| BW [MHz]                          | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |                     |
| Channel                           |            |         |           | 37850       | 38000          | 38150        |                     |                     |
| Frequency (MHz)                   |            |         |           | 2580        | 2595           | 2610         |                     |                     |
| 20                                | QPSK       | 1       | 0         | 22.97       | 23.04          | 23.01        | 24                  |                     |
| 20                                | QPSK       | 1       | 49        | 22.96       | 22.98          | 22.98        |                     |                     |
| 20                                | QPSK       | 1       | 99        | 22.88       | 22.94          | 22.91        |                     |                     |
| 20                                | QPSK       | 50      | 0         | 22.08       | 22.30          | 22.16        |                     |                     |
| 20                                | QPSK       | 50      | 24        | 22.01       | 22.08          | 22.04        | 23                  |                     |
| 20                                | QPSK       | 50      | 50        | 22.05       | 22.10          | 22.04        |                     |                     |
| 20                                | QPSK       | 100     | 0         | 21.93       | 22.04          | 22.07        |                     |                     |
| 20                                | 16QAM      | 1       | 0         | 22.05       | 22.05          | 21.98        |                     |                     |
| 20                                | 16QAM      | 1       | 49        | 22.04       | 21.64          | 22.04        | 23                  |                     |
| 20                                | 16QAM      | 1       | 99        | 22.20       | 22.19          | 22.30        |                     |                     |
| 20                                | 16QAM      | 50      | 0         | 22.05       | 22.19          | 21.80        |                     |                     |
| 20                                | 16QAM      | 50      | 24        | 22.16       | 21.98          | 21.89        |                     |                     |
| 20                                | 16QAM      | 50      | 50        | 22.15       | 21.79          | 21.83        | 23                  |                     |
| 20                                | 16QAM      | 100     | 0         | 22.16       | 22.19          | 21.85        |                     |                     |
| 20                                | 64QAM      | 1       | 0         | 21.32       | 21.60          | 21.63        |                     |                     |
| 20                                | 64QAM      | 1       | 49        | 21.32       | 21.51          | 21.61        |                     |                     |
| 20                                | 64QAM      | 1       | 99        | 21.34       | 21.61          | 21.65        | 22                  |                     |
| 20                                | 64QAM      | 50      | 0         | 21.33       | 21.32          | 21.21        |                     |                     |
| 20                                | 64QAM      | 50      | 24        | 21.35       | 21.31          | 21.30        |                     |                     |
| 20                                | 64QAM      | 50      | 50        | 21.33       | 21.10          | 21.32        |                     |                     |
| 20                                | 64QAM      | 100     | 0         | 21.33       | 21.29          | 21.20        |                     |                     |
| Channel                           |            |         |           | 37825       | 38000          | 38175        |                     | Tune-up limit (dBm) |
| Frequency (MHz)                   |            |         |           | 2577.5      | 2595           | 2612.5       |                     |                     |
| 15                                | QPSK       | 1       | 0         | 22.94       | 22.94          | 22.95        | 24                  |                     |
| 15                                | QPSK       | 1       | 37        | 22.95       | 22.87          | 22.98        |                     |                     |
| 15                                | QPSK       | 1       | 74        | 22.76       | 22.98          | 22.95        |                     |                     |
| 15                                | QPSK       | 36      | 0         | 22.07       | 22.32          | 22.36        |                     |                     |
| 15                                | QPSK       | 36      | 20        | 22.21       | 22.30          | 22.26        | 23                  |                     |
| 15                                | QPSK       | 36      | 39        | 22.28       | 22.26          | 22.19        |                     |                     |
| 15                                | QPSK       | 75      | 0         | 22.16       | 22.16          | 22.17        |                     |                     |
| 15                                | 16QAM      | 1       | 0         | 22.24       | 22.26          | 22.16        |                     |                     |
| 15                                | 16QAM      | 1       | 37        | 22.26       | 22.30          | 21.98        | 23                  |                     |
| 15                                | 16QAM      | 1       | 74        | 22.27       | 22.17          | 21.97        |                     |                     |
| 15                                | 16QAM      | 36      | 0         | 22.04       | 22.00          | 21.89        |                     |                     |
| 15                                | 16QAM      | 36      | 20        | 22.02       | 22.16          | 21.93        |                     |                     |
| 15                                | 16QAM      | 36      | 39        | 22.04       | 22.06          | 21.91        | 23                  |                     |
| 15                                | 16QAM      | 75      | 0         | 22.00       | 21.95          | 21.89        |                     |                     |
| 15                                | 64QAM      | 1       | 0         | 21.46       | 21.35          | 21.51        |                     |                     |
| 15                                | 64QAM      | 1       | 37        | 21.34       | 21.35          | 21.33        |                     |                     |
| 15                                | 64QAM      | 1       | 74        | 21.29       | 21.37          | 21.54        | 22                  |                     |
| 15                                | 64QAM      | 36      | 0         | 21.21       | 21.36          | 21.29        |                     |                     |
| 15                                | 64QAM      | 36      | 20        | 21.49       | 21.35          | 21.23        |                     |                     |
| 15                                | 64QAM      | 36      | 39        | 21.33       | 21.33          | 21.34        |                     |                     |
| 15                                | 64QAM      | 75      | 0         | 21.51       | 21.33          | 21.37        |                     |                     |
| Channel                           |            |         |           | 37800       | 38000          | 38200        |                     | Tune-up limit (dBm) |
| Frequency (MHz)                   |            |         |           | 2575        | 2595           | 2615         |                     |                     |
| 10                                | QPSK       | 1       | 0         | 22.97       | 22.98          | 22.98        | 24                  |                     |
| 10                                | QPSK       | 1       | 25        | 22.97       | 22.77          | 22.97        |                     |                     |
| 10                                | QPSK       | 1       | 49        | 22.91       | 22.93          | 22.96        |                     |                     |
| 10                                | QPSK       | 25      | 0         | 22.06       | 21.92          | 21.92        |                     |                     |
| 10                                | QPSK       | 25      | 12        | 22.26       | 22.22          | 21.93        | 23                  |                     |
| 10                                | QPSK       | 25      | 25        | 22.27       | 22.29          | 21.89        |                     |                     |
| 10                                | QPSK       | 50      | 0         | 22.28       | 22.20          | 21.92        |                     |                     |
| 10                                | 16QAM      | 1       | 0         | 22.14       | 21.91          | 22.22        |                     |                     |
| 10                                | 16QAM      | 1       | 25        | 22.02       | 21.92          | 22.32        | 23                  |                     |
| 10                                | 16QAM      | 1       | 49        | 22.39       | 21.95          | 22.04        |                     |                     |
| 10                                | 16QAM      | 25      | 0         | 21.89       | 22.00          | 21.96        |                     |                     |
| 10                                | 16QAM      | 25      | 12        | 22.19       | 21.89          | 22.02        |                     |                     |
| 10                                | 16QAM      | 25      | 25        | 21.89       | 22.03          | 22.08        | 23                  |                     |
| 10                                | 16QAM      | 50      | 0         | 22.01       | 22.05          | 21.97        |                     |                     |
| 10                                | 64QAM      | 1       | 0         | 21.36       | 21.39          | 21.32        |                     |                     |
| 10                                | 64QAM      | 1       | 25        | 21.27       | 21.52          | 21.42        |                     |                     |
| 10                                | 64QAM      | 1       | 49        | 21.63       | 21.37          | 21.42        | 22                  |                     |
| 10                                | 64QAM      | 25      | 0         | 21.22       | 21.22          | 21.32        |                     |                     |
| 10                                | 64QAM      | 25      | 12        | 21.22       | 21.42          | 21.43        |                     |                     |
| 10                                | 64QAM      | 25      | 25        | 21.18       | 21.38          | 21.34        |                     |                     |
| 10                                | 64QAM      | 50      | 0         | 21.24       | 21.40          | 21.30        |                     |                     |
| Channel                           |            |         |           | 37775       | 38000          | 38225        |                     | Tune-up limit (dBm) |
| Frequency (MHz)                   |            |         |           | 2572.5      | 2595           | 2617.5       |                     |                     |
| 5                                 | QPSK       | 1       | 0         | 22.92       | 22.93          | 22.96        | 24                  |                     |
| 5                                 | QPSK       | 1       | 12        | 22.77       | 22.98          | 22.96        |                     |                     |
| 5                                 | QPSK       | 1       | 24        | 22.77       | 22.76          | 22.75        |                     |                     |
| 5                                 | QPSK       | 12      | 0         | 22.19       | 22.67          | 22.26        |                     |                     |
| 5                                 | QPSK       | 12      | 7         | 22.33       | 22.32          | 22.32        | 23                  |                     |
| 5                                 | QPSK       | 12      | 13        | 22.21       | 22.23          | 22.25        |                     |                     |
| 5                                 | QPSK       | 25      | 0         | 22.25       | 22.26          | 21.92        |                     |                     |
| 5                                 | 16QAM      | 1       | 0         | 22.43       | 22.54          | 22.44        |                     |                     |
| 5                                 | 16QAM      | 1       | 12        | 22.04       | 22.22          | 21.92        | 23                  |                     |
| 5                                 | 16QAM      | 1       | 24        | 22.04       | 22.05          | 22.04        |                     |                     |
| 5                                 | 16QAM      | 12      | 0         | 22.05       | 22.10          | 22.04        |                     |                     |
| 5                                 | 16QAM      | 12      | 7         | 22.04       | 22.06          | 22.04        |                     |                     |
| 5                                 | 16QAM      | 12      | 13        | 21.95       | 22.07          | 22.04        | 23                  |                     |
| 5                                 | 16QAM      | 25      | 0         | 22.22       | 21.94          | 22.12        |                     |                     |
| 5                                 | 64QAM      | 1       | 0         | 21.33       | 21.66          | 21.27        |                     |                     |
| 5                                 | 64QAM      | 1       | 12        | 21.60       | 21.60          | 21.67        |                     |                     |
| 5                                 | 64QAM      | 1       | 24        | 21.60       | 21.60          | 21.57        | 22                  |                     |
| 5                                 | 64QAM      | 12      | 0         | 21.28       | 21.40          | 21.36        |                     |                     |
| 5                                 | 64QAM      | 12      | 7         | 21.37       | 21.38          | 21.29        |                     |                     |
| 5                                 | 64QAM      | 12      | 13        | 21.36       | 21.39          | 21.26        |                     |                     |
| 5                                 | 64QAM      | 25      | 0         | 21.40       | 21.42          | 21.33        |                     |                     |

| Band 41 (2535~2655MHz) |            |         |           |             |                    |                |                     |              |                     |
|------------------------|------------|---------|-----------|-------------|--------------------|----------------|---------------------|--------------|---------------------|
| BW [MHz]               | Modulation | RB Size | RB Offset | Low channel | Middle Low Channel | Middle Channel | Middle High Channel | High Channel | Tune-up limit (dBm) |
| Channel                |            |         |           | 40140       | 40390              | 40640          | 40890               | 41140        | Tune-up limit (dBm) |
| Frequency (MHz)        |            |         |           | 2545        | 2570               | 2595           | 2620                | 2645         |                     |
| 20                     | QPSK       | 1       | 0         | 22.95       | 23.05              | 23.07          | 23.00               | 23.01        | 24                  |
| 20                     | QPSK       | 1       | 49        | 22.91       | 23.00              | 23.00          | 23.01               | 23.01        |                     |
| 20                     | QPSK       | 1       | 99        | 22.85       | 23.01              | 22.96          | 23.06               | 22.81        |                     |
| 20                     | QPSK       | 50      | 0         | 22.11       | 22.13              | 22.17          | 22.15               | 22.10        |                     |
| 20                     | QPSK       | 50      | 24        | 22.11       | 22.09              | 21.94          | 21.91               | 21.91        | 23                  |
| 20                     | QPSK       | 50      | 50        | 22.14       | 22.07              | 21.99          | 21.98               | 22.05        |                     |
| 20                     | QPSK       | 100     | 0         | 22.11       | 22.14              | 22.05          | 21.99               | 21.95        |                     |
| 20                     | 16QAM      | 1       | 0         | 22.15       | 22.31              | 21.88          | 22.05               | 21.95        |                     |
| 20                     | 16QAM      | 1       | 49        | 22.14       | 22.19              | 21.98          | 21.93               | 21.95        | 23                  |
| 20                     | 16QAM      | 1       | 99        | 22.21       | 22.11              | 22.05          | 22.03               | 22.05        |                     |
| 20                     | 16QAM      | 50      | 0         | 22.12       | 22.21              | 21.98          | 22.28               | 21.95        |                     |
| 20                     | 16QAM      | 50      | 24        | 22.10       | 22.42              | 21.95          | 22.05               | 21.95        |                     |
| 20                     | 16QAM      | 50      | 50        | 22.16       | 22.48              | 22.41          | 22.02               | 22.05        | 23                  |
| 20                     | 16QAM      | 100     | 0         | 22.10       | 22.41              | 22.36          | 22.05               | 21.94        |                     |
| 20                     | 64QAM      | 1       | 0         | 21.53       | 21.44              | 21.44          | 21.27               | 21.23        |                     |
| 20                     | 64QAM      | 1       | 49        | 21.46       | 21.56              | 21.26          | 21.55               | 21.23        |                     |
| 20                     | 64QAM      | 1       | 99        | 21.36       | 21.31              | 21.22          | 21.31               | 21.19        | 22                  |
| 20                     | 64QAM      | 50      | 0         | 21.32       | 21.28              | 21.25          | 21.20               | 21.29        |                     |
| 20                     | 64QAM      | 50      | 24        | 21.17       | 21.44              | 21.32          | 21.29               | 21.22        |                     |
| 20                     | 64QAM      | 50      | 50        | 21.27       | 21.43              | 21.46          | 21.35               | 21.28        |                     |
| 20                     | 64QAM      | 100     | 0         | 21.25       | 21.53              | 21.49          | 21.17               | 21.29        | 22                  |
| Channel                |            |         |           | 40115       | 40378              | 40640          | 40903               | 41165        | Tune-up limit (dBm) |
| Frequency (MHz)        |            |         |           | 2542.5      | 2568.8             | 2595           | 2621.3              | 2647.5       |                     |
| 15                     | QPSK       | 1       | 0         | 22.61       | 22.77              | 22.97          | 22.84               | 22.83        | 24                  |
| 15                     | QPSK       | 1       | 37        | 22.60       | 22.95              | 23.01          | 22.84               | 22.94        |                     |
| 15                     | QPSK       | 1       | 74        | 22.60       | 22.93              | 22.94          | 22.77               | 22.74        |                     |
| 15                     | QPSK       | 36      | 0         | 21.77       | 22.11              | 21.96          | 22.16               | 22.77        |                     |
| 15                     | QPSK       | 36      | 20        | 22.02       | 22.16              | 21.86          | 22.12               | 22.84        | 23</                |

| 2.4GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11b 1Mbps       | CH 1    | 2412            | 18.50               | 20.00         | 18.00         | 98.79        |
|             |                     | CH 6    | 2437            | 17.67               | 19.00         | 18.00         |              |
|             |                     | CH 11   | 2462            | 18.77               | 20.00         | 18.00         |              |
|             | 802.11g 6Mbps       | CH 1    | 2412            | 17.20               | 19.00         | 17.00         | 97.58        |
|             |                     | CH 6    | 2437            | 16.49               | 18.00         | 17.00         |              |
|             |                     | CH 11   | 2462            | 17.62               | 19.00         | 17.00         |              |
|             | 802.11n-HT20 MCS0   | CH 1    | 2412            | 17.02               | 19.00         | 17.00         | 97.92        |
|             |                     | CH 6    | 2437            | 16.54               | 18.00         | 17.00         |              |
|             |                     | CH 11   | 2462            | 17.36               | 19.00         | 17.00         |              |
|             | 802.11n-HT40 MCS0   | CH 3    | 2422            | 17.12               | 19.00         | 17.00         | 97.66        |
|             |                     | CH 6    | 2437            | 17.89               | 19.00         | 17.00         |              |
|             |                     | CH 9    | 2452            | 17.56               | 19.00         | 17.00         |              |
|             | 802.11ac-VHT20 MCS0 | CH 1    | 2412            | 17.04               | 19.00         | 17.00         | 97.68        |
|             |                     | CH 6    | 2437            | 16.55               | 18.00         | 17.00         |              |
|             |                     | CH 11   | 2462            | 17.44               | 19.00         | 17.00         |              |
|             | 802.11ac-VHT40 MCS0 | CH 3    | 2422            | 17.14               | 19.00         | 17.00         | 89.50        |
|             |                     | CH 6    | 2437            | 17.91               | 19.00         | 17.00         |              |
|             |                     | CH 9    | 2452            | 17.67               | 19.00         | 17.00         |              |

| 5.2GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 36   | 5180            | 16.45               | 18.00         | 17.5          | 97.82        |
|             |                     | CH 44   | 5220            | 16.94               | 18.00         | 17.5          |              |
|             |                     | CH 48   | 5240            | 16.62               | 18.00         | 17.5          |              |
|             | 802.11n-HT20 MCS0   | CH 36   | 5180            | 16.49               | 18.00         | 17.5          | 97.92        |
|             |                     | CH 44   | 5220            | 16.63               | 18.00         | 17.5          |              |
|             |                     | CH 48   | 5240            | 16.51               | 18.00         | 17.5          |              |
|             | 802.11n-HT40 MCS0   | CH 38   | 5190            | 16.71               | 18.00         | 17.5          | 90.31        |
|             |                     | CH 46   | 5230            | 16.88               | 18.00         | 17.5          |              |
|             | 802.11ac-VHT20 MCS0 | CH 36   | 5180            | 16.36               | 18.00         | 17.5          | 97.93        |
|             |                     | CH 44   | 5220            | 16.47               | 18.00         | 17.5          |              |
|             |                     | CH 48   | 5240            | 16.41               | 18.00         | 17.5          |              |
|             | 802.11ac-VHT40 MCS0 | CH 38   | 5190            | 16.87               | 18.00         | 17.5          | 91.75        |
|             |                     | CH 46   | 5230            | 16.91               | 18.00         | 17.5          |              |
|             | 802.11ac-VHT80 MCS0 | CH 42   | 5210            | 16.92               | 18.00         | 17.5          | 95.36        |

| 5.3GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 52   | 5260            | 16.93               | 18.00         | 17.5          | 97.82        |
|             |                     | CH 60   | 5300            | 17.80               | 19.00         | 17.5          |              |
|             |                     | CH 64   | 5320            | 17.95               | 19.00         | 17.5          |              |
|             | 802.11n-HT20 MCS0   | CH 52   | 5260            | 16.77               | 18.00         | 17.5          | 97.92        |
|             |                     | CH 60   | 5300            | 17.54               | 19.00         | 17.5          |              |
|             |                     | CH 64   | 5320            | 17.72               | 19.00         | 17.5          |              |
|             | 802.11n-HT40 MCS0   | CH 54   | 5270            | 17.32               | 19.00         | 17.5          | 90.31        |
|             |                     | CH 62   | 5310            | 17.84               | 19.00         | 17.5          |              |
|             | 802.11ac-VHT20 MCS0 | CH 52   | 5260            | 16.67               | 18.00         | 17.5          | 97.93        |
|             |                     | CH 60   | 5300            | 17.46               | 19.00         | 17.5          |              |
|             |                     | CH 64   | 5320            | 17.69               | 19.00         | 17.5          |              |
|             | 802.11ac-VHT40 MCS0 | CH 54   | 5270            | 17.25               | 19.00         | 17.5          | 91.75        |
|             |                     | CH 62   | 5310            | 17.89               | 19.00         | 17.5          |              |
|             | 802.11ac-VHT80 MCS0 | CH 58   | 5290            | 17.59               | 19.00         | 17.5          | 95.36        |

| 5.5GHz WLAN | Mode              | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|-------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps     | CH 100  | 5500            | 17.93               | 19.00         | 17.5          | 97.82        |
|             |                   | CH 120  | 5600            | 16.90               | 18.00         | 17.5          |              |
|             |                   | CH 144  | 5720            | 17.22               | 19.00         | 17.5          |              |
|             | 802.11n-HT20 MCS0 | CH 100  | 5500            | 17.81               | 19.00         | 17.5          | 97.92        |
|             |                   | CH 120  | 5600            | 16.77               | 18.00         | 17.5          |              |
|             |                   | CH 144  | 5720            | 17.11               | 19.00         | 17.5          |              |
|             | 802.11n-HT40 MCS0 | CH 102  | 5510            | 17.75               | 19.00         | 17.5          | 90.31        |
|             |                   | CH 126  | 5630            | 16.96               | 18.00         | 17.5          |              |
|             |                   | CH 142  | 5710            | 17.36               | 19.00         | 17.5          |              |

|  |                     |        |      |              |       |      |       |
|--|---------------------|--------|------|--------------|-------|------|-------|
|  | 802.11ac-VHT20 MCS0 | CH 100 | 5500 | <b>17.66</b> | 19.00 | 17.5 | 97.93 |
|  |                     | CH 120 | 5600 | 16.62        | 18.00 | 17.5 |       |
|  |                     | CH 144 | 5720 | 17.08        | 19.00 | 17.5 |       |
|  | 802.11ac-VHT40 MCS0 | CH 102 | 5510 | <b>17.69</b> | 19.00 | 17.5 | 91.75 |
|  |                     | CH 126 | 5630 | 16.64        | 18.00 | 17.5 |       |
|  |                     | CH 142 | 5710 | 17.44        | 19.00 | 17.5 |       |
|  | 802.11ac-VHT80 MCS0 | CH 106 | 5530 | <b>17.43</b> | 19.00 | 17.5 | 95.36 |
|  |                     | CH 122 | 5610 | 16.73        | 18.00 | 17.5 |       |
|  |                     | CH 138 | 5690 | 17.30        | 19.00 | 17.5 |       |

|             |                     |         |                 |                     |               |               |              |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.8GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|             | 802.11a 6Mbps       | CH 149  | 5745            | <b>17.48</b>        | 19.00         | 17.5          | 97.82        |
|             |                     | CH 157  | 5785            | 17.26               | 19.00         | 17.5          |              |
|             |                     | CH 165  | 5825            | 16.39               | 18.00         | 17.5          |              |
|             | 802.11n-HT20 MCS0   | CH 149  | 5745            | <b>17.34</b>        | 19.00         | 17.5          | 97.92        |
|             |                     | CH 157  | 5785            | 17.13               | 19.00         | 17.5          |              |
|             |                     | CH 165  | 5825            | 16.16               | 18.00         | 17.5          |              |
|             | 802.11n-HT40 MCS0   | CH 151  | 5755            | <b>17.25</b>        | 19.00         | 17.5          | 90.31        |
|             |                     | CH 159  | 5795            | 17.11               | 19.00         | 17.5          |              |
|             | 802.11ac-VHT20 MCS0 | CH 149  | 5745            | <b>17.28</b>        | 19.00         | 17.5          | 97.93        |
|             |                     | CH 157  | 5785            | 17.06               | 19.00         | 17.5          |              |
|             |                     | CH 165  | 5825            | 16.23               | 18.00         | 17.5          |              |
|             | 802.11ac-VHT40 MCS0 | CH 151  | 5755            | <b>17.31</b>        | 19.00         | 17.5          | 91.75        |
|             |                     | CH 159  | 5795            | 17.14               | 19.00         | 17.5          |              |
|             | 802.11ac-VHT80 MCS0 | CH 155  | 5775            | <b>17.34</b>        | 19.00         | 17.5          | 95.36        |

| Mode          | Channel | Frequency (MHz) | Average power (dBm) |       |       |
|---------------|---------|-----------------|---------------------|-------|-------|
|               |         |                 | 1Mbps               | 2Mbps | 3Mbps |
| BR / EDR      | CH 00   | 2402            | <b>9.98</b>         | 7.02  | 6.88  |
|               | CH 39   | 2441            | 9.39                | 6.22  | 6.18  |
|               | CH 78   | 2480            | 9.46                | 6.34  | 6.37  |
| Tune-up Limit |         |                 | 11                  | 9     | 8     |
| Duty Cycle %  |         |                 | 77.07               | 76.8  | 76.67 |

| Mode          | Channel | Frequency (MHz) | Average power (dBm) |       |       |
|---------------|---------|-----------------|---------------------|-------|-------|
|               |         |                 | 1Mbps               | 2Mbps | 3Mbps |
| LE            | CH 00   | 2402            | 3.59                | 0.94  | N/A   |
|               | CH 19   | 2440            | 3.72                | 1.01  | N/A   |
|               | CH 39   | 2480            | 4.38                | 1.66  | N/A   |
| Tune-up Limit |         |                 | 6                   | 3     | N/A   |
| Duty Cycle %  |         |                 | 62.4                | 32    | N/A   |

## Reduced Power Level 1

| GSM850          | Burst Average Power (dBm) |       |       | Tune-up Limit (dBm) | Frame-Average Power (dBm) |       |       | Tune-up Limit (dBm) | Ch Delta > 0.5 |
|-----------------|---------------------------|-------|-------|---------------------|---------------------------|-------|-------|---------------------|----------------|
| TX Channel      | 128                       | 189   | 251   |                     | 128                       | 189   | 251   |                     |                |
| Frequency (MHz) | 824.2                     | 836.4 | 848.8 |                     | 824.2                     | 836.4 | 848.8 |                     |                |
| GSM 1 Tx slot   | 29.45                     | 29.48 | 29.46 | 30.50               | 20.45                     | 20.48 | 20.46 | 21.50               | 0.05           |
| GPRS 1 Tx slot  | 29.44                     | 29.49 | 29.47 | 30.50               | 20.44                     | 20.49 | 20.47 | 21.50               |                |
| GPRS 2 Tx slots | 27.14                     | 27.19 | 27.15 | 28.00               | 21.14                     | 21.19 | 21.15 | 22.00               | 0.05           |
| GPRS 3 Tx slots | 25.09                     | 25.11 | 25.04 | 26.00               | 20.83                     | 20.85 | 20.78 | 21.74               | 0.07           |
| GPRS 4 Tx slots | 24.11                     | 24.14 | 24.13 | 25.00               | 21.11                     | 21.14 | 21.13 | 22.00               | 0.03           |
| EDGE 1 Tx slot  | 24.08                     | 24.10 | 24.18 | 25.00               | 15.08                     | 15.10 | 15.18 | 16.00               | 0.10           |
| EDGE 2 Tx slots | 21.06                     | 21.05 | 21.02 | 22.00               | 15.06                     | 15.05 | 15.02 | 16.00               | 0.04           |
| EDGE 3 Tx slots | 19.34                     | 19.22 | 19.26 | 20.00               | 15.08                     | 14.96 | 15.00 | 15.74               | 0.12           |
| EDGE 4 Tx slots | 18.69                     | 18.54 | 18.68 | 19.50               | 15.69                     | 15.54 | 15.68 | 16.50               | 0.15           |
| Mode            |                           | Max.  | 29.49 |                     |                           | Max.  | 21.19 |                     |                |
| Attenuator      | Cable Loss : 0.6          |       |       |                     |                           |       |       |                     |                |
| Date            | 2022.1.17                 |       |       |                     |                           |       |       |                     |                |

| GSM1900         | Burst Average Power (dBm) |       |        | Tune-up Limit (dBm) | Frame-Average Power (dBm) |       |        | Tune-up Limit (dBm) | Ch Delta > 0.5 |
|-----------------|---------------------------|-------|--------|---------------------|---------------------------|-------|--------|---------------------|----------------|
| TX Channel      | 512                       | 661   | 810    |                     | 512                       | 661   | 810    |                     |                |
| Frequency (MHz) | 1850.2                    | 1880  | 1909.8 |                     | 1850.2                    | 1880  | 1909.8 |                     |                |
| GSM 1 Tx slot   | 25.95                     | 26.07 | 25.98  | 27.00               | 16.95                     | 17.07 | 16.98  | 18.00               | 0.13           |
| GPRS 1 Tx slot  | 25.97                     | 26.08 | 26.00  | 27.00               | 16.97                     | 17.08 | 17.00  | 18.00               |                |
| GPRS 2 Tx slots | 23.68                     | 23.71 | 23.66  | 24.50               | 17.68                     | 17.71 | 17.66  | 18.50               | 0.05           |
| GPRS 3 Tx slots | 21.60                     | 21.63 | 21.60  | 22.50               | 17.34                     | 17.37 | 17.34  | 18.24               | 0.03           |
| GPRS 4 Tx slots | 20.63                     | 20.69 | 20.66  | 21.50               | 17.63                     | 17.69 | 17.66  | 18.50               | 0.06           |
| EDGE 1 Tx slot  | 22.72                     | 22.73 | 22.69  | 23.50               | 13.72                     | 13.73 | 13.69  | 14.50               | 0.04           |
| EDGE 2 Tx slots | 19.76                     | 19.65 | 19.74  | 20.50               | 13.76                     | 13.65 | 13.74  | 14.50               | 0.11           |
| EDGE 3 Tx slots | 17.64                     | 17.69 | 17.65  | 18.50               | 13.38                     | 13.43 | 13.39  | 14.24               | 0.05           |
| EDGE 4 Tx slots | 17.06                     | 17.03 | 16.91  | 18.00               | 14.06                     | 14.03 | 13.91  | 15.00               | 0.15           |
| Mode            |                           | Max.  | 26.08  |                     |                           | Max.  | 17.71  |                     |                |
| Attenuator      | Cable Loss : 0.8          |       |        |                     |                           |       |        |                     |                |
| Date            | 2022.1.17                 |       |        |                     |                           |       |        |                     |                |

| Band                               | WCDMA Band II |            |        | Tune-up Limit (dBm) | WCDMA Band IV |            |        | Tune-up Limit (dBm) | WCDMA Band V |            |       | Tune-up Limit (dBm) |
|------------------------------------|---------------|------------|--------|---------------------|---------------|------------|--------|---------------------|--------------|------------|-------|---------------------|
| TX Channel                         | 9262          | 9400       | 9538   |                     | 1312          | 1413       | 1513   |                     | 4132         | 4182       | 4233  |                     |
| Rx Channel                         | 9662          | 9800       | 9938   |                     | 1537          | 1638       | 1738   |                     | 4357         | 4407       | 4458  |                     |
| Frequency (MHz)                    | 1852.4        | 1880       | 1907.6 |                     | 1712.4        | 1732.6     | 1752.6 |                     | 826.4        | 836.4      | 846.6 |                     |
| 3GPP Rel 99 RMC 12.2Kbps           | 16.14         | 16.16      | 16.11  | 17.00               | 16.12         | 16.15      | 16.13  | 17.00               | 21.55        | 21.57      | 21.51 | 22.50               |
| 3GPP Rel 6 HSDPA Subtest-1         | 14.59         | 14.57      | 14.53  | 15.50               | 14.87         | 14.80      | 14.85  | 15.50               | 20.37        | 20.45      | 20.34 | 21.50               |
| 3GPP Rel 6 HSDPA Subtest-2         | 14.72         | 14.59      | 14.54  | 15.50               | 14.88         | 14.82      | 14.86  | 15.50               | 20.39        | 20.47      | 20.54 | 21.50               |
| 3GPP Rel 6 HSDPA Subtest-3         | 14.24         | 14.20      | 14.17  | 15.00               | 14.50         | 14.45      | 14.38  | 15.50               | 19.71        | 19.99      | 20.03 | 21.00               |
| 3GPP Rel 6 HSDPA Subtest-4         | 14.25         | 14.22      | 14.18  | 15.00               | 14.60         | 14.33      | 14.35  | 15.50               | 19.72        | 19.91      | 19.95 | 21.00               |
| 3GPP Rel 8 DC-HSDPA Subtest-1      | 14.99         | 14.89      | 14.89  | 15.50               | 15.22         | 15.09      | 15.20  | 16.00               | 20.61        | 20.60      | 20.53 | 21.50               |
| 3GPP Rel 8 DC-HSDPA Subtest-2      | 15.01         | 14.91      | 14.90  | 16.00               | 15.21         | 15.10      | 15.16  | 16.00               | 20.63        | 20.60      | 20.51 | 21.50               |
| 3GPP Rel 8 DC-HSDPA Subtest-3      | 14.24         | 14.36      | 14.38  | 15.00               | 14.71         | 14.58      | 14.67  | 15.50               | 20.13        | 20.18      | 20.17 | 21.00               |
| 3GPP Rel 8 DC-HSDPA Subtest-4      | 14.23         | 14.41      | 14.38  | 15.00               | 14.72         | 14.58      | 14.68  | 15.50               | 20.13        | 20.19      | 20.17 | 21.00               |
| 3GPP Rel 6 HSUPA Subtest-1         | 14.61         | 14.63      | 14.56  | 15.50               | 14.96         | 14.92      | 14.90  | 15.50               | 20.44        | 20.53      | 20.62 | 21.50               |
| 3GPP Rel 6 HSUPA Subtest-2         | 14.05         | 14.17      | 14.01  | 15.00               | 14.45         | 14.38      | 14.40  | 15.50               | 19.90        | 19.99      | 19.96 | 20.50               |
| 3GPP Rel 6 HSUPA Subtest-3         | 14.80         | 14.76      | 14.67  | 15.50               | 15.09         | 14.94      | 14.92  | 15.50               | 20.47        | 20.52      | 20.49 | 21.50               |
| 3GPP Rel 6 HSUPA Subtest-4         | 14.63         | 14.68      | 14.60  | 15.50               | 14.96         | 14.89      | 14.92  | 15.50               | 20.41        | 20.50      | 20.43 | 21.50               |
| 3GPP Rel 6 HSUPA Subtest-5         | 14.77         | 14.72      | 14.63  | 15.50               | 15.07         | 15.01      | 14.91  | 16.00               | 20.44        | 20.50      | 20.56 | 21.50               |
| 3GPP Rel 7 HSPA+ (16QAM) Subtest-1 | 14.74         | 14.66      | 14.70  | 15.50               | 14.66         | 14.57      | 14.55  | 15.50               | 20.23        | 20.30      | 20.52 | 21.50               |
| Attenuator                         |               | Cable Loss | 0.8    |                     |               | Cable Loss | 0.8    |                     |              | Cable Loss | 0.6   |                     |
| Mode                               |               | Max.       | 16.16  |                     |               | Max.       | 16.15  |                     |              | Max.       | 21.57 |                     |
| Date                               | 2022.1.17     |            |        |                     | 2022.1.17     |            |        |                     | 2022.1.17    |            |       |                     |

| Band 2 (1900MHz Band) |            |         |           |             |                |              |                     |  |  |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|--|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 18700       | 18900          | 19100        |                     |  |  |
| Frequency (MHz)       |            |         |           | 1860        | 1880           | 1900         |                     |  |  |
| 20                    | QPSK       | 1       | 0         | 16.50       | 16.53          | 16.47        | 17.5                |  |  |
| 20                    | QPSK       | 1       | 49        | 16.48       | 16.42          | 16.35        |                     |  |  |
| 20                    | QPSK       | 1       | 99        | 16.42       | 16.38          | 16.36        |                     |  |  |
| 20                    | QPSK       | 50      | 0         | 15.58       | 15.67          | 15.60        |                     |  |  |
| 20                    | QPSK       | 50      | 24        | 15.59       | 15.64          | 15.64        | 16.5                |  |  |
| 20                    | QPSK       | 50      | 50        | 15.64       | 15.60          | 15.66        |                     |  |  |
| 20                    | QPSK       | 100     | 0         | 15.57       | 15.66          | 15.62        |                     |  |  |
| 20                    | 16QAM      | 1       | 0         | 15.63       | 15.63          | 15.65        |                     |  |  |
| 20                    | 16QAM      | 1       | 49        | 15.47       | 15.77          | 15.73        | 16.5                |  |  |
| 20                    | 16QAM      | 1       | 99        | 15.72       | 15.57          | 15.97        |                     |  |  |
| 20                    | 16QAM      | 50      | 0         | 15.65       | 15.62          | 15.60        |                     |  |  |
| 20                    | 16QAM      | 50      | 24        | 15.61       | 15.66          | 15.67        |                     |  |  |
| 20                    | 16QAM      | 50      | 50        | 15.69       | 15.66          | 15.73        | 16.5                |  |  |
| 20                    | 16QAM      | 100     | 0         | 15.72       | 15.73          | 15.60        |                     |  |  |
| 20                    | 64QAM      | 1       | 0         | 14.67       | 14.86          | 14.60        |                     |  |  |
| 20                    | 64QAM      | 1       | 49        | 14.62       | 14.80          | 14.71        |                     |  |  |
| 20                    | 64QAM      | 1       | 99        | 14.57       | 14.90          | 14.90        | 15.5                |  |  |
| 20                    | 64QAM      | 50      | 0         | 14.67       | 14.59          | 14.64        |                     |  |  |
| 20                    | 64QAM      | 50      | 24        | 14.70       | 14.64          | 14.69        |                     |  |  |
| 20                    | 64QAM      | 50      | 50        | 14.69       | 14.70          | 14.64        |                     |  |  |
| 20                    | 64QAM      | 100     | 0         | 14.57       | 14.54          | 14.55        | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 18675       | 18900          | 19125        |                     |  |  |
| Frequency (MHz)       |            |         |           | 1857.5      | 1880           | 1902.5       |                     |  |  |
| 15                    | QPSK       | 1       | 0         | 16.31       | 16.34          | 16.25        | 17.5                |  |  |
| 15                    | QPSK       | 1       | 37        | 16.10       | 16.46          | 16.34        |                     |  |  |
| 15                    | QPSK       | 1       | 74        | 16.47       | 16.39          | 16.47        |                     |  |  |
| 15                    | QPSK       | 36      | 0         | 15.44       | 15.53          | 15.52        |                     |  |  |
| 15                    | QPSK       | 36      | 20        | 15.43       | 15.62          | 15.59        | 16.5                |  |  |
| 15                    | QPSK       | 36      | 39        | 15.55       | 15.56          | 15.63        |                     |  |  |
| 15                    | QPSK       | 75      | 0         | 15.47       | 15.53          | 15.49        |                     |  |  |
| 15                    | 16QAM      | 1       | 0         | 15.56       | 15.64          | 15.58        |                     |  |  |
| 15                    | 16QAM      | 1       | 37        | 15.69       | 15.72          | 15.58        | 16.5                |  |  |
| 15                    | 16QAM      | 1       | 74        | 15.64       | 15.76          | 15.76        |                     |  |  |
| 15                    | 16QAM      | 36      | 0         | 15.43       | 15.48          | 15.51        |                     |  |  |
| 15                    | 16QAM      | 36      | 20        | 15.52       | 15.45          | 15.58        |                     |  |  |
| 15                    | 16QAM      | 36      | 39        | 15.57       | 15.66          | 15.63        | 16.5                |  |  |
| 15                    | 16QAM      | 75      | 0         | 15.44       | 15.46          | 15.55        |                     |  |  |
| 15                    | 64QAM      | 1       | 0         | 14.64       | 14.40          | 14.46        |                     |  |  |
| 15                    | 64QAM      | 1       | 37        | 14.63       | 14.44          | 14.86        |                     |  |  |
| 15                    | 64QAM      | 1       | 74        | 14.52       | 14.56          | 14.71        | 15.5                |  |  |
| 15                    | 64QAM      | 36      | 0         | 14.37       | 14.54          | 14.42        |                     |  |  |
| 15                    | 64QAM      | 36      | 20        | 14.57       | 14.59          | 14.49        |                     |  |  |
| 15                    | 64QAM      | 36      | 39        | 14.45       | 14.50          | 14.59        |                     |  |  |
| 15                    | 64QAM      | 75      | 0         | 14.44       | 14.51          | 14.50        | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 18650       | 18900          | 19150        |                     |  |  |
| Frequency (MHz)       |            |         |           | 1855        | 1880           | 1905         |                     |  |  |
| 10                    | QPSK       | 1       | 0         | 16.35       | 16.34          | 16.44        | 17.5                |  |  |
| 10                    | QPSK       | 1       | 25        | 16.39       | 16.42          | 16.37        |                     |  |  |
| 10                    | QPSK       | 1       | 49        | 16.35       | 16.36          | 16.35        |                     |  |  |
| 10                    | QPSK       | 25      | 0         | 15.62       | 15.63          | 15.59        |                     |  |  |
| 10                    | QPSK       | 25      | 12        | 15.58       | 15.70          | 15.63        | 16.5                |  |  |
| 10                    | QPSK       | 25      | 25        | 15.49       | 15.62          | 15.58        |                     |  |  |
| 10                    | QPSK       | 50      | 0         | 15.55       | 15.64          | 15.62        |                     |  |  |
| 10                    | 16QAM      | 1       | 0         | 16.03       | 15.96          | 15.95        |                     |  |  |
| 10                    | 16QAM      | 1       | 25        | 15.72       | 15.68          | 15.75        | 16.5                |  |  |
| 10                    | 16QAM      | 1       | 49        | 15.67       | 15.75          | 15.54        |                     |  |  |
| 10                    | 16QAM      | 25      | 0         | 15.57       | 15.56          | 15.53        |                     |  |  |
| 10                    | 16QAM      | 25      | 12        | 15.73       | 15.53          | 15.53        |                     |  |  |
| 10                    | 16QAM      | 25      | 25        | 15.53       | 15.73          | 15.83        | 16.5                |  |  |
| 10                    | 16QAM      | 50      | 0         | 16.10       | 16.03          | 16.07        |                     |  |  |
| 10                    | 64QAM      | 1       | 0         | 14.61       | 14.66          | 14.66        |                     |  |  |
| 10                    | 64QAM      | 1       | 25        | 14.64       | 14.69          | 14.73        |                     |  |  |
| 10                    | 64QAM      | 1       | 49        | 14.31       | 14.44          | 14.41        | 15.5                |  |  |
| 10                    | 64QAM      | 25      | 0         | 14.61       | 14.65          | 14.66        |                     |  |  |
| 10                    | 64QAM      | 25      | 12        | 14.64       | 14.62          | 14.63        |                     |  |  |
| 10                    | 64QAM      | 25      | 25        | 14.57       | 14.35          | 14.57        |                     |  |  |
| 10                    | 64QAM      | 50      | 0         | 14.58       | 14.58          | 14.55        | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 18625       | 18900          | 19175        |                     |  |  |
| Frequency (MHz)       |            |         |           | 1852.5      | 1880           | 1907.5       |                     |  |  |
| 5                     | QPSK       | 1       | 0         | 16.35       | 16.40          | 16.34        | 17.5                |  |  |
| 5                     | QPSK       | 1       | 12        | 16.34       | 16.29          | 16.32        |                     |  |  |
| 5                     | QPSK       | 1       | 24        | 16.30       | 16.38          | 16.39        |                     |  |  |
| 5                     | QPSK       | 12      | 0         | 15.47       | 15.38          | 15.45        |                     |  |  |
| 5                     | QPSK       | 12      | 7         | 15.48       | 15.53          | 15.45        | 16.5                |  |  |
| 5                     | QPSK       | 12      | 13        | 15.47       | 15.46          | 15.49        |                     |  |  |
| 5                     | QPSK       | 25      | 0         | 15.46       | 15.44          | 15.46        |                     |  |  |
| 5                     | 16QAM      | 1       | 0         | 15.59       | 15.49          | 15.87        |                     |  |  |
| 5                     | 16QAM      | 1       | 12        | 15.57       | 15.50          | 15.87        | 16.5                |  |  |
| 5                     | 16QAM      | 1       | 24        | 15.60       | 15.47          | 15.86        |                     |  |  |
| 5                     | 16QAM      | 12      | 0         | 15.69       | 15.83          | 15.69        |                     |  |  |
| 5                     | 16QAM      | 12      | 7         | 15.59       | 15.59          | 15.39        |                     |  |  |
| 5                     | 16QAM      | 12      | 13        | 15.39       | 15.72          | 15.49        | 16.5                |  |  |
| 5                     | 16QAM      | 25      | 0         | 15.49       | 15.95          | 15.93        |                     |  |  |
| 5                     | 64QAM      | 1       | 0         | 14.69       | 14.41          | 14.46        |                     |  |  |
| 5                     | 64QAM      | 1       | 12        | 14.85       | 14.51          | 14.62        |                     |  |  |
| 5                     | 64QAM      | 1       | 24        | 14.86       | 14.50          | 14.52        | 15.5                |  |  |
| 5                     | 64QAM      | 12      | 0         | 14.51       | 14.44          | 14.43        |                     |  |  |
| 5                     | 64QAM      | 12      | 7         | 14.57       | 14.41          | 14.41        |                     |  |  |
| 5                     | 64QAM      | 12      | 13        | 14.54       | 14.50          | 14.48        |                     |  |  |
| 5                     | 64QAM      | 25      | 0         | 14.61       | 14.41          | 14.48        | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 18615       | 18900          | 19185        |                     |  |  |
| Frequency (MHz)       |            |         |           | 1851.5      | 1880           | 1908.5       |                     |  |  |
| 3                     | QPSK       | 1       | 0         | 16.29       | 16.36          | 16.28        | 17.5                |  |  |
| 3                     | QPSK       | 1       | 8         | 16.39       | 16.42          | 16.25        |                     |  |  |
| 3                     | QPSK       | 1       | 14        | 16.40       | 16.27          | 16.27        |                     |  |  |
| 3                     | QPSK       | 8       | 0         | 15.35       | 15.30          | 15.32        |                     |  |  |
| 3                     | QPSK       | 8       | 4         | 15.41       | 15.35          | 15.36        | 16.5                |  |  |
| 3                     | QPSK       | 8       | 7         | 15.41       | 15.35          | 15.31        |                     |  |  |
| 3                     | QPSK       | 15      | 0         | 15.33       | 15.41          | 15.34        |                     |  |  |
| 3                     | 16QAM      | 1       | 0         | 15.49       | 15.40          | 15.34        |                     |  |  |
| 3                     | 16QAM      | 1       | 8         | 15.53       | 15.47          | 15.43        | 16.5                |  |  |
| 3                     | 16QAM      | 1       | 14        | 15.46       | 15.43          | 15.31        |                     |  |  |

| Band 4 (AWS Band)   |            |         |           |             |                |              |                     |
|---------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]            | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel             |            |         |           | 20050       | 20175          | 20300        |                     |
| Frequency (MHz)     |            |         |           | 1720        | 1732.5         | 1745         |                     |
| 20                  | QPSK       | 1       | 0         | 15.48       | 15.56          | 15.55        | 16.5                |
| 20                  | QPSK       | 1       | 49        | 15.34       | 15.42          | 15.41        |                     |
| 20                  | QPSK       | 1       | 99        | 15.26       | 15.39          | 15.51        |                     |
| 20                  | QPSK       | 50      | 0         | 14.64       | 14.68          | 14.65        |                     |
| 20                  | QPSK       | 50      | 24        | 14.55       | 14.63          | 14.63        | 15.5                |
| 20                  | QPSK       | 50      | 50        | 14.44       | 14.55          | 14.56        |                     |
| 20                  | QPSK       | 100     | 0         | 14.54       | 14.58          | 14.65        |                     |
| 20                  | 16QAM      | 1       | 0         | 14.41       | 14.71          | 14.58        |                     |
| 20                  | 16QAM      | 1       | 49        | 14.56       | 14.33          | 14.47        | 15.5                |
| 20                  | 16QAM      | 1       | 99        | 14.35       | 14.57          | 14.41        |                     |
| 20                  | 16QAM      | 50      | 0         | 14.54       | 14.47          | 14.61        |                     |
| 20                  | 16QAM      | 50      | 24        | 14.80       | 14.91          | 14.80        |                     |
| 20                  | 16QAM      | 50      | 50        | 14.76       | 14.77          | 14.77        | 15.5                |
| 20                  | 16QAM      | 100     | 0         | 14.78       | 14.86          | 14.87        |                     |
| 20                  | 64QAM      | 1       | 0         | 13.52       | 13.63          | 13.85        |                     |
| 20                  | 64QAM      | 1       | 49        | 13.56       | 13.49          | 13.37        |                     |
| 20                  | 64QAM      | 1       | 99        | 13.83       | 13.40          | 13.87        | 14.5                |
| 20                  | 64QAM      | 50      | 0         | 13.53       | 13.62          | 13.57        |                     |
| 20                  | 64QAM      | 50      | 24        | 13.55       | 13.66          | 13.60        |                     |
| 20                  | 64QAM      | 50      | 50        | 13.59       | 13.54          | 13.56        |                     |
| 20                  | 64QAM      | 100     | 0         | 13.62       | 13.60          | 13.69        | 14.5                |
| Channel             |            |         |           | 20025       | 20175          | 20325        |                     |
| Frequency (Mhz)     |            |         |           | 1717.5      | 1732.5         | 1747.5       |                     |
| Tune-up limit (dBm) |            |         |           |             |                |              |                     |
| 15                  | QPSK       | 1       | 0         | 15.35       | 15.39          | 15.49        | 16.5                |
| 15                  | QPSK       | 1       | 37        | 15.39       | 15.48          | 15.40        |                     |
| 15                  | QPSK       | 1       | 74        | 15.26       | 15.48          | 15.51        |                     |
| 15                  | QPSK       | 36      | 0         | 14.49       | 14.56          | 14.59        |                     |
| 15                  | QPSK       | 36      | 20        | 14.53       | 14.66          | 14.62        | 15.5                |
| 15                  | QPSK       | 36      | 39        | 14.58       | 14.57          | 14.66        |                     |
| 15                  | QPSK       | 75      | 0         | 14.53       | 14.55          | 14.56        |                     |
| 15                  | 16QAM      | 1       | 0         | 14.47       | 14.69          | 14.41        |                     |
| 15                  | 16QAM      | 1       | 37        | 14.55       | 14.55          | 14.39        | 15.5                |
| 15                  | 16QAM      | 1       | 74        | 14.41       | 14.71          | 14.50        |                     |
| 15                  | 16QAM      | 36      | 0         | 14.42       | 14.44          | 14.63        |                     |
| 15                  | 16QAM      | 36      | 20        | 14.37       | 14.44          | 14.50        |                     |
| 15                  | 16QAM      | 36      | 39        | 14.33       | 14.42          | 14.48        | 15.5                |
| 15                  | 16QAM      | 75      | 0         | 14.44       | 14.45          | 14.54        |                     |
| 15                  | 64QAM      | 1       | 0         | 13.39       | 13.70          | 13.75        |                     |
| 15                  | 64QAM      | 1       | 37        | 13.81       | 13.57          | 13.63        |                     |
| 15                  | 64QAM      | 1       | 74        | 13.85       | 13.56          | 13.60        | 14.5                |
| 15                  | 64QAM      | 36      | 0         | 13.50       | 13.57          | 13.61        |                     |
| 15                  | 64QAM      | 36      | 20        | 13.56       | 13.58          | 13.60        |                     |
| 15                  | 64QAM      | 36      | 39        | 13.59       | 13.55          | 13.57        |                     |
| 15                  | 64QAM      | 75      | 0         | 13.52       | 13.63          | 13.56        | 14.5                |
| Channel             |            |         |           | 20000       | 20175          | 20350        |                     |
| Frequency (MHz)     |            |         |           | 1715        | 1732.5         | 1750         |                     |
| Tune-up limit (dBm) |            |         |           |             |                |              |                     |
| 10                  | QPSK       | 1       | 0         | 15.47       | 15.46          | 15.29        | 16.5                |
| 10                  | QPSK       | 1       | 25        | 15.45       | 15.38          | 15.39        |                     |
| 10                  | QPSK       | 1       | 49        | 15.33       | 15.16          | 15.39        |                     |
| 10                  | QPSK       | 25      | 0         | 14.32       | 14.54          | 14.56        |                     |
| 10                  | QPSK       | 25      | 12        | 14.44       | 14.50          | 14.54        | 15.5                |
| 10                  | QPSK       | 25      | 25        | 14.33       | 14.44          | 14.51        |                     |
| 10                  | QPSK       | 50      | 0         | 14.39       | 14.49          | 14.41        |                     |
| 10                  | 16QAM      | 1       | 0         | 14.38       | 14.53          | 14.29        |                     |
| 10                  | 16QAM      | 1       | 25        | 14.65       | 14.39          | 14.71        | 15.5                |
| 10                  | 16QAM      | 1       | 49        | 14.72       | 14.62          | 14.61        |                     |
| 10                  | 16QAM      | 25      | 0         | 14.38       | 14.37          | 14.36        |                     |
| 10                  | 16QAM      | 25      | 12        | 14.30       | 14.40          | 14.37        |                     |
| 10                  | 16QAM      | 25      | 25        | 14.64       | 14.55          | 14.64        | 15.5                |
| 10                  | 16QAM      | 50      | 0         | 14.58       | 14.62          | 14.74        |                     |
| 10                  | 64QAM      | 1       | 0         | 13.44       | 13.52          | 13.42        |                     |
| 10                  | 64QAM      | 1       | 25        | 13.51       | 13.80          | 13.89        |                     |
| 10                  | 64QAM      | 1       | 49        | 13.49       | 13.53          | 13.48        | 14.5                |
| 10                  | 64QAM      | 25      | 0         | 13.33       | 13.47          | 13.46        |                     |
| 10                  | 64QAM      | 25      | 12        | 13.42       | 13.53          | 13.57        |                     |
| 10                  | 64QAM      | 25      | 25        | 13.30       | 13.42          | 13.44        |                     |
| 10                  | 64QAM      | 50      | 0         | 13.36       | 13.43          | 13.42        | 14.5                |
| Channel             |            |         |           | 19975       | 20175          | 20375        |                     |
| Frequency (MHz)     |            |         |           | 1712.5      | 1732.5         | 1752.5       |                     |
| Tune-up limit (dBm) |            |         |           |             |                |              |                     |
| 5                   | QPSK       | 1       | 0         | 15.44       | 15.39          | 15.44        | 16.5                |
| 5                   | QPSK       | 1       | 12        | 15.43       | 15.38          | 15.35        |                     |
| 5                   | QPSK       | 1       | 24        | 15.18       | 15.30          | 15.29        |                     |
| 5                   | QPSK       | 12      | 0         | 14.40       | 14.40          | 14.44        |                     |
| 5                   | QPSK       | 12      | 7         | 14.40       | 14.51          | 14.48        | 15.5                |
| 5                   | QPSK       | 12      | 13        | 14.35       | 14.52          | 14.44        |                     |
| 5                   | QPSK       | 25      | 0         | 14.38       | 14.42          | 14.48        |                     |
| 5                   | 16QAM      | 1       | 0         | 14.28       | 14.69          | 14.37        |                     |
| 5                   | 16QAM      | 1       | 12        | 14.39       | 14.74          | 14.33        | 15.5                |
| 5                   | 16QAM      | 1       | 24        | 14.33       | 14.68          | 14.28        |                     |
| 5                   | 16QAM      | 12      | 0         | 14.32       | 14.26          | 14.29        |                     |
| 5                   | 16QAM      | 12      | 7         | 14.35       | 14.39          | 14.37        |                     |
| 5                   | 16QAM      | 12      | 13        | 14.62       | 14.69          | 14.73        | 15.5                |
| 5                   | 16QAM      | 25      | 0         | 14.63       | 14.74          | 14.67        |                     |
| 5                   | 64QAM      | 1       | 0         | 13.40       | 13.84          | 13.82        |                     |
| 5                   | 64QAM      | 1       | 12        | 13.78       | 13.54          | 13.81        |                     |
| 5                   | 64QAM      | 1       | 24        | 13.74       | 13.44          | 13.51        | 14.5                |
| 5                   | 64QAM      | 12      | 0         | 13.41       | 13.48          | 13.50        |                     |
| 5                   | 64QAM      | 12      | 7         | 13.40       | 13.49          | 13.55        |                     |
| 5                   | 64QAM      | 12      | 13        | 13.41       | 13.47          | 13.46        |                     |
| 5                   | 64QAM      | 25      | 0         | 13.36       | 13.50          | 13.41        | 14.5                |
| Channel             |            |         |           | 19965       | 20175          | 20385        |                     |
| Frequency (MHz)     |            |         |           | 1711.5      | 1732.5         | 1753.5       |                     |
| Tune-up limit (dBm) |            |         |           |             |                |              |                     |
| 3                   | QPSK       | 1       | 0         | 15.29       | 15.30          | 15.42        | 16.5                |
| 3                   | QPSK       | 1       | 8         | 15.38       | 15.52          | 15.46        |                     |
| 3                   | QPSK       | 1       | 14        | 15.18       | 15.37          | 15.37        |                     |
| 3                   | QPSK       | 8       | 0         | 14.38       | 14.44          | 14.45        |                     |
| 3                   | QPSK       | 8       | 4         | 14.44       | 14.52          | 14.54        | 15.5                |
| 3                   | QPSK       | 8       | 7         | 14.40       | 14.50          | 14.50        |                     |
| 3                   | QPSK       | 15      | 0         | 14.40       | 14.46          | 14.40        |                     |
| 3                   | 16QAM      | 1       | 0         | 14.48       | 14.57          | 14.61        |                     |
| 3                   | 16QAM      | 1       | 8         | 14.70       | 14.70          | 14.44        | 15.5                |
| 3                   | 16QAM      | 1       | 14        | 14.61       | 14.39          | 14.47        |                     |

|                 |       |    |    |        |       |        |                     |
|-----------------|-------|----|----|--------|-------|--------|---------------------|
| 3               | 16QAM | 8  | 0  | 15.89  | 16.02 | 15.94  | 16.5                |
| 3               | 16QAM | 8  | 4  | 15.96  | 15.93 | 15.99  |                     |
| 3               | 16QAM | 8  | 7  | 15.86  | 15.91 | 15.94  |                     |
| 3               | 16QAM | 15 | 0  | 15.89  | 15.93 | 15.88  |                     |
| 3               | 64QAM | 1  | 0  | 14.42  | 14.35 | 14.38  | 15.5                |
| 3               | 64QAM | 1  | 8  | 14.84  | 14.83 | 14.43  |                     |
| 3               | 64QAM | 1  | 14 | 14.45  | 14.81 | 14.45  |                     |
| 3               | 64QAM | 8  | 0  | 14.37  | 14.39 | 14.23  |                     |
| 3               | 64QAM | 8  | 4  | 14.47  | 14.37 | 14.37  | 15.5                |
| 3               | 64QAM | 8  | 7  | 14.57  | 14.46 | 14.32  |                     |
| 3               | 64QAM | 15 | 0  | 14.42  | 14.42 | 14.40  |                     |
| Channel         |       |    |    | 18607  | 18900 | 19193  | Tune-up limit (dBm) |
| Frequency (MHz) |       |    |    | 1850.7 | 1880  | 1909.3 |                     |
| 1.4             | QPSK  | 1  | 0  | 16.35  | 16.38 | 16.33  | 17.5                |
| 1.4             | QPSK  | 1  | 3  | 16.25  | 16.23 | 16.22  |                     |
| 1.4             | QPSK  | 1  | 5  | 16.22  | 16.20 | 16.18  |                     |
| 1.4             | QPSK  | 3  | 0  | 16.22  | 16.22 | 16.18  |                     |
| 1.4             | QPSK  | 3  | 1  | 16.28  | 16.23 | 16.21  |                     |
| 1.4             | QPSK  | 3  | 3  | 16.28  | 16.32 | 16.21  |                     |
| 1.4             | QPSK  | 6  | 0  | 15.31  | 15.29 | 15.28  | 16.5                |
| 1.4             | 16QAM | 1  | 0  | 15.34  | 15.34 | 15.28  | 16.5                |
| 1.4             | 16QAM | 1  | 3  | 15.30  | 15.50 | 15.48  |                     |
| 1.4             | 16QAM | 1  | 5  | 15.18  | 15.38 | 15.06  |                     |
| 1.4             | 16QAM | 3  | 0  | 15.20  | 15.25 | 15.22  |                     |
| 1.4             | 16QAM | 3  | 1  | 15.38  | 15.20 | 15.25  |                     |
| 1.4             | 16QAM | 3  | 3  | 15.40  | 15.37 | 15.11  |                     |
| 1.4             | 16QAM | 6  | 0  | 15.41  | 15.34 | 15.29  | 16.5                |
| 1.4             | 64QAM | 1  | 0  | 14.29  | 14.21 | 14.24  | 15.5                |
| 1.4             | 64QAM | 1  | 3  | 14.31  | 14.52 | 14.40  |                     |
| 1.4             | 64QAM | 1  | 5  | 14.29  | 14.64 | 14.23  |                     |
| 1.4             | 64QAM | 3  | 0  | 14.32  | 14.38 | 14.39  |                     |
| 1.4             | 64QAM | 3  | 1  | 14.41  | 14.38 | 14.59  |                     |
| 1.4             | 64QAM | 3  | 3  | 14.33  | 14.47 | 14.24  |                     |
| 1.4             | 64QAM | 6  | 0  | 14.38  | 14.41 | 14.30  | 15.5                |

|                 |       |    |    |        |        |        |                     |
|-----------------|-------|----|----|--------|--------|--------|---------------------|
| 3               | 16QAM | 8  | 0  | 14.40  | 14.41  | 14.50  | 15.5                |
| 3               | 16QAM | 8  | 4  | 14.50  | 14.50  | 14.51  |                     |
| 3               | 16QAM | 8  | 7  | 14.72  | 14.80  | 14.84  |                     |
| 3               | 16QAM | 15 | 0  | 14.72  | 14.70  | 14.77  |                     |
| 3               | 64QAM | 1  | 0  | 13.39  | 13.48  | 13.46  | 14.5                |
| 3               | 64QAM | 1  | 8  | 13.58  | 13.46  | 13.62  |                     |
| 3               | 64QAM | 1  | 14 | 13.39  | 13.46  | 13.29  |                     |
| 3               | 64QAM | 8  | 0  | 13.37  | 13.41  | 13.35  |                     |
| 3               | 64QAM | 8  | 4  | 13.49  | 13.47  | 13.51  | 14.5                |
| 3               | 64QAM | 8  | 7  | 13.43  | 13.50  | 13.62  |                     |
| 3               | 64QAM | 15 | 0  | 13.39  | 13.47  | 13.38  |                     |
| Channel         |       |    |    | 19957  | 20175  | 20393  | Tune-up limit (dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1732.5 | 1754.3 |                     |
| 1.4             | QPSK  | 1  | 0  | 15.44  | 15.49  | 15.47  | 16.5                |
| 1.4             | QPSK  | 1  | 3  | 15.38  | 15.38  | 15.42  |                     |
| 1.4             | QPSK  | 1  | 5  | 15.24  | 15.33  | 15.35  |                     |
| 1.4             | QPSK  | 3  | 0  | 15.32  | 15.29  | 15.28  |                     |
| 1.4             | QPSK  | 3  | 1  | 15.28  | 15.38  | 15.43  |                     |
| 1.4             | QPSK  | 3  | 3  | 15.27  | 15.34  | 15.33  |                     |
| 1.4             | QPSK  | 6  | 0  | 14.43  | 14.45  | 14.41  | 15.5                |
| 1.4             | 16QAM | 1  | 0  | 14.37  | 14.84  | 14.50  | 15.5                |
| 1.4             | 16QAM | 1  | 3  | 14.50  | 14.58  | 14.62  |                     |
| 1.4             | 16QAM | 1  | 5  | 14.56  | 14.72  | 14.52  |                     |
| 1.4             | 16QAM | 3  | 0  | 14.59  | 14.63  | 14.54  |                     |
| 1.4             | 16QAM | 3  | 1  | 14.60  | 14.63  | 14.65  |                     |
| 1.4             | 16QAM | 3  | 3  | 14.59  | 14.71  | 14.60  |                     |
| 1.4             | 16QAM | 6  | 0  | 14.50  | 14.51  | 14.42  | 15.5                |
| 1.4             | 64QAM | 1  | 0  | 13.28  | 13.22  | 13.36  | 14.5                |
| 1.4             | 64QAM | 1  | 3  | 13.54  | 13.52  | 13.64  |                     |
| 1.4             | 64QAM | 1  | 5  | 13.45  | 13.41  | 13.25  |                     |
| 1.4             | 64QAM | 3  | 0  | 13.36  | 13.34  | 13.53  |                     |
| 1.4             | 64QAM | 3  | 1  | 13.27  | 13.42  | 13.39  |                     |
| 1.4             | 64QAM | 3  | 3  | 13.33  | 13.50  | 13.38  |                     |
| 1.4             | 64QAM | 6  | 0  | 13.32  | 13.33  | 13.40  | 14.5                |

| Band 5 (Celluar Band) |            |         |           |             |                |              |                     |  |  |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|--|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 20450       | 20525          | 20600        |                     |  |  |
| Frequency (MHz)       |            |         |           | 829         | 836.5          | 844          | 22.5                |  |  |
| 10                    | QPSK       | 1       | 0         | 21.47       | 21.48          | 21.40        |                     |  |  |
| 10                    | QPSK       | 1       | 25        | 21.33       | 21.36          | 21.16        |                     |  |  |
| 10                    | QPSK       | 1       | 49        | 21.25       | 21.37          | 21.05        |                     |  |  |
| 10                    | QPSK       | 25      | 0         | 20.56       | 20.58          | 20.39        | 21.5                |  |  |
| 10                    | QPSK       | 25      | 12        | 20.32       | 20.34          | 20.39        |                     |  |  |
| 10                    | QPSK       | 25      | 25        | 20.32       | 20.43          | 20.48        |                     |  |  |
| 10                    | QPSK       | 50      | 0         | 20.38       | 20.26          | 20.40        |                     |  |  |
| 10                    | 16QAM      | 1       | 0         | 20.42       | 20.61          | 20.32        | 21.5                |  |  |
| 10                    | 16QAM      | 1       | 25        | 20.65       | 20.68          | 20.36        |                     |  |  |
| 10                    | 16QAM      | 1       | 49        | 20.48       | 20.54          | 20.61        |                     |  |  |
| 10                    | 16QAM      | 25      | 0         | 20.57       | 20.58          | 20.40        |                     |  |  |
| 10                    | 16QAM      | 25      | 12        | 20.51       | 20.59          | 20.37        | 21.5                |  |  |
| 10                    | 16QAM      | 25      | 25        | 20.54       | 20.47          | 20.50        |                     |  |  |
| 10                    | 16QAM      | 50      | 0         | 20.55       | 20.46          | 20.36        |                     |  |  |
| 10                    | 64QAM      | 1       | 0         | 19.51       | 19.61          | 19.49        |                     |  |  |
| 10                    | 64QAM      | 1       | 25        | 19.48       | 19.68          | 19.48        | 20.5                |  |  |
| 10                    | 64QAM      | 1       | 49        | 19.37       | 19.59          | 19.50        |                     |  |  |
| 10                    | 64QAM      | 25      | 0         | 19.48       | 19.59          | 19.26        |                     |  |  |
| 10                    | 64QAM      | 25      | 12        | 19.47       | 19.64          | 19.35        |                     |  |  |
| 10                    | 64QAM      | 25      | 25        | 19.59       | 19.48          | 19.18        | 20.5                |  |  |
| 10                    | 64QAM      | 50      | 0         | 19.55       | 19.51          | 19.37        |                     |  |  |
| Channel               |            |         |           | 20425       | 20525          | 20625        | Tune-up limit (dBm) |  |  |
| Frequency (MHz)       |            |         |           | 826.5       | 836.5          | 846.5        |                     |  |  |
| 5                     | QPSK       | 1       | 0         | 21.42       | 21.38          | 21.36        | 22.5                |  |  |
| 5                     | QPSK       | 1       | 12        | 21.32       | 21.43          | 21.27        |                     |  |  |
| 5                     | QPSK       | 1       | 24        | 21.32       | 21.27          | 21.27        |                     |  |  |
| 5                     | QPSK       | 12      | 0         | 20.47       | 20.52          | 20.38        |                     |  |  |
| 5                     | QPSK       | 12      | 7         | 20.54       | 20.55          | 20.47        | 21.5                |  |  |
| 5                     | QPSK       | 12      | 13        | 20.59       | 20.43          | 20.38        |                     |  |  |
| 5                     | QPSK       | 25      | 0         | 20.50       | 20.46          | 20.38        |                     |  |  |
| 5                     | 16QAM      | 1       | 0         | 20.79       | 20.72          | 20.48        |                     |  |  |
| 5                     | 16QAM      | 1       | 12        | 20.49       | 20.71          | 20.47        | 21.5                |  |  |
| 5                     | 16QAM      | 1       | 24        | 20.36       | 20.71          | 20.54        |                     |  |  |
| 5                     | 16QAM      | 12      | 0         | 20.45       | 20.54          | 20.53        |                     |  |  |
| 5                     | 16QAM      | 12      | 7         | 20.52       | 20.55          | 20.37        |                     |  |  |
| 5                     | 16QAM      | 12      | 13        | 20.52       | 20.43          | 20.48        | 21.5                |  |  |
| 5                     | 16QAM      | 25      | 0         | 20.53       | 20.58          | 20.53        |                     |  |  |
| 5                     | 64QAM      | 1       | 0         | 19.60       | 19.48          | 19.59        |                     |  |  |
| 5                     | 64QAM      | 1       | 12        | 19.48       | 19.42          | 19.56        |                     |  |  |
| 5                     | 64QAM      | 1       | 24        | 19.62       | 19.46          | 19.40        | 20.5                |  |  |
| 5                     | 64QAM      | 12      | 0         | 19.34       | 19.48          | 19.28        |                     |  |  |
| 5                     | 64QAM      | 12      | 7         | 19.38       | 19.54          | 19.32        |                     |  |  |
| 5                     | 64QAM      | 12      | 13        | 19.56       | 19.51          | 19.08        |                     |  |  |
| 5                     | 64QAM      | 25      | 0         | 19.44       | 19.51          | 19.12        | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 20415       | 20525          | 20635        |                     |  |  |
| Frequency (MHz)       |            |         |           | 825.5       | 836.5          | 847.5        | 22.5                |  |  |
| 3                     | QPSK       | 1       | 0         | 21.41       | 21.42          | 21.27        |                     |  |  |
| 3                     | QPSK       | 1       | 8         | 21.37       | 21.38          | 21.29        |                     |  |  |
| 3                     | QPSK       | 1       | 14        | 21.38       | 21.36          | 21.10        |                     |  |  |
| 3                     | QPSK       | 8       | 0         | 20.40       | 20.53          | 20.51        | 21.5                |  |  |
| 3                     | QPSK       | 8       | 4         | 20.54       | 20.60          | 20.57        |                     |  |  |
| 3                     | QPSK       | 8       | 7         | 20.49       | 20.51          | 20.38        |                     |  |  |
| 3                     | QPSK       | 15      | 0         | 20.47       | 20.53          | 20.52        |                     |  |  |
| 3                     | 16QAM      | 1       | 0         | 20.49       | 20.60          | 20.67        | 21.5                |  |  |
| 3                     | 16QAM      | 1       | 8         | 20.42       | 20.68          | 20.52        |                     |  |  |
| 3                     | 16QAM      | 1       | 14        | 20.47       | 20.73          | 20.48        |                     |  |  |
| 3                     | 16QAM      | 8       | 0         | 20.43       | 20.52          | 20.26        |                     |  |  |
| 3                     | 16QAM      | 8       | 4         | 20.59       | 20.70          | 20.27        | 21.5                |  |  |
| 3                     | 16QAM      | 8       | 7         | 20.51       | 20.57          | 20.31        |                     |  |  |
| 3                     | 16QAM      | 15      | 0         | 20.45       | 20.47          | 20.02        |                     |  |  |
| 3                     | 64QAM      | 1       | 0         | 19.40       | 19.28          | 19.49        |                     |  |  |
| 3                     | 64QAM      | 1       | 8         | 19.28       | 19.52          | 19.28        | 20.5                |  |  |
| 3                     | 64QAM      | 1       | 14        | 19.30       | 19.48          | 19.29        |                     |  |  |
| 3                     | 64QAM      | 8       | 0         | 19.40       | 19.50          | 19.48        |                     |  |  |
| 3                     | 64QAM      | 8       | 4         | 19.62       | 19.46          | 19.40        |                     |  |  |
| 3                     | 64QAM      | 8       | 7         | 19.57       | 19.49          | 19.46        | 20.5                |  |  |
| 3                     | 64QAM      | 15      | 0         | 19.46       | 19.56          | 19.36        |                     |  |  |
| Channel               |            |         |           | 20407       | 20525          | 20643        | Tune-up limit (dBm) |  |  |
| Frequency (MHz)       |            |         |           | 824.7       | 836.5          | 848.3        |                     |  |  |
| 1.4                   | QPSK       | 1       | 0         | 21.42       | 21.39          | 21.43        | 22.5                |  |  |
| 1.4                   | QPSK       | 1       | 3         | 21.45       | 21.38          | 21.45        |                     |  |  |
| 1.4                   | QPSK       | 1       | 5         | 21.34       | 21.28          | 21.29        |                     |  |  |
| 1.4                   | QPSK       | 3       | 0         | 21.35       | 21.41          | 21.37        |                     |  |  |
| 1.4                   | QPSK       | 3       | 1         | 21.41       | 21.28          | 21.34        | 21.5                |  |  |
| 1.4                   | QPSK       | 3       | 3         | 21.42       | 21.34          | 21.34        |                     |  |  |
| 1.4                   | QPSK       | 6       | 0         | 20.45       | 20.44          | 20.43        |                     |  |  |
| 1.4                   | 16QAM      | 1       | 0         | 20.58       | 20.39          | 20.56        |                     |  |  |
| 1.4                   | 16QAM      | 1       | 3         | 20.38       | 20.62          | 20.51        | 21.5                |  |  |
| 1.4                   | 16QAM      | 1       | 5         | 20.77       | 20.45          | 20.51        |                     |  |  |
| 1.4                   | 16QAM      | 3       | 0         | 20.30       | 20.28          | 20.42        |                     |  |  |
| 1.4                   | 16QAM      | 3       | 1         | 20.33       | 20.60          | 20.46        |                     |  |  |
| 1.4                   | 16QAM      | 3       | 3         | 20.41       | 20.52          | 20.40        | 21.5                |  |  |
| 1.4                   | 16QAM      | 6       | 0         | 20.60       | 20.47          | 20.51        |                     |  |  |
| 1.4                   | 64QAM      | 1       | 0         | 19.13       | 19.30          | 19.32        |                     |  |  |
| 1.4                   | 64QAM      | 1       | 3         | 19.44       | 19.45          | 19.40        |                     |  |  |
| 1.4                   | 64QAM      | 1       | 5         | 19.39       | 19.38          | 19.26        | 20.5                |  |  |
| 1.4                   | 64QAM      | 3       | 0         | 19.05       | 19.32          | 19.33        |                     |  |  |
| 1.4                   | 64QAM      | 3       | 1         | 19.33       | 19.27          | 19.28        |                     |  |  |
| 1.4                   | 64QAM      | 3       | 3         | 19.23       | 19.40          | 19.44        |                     |  |  |
| 1.4                   | 64QAM      | 6       | 0         | 19.44       | 19.56          | 19.45        | 20.5                |  |  |

| Band 7 (2600MHz Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 20850       | 21100          | 21350        |                     |
| Frequency (MHz)       |            |         |           | 2510        | 2535           | 2560         |                     |
| 20                    | QPSK       | 1       | 0         | 15.03       | 15.04          | 14.96        | 16                  |
| 20                    | QPSK       | 1       | 49        | 14.98       | 15.02          | 14.91        |                     |
| 20                    | QPSK       | 1       | 99        | 14.93       | 14.88          | 14.93        |                     |
| 20                    | QPSK       | 50      | 0         | 14.09       | 14.16          | 14.13        |                     |
| 20                    | QPSK       | 50      | 24        | 13.85       | 13.82          | 13.72        | 15                  |
| 20                    | QPSK       | 50      | 50        | 13.95       | 13.98          | 13.95        |                     |
| 20                    | QPSK       | 100     | 0         | 13.90       | 13.92          | 13.89        |                     |
| 20                    | 16QAM      | 1       | 0         | 13.71       | 13.81          | 13.99        |                     |
| 20                    | 16QAM      | 1       | 49        | 13.86       | 13.72          | 14.00        | 15                  |
| 20                    | 16QAM      | 1       | 99        | 13.80       | 14.11          | 13.76        |                     |
| 20                    | 16QAM      | 50      | 0         | 13.65       | 13.75          | 13.68        |                     |
| 20                    | 16QAM      | 50      | 24        | 13.70       | 13.62          | 13.73        |                     |
| 20                    | 16QAM      | 50      | 50        | 13.78       | 13.83          | 13.66        | 15                  |
| 20                    | 16QAM      | 100     | 0         | 13.66       | 13.78          | 13.76        |                     |
| 20                    | 64QAM      | 1       | 0         | 12.54       | 12.70          | 12.72        |                     |
| 20                    | 64QAM      | 1       | 49        | 12.82       | 12.79          | 12.84        |                     |
| 20                    | 64QAM      | 1       | 99        | 12.80       | 12.85          | 12.76        | 14                  |
| 20                    | 64QAM      | 50      | 0         | 12.74       | 12.75          | 12.80        |                     |
| 20                    | 64QAM      | 50      | 24        | 12.79       | 12.80          | 12.80        |                     |
| 20                    | 64QAM      | 50      | 50        | 12.83       | 12.90          | 12.75        |                     |
| 20                    | 64QAM      | 100     | 0         | 12.76       | 12.73          | 12.85        | 14                  |
| Channel               |            |         |           | 20825       | 21100          | 21375        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2507.5      | 2535           | 2562.5       |                     |
| 15                    | QPSK       | 1       | 0         | 14.86       | 14.95          | 14.95        | 16                  |
| 15                    | QPSK       | 1       | 37        | 14.96       | 14.93          | 14.97        |                     |
| 15                    | QPSK       | 1       | 74        | 14.90       | 14.97          | 14.97        |                     |
| 15                    | QPSK       | 36      | 0         | 13.68       | 13.77          | 13.79        |                     |
| 15                    | QPSK       | 36      | 20        | 13.76       | 13.83          | 13.78        | 15                  |
| 15                    | QPSK       | 36      | 39        | 13.79       | 13.82          | 13.86        |                     |
| 15                    | QPSK       | 75      | 0         | 13.85       | 13.78          | 13.80        |                     |
| 15                    | 16QAM      | 1       | 0         | 14.21       | 14.32          | 14.39        |                     |
| 15                    | 16QAM      | 1       | 37        | 14.03       | 14.14          | 14.12        | 15                  |
| 15                    | 16QAM      | 1       | 74        | 14.07       | 14.07          | 14.29        |                     |
| 15                    | 16QAM      | 36      | 0         | 13.66       | 13.77          | 13.79        | 15                  |
| 15                    | 16QAM      | 36      | 20        | 13.73       | 13.76          | 13.75        |                     |
| 15                    | 16QAM      | 36      | 39        | 13.79       | 13.77          | 13.66        |                     |
| 15                    | 16QAM      | 75      | 0         | 13.74       | 13.82          | 13.74        |                     |
| 15                    | 64QAM      | 1       | 0         | 12.64       | 12.61          | 12.49        | 14                  |
| 15                    | 64QAM      | 1       | 37        | 12.54       | 12.69          | 12.78        |                     |
| 15                    | 64QAM      | 1       | 74        | 12.53       | 12.65          | 12.71        |                     |
| 15                    | 64QAM      | 36      | 0         | 12.72       | 12.80          | 12.79        |                     |
| 15                    | 64QAM      | 36      | 20        | 12.83       | 12.82          | 12.89        | 14                  |
| 15                    | 64QAM      | 36      | 39        | 12.87       | 12.78          | 12.80        |                     |
| 15                    | 64QAM      | 75      | 0         | 12.72       | 12.82          | 12.77        |                     |
| Channel               |            |         |           | 20800       | 21100          | 21400        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2505        | 2535           | 2565         |                     |
| 10                    | QPSK       | 1       | 0         | 14.85       | 14.72          | 14.75        | 16                  |
| 10                    | QPSK       | 1       | 25        | 14.88       | 14.78          | 14.80        |                     |
| 10                    | QPSK       | 1       | 49        | 14.81       | 14.78          | 14.80        |                     |
| 10                    | QPSK       | 25      | 0         | 13.60       | 13.60          | 13.59        |                     |
| 10                    | QPSK       | 25      | 12        | 13.56       | 13.68          | 13.73        | 15                  |
| 10                    | QPSK       | 25      | 25        | 13.49       | 13.67          | 13.67        |                     |
| 10                    | QPSK       | 50      | 0         | 13.58       | 13.70          | 13.69        |                     |
| 10                    | 16QAM      | 1       | 0         | 13.83       | 14.01          | 13.86        |                     |
| 10                    | 16QAM      | 1       | 25        | 13.82       | 13.84          | 13.89        | 15                  |
| 10                    | 16QAM      | 1       | 49        | 14.29       | 14.19          | 14.10        |                     |
| 10                    | 16QAM      | 25      | 0         | 13.72       | 13.60          | 13.68        |                     |
| 10                    | 16QAM      | 25      | 12        | 13.54       | 13.71          | 13.64        |                     |
| 10                    | 16QAM      | 25      | 25        | 13.59       | 13.62          | 13.54        | 15                  |
| 10                    | 16QAM      | 50      | 0         | 13.62       | 13.71          | 13.56        |                     |
| 10                    | 64QAM      | 1       | 0         | 12.64       | 12.60          | 12.58        |                     |
| 10                    | 64QAM      | 1       | 25        | 12.67       | 12.92          | 12.75        |                     |
| 10                    | 64QAM      | 1       | 49        | 12.78       | 13.02          | 12.83        | 14                  |
| 10                    | 64QAM      | 25      | 0         | 12.64       | 12.62          | 12.66        |                     |
| 10                    | 64QAM      | 25      | 12        | 12.66       | 12.77          | 12.70        |                     |
| 10                    | 64QAM      | 25      | 25        | 12.59       | 12.49          | 12.48        |                     |
| 10                    | 64QAM      | 50      | 0         | 12.53       | 12.59          | 12.51        |                     |
| Channel               |            |         |           | 20775       | 21100          | 21425        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 2502.5      | 2535           | 2567.5       |                     |
| 5                     | QPSK       | 1       | 0         | 14.89       | 14.80          | 14.70        | 16                  |
| 5                     | QPSK       | 1       | 12        | 14.76       | 14.69          | 14.77        |                     |
| 5                     | QPSK       | 1       | 24        | 14.70       | 14.76          | 14.80        |                     |
| 5                     | QPSK       | 12      | 0         | 13.40       | 13.48          | 13.40        |                     |
| 5                     | QPSK       | 12      | 7         | 13.47       | 13.62          | 13.54        | 15                  |
| 5                     | QPSK       | 12      | 13        | 13.49       | 13.65          | 13.50        |                     |
| 5                     | QPSK       | 25      | 0         | 13.50       | 13.51          | 13.46        |                     |
| 5                     | 16QAM      | 1       | 0         | 13.68       | 13.66          | 13.72        |                     |
| 5                     | 16QAM      | 1       | 12        | 13.73       | 13.95          | 13.85        | 15                  |
| 5                     | 16QAM      | 1       | 24        | 13.79       | 13.98          | 13.80        |                     |
| 5                     | 16QAM      | 12      | 0         | 13.70       | 13.76          | 13.67        |                     |
| 5                     | 16QAM      | 12      | 7         | 13.59       | 13.61          | 13.57        |                     |
| 5                     | 16QAM      | 12      | 13        | 13.59       | 13.65          | 13.78        | 15                  |
| 5                     | 16QAM      | 25      | 0         | 13.56       | 13.61          | 13.63        |                     |
| 5                     | 64QAM      | 1       | 0         | 12.74       | 12.79          | 12.75        |                     |
| 5                     | 64QAM      | 1       | 12        | 12.79       | 12.91          | 12.79        |                     |
| 5                     | 64QAM      | 1       | 24        | 12.83       | 12.93          | 12.89        | 14                  |
| 5                     | 64QAM      | 12      | 0         | 12.54       | 12.51          | 12.56        |                     |
| 5                     | 64QAM      | 12      | 7         | 12.63       | 12.68          | 12.47        |                     |
| 5                     | 64QAM      | 12      | 13        | 12.58       | 12.67          | 12.53        |                     |
| 5                     | 64QAM      | 25      | 0         | 12.53       | 12.52          | 12.57        |                     |

| Band 66         |            |         |           |             |                |              |                     |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel         |            |         |           | 132072      | 132322         | 132572       |                     |
| Frequency (MHz) |            |         |           | 1720        | 1745           | 1770         |                     |
| 20              | QPSK       | 1       | 0         | 15.50       | 15.56          | 15.54        | 16.5                |
| 20              | QPSK       | 1       | 49        | 15.35       | 15.34          | 15.30        |                     |
| 20              | QPSK       | 1       | 99        | 15.28       | 15.27          | 15.30        |                     |
| 20              | QPSK       | 50      | 0         | 14.73       | 14.80          | 14.76        | 15.5                |
| 20              | QPSK       | 50      | 24        | 14.54       | 14.56          | 14.69        |                     |
| 20              | QPSK       | 50      | 50        | 14.58       | 14.66          | 14.54        |                     |
| 20              | QPSK       | 100     | 0         | 14.56       | 14.56          | 14.48        | 15.5                |
| 20              | 16QAM      | 1       | 0         | 14.61       | 14.37          | 14.65        |                     |
| 20              | 16QAM      | 1       | 49        | 14.66       | 14.40          | 14.46        |                     |
| 20              | 16QAM      | 1       | 99        | 14.66       | 14.84          | 14.63        | 15.5                |
| 20              | 16QAM      | 50      | 0         | 14.78       | 14.75          | 14.72        |                     |
| 20              | 16QAM      | 50      | 24        | 14.67       | 14.67          | 14.68        |                     |
| 20              | 16QAM      | 50      | 50        | 14.64       | 14.56          | 14.52        | 15.5                |
| 20              | 16QAM      | 100     | 0         | 14.60       | 14.63          | 14.69        |                     |
| 20              | 64QAM      | 1       | 0         | 13.93       | 13.70          | 14.03        |                     |
| 20              | 64QAM      | 1       | 49        | 13.70       | 14.03          | 14.02        | 14.5                |
| 20              | 64QAM      | 1       | 99        | 13.93       | 14.05          | 14.13        |                     |
| 20              | 64QAM      | 50      | 0         | 13.89       | 13.79          | 13.92        |                     |
| 20              | 64QAM      | 50      | 24        | 13.83       | 13.77          | 13.89        | 14.5                |
| 20              | 64QAM      | 50      | 50        | 13.85       | 13.73          | 13.79        |                     |
| 20              | 64QAM      | 100     | 0         | 13.84       | 13.84          | 13.82        |                     |
| Channel         |            |         |           | 132047      | 132322         | 132597       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1717.5      | 1745           | 1772.5       |                     |
| 15              | QPSK       | 1       | 0         | 15.48       | 15.52          | 15.50        | 16.5                |
| 15              | QPSK       | 1       | 37        | 15.52       | 15.48          | 15.46        |                     |
| 15              | QPSK       | 1       | 74        | 15.46       | 15.42          | 15.40        |                     |
| 15              | QPSK       | 36      | 0         | 14.67       | 14.64          | 14.68        | 15.5                |
| 15              | QPSK       | 36      | 20        | 14.67       | 14.59          | 14.69        |                     |
| 15              | QPSK       | 36      | 39        | 14.53       | 14.58          | 14.55        |                     |
| 15              | QPSK       | 75      | 0         | 14.62       | 14.66          | 14.59        | 15.5                |
| 15              | 16QAM      | 1       | 0         | 14.61       | 14.48          | 14.78        |                     |
| 15              | 16QAM      | 1       | 37        | 14.48       | 14.78          | 14.71        |                     |
| 15              | 16QAM      | 1       | 74        | 14.58       | 14.48          | 14.48        | 15.5                |
| 15              | 16QAM      | 36      | 0         | 14.79       | 14.79          | 14.70        |                     |
| 15              | 16QAM      | 36      | 20        | 14.82       | 14.81          | 14.87        |                     |
| 15              | 16QAM      | 36      | 39        | 14.74       | 14.89          | 14.83        | 15.5                |
| 15              | 16QAM      | 75      | 0         | 14.84       | 14.82          | 14.78        |                     |
| 15              | 64QAM      | 1       | 0         | 14.15       | 14.05          | 14.15        |                     |
| 15              | 64QAM      | 1       | 37        | 14.17       | 13.95          | 14.05        | 14.5                |
| 15              | 64QAM      | 1       | 74        | 13.82       | 14.08          | 14.15        |                     |
| 15              | 64QAM      | 36      | 0         | 13.94       | 13.93          | 14.06        |                     |
| 15              | 64QAM      | 36      | 20        | 14.04       | 14.00          | 14.01        | 14.5                |
| 15              | 64QAM      | 36      | 39        | 13.93       | 13.87          | 13.91        |                     |
| 15              | 64QAM      | 75      | 0         | 13.95       | 13.97          | 13.94        |                     |
| Channel         |            |         |           | 132022      | 132322         | 132622       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1715        | 1745           | 1775         |                     |
| 10              | QPSK       | 1       | 0         | 15.51       | 15.51          | 15.52        | 16.5                |
| 10              | QPSK       | 1       | 25        | 15.41       | 15.39          | 15.47        |                     |
| 10              | QPSK       | 1       | 49        | 15.55       | 15.43          | 15.33        |                     |
| 10              | QPSK       | 25      | 0         | 14.98       | 14.91          | 14.98        | 15.5                |
| 10              | QPSK       | 25      | 12        | 14.95       | 15.14          | 14.92        |                     |
| 10              | QPSK       | 25      | 25        | 14.91       | 14.87          | 14.79        |                     |
| 10              | QPSK       | 50      | 0         | 14.99       | 14.84          | 15.03        | 15.5                |
| 10              | 16QAM      | 1       | 0         | 14.91       | 14.91          | 15.11        |                     |
| 10              | 16QAM      | 1       | 25        | 14.91       | 15.00          | 15.12        |                     |
| 10              | 16QAM      | 1       | 49        | 14.74       | 14.94          | 14.82        | 15.5                |
| 10              | 16QAM      | 25      | 0         | 14.75       | 14.92          | 14.80        |                     |
| 10              | 16QAM      | 25      | 12        | 14.74       | 14.94          | 14.85        |                     |
| 10              | 16QAM      | 25      | 25        | 14.65       | 14.70          | 14.70        | 15.5                |
| 10              | 16QAM      | 50      | 0         | 14.81       | 14.85          | 14.86        |                     |
| 10              | 64QAM      | 1       | 0         | 13.98       | 13.98          | 13.65        |                     |
| 10              | 64QAM      | 1       | 25        | 13.65       | 13.78          | 13.68        | 14.5                |
| 10              | 64QAM      | 1       | 49        | 13.65       | 13.65          | 13.65        |                     |
| 10              | 64QAM      | 25      | 0         | 13.98       | 13.96          | 13.98        |                     |
| 10              | 64QAM      | 25      | 12        | 13.97       | 14.01          | 14.05        | 14.5                |
| 10              | 64QAM      | 25      | 25        | 13.97       | 13.90          | 13.92        |                     |
| 10              | 64QAM      | 50      | 0         | 13.87       | 13.97          | 13.98        |                     |
| Channel         |            |         |           | 131997      | 132322         | 132647       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1712.5      | 1745           | 1777.5       |                     |
| 5               | QPSK       | 1       | 0         | 15.40       | 15.43          | 15.48        | 16.5                |
| 5               | QPSK       | 1       | 12        | 15.43       | 15.43          | 15.42        |                     |
| 5               | QPSK       | 1       | 24        | 15.51       | 15.41          | 15.47        |                     |
| 5               | QPSK       | 12      | 0         | 14.67       | 14.69          | 14.65        | 15.5                |
| 5               | QPSK       | 12      | 7         | 14.69       | 14.77          | 14.70        |                     |
| 5               | QPSK       | 12      | 13        | 14.55       | 14.61          | 14.62        |                     |
| 5               | QPSK       | 25      | 0         | 14.65       | 14.66          | 14.65        | 15.5                |
| 5               | 16QAM      | 1       | 0         | 15.14       | 14.83          | 14.84        |                     |
| 5               | 16QAM      | 1       | 12        | 14.77       | 15.06          | 15.01        |                     |
| 5               | 16QAM      | 1       | 24        | 14.89       | 14.78          | 15.13        | 15.5                |
| 5               | 16QAM      | 12      | 0         | 14.78       | 14.89          | 14.85        |                     |
| 5               | 16QAM      | 12      | 7         | 14.95       | 14.87          | 14.99        |                     |
| 5               | 16QAM      | 12      | 13        | 14.86       | 14.80          | 14.87        | 15.5                |
| 5               | 16QAM      | 25      | 0         | 14.87       | 14.89          | 14.81        |                     |
| 5               | 64QAM      | 1       | 0         | 13.65       | 14.05          | 13.85        |                     |
| 5               | 64QAM      | 1       | 12        | 13.95       | 13.95          | 13.95        | 14.5                |
| 5               | 64QAM      | 1       | 24        | 13.78       | 13.82          | 13.78        |                     |
| 5               | 64QAM      | 12      | 0         | 14.02       | 13.77          | 13.98        |                     |
| 5               | 64QAM      | 12      | 7         | 14.10       | 13.69          | 14.00        | 14.5                |
| 5               | 64QAM      | 12      | 13        | 13.93       | 14.05          | 14.00        |                     |
| 5               | 64QAM      | 25      | 0         | 14.00       | 14.08          | 13.95        |                     |
| Channel         |            |         |           | 131987      | 132322         | 132657       | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1711.5      | 1745           | 1778.5       |                     |
| 3               | QPSK       | 1       | 0         | 15.47       | 15.38          | 15.37        | 16.5                |
| 3               | QPSK       | 1       | 8         | 15.34       | 15.35          | 15.43        |                     |
| 3               | QPSK       | 1       | 14        | 15.25       | 15.06          | 15.36        |                     |
| 3               | QPSK       | 8       | 0         | 14.93       | 14.90          | 14.94        | 15.5                |
| 3               | QPSK       | 8       | 4         | 14.88       | 14.80          | 14.90        |                     |
| 3               | QPSK       | 8       | 7         | 14.74       | 14.79          | 14.76        |                     |
| 3               | QPSK       | 15      | 0         | 14.83       | 14.87          | 14.80        | 15.5                |
| 3               | 16QAM      | 1       | 0         | 14.52       | 14.93          | 14.69        |                     |
| 3               | 16QAM      | 1       | 8         | 14.85       | 14.79          | 14.78        |                     |
| 3               | 16QAM      | 1       | 14        | 14.89       | 14.78          | 14.48        | 15.5                |



|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 14.70  | 14.70  | 14.61  | 15.5                   |
| 3               | 16QAM | 8  | 4  | 14.73  | 14.72  | 14.78  |                        |
| 3               | 16QAM | 8  | 7  | 14.65  | 14.80  | 14.74  |                        |
| 3               | 16QAM | 15 | 0  | 14.75  | 14.73  | 14.69  | 14.5                   |
| 3               | 64QAM | 1  | 0  | 14.06  | 13.96  | 14.06  |                        |
| 3               | 64QAM | 1  | 8  | 14.08  | 13.86  | 13.96  |                        |
| 3               | 64QAM | 1  | 14 | 13.73  | 13.99  | 14.06  | 14.5                   |
| 3               | 64QAM | 6  | 0  | 13.85  | 13.84  | 13.97  |                        |
| 3               | 64QAM | 6  | 4  | 13.95  | 13.91  | 13.92  |                        |
| 3               | 64QAM | 8  | 7  | 13.84  | 13.78  | 13.82  | 14.5                   |
| 3               | 64QAM | 15 | 0  | 13.86  | 13.88  | 13.85  |                        |
| Channel         |       |    |    | 131979 | 132322 | 132685 | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1745   | 1779.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 15.41  | 15.32  | 15.33  | 16.5                   |
| 1.4             | QPSK  | 1  | 3  | 15.47  | 15.49  | 15.49  |                        |
| 1.4             | QPSK  | 1  | 5  | 15.39  | 15.27  | 15.43  |                        |
| 1.4             | QPSK  | 3  | 0  | 15.38  | 15.31  | 15.38  |                        |
| 1.4             | QPSK  | 3  | 1  | 15.35  | 15.41  | 15.32  |                        |
| 1.4             | QPSK  | 3  | 3  | 15.36  | 15.32  | 15.24  |                        |
| 1.4             | QPSK  | 6  | 0  | 14.96  | 14.81  | 15.00  | 15.5                   |
| 1.4             | 16QAM | 1  | 0  | 14.83  | 14.83  | 15.03  | 15.5                   |
| 1.4             | 16QAM | 1  | 3  | 14.83  | 14.92  | 15.04  |                        |
| 1.4             | 16QAM | 1  | 5  | 14.66  | 14.86  | 14.74  |                        |
| 1.4             | 16QAM | 3  | 0  | 14.61  | 14.58  | 14.84  |                        |
| 1.4             | 16QAM | 3  | 1  | 14.70  | 14.60  | 14.72  |                        |
| 1.4             | 16QAM | 3  | 3  | 14.71  | 14.72  | 14.66  |                        |
| 1.4             | 16QAM | 6  | 0  | 14.60  | 14.51  | 14.52  | 15.5                   |
| 1.4             | 64QAM | 1  | 0  | 14.11  | 13.96  | 14.12  | 14.5                   |
| 1.4             | 64QAM | 1  | 3  | 13.84  | 13.93  | 13.93  |                        |
| 1.4             | 64QAM | 1  | 5  | 13.81  | 13.81  | 13.92  |                        |
| 1.4             | 64QAM | 3  | 0  | 13.90  | 13.88  | 13.90  |                        |
| 1.4             | 64QAM | 3  | 1  | 13.89  | 13.93  | 13.97  |                        |
| 1.4             | 64QAM | 3  | 3  | 13.89  | 13.82  | 13.84  |                        |
| 1.4             | 64QAM | 6  | 0  | 13.79  | 13.89  | 13.90  | 14.5                   |

| Band 38(only on channel required) |            |         |           |             |                |              |                     |  |  |
|-----------------------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|--|
| BW [MHz]                          | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |  |
| Channel                           |            |         |           | 37850       | 38000          | 38150        |                     |  |  |
| Frequency (MHz)                   |            |         |           | 2580        | 2595           | 2610         |                     |  |  |
| 20                                | QPSK       | 1       | 0         | 18.97       | 19.04          | 19.01        | 20                  |  |  |
| 20                                | QPSK       | 1       | 49        | 18.96       | 18.98          | 18.98        |                     |  |  |
| 20                                | QPSK       | 1       | 99        | 18.88       | 18.94          | 18.91        |                     |  |  |
| 20                                | QPSK       | 50      | 0         | 18.08       | 18.30          | 18.16        |                     |  |  |
| 20                                | QPSK       | 50      | 24        | 18.01       | 18.08          | 18.04        | 19                  |  |  |
| 20                                | QPSK       | 50      | 50        | 18.05       | 18.10          | 18.04        |                     |  |  |
| 20                                | QPSK       | 100     | 0         | 17.93       | 18.04          | 18.07        |                     |  |  |
| 20                                | 16QAM      | 1       | 0         | 18.05       | 18.05          | 17.98        |                     |  |  |
| 20                                | 16QAM      | 1       | 49        | 18.04       | 17.64          | 18.04        | 19                  |  |  |
| 20                                | 16QAM      | 1       | 99        | 18.20       | 18.19          | 18.30        |                     |  |  |
| 20                                | 16QAM      | 50      | 0         | 18.05       | 18.19          | 17.80        |                     |  |  |
| 20                                | 16QAM      | 50      | 24        | 18.16       | 17.98          | 17.89        |                     |  |  |
| 20                                | 16QAM      | 50      | 50        | 18.15       | 17.79          | 17.83        | 19                  |  |  |
| 20                                | 16QAM      | 100     | 0         | 18.16       | 18.19          | 17.85        |                     |  |  |
| 20                                | 64QAM      | 1       | 0         | 17.32       | 17.60          | 17.63        |                     |  |  |
| 20                                | 64QAM      | 1       | 49        | 17.32       | 17.51          | 17.61        |                     |  |  |
| 20                                | 64QAM      | 1       | 99        | 17.34       | 17.61          | 17.65        | 18                  |  |  |
| 20                                | 64QAM      | 50      | 0         | 17.33       | 17.32          | 17.21        |                     |  |  |
| 20                                | 64QAM      | 50      | 24        | 17.35       | 17.31          | 17.30        |                     |  |  |
| 20                                | 64QAM      | 50      | 50        | 17.33       | 17.10          | 17.32        |                     |  |  |
| 20                                | 64QAM      | 100     | 0         | 17.33       | 17.29          | 17.20        | 18                  |  |  |
| Channel                           |            |         |           | 37825       | 38000          | 38175        |                     |  |  |
| Frequency (MHz)                   |            |         |           | 2577.5      | 2595           | 2612.5       |                     |  |  |
| 15                                | QPSK       | 1       | 0         | 18.94       | 18.94          | 18.95        | 20                  |  |  |
| 15                                | QPSK       | 1       | 37        | 18.95       | 18.87          | 18.98        |                     |  |  |
| 15                                | QPSK       | 1       | 74        | 18.76       | 18.98          | 18.95        |                     |  |  |
| 15                                | QPSK       | 36      | 0         | 18.07       | 18.32          | 18.36        |                     |  |  |
| 15                                | QPSK       | 36      | 20        | 18.21       | 18.30          | 18.28        | 19                  |  |  |
| 15                                | QPSK       | 36      | 39        | 18.28       | 18.26          | 18.19        |                     |  |  |
| 15                                | QPSK       | 75      | 0         | 18.16       | 18.16          | 18.17        |                     |  |  |
| 15                                | 16QAM      | 1       | 0         | 18.24       | 18.26          | 18.16        |                     |  |  |
| 15                                | 16QAM      | 1       | 37        | 18.26       | 18.30          | 17.98        | 19                  |  |  |
| 15                                | 16QAM      | 1       | 74        | 18.27       | 18.17          | 17.97        |                     |  |  |
| 15                                | 16QAM      | 36      | 0         | 18.04       | 18.00          | 17.89        |                     |  |  |
| 15                                | 16QAM      | 36      | 20        | 18.02       | 18.16          | 17.93        |                     |  |  |
| 15                                | 16QAM      | 36      | 39        | 18.04       | 18.06          | 17.91        | 19                  |  |  |
| 15                                | 16QAM      | 75      | 0         | 18.00       | 17.95          | 17.89        |                     |  |  |
| 15                                | 64QAM      | 1       | 0         | 17.46       | 17.35          | 17.51        |                     |  |  |
| 15                                | 64QAM      | 1       | 37        | 17.34       | 17.35          | 17.33        |                     |  |  |
| 15                                | 64QAM      | 1       | 74        | 17.29       | 17.37          | 17.54        | 18                  |  |  |
| 15                                | 64QAM      | 36      | 0         | 17.21       | 17.36          | 17.29        |                     |  |  |
| 15                                | 64QAM      | 36      | 20        | 17.49       | 17.35          | 17.23        |                     |  |  |
| 15                                | 64QAM      | 36      | 39        | 17.33       | 17.33          | 17.34        |                     |  |  |
| 15                                | 64QAM      | 75      | 0         | 17.51       | 17.33          | 17.37        | 18                  |  |  |
| Channel                           |            |         |           | 37800       | 38000          | 38200        |                     |  |  |
| Frequency (MHz)                   |            |         |           | 2575        | 2595           | 2615         |                     |  |  |
| 10                                | QPSK       | 1       | 0         | 18.97       | 18.98          | 18.98        | 20                  |  |  |
| 10                                | QPSK       | 1       | 25        | 18.97       | 18.77          | 18.97        |                     |  |  |
| 10                                | QPSK       | 1       | 49        | 18.91       | 18.93          | 18.96        |                     |  |  |
| 10                                | QPSK       | 25      | 0         | 18.06       | 17.92          | 17.92        |                     |  |  |
| 10                                | QPSK       | 25      | 12        | 18.26       | 18.22          | 17.93        | 19                  |  |  |
| 10                                | QPSK       | 25      | 25        | 18.27       | 18.29          | 17.89        |                     |  |  |
| 10                                | QPSK       | 50      | 0         | 18.28       | 18.20          | 17.92        |                     |  |  |
| 10                                | 16QAM      | 1       | 0         | 18.14       | 17.91          | 18.22        |                     |  |  |
| 10                                | 16QAM      | 1       | 25        | 18.02       | 17.92          | 18.32        | 19                  |  |  |
| 10                                | 16QAM      | 1       | 49        | 18.39       | 17.95          | 18.04        |                     |  |  |
| 10                                | 16QAM      | 25      | 0         | 17.89       | 18.00          | 17.96        |                     |  |  |
| 10                                | 16QAM      | 25      | 12        | 18.19       | 17.89          | 18.02        |                     |  |  |
| 10                                | 16QAM      | 25      | 25        | 17.89       | 18.03          | 18.08        | 19                  |  |  |
| 10                                | 16QAM      | 50      | 0         | 18.01       | 18.05          | 17.97        |                     |  |  |
| 10                                | 64QAM      | 1       | 0         | 17.36       | 17.39          | 17.32        |                     |  |  |
| 10                                | 64QAM      | 1       | 25        | 17.27       | 17.52          | 17.42        |                     |  |  |
| 10                                | 64QAM      | 1       | 49        | 17.63       | 17.37          | 17.42        | 18                  |  |  |
| 10                                | 64QAM      | 25      | 0         | 17.22       | 17.22          | 17.32        |                     |  |  |
| 10                                | 64QAM      | 25      | 12        | 17.22       | 17.42          | 17.43        |                     |  |  |
| 10                                | 64QAM      | 25      | 25        | 17.18       | 17.38          | 17.34        |                     |  |  |
| 10                                | 64QAM      | 50      | 0         | 17.24       | 17.40          | 17.30        | 18                  |  |  |
| Channel                           |            |         |           | 37775       | 38000          | 38225        |                     |  |  |
| Frequency (MHz)                   |            |         |           | 2572.5      | 2595           | 2617.5       |                     |  |  |
| 5                                 | QPSK       | 1       | 0         | 18.92       | 18.93          | 18.96        | 20                  |  |  |
| 5                                 | QPSK       | 1       | 12        | 18.77       | 18.98          | 18.96        |                     |  |  |
| 5                                 | QPSK       | 1       | 24        | 18.77       | 18.76          | 18.75        |                     |  |  |
| 5                                 | QPSK       | 12      | 0         | 18.19       | 18.67          | 18.26        |                     |  |  |
| 5                                 | QPSK       | 12      | 7         | 18.33       | 18.32          | 18.32        | 19                  |  |  |
| 5                                 | QPSK       | 12      | 13        | 18.21       | 18.23          | 18.25        |                     |  |  |
| 5                                 | QPSK       | 25      | 0         | 18.25       | 18.26          | 17.92        |                     |  |  |
| 5                                 | 16QAM      | 1       | 0         | 18.43       | 18.54          | 18.44        |                     |  |  |
| 5                                 | 16QAM      | 1       | 12        | 18.04       | 18.22          | 17.92        | 19                  |  |  |
| 5                                 | 16QAM      | 1       | 24        | 18.04       | 18.05          | 18.04        |                     |  |  |
| 5                                 | 16QAM      | 12      | 0         | 18.05       | 18.10          | 18.04        |                     |  |  |
| 5                                 | 16QAM      | 12      | 7         | 18.04       | 18.06          | 18.04        |                     |  |  |
| 5                                 | 16QAM      | 12      | 13        | 17.95       | 18.07          | 18.04        | 19                  |  |  |
| 5                                 | 16QAM      | 25      | 0         | 18.22       | 17.94          | 18.12        |                     |  |  |
| 5                                 | 64QAM      | 1       | 0         | 17.33       | 17.66          | 17.27        |                     |  |  |
| 5                                 | 64QAM      | 1       | 12        | 17.60       | 17.60          | 17.67        |                     |  |  |
| 5                                 | 64QAM      | 1       | 24        | 17.60       | 17.60          | 17.57        | 18                  |  |  |
| 5                                 | 64QAM      | 12      | 0         | 17.28       | 17.40          | 17.36        |                     |  |  |
| 5                                 | 64QAM      | 12      | 7         | 17.37       | 17.38          | 17.29        |                     |  |  |
| 5                                 | 64QAM      | 12      | 13        | 17.36       | 17.39          | 17.26        |                     |  |  |
| 5                                 | 64QAM      | 25      | 0         | 17.40       | 17.42          | 17.33        | 18                  |  |  |

| Band 41 (2535~2655MHz) |            |         |           |             |                    |                |                     |              |                     |
|------------------------|------------|---------|-----------|-------------|--------------------|----------------|---------------------|--------------|---------------------|
| BW [MHz]               | Modulation | RB Size | RB Offset | Low channel | Middle Low Channel | Middle Channel | Middle High Channel | High Channel | Tune-up limit (dBm) |
| Channel                |            |         |           | 40140       | 40390              | 40640          | 40890               | 41140        |                     |
| Frequency (MHz)        |            |         |           | 2545        | 2570               | 2595           | 2620                | 2645         |                     |
| 20                     | QPSK       | 1       | 0         | 18.95       | 19.05              | 19.07          | 19.00               | 19.01        | 20                  |
| 20                     | QPSK       | 1       | 49        | 18.91       | 19.00              | 19.00          | 19.01               | 19.01        |                     |
| 20                     | QPSK       | 1       | 99        | 18.85       | 19.01              | 18.96          | 19.06               | 18.81        |                     |
| 20                     | QPSK       | 50      | 0         | 18.11       | 18.13              | 18.17          | 18.15               | 18.10        |                     |
| 20                     | QPSK       | 50      | 24        | 18.11       | 18.09              | 17.94          | 17.91               | 17.91        | 19                  |
| 20                     | QPSK       | 50      | 50        | 18.14       | 18.07              | 17.99          | 17.98               | 18.05        |                     |
| 20                     | QPSK       | 100     | 0         | 18.11       | 18.14              | 18.05          | 17.99               | 17.95        |                     |
| 20                     | 16QAM      | 1       | 0         | 18.15       | 18.31              | 17.98          | 18.05               | 17.95        |                     |
| 20                     | 16QAM      | 1       | 49        | 18.14       | 18.19              | 17.98          | 17.93               | 17.95        | 19                  |
| 20                     | 16QAM      | 1       | 99        | 18.21       | 18.11              | 18.05          | 18.03               | 18.05        |                     |
| 20                     | 16QAM      | 50      | 0         | 18.12       | 18.21              | 17.98          | 18.28               | 17.95        |                     |
| 20                     | 16QAM      | 50      | 24        | 18.10       | 18.42              | 17.95          | 18.05               | 17.95        |                     |
| 20                     | 16QAM      | 50      | 50        | 18.16       | 18.48              | 18.41          | 18.02               | 18.05        | 19                  |
| 20                     | 16QAM      | 100     | 0         | 18.10       | 18.41              | 18.36          | 18.05               | 17.94        |                     |
| 20                     | 64QAM      | 1       | 0         | 17.53       | 17.44              | 17.44          | 17.27               | 17.23        |                     |
| 20                     | 64QAM      | 1       | 49        | 17.46       | 17.56              | 17.26          | 17.55               | 17.23        |                     |
| 20                     | 64QAM      | 1       | 99        | 17.36       | 17.31              | 17.22          | 17.31               | 17.19        | 18                  |
| 20                     | 64QAM      | 50      | 0         | 17.32       | 17.28              | 17.25          | 17.20               | 17.29        |                     |
| 20                     | 64QAM      | 50      | 24        | 17.17       | 17.44              | 17.32          | 17.29               | 17.22        |                     |
| 20                     | 64QAM      | 50      | 50        | 17.27       | 17.43              | 17.46          | 17.35               | 17.28        |                     |
| 20                     | 64QAM      | 100     | 0         | 17.25       | 17.53              | 17.49          | 17.17               | 17.29        | 18                  |
| Channel                |            |         |           | 40115       | 40378              | 40640          | 40903               | 41165        |                     |
| Frequency (MHz)        |            |         |           | 2542.5      | 2568.8             | 2595           | 2621.3              | 2647.5       |                     |
| 15                     | QPSK       | 1       | 0         | 18.61       | 18.77              | 18.97          | 18.84               | 18.83        | 20                  |
| 15                     | QPSK       | 1       | 37        | 18.60       | 18.95              | 19.01          | 18.84               | 18.94        |                     |
| 15                     | QPSK       | 1       | 74        | 18.60       | 18.93              | 18.94          | 18.77               | 18.74        |                     |
| 15                     | QPSK       | 36      | 0         | 17.77       | 18.11              | 17.96          | 18.16               | 18.77        |                     |
| 15                     | QPSK       | 36      | 20        | 18.02       | 18.16              | 17.96          | 18.12               | 18.84        | 19                  |
| 15                     | QPSK       | 36      | 39        | 18.18       | 18.19              | 17.95          | 18.15               | 18.79        |                     |
| 15                     | QPSK       | 75      | 0         | 17.96       | 18.21              | 17.98          | 18.18               | 18.76        |                     |
| 15                     | 16QAM      | 1       | 0         | 17.90       | 18.02              | 18.35          | 17.96               | 18.15        |                     |

| 2.4GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11b 1Mbps       | CH 1    | 2412            | 15.50               | 17.00         | 15.00         | 98.79        |
|             |                     | CH 6    | 2437            | 14.67               | 16.00         | 15.00         |              |
|             |                     | CH 11   | 2462            | 15.77               | 17.00         | 15.00         |              |
|             | 802.11g 6Mbps       | CH 1    | 2412            | 14.20               | 16.00         | 14.00         | 97.58        |
|             |                     | CH 6    | 2437            | 13.49               | 15.00         | 14.00         |              |
|             |                     | CH 11   | 2462            | 14.62               | 16.00         | 14.00         |              |
|             | 802.11n-HT20 MCS0   | CH 1    | 2412            | 14.02               | 16.00         | 14.00         | 97.92        |
|             |                     | CH 6    | 2437            | 13.54               | 15.00         | 14.00         |              |
|             |                     | CH 11   | 2462            | 14.36               | 16.00         | 14.00         |              |
|             | 802.11n-HT40 MCS0   | CH 3    | 2422            | 14.12               | 16.00         | 14.00         | 97.66        |
|             |                     | CH 6    | 2437            | 14.89               | 16.00         | 14.00         |              |
|             |                     | CH 9    | 2452            | 14.56               | 16.00         | 14.00         |              |
|             | 802.11ac-VHT20 MCS0 | CH 1    | 2412            | 14.04               | 16.00         | 14.00         | 97.68        |
|             |                     | CH 6    | 2437            | 13.55               | 15.00         | 14.00         |              |
|             |                     | CH 11   | 2462            | 14.44               | 16.00         | 14.00         |              |
|             | 802.11ac-VHT40 MCS0 | CH 3    | 2422            | 14.14               | 16.00         | 14.00         | 89.50        |
|             |                     | CH 6    | 2437            | 14.91               | 16.00         | 14.00         |              |
|             |                     | CH 9    | 2452            | 14.67               | 16.00         | 14.00         |              |

| 5.2GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 36   | 5180            | 10.95               | 12.50         | 12.0          | 97.82        |
|             |                     | CH 44   | 5220            | 11.44               | 12.50         | 12.0          |              |
|             |                     | CH 48   | 5240            | 11.12               | 12.50         | 12.0          |              |
|             | 802.11n-HT20 MCS0   | CH 36   | 5180            | 10.99               | 12.50         | 12.0          | 97.92        |
|             |                     | CH 44   | 5220            | 11.13               | 12.50         | 12.0          |              |
|             |                     | CH 48   | 5240            | 11.01               | 12.50         | 12.0          |              |
|             | 802.11n-HT40 MCS0   | CH 38   | 5190            | 11.21               | 12.50         | 12.0          | 90.31        |
|             |                     | CH 46   | 5230            | 11.38               | 12.50         | 12.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 36   | 5180            | 10.66               | 12.50         | 12.0          | 97.93        |
|             |                     | CH 44   | 5220            | 10.97               | 12.50         | 12.0          |              |
|             |                     | CH 48   | 5240            | 10.91               | 12.50         | 12.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 38   | 5190            | 11.37               | 12.50         | 12.0          | 91.75        |
|             |                     | CH 46   | 5230            | 11.41               | 12.50         | 12.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 42   | 5210            | 11.42               | 12.50         | 12.0          | 95.36        |

| 5.3GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 52   | 5260            | 11.43               | 12.50         | 12.0          | 97.82        |
|             |                     | CH 60   | 5300            | 12.30               | 13.50         | 12.0          |              |
|             |                     | CH 64   | 5320            | 12.45               | 13.50         | 12.0          |              |
|             | 802.11n-HT20 MCS0   | CH 52   | 5260            | 11.27               | 12.50         | 12.0          | 97.92        |
|             |                     | CH 60   | 5300            | 12.04               | 13.50         | 12.0          |              |
|             |                     | CH 64   | 5320            | 12.22               | 13.50         | 12.0          |              |
|             | 802.11n-HT40 MCS0   | CH 54   | 5270            | 11.82               | 13.50         | 12.0          | 90.31        |
|             |                     | CH 62   | 5310            | 12.34               | 13.50         | 12.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 52   | 5260            | 11.17               | 12.50         | 12.0          | 97.93        |
|             |                     | CH 60   | 5300            | 11.96               | 13.50         | 12.0          |              |
|             |                     | CH 64   | 5320            | 12.19               | 13.50         | 12.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 54   | 5270            | 11.75               | 13.50         | 12.0          | 91.75        |
|             |                     | CH 62   | 5310            | 12.39               | 13.50         | 12.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 58   | 5290            | 12.09               | 13.50         | 12.0          | 95.36        |

| 5.5GHz WLAN | Mode              | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|-------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps     | CH 100  | 5500            | 12.43               | 13.50         | 12.0          | 97.82        |
|             |                   | CH 120  | 5600            | 11.40               | 12.50         | 12.0          |              |
|             |                   | CH 144  | 5720            | 11.72               | 13.50         | 12.0          |              |
|             | 802.11n-HT20 MCS0 | CH 100  | 5500            | 12.31               | 13.50         | 12.0          | 97.92        |
|             |                   | CH 120  | 5600            | 11.27               | 12.50         | 12.0          |              |
|             |                   | CH 144  | 5720            | 11.61               | 13.50         | 12.0          |              |
|             | 802.11n-HT40 MCS0 | CH 102  | 5510            | 12.25               | 13.50         | 12.0          | 90.31        |
|             |                   | CH 126  | 5630            | 11.46               | 12.50         | 12.0          |              |
|             |                   | CH 142  | 5710            | 11.86               | 13.50         | 12.0          |              |

|  |                     |        |      |              |       |      |       |
|--|---------------------|--------|------|--------------|-------|------|-------|
|  | 802.11ac-VHT20 MCS0 | CH 100 | 5500 | <b>12.16</b> | 13.50 | 12.0 | 97.93 |
|  |                     | CH 120 | 5600 | 11.12        | 12.50 | 12.0 |       |
|  |                     | CH 144 | 5720 | 11.58        | 13.50 | 12.0 |       |
|  | 802.11ac-VHT40 MCS0 | CH 102 | 5510 | <b>12.19</b> | 13.50 | 12.0 | 91.75 |
|  |                     | CH 126 | 5630 | 11.14        | 12.50 | 12.0 |       |
|  |                     | CH 142 | 5710 | 11.94        | 13.50 | 12.0 |       |
|  | 802.11ac-VHT80 MCS0 | CH 106 | 5530 | <b>11.93</b> | 13.50 | 12.0 | 95.36 |
|  |                     | CH 122 | 5610 | 11.23        | 12.50 | 12.0 |       |
|  |                     | CH 138 | 5690 | 11.80        | 13.50 | 12.0 |       |

|             |                     |         |                 |                     |               |               |              |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.8GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|             | 802.11a 6Mbps       | CH 149  | 5745            | <b>10.98</b>        | 12.50         | 11.0          | 97.82        |
|             |                     | CH 157  | 5785            | 10.76               | 12.50         | 11.0          |              |
|             |                     | CH 165  | 5825            | 9.89                | 11.50         | 11.0          |              |
|             | 802.11n-HT20 MCS0   | CH 149  | 5745            | <b>10.84</b>        | 12.50         | 11.0          | 97.92        |
|             |                     | CH 157  | 5785            | 10.63               | 12.50         | 11.0          |              |
|             |                     | CH 165  | 5825            | 9.66                | 11.50         | 11.0          |              |
|             | 802.11n-HT40 MCS0   | CH 151  | 5755            | <b>10.75</b>        | 12.50         | 11.0          | 90.31        |
|             |                     | CH 159  | 5795            | 10.61               | 12.50         | 11.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 149  | 5745            | <b>10.78</b>        | 12.50         | 11.0          | 97.93        |
|             |                     | CH 157  | 5785            | 10.56               | 12.50         | 11.0          |              |
|             |                     | CH 165  | 5825            | 9.73                | 11.50         | 11.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 151  | 5755            | <b>10.81</b>        | 12.50         | 11.0          | 91.75        |
|             |                     | CH 159  | 5795            | 10.64               | 12.50         | 11.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 155  | 5775            | <b>10.84</b>        | 12.50         | 11.0          | 95.36        |

## Reduced Power Level 2

| GSM1900         |  | Burst Average Power (dBm) |       |        | Tune-up<br>Limit<br>(dBm) | Frame-Average Power (dBm) |       |        | Tune-up<br>Limit<br>(dBm) |
|-----------------|--|---------------------------|-------|--------|---------------------------|---------------------------|-------|--------|---------------------------|
| TX Channel      |  | 512                       | 661   | 810    |                           | 512                       | 661   | 810    |                           |
| Frequency (MHz) |  | 1850.2                    | 1880  | 1909.8 |                           | 1850.2                    | 1880  | 1909.8 |                           |
| GSM 1 Tx slot   |  | 28.45                     | 28.57 | 28.48  | 29.50                     | 19.45                     | 19.57 | 19.48  | 20.50                     |
| GPRS 1 Tx slot  |  | 28.47                     | 28.58 | 28.50  | 29.50                     | 19.47                     | 19.58 | 19.50  | 20.50                     |
| GPRS 2 Tx slots |  | 26.18                     | 26.21 | 26.16  | 27.00                     | 20.18                     | 20.21 | 20.16  | 21.00                     |
| GPRS 3 Tx slots |  | 24.10                     | 24.13 | 24.10  | 25.00                     | 19.84                     | 19.87 | 19.84  | 20.74                     |
| GPRS 4 Tx slots |  | 23.13                     | 23.19 | 23.16  | 24.00                     | 20.13                     | 20.19 | 20.16  | 21.00                     |
| EDGE 1 Tx slot  |  | 25.22                     | 25.23 | 25.19  | 26.00                     | 16.22                     | 16.23 | 16.19  | 17.00                     |
| EDGE 2 Tx slots |  | 22.26                     | 22.15 | 22.24  | 23.00                     | 16.26                     | 16.15 | 16.24  | 17.00                     |
| EDGE 3 Tx slots |  | 20.14                     | 20.19 | 20.15  | 21.00                     | 15.88                     | 15.93 | 15.89  | 16.74                     |
| EDGE 4 Tx slots |  | 19.56                     | 19.53 | 19.41  | 20.50                     | 16.56                     | 16.53 | 16.41  | 17.50                     |
| Mode            |  |                           | Max.  | 28.58  |                           |                           | Max.  | 20.21  |                           |
| Attenuator      |  | Cable Loss : 0.8          |       |        |                           |                           |       |        |                           |
| Date            |  | 2022.1.17                 |       |        |                           |                           |       |        |                           |

| Band            |                         | WCDMA Band II |            |        | Tune-up<br>Limit<br>(dBm) | WCDMA Band IV |            |        | Tune-up<br>Limit<br>(dBm) |
|-----------------|-------------------------|---------------|------------|--------|---------------------------|---------------|------------|--------|---------------------------|
| TX Channel      |                         | 9262          | 9400       | 9538   |                           | 1312          | 1413       | 1513   |                           |
| Rx Channel      |                         | 9662          | 9800       | 9938   |                           | 1537          | 1638       | 1738   |                           |
| Frequency (MHz) |                         | 1852.4        | 1880       | 1907.6 |                           | 1712.4        | 1732.6     | 1752.6 |                           |
| 3GPP Rel 99     | RMC 12.2Kbps            | 20.14         | 20.16      | 20.11  | 21.00                     | 21.12         | 21.15      | 21.13  | 22.00                     |
| 3GPP Rel 6      | HSDPA Subtest-1         | 18.59         | 18.57      | 18.53  | 19.50                     | 19.87         | 19.80      | 19.85  | 20.50                     |
| 3GPP Rel 6      | HSDPA Subtest-2         | 18.72         | 18.59      | 18.54  | 19.50                     | 19.88         | 19.82      | 19.86  | 20.50                     |
| 3GPP Rel 6      | HSDPA Subtest-3         | 18.24         | 18.20      | 18.17  | 19.00                     | 19.50         | 19.45      | 19.38  | 20.50                     |
| 3GPP Rel 6      | HSDPA Subtest-4         | 18.25         | 18.22      | 18.18  | 19.00                     | 19.60         | 19.33      | 19.35  | 20.50                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-1      | 18.99         | 18.89      | 18.89  | 19.50                     | 20.22         | 20.09      | 20.20  | 21.00                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-2      | 19.01         | 18.91      | 18.90  | 19.50                     | 20.21         | 20.10      | 20.16  | 21.00                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-3      | 18.24         | 18.36      | 18.38  | 19.00                     | 19.71         | 19.58      | 19.67  | 20.50                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-4      | 18.23         | 18.41      | 18.38  | 19.00                     | 19.72         | 19.58      | 19.68  | 20.50                     |
| 3GPP Rel 6      | HSUPA Subtest-1         | 18.61         | 18.63      | 18.56  | 19.50                     | 19.96         | 19.92      | 19.90  | 20.50                     |
| 3GPP Rel 6      | HSUPA Subtest-2         | 18.05         | 18.17      | 18.01  | 19.00                     | 19.45         | 19.38      | 19.40  | 20.50                     |
| 3GPP Rel 6      | HSUPA Subtest-3         | 18.80         | 18.76      | 18.67  | 19.50                     | 20.09         | 19.94      | 19.92  | 20.50                     |
| 3GPP Rel 6      | HSUPA Subtest-4         | 18.63         | 18.68      | 18.60  | 19.50                     | 19.96         | 19.89      | 19.92  | 20.50                     |
| 3GPP Rel 6      | HSUPA Subtest-5         | 18.77         | 18.72      | 18.63  | 19.50                     | 20.07         | 20.01      | 19.91  | 21.00                     |
| 3GPP Rel 7      | HSPA+ (16QAM) Subtest-1 | 18.74         | 18.66      | 18.70  | 19.50                     | 19.66         | 19.57      | 19.55  | 20.50                     |
| Attenuator      |                         |               | Cable Loss | 0.8    |                           |               | Cable Loss | 0.8    |                           |
| Mode            |                         |               | Max.       | 20.16  |                           |               | Max.       | 21.15  |                           |
| Date            |                         | 2022.1.17     |            |        |                           | 2022.1.17     |            |        |                           |

| Band 2 (1900MHz Band) |            |         |           |             |                |              |                     |                     |  |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|---------------------|--|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |                     |  |
| Channel               |            |         |           | 18700       | 18900          | 19100        |                     |                     |  |
| Frequency (MHz)       |            |         |           | 1860        | 1880           | 1900         |                     |                     |  |
| 20                    | QPSK       | 1       | 0         | 19.50       | 19.53          | 19.47        | 20.5                |                     |  |
| 20                    | QPSK       | 1       | 49        | 19.48       | 19.42          | 19.35        |                     |                     |  |
| 20                    | QPSK       | 1       | 99        | 19.42       | 19.38          | 19.36        |                     |                     |  |
| 20                    | QPSK       | 50      | 0         | 18.58       | 18.67          | 18.60        |                     |                     |  |
| 20                    | QPSK       | 50      | 24        | 18.59       | 18.64          | 18.64        | 19.5                |                     |  |
| 20                    | QPSK       | 50      | 50        | 18.64       | 18.60          | 18.66        |                     |                     |  |
| 20                    | QPSK       | 100     | 0         | 18.57       | 18.66          | 18.62        |                     |                     |  |
| 20                    | 16QAM      | 1       | 0         | 18.63       | 18.63          | 18.65        |                     |                     |  |
| 20                    | 16QAM      | 1       | 49        | 18.47       | 18.77          | 18.73        | 19.5                |                     |  |
| 20                    | 16QAM      | 1       | 99        | 18.72       | 18.57          | 18.97        |                     |                     |  |
| 20                    | 16QAM      | 50      | 0         | 18.65       | 18.62          | 18.60        |                     |                     |  |
| 20                    | 16QAM      | 50      | 24        | 18.61       | 18.66          | 18.67        |                     |                     |  |
| 20                    | 16QAM      | 50      | 50        | 18.69       | 18.66          | 18.73        | 19.5                |                     |  |
| 20                    | 16QAM      | 100     | 0         | 18.72       | 18.73          | 18.60        |                     |                     |  |
| 20                    | 64QAM      | 1       | 0         | 17.67       | 17.86          | 17.60        |                     |                     |  |
| 20                    | 64QAM      | 1       | 49        | 17.62       | 17.80          | 17.71        |                     |                     |  |
| 20                    | 64QAM      | 1       | 99        | 17.57       | 17.90          | 17.90        | 18.5                |                     |  |
| 20                    | 64QAM      | 50      | 0         | 17.67       | 17.59          | 17.64        |                     |                     |  |
| 20                    | 64QAM      | 50      | 24        | 17.70       | 17.64          | 17.69        |                     |                     |  |
| 20                    | 64QAM      | 50      | 50        | 17.69       | 17.70          | 17.64        |                     |                     |  |
| 20                    | 64QAM      | 100     | 0         | 17.57       | 17.54          | 17.55        |                     |                     |  |
| Channel               |            |         |           | 18675       | 18900          | 19125        |                     |                     |  |
| Frequency (MHz)       |            |         |           | 1857.5      | 1880           | 1902.5       |                     | Tune-up limit (dBm) |  |
| 15                    | QPSK       | 1       | 0         | 19.31       | 19.34          | 19.25        | 20.5                |                     |  |
| 15                    | QPSK       | 1       | 37        | 19.10       | 19.46          | 19.34        |                     |                     |  |
| 15                    | QPSK       | 1       | 74        | 19.47       | 19.39          | 19.47        |                     |                     |  |
| 15                    | QPSK       | 36      | 0         | 18.44       | 18.53          | 18.52        |                     |                     |  |
| 15                    | QPSK       | 36      | 20        | 18.43       | 18.62          | 18.59        | 19.5                |                     |  |
| 15                    | QPSK       | 36      | 39        | 18.55       | 18.56          | 18.53        |                     |                     |  |
| 15                    | QPSK       | 75      | 0         | 18.47       | 18.53          | 18.48        |                     |                     |  |
| 15                    | 16QAM      | 1       | 0         | 18.56       | 18.64          | 18.58        |                     |                     |  |
| 15                    | 16QAM      | 1       | 37        | 18.69       | 18.72          | 18.58        | 19.5                |                     |  |
| 15                    | 16QAM      | 1       | 74        | 18.64       | 18.76          | 18.76        |                     |                     |  |
| 15                    | 16QAM      | 36      | 0         | 18.43       | 18.48          | 18.51        |                     |                     |  |
| 15                    | 16QAM      | 36      | 20        | 18.52       | 18.45          | 18.58        |                     |                     |  |
| 15                    | 16QAM      | 36      | 39        | 18.57       | 18.66          | 18.63        | 19.5                |                     |  |
| 15                    | 16QAM      | 75      | 0         | 18.44       | 18.46          | 18.55        |                     |                     |  |
| 15                    | 64QAM      | 1       | 0         | 17.64       | 17.40          | 17.46        |                     |                     |  |
| 15                    | 64QAM      | 1       | 37        | 17.63       | 17.44          | 17.86        |                     |                     |  |
| 15                    | 64QAM      | 1       | 74        | 17.52       | 17.56          | 17.71        | 18.5                |                     |  |
| 15                    | 64QAM      | 36      | 0         | 17.37       | 17.54          | 17.42        |                     |                     |  |
| 15                    | 64QAM      | 36      | 20        | 17.57       | 17.59          | 17.49        |                     |                     |  |
| 15                    | 64QAM      | 36      | 39        | 17.45       | 17.50          | 17.59        |                     |                     |  |
| 15                    | 64QAM      | 75      | 0         | 17.44       | 17.51          | 17.50        |                     |                     |  |
| Channel               |            |         |           | 18650       | 18900          | 19150        |                     |                     |  |
| Frequency (MHz)       |            |         |           | 1855        | 1880           | 1905         |                     | Tune-up limit (dBm) |  |
| 10                    | QPSK       | 1       | 0         | 19.35       | 19.34          | 19.44        | 20.5                |                     |  |
| 10                    | QPSK       | 1       | 25        | 19.39       | 19.42          | 19.37        |                     |                     |  |
| 10                    | QPSK       | 1       | 49        | 19.35       | 19.36          | 19.35        |                     |                     |  |
| 10                    | QPSK       | 25      | 0         | 18.62       | 18.63          | 18.59        |                     |                     |  |
| 10                    | QPSK       | 25      | 12        | 18.58       | 18.70          | 18.63        | 19.5                |                     |  |
| 10                    | QPSK       | 25      | 25        | 18.49       | 18.62          | 18.58        |                     |                     |  |
| 10                    | QPSK       | 50      | 0         | 18.55       | 18.64          | 18.62        |                     |                     |  |
| 10                    | 16QAM      | 1       | 0         | 19.03       | 18.96          | 18.95        |                     |                     |  |
| 10                    | 16QAM      | 1       | 25        | 18.72       | 18.68          | 18.75        | 19.5                |                     |  |
| 10                    | 16QAM      | 1       | 49        | 18.67       | 18.75          | 18.54        |                     |                     |  |
| 10                    | 16QAM      | 25      | 0         | 18.57       | 18.56          | 18.53        |                     |                     |  |
| 10                    | 16QAM      | 25      | 12        | 18.73       | 18.53          | 18.53        |                     |                     |  |
| 10                    | 16QAM      | 25      | 25        | 18.53       | 18.73          | 18.83        | 19.5                |                     |  |
| 10                    | 16QAM      | 50      | 0         | 19.10       | 19.03          | 19.07        |                     |                     |  |
| 10                    | 64QAM      | 1       | 0         | 17.61       | 17.66          | 17.66        |                     |                     |  |
| 10                    | 64QAM      | 1       | 25        | 17.64       | 17.69          | 17.73        |                     |                     |  |
| 10                    | 64QAM      | 1       | 49        | 17.31       | 17.44          | 17.41        | 18.5                |                     |  |
| 10                    | 64QAM      | 25      | 0         | 17.61       | 17.65          | 17.66        |                     |                     |  |
| 10                    | 64QAM      | 25      | 12        | 17.64       | 17.62          | 17.63        |                     |                     |  |
| 10                    | 64QAM      | 25      | 25        | 17.57       | 17.35          | 17.57        |                     |                     |  |
| 10                    | 64QAM      | 50      | 0         | 17.58       | 17.58          | 17.55        |                     |                     |  |
| Channel               |            |         |           | 18625       | 18900          | 19175        |                     |                     |  |
| Frequency (MHz)       |            |         |           | 1852.5      | 1880           | 1907.5       |                     | Tune-up limit (dBm) |  |
| 5                     | QPSK       | 1       | 0         | 19.35       | 19.40          | 19.34        | 20.5                |                     |  |
| 5                     | QPSK       | 1       | 12        | 19.34       | 19.29          | 19.32        |                     |                     |  |
| 5                     | QPSK       | 1       | 24        | 19.30       | 19.38          | 19.39        |                     |                     |  |
| 5                     | QPSK       | 12      | 0         | 18.47       | 18.38          | 18.45        |                     |                     |  |
| 5                     | QPSK       | 12      | 7         | 18.48       | 18.53          | 18.45        | 19.5                |                     |  |
| 5                     | QPSK       | 12      | 13        | 18.47       | 18.46          | 18.49        |                     |                     |  |
| 5                     | QPSK       | 25      | 0         | 18.46       | 18.44          | 18.46        |                     |                     |  |
| 5                     | 16QAM      | 1       | 0         | 18.59       | 18.49          | 18.87        |                     |                     |  |
| 5                     | 16QAM      | 1       | 12        | 18.57       | 18.50          | 18.87        | 19.5                |                     |  |
| 5                     | 16QAM      | 1       | 24        | 18.60       | 18.47          | 18.86        |                     |                     |  |
| 5                     | 16QAM      | 12      | 0         | 18.69       | 18.83          | 18.69        |                     |                     |  |
| 5                     | 16QAM      | 12      | 7         | 18.59       | 18.59          | 18.39        |                     |                     |  |
| 5                     | 16QAM      | 12      | 13        | 18.39       | 18.72          | 18.49        | 19.5                |                     |  |
| 5                     | 16QAM      | 25      | 0         | 18.49       | 18.95          | 18.93        |                     |                     |  |
| 5                     | 64QAM      | 1       | 0         | 17.69       | 17.41          | 17.46        |                     |                     |  |
| 5                     | 64QAM      | 1       | 12        | 17.65       | 17.51          | 17.62        |                     |                     |  |
| 5                     | 64QAM      | 1       | 24        | 17.86       | 17.50          | 17.52        | 18.5                |                     |  |
| 5                     | 64QAM      | 12      | 0         | 17.51       | 17.44          | 17.43        |                     |                     |  |
| 5                     | 64QAM      | 12      | 7         | 17.57       | 17.41          | 17.41        |                     |                     |  |
| 5                     | 64QAM      | 12      | 13        | 17.54       | 17.50          | 17.48        |                     |                     |  |
| 5                     | 64QAM      | 25      | 0         | 17.61       | 17.41          | 17.48        |                     |                     |  |
| Channel               |            |         |           | 18615       | 18900          | 19185        |                     |                     |  |
| Frequency (MHz)       |            |         |           | 1851.5      | 1880           | 1908.5       |                     | Tune-up limit (dBm) |  |
| 3                     | QPSK       | 1       | 0         | 19.29       | 19.36          | 19.28        | 20.5                |                     |  |
| 3                     | QPSK       | 1       | 8         | 19.39       | 19.42          | 19.25        |                     |                     |  |
| 3                     | QPSK       | 1       | 14        | 19.40       | 19.27          | 19.27        |                     |                     |  |
| 3                     | QPSK       | 8       | 0         | 18.35       | 18.30          | 18.32        |                     |                     |  |
| 3                     | QPSK       | 8       | 4         | 18.41       | 18.35          | 18.36        | 19.5                |                     |  |
| 3                     | QPSK       | 8       | 7         | 18.41       | 18.35          | 18.31        |                     |                     |  |
| 3                     | QPSK       | 15      | 0         | 18.33       | 18.41          | 18.34        |                     |                     |  |
| 3                     | 16QAM      | 1       | 0         | 18.49       | 18.40          | 18.34        |                     |                     |  |
| 3                     | 16QAM      | 1       | 8         | 18.53       | 18.47          | 18.43        | 19.5                |                     |  |
| 3                     | 16QAM      | 1       | 14        | 18.46       | 18.43          | 18.31        |                     |                     |  |

| Band 4 (AWS Band) |            |         |           |             |                |              |                     |
|-------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]          | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel           |            |         |           | 20050       | 20175          | 20300        |                     |
| Frequency (MHz)   |            |         |           | 1720        | 1732.5         | 1745         |                     |
| 20                | QPSK       | 1       | 0         | 20.48       | 20.56          | 20.55        | 21.5                |
| 20                | QPSK       | 1       | 49        | 20.34       | 20.42          | 20.41        |                     |
| 20                | QPSK       | 1       | 99        | 20.26       | 20.39          | 20.51        |                     |
| 20                | QPSK       | 50      | 0         | 19.64       | 19.68          | 19.65        |                     |
| 20                | QPSK       | 50      | 24        | 19.55       | 19.63          | 19.63        | 20.5                |
| 20                | QPSK       | 50      | 50        | 19.44       | 19.55          | 19.56        |                     |
| 20                | QPSK       | 100     | 0         | 19.54       | 19.58          | 19.65        |                     |
| 20                | 16QAM      | 1       | 0         | 19.41       | 19.71          | 19.58        |                     |
| 20                | 16QAM      | 1       | 49        | 19.56       | 19.33          | 19.47        | 20.5                |
| 20                | 16QAM      | 1       | 99        | 19.35       | 19.57          | 19.41        |                     |
| 20                | 16QAM      | 50      | 0         | 19.54       | 19.47          | 19.61        |                     |
| 20                | 16QAM      | 50      | 24        | 19.80       | 19.91          | 19.80        |                     |
| 20                | 16QAM      | 50      | 50        | 19.76       | 19.77          | 19.77        | 20.5                |
| 20                | 16QAM      | 100     | 0         | 19.78       | 19.86          | 19.87        |                     |
| 20                | 64QAM      | 1       | 0         | 18.52       | 18.63          | 18.85        |                     |
| 20                | 64QAM      | 1       | 49        | 18.56       | 18.49          | 18.37        |                     |
| 20                | 64QAM      | 1       | 99        | 18.83       | 18.40          | 18.87        | 19.5                |
| 20                | 64QAM      | 50      | 0         | 18.53       | 18.62          | 18.57        |                     |
| 20                | 64QAM      | 50      | 24        | 18.55       | 18.66          | 18.60        |                     |
| 20                | 64QAM      | 50      | 50        | 18.59       | 18.54          | 18.56        |                     |
| 20                | 64QAM      | 100     | 0         | 18.62       | 18.60          | 18.69        | 19.5                |
| Channel           |            |         |           | 20025       | 20175          | 20325        |                     |
| Frequency (MHz)   |            |         |           | 1717.5      | 1732.5         | 1747.5       | Tune-up limit (dBm) |
| 15                | QPSK       | 1       | 0         | 20.35       | 20.39          | 20.49        | 21.5                |
| 15                | QPSK       | 1       | 37        | 20.39       | 20.48          | 20.40        |                     |
| 15                | QPSK       | 1       | 74        | 20.26       | 20.48          | 20.51        |                     |
| 15                | QPSK       | 36      | 0         | 19.49       | 19.56          | 19.59        |                     |
| 15                | QPSK       | 36      | 20        | 19.53       | 19.66          | 19.62        | 20.5                |
| 15                | QPSK       | 36      | 39        | 19.58       | 19.57          | 19.66        |                     |
| 15                | QPSK       | 75      | 0         | 19.53       | 19.55          | 19.56        |                     |
| 15                | 16QAM      | 1       | 0         | 19.47       | 19.69          | 19.41        |                     |
| 15                | 16QAM      | 1       | 37        | 19.55       | 19.55          | 19.39        | 20.5                |
| 15                | 16QAM      | 1       | 74        | 19.41       | 19.71          | 19.50        |                     |
| 15                | 16QAM      | 36      | 0         | 19.42       | 19.44          | 19.63        |                     |
| 15                | 16QAM      | 36      | 20        | 19.37       | 19.44          | 19.50        |                     |
| 15                | 16QAM      | 36      | 39        | 19.33       | 19.42          | 19.48        | 20.5                |
| 15                | 16QAM      | 75      | 0         | 19.44       | 19.45          | 19.54        |                     |
| 15                | 64QAM      | 1       | 0         | 18.39       | 18.70          | 18.75        |                     |
| 15                | 64QAM      | 1       | 37        | 18.81       | 18.57          | 18.63        |                     |
| 15                | 64QAM      | 1       | 74        | 18.85       | 18.56          | 18.60        | 19.5                |
| 15                | 64QAM      | 36      | 0         | 18.50       | 18.57          | 18.61        |                     |
| 15                | 64QAM      | 36      | 20        | 18.56       | 18.58          | 18.60        |                     |
| 15                | 64QAM      | 36      | 39        | 18.59       | 18.55          | 18.57        |                     |
| 15                | 64QAM      | 75      | 0         | 18.52       | 18.63          | 18.56        | 19.5                |
| Channel           |            |         |           | 20000       | 20175          | 20350        |                     |
| Frequency (MHz)   |            |         |           | 1715        | 1732.5         | 1750         | Tune-up limit (dBm) |
| 10                | QPSK       | 1       | 0         | 20.47       | 20.46          | 20.29        | 21.5                |
| 10                | QPSK       | 1       | 25        | 20.45       | 20.38          | 20.39        |                     |
| 10                | QPSK       | 1       | 49        | 20.33       | 20.16          | 20.39        |                     |
| 10                | QPSK       | 25      | 0         | 19.32       | 19.54          | 19.56        |                     |
| 10                | QPSK       | 25      | 12        | 19.44       | 19.50          | 19.54        | 20.5                |
| 10                | QPSK       | 25      | 25        | 19.33       | 19.44          | 19.51        |                     |
| 10                | QPSK       | 50      | 0         | 19.39       | 19.46          | 19.41        |                     |
| 10                | 16QAM      | 1       | 0         | 19.38       | 19.53          | 19.29        |                     |
| 10                | 16QAM      | 1       | 25        | 19.65       | 19.39          | 19.71        | 20.5                |
| 10                | 16QAM      | 1       | 49        | 19.72       | 19.62          | 19.61        |                     |
| 10                | 16QAM      | 25      | 0         | 19.38       | 19.37          | 19.36        |                     |
| 10                | 16QAM      | 25      | 12        | 19.30       | 19.40          | 19.37        |                     |
| 10                | 16QAM      | 25      | 25        | 19.64       | 19.55          | 19.64        | 20.5                |
| 10                | 16QAM      | 50      | 0         | 19.58       | 19.62          | 19.74        |                     |
| 10                | 64QAM      | 1       | 0         | 18.44       | 18.52          | 18.42        |                     |
| 10                | 64QAM      | 1       | 25        | 18.51       | 18.80          | 18.89        |                     |
| 10                | 64QAM      | 1       | 49        | 18.49       | 18.53          | 18.48        | 19.5                |
| 10                | 64QAM      | 25      | 0         | 18.33       | 18.47          | 18.46        |                     |
| 10                | 64QAM      | 25      | 12        | 18.42       | 18.53          | 18.57        |                     |
| 10                | 64QAM      | 25      | 25        | 18.30       | 18.42          | 18.44        |                     |
| 10                | 64QAM      | 50      | 0         | 18.36       | 18.43          | 18.42        | 19.5                |
| Channel           |            |         |           | 19975       | 20175          | 20375        |                     |
| Frequency (MHz)   |            |         |           | 1712.5      | 1732.5         | 1752.5       | Tune-up limit (dBm) |
| 5                 | QPSK       | 1       | 0         | 20.44       | 20.39          | 20.44        | 21.5                |
| 5                 | QPSK       | 1       | 12        | 20.43       | 20.38          | 20.35        |                     |
| 5                 | QPSK       | 1       | 24        | 20.18       | 20.30          | 20.29        |                     |
| 5                 | QPSK       | 12      | 0         | 19.40       | 19.40          | 19.44        |                     |
| 5                 | QPSK       | 12      | 7         | 19.40       | 19.51          | 19.48        | 20.5                |
| 5                 | QPSK       | 12      | 13        | 19.35       | 19.52          | 19.44        |                     |
| 5                 | QPSK       | 25      | 0         | 19.38       | 19.42          | 19.48        |                     |
| 5                 | 16QAM      | 1       | 0         | 19.28       | 19.69          | 19.37        |                     |
| 5                 | 16QAM      | 1       | 12        | 19.39       | 19.74          | 19.33        | 20.5                |
| 5                 | 16QAM      | 1       | 24        | 19.33       | 19.68          | 19.28        |                     |
| 5                 | 16QAM      | 12      | 0         | 19.32       | 19.26          | 19.29        |                     |
| 5                 | 16QAM      | 12      | 7         | 19.35       | 19.39          | 19.37        |                     |
| 5                 | 16QAM      | 12      | 13        | 19.62       | 19.69          | 19.73        | 20.5                |
| 5                 | 16QAM      | 25      | 0         | 19.63       | 19.74          | 19.67        |                     |
| 5                 | 64QAM      | 1       | 0         | 18.40       | 18.84          | 18.82        |                     |
| 5                 | 64QAM      | 1       | 12        | 18.78       | 18.54          | 18.81        |                     |
| 5                 | 64QAM      | 1       | 24        | 18.74       | 18.44          | 18.51        | 19.5                |
| 5                 | 64QAM      | 12      | 0         | 18.41       | 18.48          | 18.50        |                     |
| 5                 | 64QAM      | 12      | 7         | 18.40       | 18.49          | 18.55        |                     |
| 5                 | 64QAM      | 12      | 13        | 18.41       | 18.47          | 18.46        |                     |
| 5                 | 64QAM      | 25      | 0         | 18.36       | 18.50          | 18.41        | 19.5                |
| Channel           |            |         |           | 19965       | 20175          | 20385        |                     |
| Frequency (MHz)   |            |         |           | 1711.5      | 1732.5         | 1753.5       | Tune-up limit (dBm) |
| 3                 | QPSK       | 1       | 0         | 20.29       | 20.30          | 20.42        | 21.5                |
| 3                 | QPSK       | 1       | 8         | 20.38       | 20.52          | 20.46        |                     |
| 3                 | QPSK       | 1       | 14        | 20.18       | 20.37          | 20.37        |                     |
| 3                 | QPSK       | 8       | 0         | 19.38       | 19.44          | 19.45        |                     |
| 3                 | QPSK       | 8       | 4         | 19.44       | 19.52          | 19.54        | 20.5                |
| 3                 | QPSK       | 8       | 7         | 19.40       | 19.50          | 19.50        |                     |
| 3                 | QPSK       | 15      | 0         | 19.40       | 19.46          | 19.40        |                     |
| 3                 | 16QAM      | 1       | 0         | 19.48       | 19.57          | 19.61        |                     |
| 3                 | 16QAM      | 1       | 8         | 19.70       | 19.70          | 19.44        | 20.5                |
| 3                 | 16QAM      | 1       | 14        | 19.61       | 19.39          | 19.47        |                     |

|                 |       |    |    |        |       |        |                        |
|-----------------|-------|----|----|--------|-------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 18.89  | 19.02 | 18.94  | 19.5                   |
| 3               | 16QAM | 8  | 4  | 18.96  | 18.93 | 18.99  |                        |
| 3               | 16QAM | 8  | 7  | 18.86  | 18.91 | 18.94  |                        |
| 3               | 16QAM | 15 | 0  | 18.89  | 18.93 | 18.88  |                        |
| 3               | 64QAM | 1  | 0  | 17.42  | 17.35 | 17.38  | 18.5                   |
| 3               | 64QAM | 1  | 8  | 17.84  | 17.83 | 17.43  |                        |
| 3               | 64QAM | 1  | 14 | 17.45  | 17.81 | 17.45  |                        |
| 3               | 64QAM | 8  | 0  | 17.37  | 17.39 | 17.23  |                        |
| 3               | 64QAM | 8  | 4  | 17.47  | 17.37 | 17.37  | 18.5                   |
| 3               | 64QAM | 8  | 7  | 17.57  | 17.46 | 17.32  |                        |
| 3               | 64QAM | 15 | 0  | 17.42  | 17.42 | 17.40  |                        |
| Channel         |       |    |    | 18607  | 18900 | 19193  | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1850.7 | 1880  | 1909.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 18.35  | 18.38 | 19.33  | 20.5                   |
| 1.4             | QPSK  | 1  | 3  | 19.25  | 19.23 | 19.22  |                        |
| 1.4             | QPSK  | 1  | 5  | 19.22  | 19.20 | 19.18  |                        |
| 1.4             | QPSK  | 3  | 0  | 19.22  | 19.22 | 19.18  |                        |
| 1.4             | QPSK  | 3  | 1  | 19.28  | 19.23 | 19.21  |                        |
| 1.4             | QPSK  | 3  | 3  | 19.28  | 19.32 | 19.21  |                        |
| 1.4             | QPSK  | 6  | 0  | 18.31  | 18.29 | 18.28  |                        |
| 1.4             | 16QAM | 1  | 0  | 18.34  | 18.34 | 18.28  |                        |
| 1.4             | 16QAM | 1  | 3  | 18.30  | 18.50 | 18.48  | 19.5                   |
| 1.4             | 16QAM | 1  | 5  | 18.18  | 18.38 | 18.06  |                        |
| 1.4             | 16QAM | 3  | 0  | 18.20  | 18.25 | 18.22  |                        |
| 1.4             | 16QAM | 3  | 1  | 18.38  | 18.20 | 18.25  |                        |
| 1.4             | 16QAM | 3  | 3  | 18.40  | 18.37 | 18.11  |                        |
| 1.4             | 16QAM | 6  | 0  | 18.41  | 18.34 | 18.29  |                        |
| 1.4             | 64QAM | 1  | 0  | 17.29  | 17.21 | 17.24  |                        |
| 1.4             | 64QAM | 1  | 3  | 17.31  | 17.52 | 17.40  |                        |
| 1.4             | 64QAM | 1  | 5  | 17.29  | 17.64 | 17.23  | 18.5                   |
| 1.4             | 64QAM | 3  | 0  | 17.32  | 17.38 | 17.39  |                        |
| 1.4             | 64QAM | 3  | 1  | 17.41  | 17.38 | 17.59  |                        |
| 1.4             | 64QAM | 3  | 3  | 17.33  | 17.47 | 17.24  |                        |
| 1.4             | 64QAM | 6  | 0  | 17.38  | 17.41 | 17.30  | 18.5                   |

|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 19.40  | 19.41  | 19.50  | 20.5                   |
| 3               | 16QAM | 8  | 4  | 19.50  | 19.50  | 19.51  |                        |
| 3               | 16QAM | 8  | 7  | 19.72  | 19.80  | 19.84  |                        |
| 3               | 16QAM | 15 | 0  | 19.72  | 19.70  | 19.77  |                        |
| 3               | 64QAM | 1  | 0  | 18.39  | 18.48  | 18.48  | 19.5                   |
| 3               | 64QAM | 1  | 8  | 18.58  | 18.46  | 18.62  |                        |
| 3               | 64QAM | 1  | 14 | 18.39  | 18.46  | 18.29  |                        |
| 3               | 64QAM | 8  | 0  | 18.37  | 18.41  | 18.35  |                        |
| 3               | 64QAM | 8  | 4  | 18.49  | 18.47  | 18.51  | 19.5                   |
| 3               | 64QAM | 8  | 7  | 18.43  | 18.50  | 18.62  |                        |
| 3               | 64QAM | 15 | 0  | 18.39  | 18.47  | 18.38  |                        |
| Channel         |       |    |    | 19957  | 20175  | 20393  | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1732.6 | 1754.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 20.44  | 20.49  | 20.47  | 21.5                   |
| 1.4             | QPSK  | 1  | 3  | 20.38  | 20.38  | 20.42  |                        |
| 1.4             | QPSK  | 1  | 5  | 20.24  | 20.33  | 20.35  |                        |
| 1.4             | QPSK  | 3  | 0  | 20.32  | 20.29  | 20.28  |                        |
| 1.4             | QPSK  | 3  | 1  | 20.28  | 20.38  | 20.43  |                        |
| 1.4             | QPSK  | 3  | 3  | 20.27  | 20.34  | 20.33  |                        |
| 1.4             | QPSK  | 6  | 0  | 19.43  | 19.45  | 19.41  |                        |
| 1.4             | 16QAM | 1  | 0  | 19.37  | 19.84  | 19.50  |                        |
| 1.4             | 16QAM | 1  | 3  | 19.50  | 19.58  | 19.62  | 20.5                   |
| 1.4             | 16QAM | 1  | 5  | 19.56  | 19.72  | 19.52  |                        |
| 1.4             | 16QAM | 3  | 0  | 19.59  | 19.63  | 19.54  |                        |
| 1.4             | 16QAM | 3  | 1  | 19.60  | 19.63  | 19.65  |                        |
| 1.4             | 16QAM | 3  | 3  | 19.59  | 19.71  | 19.60  |                        |
| 1.4             | 16QAM | 6  | 0  | 19.50  | 19.51  | 19.42  |                        |
| 1.4             | 64QAM | 1  | 0  | 18.28  | 18.22  | 18.36  |                        |
| 1.4             | 64QAM | 1  | 3  | 18.54  | 18.52  | 18.64  |                        |
| 1.4             | 64QAM | 1  | 5  | 18.45  | 18.41  | 18.25  | 19.5                   |
| 1.4             | 64QAM | 3  | 0  | 18.36  | 18.34  | 18.53  |                        |
| 1.4             | 64QAM | 3  | 1  | 18.27  | 18.42  | 18.39  |                        |
| 1.4             | 64QAM | 3  | 3  | 18.33  | 18.50  | 18.38  |                        |
| 1.4             | 64QAM | 6  | 0  | 18.32  | 18.33  | 18.40  | 19.5                   |

| Band 7 (2600MHz Band) |            |         |           |             |                |              |                     |  |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |
| Channel               |            |         |           | 20850       | 21100          | 21350        |                     |  |
| Frequency (MHz)       |            |         |           | 2510        | 2535           | 2560         | 17.5                |  |
| 20                    | QPSK       | 1       | 0         | 16.53       | 16.54          | 16.46        |                     |  |
| 20                    | QPSK       | 1       | 49        | 16.48       | 16.52          | 16.41        |                     |  |
| 20                    | QPSK       | 1       | 99        | 16.43       | 16.38          | 16.43        |                     |  |
| 20                    | QPSK       | 50      | 0         | 15.59       | 15.66          | 15.63        |                     |  |
| 20                    | QPSK       | 50      | 24        | 15.35       | 15.32          | 15.22        | 16.5                |  |
| 20                    | QPSK       | 50      | 50        | 15.45       | 15.48          | 15.45        |                     |  |
| 20                    | QPSK       | 100     | 0         | 15.40       | 15.42          | 15.39        |                     |  |
| 20                    | 16QAM      | 1       | 0         | 15.21       | 15.31          | 15.49        | 16.5                |  |
| 20                    | 16QAM      | 1       | 49        | 15.36       | 15.22          | 15.50        |                     |  |
| 20                    | 16QAM      | 1       | 99        | 15.30       | 15.61          | 15.26        |                     |  |
| 20                    | 16QAM      | 50      | 0         | 15.15       | 15.25          | 15.18        | 16.5                |  |
| 20                    | 16QAM      | 50      | 24        | 15.20       | 15.12          | 15.23        |                     |  |
| 20                    | 16QAM      | 50      | 50        | 15.28       | 15.33          | 15.16        |                     |  |
| 20                    | 16QAM      | 100     | 0         | 15.16       | 15.28          | 15.26        |                     |  |
| 20                    | 64QAM      | 1       | 0         | 14.04       | 14.20          | 14.22        |                     |  |
| 20                    | 64QAM      | 1       | 49        | 14.32       | 14.29          | 14.34        | 15.5                |  |
| 20                    | 64QAM      | 1       | 99        | 14.30       | 14.35          | 14.26        |                     |  |
| 20                    | 64QAM      | 50      | 0         | 14.24       | 14.25          | 14.30        |                     |  |
| 20                    | 64QAM      | 50      | 24        | 14.29       | 14.30          | 14.30        | 15.5                |  |
| 20                    | 64QAM      | 50      | 50        | 14.33       | 14.40          | 14.25        |                     |  |
| 20                    | 64QAM      | 100     | 0         | 14.26       | 14.23          | 14.35        |                     |  |
| Channel               |            |         |           | 20825       | 21100          | 21375        | Tune-up limit (dBm) |  |
| Frequency (MHz)       |            |         |           | 2507.5      | 2535           | 2562.5       |                     |  |
| 15                    | QPSK       | 1       | 0         | 16.36       | 16.45          | 16.45        | 17.5                |  |
| 15                    | QPSK       | 1       | 37        | 16.46       | 16.43          | 16.47        |                     |  |
| 15                    | QPSK       | 1       | 74        | 16.40       | 16.47          | 16.47        |                     |  |
| 15                    | QPSK       | 36      | 0         | 15.18       | 15.27          | 15.29        | 16.5                |  |
| 15                    | QPSK       | 36      | 20        | 15.26       | 15.33          | 15.28        |                     |  |
| 15                    | QPSK       | 36      | 39        | 15.29       | 15.32          | 15.36        |                     |  |
| 15                    | QPSK       | 75      | 0         | 15.35       | 15.28          | 15.30        | 16.5                |  |
| 15                    | 16QAM      | 1       | 0         | 15.71       | 15.62          | 15.89        |                     |  |
| 15                    | 16QAM      | 1       | 37        | 15.53       | 15.64          | 15.62        |                     |  |
| 15                    | 16QAM      | 1       | 74        | 15.57       | 15.57          | 15.79        |                     |  |
| 15                    | 16QAM      | 36      | 0         | 15.16       | 15.27          | 15.29        |                     |  |
| 15                    | 16QAM      | 36      | 20        | 15.23       | 15.26          | 15.25        | 16.5                |  |
| 15                    | 16QAM      | 36      | 39        | 15.29       | 15.27          | 15.16        |                     |  |
| 15                    | 16QAM      | 75      | 0         | 15.24       | 15.32          | 15.24        |                     |  |
| 15                    | 64QAM      | 1       | 0         | 14.14       | 14.11          | 13.99        | 15.5                |  |
| 15                    | 64QAM      | 1       | 37        | 14.04       | 14.19          | 14.28        |                     |  |
| 15                    | 64QAM      | 1       | 74        | 14.03       | 14.15          | 14.21        |                     |  |
| 15                    | 64QAM      | 36      | 0         | 14.22       | 14.30          | 14.29        | 15.5                |  |
| 15                    | 64QAM      | 36      | 20        | 14.33       | 14.32          | 14.39        |                     |  |
| 15                    | 64QAM      | 36      | 39        | 14.37       | 14.28          | 14.30        |                     |  |
| 15                    | 64QAM      | 75      | 0         | 14.22       | 14.32          | 14.27        | Tune-up limit (dBm) |  |
| Channel               |            |         |           | 20800       | 21100          | 21400        |                     |  |
| Frequency (MHz)       |            |         |           | 2505        | 2535           | 2565         | 17.5                |  |
| 10                    | QPSK       | 1       | 0         | 16.35       | 16.22          | 16.25        |                     |  |
| 10                    | QPSK       | 1       | 25        | 16.38       | 16.28          | 16.30        |                     |  |
| 10                    | QPSK       | 1       | 49        | 16.31       | 16.28          | 16.30        |                     |  |
| 10                    | QPSK       | 25      | 0         | 15.10       | 15.10          | 15.09        |                     |  |
| 10                    | QPSK       | 25      | 12        | 15.06       | 15.18          | 15.23        | 16.5                |  |
| 10                    | QPSK       | 25      | 25        | 14.99       | 15.17          | 15.17        |                     |  |
| 10                    | QPSK       | 50      | 0         | 15.08       | 15.20          | 15.19        |                     |  |
| 10                    | 16QAM      | 1       | 0         | 15.33       | 15.51          | 15.36        | 16.5                |  |
| 10                    | 16QAM      | 1       | 25        | 15.32       | 15.34          | 15.39        |                     |  |
| 10                    | 16QAM      | 1       | 49        | 15.79       | 15.69          | 15.60        |                     |  |
| 10                    | 16QAM      | 25      | 0         | 15.22       | 15.10          | 15.18        | 16.5                |  |
| 10                    | 16QAM      | 25      | 12        | 15.04       | 15.21          | 15.14        |                     |  |
| 10                    | 16QAM      | 25      | 25        | 15.09       | 15.12          | 15.04        |                     |  |
| 10                    | 16QAM      | 50      | 0         | 15.12       | 15.21          | 15.06        |                     |  |
| 10                    | 64QAM      | 1       | 0         | 14.14       | 14.10          | 14.08        |                     |  |
| 10                    | 64QAM      | 1       | 25        | 14.17       | 14.42          | 14.25        | 15.5                |  |
| 10                    | 64QAM      | 1       | 49        | 14.28       | 14.52          | 14.33        |                     |  |
| 10                    | 64QAM      | 25      | 0         | 14.14       | 14.12          | 14.16        |                     |  |
| 10                    | 64QAM      | 25      | 12        | 14.16       | 14.27          | 14.20        | 15.5                |  |
| 10                    | 64QAM      | 25      | 25        | 14.09       | 13.99          | 13.98        |                     |  |
| 10                    | 64QAM      | 50      | 0         | 14.03       | 14.09          | 14.01        |                     |  |
| Channel               |            |         |           | 20775       | 21100          | 21425        | Tune-up limit (dBm) |  |
| Frequency (MHz)       |            |         |           | 2502.5      | 2535           | 2567.5       |                     |  |
| 5                     | QPSK       | 1       | 0         | 16.39       | 16.30          | 16.20        | 17.5                |  |
| 5                     | QPSK       | 1       | 12        | 16.26       | 16.19          | 16.27        |                     |  |
| 5                     | QPSK       | 1       | 24        | 16.20       | 16.26          | 16.30        |                     |  |
| 5                     | QPSK       | 12      | 0         | 14.90       | 14.98          | 14.90        | 16.5                |  |
| 5                     | QPSK       | 12      | 7         | 14.97       | 15.12          | 15.04        |                     |  |
| 5                     | QPSK       | 12      | 13        | 14.99       | 15.15          | 15.00        |                     |  |
| 5                     | QPSK       | 25      | 0         | 15.00       | 15.01          | 14.96        | 16.5                |  |
| 5                     | 16QAM      | 1       | 0         | 15.18       | 15.16          | 15.22        |                     |  |
| 5                     | 16QAM      | 1       | 12        | 15.23       | 15.45          | 15.35        |                     |  |
| 5                     | 16QAM      | 1       | 24        | 15.29       | 15.48          | 15.30        |                     |  |
| 5                     | 16QAM      | 12      | 0         | 15.20       | 15.26          | 15.17        |                     |  |
| 5                     | 16QAM      | 12      | 7         | 15.09       | 15.11          | 15.07        | 16.5                |  |
| 5                     | 16QAM      | 12      | 13        | 15.09       | 15.15          | 15.28        |                     |  |
| 5                     | 16QAM      | 25      | 0         | 15.06       | 15.11          | 15.13        |                     |  |
| 5                     | 64QAM      | 1       | 0         | 14.24       | 14.29          | 14.25        | 15.5                |  |
| 5                     | 64QAM      | 1       | 12        | 14.29       | 14.41          | 14.29        |                     |  |
| 5                     | 64QAM      | 1       | 24        | 14.33       | 14.43          | 14.39        |                     |  |
| 5                     | 64QAM      | 12      | 0         | 14.04       | 14.01          | 14.06        | 15.5                |  |
| 5                     | 64QAM      | 12      | 7         | 14.13       | 14.18          | 13.97        |                     |  |
| 5                     | 64QAM      | 12      | 13        | 14.08       | 14.17          | 14.03        |                     |  |
| 5                     | 64QAM      | 25      | 0         | 14.03       | 14.02          | 14.07        | Tune-up limit (dBm) |  |
| Channel               |            |         |           | 20775       | 21100          | 21425        |                     |  |

| Band 66         |            |         |           |             |                |              |                     |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel         |            |         |           | 132072      | 132322         | 132572       |                     |
| Frequency (MHz) |            |         |           | 1720        | 1745           | 1770         |                     |
| 20              | QPSK       | 1       | 0         | 21.00       | 21.06          | 21.04        | 22                  |
| 20              | QPSK       | 1       | 49        | 20.85       | 20.84          | 20.80        |                     |
| 20              | QPSK       | 1       | 99        | 20.78       | 20.77          | 20.80        |                     |
| 20              | QPSK       | 50      | 0         | 20.23       | 20.30          | 20.26        |                     |
| 20              | QPSK       | 50      | 24        | 20.04       | 20.06          | 20.19        | 21                  |
| 20              | QPSK       | 50      | 50        | 20.08       | 20.16          | 20.04        |                     |
| 20              | QPSK       | 100     | 0         | 20.06       | 20.06          | 19.98        |                     |
| 20              | 16QAM      | 1       | 0         | 20.11       | 19.87          | 20.15        |                     |
| 20              | 16QAM      | 1       | 49        | 20.16       | 19.90          | 19.96        | 21                  |
| 20              | 16QAM      | 1       | 99        | 20.16       | 20.34          | 20.13        |                     |
| 20              | 16QAM      | 50      | 0         | 20.28       | 20.25          | 20.22        |                     |
| 20              | 16QAM      | 50      | 24        | 20.17       | 20.17          | 20.18        |                     |
| 20              | 16QAM      | 50      | 50        | 20.14       | 20.06          | 20.02        | 21                  |
| 20              | 16QAM      | 100     | 0         | 20.10       | 20.13          | 20.19        |                     |
| 20              | 64QAM      | 1       | 0         | 19.43       | 19.20          | 19.53        |                     |
| 20              | 64QAM      | 1       | 49        | 19.20       | 19.53          | 19.52        |                     |
| 20              | 64QAM      | 1       | 99        | 19.43       | 19.55          | 19.63        | 20                  |
| 20              | 64QAM      | 50      | 0         | 19.39       | 19.29          | 19.42        |                     |
| 20              | 64QAM      | 50      | 24        | 19.33       | 19.27          | 19.39        |                     |
| 20              | 64QAM      | 50      | 50        | 19.35       | 19.23          | 19.29        |                     |
| 20              | 64QAM      | 100     | 0         | 19.34       | 19.34          | 19.32        |                     |
| Channel         |            |         |           | 132047      | 132322         | 132597       |                     |
| Frequency (MHz) |            |         |           | 1717.5      | 1745           | 1772.5       |                     |
| 15              | QPSK       | 1       | 0         | 20.98       | 21.02          | 21.00        | 22                  |
| 15              | QPSK       | 1       | 37        | 21.02       | 20.98          | 20.96        |                     |
| 15              | QPSK       | 1       | 74        | 20.96       | 20.92          | 20.90        |                     |
| 15              | QPSK       | 36      | 0         | 20.17       | 20.14          | 20.18        |                     |
| 15              | QPSK       | 36      | 20        | 20.17       | 20.09          | 20.19        | 21                  |
| 15              | QPSK       | 36      | 39        | 20.03       | 20.08          | 20.05        |                     |
| 15              | QPSK       | 75      | 0         | 20.12       | 20.16          | 20.09        |                     |
| 15              | 16QAM      | 1       | 0         | 20.11       | 19.98          | 20.28        |                     |
| 15              | 16QAM      | 1       | 37        | 19.98       | 20.28          | 20.21        | 21                  |
| 15              | 16QAM      | 1       | 74        | 20.08       | 19.98          | 19.98        |                     |
| 15              | 16QAM      | 36      | 0         | 20.29       | 20.29          | 20.20        |                     |
| 15              | 16QAM      | 36      | 20        | 20.32       | 20.31          | 20.37        |                     |
| 15              | 16QAM      | 36      | 39        | 20.24       | 20.39          | 20.33        | 21                  |
| 15              | 16QAM      | 75      | 0         | 20.34       | 20.32          | 20.28        |                     |
| 15              | 64QAM      | 1       | 0         | 19.65       | 19.55          | 19.65        |                     |
| 15              | 64QAM      | 1       | 37        | 19.67       | 19.45          | 19.55        |                     |
| 15              | 64QAM      | 1       | 74        | 19.32       | 19.58          | 19.65        | 20                  |
| 15              | 64QAM      | 36      | 0         | 19.44       | 19.43          | 19.56        |                     |
| 15              | 64QAM      | 36      | 20        | 19.54       | 19.50          | 19.51        |                     |
| 15              | 64QAM      | 36      | 39        | 19.43       | 19.37          | 19.41        |                     |
| 15              | 64QAM      | 75      | 0         | 19.45       | 19.47          | 19.44        |                     |
| Channel         |            |         |           | 132022      | 132322         | 132622       |                     |
| Frequency (MHz) |            |         |           | 1715        | 1745           | 1775         |                     |
| 10              | QPSK       | 1       | 0         | 21.01       | 21.01          | 21.02        | 22                  |
| 10              | QPSK       | 1       | 25        | 20.91       | 20.89          | 20.97        |                     |
| 10              | QPSK       | 1       | 49        | 21.05       | 20.93          | 20.83        |                     |
| 10              | QPSK       | 25      | 0         | 20.48       | 20.41          | 20.48        |                     |
| 10              | QPSK       | 25      | 12        | 20.45       | 20.64          | 20.42        | 21                  |
| 10              | QPSK       | 25      | 25        | 20.41       | 20.37          | 20.29        |                     |
| 10              | QPSK       | 50      | 0         | 20.49       | 20.34          | 20.53        |                     |
| 10              | 16QAM      | 1       | 0         | 20.41       | 20.41          | 20.61        |                     |
| 10              | 16QAM      | 1       | 25        | 20.41       | 20.50          | 20.62        | 21                  |
| 10              | 16QAM      | 1       | 49        | 20.24       | 20.44          | 20.32        |                     |
| 10              | 16QAM      | 25      | 0         | 20.25       | 20.42          | 20.30        |                     |
| 10              | 16QAM      | 25      | 12        | 20.24       | 20.44          | 20.35        |                     |
| 10              | 16QAM      | 25      | 25        | 20.15       | 20.20          | 20.20        | 21                  |
| 10              | 16QAM      | 50      | 0         | 20.31       | 20.35          | 20.36        |                     |
| 10              | 64QAM      | 1       | 0         | 19.48       | 19.48          | 19.15        |                     |
| 10              | 64QAM      | 1       | 25        | 19.15       | 19.28          | 19.18        |                     |
| 10              | 64QAM      | 1       | 49        | 19.15       | 19.15          | 19.15        | 20                  |
| 10              | 64QAM      | 25      | 0         | 19.48       | 19.46          | 19.48        |                     |
| 10              | 64QAM      | 25      | 12        | 19.47       | 19.51          | 19.55        |                     |
| 10              | 64QAM      | 25      | 25        | 19.47       | 19.40          | 19.42        |                     |
| 10              | 64QAM      | 50      | 0         | 19.37       | 19.47          | 19.48        |                     |
| Channel         |            |         |           | 131997      | 132322         | 132647       |                     |
| Frequency (MHz) |            |         |           | 1712.5      | 1745           | 1777.5       |                     |
| 5               | QPSK       | 1       | 0         | 20.90       | 20.93          | 20.98        | 22                  |
| 5               | QPSK       | 1       | 12        | 20.93       | 20.93          | 20.92        |                     |
| 5               | QPSK       | 1       | 24        | 21.01       | 20.91          | 20.97        |                     |
| 5               | QPSK       | 12      | 0         | 20.17       | 20.19          | 20.15        |                     |
| 5               | QPSK       | 12      | 7         | 20.19       | 20.27          | 20.20        | 21                  |
| 5               | QPSK       | 12      | 13        | 20.05       | 20.11          | 20.12        |                     |
| 5               | QPSK       | 25      | 0         | 20.15       | 20.16          | 20.15        |                     |
| 5               | 16QAM      | 1       | 0         | 20.64       | 20.33          | 20.34        |                     |
| 5               | 16QAM      | 1       | 12        | 20.27       | 20.56          | 20.51        | 21                  |
| 5               | 16QAM      | 1       | 24        | 20.39       | 20.28          | 20.63        |                     |
| 5               | 16QAM      | 12      | 0         | 20.28       | 20.39          | 20.35        |                     |
| 5               | 16QAM      | 12      | 7         | 20.45       | 20.37          | 20.49        |                     |
| 5               | 16QAM      | 12      | 13        | 20.36       | 20.30          | 20.37        | 21                  |
| 5               | 16QAM      | 25      | 0         | 20.37       | 20.39          | 20.31        |                     |
| 5               | 64QAM      | 1       | 0         | 19.15       | 19.55          | 19.35        |                     |
| 5               | 64QAM      | 1       | 12        | 19.45       | 19.45          | 19.45        |                     |
| 5               | 64QAM      | 1       | 24        | 19.28       | 19.32          | 19.28        | 20                  |
| 5               | 64QAM      | 12      | 0         | 19.52       | 19.27          | 19.48        |                     |
| 5               | 64QAM      | 12      | 7         | 19.60       | 19.19          | 19.50        |                     |
| 5               | 64QAM      | 12      | 13        | 19.43       | 19.55          | 19.50        |                     |
| 5               | 64QAM      | 25      | 0         | 19.50       | 19.58          | 19.45        |                     |
| Channel         |            |         |           | 131987      | 132322         | 132657       |                     |
| Frequency (MHz) |            |         |           | 1711.5      | 1745           | 1778.5       |                     |
| 3               | QPSK       | 1       | 0         | 20.97       | 20.88          | 20.87        | 22                  |
| 3               | QPSK       | 1       | 8         | 20.84       | 20.85          | 20.93        |                     |
| 3               | QPSK       | 1       | 14        | 20.75       | 20.56          | 20.86        |                     |
| 3               | QPSK       | 8       | 0         | 20.43       | 20.40          | 20.44        |                     |
| 3               | QPSK       | 8       | 4         | 20.38       | 20.30          | 20.40        | 21                  |
| 3               | QPSK       | 8       | 7         | 20.24       | 20.29          | 20.26        |                     |
| 3               | QPSK       | 15      | 0         | 20.33       | 20.37          | 20.30        |                     |
| 3               | 16QAM      | 1       | 0         | 20.02       | 20.43          | 20.19        |                     |
| 3               | 16QAM      | 1       | 8         | 20.35       | 20.29          | 20.28        | 21                  |
| 3               | 16QAM      | 1       | 14        | 20.39       | 20.28          | 19.98        |                     |



|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 20.20  | 20.20  | 20.11  | 21                     |
| 3               | 16QAM | 8  | 4  | 20.23  | 20.22  | 20.28  |                        |
| 3               | 16QAM | 8  | 7  | 20.15  | 20.30  | 20.24  |                        |
| 3               | 16QAM | 15 | 0  | 20.25  | 20.23  | 20.19  |                        |
| 3               | 64QAM | 1  | 0  | 19.56  | 19.46  | 19.56  | 20                     |
| 3               | 64QAM | 1  | 8  | 19.58  | 19.36  | 19.46  |                        |
| 3               | 64QAM | 1  | 14 | 19.23  | 19.49  | 19.56  |                        |
| 3               | 64QAM | 8  | 0  | 19.35  | 19.34  | 19.47  |                        |
| 3               | 64QAM | 8  | 4  | 19.45  | 19.41  | 19.42  | 20                     |
| 3               | 64QAM | 8  | 7  | 19.34  | 19.28  | 19.32  |                        |
| 3               | 64QAM | 15 | 0  | 19.36  | 19.38  | 19.35  |                        |
| Channel         |       |    |    | 131979 | 132322 | 132665 | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1745   | 1779.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 20.91  | 20.82  | 20.83  | 22                     |
| 1.4             | QPSK  | 1  | 3  | 20.97  | 20.99  | 20.99  |                        |
| 1.4             | QPSK  | 1  | 5  | 20.89  | 20.77  | 20.93  |                        |
| 1.4             | QPSK  | 3  | 0  | 20.88  | 20.81  | 20.88  |                        |
| 1.4             | QPSK  | 3  | 1  | 20.85  | 20.91  | 20.82  |                        |
| 1.4             | QPSK  | 3  | 3  | 20.86  | 20.82  | 20.74  |                        |
| 1.4             | QPSK  | 6  | 0  | 20.46  | 20.31  | 20.50  |                        |
| 1.4             | 16QAM | 1  | 0  | 20.33  | 20.33  | 20.53  | 21                     |
| 1.4             | 16QAM | 1  | 3  | 20.33  | 20.42  | 20.54  |                        |
| 1.4             | 16QAM | 1  | 5  | 20.16  | 20.36  | 20.24  |                        |
| 1.4             | 16QAM | 3  | 0  | 20.11  | 20.08  | 20.34  |                        |
| 1.4             | 16QAM | 3  | 1  | 20.20  | 20.10  | 20.22  |                        |
| 1.4             | 16QAM | 3  | 3  | 20.21  | 20.22  | 20.16  |                        |
| 1.4             | 16QAM | 6  | 0  | 20.10  | 20.01  | 20.02  |                        |
| 1.4             | 64QAM | 1  | 0  | 19.61  | 19.46  | 19.62  | 20                     |
| 1.4             | 64QAM | 1  | 3  | 19.34  | 19.43  | 19.43  |                        |
| 1.4             | 64QAM | 1  | 5  | 19.31  | 19.31  | 19.42  |                        |
| 1.4             | 64QAM | 3  | 0  | 19.40  | 19.38  | 19.40  |                        |
| 1.4             | 64QAM | 3  | 1  | 19.39  | 19.43  | 19.47  |                        |
| 1.4             | 64QAM | 3  | 3  | 19.39  | 19.32  | 19.34  |                        |
| 1.4             | 64QAM | 6  | 0  | 19.29  | 19.39  | 19.40  |                        |

### Reduced Power Level 3

| GSM1900         | Burst Average Power (dBm) |       |        | Tune-up<br>Limit<br>(dBm) | Frame-Average Power (dBm) |       |        | Tune-up<br>Limit<br>(dBm) |
|-----------------|---------------------------|-------|--------|---------------------------|---------------------------|-------|--------|---------------------------|
| TX Channel      | 512                       | 661   | 810    |                           | 512                       | 661   | 810    |                           |
| Frequency (MHz) | 1850.2                    | 1880  | 1909.8 |                           | 1850.2                    | 1880  | 1909.8 |                           |
| GSM 1 Tx slot   | 26.45                     | 26.57 | 26.48  | 27.50                     | 17.45                     | 17.57 | 17.48  | 18.50                     |
| GPRS 1 Tx slot  | 26.47                     | 26.58 | 26.50  | 27.50                     | 17.47                     | 17.58 | 17.50  | 18.50                     |
| GPRS 2 Tx slots | 24.18                     | 24.21 | 24.16  | 25.00                     | 18.18                     | 18.21 | 18.16  | 19.00                     |
| GPRS 3 Tx slots | 22.10                     | 22.13 | 22.10  | 23.00                     | 17.84                     | 17.87 | 17.84  | 18.74                     |
| GPRS 4 Tx slots | 21.13                     | 21.19 | 21.16  | 22.00                     | 18.13                     | 18.19 | 18.16  | 19.00                     |
| EDGE 1 Tx slot  | 23.22                     | 23.23 | 23.19  | 24.00                     | 14.22                     | 14.23 | 14.19  | 15.00                     |
| EDGE 2 Tx slots | 20.26                     | 20.15 | 20.24  | 21.00                     | 14.26                     | 14.15 | 14.24  | 15.00                     |
| EDGE 3 Tx slots | 18.14                     | 18.19 | 18.15  | 19.00                     | 13.88                     | 13.93 | 13.89  | 14.74                     |
| EDGE 4 Tx slots | 17.56                     | 17.53 | 17.41  | 18.50                     | 14.56                     | 14.53 | 14.41  | 15.50                     |
| Mode            |                           | Max.  | 26.58  |                           |                           | Max.  | 18.21  |                           |
| Attenuator      | Cable Loss : 0.8          |       |        |                           |                           |       |        |                           |
| Date            | 2022.1.17                 |       |        |                           |                           |       |        |                           |

| Band            |                         | WCDMA Band II |            |        | Tune-up<br>Limit<br>(dBm) | WCDMA Band IV |            |        | Tune-up<br>Limit<br>(dBm) |
|-----------------|-------------------------|---------------|------------|--------|---------------------------|---------------|------------|--------|---------------------------|
| TX Channel      |                         | 9262          | 9400       | 9538   |                           | 1312          | 1413       | 1513   |                           |
| Rx Channel      |                         | 9662          | 9800       | 9938   |                           | 1537          | 1638       | 1738   |                           |
| Frequency (MHz) |                         | 1852.4        | 1880       | 1907.6 |                           | 1712.4        | 1732.6     | 1752.6 |                           |
| 3GPP Rel 99     | RMC 12.2Kbps            | 20.14         | 20.16      | 20.11  | 21.00                     | 20.12         | 20.15      | 20.13  | 21.00                     |
| 3GPP Rel 6      | HSDPA Subtest-1         | 18.59         | 18.57      | 18.53  | 19.50                     | 18.87         | 18.80      | 18.85  | 19.50                     |
| 3GPP Rel 6      | HSDPA Subtest-2         | 18.72         | 18.59      | 18.54  | 19.50                     | 18.88         | 18.82      | 18.86  | 19.50                     |
| 3GPP Rel 6      | HSDPA Subtest-3         | 18.24         | 18.20      | 18.17  | 19.00                     | 18.50         | 18.45      | 18.38  | 19.50                     |
| 3GPP Rel 6      | HSDPA Subtest-4         | 18.25         | 18.22      | 18.18  | 19.00                     | 18.60         | 18.33      | 18.35  | 19.50                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-1      | 18.99         | 18.89      | 18.89  | 19.50                     | 19.22         | 19.09      | 19.20  | 20.00                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-2      | 19.01         | 18.91      | 18.90  | 19.50                     | 19.21         | 19.10      | 19.16  | 20.00                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-3      | 18.24         | 18.36      | 18.38  | 19.00                     | 18.71         | 18.58      | 18.67  | 19.50                     |
| 3GPP Rel 8      | DC-HSDPA Subtest-4      | 18.23         | 18.41      | 18.38  | 19.00                     | 18.72         | 18.58      | 18.68  | 19.50                     |
| 3GPP Rel 6      | HSUPA Subtest-1         | 18.61         | 18.63      | 18.56  | 19.50                     | 18.96         | 18.92      | 18.90  | 19.50                     |
| 3GPP Rel 6      | HSUPA Subtest-2         | 18.05         | 18.17      | 18.01  | 19.00                     | 18.45         | 18.38      | 18.40  | 19.50                     |
| 3GPP Rel 6      | HSUPA Subtest-3         | 18.80         | 18.76      | 18.67  | 19.50                     | 19.09         | 18.94      | 18.92  | 19.50                     |
| 3GPP Rel 6      | HSUPA Subtest-4         | 18.63         | 18.68      | 18.60  | 19.50                     | 18.96         | 18.89      | 18.92  | 19.50                     |
| 3GPP Rel 6      | HSUPA Subtest-5         | 18.77         | 18.72      | 18.63  | 19.50                     | 19.07         | 19.01      | 18.91  | 20.00                     |
| 3GPP Rel 7      | HSPA+ (16QAM) Subtest-1 | 18.74         | 18.66      | 18.70  | 19.50                     | 18.66         | 18.57      | 18.55  | 19.50                     |
| Attenuator      |                         |               | Cable Loss | 0.8    |                           |               | Cable Loss | 0.8    |                           |
| Mode            |                         |               | Max.       | 20.16  |                           |               | Max.       | 20.15  |                           |
| Date            |                         | 2022.1.17     |            |        |                           | 2022.1.17     |            |        |                           |

| Band 2 (1900MHz Band) |            |         |           |             |                |              |                     |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel               |            |         |           | 18700       | 18900          | 19100        |                     |
| Frequency (MHz)       |            |         |           | 1860        | 1880           | 1900         |                     |
| 20                    | QPSK       | 1       | 0         | 19.50       | 19.53          | 19.47        | 20.5                |
| 20                    | QPSK       | 1       | 49        | 19.48       | 19.42          | 19.35        |                     |
| 20                    | QPSK       | 1       | 99        | 19.42       | 19.38          | 19.36        |                     |
| 20                    | QPSK       | 50      | 0         | 18.58       | 18.67          | 18.60        |                     |
| 20                    | QPSK       | 50      | 24        | 18.59       | 18.64          | 18.64        | 19.5                |
| 20                    | QPSK       | 50      | 50        | 18.64       | 18.60          | 18.66        |                     |
| 20                    | QPSK       | 100     | 0         | 18.57       | 18.66          | 18.62        |                     |
| 20                    | 16QAM      | 1       | 0         | 18.63       | 18.63          | 18.65        |                     |
| 20                    | 16QAM      | 1       | 49        | 18.47       | 18.77          | 18.73        | 19.5                |
| 20                    | 16QAM      | 1       | 99        | 18.72       | 18.57          | 18.97        |                     |
| 20                    | 16QAM      | 50      | 0         | 18.65       | 18.62          | 18.60        |                     |
| 20                    | 16QAM      | 50      | 24        | 18.61       | 18.66          | 18.67        |                     |
| 20                    | 16QAM      | 50      | 50        | 18.69       | 18.66          | 18.73        | 19.5                |
| 20                    | 16QAM      | 100     | 0         | 18.72       | 18.73          | 18.60        |                     |
| 20                    | 64QAM      | 1       | 0         | 17.67       | 17.86          | 17.60        |                     |
| 20                    | 64QAM      | 1       | 49        | 17.62       | 17.80          | 17.71        |                     |
| 20                    | 64QAM      | 1       | 99        | 17.57       | 17.90          | 17.90        | 18.5                |
| 20                    | 64QAM      | 50      | 0         | 17.67       | 17.59          | 17.64        |                     |
| 20                    | 64QAM      | 50      | 24        | 17.70       | 17.64          | 17.69        |                     |
| 20                    | 64QAM      | 50      | 50        | 17.69       | 17.70          | 17.64        |                     |
| 20                    | 64QAM      | 100     | 0         | 17.57       | 17.54          | 17.55        |                     |
| Channel               |            |         |           | 18675       | 18900          | 19125        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1857.5      | 1880           | 1902.5       |                     |
| 15                    | QPSK       | 1       | 0         | 19.31       | 19.34          | 19.25        | 20.5                |
| 15                    | QPSK       | 1       | 37        | 19.10       | 19.46          | 19.34        |                     |
| 15                    | QPSK       | 1       | 74        | 19.47       | 19.39          | 19.47        |                     |
| 15                    | QPSK       | 36      | 0         | 18.44       | 18.53          | 18.52        |                     |
| 15                    | QPSK       | 36      | 20        | 18.43       | 18.62          | 18.59        | 19.5                |
| 15                    | QPSK       | 36      | 39        | 18.55       | 18.56          | 18.53        |                     |
| 15                    | QPSK       | 75      | 0         | 18.47       | 18.53          | 18.49        |                     |
| 15                    | 16QAM      | 1       | 0         | 18.56       | 18.64          | 18.58        |                     |
| 15                    | 16QAM      | 1       | 37        | 18.69       | 18.72          | 18.58        | 19.5                |
| 15                    | 16QAM      | 1       | 74        | 18.64       | 18.76          | 18.76        |                     |
| 15                    | 16QAM      | 36      | 0         | 18.43       | 18.48          | 18.51        |                     |
| 15                    | 16QAM      | 36      | 20        | 18.52       | 18.45          | 18.58        |                     |
| 15                    | 16QAM      | 36      | 39        | 18.57       | 18.66          | 18.63        | 19.5                |
| 15                    | 16QAM      | 75      | 0         | 18.44       | 18.46          | 18.55        |                     |
| 15                    | 64QAM      | 1       | 0         | 17.64       | 17.40          | 17.46        |                     |
| 15                    | 64QAM      | 1       | 37        | 17.63       | 17.44          | 17.86        |                     |
| 15                    | 64QAM      | 1       | 74        | 17.52       | 17.56          | 17.71        | 18.5                |
| 15                    | 64QAM      | 36      | 0         | 17.37       | 17.54          | 17.42        |                     |
| 15                    | 64QAM      | 36      | 20        | 17.57       | 17.59          | 17.49        |                     |
| 15                    | 64QAM      | 36      | 39        | 17.45       | 17.50          | 17.59        |                     |
| 15                    | 64QAM      | 75      | 0         | 17.44       | 17.51          | 17.50        |                     |
| Channel               |            |         |           | 18650       | 18900          | 19150        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1855        | 1880           | 1905         |                     |
| 10                    | QPSK       | 1       | 0         | 19.35       | 19.34          | 19.44        | 20.5                |
| 10                    | QPSK       | 1       | 25        | 19.39       | 19.42          | 19.37        |                     |
| 10                    | QPSK       | 1       | 49        | 19.35       | 19.36          | 19.35        |                     |
| 10                    | QPSK       | 25      | 0         | 18.62       | 18.63          | 18.59        |                     |
| 10                    | QPSK       | 25      | 12        | 18.58       | 18.70          | 18.63        | 19.5                |
| 10                    | QPSK       | 25      | 25        | 18.49       | 18.62          | 18.58        |                     |
| 10                    | QPSK       | 50      | 0         | 18.55       | 18.64          | 18.62        |                     |
| 10                    | 16QAM      | 1       | 0         | 19.03       | 18.96          | 18.95        |                     |
| 10                    | 16QAM      | 1       | 25        | 18.72       | 18.68          | 18.75        | 19.5                |
| 10                    | 16QAM      | 1       | 49        | 18.67       | 18.75          | 18.54        |                     |
| 10                    | 16QAM      | 25      | 0         | 18.57       | 18.56          | 18.53        |                     |
| 10                    | 16QAM      | 25      | 12        | 18.73       | 18.53          | 18.53        |                     |
| 10                    | 16QAM      | 25      | 25        | 18.53       | 18.73          | 18.83        | 19.5                |
| 10                    | 16QAM      | 50      | 0         | 19.10       | 19.03          | 19.07        |                     |
| 10                    | 64QAM      | 1       | 0         | 17.61       | 17.66          | 17.66        |                     |
| 10                    | 64QAM      | 1       | 25        | 17.64       | 17.69          | 17.73        |                     |
| 10                    | 64QAM      | 1       | 49        | 17.31       | 17.44          | 17.41        | 18.5                |
| 10                    | 64QAM      | 25      | 0         | 17.61       | 17.65          | 17.66        |                     |
| 10                    | 64QAM      | 25      | 12        | 17.64       | 17.62          | 17.63        |                     |
| 10                    | 64QAM      | 25      | 25        | 17.57       | 17.35          | 17.57        |                     |
| 10                    | 64QAM      | 50      | 0         | 17.58       | 17.58          | 17.55        |                     |
| Channel               |            |         |           | 18625       | 18900          | 19175        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1852.5      | 1880           | 1907.5       |                     |
| 5                     | QPSK       | 1       | 0         | 19.35       | 19.40          | 19.34        | 20.5                |
| 5                     | QPSK       | 1       | 12        | 19.34       | 19.29          | 19.32        |                     |
| 5                     | QPSK       | 1       | 24        | 19.30       | 19.38          | 19.39        |                     |
| 5                     | QPSK       | 12      | 0         | 18.47       | 18.38          | 18.45        |                     |
| 5                     | QPSK       | 12      | 7         | 18.48       | 18.53          | 18.45        | 19.5                |
| 5                     | QPSK       | 12      | 13        | 18.47       | 18.46          | 18.49        |                     |
| 5                     | QPSK       | 25      | 0         | 18.46       | 18.44          | 18.46        |                     |
| 5                     | 16QAM      | 1       | 0         | 18.59       | 18.49          | 18.87        |                     |
| 5                     | 16QAM      | 1       | 12        | 18.57       | 18.50          | 18.87        | 19.5                |
| 5                     | 16QAM      | 1       | 24        | 18.60       | 18.47          | 18.86        |                     |
| 5                     | 16QAM      | 12      | 0         | 18.69       | 18.83          | 18.69        |                     |
| 5                     | 16QAM      | 12      | 7         | 18.59       | 18.59          | 18.39        |                     |
| 5                     | 16QAM      | 12      | 13        | 18.39       | 18.72          | 18.49        | 19.5                |
| 5                     | 16QAM      | 25      | 0         | 18.49       | 18.95          | 18.93        |                     |
| 5                     | 64QAM      | 1       | 0         | 17.69       | 17.41          | 17.46        |                     |
| 5                     | 64QAM      | 1       | 12        | 17.85       | 17.51          | 17.62        |                     |
| 5                     | 64QAM      | 1       | 24        | 17.86       | 17.50          | 17.52        | 18.5                |
| 5                     | 64QAM      | 12      | 0         | 17.51       | 17.44          | 17.43        |                     |
| 5                     | 64QAM      | 12      | 7         | 17.57       | 17.41          | 17.41        |                     |
| 5                     | 64QAM      | 12      | 13        | 17.54       | 17.50          | 17.48        |                     |
| 5                     | 64QAM      | 25      | 0         | 17.61       | 17.41          | 17.48        |                     |
| Channel               |            |         |           | 18615       | 18900          | 19185        | Tune-up limit (dBm) |
| Frequency (MHz)       |            |         |           | 1851.5      | 1880           | 1908.5       |                     |
| 3                     | QPSK       | 1       | 0         | 19.29       | 19.36          | 19.28        | 20.5                |
| 3                     | QPSK       | 1       | 8         | 19.39       | 19.42          | 19.25        |                     |
| 3                     | QPSK       | 1       | 14        | 19.40       | 19.27          | 19.27        |                     |
| 3                     | QPSK       | 8       | 0         | 18.35       | 18.30          | 18.32        |                     |
| 3                     | QPSK       | 8       | 4         | 18.41       | 18.35          | 18.36        | 19.5                |
| 3                     | QPSK       | 8       | 7         | 18.41       | 18.35          | 18.31        |                     |
| 3                     | QPSK       | 15      | 0         | 18.33       | 18.41          | 18.34        |                     |
| 3                     | 16QAM      | 1       | 0         | 18.49       | 18.40          | 18.34        |                     |
| 3                     | 16QAM      | 1       | 8         | 18.53       | 18.47          | 18.43        | 19.5                |
| 3                     | 16QAM      | 1       | 14        | 18.46       | 18.43          | 18.31        |                     |

| Band 4 (AWS Band) |            |         |           |             |                |              |                     |
|-------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| BW [MHz]          | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
| Channel           |            |         |           | 20050       | 20175          | 20300        |                     |
| Frequency (MHz)   |            |         |           | 1720        | 1732.5         | 1745         |                     |
| 20                | QPSK       | 1       | 0         | 19.48       | 19.56          | 19.55        | 20.5                |
| 20                | QPSK       | 1       | 49        | 19.34       | 19.42          | 19.41        |                     |
| 20                | QPSK       | 1       | 99        | 19.26       | 19.39          | 19.51        |                     |
| 20                | QPSK       | 50      | 0         | 18.64       | 18.68          | 18.65        |                     |
| 20                | QPSK       | 50      | 24        | 18.55       | 18.63          | 18.63        | 19.5                |
| 20                | QPSK       | 50      | 50        | 18.44       | 18.55          | 18.56        |                     |
| 20                | QPSK       | 100     | 0         | 18.54       | 18.58          | 18.65        |                     |
| 20                | 16QAM      | 1       | 0         | 18.41       | 18.71          | 18.58        |                     |
| 20                | 16QAM      | 1       | 49        | 18.56       | 18.33          | 18.47        | 19.5                |
| 20                | 16QAM      | 1       | 99        | 18.35       | 18.57          | 18.41        |                     |
| 20                | 16QAM      | 50      | 0         | 18.54       | 18.47          | 18.61        |                     |
| 20                | 10QAM      | 50      | 24        | 18.80       | 18.91          | 18.80        |                     |
| 20                | 16QAM      | 50      | 50        | 18.76       | 18.77          | 18.77        | 19.5                |
| 20                | 16QAM      | 100     | 0         | 18.78       | 18.86          | 18.87        |                     |
| 20                | 64QAM      | 1       | 0         | 17.52       | 17.63          | 17.85        |                     |
| 20                | 64QAM      | 1       | 49        | 17.56       | 17.49          | 17.37        |                     |
| 20                | 64QAM      | 1       | 99        | 17.83       | 17.40          | 17.87        | 18.5                |
| 20                | 64QAM      | 50      | 0         | 17.53       | 17.62          | 17.57        |                     |
| 20                | 64QAM      | 50      | 24        | 17.55       | 17.66          | 17.60        |                     |
| 20                | 64QAM      | 50      | 50        | 17.59       | 17.54          | 17.56        |                     |
| 20                | 64QAM      | 100     | 0         | 17.62       | 17.60          | 17.69        |                     |
| Channel           |            |         |           | 20025       | 20175          | 20325        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1717.5      | 1732.5         | 1747.5       |                     |
| 15                | QPSK       | 1       | 0         | 19.35       | 19.39          | 19.49        | 20.5                |
| 15                | QPSK       | 1       | 37        | 19.39       | 19.48          | 19.40        |                     |
| 15                | QPSK       | 1       | 74        | 19.26       | 19.48          | 19.51        |                     |
| 15                | QPSK       | 36      | 0         | 18.49       | 18.56          | 18.59        |                     |
| 15                | QPSK       | 36      | 20        | 18.53       | 18.66          | 18.62        | 19.5                |
| 15                | QPSK       | 36      | 39        | 18.58       | 18.57          | 18.66        |                     |
| 15                | QPSK       | 75      | 0         | 18.53       | 18.55          | 18.56        |                     |
| 15                | 16QAM      | 1       | 0         | 18.47       | 18.69          | 18.41        |                     |
| 15                | 16QAM      | 1       | 37        | 18.55       | 18.55          | 18.39        | 19.5                |
| 15                | 16QAM      | 1       | 74        | 18.41       | 18.71          | 18.50        |                     |
| 15                | 16QAM      | 36      | 0         | 18.42       | 18.44          | 18.63        |                     |
| 15                | 16QAM      | 36      | 20        | 18.37       | 18.44          | 18.50        |                     |
| 15                | 10QAM      | 36      | 39        | 18.33       | 18.42          | 18.48        | 19.5                |
| 15                | 16QAM      | 75      | 0         | 18.44       | 18.45          | 18.54        |                     |
| 15                | 64QAM      | 1       | 0         | 17.39       | 17.70          | 17.75        |                     |
| 15                | 64QAM      | 1       | 37        | 17.81       | 17.57          | 17.63        |                     |
| 15                | 64QAM      | 1       | 74        | 17.85       | 17.56          | 17.60        | 18.5                |
| 15                | 64QAM      | 36      | 0         | 17.50       | 17.57          | 17.61        |                     |
| 15                | 64QAM      | 36      | 20        | 17.56       | 17.58          | 17.60        |                     |
| 15                | 64QAM      | 36      | 39        | 17.59       | 17.55          | 17.57        |                     |
| 15                | 64QAM      | 75      | 0         | 17.52       | 17.63          | 17.56        |                     |
| Channel           |            |         |           | 20000       | 20175          | 20350        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1715        | 1732.5         | 1750         |                     |
| 10                | QPSK       | 1       | 0         | 19.47       | 19.46          | 19.29        | 20.5                |
| 10                | QPSK       | 1       | 25        | 19.45       | 19.38          | 19.39        |                     |
| 10                | QPSK       | 1       | 49        | 19.33       | 19.16          | 19.39        |                     |
| 10                | QPSK       | 25      | 0         | 18.32       | 18.54          | 18.56        |                     |
| 10                | QPSK       | 25      | 12        | 18.44       | 18.50          | 18.54        | 19.5                |
| 10                | QPSK       | 25      | 25        | 18.33       | 18.44          | 18.51        |                     |
| 10                | QPSK       | 50      | 0         | 18.39       | 18.49          | 18.41        |                     |
| 10                | 16QAM      | 1       | 0         | 18.38       | 18.53          | 18.29        |                     |
| 10                | 16QAM      | 1       | 25        | 18.65       | 18.39          | 18.71        | 19.5                |
| 10                | 16QAM      | 1       | 49        | 18.72       | 18.62          | 18.61        |                     |
| 10                | 16QAM      | 25      | 0         | 18.38       | 18.37          | 18.36        |                     |
| 10                | 16QAM      | 25      | 12        | 18.30       | 18.40          | 18.37        |                     |
| 10                | 16QAM      | 25      | 25        | 18.64       | 18.55          | 18.64        | 19.5                |
| 10                | 10QAM      | 50      | 0         | 18.58       | 18.62          | 18.74        |                     |
| 10                | 64QAM      | 1       | 0         | 17.44       | 17.52          | 17.42        |                     |
| 10                | 64QAM      | 1       | 25        | 17.51       | 17.80          | 17.89        |                     |
| 10                | 64QAM      | 1       | 49        | 17.49       | 17.53          | 17.48        | 18.5                |
| 10                | 64QAM      | 25      | 0         | 17.33       | 17.47          | 17.46        |                     |
| 10                | 64QAM      | 25      | 12        | 17.42       | 17.53          | 17.57        |                     |
| 10                | 64QAM      | 25      | 25        | 17.30       | 17.42          | 17.44        |                     |
| 10                | 64QAM      | 50      | 0         | 17.36       | 17.43          | 17.42        |                     |
| Channel           |            |         |           | 19975       | 20175          | 20375        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1712.5      | 1732.5         | 1752.5       |                     |
| 5                 | QPSK       | 1       | 0         | 19.44       | 19.39          | 19.44        | 20.5                |
| 5                 | QPSK       | 1       | 12        | 19.43       | 19.38          | 19.35        |                     |
| 5                 | QPSK       | 1       | 24        | 19.18       | 19.30          | 19.29        |                     |
| 5                 | QPSK       | 12      | 0         | 18.40       | 18.40          | 18.44        |                     |
| 5                 | QPSK       | 12      | 7         | 18.40       | 18.51          | 18.48        | 19.5                |
| 5                 | QPSK       | 12      | 13        | 18.35       | 18.52          | 18.44        |                     |
| 5                 | QPSK       | 25      | 0         | 18.38       | 18.42          | 18.46        |                     |
| 5                 | 16QAM      | 1       | 0         | 18.28       | 18.69          | 18.37        |                     |
| 5                 | 16QAM      | 1       | 12        | 18.39       | 18.74          | 18.33        | 19.5                |
| 5                 | 16QAM      | 1       | 24        | 18.33       | 18.68          | 18.28        |                     |
| 5                 | 16QAM      | 12      | 0         | 18.32       | 18.26          | 18.29        |                     |
| 5                 | 16QAM      | 12      | 7         | 18.35       | 18.39          | 18.37        |                     |
| 5                 | 16QAM      | 12      | 13        | 18.62       | 18.69          | 18.73        | 19.5                |
| 5                 | 16QAM      | 25      | 0         | 18.63       | 18.74          | 18.67        |                     |
| 5                 | 64QAM      | 1       | 0         | 17.40       | 17.84          | 17.82        |                     |
| 5                 | 64QAM      | 1       | 12        | 17.78       | 17.54          | 17.81        |                     |
| 5                 | 64QAM      | 1       | 24        | 17.74       | 17.44          | 17.51        | 18.5                |
| 5                 | 64QAM      | 12      | 0         | 17.41       | 17.48          | 17.50        |                     |
| 5                 | 64QAM      | 12      | 7         | 17.40       | 17.49          | 17.55        |                     |
| 5                 | 64QAM      | 12      | 13        | 17.41       | 17.47          | 17.46        |                     |
| 5                 | 64QAM      | 25      | 0         | 17.36       | 17.50          | 17.41        |                     |
| Channel           |            |         |           | 19965       | 20175          | 20385        | Tune-up limit (dBm) |
| Frequency (MHz)   |            |         |           | 1711.5      | 1732.5         | 1753.5       |                     |
| 3                 | QPSK       | 1       | 0         | 19.29       | 19.30          | 19.42        | 20.5                |
| 3                 | QPSK       | 1       | 8         | 19.38       | 19.52          | 19.46        |                     |
| 3                 | QPSK       | 1       | 14        | 19.18       | 19.37          | 19.37        |                     |
| 3                 | QPSK       | 8       | 0         | 18.38       | 18.44          | 18.45        |                     |
| 3                 | QPSK       | 8       | 4         | 18.44       | 18.52          | 18.54        | 19.5                |
| 3                 | QPSK       | 8       | 7         | 18.40       | 18.50          | 18.50        |                     |
| 3                 | QPSK       | 15      | 0         | 18.40       | 18.46          | 18.40        |                     |
| 3                 | 16QAM      | 1       | 0         | 18.48       | 18.57          | 18.61        |                     |
| 3                 | 16QAM      | 1       | 8         | 18.70       | 18.70          | 18.44        | 19.5                |
| 3                 | 16QAM      | 1       | 14        | 18.61       | 18.39          | 18.47        |                     |

|                 |       |    |    |        |       |        |                        |
|-----------------|-------|----|----|--------|-------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 18.89  | 19.02 | 18.94  | 19.5                   |
| 3               | 16QAM | 8  | 4  | 18.96  | 18.93 | 18.99  |                        |
| 3               | 16QAM | 8  | 7  | 18.86  | 18.91 | 18.94  |                        |
| 3               | 16QAM | 15 | 0  | 18.89  | 18.93 | 18.88  |                        |
| 3               | 64QAM | 1  | 0  | 17.42  | 17.35 | 17.38  | 18.5                   |
| 3               | 64QAM | 1  | 8  | 17.84  | 17.83 | 17.43  |                        |
| 3               | 64QAM | 1  | 14 | 17.45  | 17.81 | 17.45  |                        |
| 3               | 64QAM | 8  | 0  | 17.37  | 17.39 | 17.23  |                        |
| 3               | 64QAM | 8  | 4  | 17.47  | 17.37 | 17.37  | 18.5                   |
| 3               | 64QAM | 8  | 7  | 17.57  | 17.46 | 17.32  |                        |
| 3               | 64QAM | 15 | 0  | 17.42  | 17.42 | 17.40  |                        |
| Channel         |       |    |    | 18607  | 18900 | 19193  | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1850.7 | 1880  | 1909.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 18.35  | 18.38 | 19.33  | 20.5                   |
| 1.4             | QPSK  | 1  | 3  | 19.25  | 19.23 | 19.22  |                        |
| 1.4             | QPSK  | 1  | 5  | 19.22  | 19.20 | 19.18  |                        |
| 1.4             | QPSK  | 3  | 0  | 19.22  | 19.22 | 19.18  |                        |
| 1.4             | QPSK  | 3  | 1  | 19.28  | 19.23 | 19.21  |                        |
| 1.4             | QPSK  | 3  | 3  | 19.28  | 19.32 | 19.21  |                        |
| 1.4             | QPSK  | 6  | 0  | 18.31  | 18.29 | 18.28  |                        |
| 1.4             | 16QAM | 1  | 0  | 18.34  | 18.34 | 18.28  |                        |
| 1.4             | 16QAM | 1  | 3  | 18.30  | 18.50 | 18.48  | 19.5                   |
| 1.4             | 16QAM | 1  | 5  | 18.18  | 18.38 | 18.06  |                        |
| 1.4             | 16QAM | 3  | 0  | 18.20  | 18.25 | 18.22  |                        |
| 1.4             | 16QAM | 3  | 1  | 18.38  | 18.20 | 18.25  |                        |
| 1.4             | 16QAM | 3  | 3  | 18.40  | 18.37 | 18.11  |                        |
| 1.4             | 16QAM | 6  | 0  | 18.41  | 18.34 | 18.29  |                        |
| 1.4             | 64QAM | 1  | 0  | 17.29  | 17.21 | 17.24  |                        |
| 1.4             | 64QAM | 1  | 3  | 17.31  | 17.52 | 17.40  |                        |
| 1.4             | 64QAM | 1  | 5  | 17.29  | 17.64 | 17.23  | 18.5                   |
| 1.4             | 64QAM | 3  | 0  | 17.32  | 17.38 | 17.39  |                        |
| 1.4             | 64QAM | 3  | 1  | 17.41  | 17.38 | 17.59  |                        |
| 1.4             | 64QAM | 3  | 3  | 17.33  | 17.47 | 17.24  |                        |
| 1.4             | 64QAM | 6  | 0  | 17.38  | 17.41 | 17.30  | 18.5                   |

|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 18.40  | 18.41  | 18.50  | 19.5                   |
| 3               | 16QAM | 8  | 4  | 18.50  | 18.50  | 18.51  |                        |
| 3               | 16QAM | 8  | 7  | 18.72  | 18.80  | 18.84  |                        |
| 3               | 16QAM | 15 | 0  | 18.72  | 18.70  | 18.77  |                        |
| 3               | 64QAM | 1  | 0  | 17.39  | 17.48  | 17.46  | 18.5                   |
| 3               | 64QAM | 1  | 8  | 17.58  | 17.46  | 17.62  |                        |
| 3               | 64QAM | 1  | 14 | 17.39  | 17.46  | 17.29  |                        |
| 3               | 64QAM | 8  | 0  | 17.37  | 17.41  | 17.35  |                        |
| 3               | 64QAM | 8  | 4  | 17.49  | 17.47  | 17.51  | 18.5                   |
| 3               | 64QAM | 8  | 7  | 17.43  | 17.50  | 17.62  |                        |
| 3               | 64QAM | 15 | 0  | 17.39  | 17.47  | 17.38  |                        |
| Channel         |       |    |    | 19957  | 20175  | 20393  | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1732.5 | 1754.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 19.44  | 19.49  | 19.47  | 20.5                   |
| 1.4             | QPSK  | 1  | 3  | 19.38  | 19.38  | 19.42  |                        |
| 1.4             | QPSK  | 1  | 5  | 19.24  | 19.33  | 19.35  |                        |
| 1.4             | QPSK  | 3  | 0  | 19.32  | 19.29  | 19.28  |                        |
| 1.4             | QPSK  | 3  | 1  | 19.28  | 19.38  | 19.43  |                        |
| 1.4             | QPSK  | 3  | 3  | 19.27  | 19.34  | 19.33  |                        |
| 1.4             | QPSK  | 6  | 0  | 18.43  | 18.45  | 18.41  |                        |
| 1.4             | 16QAM | 1  | 0  | 18.37  | 18.84  | 18.50  |                        |
| 1.4             | 16QAM | 1  | 3  | 18.50  | 18.58  | 18.62  | 19.5                   |
| 1.4             | 16QAM | 1  | 5  | 18.56  | 18.72  | 18.52  |                        |
| 1.4             | 16QAM | 3  | 0  | 18.59  | 18.63  | 18.54  |                        |
| 1.4             | 16QAM | 3  | 1  | 18.60  | 18.63  | 18.65  |                        |
| 1.4             | 16QAM | 3  | 3  | 18.59  | 18.71  | 18.60  |                        |
| 1.4             | 16QAM | 6  | 0  | 18.50  | 18.51  | 18.42  |                        |
| 1.4             | 64QAM | 1  | 0  | 17.28  | 17.22  | 17.36  |                        |
| 1.4             | 64QAM | 1  | 3  | 17.54  | 17.52  | 17.64  |                        |
| 1.4             | 64QAM | 1  | 5  | 17.45  | 17.41  | 17.25  | 18.5                   |
| 1.4             | 64QAM | 3  | 0  | 17.36  | 17.34  | 17.53  |                        |
| 1.4             | 64QAM | 3  | 1  | 17.27  | 17.42  | 17.39  |                        |
| 1.4             | 64QAM | 3  | 3  | 17.33  | 17.50  | 17.38  |                        |
| 1.4             | 64QAM | 6  | 0  | 17.32  | 17.33  | 17.40  | 18.5                   |

| Band 7 (2600MHz Band) |            |         |           |             |                |              |                     |  |  |
|-----------------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|--|--|
| BW [MHz]              | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |  |  |
| Channel               |            |         |           | 20850       | 21100          | 21350        |                     |  |  |
| Frequency (MHz)       |            |         |           | 2510        | 2535           | 2560         |                     |  |  |
| 20                    | QPSK       | 1       | 0         | 20.53       | 20.54          | 20.46        | 21.5                |  |  |
| 20                    | QPSK       | 1       | 49        | 20.48       | 20.52          | 20.41        |                     |  |  |
| 20                    | QPSK       | 1       | 99        | 20.43       | 20.38          | 20.43        |                     |  |  |
| 20                    | QPSK       | 50      | 0         | 19.59       | 19.66          | 19.63        |                     |  |  |
| 20                    | QPSK       | 50      | 24        | 19.35       | 19.32          | 19.22        | 20.5                |  |  |
| 20                    | QPSK       | 50      | 50        | 19.45       | 19.48          | 19.45        |                     |  |  |
| 20                    | QPSK       | 100     | 0         | 19.40       | 19.42          | 19.39        |                     |  |  |
| 20                    | 16QAM      | 1       | 0         | 18.21       | 18.31          | 18.46        |                     |  |  |
| 20                    | 16QAM      | 1       | 49        | 19.36       | 19.22          | 19.50        | 20.5                |  |  |
| 20                    | 16QAM      | 1       | 99        | 19.30       | 19.61          | 19.26        |                     |  |  |
| 20                    | 16QAM      | 50      | 0         | 19.15       | 19.25          | 19.18        |                     |  |  |
| 20                    | 16QAM      | 50      | 24        | 19.20       | 19.12          | 19.23        |                     |  |  |
| 20                    | 16QAM      | 50      | 50        | 19.28       | 19.33          | 19.16        | 20.5                |  |  |
| 20                    | 16QAM      | 100     | 0         | 19.16       | 19.28          | 19.26        |                     |  |  |
| 20                    | 64QAM      | 1       | 0         | 18.04       | 18.20          | 18.22        |                     |  |  |
| 20                    | 64QAM      | 1       | 49        | 18.32       | 18.29          | 18.34        |                     |  |  |
| 20                    | 64QAM      | 1       | 99        | 18.30       | 18.35          | 18.26        | 19.5                |  |  |
| 20                    | 64QAM      | 50      | 0         | 18.24       | 18.25          | 18.30        |                     |  |  |
| 20                    | 64QAM      | 50      | 24        | 18.29       | 18.30          | 18.30        |                     |  |  |
| 20                    | 64QAM      | 50      | 50        | 18.33       | 18.40          | 18.25        |                     |  |  |
| 20                    | 64QAM      | 100     | 0         | 18.26       | 18.23          | 18.35        | 19.5                |  |  |
| Channel               |            |         |           | 20825       | 21100          | 21375        |                     |  |  |
| Frequency (MHz)       |            |         |           | 2507.5      | 2535           | 2562.5       |                     |  |  |
| 15                    | QPSK       | 1       | 0         | 20.36       | 20.45          | 20.45        | 21.5                |  |  |
| 15                    | QPSK       | 1       | 37        | 20.46       | 20.43          | 20.47        |                     |  |  |
| 15                    | QPSK       | 1       | 74        | 20.40       | 20.47          | 20.47        |                     |  |  |
| 15                    | QPSK       | 36      | 0         | 19.18       | 19.27          | 19.29        |                     |  |  |
| 15                    | QPSK       | 36      | 20        | 19.26       | 19.33          | 19.28        | 20.5                |  |  |
| 15                    | QPSK       | 36      | 39        | 19.29       | 19.32          | 19.36        |                     |  |  |
| 15                    | QPSK       | 75      | 0         | 19.35       | 19.28          | 19.30        |                     |  |  |
| 15                    | 16QAM      | 1       | 0         | 19.71       | 19.82          | 19.89        |                     |  |  |
| 15                    | 16QAM      | 1       | 37        | 19.53       | 19.64          | 19.62        | 20.5                |  |  |
| 15                    | 16QAM      | 1       | 74        | 19.57       | 19.57          | 19.79        |                     |  |  |
| 15                    | 16QAM      | 36      | 0         | 19.16       | 19.27          | 19.29        |                     |  |  |
| 15                    | 16QAM      | 36      | 20        | 19.23       | 19.26          | 19.25        |                     |  |  |
| 15                    | 16QAM      | 36      | 39        | 19.29       | 19.27          | 19.16        | 20.5                |  |  |
| 15                    | 16QAM      | 75      | 0         | 19.24       | 19.32          | 19.24        |                     |  |  |
| 15                    | 64QAM      | 1       | 0         | 18.14       | 18.11          | 17.99        |                     |  |  |
| 15                    | 64QAM      | 1       | 37        | 18.04       | 18.19          | 18.28        |                     |  |  |
| 15                    | 64QAM      | 1       | 74        | 18.03       | 18.15          | 18.21        | 19.5                |  |  |
| 15                    | 64QAM      | 36      | 0         | 18.22       | 18.30          | 18.29        |                     |  |  |
| 15                    | 64QAM      | 36      | 20        | 18.33       | 18.32          | 18.39        |                     |  |  |
| 15                    | 64QAM      | 36      | 39        | 18.37       | 18.28          | 18.30        |                     |  |  |
| 15                    | 64QAM      | 75      | 0         | 18.22       | 18.32          | 18.27        | 19.5                |  |  |
| Channel               |            |         |           | 20900       | 21100          | 21400        |                     |  |  |
| Frequency (MHz)       |            |         |           | 2505        | 2535           | 2565         |                     |  |  |
| 10                    | QPSK       | 1       | 0         | 20.35       | 20.22          | 20.25        | 21.5                |  |  |
| 10                    | QPSK       | 1       | 25        | 20.38       | 20.28          | 20.30        |                     |  |  |
| 10                    | QPSK       | 1       | 49        | 20.31       | 20.28          | 20.30        |                     |  |  |
| 10                    | QPSK       | 25      | 0         | 19.10       | 19.10          | 19.09        |                     |  |  |
| 10                    | QPSK       | 25      | 12        | 19.06       | 19.18          | 19.23        | 20.5                |  |  |
| 10                    | QPSK       | 25      | 25        | 18.99       | 19.17          | 19.17        |                     |  |  |
| 10                    | QPSK       | 50      | 0         | 19.08       | 19.20          | 19.19        |                     |  |  |
| 10                    | 16QAM      | 1       | 0         | 19.33       | 19.51          | 19.36        |                     |  |  |
| 10                    | 16QAM      | 1       | 25        | 19.32       | 19.34          | 19.39        | 20.5                |  |  |
| 10                    | 16QAM      | 1       | 49        | 19.79       | 19.69          | 19.60        |                     |  |  |
| 10                    | 16QAM      | 25      | 0         | 19.22       | 19.10          | 19.18        |                     |  |  |
| 10                    | 16QAM      | 25      | 12        | 19.04       | 19.21          | 19.14        |                     |  |  |
| 10                    | 16QAM      | 25      | 25        | 19.09       | 19.12          | 19.04        | 20.5                |  |  |
| 10                    | 16QAM      | 50      | 0         | 19.12       | 19.21          | 19.06        |                     |  |  |
| 10                    | 64QAM      | 1       | 0         | 18.14       | 18.10          | 18.08        |                     |  |  |
| 10                    | 64QAM      | 1       | 25        | 18.17       | 18.42          | 18.25        |                     |  |  |
| 10                    | 64QAM      | 1       | 49        | 18.28       | 18.52          | 18.33        | 19.5                |  |  |
| 10                    | 64QAM      | 25      | 0         | 18.14       | 18.12          | 18.16        |                     |  |  |
| 10                    | 64QAM      | 25      | 12        | 18.16       | 18.27          | 18.20        |                     |  |  |
| 10                    | 64QAM      | 25      | 25        | 18.09       | 17.99          | 17.98        |                     |  |  |
| 10                    | 64QAM      | 50      | 0         | 18.03       | 18.09          | 18.01        | 19.5                |  |  |
| Channel               |            |         |           | 20775       | 21100          | 21425        |                     |  |  |
| Frequency (MHz)       |            |         |           | 2502.5      | 2535           | 2567.5       |                     |  |  |
| 5                     | QPSK       | 1       | 0         | 20.39       | 20.30          | 20.20        | 21.5                |  |  |
| 5                     | QPSK       | 1       | 12        | 20.26       | 20.19          | 20.27        |                     |  |  |
| 5                     | QPSK       | 1       | 24        | 20.20       | 20.26          | 20.30        |                     |  |  |
| 5                     | QPSK       | 12      | 0         | 18.90       | 18.98          | 18.90        |                     |  |  |
| 5                     | QPSK       | 12      | 7         | 18.97       | 19.12          | 19.04        | 20.5                |  |  |
| 5                     | QPSK       | 12      | 13        | 18.99       | 19.15          | 19.00        |                     |  |  |
| 5                     | QPSK       | 25      | 0         | 19.00       | 19.01          | 18.96        |                     |  |  |
| 5                     | 16QAM      | 1       | 0         | 19.18       | 19.16          | 19.22        |                     |  |  |
| 5                     | 16QAM      | 1       | 12        | 19.23       | 19.45          | 19.35        | 20.5                |  |  |
| 5                     | 16QAM      | 1       | 24        | 19.29       | 19.48          | 19.30        |                     |  |  |
| 5                     | 16QAM      | 12      | 0         | 19.20       | 19.26          | 19.17        |                     |  |  |
| 5                     | 16QAM      | 12      | 7         | 19.09       | 19.11          | 19.07        |                     |  |  |
| 5                     | 16QAM      | 12      | 13        | 19.09       | 19.15          | 19.28        | 20.5                |  |  |
| 5                     | 16QAM      | 25      | 0         | 19.06       | 19.11          | 19.13        |                     |  |  |
| 5                     | 64QAM      | 1       | 0         | 18.24       | 18.29          | 18.25        |                     |  |  |
| 5                     | 64QAM      | 1       | 12        | 18.29       | 18.41          | 18.29        |                     |  |  |
| 5                     | 64QAM      | 1       | 24        | 18.33       | 18.43          | 18.39        | 19.5                |  |  |
| 5                     | 64QAM      | 12      | 0         | 18.04       | 18.01          | 18.06        |                     |  |  |
| 5                     | 64QAM      | 12      | 7         | 18.13       | 18.18          | 17.97        |                     |  |  |
| 5                     | 64QAM      | 12      | 13        | 18.08       | 18.17          | 18.03        |                     |  |  |
| 5                     | 64QAM      | 25      | 0         | 18.03       | 18.02          | 18.07        | 19.5                |  |  |

| Band 66         |            |         |           |             |                |              |                     |                     |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|---------------------|
| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |                     |
| Channel         |            |         |           | 132072      | 132322         | 132572       |                     |                     |
| Frequency (MHz) |            |         |           | 1720        | 1745           | 1770         |                     |                     |
| 20              | QPSK       | 1       | 0         | 20.00       | 20.06          | 20.04        | 21                  |                     |
| 20              | QPSK       | 1       | 49        | 19.85       | 19.84          | 19.80        |                     |                     |
| 20              | QPSK       | 1       | 99        | 19.78       | 19.77          | 19.80        |                     |                     |
| 20              | QPSK       | 50      | 0         | 19.23       | 19.30          | 19.26        |                     |                     |
| 20              | QPSK       | 50      | 24        | 19.04       | 19.06          | 19.19        | 20                  |                     |
| 20              | QPSK       | 50      | 50        | 19.08       | 19.16          | 19.04        |                     |                     |
| 20              | QPSK       | 100     | 0         | 19.06       | 19.06          | 18.98        |                     |                     |
| 20              | 16QAM      | 1       | 0         | 19.11       | 18.87          | 19.15        |                     |                     |
| 20              | 16QAM      | 1       | 49        | 19.16       | 18.90          | 18.96        | 20                  |                     |
| 20              | 16QAM      | 1       | 99        | 19.16       | 19.34          | 19.13        |                     |                     |
| 20              | 16QAM      | 50      | 0         | 19.28       | 19.25          | 19.22        |                     |                     |
| 20              | 16QAM      | 50      | 24        | 19.17       | 19.17          | 19.18        |                     |                     |
| 20              | 16QAM      | 50      | 50        | 19.14       | 19.06          | 19.02        | 20                  |                     |
| 20              | 16QAM      | 100     | 0         | 19.10       | 19.13          | 19.19        |                     |                     |
| 20              | 64QAM      | 1       | 0         | 18.43       | 18.20          | 18.53        |                     |                     |
| 20              | 64QAM      | 1       | 49        | 18.20       | 18.53          | 18.52        |                     |                     |
| 20              | 64QAM      | 1       | 99        | 18.43       | 18.55          | 18.63        | 19                  |                     |
| 20              | 64QAM      | 50      | 0         | 18.39       | 18.29          | 18.42        |                     |                     |
| 20              | 64QAM      | 50      | 24        | 18.33       | 18.27          | 18.39        |                     |                     |
| 20              | 64QAM      | 50      | 50        | 18.35       | 18.23          | 18.29        |                     |                     |
| 20              | 64QAM      | 100     | 0         | 18.34       | 18.34          | 18.32        | 19                  |                     |
| Channel         |            |         |           | 132047      | 132322         | 132597       |                     | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1717.5      | 1745           | 1772.5       |                     |                     |
| 15              | QPSK       | 1       | 0         | 19.98       | 20.02          | 20.00        | 21                  |                     |
| 15              | QPSK       | 1       | 37        | 20.02       | 19.98          | 19.96        |                     |                     |
| 15              | QPSK       | 1       | 74        | 19.96       | 19.92          | 19.90        |                     |                     |
| 15              | QPSK       | 36      | 0         | 19.17       | 19.14          | 19.18        |                     |                     |
| 15              | QPSK       | 36      | 20        | 19.17       | 19.09          | 19.19        | 20                  |                     |
| 15              | QPSK       | 36      | 39        | 19.03       | 19.08          | 19.05        |                     |                     |
| 15              | QPSK       | 75      | 0         | 19.12       | 19.16          | 19.09        |                     |                     |
| 15              | 16QAM      | 1       | 0         | 19.11       | 18.98          | 19.28        |                     |                     |
| 15              | 16QAM      | 1       | 37        | 18.98       | 19.28          | 19.21        | 20                  |                     |
| 15              | 16QAM      | 1       | 74        | 19.08       | 18.98          | 18.98        |                     |                     |
| 15              | 16QAM      | 36      | 0         | 19.29       | 19.29          | 19.20        |                     |                     |
| 15              | 16QAM      | 36      | 20        | 19.32       | 19.31          | 19.37        |                     |                     |
| 15              | 16QAM      | 36      | 39        | 19.24       | 19.39          | 19.33        | 20                  |                     |
| 15              | 16QAM      | 75      | 0         | 19.34       | 19.32          | 19.28        |                     |                     |
| 15              | 64QAM      | 1       | 0         | 18.65       | 18.55          | 18.65        |                     |                     |
| 15              | 64QAM      | 1       | 37        | 18.67       | 18.45          | 18.55        |                     |                     |
| 15              | 64QAM      | 1       | 74        | 18.32       | 18.58          | 18.65        | 19                  |                     |
| 15              | 64QAM      | 36      | 0         | 18.44       | 18.43          | 18.56        |                     |                     |
| 15              | 64QAM      | 36      | 20        | 18.54       | 18.50          | 18.51        |                     |                     |
| 15              | 64QAM      | 36      | 39        | 18.43       | 18.37          | 18.41        |                     |                     |
| 15              | 64QAM      | 75      | 0         | 18.45       | 18.47          | 18.44        | 19                  |                     |
| Channel         |            |         |           | 132022      | 132322         | 132622       |                     | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1715        | 1745           | 1775         |                     |                     |
| 10              | QPSK       | 1       | 0         | 20.01       | 20.01          | 20.02        | 21                  |                     |
| 10              | QPSK       | 1       | 25        | 19.91       | 19.89          | 19.97        |                     |                     |
| 10              | QPSK       | 1       | 49        | 20.05       | 19.93          | 19.83        |                     |                     |
| 10              | QPSK       | 25      | 0         | 19.48       | 19.41          | 19.48        |                     |                     |
| 10              | QPSK       | 25      | 12        | 19.45       | 19.64          | 19.42        | 20                  |                     |
| 10              | QPSK       | 25      | 25        | 19.41       | 19.37          | 19.29        |                     |                     |
| 10              | QPSK       | 50      | 0         | 19.49       | 19.34          | 19.53        |                     |                     |
| 10              | 16QAM      | 1       | 0         | 19.41       | 19.41          | 19.61        |                     |                     |
| 10              | 16QAM      | 1       | 25        | 19.41       | 19.50          | 19.62        | 20                  |                     |
| 10              | 16QAM      | 1       | 49        | 19.24       | 19.44          | 19.32        |                     |                     |
| 10              | 16QAM      | 25      | 0         | 19.25       | 19.42          | 19.30        |                     |                     |
| 10              | 16QAM      | 25      | 12        | 19.24       | 19.44          | 19.35        |                     |                     |
| 10              | 16QAM      | 25      | 25        | 19.15       | 19.20          | 19.20        | 20                  |                     |
| 10              | 16QAM      | 50      | 0         | 19.31       | 19.35          | 19.36        |                     |                     |
| 10              | 64QAM      | 1       | 0         | 18.48       | 18.48          | 18.15        |                     |                     |
| 10              | 64QAM      | 1       | 25        | 18.15       | 18.28          | 18.18        |                     |                     |
| 10              | 64QAM      | 1       | 49        | 18.15       | 18.15          | 18.15        | 19                  |                     |
| 10              | 64QAM      | 25      | 0         | 18.48       | 18.46          | 18.48        |                     |                     |
| 10              | 64QAM      | 25      | 12        | 18.47       | 18.51          | 18.55        |                     |                     |
| 10              | 64QAM      | 25      | 25        | 18.47       | 18.40          | 18.42        |                     |                     |
| 10              | 64QAM      | 50      | 0         | 18.37       | 18.47          | 18.48        | 19                  |                     |
| Channel         |            |         |           | 131997      | 132322         | 132647       |                     | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1712.5      | 1745           | 1777.5       |                     |                     |
| 5               | QPSK       | 1       | 0         | 19.90       | 19.93          | 19.98        | 21                  |                     |
| 5               | QPSK       | 1       | 12        | 19.93       | 19.93          | 19.92        |                     |                     |
| 5               | QPSK       | 1       | 24        | 20.01       | 19.91          | 19.97        |                     |                     |
| 5               | QPSK       | 12      | 0         | 19.17       | 19.19          | 19.15        |                     |                     |
| 5               | QPSK       | 12      | 7         | 19.19       | 19.27          | 19.20        | 20                  |                     |
| 5               | QPSK       | 12      | 13        | 19.05       | 19.11          | 19.12        |                     |                     |
| 5               | QPSK       | 25      | 0         | 19.15       | 19.16          | 19.15        |                     |                     |
| 5               | 16QAM      | 1       | 0         | 19.64       | 19.33          | 19.34        |                     |                     |
| 5               | 16QAM      | 1       | 12        | 19.27       | 19.56          | 19.51        | 20                  |                     |
| 5               | 16QAM      | 1       | 24        | 19.39       | 19.28          | 19.63        |                     |                     |
| 5               | 16QAM      | 12      | 0         | 19.28       | 19.39          | 19.35        |                     |                     |
| 5               | 16QAM      | 12      | 7         | 19.45       | 19.37          | 19.49        |                     |                     |
| 5               | 16QAM      | 12      | 13        | 19.36       | 19.30          | 19.37        | 20                  |                     |
| 5               | 16QAM      | 25      | 0         | 19.37       | 19.39          | 19.31        |                     |                     |
| 5               | 64QAM      | 1       | 0         | 18.15       | 18.55          | 18.35        |                     |                     |
| 5               | 64QAM      | 1       | 12        | 18.45       | 18.45          | 18.45        |                     |                     |
| 5               | 64QAM      | 1       | 24        | 18.28       | 18.32          | 18.28        | 19                  |                     |
| 5               | 64QAM      | 12      | 0         | 18.52       | 18.27          | 18.48        |                     |                     |
| 5               | 64QAM      | 12      | 7         | 18.60       | 18.19          | 18.50        |                     |                     |
| 5               | 64QAM      | 12      | 13        | 18.43       | 18.55          | 18.50        |                     |                     |
| 5               | 64QAM      | 25      | 0         | 18.50       | 18.58          | 18.45        | 19                  |                     |
| Channel         |            |         |           | 131967      | 132322         | 132657       |                     | Tune-up limit (dBm) |
| Frequency (MHz) |            |         |           | 1711.5      | 1745           | 1778.5       |                     |                     |
| 3               | QPSK       | 1       | 0         | 19.97       | 19.88          | 19.87        | 21                  |                     |
| 3               | QPSK       | 1       | 8         | 19.84       | 19.85          | 19.93        |                     |                     |
| 3               | QPSK       | 1       | 14        | 19.75       | 19.56          | 19.86        |                     |                     |
| 3               | QPSK       | 8       | 0         | 19.43       | 19.40          | 19.44        |                     |                     |
| 3               | QPSK       | 8       | 4         | 19.38       | 19.30          | 19.40        | 20                  |                     |
| 3               | QPSK       | 8       | 7         | 19.24       | 19.29          | 19.26        |                     |                     |
| 3               | QPSK       | 15      | 0         | 19.33       | 19.37          | 19.30        |                     |                     |
| 3               | 16QAM      | 1       | 0         | 19.02       | 19.43          | 19.19        |                     |                     |
| 3               | 16QAM      | 1       | 8         | 19.35       | 19.29          | 19.28        | 20                  |                     |
| 3               | 16QAM      | 1       | 14        | 19.39       | 19.28          | 18.98        |                     |                     |

|                 |       |    |    |        |        |        |                        |
|-----------------|-------|----|----|--------|--------|--------|------------------------|
| 3               | 16QAM | 8  | 0  | 19.20  | 19.20  | 19.11  | 20                     |
| 3               | 16QAM | 8  | 4  | 19.23  | 19.22  | 19.28  |                        |
| 3               | 16QAM | 8  | 7  | 19.15  | 19.30  | 19.24  |                        |
| 3               | 16QAM | 15 | 0  | 19.25  | 19.23  | 19.19  |                        |
| 3               | 64QAM | 1  | 0  | 18.56  | 18.46  | 18.56  | 19                     |
| 3               | 64QAM | 1  | 8  | 18.58  | 18.36  | 18.46  |                        |
| 3               | 64QAM | 1  | 14 | 18.23  | 18.49  | 18.56  |                        |
| 3               | 64QAM | 8  | 0  | 18.35  | 18.34  | 18.47  |                        |
| 3               | 64QAM | 8  | 4  | 18.45  | 18.41  | 18.42  | 19                     |
| 3               | 64QAM | 8  | 7  | 18.34  | 18.28  | 18.32  |                        |
| 3               | 64QAM | 15 | 0  | 18.36  | 18.38  | 18.35  |                        |
| Channel         |       |    |    | 131979 | 132322 | 132665 | Tune-up limit<br>(dBm) |
| Frequency (MHz) |       |    |    | 1710.7 | 1745   | 1779.3 |                        |
| 1.4             | QPSK  | 1  | 0  | 19.91  | 19.82  | 19.83  | 21                     |
| 1.4             | QPSK  | 1  | 3  | 19.97  | 19.99  | 19.99  |                        |
| 1.4             | QPSK  | 1  | 5  | 19.89  | 19.77  | 19.93  |                        |
| 1.4             | QPSK  | 3  | 0  | 19.88  | 19.81  | 19.88  |                        |
| 1.4             | QPSK  | 3  | 1  | 19.85  | 19.91  | 19.82  |                        |
| 1.4             | QPSK  | 3  | 3  | 19.86  | 19.82  | 19.74  |                        |
| 1.4             | QPSK  | 6  | 0  | 19.46  | 19.31  | 19.50  | 20                     |
| 1.4             | 16QAM | 1  | 0  | 19.33  | 19.33  | 19.53  | 20                     |
| 1.4             | 16QAM | 1  | 3  | 19.33  | 19.42  | 19.54  |                        |
| 1.4             | 16QAM | 1  | 5  | 19.16  | 19.36  | 19.24  |                        |
| 1.4             | 16QAM | 3  | 0  | 19.11  | 19.08  | 19.34  |                        |
| 1.4             | 16QAM | 3  | 1  | 19.20  | 19.10  | 19.22  |                        |
| 1.4             | 16QAM | 3  | 3  | 19.21  | 19.22  | 19.16  |                        |
| 1.4             | 16QAM | 6  | 0  | 19.10  | 19.01  | 19.02  | 20                     |
| 1.4             | 64QAM | 1  | 0  | 18.61  | 18.46  | 18.62  | 19                     |
| 1.4             | 64QAM | 1  | 3  | 18.34  | 18.43  | 18.43  |                        |
| 1.4             | 64QAM | 1  | 5  | 18.31  | 18.31  | 18.42  |                        |
| 1.4             | 64QAM | 3  | 0  | 18.40  | 18.38  | 18.40  |                        |
| 1.4             | 64QAM | 3  | 1  | 18.39  | 18.43  | 18.47  |                        |
| 1.4             | 64QAM | 3  | 3  | 18.39  | 18.32  | 18.34  |                        |
| 1.4             | 64QAM | 6  | 0  | 18.29  | 18.39  | 18.40  | 19                     |

## Reduced Power Level 4

| 5.2GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 36   | 5180            | 14.45               | 16.00         | 15.5          | 97.82        |
|             |                     | CH 44   | 5220            | <b>14.94</b>        | 16.00         | 15.5          |              |
|             |                     | CH 48   | 5240            | 14.62               | 16.00         | 15.5          |              |
|             | 802.11n-HT20 MCS0   | CH 36   | 5180            | 14.49               | 16.00         | 15.5          | 97.92        |
|             |                     | CH 44   | 5220            | <b>14.63</b>        | 16.00         | 15.5          |              |
|             |                     | CH 48   | 5240            | 14.51               | 16.00         | 15.5          |              |
|             | 802.11n-HT40 MCS0   | CH 38   | 5190            | 14.71               | 16.00         | 15.5          | 90.31        |
|             |                     | CH 46   | 5230            | <b>14.88</b>        | 16.00         | 15.5          |              |
|             | 802.11ac-VHT20 MCS0 | CH 36   | 5180            | 14.36               | 16.00         | 15.5          | 97.93        |
|             |                     | CH 44   | 5220            | <b>14.47</b>        | 16.00         | 15.5          |              |
|             |                     | CH 48   | 5240            | 14.41               | 16.00         | 15.5          |              |
|             | 802.11ac-VHT40 MCS0 | CH 38   | 5190            | 14.87               | 16.00         | 15.5          | 91.75        |
|             |                     | CH 46   | 5230            | <b>14.91</b>        | 16.00         | 15.5          |              |
|             | 802.11ac-VHT80 MCS0 | CH 42   | 5210            | <b>14.92</b>        | 16.00         | 15.5          | 95.36        |

| 5.8GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 149  | 5745            | <b>14.48</b>        | 16.00         | 14.5          | 97.82        |
|             |                     | CH 157  | 5785            | 14.26               | 16.00         | 14.5          |              |
|             |                     | CH 165  | 5825            | 13.39               | 15.00         | 14.5          |              |
|             | 802.11n-HT20 MCS0   | CH 149  | 5745            | <b>14.34</b>        | 16.00         | 14.5          | 97.92        |
|             |                     | CH 157  | 5785            | 14.13               | 16.00         | 14.5          |              |
|             |                     | CH 165  | 5825            | 13.16               | 15.00         | 14.5          |              |
|             | 802.11n-HT40 MCS0   | CH 151  | 5755            | <b>14.25</b>        | 16.00         | 14.5          | 90.31        |
|             |                     | CH 159  | 5795            | 14.11               | 16.00         | 14.5          |              |
|             | 802.11ac-VHT20 MCS0 | CH 149  | 5745            | <b>14.28</b>        | 16.00         | 14.5          | 97.93        |
|             |                     | CH 157  | 5785            | 14.06               | 16.00         | 14.5          |              |
|             |                     | CH 165  | 5825            | 13.23               | 15.00         | 14.5          |              |
|             | 802.11ac-VHT40 MCS0 | CH 151  | 5755            | <b>14.31</b>        | 16.00         | 14.5          | 91.75        |
|             |                     | CH 159  | 5795            | 14.14               | 16.00         | 14.5          |              |
|             | 802.11ac-VHT80 MCS0 | CH 155  | 5775            | <b>14.34</b>        | 16.00         | 14.5          | 95.36        |

# Band 38(Reduced Power Level 5)

| BW [MHz]        | Modulation | RB Size | RB Offset | Low Channel | Middle Channel | High Channel | Tune-up limit (dBm) |
|-----------------|------------|---------|-----------|-------------|----------------|--------------|---------------------|
| Channel         |            |         |           | 37850       | 38000          | 38150        |                     |
| Frequency (MHz) |            |         |           | 2580        | 2595           | 2610         |                     |
| 20              | QPSK       | 1       | 0         | 21.97       | 22.04          | 22.01        | 23                  |
| 20              | QPSK       | 1       | 49        | 21.96       | 21.98          | 21.98        |                     |
| 20              | QPSK       | 1       | 99        | 21.88       | 21.94          | 21.91        |                     |
| 20              | QPSK       | 50      | 0         | 21.08       | 21.30          | 21.16        | 22                  |
| 20              | QPSK       | 50      | 24        | 21.01       | 21.08          | 21.04        |                     |
| 20              | QPSK       | 50      | 50        | 21.05       | 21.10          | 21.04        |                     |
| 20              | QPSK       | 100     | 0         | 20.93       | 21.04          | 21.07        |                     |
| 20              | 16QAM      | 1       | 0         | 21.05       | 21.05          | 20.98        | 22                  |
| 20              | 16QAM      | 1       | 49        | 21.04       | 20.64          | 21.04        |                     |
| 20              | 16QAM      | 1       | 99        | 21.20       | 21.19          | 21.30        |                     |
| 20              | 16QAM      | 50      | 0         | 21.05       | 21.19          | 20.80        | 22                  |
| 20              | 16QAM      | 50      | 24        | 21.16       | 20.98          | 20.89        |                     |
| 20              | 16QAM      | 50      | 50        | 21.15       | 20.79          | 20.83        |                     |
| 20              | 16QAM      | 100     | 0         | 21.16       | 21.19          | 20.85        |                     |
| 20              | 64QAM      | 1       | 0         | 20.32       | 20.60          | 20.63        | 21                  |
| 20              | 64QAM      | 1       | 49        | 20.32       | 20.51          | 20.61        |                     |
| 20              | 64QAM      | 1       | 99        | 20.34       | 20.61          | 20.65        |                     |
| 20              | 64QAM      | 50      | 0         | 20.33       | 20.32          | 20.21        | 21                  |
| 20              | 64QAM      | 50      | 24        | 20.35       | 20.31          | 20.30        |                     |
| 20              | 64QAM      | 50      | 50        | 20.33       | 20.10          | 20.32        |                     |
| 20              | 64QAM      | 100     | 0         | 20.33       | 20.29          | 20.20        |                     |
| Channel         |            |         |           | 37825       | 38000          | 38175        |                     |
| Frequency (MHz) |            |         |           | 2577.5      | 2595           | 2612.5       |                     |
| 15              | QPSK       | 1       | 0         | 21.94       | 21.94          | 21.95        | 23                  |
| 15              | QPSK       | 1       | 37        | 21.95       | 21.87          | 21.98        |                     |
| 15              | QPSK       | 1       | 74        | 21.76       | 21.98          | 21.95        |                     |
| 15              | QPSK       | 36      | 0         | 21.07       | 21.32          | 21.36        | 22                  |
| 15              | QPSK       | 36      | 20        | 21.21       | 21.30          | 21.26        |                     |
| 15              | QPSK       | 36      | 39        | 21.28       | 21.26          | 21.19        |                     |
| 15              | QPSK       | 75      | 0         | 21.16       | 21.16          | 21.17        |                     |
| 15              | 16QAM      | 1       | 0         | 21.24       | 21.26          | 21.16        | 22                  |
| 15              | 16QAM      | 1       | 37        | 21.26       | 21.30          | 20.98        |                     |
| 15              | 16QAM      | 1       | 74        | 21.27       | 21.17          | 20.97        |                     |
| 15              | 16QAM      | 36      | 0         | 21.04       | 21.00          | 20.89        |                     |
| 15              | 16QAM      | 36      | 20        | 21.02       | 21.16          | 20.93        | 22                  |
| 15              | 16QAM      | 36      | 39        | 21.04       | 21.06          | 20.91        |                     |
| 15              | 16QAM      | 75      | 0         | 21.00       | 20.95          | 20.89        |                     |
| 15              | 64QAM      | 1       | 0         | 20.46       | 20.35          | 20.51        |                     |
| 15              | 64QAM      | 1       | 37        | 20.34       | 20.35          | 20.33        | 21                  |
| 15              | 64QAM      | 1       | 74        | 20.29       | 20.37          | 20.54        |                     |
| 15              | 64QAM      | 36      | 0         | 20.21       | 20.36          | 20.29        |                     |
| 15              | 64QAM      | 36      | 20        | 20.49       | 20.35          | 20.23        | 21                  |
| 15              | 64QAM      | 36      | 39        | 20.33       | 20.33          | 20.34        |                     |
| 15              | 64QAM      | 75      | 0         | 20.51       | 20.33          | 20.37        |                     |
| Channel         |            |         |           | 37800       | 38000          | 38200        |                     |
| Frequency (MHz) |            |         |           | 2575        | 2595           | 2615         |                     |
| 10              | QPSK       | 1       | 0         | 21.97       | 21.98          | 21.98        | 23                  |
| 10              | QPSK       | 1       | 25        | 21.97       | 21.77          | 21.97        |                     |
| 10              | QPSK       | 1       | 49        | 21.91       | 21.93          | 21.96        |                     |
| 10              | QPSK       | 25      | 0         | 21.06       | 20.92          | 20.92        | 22                  |
| 10              | QPSK       | 25      | 12        | 21.26       | 21.22          | 20.93        |                     |
| 10              | QPSK       | 25      | 25        | 21.27       | 21.29          | 20.89        |                     |
| 10              | QPSK       | 50      | 0         | 21.28       | 21.20          | 20.92        |                     |
| 10              | 16QAM      | 1       | 0         | 21.14       | 20.91          | 21.22        | 22                  |
| 10              | 16QAM      | 1       | 25        | 21.02       | 20.92          | 21.32        |                     |
| 10              | 16QAM      | 1       | 49        | 21.39       | 20.95          | 21.04        |                     |
| 10              | 16QAM      | 25      | 0         | 20.89       | 21.00          | 20.96        |                     |
| 10              | 16QAM      | 25      | 12        | 21.19       | 20.89          | 21.02        | 22                  |
| 10              | 16QAM      | 25      | 25        | 20.89       | 21.03          | 21.08        |                     |
| 10              | 16QAM      | 50      | 0         | 21.01       | 21.05          | 20.97        |                     |
| 10              | 64QAM      | 1       | 0         | 20.36       | 20.39          | 20.32        |                     |
| 10              | 64QAM      | 1       | 25        | 20.27       | 20.52          | 20.42        | 21                  |
| 10              | 64QAM      | 1       | 49        | 20.63       | 20.37          | 20.42        |                     |
| 10              | 64QAM      | 25      | 0         | 20.22       | 20.22          | 20.32        |                     |
| 10              | 64QAM      | 25      | 12        | 20.22       | 20.42          | 20.43        | 21                  |
| 10              | 64QAM      | 25      | 25        | 20.18       | 20.38          | 20.34        |                     |
| 10              | 64QAM      | 50      | 0         | 20.24       | 20.40          | 20.30        |                     |
| Channel         |            |         |           | 37775       | 38000          | 38225        |                     |
| Frequency (MHz) |            |         |           | 2572.5      | 2595           | 2617.5       |                     |
| 5               | QPSK       | 1       | 0         | 21.92       | 21.93          | 21.96        | 23                  |
| 5               | QPSK       | 1       | 12        | 21.77       | 21.98          | 21.96        |                     |
| 5               | QPSK       | 1       | 24        | 21.77       | 21.76          | 21.75        |                     |
| 5               | QPSK       | 12      | 0         | 21.19       | 21.67          | 21.26        | 22                  |
| 5               | QPSK       | 12      | 7         | 21.33       | 21.32          | 21.32        |                     |
| 5               | QPSK       | 12      | 13        | 21.21       | 21.23          | 21.25        |                     |
| 5               | QPSK       | 25      | 0         | 21.25       | 21.26          | 20.92        |                     |
| 5               | 16QAM      | 1       | 0         | 21.43       | 21.54          | 21.44        | 22                  |
| 5               | 16QAM      | 1       | 12        | 21.04       | 21.22          | 20.92        |                     |
| 5               | 16QAM      | 1       | 24        | 21.04       | 21.05          | 21.04        |                     |
| 5               | 16QAM      | 12      | 0         | 21.05       | 21.10          | 21.04        |                     |
| 5               | 16QAM      | 12      | 7         | 21.04       | 21.06          | 21.04        | 22                  |
| 5               | 16QAM      | 12      | 13        | 20.95       | 21.07          | 21.04        |                     |
| 5               | 16QAM      | 25      | 0         | 21.22       | 20.94          | 21.12        |                     |
| 5               | 64QAM      | 1       | 0         | 20.33       | 20.66          | 20.27        |                     |
| 5               | 64QAM      | 1       | 12        | 20.60       | 20.60          | 20.67        | 21                  |
| 5               | 64QAM      | 1       | 24        | 20.60       | 20.60          | 20.57        |                     |
| 5               | 64QAM      | 12      | 0         | 20.28       | 20.40          | 20.36        |                     |
| 5               | 64QAM      | 12      | 7         | 20.37       | 20.38          | 20.29        | 21                  |
| 5               | 64QAM      | 12      | 13        | 20.36       | 20.39          | 20.26        |                     |
| 5               | 64QAM      | 25      | 0         | 20.40       | 20.42          | 20.33        |                     |



# Reduced Power Level 6

|             | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 2.4GHz WLAN | 802.11b 1Mbps       | CH 1    | 2412            | 13.50               | 15.00         | 13.00         | 98.79        |
|             |                     | CH 6    | 2437            | 12.67               | 14.00         | 13.00         |              |
|             |                     | CH 11   | 2462            | <b>13.77</b>        | 15.00         | 13.00         |              |
|             | 802.11g 6Mbps       | CH 1    | 2412            | 12.20               | 14.00         | 12.00         | 97.58        |
|             |                     | CH 6    | 2437            | 11.49               | 13.00         | 12.00         |              |
|             |                     | CH 11   | 2462            | 12.62               | 14.00         | 12.00         |              |
|             | 802.11n-HT20 MCS0   | CH 1    | 2412            | 12.02               | 14.00         | 12.00         | 97.92        |
|             |                     | CH 6    | 2437            | 11.54               | 13.00         | 12.00         |              |
|             |                     | CH 11   | 2462            | 12.36               | 14.00         | 12.00         |              |
|             | 802.11n-HT40 MCS0   | CH 3    | 2422            | 12.12               | 14.00         | 12.00         | 97.66        |
|             |                     | CH 6    | 2437            | <b>12.89</b>        | 14.00         | 12.00         |              |
|             |                     | CH 9    | 2452            | 12.56               | 14.00         | 12.00         |              |
|             | 802.11ac-VHT20 MCS0 | CH 1    | 2412            | 12.04               | 14.00         | 12.00         | 97.68        |
|             |                     | CH 6    | 2437            | 11.55               | 13.00         | 12.00         |              |
|             |                     | CH 11   | 2462            | 12.44               | 14.00         | 12.00         |              |
|             | 802.11ac-VHT40 MCS0 | CH 3    | 2422            | 12.14               | 14.00         | 12.00         | 89.50        |
|             |                     | CH 6    | 2437            | <b>12.91</b>        | 14.00         | 12.00         |              |
|             |                     | CH 9    | 2452            | 12.67               | 14.00         | 12.00         |              |

|             | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.2GHz WLAN | 802.11a 6Mbps       | CH 36   | 5180            | 8.95                | 10.50         | 10.0          | 97.82        |
|             |                     | CH 44   | 5220            | <b>9.44</b>         | 10.50         | 10.0          |              |
|             |                     | CH 48   | 5240            | 9.12                | 10.50         | 10.0          |              |
|             | 802.11n-HT20 MCS0   | CH 36   | 5180            | 8.99                | 10.50         | 10.0          | 97.92        |
|             |                     | CH 44   | 5220            | <b>9.13</b>         | 10.50         | 10.0          |              |
|             |                     | CH 48   | 5240            | 9.01                | 10.50         | 10.0          |              |
|             | 802.11n-HT40 MCS0   | CH 38   | 5190            | 9.21                | 10.50         | 10.0          | 90.31        |
|             |                     | CH 46   | 5230            | <b>9.38</b>         | 10.50         | 10.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 36   | 5180            | 8.86                | 10.50         | 10.0          | 97.93        |
|             |                     | CH 44   | 5220            | <b>8.97</b>         | 10.50         | 10.0          |              |
|             |                     | CH 48   | 5240            | 8.91                | 10.50         | 10.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 38   | 5190            | 9.37                | 10.50         | 10.0          | 91.75        |
|             |                     | CH 46   | 5230            | <b>9.41</b>         | 10.50         | 10.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 42   | 5210            | <b>9.42</b>         | 10.50         | 10.0          | 95.36        |

|             | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.3GHz WLAN | 802.11a 6Mbps       | CH 52   | 5260            | 9.43                | 10.50         | 10.0          | 97.82        |
|             |                     | CH 60   | 5300            | 10.30               | 11.50         | 10.0          |              |
|             |                     | CH 64   | 5320            | <b>10.45</b>        | 11.50         | 10.0          |              |
|             | 802.11n-HT20 MCS0   | CH 52   | 5260            | 9.27                | 10.50         | 10.0          | 97.92        |
|             |                     | CH 60   | 5300            | 10.04               | 11.50         | 10.0          |              |
|             |                     | CH 64   | 5320            | <b>10.22</b>        | 11.50         | 10.0          |              |
|             | 802.11n-HT40 MCS0   | CH 54   | 5270            | 9.82                | 11.50         | 10.0          | 90.31        |
|             |                     | CH 62   | 5310            | <b>10.34</b>        | 11.50         | 10.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 52   | 5260            | 9.17                | 10.50         | 10.0          | 97.93        |
|             |                     | CH 60   | 5300            | 9.96                | 11.50         | 10.0          |              |
|             |                     | CH 64   | 5320            | <b>10.19</b>        | 11.50         | 10.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 54   | 5270            | 9.75                | 11.50         | 10.0          | 91.75        |
|             |                     | CH 62   | 5310            | <b>10.39</b>        | 11.50         | 10.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 58   | 5290            | <b>10.09</b>        | 11.50         | 10.0          | 95.36        |

|             | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.5GHz WLAN | 802.11a 6Mbps       | CH 100  | 5500            | <b>10.43</b>        | 11.50         | 10.0          | 97.82        |
|             |                     | CH 120  | 5600            | 9.40                | 10.50         | 10.0          |              |
|             |                     | CH 144  | 5720            | 9.72                | 11.50         | 10.0          |              |
|             | 802.11n-HT20 MCS0   | CH 100  | 5500            | <b>10.31</b>        | 11.50         | 10.0          | 97.92        |
|             |                     | CH 120  | 5600            | 9.27                | 10.50         | 10.0          |              |
|             |                     | CH 144  | 5720            | 9.61                | 11.50         | 10.0          |              |
|             | 802.11n-HT40 MCS0   | CH 102  | 5510            | <b>10.25</b>        | 11.50         | 10.0          | 90.31        |
|             |                     | CH 126  | 5630            | 9.46                | 10.50         | 10.0          |              |
|             |                     | CH 142  | 5710            | 9.86                | 11.50         | 10.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 100  | 5500            | <b>10.16</b>        | 11.50         | 10.0          | 97.93        |
|             |                     | CH 120  | 5600            | 9.12                | 10.50         | 10.0          |              |
|             |                     | CH 144  | 5720            | 9.58                | 11.50         | 10.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 102  | 5510            | <b>10.19</b>        | 11.50         | 10.0          | 91.75        |
|             |                     | CH 126  | 5630            | 9.14                | 10.50         | 10.0          |              |
|             |                     | CH 142  | 5710            | 9.94                | 11.50         | 10.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 106  | 5530            | <b>9.93</b>         | 11.50         | 10.0          | 95.36        |
|             |                     | CH 122  | 5610            | 9.23                | 10.50         | 10.0          |              |
|             |                     | CH 138  | 5690            | 9.80                | 11.50         | 10.0          |              |

|             | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
| 5.8GHz WLAN | 802.11a 6Mbps       | CH 149  | 5745            | <b>8.98</b>         | 10.50         | 9.0           | 97.82        |
|             |                     | CH 157  | 5785            | 8.76                | 10.50         | 9.0           |              |
|             |                     | CH 165  | 5825            | 7.89                | 9.50          | 9.0           |              |
|             | 802.11n-HT20 MCS0   | CH 149  | 5745            | <b>8.84</b>         | 10.50         | 9.0           | 97.92        |
|             |                     | CH 157  | 5785            | 8.63                | 10.50         | 9.0           |              |
|             |                     | CH 165  | 5825            | 7.66                | 9.50          | 9.0           |              |
|             | 802.11n-HT40 MCS0   | CH 151  | 5755            | <b>8.75</b>         | 10.50         | 9.0           | 90.31        |
|             |                     | CH 159  | 5795            | 8.61                | 10.50         | 9.0           |              |
|             | 802.11ac-VHT20 MCS0 | CH 149  | 5745            | <b>8.78</b>         | 10.50         | 9.0           | 97.93        |
|             |                     | CH 157  | 5785            | 8.56                | 10.50         | 9.0           |              |
|             |                     | CH 165  | 5825            | 7.73                | 9.50          | 9.0           |              |
|             | 802.11ac-VHT40 MCS0 | CH 151  | 5755            | <b>8.81</b>         | 10.50         | 9.0           | 91.75        |
|             |                     | CH 159  | 5795            | 8.64                | 10.50         | 9.0           |              |
|             | 802.11ac-VHT80 MCS0 | CH 155  | 5775            | <b>8.84</b>         | 10.50         | 9.0           | 95.36        |

### Reduced Power Level 7

| 5.2GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 36   | 5180            | 11.95               | 13.50         | 13.0          | 97.82        |
|             |                     | CH 44   | 5220            | <b>12.44</b>        | 13.50         | 13.0          |              |
|             |                     | CH 48   | 5240            | 12.12               | 13.50         | 13.0          |              |
|             | 802.11n-HT20 MCS0   | CH 36   | 5180            | 11.99               | 13.50         | 13.0          | 97.92        |
|             |                     | CH 44   | 5220            | <b>12.13</b>        | 13.50         | 13.0          |              |
|             |                     | CH 48   | 5240            | 12.01               | 13.50         | 13.0          |              |
|             | 802.11n-HT40 MCS0   | CH 38   | 5190            | 12.21               | 13.50         | 13.0          | 90.31        |
|             |                     | CH 46   | 5230            | <b>12.38</b>        | 13.50         | 13.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 36   | 5180            | 11.86               | 13.50         | 13.0          | 97.93        |
|             |                     | CH 44   | 5220            | <b>11.97</b>        | 13.50         | 13.0          |              |
|             |                     | CH 48   | 5240            | 11.91               | 13.50         | 13.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 38   | 5190            | 12.37               | 13.50         | 13.0          | 91.75        |
|             |                     | CH 46   | 5230            | <b>12.41</b>        | 13.50         | 13.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 42   | 5210            | <b>12.42</b>        | 13.50         | 13.0          | 95.36        |

| 5.8GHz WLAN | Mode                | Channel | Frequency (MHz) | Average power (dBm) | Tune-Up Limit | Power Setting | Duty Cycle % |
|-------------|---------------------|---------|-----------------|---------------------|---------------|---------------|--------------|
|             | 802.11a 6Mbps       | CH 149  | 5745            | <b>11.98</b>        | 13.50         | 12.0          | 97.82        |
|             |                     | CH 157  | 5785            | 11.76               | 13.50         | 12.0          |              |
|             |                     | CH 165  | 5825            | 10.89               | 12.50         | 12.0          |              |
|             | 802.11n-HT20 MCS0   | CH 149  | 5745            | <b>11.84</b>        | 13.50         | 12.0          | 97.92        |
|             |                     | CH 157  | 5785            | 11.63               | 13.50         | 12.0          |              |
|             |                     | CH 165  | 5825            | 10.66               | 12.50         | 12.0          |              |
|             | 802.11n-HT40 MCS0   | CH 151  | 5755            | <b>11.75</b>        | 13.50         | 12.0          | 90.31        |
|             |                     | CH 159  | 5795            | 11.61               | 13.50         | 12.0          |              |
|             | 802.11ac-VHT20 MCS0 | CH 149  | 5745            | <b>11.78</b>        | 13.50         | 12.0          | 97.93        |
|             |                     | CH 157  | 5785            | 11.56               | 13.50         | 12.0          |              |
|             |                     | CH 165  | 5825            | 10.73               | 12.50         | 12.0          |              |
|             | 802.11ac-VHT40 MCS0 | CH 151  | 5755            | <b>11.81</b>        | 13.50         | 12.0          | 91.75        |
|             |                     | CH 159  | 5795            | 11.64               | 13.50         | 12.0          |              |
|             | 802.11ac-VHT80 MCS0 | CH 155  | 5775            | <b>11.84</b>        | 13.50         | 12.0          | 95.36        |