

| <b>Link Parameters</b>                        | <b>Units</b> | <b>346KG7W</b> | <b>461KG7W</b> | <b>1M84G7W</b> | <b>8M25G7W</b> |
|---|--------------|----------------|----------------|----------------|----------------|
| Uplink Frequency                              | GHz          | 14.125         | 14.125         | 14.125         | 14.125         |
| Downlink Frequency                            | GHz          | 11.830         | 11.830         | 11.830         | 11.830         |
| Carrier Allocated Bandwidth                   | kHz          | 346.0          | 461.0          | 1840.0         | 8250.0         |
| <b>Uplink:</b>                                |              |                |                |                |                |
| Noise BW (or energy dispersal for TV/FM)      | kHz          | 256            | 341.3          | 1365.3         | 6111.3         |
| Nominal E/S e.i.r.p. per carrier              | dBW          | 55.5           | 58.0           | 64.1           | 68.2           |
| Earth Station Diameter                        | m            | 4.5            | 3.7            | 11.0           | 4.5            |
| Earth Station Gain                            | dBi          | 54.5           | 52.8           | 62.4           | 54.5           |
| Uplink Input Power per Carrier                | dBW          | 1.0            | 5.2            | 1.7            | 13.7           |
| Free Space Loss                               | dB           | 207.5          | 207.5          | 207.5          | 207.5          |
| G/T Satellite                                 | dB/K         | 4.0            | 4.0            | 4.0            | 4.0            |
| C/N Thermal Uplink                            | dB           | 26.5           | 27.8           | 27.8           | 25.4           |
| C/I XPOL, ACI, IM, ASI                        | dB           | 27.5           | 28.7           | 28.8           | 26.4           |
| C/(N+I) uplink                                | dB           | 24.0           | 25.2           | 25.3           | 22.9           |
| <b>Downlink:</b>                              |              |                |                |                |                |
| Satellite e.i.r.p. per carrier (-4dB contour) | dBW          | 22.5           | 25.0           | 31.1           | 35.2           |
| Max e.i.r.p. Density                          | dBW/4KHz     | 8.4            | 9.7            | 9.7            | 7.3            |
| Max PFD                                       | dBW/m2/4kHz  | -153.7         | -152.4         | -152.4         | -154.8         |
| Free Space Loss                               | dB           | 206.1          | 206.1          | 206.1          | 206.1          |
| Earth Station Diameter                        | m            | 1.8            | 2.4            | 2.4            | 2.4            |
| Earth Station Gain                            | dBi          | 45.3           | 47.8           | 47.8           | 47.8           |
| Noise Temperature                             | kHz          | 160.0          | 160.0          | 160.0          | 160.0          |
| Earth Station G/T                             | dB/K         | 23.3           | 25.8           | 25.8           | 25.8           |
| C/N Thermal Downlink                          | dB           | 14.2           | 17.9           | 18.0           | 15.6           |
| C/I XPOL, ACI, IM, ASI                        | dB           | 18.8           | 22.5           | 22.6           | 20.2           |
| C/(N+I) downlink                              | dB           | 12.9           | 16.6           | 16.7           | 14.3           |
| <b>Adjacent satellite interference:</b>       |              |                |                |                |                |
| uplink input power dens @ 2 deg               | dBW/Hz       | -50            | -50            | -50            | -50            |
| downlink eirp dens @ 2 deg                    | dBW/Hz       | -26            | -26            | -26            | -26            |
| C/I up  | dB           | 30.47          | 31.72          | 31.80          | 29.39          |
| C/I dn  | dB           | 21.77          | 25.52          | 25.60          | 23.19          |
| Aggregate C/I up                              | dB           | 27.47          | 28.72          | 28.80          | 26.39          |
| Aggregate C/I dn                              | dB           | 18.77          | 22.52          | 22.60          | 20.19          |
| <b>Overall:</b>                               |              |                |                |                |                |
| C/(N+I) overall                               | dB           | 12.6           | 16.1           | 16.1           | 13.7           |
| C/(N+I) required                              | dB           | 6.0            | 9.3            | 9.3            | 6.9            |
| System Margin                                 | dB           | 6.6            | 6.8            | 6.8            | 6.8            |

| <b>72M0G7W</b> | <b>36M0F3F</b> |
|----------------|----------------|
| 14.125         | 14.125         |
| 11.830         | 11.830         |
| 72000.0        | 36000.0        |
|                |                |
| 63330          | 2000.0         |
| 82.9           | 78.4           |
| 13.0           | 13.0           |
| 62.4           | 63.9           |
| 20.5           | 14.5           |
| 207.5          | 207.5          |
| 4.0            | 4.0            |
| 30.0           | 27.9           |
| 30.9           | 28.9           |
| 27.4           | 25.4           |
|                |                |
| 47.9           | 37.1           |
| 9.9            | 14.1           |
| -152.2         | -148.0         |
| 206.1          | 205.6          |
| 3.7            | 4.5            |
| 51.6           | 52.5           |
| 160.0          | 160.0          |
| 29.6           | 30.5           |
| 21.9           | 15.0           |
| 26.5           | 19.1           |
| 20.6           | 13.6           |
|                |                |
| -50            | -50            |
| -26            | -26            |
| 33.94          | 31.89          |
| 29.54          | 22.09          |
| 30.94          | 28.89          |
| 26.54          | 19.09          |
|                |                |
| 19.8           | 13.3           |
| 12.7           | 10.0           |
| 7.1            | 3.3            |