

| Link Parameters                               | Units       | 346KG7W | 461KG7W | 1M84G7W | 8M25G7W |
|---|-------------|---------|---------|---------|---------|
| Uplink Frequency                              | GHz         | 14.205  | 14.205  | 14.205  | 14.205  |
| Downlink Frequency                            | GHz         | 3.905   | 3.905   | 3.905   | 3.905   |
| 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         | 49.6    | 51.1    | 57.7    | 63.4    |
| Earth Station Diameter                        | m           | 1.8     | 2.4     | 3.7     | 2.4     |
| Earth Station Gain                            | dBi         | 49.6    | 49.1    | 52.9    | 49.1    |
| Uplink Input Power per Carrier                | dBW         | 0.0     | 2.0     | 4.8     | 14.3    |
| Free Space Loss                               | dB          | 207.7   | 207.7   | 207.7   | 207.7   |
| G/T Satellite                                 | dB/K        | 5.0     | 5.0     | 5.0     | 5.0     |
| C/N Thermal Uplink                            | dB          | 21.4    | 21.7    | 22.2    | 21.4    |
| C/I XPOL, ACI, IM, ASI                        | dB          | 21.6    | 21.8    | 22.4    | 21.6    |
| C/(N+I) uplink                                | dB          | 18.5    | 18.7    | 19.3    | 18.5    |
| <b>Downlink:</b>                              |             |         |         |         |         |
| Satellite e.i.r.p. per carrier (-5dB contour) | dBW         | 10.6    | 12.2    | 18.7    | 24.4    |
| Max e.i.r.p. Density                          | dBW/4KHz    | -2.5    | -2.1    | -1.7    | -2.5    |
| Max PFD                                       | dBW/m2/4kHz | -164.6  | -164.2  | -163.8  | -164.6  |
| Free Space Loss                               | dB          | 196.1   | 196.1   | 196.1   | 196.1   |
| Earth Station Diameter                        | m           | 3.8     | 5.6     | 5.6     | 4.5     |
| Earth Station Gain                            | dBi         | 42.4    | 45.9    | 45.9    | 43.8    |
| Noise Temperature                             | kHz         | 95.0    | 95.0    | 95.0    | 95.0    |
| Earth Station G/T                             | dB/K        | 22.6    | 26.1    | 26.1    | 24.0    |
| C/N Thermal Downlink                          | dB          | 11.6    | 15.5    | 16.0    | 13.1    |
| C/I XPOL, ACI, IM, ASI                        | dB          | 15.0    | 18.8    | 19.3    | 16.4    |
| C/(N+I) downlink                              | dB          | 10.0    | 13.8    | 14.3    | 11.4    |
| <b>Adjacent satellite interference:</b>       |             |         |         |         |         |
| uplink input power dens @ 2 deg               | dBW/Hz      | -50     | -50     | -50     | -50     |
| downlink eirp dens @ 2 deg                    | dBW/Hz      | -37     | -37     | -37     | -37     |
| C/I up  | dB          | 24.57   | 24.82   | 25.40   | 24.59   |
| C/I dn  | dB          | 17.97   | 21.82   | 22.30   | 19.39   |
| Aggregate C/I up                              | dB          | 21.57   | 21.82   | 22.40   | 21.59   |
| Aggregate C/I dn                              | dB          | 14.97   | 18.82   | 19.30   | 16.39   |
| <b>Overall:</b>                               |             |         |         |         |         |
| C/(N+I) overall                               | dB          | 9.4     | 12.6    | 13.1    | 10.6    |
| C/(N+I) required                              | dB          | 6.0     | 9.3     | 9.3     | 6.9     |
| System Margin                                 | dB          | 3.4     | 3.3     | 3.8     | 3.7     |

| <b>72M0G7W</b> | <b>36M0F3F</b> |
|----------------|----------------|
| 14.205         | 14.205         |
| 3.905          | 3.905          |
| 72000.0        | 36000.0        |
|                |                |
| 63330          | 2000.0         |
| 80.6           | 72.4           |
| 5.6            | 5.6            |
| 56.5           | 56.5           |
| 24.1           | 15.9           |
| 207.7          | 207.7          |
| 5.0            | 5.0            |
| 28.5           | 22.7           |
| 28.6           | 22.9           |
| 25.6           | 19.8           |
|                |                |
| 32.0           | 28.4           |
| -5.0           | 6.4            |
| -167.1         | -155.7         |
| 196.1          | 196.1          |
| 9.0            | 9.0            |
| 50.0           | 50.0           |
| 95.0           | 95.0           |
| 30.2           | 30.2           |
| 16.7           | 15.6           |
| 20.0           | 18.9           |
| 15.1           | 13.9           |

|       |       |
|-------|-------|
| -50   | -50   |
| -37   | -37   |
| 31.64 | 25.89 |
| 23.04 | 21.89 |
| 28.64 | 22.89 |
| 20.04 | 18.89 |
|       |       |
| 14.7  | 12.9  |
| 12.7  | 10.0  |
| 2.0   | 2.9   |