



|   |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| <b>(C/I)<sub>Up-Intrasystem</sub> (dB)</b>                                  | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| <b>(C/I)<sub>Up-ASI</sub> (dB)</b>  | 32.2 | 24.2 | 20.7 | 26.7 | 26.7 | 32.2 | 36.0 |
| <b>(C/N)<sub>Uplink Thermal</sub> (dB)</b>                                  | 27.5 | 19.6 | 16.1 | 22.1 | 22.1 | 27.5 | 31.4 |
| <b>C/(N<sub>thermal</sub>+N<sub>ASI</sub>+N<sub>intrasystem</sub>) (dB)</b> | 24.7 | 18.0 | 14.7 | 20.3 | 20.3 | 24.7 | 27.0 |

**Downlink parameters**

|   | <b>D1</b> | <b>D2</b> | <b>D3</b> | <b>D4</b> | <b>D5</b> | <b>D6</b> | <b>D7</b> |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Downlink Frequency (MHz)</b>   | 12000     | 12000     | 12000     | 12000     | 12000     | 12000     | 12000     |
| <b>Beam peak EIRP density (dBW/Hz)</b>                                      | -26       | -26       | -26       | -26       | -26       | -26       | -26       |
| <b>Downlink EIRP/Carrier (dBW)</b>  | 21.48     | 29.29     | 34.25     | 36.55     | 42.67     | 49.56     | 51.22     |
| <b>Edge of coverage USA (dB)</b>  | 3.0       | 6.0       | 6.0       | 6.0       | 6.0       | 3.0       | 6.0       |
| <b>Downlink EIRP/Carrier at EOC (dBW)</b>                                   | 18.48     | 23.29     | 28.25     | 30.55     | 36.67     | 46.56     | 45.22     |
| <b>Rx E/S Antenna Diameter (Metres)</b>                                     | 0.90      | 1.80      | 4.50      | 1.80      | 2.40      | 0.90      | 1.80      |
| <b>Rx Antenna Efficiency</b>  | 0.65      | 0.65      | 0.65      | 0.65      | 0.65      | 0.65      | 0.65      |
| <b>Rx Antenna Gain (dB)</b>   | 39.2      | 45.2      | 53.2      | 45.2      | 47.7      | 39.2      | 45.2      |
| <b>Rx System Noise temp (K)</b>   | 110.0     | 110.0     | 110.0     | 110.0     | 110.0     | 110.0     | 110.0     |
| <b>Rx E/S G/T (dB/K)</b>  | 18.8      | 24.8      | 32.8      | 24.8      | 27.3      | 18.8      | 24.8      |
| <b>Antenna mispointing error (dB)</b>                                       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       | 0.5       |
| <b>Atmospheric loss (dB)</b>  | 0.3       | 0.3       | 0.3       | 0.3       | 0.3       | 0.3       | 0.3       |
| <b>Downlink Path loss (dB)</b>  | 206.4     | 206.4     | 206.4     | 206.4     | 206.4     | 206.4     | 206.4     |
| <b>Downlink Rain Attenuation (dB)</b>                                       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       | 0.0       |
| <b>(C/I)<sub>Dn Intra-system</sub> (dB)</b>                                 | 30.0      | 30.0      | 30.0      | 30.0      | 30.0      | 30.0      | 30.0      |
| <b>(C/I)<sub>Down-ASI</sub> (dB)</b>  | 16.9      | 22.9      | 30.9      | 22.9      | 25.4      | 16.9      | 22.9      |
| <b>(C/N)<sub>Downlink Thermal</sub> (dB)</b>                                | 11.1      | 14.2      | 22.1      | 14.2      | 16.7      | 11.2      | 14.2      |
| <b>C/(N<sub>thermal</sub>+N<sub>ASI</sub>+N<sub>intrasystem</sub>) (dB)</b> | 10.1      | 13.5      | 21.0      | 13.5      | 15.9      | 10.1      | 13.5      |

**End-to-End**

|                                     | <b>D1</b> | <b>D2</b> | <b>D3</b> | <b>D4</b> | <b>D5</b> | <b>D6</b> | <b>D7</b> |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>(C/N+I) - Total Actual (dB)</b>  | 9.9       | 12.2      | 13.8      | 12.7      | 14.6      | 9.9       | 13.4      |
| <b>(C/N+I) - Total Required(dB)</b> | 7.4       | 7.4       | 10.8      | 7.4       | 9.9       | 5.6       | 8.7       |
| <b>Margin (dB)</b>                  | 2.5       | 4.8       | 3.0       | 5.3       | 4.7       | 4.3       | 4.7       |