

| <b>Link Parameters</b>                        | <b>Units</b> | <b>17M9G7W</b> |
|---|--------------|----------------|
| Uplink frequency                              | GHz          | 13.88          |
| Downlink frequency                            | GHz          | 11.07          |
| User data rate                                | kbit/s       | 19112          |
| Modulation                                    |              | QPSK           |
| Total coding rate                             |              | 0.641          |
| Carrier bandwidth                             | kHz          | 17900          |
| <b>Uplink:</b>                                |              |                |
| Nominal E/S e.i.r.p. per carrier              | dBW          | 65.8           |
| Earth station diameter                        | m            | 4.5            |
| Earth station gain                            | dBi          | 54.5           |
| Uplink input power per carrier                | dBW          | 11.3           |
| Uplink input power density                    | dBW/Hz       | -61.2          |
| Atmospheric loss                              | dB           | 0.2            |
| Free space path loss                          | dB           | 207.0          |
| G/T satellite (-3dB contour)                  | dB/K         | 3.9            |
| C/N thermal uplink                            | dB           | 18.5           |
| C/I XPOL, ACI, IM, ASI                        | dB           | 20.1           |
| C/(N+I) uplink                                | dB           | 16.2           |
| <b>Downlink:</b>                              |              |                |
| Satellite e.i.r.p. per carrier (-3dB contour) | dBW          | 40.7           |
| Atmospheric loss                              | dB           | 0.1            |
| Free space path loss                          | dB           | 205.0          |
| Earth station diameter                        | m            | 1.5            |
| Earth station gain                            | dBi          | 43.0           |
| Noise temperature                             | K            | 105.0          |
| Earth station G/T                             | dB/K         | 22.8           |
| C/N thermal downlink                          | dB           | 14.4           |
| C/I XPOL, ACI, IM, ASI                        | dB           | 12.7           |
| C/(N+I) downlink                              | dB           | 8.4            |
| <b>Overall:</b>                               |              |                |
| C/(N+I) overall                               | dB           | 7.8            |
| C/(N+I) required                              | dB           | 3.9            |
| Margin  | dB           | 3.9            |