

**Table A.12-13 – Link Budget for Communication Return Link to
Class-1 User Terminal (200 kHz carrier; Spot Beam)**

| General | Unit | |
|--|------------|----------------|
| User terminal type | - | Class-1 |
| Modulation ID / Designator | - | C1RT / 200KD7W |
| Data rate (kbps) | (kbps) | 492.8 |
| Coding rate | - | 0.852 |
| Modulation | - | 16-QAM |
| Carrier bandwidth | (kHz) | 189 |
| Allocated bandwidth | (kHz) | 200 |
| Uplink | | |
| Frequency | (GHz) | 1.6 |
| User terminal elevation angle | (deg) | 90 |
| User terminal EIRP towards satellite | (dBW) | 21.0 |
| Path loss | (dB) | 188.9 |
| Atmospheric loss | (dB) | 0.1 |
| Satellite G/T | (dB/K) | 12.7 |
| Boltzmann Constant | (dBW/K/Hz) | -228.6 |
| Adjacent Channel Interference | (dB) | 0.2 |
| Up-path C/No | (dBHz) | 73.1 |
| Downlink | | |
| Frequency | (GHz) | 3.6 |
| SAS elevation angle | (deg) | 5 |
| Satellite EIRP | (dBW) | 14.5 |
| Path loss | (dB) | 195.7 |
| Atmospheric loss | (dB) | 0.4 |
| SAS G/T | (dB/K) | 32.3 |
| Boltzmann Constant | (dBW/K/Hz) | -228.6 |
| Random Loss (99%) | (dB) | 0.5 |
| Down-path C/No | (dBHz) | 78.8 |
| Total | | |
| Mean satellite C/IMo | (dBHz) | 83.0 |
| Co-Channel Interference | (dBHz) | 78.9 |
| Adjacent satellite interference allocation | (dB) | 1.0 |
| Mean Overall C/No | (dBHz) | 70.0 |
| Mean Overall C/N | (dB) | 17.2 |
| Margin | | |
| C/N objective | (dB) | 12.7 |
| C/N margin | (dB) | 4.5 |