

**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