Parameter	Unit	
Carrier bandwidth	kHz	41.6
Uplink		
Uplink Frequency	GHz	29.6
E/S antenna pointing error	dB	0.5
Clear-sky uplink EIRP	dBW	50.0
Rain-faded uplink EIRP	dBW	67.0
Uplink rain attenuation	dB	17.0
Atmospheric Loss	dB	0.3
Uplink path loss	dB	213.4
Satellite G/T (beam peak)	dB/K	17.3
Uplink C/N_o	dBHz	82.2
Uplink $C/I_{o\ ASI}$	dBHz	81.6
Uplink $C/I_{o\ Intra-system}$	dBHz	54.2
Downlink		
Downlink Frequency	GHz	19.7
Downlink EIRP (beam peak)	dBW	24.0
Atmospheric Loss	dB	0.4
Downlink rain loss	dB	10.0
Downlink path loss	dB	209.8
E/S G/T	dB/K	42.3
E/S G/T degradation due to rain	dB	3.1
Downlink C/N_o	dBHz	71.6
Downlink $C/I_{o\ Intra-system}$	dBHz	63.3
Downlink $C/I_{o\ ASI}$	dBHz	82.3
End-to-End		
Overall C/N+I	dB	7.4
C/N required	dB	1.8
System margin	dB	5.6