

Link Parameters	Units	445KG7W
Uplink frequency	GHz	13.88
Downlink frequency	GHz	11.07
User data rate	kbit/s	512
Modulation		QPSK
Total coding rate		0.691
Carrier bandwidth	kHz	445
Uplink:		
Nominal E/S e.i.r.p. per carrier	dBW	50.0
Earth station diameter	m	4.5
Earth station gain	dBi	54.5
Uplink input power per carrier	dBW	-4.5
Uplink input power density	dBW/Hz	-61.0
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	18.8
C/I XPOL, ACI, IM, ASI	dB	19.6
C/(N+I) uplink	dB	16.2
Downlink:		
Satellite e.i.r.p. per carrier (-3dB contour)	dBW	31.5
Atmospheric loss	dB	0.1
Free space path loss	dB	205.0
Earth station diameter	m	1.2
Earth station gain	dBi	41.0
Noise temperature	K	105.0
Earth station G/T	dB/K	20.8
C/N thermal downlink	dB	19.3
C/I XPOL, ACI, IM, ASI	dB	15.8
C/(N+I) downlink	dB	14.2
Overall:		
C/(N+I) overall	dB	12.1
C/(N+I) required	dB	5.7
Margin	dB	6.4