

Link Parameters	Units	1M78G7W
Uplink frequency	GHz	13.88
Downlink frequency	GHz	11.07
User data rate	kbit/s	2048
Modulation		QPSK
Total coding rate		0.691
Carrier bandwidth	kHz	1778
Uplink:		
Nominal E/S e.i.r.p. per carrier	dBW	55.8
Earth station diameter	m	4.5
Earth station gain	dBi	54.5
Uplink input power per carrier	dBW	1.3
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	4.7
C/N thermal uplink	dB	19.4
C/I XPOL, ACI, IM, ASI	dB	19.7
C/(N+I) uplink	dB	16.6
Downlink:		
Satellite e.i.r.p. per carrier (-3dB contour)	dBW	30.7
Atmospheric loss	dB	0.1
Free space path loss	dB	205.0
Earth station diameter	m	1.8
Earth station gain	dBi	44.5
Noise temperature	K	105.0
Earth station G/T	dB/K	24.3
C/N thermal downlink	dB	16.0
C/I XPOL, ACI, IM, ASI	dB	13.9
C/(N+I) downlink	dB	9.9
Overall:		
C/(N+I) overall	dB	9.0
C/(N+I) required	dB	5.7
Margin	dB	3.3