

Table A.13-3. Representative Regional Forward Link Budget (60M0G7W)

Link Parameters	Clear Sky
Carrier	
Data Rate (Mbps)	69.100
Modulation	QPSK
FEC	0.691
Bandwidth (dB-Hz)	77.8
Uplink	
Uplink Frequency (MHz)	29,685
Tx E/S Antenna Diameter (m)	8.10
Tx E/S Power to Antenna (dBW)	7.4
Input Power Density (dBW/Hz)	-70.4
Tx E/S Antenna Gain (dB)	62.9
Tx E/S EIRP per Carrier (dBW)	70.3
Mispointing Error (dB)	0.5
Atmospheric Losses (dB)	0.5
Free Space Loss (dB)	213.6
Satellite Antenna Gain (-3dB) (dBi)	52.2
Satellite Antenna G/T (-3 dB) (dB/K)	23.5
(C/I) Up - Intra-system (dB)	24.0
Downlink	
Downlink Frequency (MHz)	18,765
Downlink EIRP (-3 dB) (dBW)	55.8
Beam Peak EIRP Density (dBW/Hz)	-19.0
Atmospheric Losses (dB)	0.3
Free Space Loss (dB)	209.6
Rx E/S Antenna Diameter (m)	0.65
Antenna Mispointing Error (dB)	0.30
Rx E/S Antenna Gain (dB)	40.3
Rx E/S G/T (dB/K)	19.1
System Noise Temp. (K)	132
(C/I) Dn - Intra-system (dB)	19.0
End-to-End	
(C/N) - Thermal Uplink (dB)	30.0
(C/N) - Thermal Downlink (dB)	15.5
(C/I) Up - ASI (dB)	25.7
(C/I) Dn - ASI (dB)	17.1
(C/N+I) - Total Actual (dB)	11.7
(C/N+I) - Total Required (dB)	5.1
System Margin (dB)	6.6