

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		500MG7D	500MG7D
Data Rate	Mbit/s	1107.0	1107.0
Modulation		16-APSK	16-APSK
Coding Rate		0.6642	0.6642
Carrier Bandwidth	MHz	500	500
Uplink Frequency	GHz	28.85	28.85
Downlink Frequency	GHz	19.05	19.05
Elevation Angle	degrees	35	35
Elevation Angle	degrees	35	35
<b>Uplink:</b>			
Tx E/S Antenna Diameter	m	7.3	7.3
Tx E/S Power to Antenna	W	10.8	272.4
Tx E/S Antenna Gain	dBi	64.6	64.6
Tx E/S EIRP per Carrier	dBW	75	89.0
Tx E/S Antenna Pointing Loss	dB	1.2	1.2
Atmospheric and Rain Losses	dB	0.5	14.5
Free Space Loss	dB	213.3	213.3
G/T (peak)	dB/K	16.1	16.1
C/I - Intra-system	dB	25.5	25.5
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	62	62
Atmospheric and Rain Losses	dB	0.4	4.6
Free Space Loss	dB	209.7	209.7
Rx E/S Antenna Pointing Loss	dB	0.5	0.5
Rx E/S Antenna Diameter	m	1.8	1.8
Rx E/S Antenna Gain	dBi	49.3	49.3
Rx E/S G/T	dB/K	25.6	23.2
System Noise Temp (LNA+Sky)	K	235	409
C/I - Intra-system	dB	18.7	18.7
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	18.5	18.5
C/I Up - ASI	dB	19.2	33.2
C/N - Thermal Downlink	dB	19.4	12.8
C/I Down - ASI	dB	19.8	19.8
C/(N+I) - Total Actual	dB	11.9	10.3
C/N - Required	dB	10.3	10.3
Excess Margin	dB	1.7	0.0