

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		1M22G7W	1M22G7W
Data Rate	Mbit/s	1.95	1.95
Modulation		8-PSK	8-PSK
Coding Rate		0.6642	0.6642
Carrier Bandwidth	MHz	1.2	1.2
Uplink Frequency	GHz	29.75	29.75
Downlink Frequency	GHz	19.95	19.95
Uplink Elevation Angle	degrees	35	35
Downlink Elevation Angle	degrees	35	35
<b>Uplink:</b>			
Tx E/S Antenna Diameter	m	0.74	0.74
Tx E/S Power to Antenna	W	2.0	2.0
Tx E/S Antenna Gain	dBi	45.6	45.6
Tx E/S EIRP per Carrier	dBW	48.6	48.6
Tx E/S Antenna Pointing Loss	dB	0.5	0.5
Atmospheric and Rain Losses	dB	0.5	9.5
Free Space Loss	dB	213.6	213.6
G/T toward Tx E/S	dB/K	19	19
C/I - Intra-system	dB	20.9	20.9
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	38.8	29.8
Atmospheric and Rain Losses	dB	0.5	6.2
Free Space Loss	dB	210.1	210.1
Rx E/S Antenna Pointing Loss	dB	0.5	0.5
Rx E/S Antenna Diameter	m	3.5	3.5
Rx E/S Antenna Gain	dBi	55.3	55.3
Rx E/S G/T	dB/K	31.3	28.8
System Noise Temp (LNA+Sky)	K	250	445
C/I - Intra-system	dB	16.0	16.0
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	21.8	12.8
C/I Up - ASI	dB	19.4	19.4
C/N - Thermal Downlink	dB	27.8	10.6
C/I Down - ASI	dB	28.4	19.4
C/(N+I) - Total Actual	dB	12.7	7.1
C/N - Required	dB	7.1	7.1
Excess Margin	dB	5.6	0.0