

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emmission Designator		3M13G7D	3M13G7D
Data Rate	kbit/s	3750.0	3750.0
Modulation		QPSK	QPSK
Coding Rate		0.7500	0.7500
Carrier Bandwidth	kHz	3125	3125
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	0.67	0.67
Tx E/S Power to Antenna	W	2.8	2.8
Tx E/S Antenna Gain	dBi	44.4	44.4
Tx E/S EIRP per Carrier	dBW	48.9	48.9
Tx E/S Antenna Pointing Loss	dB	0.5	0.5
Atmospheric and Rain Losses	dB	0.5	8.9
Free Space Loss	dB	213.6	213.6
G/T toward Tx E/S	dB/K	19.5	19.5
C/I - Intra-system	dB	14.3	14.3
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	36.2	27.8
Atmospheric and Rain Losses	dB	0.5	7.1
Free Space Loss	dB	210.1	210.1
Rx E/S Antenna Pointing Loss	dB	0.55	0.55
Rx E/S Antenna Diameter	m	7.3	7.3
Rx E/S Antenna Gain	dBi	61.5	61.5
Rx E/S G/T	dB/K	38.0	34.8
System Noise Temp (LNA+Sky)	K	250	471
C/I - Intra-system	dB	13.3	13.3
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	18.4	10.0
C/I Up - ASI	dB	15.5	15.5
C/N - Thermal Downlink	dB	27.6	9.4
C/I Down - ASI	dB	27.8	27.8
C/(N+I) - Total Actual	dB	8.9	4.8
C/N - Required	dB	4.9	4.9
Excess Margin	dB	4.0	0.0