

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission 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
<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	6.7
Free Space Loss	dB	213.6	213.6
G/T toward Tx E/S	dB/K	18.5	18.5
C/I - Intra-system	dB	15.3	15.3
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	36.2	30.0
Atmospheric and Rain Losses	dB	0.5	6.5
Free Space Loss	dB	209.9	209.9
Rx E/S Antenna Pointing Loss	dB	0.6	0.6
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	34.9
System Noise Temp (LNA+Sky)	K	250	462
C/I - Intra-system	dB	13.3	13.3
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	17.4	11.2
C/I Up - ASI	dB	15.5	9.3
C/N - Thermal Downlink	dB	27.8	12.5
C/I Down - ASI	dB	28.0	28.0
C/(N+I) - Total Actual	dB	9.0	4.9
C/N - Required	dB	4.9	4.9
Excess Margin	dB	4.1	0.0