

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		1M38G7D	1M38G7D
Data Rate	kbit/s	952.5	952.5
Modulation		QPSK	QPSK
Coding Rate		0.4970	0.4970
Carrier Bandwidth	kHz	1380	1380
Uplink Frequency	GHz	29.8	29.8
Downlink Frequency	GHz	20	20
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	2.5	2.5
Tx E/S Antenna Gain	dBi	44.5	44.5
Tx E/S EIRP per Carrier	dBW	48.5	48.5
Tx E/S Antenna Pointing Loss	dB	0.5	0.5
Atmospheric and Rain Losses	dB	0.5	2.9
Free Space Loss	dB	213.6	213.6
G/T toward Tx E/S (-3 dB)	dB/K	3.5	3.5
C/I - Intra-system	dB	30.0	30.0
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S (-3 dB)	dBW	34.8	32.4
Atmospheric and Rain Losses	dB	0.5	7.7
Free Space Loss	dB	210.2	210.2
Rx E/S Antenna Pointing Loss	dB	0.8	0.8
Rx E/S Antenna Diameter	m	7.3	7.3
Rx E/S Antenna Gain	dBi	61.8	61.8
Rx E/S G/T	dB/K	38.6	35.4
System Noise Temp (LNA+Sky)	K	210	438
C/I - Intra-system	dB	16.0	16.0
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	5.4	3.0
C/I Up - ASI - 2 degree spacings	dB	19.5	17.1
C/I Up - ASI from Intelsat at 89W	dB	10.8	8.4
C/N - Thermal Downlink	dB	29.9	17.1
C/I Down - ASI - 2 degree spacings	dB	30.8	30.8
C/I Down - ASI from Intelsat at 89W	dB	20.5	20.5
C/(N+I) - Total Actual	dB	3.8	1.4
C/N - Required	dB	1.4	1.4
Excess Margin	dB	2.4	0.0