

<b>General:</b>	<b>Units</b>	<b>Clear Sky</b>	<b>Faded</b>
Emission Designator		612KG7W	612KG7W
Data Rate	Mbit/s	0.87	0.87
Modulation		QPSK	QPSK
Coding Rate		0.8869	0.8869
Carrier Bandwidth	MHz	0.6	0.6
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	1.0	1.0
Tx E/S Antenna Gain	dBi	45.6	45.6
Tx E/S EIRP per Carrier	dBW	45.6	45.6
Tx E/S Antenna Pointing Loss	dB	0.5	0.5
Atmospheric and Rain Losses	dB	0.5	8.1
Free Space Loss	dB	213.6	213.6
G/T toward Tx E/S (-3 dB)	dB/K	19	19
C/I - Intra-system	dB	18.4	18.4
<b>Downlink:</b>			
EIRP per Carrier towards Rx E/S	dBW	35.9	28.3
Atmospheric and Rain Losses	dB	0.5	7
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	28.7
System Noise Temp (LNA+Sky)	K	250	461
C/I - Intra-system	dB	15.7	15.7
<b>End-to-End:</b>			
C/N - Thermal Uplink	dB	21.5	13.9
C/I Up - ASI	dB	20.1	12.5
C/N - Thermal Downlink	dB	27.6	10.9
C/I Down - ASI	dB	29.2	21.6
C/(N+I) - Total Actual	dB	12.1	6.5
C/N - Required	dB	6.5	6.5
Excess Margin	dB	5.6	0.0