

<b>MSAT MMS Carrier EOC Link Budget</b>			
		<b>FORWARD</b>	<b>RETURN</b>
<b>PARAMETER</b>	<b>UNITS</b>	<b>(Hub to User)</b>	<b>(User to Hub)</b>
Noise Bandwidth	kHz	1	1
Boltzmann's constant	dBW/Hz·°K	-228.6	-228.6
<b>UPLINK</b>		<b>Clear</b>	<b>Clear</b>
Frequency	GHz	13	1.64
Earth Station EIRP	dBW	47	4.0
Body Shielding Loss	dB	x	0
Polarization Loss	dB	x	-0.5
Free Space Loss	dB	-206.7	-188.8
Uplink Fade	dB	0	0
Satellite Antenna Gain, EOC	dBi	29	29
Received Carrier Power	dBW	-130.7	-156.3
Satellite G/T	dB/°K	-1	5
Intersystem Interference Allowance	dB	0.5	1
C/No	dB·Hz	67.4	47.3
C/Imo	dB·Hz	52.0	54.0
Satellite C/(No+Io)	dB·Hz	51.9	46.5
<b>DOWNLINK</b>			
Frequency	GHz	1.55	11
Satellite Active Gain	dB	123.3	122
Satellite Antenna Gain, EOC	dBi	29	29
Satellite EOC EIRP	dBW	21.6	-5.3
Free Space Loss	dB	-188.5	-205.2
Downlink Fade	dB	x	0
Earth Station G/T	dB/°K	-20	36.5
Interference Allowance	dB	1	0.5
C/No	dB·Hz	40.7	54.1
<b>LINK</b>			
Link C/(No+Io)	dB·Hz	40.4	45.8
Required C/No	dB·Hz	34.2	34.2
Margin	dB	6.2	11.6