

## Representative Forward Link Budget

UT Type Carrier Type		Handheld Terminal CDMA
<b><u>General Parameters</u></b>	<b>Unit</b>	
Gateway elevation angle	deg	42.0
Minimum user elevation angle	deg	20.0
Uplink frequency	GHz	29.625
Downlink frequency	GHz	2.200
Bandwidth/carrier	kHz	1250.0
<b><u>Uplink</u></b>		
Uplink E/S antenna diameter	m	13.2
Uplink E/S antenna peak gain	dBi	69.6
E/S antenna pointing error	dB	0.5
Clear-sky uplink EIRP	dBW	39.5
Rain-faded uplink EIRP	dBW	56.5
Free space loss	dB	213.4
Atmospheric loss	dB	0.3
Rain attenuation	dB	17.0
Satellite antenna pointing error	dB	0.3
Satellite antenna receive system noise temp.	dB-K	32.1
Satellite receive antenna G/T	dB/K	17.0
Uplink C/N <sub>0</sub>	dBHz	71.2
Uplink C/IM <sub>0</sub>	dBHz	87.2
Uplink C/I <sub>0ASI</sub>	dBHz	78.2
Uplink C/I <sub>0 Intra-system</sub>	dBHz	69.2
<b><u>Downlink</u></b>		
Effective Satellite EIRP/carrier (-3 dB contour)	dBW	43.0
Free space loss	dB	191.2
Atmospheric loss	dB	0.1
User terminal antenna gain	dB	0.0
User terminal system noise temperature	dB-K	27.0
User terminal G/T	dB/K	-27.0
Downlink propagation margin	dB	10.1
Downlink C/N <sub>0</sub>	dBHz	43.2
Downlink C/IM <sub>0</sub>	dBHz	64.8
Downlink C/I <sub>0 Intra-system</sub>	dBHz	50.0
Downlink C/I <sub>0 External Interference</sub>	dBHz	53.2
<b><u>End-to-End Performance</u></b>		
End-to-end C/N <sub>0</sub>	dBHz	43.2
End-to-end aggregate C/I <sub>0</sub>	dBHz	48.3
End-to-end C/IM <sub>0</sub>	dBHz	64.7
Total aggregate C/(N <sub>0</sub> +I <sub>0</sub> +IM <sub>0</sub> )	dBHz	42.0
Total aggregate C/(N+I+IM)	dB	-18.9
Required C/N	dB	-18.9
System Margin	dB	0.0