

## Representative Forward Link Budget

UT Type Carrier Type	Handheld Terminal DVB-SH	
<b><u>General Parameters</u></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	1700.00
<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	55.4
Rain-faded uplink EIRP	dBW	72.4
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	87.1
Uplink C/IM <sub>0</sub>	dBHz	84.0
Uplink C/I <sub>0ASI</sub>	dBHz	94.1
Uplink C/I <sub>0 Intra-system</sub>	dBHz	85.2
<b><u>Downlink</u></b>		
Effective Satellite EIRP/carrier (-3 dB contour)	dBW	58.9
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	2.6
Downlink C/N <sub>0</sub>	dBHz	66.6
Downlink C/IM <sub>0</sub>	dBHz	79.5
Downlink C/I <sub>0 Intra-system</sub>	dBHz	75.7
Downlink C/I <sub>0 External Interference</sub>	dBHz	76.6
<b><u>End-to-End Performance</u></b>		
End-to-end C/N <sub>0</sub>	dBHz	66.5
End-to-end aggregate C/I <sub>0</sub>	dBHz	72.8
End-to-end C/IM <sub>0</sub>	dBHz	78.2
Total aggregate C/(N <sub>0</sub> +I <sub>0</sub> +IM <sub>0</sub> )	dBHz	65.4
Total aggregate C/(N+I+IM)	dB	3.1
Required C/N	dB	3.1
System Margin	dB	0.0