

## 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	5000.00
<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	60.5
Rain-faded uplink EIRP	dBW	77.5
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	92.2
Uplink C/IM <sub>0</sub>	dBHz	87.8
Uplink C/I <sub>0ASI</sub>	dBHz	99.2
Uplink C/I <sub>0 Intra-system</sub>	dBHz	89.9
<b><u>Downlink</u></b>		
Effective Satellite EIRP/carrier (-3 dB contour)	dBW	64.0
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	2.6
Downlink C/N <sub>0</sub>	dBHz	71.7
Downlink C/IM <sub>0</sub>	dBHz	79.5
Downlink C/I <sub>0 Intra-system</sub>	dBHz	80.4
Downlink C/I <sub>0 External Interference</sub>	dBHz	81.7
<b><u>End-to-End Performance</u></b>		
End-to-end C/N <sub>0</sub>	dBHz	71.6
End-to-end aggregate C/I <sub>0</sub>	dBHz	77.7
End-to-end C/IM <sub>0</sub>	dBHz	78.9
Total aggregate C/(N <sub>0</sub> +I <sub>0</sub> +IM <sub>0</sub> )	dBHz	70.1
Total aggregate C/(N+I+IM)	dB	3.1
Required C/N	dB	3.1
System Margin	dB	0.0