

**NOISE BUDGET REFERENCE CALCULATION**  
**for Tele-command**

	<b>On Station - MIN</b>	<b>On Station- MAX</b>	<b>Emergency- MIN</b>	<b>Emergency- MAX</b>
<b>Uplink Frequency (MHz)</b>	14497.00	14497.00	14497.00	14497.00
<b>Signal occupied bandwidth (MHz)</b>	1.00	1.00	1.00	1.00
<b>Uplink PFD min (dBW/m<sup>2</sup>/carrier)</b>	-105.00	-81.00	-77.00	-63.50
<b>Input power (dBW)</b>	2.62	26.62	23.42	36.92
<b>Tx Antenna Diameter (m)</b>	4.80	4.80	11.00	11.00
<b>Tx Antenna Efficiency</b>	0.65	0.65	0.65	0.65
<b>Tx Antenna Gain (dB)</b>	55.38	55.38	62.58	62.58
<b>Mispointing loss (dB)</b>	0.50	0.50	0.50	0.50
<b>Uplink Path loss (dB)</b>	207.80	207.80	207.80	207.80
<b>Uplink Rain Attenuation (dB)</b>	0.00	0.00	0.00	0.00
<b>Satellite antenna G/T at beam peak (dB/K)</b>	7.00	7.00	-37.80	-37.80
<b>Beam roll-off at TT&amp;C station (dB)</b>	6.00	6.00	0.00	0.00
<b>Satellite antenna G/T (dB/K)</b>	1.00	1.00	-37.80	-37.80
<b>(C/N)<sub>Uplink Thermal</sub> (dB)</b>	19.30	43.30	8.50	22.00
<b>(C/N)<sub>ASI</sub> (dB)</b>	30.00	30.00	30.00	30.00
<b>(C/I)<sub>intrasystem</sub> (dB)</b>	30.00	30.00	30.00	30.00
<b>C/(N+I)<sub>total</sub> (dB)</b>	18.62	26.89	8.44	20.80