S3 BEAM: DIGITAL (97K6G7W, 6M48G7W, 25M6G7W, 27M8G7W)

Satellite Information																	
Beam Uplink		S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3
Tr. SFD (dBW/m2 ; BE)		-87	-87	-87	-87	-87	-87	-87	-87	-73	-73	-73	-73	-73	-73	-73	-73
Tr. G/T (dB/K ; BE)		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Beam Downlink		S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3
Tr. EIRP (dBW ; BE)		44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
Carrier Information																	
Carrier Type		TURBO	TURBO	DTV	DTV	DIGITAL	DIGITAL	DIGITAL	DIGITAL	TURBO	TURBO	DTV	DTV	DIGITAL	DIGITAL	DIGITAL	DIGITAL
Modulation		QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK
Eb/No Threshold	dB	4.9	4.9	6.8	6.8	5.4	5.4	5.7	5.7	4.9	4.9	6.8	6.8	5.4	5.4	5.7	5.7
C/N Threshold	dB	7.3	7.3	8.9	8.9	5	5	7.5	7.5	7.3	7.3	8.9	8.9	5	5	7.5	7.5
Information Rate (IR)	kbit/s	32064	32064	32064	32064	64	64	6312	6312	32064	32064	32064	32064	64	64	6312	6312
Overhead (OH)	kbit/s	0	0	0	0	0	0	631.2	631.2	0	0	0	0	0	0	631.2	631.2
FEC Code Rate		0.875	0.875	0.875	0.875	0.5	0.5	0.75	0.75	0.875	0.875	0.875	0.875	0.5	0.5	0.75	0.75
R-S Code Rate		N/A	N/A	204,188	204,188	219,201	219,201	N/A	N/A	N/A	N/A	204,188	204,188	219,201	219,201	N/A	N/A
Noise Bandwidth	MHz	18.322	18.322	19.882	19.882	0.070	0.070	4.629	4.629	18.322	18.322	19.882	19.882	0.070	0.070	4.629	4.629
Total Availability	%	99.615	99.651	99.615	99.652	99.612	99.651	99.615	99.652	99.606	99.651	99.609	99.6	99.603	99.651	99.606	99.651
U/L Availability	%	99.786	99.75	99.786	99.75	99.786	99.75	99.786	99.75	99.829	99.75	99.829	99.713	99.829	99.75	99.829	99.75
D/L Availability	%	99.829	99.902	99.829	99.902	99.826	99.901	99.829	99.902	99.777	99.902	99.78	99.887	99.774	99.901	99.777	99.902
System Margin	dB	1.6	1.5	1.6	1.5	1.6	1.5	1.6	1.5	1.8	1.5	1.8	1.4	1.8	1.5	1.8	1.5
Transmit Earth Station Data																	
Antenna Diameter	meters	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2
Peak Antenna Gain	dBi	58.4	43.1	58.4	43.1	58.4	43.1	58.4	43.1	58.4	43.1	58.4	43.1	58.4	43.1	58.4	43.1
Receive Earth Station Data																	
Antenna Diameter	meters	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7	1.2	7
G/T of ES at 4 or 11 GHz	dB/K	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2
Peak Antenna Gain	dBi	41.5	57.2	41.5	57.2	41.5	57.2	41.5	57.2	41.5	57.2	41.5	57.2	41.5	57.2	41.5	57.2
C/N Uplink Per Carrier																	
Per carrier uplink EIRP	dBW	71.4	63.8	73.4	65.8	44.9	37.3	65.7	58.1	85.1	72.8	87.1	74.7	58.6	46.3	79.3	67.0
Pathloss at uplink frequency	dB	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2	207.2
Satellite G/T at BE	dB/K	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
C/N uplink, thermal	dB	21.0	13.4	22.6	15.0	18.7	11.1	21.2	13.6	34.6	22.4	36.3	23.9	32.3	20.1	34.8	22.6
C/N ES HPA																	
HPA IM	dBW/4kHz	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
C/N ES HPA-IM	dB	26.8	19.2	28.4	20.9	24.5	16.9	27.0	19.4	40.5	28.2	42.1	29.7	38.1	25.9	40.7	28.4
C/I TWTA IM at BE																	
Satellite TWTA IM at BE	dBW/4kHz	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1
C/I TWTA IM per carrier	dB	26.5	18.9	28.1	20.5	24.2	16.6	26.7	19.1	26.1	13.9	27.8	15.4	23.8	11.5	26.3	14.1
C/N Downlink Per Carrier																	
Per carrier BE EIRP	dBW	42.0	34.4	44.0	36.4	15.5	7.9	36.2	28.7	41.6	29.4	43.6	31.3	15.1	2.9	35.9	23.6
Pathloss at downlink frequency	dB	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6	205.6
ES G/T at tpdr downlink frequency	dB/K	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2	19.3	35.2
C/N downlink, thermal	dB	11.7	20.0	13.3	21.6	9.4	17.7	11.9	20.2	11.3	15.0	12.9	16.5	9.0	12.6	11.5	15.2
C/I Co-Channel																	
C/I co-channel interference, total	dB	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Total C/N (clr-sky)																	
C/N total per carrier	dB	10.9	10.9	12.5	12.5	8.6	8.6	11.1	11.1	11.1	10.9	12.7	12.4	8.8	8.6	11.3	11.1
Margin for ASI	dB	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Margin for terrestrial losses	dB	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Margin for other losses	dB	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6
C/N total (clear-sky)	dB	8.9	8.8	10.5	10.4	6.6	6.5	9.1	9.0	9.1	8.8	10.7	10.3	6.8	6.5	9.3	9.0
Margin		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

U/L PSD at BE	dBW/Hz	-59.6	-51.9	-58.0	-50.3	-61.9	-54.2	-59.4	-51.7	-46.0	-42.9	-44.3	-41.4	-48.3	-45.2	-45.8	-42.7
PFD at BP	dBW/m2/MHz	-127.4	-135.0	-125.8	-133.4	-129.7	-137.3	-127.2	-134.8	-127.8	-140.0	-126.1	-138.5	-130.1	-142.4	-127.6	-139.8