

Parameter	Digital TV MCPC 40	Digital TV	Digital TV
	MBPS QPSK $\frac{3}{4}$ RS	MCPC 40 MBPS QPSK $\frac{3}{4}$ RS	SCPC QPSK $\frac{3}{4}$ RS
	36M0G7W	27M0G7W	6M95G1W
Carrier designation			
Throughput rate, Mbps	40	32	8
Symbol rate, MHz	28.8	22.9	5.7
Uplinks:			
Transmit Power (dBW)	20	20	8.9
Transmit Loss (dB)	-1	-1	-1
Antenna diameter	6.1	6.1	3.7
Antenna Gain (dBi)	57.2	57.2	52.9
Ground Station EIRP (dBW)	76.2	76.2	60.8
Uplink Rain Loss (dB)	-2	-2	-2
Free Space Loss (dB)	-207.5	-207.5	-207.5
Satellite G/T (dB/K)	0.5	0.5	0.5
Data Rate (dB-Hz)	76	75	69
Boltzmann's Constant (dBW/K-Hz)	-228.6	-228.6	-228.6
Eb/No (dB)	19.8	20.8	11.4
Eb/Io (dB)	18	18	16
Total Eb/(No + Io) (dB) For 10-7	15.8	16.2	10.1
Downlinks:			
Satellite Carrier EIRP (dBW)	49.4	49.4	35.7
Downlink Rain Loss (dB)	-3	-3	-3
Free Space Loss (dB)	-206.3	-206.3	-206.3
Ground station antenna dia, m	0.9	0.9	2.4
Ground Station G/T (dB/K)	17.1	17.1	25.6
Eb/No (dB)	9.8	10.8	11.6
C/IM			18
Eb/IModB)			16.6
C/I	15.0	15.0	15.0
Eb/Io(ASI)	13.6	13.6	13.6
Eb/Io (dB)	13.6	13.6	11.8
Eb/(No + Io) (dB)	8.3	9.0	8.7
Total UP/DOWN Eb/(No+Io)(dB)	7.6	8.2	6.3
Required	5.4	5.4	5.4
Margin	2.2	2.8	0.9

Digital TV SCPC		Digital TV MCPC 50	
QPSK 3/4 RS	56Kbps QPSK 3/4 RS	1.544 MBPS QPSK 3/4	MBPS 8PSK 2/3 RS
5M00G1W	100KG1W	1M60G1W	36M0G7W
6	0.0562	1.5440	50
4.2	0.0407	1.1	27.1
			32.55319149
8.9	-2	8	20
-1	-1	-1	-1
3.7	1.8	1.8	6.1
52.9	46.6	46.6	57.2
60.8	43.6	53.6	76.2
-2	-2	-2	-2
-207.5	-207.5	-207.5	-207.5
0.5	0.5	0.5	0.5
67.6	47.5	61.9	76
-228.6	-228.6	-228.6	-228.6
12.8	15.7	11.3	18.8
16	16	16	18
11.1	12.8	10.0	15.4
34.3	18.5	28.5	49.4
-3	-3	-3	-3
-206.3	-206.3	-206.3	-206.3
2.4	1.2	2.4	2.4
25.6	19.6	25.6	25.6
11.6	9.9	11.5	17.3
18	18	18	
16.6	16.6	16.6	
15.0	15.0	15.0	15.0
13.6	13.6	13.6	12.3
11.8	11.8	11.8	12.3
8.7	7.7	8.7	11.1
6.7	6.6	6.3	9.8
5.4	5.4	5.4	7.2
1.3	1.2	0.9	2.6