C-Band Global Uplink/Global Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-11	-11	-11	-11	-11
Uplink SFD (dBW/m2)	-84.3	-89.3	-81.3	-81.3	-89.3
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	27.6	27.6	27.6	27.6	27.6
Rain Rate (mm/hr)	42	42	42	42	42
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	41M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	31490
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	34170.0
Allocated Bandwidth(kHz)	36000	36000	10300	100	41000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.4
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.4
UPLINK EARTH STATION					
Earth Station Diameter (meters)	13.0	6.1	2.4	2.4	7.0
Earth Station Gain (dBi)	56.4	49.4	41.9	41.9	51.0
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	15.2	7.0	11.0	11.0	8.1
Earth Station Gain (dBi)	55.0	47.5	51.9	51.9	49.3
Earth Station G/T (dB/K)	34.5	26.6	31.0	31.0	28.4
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	80.6	73.6	66.6	46.5	73.6
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-11.0	-11.0	-11.0	-11.0	-11.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Uplink C/N(dB)	22.4	16.2	15.7	15.1	15.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	27.6	27.6	17.5	-2.6	27.6
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	34.5	26.6	31.0	31.0	28.4
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Downlink C / N(dB)	18.3	11.2	12.0	11.4	12.5
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	22.4	16.2	15.7	15.1	15.7
C/N Downlink (dB)	18.3	11.2	12.0	11.4	12.5
C/I Intermodulation (dB)	N/A	N/A	18.9	18.3	N/A
C/I Uplink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.6
C/I Downlink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.6
C/I Uplink Adjacent Satellite 1 (dB)	21.7	15.5	15.0	14.4	15.0
C/I Downlink Adjacent Satellite 1 (dB)	17.2	10.0	11.1	10.5	11.4
C/I Uplink Adjacent Satellite 2 (dB)	21.7	15.5	15.0	14.4	15.0
C/I Downlink Adjacent Satellite 2 (dB)	17.9	11.6	12.1	11.6	12.7
C/(N+I) Composite (dB)	11.4	4.8	5.1	4.5	5.6
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	3.8	4.1	3.5	4.6
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.4	0.4	0.2	0.5	1.2
Number of Carriers	1	1	4	410	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-51.4	-50.6	-43.6	-44.2	-52.7
Downlink EIRP Density At Beam Peak (dBW/Hz)	-44	-43.2	-46.8	-47.4	-43.7

C-Band Global Uplink/C-Band Spot Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-11	-11	-11	-11	-11
Uplink SFD (dBW/m2)	-84.3	-89.3	-84.3	-84.3	-89.3
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT	CSPOT
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	34.6	34.6	34.6	34.6	34.6
Rain Rate (mm/hr)	42	42	42	42	42
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	41M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	31490
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	34170.0
Allocated Bandwidth(kHz)	36000	36000	10300	100	41000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.4
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.4
UPLINK EARTH STATION					
Earth Station Diameter (meters)	11.0	6.1	2.4	2.4	7.0
Earth Station Gain (dBi)	55.4	49.4	41.9	41.9	51.0
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	8.1	3.5	6.1	6.1	3.7
Earth Station Gain (dBi)	49.3	41.1	46.5	46.5	41.2
Earth Station G/T (dB/K)	28.4	21.0	26.2	26.2	20.9
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	78.6	73.6	64.1	44.0	73.6
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-11.0	-11.0	-11.0	-11.0	-11.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Uplink C/N(dB)	20.4	16.2	13.2	12.6	15.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	34.6	34.6	25.1	4.9	34.6
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	28.4	21.0	26.2	26.2	20.9
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Downlink C / N(dB)	19.2	12.6	14.7	14.2	12.0
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	20.4	16.2	13.2	12.6	15.7
C/N Downlink (dB)	19.2	12.6	14.7	14.2	12.0
C/I Intermodulation (dB)	N/A	N/A	17.4	16.8	N/A
C/I Uplink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	19.7	15.5	12.5	11.9	15.0
C/I Downlink Adjacent Satellite 1 (dB)	18.1	8.1	12.8	12.2	9.3
C/I Uplink Adjacent Satellite 2 (dB)	19.7	15.5	12.5	11.9	15.0
C/I Downlink Adjacent Satellite 2 (dB)	19.5	12.9	14.6	14.1	12.4
C/(N+I) Composite (dB)	11.4	4.6	5.2	4.6	4.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	3.6	4.2	3.6	3.8
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.4	0.2	0.3	0.6	0.4
Number of Carriers	1	1	4	410	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-52.4	-50.6	-46.1	-46.7	-52.7
Downlink EIRP Density At Beam Peak (dBW/Hz)	-37.0	-36.2	-39.3	-39.8	-36.7

C-Band Global Uplink/Hemi Downlink

UPLINK BEAM INFORMATION				
Uplink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-11	-11	-11	-11
Uplink SFD (dBW/m2)	-83.3	-89.3	-83.3	-83.3
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	HEMI	HEMI	HEMI	HEMI
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	31.5	31.5	31.5	31.5
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth(kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79
UPLINK EARTH STATION				
Earth Station Diameter (meters)	13.0	7.0	2.4	2.4
Earth Station Gain (dBi)	56.4	51.0	41.9	41.9
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	4.5	8.1	8.1
Earth Station Gain (dBi)	51.9	43.9	49.3	49.3
Earth Station G/T (dB/K)	31.0	23.6	28.4	28.4
Earth Station Elevation Angle	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	79.6	73.6	65.8	45
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-11.0	-11.0	-11.0	-11.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N(dB)	21.4	16.2	14.9	13.7
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	31.5	31.5	21.7	0.9
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	31.0	23.6	28.4	28.4
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C / N(dB)	18.7	12.1	13.6	12.3
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	21.4	16.2	14.9	13.7
C/N Downlink (dB)	18.7	12.1	13.6	12.3
C/I Intermodulation (dB)	N/A	N/A	22.1	20.9
C/I Uplink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Downlink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Uplink Adjacent Satellite 1 (dB)	20.7	15.5	14.2	13
C/I Downlink Adjacent Satellite 1 (dB)	17.8	9.8	12.5	11.2
C/I Uplink Adjacent Satellite 2 (dB)	20.7	15.5	14.2	13
C/I Downlink Adjacent Satellite 2 (dB)	18.8	12.3	13.8	12.6
C/(N+I) Composite (dB)	11.5	5.1	5.9	4.6
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.5	4.1	4.9	3.6
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.5	0.7	1.0	0.6
Number of Carriers	1	1	3	360
CARRIER DENSITY LEVELS				
Uplink Power Density (dBW/Hz)	-52.4	-52.2	-44.4	-45.6
Downlink EIRP Density At Beam Peak (dBW/Hz)	-38.1	-37.3	-40.6	-41.9

C-Band Spot Uplink/C-Band Spot Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT	CSPOT
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-1	-1	-1	-1	-1
Uplink SFD (dBW/m2)	-88.3	-92.3	-87.3	-87.3	-92.3
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT	CSPOT
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	34.6	34.6	34.6	34.6	34.6
Rain Rate (mm/hr)	42	42	42	42	43
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	41M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	31490
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	34170.0
Allocated Bandwidth(kHz)	36000	36000	10300	100	41000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.4
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.4
UPLINK EARTH STATION					
Earth Station Diameter (meters)	7.0	4.5	2.4	2.4	5.0
Earth Station Gain (dBi)	51	46.5	41.9	41.9	47.5
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	13.1	3.7	9.2	9.2	4.5
Earth Station Gain (dBi)	53.5	41.2	50.3	50.3	43.9
Earth Station G/T (dB/K)	33.0	20.9	29.4	29.4	23.6
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	74.6	70.6	61.1	41.0	70.6
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-1.0	-1.0	-1.0	-1.0	-1.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Uplink C/N(dB)	26.4	23.2	20.2	19.6	22.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	34.6	34.6	25.1	4.9	34.6
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	33.0	20.9	29.4	29.4	23.6
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Downlink C / N(dB)	23.8	12.5	17.9	17.4	14.7
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	26.4	23.2	20.2	19.6	22.7
C/N Downlink (dB)	23.8	12.5	17.9	17.4	14.7
C/I Intermodulation (dB)	N/A	N/A	17.4	16.8	N/A
C/I Uplink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	15.7	12.5	9.5	8.9	12.0
C/I Downlink Adjacent Satellite 1 (dB)	22.6	9.9	16.9	16.3	12.3
C/I Uplink Adjacent Satellite 2 (dB)	15.7	12.5	9.5	8.9	12.0
C/I Downlink Adjacent Satellite 2 (dB)	23.4	12.9	18.2	17.6	14.8
C/(N+I) Composite (dB)	11.4	4.8	5.1	4.5	5.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	3.8	4.1	3.5	4.8
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.4	0.4	0.2	0.5	1.4
Number of Carriers	1	1	4	410	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-52.0	-50.7	-49.1	-49.7	-52.2
Downlink EIRP Density At Beam Peak (dBW/Hz)	-37.0	-36.2	-39.3	-39.8	-36.7

C-Band Spot Uplink/Global Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT	CSPOT
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-1	-1	-1	-1	-1
Uplink SFD (dBW/m2)	-85.3	-92.3	-86.3	-86.3	-92.3
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	27.6	27.6	27.6	27.6	27.6
Rain Rate (mm/hr)	42	42	42	42	43
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	41M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	31490
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	34170.0
Allocated Bandwidth(kHz)	36000	36000	10300	100	41000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.4
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.4
UPLINK EARTH STATION					
Earth Station Diameter (meters)	10.0	4.6	2.4	2.4	4.6
Earth Station Gain (dBi)	54.1	46.9	41.9	41.9	46.9
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	18.3	8.1	18.3	15.2	8.1
Earth Station Gain (dBi)	56	49.3	56.0	55.0	49.3
Earth Station G/T (dB/K)	35.5	28.4	35.5	34.5	28.4
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	77.6	70.6	61.6	41.5	70.6
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-1.0	-1.0	-1.0	-1.0	-1.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Uplink C/N(dB)	29.4	23.2	20.7	20.1	22.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	27.6	27.6	17.5	-2.6	27.6
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	28.4	35.5	34.5	28.4
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-75.3
Downlink C / N(dB)	19.3	13.0	16.5	14.9	12.5
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	29.4	23.2	20.7	20.1	22.7
C/N Downlink (dB)	19.3	13.0	16.5	14.9	12.5
C/I Intermodulation (dB)	N/A	N/A	18.9	18.3	N/A
C/I Uplink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.6	27.6	27.0	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	18.7	12.5	10.0	9.4	12.0
C/I Downlink Adjacent Satellite 1 (dB)	18.2	11.9	15.4	13.8	11.4
C/I Uplink Adjacent Satellite 2 (dB)	18.7	12.5	10.0	9.4	12.0
C/I Downlink Adjacent Satellite 2 (dB)	18.8	13.3	16.0	14.5	12.7
C/(N+I) Composite (dB)	11.5	5.5	5.2	4.3	5.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.5	4.5	4.2	3.3	4.0
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.5	1.1	0.3	0.3	0.6
Number of Carriers	1	1	4	410	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-52.1	-51.1	-48.6	-49.2	-51.6
Downlink EIRP Density At Beam Peak (dBW/Hz)	-44.0	-43.2	-46.8	-47.4	-43.7

C-Band Spot Uplink/Hemi Downlink

UPLINK BEAM INFORMATION				
Uplink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-1	-1	-1	-1
Uplink SFD (dBW/m2)	-87.3	-92.3	-88.3	-88.3
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	HEMI	HEMI	HEMI	HEMI
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	31.5	31.5	31.5	31.5
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth(kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79
UPLINK EARTH STATION				
Earth Station Diameter (meters)	8.1	4.5	2.4	2.4
Earth Station Gain (dBi)	52.8	46.5	41.9	41.9
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	18.3	4.5	9.2	13.1
Earth Station Gain (dBi)	56.0	43.9	50.3	53.5
Earth Station G/T (dB/K)	35.5	23.6	29.4	33.0
Earth Station Elevation Angle	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	75.6	70.6	61.3	40.5
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-1.0	-1.0	-1.0	-1.0
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N(dB)	27.4	23.2	20.4	19.2
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	31.5	31.5	23.2	2.4
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	23.6	29.4	33.0
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C / N(dB)	23.2	12.1	16.1	18.4
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	27.4	23.2	20.4	19.2
C/N Downlink (dB)	23.2	12.1	16.1	18.4
C/I Intermodulation (dB)	N/A	N/A	18.1	16.8
C/I Uplink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Downlink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Uplink Adjacent Satellite 1 (dB)	16.7	12.5	9.7	8.5
C/I Downlink Adjacent Satellite 1 (dB)	22.1	9.8	15.1	17.2
C/I Uplink Adjacent Satellite 2 (dB)	16.7	12.5	9.7	8.5
C/I Downlink Adjacent Satellite 2 (dB)	22.7	12.3	16.3	18.0
C/(N+I) Composite (dB)	11.9	4.6	4.9	4.3
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.9	3.6	3.9	3.3
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.9	0.2	0.0	0.3
Number of Carriers	1	1	3	360
CARRIER DENSITY LEVELS				
Uplink Power Density (dBW/Hz)	-52.8	-50.7	-48.9	-50.1
Downlink EIRP Density At Beam Peak (dBW/Hz)	-38.1	-37.3	-39.1	-40.4

C-Band Hemi Uplink/Hemi Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	HEMI	HEMI	HEMI	HEMI	HEMI
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-7.5	-7.5	-7.5	-7.5	-7.5
Uplink SFD (dBW/m2)	-86.0	-88.0	-81.0	-81.0	-89.0
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	HEMI	HEMI	HEMI	HEMI	HEMI
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	31.5	31.5	31.5	31.5	31.5
Rain Rate (mm/hr)	42	42	42	42	43
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	77M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	52563
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	64451
Allocated Bandwidth(kHz)	36000	36000	10300	100	77000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.36
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.36
UPLINK EARTH STATION					
Earth Station Diameter (meters)	9.0	4.5	2.4	2.4	7.0
Earth Station Gain (dBi)	53.4	46.5	41.9	41.9	51.0
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	13.1	7.0	13.1	13.1	6.1
Earth Station Gain (dBi)	53.5	47.5	53.5	53.5	46.5
Earth Station G/T (dB/K)	33.0	26.6	33.0	33.0	26.2
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	76.9	69.9	63.4	43.0	73.9
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-7.5	-7.5	-7.5	-7.5	-7.5
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Uplink C/N(dB)	22.2	16.0	16.0	15.1	16.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	31.5	28.7	18.0	-2.4	31.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	33.0	26.6	33.0	33.0	26.2
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Downlink C / N(dB)	20.7	12.3	14.5	13.6	11.4
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	22.2	16.0	16.0	15.1	16.7
C/N Downlink (dB)	20.7	12.3	14.5	13.6	11.4
C/I Intermodulation (dB)	N/A	N/A	21.8	20.9	N/A
C/I Uplink Co-Channel (dB)*	30.3	30.3	27.3	27.0	27.0
C/I Downlink Co-Channel (dB)*	30.3	30.3	27.3	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	16.0	9.8	9.8	9.0	10.5
C/I Downlink Adjacent Satellite 1 (dB)	25.5	17.1	19.3	18.4	15.4
C/I Uplink Adjacent Satellite 2 (dB)	16.0	9.8	9.8	9.0	10.5
C/I Downlink Adjacent Satellite 2 (dB)	26.3	18.7	20.1	19.2	17.3
C/(N+I) Composite (dB)	11.5	4.8	5.2	4.4	4.9
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.5	3.8	4.2	3.4	3.9
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.5	0.4	0.3	0.4	0.5
Number of Carriers	1	1	7	770	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-52.1	-51.4	-46.8	-47.6	-55.2
Downlink EIRP Density At Beam Peak (dBW/Hz)	-38.1	-40.1	-44.3	-45.2	-40.6

C-Band Hemi Uplink/Zone Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	HEMI	HEMI	HEMI	HEMI	HEMI
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-7.5	-7.5	-7.5	-7.5	-7.5
Uplink SFD (dBW/m2)	-73.0	-83.0	-81.0	-81.0	-89.0
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	ZONE	ZONE	ZONE	ZONE	ZONE
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	30.9	30.9	30.9	30.9	30.9
Rain Rate (mm/hr)	42	42	42	42	43
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	77M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	52563
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	64451
Allocated Bandwidth(kHz)	36000	36000	10300	100	77000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.36
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.36
UPLINK EARTH STATION					
Earth Station Diameter (meters)	11.0	4.5	2.4	2.4	7.0
Earth Station Gain (dBi)	55.4	46.5	41.9	41.9	51.0
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	18.3	13.1	13.1	13.1	6.1
Earth Station Gain (dBi)	56.0	53.5	53.5	53.5	46.5
Earth Station G/T (dB/K)	35.5	33.0	33.0	33.0	26.2
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	79.4	69.4	63.4	43.0	73.9
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-7.5	-7.5	-7.5	-7.5	-7.5
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Uplink C/N(dB)	24.7	15.5	16.0	15.1	16.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	25.3	25.3	17.4	-3.0	30.9
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	33.0	33.0	33.0	26.2
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Downlink C / N(dB)	17.0	15.3	13.9	13.0	10.8
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	24.7	15.5	16.0	15.1	16.7
C/N Downlink (dB)	17.0	15.3	13.9	13.0	10.8
C/I Intermodulation (dB)	N/A	N/A	21.8	20.9	N/A
C/I Uplink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	18.5	9.3	9.8	9.0	10.5
C/I Downlink Adjacent Satellite 1 (dB)	21.9	20.1	18.7	17.8	14.8
C/I Uplink Adjacent Satellite 2 (dB)	18.5	9.3	9.8	9.0	10.5
C/I Downlink Adjacent Satellite 2 (dB)	22.6	20.9	19.5	18.6	16.7
C/(N+I) Composite (dB)	11.7	5.0	5.1	4.2	4.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.7	4.0	4.1	3.2	3.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.7	0.6	0.2	0.2	0.3
Number of Carriers	2	2	7	770	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-51.6	-51.9	-46.8	-47.6	-55.2
Downlink EIRP Density At Beam Peak (dBW/Hz)	-44.3	-43.5	-44.9	-45.8	-41.2

C-Band Hemi Uplink/Global Downlink

UPLINK BEAM INFORMATION				
Uplink Beam Name	HEMI	HEMI	HEMI	HEMI
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-7.5	-7.5	-7.5	-7.5
Uplink SFD (dBW/m2)	-83.0	-89.0	-84.0	-84.0
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	GLOBAL	GLOBAL	GLOBAL	GLOBAL
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	27.6	27.6	27.6	27.6
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth(kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79
UPLINK EARTH STATION				
Earth Station Diameter (meters)	13.0	7.0	2.4	2.4
Earth Station Gain (dBi)	56.4	51.0	41.9	41.9
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	18.3	7.0	13.1	13.1
Earth Station Gain (dBi)	56.0	47.5	53.5	53.5
Earth Station G/T (dB/K)	35.5	26.6	33.0	33.0
Earth Station Elevation Angle	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	79.9	73.9	65.1	44.3
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-7.5	-7.5	-7.5	-7.5
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N(dB)	25.2	20.0	17.7	16.5
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	27.6	27.6	18.8	-2.0
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	26.6	33.0	33.0
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C / N(dB)	19.3	11.2	15.3	14.0
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	25.2	20.0	17.7	16.5
C/N Downlink (dB)	19.3	11.2	15.3	14.0
C/I Intermodulation (dB)	N/A	N/A	19.6	18.3
C/I Uplink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Downlink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Uplink Adjacent Satellite 1 (dB)	19.0	13.8	11.5	10.3
C/I Downlink Adjacent Satellite 1 (dB)	18.2	10.0	14.0	12.8
C/I Uplink Adjacent Satellite 2 (dB)	19.0	13.8	11.5	10.3
C/I Downlink Adjacent Satellite 2 (dB)	18.8	11.6	14.9	13.6
C/(N+I) Composite (dB)	11.4	4.7	5.6	4.4
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	3.7	4.6	3.4
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.4	0.3	0.7	0.4
Number of Carriers	1	1	3	360
CARRIER DENSITY LEVELS				
Uplink Power Density (dBW/Hz)	-52.1	-51.9	-45.1	-46.3
Downlink EIRP Density At Beam Peak (dBW/Hz)	-44.0	-43.2	-45.5	-46.8

C-Band Hemi Uplink/C-Band Spot Downlink

UPLINK BEAM INFORMATION				
Uplink Beam Name	HEMI	HEMI	HEMI	HEMI
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-7.5	-7.5	-7.5	-7.5
Uplink SFD (dBW/m2)	-85.0	-89.0	-84.0	-84.0
Rain Rate (mm/hr)	42	42	42	42
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	CSPOT	CSPOT	CSPOT	CSPOT
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	34.6	34.6	34.6	34.6
Rain Rate (mm/hr)	42	42	42	42
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-32.0	-32.0	-32.0	-32.0
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth(kHz)	36000	36000	10300	100
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79
UPLINK EARTH STATION				
Earth Station Diameter (meters)	10.0	7.0	2.4	2.4
Earth Station Gain (dBi)	54.1	51	41.9	41.9
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	11.0	3.7	6.1	6.1
Earth Station Gain (dBi)	51.9	41.2	46.5	46.5
Earth Station G/T (dB/K)	31.0	20.9	26.2	26.2
Earth Station Elevation Angle	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	77.9	73.9	65.6	44.8
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-7.5	-7.5	-7.5	-7.5
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Uplink C/N(dB)	23.2	20.0	18.2	17.0
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	34.6	34.6	26.3	5.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	31.0	20.9	26.2	26.2
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8
Downlink C / N(dB)	21.8	12.5	16.0	14.7
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	23.2	20.0	18.2	17.0
C/N Downlink (dB)	21.8	12.5	16.0	14.7
C/I Intermodulation (dB)	N/A	N/A	18.1	16.8
C/I Uplink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Downlink Co-Channel (dB)*	27.0	27.0	27.7	27.0
C/I Uplink Adjacent Satellite 1 (dB)	17.0	13.8	12.0	10.8
C/I Downlink Adjacent Satellite 1 (dB)	20.9	9.9	14.0	12.8
C/I Uplink Adjacent Satellite 2 (dB)	17.0	13.8	12.0	10.8
C/I Downlink Adjacent Satellite 2 (dB)	21.9	12.9	15.9	14.6
C/(N+I) Composite (dB)	11.6	5.1	6.0	4.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.6	4.1	5.0	3.8
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0
Excess Link Margin (dB)	0.6	0.7	1.1	0.8
Number of Carriers	1	1	3	360
CARRIER DENSITY LEVELS				
Uplink Power Density (dBW/Hz)	-51.8	-51.9	-44.6	-45.8
Downlink EIRP Density At Beam Peak (dBW/Hz)	-37.0	-36.2	-38.0	-39.3

C-Band Zone Uplink/Zone Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	ZONE	ZONE	ZONE	ZONE	ZONE
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-5.6	-5.6	-5.6	-5.6	-5.6
Uplink SFD (dBW/m2)	-73.9	-80.9	-80.9	-80.9	-86.9
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	ZONE	ZONE	ZONE	ZONE	ZONE
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	30.9	30.9	30.9	30.9	30.9
Rain Rate (mm/hr)	42	42	42	42	42
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	77M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	52563
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	64451
Allocated Bandwidth(kHz)	36000	36000	10300	100	77000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.36
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.36
UPLINK EARTH STATION					
Earth Station Diameter (meters)	11.0	4.5	2.4	2.4	15.2
Earth Station Gain (dBi)	55.4	46.5	41.9	41.9	58.4
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	18.3	13.1	15.2	15.2	6.1
Earth Station Gain (dBi)	56.0	53.5	55.0	55.0	46.5
Earth Station G/T (dB/K)	35.5	33.0	34.5	34.5	26.2
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	78.5	69.5	63.5	43.1	76.0
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-5.6	-5.6	-5.6	-5.6	-5.6
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Uplink C/N(dB)	25.7	17.5	18.0	17.1	20.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	25.3	25.3	17.4	-3.0	30.9
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	33.0	34.5	34.5	26.2
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Downlink C / N(dB)	17.0	15.3	15.4	14.5	10.8
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	25.7	17.5	18.0	17.1	20.7
C/N Downlink (dB)	17.0	15.3	15.4	14.5	10.8
C/I Intermodulation (dB)	N/A	N/A	21.8	20.9	N/A
C/I Uplink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	17.6	9.4	9.9	9.1	12.6
C/I Downlink Adjacent Satellite 1 (dB)	21.9	20.1	20.2	19.4	14.8
C/I Uplink Adjacent Satellite 2 (dB)	17.6	9.4	9.9	9.1	12.6
C/I Downlink Adjacent Satellite 2 (dB)	22.6	20.9	21.0	20.1	16.7
C/(N+I) Composite (dB)	11.4	5.2	5.6	4.7	5.9
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	4.2	4.6	3.7	4.9
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.4	0.8	0.7	0.7	1.5
Number of Carriers	2	2	7	770	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-52.5	-51.8	-46.7	-47.5	-60.5
Downlink EIRP Density At Beam Peak (dBW/Hz)	-44.3	-43.5	-44.9	-45.8	-41.2

C-Band Zone Uplink/Hemi Downlink

UPLINK BEAM INFORMATION					
Uplink Beam Name	ZONE	ZONE	ZONE	ZONE	ZONE
Uplink Frequency (GHz)	6.175	6.175	6.175	6.175	6.175
Uplink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Uplink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Uplink Contour G/T (dB/K)	-5.6	-5.6	-5.6	-5.6	-5.6
Uplink SFD (dBW/m2)	-73.9	-82.9	-80.9	-80.9	-86.9
Rain Rate (mm/hr)	42	42	42	42	42
DOWNLINK BEAM INFORMATION					
Downlink Beam Name	HEMI	HEMI	HEMI	HEMI	HEMI
Downlink Frequency (GHz)	3.95	3.95	3.95	3.95	3.95
Downlink Beam Polarization	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR
Downlink Relative Contour Level (dB)	-6	-6	-6	-6	-6
Downlink Contour EIRP (dBW)	31.5	31.5	31.5	31.5	31.5
Rain Rate (mm/hr)	42	42	42	42	42
ADJACENT SATELLITE 1					
Satellite 1 Orbital Location	30.9E	30.9E	30.9E	30.9E	30.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
ADJACENT SATELLITE 2					
Satellite 1 Orbital Location	34.9E	34.9E	34.9E	34.9E	34.9E
Uplink Power Density (dBW/Hz)	-38.7	-38.7	-38.7	-38.7	-38.7
Uplink Polarization Advantage (dB)	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-38.0	-38.0	-38.0	-38.0	-38.0
Downlink Polarization Advantage (dB)	0	0	0	0	0
CARRIER INFORMATION					
Carrier ID	36M0F3F	36M0G7W	10M3G7W	100KG7W	77M0G7W
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	N/A	N/A	N/A	N/A
Information Rate(kbps)	N/A	24575	6000	64	52563
Code Rate	N/A	1/2x188/204	1/2x188/204	1/2x239/256	1/2x188/204
Occupied Bandwidth(kHz)	36000	30133	6771.1	75.4	64451
Allocated Bandwidth(kHz)	36000	36000	10300	100	77000
Minimum C/N, Clear Sky (dB)	10	3.36	3.87	2.99	3.36
Minimum C/N, Rain (dB)	10	3.36	3.57	2.79	3.36
UPLINK EARTH STATION					
Earth Station Diameter (meters)	10.0	4.5	2.4	2.4	8.1
Earth Station Gain (dBi)	54.1	46.5	41.9	41.9	52.8
Earth Station Elevation Angle	20	20	20	20	20
DOWNLINK EARTH STATION					
Earth Station Diameter (meters)	18.3	11.0	11.0	13.1	4.5
Earth Station Gain (dBi)	56.0	51.9	51.9	53.5	43.9
Earth Station G/T (dB/K)	35.5	31.0	31.0	33.0	23.6
Earth Station Elevation Angle	20	20	20	20	20
LINK FADE TYPE	Clear Sky	Clear Sky	Clear Sky	Clear Sky	Clear Sky
UPLINK PERFORMANCE					
Uplink Earth Station EIRP (dBW)	78.5	69.5	63.5	43.1	76.0
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2	-200.2
Uplink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Satellite G/T(dB/K)	-5.6	-5.6	-5.6	-5.6	-5.6
Boltzman Constant(dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Uplink C/N(dB)	25.7	17.5	18.0	17.1	20.7
DOWNLINK PERFORMANCE					
Downlink EIRP per Carrier (dBW)	25.9	25.9	18.0	-2.4	31.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-196.3	-196.3	-196.3	-196.3	-196.3
Downlink Rain Attenuation	0.0	0.0	0.0	0.0	0.0
Earth Station G/T (dB/K)	35.5	31.0	31.0	33.0	23.6
Boltzman Constant(dBW / K - Hz)	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-75.6	-74.8	-68.3	-48.8	-78.1
Downlink C / N(dB)	17.6	13.9	12.5	13.6	8.8
COMPOSITE LINK PERFORMANCE					
C/N Uplink (dB)	25.7	17.5	18.0	17.1	20.7
C/N Downlink (dB)	17.6	13.9	12.5	13.6	8.8
C/I Intermodulation (dB)	N/A	N/A	21.8	20.9	N/A
C/I Uplink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Downlink Co-Channel (dB)*	27.3	27.3	27.3	27.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	17.6	9.4	9.9	9.1	12.6
C/I Downlink Adjacent Satellite 1 (dB)	22.5	19.0	17.6	18.4	12.5
C/I Uplink Adjacent Satellite 2 (dB)	17.6	9.4	9.9	9.1	12.6
C/I Downlink Adjacent Satellite 2 (dB)	23.2	20.0	18.6	19.2	15.0
C/(N+I) Composite (dB)	11.6	5.0	5.0	4.6	4.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.6	4.0	4.0	3.6	3.7
Minimum Required C/N (dB)	-10.0	-3.4	-3.9	-3.0	-3.4
Excess Link Margin (dB)	0.6	0.6	0.1	0.6	0.3
Number of Carriers	2	2	7	770	1
CARRIER DENSITY LEVELS					
Uplink Power Density (dBW/Hz)	-51.2	-51.8	-46.7	-47.5	-54.9
Downlink EIRP Density At Beam Peak (dBW/Hz)	-43.7	-42.9	-44.3	-45.2	-40.6