

EXHIBIT 4A: C-BAND LINK BUDGETS

UPLINK BEAM INFORMATION				
Uplink Beam Name	Conus	Conus	Conus	Conus
Uplink Frequency (MHz)	5925 - 6425	5925 - 6425	5925 - 6425	5925 - 6425
Uplink Beam Polarization	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Uplink Relative Contour Level (dB)	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-1.4	-1.4	-1.4	-1.4
Uplink SFD (dBW/m ²)	-87.3	-90.3	-90.3	-90.3
DOWNLINK BEAM INFORMATION				
Downlink Beam Name	Conus	Conus	Conus	Conus
Downlink Frequency (MHz)	3700 - 4200	3700 - 4200	3700 - 4200	3700 - 4200
Downlink Beam Polarization	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Downlink Relative Contour Level (dB)	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	35.3	35.3	35.3	35.3
ADJACENT SATELLITE 1				
Satellite 1 Orbital Location	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.
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)	-39.5	-39.5	-39.5	-39.5
Downlink Polarization Advantage (dB)	0	0	0	0
ADJACENT SATELLITE 2				
Satellite 2 Orbital Location	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.
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)	-39.5	-39.5	-39.5	-39.5
Downlink Polarization Advantage (dB)	0	0	0	0
CARRIER INFORMATION				
Carrier ID	1	2	3	4
Emission Designation	36M0F3F	36M0G7W	10M3G7W	100K67W
Information Rate (kbps)	n/a	36863	6000	64
Carrier Modulation	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	n/a	n/a	n/a
Code Rate	n/a	3/4xRS	1/2xRS	1/2xRS
Occupied Bandwidth (kHz)	36000	30133	6771.1	75.4
Allocated Bandwidth (kHz)	36000	36000	10300	100
Minimum C/N (dB)	10	6.1	3.9	3.0
UPLINK EARTH STATION				
Earth Station Diameter (meters)	7.0	6.1	6.1	6.1
Earth Station Gain (dBi)	51.0	49.4	49.4	49.4
Earth Station Elevation Angle	20	20	20	20
DOWNLINK EARTH STATION				
Earth Station Diameter (meters)	6.1	3.5	3.0	3.0
Earth Station Gain (dBi)	46.5	41.1	39.7	39.7
Earth Station G/T, Clear Sky (dB/K)	26.2	21.0	19.2	19.2
Earth Station Elevation Angle	20	20	20	20
UPLINK PERFORMANCE				
Uplink Earth Station EIRP (dBW)	75.6	72.6	63.9	43.5
Uplink Path Loss, Clear Sky (dB)	-200.2	-200.2	-200.2	-200.2
Satellite G/T (dB/K)	-1.4	-1.4	-1.4	-1.4
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
Uplink C/N (dB)	27.0	24.8	22.6	21.7
DOWNLINK PERFORMANCE				
Downlink EIRP per Carrier (dBW)	35.3	35.3	28.0	7.6
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
Earth Station G/T, Clear Sky (dB/K)	26.2	21.0	19.2	19.2
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)	17.7	13.3	10.7	9.8
COMPOSITE LINK PERFORMANCE				
C/N Uplink (dB)	27.0	24.8	22.6	21.7
C/N Downlink (dB)	17.7	13.3	10.7	9.8
C/I Intermodulation (dB)	n/a	n/a	19.3	18.4
C/I Uplink Co-Channel (dB)*	27.0	27.0	28.7	28.4
C/I Downlink Co-Channel (dB)*	27.0	27.0	28.7	28.4
C/I Uplink Adjacent Satellite 1 (dB)	16.7	14.5	12.3	11.4
C/I Downlink Adjacent Satellite 1 (dB)	23.3	16.3	10.4	9.5
C/I Uplink Adjacent Satellite 2 (dB)	16.7	14.5	12.3	11.4
C/I Downlink Adjacent Satellite 2 (dB)	25.1	21.1	19.2	18.3
C/(N+I) Composite (dB)	11.4	8.1	4.9	4.0
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	10.4	7.1	3.9	3.0
Minimum Required C/N (dB)	-10.0	-6.1	-3.9	-3.0
Excess Link Margin (dB)	0.4	1.0	0.0	0.0
Number of Carriers	1.0	1.0	2.3	257.9
Carrier Density Levels				
Uplink Power Density (dBW/Hz)	-41.4	-51.6	-53.8	-54.7
Downlink EIRP Density At Beam Peak	-26.7	-35.5	-36.3	-37.1

*Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 27 MHz CHANNELS

UPLINK BEAM INFORMATION						
Uplink Beam Name	Conus	Conus	Conus	Conus	Conus	Conus
Uplink Frequency (MHz)	14000 – 14500	14000 – 14500	14000 – 14500	14000 – 14500	14000 – 14500	14000 – 14500
Uplink Beam Polarization	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Uplink Relative Contour Level (dB)	-4	-4	-4	-4	-4	-4
Uplink Contour G/T (dB/K)	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Uplink SFD (dBW/m ²)	-73.0	-73.0	-73.0	-73.0	-73.0	-73.0
Rain Rate (mm/hr)	42.0	42.0	42.0	42.0	42.0	42.0
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	Conus	Conus	Conus	Conus	Conus	Conus
Downlink Frequency (MHz)	11700 – 12200	11700 – 12200	11700 – 12200	11700 – 12200	11700 – 12200	11700 – 12200
Downlink Beam Polarization	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Downlink Relative Contour Level (dB)	-4	-4	-4	-4	-4	-4
Downlink Contour EIRP (dBW)	43.7	43.7	43.7	43.7	43.7	43.7
Rain Rate (mm/hr)	42.0	42.0	42.0	42.0	42.0	42.0
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
CARRIER INFORMATION						
Carrier ID	1	1	1	2	2	2
Emission Designation	24M0F3F	24M0F3F	24M0F3F	27M0G7W	27M0G7W	27M0G7W
Information Rate (kbps)	n/a	n/a	n/a	24575	24575	24575
Carrier Modulation	TV/FM	TV/FM	TV/FM	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	4	4	4	n/a	n/a	n/a
Code Rate	n/a	n/a	n/a	2/3xRS	2/3xRS	2/3xRS
Occupied Bandwidth (kHz)	24000	24000	24000	22600	22600	22600
Allocated Bandwidth (kHz)	24000	24000	24000	27000	27000	27000
Minimum C/N, Clear Sky (dB)	10	10	10	5.1	5.1	5.1
Minimum C/N, Rain (dB)	10	10	10	5.1	5.1	5.1
UPLINK EARTH STATION						
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	6.1
Earth Station Gain (dBi)	56.9	56.9	56.9	56.9	56.9	56.9
Earth Station Elevation Angle	20	20	20	20	20	20
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	4.6	4.6	4.6	2.4	2.4	2.4
Earth Station Gain (dBi)	53.5	53.5	53.5	47.5	47.5	47.5
Earth Station G/T (dB/K)	31.0	31.0	28.5	25.0	25.0	22.3
Earth Station Elevation Angle	20	20	20	20	20	20
LINK FADE TYPE						
	Clear Sky	Uplink Fade	Downlink Fade	Clear Sky	Uplink Fade	Downlink Fade
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	78.9	78.9	78.9	80.4	80.4	80.4
Uplink Path Loss, Clear Sky (dB)	-207.5	-207.5	-207.5	-207.5	-207.5	-207.5
Uplink Rain Attenuation (dB)	0.0	-4.5	0.0	0.0	-5.2	0.0
Satellite G/T (dB/K)	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-73.8	-73.8	-73.8	-73.5	-73.5	-73.5
Uplink C/N (dB)	24.9	20.4	24.9	26.7	21.5	26.7
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	38.2	35.2	38.2	39.5	35.2	39.5
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.9	-205.9	-205.9	-205.9	-205.9	-205.9
Downlink Rain Attenuation (dB)	0.0	0.0	-2.9	0.0	0.0	-3.5
Earth Station G/T, Clear Sky (dB/K)	31.0	31.0	28.5	25.0	25.0	22.3
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-73.8	-73.8	-73.8	-73.5	-73.5	-73.5
Downlink C/N (dB)	17.5	14.5	12.2	13.1	8.8	6.9
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	24.9	20.4	24.9	26.7	21.5	26.7
C/N Downlink (dB)	17.5	14.5	12.2	13.1	8.8	6.9
C/I Intermodulation (dB)	n/a	n/a	n/a	n/a	n/a	n/a
C/I Uplink Co-Channel (dB)*	27.5	23.0	27.5	27.0	21.8	27.0
C/I Downlink Co-Channel (dB)*	27.5	24.5	27.5	27.0	22.7	27.0
C/I Uplink Adjacent Satellite 1 (dB)	33.1	28.6	33.1	34.9	29.7	34.9
C/I Downlink Adjacent Satellite 1 (dB)	22.0	19.0	22.0	17.2	12.9	17.2
C/I Uplink Adjacent Satellite 2 (dB)	33.1	28.6	33.1	34.9	29.7	34.9
C/I Downlink Adjacent Satellite 2 (dB)	22.8	19.8	22.8	18.7	14.4	18.7
C/(N+I) Composite (dB)	14.3	11.0	11.0	10.5	6.2	6.1
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	13.3	10.0	10.0	9.5	5.2	5.1
Minimum Required C/N (dB)	-10.0	-10.0	-10.0	-5.1	-5.1	-5.1
Excess Link Margin (dB)	3.3	0.0	0.0	4.4	0.1	0.0
Number of Carriers	1.0	1.0	1.0	1.0	1.0	1.0
Carrier Density Levels						
Uplink Power Density (dBW/Hz)	-44.0	-44.0	-44.0	-50.0	-50.0	-50.0
Downlink EIRP Density At Beam Peak	-23.8	-26.8	-23.8	-30.0	-34.3	-30.0

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 27 MHz CHANNELS (continued)

UPLINK BEAM INFORMATION						
Uplink Beam Name	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500
Uplink Frequency (MHz)	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Uplink Beam Polarization	-4	-4	-4	-4	-4	-4
Uplink Relative Contour Level (dB)	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Uplink Contour G/T (dB/K)	-84.0	-84.0	-84.0	-84.0	-84.0	-84.0
Uplink SFD (dBW/m ²)	42.0	42.0	42.0	42.0	42.0	42.0
Rain Rate (mm/hr)						
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200
Downlink Frequency (MHz)	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical	Horizontal / Vertical
Downlink Beam Polarization	-4	-4	-4	-4	-4	-4
Downlink Relative Contour Level (dB)	43.7	43.7	43.7	43.7	43.7	43.7
Downlink Contour EIRP (dBW)	42.0	42.0	42.0	42.0	42.0	42.0
Rain Rate (mm/hr)						
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.	91.1 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.	95.1 W.L.
Uplink Power Density (dBW/Hz)	-50.0	-50.0	-50.0	-50.0	-50.0	-50.0
Uplink Polarization Advantage (dB)	0	0	0	0	0	0
Downlink EIRP Density (dBW/Hz)	-26.0	-26.0	-26.0	-26.0	-26.0	-26.0
Downlink Polarization Advantage (dB)	0	0	0	0	0	0
CARRIER INFORMATION						
Carrier ID	3	3	3	4	4	4
Emission Designation	10M3G7W	10M3G7W	10M3G7W	100K67W	100K67W	100K67W
Information Rate (kbps)	6000	6000	6000	64	64	64
Carrier Modulation	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK
Peak to Peak Bandwidth of EDS (MHz)	n/a	n/a	n/a	n/a	n/a	n/a
Code Rate	1/2xRS	1/2xRS	1/2xRS	1/2xRS	1/2xRS	1/2xRS
Occupied Bandwidth (kHz)	6771.1	6771.1	6771.1	75.4	75.4	75.4
Allocated Bandwidth (kHz)	10300	10300	10300	100	100	100
Minimum C/N, Clear Sky (dB)	3.9	3.9	3.9	3.0	3.0	3.0
Minimum C/N, Rain (dB)	3.6	3.6	3.6	2.8	2.8	2.8
UPLINK EARTH STATION						
Earth Station Diameter (meters)	6.1	6.1	6.1	6.1	6.1	6.1
Earth Station Gain (dBi)	56.9	56.9	56.9	56.9	56.9	56.9
Earth Station Elevation Angle	20	20	20	20	20	20
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	2.4	2.4	2.4	1.8	1.8	1.8
Earth Station Gain (dBi)	47.5	47.5	47.5	44.8	44.8	44.8
Earth Station G/T (dB/K)	25.0	25.0	22.5	22.3	22.3	19.9
Earth Station Elevation Angle	20	20	20	20	20	20
LINK FADE TYPE						
	Clear Sky	Uplink Fade	Downlink Fade	Clear Sky	Uplink Fade	Downlink Fade
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	64.8	64.8	64.8	46.6	46.6	46.6
Uplink Path Loss, Clear Sky (dB)	-207.5	-207.5	-207.5	-207.5	-207.5	-207.5
Uplink Rain Attenuation (dB)	0.0	-3.0	0.0	0.0	-3.1	0.0
Satellite G/T (dB/K)	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	-48.8	-48.8	-48.8
Uplink C/N (dB)	16.4	13.4	16.4	17.7	14.6	17.7
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	33.0	30.2	33.0	14.8	11.7	14.8
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.9	-205.9	-205.9	-205.9	-205.9	-205.9
Downlink Rain Attenuation (dB)	0.0	0.0	-3.0	0.0	0.0	-2.9
Earth Station G/T, Clear Sky (dB/K)	25.0	25.0	22.5	22.3	22.3	19.9
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-68.3	-68.3	-68.3	-48.8	-48.8	-48.8
Downlink C/N (dB)	11.9	9.0	6.4	10.5	7.4	5.2
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	16.4	13.4	16.4	17.7	14.6	17.7
C/N Downlink (dB)	11.9	9.0	6.4	10.5	7.4	5.2
C/I Intermodulation (dB)	14.1	11.6	14.1	15.4	12.3	15.4
C/I Uplink Co-Channel (dB)*	25.1	22.1	25.1	27.0	24.0	27.0
C/I Downlink Co-Channel (dB)*	25.1	22.3	25.1	27.0	24.0	27.0
C/I Uplink Adjacent Satellite 1 (dB)	24.5	21.5	24.5	25.9	22.8	25.9
C/I Downlink Adjacent Satellite 1 (dB)	15.9	13.1	15.9	14.2	11.2	14.2
C/I Uplink Adjacent Satellite 2 (dB)	24.5	21.5	24.5	25.9	22.8	25.9
C/I Downlink Adjacent Satellite 2 (dB)	17.5	14.7	17.5	16.3	13.3	16.3
C/(N+I) Composite (dB)	7.4	4.6	4.6	6.9	3.8	3.8
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	6.4	3.6	3.6	5.9	2.8	2.8
Minimum Required C/N (dB)	-3.9	-3.6	-3.6	-3.0	-2.8	-2.8
Excess Link Margin (dB)	2.5	0.0	0.0	2.9	0.0	0.0
Number of Carriers	2.6	2.6	2.6	267.4	267.4	267.4
Carrier Density Levels						
Uplink Power Density (dBW/Hz)	-60.4	-60.4	-60.4	-59.0	-59.0	-59.0
Downlink EIRP Density At Beam Peak	-31.3	-34.1	-31.3	-30.0	-33.1	-30.0

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 27 MHz CHANNELS (continued)

UPLINK BEAM INFORMATION:						
Uplink Beam Name	Conus		Conus		Conus	
Uplink Frequency (MHz)	14000 – 14500		14000 – 14500		14000 – 14500	
Uplink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Uplink Relative Contour Level (dB)	-4		-4		-4	
Uplink Contour G/T (dB/K)	-1.3		-1.3		-1.3	
Uplink SFD (dBW/m ²)	-84.0		-84.0		-84.0	
Rain Rate (mm/hr)	42.0		42.0		42.0	
DOWNLINK BEAM INFORMATION:						
Downlink Beam Name	Conus		Conus		Conus	
Downlink Frequency (MHz)	11700 – 12200		11700 – 12200		11700 – 12200	
Downlink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Downlink Relative Contour Level (dB)	-4		-4		-4	
Downlink Contour EIRP (dBW)	43.7		43.7		43.7	
Rain Rate (mm/hr)	42.0		42.0		42.0	
ADJACENT SATELLITE 1:						
Satellite 1 Orbital Location	91.1 W.L.		91.1 W.L.		91.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
ADJACENT SATELLITE 2:						
Satellite 2 Orbital Location	95.1 W.L.		95.1 W.L.		95.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
CARRIER INFORMATION:						
Carrier ID	5		5		6	
Emission Designation	1M45G7W		1M45G7W		400KG7W	
Information Rate (kbps)	512		512		128	
Carrier Modulation	BPSK		BPSK		BPSK	
Peak to Peak Bandwidth of EDS (MHz)	n/a		n/a		n/a	
Code Rate	1/2		1/2		1/2	
Occupied Bandwidth (kHz)	1229		1229		307	
Allocated Bandwidth (kHz)	1450		1450		400	
Minimum C/N, Clear Sky (dB)	3.4		3.4		3.4	
Minimum C/N, Rain (dB)	2.7		2.7		2.7	
UPLINK EARTH STATION:						
Earth Station Diameter (meters)	6.1		6.1		1.8	
Earth Station Gain (dBi)	56.9		56.9		46.4	
Earth Station Elevation Angle	20		20		20	
DOWNLINK EARTH STATION:						
Earth Station Diameter (meters)	1.8		1.8		6.1	
Earth Station Gain (dBi)	44.8		44.8		55.5	
Earth Station G/T (dB/K)	22.3		19.9		33.1	
Earth Station Elevation Angle	20		20		20	
LINK FADE TYPE:						
	Clear Sky	Uplink Fade	Downlink Fade	Clear Sky	Uplink Fade	Downlink Fade
UPLINK PERFORMANCE:						
Uplink Earth Station EIRP (dBW)	58.6	58.6	58.6	47.3	47.3	47.3
Uplink Path Loss, Clear Sky (dB)	-207.5	-207.5	-207.5	-207.5	-207.5	-207.5
Uplink Rain Attenuation (dB)	0.0	-3.1	0.0	0.0	-2.6	0.0
Satellite G/T (dB/K)	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-60.9	-60.9	-60.9	-54.9	-54.9	-54.9
Uplink C/N (dB)	17.6	14.4	17.6	12.2	9.7	12.2
DOWNLINK PERFORMANCE:						
Downlink EIRP per Carrier (dBW)	26.8	23.7	26.8	15.4	12.9	15.4
Antenna Pointing Error (dB)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Downlink Path Loss, Clear Sky (dB)	-205.9	-205.9	-205.9	-205.9	-205.9	-205.9
Downlink Rain Attenuation (dB)	0.0	0.0	-2.8	0.0	0.0	-5.8
Earth Station G/T, Clear Sky (dB/K)	22.3	22.3	19.9	33.1	33.1	29.7
Boltzman Constant (dBW/K-Hz)	228.6	228.6	228.6	228.6	228.6	228.6
Carrier Noise Bandwidth (dB-Hz)	-60.9	-60.9	-60.9	-54.9	-54.9	-54.9
Downlink C/N (dB)	10.3	7.3	5.1	15.8	13.3	6.7
COMPOSITE LINK PERFORMANCE:						
C/N Uplink (dB)	17.6	14.4	17.6	12.2	9.7	12.2
C/N Downlink (dB)	10.3	7.3	5.1	15.8	13.3	6.7
C/I Intermodulation (dB)	15.3	12.3	15.3	10.0	7.4	10.0
C/I Uplink Co-Channel (dB)*	27.4	24.3	27.4	21.7	19.1	21.7
C/I Downlink Co-Channel (dB)*	27.4	24.4	27.4	21.7	19.1	21.7
C/I Uplink Adjacent Satellite 1 (dB)	25.7	22.6	25.7	20.4	17.8	20.4
C/I Downlink Adjacent Satellite 1 (dB)	14.1	11.1	14.1	20.3	17.7	20.3
C/I Uplink Adjacent Satellite 2 (dB)	25.7	22.6	25.7	20.4	17.8	20.4
C/I Downlink Adjacent Satellite 2 (dB)	16.2	13.2	16.2	20.9	18.3	20.9
C/(N+I) Composite (dB)	6.8	3.7	3.7	6.3	3.7	3.7
Required System Margin (dB)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Net C/(N+I) Composite (dB)	5.8	2.7	2.7	5.3	2.7	2.7
Minimum Required C/N (dB)	-3.4	-2.7	-2.7	-3.4	-2.7	-2.7
Excess Link Margin (dB)	2.4	0.0	0.0	1.9	0.0	0.0
Number of Carriers	16.9	16.9	16.9	67.5	67.5	67.5
Carrier Density Levels:						
Uplink Power Density (dBW/Hz)	-59.2	-59.2	-59.2	-54.0	-54.0	-54.0
Downlink EIRP Density At Beam Peak	-30.1	-33.2	-30.1	-35.4	-38.0	-35.4

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 54 MHz CHANNELS (continued)

UPLINK BEAM INFORMATION						
Uplink Beam Name	Conus 14000 – 14500		Conus 14000 – 14500		Conus 14000 – 14500	
Uplink Frequency (MHz)	14000 – 14500		14000 – 14500		14000 – 14500	
Uplink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Uplink Relative Contour Level (dB)	-4		-4		-4	
Uplink Contour G/T (dB/K)	-1.3		-1.3		-1.3	
Uplink SFD (dBW/m ²)	-73.0		-73.0		-73.0	
Rain Rate (mm/hr)	42.0		42.0		42.0	
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	Conus 11700 – 12200		Conus 11700 – 12200		Conus 11700 – 12200	
Downlink Frequency (MHz)	11700 – 12200		11700 – 12200		11700 – 12200	
Downlink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Downlink Relative Contour Level (dB)	-4		-4		-4	
Downlink Contour EIRP (dBW)	43.7		43.7		43.7	
Rain Rate (mm/hr)	42.0		42.0		42.0	
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	91.1 W.L.		91.1 W.L.		91.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	95.1 W.L.		95.1 W.L.		95.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
CARRIER INFORMATION						
Carrier ID	1		1		2	
Emission Designation	24M0F3F		24M0F3F		54M0G7W	
Information Rate (kbps)	n/a		n/a		45801	
Carrier Modulation	TV/FM		TV/FM		QPSK	
Peak to Peak Bandwidth of EDS (MHz)	4		4		n/a	
Code Rate	n/a		n/a		2/3xRS	
Occupied Bandwidth (kHz)	24000		24000		42120	
Allocated Bandwidth (kHz)	24000		24000		54000	
Minimum C/N, Clear Sky (dB)	10		10		5.1	
Minimum C/N, Rain (dB)	10		10		5.1	
UPLINK EARTH STATION						
Earth Station Diameter (meters)	6.1		6.1		7.0	
Earth Station Gain (dBi)	56.9		56.9		58.1	
Earth Station Elevation Angle	20		20		20	
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	6.1		6.1		2.4	
Earth Station Gain (dBi)	55.5		55.5		47.5	
Earth Station G/T (dB/K)	33.1		30.4		25.0	
Earth Station Elevation Angle	20		20		20	
LINK FADE TYPE						
	Clear Sky	Uplink Fade	Downlink Fade	Clear Sky	Uplink Fade	Downlink Fade
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	78.9		78.9		83.1	
Uplink Path Loss, Clear Sky (dB)	-207.5		-207.5		-207.5	
Uplink Rain Attenuation (dB)	0.0		-4.5		-4.6	
Satellite G/T (dB/K)	-1.3		-1.3		-1.3	
Boltzman Constant (dBW/K-Hz)	228.6		228.6		228.6	
Carrier Noise Bandwidth (dB-Hz)	-73.8		-73.8		-76.2	
Uplink C/N (dB)	24.9		20.5		26.7	
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	36.9		36.9		41.4	
Antenna Pointing Error (dB)	-0.5		-0.5		-0.5	
Downlink Path Loss, Clear Sky (dB)	-205.9		-205.9		-205.9	
Downlink Rain Attenuation (dB)	0.0		-3.5		-2.9	
Earth Station G/T, Clear Sky (dB/K)	33.1		30.4		25.0	
Boltzman Constant (dBW/K-Hz)	228.6		228.6		228.6	
Carrier Noise Bandwidth (dB-Hz)	-73.8		-73.8		-76.2	
Downlink C/N (dB)	18.3		12.1		8.7	
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	24.9		24.9		26.7	
C/N Downlink (dB)	18.3		12.1		8.7	
C/I Intermodulation (dB)	n/a		n/a		n/a	
C/I Uplink Co-Channel (dB)*	27.5		27.5		27.0	
C/I Downlink Co-Channel (dB)*	27.5		27.5		27.0	
C/I Uplink Adjacent Satellite 1 (dB)	33.1		33.1		34.9	
C/I Downlink Adjacent Satellite 1 (dB)	22.8		22.8		16.4	
C/I Uplink Adjacent Satellite 2 (dB)	33.1		33.1		34.9	
C/I Downlink Adjacent Satellite 2 (dB)	23.4		23.4		17.9	
C/(N+I) Composite (dB)	14.9		11.0		9.8	
Required System Margin (dB)	-1.0		-1.0		-1.0	
Net C/(N+I) Composite (dB)	13.9		10.0		8.8	
Minimum Required C/N (dB)	-10.0		-10.0		-5.1	
Excess Link Margin (dB)	3.9		0.0		3.7	
Number of Carriers	2.0		2.0		1.0	
Carrier Density Levels						
Uplink Power Density (dBW/Hz)	-44.0		-44.0		-51.2	
Downlink EIRP Density At Beam Peak	-25.1		-25.1		-30.8	

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 54 MHz CHANNELS (continued)

UPLINK BEAM INFORMATION						
Uplink Beam Name	Conus 14000 – 14500		Conus 14000 – 14500		Conus 14000 – 14500	
Uplink Frequency (MHz)	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Uplink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Uplink Relative Contour Level (dB)	-4		-4		-4	
Uplink Contour G/T (dB/K)	-1.3		-1.3		-1.3	
Uplink SFD (dBW/m ²)	-87		-87		-87	
Rain Rate (mm/hr)	42.0		42.0		42.0	
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	Conus 11700 – 12200		Conus 11700 – 12200		Conus 11700 – 12200	
Downlink Frequency (MHz)	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Downlink Beam Polarization	Horizontal / Vertical		Horizontal / Vertical		Horizontal / Vertical	
Downlink Relative Contour Level (dB)	-4		-4		-4	
Downlink Contour EIRP (dBW)	43.7		43.7		43.7	
Rain Rate (mm/hr)	42.0		42.0		42.0	
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	91.1 W.L.		91.1 W.L.		91.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	95.1 W.L.		95.1 W.L.		95.1 W.L.	
Uplink Power Density (dBW/Hz)	-50.0		-50.0		-50.0	
Uplink Polarization Advantage (dB)	0		0		0	
Downlink EIRP Density (dBW/Hz)	-26.0		-26.0		-26.0	
Downlink Polarization Advantage (dB)	0		0		0	
CARRIER INFORMATION						
Carrier ID	3		3		3	
Mission Designation	10M3G7W		10M3G7W		100KG7W	
Information Rate (kbps)	6000		6000		64	
Carrier Modulation	QPSK		QPSK		QPSK	
Peak to Peak Bandwidth of EDS (MHz)	n/a		n/a		n/a	
Code Rate	1/2xRS		1/2xRS		1/2xRS	
Occupied Bandwidth (kHz)	6771.1		6771.1		75.4	
Allocated Bandwidth (kHz)	10300		10300		100	
Minimum C/N, Clear Sky (dB)	3.9		3.9		3.0	
Minimum C/N, Rain (dB)	3.6		3.6		2.8	
UPLINK EARTH STATION						
Earth Station Diameter (meters)	6.1		6.1		6.1	
Earth Station Gain (dBi)	56.9		56.9		56.9	
Earth Station Elevation Angle	20		20		20	
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	2.4		2.4		2.4	
Earth Station Gain (dBi)	47.5		47.5		47.5	
Earth Station G/T (dB/K)	25.0		22.5		25.0	
Earth Station Elevation Angle	20		20		20	
LINK FADE TYPE						
	Clear Sky		Uplink Fade		Downlink Fade	
	Clear Sky		Uplink Fade		Downlink Fade	
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	62.0		62.0		41.8	
Uplink Path Loss, Clear Sky (dB)	-207.5		-207.5		-207.5	
Uplink Rain Attenuation (dB)	0.0		-3.0		-2.9	
Satellite G/T (dB/K)	-1.3		-1.3		-1.3	
Boltzman Constant (dBW/K-Hz)	228.6		228.6		228.6	
Carrier Noise Bandwidth (dB-Hz)	-68.3		-68.3		-48.8	
Uplink C/N (dB)	13.6		10.6		12.9	
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	33.2		30.5		13.0	
Antenna Pointing Error (dB)	-0.5		-0.5		-0.5	
Downlink Path Loss, Clear Sky (dB)	-205.9		-205.9		-205.9	
Downlink Rain Attenuation (dB)	0.0		0.0		-3.2	
Earth Station G/T, Clear Sky (dB/K)	25.0		25.0		22.5	
Boltzman Constant (dBW/K-Hz)	228.6		228.6		228.6	
Carrier Noise Bandwidth (dB-Hz)	-68.3		-68.3		-48.8	
Downlink C/N (dB)	12.0		9.3		11.4	
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	13.6		10.6		12.9	
C/N Downlink (dB)	12.0		9.3		11.4	
I Intermodulation (dB)	17.3		14.8		16.6	
I Uplink Co-Channel (dB)*	28.3		25.4		28.3	
I Downlink Co-Channel (dB)*	28.3		25.6		28.3	
I Uplink Adjacent Satellite 1 (dB)	21.7		18.8		21.1	
I Downlink Adjacent Satellite 1 (dB)	16.1		13.4		15.4	
I Uplink Adjacent Satellite 2 (dB)	21.7		18.8		21.1	
I Downlink Adjacent Satellite 2 (dB)	17.7		14.9		17.0	
(N+I) Composite (dB)	7.4		4.6		6.7	
Required System Margin (dB)	-1.0		-1.0		-1.0	
Net C/(N+I) Composite (dB)	6.4		3.6		5.7	
Minimum Required C/N (dB)	-3.9		-3.6		-3.0	
Excess Link Margin (dB)	2.5		0.0		2.7	
Number of Carriers	3.9		3.9		403.8	
CARRIER DENSITY LEVELS						
Uplink Power Density (dBW/Hz)	-63.2		-63.2		-63.8	
Downlink EIRP Density At Beam Peak	-31.1		-33.8		-31.1	

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation.

EXHIBIT 4B: Ku-BAND LINK BUDGETS – 54 MHz CHANNELS (continued)

UPLINK BEAM INFORMATION						
Uplink Beam Name	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500	Conus 14000 – 14500
Uplink Frequency (MHz)	Horizontal / Vertical					
Uplink Beam Polarization	Horizontal / Vertical					
Uplink Relative Contour Level (dB)	Horizontal / Vertical					
Uplink Contour G/T (dB/K)	Horizontal / Vertical					
Uplink SFD (dBW/m ²)	Horizontal / Vertical					
Rain Rate (mm/hr)	Horizontal / Vertical					
DOWNLINK BEAM INFORMATION						
Downlink Beam Name	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200	Conus 11700 – 12200
Downlink Frequency (MHz)	Horizontal / Vertical					
Downlink Beam Polarization	Horizontal / Vertical					
Downlink Relative Contour Level (dB)	Horizontal / Vertical					
Downlink Contour EIRP (dBW)	Horizontal / Vertical					
Rain Rate (mm/hr)	Horizontal / Vertical					
ADJACENT SATELLITE 1						
Satellite 1 Orbital Location	Horizontal / Vertical					
Uplink Power Density (dBW/Hz)	Horizontal / Vertical					
Uplink Polarization Advantage (dB)	Horizontal / Vertical					
Downlink EIRP Density (dBW/Hz)	Horizontal / Vertical					
Downlink Polarization Advantage (dB)	Horizontal / Vertical					
ADJACENT SATELLITE 2						
Satellite 2 Orbital Location	Horizontal / Vertical					
Uplink Power Density (dBW/Hz)	Horizontal / Vertical					
Uplink Polarization Advantage (dB)	Horizontal / Vertical					
Downlink EIRP Density (dBW/Hz)	Horizontal / Vertical					
Downlink Polarization Advantage (dB)	Horizontal / Vertical					
CARRIER INFORMATION						
Carrier ID	Horizontal / Vertical					
Mission Designation	Horizontal / Vertical					
Information Rate (kbps)	Horizontal / Vertical					
Carrier Modulation	Horizontal / Vertical					
Peak to Peak Bandwidth of EDS (MHz)	Horizontal / Vertical					
Code Rate	Horizontal / Vertical					
Occupied Bandwidth (kHz)	Horizontal / Vertical					
Allocated Bandwidth (kHz)	Horizontal / Vertical					
Minimum C/N, Clear Sky (dB)	Horizontal / Vertical					
Minimum C/N, Rain (dB)	Horizontal / Vertical					
UPLINK EARTH STATION						
Earth Station Diameter (meters)	Horizontal / Vertical					
Earth Station Gain (dBi)	Horizontal / Vertical					
Earth Station Elevation Angle	Horizontal / Vertical					
DOWNLINK EARTH STATION						
Earth Station Diameter (meters)	Horizontal / Vertical					
Earth Station Gain (dBi)	Horizontal / Vertical					
Earth Station G/T (dB/K)	Horizontal / Vertical					
Earth Station Elevation Angle	Horizontal / Vertical					
LINK FADE TYPE						
Link Fade Type	Horizontal / Vertical					
UPLINK PERFORMANCE						
Uplink Earth Station EIRP (dBW)	Horizontal / Vertical					
Uplink Path Loss, Clear Sky (dB)	Horizontal / Vertical					
Uplink Rain Attenuation (dB)	Horizontal / Vertical					
Satellite G/T (dB/K)	Horizontal / Vertical					
Boltzman Constant (dBW/K-Hz)	Horizontal / Vertical					
Carrier Noise Bandwidth (dB-Hz)	Horizontal / Vertical					
Uplink C/N (dB)	Horizontal / Vertical					
DOWNLINK PERFORMANCE						
Downlink EIRP per Carrier (dBW)	Horizontal / Vertical					
Antenna Pointing Error (dB)	Horizontal / Vertical					
Downlink Path Loss, Clear Sky (dB)	Horizontal / Vertical					
Downlink Rain Attenuation (dB)	Horizontal / Vertical					
Earth Station G/T, Clear Sky (dB/K)	Horizontal / Vertical					
Boltzman Constant (dBW/K-Hz)	Horizontal / Vertical					
Carrier Noise Bandwidth (dB-Hz)	Horizontal / Vertical					
Downlink C/N (dB)	Horizontal / Vertical					
COMPOSITE LINK PERFORMANCE						
C/N Uplink (dB)	Horizontal / Vertical					
C/N Downlink (dB)	Horizontal / Vertical					
I Intermodulation (dB)	Horizontal / Vertical					
I Uplink Co-Channel (dB)*	Horizontal / Vertical					
I Downlink Co-Channel (dB)*	Horizontal / Vertical					
I Uplink Adjacent Satellite 1 (dB)	Horizontal / Vertical					
I Downlink Adjacent Satellite 1 (dB)	Horizontal / Vertical					
I Uplink Adjacent Satellite 2 (dB)	Horizontal / Vertical					
I Downlink Adjacent Satellite 2 (dB)	Horizontal / Vertical					
/(N+1) Composite (dB)	Horizontal / Vertical					
Required System Margin (dB)	Horizontal / Vertical					
Net C/(N+1) Composite (dB)	Horizontal / Vertical					
Minimum Required C/N (dB)	Horizontal / Vertical					
Excess Link Margin (dB)	Horizontal / Vertical					
Number of Carriers	Horizontal / Vertical					
Carrier Density Levels	Horizontal / Vertical					
Uplink Power Density (dBW/Hz)	Horizontal / Vertical					
Downlink EIRP Density At Beam Peak	Horizontal / Vertical					
	Clear Sky	Uplink Fade	Downlink Fade	Clear Sky	Uplink Fade	Downlink Fade
	53.8	53.8	53.8	44.6	44.6	44.6
	-207.5	-207.5	-207.5	-207.5	-207.5	-207.5
	0.0	-2.9	0.0	0.0	-2.5	0.0
	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
	228.6	228.6	228.6	228.6	228.6	228.6
	-60.9	-60.9	-60.9	-54.9	-54.9	-54.9
	12.8	9.8	12.8	9.6	7.0	9.6
	25.0	22.1	25.0	15.8	13.2	15.8
	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	-205.9	-205.9	-205.9	-205.9	-205.9	-205.9
	0.0	0.0	-3.2	0.0	0.0	-6.1
	25.0	25.0	22.4	33.1	33.1	29.7
	228.6	228.6	228.6	228.6	228.6	228.6
	-60.9	-60.9	-60.9	-54.9	-54.9	-54.9
	11.3	8.4	5.5	16.2	13.6	6.7
	12.8	9.8	12.8	9.6	7.0	9.6
	11.3	8.4	5.5	16.2	13.6	6.7
	16.5	13.7	16.5	13.3	10.8	13.3
	28.7	25.7	28.7	25.0	22.5	25.0
	28.7	25.8	28.7	25.0	22.5	25.0
	21.0	18.0	21.0	17.7	15.2	17.7
	15.3	12.4	15.3	20.6	18.1	20.6
	21.0	18.0	21.0	17.7	15.2	17.7
	16.9	14.0	16.9	21.2	18.7	21.2
	6.6	3.7	3.7	6.2	3.7	3.7
	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
	5.6	2.7	2.7	5.2	2.7	2.7
	-3.4	-2.7	-2.7	-3.4	-2.7	-2.7
	2.2	0.0	0.0	1.8	0.0	0.0
	25.4	25.4	25.4	135.0	135.0	135.0
	-64.0	-64.0	-64.0	-59.3	-59.3	-59.3
	-31.9	-34.8	-31.9	-35.1	-37.7	-35.1

* Note: The C/I level is adjusted depending on the signal level and transponder mode of operation