

Emission Designator	36M0G7W	2M00G7W	500KG7W	18M0G7W	1M00G7W	200KG7W	9M00G7W
Emission BW [kHz]	36000	2000	500	18000	1000	200	9000
Modulation type	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	8PSK
Information (bit) rate [kbps]	38080.9	2115.6	528.9	21419.6	1190.0	282.6	14260.6
FEC Rate	0.667	0.667	0.667	0.750	0.750	0.889	0.667
Uplink Frequency [GHz]	14	14	14	14	14	14	14
Uplink ES antenna diameter [m]	6	1.2	1.2	6	9.1	2.4	9.1
Uplink ES antenna gain [dBi]	57.0	43.0	43.0	57.0	60.6	49.1	60.6
Uplink Antenna feed flange power [dBW]	14.6	5.0	-1.0	11.6	-1.0	-7.0	8.5
Uplink ES to Satellite Distance [km]	38000	38000	38000	38000	38000	38000	38000
Uplink Free-Space Loss [dB]	207.0	207.0	207.0	207.0	207.0	207.0	207.0
Satellite RX antenna gain [dBi]	31.9	31.9	31.9	31.9	31.9	31.9	31.9
Satellite Rx system noise temperature [K]	400	400	400	400	400	400	400
Uplink Rain Atten. [dB]	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Uplink Cloud Atten. [dB]	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Uplink Noise temp. increase due to rain and cloud [K]	174.5	174.5	174.5	174.5	174.5	174.5	174.5
Uplink Thermal C/N [dB]	18.0	7.0	7.0	18.0	21.6	11.0	21.6
Uplink C/I (ASI) [dB]	14.2	14.2	14.2	15.2	15.2	17.3	18.3
Uplink C/I (Xpol) [dB]	30	30	30	30	30	30	30
Uplink C/I (IM) [dB]	27	27	27	27	27	27	27
Uplink C/(N+I) [dB]	12.5	6.2	6.2	13.1	13.9	10.0	16.0
Downlink Frequency (GHz)	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Downlink EIRP [dBW]	48.5	32.6	26.6	45.5	33.0	25.1	42.5
Downlink ES to Satellite Distance [km]	38000	38000	38000	38000	38000	38000	38000
Downlink Free-Space Loss [dB]	205.4	205.4	205.4	205.4	205.4	205.4	205.4
RX ES antenna diameter [m]	1.2	6	6	1.2	1.2	9.1	1.2
RX ES antenna gain [dBi]	41.5	55.5	55.5	41.5	41.5	59.1	41.5
RX ES system noise temperature [K]	200	200	200	200	200	200	200
Downlink Rain Atten. [dB]	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Downlink Cloud Atten. [dB]	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Downlink Noise temp. increase due to rain and cloud [deg K]	137.8	137.8	137.8	137.8	137.8	137.8	137.8
Downlink Thermal C/N [dB]	9.5	20.1	20.1	9.5	9.5	26.3	9.5
Downlink C/I (ASI) [dB]	14.2	14.2	14.2	15.2	15.2	17.3	18.3
Downlink C/I (Xpol) [dB]	30	30	30	30	30	30	30
Downlink C/I (IM) [dB]	27	27	27	27	27	27	27
Downlink C/(N+I) [dB]	8.2	13.0	13.0	8.4	8.4	16.2	8.9
Total C/(N+I) [dB]	6.79	5.35	5.35	7.10	7.31	9.04	8.10
Required C/(N+I) [dB]	3.90	3.90	3.90	4.83	4.83	7.00	7.92
Margin [dB]	2.89	1.45	1.45	2.27	2.48	2.04	0.18