Attachment 1

Two-Degree Spacing Analysis for Inmarsat-5 F3 at 179.6º E.L.

In order to demonstrate two-degree compatibility, the transmission parameters of the Inmarsat-5 F3 satellite have been assumed as both the wanted and victim transmissions. Table A.11.2 provides a summary of the uplink and downlink transmission parameters. The interference analysis assumes a nominal orbital separation of 1.9 degrees as opposed to 2 degrees in order to take into account the east-west station-keeping of 0.05 degrees. The analysis also assumes a 1.1 factor (or 1 dB advantage) for topocentric-to-geocentric conversion. All wanted and interfering carriers are co-polarized.

Table A.11.3 shows the results of the interference calculations in terms of the C/I margins. The format is similar to that of the output of the Sharp Adjacent Satellite Interference Analysis program. It can be seen that the C/I margins are all positive.

Table A.11.1. Inmarsat-5 F3 transmission parameters.

Uplink

E/W station keeping (deg.):	0.05
Worst case separation (deg.):	1.9
Worst case topocentric angle (deg):	2.09

Carrier ID	Emission Designator	Occupied BW (kHz)	Tx Antenna Type	Tx Antenna Gain (dBi)	Uplink EIRP (dBW)	Uplink EIRP density (dBW/kHz)	Tx Antenna Off-axis Gain at 2.09 deg. (dB)	C/I Criterion (dB)
1	3M16G7W	2630.3	Typ-60cm	43.6	49.2	15.0	21.0	11.2
2	2M45G7W	2041.7	Typ-100cm	48.0	52.5	19.4	21.0	14.2
3	4M78G7W	3981.1	Typ-150cm	51.5	59.5	23.5	21.0	17.8
4	3M16G7W	2630.3	Typ-60cm	43.4	49.2	15.0	21.0	13.2
5	2M45G7W	2041.7	Typ-100cm	47.9	52.5	19.4	21.0	17.8
6	4M78G7W	3981.1	Typ-150cm	51.4	59.5	23.5	21.0	20.4
7	32M0G7W	32000.0	Typ-13.2m	68.9	77	31.9	21.0	14.7
8	32M0G7W	32000.0	Typ-13.2m	68.9	77	31.9	21.0	17.7
9	32M0G7W	32000.0	Typ-13.2m	68.9	77	31.9	21.0	21.8
10	50M0G7W	50000.0	Typ-13.2m	68.7	77	30.0	21.0	13.2
11	50M0G7W	50000.0	Typ-13.2m	68.7	77	30.0	21.0	17.1
12	50M0G7W	50000.0	Typ-13.2m	68.7	77	30.0	21.0	20.7
13	900KF3X (TLC)	700.0	Typ-13.2m	69.5	74	45.5	21.0	23.2

14	5M00G1W (Rtn Signalling)	5000.0	Typ-60cm	43.5	49.2	12.2	21.0	-9.8
15	5M00G1W (Rtn Signalling)	5000.0	Typ-100cm	47.9	52.5	15.5	21.0	-9.8
16	5M00G1W (Rtn Signalling)	5000.0	Typ-150cm	51.5	59.5	22.5	21.0	-9.8
17	5M00G1W (Fwd Signalling)	140.0	Typ-13.2m	68.7	67.7	46.2	21.0	10.2
18	32M0G7W (TEST-F1)	32000.0	Typ-13.2m	68.9	77	31.9	21.0	26
19	50M0G7W (TEST-F2)	50000.0	Typ-13.2m	68.7	77	30.0	21.0	26
20	5M00G1W (TEST-F3)	140.0	Typ-13.2m	68.7	67.7	46.2	21.0	10.2
21	3M16G7W (TEST-R1)	2630.3	Typ-13.2m	69.3	49.2	15.0	21.0	11.2
22	2M45G7W (TEST-R2)	2041.7	Typ-13.2m	69.3	52.5	19.4	21.0	14.2
23	4M78G7W (TEST-R3)	3981.1	Typ-13.2m	69.3	59.5	23.5	21.0	17.8
24	3M16G7W (TEST-R4)	2630.3	Typ-13.2m	69.1	49.2	15.0	21.0	11.2
25	2M45G7W (TEST-R5)	2041.7	Typ-13.2m	69.1	52.5	19.4	21.0	14.2
26	4M78G7W (TEST-R6)	3981.1	Typ-13.2m	69.1	59.5	23.5	21.0	17.8
27	5M00G1W (TEST-R7)	5000.0	Typ-13.2m	69.2	67.7	30.7	21.0	-9.8
28	5M00G1W (TEST-R8)	5000.0	Typ-13.2m	69.2	67.7	30.7	21.0	-9.8
29	5M00G1W (TEST-R9)	5000.0	Typ-13.2m	69.2	67.7	30.7	21.0	-9.8

Downlink

E/W station keeping (deg.): 0.05
Worst case separation (deg.): 1.9
Worst case topocentric angle (deg): 2.09

Carrier ID	Emission Designator	Occupied BW (kHz)	Rx Antenna Type	Rx Antenna Gain (dBi)	Downlink EIRP (dBW)	Downlink EIRP density (dBW/kHz)	Rx Antenna Off-axis Gain at 2.09 deg. (dB)	C/I Criterion (dB)
1	3M16G7W	2630.3	Typ-13.2m	66.1	19.3	-14.9	21.0	11.2
2	2M45G7W	2041.7	Typ-13.2m	66.1	22.6	-10.5	21.0	14.2
3	4M78G7W	3981.1	Typ-13.2m	66.1	26.6	-9.4	21.0	17.8
4	3M16G7W	2630.3	Typ-13.2m	65.7	24.4	-9.8	21.0	13.2
5	2M45G7W	2041.7	Typ-13.2m	65.7	27.7	-5.4	21.0	17.8
6	4M78G7W	3981.1	Typ-13.2m	65.7	29.1	-6.9	21.0	20.4
7	32M0G7W	32000.0	Typ-60cm	40.1	53.1	8.0	21.0	14.7
8	32M0G7W	32000.0	Typ-100cm	44.5	53.1	8.0	21.0	17.7
9	32M0G7W	32000.0	Typ-150cm	48.1	53.1	8.0	21.0	21.8
10	50M0G7W	50000.0	Typ-60cm	39.9	54.0	7.0	21.0	13.2
11	50M0G7W	50000.0	Typ-100cm	44.3	54.0	7.0	21.0	17.1

12	50M0G7W	50000.0	Typ-150cm	47.8	54.0	7.0	21.0	20.7
13	150KG3X (TLM)	130.0	Typ-13.2m	66.4	28.8	7.7	21.0	23.2
14	5M00G1W (Rtn Signalling)	5000.0	Typ-13.2m	65.8	23.9	-13.1	21.0	-9.8
15	5M00G1W (Rtn Signalling)	5000.0	Typ-13.2m	65.8	27.2	-9.8	21.0	-9.8
16	5M00G1W (Rtn Signalling)	5000.0	Typ-13.2m	65.8	35.2	-1.8	21.0	-9.8
17	5M00G1W (Fwd Signalling)	140.0	Typ-60cm	40.0	30.0	8.5	21.0	10.2
18	5M00G1W (Fwd Signalling)	140.0	Typ-100cm	44.4	30.0	8.5	21.0	10.2
19	5M00G1W (Fwd Signalling)	140.0	Typ-150cm	47.9	30.0	8.5	21.0	10.2
20	32M0G7W (TEST-F1)	32000.0	Typ-13.2m	66.6	53.1	8.0	21.0	26
21	50M0G7W (TEST-F2)	50000.0	Typ-13.2m	66.4	54.0	7.0	21.0	26
22	5M00G1W (TEST-F3)	140.0	Typ-13.2m	66.5	30.0	8.5	21.0	10.2
23	3M16G7W (TEST-R1)	2630.3	Typ-13.2m	66.1	19.3	-14.9	21.0	11.2
24	2M45G7W (TEST-R2)	2041.7	Typ-13.2m	66.1	22.6	-10.5	21.0	14.2
25	4M78G7W (TEST-R3)	3981.1	Typ-13.2m	66.1	26.6	-9.4	21.0	17.8
26	3M16G7W (TEST-R4)	2630.3	Typ-13.2m	66.4	24.4	-9.8	21.0	11.2
27	2M45G7W (TEST-R5)	2041.7	Typ-13.2m	66.4	27.7	-5.4	21.0	14.2
28	4M78G7W (TEST-R6)	3981.1	Typ-13.2m	66.4	29.1	-6.9	21.0	17.8
29	5M00G1W (TEST-R7)	5000.0	Typ-13.2m	65.8	23.9	-13.1	21.0	-9.8
30	5M00G1W (TEST-R8)	5000.0	Typ-13.2m	65.8	27.2	-9.8	21.0	-9.8
31	5M00G1W (TEST-R9)	5000.0	Typ-13.2m	65.8	35.2	-1.8	21.0	-9.8

Table A.11.2. Summary of the C/I margins (dB)

Uplink

	Interfering Carrier																													
Wanted Carrier	Crx ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	1	11.4	11.4	10.8	11.2	11.3	10.7	19.8	19.8	19.8	21.5	21.5	21.5	6.8	14.1	15.2	11.8	5.3	19.8	21.5	5.3	37.1	32.7	28.6	36.9	32.5	28.4	21.3	21.3	21.3
	2	12.8	12.8	12.2	12.6	12.7	12.1	21.2	21.2	21.2	22.9	22.9	22.9	8.2	15.5	16.6	13.2	6.7	21.2	22.9	6.7	38.5	34.1	30.0	38.3	33.9	29.8	22.7	22.7	22.7
	3	13.3	13.3	12.7	13.1	13.2	12.6	21.7	21.7	21.7	23.4	23.4	23.4	8.7	16.0	17.1	13.7	7.2	21.7	23.4	7.2	39.0	34.6	30.5	38.8	34.4	30.3	23.2	23.2	23.2
	4	9.4	9.4	8.8	9.2	9.3	8.7	17.8	17.8	17.8	19.5	19.5	19.5	4.8	12.1	13.2	9.8	3.3	17.8	19.5	3.3	35.1	30.7	26.6	34.9	30.5	26.4	19.3	19.3	19.3
	5	9.2	9.2	8.6	9.0	9.1	8.5	17.6	17.6	17.6	19.3	19.3	19.3	4.6	11.9	13.0	9.6	3.1	17.6	19.3	3.1	34.9	30.5	26.4	34.7	30.3	26.2	19.1	19.1	19.1
	6	10.7	10.7	10.1	10.5	10.6	10.0	19.1	19.1	19.1	20.8	20.8	20.8	6.1	13.4	14.5	11.1	4.6	19.1	20.8	4.6	36.4	32.0	27.9	36.2	31.8	27.7	20.6	20.6	20.6
	7	24.8	24.9	24.3	24.7	24.7	24.1	33.2	33.2	33.2	34.9	34.9	34.9	20.2	27.5	28.6	25.2	18.7	33.2	34.9	18.7	50.6	46.2	42.1	50.4	46.0	41.9	34.7	34.7	34.7
	8	21.8	21.9	21.3	21.7	21.7	21.1	30.2	30.2	30.2	31.9	31.9	31.9	17.2	24.5	25.6	22.2	15.7	30.2	31.9	15.7	47.6	43.2	39.1	47.4	43.0	38.9	31.7	31.7	31.7
	9	17.7	17.8	17.2	17.6	17.6	17.0	26.1	26.1	26.1	27.8	27.8	27.8	13.1	20.4	21.5	18.1	11.6	26.1	27.8	11.6	43.5	39.1	35.0	43.3	38.9	34.8	27.6	27.6	27.6
	10	24.4	24.4	23.8	24.2	24.3	23.7	32.8	32.8	32.8	34.5	34.5	34.5	19.8	27.1	28.2	24.8	18.3	32.8	34.5	18.3	50.1	45.7	41.6	49.9	45.5	41.4	34.3	34.3	34.3
	11	20.5	20.5	19.9	20.3	20.4	19.8	28.9	28.9	28.9	30.6	30.6	30.6	15.9	23.2	24.3	20.9	14.4	28.9	30.6	14.4	46.2	41.8	37.7	46.0	41.6	37.5	30.4	30.4	30.4
	12	16.9	16.9	16.3	16.7	16.8	16.2	25.3	25.3	25.3	27.0	27.0	27.0	12.3	19.6	20.7	17.3	10.8	25.3	27.0	10.8	42.6	38.2	34.1	42.4	38.0	33.9	26.8	26.8	26.8
	13	29.9	30.0	29.4	29.8	29.8	29.2	38.3	38.3	38.3	40.0	40.0	40.0	25.3	32.6	33.7	30.3	23.8	38.3	40.0	23.8	55.7	51.3	47.2	55.5	51.1	47.0	39.8	39.8	39.8
	14	29.6	29.6	29.0	29.4	29.5	28.9	38.0	38.0	38.0	39.7	39.7	39.7	25.0	32.3	33.4	30.0	23.5	38.0	39.7	23.5	55.3	50.9	46.8	55.1	50.7	46.6	39.5	39.5	39.5
	15	32.9	32.9	32.3	32.7	32.8	32.2	41.3	41.3	41.3	43.0	43.0	43.0	28.3	35.6	36.7	33.3	26.8	41.3	43.0	26.8	58.6	54.2	50.1	58.4	54.0	49.9	42.8	42.8	42.8
	16	39.9	39.9	39.3	39.7	39.8	39.2	48.3	48.3	48.3	50.0	50.0	50.0	35.3	42.6	43.7	40.3	33.8	48.3	50.0	33.8	65.6	61.2	57.1	65.4	61.0	56.9	49.8	49.8	49.8
	17	43.6	43.6	43.1	43.5	43.5	42.9	52.0	52.0	52.0	53.7	53.7	53.7	39.0	46.3	47.4	44.0	37.5	52.0	53.7	37.5	69.3	64.9	60.8	69.1	64.7	60.6	53.5	53.5	53.5
	18	13.5	13.6	13.0	13.4	13.4	12.8	21.9	21.9	21.9	23.6	23.6	23.6	8.9	16.2	17.3	13.9	7.4	21.9	23.6	7.4	39.3	34.9	30.8	39.1	34.7	30.6	23.4	23.4	23.4
	19	11.6	11.6	11.0	11.4	11.5	10.9	20.0	20.0	20.0	21.7	21.7	21.7	7.0	14.3	15.4	12.0	5.5	20.0	21.7	5.5	37.3	32.9	28.8	37.1	32.7	28.6	21.5	21.5	21.5
	20	43.6	43.6	43.1	43.5	43.5	42.9	52.0	52.0	52.0	53.7	53.7	53.7	39.0	46.3	47.4	44.0	37.5	52.0	53.7	37.5	69.3	64.9	60.8	69.1	64.7	60.6	53.5	53.5	53.5
	21	11.4	11.4	10.8	11.2	11.3	10.7	19.8	19.8	19.8	21.5	21.5	21.5	6.8	14.1	15.2	11.8	5.3	19.8	21.5	5.3	37.1	32.7	28.6	36.9	32.5	28.4	21.3	21.3	21.3
	22	12.8	12.8	12.2	12.6	12.7	12.1	21.2	21.2	21.2	22.9	22.9	22.9	8.2	15.5	16.6	13.2	6.7	21.2	22.9	6.7	38.5	34.1	30.0	38.3	33.9	29.8	22.7	22.7	22.7
	23	13.3	13.3	12.7	13.1	13.2	12.6	21.7	21.7	21.7	23.4	23.4	23.4	8.7	16.0	17.1	13.7	7.2	21.7	23.4	7.2	39.0	34.6	30.5	38.8	34.4	30.3	23.2	23.2	23.2
	24	11.4	11.4	10.8	11.2	11.3	10.7	19.8	19.8	19.8	21.5	21.5	21.5	6.8	14.1	15.2	11.8	5.3	19.8	21.5	5.3	37.1	32.7	28.6	36.9	32.5	28.4	21.3	21.3	21.3
	25	12.8	12.8	12.2	12.6	12.7	12.1	21.2	21.2	21.2	22.9	22.9	22.9	8.2	15.5	16.6	13.2	6.7	21.2	22.9	6.7	38.5	34.1	30.0	38.3	33.9	29.8	22.7	22.7	22.7
	26	13.3	13.3	12.7	13.1	13.2	12.6	21.7	21.7	21.7	23.4	23.4	23.4	8.7	16.0	17.1	13.7	7.2	21.7	23.4	7.2	39.0	34.6	30.5	38.8	34.4	30.3	23.2	23.2	23.2
	27	48.1	48.1	47.5	47.9	48.0	47.4	56.5	56.5	56.5	58.2	58.2	58.2	43.5	50.8	51.9	48.5	42.0	56.5	58.2	42.0	73.8	69.4	65.3	73.6	69.2	65.1	58.0	58.0	58.0
	28	48.1	48.1	47.5	47.9	48.0	47.4	56.5	56.5	56.5	58.2	58.2	58.2	43.5	50.8	51.9	48.5	42.0	56.5	58.2	42.0	73.8	69.4	65.3	73.6	69.2	65.1	58.0	58.0	58.0
	29	48.1	48.1	47.5	47.9	48.0	47.4	56.5	56.5	56.5	58.2	58.2	58.2	43.5	50.8	51.9	48.5	42.0	56.5	58.2	42.0	73.8	69.4	65.3	73.6	69.2	65.1	58.0	58.0	58.0

Minimum C/I margin = 3.1 dB

Downlink

	Interfering Carrier																														
Wanted Carrier	Crx ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	1	33.9	29.5	28.4	28.8	24.4	25.9	11.0	11.0	11.0	12.1	12.1	12.1	11.4	32.1	28.8	20.8	10.5	10.5	10.5	11.0	12.0	10.5	33.9	29.5	28.4	28.8	24.4	25.9	32.1	28.8	20.8
	2	35.3	30.9	29.8	30.2	25.8	27.3	12.4	12.4	12.4	13.5	13.5	13.5	12.8	33.5	30.2	22.2	11.9	11.9	11.9	12.4	13.4	11.9	35.3	30.9	29.8	30.2	25.8	27.3	33.5	30.2	22.2
	3	32.8	28.4	27.3	27.7	23.3	24.8	9.9	9.9	9.9	11.0	11.0	11.0	10.3	31.0	27.7	19.7	9.4	9.4	9.4	9.9	10.9	9.4	32.8	28.4	27.3	27.7	23.3	24.8	31.0	27.7	19.7
	4	36.6	32.2	31.1	31.5	27.1	28.6	13.7	13.7	13.7	14.7	14.7	14.7	14.0	34.8	31.5	23.5	13.2	13.2	13.2	13.7	14.7	13.2	36.6	32.2	31.1	31.5	27.1	28.6	34.8	31.5	23.5
	5	36.4	32.0	30.9	31.3	26.9	28.4	13.5	13.5	13.5	14.5	14.5	14.5	13.8	34.6	31.3	23.3	13.0	13.0	13.0	13.5	14.5	13.0	36.4	32.0	30.9	31.3	26.9	28.4	34.6	31.3	23.3
	6	32.3	27.9	26.8	27.2	22.8	24.3	9.4	9.4	9.4	10.4	10.4	10.4	9.7	30.5	27.2	19.2	8.9	8.9	8.9	9.4	10.4	8.9	32.3	27.9	26.8	27.2	22.8	24.3	30.5	27.2	19.2
	7	27.3	22.9	21.8	22.2	17.8	19.3	4.4	4.4	4.4	5.4	5.4	5.4	4.7	25.5	22.2	14.2	3.9	3.9	3.9	4.3	5.4	3.9	27.3	22.9	21.8	22.2	17.8	19.3	25.5	22.2	14.2
	8	28.7	24.3	23.2	23.6	19.2	20.7	5.8	5.8	5.8	6.8	6.8	6.8	6.2	26.9	23.6	15.6	5.3	5.3	5.3	5.8	6.8	5.3	28.7	24.3	23.2	23.6	19.2	20.7	26.9	23.6	15.6
	9	28.2	23.8	22.7	23.1	18.7	20.2	5.3	5.3	5.3	6.3	6.3	6.3	5.6	26.3	23.0	15.0	4.7	4.7	4.7	5.2	6.2	4.7	28.2	23.8	22.7	23.1	18.7	20.2	26.3	23.0	15.0
	10	27.6	23.2	22.1	22.5	18.1	19.6	4.7	4.7	4.7	5.7	5.7	5.7	5.0	25.8	22.5	14.5	4.1	4.1	4.1	4.6	5.7	4.1	27.6	23.2	22.1	22.5	18.1	19.6	25.8	22.5	14.5
	11	28.1	23.7	22.6	23.0	18.6	20.1	5.2	5.2	5.2	6.2	6.2	6.2	5.5	26.3	23.0	15.0	4.7	4.7	4.7	5.2	6.2	4.7	28.1	23.7	22.6	23.0	18.6	20.1	26.3	23.0	15.0
	12	28.0	23.6	22.5	22.9	18.5	20.0	5.1	5.1	5.1	6.1	6.1	6.1	5.5	26.2	22.9	14.9	4.6	4.6	4.6	5.1	6.1	4.6	28.0	23.6	22.5	22.9	18.5	20.0	26.2	22.9	14.9
	13	44.8	40.4	39.3	39.7	35.3	36.8	21.9	21.9	21.9	22.9	22.9	22.9	22.2	43.0	39.7	31.7	21.3	21.3	21.3	21.8	22.9	21.3	44.8	40.4	39.3	39.7	35.3	36.8	43.0	39.7	31.7
	14	56.4	52.0	50.9	51.3	46.9	48.4	33.5	33.5	33.5	34.5	34.5	34.5	33.9	54.6	51.3	43.3	33.0	33.0	33.0	33.5	34.5	33.0	56.4	52.0	50.9	51.3	46.9	48.4	54.6	51.3	43.3
	15	59.7	55.3	54.2	54.6	50.2	51.7	36.8	36.8	36.8	37.8	37.8	37.8	37.2	57.9	54.6	46.6	36.3	36.3	36.3	36.8	37.8	36.3	59.7	55.3	54.2	54.6	50.2	51.7	57.9	54.6	46.6
	16	67.7	63.3	62.2	62.6	58.2	59.7	44.8	44.8	44.8	45.8	45.8	45.8	45.2	65.9	62.6	54.6	44.3	44.3	44.3	44.8	45.8	44.3	67.7	63.3	62.2	62.6	58.2	59.7	65.9	62.6	54.6
	17	32.2	27.8	26.7	27.1	22.7	24.2	9.3	9.3	9.3	10.3	10.3	10.3	9.7	30.4	27.1	19.1	8.8	8.8	8.8	9.3	10.3	8.8	32.2	27.8	26.7	27.1	22.7	24.2	30.4	27.1	19.1
	18	36.6	32.2	31.1	31.5	27.1	28.6	13.7	13.7	13.7	14.7	14.7	14.7	14.1	34.8	31.5	23.5	13.2	13.2	13.2	13.7	14.7	13.2	36.6	32.2	31.1	31.5	27.1	28.6	34.8	31.5	23.5
	19	40.1	35.7	34.6	35.0	30.6	32.1	17.2	17.2	17.2	18.2	18.2	18.2	17.6	38.3	35.0	27.0	16.7	16.7	16.7	17.2	18.2	16.7	40.1	35.7	34.6	35.0	30.6	32.1	38.3	35.0	27.0
	20	42.6	38.2	37.1	37.5	33.1	34.6	19.7	19.7	19.7	20.7	20.7	20.7	20.0	40.7	37.4	29.4	19.1	19.1	19.1	19.6	20.6	19.1	42.6	38.2	37.1	37.5	33.1	34.6	40.7	37.4	29.4
	21	41.3	36.9	35.8	36.2	31.8	33.3	18.4	18.4	18.4	19.4	19.4	19.4	18.8	39.5	36.2	28.2	17.9	17.9	17.9	18.4	19.4	17.9	41.3	36.9	35.8	36.2	31.8	33.3	39.5	36.2	28.2
	22	58.7	54.3	53.2	53.6	49.2	50.7	35.8	35.8	35.8	36.8	36.8	36.8	36.2	56.9	53.6	45.6	35.3	35.3	35.3	35.8	36.8	35.3	58.7	54.3	53.2	53.6	49.2	50.7	56.9	53.6	45.6
	23	33.9	29.5	28.4	28.8	24.4	25.9	11.0	11.0	11.0	12.0	12.0	12.0	11.3	32.1	28.8	20.8	10.5	10.5	10.5	11.0	12.0	10.5	33.9	29.5	28.4	28.8	24.4	25.9	32.1	28.8	20.8
	24	35.3	30.9	29.8	30.2	25.8	27.3	12.4	12.4	12.4	13.4	13.4	13.4	12.7	33.5	30.2	22.2	11.9	11.9	11.9	12.4	13.4	11.9	35.3	30.9	29.8	30.2	25.8	27.3	33.5	30.2	22.2
	25	32.8	28.4	27.3	27.7	23.3	24.8	9.9	9.9	9.9	10.9	10.9	10.9	10.2	31.0	27.7	19.7	9.4	9.4	9.4	9.9	10.9	9.4	32.8	28.4	27.3	27.7	23.3	24.8	31.0	27.7	19.7
	26	39.3	34.9	33.8	34.2	29.8	31.3	16.4	16.4	16.4	17.4	17.4	17.4	16.7	37.5	34.2	26.2	15.9	15.9	15.9	16.4	17.4	15.9	39.3	34.9	33.8	34.2	29.8	31.3	37.5	34.2	26.2
	27	40.7	36.3	35.2	35.6	31.2	32.7	17.8	17.8	17.8	18.8	18.8	18.8	18.1	38.9	35.6	27.6	17.3	17.3	17.3	17.8	18.8	17.3	40.7	36.3	35.2	35.6	31.2	32.7	38.9	35.6	27.6
	28	35.6	31.2	30.1	30.5	26.1	27.6	12.7	12.7	12.7	13.7	13.7	13.7	13.0	33.8	30.5	22.5	12.2	12.2	12.2	12.7	13.7	12.2	35.6	31.2	30.1	30.5	26.1	27.6	33.8	30.5	22.5
	29	56.4	52.0	50.9	51.3	46.9	48.4	33.5	33.5	33.5	34.5	34.5	34.5	33.9	54.6	51.3	43.3	33.0	33.0	33.0	33.5	34.5	33.0	56.4	52.0	50.9	51.3	46.9	48.4	54.6	51.3	43.3
	30	59.7	55.3	54.2	54.6	50.2	51.7	36.8	36.8	36.8	37.8	37.8	37.8	37.2	57.9	54.6	46.6	36.3	36.3	36.3	36.8	37.8	36.3	59.7	55.3	54.2	54.6	50.2	51.7	57.9	54.6	46.6
	31	67.7	63.3	62.2	62.6	58.2	59.7	44.8	44.8	44.8	45.8	45.8	45.8	45.2	65.9	62.6	54.6	44.3	44.3	44.3	44.8	45.8	44.3	67.7	63.3	62.2	62.6	58.2	59.7	65.9	62.6	54.6

Minimum C/I margin = 3.9 dB