

The ModCod Performance as Defined by DVB-S2 Standard [4]

Mode	LDPC Rate	Spectral efficiency	Ideal Es/No (dB) for FECFRAME length = 64,800	Eb/No (dB)	Info Rate (Xbps)	Channel Rate (Xbps)	Channel Rate (Xsps)
QPSK	1/4	0.490243	-2.35	0.75	10.00	40.80	20.40
QPSK	1/3	0.656448	-1.24	0.59	10.00	30.47	15.23
QPSK	2/5	0.789412	-0.30	0.73	10.00	25.34	12.67
QPSK	1/2	0.988858	1.00	1.05	10.00	20.23	10.11
QPSK	3/5	1.188304	2.23	1.48	10.00	16.83	8.42
QPSK	2/3	1.322253	3.10	1.89	10.00	15.13	7.56
QPSK	3/4	1.487473	4.03	2.31	10.00	13.45	6.72
QPSK	4/5	1.587196	4.68	2.67	10.00	12.60	6.30
QPSK	5/6	1.654663	5.18	2.99	10.00	12.09	6.04
QPSK	8/9	1.766451	6.20	3.73	10.00	11.32	5.66
QPSK	9/10	1.788612	6.42	3.89	10.00	11.18	5.59
8PSK	3/5	1.779991	5.50	3.00	10.00	16.85	5.62
8PSK	2/3	1.980636	6.62	3.65	10.00	15.15	5.05
8PSK	3/4	2.228124	7.91	4.43	10.00	13.46	4.49
8PSK	5/6	2.478562	9.35	5.41	10.00	12.10	4.03
8PSK	8/9	2.646012	10.69	6.46	10.00	11.34	3.78
8PSK	9/10	2.679207	10.98	6.70	10.00	11.20	3.73
16APSK	2/3	2.637201	8.97	4.76	10.00	15.17	3.79
16APSK	3/4	2.966728	10.21	5.49	10.00	13.48	3.37
16APSK	4/5	3.165623	11.03	6.03	10.00	12.64	3.16
16APSK	5/6	3.300184	11.61	6.42	10.00	12.12	3.03
16APSK	8/9	3.523143	12.89	7.42	10.00	11.35	2.84
16APSK	9/10	3.567342	13.13	7.61	10.00	11.21	2.80
32APSK	3/4	3.703295	12.73	7.04	10.00	13.50	2.70
32APSK	4/5	3.951571	13.64	7.67	10.00	12.65	2.53
32APSK	5/6	4.11954	14.28	8.13	10.00	12.14	2.43
32APSK	8/9	4.397854	15.69	9.26	10.00	11.37	2.27
32APSK	9/10	4.453027	16.05	9.56	10.00	11.23	2.25

Note: Given the system spectral efficiency η_{tot} , the ratio between the energy per information bit and single sided noise power spectral density $E_b/N_o = E_s/N_o - 10\log(\eta_{tot})$.