

Design Tables for 3-Pole Capacitively Coupled Band-Pass LC Ladder Filters

1 dB Tchebyscheff Response

This table lists element values for the filter shown opposite against centre frequency for the special case of 10% bandwidth and 50 Ohm source and load resistances. Values are tabulated for the Tchebyscheff Response function with 1 dB pass-band ripple.

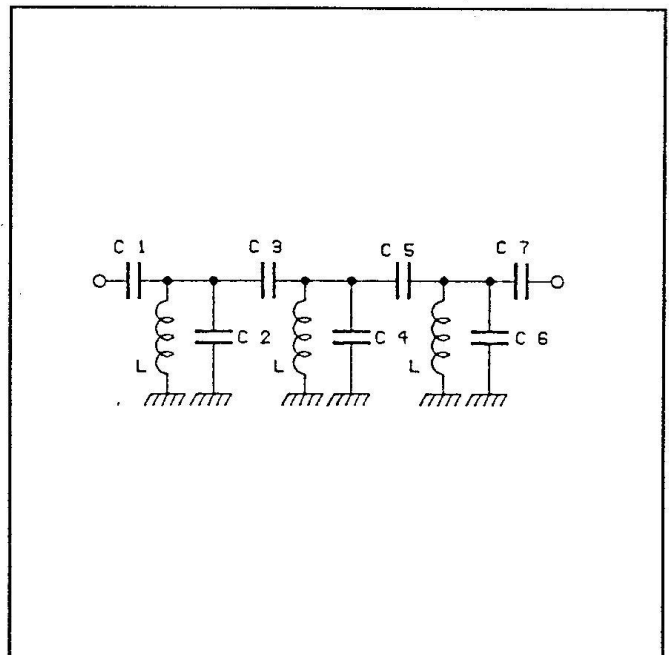
The bandwidth is defined as being between the upper and lower -1 dB ripple frequencies.

Element values for frequencies lying between those tabulated may be obtained to a reasonable degree of accuracy by linear interpolation.

Values for other terminations and response functions may be calculated by referring to the reference given on page 2.0.

Each filter has been designed for a resistance level of around 300 Ohms before adjusting the end sections to provide matching into 50 Ohms.

Circuit Diagram



Centre Freq. fc (MHz)	L (nH)	C1 = C7 (pF)	C3 = C5 (pF)	C2 = C6 (pF)	C4 (pF)
10	220	142	81	954	991
15	150	94	53	621	646
20	100	76	45	538	545
25	82	60	35	412	426
30	68	50	29	345	356
40	56	35	20	234	243
50	39	31	18	217	234
60	33	25	15	178	184
70	27	22	14	160	160
80	27	18	10	122	126
90	22	17	10	119	122
100	22	14	8.2	95	99
150	15	9.4	5.31	62	65
200	10	7.6	4.48	53	54
250	8.2	6.0	3.50	41	43
300	6.8	5.0	2.93	35	36
350	5.6	3.5	2.00	23	24
400	5.6	4.4	2.61	31	32
450	4.7	3.2	1.88	22	23
500	3.9	3.1	1.84	22	22