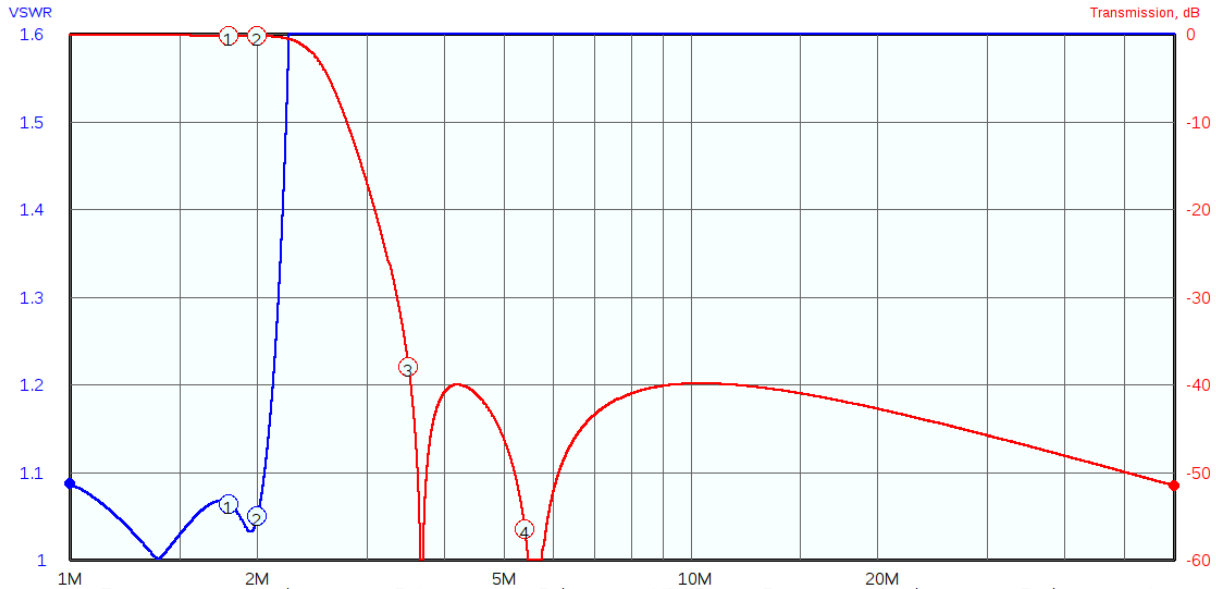
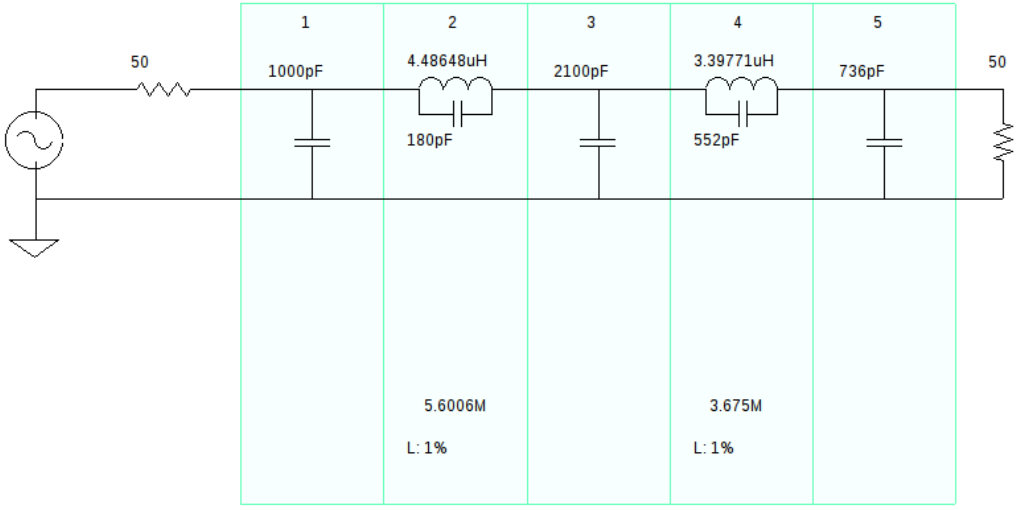
The following are a set of plots for suitable Hi pass filters for Hermes lite. All filters with the exception of the 30 Mhz roofing filter are 5 pole Cauer and designed with a maximum of 2 E12 caps in parallel but in most cases will be a single cap.

160 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	1.8M	-0.14707	-131.05	-30.165	278.6n	1.064	52.973	-1.3024	52.959	-1.2041
2	2M	-0.1771	-152.99	-32.149	334.2n	1.0506	50.861	2.6545	50.806	2.3555
3	3.5M	-37.915	21.326	-0.05493	78.76n	316.27	67.432	-89.621	0.44564	-67.431
4	5.4M	-56.466	154.81	-0.01396	-4.137n	>1000	29.882	-89.895	0.05454	-29.882



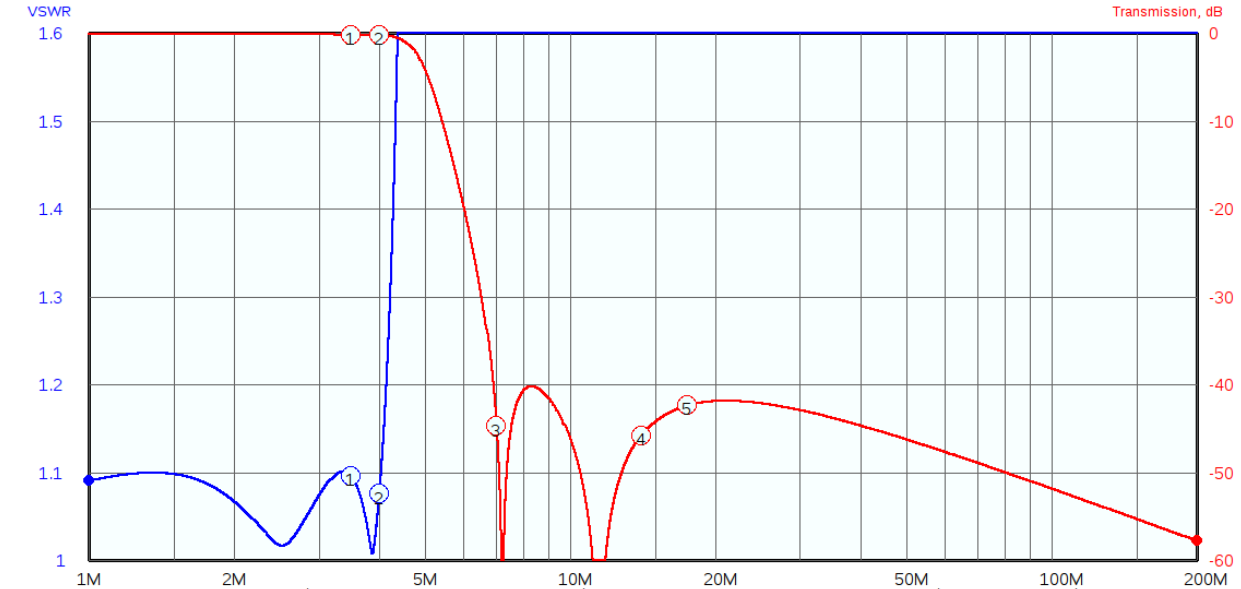
Design data:
Bandwidth: 2.04M
Family: Manual entry

Q values:
Inductors: 120
Capacitors: 1000

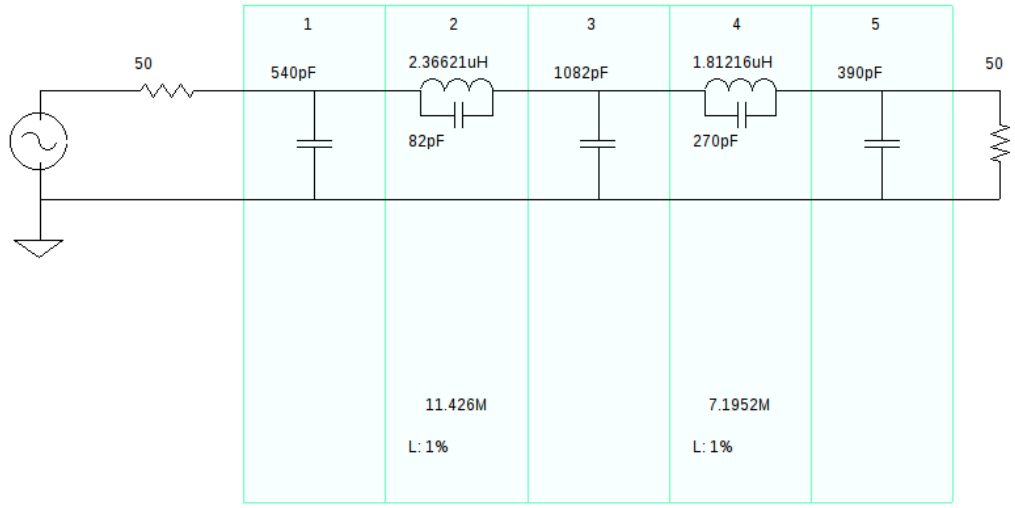
Maximum / minimum ratios:
Capacitors: 11.667
Inductors: 1.3204

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

80 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	3.5M	-0.13626	-134.03	-26.772	145.7n	1.0961	53.179	-3.8901	53.057	-3.6078
2	4M	-0.17482	-163.67	-28.744	187.4n	1.0759	49.646	4.166	49.515	3.6066
3	7M	-44.721	16.608	-0.04201	-5.618n	413.47	59.284	-89.719	0.29093	-59.283
4	14M	-45.795	-46.314	-0.0078	8.926n	>1000	20.057	-89.926	0.02606	-20.057
5	17.5M	-42.334	-55.314	-0.0059	5.716n	>1000	15.538	-89.931	0.01861	-15.538



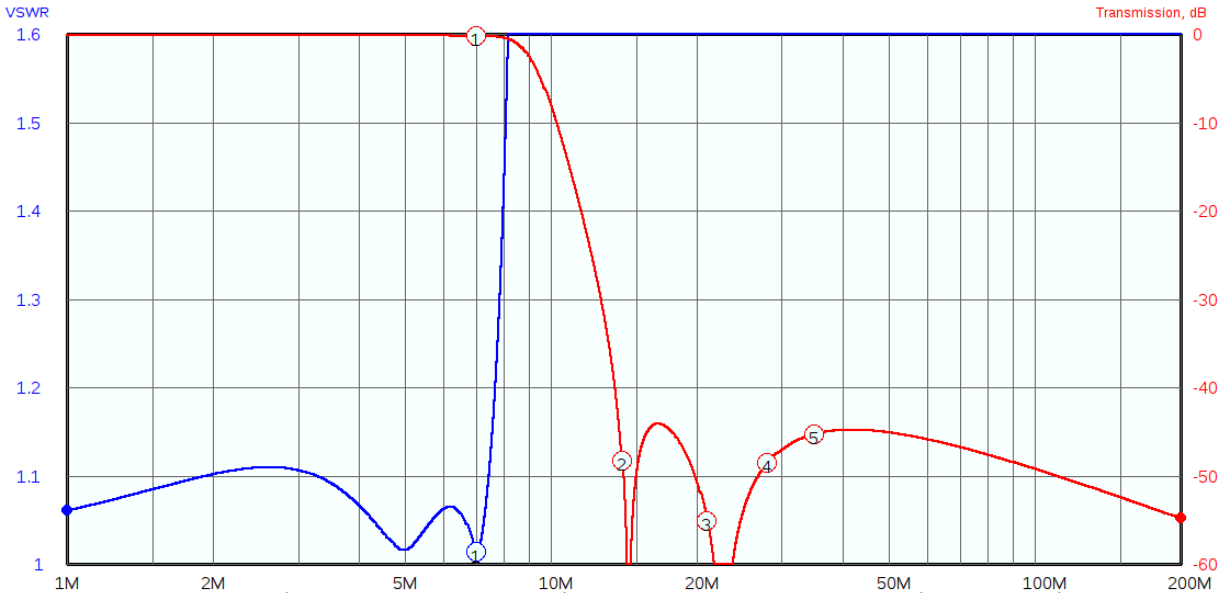
Design data:
Bandwidth: 4M
Family: Manual entry

Q values:
Inductors: 140
Capacitors: 1000

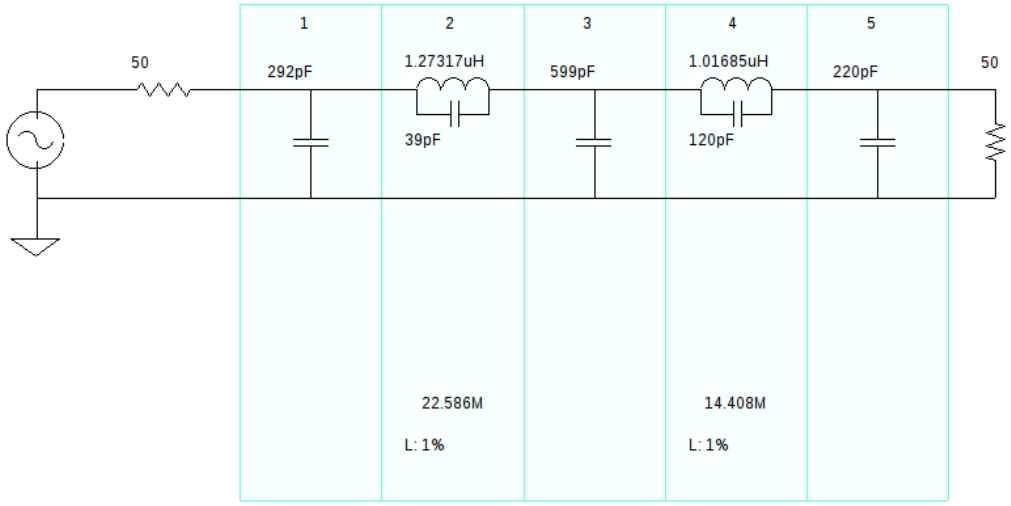
Maximum / minimum ratios:
Capacitors: 13.195
Inductors: 1.3057

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

40 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	7M	-0.14372	-150.23	-43.351	86.49n	1.0137	50.681	0.07656	50.681	0.06772
2	14M	-48.299	8.2294	-0.03304	-2.34n	525.84	51.182	-89.782	0.19472	-51.181
3	21M	-55.129	148.03	-0.01131	6.135n	>1000	26.515	-89.91	0.04171	-26.515
4	28M	-48.499	-48.932	-0.00706	4.177n	>1000	18.615	-89.929	0.02315	-18.615
5	35M	-45.227	-57.353	-0.00534	2.677n	>1000	14.481	-89.934	0.01666	-14.481



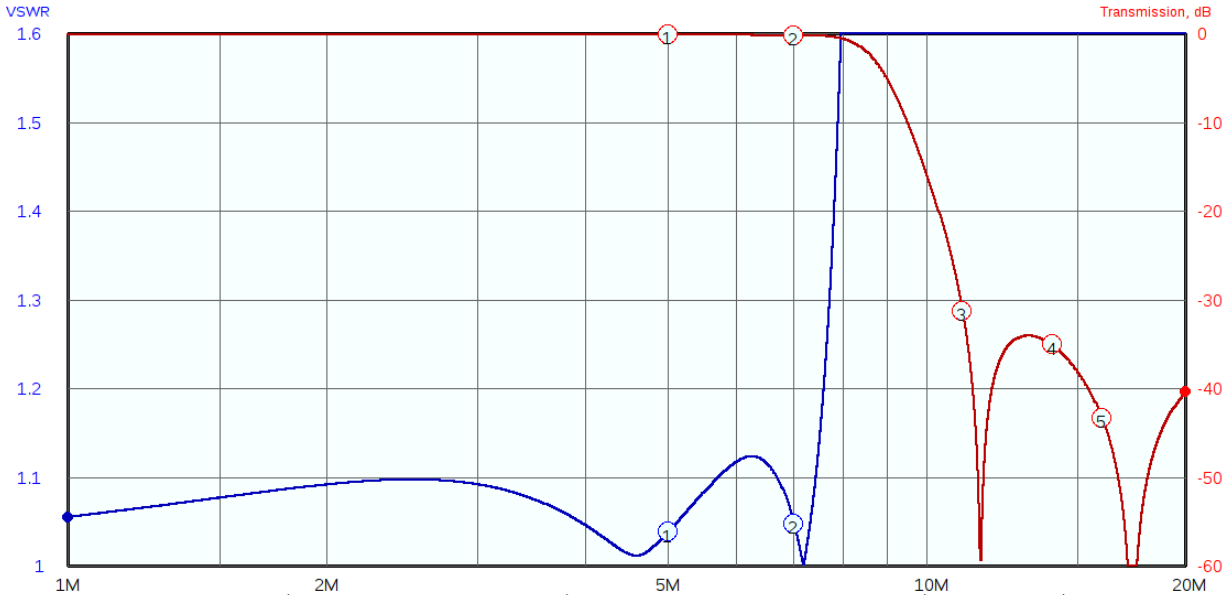
Design data:
Bandwidth: 7.5M
Family: Manual entry

Q values:
Inductors: 140
Capacitors: 1000

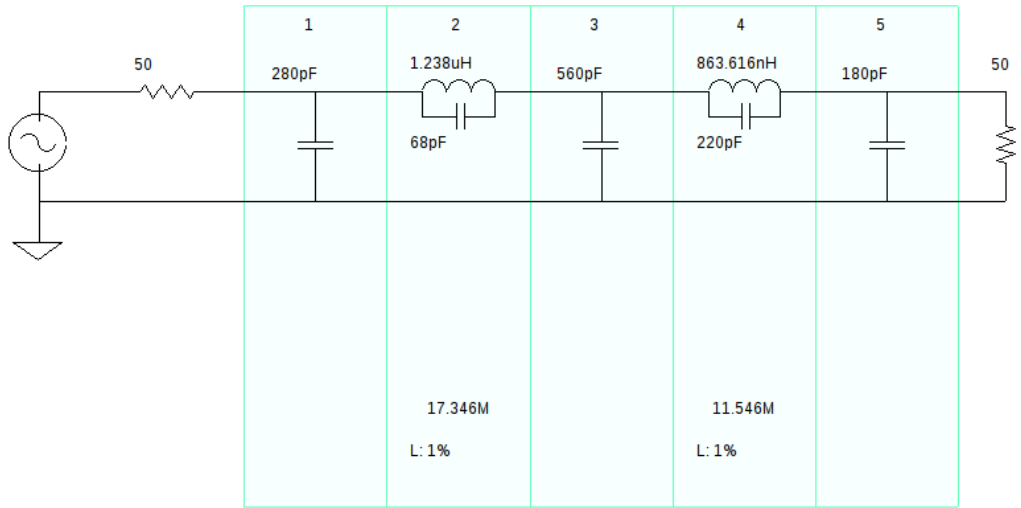
Maximum / minimum ratios:
Capacitors: 15.359
Inductors: 1.2521

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

60/40 Metre Plot and schematic follow. This filter compromises the absolute stopband floor to accommodate the 60 metre band with a value of around 35 dB stopband attenuation.



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	5M	-0.08768	-91.976	-34.443	62.42n	1.0387	51.82	-0.72529	51.816	-0.65595
2	7M	-0.14098	-146.36	-32.602	96.4n	1.048	51.259	-2.2765	51.218	-2.0361
3	11M	-31.186	37.516	-0.07543	40.28n	230.3	93.059	-89.403	0.96916	-93.053
4	14M	-35.017	176.92	-0.02814	21.51n	617.43	47.104	-89.814	0.15285	-47.104
5	16M	-43.282	164.56	-0.01845	12.68n	941.79	37.137	-89.873	0.08238	-37.137
6	21M	-38.405	-36.931	-0.01081	-----	>1000	25.186	-89.911	0.039	-25.186



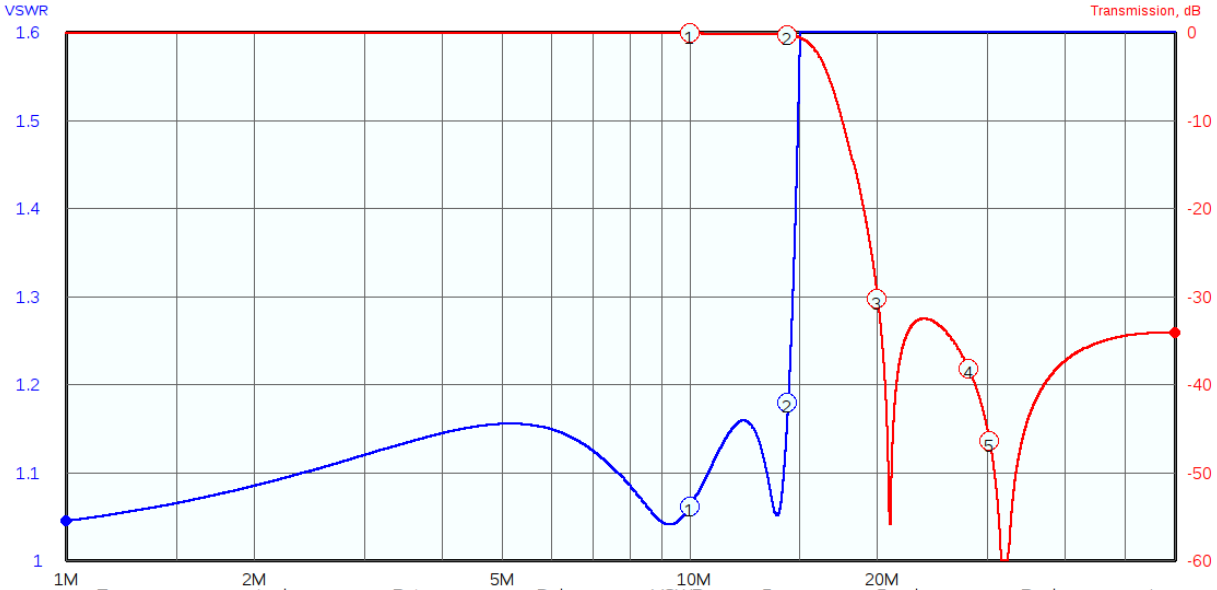
Design data:
Bandwidth: 7.3M
Family: Manual entry

Q values:
Inductors: 160
Capacitors: 1000

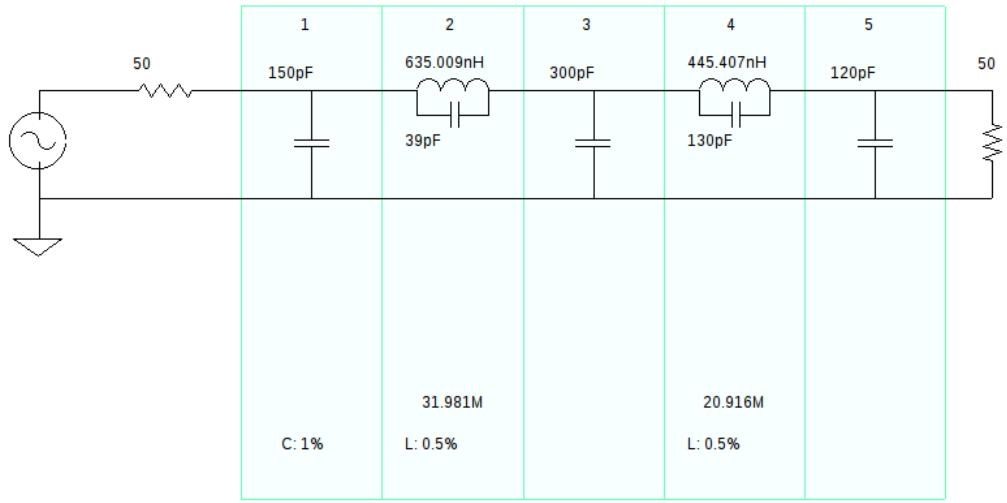
Maximum / minimum ratios:
Capacitors: 8.2353
Inductors: 1.4335

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

30-20 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	10M	-0.1156	-100.65	-30.486	35.59n	1.0616	52.565	1.8779	52.537	1.7226
2	14.35M	-0.2704	-175.55	-21.665	71.93n	1.18	45.208	7.4881	44.822	5.8915
3	20M	-30.292	36.764	-0.10604	21.57n	163.83	108.96	-89.077	1.7544	-108.94
4	28M	-38.15	164.69	-0.0251	8.566n	692.2	41.28	-89.831	0.12147	-41.279
5	30.3M	-46.441	159.19	-0.0195	3.905n	890.65	36.102	-89.864	0.08541	-36.102



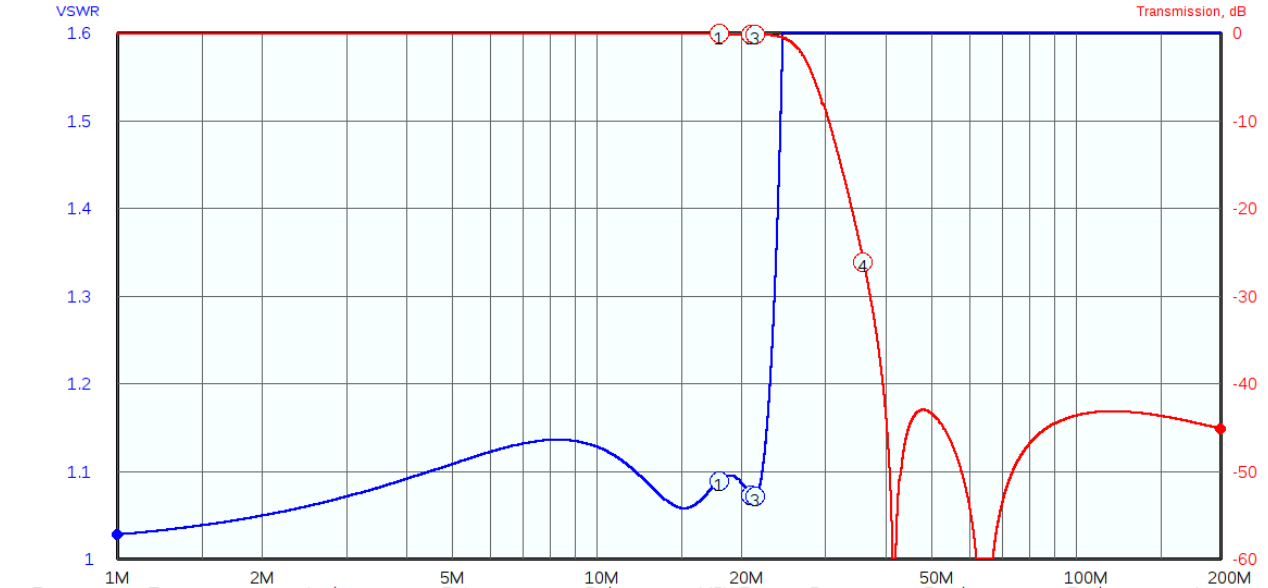
Design data:
Bandwidth: 14.5M
Family: Manual entry

Q values:
Inductors: 140
Capacitors: 1000

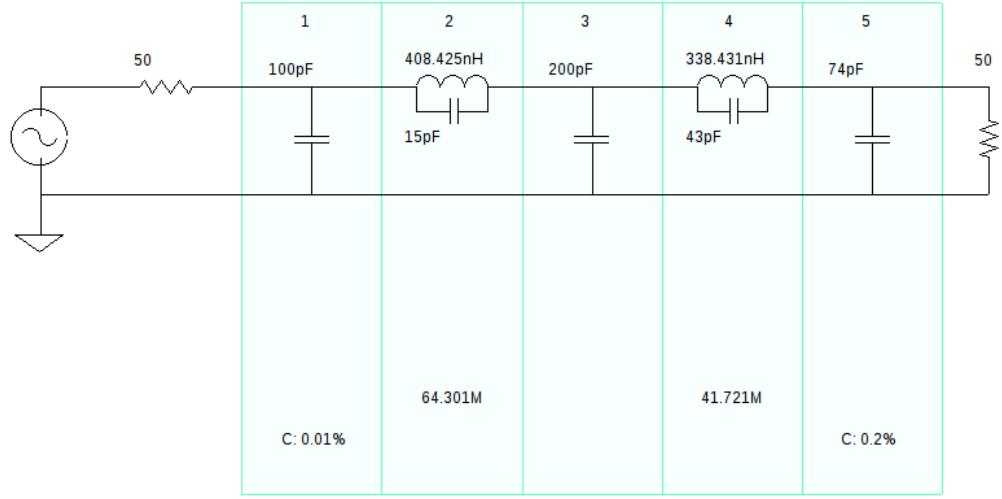
Maximum / minimum ratios:
Capacitors: 7.6923
Inductors: 1.4257

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

17-15 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	18M	-0.12177	-121.97	-27.399	24.05n	1.0891	50.566	-4.8433	50.385	-4.2693
2	21M	-0.14876	-150.53	-29.11	29.3n	1.0726	47.366	-2.5509	47.319	-2.1081
3	21.4M	-0.15493	-154.85	-29.19	30.37n	1.0719	46.756	-1.0301	46.748	-0.84052
4	36M	-26.118	24.745	-0.07222	13.88n	240.55	73.658	-89.487	0.65893	-73.655
5	42M	-61.054	161.13	-0.03202	-657.1n	542.47	48.838	-89.789	0.18011	-48.838



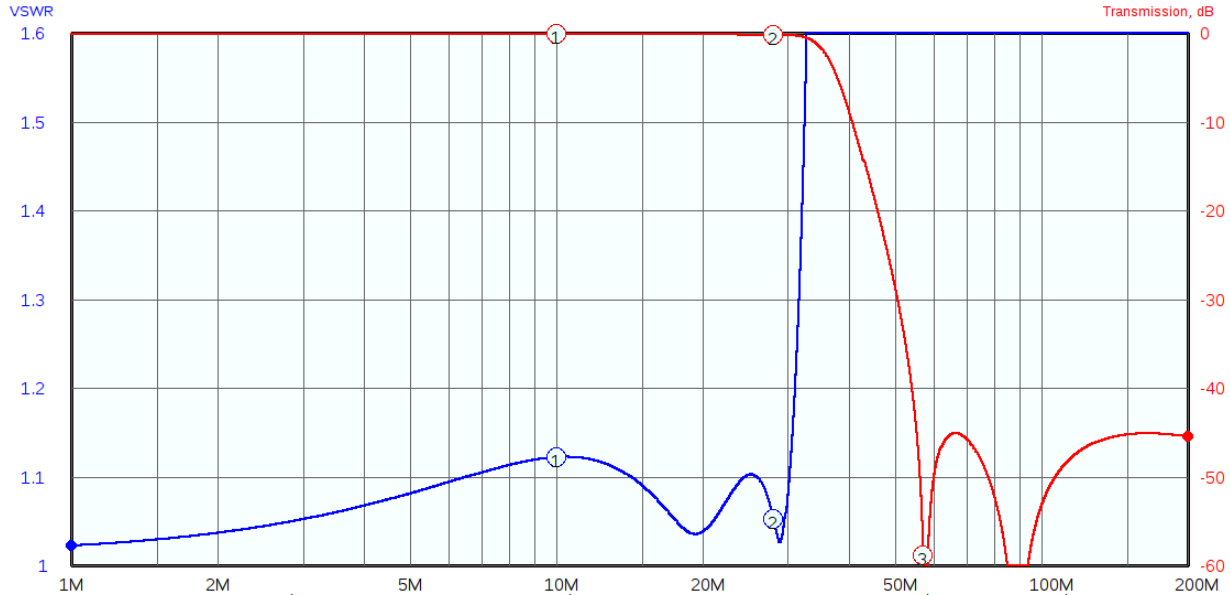
Design data:
Bandwidth: 22M
Family: Manual entry

Q values:
Inductors: 140
Capacitors: 1000

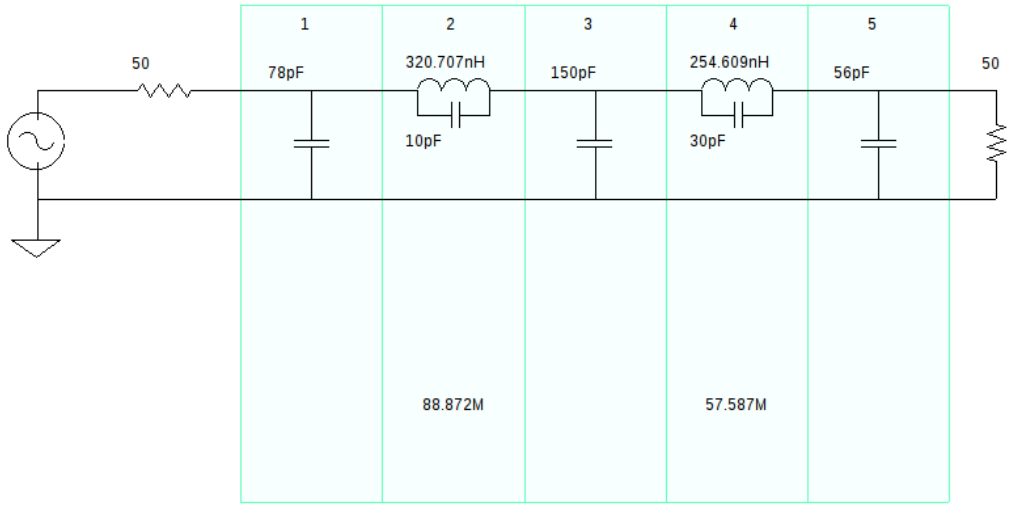
Maximum / minimum ratios:
Capacitors: 13.333
Inductors: 1.2068

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

12-10 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	10M	-0.09278	-46.948	-24.764	13.44n	1.1227	46.814	-5.4387	46.604	-4.4371
2	28M	-0.1481	-152.5	-31.722	21.97n	1.0533	51.742	-2.2322	51.702	-2.0153
3	57M	-58.839	11.118	-0.02853	-37.08n	608.97	44.909	-89.811	0.14834	-44.908
4	85.5M	-61.261	146.14	-0.01017	53.1p	>1000	24.115	-89.914	0.03608	-24.115



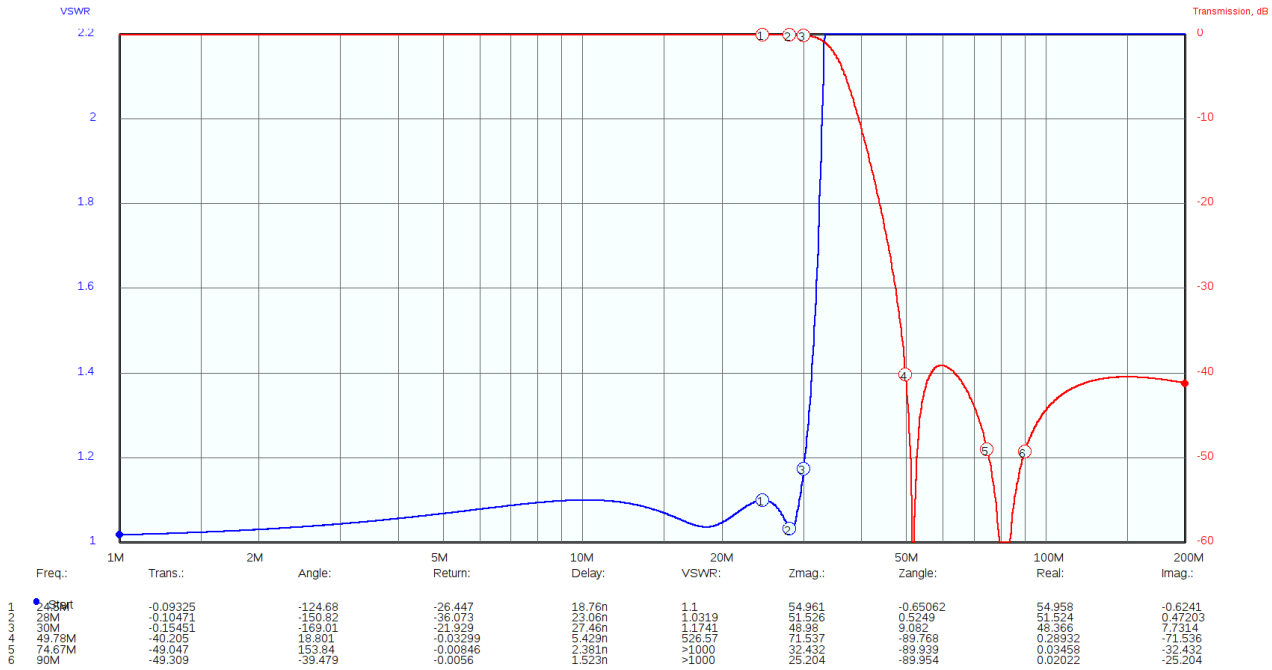
Design data:
Bandwidth: 30M
Family: Manual entry

Q values:
Inductors: 140
Capacitors: 1000

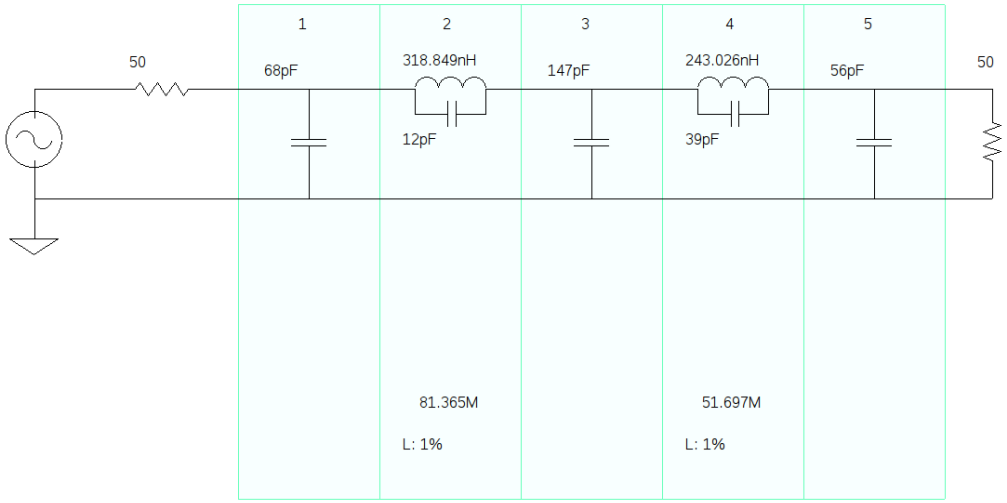
Maximum / minimum ratios:
Capacitors: 15
Inductors: 1.2596

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

This is an improved 12/10 M filter with better VSWR in passband. A trivial amount of attenuation was sacrificed to get this result. 318.849 nH = 11t and 243.026 nH = 10t all on t37-10 cores.



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	24.8M	-0.09325	-124.68	-26.447	18.76n	1.1	54.961	-0.65062	54.958	-0.6241
2	28M	-0.10471	-150.82	-36.073	23.06n	1.0319	51.526	0.5249	51.524	0.47203
3	30M	-0.15451	-169.01	-21.929	27.46n	1.1741	48.98	9.082	48.366	7.7314
4	49.78M	-40.205	18.801	-0.03299	5.429n	526.57	71.537	-89.768	0.28932	-71.536
5	74.67M	-49.047	153.84	-0.00846	2.381n	>1000	32.432	-89.939	0.03458	-32.432
6	90M	-49.309	-39.479	-0.0056	1.523n	>1000	25.204	-89.954	0.02022	-25.204



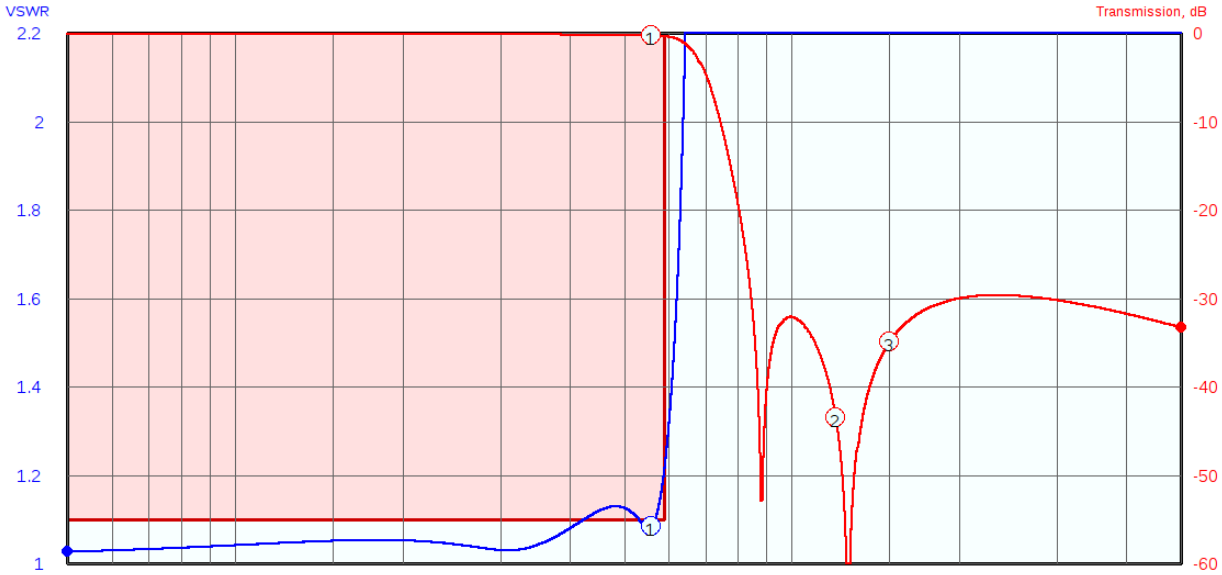
Design data:
Bandwidth: 30M
Family: Manual entry

Q values:
Inductors: 200
Capacitors: 2000

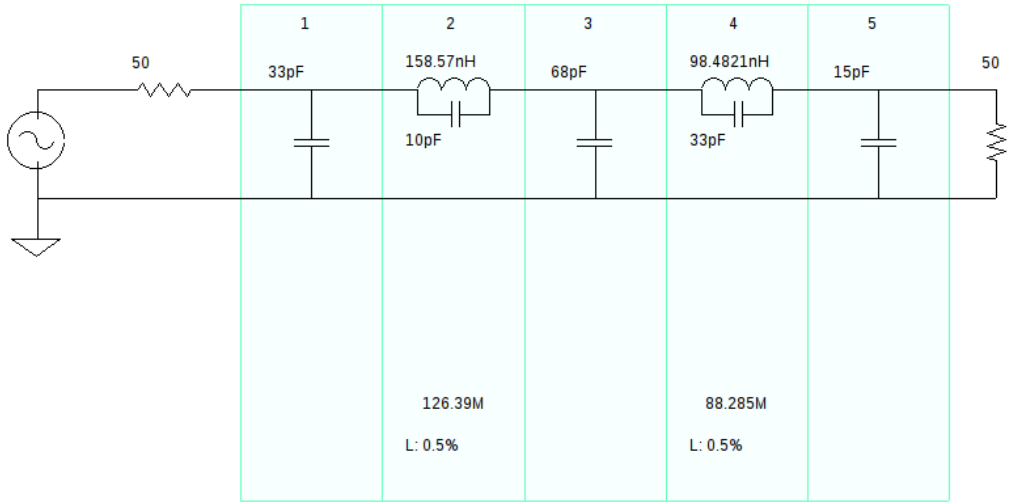
Maximum / minimum ratios:
Capacitors: 12.25
Inductors: 1.312

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B

6 Metre Plot and schematic follow



	Freq.:	Trans.:	Angle:	Return:	Delay:	VSWR:	Zmag.:	Zangle:	Real:	Imag.:
1	56M	-0.21727	-141.81	-27.793	12.45n	1.085	53.646	2.3617	53.6	2.2106
2	120M	-43.403	177.05	-0.02605	1.134n	666.85	41.587	-89.825	0.12685	-41.587
3	150M	-34.838	-26.048	-0.01572	1.254n	>1000	29.638	-89.882	0.06113	-29.638



Design data:
Bandwidth: 56M
Family: Manual entry

Q values:
Inductors: 100
Capacitors: 1000

Maximum / minimum ratios:
Capacitors: 6.8
Inductors: 1.6101

Unbalanced preview
Normal - unbalanced
Balanced - A
Balanced - B