LOW PASS PHASE CORRECTED FILTERS FL4/556-9 SERIES

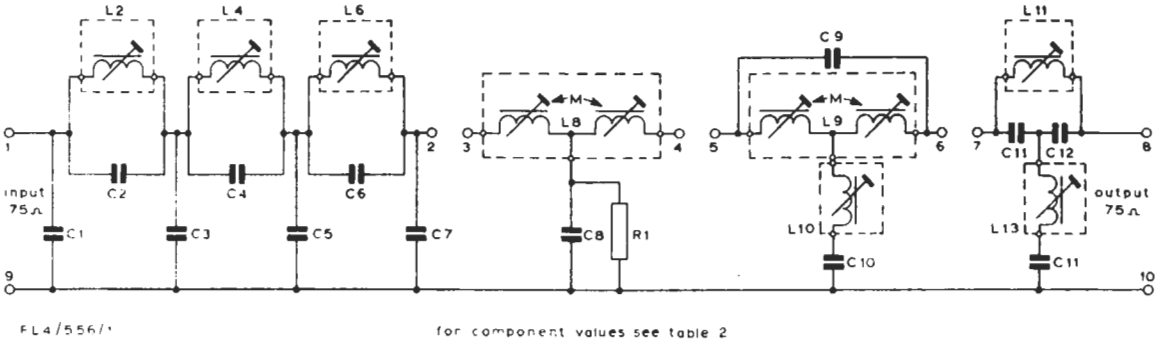

Fig. 1 Circuit of the FL4/556-9

The FL4/556-9 series of low-pass phase-corrected filters have a characteristic impedance of 75 ohms. The loss section is a 7th-order Cauer elliptic function low-pass filter and the delay equalisation comprises three constant-resistance phase-compensating sections. The basic loss of these filters is 0·5 dB. The other characteristics of the filters are given in Table 1.

The FL4/556A and FL4/557A filters have zero chrominance/luminance delay inequalities and zero chrominance/luminance gain inequalities. These filters can be used, therefore, on 625-line colour standards as either a general purpose low-pass filter or as a 0·5 μs delay.

The FL4/556 series of filters are constructed on a printed wiring card $4\frac{5}{8}$ inches by $2\frac{1}{8}$ inches. The FL4/557 series of filters comprise the FL4/556 series mounted in an S.T.C. die-cast box measuring $4\frac{3}{4}$ inches by $3\frac{3}{4}$ inches by $1\frac{5}{32}$ inches. The FL4/558 comprises an FL4/556C constructed on a CH1/12A chassis with index-peg positions 7 and 21. The FL4/559 comprises an FL4/556D constructed on a CH1/12A chassis with index-peg positions 8 and 23. The circuit diagram is given in Fig. 1 and Table 2 overleaf.

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TABLE 1

Filter	*Cut off Frequency MHz*	*3-dB loss Frequency MHz*	*Minimum Frequency for > 50 dB loss MHz*	*Delay ns*
FL4/556 FL4/557	3·0	3·04	3·75	920
FL4/556A FL4/557A	5·5	5·61	6·92	500
FL4/556B FL4/557B	4·5	4·56	5·63	610
FL4/556C FL4/557C FL4/558	3·12	3·18	3·93	880
FL4/556D FL4/557D FL4/559	4·8	4·91	6·06	570

TABLE 2

Component	FL4/556 FL4/557		FL4/556A FL4/557A		FL4/556B FL4/557B		FL4/556C FL4/557C FL4/558		FL4/556D FL4/557D FL4/559	
	code number	value in µH	code number	value in µH	code number	value in µH	code number	value in µH	code number	value in µH
L2	L/726	5·28	L/981	2·86	L/984	3·52	L/726	5·05	L/984	3·27
L4	L/726	5·15	L/981	2·80	L/984	3·43	L/726	4·92	L/984	3·18
L6	L/981	2·79	L/1004	1·51	L/723	1·86	L/981	2·67	L/723	1·73
L8	L/982	5·79	L/1007	3·14	L/846	3·86	L/982	5·53	L/1007	3·58
L9	L/982	5·83	L/1007	3·16	L/846	3·89	L/982	5·57	L/1007	3·61
L10	L/983	3·05	L/723	1·66	L/723	2·03	L/983	2·92	L/723	1·88
L11	L/722	8·08	L/1006	4·38	L/796	5·39	L/722	7·72	L/726	5·00
L13	L/984	3·43	L/723	1·86	L/1005	2·29	L/984	3·28	L/1005	2·13
	value in pF		value in pF		value in pF		value in pF		value in pF	
C1	526		285		351		503		326	
C2	90		49		60		86		56	
C3	1092		592		728		1044		676	
C4	250		136		167		239		155	
C5	939		509		626		898		581	
C6	631		342		421		603		390	
C7	210		114		140		201		130	
C8	4114		2230		2743		3932		2547	
C9	542		294		361		518		335	
C10	4140		2245		2760		3957		2563	
C11	1220		661		813		1166		755	
C12	1220		661		813		1166		755	
C13	3500		1898		2333		3346		2166	
R1	omitted		A.O.T		A.O.T		A.O.T		A.O.T	