

LOW-PASS FILTERS FL4/511 AND FL4/512

Introduction

These filters are phase-corrected low-pass units with input and output impedances, within the pass-band, of 75 ohms. The FL4/511 has a cut-off frequency of 5.3 MHz and the FL4/512 a cut-off frequency of 5.8 MHz. Both filters are similar in construction with input and output connections made via Musa coaxial sockets.

General

The frequency responses of the FL4/511 and the FL4/512 are shown in Figs. 1 and 2 respectively. Circuit diagram (Fig. 3) is applicable to both filters. Component values are shown in the table on Fig. 3. The circuit comprises two m-derived sections followed by three bridged-T phase equalisation sections.

The components are mounted on a brass chassis which is contained in a copper box 184 mm (7 1/4 in.) long, 70 mm (2 3/4 in.) wide and 102 mm (4 in.) deep.

Maintenance

The pulse-and-bar responses can be checked by referring to the waveforms shown in Figs. 4 and 5. If a unit is suspected to be faulty it should be returned to Equipment Department for repair and for re-alignment by comparison with a master filter.

LPB 6/70

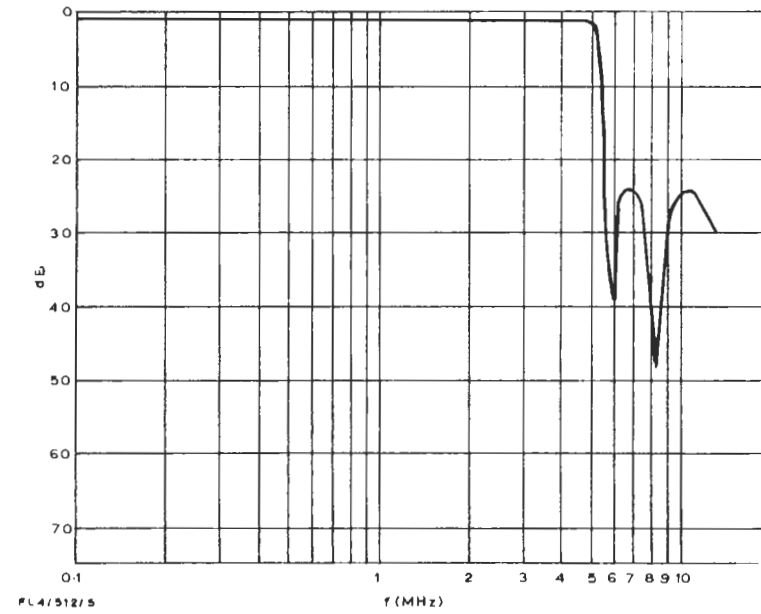


Fig. 1 Frequency Response of the FL4/511

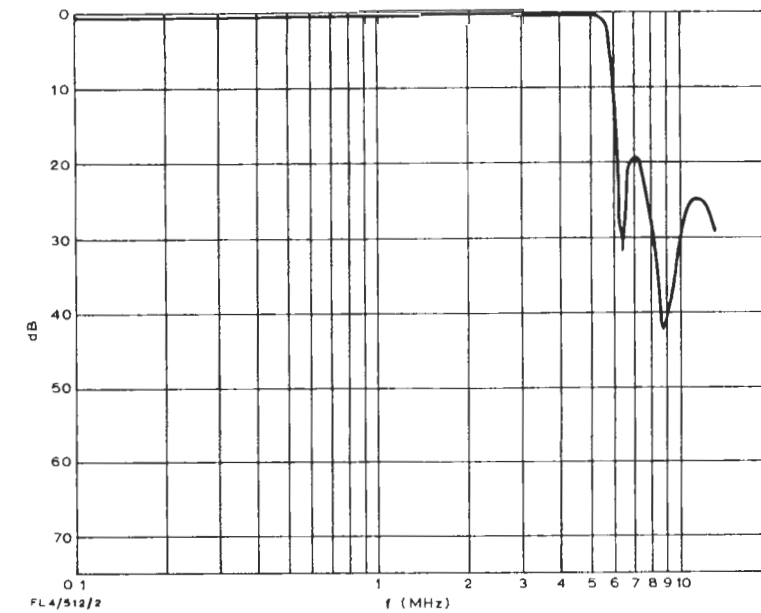
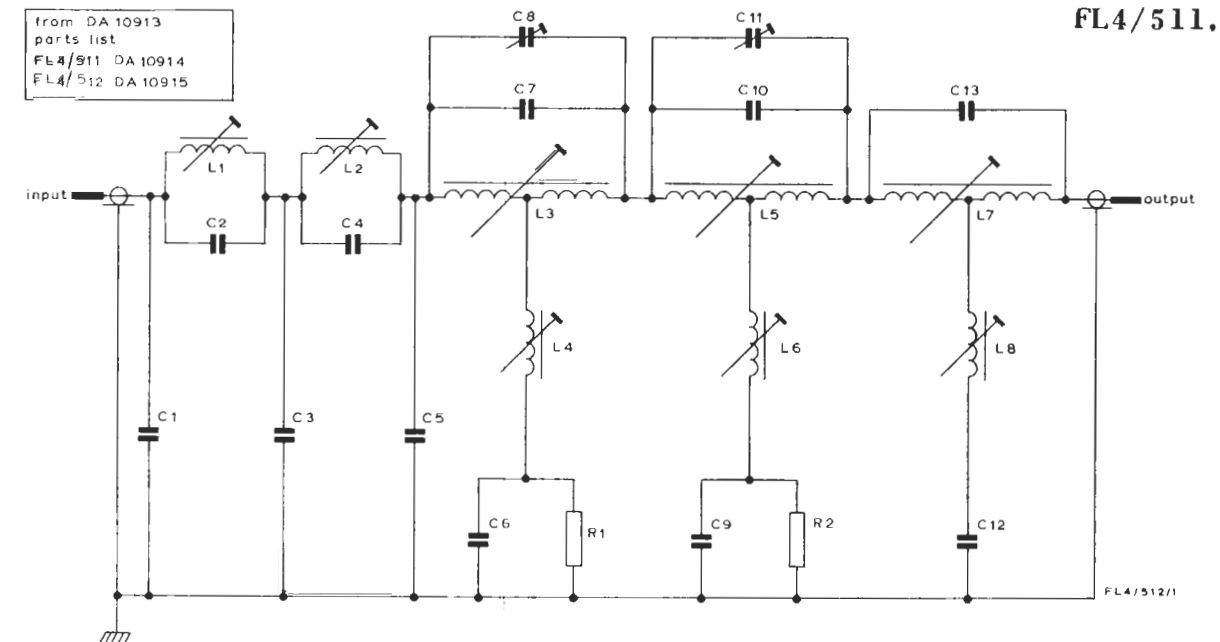


Fig. 2 Frequency Response of the FL4/512



	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
FL4/511	293p	170p	511p	743p	84p	4.072n	265p	4-34p	1.609n	299p	4-34p	641p	381p
FL4/512	267p	155p	466p	678p	76p	3.721n	237p	4-34p	1.470n	267p	4-34p	586p	351p
	L1	L2	L3	L4	L5	L6	L7	L8				R1	R2
FL4/511	2.35μ	1.01μ	22.89μ	1.6μ	9.06μ	1.89μ	3.6μ	2.15μ				560	3.9k
FL4/512	2.19μ	0.92μ	20.9μ	1.5μ	8.3μ	1.7μ	3.3μ	2.0μ				560	2.2k

Fig. 3 Circuit of the FL4/511 and FL4/512



Fig. 4 2T-pulse Response:
(a) output of generator
(b) output of filter



Fig. 5 1T-pulse Response:
(a) output of generator
(b) output of filter