

Glenair supplies filter connectors in the following electrical configurations: C, L-C, C-L, and Pi. The following general values may be used in type selection: single element filter connectors sporting either a single capacitor or inductor yield an insertion loss characteristic of 20dB per decade, dual element filters (capacitor plus an inductor) 40dB per decade, and triple element filters 60dB per decade. Selection is based primarily on source and load impedances but may also be influenced by the level of attenuation required at various frequencies. Please consult the factory for assistance in evaluating insertion loss values.



C Filter

Single capacitor with low self inductance. This configuration is generally used to attenuate high frequency signals. The simple design allows high-frequency EMI to discharge to ground via the surrounding electro-magnetic field.

C FILTER INSERTION LOSS							
Frequency	Insertion Loss, dB Minimum, 25°C						
	A	B	C	D	E	F	G
1 MHz	6	5	3	-	-	-	-
10 MHz	24	23	16	8	4	-	-
100 MHz	41	39	35	28	21	10	5
500-1000 MHz	50	49	46	41	34	23	17

C FILTER CAPACITANCE

Filter Class	Capacitance (pF)
A	19000 - 28000
B	16000 - 22500
C	9000 - 16500
D	4000 - 6000
E	1650 - 2500
F	400 - 650
G	200 - 300



L-C or C-L Filter

Single capacitor combined with an inductive element. It is commonly used in a circuit with a both a low impedance source and a high impedance load or a low impedance load and a high impedance source. The inductive element should face the low impedance.

L-C FILTER INSERTION LOSS							
Frequency	Insertion Loss, dB Minimum, 25°C						
	A	B	C	D	E	F	G
1 MHz	6	6	3	-	-	-	-
10 MHz	25	24	17	9	6	-	-
100 MHz	42	41	38	30	23	12	6
500-1000 MHz	52	51	48	43	36	25	19



L-C FILTER CAPACITANCE

Filter Class	Capacitance (pF)
A	19000 - 28000
B	16000 - 22500
C	9000 - 16500
D	4000 - 6000
E	1650 - 2500
F	400 - 650
G	200 - 300



Pi Filter

Dual capacitors with a single inductive element positioned between them. The Pi filter provides exceptional high-frequency performance due to its sharper rolloff and is typically used when both source and load impedances are high.

PI FILTER INSERTION LOSS							
Frequency	Insertion Loss, dB Minimum, 25°C						
	A	B	C	D	E	F	G
1 MHz	10	8	5	1	-	-	-
10 MHz	40	35	25	14	8	2	0.8
100 MHz	62	60	57	50	40	15	13
500-1000 MHz	66	62	60	58	52	32	22

PI FILTER CAPACITANCE

Filter Class	Capacitance (pF)
A	38000 - 56000
B	32000 - 45000
C	18000 - 33000
D	8000 - 12000
E	3300 - 5000
F	800 - 1300
G	400 - 600