MICROLAB / FXR — Low Pass Filters

LA series

Reliable Rod and Bead Design
Medium Power, Very Low Loss
400 –18,000 MHz Cut-Off

- **50 Watt Average Power Rating**
- **Minimal RF Insertion Loss**
- **Exceptionally High Reliability**
- **Low Cost Design**
- **N, BNC, TNC and SMA Connectors**

Microlab/FXR Model LA series low pass filters are designed to suppress harmonics and out of band noise and interference, to improve signal quality in medium power system applications and bench testing.

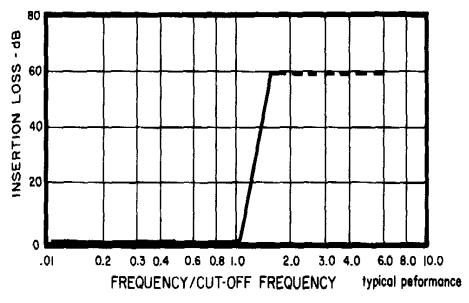
The rod and bead filter is constructed of alternate lengths of high and low impedance transmission lines tuned to provide the proper frequency response. Careful design of the matching end sections ensures a low loss pass band response down to at least 40% of the cut-off frequency. In the stop band rejection of at least 55 dB occurs at 150% of cut-off and extends typically for several octaves. When compared to lumped element construction, the single piece rod and bead filter has far fewer solder joints, is better supported, and operates cooler with a better VSWR.

Options for special cut-off frequencies, special low pass responses, different polarity or alternate connectors are available on request. Note that not all connectors can be used to 18 GHz. (1/01)

Specifications Model LA series

Pass Band:	$0.4f_c$ – $1.0f_c$
Stop Band Rejection:	
At 1.2 f_c:	25 dB min.
At 1.5 f_c	55 dB min.
Power Rating:	
< 7 GHz	50W avg, 4kW pk
> 7 GHz	25W avg, 1 kW pk
Temperature:	-55° to +150°C
Connectors:	N (m-f) type
Connector Finish:	Silverplate per QQ-S-365
Housing Finish:	Iridite per MIL-C-5541

Typical Performance



Model Selection (N connectors)

Part No.	Cut-Off MHz*	VSWR max.	Loss max dB	Length in.(mm)	Weight Oz (g)
LA-04N	400	1.30	0.2	14.6 (409)	7 (178)
LA-07N	700	1.30	0.2	9.9 (277)	6 (152)
LA-10N	1000	1.30	0.2	7.4 (207)	5 (127)
LA-15N	1500	1.30	0.2	5.8 (162)	4 (102
LA-20N	2000	1.30	0.2	4.7 (132)	4 (102)
LA-30N	3000	1.30	0.2	4.8 (134)	3 (76)
LA-40N	4000	1.40	0.2	4.0 (112)	3 (76)
LA-50N	5000	1.40	0.2	3.6 (101)	3 (76)
LA-60N	6000	1.40	0.2	3.2 (90)	3 (76)
LA-70N	7000	1.40	0.2	3.0 (84)	3 (76)
LA-80N	8000	1.50	0.3	3.2 (90)	3 (76)
LA-90N	9000	1.50	0.3	3.0 (84)	3 (76)
LA-100N	10000	1.50	0.4	2.8 (78)	3 (76)
LA-110N	11000	1.50	0.4	2.8 (78)	3 (76)
LA-120N	12000	1.50	0.4	2.7 (76)	3 (76)
LA-150F	15000	1.50	0.4	1.6 (45)	0.5 (12.7)
LA-180F	18000	1.50	0.4	1.9 (53)	0.5 (12.7)

*below 700 MHz +4,-0%, 700 MHz and above +2,-0%
Weights and lengths all nominal.

Alternate Connector Specifications

Connector	Suffix	Typical Part No.	Max. Frequency	Weight Difference
N	N	LA-04N	12 GHz	None
BNC	B	LA-04B	4 GHz	-2 (-54)
TNC	T	LA-04T	7 GHz	-2 (-54)
SMA	F	LA-04F	18 GHz	None

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