

# Custom Low Pass Filters



RLC Electronics' computerized Custom Low Pass Filters are available built to your specifications in the cutoff and rejection regions. By varying the number of sections, you not only have direct control of the cutoff frequency but also the skirt

selectivity. RLC units are available over the pass band frequencies of 10 to 26,000 MHz. Advanced coaxial techniques and optimum selection of component materials assure low VSWR over the entire pass band.

## Specifications

F-80<sup>-1-2-3</sup>

Model Number	Cut-Off Frequency fc (MHz)	Number of Sections*	3 dB Point (Typical)	30 dB Point (Typical)	60 dB Point (Typical)
F-80	10 to 26,000	2	1.4 fc	2.5 fc	5.2 fc
		3	1.15 fc	1.7 fc	2.8 fc
		4	1.09 fc	1.4 fc	2.0 fc
		5	1.07 fc	1.26 fc	1.62 fc
		6	1.05 fc	1.18 fc	1.44 fc
		7	1.04 fc	1.14 fc	1.33 fc
		8	1.04 fc	1.11 fc	1.26 fc
		9	1.03 fc	1.08 fc	1.19 fc
		10	1.02 fc	1.06 fc	1.14 fc

**Pass Band:** DC to fc  
**Pass Band Insertion Loss(max):** (see below)  
**Pass Band VSWR:** 1.5\*\*  
**Power Rating:** 25 Watts  
**Impedance:** 50 Ohms

**Environmental:** MIL-E-5400, Class 1A; except operating temp -55C to +85C  
**Connector Types:** (Male & Female)  
**Type - Recommend Freq Rng:**  
 N DC - 12,400 BNC DC - 1,000  
 TNC DC - 12,400 SMA DC - 26,000

\*Refers to number of filter sections N: total number of reactive elements is 2N+1

\*\*VSWR 12.4GHz and above for 8 or more sections to be 1.5+(0.05(N-7)), where N = number of sections

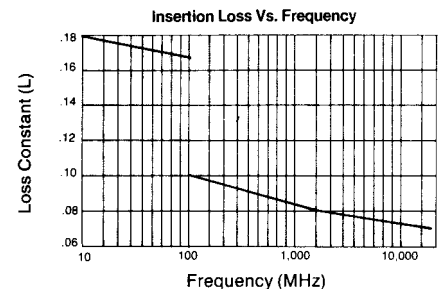
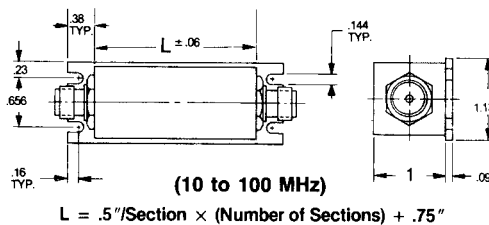
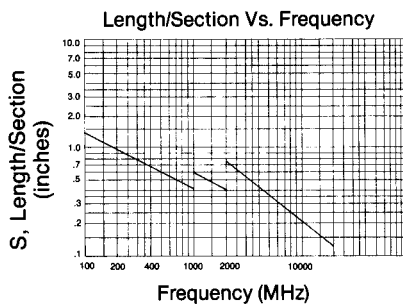
### To designate the switch desired use:

- (1) Cut-off Frequency in MHz
- (2) Number of Sections

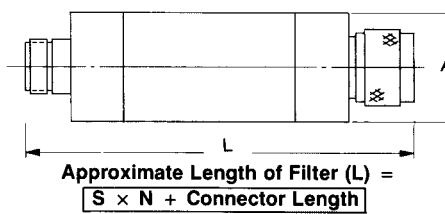
- (3) "N" for type N, "B" for BNC, "T" for TNC or "R" for SMA connectors. Add "M" or "F" for type male or female.

Example: F-80-500-4-N is a 500 MHz cutoff, 4 section filter with type N connectors.

## Outline Drawing



FREQUENCY	A	WEIGHT PER INCH	CONNECTOR LENGTH		
			N	BNC/TNC	SMA
10-100 MHz		1 oz.	1.25	1.20	.65
101 MHz-5,000 MHz	.50	1 oz.	2.19	1.56	1.25
5,001 MHz-18,000 MHz	.38	1 oz.	2.19	1.56	1.25



Tolerances unless otherwise specified are: .xx, ± .02; .xxx, ± .005.

**INSERTION LOSS** = L x N where N is number of sections and L is loss constant from graph.

