



Reactel's high "Q" Cavity Filters are designed to meet the most stringent requirements with low loss and high selectivity. Depending on the frequency and loss specifications, these units are manufactured in sizes as small as 0.25" wide and as large as 1.25" wide, covering a frequency range from 30 MHz to 50 GHz.

Reactel's C7 series is the most versatile of the cavity filter family. They are machined from solid aluminum bar stock and silver plated to keep losses at a minimum. All units can be designed with 2 to 16 sections, depending on your requirements. By using resonant modes, and quarterwave or helical resonators we are able to produce filters with 3 dB bandwidths from 0.2 to over 20% wide.

All of Reactel, Incorporated's cavity filters are designed using the latest in CAD/CAM equipment and machinery. This approach assures that accuracy and repeatability will be maintained throughout the manufacturing process regardless of quantity ordered, and also allows us to offer you the most cost efficient pricing available.





## Part Numbering System

**3 C 7 — 500 — 50 S 1 1**  
 1 2 3    4        5 6 7 8

### Part Number Definition:

- 1- Number of Sections
- 2- Cavity Filter
- 3- Series Identification
- 4- Center Frequency
- 5- 3 dB Bandwidth
- 6- Connector Definition (See Page 16)
- 7- Input Connector Type
- 8- Output Connector Type



Series	Frequency Range	% 3 dB BW	Impedance	Max. VSWR	*Standard Power
C0	4 to 18 GHz	0.5 to 10%	50Ω	1.5:1	5 Watts
C1	3 to 12 GHz	0.5 to 15%	50Ω	1.5:1	10 Watts
C2	2 to 10 GHz	0.5 to 15%	50Ω	1.5:1	15 Watts
C3	1.5 to 10 GHz	0.5 to 20%	50Ω	1.5:1	15 Watts
C7	1 to 10 GHz	0.5 to 20%	50Ω	1.5:1	15 Watts
C9	0.5 to 2.5 GHz	0.5 to 5%	50Ω	1.5:1	5 Watts
C10	0.03 to 0.5 GHz	0.3 to 5%	50Ω	1.5:1	5 Watts

\* Higher power is available, please consult the factory.



## Cavity Filter Connector Length

Connector Type	Connector Code	Type M / F	Connector Length
SMA	S	2 / 1	0.50 / 0.38
BNC	B	2 / 1	0.85 / 0.53
TNC	T	2 / 1	0.85 / 0.53
Type N	N	2 / 1	0.83 / 0.80

Other types of connectors are available, please contact the factory with your requirement.

## Cavity Filter Body Dimensions

Series	Width	Approximate Height	*Filter Length
C0	0.50"	$\frac{1625}{CF \text{ (MHz)}} + 0.5$	**N x 0.25 + 0.4
C1	0.50"		N x 0.375 + 0.4
C2	0.50"		N x 0.437 + 0.3
C3	0.75"		N x 0.625 + 0.3
C7	1.00"		N x 0.75 + 0.3
C9	***	***	***
C10	***	***	***

\* Not including connector length.

\*\* N=Number of sections

\*\*\* Exact dimensions to be determined at time of design, please consult the factory.