

# ALLEN AVIONICS, INC.

## Custom Sub-Miniature L-C Bandpass Filters - Series MB

mbPrinter

- ▶ Small Lightweight Metal Cans
  - ▶ Low Insertion Loss
  - ▶ Maximum Ripple Typically less than .5 dB, 1 dB Maximum
  - ▶ SMA Connectors or P.C. Board Mounting Standard
- ▶ Order Any Center Frequency from 10 MHz to 500 MHz
  - ▶ Passive LC Filter Design
  - ▶ Good Temperature Stability
  - ▶ 1 Watt Power Handling Capacity

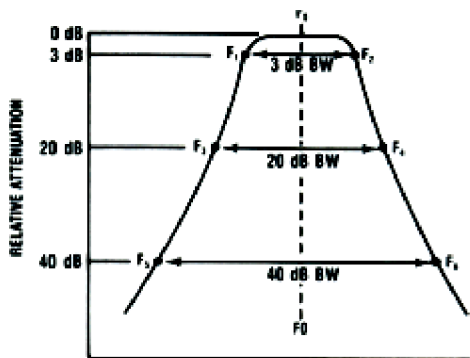
### Custom Sub-Miniature L-C Bandpass Filters - Series MB

All of the filters tabulated on this page are specified as having a minimum band width at the - 3 dB points and a maximum band width at the -20 dB and -40 dB points. Most of the Bandpass Filters on this page do not exhibit arithmetic or geometric symmetry. However, to insure our customers of a simple method of determining their requirements, we are specifying the -3 dB, -20 dB and -40 dB bandwidths as if all had arithmetic symmetry. This will guarantee at least 1/2 of the 3 dB passband will exist on each side of the center frequency. The -20 dB and -40 dB points will be no greater  $\pm 1/2$  of their respective bandwidth away from their center frequency.

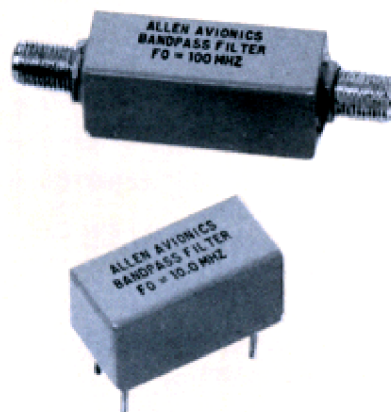
#### Size (inches)

	L	W	H	D	E
SA	.80	x .50	x .50	.30	.60
SB	1.00	x .50	x .50	.30	.80
SB	1.25	x .50	x .50	.30	1.00

#### Download Mechanical Specs from the WEB Site



Shape Factor	20dB 3dB	40dB 3dB
A	3.6	8.0
B	2.6	4.8
C	2.3	3.4
D	2.0	2.6



$F_1$  to  $F_0$  and  $F_0$  to  $F_2$  is greater than  $1/2$  3dB bandwidth  
 $F_3$  to  $F_0$  and  $F_0$  to  $F_4$  is less than  $1/2$  20dB bandwidth  
 $F_5$  to  $F_0$  and  $F_0$  to  $F_6$  is less than  $1/2$  40dB bandwidth

Filter Center Frequency ( $F_0$ ) Can be any 3 digit number from 10 MHz to 500 MHz. "P" represents the decimal point and must be used in the second, third or fourth location.	3 dB Bandwidth ( $F_c$ )= $F_0/Q$ Can be any 3 digit number up to 125 MHz (a center frequency of 500 MHz with a Q of 4.) "P" represent the decimal point and must be used in one of the four locations. The specified bandwidth must be within the limits of the tabulated Q. (See examples below)	shape factor  see table	S for SMA Connectors  P for Printed Circuit Board Mounting
Example: MB - 99P5	4P50	A	S
Example: MB-99P5-4P50-A-S			
This part number describes a Bandpass Filter having its center frequency at 99.5 MHz and having a 3 dB bandwidth of 4.50 MHz with a "A" shape factor and SMA Connectors. Note in tabulation below that for a center frequency of 100 MHz, and a shape factor of "A", a Q of up to 30 is realizable.			
Example: MB - 10P0	P200	A	S
Example: MB-10P0-P200-A-S			
This part number describes a Bandpass Filter having its center frequency at 10.0 MHz and having a 3 dB bandwidth of .200 MHz with a "A" shape factor and SMA Connectors. Note in tabulation below that for a center frequency of 10 MHz, and a shape factor of "A", a Q of up to 50 is realizable.			

Center Frequency F <sub>0</sub>	Q Range F <sub>0</sub> 3 dB BW	Shape Factor	Insertion Loss (dB)	Size	Center Frequency F <sub>0</sub>	Q Range F <sub>0</sub> 3 dB BW	Shape Factor	Insertion Loss (dB)	Size
10 MHz	10-25	A	3-8	SA	100 MHz	10-20	A	4-8	SA
	25-40	A	7-12	SA		20-30	A	7-13	SA
	40-50	A	9-15	SA		30-35	A	9-15	SA
	8-20	B	4-9	SB		8-15	B	5-9	SB
	20-30	B	7-12	SB		15-22	B	8-13	SB
	30-35	B	9-15	SB		6-10	C	4-6	SB
	6-15	C	3-7	SB		10-15	C	5-10	SC
	15-30	C	6-13	SB		4-10	D	4-8	SC
	4-10	D	2-7	SC		10-15	D	6-12	SC
25 MHz	10-25	A	3-8	SA	150 MHz	10-15	A	4-8	SA
	25-40	A	7-12	SA		15-25	A	7-13	SA
	40-50	A	9-15	SA		8-15	B	5-9	SB
	8-20	B	4-9	SB		15-20	B	8-13	SB
	20-30	B	7-12	SB		6-10	C	4-6	SB
	30-35	B	9-15	SB		10-15	C	5-10	SC
	6-15	C	3-7	SB		4-10	D	4-8	SC
	15-30	C	6-13	SB		10-15	D	6-12	SC
	4-10	D	2-7	SC		200 MHz	10-15	A	4-8
10-15	D	6-12	SC	15-20	A		7-12	SA	
50 MHz	10-25	A	4-7	SA	8-12		B	5-9	SB
	25-40	A	7-12	SA	12-15		B	8-13	SB
	40-45	A	9-15	SA	6-10		C	4-6	SB
	8-15	B	5-9	SB	10-13		C	5-10	SB
	15-25	B	7-11	SB	4-10		D	4-8	SC
	25-30	B	9-15	SB	10-13		D	6-12	SC
	6-15	C	3-7	SB	250 MHz		10-15	A	4-8
	15-25	C	6-13	SB		15-20	A	7-12	SA
	4-10	D	3-8	SC		8-12	B	5-9	SB
10-15	D	6-12	SC	12-15		B	8-13	SB	
75 MHz	10-20	A	4-8	SA		6-10	C	4-6	SB
	20-30	A	7-12	SA		10-12	C	5-10	SB
	30-40	A	9-15	SA		4-10	D	4-8	SC
	8-12	B	5-9	SB		10-12	D	6-12	SC
	12-20	B	7-12	SB		300 MHz to 500 MHz	10-15	A	4-8
	20-25	B	9-15	SB	8-12		B	5-9	SB
	6-15	C	4-7	SB	12-15		B	8-13	SB
	15-20	C	6-12	SC	6-10		C	4-6	SB
	4-10	D	3-8	SC	10-12		C	5-10	SB
10-15	D	6-12	SC	4-10	D		4-8	SC	
				10-12	D		6-12	SC	

**Allen Avionics, Inc.**

224 East Second Street, Mineola, NY 11501

Phone: (516) 248-8080 Fax: (516) 747-6724

E-Mail: [Info@AllenAvionics.com](mailto:Info@AllenAvionics.com)



We are pleased to accept