

MP Series Discrete Element Micro-Miniature Bandpass Filters

Microwave Filter Company's MP series micro-miniature bandpass filters utilize high quality components for narrow and wide band filter applications.



FEATURES:

- Available frequency range: 500 MHz to 6000 MHz
- Micro-Miniature package
- 3-9 section designs are standard
- Call the factory for custom designs

SPECIFICATIONS

Model No.	Frequency (MHz)	3 dB BW (percent)	VSWR typical	Average Power (Watts, nominal)	Impedance (ohms)	No. of Sections
MP10	500-6000	3-50	1.5:1	1	50	3-9

MODEL DESIGNATION

Code	Description
1	Number of Sections
2	Series
3	Center Frequency (MHz)
4	3 dB Bandwidth (MHz)
5	Connector Code (Input/Output) (see chart)
6	Mechanical Outline (Style)

CONNECTOR CODE CHART

Connector Style	Connector Code
SMA Female	SF
SMA Male	SM
PC Pins	PN
Special	XX

SAMPLE

8	MP10-	100/	20-	SF/SF-	1
1	2	3	4	5	6

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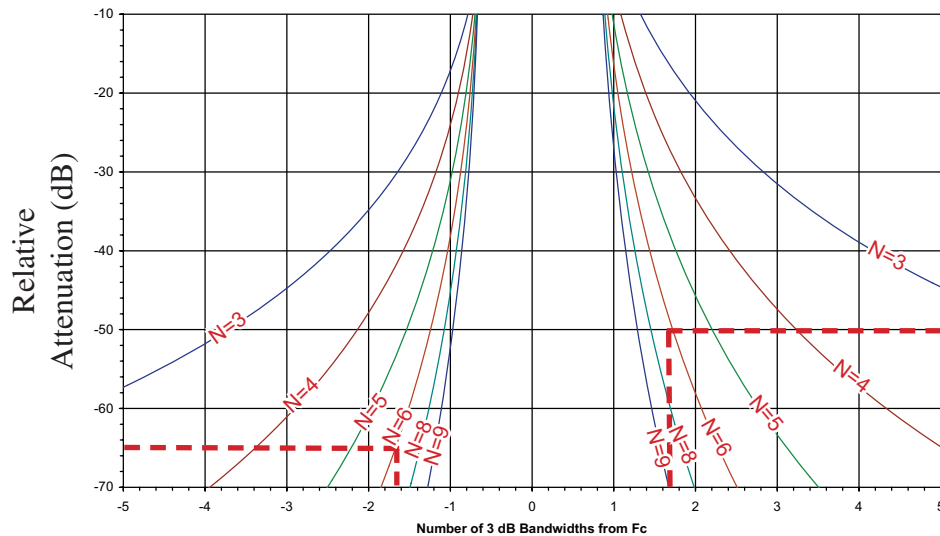
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The curves below show the attenuation as a function of the normalized 3dB bandwidth. The following formula is used to predict the attenuation for a given number of sections:

$$\text{Number of normalized 3 dB bandwidths from center frequency, } BW_N = \frac{\text{Rejection Frequency (MHz)} - \text{Center Frequency (MHz)}}{\text{3 dB Bandwidth (MHz)}}$$



EXAMPLE

Determine minimum attenuation levels at 225 MHz and 275 MHz for the following filter:

Center Frequency = 250 MHz

Minimum 3 dB Bandwidth = 15 MHz

Number of sections = 6

$$\begin{aligned} \text{3 dB bandwidths from } F_c, (BW_N) &= \frac{(225 - 250)/15}{1} = -1.67 \text{ BW} \\ &= \frac{(275 - 250)/15}{1} = +1.67 \text{ BW} \end{aligned}$$

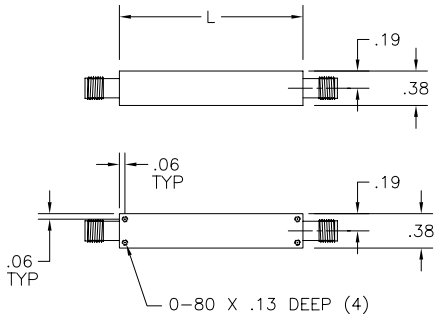
From the curve above:

- 1.67 BW = 65 dB
- +1.67 BW = 50 dB

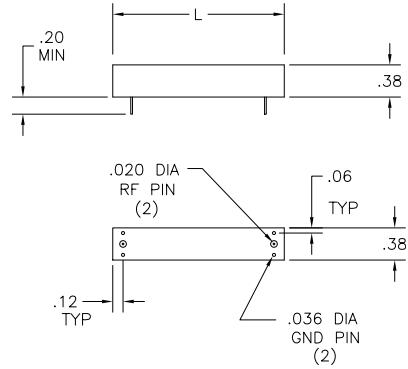
*Note: For illustration purposes only. Consult factory for specific information.

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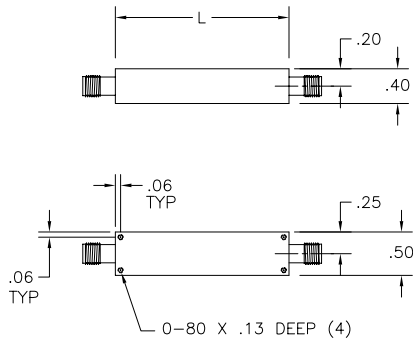
STYLE 1 CONNECTORS



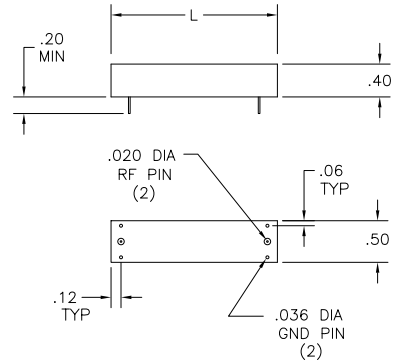
STYLE 1 PINS



STYLE 2 CONNECTORS



STYLE 2 PINS



Model	Number of Sections	Style	Width (IN.)	Height (IN.)	Length (IN.)
MP Series	3	1	0.38	0.38	0.75
MP Series	4-5	1	0.38	0.38	1.0
MP Series	6-7	2	0.50	0.40	1.5
MP Series	8-9	2	0.50	0.40	1.75

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