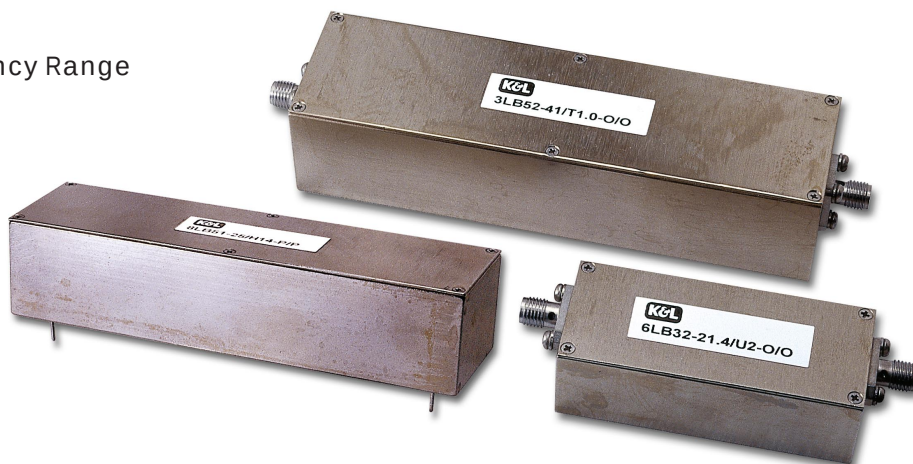


Lumped Components, Miniature Bandpass — LB Series

◆ Features:

- Covers the 0.5 MHz to 200 MHz Frequency Range
- 3 dB BW Available from 1-200%
- Designs Available in 2-10 Sections
- Low Insertion Loss
- 0.05 dB Chebyshev Response
- Small, Ruggedized Package
- Custom Designs Available



◆ Specifications:

Model	Frequency (MHz)	3 dB % BW	VSWR	Average Power (Watts)	Impedance (Ohms)*	No. of Sections	Shock	Vibration	Temperature	Relative Humidity
LB10	0.5-200	1-50 / 50-200	1.5:1 / 1.7:1	Contact Factory	50	2-10	20 G's, 1/2 Sine, 11 Ms	10 G's, 10 Hz- 2000 Hz	-55 to +85 °C	0-95%
LB30	5-150	3-50 / 50-200	1.5:1 / 1.7:1	15	50	2-10				
LB40	15-200	3-50 / 50-200	1.5:1 / 1.7:1	10	50	2-10				
LB50	0.5-200	3-50 / 50-200	1.5:1 / 1.7:1	20	50	2-10				

* 75 ohms also available.

◆ Attenuation:

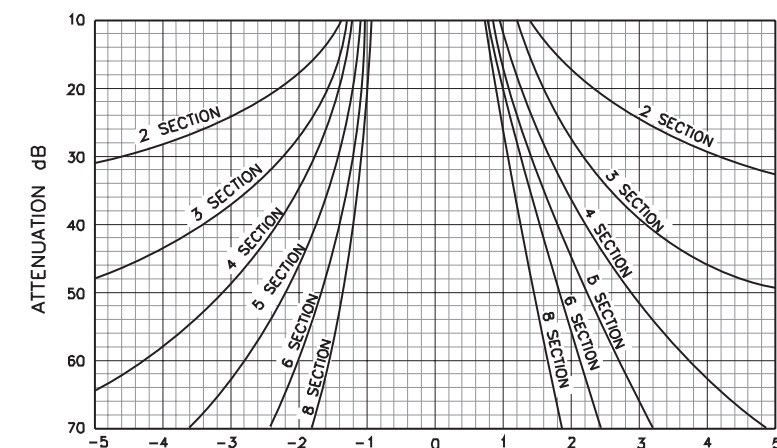
The adjacent curve shows the attenuation as multiples of the bandwidth for filters with 2-8 sections. The following formula is used:
3 dB bandwidths from center frequency =

$$\frac{\text{Reject Frequency} - \text{Center Frequency}}{3 \text{ dB Bandwidth}}$$

Example:

Center Frequency = 21.4 MHz
3 dB Bandwidth = 2
Number of Sections = 6

Find the attenuation at 17.4 and 25.4 MHz by substituting in the formula 3 dB bandwidth from center frequency = $\frac{17.4-21.4}{2} = -2 \text{ BW's}$ and



3 dB bandwidth from center frequency = $\frac{25.4-21.4}{2} = +2 \text{ BW's}$

From the curve, we find the attenuation in dB for a 6-section response -2 bandwidths from center frequency yield 60 dB, and +2 bandwidths from center frequency yields 58 dB.



Filtering Solutions for Your Global Market

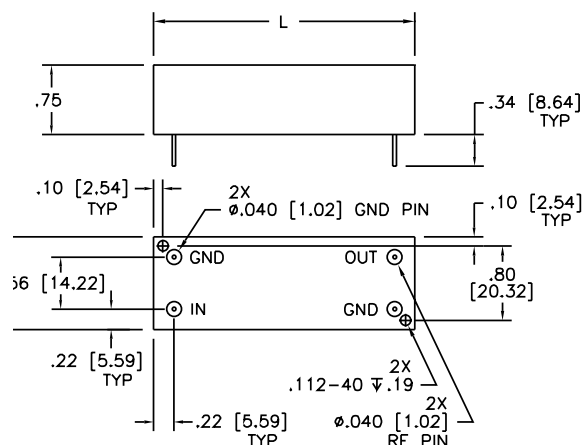
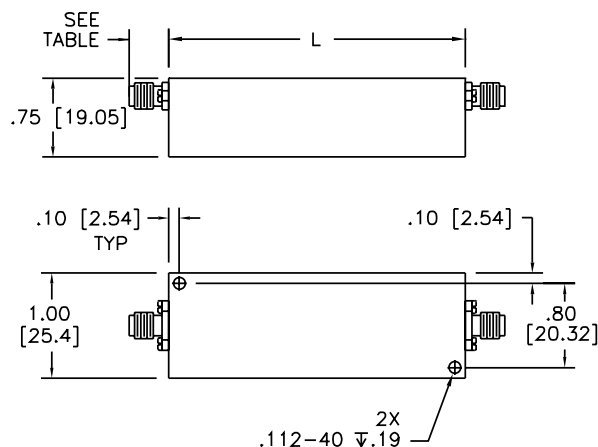
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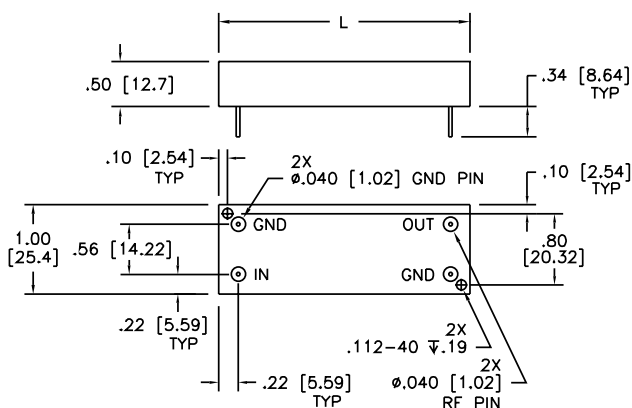
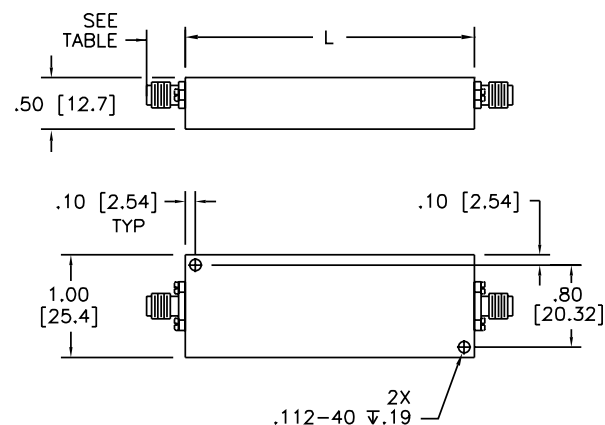
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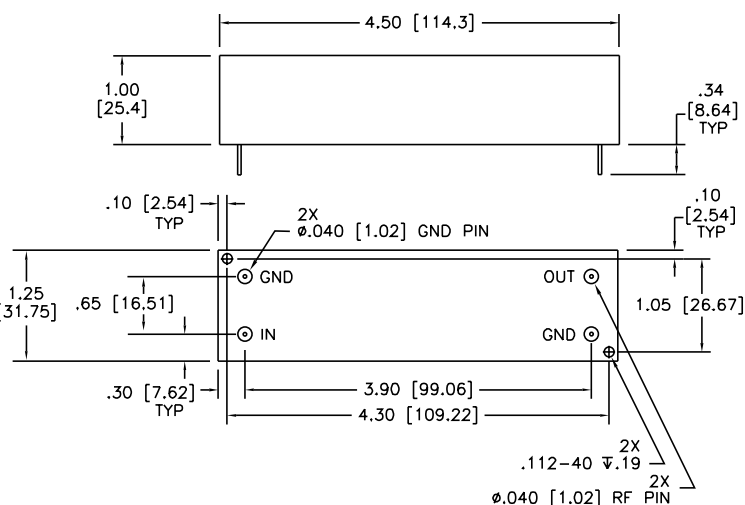
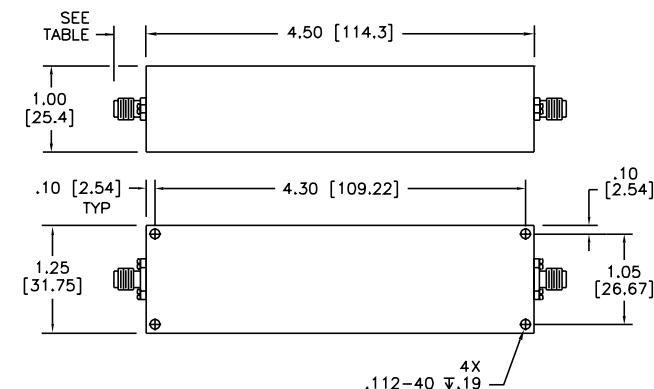
◆ Package Style 3:



◆ Package Style 4:



◆ Package Style 5:



Sect.	L-inches	mm
2-6	2.38	60.45
7-10	3.58	90.93

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Lumped Components, Miniature Bandpass — LB Series

◆ To Order:

6 L B 30 — 21.4 / U 2 — O / O
1 2 3 4 5 6 7 8 9

Code	Description		
1	Number of Sections	5	Center frequency (MHz)
2	Series (L-lumped)	6	Supplemental Codes (See Page 13)
3	B-Bandpass	7	Bandwidth (MHz)
4	Package Designator - Style 3	8	Input Connector
		9	Output Connector

◆ Insertion Loss:

The following formula is used to determine the maximum insertion loss at center frequency. For specification purposes, the result is always rounded up to the next tenth of a dB.

$$\text{Insertion Loss} = \frac{(\text{Loss Constant}) (\text{No. of Sections} + 0.5)}{\% 3 \text{ dB BW}} + 0.4$$

Example:

Bandpass Model = 6LB30-30/T3-O/O
 Insertion Loss = $\frac{(5.5)(6.5)}{10} + 0.4 = 4.0 \text{ dB}$

Model	Loss Constant
LB30	5.5
LB40	6
LB50	4.75

◆ Connectors:

Connector Style	Connector Code	LB30	LB40	LB50
N Female	N	.75"/19.05mm	*NR	.75"/19.05mm
N Male	NP	*NR	*NR	.79"/20.06mm
BNC Female	B	.72"/18.29mm	*NR	.72"/18.29mm
BNC Male	BP	.88"/22.35mm	*NR	.88"/22.35mm
TNC Female	T	.75"/19.05mm	*NR	.75"/19.05mm
TNC Male	TP	.85"/21.59mm	*NR	.85"/21.59mm
SMA Female	O	.38"/9.65mm	.38"/9.65mm	.38"/9.65mm
SMA Male	OP	.50"/12.7mm	.50"/12.7mm	.50"/12.7mm
Cable	C	6" RG 188	6" RG 188	6" RG 188
PC Mounting	P	See pg. 19	See pg. 19	See pg. 19
Sealectro Female	S	.38"/9.65mm	.38"/9.65mm	.38"/9.65mm
Special	X	Contact Factory	Contact Factory	Contact Factory

*NR = Not Recommended



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