

Dielectric Resonators

◆ Description:

K&L's Dielectric Resonator Bandpass Filters are available in standard packages with a basic Chebychev design. Connectors available are SMA and RF pins. Through the use of ceramic technology, this filter series offers superior temperature stability and low insertion loss.



◆ Specifications:

Frequency (MHz)	3 dB % BW	VSWR	Impedance (Ohms)	No. of Sections	Shock	Vibration	Temperature	Temp. Stability	Relative Humidity
500-3000	1.0-10	1.5:1	50	2-6	20 G's, 1/2 Sine, 11 Ms	10 G's, 10 Hz- 2000 Hz	-40 to +85 °C (Operating) -50 to +125 °C (Non-Operating)	+2 to +11 ppm/°C	0-95%

◆ Attenuation:

The adjacent curve shows the attenuation as multiples of the bandwidth for filters with 2-6 sections. The following formula is used:
3 dB bandwidths from center frequency=

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

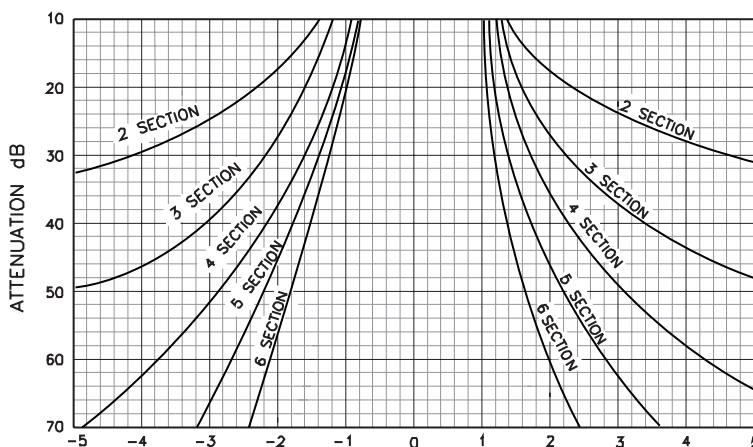
Example:

Center Frequency = 1000 MHz
3 dB Bandwidth = 50
Number of Sections = 5

Find the attenuation at 900 and 1100 MHz by substituting in the formula 3 dB bandwidth from center frequency = $\frac{900-1000}{50} = -2 \text{ BW's}$

and 3dB bandwidth from center frequency = $\frac{1100-1000}{50} = +2 \text{ BW's}$

From the curve, we find the attenuation in dB for a 5-section response -2 bandwidths from center frequency yield 46 dB, and +2 bandwidths from center frequency yields 44 dB.



Filtering Solutions for Your Global Market

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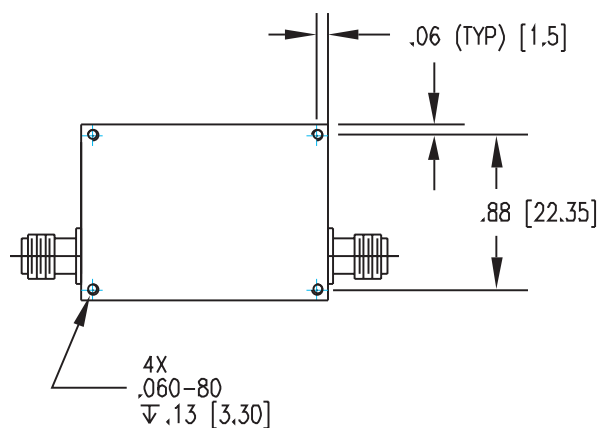
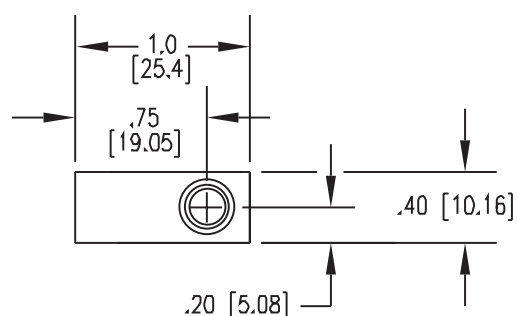
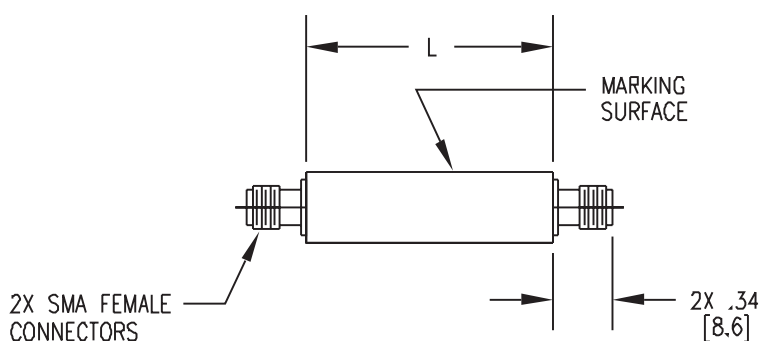
◆ **To Order:**

3 DR 20 — 1000 / I 50 — 0 / 0
1 2 3 4 5 6 7 8

<u>Code</u>	<u>Description</u>
1	Number of Sections
2	Series
3	Package/Resonator Designator
4	Center Frequency
5	Supplemental Codes (See Page 13)
6	Bandwidth
7	Input Connector
8	Output Connector

◆ Connectors:

Connector	Code
SMA Female	O
SMA Male	OP
Other (Specify)	X



	RESONATOR	SECTIONS	"L"
Pkg. 20	4mm	2 – 3	1.0 [25.4]
	4mm	4 – 5	1.3 [33.02]
	4mm	6	1.5 [38.1]
Pkg. 30	6mm	2 – 3	1.3 [33.02]
	6mm	4	1.5 [38.1]
	6mm	5 – 6	2.0 [50.8]

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