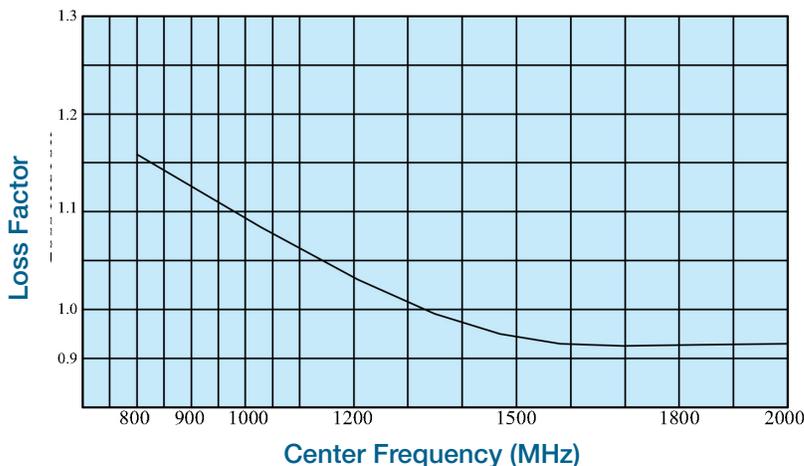


No. of Sections	2	3	4	5	6 or more
1.5/1 VSWR BW	0.4	0.7	0.8	0.85	0.9
MIN 3 dB BW					



Specification	Standard	*Special
<b>Electrical</b>		
Center Frequency (Fc)	800 to 2000 MHz	650 to 2250 MHz
3dB Relative Bandwidth (% of Fc)	3 to 7	3 to 10
Number of Sections Available	2 to 4	2 to 5
Resonator Size (mm)	12	12
Resonator Size (inches)	0.475	0.475
Nominal Impedance	50Ω	50 to 75Ω
Maximum Insertion Loss	0.5 to 1.25 dB	0.5 to 1.25 dB
Maximum VSWR	1.5/1	1.3/1
Maximum Input Power (Average) (Watts to 10,000 ft.)	50	50
Maximum Input Power (Peak) (Watts to 10,000 ft.)	250	250
<b>Environmental</b>		
Shock	15 G's	75 G's
Vibration	5 G's	30 G's
Humidity	90% relative	100% relative
Altitude	Unlimited	Unlimited
Temperature Range (Operating)	- 30°C to + 85°C	- 54°C to + 100°C
Temperature (Non-Operating)	- 40°C to + 100°C	- 62°C to + 150°C
<b>Mechanical</b>		
Approximate Weight in oz.	L x W x H x 40	L x W x H x 40
Mounting Provisions	See Next Page	See Next Page

\*Contact Benchmark Lark Engineering for Special Configurations



### Insertion Loss:

The maximum Insertion Loss at center frequency is equal to:

$$\frac{LF \times (N + 0.5)}{\% \text{ 3 dB BW}} + 0.2$$

Where:

LF = Loss Factor N = Number of Sections

% 3dB BW:

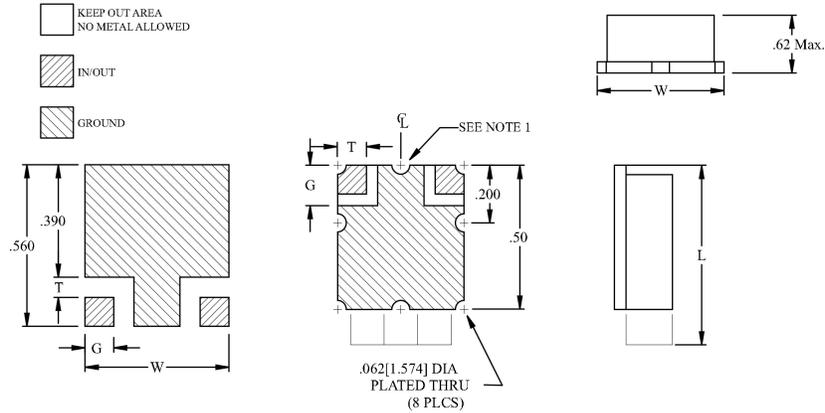
$$\frac{3\text{dB BW (MHz)} \times 100}{\text{Center Frequency (MHz)}}$$

Example:

A 3 section SDP with a resonator size of 12mm, a center frequency of 1200 MHz and a 3dB BW of 84 MHz would be:

$$\frac{1.04 \times 3.5}{7} + 0.2 = .72 \text{ dB}$$

## Mechanical Specifications — SDP Series



Note 1 - Additional plated thru holes will be provided on this edge, as space allows.

Note 2 - All dimensions are in inches unless otherwise specified.

The approximate width (W) of a Lark SDP series filter can be determined by the formula:

$$W = N \times 0.475 + 0.11$$

Where N is the number of sections and 0.475 is the resonator size in inches.

For widths (W) greater than 0.400, Insulating gap (G) is 0.140 and pad size (T) is 0.100.

The approximate length of a Lark SDP filter is a function of the PCB carrier and the resonator size (see below). Standard lengths of Printed Circuit Boards are 0.250, 0.500, and 0.750. Resonators can extend beyond the length of the PCB as much as 0.150 until the next PCB size will be used. The length (L) is equal to:

$$L (\text{max}) = \text{FAC}/\text{Fc} + \text{C}$$

Where:

FAC = See Below

Fc = Center Frequency (MHz)

Frequency Range	FAC	C
800-1200	660	0.15
1201-2000	880	.15
2001-5000	940	.15

Lark Technology

3201 E Harbour Dr | Phoenix, AZ 85034, USA

833.236.2400 |

**L//ARK**