

# Coaxial Low Pass Filter

50Ω

\*DC to 5000 MHz

VLF-5000+



Generic photo used for illustration purposes only

CASE STYLE: FF704

| Connectors | Model     |
|------------|-----------|
| SMA        | VLF-5000+ |

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## Maximum Ratings

|                            |                   |
|----------------------------|-------------------|
| Operating Temperature      | -55°C to 100°C    |
| Storage Temperature        | -55°C to 100°C    |
| RF Power Input*            | 9W max. at 25°C   |
| DC Current Input to Output | 0.5A max. at 25°C |

\* Passband rating, derate linearly to 3W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

## Features

- rugged uni-body construction, small size
- 7 sections
- excellent power handling, 9W
- temperature stable
- low cost
- protected by U.S. Patent 6,943,646

## Applications

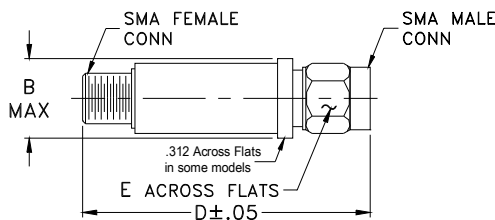
- harmonic rejection
- transmitters/receivers
- lab use

## Electrical Specifications at 25°C

| PASSBAND<br>(MHz)<br>(loss < 1 dB) | fco, MHz<br>Nom.<br>(loss 3 dB) | STOP BAND (MHz)<br>(loss, dB) |            |               | VSWR<br>(:1)     |                  | NO. OF<br>SECTIONS |
|------------------------------------|---------------------------------|-------------------------------|------------|---------------|------------------|------------------|--------------------|
|                                    |                                 | f 20<br>Min.                  | 30<br>Typ. | fr 20<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                    |
| Max.                               | Typ.                            | Min.                          | Typ.       | Typ.          | Typ.             | Typ.             |                    |
| *DC-5000                           | 5580                            | 6850                          | 7050-10000 | 18000         | 20               | 1.2              | 7                  |

\* Not for use with DC voltage at input and output ports

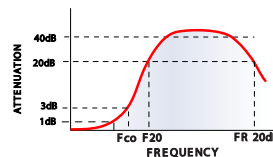
## Outline Drawing



## Outline Dimensions (inch/mm)

| B     | D     | E    | wt    |
|-------|-------|------|-------|
| .410  | 1.43  | .312 | grams |
| 10.41 | 36.32 | 7.92 | 10.0  |

## typical frequency response

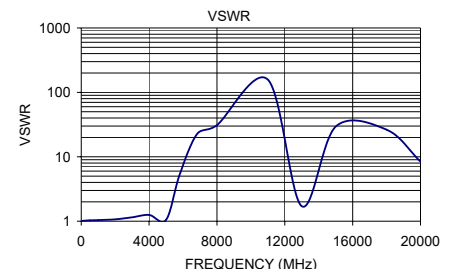
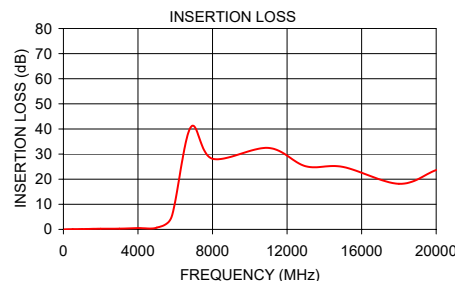


## electrical schematic



## Typical Performance Data at 25°C

| Frequency<br>(MHz) | Insertion Loss<br>(dB) | VSWR<br>(:1) |
|--------------------|------------------------|--------------|
| 50.00              | 0.01                   | 1.01         |
| 500.00             | 0.10                   | 1.03         |
| 1000.00            | 0.14                   | 1.04         |
| 2000.00            | 0.26                   | 1.07         |
| 3000.00            | 0.31                   | 1.15         |
| 4000.00            | 0.51                   | 1.25         |
| 5000.00            | 0.68                   | 1.05         |
| 5800.00            | 4.91                   | 5.30         |
| 6830.00            | 40.67                  | 22.58        |
| 8000.00            | 28.12                  | 31.03        |
| 11000.00           | 32.43                  | 157.93       |
| 13000.00           | 25.15                  | 1.71         |
| 15000.00           | 24.88                  | 29.46        |
| 18000.00           | 18.17                  | 26.33        |
| 20000.00           | 23.63                  | 8.43         |



## Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
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