

# Coaxial Bandpass Filter

50Ω 4900 to 6200 MHz

## VBFZ-5500-S+



Generic photo used for illustration purposes only

CASE STYLE: FF1145

| Connectors | Model        |
|------------|--------------|
| SMA        | VBFZ-5500-S+ |

**+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*       | 7W at 25°C     |

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

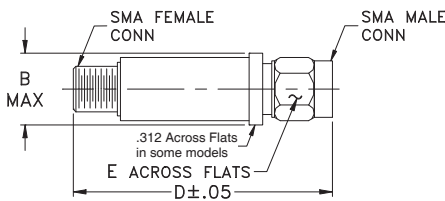
### Features

- Good Rejection, 30dB up to 17GHz
- Low insertion loss
- Excellent power handling, 7W
- Temperature stable LTCC internal structure
- Rugged stainless steel unibody
- Protected by US Patent 6,943,646

### Applications

- Harmonic rejection
- Transmitters/receivers
- Lab use
- Test instrumentation

### Outline Drawing



### Outline Dimensions (inch mm)

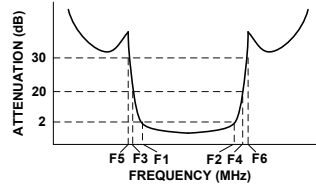
| B     | D     | E    | wt.   |
|-------|-------|------|-------|
| .410  | 1.91  | .312 | grams |
| 10.41 | 48.51 | 7.92 | 11.8  |

Note: Please refer to case style drawing for details

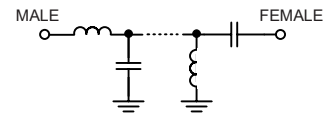
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| CENTER FREQ. (MHz)<br>Fc | PASSBAND (MHz)<br>(Loss < 2dB)<br>F1 - F2 | STOPBANDS (MHz) |      |                 |              | VSWR (:1) |      |          |
|--------------------------|---|-----------------|------|-----------------|--------------|-----------|------|----------|
|                          |   | (Loss > 20dB)   |      | (Loss 30dB Typ) |              | Passband  |      | Stopband |
|                          |   | F3              | F4   | F5              | F6           | Typ.      | Max. | Typ.     |
| 5500                     | 4900 - 6200                               | 3600            | 8600 | 3500            | 8600 - 17000 | 1.3       | 2.1  | 20       |

### Typical Frequency Response



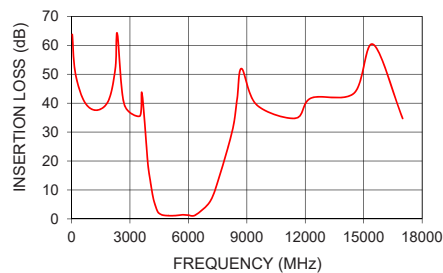
### Functional Schematic



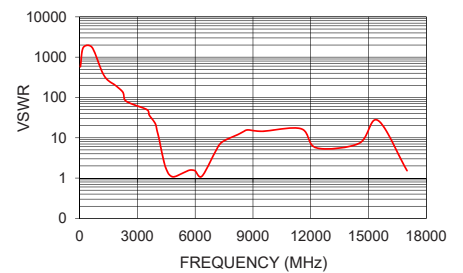
### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50              | 60.32               | 868.59    |
| 1500            | 37.93               | 157.93    |
| 3500            | 35.51               | 49.64     |
| 3600            | 41.94               | 39.49     |
| 3750            | 30.57               | 30.49     |
| 4000            | 15.08               | 17.05     |
| 4150            | 8.84                | 8.31      |
| 4300            | 4.47                | 3.66      |
| 4450            | 2.28                | 1.91      |
| 4900            | 1.14                | 1.07      |
| 5500            | 1.26                | 1.43      |
| 6200            | 1.27                | 1.32      |
| 6800            | 2.83                | 2.39      |
| 7000            | 4.82                | 4.03      |
| 7300            | 8.94                | 7.05      |
| 7700            | 15.82               | 8.81      |
| 8200            | 28.73               | 11.77     |
| 8600            | 48.53               | 15.00     |
| 10000           | 39.46               | 10.50     |
| 17000           | 34.71               | 1.53      |

VBFZ-5500-S+  
INSERTION LOSS



VBFZ-5500-S+  
VSWR



### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

