

# Coaxial Low Pass Filter

## VLFG-2250+

50Ω DC to 2250 MHz



Generic photo used for illustration purposes only  
CASE STYLE: FF704

### The Big Deal

- Excellent power handling, 4.5W
- Temperature stable
- Rugged unibody construction
- Good rejection, 40 dB typical

### Product Overview

VLFG-2250+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-2250 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. VLFG-2250+ offer low insertion loss, and excellent power handling capability. It handles up to 4.5W RF input power and provides a wide operating temperature range from -55°C to 125°C.

### Key Features

| Feature                     | Advantages   |
|-----------------------------|--|
| Low passband insertion loss | Suitable for high performance application.   |
| 4.5W Power handling         | Supports a range of system power requirements.   |
| Connectorized package       | The connectorized package is easy to interface with other devices and well suited for test setups. |

#### 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.  
C. 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)



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**+RoHS Compliant**

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

### Features

- Low loss, 1.2 dB typical
- Good rejection 40 dB typical
- Excellent power handling, 4.5W
- Temperature stable
- Connectorized package
- Rugged unibody construction

### Applications

- Military radar applications
- Test and measurement
- Telecommunication and broadband wireless applications

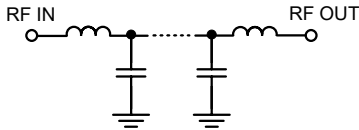
### Electrical Specifications at 25°C

| Parameter |                | F#    | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------|----------------|-------|-----------------|------|------|------|------|
| Pass Band | Insertion Loss | DC-F1 | DC - 2250       | —    | 1.2  | 2.0  | dB   |
|           | Freq. Cut-Off  | F2*   | 2500            | —    | 3.0  | —    | dB   |
|           | Return Loss    | DC-F1 | DC - 2250       | —    | 21   | —    | dB   |
| Stop Band | Rejection Loss | F3-F4 | 2950 - 3600     | 20   | 30   | —    | dB   |
|           |                | F4-F5 | 3600 - 8000     | 32   | 40   | —    | dB   |
|           |                | F5-F6 | 8000 - 15000    | —    | 26   | —    | dB   |

In Application where DC voltage is present at either input or output port, DC blocks are required.

\* Typically, a ±5% frequency deviation from the stated value may occur on a unit-to-unit basis.

### Functional Schematic



### Maximum Ratings

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -55°C to 125°C  |
| Storage Temperature   | -55°C to 125°C  |
| RF Power Input*       | 4.5W max. @25°C |

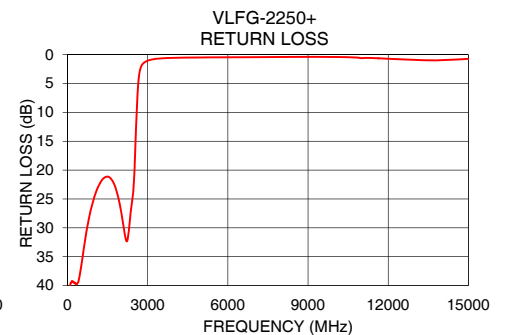
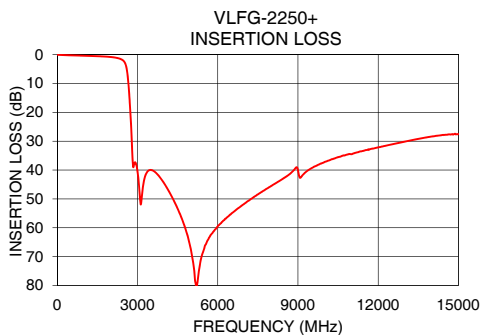
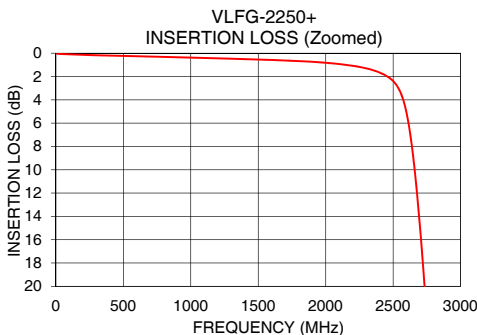
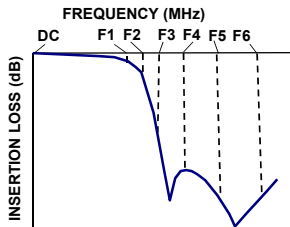
\*Passband rating, derate linearly to 1W at 125°C ambient

Permanent damage may occur if any of these limits are exceeded.

### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |
|-----------------|---------------------|------------------|
| 10              | 0.05                | 45.25            |
| 100             | 0.10                | 40.02            |
| 1000            | 0.38                | 24.72            |
| 1400            | 0.51                | 21.26            |
| 1800            | 0.67                | 23.09            |
| 2000            | 0.82                | 27.01            |
| 2250            | 1.17                | 32.00            |
| 2500            | 2.39                | 20.74            |
| 2560            | 3.52                | 13.40            |
| 2760            | 24.75               | 2.01             |
| 2800            | 33.02               | 1.70             |
| 2950            | 38.01               | 1.14             |
| 3000            | 40.49               | 1.04             |
| 3600            | 40.31               | 0.61             |
| 5000            | 67.78               | 0.48             |
| 8000            | 45.53               | 0.41             |
| 10000           | 37.18               | 0.40             |
| 11000           | 34.51               | 0.61             |
| 12000           | 32.15               | 0.70             |
| 15000           | 27.57               | 0.73             |

### Typical Frequency Response



### Notes

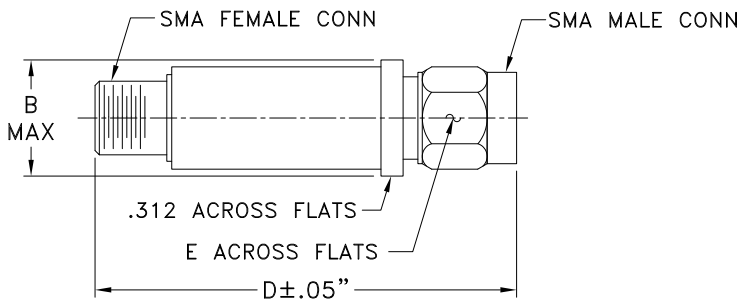
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**Coaxial Connections**

|          |            |
|----------|------------|
| PORT - 1 | SMA-Male   |
| PORT - 2 | SMA-Female |

**Outline Drawing**



**Outline Dimensions ( inch / mm )**

| B     | D     | E    | wt.   |
|-------|-------|------|-------|
| .410  | 1.43  | .312 | grams |
| 10.41 | 36.32 | 7.92 | 10    |

Note: Please refer to case style drawing for details

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