

Coaxial Low Pass Filter

VLFG-2000+

50Ω DC to 2000 MHz



Generic photo used for illustration purposes only
CASE STYLE: FF704

The Big Deal

- Excellent power handling, 5.5W
- Temperature stable
- Rugged unibody construction
- Good rejection, 42 dB typical

Product Overview

VLFG-2000+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-2000 MHz bandwidth, these units offer good matching within the passband and good rejection in stopband. VLFG-2000+ offer low insertion loss, and excellent power handling capability. It handles up to 5.5W 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. |
| 5.5W 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



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+RoHS Compliant

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

Features

- Low loss, 1.1dB typ.
- Very good rejection 42dB typ.
- Excellent power handling, 5.5W
- Temperature stable
- Connectorized package
- Rugged unibody construction

Applications

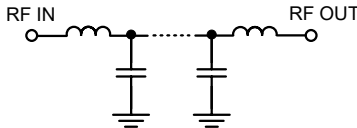
- Military radio applications
- Test and measurement
- Telecommunications and broadband wireless applications
- Military Radar applications.

Electrical Specifications at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|-----------|----------------|-----------------|--------------|------|------|------|----|
| Pass Band | Insertion Loss | DC-F1 | DC - 2000 | — | 1.1 | 1.7 | dB |
| | Freq. Cut-Off | F2* | 2350 | — | 3.0 | — | dB |
| | Return Loss | DC-F1 | DC - 2000 | — | 16 | — | dB |
| Stop Band | Rejection Loss | F3-F4 | 2850 - 3300 | 20 | 40 | — | dB |
| | | F4-F5 | 3300 - 7500 | 32 | 42 | — | dB |
| | | F5-F6 | 7500 - 13500 | — | 28 | — | 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

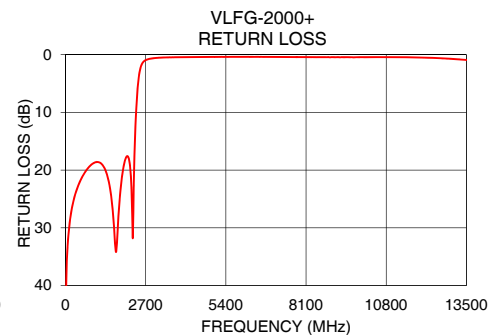
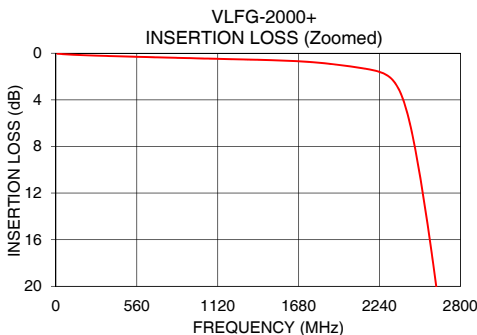
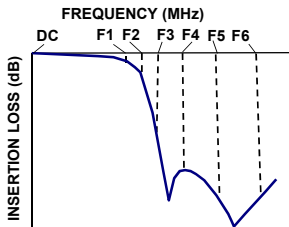
| | |
|-----------------------|-----------------|
| Operating Temperature | -55°C to 125°C |
| Storage Temperature | -55°C to 125°C |
| RF Power Input* | 5.5W max. @25°C |

*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 | 0.04 | 42.93 |
| 100 | 0.12 | 31.19 |
| 300 | 0.21 | 24.71 |
| 500 | 0.29 | 21.84 |
| 700 | 0.35 | 20.05 |
| 1000 | 0.45 | 18.66 |
| 1500 | 0.60 | 23.15 |
| 2000 | 1.07 | 18.39 |
| 2350 | 2.62 | 13.19 |
| 2370 | 3.03 | 10.78 |
| 2510 | 9.86 | 2.62 |
| 2635 | 20.34 | 1.18 |
| 2725 | 29.63 | 0.88 |
| 2850 | 49.02 | 0.70 |
| 3300 | 66.56 | 0.50 |
| 5000 | 54.29 | 0.39 |
| 7500 | 44.25 | 0.41 |
| 9000 | 39.81 | 0.43 |
| 11000 | 33.19 | 0.43 |
| 13500 | 29.79 | 0.92 |

Typical Frequency Response



Notes

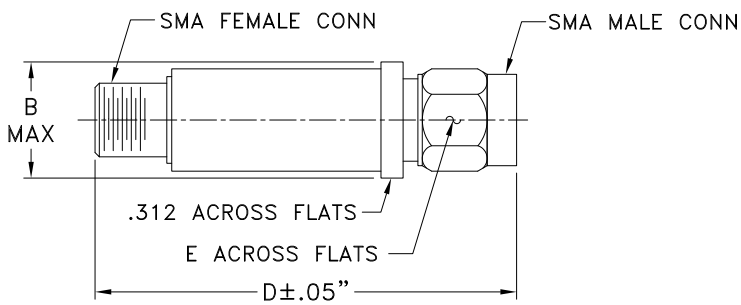
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Coaxial Connections

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

Outline Drawing



Outline Dimensions (inch)

| 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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