

Coaxial

# Low Pass Filter

VLFG-490+

50Ω

DC to 490 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF704

## The Big Deal

- Good power handling, 3.5 W
- Temperature stable
- Rugged, unibody construction
- Very good rejection, 45 dB typical

## Product Overview

VLFG-490+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-490 MHz bandwidth, these units offer good matching within the passband and high rejection in stopband. VLFG-490+ offer low insertion loss, and good power handling capability. It handles up to 3.5W 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.
3.5W 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

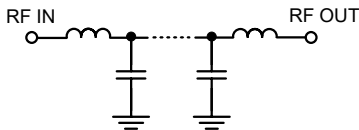
## Features

- Low loss, 1.5 dB typical
- Very good rejection 45 dB typical
- Good power handling, 3.5 W
- Temperature stable
- Rugged unibody construction
- Connectorized package

## Applications

- Harmonic Rejection
- VHF/UHF transmitters / receivers
- Military radar applications
- Test and measurement
- Telecommunications & broadband wireless applications
- Satcom modems

## Functional Schematic



## Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 490	—	1.5	2	dB
	Freq. Cut-Off	F2*	590	—	3.0	—	dB
	Return Loss	DC-F1	DC - 490	—	16	—	dB
Stop Band	Rejection Loss	F3-F4	800 - 960	20	56	—	dB
		F4-F5	960 - 1500	40	52	—	dB
		F5-F6	1500 - 3000	35	46	—	dB
		F6-F7	3000 - 8500	—	17	—	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.

### Maximum Ratings

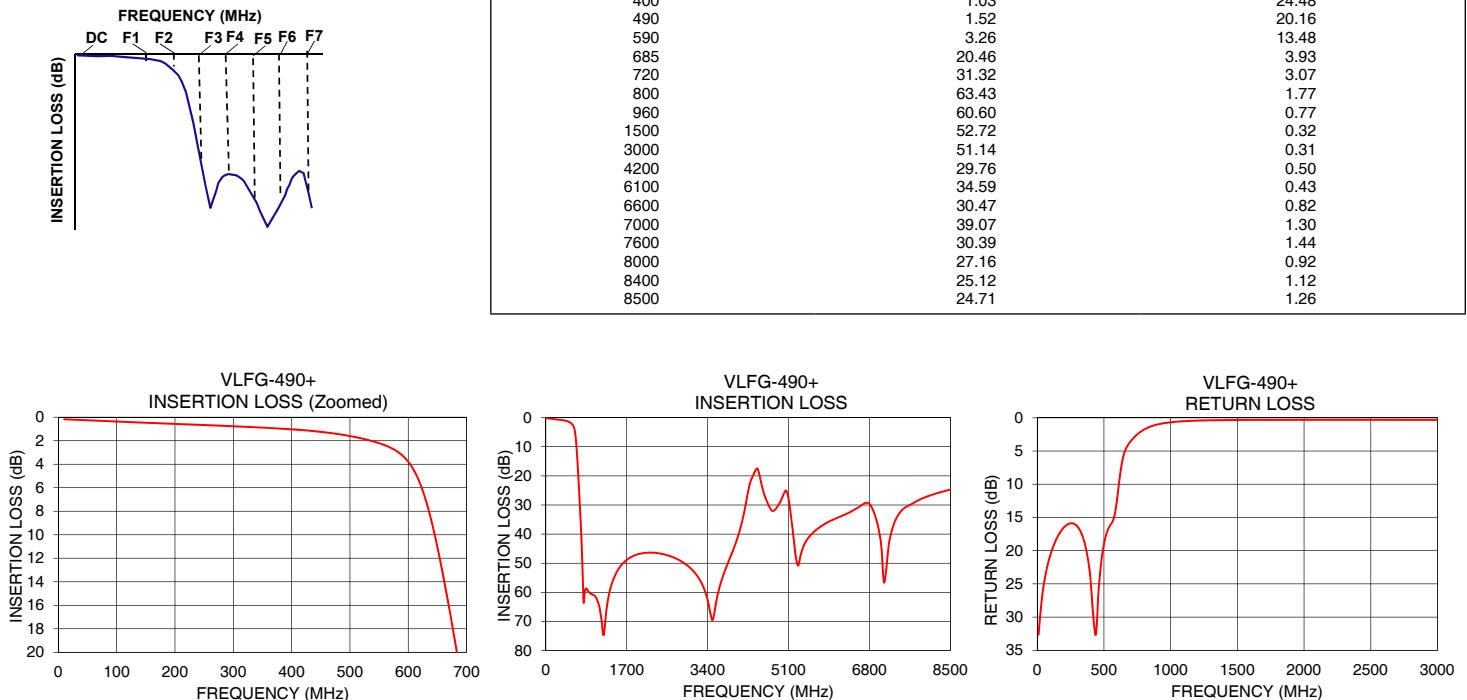
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	3.5 W max. @25°C

\*Passband rating, derate linearly to 0.9 W 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	0.17	32.63
100	0.37	20.53
300	0.77	16.33
400	1.03	24.48
490	1.52	20.16
590	3.26	13.48
685	20.46	3.93
720	31.32	3.07
800	63.43	1.77
960	60.60	0.77
1500	52.72	0.32
3000	51.14	0.31
4200	29.76	0.50
6100	34.59	0.43
6600	30.47	0.82
7000	39.07	1.30
7600	30.39	1.44
8000	27.16	0.92
8400	25.12	1.12
8500	24.71	1.26

## Typical Frequency Response



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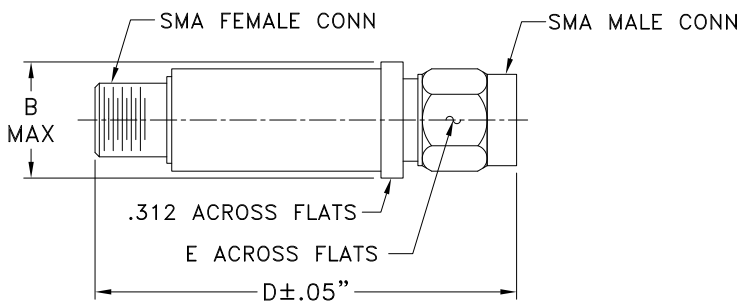
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Coaxial Connections

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

Outline Drawing



Outline Dimensions ( <sup>inch</sup> <sub>mm</sub> )

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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