

Coaxial

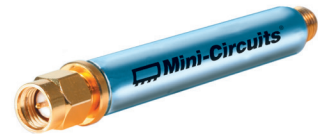
# Low Pass Filter

**VLFX-400+**

50Ω DC to 400 MHz (40 dB Typ. Isolation up to 20 GHz)

## The Big Deal

- Very good rejection, 40 dB typ. up to 20 GHz
- Excellent power handling, 10W
- Rugged unibody construction



*Generic photo used for illustration purposes only*  
CASE STYLE: FF1118

## Product Overview

VLFX-400+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-400 MHz bandwidth, these units offer good matching within the passband and high rejection in stopband, 40 dB typ. up to 20 GHz. This will find its applications in harmonic rejection, transmitters / receivers and test instrumentation.

## Key Features

Feature	Advantages
Low passband insertion loss	Suitable for high performance application
Fast roll-off	Provides very good adjacent band rejection
Connectorized package	The connectorized package is easy to interface with other devices and well suited for test setups

### Notes

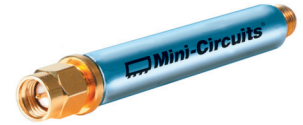
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## VLFX-400+

50Ω DC to 400 MHz (40 dB Typ. Isolation up to 20 GHz)



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Connectors	Model
SMA	VLFX-400+

### Features

- Very good isolation, 40 dB typ. up to 20 GHz
- Excellent power handling, 10W
- Temperature stable LTCC internal structure
- Re-entry frequency > 20 GHz
- Protected by US patent 6,943,646
- Rugged unibody construction

### Applications

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

### Electrical Specifications<sup>(1)</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-400	—	1.0	1.6	dB
	Freq. Cut-Off	F2	540	—	3.0	—	dB
	VSWR	DC-F1	DC-400	—	1.15	—	:1
Stop Band	Insertion Loss	F3	670	20	27	—	dB
		F4-F5	700-20000	—	40	—	dB
	VSWR	F3-F5	700-20000	—	10	—	:1

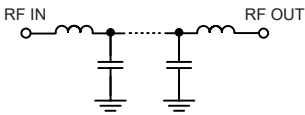
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

### Maximum Ratings

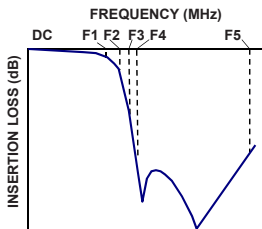
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

\*Passband rating, derate linearly to 3.5W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

### Functional Schematic



### Typical Frequency Response

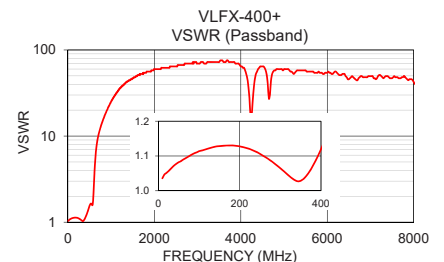
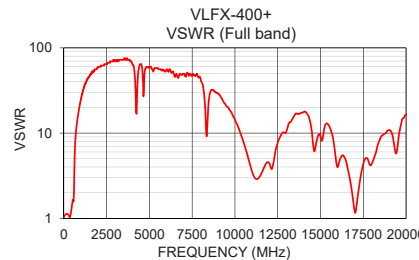
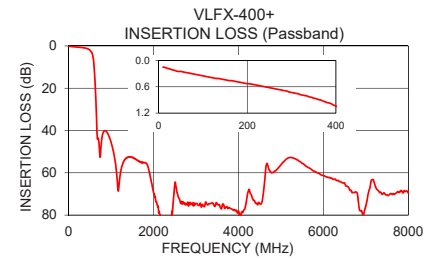
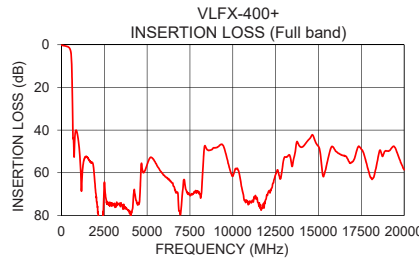


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.15	1.04
100	0.35	1.11
400	1.04	1.12
500	2.00	1.54
540	3.01	1.64
600	10.02	2.61
630	20.66	5.09
650	30.43	6.73
670	42.12	8.16
700	43.91	9.90
800	41.80	14.74
1000	45.62	25.19
2500	65.14	64.35
5000	56.15	59.91
7500	70.51	46.96
10000	61.65	14.38
12500	60.76	7.70
15000	47.59	9.18
17500	48.96	4.36
20000	58.57	16.41

### +RoHS Compliant

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



### Notes

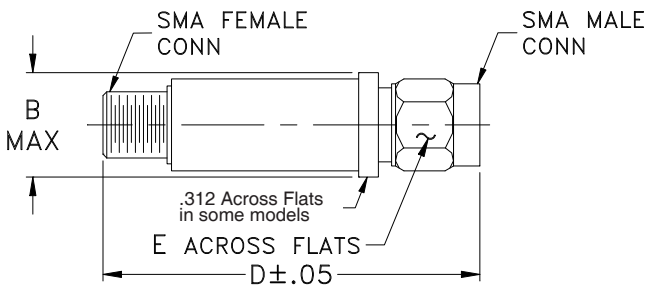
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## Coaxial Connections

INPUT	SMA-Male
OUTPUT	SMA-Female

## Outline Drawing



## Outline Dimensions ( $\frac{\text{inch}}{\text{mm}}$ )

B	D	E	wt.
$\frac{\text{inch}}$	$\frac{\text{inch}}$	$\frac{\text{inch}}$	$\frac{\text{grams}}$
.410	2.67	.312	17.0
10.41	67.82	7.92	

Note: Please refer to case style drawing for details

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