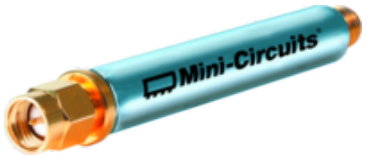
Coaxial

Low Pass Filter

VLFX-500+

50Ω DC to 500 MHz (40 dB Typ. Isolation up to 20 GHz)



CASE STYLE: FF1118

The Big Deal

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

Product Overview

VLFX-500+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-500 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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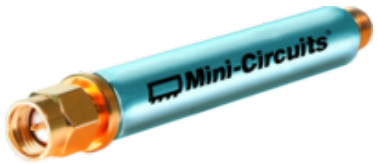


CASE STYLE: FF1118

Connectors	Model
SMA	VLFX-500+

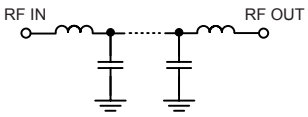
Features

- 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

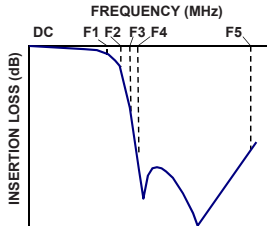
Applications

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

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications[(1)] at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-500	—	1.1	1.6	dB
	Freq. Cut-Off	F2	750	—	3.0	—	dB
	VSWR	DC-F1	DC-500	—	1.15	—	:1
Stop Band	Insertion Loss	F3	900	20	33	—	dB
		F4-F5	1100-20000	—	40	—	dB
	VSWR	F3-F5	900-20000	—	10	—	:1

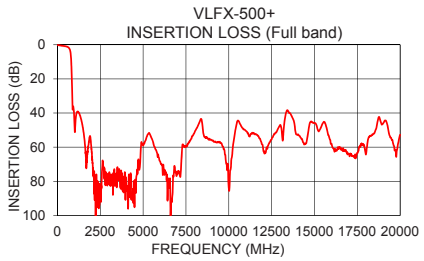
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

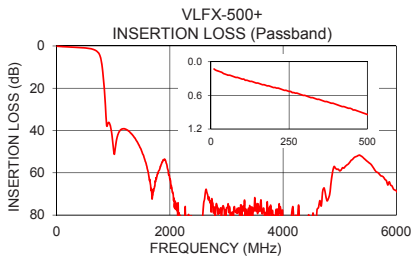
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

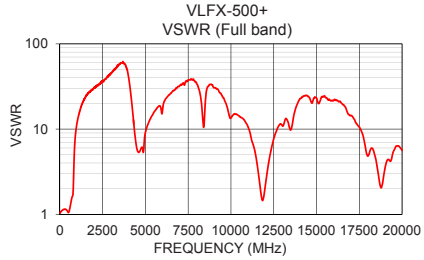
*Passband rating, derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

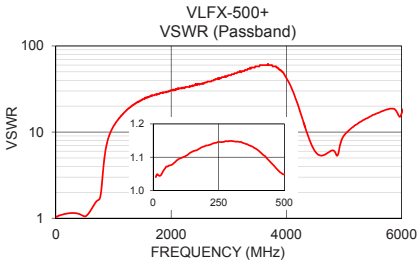
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.13	1.04
250	0.53	1.15
500	0.94	1.05
730	2.99	1.62
750	3.73	1.65
840	19.87	4.87
865	30.17	6.37
900	37.15	8.08
1100	40.78	14.50
1500	49.60	23.81
2000	63.15	30.49
4000	82.68	42.38
5000	59.06	9.13
8000	51.44	34.07
10000	83.79	13.49
12500	55.46	7.66
15000	45.93	23.18
17500	63.27	10.56
18500	51.77	4.08
20000	52.75	5.61









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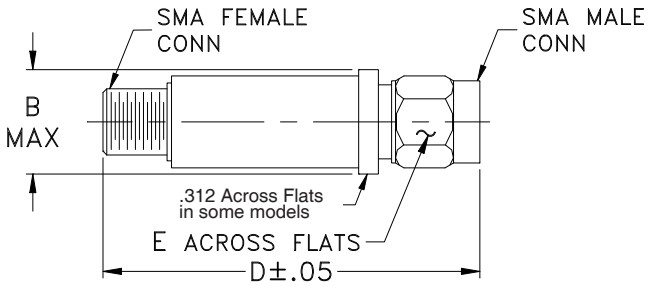
Coaxial Connections

INPUT	SMA-Male
OUTPUT	SMA-Female

Outline Drawing



Outline Dimensions (inch / mm)

B	D	E	wt.
.410	**2.67**	**.312**	**grams**
10.41	67.82	7.92	17.0

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