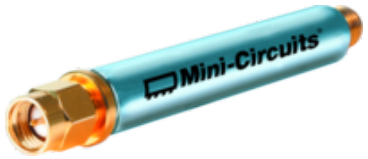
Coaxial

Low Pass Filter

VLFX-450+

50Ω DC to 450 MHz (40 dB Typ. Isolation up to 20 GHz)



CASE STYLE: FF1118

Connectors	Model
SMA	VLFX-450+

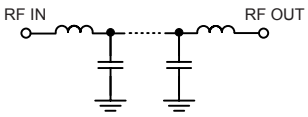
Features

- 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

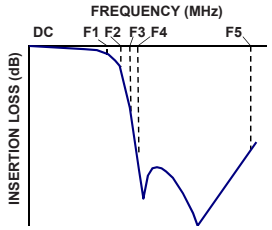
Applications

- 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-450	—	1.0	1.6	dB
	Freq. Cut-Off	F2	640	—	3.0	—	dB
	VSWR	DC-F1	DC-450	—	1.15	—	:1
Stop Band	Insertion Loss	F3	800	20	35	—	dB
		F4-F5	900-20000	—	40	—	dB
	VSWR	F3-F5	900-20000	—	10	—	:1

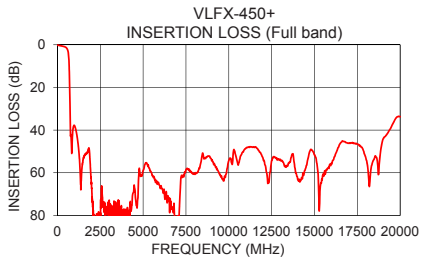
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

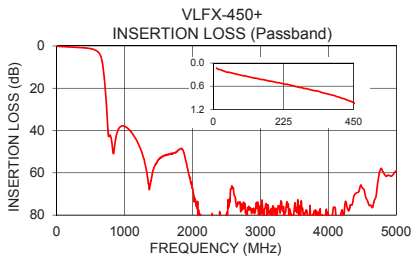
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

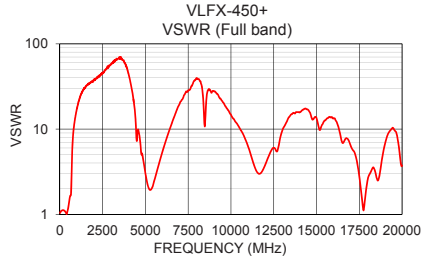
*Passband rating, derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

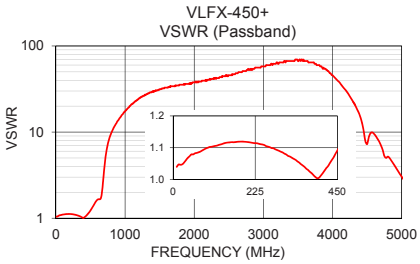
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.13	1.04
100	0.33	1.10
450	1.03	1.09
600	2.59	1.64
625	3.37	1.66
640	4.13	1.66
700	14.95	3.83
715	20.29	4.92
740	31.69	6.61
800	43.39	9.74
850	48.36	11.77
900	39.97	13.70
2500	88.89	45.72
5000	59.06	3.03
7500	58.61	28.49
10000	54.26	14.74
12500	54.33	6.03
15000	51.67	13.49
17500	46.48	2.81
20000	33.73	3.74









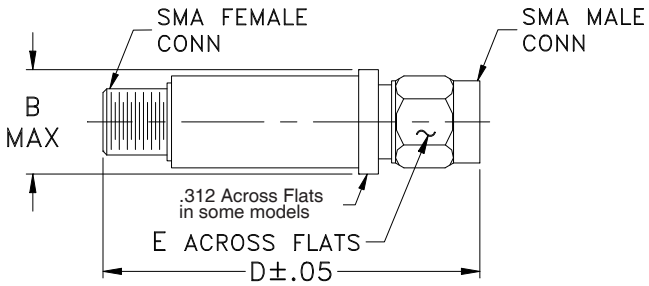
Notes

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

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