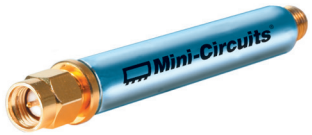
Coaxial

Low Pass Filter

VLFX-300+

50Ω DC to 300 MHz (40 dB Typ. Isolation up to 20 GHz)



Generic photo used for illustration purposes only
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-300+ is a 50Ω low pass filter built in rugged unibody construction. Covering DC-300 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

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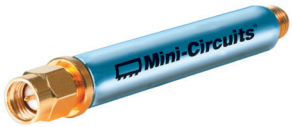

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Connectors	Model
SMA	VLFX-300+

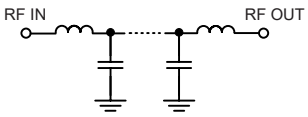
Features

- 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

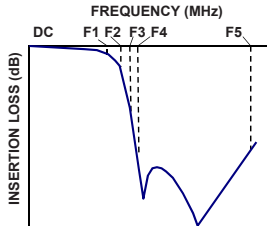
Applications

- 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-300	—	1.0	1.6	dB
	Freq. Cut-Off	F2	450	—	3.0	—	dB
	VSWR	DC-F1	DC-300	—	1.15	—	:1
Stop Band	Insertion Loss	F3	580	20	27	—	dB
		F4-F5	650-20000	—	40	—	dB
	VSWR	F3-F5	580-20000	—	10	—	:1

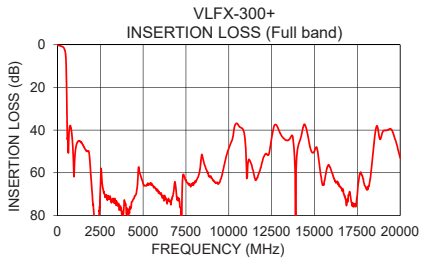
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

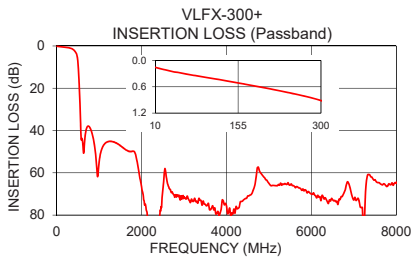
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

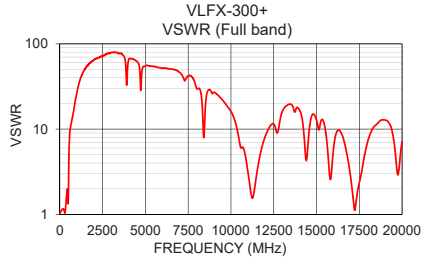
*Passband rating, derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

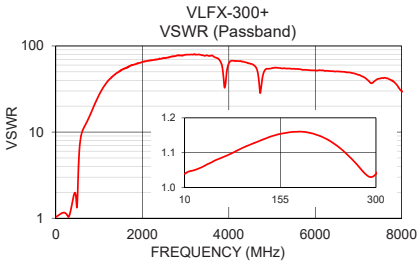
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.16	1.04
100	0.39	1.12
200	0.62	1.16
300	0.91	1.04
400	1.87	1.71
450	3.09	1.94
510	10.40	2.55
535	20.40	5.32
550	28.08	6.86
555	31.02	7.30
580	44.40	8.96
600	43.91	9.83
650	47.50	11.30
1000	54.95	27.11
5000	64.99	55.33
10000	48.55	16.08
12500	43.81	11.50
15000	49.85	12.84
17500	70.38	2.34
20000	52.94	7.09









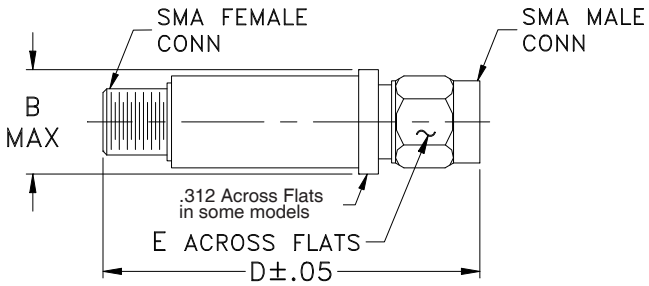
Notes

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

Note: Please refer to case style drawing for details