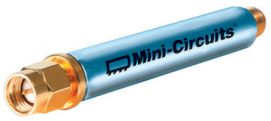
Coaxial

Low Pass Filter

VLFX-470+

50Ω DC to 470 MHz (40 dB Typ. Isolation up to 20 GHz)



Generic photo used for illustration purposes only

CASE STYLE: FF1118

Connectors	Model
SMA	VLFX-470+

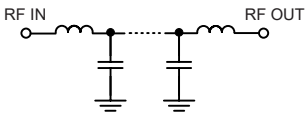
Features

- 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

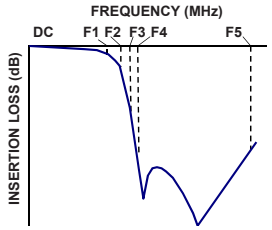
Applications

- 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-470	—	1.0	1.6	dB
	Freq. Cut-Off	F2	675	—	3.0	—	dB
	VSWR	DC-F1	DC-470	—	1.15	—	:1
Stop Band	Insertion Loss	F3	820	20	27	—	dB
		F4-F5	1000-20000	—	40	—	dB
	VSWR	F3-F5	820-20000	—	10	—	:1

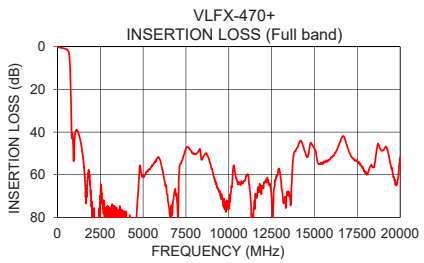
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

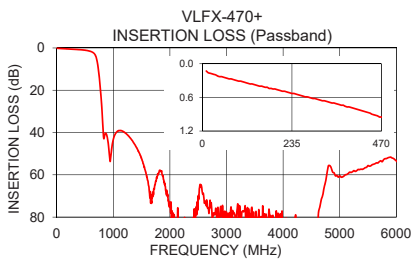
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

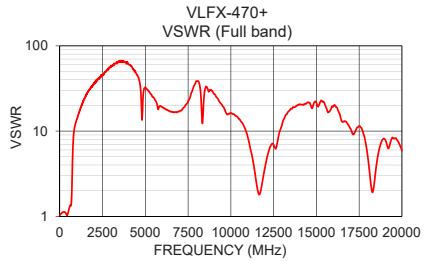
*Passband rating, derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

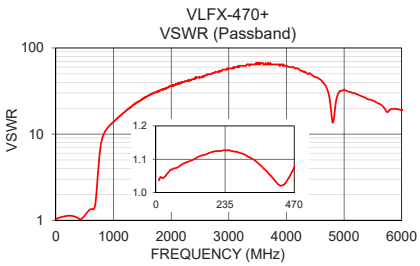
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.13	1.04
250	0.55	1.13
470	0.95	1.08
600	1.64	1.34
675	3.04	1.43
750	13.20	5.13
775	20.23	7.14
800	29.26	8.72
820	38.84	9.58
950	53.02	12.89
1000	43.29	13.92
2000	72.95	36.20
5000	60.47	32.79
7500	47.70	22.29
10000	76.10	16.26
12500	71.56	6.89
15000	47.72	21.73
17500	53.71	11.46
18500	55.57	3.86
20000	51.74	5.93









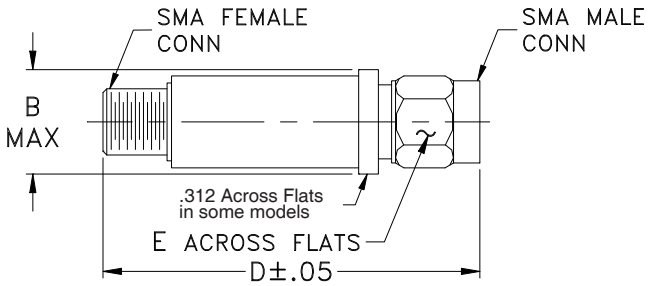
Notes

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