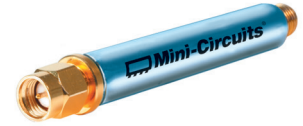


# Low Pass Filter

## VLFX-450+

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



Generic photo used for illustration purposes only  
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

### Electrical Specifications<sup>(1)</sup> 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

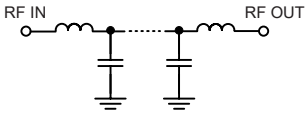
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

### Maximum Ratings

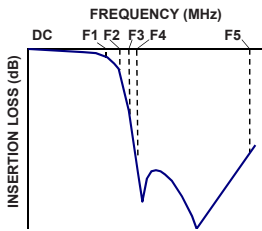
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max.

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

### Functional Schematic



### Typical Frequency Response

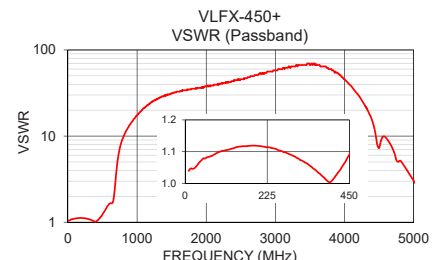
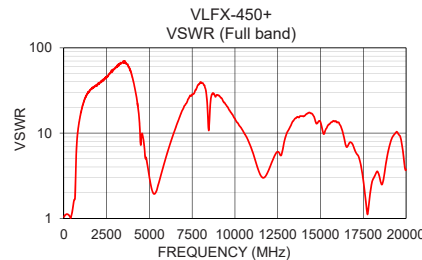
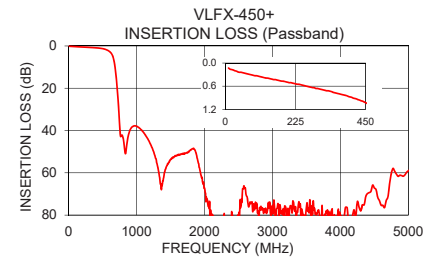
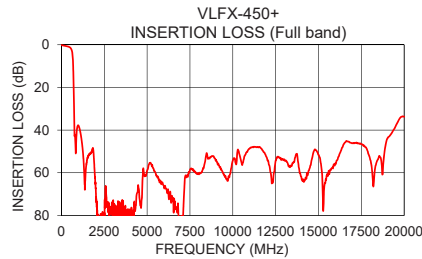


### Typical Performance Data at 25°C

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

### +RoHS Compliant

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



### Notes

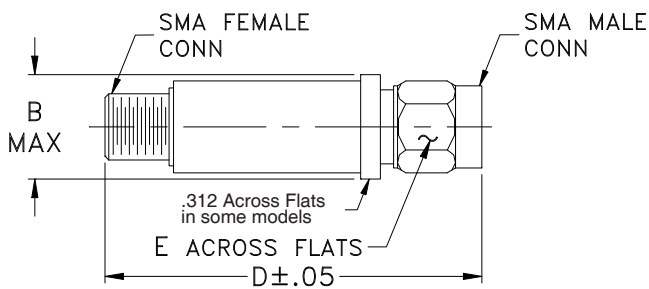
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## Coaxial Connections

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

### Notes

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