

Coaxial

Low Pass Filter

VLF-52+

50Ω

DC to 52 MHz

The Big Deal

- Low Insertion Loss (1.2 dB typical)
- Good close-in rejection
- Versatile small size, coaxial, 1.43" length



CASE STYLE: FF704

Product Overview

The VLF-52+ Low Pass Filter is constructed using internal LTCC Low Pass Filter structure to achieve repeatable performance. The Pass Band frequency range DC-52 MHz is ideal for rejecting down converted harmonics of base band signals. Built using Mini-Circuits proven unibody construction which integrates the RF connectors with the case body, the VLF-52+ takes very little space and meets rugged test lab and system environment.

Key Features

Feature	Advantages
High Rejection	Achieving 50dB rejection at 180 MHz; The VLF-52 is ideal for test setups.
Compact Versatile Case (1.43"x0.41")	Enables use in a variety of applications including space constrained connectorized systems. Connectors: SMA Female (1), SMA Male (1)
Rugged Unibody Construction	Mini-Circuits Unibody construction allows survivability in critical applications including militarized or industrial systems.

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



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*DC to 52 MHz

VLF-52+



Generic photo used for illustration purposes only

CASE STYLE: FF704

Connectors	Model
SMA	VLF-52+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C

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

Features

- rugged uni-body construction, small size
- 7 sections
- excellent power handling, 8.5W
- temperature stable
- low cost
- protected by U.S. Patent 6,943,646

Applications

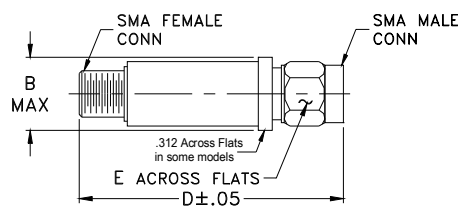
- harmonic rejection
- transmitters/receivers
- lab use

Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	*DC-52	—	1.0	dB
	Freq. Cut-Off	F2	93	3.0	—	dB
	VSWR	DC-F1	*DC-52	—	1.4	:1
Stop Band	Rejection Loss	F3	140	20	28	dB
		F4-F5	170-1100	—	33	dB
		F6	1200	—	23	dB
	VSWR	F3-F6	140-1200	—	18	:1

* Not for use with DC voltage at input and output ports

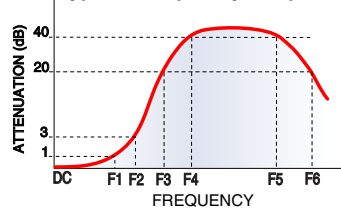
Outline Drawing



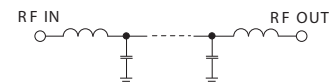
Outline Dimensions (inch/mm)

B	D	E	gra
.410	1.43	.312	1
10.41	36.32	7.92	

Typical Frequency Response

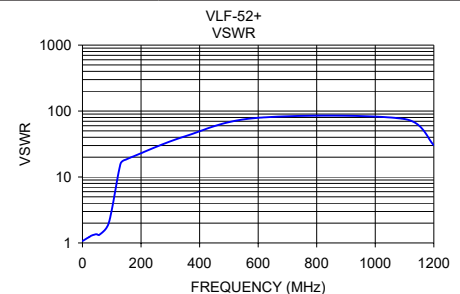
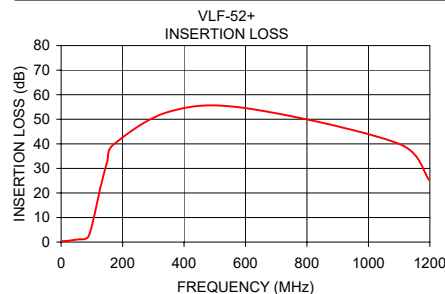


Electrical Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.30	0.33	1.07
23.00	0.54	1.23
31.00	0.67	1.29
45.00	0.91	1.35
49.00	0.97	1.35
50.00	0.98	1.35
58.00	1.10	1.33
90.00	2.59	2.01
130.00	23.25	15.81
150.00	32.73	18.50
170.00	39.67	20.22
350.00	53.02	41.37
600.00	54.54	78.97
1100.00	39.99	75.53
1200.00	24.93	30.49



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