Coaxial

Low Pass Filter

VLF-52+

50Ω DC to 52 MHz



CASE STYLE: FF704

The Big Deal

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

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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Generic photo used for illustration purposes only

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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.

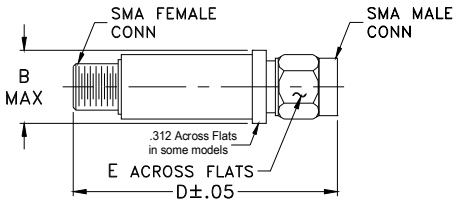
Features

- 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

Outline Drawing



Outline Dimensions (inch / mm)

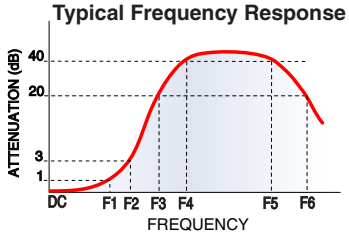
B	D	E	
.410	1.43	.312	gra
10.41	36.32	7.92	1

Electrical Specifications at 25°C

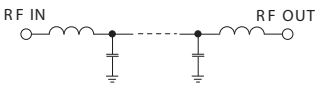
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	*DC-52	—	1.0	1.2	dB
	Freq. Cut-Off	F2	93	—	3.0	—	dB
	VSWR	DC-F1	*DC-52	—	1.4	1.5	:1
Stop Band	Rejection Loss	F3	140	20	28	—	dB
		F4-F5	170-1100	—	33	—	dB
		F6	1200	—	23	—	dB
	VSWR	F3-F6	140-1200	—	18	—	:1

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

Typical Frequency Response



Electrical Schematic



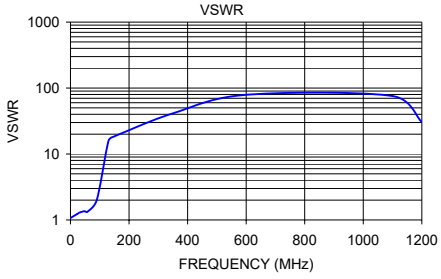
Typical Performance Data at 25°C

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

VLF-52+
INSERTION LOSS



VLF-52+
VSWR



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