Coaxial

Bandpass Filter

VBF-7500+

50Ω 7450 to 7650 MHz



CASE STYLE: FF704

The Big Deal

- Low Insertion Loss (1.8 dB typical)
- Good close-in rejection
- Versatile small size, coaxial, 1.43" length

Product Overview

The VBF-7500+ Band Pass Filter is constructed using internal LTCC Band Pass Filter structure to achieve repeatable performance. Covering 7500 MHz ± 100 MHz, these units offer low insertion loss and good rejection at the band reject edges. Built using Mini-Circuits proven unibody construction which integrates the RF connectors with the case body, the VBF-7500+ takes very little space and meets rugged test lab system environment.

Key Features

Feature	Advantages
Good Rejection close to pass band	Provides good rejection of signals close to the pass band, for improved system performance.
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: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. **2.** Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. **3.** The parts covered by this specification sheet 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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Connectors	Model	Price	Qty.
SMA	VBF-7500+	$34.95 ea.	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify 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*	2W max. at 25°C

*Passband rating, derate linearly to 0.5W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

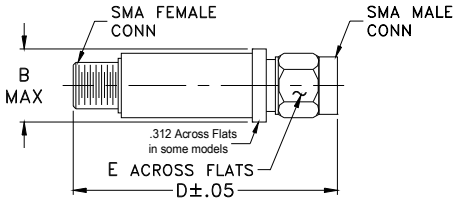
Features

- Small size
- Temperature stable
- Rugged unibody construction

Applications

- Harmonic Rejection
- Transmitters / Receivers

Outline Drawing



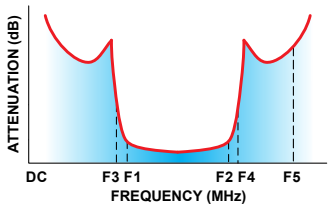
Outline Dimensions (inch / mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

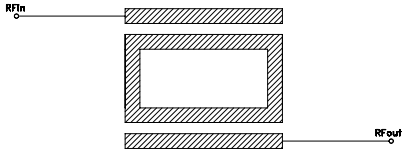
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	7500	—	MHz
	Insertion Loss	F1-F2	7450-7650	—	1.8	3.5	dB
	VSWR	F1-F2	7450-7650	—	1.5		:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-6400	—	18	—	dB
	VSWR	DC-F3	DC-6400	—	30	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	9000-14000	—	20	—	dB
	VSWR	F4-F5	9000-14000	—	30	—	:1

Typical Frequency Response

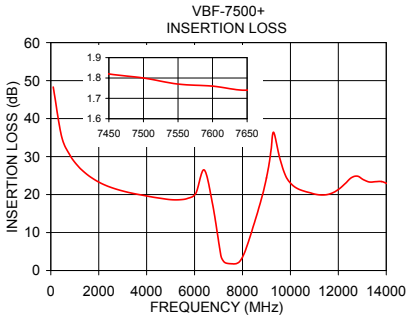


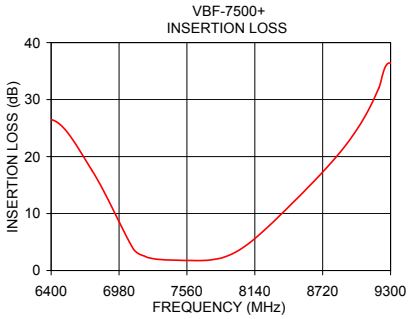
Functional Schematic

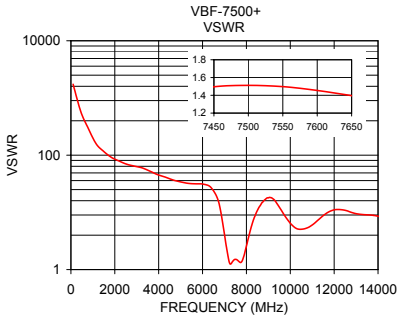


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
100.00	48.31	1737.18
450.00	35.27	579.06
800.00	30.38	289.53
1150.00	27.40	157.93
2550.00	21.79	69.49
5000.00	18.65	34.07
6050.00	20.33	31.03
6750.00	17.53	14.38
7100.00	3.86	2.33
7500.00	1.80	1.51
7900.00	2.52	1.81
10050.00	22.70	6.15
11050.00	20.08	6.21
12050.00	21.56	11.17
14050.00	22.86	8.51







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