

# Coaxial Bandpass Filter

## ZFBP-2400+

50Ω      2300 to 2500 MHz

### The Big Deal

- Narrow bandwidth
- Good VSWR, 1.3:1 typical
- High rejection, 50 dB typical
- Flat group delay, 0.3 ns typical
- High power, 8.5W



CASE STYLE: H16

### Product Overview

ZFBP-2400+ is a 50Ω narrow band filter built into a shielded (size: 1.25" x 1.25" x 0.75") case. Covering a bandwidth of 2400 MHz ± 100 MHz, this filter offers good matching in the passband and high rejection in the stopband. Power handling capacity is as high as 8.5W at 25°C.

### Key Features

Feature	Advantages
Narrow bandwidth (Fractional bandwidth of 8.3%)	Suitable for Narrow bandwidth applications like Wireless Communication Service and ISM.
Good VSWR, 1.3:1 typical	The model has good return loss for a narrow bandwidth which provides good matching when used with other devices.
High rejection (50 dB typical on lower side band and > 35 dB rejection till 6000 MHz on upper side band)	This enables the filter to attenuate sub harmonics and spurious signals.
Flat group delay characteristics (0.3 ns typical)	The model has a group delay flatness of 0.3 ns which helps in reducing the signal distortion.
High power (8.5W)	Suitable for base station and long-haul applications and test labs.



For detailed performance specs & shopping online see web site

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IFIRF MICROWAVE COMPONENTS

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](http://www.minicircuits.com/MCLStore/terms.jsp).

# Coaxial Bandpass Filter

## ZFBP-2400+

50Ω 2300 to 2500 MHz



### Features

- High rejection, 50 dB typical
- Flat group delay over passband, 0.3 ns typical
- Good VSWR, 1.3:1 typical in passband
- Rugged shielded case

### Applications

- Harmonic rejection
- Transmitters / receivers
- Lab use

Connectors	CASE STYLE: H16 Model	Price	Qty.
SMA-FEMALE	ZFBP-2400-S+	\$49.95 ea.	(1-9)
BRACKET (OPTION "B")		\$5.00 ea.	(1-9)

### Electrical Specifications at 25°C

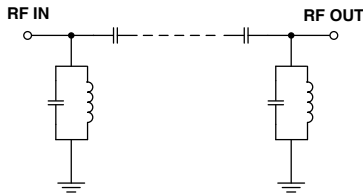
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	2400	—	MHz	
	Insertion Loss	F1-F2	2300 - 2500	—	2.2	3.5	dB
	VSWR	F1-F2	2300 - 2500	—	1.3	1.65	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 1800	20	30	—	dB
	VSWR	DC-F3	DC - 1800	—	50	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	2800 - 6000	20	28	—	dB
	VSWR	F4-F5	2800 - 6000	—	16	—	:1

### Maximum Ratings

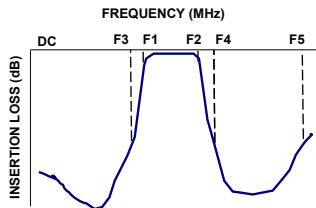
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C

\* Derate linearly to 4W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

### Functional Schematic



### Typical Frequency Response

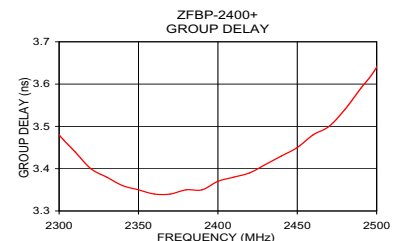
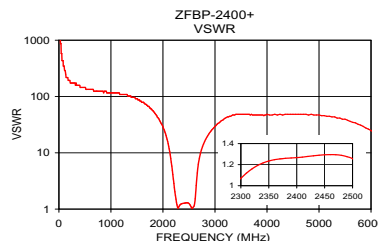
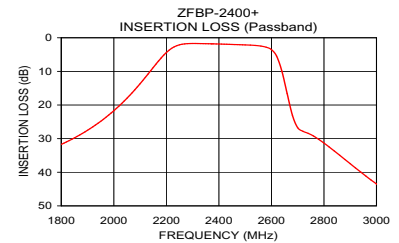
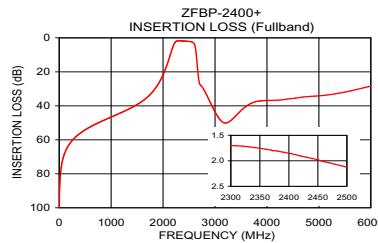


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.5	95.43	1737.18	2300.0	3.48
500.0	55.03	144.77	2310.0	3.44
1100.0	46.14	115.81	2320.0	3.40
1800.0	32.22	56.04	2330.0	3.38
2070.0	16.34	18.70	2340.0	3.36
2150.0	8.89	7.94	2350.0	3.35
2200.0	4.52	3.42	2360.0	3.34
2270.0	1.86	1.19	2370.0	3.34
2300.0	1.72	1.07	2380.0	3.35
2400.0	1.92	1.27	2390.0	3.35
2500.0	2.19	1.26	2400.0	3.37
2600.0	3.40	1.14	2410.0	3.38
2620.0	5.02	1.52	2420.0	3.39
2660.0	14.64	4.39	2430.0	3.41
2800.0	32.28	15.81	2440.0	3.43
3050.0	47.48	32.79	2450.0	3.45
3300.0	49.58	44.55	2460.0	3.48
4800.0	36.24	46.96	2470.0	3.50
5600.0	32.22	36.20	2480.0	3.54
6000.0	29.22	24.83	2500.0	3.64

+ 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.



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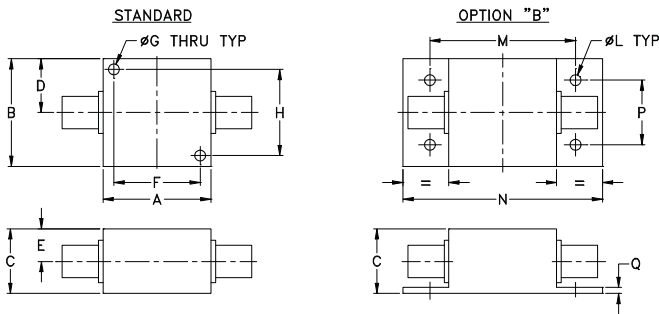
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REV. OR  
M130734  
ZFBP-2400+  
EDR-9477/1AU  
RAV/URJ/NY  
110419  
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## Coaxial Connections

INPUT	1 (SMA female)
OUTPUT	2 (SMA female)

## Outline Drawing



## Outline Dimensions ( inch / mm )

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.000	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.750	.06	grams
--	--	3.18	42.88	55.37	19.05	1.52	70.0