

# Coaxial Bandpass Filter

## ZABP-510+

50Ω 20 to 1000 MHz

### The Big Deal

- Sharp roll-off
- Wide bandwidth
- Good VSWR



CASE STYLE: UU1842

### Product Overview

ZABP-510+ is a 50Ω bandpass filter with a rugged connectorized package covering the passband of 20 to 1000 MHz. The bandpass filter offers good matching within the passband and provides high rejection. This filter has miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across lots and consistent performance across temperature.

### Key Features

Feature	Advantages
Fast roll-off	ZABP-550+ has sharper transition and rejects spurious signals in the stopband.
Good VSWR	This filter maintains typical VSWR over passband frequency range making this filter easier to integrate into receiver and transmitter RF chains with less concerns for in band frequency ripple.
Connectorized package	Connectorized package is easy to interface with other devices and well suited for test setups.

#### 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.  
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# Bandpass Filter

## ZABP-510+

50Ω 20 to 1000 MHz



CASE STYLE: UU1842  
Connectors Model  
SMA-MF ZABP-510-S+

### Features

- Sharp roll-off
- Wide bandwidth
- Good VSWR
- Connectorized package

### Applications

- Test equipment
- Receiver front end applications
- Harmonic rejection

### Electrical Specifications at 25°C

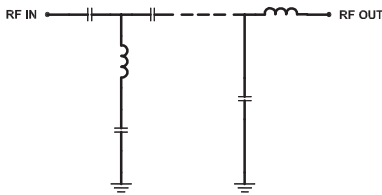
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	510	-	MHz
	Insertion Loss	F1-F2	20-1000	1.5	2.7	dB
	VSWR	F1-F2	20-1000	1.6	2.0	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 17	20	-	dB
	VSWR	DC-F3	DC - 17	-	20	:1
Stop Band, Upper	Insertion Loss	F4-F5	1150-1600	25	38	dB
	Insertion Loss	F5-F6	1600-2000	-	40	dB
	Insertion Loss	F6-F7	2000-2500	-	20	dB
	VSWR	F4-F7	1150-2500	-	20	:1

### Maximum Ratings

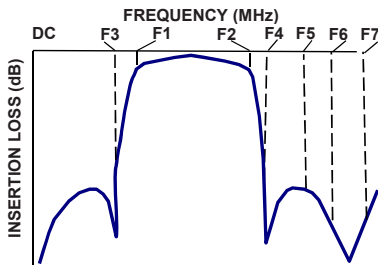
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W max.

Permanent damage may occur if any of these limits are exceeded.

### Functional Schematic



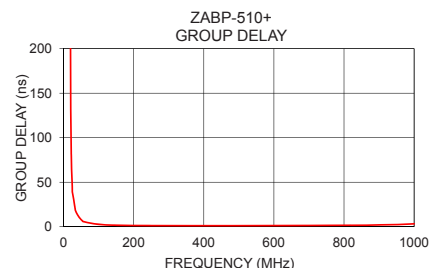
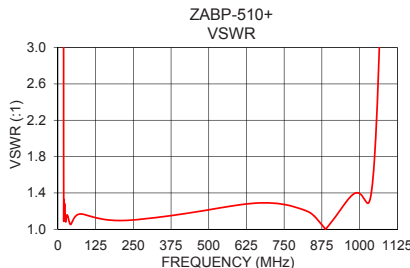
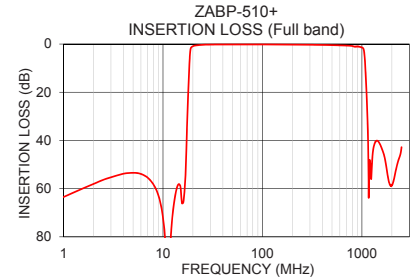
### Typical Frequency Response



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

### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	63.48	1858.20	20	170.85
10.0	72.13	509.03	22	80.79
17.0	50.27	50.66	25	39.25
17.5	32.11	35.61	28	32.53
18.0	18.75	19.41	30	27.67
18.5	7.15	5.33	40	13.33
19.0	1.83	1.23	50	8.04
20.0	0.90	1.28	100	2.71
200.0	0.24	1.10	250	1.31
510.0	0.46	1.22	300	1.26
1000.0	1.44	1.39	400	1.23
1050.0	2.98	1.81	500	1.25
1076.0	8.16	4.19	510	1.25
1112.0	20.31	7.90	600	1.32
1136.0	30.50	9.23	700	1.44
1150.0	38.39	9.74	750	1.53
1600.0	43.84	3.51	800	1.65
1800.0	53.59	3.69	900	2.10
2000.0	58.66	3.00	950	2.50
2500.0	42.82	2.45	1000	3.34



### Notes

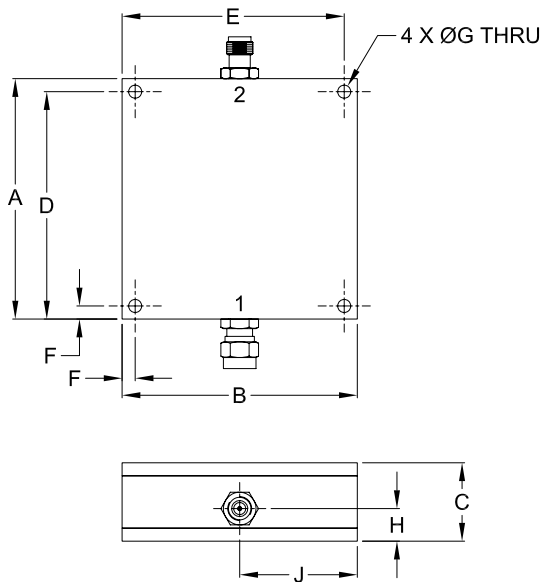
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## Coaxial Connections

INPUT	SMA-MALE
OUTPUT	SMA-FEMALE

## Outline Drawing



## Outline Dimensions ( $\frac{\text{inch}}{\text{mm}}$ )

A	B	C	D	E
2.300	2.250	.750	2.175	2.125
58.42	57.15	19.05	55.25	53.98
F	G	H	J	wt.
.125	.125	.312	1.125	grams
3.18	3.18	7.93	28.58	124

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