

# Coaxial Bandpass Filter

## ZABP-450+

50Ω 400 to 510 MHz

### The Big Deal

- High rejection
- Good VSWR
- Connectorized package



CASE STYLE: UU1842

### Product Overview

ZABP-450+ is a 50Ω bandpass filter with a rugged connectorized package covering the passband of 400 to 510 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   |
|-----------------------|--|
| High rejection        | ZABP-450+ 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-450+

50Ω 400 to 510 MHz



CASE STYLE: JU1842  
Connectors SMA-MF Model ZABP-450-S+

### Features

- High rejection
- Good VSWR, 1.25:1 @ passband
- Connectorized package

### Applications

- Military and avionics
- Receiver / transmitters
- Harmonic rejection
- Test equipment

### Electrical Specifications at 25°C

| Parameter               | F#               | Frequency (MHz) | Min.       | Typ. | Max. | Unit |
|-------------------------|------------------|-----------------|------------|------|------|------|
| <b>Pass Band</b>        | Center Frequency | -               | -          | 450  | -    | MHz  |
|                         | Insertion Loss   | F1-F2           | 400 - 510  | 1.0  | 2    | dB   |
|                         | VSWR             | F1-F2           | 400 - 510  | 1.25 | 1.9  | :1   |
| <b>Stop Band, Lower</b> | Insertion Loss   | DC-F3           | DC - 150   | 40   | 50   | dB   |
|                         | VSWR             | F3-F4           | 150 - 310  | 20   | 30   | dB   |
| <b>Stop Band, Upper</b> | Insertion Loss   | DC-F4           | DC - 310   | -    | 18   | dB   |
|                         | VSWR             | F5-F6           | 700 - 760  | 20   | 35   | dB   |
| <b>Stop Band, Upper</b> | Insertion Loss   | F6-F7           | 760 - 1200 | -    | 50   | dB   |
|                         | VSWR             | F5-F7           | 700 - 1200 | -    | 18   | :1   |

### Maximum Ratings

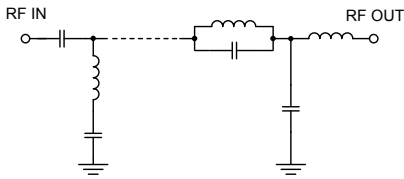
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input        | 0.5 W max.     |

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

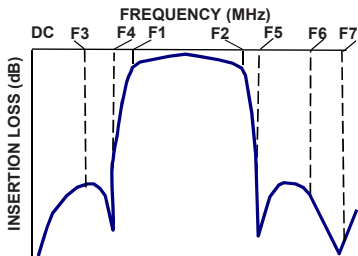
### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (ns) |
|-----------------|---------------------|-----------|-----------------|------------------|
| 1               | 83.94               | 6881.00   | 400             | 6.21             |
| 50              | 53.22               | 2353.20   | 405             | 5.96             |
| 150             | 52.15               | 239.30    | 410             | 5.76             |
| 310             | 29.67               | 36.53     | 415             | 5.58             |
| 320             | 20.49               | 29.37     | 420             | 5.45             |
| 330             | 13.93               | 19.92     | 425             | 5.33             |
| 342             | 7.94                | 9.69      | 430             | 5.24             |
| 355             | 3.72                | 4.06      | 435             | 5.16             |
| 400             | 0.85                | 1.19      | 440             | 5.11             |
| 450             | 0.79                | 1.23      | 445             | 5.07             |
| 455             | 0.78                | 1.20      | 450             | 5.04             |
| 510             | 0.90                | 1.25      | 455             | 5.03             |
| 590             | 3.19                | 2.42      | 460             | 5.03             |
| 630             | 14.76               | 11.44     | 465             | 5.02             |
| 645             | 20.10               | 16.08     | 470             | 5.04             |
| 675             | 30.28               | 23.07     | 475             | 5.04             |
| 700             | 38.51               | 26.37     | 480             | 5.06             |
| 760             | 70.06               | 29.19     | 490             | 5.11             |
| 1000            | 53.97               | 32.23     | 500             | 5.17             |
| 1200            | 49.91               | 33.45     | 510             | 5.25             |

### Functional Schematic

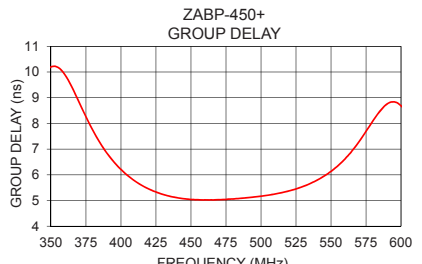
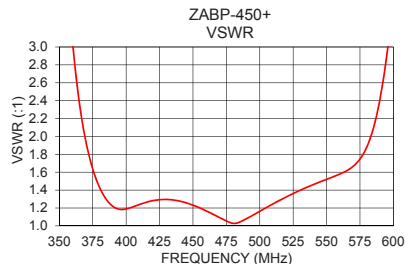
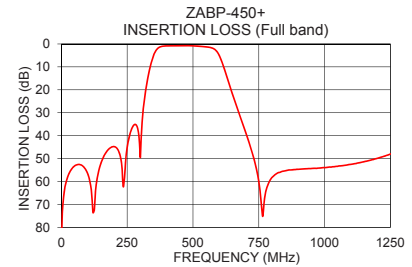
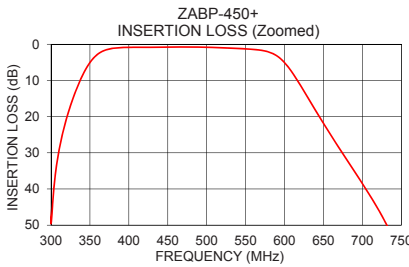


### Typical Frequency Response



**+RoHS Compliant**

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



### Notes

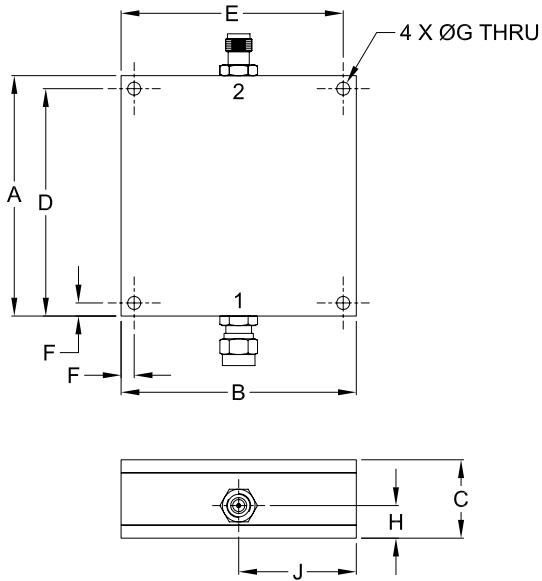
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## Coaxial Connections

|        |            |
|--------|------------|
| 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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