

Coaxial Bandpass Filter

ZABP-550+

50Ω 100 to 1000 MHz

The Big Deal

- High rejection
- Good VSWR
- Connectorized package



CASE STYLE: UU1842

Product Overview

ZABP-550+ is a 50Ω bandpass filter with a rugged connectorized package covering the passband of 100 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 |
|-----------------------|--|
| High rejection | 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.
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



Bandpass Filter

ZABP-550+

50Ω 100 to 1000 MHz



CASE STYLE: UU1842
Connectors SMA-MF Model ZABP-550-S+

Features

- Sharp roll-off
- Ultra wide bandwidth
- Good VSWR
- Connectorized package

Applications

- Receiver front end applications
- Cellular network
- Civil aircraft communication radio
- Test equipment

Electrical Specifications at 25°C

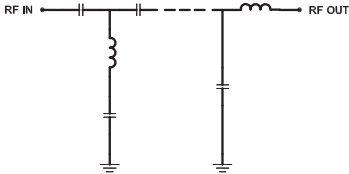
| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|-----------|------|------|------|
| Pass Band | Center Frequency | - | - | 587 | - | MHz |
| | Insertion Loss | F1-F2 | 100-1000 | 1.1 | 2.2 | dB |
| | VSWR | F1-F2 | 100-1000 | 1.5 | 2.1 | :1 |
| Stop Band, Lower | Insertion Loss | DC-F3 | DC - 80 | 40 | 50 | dB |
| | VSWR | DC-F3 | DC - 80 | - | 20 | :1 |
| Stop Band, Upper | Insertion Loss | F4-F5 | 1200-2000 | 30 | 40 | dB |
| | VSWR | F4-F5 | 1200-2000 | - | 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.

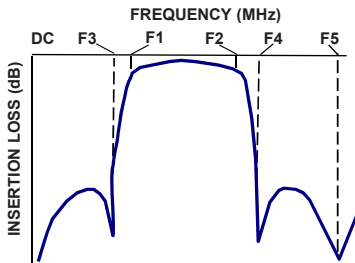
Functional Schematic



Typical Performance Data at 25°C

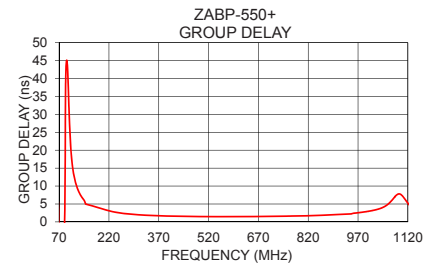
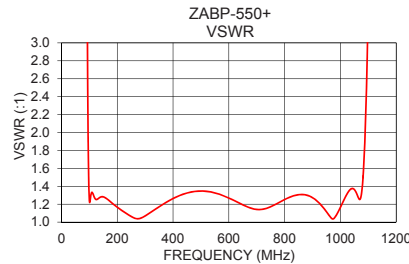
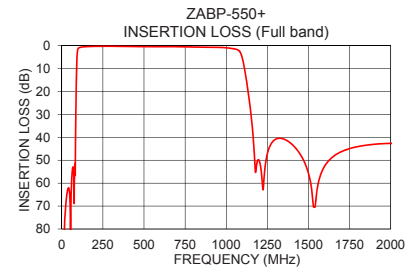
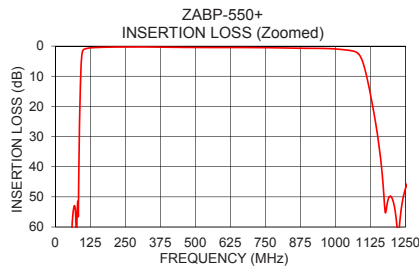
| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (ns) |
|-----------------|---------------------|-----------|-----------------|------------------|
| 1 | 99.59 | 46461.03 | 100 | 31.04 |
| 25 | 69.03 | 2049.79 | 125 | 9.40 |
| 50 | 67.70 | 281.03 | 150 | 4.99 |
| 80 | 51.48 | 26.64 | 200 | 3.65 |
| 83 | 48.25 | 18.10 | 250 | 2.55 |
| 85 | 32.84 | 13.50 | 300 | 2.05 |
| 88 | 20.37 | 8.96 | 350 | 1.79 |
| 90 | 11.15 | 5.66 | 400 | 1.64 |
| 94 | 3.48 | 2.54 | 450 | 1.54 |
| 100 | 1.23 | 1.24 | 500 | 1.49 |
| 550 | 0.47 | 1.33 | 550 | 1.47 |
| 1000 | 0.95 | 1.16 | 600 | 1.48 |
| 1090 | 3.70 | 2.11 | 650 | 1.50 |
| 1110 | 9.66 | 5.46 | 700 | 1.55 |
| 1125 | 16.25 | 8.77 | 750 | 1.60 |
| 1133 | 20.18 | 10.25 | 800 | 1.69 |
| 1151 | 30.32 | 12.61 | 850 | 1.82 |
| 1200 | 50.19 | 16.16 | 900 | 2.02 |
| 1600 | 52.37 | 20.19 | 950 | 2.25 |
| 2000 | 42.64 | 21.45 | 1000 | 2.95 |

Typical Frequency Response



+RoHS Compliant

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



Notes

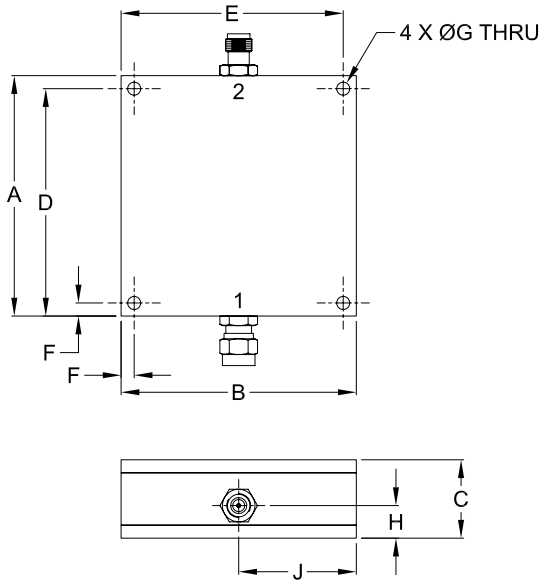
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Coaxial Connections

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