

Bandpass Filter

ZBPF-75+

50Ω 0.063 to 0.087 MHz

The Big Deal

- Very low frequency band pass filter (KHz Range) of fractional bandwidth 32%
- Good ultimate rejection of 30dB Typical from 50 – 800MHz
- Compact connectorized package for this frequency range



CASE STYLE: CC1397

Product Overview

ZBPF-75-1+ is a 50Ω bandpass filter into a rugged shielded case of (2.0" x 2.0" x 0.75") size. The passband range for this is 63 KHz to 87 KHz. The model has good passband IL, roll-off and ultimate rejection. This will find its application in wire line broadband access.

Key Features

| Feature | Advantages |
|---|---|
| Good passband insertion loss and roll-off | Low insertion loss will be used in designs optimized for high performance applications. Good roll-off will attenuate frequencies closer to the passband with good rejection value of >20dB. |
| Good ultimate rejection | This enables the filters to attenuate spurious signals and reject harmonics for broad band frequency. |
| Connectorized package | The connectorized packages are easily to interface with other devices and well suited for test set-ups. |



For detailed performance specs & shopping online see web site

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IF/RF 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.

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Features

- Low frequency passband 63 to 87KHz
- Wide stopband Rejection
- Rugged shielded case

| | | | |
|------------|------------|-------------|-------|
| Connectors | Model | Price | Qty. |
| SMA-FEMALE | ZBPF-75-S+ | \$69.95 ea. | (1-9) |

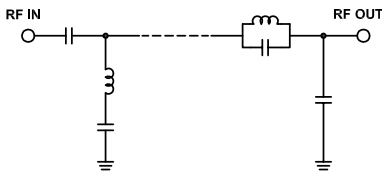
Electrical Specifications at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|---------------|-------|------|------|
| Pass Band | Center Frequency | — | — | 0.075 | — | MHz |
| | Insertion Loss | F1-F2 | 0.063 - 0.087 | — | 2.4 | dB |
| | VSWR | F1-F2 | 0.063 - 0.087 | — | 2.0 | :1 |
| Stop Band, Lower | Insertion Loss | DC-F3 | DC - 0.045 | 20 | 37 | dB |
| | VSWR | DC-F3 | DC - 0.045 | — | 4.2 | :1 |
| Stop Band, Upper | Insertion Loss | F4-F5 | 0.125 - 800 | 20 | 31 | dB |
| | VSWR | F4-F5 | 0.125 - 800 | — | 13 | :1 |

Applications

- Fiber optics network
- Wire line broadband access
- Harmonic and sub-harmonic Rejection
- Transmitters / Receivers
- Lab Use

Functional Schematic



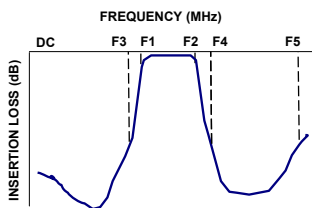
| Maximum Ratings | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | +5dBm max. |

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

Typical Performance Data at 25°C

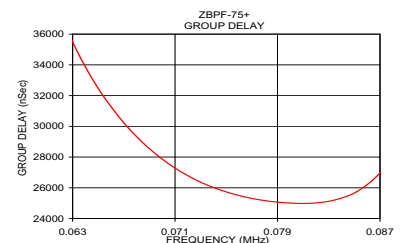
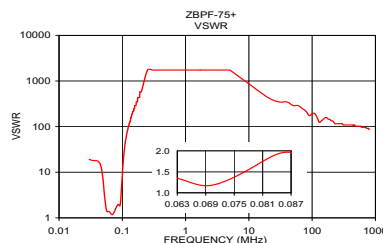
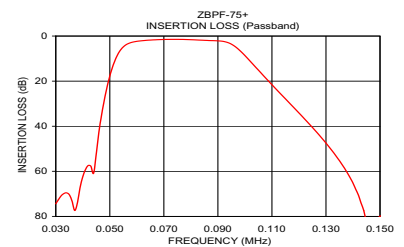
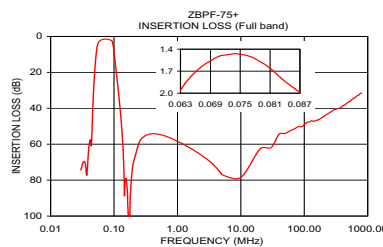
| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (nsec) |
|-----------------|---------------------|-----------|-----------------|--------------------|
| 0.030 | 74.40 | 19.11 | 0.063 | 35498.20 |
| 0.040 | 62.40 | 17.75 | 0.064 | 33868.40 |
| 0.045 | 52.06 | 14.74 | 0.065 | 32469.60 |
| 0.048 | 28.16 | 9.90 | 0.066 | 31281.20 |
| 0.051 | 13.79 | 4.50 | 0.067 | 30233.50 |
| 0.054 | 6.14 | 2.09 | 0.068 | 29330.10 |
| 0.056 | 3.86 | 1.52 | 0.069 | 28543.10 |
| 0.059 | 2.56 | 1.36 | 0.070 | 27868.90 |
| 0.063 | 1.96 | 1.35 | 0.072 | 26790.40 |
| 0.075 | 1.47 | 1.37 | 0.074 | 26018.30 |
| 0.087 | 1.99 | 1.96 | 0.075 | 25732.40 |
| 0.095 | 3.59 | 2.82 | 0.076 | 25495.80 |
| 0.098 | 6.29 | 5.51 | 0.078 | 25167.10 |
| 0.106 | 16.44 | 24.83 | 0.079 | 25067.40 |
| 0.120 | 34.11 | 78.97 | 0.080 | 25006.90 |
| 0.125 | 40.56 | 102.19 | 0.081 | 24979.00 |
| 0.150 | 79.89 | 217.15 | 0.082 | 25015.30 |
| 50.000 | 53.97 | 289.53 | 0.083 | 25122.40 |
| 500.000 | 36.46 | 102.19 | 0.085 | 25663.50 |
| 800.000 | 31.49 | 86.86 | 0.087 | 26970.10 |

Typical Frequency Response



+ 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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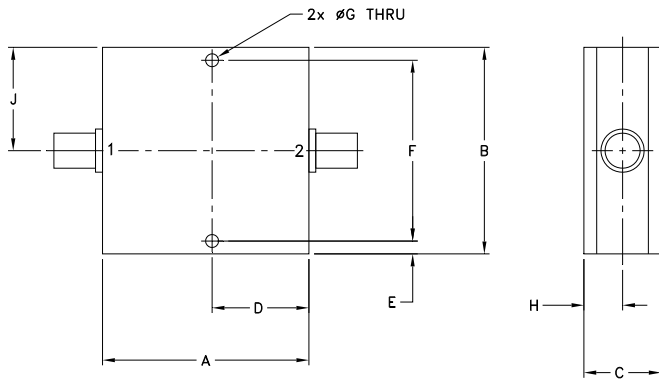
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Coaxial Connections

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

Outline Drawing



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

| | | | | | |
|-------|-------|-------|-------|------|-------|
| A | B | C | D | E | F |
| 2.00 | 2.00 | .75 | .938 | .13 | 1.750 |
| 50.80 | 50.80 | 19.05 | 23.83 | 3.30 | 44.45 |
| G | H | J | | | wt |
| .125 | .38 | 1.00 | | | grams |
| 3.18 | 9.65 | 25.40 | | | 100.0 |