

Coaxial Bandpass Filter

75Ω 12.3 to 13.8 MHz

ZFBP13-75+



CASE STYLE: H16

Connectors Model

BNC ZFBP13-75+
BRACKET (OPTION "B")

+RoHS Compliant

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

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5W at 25°C |

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

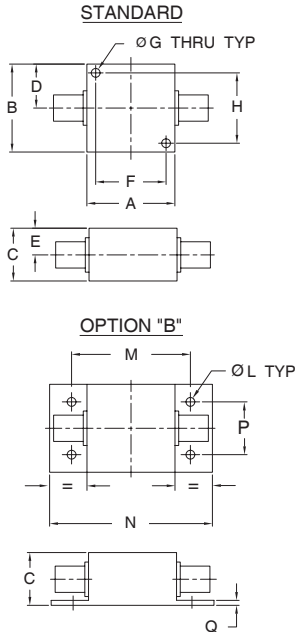
Features

- Good VSWR, 1.25:1 Typ @ Passband
- Excellent Rejection in the Stopband

Applications

- IF Signal Processing
- High Rejection Application
- Wire-Line Broadband Access
- Lab Use

Outline Drawing



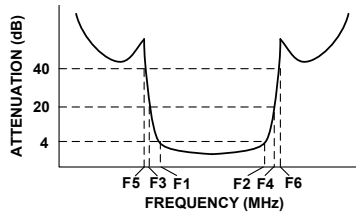
Outline Dimensions (inch/mm)

| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| A | B | C | D | E | F | G |
| 1.25 | 1.25 | .75 | .63 | .38 | 1.000 | .125 |
| 31.75 | 31.75 | 19.05 | 16.00 | 9.65 | 25.40 | 3.18 |
| H | L | M | N | P | Q | wt. |
| 1.000 | .125 | 1.688 | 2.18 | .75 | .06 | grams |
| 25.40 | 3.18 | 42.88 | 55.37 | 19.05 | 1.52 | 70 |

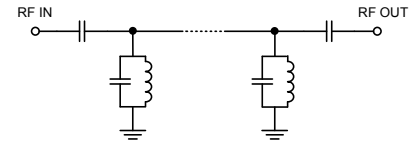
Bandpass Filter Electrical Specifications (T_{AMB} = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz) (Loss < 4dB) F1 - F2 | STOPBANDS (MHz) | | | | VSWR (:1) | |
|--------------------|-------------------------------------|-----------------|----|-------------|------------|---------------|---------------|
| | | Loss > 20dB | | Loss > 40dB | | Passband Max. | Stopband Typ. |
| | | F3 | F4 | F5 | F6 | | |
| 13 | 12.3 - 13.8 | 10.6 | 16 | 10 | 17.5 - 300 | 1.4 | 18 |

Typical Frequency Response



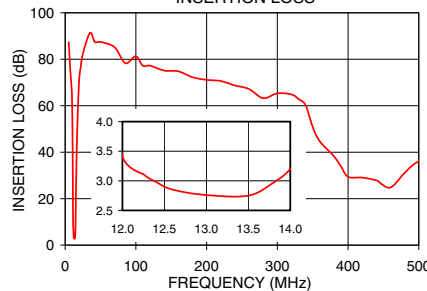
Functional Schematic



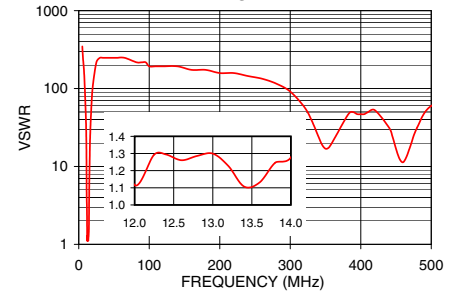
Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 5.0 | 87.34 | 347.44 |
| 10.0 | 57.83 | 45.72 |
| 10.6 | 39.87 | 25.94 |
| 10.8 | 30.57 | 18.90 |
| 11.0 | 19.01 | 10.13 |
| 11.2 | 9.35 | 4.25 |
| 12.3 | 3.11 | 1.29 |
| 13.0 | 2.76 | 1.30 |
| 13.8 | 2.97 | 1.25 |
| 14.0 | 3.20 | 1.28 |
| 14.6 | 7.73 | 2.87 |
| 15.0 | 16.86 | 6.91 |
| 15.5 | 27.53 | 12.80 |
| 16.0 | 36.14 | 20.95 |
| 17.0 | 49.40 | 39.49 |
| 17.5 | 54.55 | 48.26 |
| 20.0 | 72.27 | 108.58 |
| 50.0 | 87.48 | 248.17 |
| 100.0 | 81.25 | 193.02 |
| 200.0 | 71.14 | 157.93 |
| 300.0 | 65.31 | 91.43 |

ZFBP13-75+
INSERTION LOSS



ZFBP13-75+
VSWR



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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



Coaxial Band Pass Filter

ZFBP13-75+

Typical Performance Data

| FREQUENCY (MHz) | INSERTION LOSS (dB) | RETURN LOSS (dB) |
|--------------------|---------------------------|------------------------|
| 0.3 | 97.25 | 0.01 |
| 1 | 102.14 | 0.01 |
| 5 | 87.34 | 0.05 |
| 7 | 76.63 | 0.09 |
| 8 | 72.29 | 0.13 |
| 9 | 67.70 | 0.21 |
| 10 | 57.83 | 0.38 |
| 11 | 39.87 | 0.67 |
| 12 | 3.11 | 17.86 |
| 13 | 2.76 | 17.71 |
| 14 | 2.97 | 19.18 |
| 15 | 16.86 | 2.53 |
| 16 | 36.14 | 0.83 |
| 17 | 49.40 | 0.44 |
| 18 | 54.55 | 0.36 |
| 20 | 72.27 | 0.16 |
| 25 | 82.32 | 0.08 |
| 35 | 91.36 | 0.07 |
| 50 | 87.48 | 0.07 |
| 100 | 81.25 | 0.09 |
| 120 | 77.26 | 0.09 |
| 140 | 75.14 | 0.09 |
| 160 | 74.81 | 0.10 |
| 180 | 72.29 | 0.10 |
| 200 | 71.14 | 0.11 |
| 220 | 70.64 | 0.11 |
| 240 | 68.73 | 0.12 |
| 260 | 67.21 | 0.13 |
| 280 | 63.25 | 0.15 |
| 300 | 65.31 | 0.19 |
| 320 | 64.84 | 0.30 |
| 330 | 62.90 | 0.44 |
| 340 | 60.22 | 0.72 |
| 350 | 50.93 | 1.03 |
| 360 | 44.71 | 0.84 |
| 380 | 38.23 | 0.40 |
| 390 | 33.89 | 0.35 |
| 400 | 29.40 | 0.37 |
| 420 | 29.08 | 0.33 |
| 440 | 27.87 | 0.55 |
| 450 | 25.71 | 1.03 |
| 460 | 24.80 | 1.54 |
| 470 | 27.55 | 0.97 |
| 480 | 31.05 | 0.55 |
| 500 | 36.09 | 0.29 |
| 550 | 42.16 | 0.20 |
| 600 | 44.71 | 0.18 |
| 650 | 45.87 | 0.18 |
| 700 | 46.37 | 0.19 |
| 750 | 46.61 | 0.20 |
| 800 | 46.45 | 0.21 |
| 850 | 46.40 | 0.22 |
| 900 | 45.99 | 0.24 |
| 950 | 45.68 | 0.26 |
| 1000 | 45.23 | 0.31 |

REV. X1
ZFBP13-75+
061119
Page 1 of 1



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



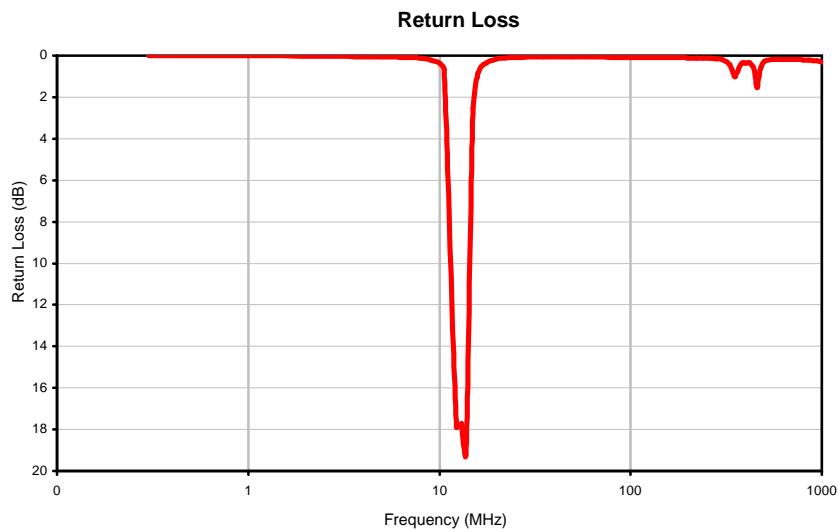
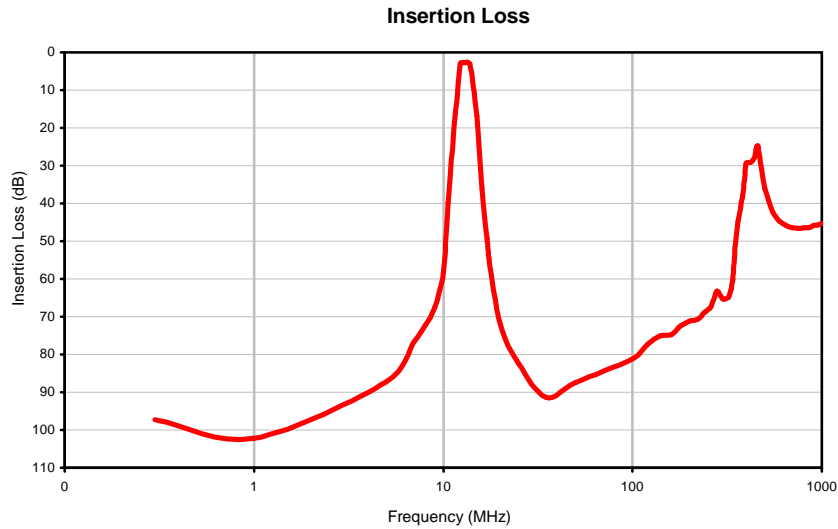
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Coaxial Band Pass Filter

ZFBP13-75+

Typical Performance Curves



REV. X1
ZFBP13-75+
061119
Page 1 of 1



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

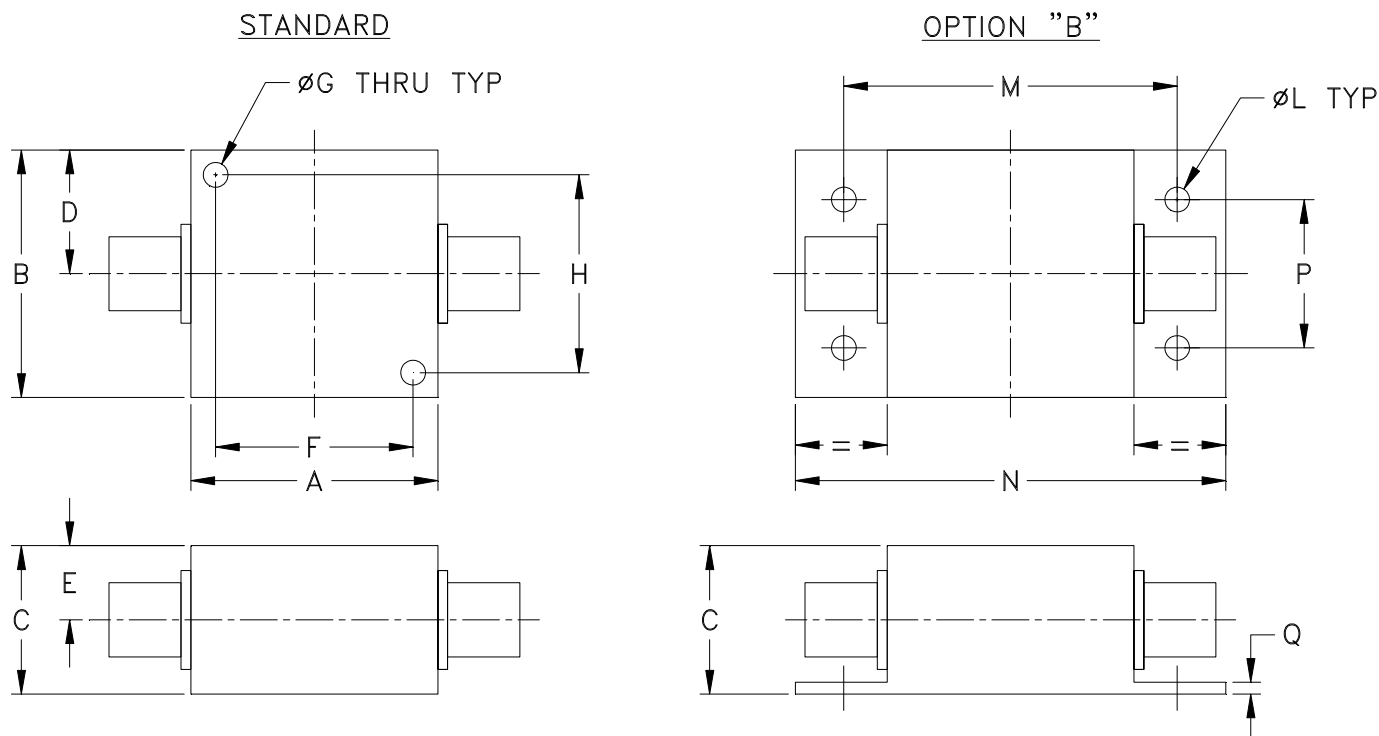


Case Style

H

Outline Dimensions

H16



| CASE# | A | B | C | D | E | F | G | H | J | K | L | M | N |
|-------|-----------------|-----------------|-----------------|----------------|---------------|------------------|----------------|------------------|----|----|----------------|------------------|-----------------|
| H16 | 1.25 (31.75) | 1.25 (31.75) | .750 (19.05) | .63 (16.00) | .38 (9.65) | 1.000 (25.40) | .125 (3.18) | 1.000 (25.40) | -- | -- | .125 (3.18) | 1.688 (42.88) | 2.18 (55.37) |

| CASE# | P | Q | WT.GRAMS |
|-------|-----------------|---------------|----------|
| H16 | .750 (19.05) | .06 (1.52) | 70 |

Dimensions are in inches (mm). Tolerances: 2PL. ± .03; 3PL. ± .015

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Mounting bracket available on request. Add suffix B to part number.
4. Bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.
5. Refer to the individual model data sheet for the type of connectors available.

Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|----------------------------|--|--------------------------------------|
| Operating Temperature | -55° to 100°C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Barometric Pressure | 100,000 Feet | MIL-STD-202, Method 105, Condition D |
| Humidity | 90% RH, 65°C Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103 |
| Thermal Shock | -65° to 125°C, 5 cycles | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18) | MIL-STD-202, Method 213, Condition I |