

# Bandpass Filter

## BFCN-4440+

50Ω 4200 to 4700 MHz



### Maximum Ratings

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature   | -55°C to 100°C |
| RF Power Input*       | 1.5W at 25°C   |

\*Passband rating, derate linearly to 0.25W at 100°C ambient.

### Pin Connections

|        |     |
|--------|-----|
| RF IN  | 1   |
| RF OUT | 3   |
| GROUND | 2,4 |

### Features

- Good VSWR, 1.2:1 Typ @ Passband
- Small size
- Temperature stable
- LTCC construction

### Applications

- Harmonic Rejection
- Transmitters/Receivers

CASE STYLE: FV1206  
PRICE: \$ 3.95 ea. QTY (10-49)

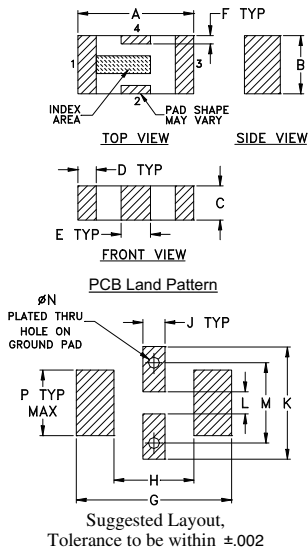
**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

| CENTER FREQ. (MHz) | PASSBAND (MHz)<br>(Loss < 2dB)<br>F1 - F2 | STOPBANDS (MHz) |      |               |              | VSWR (:1)     |               |
|--------------------|---|-----------------|------|---------------|--------------|---------------|---------------|
|                    |   | Loss > 20dB     |      | Loss 25dB Typ |              | Passband Max. | Stopband Typ. |
|                    |   | F3              | F4   | F5            | F6           |               |               |
| 4440               | 4200 - 4700                               | 2000            | 6750 | 2000          | 6650 - 12000 | 1.6           | 20            |

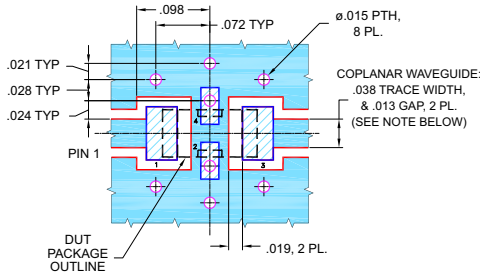
### Outline Drawing



### Outline Dimensions (inch/mm)

| A    | B    | C    | D    | E    | F    | G    | H    |
|------|------|------|------|------|------|------|------|
| .126 | .063 | .037 | .020 | .032 | .009 | .169 | .087 |
| 3.20 | 1.60 | 0.94 | 0.51 | 0.81 | 0.23 | 4.29 | 2.21 |
| J    | K    | L    | M    | N    | P    | WT.  |      |
| .024 | .122 | .024 | .087 | .012 | .071 | GRAM |      |
| 0.61 | 3.10 | 0.61 | 2.21 | 0.30 | 1.80 | .020 |      |

### Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)

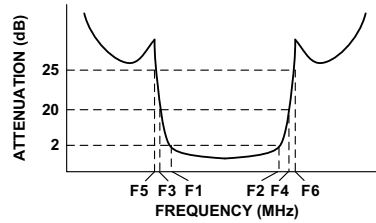


#### NOTES:

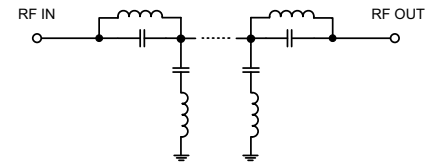
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Typical Frequency Response



### Functional Schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50              | 82.05               | 1737.18   |
| 500             | 76.80               | 1737.18   |
| 1000            | 46.74               | 868.59    |
| 2000            | 24.56               | 91.43     |
| 2300            | 19.60               | 51.10     |
| 2900            | 10.36               | 18.30     |
| 3300            | 5.35                | 6.78      |
| 3700            | 2.28                | 2.79      |
| 4200            | 1.00                | 1.34      |
| 4440            | 0.91                | 1.12      |
| 4700            | 1.00                | 1.26      |
| 5000            | 1.45                | 1.79      |
| 5400            | 3.99                | 4.26      |
| 5650            | 7.48                | 8.60      |
| 6000            | 14.07               | 19.11     |
| 6650            | 29.01               | 31.03     |
| 6750            | 31.37               | 29.96     |
| 9000            | 22.79               | 18.30     |
| 12000           | 26.72               | 17.22     |

