

Ceramic

# Bandpass Filter

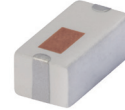
**BFCN-5151+**

50Ω

4120 to 6440 MHz

## The Big Deal

- Small size 3.2mm x 1.6mm
- Pass band (4120-6440 MHz)
- High rejection in upper stopband



CASE STYLE: FV1206-7

## Product Overview

The BFCN-5151+ LTCC Band Pass Filter achieves a miniature size and high repeatability of performance. Wrap-around terminations minimize variations in performance due to parasitics. Covering 4120 to 6440 MHz, these units offer excellent rejection over a deep stopband.

## Key Features

| Feature                            | Advantages  |
|------------------------------------|---|
| Small Size (3.20mm x1.6 mm)        | Allows for high layout density of circuit boards, while minimizing effects of parasitics.                                   |
| Rejection peaks close to pass band | Provides good rejection of signals close to the pass band, for improved system performance.                                 |
| Deep stopband                      | Upper stopband features transmission zeroes for high rejection.   |
| LTCC construction                  | Provides a rugged package that is well suited for tough environments including high humidity and high temperature extremes. |

# Ceramic Bandpass Filter

50Ω 4120 to 6440 MHz

## BFCN-5151+

### Features

- Small size
- Temperature stable
- Hermetically sealed
- LTCC construction

### Applications

- Harmonic Rejection
- Transmitters / Receivers



Generic photo used for illustration purposes only

CASE STYLE: FV1206-7

**+RoHS Compliant**

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

### Maximum Ratings

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -55°C to +100°C |
| Storage Temperature   | -55°C to +100°C |
| RF Power Input        | 1W max.         |

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

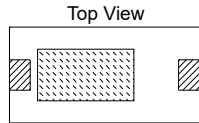


### Electrical Specifications<sup>1,2</sup> at 25°C

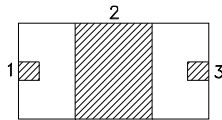
| Parameter        | F#               | Frequency (MHz) | Min.        | Typ. | Max. | Unit |    |
|------------------|------------------|-----------------|-------------|------|------|------|----|
| Pass Band        | Center Frequency | —               | —           | 5151 | —    | MHz  |    |
|                  | Insertion Loss   | F1-F2           | —           | 1.2  | 3.0  | dB   |    |
|                  | Return Loss      | F1-F2           | 4120-6440   | —    | 14   | —    | dB |
| Stop Band, Lower | Insertion Loss   | DC-F3           | DC-3000     | 20   | 24   | —    | dB |
| Stop Band, Upper | Insertion Loss   | F4-F5           | 8820-10450  | 20   | 32   | —    | dB |
|                  |                  | F5-F6           | 10450-14250 | 15   | 25   | —    | dB |

1. Measured on Mini-Circuits Characterization Test Board TB-812+.

2. This filter is not intended for use as a DC Blocking circuit element. In Application where DC voltage is present at either input or output ports, blocking capacitors are required at the corresponding RF port.



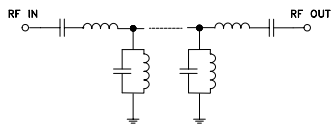
Bottom View



### Pad Connections

|        |   |
|--------|---|
| Input  | 1 |
| Output | 3 |
| Ground | 2 |

### Functional Schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) |
|-----------------|---------------------|------------------|
| 600             | 54.74               | 0.06             |
| 1600            | 31.21               | 0.20             |
| 2400            | 24.66               | 0.30             |
| 3200            | 36.16               | 0.59             |
| 3600            | 7.33                | 3.18             |
| 4000            | 1.31                | 15.96            |
| 5500            | 1.00                | 13.33            |
| 6750            | 1.26                | 17.18            |
| 7250            | 4.49                | 4.26             |
| 8000            | 18.44               | 0.72             |
| 9000            | 38.80               | 0.48             |
| 10000           | 43.91               | 0.39             |
| 11000           | 25.41               | 0.58             |
| 13000           | 32.80               | 0.36             |
| 15000           | 35.07               | 0.71             |

### Specification Definition

