

# Bandpass Filter

## BFCN-4440+

50Ω 4200 to 4700 MHz



CASE STYLE: FV1206  
PRICE: \$ 3.95 ea. QTY (20)

### Maximum Ratings

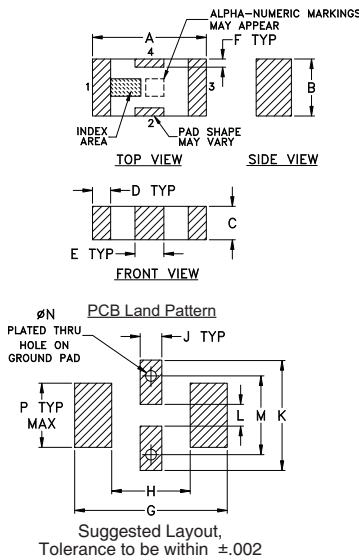
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.5W at 25°C

\*Passband rating, derate linearly to 0.25W at 100°C ambient  
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

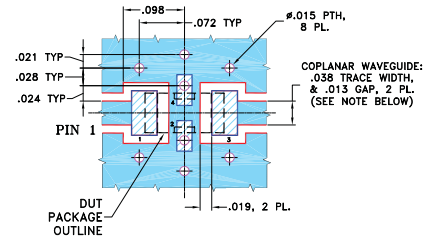
### Outline Drawing



### Outline Dimensions (inch/mm)

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

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](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

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

### Applications

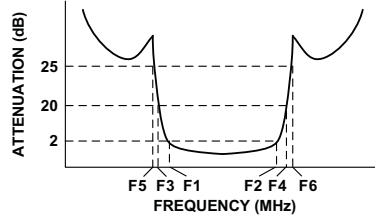
- Harmonic Rejection
- Transmitters/Receivers

### Bandpass Filter Electrical Specifications<sup>1,2</sup> (T<sub>AMB</sub> = 25°C)

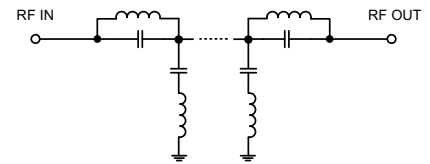
CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 2dB) F1 - F2	STOPBANDS (MHz)				VSWR (:1)	
		Loss > 20dB		Loss 25dB Typ		Passband Max.	Stopband Typ.
		F3	F4	F5	F6		
4440	4200 - 4700	2000	6750	2000	6650 - 12000	1.6	20

1. Measured on Mini-Circuits Characterization Test Board TB-270.  
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.

### 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

