

# Bandpass Filter

## BFCN-2840+

50Ω 2750 to 2930 MHz



CASE STYLE: FV1206

### Maximum Ratings

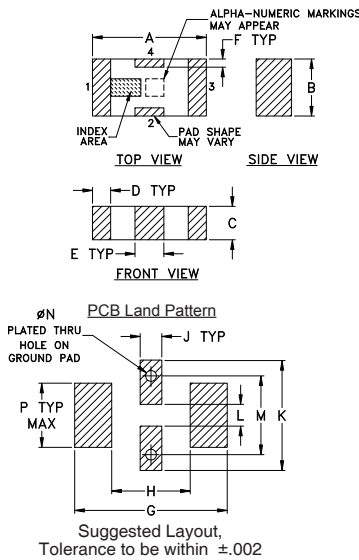
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.5W at 25°C

\*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

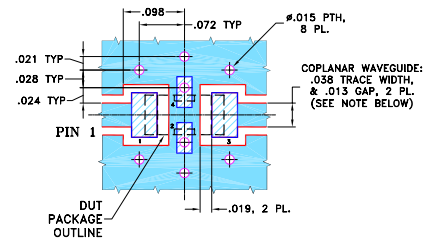
### Outline Drawing



### 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	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	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

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

### Features

- Good VSWR, 1.6:1 typ @ passband
- Small size
- Temperature stable
- LTCC construction

### Applications

- Harmonic Rejection
- Transmitters / Receivers
- WiMAX

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

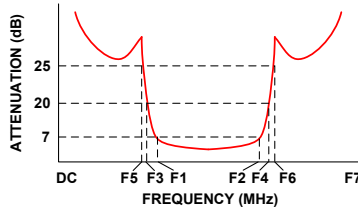
### Electrical Specifications<sup>1,2</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	2840	—	MHz
	Insertion Loss	F1-F2	2750-2930	—	7	dB
	VSWR	F1-F2	2750-2930	—	1.6	3.0
Stop Band, Lower	Insertion Loss	DC-F5	DC-1500	—	25	dB
		DC-F3	DC-1550	20	—	dB
	VSWR	DC-F3	DC-1550	—	20	—
Stop Band, Upper	Insertion Loss	F4-F6	4000-4050	20	—	dB
		F6-F7	4050-6000	—	25	dB
	VSWR	F4-F7	4000-6000	—	20	—

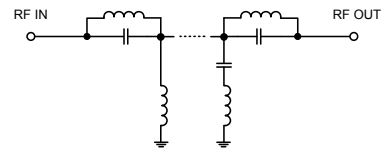
1. Measured on Mini-Circuits Characterization Test Board TB-270.

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	80.14	1737.18
500	46.02	434.30
1500	25.87	91.43
1550	25.16	82.73
2570	11.87	6.78
2650	5.57	3.06
2750	2.72	1.64
2800	2.30	1.51
2840	2.19	1.50
2900	2.22	1.62
2930	2.33	1.70
3070	4.74	3.07
3130	9.35	6.11
3190	18.60	11.69
4000	26.84	11.03
4050	28.86	17.05
4500	34.53	37.77
6000	27.46	22.87

