

Bandpass Filter

BFCN-3010+

50Ω 2920 to 3100 MHz



CASE STYLE: FV1206

Maximum Ratings

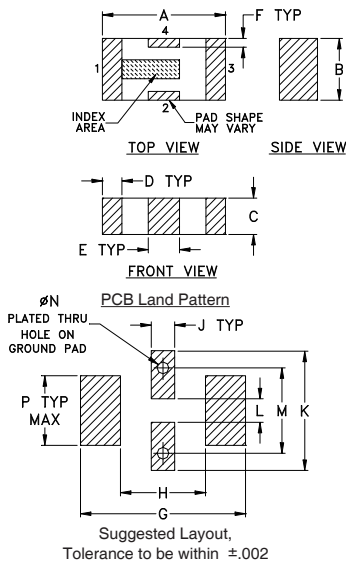
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.5W at 25°C

*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

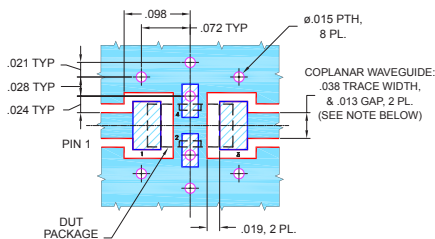
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	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	grams	
0.61	3.10	0.61	2.21	0.30	1.80	0.20	

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



- NOTES:
- 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.
 - 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

Features

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

Applications

- Harmonic Rejection
- Transmitters / Receivers
- Point-to-Point communications

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

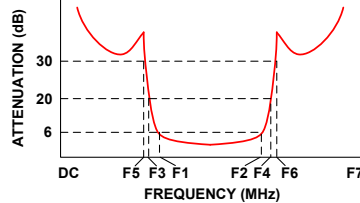
Electrical Specifications^{1,2} at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	F1-F2		3010		MHz
	Insertion Loss	F1-F2		1.6	3.0	dB
Stop Band, Lower	VSWR	DC-F5				:1
	Insertion Loss	DC-F3	DC-1300	20		dB
		DC-F3	DC-1530		20	dB
Stop Band, Upper	Insertion Loss	F4-F6	4450-4650	20		dB
		F6-F7	4650-6600		20	dB
	VSWR	F4-F7	4450-6600		20	:1

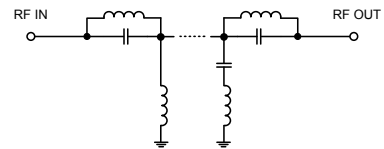
1. Measured on Mini-Circuits Characterization Test Board TB-270.

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

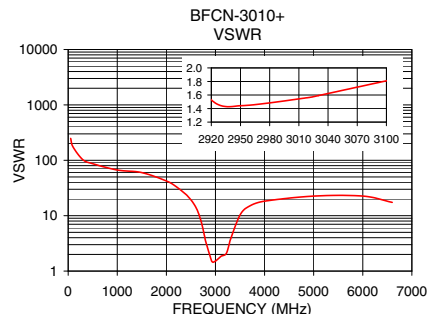
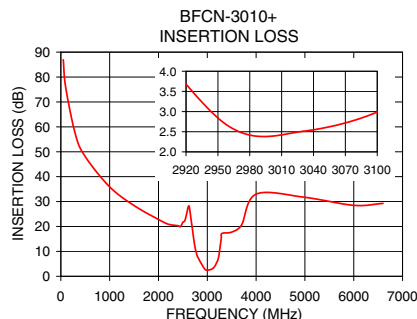


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	86.94	248.17
500	48.07	86.86
1300	31.07	62.05
1530	28.16	57.91
2700	18.27	8.31
2800	7.88	3.46
2920	3.03	1.53
3000	2.73	1.50
3010	2.56	1.53
3050	2.92	1.66
3100	3.15	1.83
3200	5.82	1.98
3250	10.05	2.45
3400	19.93	7.08
4100	28.17	18.50
4450	29.63	19.87
4650	34.88	20.70
6600	29.26	17.39



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