

Ceramic Bandpass Filter

BFCN-2910+

50Ω 2850 to 2970 MHz



CASE STYLE: FV1206

Maximum Ratings

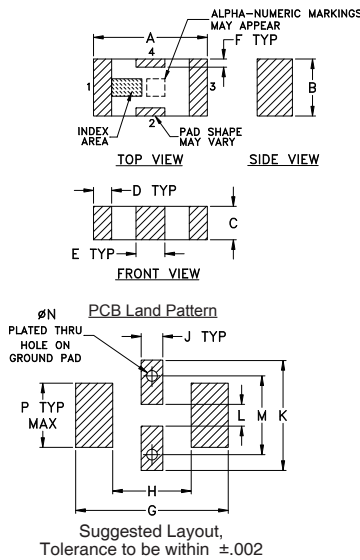
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.5W at 25°C

*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

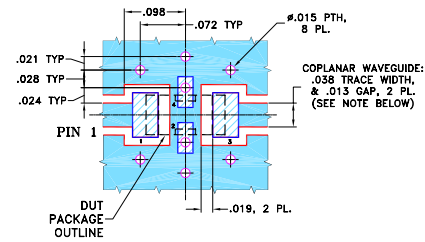
Outline Drawing



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:
- 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-Circuit's 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

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

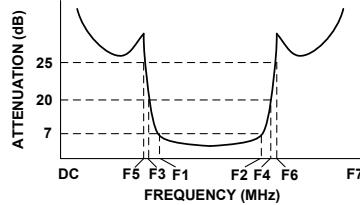
Electrical Specifications^{1,2} at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	2910	—	MHz
	Insertion Loss	F1-F2	2850-2970	—	7	dB
Stop Band, Lower	VSWR	F1-F2	2850-2970	—	1.6	:1
	Insertion Loss	DC-F5	DC-1550	—	25	dB
	VSWR	DC-F3	DC-1600	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F6	4200-4250	20	—	dB
	VSWR	F6-F7	4250-6000	—	25	dB
	VSWR	F4-F7	4200-6000	—	20	:1

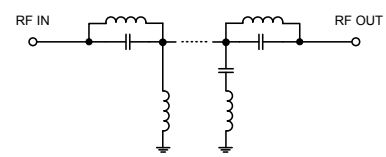
1. Measured on Mini-Circuits Characterization Test Board TB-270.

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	86.10	248.17
500	46.65	86.86
1550	26.23	57.91
1600	25.54	56.04
2650	12.78	5.99
2720	6.72	3.19
2850	3.09	1.65
2880	3.11	1.65
2925	2.54	1.73
2940	2.76	1.76
2970	3.28	1.80
3000	2.93	1.81
3120	6.01	1.79
3170	12.42	3.04
3700	24.33	17.39
4200	33.27	21.20
4250	36.29	21.20
6000	28.74	26.33

