

# High Pass Filter

50Ω 4250 to 10000 MHz

# HFCN-3800+ HFCN-3800



## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C

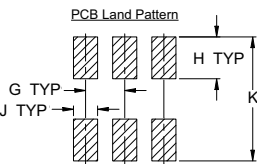
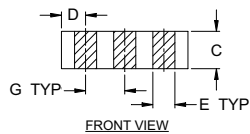
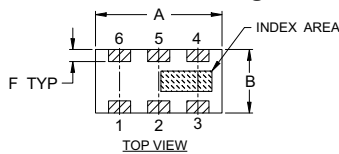
\*Passband rating, derate linearly to 3W at 100°C ambient.

## Pin Connections

RF IN	1**
RF OUT	3**
GROUND	2,4,5,6

\*\*RF IN & RF OUT can be interchanged

## Outline Drawing

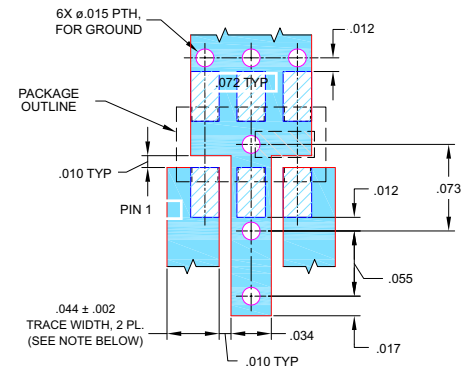


Suggested Layout, Tolerance to be within ±.002

## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	wt.
.126	.063	.035	.024	.022	.012	.039	.042	.024	.123	grams
3.20	1.60	0.89	0.61	0.56	0.30	0.99	1.07	0.61	3.12	.02

**Demo Board MCL P/N: TB-285**  
**Suggested PCB Layout(PL-158)**



### NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH 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

## Features

- Low Cost
- Small size
- 5 sections
- Temperature stable
- Excellent power handling, 7W
- DC block in/out, breakdown voltage, 1kV typ.
- Hermetically sealed
- Patent pending

## Application

- Sub-harmonic rejection and DC blocking
- Transmitters/Receivers

CASE STYLE: FV1206-1

Model	Price	Qty.
HFCN-3800+	\$2.49	(10-49)
HFCN-3800	\$2.49	(10-49)
HFCN-3800D+	\$2.99	(10-49)
HFCN-3800D	\$2.99	(10-49)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

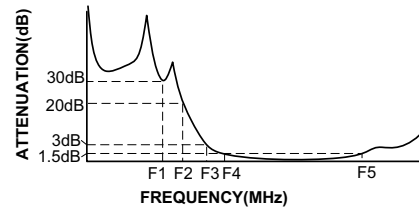
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

## High Pass Filter Electrical Specifications<sup>1</sup> (T<sub>AMB</sub> = 25°C)

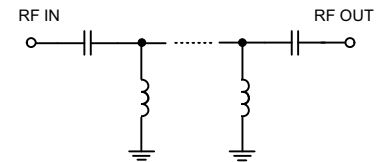
STOPBAND (MHz)		f <sub>co</sub> , MHz	PASSBAND (MHz)		VSWR	POWER INPUT	NO. OF SECTIONS
(Loss>30dB)	(Loss>20dB)	Nom.	(Loss<1.5dB)	(Loss<2dB)	Typ.	(W)	
Typ.	Min.	Typ.	Max.	Max.	Stopband Frequency (MHz)	Max.	
DC-F1	DC-F2	F3	F4-F5		1.5:1		
DC-3100	DC-3200	3800	4500-9000	4250-10000	20:1	3950-10000	7

1. For Applications requiring DC voltage to be applied to the input or output, use HFCN-3800D (DC Resistance to ground is 100 Mohms min.)

## Typical Frequency Response



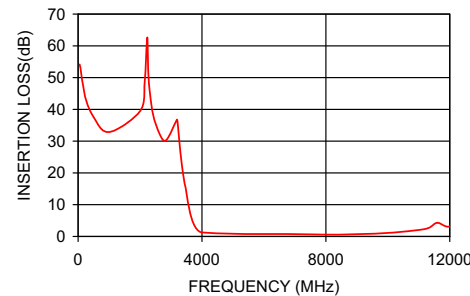
## Electrical Schematic



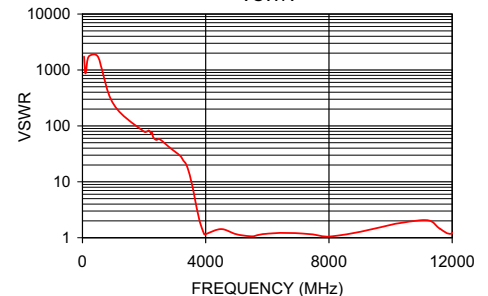
## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	54.14	1737.18
500	37.58	1737.18
1500	32.52	108.58
3100	33.38	31.60
3200	36.68	28.03
3400	19.19	18.90
3550	10.63	9.33
3800	2.59	2.00
3950	1.41	1.16
4250	1.14	1.45
4500	1.02	1.43
7000	0.72	1.22
9000	0.68	1.28
10000	1.13	1.70
11330	2.71	1.96
12000	3.15	1.70

## HFCN-3800 INSERTION LOSS



## HFCN-3800 VSWR



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

RF/IF MICROWAVE COMPONENTS