Ceramic

High Pass Filter

50Ω 4250 to 10000 MHz

HFCN-3800+
HFCN-3800

CASE STYLE: FV1206-1

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 3000

Maximum Ratings

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

*Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

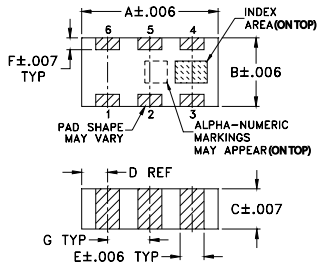
Features

- Low cost
- Small size
- 5 sections
- Temperature stable
- Excellent power handling, 7W
- Hermetically sealed
- LTCC construction
- Protected by US Patent 7,760,485

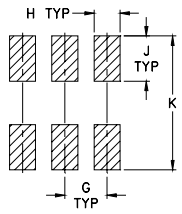
Applications

- Sub-harmonic rejection
- Transmitters / receivers

Outline Drawing



PCB Land Pattern



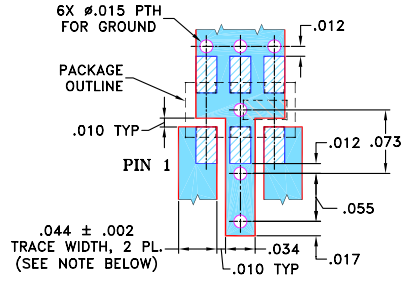
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28

G	H	J	K	wt
.039	.024	.042	.123	grams
0.99	0.61	1.07	3.12	.020

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



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS: .020 ± .0015; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT

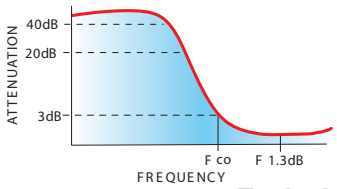
DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Electrical Specifications[1,2] at 25°C

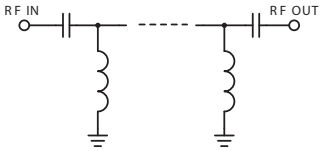
STOPBAND (MHz)		fco, MHz Nom.	PASSBAND (MHz)		VSWR Typ.		POWER INPUT (W)	NO. OF SECTIONS
(Loss > 30dB) Typ.	(Loss > 20dB) Min.	(Loss 3 dB) Typ.	(Loss < 1.5dB) Max.	(Loss < 2dB) Max.	Stopband	Frequency (MHz) 1.5:1	Max.	
2500	3200	3800	4500-9000	4250-10000	20:1	3950-10000	7	5

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, Mini-Circuits' "D" suffix version of this model will provide>100 MOhm isolation to ground.
(2) Measured on Mini-Circuits Characterization Test Board TB-285.

typical frequency response



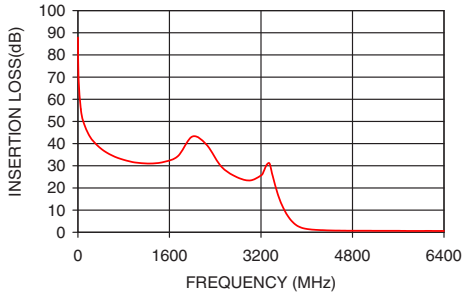
electrical schematic



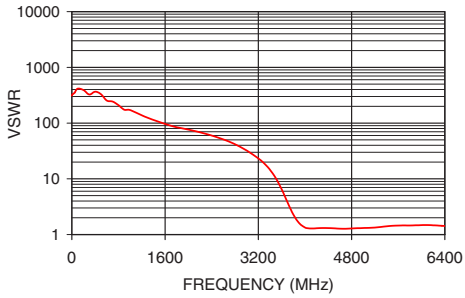
Typical Performance Data at 25ºC

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50.00	55.55	352.78
500.00	36.00	329.74
1500.00	31.71	104.95
3200.00	25.64	23.24
3400.00	25.91	14.49
3500.00	16.74	10.30
3800.00	3.55	2.30
4000.00	1.50	1.34
4250.00	0.97	1.31
4500.00	0.78	1.29
5000.00	0.70	1.31
5500.00	0.66	1.44
6000.00	0.61	1.48
6400.00	0.59	1.42

HFCN-3800
INSERTION LOSS



HFCN-3800
VSWR



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