CERAMIC

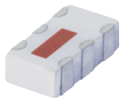
High Pass Filter

HFCN-3800+

50Ω 4250 to 10000 MHz

THE BIG DEAL

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



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

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

APPLICATIONS

- Sub-harmonic rejection
- Transmitters/receivers

ELECTRICAL SPECIFICATIONS[1,2] AT 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Units
Stop Band	Rejection Loss	2500	—	30	—	dB
		3200	20	—	—	
	Freq. Cut-Off	3800	—	3.0	—	dB
	VSWR	2500-3200	—	20	—	:1
Pass Band	Insertion Loss	4250-10000	—	—	2.0	dB
		4500-9000	—	—	1.5	dB
	VSWR	3950-10000	—	1.5	—	:1

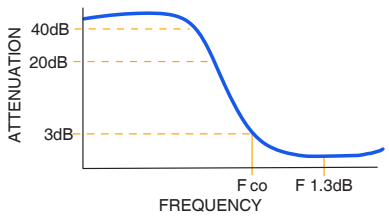
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, Mini-Circuits' "D" suffix version of this model will provide>100 MOhm isolation to ground.
2. Measured on Mini-Circuits Characterization Test Board TB-285.

MAXIMUM RATINGS

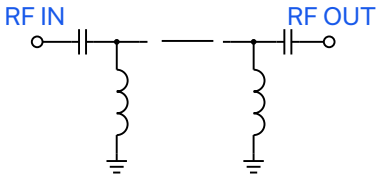
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input[3]	7 W max. at 25°C

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



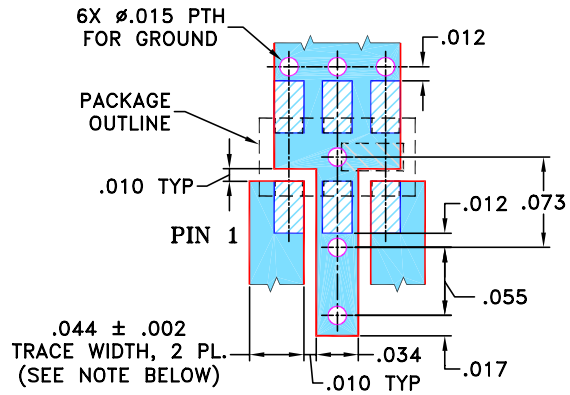
REV. K
ECO-027572
HFCN-3800+
MCL NY
251210

PIN CONNECTIONS

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

PRODUCT MARKING: MS

DEMO BOARD MCL P/N: TB-285
SUGGESTED PCB LAYOUT (PL-158)

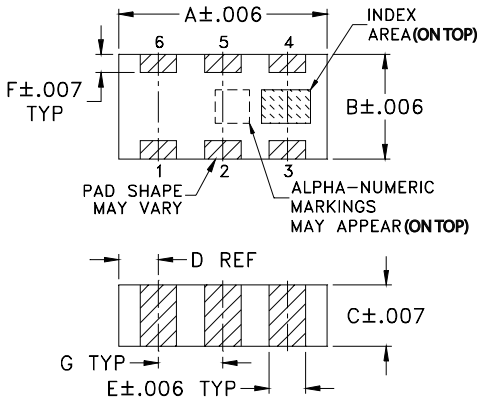


NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS: .020 ± .0015; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

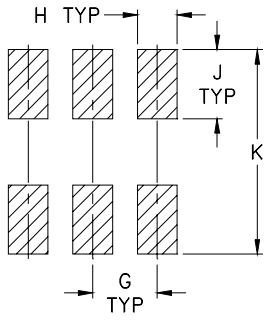
DENOTES PCB COPPER LAYOUT

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches / 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

TAPE & REEL INFORMATION: F75

CERAMIC

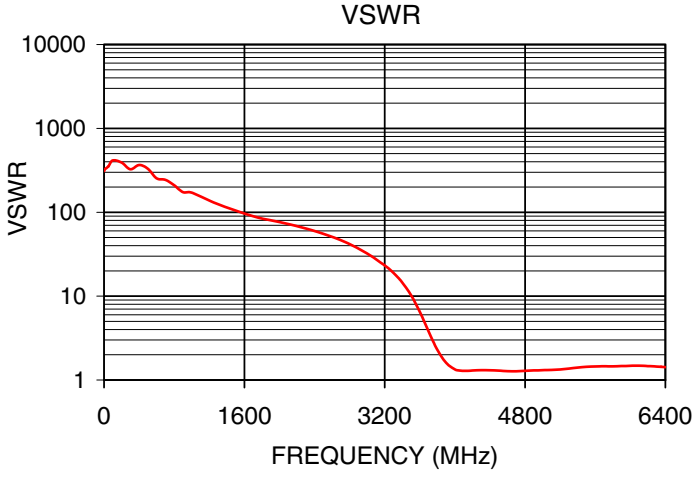
High Pass Filter

HFCN-3800+

TYPICAL PERFORMANCE DATA AT 25°C

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





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