

# High Pass Filter

50Ω 500 to 2500 MHz

## Maximum Ratings

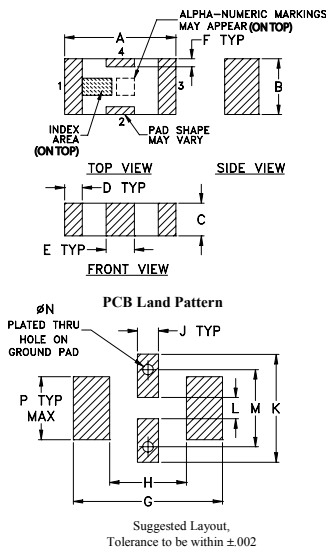
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C

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

## Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

## Outline Drawing



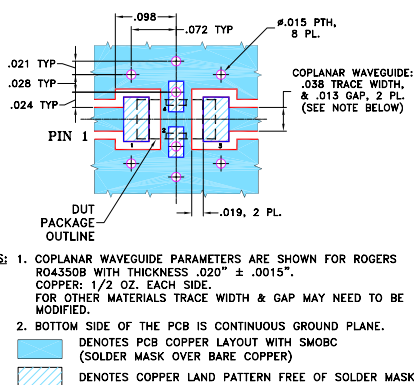
## Outline Dimensions (inch)

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

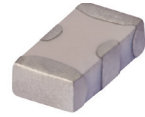
H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

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



- NOTES:**
1. 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.
  2. 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

# HFCN-440+



Generic photo used for illustration purposes only  
CASE STYLE: FV1206

**+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

## Features

- Low cost
- Small size
- 7 sections
- Temperature stable
- Excellent power handling, 7W
- Hermetically sealed
- LTCC construction
- Patent pending

## Applications

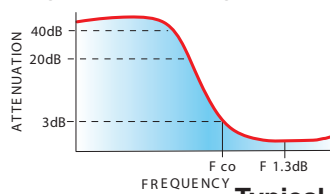
- Military
- Sub-harmonic rejection
- Transmitters / receivers

## Electrical Specifications<sup>(1,2)</sup> at 25°C

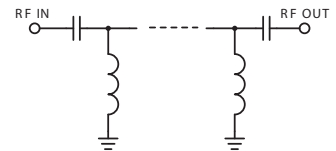
STOPBAND (MHz) Min.	f <sub>co</sub> , MHz Nom. (Loss 3 dB) Typ.	PASSBAND (MHz)	VSWR Typ. Frequency (MHz) Stopband	POWER INPUT (W) Max.	NO. OF SECTIONS
(Loss > 40dB) 230 (Loss > 20dB) 350	440	(Loss < 1.3dB) 600-1700 (Loss < 2dB) 500-2500	1.5:1	7	7

- (1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.  
(2) Measured on Mini-Circuits Characterization Test Board TB-270.

## typical frequency response

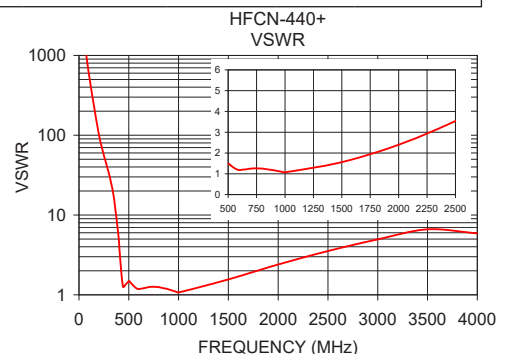
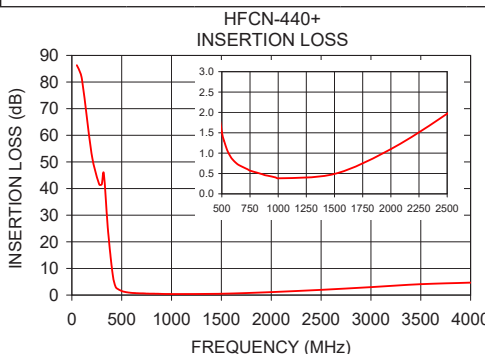


## electrical schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	86.32	1737.18
100	81.31	579.06
230	46.84	75.53
350	30.62	16.72
385	15.56	7.73
410	7.73	3.29
440	3.08	1.29
450	2.53	1.26
500	1.52	1.48
510	1.40	1.45
600	0.83	1.18
800	0.53	1.25
1000	0.38	1.07
1500	0.49	1.56
1700	0.70	1.87
2500	1.97	3.54
4000	4.69	5.89



## 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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