



CERAMIC

# High Pass Filter

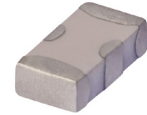
## HFCN-440+

Mini-Circuits

50Ω 500 to 2500 MHz

### THE BIG DEAL

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



Generic photo used for illustration purposes only

CASE STYLE: FV1206

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

### APPLICATIONS

- Sub-harmonic rejection
- Transmitters/receivers
- Military

### ELECTRICAL SPECIFICATIONS<sup>1,2</sup> AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units	
Stop Band	Rejection Loss	230	—	40	—	dB
		350	20	—	—	
	Freq. Cut-Off	440	—	3.0	—	dB
	VSWR	230-350	—	20	—	:1
Pass Band	Insertion Loss	500-2500	—	—	2.0	dB
		600-1700	—	—	1.3	dB
	VSWR	500-1700	—	1.5	—	:1

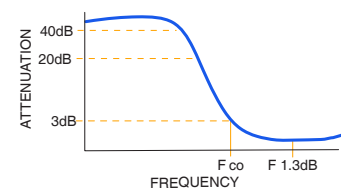
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.  
 2. Measured on Mini-Circuits Characterization Test Board TB-270.

### MAXIMUM RATINGS

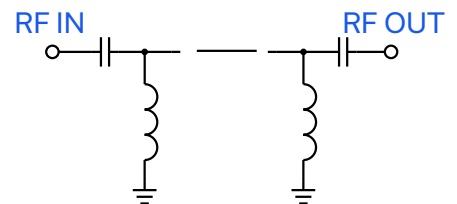
Parameter	Ratings
Operating temperature	-55°C to +100°C
Storage temperature	-55°C to +100°C
RF Power Input <sup>3</sup>	7W max.at 25°C

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. D  
 ECO-019322  
 HFCN-440+  
 RVN/CP/AM  
 231003



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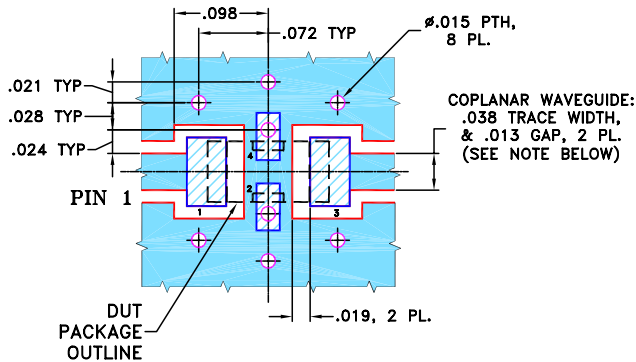
## HFCN-440+

### PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: NM

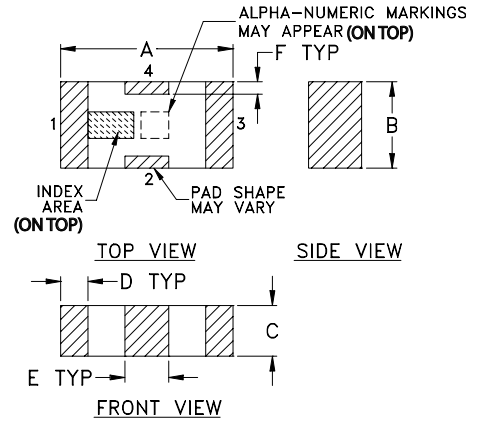
DEMO BOARD MCL P/N: TB-270  
SUGGESTED PCB LAYOUT (PL-137)



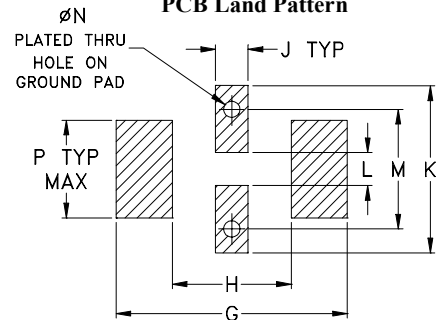
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### OUTLINE DRAWING



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

### OUTLINE DIMENSIONS (Inches 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

TAPE & REEL INFORMATION: F71