

Ceramic High Pass Filter

HFCN-1500+ HFCN-1500

50Ω 1600 to 5500 MHz



Maximum Ratings

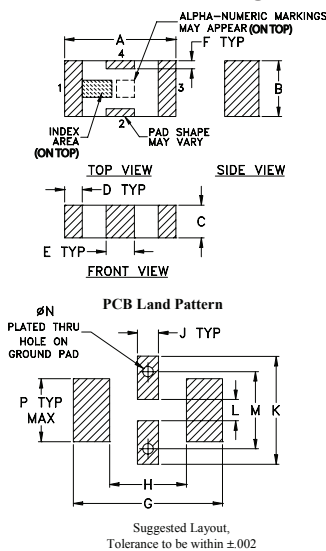
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C

* 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

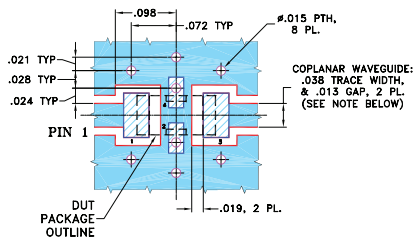


Outline Dimensions (inch/mm)

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

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

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

Features

- low cost
- small size
- 7 sections
- temperature stable
- hermetically sealed
- LTCC construction
- excellent power handling, 7W

Applications

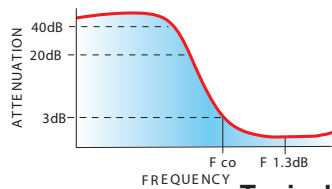
- sub-harmonic rejection and dc blocking
- transmitters/receivers
- lab use

Electrical Specifications^(1,2) at 25°C

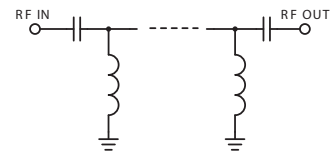
STOP BAND (MHz) Min.		f _{co} , MHz Nom.	PASSBAND (MHz)		VSWR (:1) Typ.	POWER INPUT (W)	NO. OF SECTIONS
(loss > 40 dB)	(loss > 20 dB)	(loss 3 dB) Typ.	(loss < 1.3 dB) Max.	(loss < 2 dB) Typ.	Frequency (MHz) Stopband 1.5:1		
1060	1250	1550	1850-4400	1600-5500	20:1	1620-3450	7

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, if DC pass IN-OUT is required, Mini-Circuits "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.
(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)
1.00	105.45	1737.18
100.00	63.65	579.06
1060.00	48.22	46.96
1250.00	31.52	28.03
1400.00	14.81	12.89
1480.00	7.64	5.56
1550.00	3.50	2.35
1600.00	2.13	1.54
1620.00	1.83	1.41
1850.00	1.00	1.49
2000.00	0.76	1.31
3450.00	0.45	1.15
4400.00	0.94	1.82
5500.00	2.10	3.04
7000.00	3.85	4.99
9000.00	5.89	5.89

