

# Ceramic High Pass Filter

# HFCN-1600+ HFCN-1600

50Ω 1650 to 5000 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

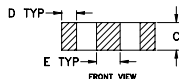
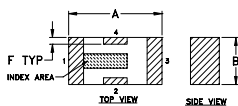
\* Passband rating, derate linearly to 3W at 100°C ambient.

## Pin Connections

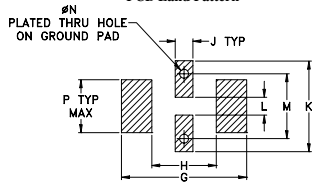
RF IN	1**
RF OUT	3**
GROUND	2,4

\*\* RF IN & RF OUT can be interchanged

## Outline Drawing



### PCB Land Pattern

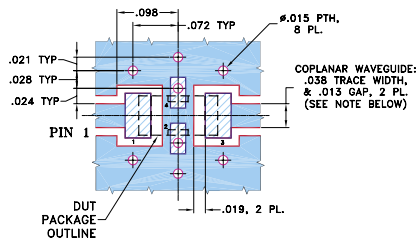


Suggested Layout, Tolerance to be within ±.002

## Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
.126	.063	.037	.020	.032	.009	.169	.087	.024	.122	.024	.087	.012	.071	grams
3.20	1.60	0.94	0.51	0.81	0.23	4.29	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

## Features

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

## Applications

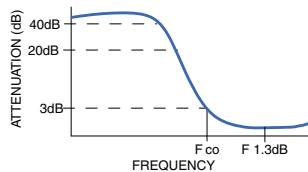
- sub-harmonic rejection
- transmitters/receivers
- lab use

## Electrical Specifications<sup>1</sup> (T<sub>AMB</sub> = 25°C)

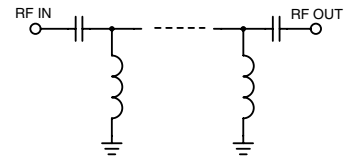
STOP BAND (MHz) Min.	f <sub>co</sub> , MHz Nom.	PASSBAND (MHz)	VSWR (:1) Typ.	POWER INPUT (W)	NO. OF SECTIONS
(loss > 40 dB)	(loss 3 dB) Typ.	(loss < 1.3 dB) (loss < 2 dB) Max. Typ.	Frequency (MHz) Stopband 1.5:1		
1090	1290	1600	20:1	7	7

1. For applications requiring DC voltage to be applied to the input or output, use HFCN-1600D (DC Resistance to ground is 100 Mohms min.)

## typical frequency response



## electrical schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	82.28	>20
500.00	59.56	>20
1090.00	57.39	>20
1290.00	26.41	>20
1500.00	7.28	5.70
1600.00	2.52	1.95
1700.00	1.28	1.36
1960.00	0.80	1.36
3000.00	0.44	1.03
4000.00	0.70	1.63
4500.00	1.14	2.10
5000.00	1.70	2.61
6000.00	2.66	3.54
7000.00	3.49	4.55
8000.00	4.12	5.59

