

# Ceramic High Pass Filter

1700 to 6300 MHz

**NEW!**  
**HFCN-1500**



**BLUE CELL™**

## Maximum Ratings

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

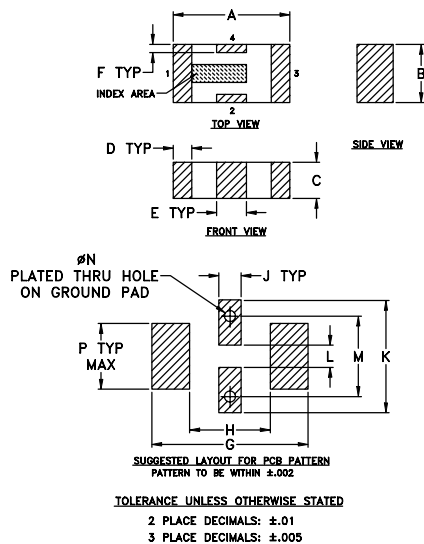
\*Passband rating, derate linearly to 3W at 100°C ambient.

## Pin Connections

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

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

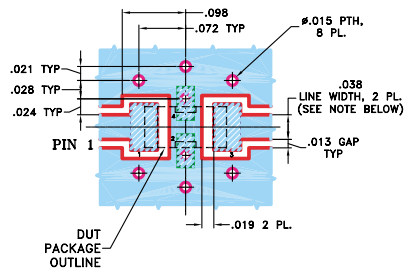
## Outline Drawing



## Outline Dimensions (inch)

| A    | B    | C    | D    | E    | F    | G    | H    | J    | K    | L    | M    | N    | P    | wt    |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| .126 | .063 | .037 | .024 | .087 | .012 | .071 | .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)**



## Features

- low cost
- small size
- 7 sections
- temperature stable
- dc block in/out, breakdown voltage, 1kV typ.
- excellent power handling, 7W

## Applications

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

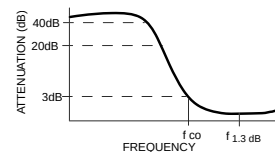
| Model      | Price  | Qty.    |
|------------|--------|---------|
| HFCN-1500  | \$1.99 | (10-49) |
| HFCN-1500D | \$2.49 | (10-49) |

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

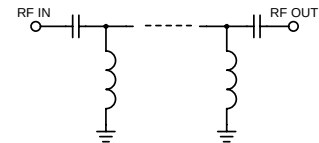
| MODEL NO. | STOP BAND (MHz)        |                        | f <sub>co</sub> , MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | PASSBAND (MHz)          |                       | VSWR<br>Typ.<br>Frequency<br>(MHz)<br>1.5:1<br>Stopband | POWER<br>INPUT<br>(W) | NO. OF<br>SECTIONS |
|-----------|------------------------|------------------------|------------------------------------------------------|-------------------------|-----------------------|---------------------------------------------------------|-----------------------|--------------------|
|           | (loss > 40 dB)<br>Min. | (loss > 20 dB)<br>Min. |                                                      | (loss < 1.3 dB)<br>Max. | (loss < 2 dB)<br>Typ. |                                                         |                       |                    |
| HFCN-1500 | 1140                   | 1280                   | 1550                                                 | 1850-4400               | 1600-5500             | 20:1                                                    | 1620-3450             | 7                  |

1. For Applications requiring DC voltage to be applied to the Input or output, use HFCN-1500D (DC Resistance to ground is 100 Mohms min.)

## typical frequency response

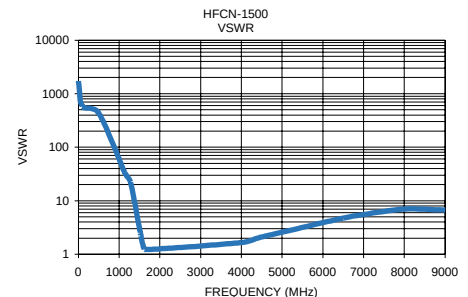
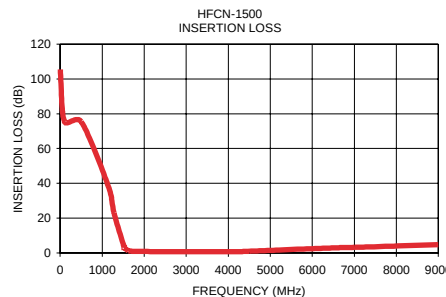


## schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00            | 105.45              | 1737.18   |
| 100.00          | 75.64               | 579.06    |
| 500.00          | 75.41               | 434.30    |
| 1140.00         | 38.65               | 33.42     |
| 1280.00         | 23.08               | 22.29     |
| 1520.00         | 3.30                | 2.53      |
| 1530.00         | 2.97                | 2.26      |
| 1620.00         | 1.36                | 1.25      |
| 1760.00         | 0.91                | 1.23      |
| 4000.00         | 0.67                | 1.65      |
| 4500.00         | 0.96                | 2.10      |
| 6500.00         | 2.88                | 4.74      |
| 7000.00         | 3.24                | 5.52      |
| 8000.00         | 4.00                | 6.97      |
| 9000.00         | 4.78                | 6.68      |



## designers kit available

| Kit No. | No. of Units in Kit | Description                                                         | Price \$ per Kit |
|---------|---------------------|---------------------------------------------------------------------|------------------|
| K1-HFCN | 40                  | 5 of each: HFCN-650, -740, -1200, -1500, -1760, -2000, -2275, -2700 | 79.95            |

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