

# Ceramic Low Pass Filter

DC to 5000 MHz

**NEW!**  
**LFCN-5000**



**BLUE CELL™**

CASE STYLE: FV1206

| Model      | Price  | Qty.    |
|------------|--------|---------|
| LFCN-5000  | \$1.99 | (10-49) |
| LFCN-5000D | \$2.49 | (10-49) |

## Maximum Ratings

|                            |                   |
|----------------------------|-------------------|
| Operating Temperature      | -55°C to 100°C    |
| Storage Temperature        | -55°C to 100°C    |
| RF Power Input*            | 9W max. at 25°C   |
| DC Current Input to Output | 0.5A max. at 25°C |

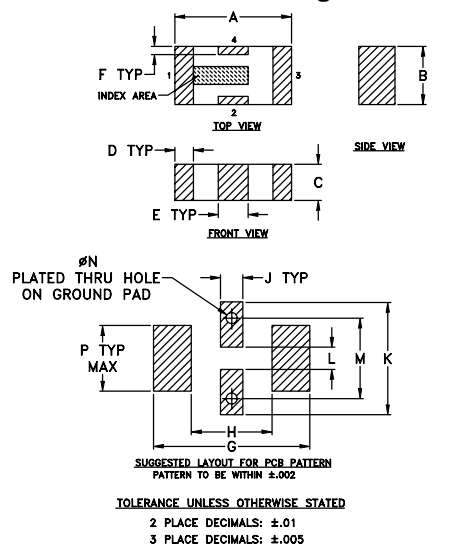
\*Passband rating, derate linearly to 3 W at 100°C ambient.

## Pin Connections

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

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

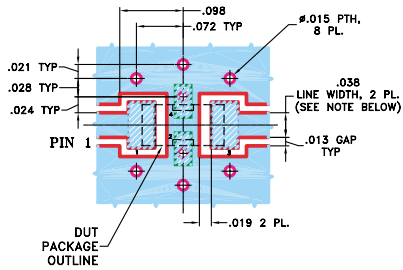
## Outline Drawing



## Outline Dimensions (inch)

| A    | B    | C    | D    | E    | F    | G     | H    |
|------|------|------|------|------|------|-------|------|
| .126 | .063 | .039 | .020 | .032 | .009 | .169  | .087 |
| 3.20 | 1.60 | 0.99 | 0.51 | 0.81 | 0.23 | 4.29  | 2.21 |
| J    | K    | L    | M    | N    | P    | wt.   |      |
| .024 | .122 | .024 | .087 | .012 | .071 | grams |      |
| 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)**



- NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT
  - DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

## Features

- excellent power handling, 9W
- small size
- 7 sections
- temperature stable
- patent pending

## Applications

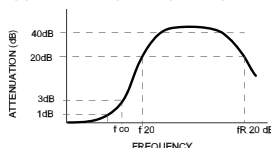
- harmonic rejection
- transmitters/receivers
- lab use

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

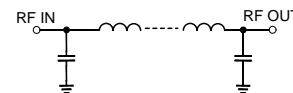
| MODEL NO. | PASSBAND (MHz)<br>(loss < 1 dB)<br>Max. | f <sub>co</sub> , MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | STOP BAND (MHz)<br>(loss, dB) |            |                           | VSWR (:1)        |                  | NO. OF SECTIONS |
|-----------|---|--|-------------------------------|------------|---------------------------|------------------|------------------|-----------------|
|           |   |  | f 20<br>Min.                  | 30<br>Typ. | f <sub>r</sub> 20<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                 |
| LFCN-5000 | DC-5000                                 | 5580   | 6600                          | 6800-11000 | 18000                     | 20               | 1.2              | 7               |

1. For Applications requiring DC voltage to be applied to the Input or output, use LFCN-5000D (DC Resistance to ground is 100 Mohms min.)

## typical frequency response

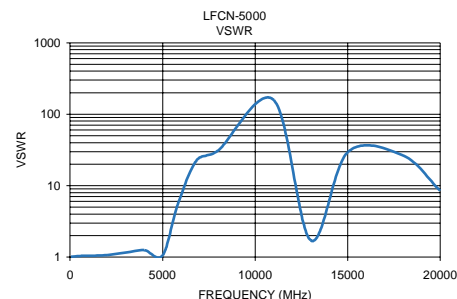
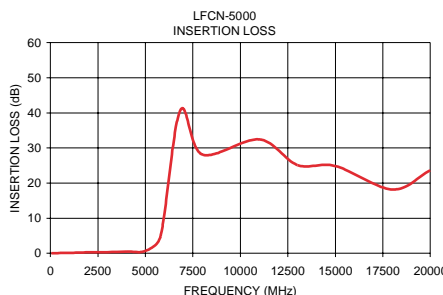


## schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50.00           | 0.01                | 1.01      |
| 500.00          | 0.10                | 1.03      |
| 1000.00         | 0.14                | 1.04      |
| 2000.00         | 0.26                | 1.07      |
| 3000.00         | 0.31                | 1.15      |
| 4000.00         | 0.51                | 1.25      |
| 5000.00         | 0.68                | 1.05      |
| 5800.00         | 4.91                | 5.30      |
| 6830.00         | 40.67               | 22.58     |
| 8000.00         | 28.12               | 31.03     |
| 11000.00        | 32.43               | 157.93    |
| 13000.00        | 25.15               | 1.71      |
| 15000.00        | 24.88               | 29.46     |
| 18000.00        | 18.17               | 26.33     |
| 20000.00        | 23.63               | 8.43      |



designers kit available

| Kit No. | No. of Units in Kit | Description  | Price \$ per Kit |
|---------|---------------------|--|------------------|
| K2-LFCN | 60                  | 5 of each: LFCN-800,-900,-1000,-1200,-1325,-1700,-2000,-2250,-2400,-5000,-6000,-6700 | 119.95           |

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