

# Ceramic Low Pass Filter

DC to 225 MHz

**NEW!**

**LFCN-225**



**BLUE CELL™**

CASE STYLE: FV1206  
PRICE: \$ 2.99 ea. QTY (10-49)

## Maximum Ratings

|                            |                   |
|----------------------------|-------------------|
| Operating Temperature      | -55°C to 100°C    |
| Storage Temperature        | -55°C to 100°C    |
| RF Power Input*            | 8.5W max. at 25°C |
| DC Current Input to Output | 0.5A max. at 25°C |

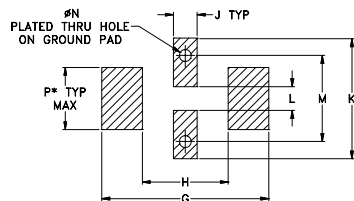
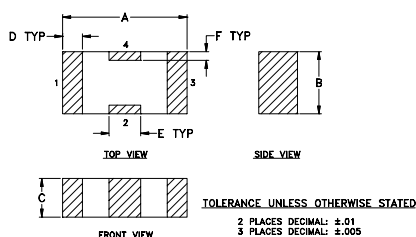
\*Passband rating, derate linearly to 3.5W at 100°C ambient.

## Pin Connections

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

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

## Outline Drawing



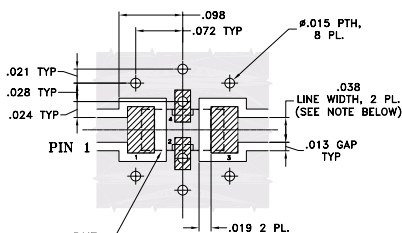
SUGGESTED LAYOUT FOR PCB PATTERN  
PATTERN TO BE WITHIN ±.002

\* LINE WIDTH SHOULD BE DESIGNED TO MATCH  
50 OHMS CHARACTERISTIC IMPEDANCE,  
DEPENDENT ON PCB MATERIAL & THICKNESS.

## 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, 8.5W
- small size
- 7 sections
- temperature stable
- patent pending

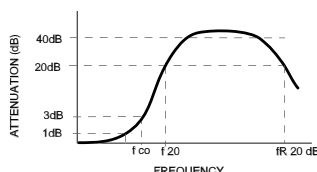
## Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- RF suppression for DC lines on PCB
- anti-aliasing for A/D converter

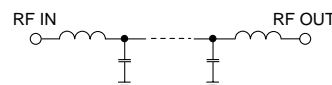
## Low Pass Filter Electrical Specifications (T<sub>AMB</sub>=25°C)

| MODEL NO. | PASSBAND (MHz)<br>(loss < 1 dB)<br>Max. | fco, MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | STOP BAND (MHz)<br>(loss, dB) |            |               | VSWR (:1)        |                  | NO. OF SECTIONS |
|-----------|---|---|-------------------------------|------------|---------------|------------------|------------------|-----------------|
|           |   |   | f 20<br>Min.                  | 40<br>Typ. | fr 20<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                 |
| LFCN-225  | DC-225                                  | 350                                     | 460                           | 510-2500   | 5500          | 20               | 1.2              | 7               |

## typical frequency response

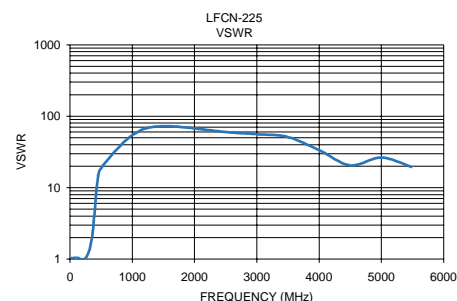
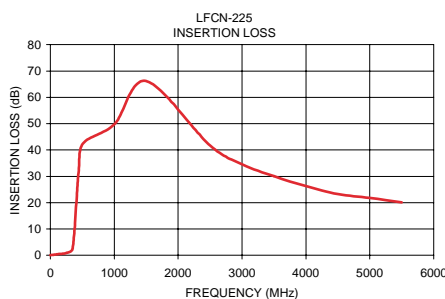


## schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00            | 0.09                | 1.02      |
| 100.00          | 0.36                | 1.04      |
| 250.00          | 0.89                | 1.03      |
| 350.00          | 2.70                | 1.91      |
| 440.00          | 31.16               | 12.52     |
| 510.00          | 42.44               | 19.32     |
| 1000.00         | 49.75               | 54.29     |
| 1500.00         | 66.15               | 72.39     |
| 2500.00         | 41.71               | 59.91     |
| 3000.00         | 34.59               | 56.04     |
| 3500.00         | 30.04               | 51.10     |
| 4000.00         | 26.30               | 33.42     |
| 4500.00         | 23.26               | 20.45     |
| 5000.00         | 21.80               | 26.33     |
| 5500.00         | 20.10               | 19.32     |



## designers kit available

| Kit No. | No. of Units in Kit | Description   | Price \$ per Kit |
|---------|---------------------|---|------------------|
| K1-LFCN | 35                  | 5 of each: LFCN-225, -320, -400, -490, -530, -575, -630 | 99.95            |

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