

# Ceramic Low Pass Filter

DC to 1450 MHz

**NEW!**  
**LFCN-1450**



**BLUE CELL™**

CASE STYLE: FV1206

## Maximum Ratings

|                            |                   |
|----------------------------|-------------------|
| Operating Temperature      | -55°C to 100°C    |
| Storage Temperature        | -55°C to 100°C    |
| RF Power Input*            | 10W max. at 25°C  |
| DC Current Input to Output | 0.5A max. at 25°C |

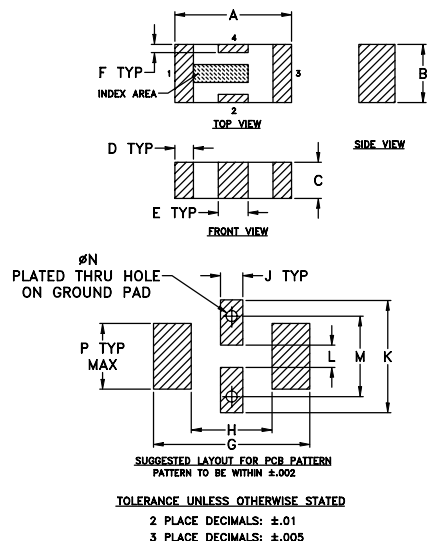
\*Passband rating, derate linearly to 3.5W at 100°C ambient.

## Pin Connections

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

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

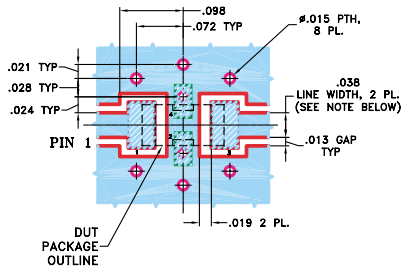
## Outline Drawing



## 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)**



- 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, 10W
- small size
- 7 sections
- temperature stable
- patent pending

## Applications

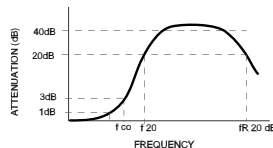
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

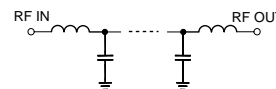
| MODEL NO. | PASSBAND (MHz)<br>(loss < 1 dB)<br>Max. | f <sub>co</sub> , MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | STOP BAND (MHz)<br>(loss, dB) |            |               | VSWR (:1)        |                  | NO. OF SECTIONS |
|-----------|---|--|-------------------------------|------------|---------------|------------------|------------------|-----------------|
|           |   |  | f 20<br>Min.                  | 30<br>Typ. | fr 20<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                 |
| LFCN-1450 | DC-1450                                 | 1825   | 2025                          | 2050-6600  | 6700          | 20               | 1.2              | 7               |

1. For Applications requiring DC voltage to be applied to the Input or output, use LFCN-1450D (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) |
|-----------------|---------------------|-----------|
| 100.00          | 0.10                | 1.03      |
| 1000.00         | 0.50                | 1.12      |
| 1400.00         | 0.86                | 1.07      |
| 1600.00         | 1.49                | 1.35      |
| 1700.00         | 2.90                | 2.22      |
| 1800.00         | 8.10                | 5.85      |
| 2025.00         | 33.68               | 18.90     |
| 2050.00         | 36.32               | 19.98     |
| 2500.00         | 35.12               | 34.07     |
| 2700.00         | 34.84               | 37.77     |
| 3000.00         | 37.19               | 43.44     |
| 5000.00         | 43.89               | 41.37     |
| 6600.00         | 30.75               | 21.20     |
| 6800.00         | 16.06               | 11.85     |
| 7000.00         | 18.67               | 18.11     |

