

Ceramic

# Low Pass Filter

DC to 1500 MHz

NEW!

LFCN-1500



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 |

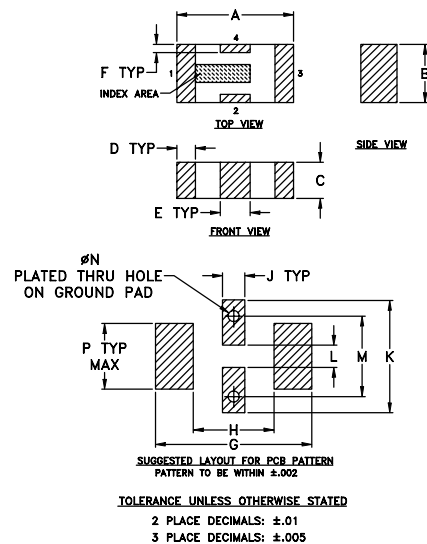
\*Passband rating, derate linearly to 3.5W at 100°C ambient.

## Pin Connections

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

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

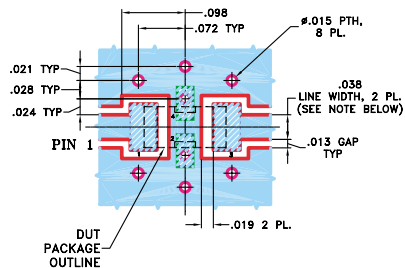
## Outline Drawing



## Outline Dimensions (inch)

| A    | B    | C    | D    | E    | F    | G    | H    | J    | K    | L    | M    | N    | P    | W     |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| .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)**



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

## Applications

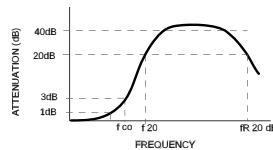
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

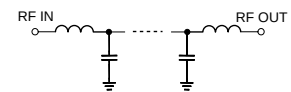
| MODEL NO. | PASSBAND (MHz)<br>(loss < 1 dB)<br>Max. | f <sub>co</sub> , MHz<br>Nom.<br>(loss 3 dB)<br>Typ. | STOP BAND (MHz)<br>(loss, dB) |            |                           | VSWR (:1)        |                  | NO. OF SECTIONS |
|-----------|-----------------------------------------|------------------------------------------------------|-------------------------------|------------|---------------------------|------------------|------------------|-----------------|
|           |                                         |                                                      | f 20<br>Min.                  | 30<br>Typ. | f <sub>r</sub> 20<br>Typ. | Stopband<br>Typ. | Passband<br>Typ. |                 |
| LFCN-1500 | DC-1500                                 | 1825                                                 | 2100                          | 2150-6800  | 7000                      | 20               | 1.2              | 7               |

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

## typical frequency response

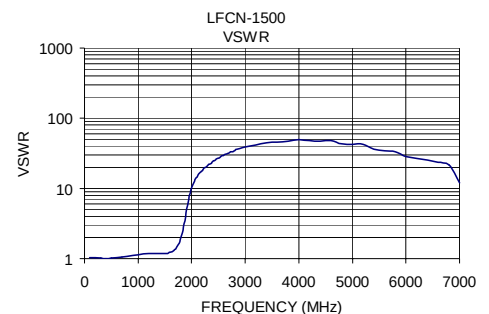
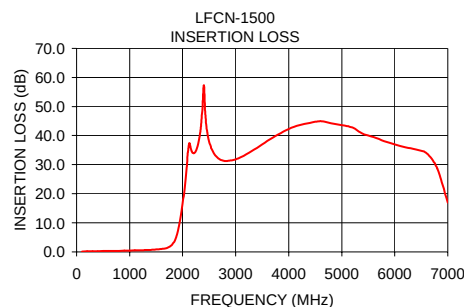


## schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 100.00          | 0.09                | 1.03      |
| 1000.00         | 0.41                | 1.13      |
| 1500.00         | 0.77                | 1.19      |
| 1700.00         | 1.31                | 1.38      |
| 1825.00         | 2.99                | 2.33      |
| 2000.00         | 16.47               | 10.13     |
| 2100.00         | 34.49               | 14.62     |
| 2150.00         | 35.94               | 16.56     |
| 2500.00         | 37.94               | 27.16     |
| 3000.00         | 31.80               | 38.61     |
| 4000.00         | 42.25               | 49.64     |
| 5000.00         | 43.54               | 42.38     |
| 6000.00         | 36.93               | 28.49     |
| 6800.00         | 28.71               | 21.46     |
| 7000.00         | 16.97               | 12.01     |



**Mini-Circuits®**

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

REV. B  
M96263  
LFCN-1500  
ED-11960/2  
AD/CP/AM  
050113