

# Ceramic Low Pass Filter

50Ω

DC to 800 MHz

LFCN-800D+



CASE STYLE: FV1206

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Available Tape and Reel at no extra cost

Reel Size 7" Devices/Reel 20, 50, 100, 200, 500, 1000, 3000

## Maximum Ratings

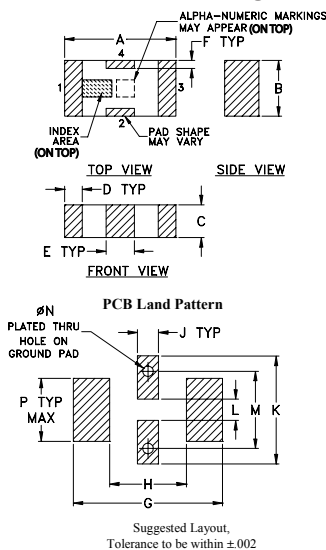
|                             |                 |
|-----------------------------|-----------------|
| Operating Temperature       | -55°C to 100°C  |
| Storage Temperature         | -55°C to 100°C  |
| RF Power Input*             | 9W max. at 25°C |
| Max. DC Voltage at pins 1&3 | 25 VDC          |
| DC Current Input to Output  | 1A max. at 25°C |

\* Derate linearly to 4W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

## Pin Connections

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

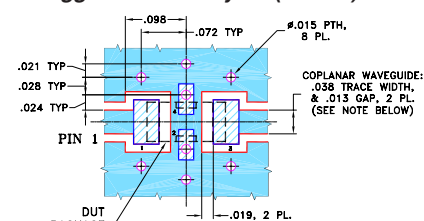
## Outline Drawing



## Outline Dimensions (inch)

| A    | B    | C    | D    | E    | F    | G    |       |
|------|------|------|------|------|------|------|-------|
| .126 | .063 | .037 | .020 | .032 | .009 | .169 |       |
| 3.20 | 1.60 | 0.94 | 0.51 | 0.81 | 0.23 | 4.29 |       |
| H    | J    | K    | L    | M    | N    | P    | wt    |
| .087 | .024 | .122 | .024 | .087 | .012 | .071 | grams |
| 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)



NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- excellent power handling, 9W
- small size
- 5 sections
- temperature stable
- LTCC construction

## Applications

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

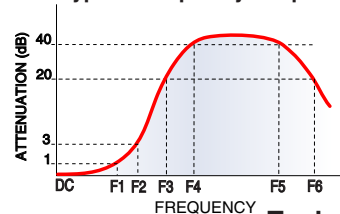
## Electrical Specifications<sup>1,2</sup> at 25°C

| Parameter | F#             | Frequency (MHz) | Min.   | Typ. | Max. | Unit |
|-----------|----------------|-----------------|--------|------|------|------|
| Pass Band | Insertion Loss | DC-F1           | DC-800 | —    | 1.3  | dB   |
|           | Freq. Cut-Off  | F2              | 990    | 3.0  | —    | dB   |
|           | VSWR           | DC-F1           | DC-800 | 1.2  | —    | :1   |
| Stop Band | Rejection Loss | F3              | 1400   | 20   | —    | dB   |
|           | F4-F5          | 1500-2000       | —      | 30   | —    | dB   |
|           | F6             | 4500            | —      | 20   | —    | dB   |
| VSWR      | F3-F6          | 1400-4500       | —      | 20   | —    | :1   |

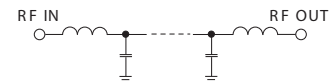
(1) DC Resistance to ground is 100 Mohms min.

(2) Measured on Mini-Circuits Characterization Test Board TB-270.

## Typical Frequency Response

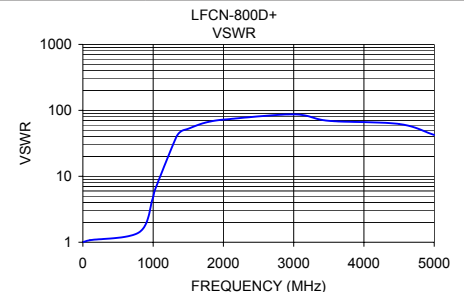
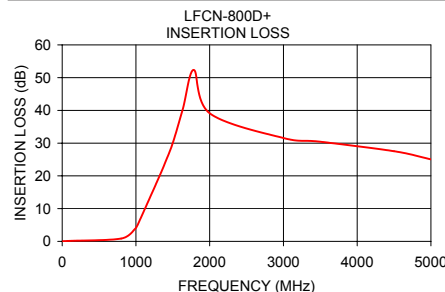


## Electrical Schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 10.00           | 0.06                | 1.01      |
| 100.00          | 0.14                | 1.07      |
| 800.00          | 0.85                | 1.41      |
| 990.00          | 3.87                | 4.47      |
| 1030.00         | 5.38                | 6.39      |
| 1330.00         | 20.50               | 39.49     |
| 1400.00         | 24.29               | 48.26     |
| 1500.00         | 30.05               | 52.65     |
| 1635.00         | 40.35               | 59.91     |
| 1785.00         | 52.35               | 66.82     |
| 2000.00         | 39.14               | 72.39     |
| 3000.00         | 31.57               | 86.86     |
| 3500.00         | 30.42               | 69.49     |
| 4500.00         | 27.52               | 62.05     |
| 5000.00         | 25.04               | 42.38     |



## Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

