

Ceramic

# Low Pass Filter

50Ω

DC to 850 MHz

LFCN-900D-1+



CASE STYLE: FV1206  
PRICE: \$2.49 ea. QTY (20)

## Maximum Ratings

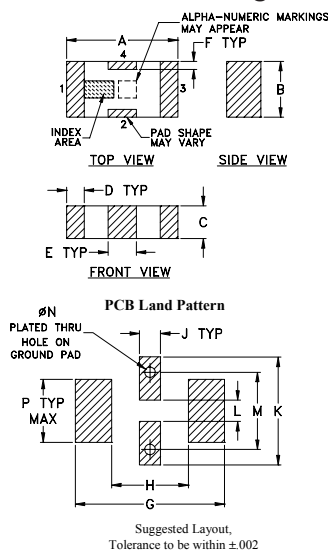
|                             |                   |
|-----------------------------|-------------------|
| Operating Temperature       | -55°C to 100°C    |
| Storage Temperature         | -55°C to 100°C    |
| RF Power Input*             | 10W max. at 25°C  |
| Max. DC Voltage at pins 1&3 | 25 VDC            |
| DC Current Input to Output  | 0.5A max. at 25°C |

\* Derate linearly to 3.5W 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



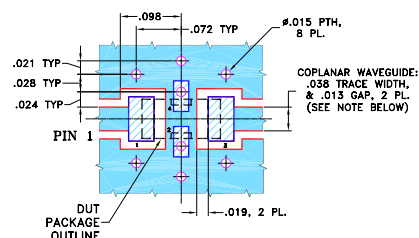
## Outline Dimensions (inch)

| 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.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- excellent power handling, 10W
- small size
- 7 sections
- temperature stable
- LTCC construction
- rejection in stopband, 45-50 dB typ.
- protected by U.S. Patent 6,943,646

## Applications

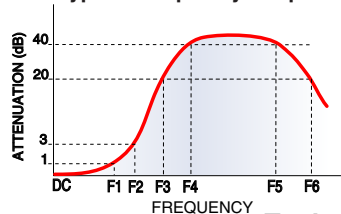
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

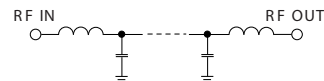
| Parameter | F#             | Frequency (MHz) | Min.      | Typ. | Max. | Unit |
|-----------|----------------|-----------------|-----------|------|------|------|
| Pass Band | Insertion Loss | DC-F1           | DC-850    | —    | 1.3  | dB   |
|           | Freq. Cut-Off  | F2              | 1075      | 3.0  | —    | dB   |
|           | VSWR           | DC-F1           | DC-850    | 1.2  | —    | :1   |
| Stop Band | Rejection Loss | F3              | 1275      | 20   | —    | dB   |
|           |                | F4-F5           | 1350-4850 | 30   | —    | dB   |
|           |                | F6              | 5100      | 20   | —    | dB   |
|           | VSWR           | F3-F6           | 1275-5100 | 20   | —    | :1   |

1. DC Resistance to ground is 100 Mohms min.

## Typical Frequency Response

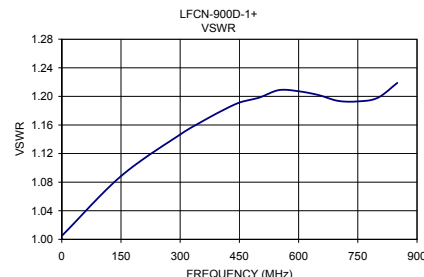
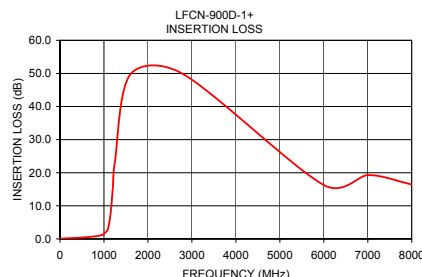


## Electrical Schematic



## Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00            | 0.04                | 1.01      |
| 150.00          | 0.19                | 1.09      |
| 500.00          | 0.41                | 1.20      |
| 850.00          | 0.86                | 1.22      |
| 950.00          | 1.22                | 1.26      |
| 1000.00         | 1.52                | 1.22      |
| 1075.00         | 2.54                | 1.18      |
| 1100.00         | 3.44                | 1.50      |
| 1150.00         | 7.61                | 2.74      |
| 1200.00         | 15.27               | 4.03      |
| 1250.00         | 23.41               | 5.02      |
| 1600.00         | 49.71               | 19.32     |
| 2800.00         | 49.80               | 30.49     |
| 6000.00         | 16.27               | 19.98     |
| 7000.00         | 19.30               | 17.05     |
| 8000.00         | 16.47               | 33.42     |



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IF/IRF MICROWAVE COMPONENTS

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REV. OR  
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