

Ceramic Low Pass Filter

50Ω DC⁽¹⁾ to 4400 MHz

LFCN-4400+ LFCN-4400



CASE STYLE: FV1206
PRICE: \$2.99 ea. QTY (20)

+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 | Devices/Reel |
|-----------|-----------------------------------|
| 7" | 20, 50, 100, 200, 500, 1000, 3000 |

Maximum Ratings

Operating Temperature -55°C to 100°C

Storage Temperature -55°C to 100°C

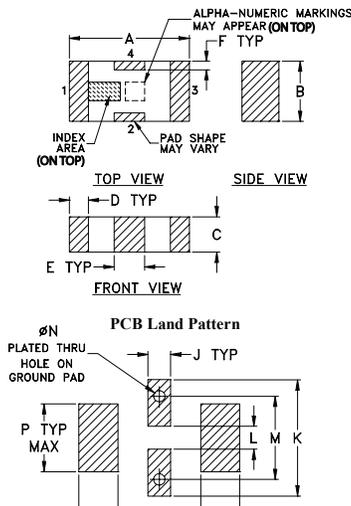
RF Power Input* 8W max. at 25°C

* Passband rating, derate linearly to 3W 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 |

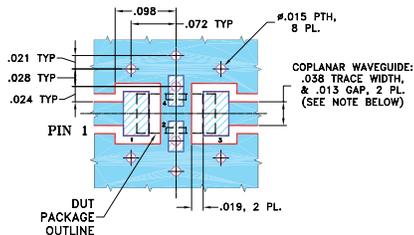
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | | |
|------|------|------|------|------|------|------|-------|
| 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

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

Features

- excellent power handling, 8W
- small size
- 7 sections
- temperature stable
- hermetically sealed
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

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

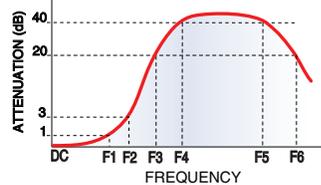
Electrical Specifications^(1,2) at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|-----------|----------------|-----------------|------------|------|------|------|----|
| Pass Band | Insertion Loss | DC-F1 | DC-4400 | — | — | 1 | dB |
| | Freq. Cut-Off | F2 | 5290 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | DC-4400 | — | 1.2 | — | :1 |
| Stop Band | Rejection Loss | F3 | 6700 | 20 | — | — | dB |
| | | F4-F5 | 6280-9800 | — | 30 | — | dB |
| | VSWR | F5-F6 | 9800-13000 | — | 20 | — | dB |
| | | F3-F6 | 6700-13000 | — | 17 | — | :1 |

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

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

Typical Frequency Response



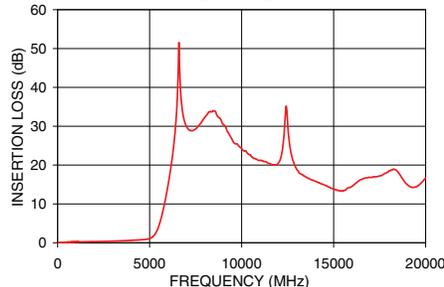
Electrical Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50 | 0.04 | 1.03 |
| 320 | 0.12 | 1.06 |
| 1340 | 0.24 | 1.08 |
| 3740 | 0.57 | 1.33 |
| 4400 | 0.75 | 1.39 |
| 5170 | 1.98 | 1.88 |
| 5290 | 2.99 | 2.62 |
| 5580 | 7.66 | 6.63 |
| 5860 | 14.61 | 13.09 |
| 6280 | 31.47 | 21.20 |
| 6700 | 31.52 | 26.33 |
| 7400 | 28.90 | 26.33 |
| 9800 | 24.24 | 14.26 |
| 13000 | 19.94 | 12.80 |
| 20000 | 17.61 | 11.53 |

LFCN-4400 INSERTION LOSS



LFCN-4400 VSWR

