

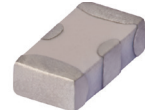
Ceramic

Low Pass Filter

50Ω

DC to 5000 MHz

LFCN-5000D+



Generic photo used for illustration purposes only
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 | Devices/Reel |
|-----------|-----------------------------------|
| 7" | 20, 50, 100, 200, 500, 1000, 3000 |

Maximum Ratings

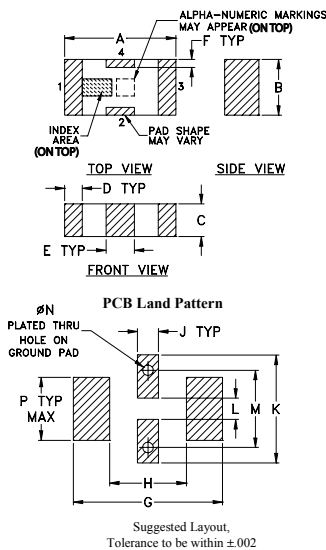
| | |
|-----------------------------|-------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 9W max. at 25°C |
| Max. DC Voltage at pins 1&3 | 25 VDC |
| DC Current Input to Output | 0.5A max. at 25°C |

* Derate linearly to 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

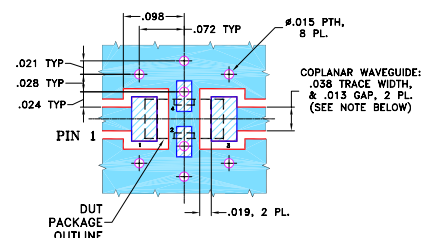


Outline Dimensions (inch/mm)

| 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

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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, 9W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

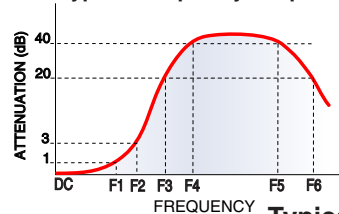
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

Electrical Specifications^{1,2} at 25°C

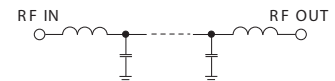
| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------|----------------|-----------------|------------|------|------|------|
| Pass Band | Insertion Loss | DC-F1 | DC-5000 | — | — | 1.0 |
| | Freq. Cut-Off | F2 | 5580 | — | 3.0 | dB |
| | VSWR | DC-F1 | DC-5000 | — | 1.2 | :1 |
| Stop Band | Rejection Loss | F3 | 6850 | 20 | — | dB |
| | | F4-F5 | 7050 | — | 30 | dB |
| | | F6 | 18000 | — | 20 | dB |
| | VSWR | F3-F6 | 6850-18000 | — | 20 | :1 |

1. DC Resistance to ground is 100 Mohms min.
2. Measured on Mini-Circuits Characterization Test Board TB-270.

Typical Frequency Response

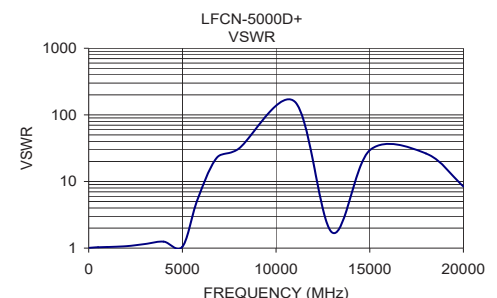
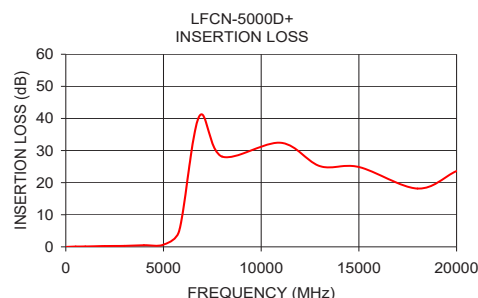


Electrical Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50.00 | 0.01 | 1.01 |
| 500.00 | 0.10 | 1.03 |
| 1000.00 | 0.14 | 1.04 |
| 2000.00 | 0.26 | 1.07 |
| 3000.00 | 0.31 | 1.15 |
| 4000.00 | 0.51 | 1.25 |
| 5000.00 | 0.68 | 1.05 |
| 5800.00 | 4.91 | 5.30 |
| 6830.00 | 40.67 | 22.58 |
| 8000.00 | 28.12 | 31.03 |
| 11000.00 | 32.43 | 157.93 |
| 13000.00 | 25.15 | 1.71 |
| 15000.00 | 24.88 | 29.46 |
| 18000.00 | 18.17 | 26.33 |
| 20000.00 | 23.63 | 8.43 |



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