

Ceramic Low Pass Filter

50Ω DC⁽¹⁾ to 1000 MHz

LFCN-1000+



Generic photo used for illustration purposes only
CASE STYLE: FV1206

Maximum Ratings

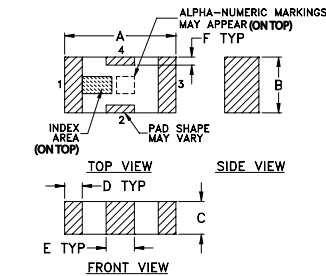
| | |
|-----------------------|------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 10W max. at 25°C |

* Passband rating, derate linearly to 3.5W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

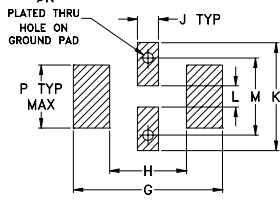
Pin Connections

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

Outline Drawing



PCB Land Pattern

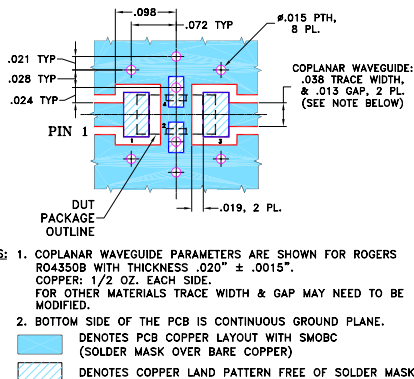


Suggested Layout, Tolerance to be within ±0.02

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)



Features

- excellent power handling, 10W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

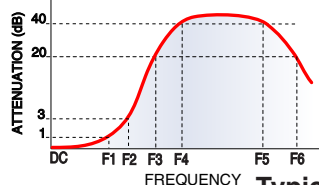
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

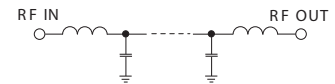
| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|-----------|----------------|-----------------|-----------|------|------|------|----|
| Pass Band | Insertion Loss | DC-F1 | DC-1000 | — | — | 1.0 | dB |
| | Freq. Cut-Off | F2 | 1300 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | DC-1000 | — | 1.3 | — | :1 |
| Stop Band | Rejection Loss | F3 | 1550 | 20 | — | — | dB |
| | | F4-F5 | 1900-5000 | — | 30 | — | dB |
| | | F6 | 5500 | — | 20 | — | dB |
| | VSWR | F3-F6 | 1550-5500 | — | 20 | — | :1 |

(1) In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.
(2) Measured on Mini-Circuits Characterization Test Board TB-270.

Typical Frequency Response

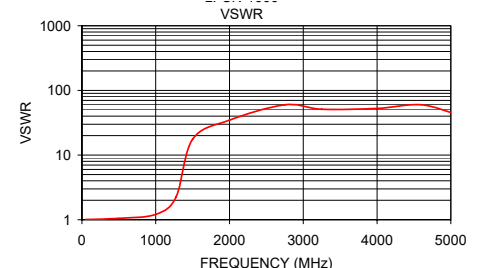


Electrical Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 50.00 | 0.01 | 1.01 |
| 500.00 | 0.30 | 1.05 |
| 1000.00 | 0.80 | 1.21 |
| 1275.00 | 3.33 | 2.23 |
| 1500.00 | 25.87 | 17.57 |
| 2000.00 | 49.50 | 34.75 |
| 2750.00 | 39.80 | 59.91 |
| 3250.00 | 43.45 | 51.10 |
| 4000.00 | 43.25 | 52.65 |
| 4600.00 | 43.25 | 59.91 |
| 5125.00 | 43.11 | 41.37 |
| 5500.00 | 22.76 | 34.75 |
| 6000.00 | 15.24 | 29.46 |
| 6500.00 | 19.30 | 62.05 |
| 7000.00 | 18.56 | 69.49 |



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



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