

Ceramic Low Pass Filter

LFCN-630+

50Ω DC⁽¹⁾ to 630 MHz



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

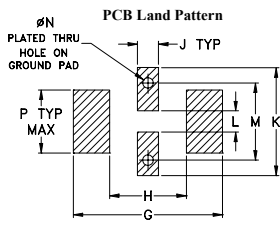
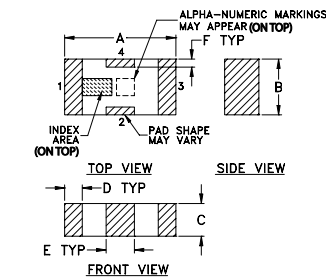
| | |
|-----------------------|-------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 8.5W max. at 25°C |

* 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

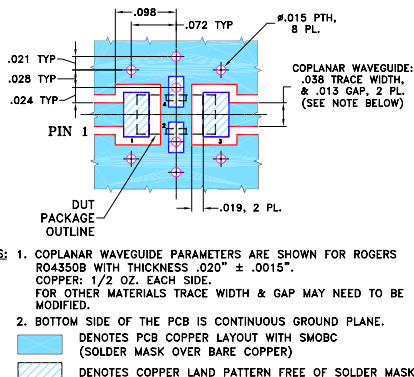


Suggested Layout, Tolerance to be within ±0.02

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)



Features

- excellent power handling, 8.5W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- RF suppression for DC lines on PCB
- anti-aliasing for A/D converter

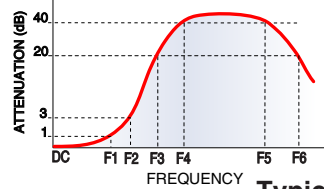
Electrical Specifications^(1,2) at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|-----------|----------------|-----------------|-----------|------|------|------|----|
| Pass Band | Insertion Loss | DC-F1 | DC-630 | — | — | 1.2 | dB |
| | Freq. Cut-Off | F2 | 830 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | DC-630 | — | 1.2 | — | :1 |
| Stop Band | Rejection Loss | F3 | 1000 | 20 | — | — | dB |
| | | F4-F5 | 1050-3500 | — | 40 | — | dB |
| | | F6 | 6000 | — | 20 | — | dB |
| | VSWR | F3-F6 | 1000-6000 | — | 20 | — | :1 |

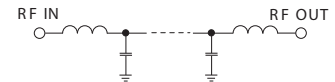
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.

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

Typical Frequency Response

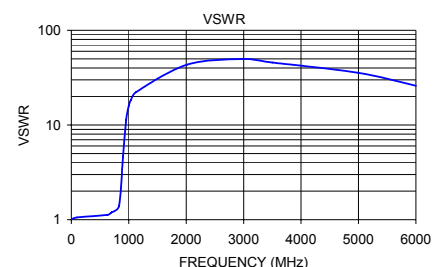


Electrical Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00 | 0.05 | 1.01 |
| 100.00 | 0.18 | 1.06 |
| 630.00 | 0.75 | 1.13 |
| 700.00 | 0.95 | 1.20 |
| 830.00 | 2.02 | 1.39 |
| 900.00 | 7.06 | 4.64 |
| 955.00 | 16.49 | 11.38 |
| 1000.00 | 25.84 | 15.96 |
| 1040.00 | 35.54 | 18.50 |
| 1130.00 | 66.95 | 22.29 |
| 2015.00 | 74.70 | 43.44 |
| 3000.00 | 51.23 | 49.64 |
| 3500.00 | 45.12 | 45.72 |
| 5000.00 | 30.26 | 35.46 |
| 6000.00 | 23.74 | 25.94 |



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

