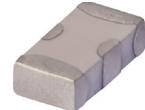


Ceramic Low Pass Filter

50Ω

DC⁽¹⁾ to 320 MHz

LFCN-320+



Generic photo used for illustration purposes only
CASE STYLE: FV1206

Maximum Ratings

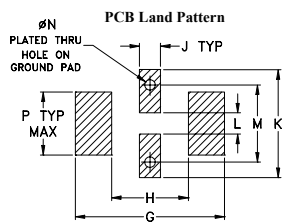
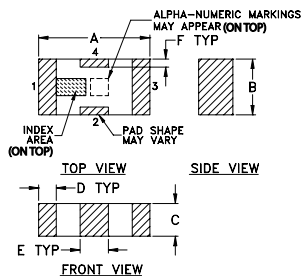
| | |
|-----------------------|-------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 8.5W max. at 25°C |

* 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



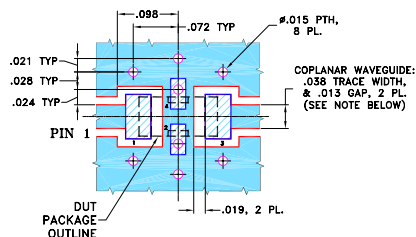
Suggested Layout,
Tolerance to be within ±.002

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

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

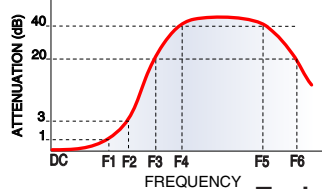
Electrical Specifications^(1,2) at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------|----------------|-----------------|------|------|------|------|
| Pass Band | Insertion Loss | DC-F1 | — | — | 1.0 | dB |
| | Freq. Cut-Off | F2 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | — | 1.2 | — | :1 |
| Stop Band | Rejection Loss | F3 | 20 | — | — | dB |
| | | F4-F5 | — | 40 | — | dB |
| | | F6 | — | 20 | — | dB |
| | VSWR | F3-F6 | — | 20 | — | :1 |

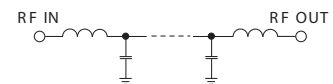
(1) In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.

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

Typical Frequency Response

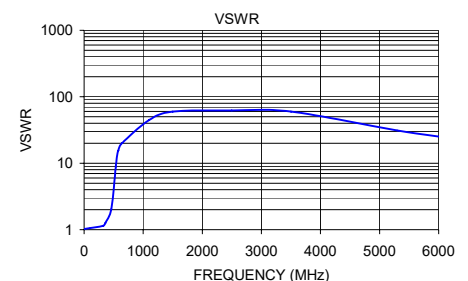


Electrical Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00 | 0.09 | 1.02 |
| 100.00 | 0.30 | 1.06 |
| 320.00 | 0.78 | 1.14 |
| 360.00 | 0.99 | 1.26 |
| 460.00 | 2.60 | 2.03 |
| 535.00 | 15.40 | 8.90 |
| 560.00 | 27.43 | 13.29 |
| 580.00 | 40.10 | 15.53 |
| 640.00 | 48.87 | 19.98 |
| 1100.00 | 46.62 | 44.55 |
| 1500.00 | 48.50 | 59.91 |
| 2500.00 | 53.58 | 62.05 |
| 3500.00 | 40.54 | 59.91 |
| 5300.00 | 25.47 | 31.03 |
| 6000.00 | 24.68 | 25.19 |



Notes

- 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-Circuits' 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



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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