



CERAMIC

Low Pass Filter

LFCN-225+

Mini-Circuits

50Ω DC¹ to 225 MHz

FEATURES

- Excellent power handling, 8.5W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S Patent 6,943,646



Generic photo used for illustration purposes only

CASE STYLE: FV1206

APPLICATIONS

- Harmonic rejection
- VHF/UHF transmitters/receivers

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

ELECTRICAL SPECIFICATIONS^{1,2} AT 25°C

| Parameter | | F# | Frequency (MHz) | Min. | Typ. | Max. | Units |
|-----------|----------------|-------|-----------------|------|------|------|-------|
| Passband | Insertion Loss | DC-F1 | DC-225 | — | — | 1.2 | dB |
| | Freq. Cut-Off | F2 | 350 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | DC-225 | — | 1.2 | — | :1 |
| Stop Band | Rejection Loss | F3 | 460 | 20 | — | — | dB |
| | | F4-F5 | 510-2500 | — | 40 | — | |
| | VSWR | F6 | 5500 | — | 20 | — | :1 |
| | | F3-F6 | 460-5500 | — | 20 | — | |

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.

MAXIMUM RATINGS

| Parameter | Ratings |
|-----------------------------|--------------------|
| Operating temperature | -55°C to 100°C |
| Storage temperature | -55°C to 100°C |
| RF Power Input ³ | 8.5 W max. at 25°C |

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. L
ECO-011696
LFCN-225+
AD/CP/AM
220128





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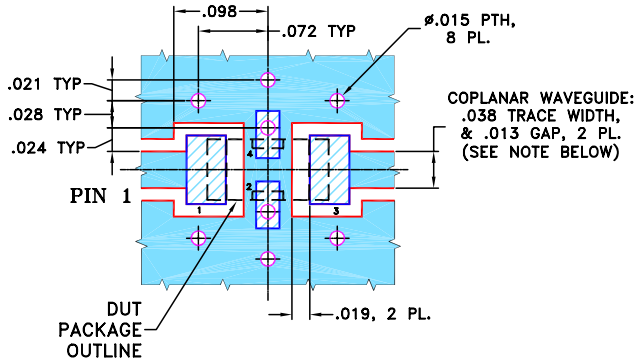
LFCN-225+

PIN CONNECTIONS

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

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)



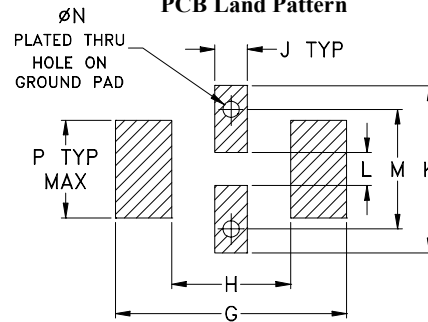
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches 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 |

TAPE & REEL INFORMATION: F71



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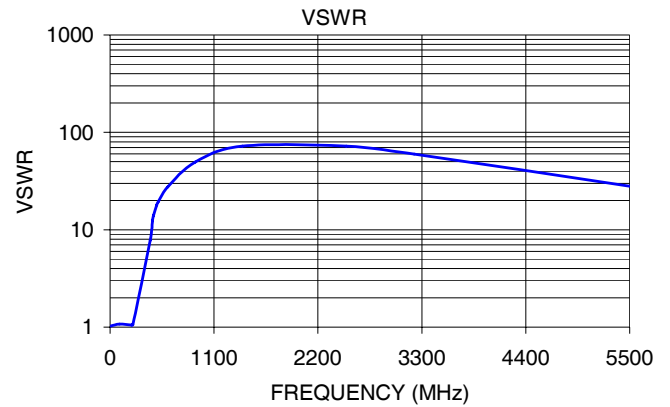
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TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 1.00 | 0.09 | 1.02 |
| 100.00 | 0.36 | 1.08 |
| 225.00 | 0.69 | 1.05 |
| 240.00 | 0.76 | 1.06 |
| 425.00 | 14.11 | 7.80 |
| 450.00 | 27.79 | 12.52 |
| 460.00 | 34.45 | 14.03 |
| 495.00 | 38.38 | 17.93 |
| 510.00 | 41.66 | 19.32 |
| 610.00 | 38.03 | 27.59 |
| 900.00 | 51.04 | 49.64 |
| 1400.00 | 55.18 | 72.39 |
| 2500.00 | 51.22 | 72.39 |
| 3220.00 | 39.48 | 59.91 |
| 5500.00 | 24.20 | 28.03 |



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

