



CERAMIC

Low Pass Filter

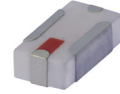
LFCN-722+

Mini-Circuits

50Ω DC¹ to 7200 MHz

FEATURES

- Excellent power handling, 12W
- Small size 1206 (3.2 x 1.6 mm)
- Temperature stable
- LTCC construction



Generic photo used for illustration purposes only

CASE STYLE: FV1206-4

+RoHS Compliant

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

APPLICATIONS

- Harmonic rejection
- Transmitters/receivers
- Lab use

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

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Units | |
|-----------|----------------|-----------------|------------|------|------|-------|----|
| Passband | Insertion Loss | DC-F1 | DC-7200 | — | 1.9 | 3.2 | dB |
| | Freq. Cut-Off | F2 | 7940 | — | 3.0 | — | dB |
| | VSWR | DC-F1 | DC-7200 | — | 2.0 | — | :1 |
| Stop Band | Rejection Loss | F3 | 8980 | — | 20 | — | dB |
| | | F4-F5 | 9270-10060 | 25 | 35 | — | |
| | | F6 | 15000 | — | 30 | — | |
| | | | | | | | |

1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

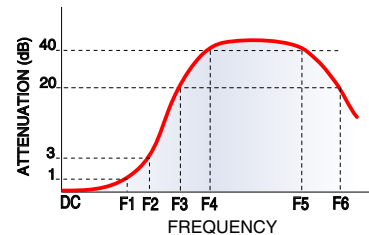
2. Measured on Mini-Circuits Characterization Test Board TB-618+.

MAXIMUM RATINGS

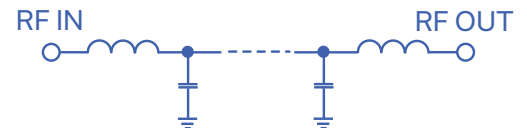
| Parameter | Ratings |
|-----------------------------|-------------------|
| Operating temperature | -55°C to 100°C |
| Storage temperature | -55°C to 100°C |
| RF Power Input ³ | 12 W max. at 25°C |

3. Passband rating, derate linearly to 6W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. B
ECO-011891
LFCN-722+
AD/CP/AM
220209





CERAMIC

Low Pass Filter

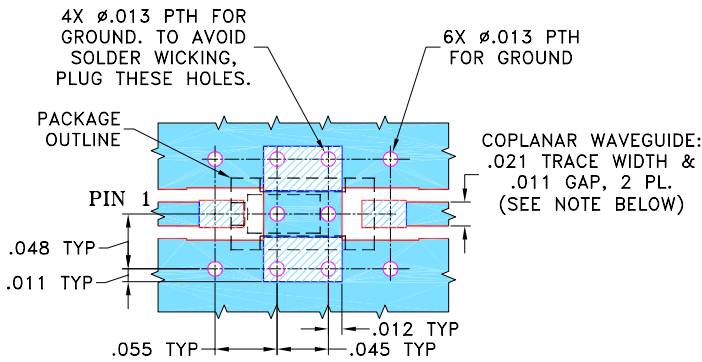
LFCN-722+

PIN CONNECTIONS

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

PRODUCT MARKING: N/A

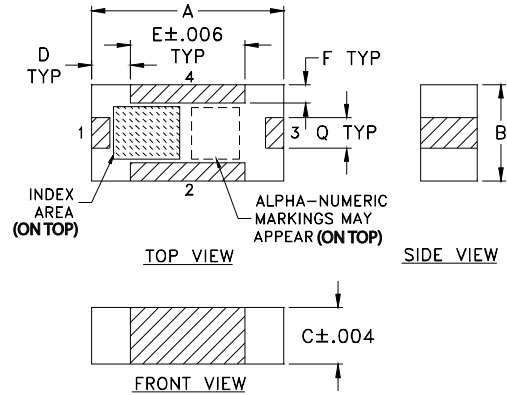
DEMO BOARD MCL P/N: TB-618+
SUGGESTED PCB LAYOUT (PL-363)



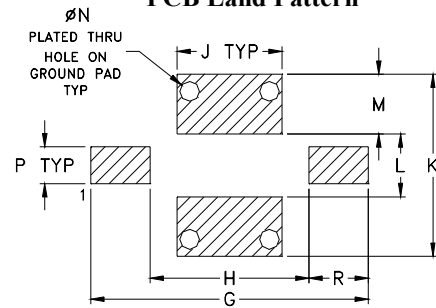
- NOTE:** 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS $.010" \pm .001"$. COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- 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 $\pm .002$

OUTLINE DIMENSIONS (Inches / mm)

| | | | | | | | | |
|------|------|------|------|------|------|------|-------|------|
| A | B | C | D | E | F | G | H | J |
| .126 | .063 | .037 | .026 | .075 | .012 | .182 | .104 | .069 |
| 3.20 | 1.60 | 0.94 | 0.66 | 1.91 | 0.30 | 4.62 | 2.64 | 1.75 |
| K | L | M | N | P | Q | R | wt | |
| .119 | .041 | .039 | .013 | .024 | .020 | .039 | grams | |
| 3.02 | 1.04 | 0.99 | 0.33 | 0.61 | 0.51 | 0.99 | .020 | |

TAPE & REEL INFORMATION: F75



CERAMIC

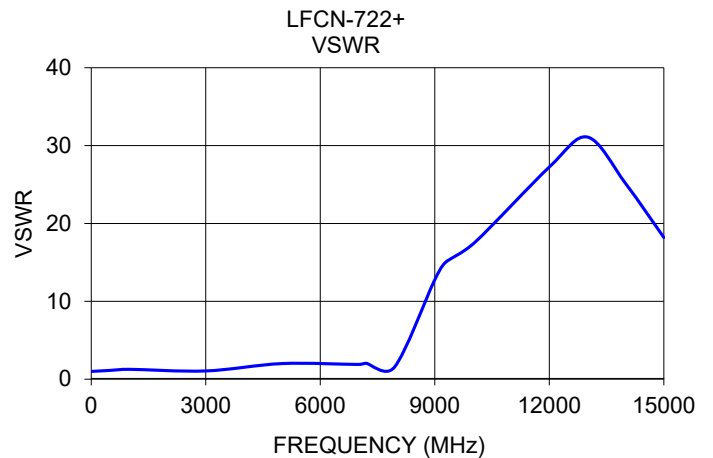
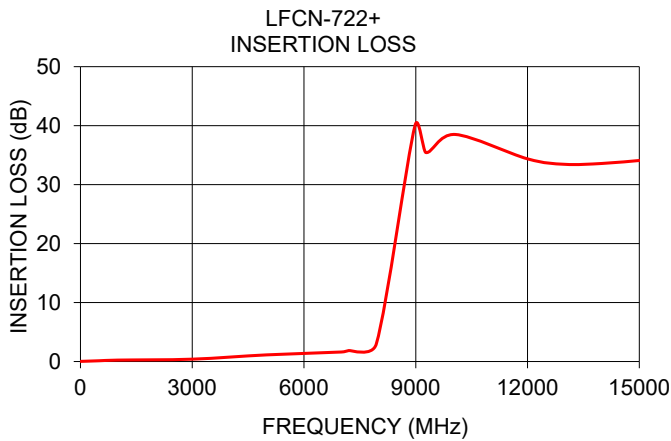
Low Pass Filter

LFCN-722+

Mini-Circuits

TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 10 | 0.03 | 1.01 |
| 20 | 0.03 | 1.01 |
| 100 | 0.04 | 1.02 |
| 500 | 0.13 | 1.13 |
| 1000 | 0.24 | 1.27 |
| 3000 | 0.40 | 1.06 |
| 5000 | 1.13 | 2.01 |
| 7000 | 1.61 | 1.90 |
| 7200 | 1.86 | 2.04 |
| 7940 | 2.97 | 1.53 |
| 8980 | 40.03 | 12.57 |
| 9270 | 35.44 | 14.95 |
| 10060 | 38.50 | 17.62 |
| 12000 | 34.37 | 27.25 |
| 13000 | 33.44 | 31.09 |
| 14000 | 33.59 | 25.12 |
| 15000 | 34.09 | 18.20 |



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

